CONSTRUCTION PLANS FOR
HAIKEY CREEK WWTP BIOSOLIDS IMPROVEMENTS

RMUA PROJECT NO. ES 2020-11
BAMA PROJECT NO. HC21020
OWRB LOAN # FAP 25-005-L, FAP24-0002-L, FAP 24-0016L

USDA RD COOPERATIVE AGREEMENT GRANT:
FERTILIZER PRODUCTION EXPANSION
PROGRAM (CASE NO. 42-072-666453235)

HAIKEY CREEK WASTEWATER TREATMENT PLANT
11602 E 151st STREET
BROKEN ARROW, OK 74011

PLANS PREPARED BY

JACOBS
8801 S. YALE AVE, SUITE 290
TULSA , OK 74137
(918) 583-3057

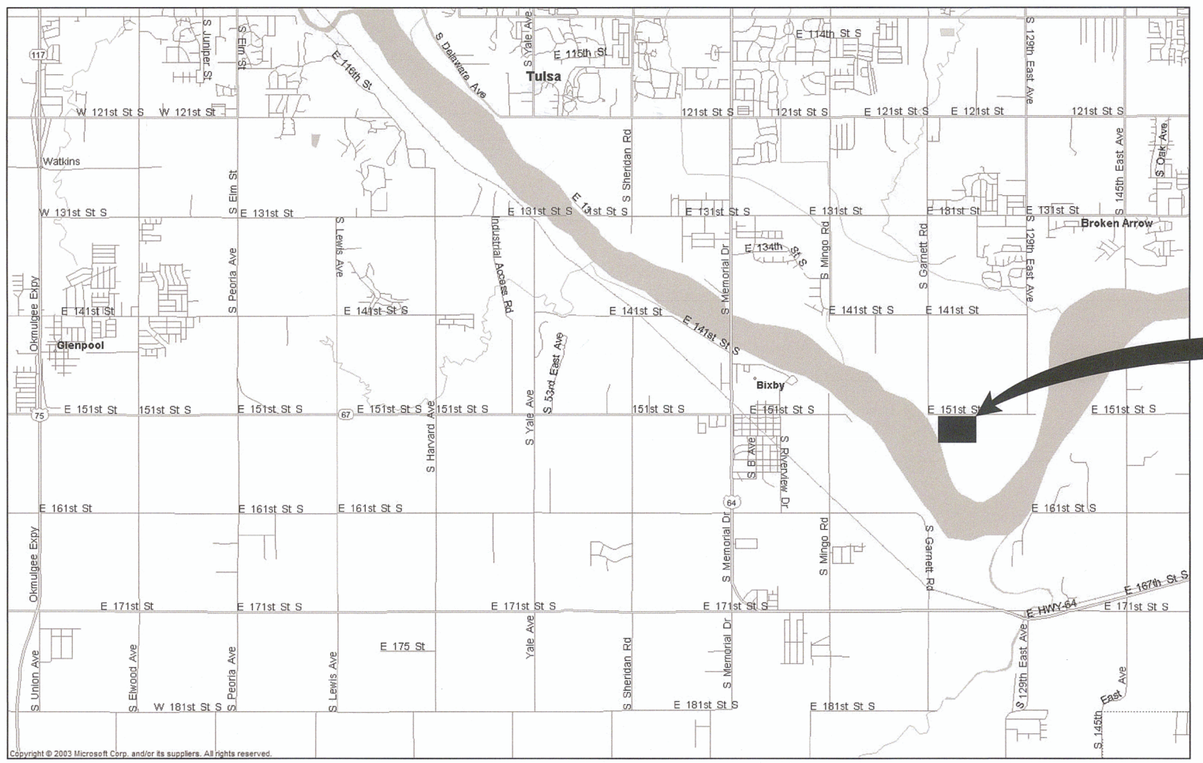
CERTIFICATE OF AUTHORIZATION #1435

LICENSED PROFESSIONAL ENGINEER
B. LUKE LENARD
28364
OKLAHOMA
May 20, 2026

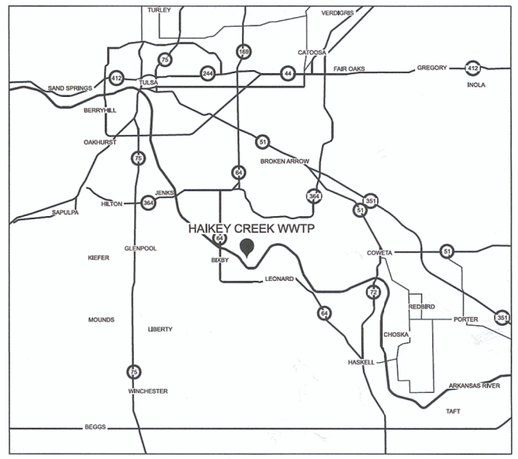
OKIE 811
Know what's below 811 before you dig.

UTILITY COORDINATION INFORMATION	
TULSA ENGINEERING SERVICES DEPARTMENT	
WATER DESIGN	918-596-9566
WASTEWATER DESIGN	918-596-9564
TRANSPORTATION DESIGN	918-596-9636
TRAFFIC ENGINEERING DESIGN	918-596-9741
STORMWATER DESIGN	918-596-9498
COT UTILITY COORDINATION	918-596-9649
BAMA CONSTRUCTION DIV. MGR.	539-252-2393
OKLAHOMA NATURAL GAS CO.	918-831-8215
COX COMMUNICATIONS	918-286-4716
AEP\PSO	918-250-6257
AT&T	918-596-4237
MTTA	918-830-0024

SURVEY DATUM:
HORIZONTAL - OKLAHOMA STATE PLANE COORDINATE (NAD 1983)
VERTICAL - (NAVD 1988)



PROJECT LOCATION MAP



PROJECT AREA MAP

HAIKEY CREEK WASTEWATER TREATMENT PLANT

CITY OF TULSA

BROKEN ARROW
Where opportunity lives

APPROVED BY

DIRECTOR OF ENGINEERING & CONSTRUCTION
BROKEN ARROW MUNICIPAL AUTHORITY — DATE 6/2/26

WATER AND SEWER DIRECTOR
TULSA METROPOLITAN UTILITY AUTHORITY — DATE 6·3·2026

CONSULTANT ENGINEER
JACOBS ENGINEERING GROUP INC. — DATE May 20, 2026

HAIKEY CREEK WWTP BIOSOLIDS IMPROVEMENTS ES 2020-11

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REGISTERED PROFESSIONAL ENGINEER
VIBHUTI PANDEY
36209
OKLAHOMA
DIGITALLY SIGNED ON 05/08/2026

GENERAL

DRAWING INDEX 1

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RJL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 01-G-0002
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 2 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 07:33

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279	95-C2BF-S-2000	STRUCTURAL - FOUNDATION PLAN
280	95-C2BF-S-3001	STRUCTURAL - SECTIONS
281	95-C2BF-D-2000	PROCESS - OVERALL PLAN
282	95-C2BF-D-2050	PROCESS - OVERALL SPRINKLER PLAN
283	95-C2BF-D-2100	PROCESS - ENLARGED PLANS
284	95-C2BF-D-2200	PROCESS - SECTIONS
285	95-C2BF-D-2300	PROCESS - DETAILS
286	95-C2BF-D-2400	PROCESS - ISOMETRIC
287	95-C2BF-E-2000	ELECTRICAL - POWER PLAN
		(95-C3CS) FINISHED COMPOSTING STORAGE BUILDING
288	95-C3CS-R-0001	RENDERING
289	95-C3CS-S-2000	STRUCTURAL - FOUNDATION PLAN - BASE BID
290	95-C3CS-S-2010	STRUCTURAL - FOUNDATION PLAN - ALTERNATE BID
291	95-C3CS-S-3001	STRUCTURAL - SECTION
292	95-C3CS-S-3002	STRUCTURAL - SECTION
293	95-C3CS-S-5001	STRUCTURAL - DETAILS
294	95-C3CS-A-2000	ARCHITECTURAL - FLOOR PLAN
295	95-C3CS-A-2100	ARCHITECTURAL - ROOF PLAN
296	95-C3CS-A-3001	ARCHITECTURAL - ELEVATIONS
297	95-C3CS-A-3101	ARCHITECTURAL - SECTION
298	95-C3CS-A-6001	ARCHITECTURAL - SCHEDULES
299	95-C3CS-E-2000	ELECTRICAL - FACILITY PLAN - BASE BID
300	95-C3CS-E-2010	ELECTRICAL - FACILITY PLAN - ALTERNATE BID

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REGISTERED PROFESSIONAL ENGINEER
VIBHUTI PANDEY
36209
OKLAHOMA
DIGITALLY SIGNED ON 05/08/2026

REVISION	BY	DATE

General

DRAWING INDEX 2

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MN	05/7/26	
HORIZONTAL:	LEAD ENG.	RZ	5/6/26	
VERTICAL:	FIELD MGR.		5/6	DESIGN MANAGER
FILE:	DRAWING: 01-G-0003			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 3 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 15:42

SUMMARY OF CONTRACT QUANTITIES

NUMBER	REFERENCE	ITEM DESCRIPTION	UNIT	QUANTITY
1	01 50 00	MOBILIZATION	EA	1
2	70-THK1-X-XXXX DRAWINGS	(EXISTING) GRAVITY THICKENER, COMPLETE	EA	1
3	40-WAS1-X-XXXX DRAWINGS	(EXISTING) RAS_WAS FACILITY, COMPLETE	EA	1
4	70-RDT1-X-XXXX DRAWINGS	(EXISTING) ROTARY DRUM THICKENER, COMPLETE	EA	1
5	90-D2BL-X-XXXX DRAWINGS	SLUDGE MIXING BUILDING, COMPLETE (EXCLUDING BLOWERS, PUMP AND MIXING ASSEMBLY)	EA	1
6	44 42 19.04	SLUDGE MIXING BUILDING, BLOWERS	EA	3
7	44 42 56.01	SLUDGE MIXING BUILDING, HORIZONTAL PUMP AND MIXING ASSEMBLY	EA	2
8	90-D1CT-X-XXXX DRAWINGS	SLUDGE TANK SEDIMENT REMOVAL	CY	400
9	90-D1CT-X-XXXX DRAWINGS	SLUDGE TANKS, COMPLETE	EA	1
10	90-D1BL-X-XXXX DRAWINGS	DEWATERING CENTRIFUGE BUILDING, COMPLETE (EXCLUDING CENTRIFUGES AND SLUDGE CONVEYOR SYSTEM)	EA	1
11	43 22 23	DEWATERING CENTRIFUGE BUILDING, CENTRIFUGES No.1 and No. 2	EA	2
12	44 46 13.01	DEWATERING CENTRIFUGE BUILDING, SLUDGE CONVEYOR SYSTEM	EA	1
13	90-D3BL-X-XXXX DRAWINGS	(EXISTING) SLUDGE MIXING ELECTRICAL ROOM, COMPLETE	EA	1
14	95-C2BL-X-XXXX DRAWINGS	COMPOSTING BUILDING, COMPLETE	EA	1
15	95-C2BF-X-XXXX DRAWINGS	BIOFILTER NO. 1, COMPLETE	EA	1
16	95-C3CS-X-XXXX DRAWINGS	FINISHED COMPOSTING STORAGE BUILDING BASE BID, COMPLETE	EA	1
17	95-C1BL-X-XXXX DRAWINGS	COMPOSTING OPERATIONS BUILDING, COMPLETE	EA	1
18	33 32 13	PACKAGED SANITARY LIFT STATION	EA	1
19	23 13 00	TRUCK WASH AND FUEL STATION	EA	1
20	11 82 30	TROMMEL SCREEN UNIT	EA	1
21	01 29 00	HYDROJETTER	EA	1
22	02 41 00	DEMOLITION AND SITE CLEARING	EA	1
23	01 57 13	EROSION CONTROL	EA	1
24	Division 31	SITE GRADING (CUT/FILL/IMPORT/EXPORT)	EA	1
25	31 32 19.16	GEOTEXTILE	SF	21,975
26	32 11 23	ROADWAY BASECOURSE	SF	21,975
27	32 12 16	SURFACING COURSE	SF	21,975
28	32 12 16	ASPHALT PAVEMENT	SF	21,975
29	32 16 00	CONCRETE VALLEY GUTTER	LF	1,108
30	32 17 23	STRIPING	EA	1
31	32 16 00	WHEEL STOPS	EA	24
32	10 14 00	SIGNAGE	EA	1
33	32 12 16	ASPHALT PAVEMENT PATCHES	SF	10,805
34	32 13 13	CONCRETE PAVEMENT	SF	100,909
35	32 16 00	SIDEWALKS	SF	4,474
36	32 16 00	CURB	LF	288
37	03 30 00	SITE EQUIPMENT PADS	SF	100
38	32 31 13	FENCING AND GATES (SEE NOTE 11)	LF	1,426
39	01 29 00, 09 90 00	REMOVE EXISTING PAINT AND RECOAT BOLLARDS SAFETY YELLOW	EA	2
40	01 29 00	SITE GUARD POSTS	EA	52
41	01 57 13	SEEDING	SF	63,791
42	33 05 01.10, 40 27 00.14	6-INCH HDPE CENTRATE, BURIED WITH FITTINGS	LF	732
43	33 05 01.09, 40 27 00.10	2-INCH PVC W1/W2, BURIED WITH FITTINGS	LF	421
44	33 05 01.09, 40 27 00.10	2-1/2INCH PVC W1, BURIED WITH FITTINGS	LF	101
45	33 05 01.09, 40 27 00.10	4-INCH PVC W1/W2, BURIED WITH FITTINGS	LF	475
46	33 05 01.09, 40 27 00.10	6-INCH PVC W1, BURIED WITH FITTINGS	LF	620
47	33 05 01.09, 40 27 00.10	10-INCH PVC W1, BURIED WITH FITTINGS	LF	368
48	33 05 01.10, 40 27 00.14	6-INCH HDPE TWAS, BURIED WITH FITTINGS	LF	50
49	33 05 01.10, 40 27 00.14	8-INCH HDPE TWAS, BURIED WITH FITTINGS	LF	619
50	33 05 01.10, 40 27 00.14	4-INCH HDPE SSC, BURIED WITH FITTINGS	LF	569
51	33 05 01.10, 40 27 00.14	6-INCH HDPE WAS, BURIED WITH FITTINGS	LF	608
52	33 05 01.09, 40 27 00.10	12-INCH PVC PD, BURIED WITH FITTINGS	LF	230
53	33 05 01.09, 40 27 00.10	8-INCH PVC PD, BURIED WITH FITTINGS	LF	365
54	33 05 01.09, 40 27 00.10	4-INCH PVC PD, BURIED WITH FITTINGS	LF	1,146
55	33 05 01.09, 40 27 00.10	3-INCH PVC SPD, BURIED WITH FITTINGS	LF	631
56	40 05 15	10-INCH ALP, BURIED WITH FITTINGS	LF	20
57	02 41 00	DEMOLISH 6-INCH TO 10-INCH DUCTILE IRON SLUDGE/DRAIN	LF	4,000
58	02 41 00	ABANDON 6-INCH PVC SLUDGE	LF	583
59	02 41 00	ABANDON 36-INCH DUCTILE IRON INFLUENT	LF	407
60	02 41 00	ABANDON 48-INCH DUCTILE IRON INFLUENT	LF	419
61	02 41 00	ABANDON 12-INCH DUCTILE IRON FILTRATE	LF	564
62	02 41 00	ABANDON 24-INCH DUCTILE IRON OVERFLOW	LF	350
63	02 41 00	ABANDON 24-INCH DUCTILE IRON MIX LIQUOR	LF	172
64	02 41 00	ABANDON 24-INCH DUCTILE IRON OVERFLOW	LF	54
65	02 41 00	ABANDON 24-INCH DUCTILE IRON OVERFLOW	LF	294
66	02 41 00	ABANDON 4-INCH DUCTILE IRON SCUM	LF	140
67	33 44 13.13	CATCH BASINS	EA	7
68	33 05 13	SANITARY SEWER MANHOLE	EA	4
69	40 27 02	4" BFP	EA	1
70	40 27 02	10" METER, PSV AND VAULT	EA	1
71	40 27 02	4" GATE VALVES	EA	6
72	33 05 16.13	PRECAST VAULT (11' x 5')	EA	1

SUMMARY OF CONTRACT QUANTITIES

NUMBER	REFERENCE	ITEM DESCRIPTION	UNIT	QUANTITY
73	26 05 02	ELECTRICAL DUCTBANK 1	LF	390
74	26 05 02	ELECTRICAL DUCTBANK 2	LF	70
75	26 05 02	ELECTRICAL DUCTBANK 3	LF	10
76	26 05 02	ELECTRICAL DUCTBANK 4	LF	20
77	26 05 02	ELECTRICAL DUCTBANK 5	LF	18
78	26 05 02	ELECTRICAL DUCTBANK 6	LF	150
79	26 05 02	ELECTRICAL DUCTBANK 7	LF	90
80	26 05 02	ELECTRICAL DUCTBANK 8	LF	100
81	26 05 02	ELECTRICAL DUCTBANK 9	LF	445
82	26 05 02	ELECTRICAL DUCTBANK 10	LF	135
83	26 05 02	ELECTRICAL DUCTBANK 11A	LF	475
84	26 05 02	ELECTRICAL DUCTBANK 11B	LF	475
85	26 05 02	ELECTRICAL DUCTBANK 12	LF	95
86	26 05 02	ELECTRICAL DUCTBANK 13	LF	40
87	26 05 02	ELECTRICAL DUCTBANK 14	LF	315
88	26 05 02	ELECTRICAL DUCTBANK 15	LF	30
89	26 05 02	ELECTRICAL DUCTBANK 16	LF	225
90	26 05 02	ELECTRICAL DUCTBANK 17	LF	530
91	26 05 02	ELECTRICAL DUCTBANK 18	LF	105
92	26 05 02	ELECTRICAL DUCTBANK 19	LF	165
93	26 05 02	ELECTRICAL DUCTBANK 20	LF	70
94	26 05 02	ELECTRICAL MANHOLE	EA	7
95	26 05 02	ELECTRICAL HANDHOLE	EA	7
96	26 05 02	FIBER OPTIC DUCTBANK (2 - 2" CONDUIT)	EA	800
97	26 08 00	PAD MOUNTED SWITCH	EA	1
98	26 08 00	PAD MOUNTED TRANSFORMER	EA	1
99	26 50 00	LUMINAIRE AND POLE	EA	14
100	01 29 00	OWNER'S ALLOWANCE	ALLOW	1,000,000
101	01 29 00	AS-BUILT DRAWINGS	EA	1
ALT01	43 22 23	BID ALTERNATE 1: CENTRIFUGE NO. 3	EA	1
ALT02	41 61 29	BID ALTERNATE 2: FRONT-END LOADERS	EA	2
ALT03	50-FCL1-S-XXXX DRAWINGS	BID ALTERNATE 3: SCUM COLLECTION SYSTEM	EA	1
ALT04	95-C3CS-X-XXXX DRAWINGS	BID ALTERNATE 4: FINISHED COMPOSTING STORAGE BUILIDNG	EA	1

GENERAL NOTES:

1. PAY NOTE: CONTRACTOR SHALL REFERENCE PAY NOTES IN ITEMS 1.05 PARAGRAPH B SECTION 01 29 00 VOLUME 1 OF PROJECT SPECIFICATIONS.

2. WORK COVERED BY CONTRACT DOCUMENTS - THE COMPLETED WORK WILL PROVIDE OWNER WITH FACILITY AT HCWWTP THAT INCLUDES THE FOLLOWING:
   A. INSTALLATION OF THE NEW SCUM COLLECTION SYSTEM
   B. REVISIONS TO EXISTING GRAVITY THICKENER
   C. REVISIONS TO EXISTING WAS PUMPS
   D. REVISIONS TO EXISTING ROTARY DRUM THICKENER
   E. INSTALLATION OF NEW SLUDGE MIXING BUILDING
   F. INSTALLATION OF NEW SLUDGE TANK
   G. REVISIONS TO EXISTING DEWATERING BUILDING
   H. REVISIONS TO EXISTING SLUDGE MIXING ELECTRICAL ROOM
   I. INSTALLATION OF NEW COMPOSTING BUILDING
   J. INSTALLATION OF NEW BIOFILTER
   K. INSTALLATION OF NEW FINISHED COMPOSTING STORAGE BUILDING
   L. INSTALLATION OF NEW COMPOSTING OPERATIONS BUILDING
   M. INSTALLATION OF NEW TRUCK WASH AND FUEL STATION
   N. INSTALLATION OF ELECTRICAL AND FIBER OPTIC DUCTBANKS
   O. INSTALLATION OF YARD PIPING
   P. CONSTRUCTION OF NEW ROADWAY
   Q. INSTALLATION AND REMOVAL OF TEMPORARY CONSTRUCTION ACCESS
   R. ADDITIONAL ITEMS AS SHOWN IN THE CONTRACT DOCUMENTS

3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARDS OF THE CITY OF TULSA WATER AND SEWER DEPARTMENT.

4. CONTRACTOR SHALL SUBMIT A CONSTRUCTION SAFETY PLAN TO ENGINEER PRIOR TO COMMENCEMENT OF WORK. THE SAFETY PLAN SHALL ADDRESS BUT NOT BE LIMITED TO ISSUES SUCH AS TRAFFIC CONTROL, WORKSITE SAFETY, CONFINED SPACE ENTRY, WORKER PROTECTIVE EQUIPMENT, FIRST AID, HYGIENE AND OTHER RELATED TOPICS. CONTRACTORS SHALL FOLLOW THE SAFETY PLAN AND PERFORM THE WORK IN A MANNER THAT PROTECTS THE SAFETY OF WORKERS, INSPECTORS, BYSTANDERS, AND OTHERS WHO MAY BE IN THE VICINITY OF THE PROJECT.

5. THE CONTRACTOR SHALL HAVE AT LEAST ONE (1) FULLY EXECUTED COPY OF THE CONTRACT DOCUMENT AT THE JOB SITE AT ALL TIMES.

6. UTILITIES SHOWN ON THE DRAWINGS ARE BASED ON THE ENGINEER'S REVIEW OF UTILITY INFORMATION. PRIOR TO ANY EXCAVATIONS, CONTRACTOR SHALL CONTACT OKIE811 TO LOCATE BURIED UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE AND DOCUMENT THE LOCATION OF ALL EXISTING UTILITY LINES, PIPING, CONDUITS AND STRUCTURES (BURIED OR EXPOSED) REGARDLESS OF WHETHER THEY ARE SHOWN ON THE DRAWINGS. DURING CONSTRUCTION, CONTRACTOR SHALL CARRY OUT OPERATIONS IN A MANNER THAT WILL PREVENT DAMAGE TO ALL EXISTING UTILITIES OR STRUCTURES. ANY SUCH DAMAGE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. IF THERE IS ANY INTERFERENCE TO THE ALIGNMENT OR ELEVATION OF NEW FACILITATES, IT SHALL, BE THE CONTRACTOR'S REPSONSIBILITY TO NOTIFY THE ENGINEER SUCH THAT THE CONFLICT CAN BE RESOLVED. A LIST OF UTILITY COMPANIES WHICH MAY HAVE FACILITIES IN THE PROJECT AREA ARE LISTED ON THE PROJECT CONTACT LIST SHOWN ON THE COVER SHEET.

7. CONTRACTOR SHALL CARRY OUT CONSTRUCTION OPERATIONS IN A MANNER THAT WILL PREVENT DAMAGE TO ALL EXISTING FACILITIES. ANY SUCH DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

8. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEWATERING REQUIRED TO COMPLETE THE CONSTRUCTION. DEWATERING SHALL CONFIRM TO ALL LOCAL, STATE AND FEDERAL REGULATIONS.

9. CONSTRUCTION ITEMS SHOWN ON THE DRAWINGS OR OTHERWISE REQUIRED BY CODE BUT ARE NOT SPECIFICALLY INCLUDED IN THE SUMMARY OF BID ITEMS AND QUANTITIES SHALL BE CONSIDERED INCIDENTAL CONSTRUCTION ITEMS, AND THEIR COST SHALL BE INCLUDED IN THE COST OF THE BID ITEMS PROVIDED.

10. ALL PAVEMENT REMOVAL SHALL BE SAW CUT AT THE NEW LINES SHOWN ON THE DRAWINGS OR AS INDICATED IN THE SPECIFICATIONS. WHEN APPROPRIATE, CONTRACTOR SHALL EXTEND THE PAVEMENT REMOVAL TO EXISTING JOINTS IF APPROVED BY THE ENGINEER. CONCRETE PAVEMENTS, FLEXIBLE PAVEMENTS, CURB AND GUTTER, AND UNPAVED SURFACES SHALL BE FINISHED TO MATCH THE EXISTING SURROUNDING SURFACES.

11. FENCING DISTURBED DUE TO CONSTRUCTION SHALL BE REPLACED WITH NEW MATERIALS AND SHALL BE INCLUDED IN THE CLEARING AND RESTORATION UNIT PRICE.

REGISTERED PROFESSIONAL ENGINEER
VIBHUTI PANDEY
36209
OKLAHOMA
DIGITALLY SIGNED ON 05/08/2026

REVISION	BY	DATE

GENERAL

PAY QUANTITIES AND NOTES

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
	PROJ. MGR.	MSN 05/7/26	
HORIZONTAL:	LEAD ENG.	RJL 5/7/26	
VERTICAL:	FIELD MGR.	5/7/26	DESIGN MANAGER
FILE:	DRAWING: 01-G-0004		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 4 OF 300 SHEETS

PLOT DATE: 20-MAY-2026 PLOT TIME: 16:42

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ABBREVIATIONS

SYMBOLS	
Δ	DELTA, DIFFERENCE
Σ	SUM
×	MULTIPLY
÷	DIVIDE
?	SQUARE ROOT
>	SELECT HIGHEST SIGNAL
<	SELECT LOWEST SIGNAL
}	BIAS
%	GAIN, ATTENUATE
1:1	REPEAT, BOOST
@	AT
#	NUMBER / POUND
°F	DEGREES FAHRENHEIT
°C	DEGREES CELSIUS

A	
A	AMPERE, AUTOMATIC, AMMETER, AMPERES
AB	ANCHOR BOLT
ABP	AIR BLOWER PUMP
ABR	AIR BLOWER
AC	ACOUSTICAL CEILING, ALTERNATING CURRENT, ASPHALT CONCRETE
ACC	AIR-COOLED CIRCUIT
ACCU	AIR-COOLED CONDENSING UNIT
ACB	AIR-CIRCUIT BREAKER
ACH	ALUMINUM CHLOROHYDRATE
ACI	AMERICAN CONCRETE INSTITUTE
ACP	AREA CONTROL PANEL
ACT	VALVE ACTUATOR
ACS	ACCESS CONTROL SYSTEM
ACU	AIR CONDITIONING UNIT
ACL	AIR CLEANER
ACM	AIR COMPRESSOR
AD	AREA DRAIN
ADA	AMERICANS W/ DISABILITIES ACT
ADF	AIR DIFFUSER
ADM	ADMINISTRATION
AER	AERATOR
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AGP	AUTO GREASE PUMP
AHU	AIR HANDLING UNIT
AHV	ACTIVE HARMONIC FILTER
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AL	ALUMINUM
ANL	ANALYZER
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APO	ANONIC POLYMER
ARB	AERATION BASIN
ART	AIR RECEIVING TANK
ARV	AIR RELIEF VALVE
AS	ADJUSTABLE SPEED
ASC	AUXILIARY SWITCH CLOSED
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASF	AIR SUPPLY FAN
ASO	AUXILIARY SWITCH OPEN
ASTM	ASTM INTERNATIONAL
ASU	AIR SUPPLY UNIT
ATC	AUTOMATIC TRANSFER CONTROL
AUX	AUXILIARY
ARVG	AIR VACUUM RELEASE VALVE

B	
BAR	BAROMETER
BC	BOTTOM OF CURB
BDB	BASIN DISTRIBUTION BOX
BDD	BACK DRAFT DAMPER
BDR	BASIN DRAIN
BF	BLIND FLANGE
BFG	BUTTERFLY GATE
BFV	BUTTERFLY VALVE
BFP	BACKFLOW PREVENTER
BIO	BIOSELECTORS
BLDG	BUILDING
BLO	BLOWER
BLT	BUILDING LIGHTS
BLV	BALL VALVE
BO	BLOWOFF
B.O.	BOTTOM OF
BTU	BRITISH THERMAL UNITS
BRN	BURNER
BRS	BAR SCREEN
BSP	BOOSTER PUMP
BUB	BUBBLER
BWA	BACKWASH AIR
BWS	BACKWASH SUPPLY
BWW	BACKWASH WASTE

C	
CA	COMPRESSED AIR
CARV	COMBINATION AIR RELEASE VALVE
CAS	COMPRESSED AIR SYSTEM
CAU	COMPRESSED ABSORPTION SYSTEM
CBP	CHAMBER BYPASS
CBS	COVERED BASIN
CCP	CENTRAL CONTROL PANEL
CCS	CENTRAL CONTROL SYSTEM
CCTV	CLOSED CIRCUIT TELEVISION
CCU	CARBON CANISTER UNIT
CD	CEILING DIFFUSER
CDF	CONTROLLED DENSITY FILL
CDO	CARBON DIOXIDE
CDS	CARBON DIOXIDE SOLUTION
CDU	CLARIFIER DRIVE UNIT
CEN	CENTRIFUGE
CENT	CENTRIFUGAL
CF	CUBIC FEET
CFE	COMBINED FILTER EFFLUENT
CFM	CUBIC FEET PER MINUTE
CFP	CHEMICAL FEED PUMP
CFS	CUBIC FEET PER SECOND
CHEM	CHEMICAL
CHKD	CHECKERED
CHL	CHLORINATION
CHV	CHECK VALVE
CI	CAST IRON, CHEMICAL INJECTOR
CIP	CAST IN PLACE
CISP	CAST IRON SOIL PIPE
CJ	CONSTRUCTION JOINT
CL	CENTERLINE
CLDI	CEMENT LINED DUCTILE IRON
CLF	CHLORINE FEED SYSTEM
CLI	COVER LEVEL INDICATOR
CLR	CLEAR
CLSM	CONTROLLED LOW STRENGTH MATERIAL
CLP	COOLING WATER PUMP
CML&TW	CEMENT MORTAR LINED AND TAPE WRAPPED
CMMS	COMPUTERIZED MAINTENANCE MONITORING SYSTEM
CMP	CENTRAL MONITORING PANEL
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CNT	CONTROL
CNV	CONVEYOR
COAX	COAXIAL CABLE
COL	COLUMN
COM	COMPOST
CON	CONTROLLER
CONC	CONCRETE
COND	CONDENSATE, CONDUCTIVITY
CONN	CONNECTION
COP	COPPER
CO2	CARBON DIOXIDE
CP	CONTROL PANEL, CATHODIC PROTECTION
CPLG	COUPLING
CPP	COPPER PATCH PANEL
CPT	CONTROL POWER TRANSFER
CPU	CENTRAL PROCESSING UNIT
CPVC	CHLORINATED POLYVINYL CHLORIDE
CS	CAUSTIC SODA, CONTROL STATION, CONSTANT SPEED
CS-2	CONSTANT SPEED, 2 SPEED
CSP	CHLORINE SOLUTION PUMP
CT	CONTACT TIME
CTR	CENTER
CU	CUBIC, CONDENSING UNIT
CUS	COPPER SULFATE
CU FT	CUBIC FEET
CU IN	CUBIC INCHES
CU YD	CUBIC YARDS
CV	CHEMICAL VAULT
CW	CLARIFIED WATER
CWP	CHLORINE WATER PUMP
CWU	CHLORINE WATER UNIT
C900	AWWA C900 POLYVINYL CHLORIDE

D	
DA	DUAL ACTION
DAF	DIFFUSED AIR FLOTATION
DAS	DATA ACQUISITION SYSTEM
DBD	DRYING BEDS
DBL	DOUBLE
DC	DIRECT CURRENT
DCV	DOUBLE CHECK VALVE
DDU	DITCH DRIVE UNIT
DEC	DECANT
DEG	DEGREE
DEH	DEHUMIDIFIER
DEMO	DEMOLITION
DET	DETECTOR
DEP	DETECTOR PLAN
DFN	DRINKING FOUNTAIN
DFU	DIFFUSED AIR FLOTATION UNIT
DGM	DIGESTER GAS METER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RETURN
DI	DUCTILE IRON
DIA	DIAMETER
DIAG	DIAGONAL
DIG	DIGESTER
DIP	DUCTILE IRON PIPE
DIV	DIVISION
DLC	DIFFERENTIAL LEVEL CONTROL
DN	DOWN
DO	DISSOLVED OXYGEN
DOM	D.O. METER
DOR	DOOR OPENER
DP	DISTRIBUTION PANEL
DPDT	DOUBLE POLE DOUBLE-THROW
DPM	DIGITAL POWER MONITOR
DR	DRAIN
DRN	DIURNAL BASIN
DRV	DIGESTER RELIEF VALVE
DRY	AIR DRYER
DSW	DISCONNECT SWITCH
DW	DOUBLE-WALL
DWP	DEWATERING PUMP
DWV	DRAIN WASTE VENT

E	
EA	EXHAUST AIR
ECC	ECCENTRIC
ECU	EVAPORATIVE COOLING UNIT
EDH	ELECTRIC DUCT HEATER
EEP	EMERGENCY ESCAPE PACK
EES	EYEWASH/EMERGENCY SHOWER
EF	EXHAUST FAN, EACH FACE
EFF	EFFLUENT
EFP	EFFLUENT PUMP
EG	EXHAUST GRILLE
EHF	EXHAUST FAN
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EJT	EJECTOR
EL	ELEVATION
ELD	EXTENSION LADDER
ELDI	CERAMIC EPOXY LINED DUCTILE IRON PIPE
ELEC	ELECTRICAL
ELT	EMERGENCY LIGHTS
ELV	ELEVATOR
EMS	EMERGENCY MONITORING SYSTEM
EMT	ELECTRICAL METALLIC TUBING
ENC	ENCASED
ERV	ENERGY RECOVERY VENTILATOR
ESB	EMERGENCY STORAGE BASIN
ETAP	ETHERNET TAP
EVP	EVAPORATOR
EQ	EQUAL
EQPT	EQUIPMENT
ET	EXPANSION TANK
EVP	EVAPORATOR
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXF	EXCESS FLOW FACILITY
EXP	EXPOSED
EXP JT	EXPANSION JOINT
EXIST	EXISTING
EXT	EXTERIOR

F	
F	FAHRENHEIT
FACP	FIRE ALARM CONTROL PANEL
FAN	DUCT FAN
FAR	FLAME ARRESTOR
FC	FLEXIBLE CONDUIT, FAILED CLOSED
FCA	FLEXIBLE COUPLING ADAPTER
FCO	FLOOR CLEAN OUT
FCL	FINAL CLARIFIER
FCV	FLOW CONTROL VALVE
FD	FLOOR DRAIN
FDN	FOUNDATION
FDR	FEEDER
FE	FILTER EFFLUENT
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
FEXT	FIRE EXTINGUISHER
FF	FINISHED FLOOR
FFE	FINISHED FLOOR ELEVATION
FG	FINISH GRADE, FLAP GATE
FHD	FUME HOOD
FI	FILTER INFLUENT
FIG	FIGURE
FL	FLOOR
FLC	FLOCCULATOR
FLG	FLANGE
FLEX	FLEXIBLE
FLOCC	FLOCCULATION
FLM	FLUME
FLP	FAIL LAST POSITION
FLT	FILTER
FMN	FORCE MAIN
FMT	FLOW METER
FO	FAIL OPEN, FIBER OPTIC
FP	FIRE PROTECTION, FLOW PANEL
FPP	FIBER PATCH PANEL
FPS	FEET PER SECOND
FRP	FIBERGLASS REINFORCED PLASTIC
FS	FLOAT SWITCH, FLOOR SINK, FERRIC SULFATE
FSS	FIRE SPRINKLER SYSTEM
FT	FOOT/FEET
FTB	FLOW TUBE
FTG	FOOTING
FTW	FILTER TO WASTE
FV	FLOW VALVE
FW	FINISHED WATER (POTABLE WATER)
FWD	FORWARD

G	
GA	GAUGE
GAC	GRANULAR ACTIVATED CARBON
GALV	GALVANIZED
GB	GYPSUM BOARD, GIGABIT
GCWR	OZONE GENERATOR COOLING WATER RETURN
GCWS	OZONE GENERATOR COOLING WATER SUPPLY

GENERAL NOTE:

THIS IS A STANDARD LEGEND SHEET. THEREFORE, NOT ALL OF THE INFORMATION SHOWN MAY BE USED ON THIS PROJECT.

REGISTERED PROFESSIONAL ENGINEER
VIBHUTI PANDEY
36209
OKLAHOMA
DIGITALLY SIGNED ON 05/08/2026

REVISION	BY	DATE

GENERAL

ABBREVIATIONS 1

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN	05/26
HORIZONTAL:	LEAD ENG.	RJL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 01-G-0005		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 5 OF 300 SHEETS

PLOT DATE: 20-MAY-2026 PLOT TIME: 21:27

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ABBREVIATIONS

GDR	GRINDER
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GFR	GROUND FAULT RELAY
GHZ	GIGAHERTZ
GMC	GAS MIXING COMPRESSOR
GOX	GASEOUS OXYGEN
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPR	GENERATOR PROTECTOR RELAY
GPS	GLOBAL POSITIONING SYSTEM
GR	GAC RETURN
GRTG	GRATING
GS	GAC SUPPLY
GSC	GAS STORAGE COMPRESSOR
GSP	GALVANIZED STEEL PIPE
GSS	GAS STORAGE SPHERE
GST	GRIT SETTLING TANK
GT	GATE, GRAVITY THICKENER
GTU	GRIT UNIT
GV	GATE VALVE
GW	GROUNDWATER
GWB	GYPSUM WALL BOARD
H	
H2S	HYDROGEN SULFIDE
H.A.S.	HEADED ANCHOR STUDS
HAU	HEAT & A/C UNIT
HC	HOLLOW CORE WOOD
HCG	HIGH-CAPACITY GRILLE
HCL	HYDROCHLORIC ACID
HCP	HVAC CONTROL PANEL
HD	HUB DRAIN
HDG	HOT DIP GALVANIZED
HDMI	HIGH-DEFINITION MULTIMEDIA INTERFACE
HDPE	HIGH DENSITY POLYETHYLENE
HID	HIGH INTENSITY DISCHARGE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HORSEPOWER, HEAT PUMP
HPS	HIGH PRESSURE SODIUM
HPT	HIGH POINT
HPU	HYDRAULIC POWER UNIT
HPW	HOT PROCESS WATER
HPR	HOPPER
HRE	HEAT RECOVERY EXCHANGER
HRS	HEAT RECOVERY SILENCER
HRT	HYDRAULIC RETENTION TIME
HRU	HEAT RECOVERY UNIT
HSS	HOLLOW STRUCTURAL SECTIONS
HTR	HEATER UNIT
HV	HOSE VALVE
HVAC	HEATING VENTILATING AND AIR CONDITIONING
HW	HIGH WATER
HWH	HOT WATER HEATER
HWP	HEATED WATER PUMP
HZ	HERTZ
I	
IBC	INTERNATIONAL BUILDING CODE
I&C	INSTRUMENTATION & CONTROL
ID	INSIDE DIAMETER
IDU	INDOOR UNIT
I.E.	INVERT ELEVATION
I.F.	INSIDE FACE
IFE	INDIVIDUAL FILTER EFFLUENT
IH	INTAKE HOOD
IN	INCH
IND	INDUCTOR
INSUL	INSULATION
INV	INLET VALVE
IP	INTERNET PROTOCOL
IRRIG	IRRIGATION
IU	INTAKE UNIT
J	
JB	JUNCTION BOX
JT	JOINT

K	
KA	KILOAMPERES
KAIC	KILOAMPERES INTERRUPTING CAPACITY
KV	KILOVOLTS
KVA	KILOVOLTS AMPERES
KW	KILOWATT
L	
LAB	LABORATORY
LAM	LAMINATE
LAV	LAVATORY
LB	POUND
LC	LIGHTING CONTROLLER
LCU	LONGITUDINAL COLLECTOR UNIT
LCP	LOCAL CONTROL PANEL
LDR	STATIONARY LADDER
LFT	LIFT STATION
LIT	LEVEL INDICATING TRANSMITTER
LLC	LEVEL CONTROLLER
LLWL	LOW LOW WATER LEVEL
LMT	LIMITORQUE
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LOR	LOCAL-OFF-REMOTE
LOX	LIQUID OXYGEN
LP	LOW VOLTAGE PANEL, LIGHTING PANEL
LPT	LOW POINT
LSIG	LONG TIME/SHORT TIME/INSTANTANEOUS GROUND FAULT
LVR	LOUVER
M	
MATL	MATERIAL
MAG	MAGNETIC
MAN	MANOMETER
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MBD	MAIN BELT DRIVE
MBH	1000 BTU/HR
MCC	MOTOR CONTROL CENTER
MD	MOTORIZED DAMPER
MDB	MODIFIED BASIN
MDC	MOTORIZED DAMPER CONTROL
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MFR	MANUFACTURER
MG	MILLION GALLONS
MGD	MILLION GALLONS PER DAY
MG/L	MILLIGRAM PER LITER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MIX	MIXER
MJ	MECHANICAL JOINT
MM	MILLIMETER
MNH	MANHOLE
MNT	MAINTENANCE
MO	MASONRY OPENING
MPM	METERING PUMP
MPOE	MAIN POINT OF ENTRY
MPR	MOTOR PROTECTION RELAY
MPS	METERING PUMP SKID
MSC	MANUFACTURER SUPPLIED CABLE
MSP	MOTORIZED ROTATING SCUM PIPE
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
MV	MEDIUM VOLTAGE
MVA	MEGA-VOLT AMPERES
MWS	MAXIMUM WATER SURFACE
N	
N	NORTH
N2	NITROGEN GAS
N/A	NOT APPLICABLE
NAD	NORTH AMERICAN DATUM
NAS	NETWORK ATTACHED STORAGE
NAVD	NORTH AMERICAN VERTICAL DATUM
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NIC	NOT IN CONTRACT
NIP	NETWORK INTERFACE PANEL
NPL	NETWORK PANEL
NPP	NON-POTABLE WATER PUMP

NPW	NON-POTABLE WATER (RECLAIMED EFFLUENT)
NO.	NUMBER (#), NORMALLY OPEN
NO3N	NITRATE AS NITROGEN
NTP	NETWORK TIME PROTOCOL
NTS	NOT TO SCALE
NVR	NETWORK VIDEO RECORDER
O	
O2	OXYGEN
OA	OUTSIDE AIR
OC	ON CENTER
OCF	ODOR CONTROL FAN
OCS	ODOR CONTROL SCRUBBER
OCR	OVERCURRENT RELAY
OD	OUTSIDE DIAMETER
ODU	OUTDOOR UNIT
OF	OVERFLOW
O.F.	OUTSIDE FACE
OG	OFFGAS
OHD	OVERHEAD DOOR
OHM	OHMMETER
OIT	OPERATOR INTERFACE TERMINAL
OIU	OPERATOR INTERFACE UNIT
OL	OVERLOAD RELAY
OPNG	OPENING
OPP	OPPOSITE
OPS	OPERATIONS
ORP	OXIDATION REDUCTION POTENTIAL
OS	OCCUPANCY SENSOR
OUT	OUTFALL
OWS	OIL WATER SEPARATOR
OZ	OUNCE, OZONE
OZW	OZONATED WATER
P	
P	PNEUMATIC, PILOT LIGHT
P&ID	PROCESS AND INSTRUMENTATION DIAGRAM
PAS	PASTEURIZATION
PBU	POLYMER BLEND UNIT
PC	POINT OF CURVATURE, PLUMBING CODE
PCB	POWER CIRCUIT BREAKER
PCD	PERFORATED CEILING DIFFUSER
PCG	PERFORATED CEILING GRILLE
PCL	PRIMARY CLARIFIER
PCV	PRESSURE CONTROL VALVE
PD	PROCESS DRAIN
PE	PRESSURE ELEMENT
PEA	ANIONIC POLYMER
PEMB	PRE-ENGINEERED METAL BUILDING
PEN	NONIONIC POLYMER
PFP	POLYMER FEED PUMP
PFS	POLYMER FEED SYSTEM
PGD	PORTABLE GAS DETECTOR
PGL	PIPE GALLERY
pH	HYDROGEN ION CONCENTRATION
PI	PRESSURE INDICATOR, POINT OF INTERSECTION
PITO	POINT OF INTERSECTION TURNOUT
PIV	POST INDICATOR VALVE
PJF	PREFORMED JOINT FILLER
PKP	POLYMER STOCK PUMP
PLAM	PLASTIC LAMINATE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PLY	POLYMER SOLUTION PUMP
PMW	PORTABLE WATER METER
PMX	POLYMER MIX
PNC	PNEUMATIC CONTROL
POB	POINT OF BEGINNING
POC	POINT OF CONNECTION, POINT ON CURVE
POE	POWER OVER ETHERNET, POINT OF ENDING
POLY	POLYETHYLENE, POLYMER
PP	POWER POLE
PPD	PUMPED PROCESS DRAIN, POUNDS PER DAY
PPS	POTASSIUM PERMANGANATE SYSTEM
PRC	POINT OF REVERSE CURVATURE
PREFAB	PREFABRICATION
PRS	PRESSURE SWITCH
PRV	PRESSURE REDUCING VALVE
PS	POINT OF SWITCH

PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSP	PRIMARY SLUDGE PUMP
PSS	PUMPED SANITARY SEWER
PSV	PRESSURE SAFETY VALVE
PT	PRESSURE TREATED, POINT OF TANGENCY
PTP	POLYMER TRANSFER PUMP
PUE	PUBLIC UTILITY EASEMENTS
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE, POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVRV	PRESSURE AND VACUUM RELIEF VALVE
PVT	POINT OF VERTICAL TANGENCY
PW	PROCESS WATER (NON-POTABLE, BACKFLOW PREVENT FW)
PWP	PLANT WATER PUMP
PWR	POWER
Q	
QT	QUARRY TILE
R	
RAD	RADIUS
RAR	ROTOR AERATOR
RB	RETENTION BASIN
RBP	RESIDUALS BOOSTER PUMP
RA	RETURN AIR
RC	REINFORCED CONCRETE
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPT	RECEPTACLE
RCY	RECYCLE
RD	ROAD, ROOF DRAIN
RDCR	REDUCER
RDT	ROTATING DRUM THICKENER
RDU	REDUCER
RE	REUSE EFFLUENT
REC	RECORDER
REF	REFERENCE
REFRIG.	REFRIGERATOR
REG	REGULAR
REINF	REINFORCING
REQD	REQUIRED
RG	RETURN GRILLE
RGS	RIGID GALVANIZED STEEL
RFP	RETURN FLOW PUMP
RFR	SAMPLE REFRIGERATOR
RH	ROOF HOOD
RHF	RESIDUALS HANDLING FACILITY
RIO	REMOTE I/O UNIT
RL	REFRIGERANT LIQUID
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RPM	REVOLUTIONS PER MINUTE
RS	RIGID STEEL, REFRIGERANT SUCTION
RSH	REFRIGERANT SUCTION HIGH PRESSURE
RSL	REFRIGERANT SUCTION LOW PRESSURE
RST	REINFORCING STEEL

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VIBHUTI PANDEY
36209
OKLAHOMA
DIGITALLY SIGNED ON 05/08/2026

GENERAL

ABBREVIATIONS 2

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/7/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 01-G-0006 DATE: MAY 2026
ATLAS PAGE NO: 3328 SHEET 6 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 15:42

ABBREVIATIONS

RTU	ROOF TOP UNIT, REMOTE TELEMETRY UNIT
RUP	RUPTURE DISC
RVNR	REDUCED VOLTAGE NON-REVERSING
RVR	REDUCED VOLTAGE REVERSING
RW	RAW WATER
R/W	RIGHT OF WAY
RWR	ROTATING WEIR
S	
SA	SUPPLY AIR, SURGE ARRESTOR
SAM	SAMPLER
SAT	SATURATION TANK
SATC	SUSPENDED ACOUSTICAL TILE CEILING
SBC	SAND BALLASTED CLARIFICATION
SBM	SUBMERSIBLE PUMP
SBS	SODIUM BISULFITE
SBP	SOLUTION BOOSTER PUMP
SC	SHOWER CURTAIN
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
SCB	SELF CONTAINED BREATHING APPARATUS
SCFM	STANDARD CUBIC FEET PER MINUTE
SCL	SECONDARY CLARIFIER
SCP	SCRAPER
SCU	SPEED CONTROL UNIT
SCR	SCREW PUMP
SD	STORM DRAIN
SDG	SLIDE GATE
SDT	SEDIMENT TRAP
SED	SEDIMENTATION
SEP	SEPTIC TANK
SEW	SEWAGE
SF	SQUARE FEET, SUPPLY FAN
SFS	SO2 FEED SYSTEM
SG	SUPPLY GRILLE
SGT	SLUICE GATE
SH	SODIUM HYPOCHLORITE
SHA	SURFACE HARDENING AGENT
SHE	SLUDGE HEAT EXCHANGER
SHS	SOLIDS HANDLING SYSTEM
SIM	SIMILAR
SIP	SECURITY INTERFACE PANEL
SKM	SKIMMER
SLD	STEP LADDER
SLF	SULFONATION
SLG	SETTLED SLUDGE
SLV	SHORT LEG VERTICAL
SMFO	SINGLE MODE FIBER OPTIC
SMLS	SEAMLESS EPOXY
SNL	SILENCER
SNS	SENSOR
SOI	SPRAY-ON INSULATION
SP	SODIUM PERMANGANATE
SPC	SET POINT CONTROL
SPECS	SPECIFICATIONS
SPD	SURGE PROTECTION DEVICE
SPF	SLUDGE FEED SYSTEM
SPR	SEPARATOR
SPS	SO2 PLACING SYSTEM
SPT	SLUDGE PUMP TIMER
SRP	SLUDGE RECIRCULATION PUMP
SSP	SO2 SOLUTION PUMP
SQ	SQUARE
SQ FT	SQUARE FEET
SQ IN	SQUARE INCH
SRC	SAND RECYCLE
SS	SANITARY SEWER
SSHEW	SAFETY SHOWER AND EYEWASH
SST	STAINLESS STEEL
SSVR	SECURITY SERVER
STA	STATION
STD	STANDARD
STIF	STIFFENER
STL	STEEL
STP	SLUDGE TRANSFER PUMP
STR	STRAINER
SUB	SUBSTATION, SUBMERGED
SUSP	SUSPENDED
SUP	SUMP PUMP
SV	SOLENOID VALVE
SVIN	SHEET VINYL
SVL	SEPTIC VALVE
SVR	SERVER
SW	SWITCH, SINGLE-WALL
SWBD	SWITCHBOARD
SWD	SIDE WATER DEPTH
SWGR	SWITCHGEAR
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
SWP	STORMWATER PUMP
T	
T&B	TOP AND BOTTOM
TA	TRANSFER AIR
TAN	TANGENT
TB	TERMINAL BOARD
TCE	TEMPORARY CONSTRUCTION EASEMENT
TCL_2	TOTAL CHLORINE RESIDUAL
TCMU	TEXTURED CONCRETE MASONRY UNIT
TCU	TERMINAL CONTROL UNIT
TDH	TOTAL DYNAMIC HEAD
TDR	TIME DELAY RELAY
TECH	TECHNICAL
TEL	TELEPHONE
TEMP	TEMPERATURE
TF	TOP FACE
TG	TEMPERED GLASS, TRANSFER GRILLE
TGW	TELEPHONE GATEWAY
THD	THREAD
THK	THICKNESS
THWN	THERMOPLASTIC HEAT AND WATER RESISTANT NYLON COATED
TJB	TERMINAL JUNCTION BOX
TL	TWIST LOCK
T.O.	TOP OF
TOD	TOTAL OXYGEN DEMAND
TP	TURNING POINT
TPER	THERMOPLASTIC ELASTOMERIC RUBBER
TPO	THERMOPLASTIC POLYOLEFIN (ROOFING MEMBRANE)
TR	TRUSS
TRN	TRANSFORMER
TRW	TILTING WEIR
TS	TUBE STEEL, TEST STATION
TSS	TOTAL SOLIDS
TSP	THICKENED SLUDGE PUMP
TURB	TURBIDITY
TVSS	TRANSIENT VOLTAGE SURGE PROTECTOR
TW	TREATED WATER
TWP	TRANSLUCENT WALL PANEL
TYP	TYPICAL
U	
UH	UNIT HEATER
UMH	UTILITY MANHOLE
UNC	UNIFORM NATIONAL COARSE
UON	UNLESS OTHERWISE NOTED
ULP	UPS LIGHTING PANEL
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
USB	UNIT SUBSTATION, UNIVERSAL SERIAL BUS
USL	UNTHICKENED SLUDGE
UVA	ULTRAVIOLET ABSORBANCE
UVR	UNDER VOLTAGE RELAY
V	
V	VOLTS
VAC	VOLTAGE ALTERNATING CURRENT
VB	VAPOR BARRIER
VC	VERTICAL CURVE
VCB	VACUUM CIRCUIT BREAKER
VCP	VITRIFIED CLAY PIPE
VCT	VINYL COMPOSITION TILE
VCV	VACUUM VALVE
VDC	VOLTAGE DIRECT CURRENT
VEH	VEHICLE
VEL	VELOCITY
VERT	VERTICAL
VF	VENTILATION FAN
VFD	VARIABLE FREQUENCY DRIVE
VHC	VOLATILE HYDROCARBONS
VHOST	VIRTUAL HOST
VM	VOLTMETER
VPS	VEMMER PLASTER SYSTEM
VPC	POINT OF VERTICAL CURVATURE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT
VR	VOLTAGE REGULATOR
VS	VERTICAL SLIDE
VTR	VENT THRU ROOF
W	
W	WATTS
WAP	WIRELESS ACCESS POINT
WBP	WATER BOOSTER PUMP
WC	WATER COLUMN
WCO	WALL CLEANOUT
WG	WATER GAUGE
WH	WATTHOUR METER, WATER HEATER
WM	WATTMETER, WALL MONITOR
WN	WASTE NEUTRALIZATION
WNT	WASTE NEUTRALIZATION TANK
WP	WORK POINT
WRB	WATER-RESISTANT BOARD
WRG	WEIR GATE
WRF	WATER RECLAMATION FACILITY
WS	WATER STOP
WSG	WATER SUPPLY GATE
WSE	WATER SURFACE ELEVATION
WSP	WELDED STEEL PIPE
WSR	WATER SUPPLY REGISTER
WWF	WELDED WIRE FABRIC
WWPH	WET WEATHER PEAK HOUR
X	
XD	TRANSDUCER
XFMR	TRANSFORMER
Z	
Z	IMPEDANCE
ZS	POSITION SWITCH

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VIBHUTI PANDEY
36209
OKLAHOMA

DIGITALLY SIGNED ON 05/08/2026

GENERAL

ABBREVIATIONS 3

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

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PROFILE:
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DRAWN	AP	
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SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

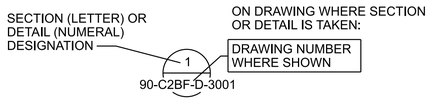
APPROVED:
DESIGN MANAGER

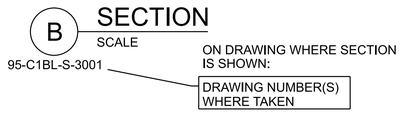
FILE: DRAWING: 01-G-0007 DATE: MAY 2026

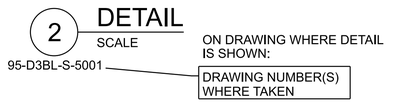
ATLAS PAGE NO: 3328 SHEET 7 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 15:42

SECTION / DETAIL DESIGNATIONS

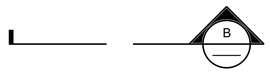




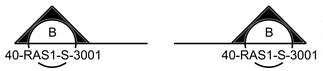


DRAWING TITLE
SCALE

ON DRAWING WHERE ONLY A TITLE IS REQUIRED WITH NO REFERENCE (eg: ELEVATIONS)



SECTION CALLOUT WHERE SECTION IS ON THE SAME SHEET AND CUT EXTENDS TO A FIXED LIMIT



SECTION CALLOUT WHERE SECTION IS ON ANOTHER SHEET AND CUT EXTENDS THROUGHOUT ENTIRE SHEET

GRID LINE INDICATOR

KEYNOTE NUMBER

REVISION / ADDENDA NUMBER

NORTH ARROW; CAN BE MODIFIED TO INCLUDE MAGNETIC NORTH ALONG WITH PROJECT NORTH

DESIGN DETAIL DESIGNATION

NOTES:

1. ALL DESIGN DETAILS ARE TYPICAL AND MUST BE USED IF DESIGN DETAIL DESIGNATION IS NOT SHOWN
2. THE TERM STANDARD DETAIL, OR A FORM OF IT, IS SYNONYMOUS WITH DESIGN DETAIL. THE DESIGN DETAILS REPRESENT THE CHARACTER AND NATURE OF THE WORK REQUIRED THROUGHOUT THE PROJECT. ALL ASSOCIATED WORK SHALL BE IN ACCORDANCE WITH THE DESIGN DETAILS SHOWN WHETHER THE DETAILS ARE SPECIFICALLY REFERENCED OR NOT. STANDARD DETAILS ARE IN SEPARATE 8-1/2 X 11 DRAWING VOLUME 5.

FACILITY / AREA NUMBERS

No.	FACILITY/AREA NUMBERS
	01 GENERAL
	05 SITE CIVIL
	07 YARD PIPING
	08 SITE ELECTRICAL
	09 INSTRUMENTATION & CONTROLS
H040 - RAS_WAS FACILITY	
	40-RAS1 SCREW PUMPS & RAS
	40-WAS1 WAS PUMPS
H050 - SCUM COLLECTION	
	50-FCL1 SCUM COLLECTION
H070 - WAS PUMPS & ROTARY DRUM THICKENER	
	70-RDT1 ROTARY DRUM THICKENER
	70-THK1 GRAVITY THICKENER
H090 - DEWATERING FACILITIES	
	90-DEW1 DEWATERING CENTRIFUGE BUILDING
	90-DEW2 SLUDGE MIXING BUILDING
	90-DEW1 SLUDGE TANKS
	90-DEW3 (EXISTING) SLUDGE MIXING ELECTRICAL ROOM
H095 - COMPOSTING FACILITIES	
	95-COM1 COMPOSTING OPERATIONS BUILDING
	95-COM2 COMPOSTING BUILDING
	95-COM2 BIOFILTER NO. 1
	95-COM3 FINISHED COMPOSTING STORAGE BUILDING

DISCIPLINE DESIGNATORS

A	ARCHITECTURAL
C	CIVIL SITE
D	PROCESS MECHANICAL
E	ELECTRICAL
G	GENERAL
H	HVAC
N	INSTRUMENTATION AND CONTROL
P	PLUMBING
S	STRUCTURAL
R	RENDERING
Y	YARD PIPING

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REGISTERED PROFESSIONAL ENGINEER
VIBHUTI PANDEY
36209
OKLAHOMA
DIGITALLY SIGNED ON 05/08/2026

REVISION	BY	DATE

GENERAL

LEGEND AND SYMBOLS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENG.	5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 01-G-0010		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 8 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 15:42

GENERAL SITE NOTES:

1. SOME EXISTING FEATURES SHOWN IN THE CIVIL PLANS WERE TAKEN FROM RECORD DRAWINGS AND FIELD MEASUREMENTS AND SHALL NOT BE CONSIDERED ACCURATE. ACTUAL EXISTING CONDITIONS MAY VARY FROM THOSE SHOWN ON THESE PLANS. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND ADJUST WORK PLAN ACCORDINGLY PRIOR TO BEGINNING CONSTRUCTION.
2. EXISTING TOPOGRAPHY, STRUCTURES, AND SITE FEATURES ARE SHOWN SCREENED AND/OR LIGHT-LINED.
3. NEW FINISH GRADE, STRUCTURES, AND SITE FEATURES ARE SHOWN HEAVY-LINED.
4. MAINTAIN, RELOCATE, OR REPLACE EXISTING SURVEY MONUMENTS, CONTROL POINTS, AND STAKES WHICH ARE DISTURBED OR DESTROYED. PERFORM THE WORK TO PRODUCE THE SAME LEVEL OF ACCURACY AS THE ORIGINAL MONUMENT(S) IN A TIMELY MANNER, AND AT THE CONTRACTOR'S EXPENSE.
5. FOR LOCATION OF CONTROL POINT ON STRUCTURES, SEE STRUCTURAL DRAWINGS.
6. COORDINATES AND DIMENSIONS SHOWN FOR ROADWAY IMPROVEMENTS ARE TO FACE OF CURB OR EDGE OF PAVEMENT.
7. PROVIDE TEMPORARY FENCING AS NECESSARY TO MAINTAIN SITE SECURITY AT ALL TIMES.
8. ELEVATIONS GIVEN ARE TO FINISH GRADE UNLESS OTHERWISE SHOWN.
9. SLOPE UNIFORMLY BETWEEN CONTOURS AND SPOT ELEVATIONS SHOWN.
10. ALL WORK SHALL BE IN A SAFE MANNER. ALL SAFETY RULES AND GUIDELINES SHALL BE FOLLOWED.

GENERAL YARD PIPING AND UTILITIES NOTES:

1. EXISTING UNDERGROUND UTILITIES OBTAINED FROM AS-BUILTS AND FROM FIELD SURVEY. CONTRACTOR SHALL FIELD VERIFY DEPTH AND LOCATION PRIOR TO EXCAVATION. PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION.
2. EXISTING PIPING AND EQUIPMENT ARE SHOWN SCREENED AND/OR LIGHT-LINED. NEW PIPING AND EQUIPMENT ARE SHOWN HEAVY-LINED.
3. UNLESS OTHERWISE SHOWN ALL PIPING SHALL HAVE A MINIMUM OF 36-INCHES COVER.
4. ALL PIPES SHALL HAVE A CONSTANT SLOPE BETWEEN INVERT ELEVATIONS UNLESS A FITTING IS SHOWN.
5. ALL NEW PIPES MUST BE PROPERLY FLUSHED AND PRESSURE TESTED. IN ADDITION WATER LINES SHALL BE CHLORINATED AND BACTERIOLOGICALLY TESTED.
6. FOR TRENCHING AND BACKFILL, SEE (3123-110) (3123-916) (3123-925) (3123-917) (3123-918).
7. FOR SURFACE RESTORATION OF ASPHALT CONCRETE, SEE (3123-115).
8. MINIMUM ALLOWABLE CLEARANCE BETWEEN PIPES AT CROSSINGS SHALL BE 3". CONTROLLED DENSITY FILL SUPPORT IS REQUIRED AS SHOWN ON (3123-120).

CIVIL LEGEND

EXISTING	THIS CONTRACT	
× 157.7	⊗ 158.50	SPOT ELEVATION
155	155	CONTOUR LINE
	CB OR (CB)	CATCH BASIN OR INLET
		TRENCH DRAIN
	OR	SIGN
	SSMH	SANITARY SEWER MANHOLE
E	(D)	STORM DRAIN MANHOLE/JUNCTION BOX
H	E	ELECTRICAL MANHOLE/HANDHOLE
		POST OR GUARD POST
		GUY ANCHOR
		FIRE HYDRANT
		UTILITY POLE
		LIGHT POLE
	BM	BENCH MARK
		SURVEY CONTROL POINT OR POINT OF INTERSECTION
		BRUSH/TREE LINE
		TREE
		PROPERTY LINE
		CENTER LINE, BUILDING, ROAD, ETC.
		STAGING OR WORK AREA LIMITS
	N 350 936.455 E 2 604 725.422	STRUCTURE, BUILDING OR FACILITY LOCATION POINT - COORDINATES
	B-1	BORING LOCATION AND NUMBER
	TP-2	TEST PIT LOCATION AND NUMBER
	P-3	PIEZOMETER LOCATION AND NUMBER
OR OR		DEMOLITION
OR	OR	STRUCTURE, BUILDING OR FACILITY
		ASPHALT CONCRETE PAVEMENT
		GRAVEL SURFACING
		CONCRETE PAVEMENT
		CURB
		CURB AND GUTTER
		SINGLE SWING GATE
		DOUBLE SWING GATE
		SLIDING GATE
		GUARD RAIL
		CHAIN LINK FENCE
		WIRE FENCE
		SEDIMENT FENCE
		CULVERT
		OUTLET PROTECTION / RIPRAP

YARD PIPING LEGEND *

EXISTING	THIS CONTRACT	
	8" PE	NOMINAL PIPE DIAMETER
8" PE	8" PE	PIPE USE IDENTIFICATION
		PIPING < 30" DIAMETER
		PIPING ≥30" DIAMETER
		EXISTING PIPE TO BE ABANDONED
		EXISTING PIPE TO BE REMOVED
		NON-FREEZE HOSE VALVE (V-X) X = NO. IN SPECIFICATIONS
		NON-FREEZE HOSE VALVE WITH HOSE RACK (V-X) X = NO. IN SPECIFICATIONS
		INDICATOR POST VALVE
		GATE VALVE AND VALVE BOX
		BUTTERFLY VALVE AND VALVE BOX
		PLUG VALVE AND VALVE BOX
		FLEXIBLE COUPLING
		90° ELBOW UP
		90° ELBOW DOWN
		BEND < 90° UP
		BEND < 90° DOWN
		CONCENTRIC REDUCER
		CAP OR PLUG
		CLEANOUT
		FIRE HYDRANT

* FOR ADDITIONAL SITE PIPING FEATURES NOT INCLUDED IN THIS LEGEND SEE THE PROCESS MECHANICAL LEGEND ON DRAWING 01-G-0012.

GENERAL NOTE:

1. THIS IS A STANDARD LEGEND SHEET. THEREFORE, NOT ALL OF THE INFORMATION SHOWN MAY BE USED ON THIS PROJECT.

LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA
05/18/2026

REVISION	BY	DATE

GENERAL

SITE CIVIL & YARD PIPING LEGEND

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MW	05/26	
HORIZONTAL:	LEAD ENG.	SZL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 01-G-0011			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 9 OF 300 SHEETS

PLOT DATE: 15-MAY-2026 PLOT TIME: 13:53

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GENERAL ARCHITECTURAL NOTES

1. UNLESS OTHERWISE INDICATED, PLAN DIMENSIONS ARE TO COLUMN GRID ON CENTERLINES , NOMINAL SURFACE OF MASONRY, FACE OF STUDS AND FACE OF CONCRETE WALLS.
2. "FLOOR LINE" REFERS TO TOP OF CONCRETE SLABS. FINISH FLOORING IS INSTALLED ABOVE THE FLOOR LINE. FOR DEPRESSED FLOORS AND CURBS, SEE STRUCTURAL DRAWINGS.
3. REPETITIVE FEATURES ARE NOT DRAWN IN THEIR ENTIRETY AND SHALL BE COMPLETELY PROVIDED AS IF DRAWN IN FULL.
4. LINE OF GRADES AND EXISTING GRADES, AS SHOWN ON THE BUILDING ELEVATIONS AND SECTIONS ARE APPROXIMATE. THEY ARE AT THE BUILDING FACE, OR ON THE SECTION END EXCEPT AS NOTED.
5. VERIFY ALL ROUGH-IN DIMENSIONS FOR EQUIPMENT PROVIDED IN THIS CONTRACT, OR BY OTHERS.
6. REFER TO ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND OTHER CATEGORIES OF DRAWINGS FOR ADDITIONAL NOTES.
7. VERIFY SIZE AND LOCATION OF, AND PROVIDE: REQUIRED OPENINGS THROUGH FLOORS AND WALLS, ACCESS DOORS, FURRING, CURBS, ANCHORS AND INSERTS. PROVIDE ALL BASES AND BLOCKING REQUIRED FOR ACCESSORIES, MECHANICAL, ELECTRICAL AND OTHER EQUIPMENT.
8. WHERE DOOR IS LOCATED NEAR CORNER OF ROOM AND IS NOT LOCATED BY DIMENSION ON PLAN OR DETAILS, DIMENSION SHALL BE 3-INCHES FROM FACE OF STUD (WALL) TO FACE OF ROUGH OPENING. DIMENSION SHALL BE 6" FROM FACE OF WALL TO EDGE OF ROUGH OPENING AT CONCRETE WALLS, 8" AT CMU WALLS.

ARCH/STRUCT MATERIAL SYMBOLS

SYMBOL	LEGEND
	GRANULAR FILL
	EARTH OR FINISH GRADE
	CONCRETE
	GROUT
	CMU WALL (PLAN)
	CMU WALL (SECTION)
	METAL STUD WALL (PLAN)
	RIGID INSULATION
	BATT INSULATION
	PLYWOOD
	GYPSUM WALLBOARD
	STEEL
	ALUMINUM
	WOOD, ROUGH CONTINUOUS
	WOOD, ROUGH NON-CONTINUOUS

ARCHITECTURAL/STRUCTURAL LEGEND

SYMBOL	LEGEND
A	NEW REFERENCE GRID INDICATOR
A	EXISTING REFERENCE GRID INDICATOR
ROOM NAME, XX101	ROOM IDENTIFIER
"XX" = FACILITY INDICATOR; DOOR LETTER; ROOM NUMBER; XX101A	DOOR IDENTIFIER
XXW-1	WINDOW IDENTIFIER
XXL-1	LOUVER IDENTIFIER
A	WALL TYPE INDICATOR
1 / XX-A-301	EXTERIOR ELEVATION INDICATOR
QUANTITY AND DIRECTION OF POINTERS AS REQUIRED; A, B, C, D, E; 1 / XX-A-301	INTERIOR ELEVATION INDICATOR
⊗ 110.50	SPOT ELEVATION INDICATOR
	DIRECTION OF SLOPE DOWN
HINGE SIDE	DOOR/HATCH SWING INDICATOR
ACTIVE; XX101A; INACTIVE	INDICATES PAIR OF DOORS (DOOR NUMBER ON ACTIVE LEAF)
F.EXT-X (IN CABINET); F.EXT-X	FIRE EXTINGUISHER "X" = NUMBER IN SPECIFICATIONS

WALL TYPES

GENERAL SHEET NOTES

1. ● DENOTES LOCATION OF WALL TYPE INDICATOR ON PLANS AND SECTIONS.
2. SEE SCHEDULES AND DRAWINGS FOR INTERIOR AND EXTERIOR WALL FINISHES.

TYPE	DETAIL
A	STRUCTURAL STEEL GIRT SHEET METAL WALL PANEL, SEE ELEVATIONS FOR LOCATIONS
A1	8" CMU, SEE STRUCTURAL FOR REINFORCING FOAM-IN-PLACE INSULATION BATT INSULATION (R-13) 3 5/8" GALVANIZED STEEL STUDS @ 16" OC 5/8" GWB OVER SHEET VAPOR RETARDER
A2	8" CMU, SEE STRUCTURAL FOR REINFORCING FOAM-IN-PLACE INSULATION BATT INSULATION (R-13) 3 5/8" GALVANIZED STEEL STUDS @ 16" OC CERAMIC TILE ON 5/8" CEMENTITIOUS BACKER BOARD TO HEIGHT SHOWN ON DRAWINGS; 5/8" WRB ABOVE
B1	5/8" GWB SOUND ATTENUATION BLANKETS 3 5/8" GALVANIZED STEEL STUDS @ 16" OC 5/8" GWB
B2	5/8" WRB SOUND ATTENUATION BLANKETS 3 5/8" GALVANIZED STEEL STUDS @ 16" OC 5/8" GWB
B3	NOTE: REFER TO DESIGN DETAIL 0931-100 AND 0931-102 FOR ADDITIONAL REQUIREMENTS AT SHOWER STALLS. CERAMIC TILE ON 5/8" CEMENTITIOUS BACKER BOARD TO HEIGHT SHOWN ON DRAWINGS; 5/8" WRB ABOVE (TILE FULL HEIGHT AT SHOWER COMPARTMENT); TYP BOTH SIDES 3 5/8" GALVANIZED STEEL STUDS @ 16" OC 5/8" GWB
B4	26" CERAMIC TILE ON 5/8" CEMENTITIOUS BACKER BOARD TO HEIGHT SHOWN ON DRAWINGS; 5/8" WRB ABOVE SOUND ATTENUATION BLANKETS 5 1/2" GALVANIZED STEEL STUDS @ 16" OC, TYP CERAMIC TILE ON 5/8" CEMENTITIOUS BACKER BOARD TO HEIGHT SHOWN ON DRAWINGS; 5/8" WRB ABOVE

TYPE	DETAIL
B5	NOTE: REFER TO DESIGN DETAIL 0931-100 AND 0931-102 FOR ADDITIONAL REQUIREMENTS AT SHOWER STALLS. CERAMIC TILE ON 5/8" CEMENTITIOUS BACKER BOARD TO HEIGHT SHOWN ON DRAWINGS; 5/8" WRB ABOVE (TILE FULL HEIGHT AT SHOWER COMPARTMENT) 3 5/8" GALVANIZED STEEL STUDS @ 16" OC
B6	5/8" GWB 3 5/8" GALVANIZED STEEL STUDS @ 16" OC
B7	5/8" GWB 3 5/8" GALVANIZED STEEL STUDS @ 16" OC 5/8" GWB
C	CAST-IN-PLACE CONCRETE, SEE STRUCTURAL FOR REINFORCING
D	STRUCTURAL STEEL GIRT INSULATED METAL WALL PANEL (R-20) SEALED JOINT, TYP

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STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

GENERAL

ARCHITECTURAL LEGEND AND WALL TYPES

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

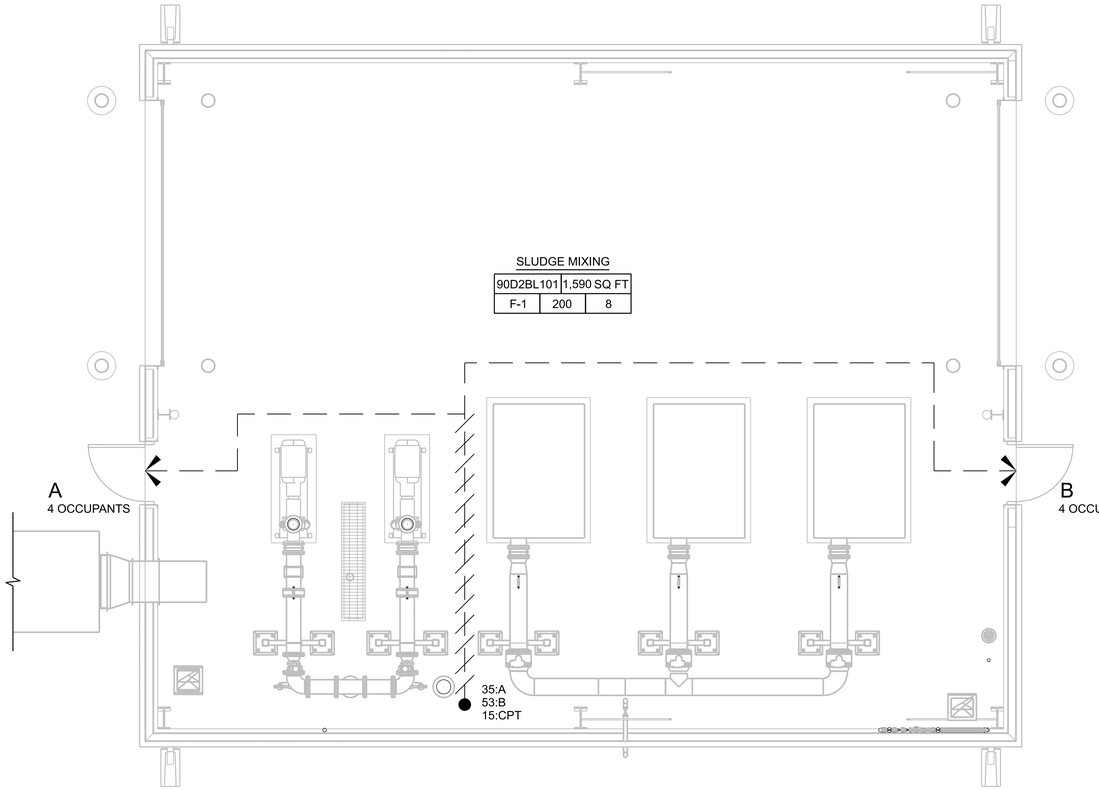
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN	05/26
HORIZONTAL:	LEAD ENG.	AZL	5/26
VERTICAL:	FIELD MGR.		DESIGN MANAGER
FILE:	DRAWING: 01-G-0012		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 10 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:19

CODE DATA TABLE		
FACILITY NUMBER: 90-D1BL FACILITY NAME: DEWATERING CENTRIFUGE BUILDING		
BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE (IBC) WITH OUBCC 748 TECHNICAL AMENDMENTS AND 2018 INTERNATIONAL EXISTING BUILDING CODE (IEBC)		
CLASSIFICATION OF WORK	1. REPAIRS (IEBC 401.2) 2. ALTERATION LEVEL 1: REMOVAL AND REPLACEMENT OF EXISTING MATERIALS, EQUIPMENT, OR FIXTURES USING NEW MATERIALS, EQUIPMENT, OR FIXTURES THAT SERVE THE SAME PURPOSE (IEBC 602 AND CHAPTER 7). 3. ALTERATION LEVEL 2: RECONFIGURATION OR EXTENSION OF ANY SYSTEM INCLUDING THE INSTALLATION OF ANY ADDITIONAL EQUIPMENT (IEBC 603 AND CHAPTER 8).	
OCCUPANCY	NO CHANGE IN OCCUPANCY	
ACCESSIBILITY	NOT DECREASED (IEBC 305.3); EXEMPT IN ACCORDANCE WITH IBC 1103.2.9 - EQUIPMENT SPACES	
ENERGY CONSERVATION	NOT DECREASED (IEBC 707.1); LIMITS OF PROJECT ALTERATIONS AND REPAIRS DO NOT NECESSITATE COMPLIANCE WITH ENERGY REQUIREMENTS	
FIRE ALARM SYSTEM [IBC, CHAPTER 9]	REQUIRED PER NFPA 820; PROVIDED, REFER TO FIRE ALARM DRAWINGS	

CODE DATA TABLE		
FACILITY NUMBER: 90-D2BL FACILITY NAME: SLUDGE MIXING BUILDING		
BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE (IBC) WITH OUBCC 748 TECHNICAL AMENDMENTS		
OCCUPANCY GROUP (IBC, SECTION 306.2)	SPACE EQUIPMENT AND PROCESS AREAS	OCCUPANCY GROUP F-1 (MODERATE-HAZARD INDUSTRIAL)
HAZARDOUS MATERIALS [IBC, TABLE 307.1 (2)]		NONE
INCIDENTAL ACCESSORY USE SEPARATIONS		NONE
OCCUPANCY SEPARATION / FIRE RATING		N/A
CONSTRUCTION TYPE [IBC, SECTION 602.2]		TYPE II-B
GENERAL BUILDING LIMITATIONS		
MAXIMUM STORIES / HEIGHT ALLOWED [IBC TABLES 504.3 AND 504.4]	F-1 ((NON-SPRINKLERED (NS) DESIGNATION))	2 STORIES / 22 FT
ACTUAL NUMBER OF STORIES / HEIGHT ABOVE GROUND PLANE	F-1	1 STORY / 18 FT
MAXIMUM AREA ALLOWED PER FLOOR [IBC TABLE 506.2]	F-1 ((NON-SPRINKLERED (NS) DESIGNATION))	15,500 SF
ACTUAL AREA PER FLOOR	F-1	1,590 SF
FIRE RESISTANCE OF BUILDING ELEMENTS [IBC, TABLE 601]		
REQUIRED RATINGS	UNRATED FOR CONSTRUCTION TYPE II-B	
EXTERIOR WALL FIRE RESISTANCE [IBC, TABLE 602]		
ACTUAL FIRE SEPARATION DISTANCE	NORTH, SOUTH, EAST AND WEST SIDES: 10+ FT	
REQUIRED WALL RATING	UNRATED WHEN 10 FEET AND OVER FIRE SEPARATION	
ACTUAL WALL RATING	UNRATED	
EXTERIOR OPENING PROTECTION [IBC, TABLE 705.8]	ACTUAL FIRE SEPARATION	REQUIRED OPENING PROTECTION
NORTH, WEST AND EAST SIDES	30+ FT (UNPROTECTED)	UNLIMITED
SOUTH SIDE	5 FT TO LESS THAN 10 FT (UNPROTECTED)	10%
ACTUAL OPENING PROTECTION	UNPROTECTED (NORTH, SOUTH, EAST AND WEST SIDES): SOUTH SIDE BELOW ALLOWABLE OPENING AREA	
FIRE PROTECTION SYSTEMS [IBC, CHAPTER 9]		
AUTOMATIC SPRINKLER SYSTEMS [IBC, SECTION 903]	NOT REQUIRED AND NOT PROVIDED	
FIRE EXTINGUISHERS [IBC, SECTION 906.1]	HAND HELD, MULTIPURPOSE FIRE EXTINGUISHERS THROUGHOUT AT 75 FT MAXIMUM SPACING	
FIRE ALARM SYTEM [IBC, CHAPTER 9]	NOT REQUIRED; NOT PROVIDED	
MEANS OF EGRESS [IBC, CHAPTER 10]		
BUILDING OCCUPANT LOAD [IBC TABLE 1004.5]	FACTOR: 200 SF (GROSS) TYPICAL; SEE LIFE SAFETY PLAN (FOR CALCULATED LOAD); NORMALLY UNOCCUPIED	
ALLOWABLE TRAVEL DISTANCE [IBC TABLE 1017.2]	F-1	200 FT (NS)
ACTUAL TRAVEL DISTANCE		SEE LIFE SAFETY PLAN
COMMON PATH OF TRAVEL DISTANCE (IBC TABLE 1006.2.1)	F (NON-SPRINKLERED)	75 FEET
ACTUAL COMMON PATH OF TRAVEL DISTANCE		SEE LIFE SAFETY PLAN
EXITS REQUIRED [IBC, TABLE 1006.3.3]	TWO EXITS REQUIRED IF OCCUPANT LOAD EXCEEDS 49 OR CPT EXCEEDS 75 FT	EXITS PROVIDED, SEE LIFE SAFETY PLAN
ACCESSIBILITY (ICC / ANSI 117.1 2009)		
	PROCESS AND EQUIPMENT SPACES ARE EXEMPT PER IBC 1103.2.9 (EQUIPMENT SPACES)	
ENERGY CODE 2006 INTERNATIONAL ENERGY CONSERVATION CODE (IECC), TABLE 502.2 (1) AND TABLE 502.3		
COMMERCIAL ENERGY EFFICIENCY BUILDING ENVELOPE REQUIREMENTS		ZONE: 3A (TULSA COUNTY)
ELEMENTS	REQUIRED (PRESCRIPTIVE METHOD)	PROPOSED DESIGN
WALL (METAL BUILDING)	R-13	INSULATED METAL PANELS (R-15)
ROOF (METAL BUILDING)	R-19 WITH R-5 THERMAL BLOCKS	INSULATED METAL PANELS (R-20)
FLOOR (UNHEATED SLAB ON GRADE)	NOT REQUIRED	NOT PROVIDED
SWINGING DOORS	U-0.70 MAX (R-1.5 MIN)	U-0.70 MAX
NONSWINGING DOORS	U-1.45 MAX (R-1 MIN)	R-8
AIR BARRIER	NOT REQUIRED	NOT PROVIDED



N

FACILITY 90-D2BL - LIFE SAFETY PLAN

1/4"=1'-0"

GENERAL SHEET NOTES

1. FOR FIRE EXTINGUISHER LOCATIONS, SEE DRAWING 90-D2BL-A-2000.
2. FOR FIRE EXTINGUISHER INFORMATION, SEE SPECIFICATION SECTION 10 44 00, PORTABLE FIRE AND SAFETY EQUIPMENT.

LIFE SAFETY PLAN LEGEND

X : Y — TRAVEL DISTANCE ('X' = TOTAL DISTANCE IN FEET TO EXIT 'Y')

COMMON PATH OF TRAVEL (CPT); X=CPT TRAVEL DISTANCE

ROOM NAME | ## | XXXXX SQ FT | OCC | OLF | OL

ROOM NUMBER
ROOM SQ FOOTAGE
OCCUPANT LOAD
OCCUPANT LOAD FACTOR
OCCUPANCY GROUP

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STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

GENERAL

CODE DATA AND LIFE SAFETY PLAN
FACILITY 90-D2BL

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MW	05/7/26
LEAD ENG.	BZ	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 01-G-0013
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 11 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:20

BUILDING CODE DATA TABLE

FACILITY NUMBER: 95-C1BL FACILITY NAME: COMPOSTING OPERATIONS BUILDING

BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE (IBC) WITH OUBCC 748 TECHNICAL AMENDMENTS		
OCCUPANCY GROUP [IBC, SECTION 304.1]	SPACE OFFICE AREAS	OCCUPANCY GROUP B (BUSINESS), SEE LIFE SAFETY PLAN
HAZARDOUS MATERIALS [IBC, TABLE 307.1 (2)]		NONE
INCIDENTAL ACCESSORY USE SEPARATIONS		NONE
OCCUPANCY SEPARATION / FIRE RATING		N/A
CONSTRUCTION TYPE [IBC, SECTION 602.2]		TYPE II-B
GENERAL BUILDING LIMITATIONS		
MAXIMUM STORIES / HEIGHT ALLOWED [IBC TABLES 504.3 & 504.4]	B ((NON-SPRINKLERED (NS) DESIGNATION)):	3 STORIES / 55 FT
ACTUAL NUMBER OF STORIES / HEIGHT ABOVE GROUND PLANE	B	1 STORY / 18 FT
MAXIMUM AREA ALLOWED PER FLOOR [IBC TABLE 506.2]	B ((NON-SPRINKLERED (NS) DESIGNATION)):	23,000 SF
ACTUAL AREA PER FLOOR	OPERATIONS BUILDING	1,700 SF
FIRE RESISTANCE OF BUILDING ELEMENTS [IBC, TABLE 601]		
REQUIRED RATINGS	UNRATED FOR CONSTRUCTION TYPE II-B	
EXTERIOR WALL FIRE RESISTANCE [IBC, TABLE 602]		
ACTUAL FIRE SEPARATION DISTANCE	NORTH, SOUTH, EAST, AND WEST SIDES: 30+ FT	
REQUIRED WALL RATING	UNRATED WHEN 10 FEET AND OVER FIRE SEPARATION	
ACTUAL WALL RATING	UNRATED	
EXTERIOR OPENING PROTECTION [IBC, TABLE 705.8]	ACTUAL FIRE SEPARATION:	REQUIRED OPENING PROTECTION
NORTH, SOUTH, EAST, AND WEST SIDES	30+ FT (UNPROTECTED)	UNLIMITED
ACTUAL OPENING PROTECTION	UNPROTECTED (NORTH, SOUTH, EAST AND WEST SIDES)	
FIRE PROTECTION SYSTEMS [IBC, CHAPTER 9]		
AUTOMATIC SPRINKLER SYSTEMS [IBC, SECTION 903]	NOT REQUIRED AND NOT PROVIDED	
FIRE EXTINGUISHERS [IBC, SECTION 906.1]	HAND HELD, MULTIPURPOSE FIRE EXTINGUISHERS THROUGHOUT BUILDING AT 75 FOOT MAXIMUM SPACING	
FIRE ALARM SYSTEM [IBC, CHAPTER 9]	NOT REQUIRED; PROVIDED, REFER TO FIRE ALARM DRAWINGS	
MEANS OF EGRESS [IBC, CHAPTER 10]		
OCCUPANT LOAD FACTOR [IBC, TABLE 1004.5]	FACTOR: 150 SF (GROSS) TYPICAL, 300 SF AT EQUIPMENT SPACES TOTAL BUILDING OCCUPANT LOAD: SEE LIFE SAFETY PLAN	
ALLOWABLE TRAVEL DISTANCE [IBC, TABLE 1017.2]	B	200 FT
ACTUAL TRAVEL DISTANCE		SEE LIFE SAFETY PLAN
COMMON PATH OF TRAVEL DISTANCE (IBC TABLE 1006.2.1)	B (NON-SPRINKLERED)	75 FEET
ACTUAL COMMON PATH OF TRAVEL DISTANCE		SEE LIFE SAFETY PLAN
EXITS REQUIRED [IBC, TABLE 1006.3.3]	TWO EXITS REQUIRED IF OCCUPANT LOAD EXCEEDS 49 OR CPT EXCEEDS 75 FT	EXITS PROVIDED, SEE LIFE SAFETY PLAN
ACCESSIBILITY (ICC / ANSI 117.1 2009)		
BUILDING WILL MEET ACCESSIBILITY REQUIREMENTS EXCEPT FOR THE ELECTRICAL ROOM AND JANITORS CLOSET (EQUIPMENT SPACES ARE EXEMPT PER IBC 1103.2.9)		

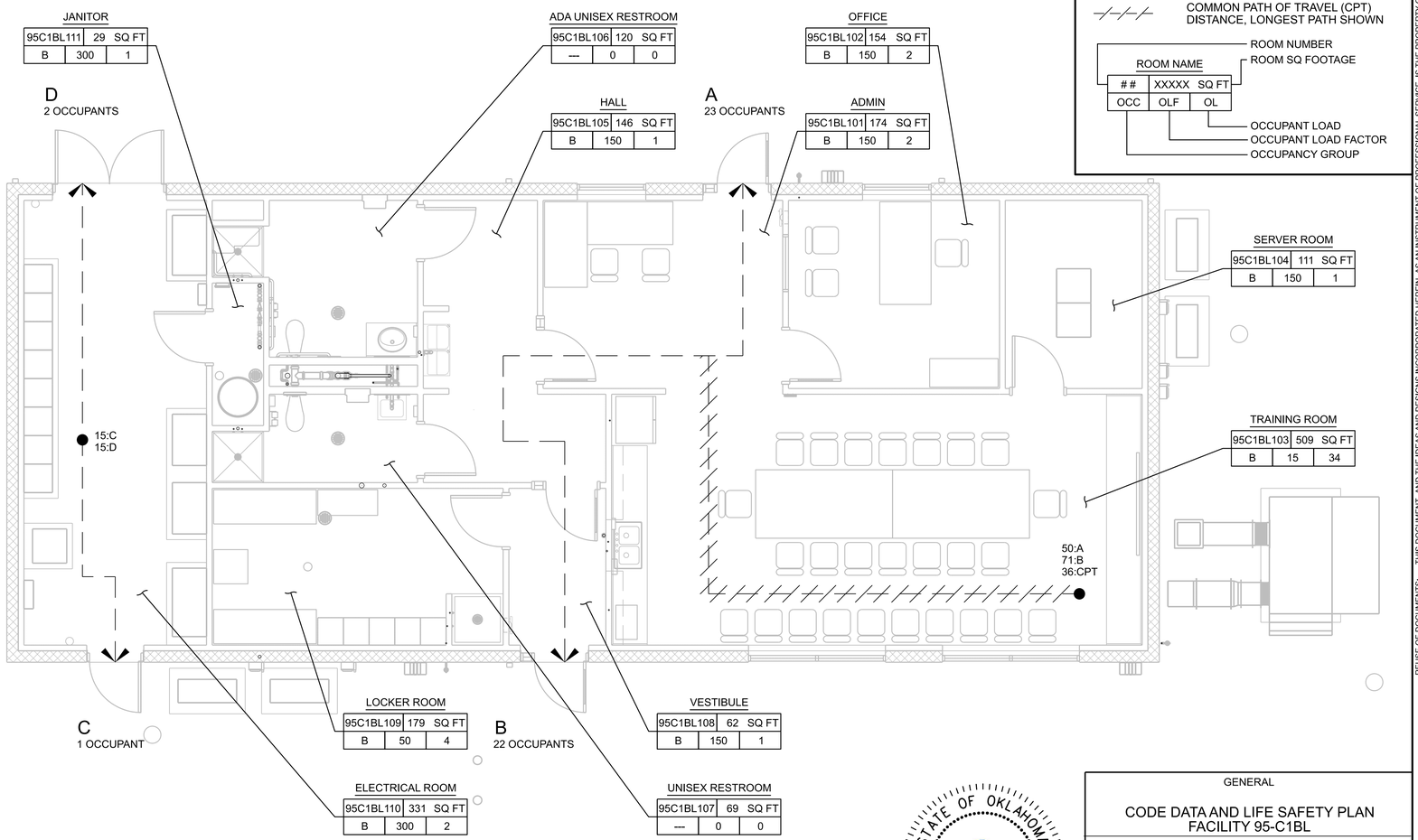
ENERGY CODE 2006 INTERNATIONAL ENERGY CONSERVATION CODE (IECC), TABLE 502.2 (1) AND TABLE 502.3

COMMERCIAL ENERGY EFFICIENCY BUILDING ENVELOPE REQUIREMENTS		ZONE: 3A (TULSA COUNTY)
ELEMENTS	REQUIRED (PRESCRIPTIVE METHOD)	PROPOSED DESIGN
WALL (MASS)	R-5.7 CONTINUOUS INSULATION (CI)	INSULATED 8" CMU (CI VALUE OF R-4.1) + BATT INSULATION R-13 (CI VALUE OF R-4.6) = TOTAL CI OF R-8.7
ROOF (INSULATION ENTIRELY ABOVE ROOF DECK)	R-15 CONTINUOUS INSULATION (CI)	RIGID INSULATION (R-15)
FLOOR (UNHEATED SLAB ON GRADE)	NO REQUIREMENT (NR)	NOT PROVIDED
DOOR (SWINGING)	U-0.70	U-0.36 MAXIMUM
VERTICAL FENESTRATION (METAL, FIXED)	U-0.65	U-0.65 MAXIMUM
FENESTRATION, SOLAR HEAT GAIN COEFFICIENT (SHGC)	PROJECTION FACTOR (PF) ≥ 0.5: SHGC 0.40	SHGC MAXIMUM OF 0.40
AIR BARRIER	REQUIRED	PROVIDED

PLUMBING FIXTURES [IBC 2902.1]

REQUIRED: 1 WATER CLOSET AND 1 LAVATORY REQUIRED FOR EACH GENDER, 1 SERVICE SINK, 1 DRINKING FOUNTAIN.

PROVIDED: 2 SINGLE USER RESTROOMS (WITH 1 WATER CLOSET AND LAVATORY), 1 SERVICE SINK, 1 DRINKING FOUNTAIN.



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FACILITY 95-C1BL - LIFE SAFETY PLAN

1/4"=1'-0"

GENERAL SHEET NOTES

1. FOR FIRE EXTINGUISHER LOCATIONS, SEE DRAWING 95-C1BL-A-2000.
2. FOR FIRE EXTINGUISHER INFORMATION, SEE SPECIFICATION SECTION 10 44 00, PORTABLE FIRE AND SAFETY EQUIPMENT.

LIFE SAFETY PLAN LEGEND

X : Y — TRAVEL DISTANCE 'X' IN FEET TO "Y", EXIT DESIGNATOR

32" MINIMUM EGRESS WIDTH PROVIDED, TYP

COMMON PATH OF TRAVEL (CPT) DISTANCE, LONGEST PATH SHOWN

ROOM NAME		
##	XXXXX	SQ FT
OCC	OLF	OL

ROOM NUMBER
ROOM SQ FOOTAGE
OCCUPANT LOAD
OCCUPANT LOAD FACTOR
OCCUPANCY GROUP

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STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

GENERAL

CODE DATA AND LIFE SAFETY PLAN
FACILITY 95-C1BL

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	GZL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 01-G-0014			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 12 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:20

CODE DATA TABLE

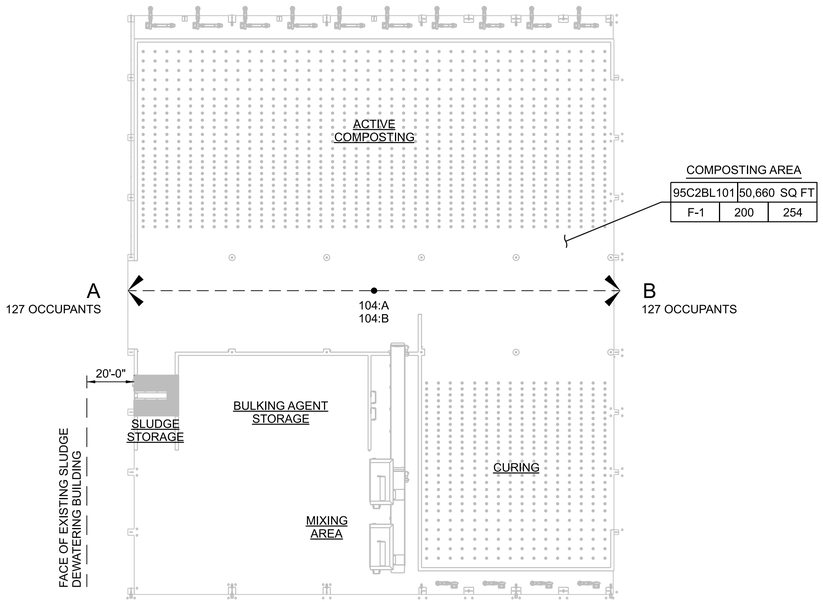
FACILITY NUMBER: 95-C2BL FACILITY NAME: COMPOSTING BUILDING

BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE (IBC) WITH OUBCC 748 TECHNICAL AMENDMENTS		
OCCUPANCY GROUP (IBC, SECTION 306.2)	SPACE EQUIPMENT AND PROCESS AREAS	OCCUPANCY GROUP F-1 (MODERATE-HAZARD INDUSTRIAL)
HAZARDOUS MATERIALS [IBC, TABLE 307.1 (2)]		NONE
INCIDENTAL ACCESSORY USE SEPARATIONS		NONE
OCCUPANCY SEPARATION / FIRE RATING		N/A
CONSTRUCTION TYPE [IBC, SECTION 602.2]		TYPE II-B
GENERAL BUILDING LIMITATIONS		
MAXIMUM STORIES / HEIGHT ALLOWED [IBC TABLES 504.3 AND 504.4]	F-1 ((NON-SPRINKLERED (NS) DESIGNATION))	2 STORIES / 55 FT
ACTUAL NUMBER OF STORIES / HEIGHT ABOVE GROUND PLANE	F-1	1 STORY / 38 FT
MAXIMUM AREA ALLOWED PER FLOOR [IBC TABLE 506.2]	F-1 ((NON-SPRINKLERED (NS) DESIGNATION))	15,500 SF
ACTUAL AREA PER FLOOR	F-1	50,660 SF (EXCEEDS ALLOWABLE AREA FOR NS, WAIVER REQUIRED)
FIRE RESISTANCE OF BUILDING ELEMENTS [IBC, TABLE 601]		
REQUIRED RATINGS	UNRATED FOR CONSTRUCTION TYPE II-B	
EXTERIOR WALL FIRE RESISTANCE [IBC, TABLE 602]		
ACTUAL FIRE SEPARATION DISTANCE	NORTH, SOUTH, EAST AND WEST SIDES: 10+ FT	
REQUIRED WALL RATING	UNRATED WHEN 10 FEET AND OVER FIRE SEPARATION	
ACTUAL WALL RATING	UNRATED	
EXTERIOR OPENING PROTECTION [IBC, TABLE 705.8]	ACTUAL FIRE SEPARATION	REQUIRED OPENING PROTECTION
NORTH, SOUTH AND EAST SIDES	30+ FT (UNPROTECTED)	UNLIMITED
WEST SIDE	5 FT TO LESS THAN 10 FT (UNPROTECTED)	10%
ACTUAL OPENING PROTECTION	UNPROTECTED (NORTH, SOUTH, EAST AND WEST SIDES): WEST SIDE EXCEEDS ALLOWABLE OPENING AREA (WAIVER REQUIRED)	
FIRE PROTECTION SYSTEMS [IBC, CHAPTER 9]		
AUTOMATIC SPRINKLER SYSTEMS [IBC, SECTION 903]	REQUIRED (EXCEEDS MAXIMUM ALLOWABLE AREA), NOT PROVIDED (WAIVER REQUIRED)	
FIRE EXTINGUISHERS [IBC, SECTION 906.1]	HAND HELD, MULTIPURPOSE FIRE EXTINGUISHERS THROUGHOUT AT 75 FT MAXIMUM SPACING	
FIRE ALARM SYSTEM [IBC, CHAPTER 9]	NOT REQUIRED; NOT PROVIDED	
MEANS OF EGRESS [IBC, CHAPTER 10]		
BUILDING OCCUPANT LOAD [IBC TABLE 1004.5]	FACTOR: 200 SF (GROSS) TYPICAL; SEE LIFE SAFETY PLAN (FOR CALCULATED LOAD); NORMALLY UNOCCUPIED	
ALLOWABLE TRAVEL DISTANCE [IBC TABLE 1017.2]	F-1	200 FT (NS)
ACTUAL TRAVEL DISTANCE		SEE LIFE SAFETY PLAN
COMMON PATH OF TRAVEL DISTANCE (IBC TABLE 1006.2.1)	F (NON-SPRINKLERED)	75 FEET
ACTUAL COMMON PATH OF TRAVEL		SEE LIFE SAFETY PLAN
EXITS REQUIRED [IBC, TABLE 1006.3.3]	TWO EXITS REQUIRED IF OCCUPANT LOAD EXCEEDS 49 OR CPT EXCEEDS 75 FT	EXITS PROVIDED, SEE LIFE SAFETY PLAN
ACCESSIBILITY (ICC / ANSI 117.1 2009)		
	PROCESS AND EQUIPMENT SPACES ARE EXEMPT PER IBC 1103.2.9 (EQUIPMENT SPACES)	

ENERGY CODE 2006 INTERNATIONAL ENERGY CONSERVATION CODE (IECC), TABLE 502.2 (1) AND TABLE 502.3

COMMERCIAL ENERGY EFFICIENCY BUILDING ENVELOPE REQUIREMENTS		ZONE: 3A (TULSA COUNTY)
ELEMENTS	REQUIRED (PRESCRIPTIVE METHOD)	PROPOSED DESIGN
WALL (METAL BUILDING)	NOT REQUIRED, NOTE 1	NOT PROVIDED
ROOF (METAL BUILDING)	NOT REQUIRED, NOTE 1	NOT PROVIDED
FLOOR (UNHEATED SLAB ON GRADE)	NOT REQUIRED, NOTE 1	NOT PROVIDED
AIR BARRIER	NOT REQUIRED, NOTE 1	NOT PROVIDED

NOTE 1: BUILDING IS UNENCLOSED AND HAS NO HEATING OR COOLING.



FACILITY 95-C2BL - LIFE SAFETY PLAN

1/32"=1'-0"

CODE DATA TABLE

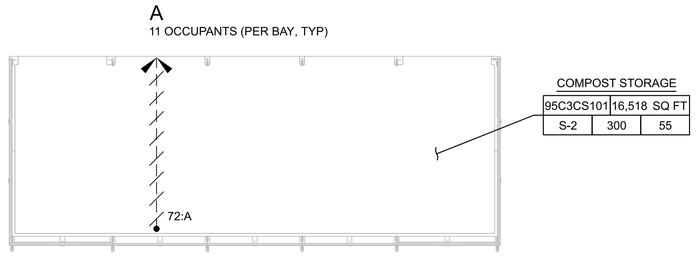
FACILITY NUMBER: 95-C3CS FACILITY NAME: FINISHED COMPOSTING STORAGE BUILDING

BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE (IBC) WITH OUBCC 748 TECHNICAL AMENDMENTS		
OCCUPANCY GROUP (IBC, SECTION 306.2)	SPACE EQUIPMENT AND PROCESS AREAS	OCCUPANCY GROUP S-2 (LOW-HAZARD STORAGE)
HAZARDOUS MATERIALS [IBC, TABLE 307.1 (2)]		NONE
INCIDENTAL ACCESSORY USE SEPARATIONS		NONE
OCCUPANCY SEPARATION / FIRE RATING		N/A
CONSTRUCTION TYPE [IBC, SECTION 602.2]		TYPE II-B
GENERAL BUILDING LIMITATIONS		
MAXIMUM STORIES / HEIGHT ALLOWED [IBC TABLES 504.3 AND 504.4]	S-2 ((NON-SPRINKLERED (NS) DESIGNATION))	3 STORIES / 55 FT
ACTUAL NUMBER OF STORIES / HEIGHT ABOVE GROUND PLANE	S-2	1 STORY / 25 FT
MAXIMUM AREA ALLOWED PER FLOOR [IBC TABLE 506.2]	S-2 ((NON-SPRINKLERED (NS) DESIGNATION))	26,000 SF
ACTUAL AREA PER FLOOR	S-2	16,518 SF
FIRE RESISTANCE OF BUILDING ELEMENTS [IBC, TABLE 601]		
REQUIRED RATINGS	UNRATED FOR CONSTRUCTION TYPE II-B	
EXTERIOR WALL FIRE RESISTANCE [IBC, TABLE 602]		
ACTUAL FIRE SEPARATION DISTANCE	NORTH, SOUTH, EAST AND WEST SIDES: 10+ FT	
REQUIRED WALL RATING	UNRATED WHEN 10 FEET AND OVER FIRE SEPARATION	
ACTUAL WALL RATING	UNRATED	
EXTERIOR OPENING PROTECTION [IBC, TABLE 705.8]	ACTUAL FIRE SEPARATION	REQUIRED OPENING PROTECTION
NORTH, SOUTH, EAST AND WEST SIDES	30+ FT (UNPROTECTED)	UNLIMITED
ACTUAL OPENING PROTECTION	UNPROTECTED (NORTH, SOUTH, EAST AND WEST SIDES)	
FIRE PROTECTION SYSTEMS [IBC, CHAPTER 9]		
AUTOMATIC SPRINKLER SYSTEMS [IBC, SECTION 903]	NOT REQUIRED AND NOT PROVIDED	
FIRE EXTINGUISHERS [IBC, SECTION 906.1]	HAND HELD, MULTIPURPOSE FIRE EXTINGUISHERS THROUGHOUT AT 75 FT MAXIMUM SPACING	
FIRE ALARM SYSTEM [IBC, CHAPTER 9]	NOT REQUIRED; NOT PROVIDED	
MEANS OF EGRESS [IBC, CHAPTER 10]		
BUILDING OCCUPANT LOAD [IBC TABLE 1004.5]	FACTOR: 300 SF (GROSS) TYPICAL; SEE LIFE SAFETY PLAN (FOR CALCULATED LOAD); NORMALLY UNOCCUPIED	
ALLOWABLE TRAVEL DISTANCE [IBC TABLE 1017.2]	S-2	300 FT (NS)
ACTUAL TRAVEL DISTANCE		SEE LIFE SAFETY PLAN
COMMON PATH OF TRAVEL DISTANCE (IBC TABLE 1006.2.1)	F (NON-SPRINKLERED)	75 FEET
ACTUAL COMMON PATH OF TRAVEL DISTANCE		SEE LIFE SAFETY PLAN
EXITS REQUIRED [IBC, TABLE 1006.3.3]	TWO EXITS REQUIRED IF OCCUPANT LOAD EXCEEDS 49 OR CPT EXCEEDS 75 FT	EXITS PROVIDED, SEE LIFE SAFETY PLAN
ACCESSIBILITY (ICC / ANSI 117.1 2009)		
	PROCESS AND EQUIPMENT SPACES ARE EXEMPT PER IBC 1103.2.9 (EQUIPMENT SPACES)	

ENERGY CODE 2006 INTERNATIONAL ENERGY CONSERVATION CODE (IECC), TABLE 502.2 (1) AND TABLE 502.3

COMMERCIAL ENERGY EFFICIENCY BUILDING ENVELOPE REQUIREMENTS		ZONE: 3A (TULSA COUNTY)
ELEMENTS	REQUIRED (PRESCRIPTIVE METHOD)	PROPOSED DESIGN
WALL (METAL BUILDING)	NOT REQUIRED, NOTE 1	NOT PROVIDED
ROOF (METAL BUILDING)	NOT REQUIRED, NOTE 1	NOT PROVIDED
FLOOR (UNHEATED SLAB ON GRADE)	NOT REQUIRED, NOTE 1	NOT PROVIDED
AIR BARRIER	NOT REQUIRED, NOTE 1	NOT PROVIDED

NOTE 1: BUILDING IS UNENCLOSED AND HAS NO HEATING OR COOLING.



FACILITY 95-C3CS - LIFE SAFETY PLAN

1/32"=1'-0"

GENERAL SHEET NOTES

1. FOR FIRE EXTINGUISHER LOCATIONS, SEE DRAWINGS 95-C2BL-A-2000 AND 95-C3CS-A-2000.
2. FOR FIRE EXTINGUISHER INFORMATION, SEE SPECIFICATION SECTION 10 44 00, PORTABLE FIRE AND SAFETY EQUIPMENT.

LIFE SAFETY PLAN LEGEND

X : Y — — ● TRAVEL DISTANCE ('X' = TOTAL DISTANCE IN FEET TO EXIT 'Y')

COMMON PATH OF TRAVEL (CPT); X=CPT TRAVEL DISTANCE

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STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

REVISION	BY	DATE

GENERAL

CODE DATA AND LIFE SAFETY PLANS
FACILITY 95-C2BL AND 95-C3CS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MW	05/26
HORIZONTAL:	LEAD ENG.	AZL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 01-G-0015		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 13 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:21

DESIGN CRITERIA

1. APPLICABLE CODE: 2018 INTERNATIONAL BUILDING CODE (IBC), AS AMENDED BY THE STATE OF OKLAHOMA AND ALL OTHER APPLICABLE LOCAL AGENCIES.

2. REFER TO THE DRAWINGS FOR ADDITIONAL AND SPECIFIC STRUCTURE LOADINGS AND REQUIREMENTS.

3. ALL LOADS SHOWN ARE SERVICE LEVEL (UNFACTORED) UNLESS SPECIFICALLY NOTED OTHERWISE.

4. RISK CATEGORY:
   ALL STRUCTURES = III

5. DEAD LOADS:
   A. SELF WEIGHT

6. ROOF LOADS:

GROUND SNOW LOAD, Pg	= 10 PSF
SNOW EXPOSURE FACTOR, Ce	= 1.0
THERMAL FACTOR, Ct	= 1.1
SLOPE FACTOR, Cs	= 1.0
IMPORTANCE FACTOR, I	= 1.1
MINIMUM FLAT ROOF SNOW LOAD, Pf	= 11 PSF
LIVE LOAD	= 20 PSF
MISCELLANEOUS MECHANICAL AND ELECTRICAL LOADS	= 5 PSF

7. FLOOR LIVE LOADS:

OFFICE	100 PSF
ELECTRICAL ROOM	300 PSF
MECHANICAL ROOM	200 PSF
CORRIDORS, EXITS, STAIRS	100 PSF
WALKWAYS AND ELEVATED PLATFORMS	100 PSF
LIGHT STORAGE	125 PSF
HEAVY STORAGE	250 PSF

8. WIND LOADS:

ASCE 7 METHOD	= MWFRS DIRECTIONAL PROCEDURE ENVELOPE PROCEDURE
BASIC WIND SPEED (3-SECOND GUST)	= 115 MPH
EXPOSURE CATEGORY	= C
INTERNAL PRESSURE COEFFICIENT, GCpi	= +/- 0.18
COMPONENT AND CLADDING WALL ELEMENTS (WINDOWS, DOORS, LOUVERS, SIDING ETC FOR STRUCTURES UNDER 60 FEET IN HEIGHT)	= 34 PSF

9. SEISMIC LOADS:

MAPPED SPECTRAL RESPONSE ACCELERATIONS	
S_S	= 0.137g
S_1	= 0.073g
DESIGN SPECTRAL RESPONSE ACCELERATIONS	
S_{DS}	= 0.146g
S_{D1}	= 0.117g
SITE CLASS	= D
SEISMIC DESIGN CATEGORY	= B
IMPORTANCE FACTOR, Ie	= 1.25

   STRUCTURES HAVE BEEN ANALYZED USING THE EQUIVALENT LATERAL FORCE PROCEDURES OF ASCE 7.

10. SPECIAL LOADS: SEE PLANS FOR STRUCTURE SPECIFIC LOADS

11. HYDRAULIC LOADS: SEE PLANS FOR STRUCTURE SPECIFIC LOADS

12. SOIL DESIGN PARAMETERS:

A.	NET ALLOWABLE SOIL BEARING PRESSURES:	2000 PSF
B.	GROUND WATER (GW) ELEVATION:	
	NORMAL HIGH GW	EL 587.00
	100 YEAR FLOOD	GRADE SURFACE
C.	EQUIVALENT DRAINED FLUID PRESSURES (ABOVE GW): AT REST:	60 PCF
D.	EQUIVALENT UNDRAINED FLUID PRESSURES (BELOW GW): AT REST:	93 PCF
	WHERE H IS HEIGHT OF SOIL ADJACENT TO THE WALL	
E.	VERTICAL SURCHARGE:	2 FT OF SOIL WEIGHT
F.	COEFFICIENT OF FRICTION:	0.3
G.	NATIVE SOIL UNIT WEIGHT	125 PCF
H.	FACTOR OF SAFETY FOR UPLIFT RESISTANCE (SOIL FRICTION AND WEDGE FAILURE NOT CONSIDERED):	
	NORMAL HIGH GW ELEVATION	FOS = 1.25
	100 YEAR FLOOD ELEVATION	FOS = 1.10

13. FROST DEPTH: 18 IN

GENERAL INFORMATION

1. FOR ABBREVIATIONS NOT LISTED, SEE ASME Y14.38 "ABBREVIATIONS AND ACRONYMS" PUBLICATION AS DISTRIBUTED BY THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME).

2. DESIGN DETAILS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS OCCURRING THROUGHOUT THE PROJECT, WHETHER OR NOT THEY ARE INDIVIDUALLY CALLED OUT.

3. VERIFY FINAL OPENING DIMENSIONS IN WALLS, SLABS, AND DECKS WITH OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION OF THESE ELEMENTS.

4. FOR NUMBER, TYPE, SIZE, ARRANGEMENT, AND/OR LOCATION OF EQUIPMENT PADS, SEE OTHER DISCIPLINE DRAWINGS. COORDINATE WITH EQUIPMENT SUPPLIER PRIOR TO PLACING SLABS, WALLS AND FOUNDATIONS. COORDINATE PIPING OPENINGS WITH OTHER DISCIPLINE DRAWINGS.

5. DO NOT CUT OR MODIFY STRUCTURAL MEMBERS FOR PIPES, DUCTS, ETC, UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE ENGINEER.

6. VISITS TO THE JOB SITE BY THE ENGINEER TO OBSERVE THE CONSTRUCTION DO NOT IN ANY WAY MEAN THAT ENGINEER IS GUARANTOR OF CONSTRUCTOR'S WORK, NOR RESPONSIBLE FOR THE COMPREHENSIVE OR SPECIAL INSPECTIONS, COORDINATION, SUPERVISION, OR SAFETY AT THE JOB SITE.

7. INFORMATION (DETAILING, DIMENSIONS, CONFIGURATIONS, AND ELEVATIONS, ETC.) OF EXISTING CONSTRUCTION SHOWN REFLECTS AVAILABLE EXISTING DESIGN DOCUMENTS, AND DOES NOT NECESSARILY REPRESENT THE AS-CONSTRUCTED CONDITIONS. THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS, ELEVATIONS AND DETAILING OF THE EXISTING STRUCTURES PRIOR TO UNDERTAKING ANY WORK THAT IS AFFECTED BY THE EXISTING STRUCTURE. NOTIFY ENGINEER IF CONDITIONS VARY FROM THAT SHOWN PRIOR TO STARTING WORK

INSPECTION AND TESTING

1. SPECIAL INSPECTION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR INSPECTIONS REQUIRED BY THE BUILDING OFFICIAL. THE CONTRACTOR SHALL SCHEDULE BOTH INSPECTIONS.

2. SPECIFIED CONCRETE AND MASONRY AND OTHER MATERIAL TESTING RELATED TO SPECIAL INSPECTION DURING CONSTRUCTION WILL BE OWNER FURNISHED.

3. SPECIFIED LABORATORY TEST MIXES AND SIMILAR TEST RESULTS TO VERIFY MATERIAL QUALITY AND CONFORMANCE TO SPECIFICATIONS, AND SUBMITTED FOR REVIEW PRIOR TO ACCEPTANCE FOR USE ON THE PROJECT, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

4. SPECIAL INSPECTION, TESTING AND OBSERVATION (OWNER FURNISHED) IS REQUIRED IN ACCORDANCE WITH THE IBC SECTIONS AS INDICATED IN THE STATEMENT OF SPECIAL INSPECTIONS.

FOUNDATIONS

1. REFER TO GEOTECHNICAL DATA REPORT FOR GEOTECHNICAL DRILLING AND LABORATORY TESTING SERVICES PROPOSED BIOSOLIDS IMPROVEMENTS AT HAIKEY CREEK WWTP BY KLEINFELDER DATED SEPTEMBER 17TH, 2025.

2. EXCAVATIONS SHALL BE SHORED TO PREVENT SUBSIDENCE AND DAMAGE TO ADJACENT EXISTING STRUCTURES, ROADS, UTILITIES, ETC.

3. FOUNDATION SLABS, SLABS-ON-GRADE AND WALL AND COLUMN FOUNDATIONS SPECIFICALLY NOTED TO BE ON FILL SHALL BEAR ON A MINIMUM OF 6 INCHES OF COMPACTED GRANULAR FILL AS SPECIFIED IN SECTION 32 11 23, AGGREGATE BASE COURSES.

4. FOUNDATION BEARING SURFACES SHALL BE OBSERVED BY THE GEOTECHNICAL ENGINEER OR QUALIFIED DESIGNEE PRIOR TO PLACEMENT OF FORMWORK OR REINFORCING STEEL. THE OBSERVATION SHALL VERIFY IF THE ACTUAL EXPOSED SUBGRADE IS AS ANTICIPATED BY THE SITE SPECIFIC BORINGS TESTING AND DATA REPORTS.

5. NO BACKFILL SHALL BE PLACED BEHIND WALLS UNTIL THE WALL'S CONCRETE HAS ATTAINED 100 PERCENT AND TOP SUPPORTING SLAB'S CONCRETE HAS ATTAINED 80 PERCENT OF THEIR SPECIFIED 28 DAY COMPRESSIVE STRENGTH, OR UNTIL TOP-OF-WALL FRAMING SYSTEMS, INCLUDING STEEL OR WOOD DIAPHRAGMS, HAVE BEEN COMPLETED.

6. NO BACKFILL SHALL BE PLACED BEHIND CANTILEVERED, FREE TOP WALLS UNTIL THE CONCRETE HAS ATTAINED 100 PERCENT OF ITS SPECIFIED 28 DAY COMPRESSIVE STRENGTH.

7. USE OF EXPLOSIVES IS NOT ALLOWED.

FORMWORK, SHORING, AND BRACING

1. STRUCTURES SHOWN ON THE DRAWINGS HAVE BEEN DESIGNED FOR STABILITY UNDER FINAL CONDITIONS ONLY. DESIGN SHOWN DOES NOT INCLUDE NECESSARY COMPONENTS OR EQUIPMENT FOR STABILITY OF THE STRUCTURES DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR WORK RELATING TO CONSTRUCTION ERECTION METHODS, BRACING, SHORING, RIGGING, GUYS, SCAFFOLDING, FORMWORK, AND OTHER WORK AIDS REQUIRED TO SAFELY PERFORM THE WORK SHOWN.

2. TEMPORARY SHORING SHALL REMAIN IN PLACE UNTIL ELEVATED CONCRETE FLOOR OR SLABS HAVE REACHED 80 PERCENT OF THE 28 DAY COMPRESSIVE STRENGTH AS DETERMINED BY FIELD CYLINDER BREAKS.

3. "BURY" BARS OR "CARRIER" BARS ARE NOT ALLOWED FOR THE BOTTOM MATS OF REINFORCING IN ALL ELEVATED SLABS AND ARE NOT ALLOWED FOR THE TOP MATS OF REINFORCING IN ELEVATED SLABS LESS THAN 12 INCHES THICK.

CONCRETE REINFORCING

1. REINFORCING STEEL:
   TYPICAL: ASTM A615, GRADE 60 OR ASTM A706, GRADE 60

2. FABRICATION AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH CRSI MSP-1 "MANUAL OF STANDARD PRACTICE" AND ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE".

3. CONCRETE COVER FOR REINFORCING, UNLESS SHOWN OTHERWISE, SHALL BE:
   WHEN CAST AGAINST EARTH: 3"
   ALL OTHER: 2"

4. REFER TO WALL CORNER AND WALL INTERSECTION REINFORCING DETAIL 0330-003. WALL CORNER REINFORCING SIZES AND SPACINGS SHALL BE AS SHOWN ON THE DRAWINGS AND REFERENCED TO THIS DETAIL. TYPICAL HORIZONTAL WALL REINFORCING SHALL LAP WITH THE CORNER HORIZONTAL REINFORCING.

5. 90 DEGREE BENDS, UNLESS OTHERWISE SHOWN, SHALL BE ACI 318 STANDARD HOOKS.

6. WALL CORNER AND WALL INTERSECTION REINFORCEMENT BARS SHALL BE CONTINUOUS AROUND CORNERS AND THROUGH COLUMNS OR PILASTERS. REINFORCEMENT SHALL BE EXTENDED INTO CONNECTING WALLS AND LAPPED ON THE OPPOSITE FACE OF THE CONNECTING WALLS, AS INDICATED IN DETAIL 0330-003.

7. WALL FOOTING CORNER AND INTERSECTION REINFORCEMENT BARS SHALL BE EXTENDED INTO CONNECTING FOOTINGS AND LAPPED ON THE OPPOSITE FACE OF THE CONNECTING FOOTING. OUTSIDE FACE WALL FOOTING REINFORCEMENT SHALL BE LAPPED WITH CORNER BARS. ALL WALL FOOTING REINFORCEMENT SHALL BE CONTINUOUS THROUGH COLUMNS OR PILASTERS FOOTINGS.

8. LAP VERTICAL WALL BARS WITH DOWELS FROM BASE SLABS AND EXTEND INTO TOP FACE OF ROOF SLABS AND LAP WITH TOP SLAB REINFORCEMENT. PROVIDE A MINIMUM OF FOUR FULL HEIGHT VERTICAL BARS WITH MATCHING DOWELS AT WALL ENDS, CORNERS AND INTERSECTIONS WITH SIZE TO MATCH TYPICAL VERTICAL REINFORCING STEEL SHOWN OR REQUIRED BY NOTES ABOVE.

9. LOCATE ELEVATED SLAB AND BEAM TOP BAR SPLICES AT MIDSPAN AND BOTTOM BAR SPLICES AT SUPPORTS.

10. REINFORCING STEEL FOR FOOTINGS AND SLABS ON GRADE SHALL BE ADEQUATELY SUPPORTED ON BAR SUPPORTS WITH SPACERS TO KEEP REINFORCING ABOVE THE PREPARED GRADE. LIFTING REINFORCING OFF GRADE DURING CONCRETE PLACEMENT IS NOT PERMITTED.

11. REFER TO OPENING REINFORCING DETAILS 0330-001 AND 0330-002.

12. REINFORCEMENT BENDS AND LAPS, UNLESS OTHERWISE NOTED, SHALL SATISFY THE FOLLOWING MINIMUM REQUIREMENTS:

CONCRETE DESIGN STRENGTH = 4,500 PSI MIN AT 28 DAYS[3] GRADE 60 REINFORCING STEEL										
BAR SIZE		#3	#4	#5	#6	#7	#8	#9	#10	#11
LAP SPLICE LENGTH										
SPACING = 3"	TOP BAR [2]	1'-4"	1'-8"	2'-1"	3'-0"	5'-2"	6'-8"	8'-6"	10'-10"	13'-4"
	OTHER BAR	1'-4"	1'-4"	1'-8"	2'-4"	4'-0"	5'-2"	6'-7"	8'-4"	10'-3"
SPACING = 4"	TOP BAR [2]	1'-4"	1'-8"	2'-0"	2'-5"	3'-10"	5'-0"	6'-5"	8'-1"	10'-0"
	OTHER BAR	1'-4"	1'-4"	1'-7"	1'-10"	3'-0"	3'-11"	4'-11"	6'-3"	7'-8"
SPACING ≥ 6"	TOP BAR [2]	1'-4"	1'-8"	2'-0"	2'-5"	3'-6"	4'-0"	5'-0"	6'-2"	7'-5"
	OTHER BAR	1'-4"	1'-4"	1'-7"	1'-10"	2'-9"	3'-1"	3'-10"	4'-9"	5'-8"
EMBEDMENT LENGTH										
SPACING = 3"	TOP BAR [2]	1'-0"	1'-3"	1'-8"	2'-4"	4'-0"	5'-2"	6'-7"	8'-4"	10'-3"
	OTHER BAR	1'-0"	1'-0"	1'-3"	1'-10"	3'-1"	4'-0"	5'-1"	6'-5"	7'-11"
SPACING = 4"	TOP BAR [2]	1'-0"	1'-3"	1'-7"	1'-10"	3'-0"	3'-11"	4'-11"	6'-3"	7'-8"
	OTHER BAR	1'-0"	1'-0"	1'-3"	1'-5"	2'-4"	3'-0"	3'-10"	4'-10"	5'-11"
SPACING ≥ 6"	TOP BAR [2]	1'-0"	1'-3"	1'-7"	1'-10"	2'-9"	3'-1"	3'-10"	4'-9"	5'-8"
	OTHER BAR	1'-0"	1'-0"	1'-3"	1'-5"	2'-1"	2'-5"	3'-0"	3'-8"	4'-5"

1. LAP LENGTHS ARE BASED ON MINIMUM CONCRETE COVER OF 2". LONGER LENGTHS ARE REQUIRED FOR CONCRETE COVER LESS THAN 2".
2. TOP BARS SHALL BE DEFINED AS ANY HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR. HORIZONTAL WALL BARS ARE CONSIDERED TOP BARS.
3. WHERE 3500 PSI CONCRETE IS USED, INCREASE ABOVE LENGTHS BY 7 PERCENT.

CAST IN PLACE CONCRETE

1. 28-DAY COMPRESSIVE STRENGTHS:

TYPICAL, UNLESS OTHERWISE INDICATED:	4500 PSI
CONCRETE FILL:	3500 PSI
CURBS AND SIDEWALKS:	3500 PSI
DUCT BANKS AND PIPE ENCASEMENTS NOT INTEGRAL WITH FOUNDATIONS:	3500 PSI

2. DESIGN STRENGTHS ARE SAME AS 28-DAY COMPRESSIVE STRENGTHS.

3. CONTINUOUS WATERSTOP AS SPECIFIED SHALL BE INSTALLED IN CONSTRUCTION JOINTS OF HYDRAULIC STRUCTURES, CHANNELS, AND BELOW GRADE STRUCTURES, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.

4. CONSTRUCTION JOINTS INDICATED ARE SUGGESTED LOCATIONS. CONTRACTOR MAY REVISE LOCATION OF JOINTS, SUBJECT TO SPECIFIED REQUIREMENTS. LAYOUT SHOWING ALL CONSTRUCTION JOINT LOCATIONS SHALL BE SUBMITTED FOR REVIEW BY ENGINEER.

5. ROUGHEN AND CLEAN CONSTRUCTION JOINTS IN WALLS AND SLABS AS SPECIFIED PRIOR TO PLACING ADJACENT CONCRETE.

6. COORDINATE PLACEMENT OF OPENINGS, PIPE PENETRATIONS, CURBS, DOWELS, SLEEVES, CONDUITS, BOLTS AND INSERTS PRIOR TO PLACEMENT OF CONCRETE.

7. NO ALUMINUM CONDUIT OR PRODUCTS CONTAINING ALUMINUM OR ANY OTHER MATERIAL INJURIOUS TO THE CONCRETE SHALL BE EMBEDDED IN THE CONCRETE.

8. DO NOT PLACE CONDUIT PARALLEL TO BEAM OR COLUMN REINFORCEMENT UNLESS SPECIFICALLY INDICATED IN DRAWINGS.

9. PATCH FORM TIE HOLES IN ACCORDANCE WITH DETAILS 0310-051 AND/OR 0310-052.

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PROFESSIONAL STRUCTURAL ENGINEER
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36346
OKLAHOMA
05/18/2026

GENERAL

STRUCTURAL NOTES 1

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	GZ	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 01-G-0020
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 14 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:30

CONCRETE UNIT MASONRY

1. MASONRY WALL TYPE: INTERMEDIATE REINFORCED WALLS.
2. DESIGN COMPRESSIVE STRENGTH, f'm, OF THE FINISHED ASSEMBLY AND MATERIAL PROPERTIES SHALL BE PER THE TABLE BELOW.
3. MORTAR: ASTM C270, TYPE S, HYDRATED. DO NOT USE MASONRY CEMENT.
4. GROUT: ASTM C476 COARSE GROUT. USE OF WATER REDUCERS OR SUPERPLASTICIZERS IS NOT PERMITTED.
5. CONCRETE MASONRY UNITS: ASTM C90, MEDIUM WEIGHT, LINEAR SHRINKAGE SHALL NOT EXCEED 0.065 PERCENT.
6.

DESIGN COMPRESSIVE STRENGTH f 'm (PSI)	UNIT STRENGTH (PSI)	GROUT STRENGTH (PSI) MIN	MORTAR PROPERTIES
2,000	2,000	2,000	Type S

7. PLACE COURSES IN WALLS, COLUMNS, AND PILASTERS IN RUNNING BOND PATTERN.
8. PROVIDE MATCHING FOUNDATION DOWELS FOR ALL TYPICAL AND ADDITIONAL VERTICAL BARS.
9. PROVIDE VERTICAL BARS AND DOWELS WITH LAP LENGTHS AS SHOWN IN DETAIL 0422-004.
10. STAGGER ADJACENT LAP SPLICES BY 24 INCHES WHEN SEPARATED BY 3 INCHES OR LESS.
11. PROVIDE NUMBER OF FULL HEIGHT VERTICAL BARS AT EDGES OF OPENINGS AS SHOWN IN DETAIL 0422-004.
12. PROVIDE FULL HEIGHT VERTICAL BARS IN 3 CELLS AT WALL CORNERS AND INTERSECTIONS AS SHOWN IN DETAIL 0422-001.
13. PROVIDE HORIZONTAL CORNER AND INTERSECTION BARS WITH LAP LENGTHS AS SHOWN IN DETAIL 0422-001.
14. PROVIDE REINFORCED LINTELS ABOVE AND REINFORCED BOND BEAMS BELOW OPENINGS AS SHOWN IN DETAIL 0422-003.
15. PROVIDE FULL HEIGHT VERTICAL BARS WITH MATCHING DOWELS IN CELLS ADJACENT TO OPENINGS AS SHOWN IN DETAIL 0422-003.
16. GROUTING: PARTIALLY GROUT WALLS;
    - A. DO NOT SOLID GROUT WALLS UNLESS INDICATED ON THE DRAWINGS.
    - B. GROUT ONLY CELLS WITH REINFORCING WHERE REBAR IS SPACED AT 32 INCHES ON CENTER OR GREATER EACH WAY.
    - C. SOLID GROUT ALL CELLS IN CMU WALLS WHERE REBAR IS SPACED AT 24 INCHES ON CENTER OR LESS, EITHER WAY.
    - D. SOLID GROUT ALL PIERS, COLUMNS, HEADERS, AND BOND BEAMS.
    - E. SOLID GROUT ADDITIONAL MASONRY AREAS SPECIFICALLY INDICATED ON THE DRAWINGS.
    - F. FILL NON-GROUTED CELLS WITH INSULATION WHERE WALL TYPES SHOWN ON ARCHITECTURAL DRAWINGS REQUIRE INSULATED MASONRY CELLS.
17. MASONRY UNIT AND GROUT TESTING SHALL BE IN CONFORMANCE WITH IBC "UNIT STRENGTH METHOD". TESTING WILL BE OWNER FURNISHED AS INDICATED ON THE STATEMENT OF SPECIAL INSPECTIONS PLAN PROVIDED ON THE DRAWINGS. PRISM TEST METHOD MAY BE SUBMITTED AS AN ALTERNATIVE OR MAY BE REQUIRED BY OWNER'S REPRESENTATIVE TO VERIFY WORK.
18. DO NOT PLACE CONDUIT IN CELLS CONTAINING PARALLEL REINFORCEMENT.

WELDING

1. WELDS SHALL CONFORM TO AMERICAN WELDING SOCIETY (AWS):
   - D1.1, STRUCTURAL WELDING CODE STEEL
   - D1.2, STRUCTURAL WELDING CODE ALUMINUM
   - D1.3, STRUCTURAL WELDING CODE SHEET STEEL
   - D1.4, STRUCTURAL WELDING CODE REINFORCING STEEL
   - D1.6, STRUCTURAL WELDING CODE STAINLESS STEEL
2. REPAIR WELDS FOUND DEFECTIVE IN ACCORDANCE WITH AWS D1.1 SECTION 5.26.
3. USE INTERMITTENT WELDS AT FIELD WELDS OF EMBED PLATES AND ANGLES TO AVOID SPALLING OR CRACKING OF THE EXISTING CONCRETE.
4. BUTT JOINT WELDS SHALL BE COMPLETE JOINT PENETRATION (CJP) UNLESS INDICATED OTHERWISE.

STRUCTURAL STEEL AND METAL FABRICATIONS

1. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:

W-SHAPES AND CHANNELS	A992
MISCELLANEOUS SHAPES INCLUDING ANGLES, PLATES, ETC.	A36
HOLLOW STRUCTURAL SECTIONS (HSS)	A500, GRADE B OR C
STEEL PIPE	A53, GRADE B
STAINLESS STEEL SHAPES	A276

2. ALUMINUM SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:

STRUCTURAL SHAPES	B308
PLATES	B209

3. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN CONFORMANCE WITH THE AISC MANUAL OF STEEL CONSTRUCTION, CURRENT EDITION, AND CURRENT OSHA STANDARDS.
4. FASTENERS SHALL BE HIGH STRENGTH BOLTS CONFORMING TO THE FOLLOWING ASTM STANDARDS EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE:

UNLESS SHOWN OTHERWISE	F3125, GR A325-N
TENSION CONTROL (TC) BOLTS	ASTM A325 AND ASTM F1852
ANCHOR BOLTS (AB)	
STAINLESS STEEL	F593, AISI TYPE 316, CONDITION CW
STEEL OR GALVANIZED STEEL	F1554, GR 36 / A153
MACHINE BOLTS (MB)	
STEEL	A307
STAINLESS STEEL	F593, AISI TYPE 316, CONDITION CW
GALVANIZED STEEL	A307 / A153
ALUMINUM	F468, ALLOY 2024-T4

5. ITEMS TO BE EMBEDDED IN CONCRETE SHALL BE CLEAN AND FREE OF OIL, DIRT AND PAINT.
6. NO HOLES OTHER THAN THOSE SPECIFICALLY DETAILED SHALL BE ALLOWED THROUGH STRUCTURAL STEEL MEMBERS. NO CUTTING OR BURNING OF STRUCTURAL STEEL IS PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

STEEL DECKING

1. FOR DECK SIZE, GAGE, AND FASTENING CONFIGURATIONS, SEE FRAMING PLANS. FASTENING CONFIGURATIONS SHOWN ARE SPECIFIC TO THE DECK PRODUCT USED AS BASIS OF DESIGN. CONTRACTOR SHALL FASTEN THE DECKING IN ACCORDANCE WITH INSTALLED DECK MANUFACTURER'S RECOMMENDATIONS TO MEET SPECIFIED CAPACITY REQUIREMENTS.
2. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3 "STRUCTURAL WELDING CODE SHEET STEEL".
3. DECKING SHALL HAVE A MINIMUM 1 1/2 INCHES BEARING ON SUPPORTS.
4. DECKING SHALL BE CONTINUOUS OVER THREE SPANS MINIMUM, EXCEPT WHERE SHOWN OTHERWISE.
5. FLOOR DECK RECEIVING CONCRETE FILL SHALL BE COMPOSITE TYPE.
6. DECK TO DRAG STRUTS AND TOP OF WALL ANGLE TIES WITH ATTACHMENTS AS SPECIFIED AT 0'-6" ON CENTER, UNLESS OTHERWISE NOTED. LOCATE ANGLE IN DECK VALLEY. SEE DETAILS.
7. LOCATE OPENINGS FOR EQUIPMENT PER OTHER DISCIPLINE DRAWINGS.
8. REINFORCE DECK FOR LARGER OPENINGS PER DETAIL 0531-021. REINFORCE SMALL OPENINGS AS SPECIFIED.
9. COMPOSITE STRUCTURAL STEEL BEAMS HAVE BEEN DESIGNED FOR "UNSHORED CONDITION" DURING CONSTRUCTION, AND WILL DEFLECT UNDER WET CONCRETE LOADS. TO ACHIEVE THE FINISHED TOP OF CONCRETE INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, PROVIDE THE ADDITIONAL CONCRETE.

METAL BUILDING SYSTEMS

1. FOR DESIGN LOADS REFER TO DESIGN CRITERIA SECTION ABOVE WITH THE FOLLOWING ADDITIONS:
   A. COLLATERAL LOAD: 5 PSF
2. METAL BUILDING FOUNDATIONS HAVE BEEN DESIGNED FOR PRELIMINARY METAL BUILDING COLUMN REACTIONS SHOWN ON THE DRAWINGS. DO NOT CAST METAL BUILDING FOUNDATIONS UNTIL THEIR SIZES HAVE BEEN VERIFIED BY THE ENGINEER FOR THE ACTUAL COLUMN REACTIONS TO BE PROVIDED BY THE METAL BUILDING MANUFACTURER.
3. COLUMN ANCHOR BOLTS SHALL BE DESIGNED BY THE METAL BUILDING MANUFACTURER. ANCHORAGE DESIGN SHALL INCLUDE DETERMINATION OF ANCHOR BOLT MATERIAL, DIAMETER, EMBEDMENT DEPTH, QUANTITY, AND LAYOUT.
4. METAL BUILDING MANUFACTURER TO VERIFY THAT CONCRETE COLUMN PIER DIMENSIONS SHOWN ON THE DRAWINGS ARE LARGE ENOUGH TO ACCOMMODATE METAL BUILDING COLUMN BASE PLATES AND PROVIDE SUFFICIENT EDGE DISTANCE FOR COLUMN ANCHOR BOLTS.

DEFERRED SUBMITTALS

1. DEFERRED SUBMITTALS ARE THOSE PORTIONS OF THE DESIGN WHICH ARE NOT SUBMITTED AT THE TIME OF PERMIT APPLICATION AND WHICH ARE TO BE SUBMITTED TO THE PERMITTING AGENCY FOR ACCEPTANCE PRIOR TO INSTALLATION OF THAT PORTION OF THE WORK OR ARE REQUIRED TO BE SUBMITTED FOR REVIEW ONLY BY THE ENGINEER.
2. WHERE DEFERRED SUBMITTALS INCLUDE ADDITIONAL MATERIALS, INSTALLATION, ANCHORAGE, OR CERTIFICATION OF COMPONENTS THAT REQUIRE SPECIAL INSPECTION AND/OR STRUCTURAL OBSERVATION TO MEET CODE REQUIREMENTS, THE DEFERRED SUBMITTAL SHALL INCLUDE SPECIFIC LINE ITEMS TO BE ADDED TO THE APPROPRIATE TABLES IN THE PROJECT'S STATEMENT OF SPECIAL INSPECTIONS PLAN IF THEY ARE NOT ALREADY IDENTIFIED.
3. THE FOLLOWING IS A LIST OF DEFERRED SUBMITTALS PER IBC SECTION THAT ARE EXPECTED TO CONTAIN STRUCTURAL CALCULATIONS OR SAFETY RELATED SYSTEM INFORMATION FOR REVIEW TO MEET BUILDING PERMITTING REQUIREMENTS FOR DESIGNED SYSTEMS. PRIOR TO INSTALLATION OF THE INDICATED STRUCTURAL ELEMENT, EQUIPMENT, DISTRIBUTION SYSTEM, OR COMPONENT OR ITS ANCHORAGE, THE CONTRACTOR SHALL SUBMIT THE REQUIRED CALCULATIONS AND SUPPORTING DATA AND DRAWINGS FOR REVIEW AND ACCEPTANCE BY THE ENGINEER. ADDITIONALLY, ACCEPTANCE INDICATED ON THE ENGINEER'S COMMENT FORM, ALONG WITH THE COMPLETED, FINAL SUBMITTAL SHALL THEN BE SUBMITTED BY THE CONTRACTOR TO THE PERMITTING AGENCY AND APPROVED PRIOR TO INSTALLATION OF THESE ITEMS.

SPECIFICATION SECTION	CODE REQUIRED DEFERRED SUBMITTALS FOR REVIEW BY PERMITTING AGENCY
01 88 15	ANCHORAGE AND BRACING
05 52 16	ALUMINUM RAILINGS
13 34 19	METAL BUILDING SYSTEMS
40 05 15	PIPING SUPPORT SYSTEMS
OTHER	ANY EQUIPMENT OR COMPONENT IN WHICH A TECHNICAL SPECIFICATION REQUIRES SUBMITTAL OF EQUIPMENT OR ANCHORAGE SYSTEM CALCULATIONS

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REUSE OF DOCUMENTS:

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05/18/2026

GENERAL

STRUCTURAL NOTES 2

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RJL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 01-G-0021
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 15 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:30

STATEMENT OF SPECIAL INSPECTIONS

GENERAL NOTES:

1. THE STATEMENT OF SPECIAL INSPECTIONS PROVIDE PROJECT COMPLIANCE WITH THE PROVISIONS OF THE 2018 INTERNATIONAL BUILDING CODE (IBC) CHAPTER 17 FOR SPECIAL INSPECTION, STRUCTURAL OBSERVATION, AND TESTING FOR WIND AND SEISMIC RESISTANCE AS APPLICABLE. EXCEPT WHERE OTHERWISE NOTED, THESE INSPECTIONS ARE OWNER FURNISHED.
2. STANDARD SPECIAL INSPECTION REQUIREMENTS FOR NONSTRUCTURAL COMPONENTS ARE CONTAINED IN TABLE 1.
3. STANDARD SPECIAL INSPECTION REQUIREMENTS FOR STRUCTURAL COMPONENTS, REGARDLESS OF WIND OR SEISMIC DESIGN CATEGORIES, ARE CONTAINED IN TABLE 2. STANDARD TESTING REQUIREMENTS FOR STRUCTURAL COMPONENTS ARE CONTAINED IN TABLE 3.
4. PROJECT SPECIFIC REQUIREMENTS FOR STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORIES C, D, E, OR F ARE CONTAINED IN TABLE 4. ADDITIONAL TESTING REQUIREMENTS FOR STRUCTURAL RESISTANCE ARE CONTAINED IN TABLE 6.
5. PROJECT SPECIFIC REQUIREMENTS FOR STRUCTURES SUBJECT TO BASIC WIND SPEEDS Vasd IN EXCESS OF 110 MPH ARE CONTAINED IN TABLE 5.
6. FOR ADDITIONAL REQUIREMENTS, REFER TO SPECIFICATION SECTION 01 45 33, SPECIAL INSPECTION, OBSERVATION, AND TESTING. THESE INCLUDE:
   A. CONTRACTOR'S REQUIREMENTS TO PROVIDE ACCESS TO THE WORK FOR REQUIRED INSPECTIONS, AND TO PROVIDE NOTICE OF REQUIRED INSPECTIONS AND STRUCTURAL OBSERVATION.
   B. CONTRACTOR'S STATEMENT OF RESPONSIBILITY FOR WORK TO BE PERFORMED ON SYSTEMS DESIGNATED UNDER THE STATEMENT OF SPECIAL INSPECTIONS FOR WIND OR SEISMIC RESISTANCE.
   C. DEFINITIONS AND TERMINOLOGY USED IN THIS STATEMENT OF SPECIAL INSPECTIONS.

SPECIAL INSPECTION:

1. SPECIAL INSPECTION WILL BE IN ACCORDANCE WITH IBC SECTIONS 1704 AND 1705 TOGETHER WITH LOCAL AND STATE AMENDMENTS. REFER TO THE FOLLOWING TABLES FOR PROJECT SPECIFIC INSPECTION TYPES AND FREQUENCIES.
2. SPECIAL INSPECTIONS WILL BE PROVIDED BY A CERTIFIED OR QUALIFIED INSPECTOR AND ASSOCIATED TESTING WILL BE PERFORMED BY AN APPROVED ACCREDITED INDEPENDENT AGENCY. THE OWNER WILL SECURE AND PAY FOR THE SERVICES OF THE AGENCY TO PERFORM ALL SPECIAL INSPECTION AND ASSOCIATED TESTS. INSPECTORS FOR EACH SYSTEM AND MATERIAL WILL BE INTERNATIONAL CODE COUNCIL (ICC) CERTIFIED OR OTHERWISE APPROVED BY THE BUILDING OFFICIAL.
3. THE SPECIAL INSPECTOR WILL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE APPROVED CONTRACT DOCUMENTS AND SUBMIT RECORDS OF INSPECTION. ALL DISCREPANCIES WILL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
4. SPECIAL INSPECTION AND ASSOCIATED TESTING REPORTS WILL BE SUBMITTED TO THE ENGINEER, CONTRACTOR, BUILDING OFFICIAL, AND OWNER WITHIN ONE WEEK OF INSPECTION OR WITHIN ONE WEEK OF TEST COMPLETION. INSPECTIONS FOR WHICH REPORTING WILL BE REQUIRED ARE NOTED IN THE FOLLOWING TABLES.
5. AT THE CONCLUSION OF CONSTRUCTION, A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF PREVIOUSLY NOTED DISCREPANCIES SHALL BE SUBMITTED.

GEOTECHNICAL OBSERVATION:

1. ALL FOUNDATION BEARING SURFACES SHALL BE INSPECTED BY GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF GRANULAR FILL, GEOTEXTILE, OR REINFORCING STEEL. ADDITIONAL SPECIAL INSPECTION REQUIREMENTS ARE LISTED IN TABLE 1.
2. GEOTECHNICAL TESTING REQUIREMENTS ARE LISTED IN TABLE 3.

STRUCTURAL OBSERVATION

1. STRUCTURAL OBSERVATION WILL BE IN ACCORDANCE WITH IBC SECTION 1704.6 TOGETHER WITH LOCAL AND STATE AMENDMENTS.
2. ONSITE STRUCTURAL OBSERVATION WILL BE PERFORMED FOR EACH IDENTIFIED SEISMIC FORCE- OR WIND FORCE-RESISTING SYSTEM, INCLUDING FOUNDATIONS AND CONNECTIONS. REFER TO THE GENERAL STRUCTURAL NOTES, DRAWINGS FOR THE BASIC SEISMIC AND WIND FORCE-RESISTING SYSTEMS FOR THE STRUCTURES INCLUDED IN THE WORK.
3. STRUCTURAL OBSERVATION WILL BE PERFORMED BY A REGISTERED PROJECT DESIGN PROFESSIONAL FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR ANY REQUIRED SPECIAL INSPECTIONS OR INSPECTIONS BY THE BUILDING OFFICIAL.
4. STRUCTURAL OBSERVATION REPORTS, NOTING ANY DEFICIENCIES IN OBSERVED CONSTRUCTION, WILL BE DELIVERED TO THE CONTRACTOR, BUILDING OFFICIAL, AND OWNER FOLLOWING EACH OBSERVATION. THE CONTRACTOR WILL BE NOTIFIED ONSITE OR BY PHONE OR E-MAIL WITHIN 24 HOURS UPON FINDING DEFICIENCIES.
5. AT THE CONCLUSION OF CONSTRUCTION, A WRITTEN STATEMENT WILL BE PROVIDED TO VERIFY THAT THE STRUCTURAL OBSERVATION SITE VISITS WERE MADE AND WHETHER THERE REMAIN ANY STRUCTURAL DEFICIENCIES THAT HAVE NOT BEEN RESOLVED.
6. STRUCTURAL OBSERVATION WILL INCLUDE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM FOR EACH STRUCTURE CONTAINED IN THE WORK. THE CONTRACTOR SHALL SCHEDULE AND FACILITATE STRUCTURAL OBSERVATION, INCLUDING THE ELEMENTS DESCRIBED IN THE STRUCTURAL OBSERVATION TABLES (ATTACHED).

SPECIAL INSPECTIONS FOR WIND RESISTANCE

1. SPECIAL INSPECTIONS REQUIREMENTS FOR WIND RESISTANCE IN ACCORDANCE WITH 2018 IBC SECTION 1705.11 TOGETHER WITH LOCAL AND STATE AMENDMENTS.

SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE

1. SPECIAL INSPECTIONS REQUIREMENTS FOR SEISMIC RESISTANCE WILL BE IN ACCORDANCE WITH IBC SECTION 1705.12 AND 1705.13 TOGETHER WITH LOCAL AND STATE AMENDMENTS. REFER TO GENERAL STRUCTURAL NOTES ON DRAWINGS FOR BASIC SEISMIC-FORCE-RESISTING SYSTEMS FOR EACH STRUCTURE AND DESIGNATED SEISMIC DESIGN CATEGORY.
2. SPECIAL INSPECTIONS REQUIREMENTS FOR SEISMIC RESISTANCE SHALL APPLY TO THE SYSTEMS AND COMPONENTS LISTED IN TABLE 4.

STRUCTURAL OBSERVATION TABLE

	SYSTEM FOR FACILITY AS APPLICABLE	STAGE	ITEMS	COMMENTS
1.	FOUNDATION SLAB OF STRUCTURE	PRIOR TO FIRST CONCRETE PLACEMENT OF FIRST SECTION WHEN ITEMS CAN STILL BE REVISED	REINFORCING STEEL, CONCRETE AND MASONRY WALL DOWELS, WATERSTOPS, EMBEDS, AND SIMILAR ITEMS	NOTE 1
2.	CONCRETE WALLS OF STRUCTURE	PRIOR TO FIRST CONCRETE PLACEMENT OF FIRST SECTION WHEN ITEMS CAN STILL BE REVISED	REINFORCING STEEL, WALL DOWELS, WATERSTOPS, EMBEDS, AND SIMILAR ITEMS	NOTE 1
3.	WALL TO FOUNDATION CONNECTIONS PRIOR TO FORM CLOSURE	PRIOR TO FIRST CONCRETE PLACEMENT OF FIRST SECTION WHEN ITEMS CAN STILL BE REVISED		NOTE 1
4.	CONCRETE STRUCTURES	PRIOR TO FIRST CONCRETE PLACEMENT ON FIRST LIQUID HOLDING STRUCTURE WHEN ITEMS CAN STILL BE REVISED	REINFORCING STEEL, WALL DOWELS, WATERSTOPS, EMBEDS, AND SIMILAR ITEMS	NOTE 1
5.	CONCRETE STRUCTURES	AT COMPLETION OF PLACEMENT OF ALL CONCRETE COMPONENTS FOR THE FIRST LIQUID HOLDING STRUCTURE	CONCRETE TOLERANCES, FINISHING, LIQUID TIGHTNESS, AND SIMILAR ITEMS	NOTE 1
6.	MASONRY WALL, BEAM, PIER, AND COLUMN REINFORCING STEEL	DURING THE INITIAL CONSTRUCTION OF THE FIRST MASONRY STRUCTURE WHEN ITEMS CAN STILL BE REVISED	REINFORCING STEEL, GROUTED CELLS, EMBEDS, COURSE PREPARATION AND SIMILAR ITEMS	NOTE 1
7.	SYSTEM CONNECTION EMBEDS	PRIOR TO MASONRY GROUT OR CONCRETE PLACEMENT		NOTE 1
8.	AT ADDITIONAL TIMES DURING CONSTRUCTION AT WHICH THE ENGINEER OF RECORD OR OWNER DEEM THE NEED FOR ADDITIONAL STRUCTURAL OBSERVATION			NOTE 1
9.	AT SUBSTANTIAL COMPLETION OF PRIMARY STRUCTURAL SYSTEM FOR DETERMINATION OF FINAL CONDITION OF STRUCTURE			NOTE 1

NOTES:
1. STRUCTURAL OBSERVER TO DISCUSS ITEMS AND SITE SPECIFIC CONDITIONS WITH SPECIAL INSPECTOR AND FIELD INSPECTION STAFF DURING OBSERVATION.

TABLE 1
REQUIRED NON-STRUCTURAL SPECIAL INSPECTION
REFER TO SPECIFICATION SECTION 01 45 33

SYSTEM OR MATERIAL	2018 IBC CODE REFERENCE	REFERENCED STANDARD	PERIODIC SPECIAL INSPECTION (SEE NOTE 1)	CONTINUOUS SPECIAL INSPECTION	COMMENTS	TESTING FOR SPECIAL INSPECTION
GEOTECHNICAL						
1. SOILS:						
A. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	1705.6, 1803.5.8, 1803.5.9, 1804.5	SECTION 31 23 13, SUBGRADE PREPARATION	X		PROFESSIONAL OBSERVATION BY GEOTECHNICAL ENGINEER	
B. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	1705.6	SECTION 31 23 16, EXCAVATION	X		PROFESSIONAL OBSERVATION BY GEOTECHNICAL ENGINEER	
C. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	1705.6	SECTION 31 23 23, FILL AND BACKFILL	X			SEE TABLE 3 FOR GRADATION TEST REQUIREMENTS
D.VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	1705.6, 1803.5.8	SECTION 31 23 23, FILL AND BACKFILL		X		SEE TABLE 3 FOR DENSITY TEST REQUIREMENTS
E. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	1705.6	SECTION 31 23 13, SUBGRADE PREPARATION	X		PROFESSIONAL OBSERVATION BY GEOTECHNICAL ENGINEER	SEE TABLE 3 FOR DENSITY TEST AND PROOF ROLLING REQUIREMENTS
ARCHITECTURAL						
1. FIRE-RESISTANT PENETRATIONS AND JOINTS IN BUILDING ASSIGNED TO RISK CATEGORY III OR IV:						
A. PENETRATION FIRESTOPS	1705.16.1	ASTM E2174	X			
B. FIRE-RESISTANT JOINT SYSTEMS	1705.16.2	ASTM E2393	X			
STRUCTURAL						
SEE TABLE 2.						

NOTES:
1. PERIODIC INSPECTION IS DEFINED AS INSPECTION BY THE SPECIAL INSPECTOR OF ALL MATERIALS AND SYSTEMS, IN SOME CASES PERFORMED DURING THEIR PLACEMENT AND IN ALL CASES PERFORMED UPON COMPLETION OF THEIR PLACEMENT. THE COMPLETION INSPECTION SHALL BE PERFORMED SO THAT WORK CAN BE CORRECTED PRIOR TO OTHER RELATED WORK PROCEEDING AND COVERING INSPECTED WORK.

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REUSE OF DOCUMENTS:

PROFESSIONAL STRUCTURAL ENGINEER
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OKLAHOMA
05/18/2026

GENERAL

STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS 1

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
FILE: DRAWING: 01-G-0022
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 16 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:30

TABLE 2
REQUIRED STRUCTURAL SPECIAL INSPECTION
REFER TO SPECIFICATION SECTION 01 45 33

SYSTEM	2018 IBC CODE REFERENCE	REFERENCED STANDARD	PERIODIC SPECIAL INSPECTION (SEE NOTE 1)	CONTINUOUS SPECIAL INSPECTION	COMMENTS	TESTING FOR SPECIAL INSPECTION
CONCRETE						
1. INSPECT REINFORCING STEEL AND PLACEMENT	1705.3	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	X			
2. INSPECT ANCHORS CAST IN CONCRETE	1705.3	ACI 318: 17.8.2	X			
3. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS						
A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	1705.3	ACI 318: 17.8.2.4, ICC-ES EVALUATION REPORTS		X		
B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 3A.	1705.3	ACI 318: 17.8.2, ICC-ES EVALUATION REPORTS	X			
4. VERIFY USE OF REQUIRED DESIGN MIX	1705.3, 1904.2, 1910.2, 1910.3	ACI 318: Ch. 4, 5.2-5.4	X			
5. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	1705.3	ASTM C 172, ASTM C 31, ACI 318: 26.12		X		SEE TABLE 3 FOR CONCRETE TEST REQUIREMENTS
6. INSPECT CONCRETE FOR PROPER APPLICATION TECHNIQUES	1705.3	ACI 318: 26.5.1.1, 26.5.2.1		X		
7. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	1705.3	ACI 318: 26.5.3.2, 26.5.4.2, 26.5.5.2	X			
8. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO REMOVAL OF SHORING AND FORMS FROM BEAMS AND STRUCTURAL SLABS	1705.3	ACI 318: 26.11.2.1	X			
9. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	1705.3	ACI 318: 26.11.1.2	X			
10. INSPECT WATERSTOPS FOR PROPER SHAPE, LOCATION, JOINT QUALITY, AND SURROUNDING CONCRETE PLACEMENT		ACI 318; 26.5.6.2	X			
11. VERIFY PROPER INSTALLATION OF MECHANICAL REINFORCING SPLICES AND CONNECTIONS	1705.1.1 ITEM 3, 1705.3	ICC-ES EVALUATION REPORTS	X			

TABLE 2 (CONTINUED)
REQUIRED STRUCTURAL SPECIAL INSPECTION
REFER TO SPECIFICATION SECTION 01 45 33

SYSTEM	2018 IBC CODE REFERENCE	REFERENCED STANDARD	PERIODIC SPECIAL INSPECTION (SEE NOTE 1)	CONTINUOUS SPECIAL INSPECTION	COMMENTS	TESTING FOR SPECIAL INSPECTION
MASONRY LEVEL C						
1. VERIFICATION OF f'_m PRIOR TO CONSTRUCTION AND FOR EVERY 5,000 SQUARE FEET DURING CONSTRUCTION	1705.4	ACI 530: Sec. 1.19.3 ACI 530.1: Art. 1.4B	X			SEE TABLE 3 FOR MASONRY TEST REQUIREMENTS
2. VERIFICATION OF PROPORTIONS OF MATERIALS IN PREMIXED OR PREBLENDED MORTAR AND GROUT AS DELIVERED TO THE PROJECT SITE	1705.4	ACI 530: Sec. 1.19.3 ACI 530.1: Art. 1.5B	X			
3. VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS	1705.4	ACI 530: Sec. 1.19.2 ACI 530.1: Art. 1.5	X			
4. VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:						
A. PROPORTIONS OF SITE-MIXED MORTAR AND GROUT	1705.4	ACI 530: Sec. 1.19.3 ACI 530.1: Art. 2.1, 2.4G.1.b, 2.6A, 2.6B	X			
B. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS	1705.4	ACI 530: Sec. 1.16, 1.19.3 ACI 530.1: Art. 2.4, 3.4	X			
C. PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORTAR JOINTS	1705.4	ACI 530: Sec. 1.19.3 ACI 530.1: Art. 3.3B	X			
D. PLACEMENT OF REINFORCEMENT	1705.4	ACI 530: Sec. 1.16, 1.19.3 ACI 530.1: Art. 3.2E, 3.4, 3.6A		X		
E. GROUT SPACE PRIOR TO GROUTING	1705.4	ACI 530: Sec. 1.19.3 ACI 530.1: Art. 3.2D, 3.2F		X		
F. PLACEMENT OF GROUT	1705.4	ACI 530: Sec. 1.19.3 ACI 530.1: Art. 3.5, 3.6C		X		
G. SIZE AND LOCATION OF STRUCTURAL ELEMENTS	1705.4	ACI 530: Sec. 1.19.3 ACI 530.1: Art. 3.3F	X			
H. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION	1705.4	ACI 530: Sec. 1.16.4.3, 1.17.1, 1.19.3		X		
I. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMP. BELOW 40 DEGREES F) OR HOT WEATHER (TEMP. ABOVE 90 DEGREES F)	1705.4, 2104.3, 2104.4	ACI 530: Sec. 1.19.3 ACI 530.1: Art. 1.8C, 1.8D	X			
5. OBSERVE PREPARATION OF GROUT AND MORTAR SPECIMENS	1705.4, 2105.2.2, 2105.3	ACI 530: Sec. 1.19.3 ACI 530.1: Art. 1.4B.2		X		SEE TABLE 3 FOR UNIT STRENGTH TESTS FOR MASONRY

TABLE 2 (CONTINUED)
REQUIRED STRUCTURAL SPECIAL INSPECTION
REFER TO SPECIFICATION SECTION 01 45 33

SYSTEM	2018 IBC CODE REFERENCE	REFERENCED STANDARD	PERIODIC SPECIAL INSPECTION (SEE NOTE 1)	CONTINUOUS SPECIAL INSPECTION	COMMENTS	TESTING FOR SPECIAL INSPECTION
STRUCTURAL STEEL						
1. MATERIAL VERIFICATION OF STRUCTURAL STEEL:						
A. IDENTIFICATION MARKINGS TO CONFORM TO AISC 360	1705.2.1, 2203.1	Applicable ASTM Material Standards	X			
B. MANUFACTURER'S CERTIFIED TEST REPORTS	1705.2.1	AISC 360: Sec. N3.2, N5.2	X			
2. PRIOR TO BOLTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:						
A. MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	1705.2.1	AISC 360: Sec. N3.2, N5.2, N5.6 RCSC: Sec. 2.1, 9.1		X		
B. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	1705.2.1	AISC 360: Sec. N3.2, N5.2, N5.6 Applicable ASTM Material Standards	X			
C. PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	1705.2.1	AISC 360: Sec. N5.6 RCSC: Sec. 4	X			
D. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	1705.2.1	AISC 360: Sec. N5.6 RCSC: Sec. 3.2, 4	X			
E. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER	1705.2.1	AISC 360: Sec. N5.6 RCSC: Sec. 7		X		
F. PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	1705.2.1	AISC 360: Sec. N5.6 RCSC: Sec. 2.2	X			
3. VERIFY DURING BOLTING:						
A. FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	1705.2.1	AISC 360: Sec. N5.6	X			
B. JOINT BROUGHT TO SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	1705.2.1	AISC 360: Sec. N5.6	X			
C. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	1705.2.1	AISC 360: Sec. N5.6	X			

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05/18/2026

GENERAL

STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS 2

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 01-G-0023
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 17 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:30

TABLE 2 (CONTINUED)
REQUIRED STRUCTURAL SPECIAL INSPECTION
REFER TO SPECIFICATION SECTION 01 45 33

SYSTEM	2018 IBC CODE REFERENCE	REFERENCED STANDARD	PERIODIC SPECIAL INSPECTION (SEE NOTE 1)	CONTINUOUS SPECIAL INSPECTION	COMMENTS	TESTING FOR SPECIAL INSPECTION
STRUCTURAL STEEL (CONTINUED)						
4. PRIOR TO WELDING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:						
A. APPROVED WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE TO WELDERS AND WELDING INSPECTOR(S)	1705.2.1	AWS D1.1	X			
B. WELDER QUALIFICATIONS AND JOINT FIT-UP	1705.2	AWS D1.1	X		NOTE 2	ALSO SEE REQUIREMENTS OF SPEC. SECTION 05 05 23
5. VERIFY DURING WELDING:						
A. CONTROL AND HANDLING OF WELDING CONSUMABLES	1705.2.1	AWS D1.1	X			
B. ENVIRONMENTAL CONDITIONS	1705.2.1	AWS D1.1	X			
C. COMPLIANCE WITH WPS REQUIREMENTS	1705.2.1	AWS D1.1	X		NOTE 2	
6. AFTER WELDING, VERIFY THE FOLLOWING:						
A. SIZE, LENGTH AND LOCATION OF WELDS	1705.2.1	AWS D1.1	X		NOTE 2	
B. WELDS MEET VISUAL ACCEPTANCE CRITERIA	1705.2.1	AWS D1.1	X		NOTE 2	ALSO SEE REQUIREMENTS OF SPEC. SECTION 05 05 23
C. BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	1705.2.1	AWS D1.1	X			
D. NONDESTRUCTIVE WELDING INSPECTION	1705.2	AWS D1.1	X		NOTE 2	ALSO SEE REQUIREMENTS OF SPEC. SECTION 05 05 23
STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL						
1. CONNECTION OF COLD-FORMED STEEL DECK TO SUPPORTING STRUCTURE:						
A. FLOOR AND ROOF DECK WELDS	1705.2.2	AWS D1.3 SDI QA/QC	X		NOTE 2	ALSO SEE REQUIREMENTS OF SPEC. SECTION 05 05 23
B. OTHER FASTENERS: VERIFY FASTENERS ARE IN CONFORMANCE WITH APPROVED SUBMITTAL	1705.2.2	AISC 360: SEC N6	X			
C. OTHER FASTENERS: VERIFY FASTENERS INSTALLATION IS IN ACCORDANCE WITH APPROVED SUBMITTAL	1705.2.2	AISC 360: SEC N6	X			
ALUMINUM						
1. MATERIAL VERIFICATION OF ALUMINUM:						
A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	1705.1.1 ITEM 2		X			
B. MANUFACTURERS' CERTIFIED MILL TEST REPORTS	1705.1.1 ITEM 2		X			
2. INSPECTION OF WELDING:						
A. NONDESTRUCTIVE INSPECTION	1705.1.1 ITEM 2	AWS D1.2	X		NOTE 2	ALSO SEE REQUIREMENTS OF SPEC. SECTION 05 05 23

NOTES:
1. PERIODIC INSPECTION IS DEFINED AS INSPECTION BY THE SPECIAL INSPECTOR OF ALL MATERIALS AND SYSTEMS, IN SOME CASES PERFORMED DURING THEIR PLACEMENT AND IN ALL CASES PERFORMED UPON COMPLETION OF THEIR PLACEMENT. THE COMPLETION INSPECTION SHALL BE PERFORMED SO THAT WORK CAN BE CORRECTED PRIOR TO OTHER RELATED WORK PROCEEDING AND COVERING INSPECTED WORK.

2. VISUAL INSPECTION IS THE RESPONSIBILITY OF THE CONTRACTOR'S WELDING INSPECTOR(S) AND IS NOT CONSIDERED SPECIAL INSPECTION. CONTRACTOR MUST PROVIDE A QUALIFIED WELDING INSPECTOR TO OVERSEE CONTRACTOR'S WELDING OPERATIONS, AS REQUIRED BY AWS D1.1, SECTIONS 8.1.2 & 8.6, SPEC. SECTION 05 05 23 AND REFERENCED WELDING CODES.

TABLE 3
TESTING FOR REQUIRED SPECIAL INSPECTION
REFER TO SPECIFICATION SECTION 01 45 33

MATERIAL	TYPE OR SCOPE	STANDARD	2018 IBC CODE REFERENCE	FREQUENCY	BY WHOM	COMMENTS
GEOTECHNICAL						
COMPACTED FILL	GRADATION	ASTM C117, C136	1705.6	SECTION 31 23 23, FILL AND BACKFILL	SPECIAL INSPECTOR	
COMPACTED FILL	COMPACTION	ASTM D6938, D698	1705.6	SECTION 31 23 23, FILL AND BACKFILL	SPECIAL INSPECTOR	
COMPACTED FILL	DENSITY	ASTM D698	1705.6	SECTION 31 23 23, FILL AND BACKFILL	SPECIAL INSPECTOR	
PREPARED SUBGRADE	DENSITY	ASTM D6938, D698	1705.6	SECTION 31 23 13, SUBGRADE PREPARATION	SPECIAL INSPECTOR	
CONCRETE						
CONCRETE	STRENGTH	ASTM C39	1705.3	ONCE EACH DAY, BUT NOT LESS THAN ONE SAMPLE FOR EACH 150 CUBIC YARDS OR 5,000 SFT OF WALLS OR SLABS PLACED	SPECIAL INSPECTOR	
CONCRETE	SLUMP	ASTM C143, C94	1705.3	ONE SAMPLE PER STRENGTH TEST	SPECIAL INSPECTOR	
CONCRETE	AIR CONTENT	ASTM C231, C94	1705.3	ONE SAMPLE PER STRENGTH TEST	SPECIAL INSPECTOR	
CONCRETE	TEMPERATURE	ASTM C1064	1705.3	ONE SAMPLE PER STRENGTH TEST	SPECIAL INSPECTOR	
MASONRY						
CONCRETE MASONRY	UNIT STRENGTH	ASTM C140	2105.1	ONE SAMPLE SET (6 FULL SIZE UNITS) PER 5,000 SQ. FT. DURING CONSTRUCTION	SPECIAL INSPECTOR	
MASONRY	COMPRESSIVE STRENGTH OF GROUT	ASTM C1019	2105.1	THREE SAMPLES PRIOR TO CONSTRUCTION	SPECIAL INSPECTOR	
STEEL						
STEEL STUD WELDING	PRE-PRODUCTION TESTING	AWS D1.1 Sec. 9.7.1	1705.2	PRIOR TO CONSTRUCTION FOR EACH SIZE AND TYPE AND FIRST 2 STUDS EACH SHIFT	SPECIAL INSPECTOR	
HIGH-STRENGTH BOLTING	PRE-INSTALLATION VERIFICATION TESTING OF PRETENSIONED BOLTS	RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS, Sec. 7	1705.2	3 FASTENER ASSEMBLIES OF EACH COMBINATION OF DIAMETER, LENGTH, GRADE AND LOT	SPECIAL INSPECTOR	
STRUCTURAL STEEL	ULTRASONIC OR RADIOGRAPHIC NONDESTRUCTIVE TESTING	AWS D1.1	1705.2	SECTION 05 05 23, WELDING	SPECIAL INSPECTOR	PERFORM RT OR UT ON GROOVE WELDS

TABLE 4
REQUIRED SPECIAL INSPECTION FOR SEISMIC RESISTANCE FOR STRUCTURAL SYSTEMS
REFER TO TABLE 2 FOR STANDARD STRUCTURAL SPECIAL INSPECTION REQUIREMENTS
REFER TO SPECIFICATION SECTION 01 45 33

PROJECT IS SEISMIC DESIGN CATEGORY B
TABLE IS NOT APPLICABLE TO PROJECT

TABLE 5
REQUIRED SPECIAL INSPECTION FOR WIND RESISTANCE FOR STRUCTURAL SYSTEMS
REFER TO SPECIFICATION SECTION 01 45 33

The Nominal Design Wind Speed (3-second-gust) for this Project is 79 mph.
The Wind Exposure is Category C.

TABLE IS NOT APPLICABLE TO PROJECT

TABLE 6
TESTING FOR SEISMIC RESISTANCE
REFER TO SPECIFICATION SECTION 01 45 33

PROJECT IS SEISMIC DESIGN CATEGORY B - NO SPECIAL SYSTEMS DETAILED FOR SEISMIC
TABLE IS NOT APPLICABLE TO PROJECT

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05/18/2026

GENERAL

STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS 3

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026
FILE: DRAWING: 01-G-0024
ATLAS PAGE NO: 3328
SHEET 18 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:30

PIPE AND FITTING SYMBOLS

DOUBLE LINE	SINGLE LINE	
		EXISTING PIPE
		NEW PIPE
		EXISTING PIPE TO BE ABANDONED
		EXISTING PIPE TO BE REMOVED
		WELDED JOINT
		GROOVED END JOINT
		FLANGED JOINT
		MECHANICAL JOINT & PROPRIETARY RESTRAINED JOINT
		BELL & SPIGOT JOINT (LEADED)
		HUB & SPIGOT JOINT (RUBBER GASKET)
		BALL JOINT
		ADAPTER SIDE GROOVED END ADAPTER FLANGE
		FLANGED COUPLING ADAPTER
		FLEXIBLE COUPLING
		METAL BELLOWS EXP JOINT
		ELASTOMER BELLOWS EXP JOINT
		ELBOW UP
		ELBOW DOWN
		TEE UP
		TEE DOWN
		LATERAL UP
		LATERAL DOWN
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER

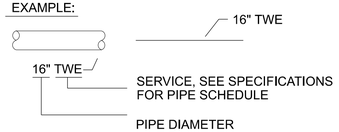
DOUBLE LINE	SINGLE LINE	
		REDUCING BUSHING
		UNION
		CAP
		ANCHOR
		ELBOW, 90 DEGREE
		CROSS
		TEE
		ELBOW, 45 DEGREE
		LATERAL

NOTES:

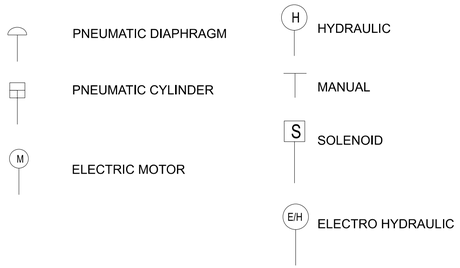
1. ONLY FLANGED END CONNECTIONS ARE SHOWN HERE FOR DOUBLE LINE FITTINGS. FITTINGS WITH OTHER END PATTERNS ARE SHOWN SIMILARLY ON THE CONSTRUCTION DRAWINGS. ALSO SEE PIPING SPECIFICATIONS.
2. SYMBOLS SHOWN HERE FOR SINGLE LINE FITTINGS ARE GENERIC ONLY. REFER TO PIPING SPECIFICATIONS FOR SPECIFIC END CONNECTIONS FOR SINGLE LINE PIPE AND FITTINGS.
3. EXISTING PIPE AND EQUIPMENT IS SHOWN LIGHT-LINED AND/OR SCREENED AND IS NOTED AS EXISTING. NEW PIPING AND EQUIPMENT IS SHOWN HEAVY-LINED.

PIPING DESIGNATION

EXAMPLE:



ACTUATOR SYMBOLS



VALVE SYMBOLS

SINGLE LINE	DOUBLE LINE
GATE	
K KNIFE GATE	OR
BUTTERFLY	OR
GLOBE	OR
BALL	OR
SEATING PORT	
ECCENTRIC PLUG	OR
PLUG OR COCK	OR
NEEDLE	OR
DIAPHRAGM	OR
PINCH	OR
SWING CHECK	OR
BALL CHECK	OR

HOSE VALVE (HV- X) OR (V-X)
X = NO. IN SPECS

S SAMPLE

MUD

PRESSURE RELIEF

AIR AND/OR VACUUM RELEASE

REGULATED SIDE
PRESSURE CONTROL (INTERNAL PILOT)

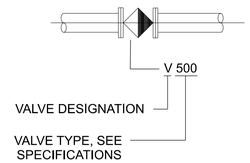
REGULATED SIDE
PRESSURE CONTROL (EXTERNAL PILOT)

MULTI-PORT VALVE,
ARROWS INDICATE FLOW PATTERN.
SEATING PORTS ARE IMPLIED BY INDICATED FLOW PATTERN.

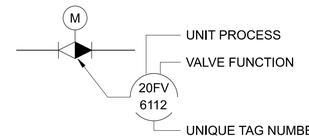
TELESCOPING SCUM VALVE

VALVE DESIGNATIONS

MANUAL VALVES AND CHECK VALVES

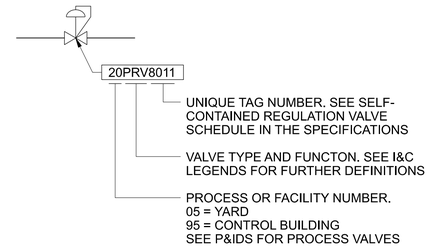


CONTROL VALVES



NOTE:
SEE I&C LEGENDS FOR FURTHER DEFINITIONS AND ACTUATOR TYPES.

SELF-CONTAINED REGULATING VALVES



MECHANICAL LEGEND AND NOTES

GENERIC PIPING NOTES

1. LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS.
2. SIZE OF FITTINGS SHOWN ON DRAWINGS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE.
3. LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHOWN IS ONLY APPROXIMATE. CONTRACTOR SHALL DESIGN SUPPORTS AS SPECIFIED.
4. ALL JOINTS SHALL BE WATERTIGHT. WALL PIPES SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO BACKFILL.
5. ALL FLEXIBLE CONNECTORS AND COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST PROTECTION AS SPECIFIED, UNLESS OTHERWISE NOTED. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED.
6. SYMBOLS, LEGENDS, AND PIPE USE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED THROUGHOUT THE DRAWINGS, WHEREVER APPLICABLE. NOT ALL OF THE VARIOUS PIPING COMPONENTS ARE NECESSARILY USED IN THE PROJECT.
7. ALL BURIED PIPING SPECIFIED TO BE PRESSURE TESTED, EXCEPT FLANGED, WELDED, OR SCREWED PIPING, SHALL BE PROVIDED WITH THRUST PROTECTION AS SPECIFIED, UNLESS OTHERWISE NOTED.
8. NUMBER AND LOCATION OF UNIONS SHOWN ON DRAWINGS IS ONLY APPROXIMATE. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT.
9. WHERE A GROOVED END COUPLING IS SHOWN, IT SHALL BE THE RIGID JOINT TYPE, UNLESS OTHERWISE SPECIFIED. WHERE A FLANGED COUPLING ADAPTER IS SHOWN, A STANDARD FLANGE SHALL BE JOINED TO THE COUPLING ADAPTER.

LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

GENERAL

PROCESS LEGEND

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
HORIZONTAL:	PROJ. MGR.	MSN 05/26	
	LEAD ENG.	RZL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 01-G-0030		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 19 OF 300 SHEETS

PLOT DATE: 05\13\2026 PLOT TIME: 8:32:36 AM

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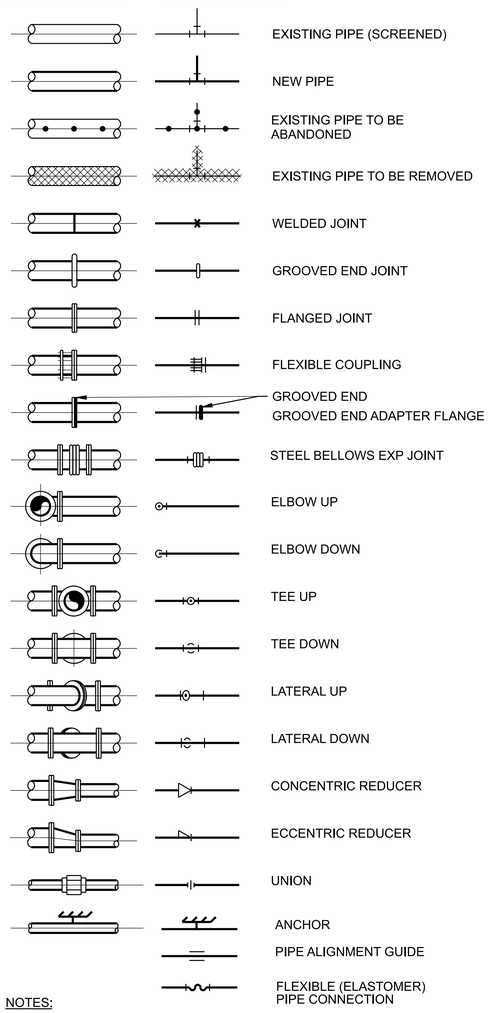
HEATING, VENTILATING, AND AIR CONDITIONING PIPE AND FITTING SYMBOLS

DOUBLE LINE | SINGLE LINE

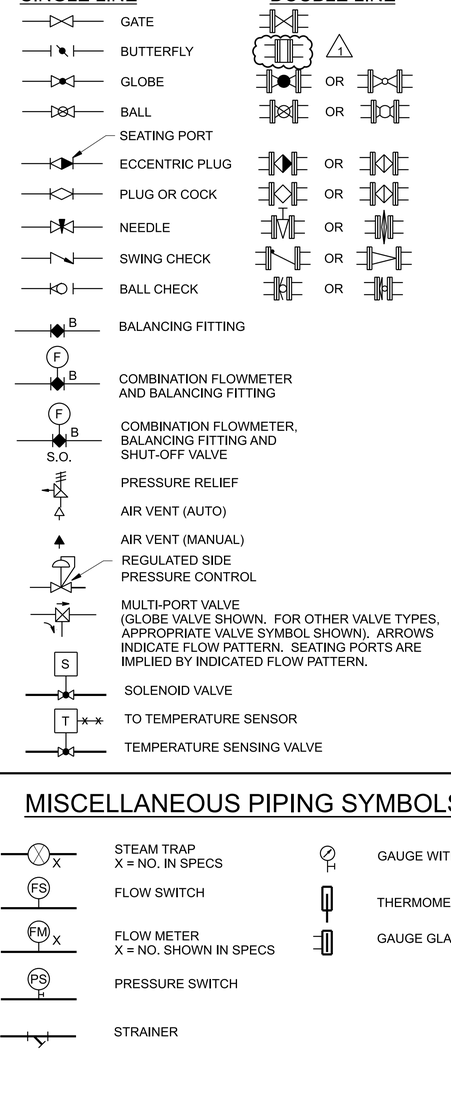


NOTES:

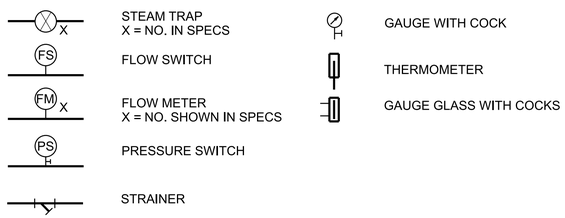
1. ONLY FLANGED FITTINGS ARE SHOWN FOR DOUBLE LINE PIPING. FITTINGS WITH OTER END PATTERNS ARE SIMILAR.
2. EXISTING PIPING AND EQUIPMENT IS SHOWN LIGHT LINED AND/OR SCREENED AND IS NOTED AS EXISTING. NEW PIPING AND EQUIPMENT IS SHOWN HEAVY-LINED.-

VALVE SYMBOLS

SINGLE LINE | DOUBLE LINE

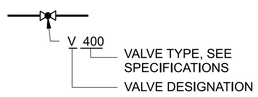


MISCELLANEOUS PIPING SYMBOLS



VALVE DESIGNATIONS

MANUAL VALVES AND CHECK VALVES



HVAC EQUIPMENT IDENTIFICATION

ACC	AIR-COOLED CONDENSER
ACCU	AIR-COOLED CONDENSING UNIT
ACU	AIR CONDITIONING UNIT
AHU	AIR HANDLING UNIT
BD	BUTTERFLY DAMPER
CD	CEILING DIFFUSER
CG	CEILING GRILLE
CR	CEILING REGISTER
CRP	CONDENSATE RETURN PUMP
CRU	CONDENSATE RETURN UNIT
EHF	EXHAUST FAN
EUH	ELECTRIC UNIT HEATER
SF	SUPPLY FAN

NOTE:
ABBREVIATIONS ARE SHOWN ON GENERAL LEGENDS.

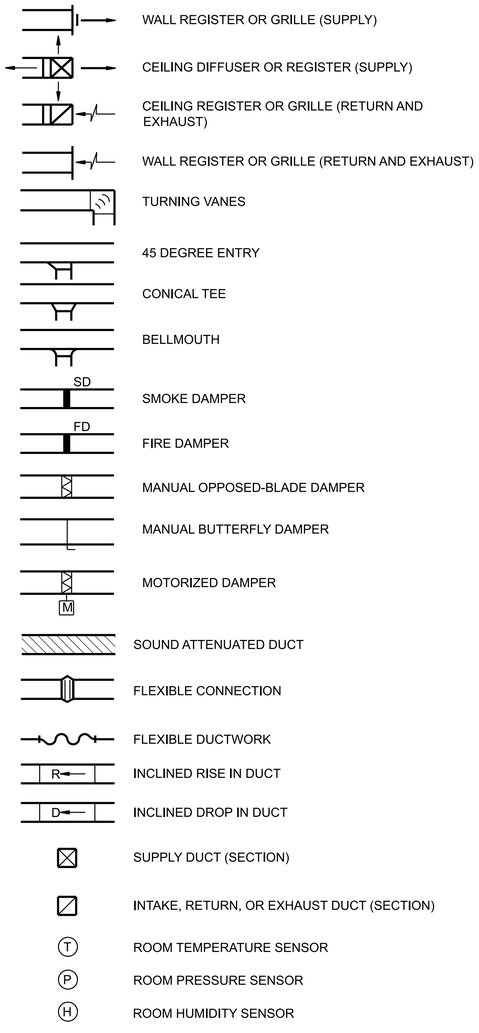
HEATING, VENTILATING, AND AIR CONDITIONING SYMBOLS

HCP	HVAC CONTROL PANEL
(200)	200 SCFM

NOTE:

1. FOR FULL LIST OF SENSOR TAGS, SEE SPECIFICATION 23-09-13.

HEATING, VENTILATING, AND AIR CONDITIONING SYMBOLS CONT.



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LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

GENERAL

HVAC LEGEND

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
HORIZONTAL:	PROJ. MGR.	WSN 05/26	
VERTICAL:	LEAD ENG.	5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 01-G-0035		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 20 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 13:57

PACKAGED AIR CONDITIONING UNITS

23 81 00

TAG NUMBER	UNIT LOCATION	FILTER DATA MERV	RESISTANCE IN.WG. CLEAN	DIRTY	SUPPLY FAN DATA MAXIMUM SUPPLY AIR CFM	OUTSIDE AIR CFM	TOTAL S.P. IN. WG.	EXTERNAL S.P. IN. WG.	HP	RPM	RET./EXH. FAN DATA CFM	TOTAL S.P. IN. WG.	EXTERNAL S.P. IN. WG.	HP	RPM	COOLING DATA TOTAL MBH	LAT DB	LAT DEG. F WB	AMBIENT TEMP. DEG. F	DP MAX IN.WG.	EER/IEER @ ARI	HEATING DATA HEAT CAPCACITY MBH	HEAT TYPE	CFM	LAT DEG. F	OUTSIDE AIR TEMPERATURE DB/WB(F)	PRE-HEAT COIL HEAT CAPACITY kW	LEAVING AIR TEMP. (DB/WB)	ELECTRIC HEAT FLA	RE-HEAT COIL HEAT CAPACITY MBH	LEAVING AIR TEMP. (DB/WB)	RELAVTIVE HUMIDITY	AUXILIARY HEATING HEAT TYPE	HEATING CAPACITY kW	ELECTRIC HEAT FLA	CONDENSER FAN DATA NO.	HP (EA)	COMPRESSOR DATA NO.	MINIMUM STEPS	UNIT ELECTRICAL DATA FLA (EA)	SCCR (KAIC)	# CONN	MCA	MOCP	VOLT	PH	MANUFACTURER	MODEL	REMARKS
H090-DEW1-ACU01	OUTDOORS	8	0.31	0.35	11,415	11,415	2.7	1.5	15	1449	-	-	-	-	-	-	-	-	-	-	-	444	ELECTRIC	11,415	53	14.3/11.5	20	20/15.5	24.1								-	-	-	-	189	10	1	195	225	460	3	AAON	RNA	I-R
H095-COM1-ACU01	OUTDOORS	8	0.07	0.35	2,225	330	3.35	1.5	3	1760	1,895	1.08	1	1	1,760	55	55	54.2	101.6	0.14	11.86/14.1	40	HEAT PUMP	2,225	80	14.3/11.5				52.5	75/60.7	44.1	ELECTRIC	20	24.1	2	0.33	1	VARIABLE	30	10	1	37	40	460	3			A-O
H090-DEW2-ACU01	OUTDOORS	8	0.1	0.35	5,875	5,875	2.3	1.5	5	1760	-	-	-	-	-	-	-	-	-	-	-	165	ELECTRIC	5,875	54	14.3/11.5														104	10	1	106	125	460	3			I-Q
H040-WAS1-ACU01	OUTDOORS	8	0.06	0.35	2,420	2,420	2.01	1.5	2	1170	-	-	-	-	-	-	-	-	-	-	-	92	ELECTRIC	2,420	52	14.3/11.5										-	-	-	-	52	10	1	64	70	460	3			I-Q

REMARKS:

A. ECONOMIZER WITH DIFFERENTIAL ENTHALPY CONTROL
B. COMPRESSOR CYCLE DELAY
C. COMPRESSOR START ASSIST: CAPACITOR/RELAY TYPE
D. GRAVITY FRESH AIR DAMPER
E. HAIL GUARD
F. DIP APPLIED ANTI-CORROSION COATING ON CONDENSER COIL (NOT SPRAY APP
G. UNIT CONFIGURATION: PACKAGED, ROOF-MOUNT TYPE WITH
H. PLENUM CURB FOR SIDE DISCHARGE
I. MANUFATURER PROVIDED VFD
J. SIDE LOADED METAL FILTERS MERV 8-2"
K. PROVIDE CORROSION RESISTANT COATING PER SPECIFICA
L. DAMPERS ARE EXTRUDED ALUMINUM AIR FOIL PARALLEL B
M. MANUFACTURER PROVIDED DISCONNECT
N. RAIN HOOD
O. DIRECT DRIVE PLENUM SUPPLY FAN
P. 12" ROOF CURB
Q. UNIT CONFIGURATION: PACKAGED, ROOF-MOUNT TYPE WITH SIDE DISCHARGE
R. ADDITIONAL ELECTRIC PREHEAT MODULE INCLUDED TO MEET REQUIRED MBH

SPLIT DX UNIT

23 81 00

INDOOR UNIT

TAG NUMBER	FACILITY SERVED	FAN DATA MAXIMUM SUPPLY AIR CFM	MINIMUM SUPPLY AIR CFM	EXTERNAL STATIC P IN. WG	FAN MOTOR DATA HP	VOLT	PH	NEMA CLASS	MOTOR ENCLOSURE	DX COOLING DATA TOTAL MBH	LAT DEG. F DB	WB	AMBIENT TEMP. DEG. F	SEER EER	HEATING DATA TOTAL MBH	HSPF2	MODEL
FC01	DEW1	1,130	812	N/A						55	58.0	N/A	103	20.8/12.7	61	10.6	KNSCB481A
FC02		1,130	812	N/A						55	58.0	N/A	103	20.8/12.7	61	10.6	
FC03		1,130	812	N/A						55	58.0	N/A	103	20.8/12.7	61	10.6	
FC01	COM1	971	794	N/A						44	58.0	N/A	103	23.5/13.7	46	10.6	KNSCB361A
FC02		971	794	N/A						44	58.0	N/A	103	23.5/13.7	46	10.6	
FC03		459	388	N/A						23	58.0	N/A	103	20.5/13.2	24	9.5	KNUDB181A
FC04		459	388	N/A						23	58.0	N/A	103	20.5/13.2	24	9.5	
FC01	DEW3	971	794	N/A						44	58.0	N/A	103	23.5/13.7	46	10.6	KNSCB361A
FC02		971	794	N/A						44	58.0	N/A	103	23.5/13.7	46	10.6	

POWERED BY ODU

OUTDOOR UNIT

TAG NUMBER	CONDENSER FAN DATA NO.	RLA (EA)	COMPRESSOR DATA NO.	MIN. STAGES	UNIT ELECTRICAL DATA # CONN	MCA	MOCP	VOLT	PH	MOTOR ENCLOSURE	MODEL	MANUFACTURER	REMARKS
CU01	2	3.2	1	2	1	32.0	40				KUSXA481A		
CU02	2	3.2	1	2	1	32.0	40						
CU03	2	3.2	1	2	1	32.0	40						
CU01	2	3.2	1	2	1	32.0	35				KUSXA361A		
CU02	2	3.2	1	2	1	32.0	35	208	1	BLDC		LG	A-E
CU03	1	1.6	1	2	1	19.1	30				KUSXA181A		
CU04	1	1.6	1	2	1	19.1	30						
CU01	2	3.2	1	2	1	32.0	35				KUSXA361A		
CU02	2	3.2	1	2	1	32.0	30						

REMARKS:

A. HAIL GUARD
B. MANUFACTURER PROVIDED DISCONNECT
C. MINIMUM 12" STAND FOR EQUIPMENT.
D. RAIN HOOD
E. MANUFACTURE PROVIDED VIBRATION AND ISOLATION KIT.

AIR INLET/ OUTLET

23 37 00

SYMBOL	FLOW RANGE (CFM)	MOUNTING TYPE	FACE SIZE (IN)	NECK SIZE (IN)	MAX APD (IN WC)	MAX NC	BASIS OF DESIGN	NOTES
SG-1	897	NOTE 1	N/A	NOTE 1	0.1	30	TITUS 272	NOTES 2, 3, 4, 5
	693							
	526							
	331							
	230							
	NOTE 1							
SD-1	NOTE 1		24x24				TITUS TDCA-AA	
			12X12					
EG-1	4410		N/A				TITUS 350	
	2853							
	N/A							
	1139							
	428							
	324							
	246							
RD-1	NOTE 1	NOTE 1	24X24				TITUS PAR-AA	
			12X12					

NOTES

1. SEE DRAWINGS
2. BALANCING DAMPERS SHALL BE PROVIDED FOR ALL SUPPLY AND RETURN AIR GRILLES IN THE CONNECTING BRANCH DUCT, IF INDICATED OR NOT.
3. PRESSURE DROP AND SOUND AT 45 DEGREE BLADE ANGLE FOR ADJUSTABLE DAMPERS.
4. MATERIAL FOR DIFFUSERS AND GRILLES SHALL BE ALUMINUM UNLESS NOTED OTHERWISE
5. BAKED WITE ENAMEL

DUCTWORK SCHEDULE

23 31 13

SYSTEM	SERVICE	SECTION	SMACNA DUCT CONSTRUCTION CRITERIA PRESSURE CLASS (IN W.G.)	MATERIALS OF CONSTRUCTION	SEAL CLASS	APPLICABLE REMARKS
H070-WAS1-ACU01	SUPPLY AIR	ALL	3	ALUMINUM	B	A&B
H090-DEW1-ACU01	SUPPLY AIR	ALL	3	ALUMINUM	B	
H090-DEW1-EHF01	EXHAUST AIR	ALL	-2	ALUMINUM	B	
H090-DEW2-ACU01	SUPPLY AIR	ALL	3	ALUMINUM	B	
H090-DEW2-EHF01	EXHAUST AIR	ALL	-2	ALUMINUM	B	
H095-COM1-ACU01	SUPPLY AIR	ALL	3	GALVANIZED STEEL	B	
	RETURN AIR	ALL	-2	GALVANIZED STEEL	B	
H095-COM1-EHF01/02/03/04	EXHAUST AIR	ALL	-2	ALUMINUM	B	
ALL OTHERS	ALL	ALL	3	ALUMINUM	B	

REMARKS:

A: REFER SECTION 23 31 13, METAL DUCT AND ACCESSORIES
B: REFER TO SECTION 23 07 00, HVAC INSULATION

FANS

23 34 00

TAG NUMBER	LOCATION	TYPE	FAN DATA AIRFLOW MAXIMUM ACFM	@ SP IN. WG.	DRIVE TYPE	WHEEL TYPE	ELECTRICAL DATA MOTOR MAXIMUM BHP	HP	ENCLOSURE	NEMA CLASS	VOLTS	PH	MAXIMUM DIMENSIONS INCHES L	W	H	WEIGHT LBS.	MANUFACTURER	MODEL NO.	REMARKS
H090-DEW1-EHF01	DEWATERING FACILITY	ROOF FAN, UTILITY SET UP-BLAST	10,452	1.40	DIRECT	BACKWARD INCLINED AIRFOIL	5.80	7.50					40.0	40.0	48.0	334	GREENHECK	CUE-300HP-VG	2,3
H095-COM2-EHF01	COMPOSTING FACILITY		20,893	0.10	DIRECT	PROPELLER	2.70	5.00	TEFC	4X	460	3	52.0	52.0	50.0	436		RDU-42-430-VG	1,2
H095-COM2-EHF02																			
H095-COM2-EHF03																			
H095-COM2-EHF04																			
H095-COM2-EHF05																			
H095-COM2-EHF06																			
H095-COM2-EHF07																			
H090-COM3-EHF01	BLOWER AND RECIRC PUMP	SIDEWALL, UTILITY SET-UP BLAST	4,625	1.00	DIRECT	BACKWARD INCLINED AIRFOIL	1.34	2.00					30.0	30.0	39.0	155		CUE-200-VG	
H095-COM1-EHF01	COMPOSTING OPERATIONS BUILDING	INLINE	110	0.25	DIRECT	FORWARD CURVED WHEEL	0.01	N/A	N/A	N/A	115	1	24.0	14.0	15.0	67		CSP-A900	
H095-COM1-EHF02																			
H095-COM1-EHF03																			
H095-COM1-EHF04																			

REMARKS:

1. FACTORY PROVIDED SPEED CONTROLLER, POTENTIOMETER DIAL MOUNTED AT THE MOTOR.
2. PROVIDE SWITCH FOR LOCAL POWER DISCONNECT
3. PROVIDE FACTORY PRESSURE CONTROLLER WITH INTEGRAL TRANSDUCER AND FACTORY INSTALLED TRANSFORMER.

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LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

GENERAL

HVAC SCHEDULES

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
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REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026
SHEET 21 OF 300 SHEETS

FILE: DRAWING: 01-G-0036
ATLAS PAGE NO: 3328

PLOT DATE: 19-MAY-2026 PLOT TIME: 12:25

APPLICABLE CODES AND STANDARDS

NFPA 70, NATIONAL ELECTRICAL CODE	2017
NFPA 72, NATIONAL FIRE ALARM SIGNALING CODE	2016
NFPA 820, STANDARD FOR FIRE PROTECTION IN WASTEWATER TREATMENT AND COLLECTION FACILITIES	2016
INTERNATIONAL BUILDING CODE (IBC), WITH OKLAHOMA AMMENDMENTS	2018
INTERNATIONAL FIRE CODE (IFC), WITH OKLAHOMA AMENDMENTS	2018

FIRE ALARM LEGEND

FACP	FIRE ALARM CONTROL PANEL
FRT	FIRE ALARM RADIO TRANSCEIVER
ANN	LCD ANNUNCIATOR PANEL
	CEILING-MOUNTED FIRE ALARM HORN / STROBE
	CEILING-MOUNTED FIRE ALARM HORN
	CEILING-MOUNTED FIRE ALARM STROBE
	WALL-MOUNTED FIRE ALARM HORN
	WALL-MOUNTED FIRE ALARM HORN/STROBE
	WALL-MOUNTED FIRE ALARM STROBE
	ELECTRIC HORN/STROBE WATERFLOW INDICATOR
F	MANUAL FIRE ALARM PULL STATION
P	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR
I	ADDRESSABLE IONIZATION SMOKE DETECTOR
S	RETURN/SUPPLY AIR DUCT SMOKE DETECTOR (SUPPLIED BY FIRE ALARM CONTRACTOR; INSTALLED BY MECHANICAL CONTRACTOR)
M	ADDRESSABLE INPUT MONITOR MODULE
C	ADDRESSABLE OUTPUT CONTROL MODULE
TS	TAMPER SWITCH
WF	WATER FLOW SWITCH - VANE TYPE
	PRESSURE SWITCH HIGH/LOW
"WP"	DESIGNATES WEATHERPROOF DEVICE AND BACKBOX
"XP"	DESIGNATES EXPLOSION PROOF DEVICE
CO	CARBON MONOXIDE DETECTOR

FIRE ALARM GENERAL NOTES

1. PROVIDE AN ADRESSABLE FIRE ALARM SYSTEM THROUGHOUT THE DEWATERING CENTRIFUGE BUILDING DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 72, NFPA 70, AND IBC WITH LOCAL OKLAHOMA STATE AMENDMENTS. ALL DEVICES AND EQUIPMENT MUST BE UL LISTED AND IN COMPLIANCE WITH THE SPECIFICATION.
2. CONTRACTOR TO COORDINATE UL LISTED FIRE ALARM MONITORING STATION.
3. PROVIDE AN ADDITIONAL DRY CONTACT CONNECTION BETWEEN THE FACP AND SCADA SYSTEM.
4. CONTRACTOR MUST FIELD VERIFY THE EXISTING CONDITIONS AND VERIFY CONSTRUCTION LAYOUT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. REPORT ANY DISCREPANCIES BETWEEN THE DRAWINGS AND ACTUAL FIELD CONDITIONS TO THE CONTRACTING OFFICER PRIOR TO PROCEEDING WITH WORK. THE FINAL DESIGN INCLUDING QUANTITIES AND NOTIFICATION APPLLIANCE LOCATIONS ARE THE RESPONSIBILITY OF THE FIRE ALARM CONTRACTOR.
5. THE FIRE ALARM INSTALLER MUST BE RESPONSIBLE FOR ALL APPLICABLE TRADE PERMITS, REQUESTS FOR INSPECTIONS, AND ALL REQUIRED FIRE ALARM TESTING.
6. FIRE ALARM CONTRACTOR MUST OBTAIN AHJ APPROVAL OF SHOP DRAWINGS PRIOR TO INSTALLATION.
7. PENETRATIONS THROUGH ALL REQUIRED FIRE RATED AND SMOKE PARTITIONS MUST BE SEALED USING UL APPROVED CONFIGURATIONS AND MATERIALS.
8. ALL FIRE ALARM COMPONENTS INCLUDING PANELS, DEVICES, POWER SUPPLIES, ETC. MUST BE UL LISTED.
9. PROVIDE ACCEPTANCE TESTING OF ENTIRE SYSTEM TO THE SATISFACTION OF THE CONTRACTING REPRESENTATION. TESTING OF ALL INDIVIDUAL SYSTEMS, DEVICES, WIRING, ETC. IS REQUIRED. PUNCHLIST ITEMS MUST BE COMPLETED IN A TIMELY MANNER TO THE SATISFACTION OF THE CONTRACTING REPRESENTATIVE. THE CALENDAR WARRANTY PERIOD MUST COMMENSE UPON THE CONTRACTING REPRESENTATIVE'S ACCEPTANCE OF ALL REFERENCED SYSTEMS AND COMPLETTION OF ALL PUNCHLIST ITEMS.
10. CONTRACTOR MUST COORDINATE WITH MECHANICAL CONTRACTOR AND PROVIDE CONDUIT, CONDUCTORS, AND HARDWARE AS REQUIRED FOR CONNECTION TO DUCT MOUNTED DETECTORS AND FIRE/SMOKE DAMPERS.
11. COORDINATE THE FINAL LOCATION OF DETECTORS WITH DUCTWORK. EACH DETECTOR MUST BE ACCESSIBLE AND VISIBLE FORM THE GROUND. WHERE CONFLICTS EXIST, CONTACT ENGINEER FOR RESOLUTION.
12. DUCT SMOKE DETECTORS MUST BE PROVIDED IN THE SUPPLY AND RETURN SIDE OF THE AIR HANDLING UNITS OVER 2,000 "CFM".
13. DO NOT LOCATE DETECTORS IN DIRECT AIR OR CLOSER THAN 3 FEET FROM AN AIR SUPPLY OR RETURN DIFFUSER.
14. PROVIDE CLASS B SIGNALING LINE CIRCUITS (SLC), INTITIATING DEVICE CIRCUITS (IDC), AND NOTIFICATION APPLIANCE CIRCUITS (NAC).
15. FIRE ALARM CONTRACTOR MUST PROVIDE ENGINEERED SHOP DRAWINGS COMPLETE WITH WIRING DIAGRAMS, SEQUENCE OF OPERATIONS, COLTAGE DROP, AND BATTERY CALCULATIONS AS WELL AS LISTING OF EQUIPMENT AND DEVICES FURNISHED, COMPLYING WITH THE CITY REQUIREMENTS.
16. AUDIO/VISUAL NOTIFICATION APPLIANCES MUST BE PROVIDED THROUGHOUT THE FACILITY IN ACCORDANCE WITH NFPA 72, AND IFC SECTION 907 AS AMENDED BY THE LOCAL MUNICIPALITY. DEVICES MUST BE PLACED WITH REGARD FOR OBSTRUCTIONS.
17. AUDIBLE DEVICES DB LEVEL MUST BE BASED ON PUBLIC MODE AUDIBILITY REQUIREMENTS OF NFPA 72.
18. DUCT SMOKE DETECTORS INSTALLED IN OCCUPANCIES NOT REQUIRED TO BE EQUIPPED WITH A FIRE ALARM SYSTEM MUST ACTIVATE A VISIBLE AND AUDIBLE SIGNAL IN AN APPROVED LOCATION. THE SMOKE DETECTOR TROUBLE CONDITIONS MUST ACTIVATE A VISIBLE OR AUDIBLE SIGNAL IN AN APPROVED LOCATION AND MUST BE IDENTIFIED AS AIR DUCT DETECTOR TROUBLE.
19. THESE DOCUMENTS DEPICT PERFORMANCE LEVEL ENGINEERING DESIGN CRITERIA TO BE UTILIZED AS A GUIDANCE FOR THE PLANNING OF THE FIRE ALARM SYSTEM. PROVIDE COMPLETE DOCUMENTS FOR REVIEW AND APPROVAL FROM THE ENGINEER AND AUTHORITY HAVING JURISDICTION PRIO TO INSTALLATION. INCLUDE IN SHOP DRAWINGSAND CALCULATIONS ANY ADDITIONAL EQUIPMENT NECESSARY TO PROVIDE A COMPLETE INSTALLATION AND COMPLY WITH STANDARDS.

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LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

GENERAL
FIRE ALARM
GENERAL NOTES AND LEGEND

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/18/26
LEAD ENG.	SJL	5/18/26
FIELD MGR.		5/18/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 01-G-0038
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 22 OF 300 SHEETS

PLOT DATE: 18-MAY-2026 PLOT TIME: 13:35

PLUMBING SYMBOLS

- EXISTING PIPE (SCREENED)
- NEW PIPE
- EXISTING PIPE TO BE ABANDONED
- EXISTING PIPE TO BE REMOVED
- ANCHOR
- CAP
- CLEANOUT PLUG
- ELBOW, 90 DEGREE
- ELBOW UP
- ELBOW DOWN
- CROSS
- TEE
- TEE UP
- TEE DOWN
- ELBOW, 45 DEGREE
- LATERAL
- LATERAL UP
- LATERAL DOWN
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- UNION
- GROOVED END JOINT
- FLEXIBLE PIPE CONNECTION
- STEEL BELLOWS EXPANSION JOINT
- STRAINER
- SIGHT GLASS
- PS — PRESSURE SWITCH
- PRESSURE GAUGE WITH COCK
- THERMOMETER
- HOSE RACK (TYPE AS INDICATED)
- EYEWASH
- S — SAFETY SHOWER
- S — SAFETY SHOWER\EYEWASH COMBINATION UNIT
- HOSE VALVE

Z" YCO-X
- Z = OUTLET SIZE IN INCHES
- Y = F - FLOOR CLEANOUT; W - WALL CLEANOUT
- X = NO. IN SPECIFICATION

Z" HD-XY — HUB DRAIN
- Z = OUTLET SIZE IN INCHES
- X = NO. IN SPECIFICATION
- Y = T WITH TRAP; Y = P WITH PRIMED TRAP

Z" FD-XY — FLOOR DRAIN
- Z = OUTLET SIZE IN INCHES
- X = NO. IN SPECIFICATION
- Y = T WITH TRAP; Y = P WITH PRIMED TRAP

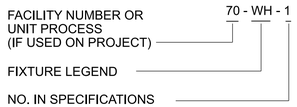
Z" RD-X — ROOF DRAIN
- Z = OUTLET SIZE IN INCHES
- X = NO. IN SPECIFICATION

Z" OD-X — OVERFLOW ROOF DRAIN
- Z = OUTLET SIZE IN INCHES
- X = NO. IN SPECIFICATION

PLUMBING EQUIPMENT IDENTIFICATION

IDENTIFICATION	EQUIPMENT NAME
AAV	AIR ADMITTANCE VALVE
AD	AREA DRAIN
AC	AIR COMPRESSOR
ANT	ACID NEUTRALIZATION TANK
AR	AIR RECEIVER
BFP	BACKFLOW PREVENTER
BP	BOOSTER PUMP
CP	CIRCULATION PUMP
DB	DOWNSPOUT BOOT
DCBP	DOUBLE CHECK BACKFLOW PREVENTER
DN	DOWNSPOUT NOZZLE
DT	DILUTION TANK
DWT	DOMESTIC WATER STORAGE TANK
ET	EXPANSION TANK
ETP	ELECTRONIC TRAP PRIMER
IM	ICE MAKER
HX	HEAT EXCHANGER
OD	OVERFLOW ROOF DRAIN
ON	OVERFLOW NOZZLE
OS	OIL\WATER SEPERATOR
P	PUMP
RD	ROOF DRAIN
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
ST	STORAGE TANK
SP	SUMP PUMP
TP	TRAP PRIMER ASSEMBLY
TWT	TEMPERED WATER STORAGE TANK
WH	WATER HEATER
WHA	WATER HAMMER ARRESTOR
VP	VACUUM PUMP

EXAMPLE CALLOUT:



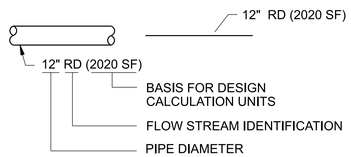
VALVE SYMBOLS

SINGLE LINE	DOUBLE LINE
GATE	
BUTTERFLY	OR
GLOBE	OR
BALL	OR
PLUG OR COCK	OR
SWING CHECK	OR
BALL CHECK	OR

- HOSE VALVE (HV- X) OR (V-X); X = NO. IN SPECS
- PRESSURE RELIEF
- AIR AND/OR VACUUM RELEASE
- REGULATED SIDE
- PRESSURE CONTROL (INTERNAL PILOT)
- BALANCE VALVE (RHW)
- BACKFLOW PREVENTER

PIPING DESIGNATION

EXAMPLE:



PIPE SERVICE IDENTIFICATION	BASIS FOR DESIGN CALCULATION UNITS
RD	DRAINAGE AREA IN SQUARE FOOTAGE - SF
NG	VOLUME OF GAS CUBIC FEET PER HOUR - CFH *
D	DRAINAGE FIXTURE UNIT - DFU
V	DRAINAGE FIXTURE UNIT - DFU
W1	FLOW IN GALLONS PER MINUTE GPM
HW	FLOW IN GALLONS PER MINUTE GPM

NOTE: * GAS FLOW DEMAND BASED ON PROJECT SITE ELEVATION

PLUMBING FIXTURE IDENTIFICATION

LEGEND	FIXTURE
EWC	ELECTRIC WATER COOLER
HV	HOSE VALVE OR HYDRANT
LAV	LAVATORY
MS	MOP SINK
SH	SHOWER
S	SINK
SSH	SAFETY SHOWER\EYEWASH COMBINATION
SSK	SERVICE SINK
UR	URINAL
WC	WATER CLOSET

EXAMPLE CALLOUT: SSH - 1
- FIXTURE LEGEND
- NO. IN SPECIFICATIONS

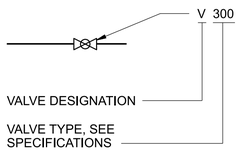
PLUMBING FIXTURE SCHEDULE

ITEM	DESCRIPTION	D	V	ARD	ARV	W1	HW	DIW	W2	A	VAC	COMMENTS
WC-1	WALL MTD WATER CLOSET	4"	2"	-	-	1"	-	-	-			
WC-2	WALL MTD WATER CLOSET	4"	2"	-	-	1"	-	-	-			ADA COMPLIANT
UR-1	URINAL	2"	1 1/2"	-	-	3/4"	-	-	-			
UR-2	URINAL	2"	1 1/2"	-	-	3/4"	-	-	-			ADA COMPLIANT
LAV-1	LAVATORY	1 1/2"	1 1/2"	-	-	1/2"	1/2"	-	-			
LAV-2	LAVATORY	1 1/2"	1 1/2"	-	-	1/2"	1/2"	-	-			ADA COMPLIANT
S-1	SINK (KITCHEN)	2"	1 1/2"	-	-	1/2"	1/2"	-	-			
MS-1	MOP SINK	3"	1 1/2"	-	-	1/2"	1/2"	-	-			
SSK-1	SERVICE SINK	3"	1 1/2"	-	-	1/2"	1/2"	-	-			
SH-1	SHOWER	2"	1 1/2"	-	-	1/2"	1/2"	-	-			
SH-2	SHOWER	2"	1 1/2"	-	-	1/2"	1/2"	-	-			ADA COMPLIANT
EWC-1	ELECTRIC WATER COOLER	1 1/2"	1 1/2"	-	-	1/2"	-	-	-			ADA COMPLIANT

VALVE DESIGNATIONS

MANUAL VALVES AND CHECK VALVES

EXAMPLE CALLOUT:



GENERAL DRAWING NOTES

1. THIS IS A STANDARD LEGEND SHEET. SOME SYMBOLS OR ABBREVIATIONS ON THIS SHEET MAY NOT APPEAR ON THE PLANS.
2. FOR ADDITIONAL ABBREVIATIONS OF OTHER DIVISIONS, SEE OTHER LEGENDS SUCH AS GENERAL, HVAC, MECHANICAL, FIRE PROTECTION, STRUCTURAL AND ARCHITECTURAL LEGENDS.
3. FOR ADDITIONAL FLOW STREAM IDENTIFICATIONS OF OTHER DIVISIONS SEE OTHER LEGENDS SUCH AS GENERAL, INSTRUMENTATION AND CONTROL, HVAC, MECHANICAL, FIRE PROTECTION, STRUCTURAL AND ARCHITECTURAL LEGENDS.

LICENSED PROFESSIONAL ENGINEER — SAUL TORRES — 35552 — 05/18/26 — OKLAHOMA

REVISION	BY	DATE

GENERAL

PLUMBING LEGEND

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	SJL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 01-G-0040			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 23 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 12:25

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ONE-LINE DIAGRAM-1

SYMBOL	DESCRIPTION
	DRAWOUT AIR CIRCUIT BREAKER, LOW VOLTAGE
400	CIRCUIT BREAKER, THERMAL MAGNETIC TRIP SHOWN, 3 POLE, UNO
AS AF or AT AF	CIRCUIT BREAKER, STATIC TRIP UNIT, SENSOR AMP TRIP AND FRAME RATINGS SHOWN, 3 POLE, UNO
100/M	CIRCUIT BREAKER, MAGNETIC TRIP ONLY, TRIP RATING SHOWN, 3 POLE, UNO
400 400	CIRCUIT BREAKER WITH CURRENT LIMITING FUSES, TRIP AND FUSE RATING INDICATED, 3 POLE, UNO
400 225	FUSED SWITCH, SWITCH AND FUSE CURRENT RATING INDICATED, 3 POLE, UNO
100	SWITCH, CURRENT RATING INDICATED, 3 POLE, UNO
60 (3)	FUSE, CURRENT RATING AND QUANTITY INDICATED
1	MAGNETIC STARTER WITH OVERLOAD, NEMA SIZE INDICATED, FVNR UNO
AFD	ELECTRONIC STARTER/SPEED CONTROL RVSS = REDUCED VOLTAGE SOFT STARTER AFD = AC ADJUSTABLE FREQUENCY DRIVE DC = DC ADJUSTABLE SPEED DRIVE RVAT = REDUCED VOLTAGE AUTO TRANSFORMER TYPE RVRT = REDUCED VOLTAGE REACTOR TYPE
	CABLE OR BUS CONNECTION POINT
K 1	KEY INTERLOCK 1 = INTERLOCK KEY SET
	SURGE ARRESTER (GAP TYPE)
10	CAPACITOR - KVAR INDICATED, 3 PHASE
3	AC MOTOR, SQUIRREL CAGE INDUCTION - HORSEPOWER INDICATED
G 500/625	GENERATOR, KW/KVA RATING SHOWN
VS V 0-600V	ANALOG METER WITH SWITCH - SCALE RANGE SHOWN V = VOLTAGE KW = KILOWATTS A = AMPERAGE KVAR = KILOVARS PF = POWER FACTOR
DPM	DIGITAL POWER METER (MULTIFUNCTION)
	UTILITY REVENUE METER
	GROUND
15 KVA 480-120/240V 1 PH	TRANSFORMER, SIZE, VOLTAGE RATINGS, AND PHASE INDICATED
	SHIELDED ISOLATION TRANSFORMER
480-120V (3)	POTENTIAL TRANSFORMER, VOLTAGE RATING AND QUANTITY INDICATED
100:5 (3)	CURRENT TRANSFORMER, RATIO(100:5) AND QUANTITY INDICATED (3)
	CONNECTION POINT TO EQUIPMENT SPECIFIED IN OTHER DIVISIONS. RACEWAY, CONDUCTOR AND CONNECTION IN THIS DIVISION

ONE-LINE DIAGRAM-2

SYMBOL	DESCRIPTION
SPD	SURGE PROTECTIVE DEVICE
	DRAWOUT POWER CIRCUIT BREAKER, MEDIUM VOLTAGE
	NON DRAWOUT FUSED SWITCH, MEDIUM VOLTAGE
	DRAWOUT FUSED SWITCH AND CONTACTOR, MEDIUM VOLTAGE
	DRAWOUT FUSED SWITCH AND VACUUM CONTACTOR, MEDIUM VOLTAGE
	DRAWOUT VACUUM CONTACTOR, MEDIUM VOLTAGE
	MEDIUM VOLTAGE CABLE STRESS CONE TYPE TERMINATION, OPEN TERMINATOR OR ELBOW
	SWITCH - LOAD BREAK, GROUP OPERATED, MEDIUM VOLTAGE
	SWITCH W/ARCING HORNS, MEDIUM VOLTAGE
	DISCONNECTING FUSE - SOLID MATERIAL, MEDIUM VOLTAGE
	SWITCH - HOOK STICK OPERATED, SINGLE POLE, MEDIUM VOLTAGE
	FUSE - EXPULSION, HOOK STICK OPERATED, SINGLE POLE, MEDIUM VOLTAGE
	GROUND SWITCH, GANG OPERATED
	TERMINAL BLOCK LUG
	DELTA CONNECTION
800/1200:5	WYE GROUNDED CONNECTION, SOLID GROUND
R or Z	WYE NEUTRAL GROUND RESISTOR OR IMPEDANCE CONNECTION
86	RELAY OR DEVICE, FUNCTION NUMBER AS INDICATED
50:5 (1)	CURRENT TRANSFORMER, ZERO SEQUENCE, RATIO AND QUANTITY INDICATED
(3)	BUSHING CURRENT TRANSFORMER, MULTI-RATIO AND QUANTITY INDICATED
MO	MOTOR OPERATOR, BREAKER OR SWITCH
FMR	FEEDER MANAGEMENT RELAY
GPR	GENERATOR PROTECTIVE RELAY
MMR	MAIN MANAGEMENT RELAY
MPR	MOTOR PROTECTION RELAY
ISC = XX,XXXA	CALCULATED SHORT CIRCUIT CURRENT - RMS SYMMETRICAL AMPS.

LEGEND NOTES:

1. THESE ARE STANDARD LEGEND SHEETS. SOME SYMBOLS AND ABBREVIATIONS MAY APPEAR ON THE LEGEND AND NOT ON THE DRAWINGS.
2. FOR ADDITIONAL ABBREVIATIONS OF OTHER DIVISIONS (HVAC, MECHANICAL, AND STRUCTURAL/ARCHITECTURAL) SEE OTHER LEGENDS.

NOTES:

1. ALL ELECTRICAL WORK UNDER THIS CONTRACT SHALL BE PERFORMED BY THE HOLDER OF A JOURNEYMAN OR MASTER ELECTRICIAN LICENSE ISSUED IN THE STATE OF OKLAHOMA, OR UNDER THE DIRECT, ON-SITE SUPERVISION OF THE LICENSE HOLDER. ELECTRICAL WORK SHALL NOT BE PERFORMED IF THE LICENSE HOLDER IS NOT PRESENT AT THE PROJECT SITE.
2. REFER TO SECTION 01 31 13, COORDINATION FOR CONSTRUCTION SEQUENCE REQUIREMENTS.

CONTROL DIAGRAM-1

SYMBOL	DESCRIPTION
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY OPEN
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY CLOSED
	PUSH BUTTON SWITCH, MAINTAINED CONTACTS WITH MECHANICAL INTERLOCK
	3 POSITION SELECTOR SWITCH MAINTAINED CONTACT
HAND OFF REMOTE	SELECTOR SWITCH - MAINTAINED CONTACT - CHART IDENTIFIES OPERATION WHEN NEEDED FOR CLARITY:

	POSITION		
CKT	HAND	OFF	REMOTE
1	X	O	O
2	O	O	X

X - CLOSED CONTACT
O - OPEN CONTACT

SYMBOL	DESCRIPTION
	TOGGLE SWITCH, ON-OFF TYPE
ON OFF	SELECTOR SWITCH, ON-OFF TYPE
	MUSHROOM HEAD PUSHBUTTON SWITCH
A	INDICATING LIGHT, PUSH-TO-TEST, LETTER INDICATES COLOR
A	INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN S - STROBE B - BLUE R - RED C - CLEAR W - WHITE
ETM	ELAPSED TIME METER
M	MOTOR STARTER CONTACTOR COIL
CRX	CONTROL RELAY, X INDICATES NUMERICAL ORDER IN CIRCUIT
TDR X	TIME DELAY RELAY, X INDICATES NUMERICAL ORDER IN CIRCUIT
SV X	SOLENOID VALVE, X INDICATES NUMERICAL ORDER IN CIRCUIT
	CONTACT - NORMALLY OPEN
	CONTACT - NORMALLY CLOSED
	REMOTE DEVICE
	TIME DELAY RELAY CONTACT, NORMALLY OPEN, CLOSES WHEN ENERGIZED AND TIMED OUT
	TIME DELAY RELAY CONTACT, NORMALLY CLOSED, OPENS WHEN ENERGIZED AND TIMED OUT
	TIME DELAY RELAY CONTACT, CLOSES WHEN ENERGIZED, OPENS WHEN DE-ENERGIZED AND TIMED OUT
	TIME DELAY RELAY CONTACT, OPENS WHEN ENERGIZED, CLOSES WHEN DE-ENERGIZED AND TIMED OUT
	MOTOR SPACE HEATER
	TERMINAL BLOCK, REMOTE
	TERMINAL BLOCK, INTERNAL
	FUSED TERMINAL BLOCK
	FUSE, RATING INDICATED
CPT 120V	TRANSFORMER, CONTROL POWER
	THERMOCOUPLE
	CAPACITOR
+ −	BATTERY
	LIMIT SWITCH, NORMALLY OPEN, CLOSES AT END OF TRAVEL
	LIMIT SWITCH, NORMALLY CLOSED, OPENS AT END OF TRAVEL
	TEMPERATURE SWITCH, OPENS ON TEMPERATURE RISE

CONTROL DIAGRAM-2

SYMBOL	DESCRIPTION
	TEMPERATURE SWITCH, CLOSES ON TEMPERATURE RISE
	FLOAT SWITCH, NORMALLY CLOSED, OPENS ON RISING LEVEL (NORMALLY OPEN, CLOSES ON DESCENDING LEVEL)
	FLOAT SWITCH, NORMALLY OPEN, CLOSES ON RISING LEVEL
	PRESSURE SWITCH, NORMALLY CLOSED, OPENS ON RISING PRESSURE
	PRESSURE SWITCH, NORMALLY OPEN, CLOSES ON RISING PRESSURE
	FLOW SWITCH, CLOSES ON INCREASED FLOW
	FLOW SWITCH, OPENS ON INCREASED FLOW
NGR	NEUTRAL GROUND CURRENT LIMITING RESISTOR
RES	CALIBRATING RESISTOR
T GEN	TACHOMETER GENERATOR
GFS	GROUND FAULT SENSOR
	FLASHER
	SEALED CONTACT
	BUZZER
	POTENTIOMETER
	RESISTOR
	BLOWN FUSE INDICATOR
	COAXIAL CABLE
	MULTICONDUCTOR SHIELDED CABLE
	DUPLEX RECEPTACLE
L U	RELAY, WITH MECHANICAL LATCH
	FULLWAVE DIODE BRIDGE (AC TO DC)

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

REVISION	BY	DATE

GENERAL
ELECTRICAL
LEGEND 1

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	BZ	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 01-G-0050			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 24 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 12:56

SYMBOL	DESCRIPTION

POWER SYSTEM PLAN-1

CONNECTION POINT TO EQUIPMENT SPECIFIED. RACEWAY, CONDUCTOR,TERMINATION AND CONNECTION IN THIS DIVISION.

MCC-A — MAJOR ELECTRICAL COMPONENT OR DEVICE - NAME OR IDENTIFYING SYMBOL AS SHOWN.

PANELBOARD - SURFACE MOUNTED

LPXXA
- PANELBOARD LETTER OR NUMBER
- FACILITY NUMBER
- LP - LOW VOLTAGE PANEL
  DP - DISTRIBUTION PANEL

PANELBOARD - FLUSH MOUNTED

TERMINAL JUNCTION BOX

M — MOTOR, SQUIRREL CAGE INDUCTION

G — GENERATOR, VOLTAGE AND SIZE AS INDICATED.

LPXXA — HOME RUN - DESTINATION SHOWN

or G — EXPOSED CONDUIT AND CONDUCTORS*

or G — CONCEALED CONDUIT AND CONDUCTORS*

NOTE:
ALL UNMARKED CONDUIT RUNS CONSIST OF TWO NO. 12, ONE NO. 12 GROUND CONDUCTORS IN 3/4" CONDUIT. RUNS MARKED WITH CROSSHATCHES INDICATE NUMBER OF NO. 12 CONDUCTORS. CROSSHATCH WITH SUBSCRIPT "G" INDICATES GREEN GROUND WIRE.

G — CROSSHATCHES WITH BAR INDICATE NO.10 CONDUCTOR. SIZE CONDUIT ACCORDING TO SPECIFICATIONS AND APPLICABLE CODE.

[A1] OR [MCC-A-P] — CONDUIT AND CONDUCTOR CALL OUT, SEE LEGEND SHEET 3

CONDUIT DOWN

CONDUIT UP

CONDUIT, STUBBED AND CAPPED

CONDUIT TERMINATION AT CABLE TRAY

EX — EXISTING CONDUIT/ DUCT BANK

BD — BUS DUCT - SEE SPECIFICATIONS

CE — CONCRETE ENCASED CONDUIT

DB — DIRECT BURIED CONDUIT

FO — FIBER OPTIC CONDUIT

N 262 828.94
E 2 665 357.00
EL. 161.50
} COORDINATES ARE GIVEN AT CHANGES IN DIRECTION OR ELEVATION. ELEVATION IS TO THE TOP OF CONCRETE.

DB-1 — CONCRETE ENCASED DUCTBANK WHERE DB-1 IS THE DUCTBANK NAME. SEE THE DUCTBANK SCHEDULE FOR CONTENTS.

MH-1 (OR PPT-1)
PRECAST CONCRETE MANHOLE (6'x6'x6', UNO)
OR PAD MOUNTED SST PULL BOX.
SEE STAKING PLANS FOR LOCATION.

CABLE TRAY

T — TRANSFORMER

J or HH — GENERAL CONTROL OR WIRING DEVICE. LETTER SYMBOLS OR ABBREVIATIONS INDICATE TYPE OF DEVICE

CS — CONTROL STATION, SEE CONTROL DIAGRAMS FOR CONTROL DEVICE(S) REQUIRED.

POWER SYSTEM PLAN-1 CONT'D

30 — NONFUSED DISCONNECT SWITCH, CURRENT RATING INDICATED, 3 POLE

60/40 — FUSED DISCONNECT SWITCH, CURRENT RATING INDICATED (60/40, 60=SWITCH RATING / 40=FUSE RATING) 3 POLE

2 — COMBINATION CIRCUIT BREAKER AND MAGNETIC STARTER, NEMA SIZE INDICATED

POWER SYSTEM PLAN-2

100/40 — BREAKER, SEPARATELY MOUNTED, CURRENT RATING INDICATED (100/40, 100 = FRAME SIZE; 40 = TRIP RATING) 3 POLE

C 2 — CONTACTOR, MAGNETIC, NEMA SIZE INDICATED

L 30 — LIGHTING CONTACTOR, CURRENT RATING INDICATED

2 — STARTER, MAGNETIC NEMA SIZE INDICATED

XX / 2 — CONVENIENCE RECEPTACLE - DUPLEX UNLESS NOTED OTHERWISE
WP - WEATHERPROOF C - CLOCK HANGER
TL - TWIST LOCK CRE - CORROSION RESISTANT
GFCI- GROUND FAULT CIRCUIT INTERRUPTER
SUBSCRIPT NUMBER AT RECEPTACLE INDICATES CIRCUIT

240V RECEPTACLE

CONVENIENCE RECEPTACLE - QUADRUPLEX

MULTI OUTLET ASSEMBLY

DUPLEX CONVENIENCE RECEPTACLE - FLUSH IN FLOOR

QUADRUPLEX CONVENIENCE RECEPTACLE - FLUSH IN FLOOR

CONVENIENCE RECEPTACLE, PEDESTAL, DUPLEX SINGLE FACE UNLESS INDICATED OTHERWISE

L20R / 20 — RECEPTACLE, SPECIAL PURPOSE-NEMA CONFIGURATION AND AMPERAGE INDICATED

T — THERMOSTAT

UTILITY REVENUE METERING FACILITY

EUH — ELECTRIC UNIT HEATER

AC — ELECTRIC AIR CONDITIONER (SELF CONTAINED UNIT)

UTILITY POLE

CLASS 1, DIVISION 2 SEAL-OFF

LIGHTING SYSTEM PLAN

1 or 1 — LUMINAIRE, SEE SCHEDULE

1 — LUMINAIRE, SEE SCHEDULE

1 or — LUMINAIRE WITH INTERNAL BATTERY BACKUP, SEE SCHEDULE

1 — STRIP LUMINAIRE, SEE SCHEDULE

4 or 4 — LUMINAIRE AND POLE, SEE SCHEDULE

5 or 5 — WALL MOUNTED LUMINAIRE, SEE SCHEDULE

1 — FLOOD LIGHTS - AIM IN THE DIRECTION SHOWN

STANDBY LIGHTING UNIT, SURFACE MOUNTED, SEE SCHEDULE

COMBINATION EMERGENCY AND EXIT LUMINAIRE, SEE SCHEDULE

LIGHTING SYSTEM PLAN CONT'D

XX or — EXIT LIGHTS - FILLED SECTION INDICATES LIGHTED FACE, ARROW INDICATES EGRESS DIRECTIONAL INDICATORS, XX = FIXTURE NUMBER, SEE SCHEDULE

$a or 2a — SMALL LETTER SUBSCRIPT AT SWITCH AND LUMINAIRE INDICATES SWITCHING. SUBSCRIPT NUMBER AT LUMINAIRE INDICATES CIRCUIT

$3 — WALL SWITCH:

2-	DOUBLE POLE	P-	PILOT LIGHT
3-	THREE WAY	K-	KEY OPERATED
4-	FOUR WAY	D-	DIMMER
WP-	WEATHERPROOF	CRE-	CORROSION RESISTANT
EX-	EXPLOSIONPROOF	L-	MOMENTARY 3-WAY
M-	MOTOR RATED	MS-	MANUAL STARTER WITH OVERLOADS

OS — OCCUPANCY SENSOR

LC — LIGHTING CONTACTOR

MD — MOTION DETECTOR

PC — PHOTOCELL

SECURITY SYSTEM PLAN AND RISER

CR — CARD KEY ACCESS

CS — CONTROL STATION

DS — DOOR SWITCH

EP — EGRESS PUSHBUTTON

ELECTRONIC LOCK
M = MAGENITIC
S = STRIKE

INTERCOM

MONITOR

MOTION SENSOR

VIDEO CAMERA
PTZ = PAN/TILT/ZOOM
F = FIXED

GROUND SYSTEM PLAN

GROUND ROD

GROUND ROD IN TEST WELL

G — GROUNDING CONDUCTOR, SIZE AS INDICATED

PIGTAIL FOR CONNECTION TO EQUIPMENT CABINET OR FRAME

G — EQUIPMENT GROUND BUS

N — EQUIPMENT NEUTRAL BUS

TA — CABLE TO CABLE TEE

WA — CABLE TO STEEL SURFACE

XA — CABLE TO CABLE CROSS

XJ — CABLE TO REINFORCING STEEL

LA — CABLE TO LUG

ONE LINE PROTECTION RELAYING AND ELEMENTARY DIAGRAMS -2

DEVICE FUNCTION NO.	DEVICE DESCRIPTION
21	IMPEDANCE/DISTANCE RELAY
25A	AUTOMATIC SYNCHRONIZER
25C	SYNCH CHECK RELAY
27	UNDERVOLTAGE RELAY
32	REVERSE POWER RELAY
40	GENERATOR LOSS OF EXCITATION RELAY
43CSE	AUTOMATIC POWER TRANSFER AND LOAD CONTROL MODE SEL. SWITCH
43CSX	MODE SEL. SWITCH
46	GENERATOR CURRENT UNBALANCE RELAY
47	PHASE REVERSAL RELAY
50GS	INSTANTANEOUS OVERCURRENT DEVICE, GROUND SENSOR
50	INSTANTANEOUS OVERCURRENT DEVICE
51	TIME OVERCURRENT RELAY
51G	TIME OVERCURRENT RELAY, GROUND FAULT
51V	TIME OVERCURRENT, VOLTAGE RESTRAINED
52	POWER CIRCUIT BREAKER
52CSX	POWER CIRCUIT BREAKER CONTROL SWITCH
59	OVERVOLTAGE RELAY
60	VOLTAGE OR CURRENT BALANCE RELAY
67	DIRECTIONAL TIME OVERCURRENT RELAY
74	ALARM RELAY
81O/U	FREQUENCY RELAY, OVER/UNDER
86	LOCKOUT RELAY
87	DIFFERENTIAL PROTECTIVE RELAY
90	VOLTAGE REGULATOR

X = DEVICE NUMBER, WHEN THERE ARE MULTIPLE UNITS

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

GENERAL
ELECTRICAL
LEGEND 2

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	WDN	05/26
LEAD ENG.	BZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
FILE: DRAWING: 01-G-0051
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 25 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 12:56

GENERAL CIRCUIT CONDUCTOR AND CONDUIT IDENTIFICATION

POWER CIRCUIT CALLOUT SCHEDULE					
EQUIPMENT GROUNDS NEC 250 Table 122		100% GROUNDS NEC 250-122(A)		SERVICE GROUNDS NEC 250 Table 66	
2 Wire + Ground					
[20E2]	3/4"C-2#12,#12G	[20M2]	3/4"C-2#12,#12G	NA	NA
[30E2]	3/4"C-2#10,#10G	[30M2]	3/4"C-2#10,#10G	NA	NA
[40E2]	3/4"C-2#8,#10G	[40M2]	3/4"C-2#8,#8G	[40S2]	3/4"C-2#8,#8N
[50E2]	3/4"C-2#8,#10G	[50M2]	3/4"C-2#8,#8G	[50S2]	3/4"C-2#8,#8N
[60E2]	1"C-2#6,#10G	[60M2]	1"C-2#6,#6G	[60S2]	1"C-2#6,#8N
[70E2]	1"C-2#4,#8G	[70M2]	1"C-2#4,#4G	[70S2]	1-1/4"C-2#4,#8N
[80E2]	1"C-2#4,#8G	[80M2]	1"C-2#4,#4G	[80S2]	1-1/4"C-2#4,#8N
[90E2]	1"C-2#3,#8G	[90M2]	1"C-2#3,#3G	[90S2]	1-1/4"C-2#3,#8N
[100E2]	1"C-2#3,#8G	[100M2]	1"C-2#3,#3G	[100S2]	1-1/4"C-2#3,#8N
[110E2]	1"C-2#2,#6G	[110M2]	1"C-2#2,#2G	[110S2]	1-1/4"C-2#2,#8N
[125E2]	2"C-2#1,#6G	[125M2]	2"C-2#1,#1G	[125S2]	2"C-2#1,#6N
[150E2]	2"C-2#1/0,#6G	[150M2]	2"C-2#1/0,#1/0G	[150S2]	2"C-2#1/0,#6N
[200E2]	2"C-2#3/0,#6G	[200M2]	2"C-2#3/0,#3/0G	[200S2]	2"C-2#3/0,#4N
[225E2]	2"C-2#4/0,#4G	[225M2]	2"C-2#4/0,#4/0G	[225S2]	2"C-2#4/0,#2N
[400E2]	3"C-2#500,#3G	[400M2]	3"C-2#500,#500G	[400S2]	3"C-2#500,#1/0N
3 Wire + Ground					
[20E3]	3/4"C-3#12,#12G	[20M3]	3/4"C- 3#12,#12G	NA	NA
[30E3]	3/4"C-3#10,#10G	[30M3]	3/4"C3#10,#10G	NA	NA
[40E3]	3/4"C-3#8,#10G	[40M3]	3/4"C-3#8,#8G	[40S3]	3/4"C-3#8,#8N
[50E3]	3/4"C-3#8,#10G	[50M3]	3/4"C3#8,#8G	[50S3]	3/4"C-3#8,#8N
[60E3]	3/4"C3#6,#10G	[60M3]	3/4"C-3#6,#6G	[60S3]	3/4"C-3#6,#8N
[70E3]	1"C-3#4,#8G	[70M3]	1"C-3#4,#4G	[70S3]	1"C-3#4,#8N
[80E3]	1"C-3#4,#8G	[80M3]	1"C-3#4,#4G	[80S3]	1"C-3#4,#8N
[90E3]	1-1/4"C-3#3,#8G	[90M3]	1-1/4"C-3#3,#3G	[90S3]	1"C-3#3,#8N
[100E3]	1-1/4"C3#3,#8G	[100M3]	1-1/4"C-3#3,#3G	[100S3]	1"C-3#3,#8N
[110E3]	2"C-3#2,#6G	[110M3]	2"C-3#2,#2G	[110S3]	1"C-3#2,#8N
[125E3]	2"C-3#1,#6G	[125M3]	2"C-3#1,#1G	[125S3]	2"C-3#1,#6N
[150E3]	2"C-3#1/0,#6G	[150M3]	2"C-3#1/0,#1/0G	[150S3]	2"C-3#1/0,#6N
[200E3]	2"C-3#3/0,#6G	[200M3]	2"C-3#3/0,#3/0G	[200S3]	2"C-3#3/0,#4N
[225E3]	2"C-3#4/0,#4G	[225M3]	2"C-3#4/0,#4/0G	[225S3]	2"C-3#4/0,#2N
[250E3]	3"C-3#300,#4G	[250M3]	3"C-3#300,#300G	[250S3]	3"C-3#300,#2N
[300E3]	3"C-3#350,#4G	[300M3]	3"C-3#350,#350G	[300S3]	3"C-3#350,#2N
[350E3]	3"C3#500,#3G	[350M3]	3"C-3#500,#500G	[350S3]	3"C-3#500,#1/0N
[400E3]	3"C-3#500,#3G	[400M3]	3"C-3#500,#500G	[400S3]	3"C-3#500,#1/0N
[500E3]	(2)3"C-3#250,#2G	[500M3]	(2)3"C-3#250,#250G	[500S3]	(2)3"C-3#250,#1/0N
[600E3]	(2)3"C-3#350,#1G	[600M3]	(2)3"C3#350,#350G	[600S3]	(2)4"C-3#350,#2/0N
[700E3]	(2)3"C-3#500,#1/0G	[700M3]	(2)3"C3#500,#500G	[700S3]	(2)3"C-3#500,#2/0N
[800E3]	(2)3"C3#500,#1/0G	[800M3]	(2)3"C-3#500,#500G	[800S3]	(2)3"C-3#500,#2/0N
[1000E3]	(3)3"C-3#500,#2/0G	[1000M3]	(3)3"C-3#500,#500G	[1000S3]	(3)3"C-3#500,#3/0N
[1200E3]	(3)4"C-3#600,#3/0G	[1200M3]	(3)4"C-3#600,#600G	[1200S3]	(3)4"C-3#600,#3/0N
[1600E3]	(4)4"C-3#600,#4/0G	[1600M3]	(4)4"C-3#600,#600G	[1600S3]	(4)4"C-3#600,#3/0N
[2000E3]	(5)4"C-3#600,#250G	[2000M3]	(5)4"C-3#600,#600G	[2000S3]	(5)4"C-3#600,#3/0N
[2500E3]	(6)4"C-3#600,#350G	[2500M3]	(6)4"C-3#600,#600G	[2500S3]	(6)4"C-3#600,#3/0N
[3200E3]	(8)4"C-3#600,#400G	[3200M3]	(8)4"C-3#600,#600G	[3200S3]	(8)4"C-3#600,#3/0N
[4000E3]	(10)4"C-3#600,#500G	[4000M3]	(10)4"C-3#600,#600G	[4000S3]	(10)4"C-3#600,#3/0N
4 Wire + Ground				MULTI-WIRE 20 AMP	
[20E4]	3/4"C-4#12,#12G	[20M4]	3/4"C-4#12,#12G	[20E5]	3/4"C-5#12,#12G
[30E4]	3/4"C-4#10,#10G	[30M4]	3/4"C-4#10,#10G	[20E6]	3/4"C-6#12,1#12G
[40E4]	3/4"C-4#8,#10G	[40M4]	3/4"C-4#8,#8G	[20E7]	3/4"C-7#12,1#12G
[50E4]	3/4"C-4#8,#10G	[50M4]	3/4"C-4#8,#8G	[20E8]	3/4"C-8#12,1#12G
[60E4]	1"C-4#6,#8G	[60M4]	1"C-4#6,#6G	[20E9]	3/4"C-9#12,1#12G
[70E4]	1-1/4"C-4#4,#8G	[70M4]	1-1/4"C-4#4,#4G	[20E10]	1"C-10#10,1#10G
[80E4]	1-1/4"C-4#4,#8G	[80M4]	1-1/4"C-4#4,#4G	[20E11]	1"C-11#10,1#10G
[90E4]	1-1/4"C-4#3,#8G	[90M4]	1-1/4"C-4#3,#3G	[20E12]	1"C-12#10,1#10G
[100E4]	1-1/4"C-4#3,#8G	[100M4]	1-1/4"C-4#3,#3G	[20E13]	1"C-13#10,1#10G
[110E4]	2"C-4#2,#6G	[110M3]	2"C-4#2,#2G	[20E14]	1"C-14#10,1#10G
[125M4]	2"C-4#1,#6G	[125M4]	2"C-4#1,#1G	[20E15]	1"C-15#10,1#10G
[150E4]	2"C-4#1/0,#6G	[150M4]	2"C-4#1/0,#1/0G	[20E16]	1-1/4"C-16#10,1#10G
[200E4]	2"C-4#3/0,#6G	[200M4]	2"C-4#3/0,#3/0G	[20E17]	1-1/4"C-17#10,1#10G
[225E4]	3"C-4#4/0,#4G	[225M4]	3"C-4#4/0,#4/0G	[20E18]	1-1/4"C-18#10,1#10G
[250E4]	3"C-4#300,#4G	[250M4]	3"C-4#300,#300G	[20E19]	1-1/4"C-19#10,1#10G
[300E4]	3"C-4#350,#4G	[300M4]	3"C-4#350,#350G	[20E20]	1-1/4"C-20#10,1#10G
[350E4]	3-1/2"C-4#500,#3G	[350M4]	4"C-4#500,#500G		
[400E4]	(2)3-1/2"C-4#500, #3G	[400M4]	(2)4"C-4#500, #500G		
[500E4]	(2)3-1/2"C-4#250,#2G	[500M4]	(2)4"C-4#250,#250G		
[600E4]	(2)3"C-4#350,#1G	[600M4]	(2)4"C-4#350,#350G		
[700E4]	(2)3-1/2"C-4#500,#1/0G	[700M4]	(2)4"C-4#500,#500G		
[800E4]	(2)3-1/2"C-4#500,#1/0G	[800M4]	(2)4"C-4#500,#500G		
[1000E4]	(3)4"C-4#500,#2/0G	[1000M4]	(3)4"C-4#500,#350G		
[1200E4]	(3)4"C-4#600,#3/0G	[1200M4]	(3)4"C-4#600,#600G		
[1600E4]	(4)4"C-4#600,#4/0G	[1600M4]	(4)4"C-4#600,#600G		
[2000E4]	(5)4"C-4#600,#250G	[2000M4]	(5)4"C-4#600,#600G		
[2500E4]	(6)4"C-4#600,#350G	[2500M4]	(6)4"C-4#600,#600G		
[3200E4]	(8)4"C-4#600,#400G	[3200M4]	(8)4"C-4#600,#600G		
[4000E4]	(10)4"C-4#600,#500G	[4000M4]	(10)4"C-4#600,#600G		

THE MULTIWIRE CONFIGURATION SHOWN HERE SHALL NOT BE USED FOR RECEPTACLE CIRCUITS OR OTHER CORD-AND-PLUG-CONNECTED PORTABLE LOADS. NEC-240.4(B)

NOTE 1 - WHERE [---] DESIGNATOR IS PRECEEDED BY "MC" PROVIDE METAL CLAD CABLE

ANALOG and DISCRETE CABLE CALLOUTS					
ANALOG		ANALOG		DISCRETE	
[A1]	3/4"C, 1 TYPE 3	[B1]	3/4"C, 1 TYPE 4	[C1]	1"C, MSC
[A2]	3/4"C, 2 TYPE 3	[B2]	1"C, 2 TYPE 4	[C2]	3/4"C, 2#14, 1#14G
[A3]	1"C, 3 TYPE 3	[B3]	1"C, 3 TYPE 4	[C4]	3/4"C, 4#14, 1#14G
[A4]	1"C, 4 TYPE 3	[B4]	1-1/4"C, 4 TYPE 4	[C6]	3/4"C, 6#14, 1#14G
[A5]	1"C, 5 TYPE 3	[B5]	1-1/4"C, 5 TYPE 4	[C8]	3/4"C, 8#14, 1#14G
[A6]	1-1/4"C, 6 TYPE 3	[B6]	1-1/2"C, 6 TYPE 4	[C10]	1"C, 10#14, 1#14G
[A7]	1-1/4"C, 7 TYPE 3	[B7]	1-1/2"C, 7 TYPE 4	[C12]	1"C, 12#14, 1#14G
[A8]	1-1/2"C, 8 TYPE 3	[B8]	1-1/2"C, 8 TYPE 4	[C14]	1"C, 14#14, 1#14G
[A9]	1-1/2"C, 9 TYPE 3			[C16]	1"C, 16#14, 1#14G
[A10]	1-1/2"C, 10 TYPE 3			[C18]	1-1/4"C, 18#14, 1#14G
[A11]	1-1/2"C, 11 TYPE 3			[C20]	1-1/4"C, 20#14, 1#14G
[A12]	2"C, 12 TYPE 3			[C22]	1-1/4"C, 22#14, 1#14G
[A13]	2"C, 13 TYPE 3			[C24]	1-1/2"C, 24#14, 1#14G
[A14]	2"C, 14 TYPE 3			[C26]	1-1/2"C, 26#14, 1#14G
[A15]	2"C, 15 TYPE 3			[C28]	1-1/2"C, 28#14, 1#14G
[A16]	2"C, 16 TYPE 3			[C30]	1-1/2"C, 30#14, 1#14G
[A17]	2"C, 17 TYPE 3			[C36]	2"C, 36#14, 1#14G
[A18]	2"C, 18 TYPE 3			[C40]	2"C, 40#14, 1#14G
[A19]	2"C, 19 TYPE 3			[C46]	2"C, 46#14, 1#14G
[A20]	2"C, 20 TYPE 3			[C50]	2"C, 50#14, 1#14G
[A21]	3"C, 21 TYPE 3			[C58]	2-1/2"C, 58#14, 1#14G
[A22]	2-1/2"C, 22 TYPE 3			[C72]	2-1/2"C, 72#14, 1#14G
				[C100]	3"C, 100#14, 1#14G

EMPTY CONDUIT CALLOUT	
[CE-1]	3/4"C, WITH PULL STRING
[CE-2]	1"C, WITH PULL STRING
[CE-3]	1 1/4"C, WITH PULL STRING
[CE-4]	1-1/2"C, WITH PULL STRING
[CE-5]	2"C, WITH PULLSTRING
[CE-6]	3"C, WITH PULLSTRING
[CE-7]	4"C, WITH PULLSTRING
[CE-8]	5"C, WITH PULLSTRING
[CE-9]	6"C, WITH PULLSTRING

CONTROL CABLE CIRCUIT CALLOUTS	
[CC5]	3/4"C, 1-5C TYPE 1
[CC7]	3/4"C, 1-7C TYPE 1
[CC9]	1"C, 1-9C TYPE 1
[CC12]	1"C, 1-12C TYPE 1
[CC19]	2"C, 1-19C TYPE 1
[CC25]	2"C, 1-25C TYPE 1
[CC37]	2"C, 1-37C TYPE 1
[CCC1]	1-7C #12 TYPE 1
[D1]	3/4"C, BELDEN #3084
[D2]	3/4"C, ALLEN-BRADLEY 889-C5AC
[D3]	3/4"C, BELDEN #1583A
[D4]	3/4"C, BELDEN #1189A
[D5]	3/4"C, ALPHA #58136
[CAT]	1"C, CAT6 CABLE
[CX]	1"C, COAX
[FMM]	2"C, MULTIMODE FIBER OPTIC CABLE
[FSM]	2"C, SINGLEMODE FIBER OPTIC CABLE
[PH]	1"C, PHONE CABLE
[MSC]	1"C, MANUFACTURER SUPPLIED CABLE
AFD POWER CABLE CALLOUTS	
[20PV3]	1"C, 1(3C#12, #12G) TYPE 8
[30PV3]	2"C, 1(3C#10, 1#10G) TYPE 8
[40PV3]	2"C, 1(3C#8, 1#8G) TYPE 8
[60PV3]	2"C, 1(3C#6, 1#6G) TYPE 8
[80PV3]	2"C, 1(3C#4, 1#4G) TYPE 8
[100PV3]	3"C, 1(3C#2, 1#2G) TYPE 8
[150PV3]	3"C, 1(3C#1/0, 3#10G) TYPE 9
[175PV3]	3"C, 1(3C#2/0, 3#8G) TYPE 9
[200PV3]	3"C, 1(3C#4/0, 3#8G) TYPE 9
[250PV3]	3"C, 1(3C#250, 3#8G) TYPE 9
[300PV3]	4"C, 1(3C#350, 3#8G) TYPE 9
[400PV3]	2 EACH [2"C, 1(3C#4/0, 3#8G) TYPE 9
[500PV3]	2 EACH [3"C, 1(3C#250, 3#8G) TYPE 9
[600PV3]	2 EACH [4"C, 1(3C#350, 3#8G) TYPE 9

MEDIUM VOLTAGE POWER CIRCUIT CALLOUT	
[100MV3]	3"C, 3-1/C#2, 15KV, 1#2G, 600V
[200MV3]	3"C, 3-1/C#2/0, 15KV, 1#2, 600V
[400MV3]	5"C, 3-1/C#500KCMIL, 15KV, 1#250G, 600V
[500MV3]	(2 SETS) 4"C, 3-1/C#4/0, 15KV, 1#2G, 600V
[1000MV3]	(3 SETS) 5"C, 3-1/C#500KCMIL, 15KV, 1#250KCMIL, G, 600A
[1200MV3]	(4 SETS) 5"C, 3-1/C#500KCMIL, 15KV, 1#250KVMIL, G, 600A

NOTES:

FOR CABLE TYPES, SEE SPECIFICATIONS.

CONDUIT SIZES ARE BASED ON THE AREA OF THW CONDUCTORS.

SIZING OF CONDUCTORS #1AWG AND SMALLER BASED ON AMPACITIES AT 60 DEGREES C, SIZING OF CONDUCTORS #1/0AWG AND LARGER BASED ON AMPACITIES AT 75 DEGREES C.

WHERE CIRCUITS ARE UNDERGROUND, DIRECT BURIED OR CONCRETE ENCASED, MINIMUM CONDUIT SIZE SHALL BE 1".

FOR METRIC CONDUIT SIZES USE THE FOLLOWING CONVERSION:

1/2" = 16 mm 1 1/4" = 35 mm
3/4" = 21 mm 1 1/2" = 41 mm
1" = 27 mm 2" = 53 mm

GENERAL NOTES

1. CONDUIT, WIRE AND EQUIPMENT SIZES AND LOCATIONS SHOWN ARE FOR BID BASIS ONLY AND SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL WORK WITH APPROVED SHOP DRAWINGS, WITH THE REQUIREMENTS OF EQUIPMENT PROVIDED FOR INSTALLATION BY CONTRACTOR AND WITH REQUIREMENTS OF OTHER DIVISIONS OF THE CONTRACT AS NECESSARY TO PROVIDE COMPLETE AND WORKING SYSTEMS COMPLYING WITH THE CONTRACT DOCUMENTS. ALL PROPOSED DEVIATIONS FROM CONTRACT DOCUMENTS SHALL BE SUBMITTED AND APPROVED BY ENGINEER BEFORE EXECUTION OF THE AFFECTED WORK.
2. THE TERMS RACEWAY AND CONDUIT ARE USED IN THESE DOCUMENTS TO DENOTE NOT ONLY THE RACEWAY OR CONDUIT ITSELF BUT ALSO ALL JUNCTION BOXES, PULLBOXES, CONDULETS, FITTINGS, CLAMPS, SUPPORTS AND ALL OTHER ITEMS NECESSARY FOR A COMPLETE AND WORKING SYSTEM COMPLYING WITH THE CONTRACT DOCUMENTS.
3. NOTES INDICATED AS "REF", "REFERENCE" OR "REFER TO" ARE PROVIDED TO ASSIST IN LOCATING RELATED CONTRACTUAL REQUIREMENTS BUT ARE NOT CONTRACTUAL INSTRUCTIONS THEMSELVES. MISSING INCORRECT OR INCOMPLETE REFERENCES SHALL HAVE NO EFFECT ON THE REQUIREMENTS OF THE CONTRACT.
4. ITEMS MARKED MSC (MANUFACTURER SUPPLIED OR SPECIFIED CABLE): CONTRACTOR SHALL DETERMINE REQUIREMENTS FOR AND PROVIDE, MINIMUM 1" CONDUIT AND CABLE AS REQUIRED BY MANUFACTURER AND IN COMPLIANCE WITH CONTRACT DOCUMENTS.
5. EXCEPT AS NOTED BELOW, ALL WIRE AND CABLE, INCLUDING GROUNDED CONDUCTORS ABOVE GRADE AND FIBER OPTIC CABLE, SHALL BE INSTALLED IN RACEWAY AND ENCLOSURES. EXCEPTIONS ARE EQUIPMENT CABLES PROVIDED BY EQUIPMENT MANUFACTURERS AND UL LISTED FOR INSTALLATION OUTSIDE OF CONDUIT INCLUDING FLOAT SWITCH AND SUBMERSIBLE PUMP CABLES.
6. SPARE RUNS OF CONDUCTORS SHALL BE INSULATED OR TERMINATED AND LABELED AT BOTH ENDS. SPARE RUNS OF FIBER OPTIC STRANDS SHALL BE LABELED AND TERMINATED AT BOTH ENDS. ALL CONDUCTORS AND FIBERS BE TESTED AFTER INSTALLATION AND TEST REPORTS SHALL BE SUBMITTED. REPLACE ALL DEFECTIVE MATERIAL; DO NOT SUBMIT TEST REPORTS SHOWING DEFECTS.
7. CONDUCTORS SHALL NOT BE SLICED EXCEPT AS NOTED IN THE SPECIFICATIONS AND SHOWN ON THE DRAWINGS.
8. ALL CONDUITS SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR SIZED PER TABLE 250.122 OF NEC, UNLESS OTHERWISE NOTED.
9. ALL EXISTING INFORMATION SHOWN MUST BE FIELD VERIFIED. ACCURACY OF EXISTING WIRING IS NOT GUARANTEED.
10. CONDUCTIVE ENCLOSURES AND OTHER EXTERIOR METAL COMPONENTS OR INSTRUMENTS AND CONTROLS WHICH ARE NOT NORMALLY ENERGIZED SHALL BE CONNECTED TO FACILITY GROUNDING ELECTRODE SYSTEM (GROUND RING) WITH #6 MINIMUM TINNED SOLID COPPER CONDUCTOR.
11. PROVIDE #10 WIRE INSTEAD OF #12 WIRE FOR ALL 20 AMPERE 120VOLT OR 208 VOLT CIRCUITS EXCEEDING 120 FEET CONDUIT LENGTH.
12. WHERE THE NUMBER OR SIZE OF CONDUCTORS SHOWN TO BE CONNECTED ARE IN EXCESS OF THE CAPACITY OF THE STANDARD TERMINALS OF THE CONNECTED EQUIPMENT, PROVIDE ADDITIONAL TERMINALS, ENCLOSURE, JUNCTION BOXES, PULL SECTIONS, WIRES, CONDUITS AND ALL OTHER MATERIALS AND LABOR AS NECESSARY TO MAKE THE CONNECTIONS SHOWN IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
13. ALL MATERIALS AND EQUIPMENT PROPOSED FOR USE SHALL BE NEW, UN-USE, UNLESS NOTED OTHERWISE, AND BE FULLY RATED AS SPECIFIED AND SCHEDULED IN THE CONTRACT DOCUMENTS AT THE PROJECT ALTITUDE AND MAXIMUM AMBIENT TEMPERATURE.
14. PROVIDE ARC FLASH WARNING AND OTHER SIGNS ON ALL SWITCHGEAR PANELBOARDS, MOTOR CONTROL CENTERS, MOTOR CONTROLLERS, CONTROL PANELS, AND OTHER EQUIPMENT PROVIDED OR MODIFIED UNDER THIS CONTRACT AND REQUIRED TO BE LABELED BY NEC INCLUDING BUT NOT LIMITED TO PARAGRAPH 110.16 FLASH PROTECTION.
15. COORDINATE SIZE AND INSTALLATION OF ALL EQUIPMENT WITH EXISTING CONDITIONS AND WORK IN OTHER DIVISIONS OF CONTRACT TO ENSURE COMPLIANCE WITH THE NEC, INCLUDING BUT NOT LIMITED TO PARAGRAPH 110.26 SPACES ABOUT ELECTRICAL EQUIPMENT.
16. STANDARD DETAILS INCLUDED IN THESE DOCUMENTS SHALL BE USED WHERE APPLICABLE WHETHER SPECIFICALLY CALLED OUT ON THE PLANS OR NOT. PRACTICES CUSTOMARY TO THE TRADE MAY BE USED ONLY WHERE NO APPLICABLE STANDARDS DETAIL CAN BE FOUND IN THESE DOCUMENTS AND WHERE THE CUSTOMARY PRACTICE WILL RESULT IN A COMPLETE AND WORKING SYSTEM IN COMPLIANCE WITH THESE DOCUMENTS.
17. ALL TERMINATIONS OF RIGID METAL CONDUIT IN WALLS OF ENCLOSURES WITHOUT CAST-IN-PLACE THREADED CONDUIT CONNECTIONS, AND WHICH ARE LOCATED OUTDOORS SHALL BE MADE USING MYERS HUBS.
18. REFER TO DOCUMENTS OF OTHER DIVISIONS OF CONTRACT, INCLUDING BUT NOT LIMITED TO PROCESS MECHANICAL, AND INSTRUMENTATION AND CONTROL FOR LOCATIONS OF PROCESS, INSTRUMENTATION, CONTROL, AND OTHER EQUIPMENT REQUIRING ELECTRICAL, FIBER OPTIC OR RACEWAY-ONLY CONNECTIONS TO BE PROVIDED UNDER THIS DIVISION OF CONTRACT. ALL EQUIPMENT LOCATIONS SHOWN ON DRAWINGS IN THIS DIVISION ARE APPROXIMATE ONLY UNLESS DIMENSIONED.
19. COORDINATE EARTH WORK AND INSTALLATION OF ELECTRICAL ITEMS WITH INTERFERENCE'S SHOWN ON DOCUMENTS OF ALL DIVISIONS OF CONTRACT, INCLUDING CIVIL AND YARD PIPING. REPORT ALL DAMAGE AT ONCE TO OWNER AND ENGINEER AND REPAIR AS DIRECTED AT CONTRACTOR'S SOLE EXPENSE.
20. DO NOT INSTALL ANY CONDUITS, DUCT BANKS, PULL BOXES, MANHOLES, HANDHOLES, LIGHT POLES, CONTROL PANEL, ETC. IN AREAS DESIGNATED FOR FUTURE USE.
21. PROVIDE REINFORCED CONCRETE ENCASEMENT OF ALL DIRECT BURIED CONDUITS AND DUCT BANK UNDER ROADWAYS AND 10 FEET BEYOND ON EACH SIDE OF THE ROADWAY.

HAZARDOUS LOCATION NOTES

1. PER NFPA 820 (2024), TABLE 4.2.2, ROW 16a, THE AREA OF THE WASTE WATER LIFT STATION IS CLASSIFIED AS A HAZARDOUS LOCATION AS FOLLOWS:
   a) THE AREA INSIDE THE WET WELL IS CONSIDERED CLASS 1, DIV 1 LOCATION.
   b) THE AREA WITHIN A 3FT ENVELOPE AROUND THE VENT IS CONSIDERED A CLASS 1, DIV 1 LOCATION
   c) THE AREA WITHIN A 5FT ENVELOPE AROUND THE VENT IS CONSIDERED A CLASS 1, DIV 2 LOCATION.
   d) THE AREA WITHIN AN ENVELOPE 18 INCHES ABOVE AND 3FT BEYOND EACH HATCH IS CONSIDERED A CLASS 1, DIV 2 LOCATION.
   e) THE AREA BEYOND THE ENVELOPE IS UNCLASSIFIED.
2. THE AREA OF THE ODOR-CONTROL SYSTEM IS CLASSIFIED AS A HAZARDOUS LOCATION AS FOLLOWS:
   a) THE AREAS WITHIN 3 FT OF LEAKAGE SOURCES AND THE VALVE VAULT IS CONSIDERED CLASS 1, DIV 2 LOCATION.
   b) THE AREA BEYOND THE ENVELOPE IS UNCLASSIFIED.
3. PROVIDE SUITABLE WIRING METHODS AND MATERIALS FOR HAZARDOUS LOCATIONS PER NFPA 70 (NEC).

GROUNDING NOTES

1. ROUTE ALL GROUNDING ELECTRODE CONDUCTORS FROM EQUIPMENT GROUND BUSSES, STRUCTURAL SUPPORTS, EQUIPMENT FRAMES, AND LIGHTNING PROTECTION DOWN CONDUCTORS TO THE GROUNDING ELECTRODE SYSTEM IN 1-INCH PVC SCH 40 CONDUIT. CONNECTIONS FROM STRUCTURAL FRAMES AND DOWN CONDUCTORS, SHALL BE CONDUIT FROM 3-INCHES ABOVE THE CONCRETE SLAB TO A MINIMUM OF 6-INCHES BEYOND THE OUTSIDE EDGE OF THE SLAB. CONNECTIONS FROM EQUIPMENT GROUND BUSSES SHALL BE ROUTED IN CONDUIT FULL LENGTH FROM THE ENCLOSURE TO A MINIMUM OF 6-INCHES BEYOND THE OUTSIDE EDGE OF THE SLAB. FURNISH AND INSTALL THE APPROPRIATE CONDUIT FITTING FOR EACH ENCLOSURE PENETRATION, DO NOT ROUTE GROUNDING ELECTRODE CONDUCTORS ACROSS THE CONCRETE SURFACE.
2. THE GROUNDING ELECTRODE SYSTEM SHALL BE SIZED AND INSTALLED AS SHOWN ON THE PLANS. ALL THE BELOW GRADE AND REBAR BONDING CONNECTIONS SHALL BE EXOTHERMICALLY MADE, ERICO CADWELS OR CADWELD EXOLEN, NO SUBSTATIONS. ABOVE GRADE CONNECTIONS SHALL BE STANDARD GROUND BUS LUGS WITHIN THE EQUIPMENT ENCLOSURE STRUCTURAL CONNECTIONS SHALL BE MECHANICAL SPLIT-BOLT, SADDLE, OR CONE SCREW TYPE: BURNDY OR THOMAS AND BETTS.
3. GROUND RODS SHALL BE TWO-SECTION, COPPER-CLAD, 3/4-INCH DIAMETER 20 FEET IN LENGTH.
4. GROUND WELL TEST BOX SHALL BE CHRISTY NO. G5 OR EQUIVALENT.
5. MAXIMUM RESISTANCE TO REMOTE EARTH OF THE GROUNDING ELECTRODE SYSTEM SHALL BE 5 OHMS AS MEASURED WITH A CLAMP-ON GROUND RESISTANCE TESTER SUCH AS AN AEMC 3711, FLUKE 1630 OR GREENLEE CMGRT-100, OR EQUIVALENT DEVICE, 3 AND 4 POINT FALL OF POTENTIAL TESTS ARE NOT ACCEPTABLE GROUND TEST MONITOR MUST HAVE CERTIFICATE OF CALIBRATION NOT EXCEEDING 12 MONTHS PRIOR TO TESTING THE INSTALLATION. CONTRACTOR SHALL FURNISH AND WRITTEN REMOTE OF THE GROUND TEST TO THE OWNER'S ENGINEER, CONTACT OWNER'S ENGINEER FOR LOCATION TEST MEASUREMENTS.
6. USE THE GROUNDING BOLTS PROVIDED BY THE MANUFACTURER TO GROUND THE DIESEL FUEL TANK. DOWN GROUND CONDUCTORS SHALL BE PROTECTED WITH PVC SCHEDULE 40. DO NOT RUN EXPOSED GROUND CONDUCTORS DOWN THE SIDE OF THE TANK.

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05/18/2026

GENERAL
ELECTRICAL
LEGEND 3

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RJL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 01-G-0052
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 26 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 12:56

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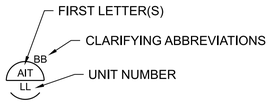
INSTRUMENT IDENTIFICATION

TAGGING STRUCTURE



THE CITY OF TULSA REQUIREMENTS FOR TAGGING HAVE BEEN FOLLOWED TO PROVIDE A UNIQUE TAG TO EACH EQPT AS FOLLOWS:

HXXX-ABCn-DEFXX

SEE "SELF CONTAINED VALVE & EQUIPMENT TAG NUMBERS" FOR TAGGING DEFINITIONS

INSTRUMENT IDENTIFICATION LETTERS TABLE

LETTER	FIRST-LETTER		SUCCEEDING-LETTERS		
	PROCESS OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	READOUT OR PASSIVE FUNCTION	READOUT OR PASSIVE FUNCTION
A	ANALYSIS (+)		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE (*)	USER'S CHOICE (*)	USER'S CHOICE (*)
C	USER'S CHOICE (*)			CONTROL	
D	DENSITY (S.G.)	DIFFERENTIAL			
E	VOLTAGE		PRIMARY ELEMENT, SENSOR		
F	FLOW RATE	RATIO (FRACTION)			
G	USER'S CHOICE (*)		GLASS, GAUGE VIEWING DEVICE	GATE	
H	HAND (MANUAL)				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOTION	MOMENTARY			MIDDLE, INTERMEDIATE
N	TORQUE		USER'S CHOICE (*)	USER'S CHOICE (*)	USER'S CHOICE (*)
O	USER'S CHOICE (*)		ORIFICE, RESTRICTION		
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RADIATION		RECORD OR PRINT		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTI VARIABLE		MULTI FUNCTION	MULTI FUNCTION	MULTI FUNCTION
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED (*)	X AXIS	UNCLASSIFIED (*)	UNCLASSIFIED (*)	UNCLASSIFIED (*)
Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION	Z AXIS		DRIVE, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

TABLE BASED ON THE INSTRUMENTATION, SYSTEMS, AND AUTOMATION SOCIETY (ISA) STANDARD.

(+) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL. SEE ABBREVIATIONS AND LETTER SYMBOLS.
(*) WHEN USED, DEFINE THE MEANING HERE FOR THE PROJECT.

GENERAL INSTRUMENT OR FUNCTIONAL SYMBOLS

- FIELD MOUNTED
- REAR-OF-PANEL MOUNTED (OPERATOR INACCESSIBLE)
- PANEL MOUNTED (OPERATOR ACCESSIBLE)
- MCC MOUNTED
- COMPUTER FUNCTION
- PLC FUNCTION
- SHARED DISPLAY, SHARED CONTROL

TRANSDUCERS

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

EXAMPLE

CURRENT TO PNEUMATIC TRANSDUCER (BACK OF PANEL, IN A FLOW LOOP)

ACCESSORY DEVICES

A	ALARM
C	CONTROLLER
I	INDICATOR
R	RECORDER
S	SWITCH
T	TRANSMITTER
X	UNCLASSIFIED

EXAMPLE

TRANSMITTER AS AN ACCESSORY TO A FLOW ELEMENT

SPECIAL CASES

ON AND OFF EVENT LIGHTS

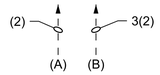
ON-OFF HAND SWITCH, MAINTAINED CONTACT SWITCH (CONTROLLED DEVICE WILL RESTART ON RETURN OF POWER AFTER POWER FAILURE).

STOP-START HAND SWITCH MOMENTARY CONTACT SWITCHES (CONTROLLED DEVICE WILL NOT RESTART ON RETURN OF POWER AFTER POWER FAILURE).

LINE LEGEND

- PRIMARY PROCESS (CLOSED CONDUIT, DASHED LINE INDICATES ALTERNATE FLOW STREAM)
- SECONDARY PROCESS
- BYPASS PROCESS
- PROCESS (OPEN CHANNEL)
- ANALOG SIGNAL (4 TO 20 mAdc, ETC.)
- DISCRETE (ON/OFF, ETC.)
- PNEUMATIC SIGNAL
- FILLED SYSTEM SIGNAL
- HYDRAULIC SYSTEM SIGNAL
- BUILDING OR FACILITY BOUNDARY
- PACKAGE SYSTEM EQUIPMENT
- TYPICAL BREAK
- POWER
- ETHERNET CAT6 CONNECTION
- FIBER OPTIC CONNECTION
- FIBER OPTIC PATCH CORD

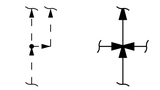
PARALLELING LINES



(A) TOTAL OF 2 SIGNALS

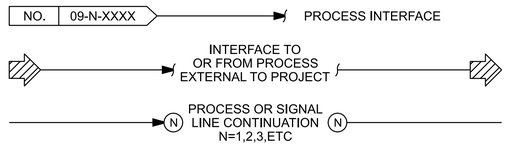
(B) 3 TYPICAL SETS OF 2 SIGNALS EACH. TOTAL OF 6 SIGNALS.

CONNECTING LINES



NON-CONNECTING LINES

INTERFACE SYMBOLS



DIGITAL SYSTEM INTERFACES

- ▲ ANALOG INPUT
- ▼ ANALOG OUTPUT
- $\triangle_X$ DISCRETE INPUT
- ∇_X DISCRETE OUTPUT

SELF CONTAINED VALVE & EQUIPMENT TAG NUMBERS

EACH EQUIPMENT IS UNIQUELY IDENTIFIED BY A TAG STRUCTURED AS:

HXXX-ABCn-DEFXX WHERE

HXXX	ABCn	DESCRIPTION	DEFXX
H040	WAS1	WASTE ACTIVATED SLUDGE	SEE TOP RIGHT FOR SUB-PROCESS EQUIPMENT DEFINITIONS
H050	FCL1	FINAL CLARIFIER (SCUM WET WELL)	
H070	RDT1	ROTARY DRUM THICKENERS	
H090	DEW1	DEWATERING (CENTRIFUGE BUILDING)	
H090	DEW2	DEWATERING (SLUDGE HOLDING TANK NO. 2)	
H090	DEW2	DEWATERING (SLUDGE MIXING ROOM)	
H090	DEW3	DEWATERING (SLUDGE MIXING ELECTRICAL ROOM)	
H095	COM1	COMPOSTING (OPERATIONS BUILDING)	
H095	COM2	COMPOSTING FACILITY	
H095	COM2	COMPOSTING (BIOFILTER NO. 1)	
H095	COM3	COMPOSTING (FINISHED COMPOST STORAGE BUILDING)	
H110	LFT1	COMPOSTING (SANITARY LIFT STATION)	
H001	OPS1	OPERATIONS BUILDING	

GENERAL SHEET NOTES

1. COMPONENTS AND PANELS SHOWN WITH A SINGLE ASTERISK (*)BEFORE TAG NUMBERS HAVE TAG NUMBER PREFIXES SPECIFIED BY THE GENERAL SHEET NOTES OF THE INIVIDUAL DRAWING.
2. COMPONENTS AND PANELS SHOWN WITH A SINGLE DIAMOND (◆) ARE TO BE PROVIDED AS PART OF A PACKAGE SYSTEM.
3. COMPONENTS AND PANELS SHOWN WITH A DOUBLE ASTERISK (✻✻) ARE TO BE PROVIDED UNDER DIVISION 26, ELECTRICAL.
4. THIS IS A STANDARD LEGEND. THEREFORE, NOT ALL OF THIS INFORMATION MAY BE USED ON THE PROJECT.

EQUIPMENT TAG SUB-PROCESS EQUIPMENT DEFINITIONS:

THE CITY OF TULSA REQUIREMENTS FOR TAGGING HAVE BEEN FOLLOWED TO PROVIDE A UNIQUE TAG TO EACH EQPT AS FOLLOWS:

HXXX-ABCn-DEFXX

WHERE DEF,

- ARV : AIR RELIEF VALVE
- BFT : BIOFILTER
- BFV : BUTTERFLY VALVE
- BLDG : BUILDING
- BLO : BLOWER
- BLV : BALL VALVE
- CEN : CENTRIFUGE
- CKV : CHECK VALVE
- CNV : CONVEYOR
- CPL : CONTROL PANEL
- DBV : DUCK BILL VALVE
- DMP : DAMPER
- EHF : EXHAUST FAN
- FAN : DUCT FAN
- FCV : FLOW CONTROL VALVE
- FMT : FLOW METER
- FTK : FUEL TANK
- GBV : GLOBE VALVE
- GRD : GRINDER
- GTV : GATE VALVE
- KGV : KNIFE GATE VALVE
- LBS : LUBRICATION SYSTEM
- LIT : LEVEL TRANSMITTER
- MCC : MOTOR CONTROL CENTER
- MCP : MAIN CONTROL PANEL
- MDP : MAIN DISTRIBUTION PANEL
- MOT : MOTOR
- MTR : METER
- MXR : MIXER
- OCF : ODOR CONTROL FAN
- NPL : NETWORK PANEL
- PBU : POLYMER BLEND UNIT
- PFP : POLYMER FEED PUMP
- PGV : PLUG VALVE
- PLC : PROGRAMMABLE LOGIC CONTROLLER
- PMP : PUMP
- PMX : POLYMER MIXER
- PNL : PANEL
- PRS : PRESSURE SWITCH
- PTM : PRESSURE TRANSMITTER
- RCP : RECIRCULATING PUMP
- RDT : ROTATING DRUM THICKENER
- SCA : SCALES
- SCP : SCUM PUMP
- SFP : SLUDGE FEED PUMP
- SNV : SOLENOID VALVE
- STR : STRAINER
- TNK : TANK
- TTM : TEMPERATURE TRANSMITTER
- VFD : VARIABLE FREQUENCY DRIVE
- WSP : WASTE SLUDGE PUMP

AND WHERE XX=01, 02, 03, ETC.

SURGE SUPPRESSOR TABLE:

SS TYPE	APPLICATION
1	PROTECT 120V AC, SINGLE-PHASE POWER IN CONTROL PANELS.
2	PROTECT ANALOG SIGNALS WITHIN CONTROL PANELS.
3	ANALOG SIGNAL OF 2-WIRE TRANSMITTERS
4	BOTH ANALOG SIGNAL 120V AC POWER OF 4-WIRE TRANSMITTER

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REUSE OF DOCUMENTS:

LICENSED PROFESSIONAL ENGINEER
ORVIL LUGO
35653
OKLAHOMA

MAY 15th, 2026

REVISION	BY	DATE

GENERAL
INSTRUMENTATION AND CONTROLS LEGEND 1

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSN 05/26	
	LEAD ENG.	AZL 5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 01-G-0055		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 27 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:16

VALVE SYMBOLS

GATE
KNIFE GATE
BUTTERFLY
GLOBE
BALL
V
VEE-BALL
PLUG
SEAT PORT
ECCENTRIC PLUG
DIAPHRAGM

PINCH
NEEDLE
SWING CHECK
BALL CHECK
BACKFLOW PREVENTER
ROTARY
TELESCOPE
S
SAMPLE
MUD

PRESSURE RELIEF
AIR AND/OR VACUUM RELEASE
REGULATED SIDE
PRESSURE CONTROL
PRESSURE REGULATION (CLAY-TYPE)
MULTI-PORT VALVE (GATE VALVE SHOWN. FOR OTHER VALVE TYPES, APPROPRIATE VALVE SYMBOL SHOWN.) SEAT PORTS ARE IMPLIED BY INDICATED FLOW PATTERN.
ANGLE GATE

GATE SYMBOLS

SLUICE
BUTTERFLY
FABRICATED SLIDE
FLAP
STOP LOG
SHEAR

ACTUATOR SYMBOLS

PNEUMATIC DIAPHRAGM SPRING-OPPOSED, SINGLE OR DOUBLE ACTING
PNEUMATIC CYLINDER SINGLE OR DOUBLE ACTING ACTUATED BY ONE INPUT
M
ELECTRIC MOTOR
S
SOLENOID

VALVE POSITIONER
H
HYDRAULIC
DIAPHRAGM, DIFFERENTIAL PRESSURE
E/H
ELECTROHYDRAULIC

MANUAL

NOTE:
ON LOSS OF PRIMARY POWER (PNEUMATIC, ELECTRICAL, OR HYDRAULIC)

XX:
FO FAIL OPEN
FC FAIL CLOSED
FLP FAIL TO LAST POSITION

PRIMARY ELEMENT SYMBOLS

PARSHALL FLUME
WEIR
ORFICE PLATE
FLOW TUBE
J
PITOT-STATIC
VORTEX METER
ULTRASONIC FLOWMETER
M
ELECTROMAGNETIC FLOWMETER

PROPELLER OR TURBINE METER
THERMAL FLOWMETER
LEVEL (BUBBLER TUBE)
LIT
LEVEL (SUBMERSIBLE)

LS
LEVEL (FLOAT)
FI
ROTAMETER
DE
DENSITY METER
XX
GENERIC
LE XX
LEVEL (ULTRASONIC)
LE X
LEVEL (RADAR)

MISCELLANEOUS SYMBOLS

V
VENT TO ATMOSPHERE
AIR GAP
T
DRIP TRAP
PIG INSERT POINT
PIG CATCH POINT
A
SELF CONTAINED AIR SUPPLY
AP
AIR PURGE SET
F
FLUSHING CONNECTION
S
SEAL WATER SET
WP
WATER PURGE SET
FLEXIBLE CONNECTION
AERATOR
DIAPHRAGM SEAL
ANNULAR DIAPHRAGM SEAL
SS
COMPOSITE SAMPLER
FLAME TRAP
CALIBRATION COLUMN
S
INLINE SILENCER
BLIND FLANGE
PIPE CAP
STRAINER
BASKET STRAINER
FILTER
PULSATION DAMPENER
EXPANSION CHAMBER
OMNI ANTENNA
ETH
ETHERNET

FFLCPLLLX
PANEL CONTINUED ON SAME OR OTHER DRAWING
PANEL OUTLINE
PANEL NAME
120V
120 VOLT, 60 HZ POWER
480V
480 VOLT, 60 HZ POWER
XX
AIR SET
XX = SUPPLY PRESSURE IN PSIG.
PLUG
RECEPTACLE
REDUCER
RUPTURE DISK (VACUUM)
RUPTURE DISK (PRESSURE)
TV
TV MONITOR
TV
TV CAMERA
A
B
AND
C
LOGIC ELEMENT: IF A AND NOT B THEN C
OR
LOGIC ELEMENT: IF A OR B THEN C
RADIO ANTENNA
I
OR
I
INTERLOCK, SEE CONTROL DIAGRAMS
VOICE COMMUNICATION POINT
HORN / ALARM
SKIMMING MECHANISM
SCREW CONVEYOR
MIXER
ELECTRIC MOTOR
DIAPHRAGM
EXHAUST FAN
ANTENNA

PUMP AND COMPRESSOR SYMBOLS

CENTRIFUGAL PUMP (DRY PIT)
CENTRIFUGAL WET PIT PUMP OR TURBINE PUMP
RECIPROCATING OR METERING PUMP (POSITIVE DISPLACEMENT)
DIAPHRAGM PUMP
GEAR PUMP OR BLOWER (POSITIVE DISPLACEMENT)
XXAS
CS-1 ADJUSTABLE SPEED
CS-2 CONSTANT SPEED (SINGLE SPEED)
CONSTANT SPEED (TWO SPEED)
XX:

PROGESSING CAVITY PUMP
COMPRESSOR (CENTRIFUGAL)
COMPRESSOR (PISTON)
BLOWER OR FAN (CENTRIFUGAL)
EJECTOR

PISTON PUMP
SUBMERSIBLE SUMP PUMP
ROTARY PUMP
VACUUM PUMP
SCREW PUMP

FLOW STREAM IDENTIFICATION

ABI	AERATION BASIN INLET
AHP	AIR, HIGH PRESSURE PROCESS
AI	AIR, INSTRUMENT
ALP	AIR, LOW PRESSURE PROCESS
B	BRINE
BDS	BLENDED DIGESTED SLUDGE
BFE	BIO-FILTER EFFLUENT
BFI	BIO-FILTER INFLUENT
BFR	BIO-FILTER RECYCLE
BFW	BRINE FEEDWATER
BS	BRINE SLUDGE
BWS	BACKWASH SUPPLY
BYP	BYPASS
C	CARBON SLURRY
CD	CARBON DIOXIDE GAS
CEN	CENTRATE
CG	CHLORINE GAS (PRESSURE)
CGV	CHLORINE GAS (VACUUM)
CHS	CHEMICAL SLUDGE
CL	CHLORINE LIQUID
CO	CONDENSATE DRAIN
CON	CONDENSATE
CS	CHLORINE SOLUTION
CWR	COOLING WATER RETURN
CWS	COOLING WATER SUPPLY
D	DRAIN (SANITARY)
DAS	DIGESTED ACTIVATED SLUDGE
DG	DIGESTER GAS
DIW	DEIONIZED WATER
DS	DIGESTED SLUDGE
DW	DISTILLED WATER
DWS	DEWATERED SLUDGE
F	FILTRATE
FA	FOUL AIR
FC	FERRIC CHLORINE
FE	FILTER EFFLUENT
FI	FILTER INFLUENT
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FTW	FILTER TO WASTE
G	NATURAL GAS
GAS	GASOLINE
GR	GRIT SLURRY
H	HYDROGEN GAS
HPR	HIGH PRESSURE RETURN (CONDENSATE)
HPS	HIGH PRESSURE STEAM
HS	HEAVY SOLIDS
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
IR	INTERPOSING RELAY
LD	DRY LIME
LPO	LIQUID POLYMER
LPR	LOW PRESSURE RETURN (CONDENSATE)
LPS	LOW PRESSURE STEAM
LS	LIME SLURRY
LSD	LIME SLUDGE
ML	MIXED LIQUOR
MPR	MEDIUM PRESSURE RETURN (CONDENSATE)
MPS	MEDIUM PRESSURE STEAM
NA	SODIUM HYDROXIDE
NT	NITROGEN TRICHLORIDE
OA	ODOROUS AIR
OF	OVERFLOW
PD	PROCESS DRAIN
PE	PRIMARY EFFLUENT
PI	PRIMARY INFLUENT
PLE	PLANT EFFLUENT
PO	POLYMER SOLUTION
PS	PRESSURE SEWER
PSD	PRIMARY SLUDGE
PSM	PRIMARY SCUM
RAS	RETURN ACTIVATED SLUDGE
RB	RAW BRINE
RCS	RECARBONATION SLUDGE
RCY	RECYCLE
RHW	RECIRCULATED HOT WATER
RS	RAW SEWAGE
RSD	RECIRCULATED SLUDGE
S	SANITARY SEWER (GRAVITY)
SA	SAMPLE
SAS	SODA ASH SOLUTION
SB	SPENT BRINE
SC	COLD SLUDGE
SDG	SULFUR DIOXIDE GAS
SDL	SULFUR DIOXIDE LIQUID
SDS	SULFUR DIOXIDE SOLUTION
SDV	SULFUR DIOXIDE GAS (VACUUM)
SE	SECONDARY EFFLUENT
SH	HEATED SLUDGE
SS	SANITARY SEWER
SSC	SECONDARY SCUM
SSD	SECONDARY DIGESTED SLUDGE
SW	SURFACE WASH
TAS	THICKENED ACTIVATED SLUDGE
TB	TREATED BRINE
TBS	THICKENER BOTTOM SLUDGE
TDS	THICKENED DIGESTED SLUDGE
TPS	THICKENED PRIMARY SLUDGE
TS	THICKENED SLUDGE
TUF	THICKENER UNDERFLOW
TWAS	THICKENED WASTE ACTIVATED SLUDGE
UD	UNDERDRAIN
V	VENT
VAC	VACUUM
W1	NO. 1 (POTABLE) WATER
W2	NO. 2 (NON-POTABLE) WATER
W3	NO. 3 WATER
W4	NO. 4 WATER
WAS	WASTE ACTIVATED SLUDGE

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LICENSED PROFESSIONAL ENGINEER
ORVIL LUGO 35653
OKLAHOMA
MAY 15th, 2026

GENERAL
INSTRUMENTATION AND CONTROLS LEGEND 2

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

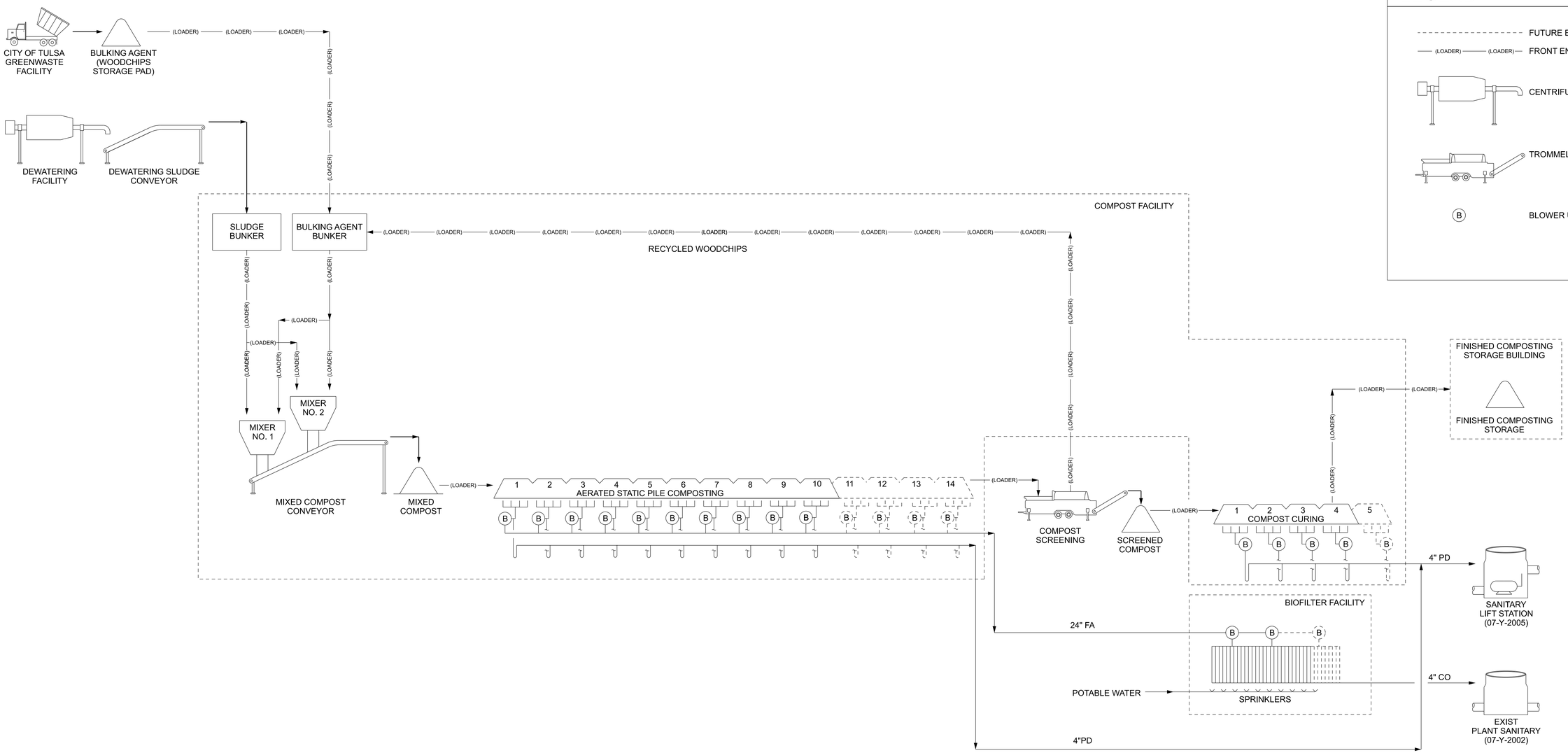
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
	PROJ. MGR.	MSN	05/26
HORIZONTAL:	LEAD ENG.	RZL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 01-G-0056		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 28 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:16



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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

GENERAL

PROCESS FLOW DIAGRAM

WFXQ7901

HAIKEY CREEK WWTP BIOSOLIDS IMPROVEMENTS

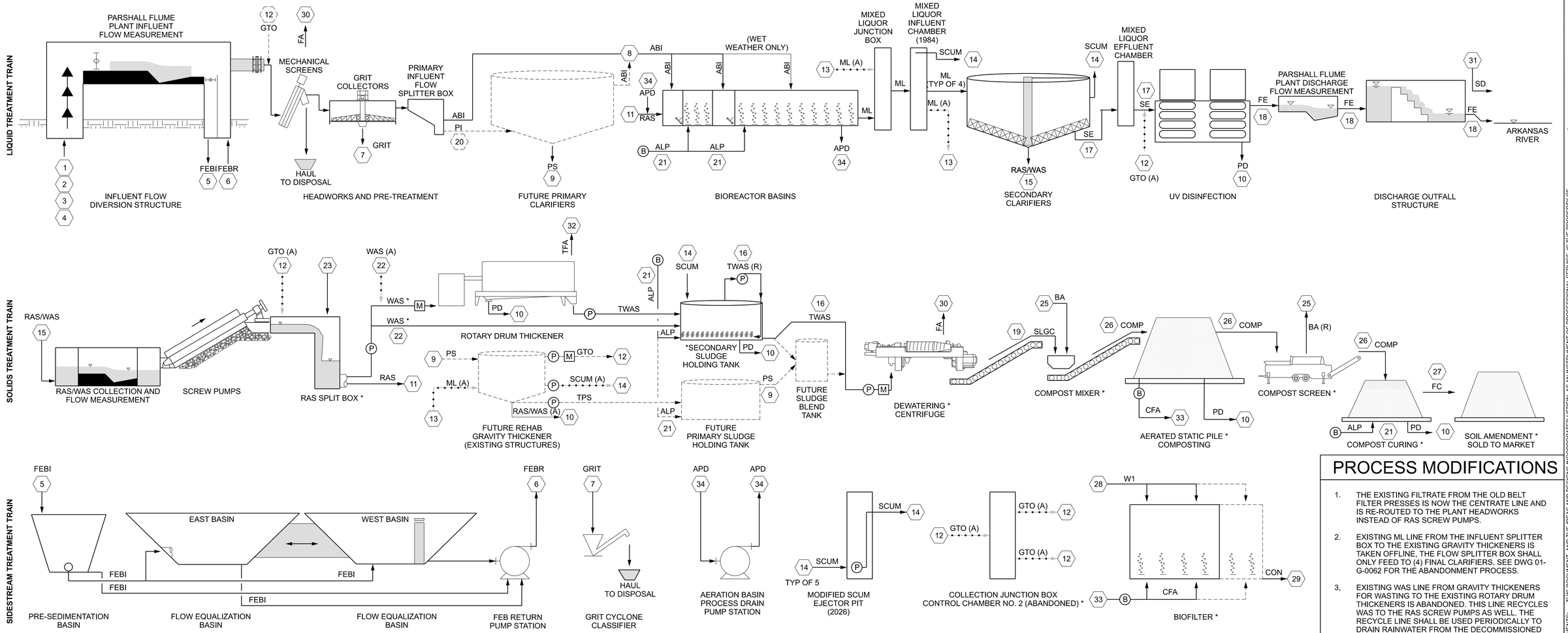
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	RJL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 01-G-0060			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 29 OF 300 SHEETS

PLOT DATE: 05\13\2026 PLOT TIME: 8:37:42 AM



FLOW STREAM ID:	DESCRIPTION:	ID:	DESCRIPTION:	ID:	DESCRIPTION:	ID:	DESCRIPTION:	ID:	DESCRIPTION:
1	RS 36" HAIKEY CREEK FORCE MAIN	9	PS PRIMARY SLUDGE (FUTURE)	17	SE SECONDARY EFFLUENT	25	BA BULKING AGENT	33	CFA COMPOST FOUL AIR
2	RS 30" HAIKEY CREEK FORCE MAIN	10	PD PROCESS DRAIN	18	FE FINAL EFFLUENT	26	COMP COMPOST		
3	RS 24" SOUTHEAST BASIN FORCE MAIN	11	RAS RETURN ACTIVATED SLUDGE	19	SLGC SLUDGE CAKE	27	FC FINISHED COMPOST	34	APD AERATION PROCESS DRAIN
4	RS 24" FUTURE FORCE MAIN	12	GTO GRAVITY THICKENER OVERFLOW	20	PI PRIMARY INFLUENT	28	W1 POTABLE WATER		
5	FEBI FLOW EQ BASIN INFLUENT	13	ML MIXED LIQUOR	21	ALP AIR LOW PRESSURE	29	CON COMPOST CONDENSATE		
6	FEBR FLOW EQ BASIN RETURN	14	SCUM SCUM	22	WAS WASTE ACTIVATED SLUDGE	30	FA FOUL AIR		
7	GRIT GRIT	15	RAS/WAS RETURN ACTIVATED SLUDGE AND WASTE ACTIVATED SLUDGE	23	SS SANITARY SEWER	31	SD STORM DRAIN		
8	ABI AERATION BASIN INFLUENT	16	TWAS THICKENED WASTE ACTIVATED SLUDGE	24	DFA DEWATERING FOUL AIR	32	TFA THICKENER FOUL AIR		

GENERAL NOTES

1. ABANDON THE FOLLOWING EXISTING FACILITIES IN PLACE PER THIS PROCESS FLOW DIAGRAM: PROCESS TRAINS, SCUM HOLDING TANK, FEB I INFLUENT PUMP STATION, CHLORINE CONTACT BASINS, SLUDGE LAGOON, AND SLUDGE DRYING BEDS.
2. (A) = ABANDONED; (R) = RECYCLED
   (B) = BLOWER
   (P) = PUMP
   [M] = METER

PROCESS MODIFICATIONS

1. THE EXISTING FILTRATE FROM THE OLD BELT FILTER PRESSES IS NOW THE CENTRATE LINE AND IS RE-ROUTED TO THE PLANT HEADWORKS INSTEAD OF RAS SCREW PUMPS.
2. EXISTING ML LINE FROM THE INFLUENT SPLITTER BOX TO THE EXISTING GRAVITY THICKENERS IS TAKEN OFFLINE. THE FLOW SPLITTER BOX SHALL ONLY FEED TO (4) FINAL CLARIFIERS. SEE DWG 01-G-0062 FOR THE ABANDONMENT PROCESS.
3. EXISTING WAS LINE FROM GRAVITY THICKENERS FOR WASTING TO THE EXISTING ROTARY DRUM THICKENERS IS ABANDONED. THIS LINE RECYCLES WAS TO THE RAS SCREW PUMPS AS WELL. THE RECYCLE LINE SHALL BE USED PERIODICALLY TO DRAIN RAINWATER FROM THE DECOMMISSIONED BASINS.
4. AREAS WITH AN ASTERISK (*) ARE PROPOSED AND IMPLEMENTED IN THIS BIOSOLIDS IMPROVEMENT PROJECT.
5. PRIOR TO THIS CONTRACT PROCESS MODIFICATIONS, THE EXISTING GRAVITY THICKENERS ACCEPTED MLSS WHICH EFFECTIVELY CREATES MINI-CLARIFIERS. THIS CONTRACT REMOVES THIS PROCESS TRAIN BUT LEAVES STRUCTURES LABELED AS SHOWN ON RECORD DRAWINGS FOR CLARITY.

LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
05/17/2026

REVISION	BY	DATE

GENERAL
PROCESS FLOW DIAGRAM
POST BIOSOLIDS IMPROVEMENTS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
	SURVEY		
HORIZONTAL:	PROJ. MGR.	MSN 05/26	
	LEAD ENG.	AZL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 01-G-0061		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 30 OF 300 SHEETS

PLOT DATE: 05\13\2026 PLOT TIME: 8:42:41 AM

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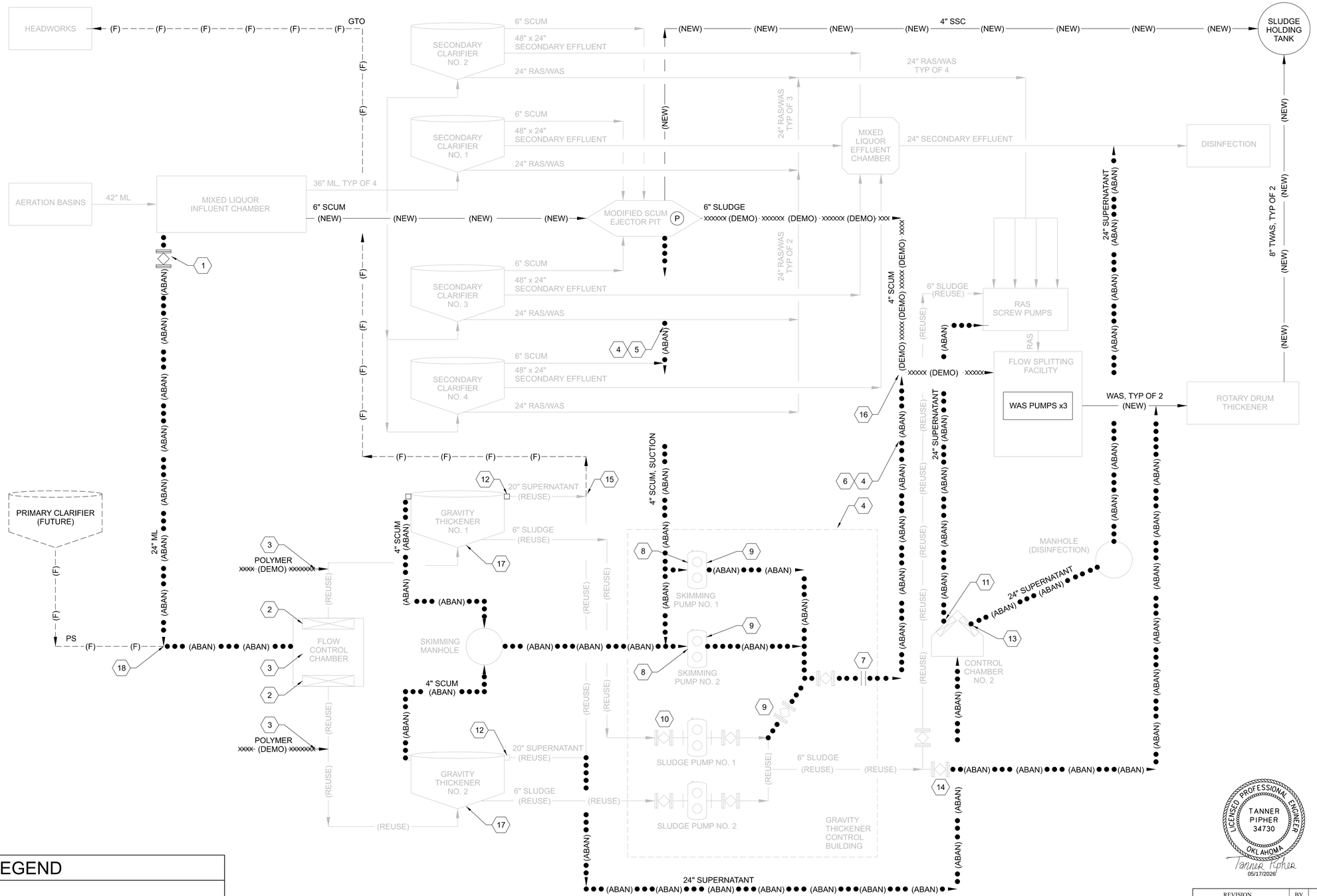

LEGEND

(F)	FUTURE
(REUSE)	KEEP IN SERVICE/DRAIN
xxxxx (DEMO) xxxxx	DEMOLISH
(ABAN)	ABANDON IN PLACE
(NEW)	NEW
P	PUMP

GRAVITY THICKENER ABANDONMENT PROCESS FLOW DIAGRAM

GENERAL NOTES

1. THE GRAVITY THICKENER PFD DEPICTS THE PLAN FOR ABANDONMENT. VERIFY ALL LINE SIZES, CONNECTION POINTS, AND LOCATION OF ABANDONMENT PRIOR TO EXECUTING THE PLAN.
2. SEE SPECIFICATION 02 41 00 FOR DEMOLITION DEFINITIONS AND GRAVITY THICKENER OUTLINE.
3. ENSURE GRAVITY THICKENER SLUDGE PUMPS REMAIN OPERATIONAL TO DRAIN RAINWATER OUT OF BASINS AND RECYCLE BACK TO THE RAS SCREW PUMP LOCATION.

SHEET KEYNOTES

1. CLOSE 24" ML VALVE EXITING INFLUENT CHAMBER.
2. CLOSE CONTROL CHAMBER NO.1 GATES.
3. DEMO ALL EXISTING POLYMER AND CHLORINE SOLUTION COMPONENTS.
4. ENSURE NEW SCUM PUMP STATION IS OPERATING BEFORE ABANDONMENT OF GRAVITY THICKENER SCUM LINES.
5. CUT AND GROUT, AND SEPARATE 4" SCUM LINE FROM SECONDARY CLARIFIER NO.4 SCUM LINE.
6. CUT AND GROUT, AND SEPARATE 4" SCUM LINE FROM 6" FLOW SPLITTING FACILITY SLUDGE LINE.
7. CLOSE VALVE AND INSTALL BLIND FLANGE TO ABANDON 4" SCUM EJECTOR PIT BYPASS LINE.
8. CLOSE SKIMMING PUMP INTAKE VALVES.
9. FLUSH SKIMMING PUMPS AND CLOSE VALVE CONNECTING 4" SCUM LINE TO 6" SLUDGE LINE.
10. INSTALL WATER LEVEL SENSOR IN BUILDING BASEMENT.
11. CLOSE CONTROL CHAMBER VALVE TO RAS SCREW PUMPS.
12. FLUSH 20" SUPERNATANT LINES.
13. CLOSE CONTROL CHAMBER VALVE TO DISINFECTION (MANHOLE).
14. SLUDGE RAS PUMP BYPASS VALVE CLOSE.
15. FUTURE YARD PIPING SHALL BE TIED IN AND ROUTED BACK TO HEADWORKS.
16. REMOVE EXISTING SCUM TIE-IN APPROXIMATELY 5'-0" NORTH OF EXISTING SCUM EJECTOR PIT.
17. THE EXISTING GRAVITY THICKENERS PRIOR TO THIS CONTRACT PROCESS MODIFICATIONS ACCEPTED MLSS WHICH EFFECTIVELY CREATES MINI-CLARIFIERS. THIS CONTRACT REMOVES THIS PROCESS TRAIN BUT LEAVES STRUCTURES LABELED AS SHOWN ON RECORD DRAWINGS FOR CLARITY.
18. FUTURE TIE-IN IS IN FRONT OF THE ABANDONED GRAVITY THICKENER CONTROL BUILDING AND A SECTION OF EXISTING PIPE WILL BE ABANDONED IS UNDERNEATH FOUNDATION.

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05/17/2026

REVISION	BY	DATE

GENERAL
PROCESS FLOW DIAGRAM
GRAVITY THICKENER ABANDONMENT AND PLANT SCUM MODIFICATIONS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSN 05/26	
	LEAD ENG.	AZL 5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 01-G-0062		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 31 OF 300 SHEETS

PLOT DATE: 05\13\2026 PLOT TIME: 8:44:03 AM

PIPING SCHEDULE

FLOW STREAM (NOTE 1)	SERVICE	NOMINAL PIPE SIZE (IN.) (NOTE 2)	INSTALLATION (NOTE 3)	MATERIAL (NOTE 4)	SPECIFICATION SECTION	JOINT TYPE (NOTE 5)	PROTECTIVE LINING (NOTE 7)	PROTECTIVE COATING (NOTE 7)	PIPE PAINT COLOR (NOTE 8)	OPERATING PRESSURE (PSIG)	TEST PRESSURE (PSIG)	TEST TYPE (NOTE 6)	REMARKS (ALSO SEE NOTE 9)
ALP	AIR LOW PRESSURE	≤ 6"	IND/EXP/SUB	SST, SCH 10S	40 27 00.08	FL, W	BARE	BARE	NONE	10	15	P	INSULATE INDOOR FOR PERSONAL PROTECTION.
		≥ 8"		SST, SCH 5S			BARE	BARE	NONE	10	15	P	INSULATE INDOOR FOR PERSONAL PROTECTION.
CD	HVAC CONDENSATE DRAIN	ALL	EXP	CU	40 27 00.13	W	NONE	NONE	N/A	N/A	5	H	INSULATE PER SPECIFICATION 22 07 00 WHERE EXPOSED OUTDOORS
				PVC-DWV	22 10 01.02		NONE	NONE	N/A	N/A			
CEN	CENTRATE	≤ 4"	IND / EXP	ELDI	40 27 00.01	FL	EPOXY	IND/EXP: EPOXY	LIGHT BROWN	35	60	H	ONLY CENTRATE DRAIN IS PVC FROM CHUTE TO DRAIN HUB.
			BUR			PRJ	EPOXY	BUR: POLY	NONE	35	60	H	
			BUR	HDPE	33 05 01.10	W	NONE	NONE	NONE	35	60	H	
CON	COMPOST CONDENSATE	≥ 4"	BUR	HDPE	40 27 00.14	W	NONE	NONE	NONE	--	--	G	
FA	FOUL AIR	ALL	EXP	AL (DUCT)	23 31 13.05	FL	PTFE	BARE	NONE	20" W.C.	3	P	
			BUR	HDPE (DUCT)	33 05 01.10	W	NONE	NONE	NONE	20" W.C.	3	P	DEBEAD ALL HDPE DUCT
HW1	HOT WATER, POTABLE	ALL	EXP	CU	40 27 00.13	W	NONE	NONE	N/A	N/A	NOTE 6, PC	PC	INSULATE PER SPECIFICATION 22 07 00. HEAT TRACE AND INSULATE EXPOSED PIPING PER 40 42 13
				CPVC	40 27 00.11								
HWR1	HOT WATER RETURN, POTABLE	ALL	EXP	CU	40 27 00.13	W	NONE	NONE	N/A	N/A	NOTE 6, PC	PC	INSULATE PER SPECIFICATION 22 07 00. HEAT TRACE AND INSULATE EXPOSED PIPING PER 40 42 13
				CPVC	40 27 00.11								
OA	ODOROUS AIR	ALL	IND	FR-PVC (DUCT)	40 27 00.09	W	NONE	NONE	NONE	8" W.C.	0.5	P	
			EXP	AL (DUCT)	23 31 13.05	FL	PTFE	BARE	NONE	8" W.C.	0.5	P	
			BUR	HDPE (DUCT)	33 05 01.10	W	NONE	NONE	NONE	8" W.C.	0.5	P	DEBEAD ALL HDPE DUCT
OF	OVERFLOW	≥ 4"	EXP	ELDI	40 27 00.01	FL	EPOXY	5	BROWN	--	--	G	
			BUR	PVC	40 27 00.10	W	NONE	NONE	NONE				
PO	POLYMER	ALL	ALL	CPVC	40 27 00.11	FL, W	NONE	25	NONE	80	120	H	PROVIDE PROTECTIVE COATING FOR EXP AND IND EXPOSURES ONLY. ALL PO IS DOUBLE WALL CONTAINMENT PIPE.
PD	PROCESS DRAIN	< 4"	IND / EXP	PVC-DWV / CISP	40 27 00.10	W, FL	NONE	PVC: 25; CI: 5	NONE	G	G	G	
		≥ 4"		ELDI	40 27 00.01	FL	EPOXY	DI: 5	BLACK	N/A	150	H	
		1" - 3"	BUR	PVC	40 27 00.10	W	NONE	NONE	NONE	G	G	G	
		4" - 8"	BUR	PVC	33 05 01.12.03	HU	NONE	NONE	NONE				
		≥ 4"	BUR/EMB	ELDI	40 27 00.01	MJ, PRJ	EPOXY	BUR: POLY / EMB: 7	NONE				
RFS/RFL	REFRIGERANT	ALL	EXP-NT	CU-ACR	23 23 01	W	NONE	NONE	NA	--	--	-	MANUFACTURER SPECIFIED DESIGN AND TEST PRESSURE. INSULATION PER SPECIFICATION 22 07 00
RS	RAW SEWAGE	≤ 18"	BUR/EMB	PVC	33 05 01.12.03	HU	NONE	NONE	NONE	--	--	G	
		> 18"	BUR/EMB	ELDI	40 27 00.01	PRJ	EPOXY	7	NONE				
		ALL	IND/EXP	ELDI	40 27 00.01	FL	EPOXY	5	GREY				
SD	SANITARY, DRAIN	ALL	EXP/BUR	CPVC	40 27 00.11	W	NONE	EXP:25	-	N/A	5	H	
SS	SANITARY SEWER	≥ 4"	BUR	PVC-SEWER	33 05 01.12.03	HU	NONE	NONE	NONE	15	25	H	
		3"	SUB	PVC	40 27 00.10	W							
SSC	SECONDARY SCUM	≥ 4"	BUR/SUB	PVC	40 27 00.10	W	NONE	NONE	NONE	15	25	H	
			BUR	HDPE	33 05 01.10	W	NONE	NONE	NONE	15	25	H	
			EXP/SUB	ELDI	40 27 00.01	FL	EPOXY	5	BROWN	15	25	H	
STD	DRAIN, STORM/RAIN	3" - 10"	BUR	HDPE	33 41 01.08	HU	NONE	NONE	NONE	--	--	G	
		ALL	AS INDICATED ON DRAWINGS	CLDI	40 27 00.01	FL, GR, MJ	CEMENT	SUB: 2 / EXP: 5 BUR: POLY EMB: 7	DARK GRAY				PROVIDE PROTECTIVE COATING FOR EXP AND IND EXPOSURES ONLY
TS	THICKENED SLUDGE	> 4"	EXP	GLDI	40 27 00.01	FL, GR	GLASS	5	BROWN	50	75	H	
			BUR	GLDI	40 27 00.01	MJ	GLASS	POLY	NONE				
			EMB	GLDI	40 27 00.01	FL, MJ	GLASS	7	NONE				
TWAS	THICKENED WASTE ACTIVATED SLUDGE	> 4"	EXP	GLDI	40 27 00.01	FL, GR	GLASS	5	BROWN	50	75	H	
			BUR	GLDI	40 27 00.01	MJ	GLASS	POLY	NONE				
			EMB	GLDI	40 27 00.01	FL, MJ	GLASS	7	NONE				
VS, VTR	VENT, SANITARY	ALL	EXP	CPVC	40 27 00.11	W	NONE	NONE	DARK GRAY	N/A	5	H	
W1	WATER, POTABLE	ALL	EXP	CU	40 27 00.13	W	NONE	NONE	N/A	N/A	NOTE 6, PC	PC	INSULATE PER SPECIFICATION 22 07 00
				CPVC	40 27 00.11	W	NONE	25					
			BUR	CLDI	40 27 00.01	FL, MJ	CEMENT	7					
				PVC	40 27 00.10	HU	NONE	NONE					
		>3"	BUR	PVC	33 05 01.09	MJ	NONE	NONE	NONE	100	150	H	
W2	WATER, NON-POTABLE	ALL	EXP	CU	40 27 00.13	W	NONE	NONE	N/A	N/A	NOTE 6, PC	PC	INSULATE PER SPECIFICATION 22 07 00, BIOFILTER IRRIGATION MUST BE CPVC
				CPVC	40 27 00.11	W	NONE	25					
			BUR	PVC	40 27 00.10	W	NONE	25		170	250	H	USE SCHEDULE 40 PVC
WAS	WASTE ACTIVATED SLUDGE	> 4"	BUR	HDPE	33 05 01.10	W	NONE	NONE	NONE	10	50	H	
			EXP, IND	ELDI	40 27 00.01	FL, GR	EPOXY	5	BROWN				
			SUB					2	NONE				

NOTES

1. WHERE PIPING CARRIES TWO OR MORE DESIGNATIONS NOT LISTED AS A SINGLE FLOWSTREAM, THE PIPING MATERIAL SHALL CONFORM TO THE MATERIAL OF THE FIRST SERVICE LISTED. THE SUFFIX IDENTIFIES THE FUNCTION OF THE PIPE. FOR DUCTILE IRON PIPE DRAIN AND VENT SIZES SMALLER THAN 4-INCH, MATERIALS SHALL BE GALV, STL OR SST IN ACCORDANCE WITH THE ASSOCIATED SERVICE. PRESSURE TEST PROCESS PIPE DRAIN LINES UPSTREAM OF ISOLATION VALVE TO SAME TEST PRESSURE AS ASSOCIATED SERVICE. GRAVITY TEST PIPE DRAIN LINES DOWNSTREAM OF ISOLATION VALVES.

2. "ALL" REFERS TO ALL SIZES
   - > GREATER THAN
   - < LESS THAN
   - ≥ GREATER THAN OR EQUAL TO
   - ≤ LESS THAN OR EQUAL TO

3. ALL: ALL INSTALLATIONS
   - BUR: BURIED INSTALLATIONS BELOW GRADE
   - CON: CONCEALED INDOOR INSTALLATIONS
   - EMB: EMBEDDED INSTALLATIONS OR CONCRETE ENCASED
   - EXP: EXPOSED OUTDOOR INSTALLATIONS
   - IND: EXPOSED INDOOR INSTALLATIONS
   - SUB: SUBMERGED INSTALLATIONS INCLUDING WET OR DRY AREAS SUBJECT TO HYDROSTATIC LOADING

4. PIPING AS SPECIFIED IN APPLICABLE PIPING SPECIFICATIONS
   - BS: BLACK STEEL
   - CLDI: CEMENT-LINED DUCTILE IRON
   - CPVC: CHLORINATED POLYVINYL CHLORIDE
   - CU: COPPER
   - CISP: CAST IRON SOIL PIPE (GRAVITY)
   - ELDI: EPOXY LINED DUCTILE IRON
   - FRP: FIBERGLASS-REINFORCED PLASTIC
   - FRPVC: FIRE RESISTANT POLYVINYL CHLORIDE
   - GLDI: GLASS-LINED DUCTILE IRON
   - GS: GALVANIZED STEEL
   - PE: POLYETHYLENE
   - PVC: POLYVINYL CHLORIDE
   - PVC-DWV: POLYVINYL CHLORIDE - DRAIN, WASTE, VENT
   - PVC-SEWER: POLYVINYL CHLORIDE - SEWER
   - RCP: REINFORCED CONCRETE PIPE
   - SST: STAINLESS STEEL (TYPE 316/316L UNLESS OTHERWISE NOTED)
   - STL: STEEL

5. JOINTS AS SPECIFIED IN APPLICABLE PIPING SPECIFICATIONS. JOINT BONDING AND INSULATED FITTINGS SHALL BE AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH OTHER PIPING SPECIFICATION SECTIONS AS APPLICABLE.
   - FL: FLANGED
   - GR: GROOVED
   - HU: HUB AND SPIGOT (PUSH-ON)
   - MJ: RESTRAINED MECHANICAL JOINT OR PROPRIETARY RESTRAINED JOINT
   - PRJ: PROPRIETARY RESTRAINED JOINT
   - S: SCREWED OR THREADED
   - W: WELDED, FUSED, SOLDERED, BRAZED, SOCKET WELDED, GLUED OR SOLVENT WELDED

6. TEST TYPE:
   - FC: TEST PER FIRE CODE AND NFPA 13
   - FGC: TEST PER FUEL GAS CODE, NLT 1.5x MAXIMUM OPERATING PRESSURE BUT NLT 3 PSI
   - G: GRAVITY TEST TO HIGHEST LIQUID LEVEL ABOVE PIPE AND IN ACCORDANCE WITH SPECIFICATION SECTION 40 80 01
   - H: HYDROSTATIC TEST TO INDICATED PRESSURE
   - P: PNEUMATIC TEST TO INDICATED PRESSURE
   - PC: TEST PER PLUMBING CODE

   SEE SPECIFICATION 40 80 01 FOR MECHANICAL PIPING LEAKAGE TESTING REQUIREMENTS

7. LININGS AND COATINGS:
   - SYSTEM NO.: IN ACCORDANCE WITH SPECIFICATION SECTION 09 90 00
   - CEMENT (CLDI): AWWA C104 MORTAR LINING IN ACCORDANCE WITH SPECIFICATIONS
   - CEMENT (STL): AWWA C205 MORTAR LINING IN ACCORDANCE WITH SPECIFICATIONS
   - ETFE: ETHYLENE TETRAFLUOROETHYLENE IN ACCORDANCE WITH SPECIFICATIONS
   - GLASS (GLDI): GLASS LINING IN ACCORDANCE WITH SPECIFICATIONS
   - POLY: POLYETHYLENE BAGGING AS A MINIMUM AND IN ACCORDANCE WITH SPECIFICATIONS
   - WRAP: HEAT SHRINK WRAP AS A MINIMUM AND IN ACCORDANCE WITH SPECIFICATIONS

8. PAINT COLORS:
   - DARK GRAY: BLACK SABLE - 90BG 10/067 A1953
   - RED: FEDERAL STANDARD 595 31350
   - SUBMIT OR EMPTY: SUBMIT COLOR FOR APPROVAL

9. REFER TO SPECIFICATIONS FOR PIPE SUPPORTS AND INSULATION.

10. PIPE LABEL SHALL MATCH FLOWSTREAM AND SERVICE COLUMN UNLESS OTHERWISE SPECIFIED IN LETTERING TEXT COLUMN. IF LETTERING TEXT COLUMN IS EMPTY, PIPE LABEL SHALL BE FLOWSTREAM AND SERVICE. SEE SPECIFICATION SECTION 10 14 00 FOR ADDITIONAL LABELING REQUIREMENTS.

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LICENSED PROFESSIONAL ENGINEER
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05/21/2026

GENERAL
PIPE SCHEDULE

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MW	05/21/26
LEAD ENG.	RL	5/21/26
FIELD MGR.		5/21/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 01-G-0070
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 32 OF 300 SHEETS

PLOT DATE: 20-MAY-2026 PLOT TIME: 16:51

FACILITY NUMBER	FACILITY	ROOM / AREA	MATERIAL SELECTION DESIGNATION[1]	NFPA 820 CLASSIFICATION	NFPA 820 REFERENCE	NFPA 820 REQUIRED VENTILATION	VENTILATION PROVIDED	NFPA 820 FIRE PROTECTION MEASURES	NOTES
WAS1	WASTE ACTIVATED SLUDGE & TANK DRAINAGE PUMPS	WASPUMPS	CORROSIVE	UNCLASSIFIED BY VENTILATION	6.2.2(A)-9B	6ACH	6ACH	H AND FE	
		DRAINAGE PUMPS	CORROSIVE	UNCLASSIFIED BY VENTILATION	4.2.2-15A	6ACH	6ACH	FE	
DEW2	SLUDGE MIXING	BLOWER/PUMP AREA	CORROSIVE	UNCLASSIFIED BY VENTILATION	6.2.2(A)-9B	6ACH	6ACH	H AND FE	
DEW1	SLUDGE HOLDING TANKS	HOLDING TANK	SUBMERGED	CLASS 1, DIV 1	6.2.2(A)-11C	NOT ENCLOSED	NOT ENCLOSED	N/A	NOTE 3
			OUTDOOR, HAZARDOUS	CLASS 1, DIV 1	6.2.2(A)-11C	NOT ENCLOSED	NOT ENCLOSED	N/A	NOTE 3
DEW1	THICKENING AND DEWATERING FACILITY	DEWATERING ROOM 104	CORROSIVE	UNCLASSIFIED BY VENTILATION	6.2.2(A)-12A	6ACH	6ACH	H, FE, FAS	
		ELECTRICAL ROOM 101	INDOOR DRY	UNCLASSIFIED	-	-	-	-	
		TOILET ROOM 102	INDOOR WET	UNCLASSIFIED	-	-	-	-	
		STAIRWELL 001	INDOOR DRY	UNCLASSIFIED	-	-	-	-	
		JANITOR 102	INDOOR DRY	UNCLASSIFIED	-	-	-	-	
		ODOR CONTROL	CORROSIVE	CLASS 1, DIV 2	4.2.2-18E	-	-	FE	AREAS WITHIN 3FT OF LEAKAGE SOURCES
			CORROSIVE	UNCLASSIFIED	4.2.2-18F	-	-	FE	AREAS BEYOND 3FT
		CENTRATE & CENTRIFUGE FEED PUMP ROOM 105	CORROSIVE	UNCLASSIFIED BY VENTILATION	6.2.2(A)-9B	6ACH	6ACH	H AND FE	
FCL1	SCUM COLLECTION	WET WELL/MANHOLE	SUBMERGED	UNCLASSIFIED					
		VAULT	CORROSIVE	UNCLASSIFIED					
THK1	BYPASS VAULT	VAULT	CORROSIVE	UNCLASSIFIED					
COM2	COMPOSTING BUILDING	COMPOSTING AREA 101	OUTDOOR	UNCLASSIFIED	4.2.2(A)-18F	N/A	6ACH	FE	
COM2	BIOFILTER	BIOFILTER	OUTDOOR	UNCLASSIFIED					
COM3	FINISHED COMPOSTING STORAGE BUILDING	STORAGE AREA	OUTDOOR	UNCLASSIFIED					
COM1	COMPOSTING OPERATIONS BUILDING	ELECTRICAL ROOM/OFFICE SPACE	INDOOR DRY	UNCLASSIFIED	N/A	N/A	NOTE 4	N/A	
		LOCKERS/BATHROOMS	INDOOR WET	UNCLASSIFIED	N/A	N/A	NOTE 4	N/A	
DEW3	SLUDGE MANAGEMENT CENTER	ELECTRICAL ROOM	INDOOR DRY	UNCLASSIFIED	N/A	N/A	NOTE 4	N/A	

NOTES:
1. SEE MATERIAL SELECTION TABLE FOR TYPICAL MATERIALS OF CONSTRUCTION REQUIRED IN EACH AREA. HAZARDOUS DESIGNATIONS REFER TO NFPA 820 CLASSIFICATION.
2. SEE GENERAL ARCHITECTURAL DRAWINGS FOR IBC CODE CLASSIFICATIONS AND LIFE SAFETY DATA.
3. INTERIOR OF THE TANK FROM THE MINIMUM OPERATING SLUDGE SURFACE TO THE TOP OF THE TANK WALL; ENVELOPE (18 IN) ABOVE THE TOP OF THE TANK AND EXTENDING (18 IN) BEYOND THE EXTERIOR WALL; ENVELOPE (18IN) ABOVE GRADE EXTENDING (10FT) HORIZONTALLY FROM THE EXTERIOR TANK WALLS.
4. VENTILATION REQUIREMENTS PER INTERNATIONAL MECHANICAL CODE.
5. ABBREVIATION: H- HYDRANT PROTECTION , FE-PORTABLE FIRE EXTINGUISHER, FAS-FIRE ALARM SYSTEM, CGD- COMBUSTIBLE GAS DETECTION.

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Tanner Pipher
05/17/2026

GENERAL

AREA CLASSIFICATION TABLE

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RJL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 01-G-0080 DATE: MAY 2026

ATLAS PAGE NO: 3328 SHEET 33 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 15:43

	ELECTRICAL				HVAC (NOTE 10)			ALL TRADES				
EXPOSURE TYPE / MATERIAL SELECTION DESIGNATION[4]	NEMA 250 ENCLOSURE TYPE (NOTE 12)	ELECTRICAL CONDUIT	ELECTRICAL FITTINGS AND BODIES	SUPPORTS FOR ELECTRICAL CONDUITS & CABLE TRAYS	ROOF AND ROOM MOUNTED EQUIPMENT	BUILDING DUCTWORK, SUPPORTS & FASTENERS (NOTE 19)	PROCESS DUCTWORK, SUPPORTS & FASTENERS (NOTE 19)	PIPE SUPPORTS (OTHER THAN FRAMING CHANNEL)	EQUIPMENT PANEL, BACKPAN AND SUPPORTS (STANCHION, BENCH STANDS, AND FLOOR STANDS)	FRAMING CHANNEL AND BASE PLATE (ALL TRADES)	HARDWARE (THREADED ROD, NUTS, BOLTS, FASTENERS, ETC.)	REMARKS
OUTDOOR	4X (304 OR 316 SS)	ALUMINUM NOTE 24	ALUMINUM	304 OR 316 STAINLESS STEEL	HOT DIP GALVANIZED (G90) WITH FIELD APPLIED EPOXY AND POLYURETHANE COATING PER SYSTEM 5	ALUMINUM	ALUMINUM	HOT DIP GALVANIZED OR ALUMINUM OR COATING SYSTEM NO. 5 (NOTE 11, 15)	HOT DIP GALVANIZED OR ALUMINUM OR COATING SYSTEM NO. 5 (NOTE 11, 15)	304 OR 316 STAINLESS STEEL OR ALUMINUM OR HOT DIP GALVANIZED (NOTE 11, 15)	304 OR 316 STAINLESS STEEL OR HOT DIPPED GALVANIZED (NOTE 25, 27)	NOTE 2
SUBMERGED (NOTE 3 AND 18)	6P	MFG SUPPLIED CABLE	N/A	316 STAINLESS STEEL	N/A	N/A	N/A	316 STAINLESS STEEL	316 STAINLESS STEEL	316 STAINLESS STEEL	316 STAINLESS STEEL	NOTE 3
CORROSIVE	4X	ALUMINUM NOTE 24	ALUMINUM	304 OR 316 STAINLESS STEEL	HOT DIP GALVANIZED (G90) WITH FIELD APPLIED EPOXY COATING PER SYSTEM 5, WITHOUT POLYURETHANE FINISH COAT	ALUMINUM	FR-PVC	304 OR 316 STAINLESS STEEL OR ALUMINUM OR SYSTEM NO. 4 (NOTE 11, 15)	304 OR 316 STAINLESS STEEL OR ALUMINUM OR SYSTEM NO. 4 (NOTE 11, 15)	304 OR 316 STAINLESS STEEL OR ALUMINUM OR SYSTEM NO. 4 (NOTE 11, 15)	304 OR 316 STAINLESS STEEL	NOTE 2, 6
OUTDOOR HAZARDOUS	7 OR 9	ALUMINUM NOTE 24	ALUMINUM	316 STAINLESS STEEL	HOT DIP GALVANIZED (G90) WITH FIELD APPLIED EPOXY AND POLYURETHANE COATING PER SYSTEM 5	ALUMINUM	NA	304 OR 316 STAINLESS STEEL OR STEEL WITH DUPLEX COATING SYSTEM (NOTE 11, 15)	304 OR 316 STAINLESS STEEL OR STEEL WITH DUPLEX COATING SYSTEM (NOTE 11, 15)	304 OR 316 STAINLESS STEEL OR ALUMINUM OR STEEL WITH DUPLEX COATING SYSTEM (NOTE 11, 15)	316 STAINLESS STEEL	
INDOOR WET	1	ALUMINUM	STEEL	ZINC PLATED	GALVANIZED STEEL OR ALUMINUM	GALVANIZED STEEL OR ALUMINUM	NA	GALVANIZED STEEL	304 OR 316 STAINLESS STEEL HARDWARE GALVANIZED MOUNTING PLATE AND POST	HOT DIPPED GALVANIZED STEEL (PRE-GALVANIZED ACCPETABLE)	304 STAINLESS STEEL	NOTE 4
INDOOR DRY	1	ALUMINUM	STEEL	ZINC PLATED	GALVANIZED STEEL OR ALUMINUM	GALVANIZED STEEL OR ALUMINUM	NA	GALVANIZED STEEL	304 OR 316 STAINLESS STEEL HARDWARE GALVANIZED MOUNTING PLATE AND POST	HOT DIPPED GALVANIZED STEEL (PRE-GALVANIZED ACCPETABLE)	GALVANIZED STEEL	NOTE 4

NOTES:
1. MATERIALS SHOWN ARE TYPICAL UNLESS OTHERWISE INDICATED ON SPECIFIC DRAWINGS OR SPECIFICATIONS.
2. WHERE ALUMINUM MATES WITH CONCRETE, COAT WITH SURFACE TOLERANT EPOXY COATING PER SECTION 09 90 00
3. SUBMERGED DESIGNATION IS AREA BELOW LIQUID SURFACE, BELOW TOP OF BASIN, AND UNDERSIDE OF TANK COVER OR TANK SLAB (INCLUDES WET VAPOR SPACE ABOVE LIQUID SURFACE).
4. SEE DWG AREA CLASSIFICATION TABLE FOR MATERIAL SELECTION DESIGNATION BY FACILITY AND AREA.
5. GALVANIZED STEEL SHALL BE GALVANIZED PER ASTM A123. HIGH STRENGTH FASTENERS THAT REQUIRE GALVANIZING SHALL BE ASTM A325 BOLTS AND SHALL COMPLY WITH ASTM A143.
6. MALLEABLE IRON SHALL HAVE STANDARD ELECTROPLATED ZINC FINISH.
7. USE HOT-DIPPED GALVANIZED BOLTED CONNECTIONS FOR GALVANIZED STEEL MEMBERS.
8. FUSION BONDED COATED (FBC) PER SECTION 09 90 00
9. NOT USED.
10. REFER TO PIPE SCHEDULE FOR PROCESS RELATED DUCT WORK
11. DUPLEX COATING SYSTEM IS HOT DIP GALVANIZED STEEL WITH DIELECTRIC BOND COATS, SUCH AS EPOXY AND POLYURETHANE. REFERENCE SECTION 09 90 00 FOR PROPER FINISH COATS
12. WHEN ENCLOSURE MATERIAL NOT SPECIFIED, ENCLOSURE MATERIAL SHALL MATCH MATERIAL SPECIFIED IN THE 'SUPPORTS FOR ELECTRICAL CONDUITS & CABLE TRAYS' COLUMN
13. NOT USED..
14. NOT USED.
15. NOT USED.
16. GALVANIZED SUPPORTS IN CONTACT WITH FLOOR SHALL HAVE 1 INCH MINIMUM GROUT OR CURB AS INDICATED
17. FOR ELECTRICAL ABBREVIATIONS, REFERENCE THE ELECTRICAL ABBREVIATIONS DRAWING
18. DISSIMILAR MATERIALS SHALL BE ELECTRICALLY INSULATED WITH NEOPRENE PADS OR EQUAL AND FASTENERS SHALL HAVE G10 WASHERS AND SLEEVES
19. FASTENERS PER SECTION 23 31 13.
20. ALUMINUM MAY BE CONSIDERED AS AN ALTERNATIVE MATERIAL FOR OUTOOR AND WASHDOWN AREAS AS LONG AS PVC COATED RIGID GALVANIZED STEEL IS USED FOR SLAB PENETRATIONS AND ROUTED AT LEAST 8 INCHES ABOVE FINSHED FLOOR BEFORE MATERIAL TRANSITION.
21. NOT USED.
22. REFERENCE DRAWINGS FOR RAILING MATERIAL REQUIREMENTS.
23. PRECAST CONCRETE STAIRS TO HAVE CAST-IRON NOSING.
24. THROUGH SLAB PENETRATIONS WILL REQUIRE PVC COATED RIGID GALVANIZED STEEL AND EXTEND AT LEAST 8 INCHES ABOVE SLAB
25. USE STAINLESS STEEL FOR FASTENERS FOR ITEMS INSTALLED LESS THAN ONE FOOT ABOVE FINISHED FLOOR.
26. ELECTRICALLY ISOLATE DISSIMILAR METAL CONNECTIONS AND ALUMINUM WITH CONCRETE
27. MATCH MATERIALS OF CONNECTING MEMBERS

REFERENCE SPECIFICATION SECTIONS:
01 61 45 AREA EXPOSURE DESIGNATIONS AND ENVIRONMENTAL CONDITIONS
05 50 00 METAL FABRICATIONS
05 10 00 STRUCTURAL METAL FRAMING
09 90 00 PAINTING AND COATING
23 31 13 METAL DUCTS AND ACCESSORIES
26 05 33 RACEWAYS BOXES AND FITTINGS
40 05 07 HANGERS AND SUPPORTS FOR PROCESS PIPING

LICENSED PROFESSIONAL ENGINEER
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OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

GENERAL

MATERIAL CLASSIFICATION TABLE

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MW	05/26	
HORIZONTAL:	LEAD ENG.	RZ	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 01-G-0085			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 34 OF 300 SHEETS

PLOT DATE: 05\13\2026 PLOT TIME: 9:04:31 AM

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LUCITY EQUIPMENT TABLE PART 1

LOCATION	DEMOLISH EQUIPMENT DESCRIPTION	STATUS	EQUIPMENT ID	CORRECTED ID	DRAWING NO.	SPEC NO.
SCUM COLLECTION	EXHAUST FAN	DEMOLISH			50-FCL1-D-1000	02 41 00
SCUM COLLECTION	ELECTRICAL PANEL	DEMOLISH			50-FCL1-D-1000	02 41 00
SCUM COLLECTION	AIR PISTON VALVE	DEMOLISH			50-FCL1-D-1000	02 41 00
SCUM COLLECTION	SCUM PUMP	DEMOLISH			50-FCL1-D-1000	02 41 00
GRAVITY THICKENER	WATER HEATER	DEMOLISH			70-THK1-D-1000	02 41 00
GRAVITY THICKENER	POLYMER BLENDING UNIT	DEMOLISH			70-THK1-D-1000	02 41 00
GRAVITY THICKENER	POLYMER FEED PUMP	DEMOLISH			70-THK1-D-1000	02 41 00
GRAVITY THICKENER	POLYMER SYSTEM CONTROL PANEL	DEMOLISH			70-THK1-D-1000	02 41 00
GRAVITY THICKENER	POLYMER STOCK PUMP	DEMOLISH			70-THK1-D-1000	02 41 00
DEWATERING CENTRIFUGE BUILDING	SLUDGE FEED PUMP #1	DEMOLISH			90-D1BL-D-1000	02 41 00
DEWATERING CENTRIFUGE BUILDING	SLUDGE FEED PUMP #2	DEMOLISH			90-D1BL-D-1000	02 41 00
DEWATERING CENTRIFUGE BUILDING	SLUDGE FEED PUMP #3	DEMOLISH			90-D1BL-D-1000	02 41 00
DEWATERING CENTRIFUGE BUILDING	DEWATERING SLUDGE FILTRATE PUMP #1	DEMOLISH			90-D1BL-D-1000	02 41 00
DEWATERING CENTRIFUGE BUILDING	DEWATERING SLUDGE FILTRATE PUMP #2	DEMOLISH			90-D1BL-D-1000	02 41 00
DEWATERING CENTRIFUGE BUILDING	DEWATERING SLUDGE FILTRATE PUMP #3	DEMOLISH			90-D1BL-D-1000	02 41 00
DEWATERING CENTRIFUGE BUILDING	BELT FILTER PRESS#1	DEMOLISH			90-D1BL-D-1001	02 41 00
DEWATERING CENTRIFUGE BUILDING	BELT FILTER PRESS#2	DEMOLISH			90-D1BL-D-1001	02 41 00
DEWATERING CENTRIFUGE BUILDING	POLYMER EQUIPMENT AND SYSTEM	DEMOLISH			90-D1BL-D-1001	02 41 00
DEWATERING CENTRIFUGE BUILDING	LIME SCREW CONVEYOR	DEMOLISH			90-D1BL-D-1001	02 41 00
DEWATERING CENTRIFUGE BUILDING	LIME MIXER	DEMOLISH			90-D1BL-D-1001	02 41 00
DEWATERING CENTRIFUGE BUILDING	LIME MOTOR	DEMOLISH			90-D1BL-D-1001	02 41 00
DEWATERING CENTRIFUGE BUILDING	LIME SILO	DEMOLISH			90-D1BL-D-1001	02 41 00
DEWATERING CENTRIFUGE BUILDING	EXHAUST FAN	DEMOLISH			90-D1BL-D-1100	02 41 00
DEWATERING CENTRIFUGE BUILDING	HVAC HEATER	DEMOLISH			90-D1BL-D-1100	02 41 00
DEWATERING CENTRIFUGE BUILDING	VENTILLATION EQUIPMENT	DEMOLISH			90-D1BL-D-1100	02 41 00
DEWATERING CENTRIFUGE BUILDING	WATER HEATER	DEMOLISH			90-D1BL-P-1100	02 41 00
SLUDGE TANKS	SLUDGE HOLDING TANK #1	DEMOLISH			90-D1CT-D-1000	02 41 00
SLUDGE MANAGEMENT BUILDING	PISTON PUMP	DEMOLISH			90-D3BL-D-1000	02 41 00
SLUDGE MANAGEMENT BUILDING	SLUDGE FEED PUMP #1	DEMOLISH			90-D3BL-D-1000	02 41 00
SLUDGE MANAGEMENT BUILDING	SLUDGE FEED PUMP #2	DEMOLISH			90-D3BL-D-1000	02 41 00
SLUDGE MANAGEMENT BUILDING	SLUDGE FEED PUMP #3	DEMOLISH			90-D3BL-D-1000	02 41 00
SLUDGE MANAGEMENT BUILDING	ROTARY LOBE BLOWER #1	DEMOLISH			90-D3BL-D-1000	02 41 00
SLUDGE MANAGEMENT BUILDING	ROTARY LOBE BLOWER #2	DEMOLISH			90-D3BL-D-1000	02 41 00
WAS PUMPS	LOUVER	DEMOLISH			40-WAS1-D-1001	02 41 00
LOCATION	**NEW EQUIPMENT DESCRIPTION**	**STATUS**	**EQUIPMENT ID**	**CORRECTED ID**	**DRAWING NO.**	**SPEC NO.**
WAS FEED PUMPS	AIR RELIEF VALVE FOR WAS PUMP NO. 1	NEW	H040-WAS1-ARV01		09-N-0001	40 27 02
WAS FEED PUMPS	AIR RELIEF VALVE FOR WAS PUMP NO. 3	NEW	H040-WAS1-ARV02		09-N-0001	40 27 02
WAS FEED PUMPS	AIR RELIEF VALVE FOR WAS PUMP NO. 2	NEW	H040-WAS1-ARV03		09-N-0001	40 27 02
WAS FEED PUMPS	DRAIN BALL VALVE NO. 1	NEW	H040-WAS1-BLV01		09-N-0001	40 27 02
WAS FEED PUMPS	DRAIN BALL VALVE NO. 2	NEW	H040-WAS1-BLV02		09-N-0001	40 27 02
WAS FEED PUMPS	DRAIN BALL VALVE NO. 3	NEW	H040-WAS1-BLV03		09-N-0001	40 27 02
WAS FEED PUMPS	DRAIN BALL VALVE NO. 4	NEW	H040-WAS1-BLV04		09-N-0001	40 27 02
WAS FEED PUMPS	DRAIN BALL VALVE NO. 5	NEW	H040-WAS1-BLV05		09-N-0001	40 27 02
WAS FEED PUMPS	DRAIN BALL VALVE NO. 6	NEW	H040-WAS1-BLV06		09-N-0001	40 27 02
WAS FEED PUMPS	DRAIN BALL VALVE NO. 7	NEW	H040-WAS1-BLV07		09-N-0001	40 27 02
WAS FEED PUMPS	DRAIN BALL VALVE NO. 8	NEW	H040-WAS1-BLV08		09-N-0001	40 27 02
WAS FEED PUMPS	CHECK VALVE FOR WAS PUMP NO. 1	NEW	H040-WAS1-CKV01		09-N-0001	40 27 02
WAS FEED PUMPS	CHECK VALVE FOR WAS PUMP NO. 3	NEW	H040-WAS1-CKV02		09-N-0001	40 27 02
WAS FEED PUMPS	CHECK VALVE FOR WAS PUMP NO. 2	NEW	H040-WAS1-CKV03		09-N-0001	40 27 02
WAS FEED PUMPS	WAS PUMPS INTAKE FLOW INDICATOR	NEW	H040-WAS1-FMT01		09-N-0001	40 27 02
WAS FEED PUMPS	PLUG VALVE NO. 1	NEW	H040-WAS1-PGV01		09-N-0001	40 27 02
WAS FEED PUMPS	PLUG VALVE NO. 2	NEW	H040-WAS1-PGV02		09-N-0001	40 27 02
WAS FEED PUMPS	PLUG VALVE NO. 3	NEW	H040-WAS1-PGV03		09-N-0001	40 27 02
WAS FEED PUMPS	PLUG VALVE NO. 4 WITH POSITION FEEDBACK	NEW	H040-WAS1-PGV04		09-N-0001	40 27 02
WAS FEED PUMPS	PLUG VALVE NO. 5 WITH POSITION FEEDBACK	NEW	H040-WAS1-PGV05		09-N-0001	40 27 02
WAS FEED PUMPS	PLUG VALVE NO. 6 WITH POSITION FEEDBACK	NEW	H040-WAS1-PGV06		09-N-0001	40 27 02
WAS FEED PUMPS	PLUG VALVE NO. 7 WITH POSITION FEEDBACK	NEW	H040-WAS1-PGV07		09-N-0001	40 27 02
WAS FEED PUMPS	PLUG VALVE NO. 8 WITH POSITION FEEDBACK	NEW	H040-WAS1-PGV08		09-N-0001	40 27 02
WAS FEED PUMPS	PLUG VALVE NO. 9	NEW	H040-WAS1-PGV09		09-N-0001	40 27 02
WAS FEED PUMPS	WAS PUMP NO. 1 LOW SUCTION PRESSURE SWITCH	NEW	H040-WAS1-PRS01		09-N-0001	
WAS FEED PUMPS	WAS PUMP NO. 1 HIGH DISCHARGE PRESSURE SWITCH	NEW	H040-WAS1-PRS02		09-N-0001	
WAS FEED PUMPS	WAS PUMP NO. 2 LOW SUCTION PRESSURE SWITCH	NEW	H040-WAS1-PRS03		09-N-0001	
WAS FEED PUMPS	WAS PUMP NO. 2 HIGH DISCHARGE PRESSURE SWITCH	NEW	H040-WAS1-PRS04		09-N-0001	
WAS FEED PUMPS	WAS PUMP NO. 3 LOW SUCTION PRESSURE SWITCH	NEW	H040-WAS1-PRS05		09-N-0001	
WAS FEED PUMPS	WAS PUMP NO. 3 HIGH DISCHARGE PRESSURE SWITCH	NEW	H040-WAS1-PRS06		09-N-0001	
WAS FEED PUMPS	WAS PUMP NO. 1	NEW	H040-WAS1-WSP01		09-N-0001	44 42 56.01
WAS FEED PUMPS	WAS PUMP NO. 2	NEW	H040-WAS1-WSP02		09-N-0001	44 42 56.01
WAS FEED PUMPS	WAS PUMP NO. 3	NEW	H040-WAS1-WSP03		09-N-0001	44 42 56.01
SCUM WET WELL	AIR RELIEF VALVE FOR SCUM PUMP NO. 1	NEW	H050-FCL1-ARV01		09-N-0002	40 27 02
SCUM WET WELL	AIR RELIEF VALVE FOR SCUM PUMP NO. 2	NEW	H050-FCL1-ARV02		09-N-0002	40 27 02
SCUM WET WELL	BACKFLOW PREVENTOR FOR WASHDOWN SPRAY BAR	NEW	H050-FCL1-BFL01		09-N-0002	40 27 02
SCUM WET WELL	BALL VALVE NO. 1	NEW	H050-FCL1-BLV01		09-N-0002	40 27 02
SCUM WET WELL	BALL VALVE NO. 2	NEW	H050-FCL1-BLV02		09-N-0002	40 27 02
SCUM WET WELL	BALL VALVE NO. 3	NEW	H050-FCL1-BLV03		09-N-0002	40 27 02
SCUM WET WELL	BALL VALVE NO. 4	NEW	H050-FCL1-BLV04		09-N-0002	40 27 02
SCUM WET WELL	BALL VALVE NO. 5	NEW	H050-FCL1-BLV05		09-N-0002	40 27 02
SCUM WET WELL	CHECK VALVE FOR SCUM PUMP NO. 1	NEW	H050-FCL1-CKV01		09-N-0002	40 27 02
SCUM WET WELL	CHECK VALVE FOR SCUM PUMP NO. 2	NEW	H050-FCL1-CKV02		09-N-0002	40 27 02
SCUM WET WELL	DUCKBILL VALVE FOR DRAIN	NEW	H050-FCL1-DBV01		09-N-0002	40 27 02
SCUM WET WELL	GATE VALVE FROM INFLUENT CHAMBER	NEW	H050-FCL1-GTV01		09-N-0002	40 27 02
SCUM WET WELL	GATE VALVE FROM SECONDARY CLARIFIER NO. 1	NEW	H050-FCL1-GTV02		09-N-0002	40 27 02
SCUM WET WELL	GATE VALVE FROM SECONDARY CLARIFIER NO. 2	NEW	H050-FCL1-GTV03		09-N-0002	40 27 02
SCUM WET WELL	GATE VALVE FROM SECONDARY CLARIFIER NO. 3	NEW	H050-FCL1-GTV04		09-N-0002	40 27 02
SCUM WET WELL	GATE VALVE FROM SECONDARY CLARIFIER NO. 4	NEW	H050-FCL1-GTV05		09-N-0002	40 27 02
SCUM WET WELL	SCUM TANK RADAR LEVEL INDICATOR	NEW	H050-FCL1-LIT01		09-N-0002	
SCUM WET WELL	PLUG VALVE NO. 1	NEW	H050-FCL1-PGV01		09-N-0002	40 27 02
SCUM WET WELL	MOTOROIZED PLUG VALVE NO. 2	NEW	H050-FCL1-PGV02		09-N-0002	40 27 02
SCUM WET WELL	PLUG VALVE NO. 3	NEW	H050-FCL1-PGV03		09-N-0002	40 27 02

LUCITY EQUIPMENT TABLE PART 2

LOCATION	NEW EQUIPMENT DESCRIPTION	STATUS	EQUIPMENT ID	CORRECTED ID	DRAWING NO.	SPEC NO.
SCUM WET WELL	MOTORIZED PLUG VALVE NO. 4	NEW	H050-FCL1-PGV04		09-N-0002	40 27 02
SCUM WET WELL	SECONDARY SCUM PUMP NO. 1 HIGH DISCHARGE PRESSURE SWITCH	NEW	H050-FCL1-PRS01		09-N-0002	
SCUM WET WELL	SECONDARY SCUM PUMP NO. 2 HIGH DISCHARGE PRESSURE SWITCH	NEW	H050-FCL1-PRS02		09-N-0002	
SCUM WET WELL	SECONDARY SCUM PUMP NO. 1 PRESSURE TRANSMITTER	NEW	H050-FCL1-PTM01		09-N-0002	
SCUM WET WELL	SECONDARY SCUM PUMP NO. 2 PRESSURE TRANSMITTER	NEW	H050-FCL1-PTM02		09-N-0002	
SCUM WET WELL	SECONDARY SCUM PUMP NO.1	NEW	H050-FCL1-SCP01		09-N-0002	44 42 56.04
SCUM WET WELL	SECONDARY SCUM PUMP NO.2	NEW	H050-FCL1-SCP02		09-N-0002	44 42 56.04
SLUDGE HOLDING TANKS	RDT BYPASS CONTROL VALVE BOX FLOW INDICATOR	NEW	H070-RDT1-FMT01		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	PLUG VALVE NO. 1 WITH POSITION FEEDBACK	NEW	H070-RDT1-PGV01		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	PLUG VALVE NO. 2 WITH POSITION FEEDBACK	NEW	H070-RDT1-PGV02		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	PLUG VALVE NO. 3 WITH POSITION FEEDBACK	NEW	H070-RDT1-PGV03		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	PLUG VALVE NO. 4 WITH POSITION FEEDBACK	NEW	H070-RDT1-PGV04		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	SLUDGE HOLDING TANK NO. 1 RADAR LEVEL INDICATOR	NEW	H090-DEW1-LIT01		09-N-0004	
SLUDGE HOLDING TANKS	AIR RELIEF VALVE NO. 1	NEW	H090-DEW2-ARV01		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	AIR RELIEF VALVE FOR RECIRCULATION PUMP NO. 1	NEW	H090-DEW2-ARV02		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	AIR RELIEF VALVE FOR RECIRCULATION PUMP NO. 2	NEW	H090-DEW2-ARV03		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	BUTTERFLY VALVE FOR BLOWER NO. 1	NEW	H090-DEW2-BFV01		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	BUTTERFLY VALVE FOR BLOWER NO. 2	NEW	H090-DEW2-BFV02		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	BUTTERFLY VALVE FOR BLOWER NO. 3	NEW	H090-DEW2-BFV03		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	SLUDGE HOLDING TANK BLOWER NO. 1	NEW	H090-DEW2-BLO01		09-N-0004	44 42 19.04
SLUDGE HOLDING TANKS	SLUDGE HOLDING TANK BLOWER NO. 2	NEW	H090-DEW2-BLO02		09-N-0004	44 42 19.04
SLUDGE HOLDING TANKS	SLUDGE HOLDING TANK BLOWER NO. 3	NEW	H090-DEW2-BLO03		09-N-0004	44 42 19.04
SLUDGE HOLDING TANKS	DRAIN BALL VALVE NO. 1	NEW	H090-DEW2-BLV01		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	DRAIN BALL VALVE NO. 2	NEW	H090-DEW2-BLV02		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	DRAIN BALL VALVE NO. 3	NEW	H090-DEW2-BLV03		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	DRAIN BALL VALVE NO. 4	NEW	H090-DEW2-BLV04		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	DRAIN BALL VALVE NO. 5	NEW	H090-DEW2-BLV05		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	DRAIN BALL VALVE NO. 6	NEW	H090-DEW2-BLV06		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	DRAIN BALL VALVE NO. 7	NEW	H090-DEW2-BLV07		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	DRAIN BALL VALVE NO. 8	NEW	H090-DEW2-BLV08		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	PLUG VALVE NO. 1	NEW	H090-DEW2-PGV01		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	PLUG VALVE NO. 2	NEW	H090-DEW2-PGV02		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	PLUG VALVE NO. 3	NEW	H090-DEW2-PGV03		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	PLUG VALVE NO. 4	NEW	H090-DEW2-PGV04		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	PLUG VALVE NO. 5	NEW	H090-DEW2-PGV05		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	PLUG VALVE NO. 6	NEW	H090-DEW2-PGV06		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	PLUG VALVE NO. 7	NEW	H090-DEW2-PGV07		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	PLUG VALVE NO. 8	NEW	H090-DEW2-PGV08		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	PLUG VALVE NO. 9	NEW	H090-DEW2-PGV09		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	PLUG VALVE NO. 10	NEW	H090-DEW2-PGV10		09-N-0004	40 27 02
SLUDGE HOLDING TANKS	BLOWER NO. 1 HIGH DISCHARGE PRESSURE SWITCH	NEW	H090-DEW2-PRS01		09-N-0004	
SLUDGE HOLDING TANKS	BLOWER NO. 2 HIGH DISCHARGE PRESSURE SWITCH	NEW	H090-DEW2-PRS02		09-N-0004	
SLUDGE HOLDING TANKS	BLOWER NO. 3 HIGH DISCHARGE PRESSURE SWITCH	NEW	H090-DEW2-PRS03		09-N-0004	
SLUDGE HOLDING TANKS	RECIRCULATION PUMP NO. 1 LOW INTAKE PRESSURE SWITCH	NEW	H090-DEW2-PRS04		09-N-0004	
SLUDGE HOLDING TANKS	RECIRCULATION PUMP NO. 1 HIGH DISCHARGE PRESSURE SWITCH	NEW	H090-DEW2-PRS05		09-N-0004	
SLUDGE HOLDING TANKS	RECIRCULATION PUMP NO. 2 LOW INTAKE PRESSURE SWITCH	NEW	H090-DEW2-PRS06		09-N-0004	
SLUDGE HOLDING TANKS	RECIRCULATION PUMP NO. 2 HIGH DISCHARGE PRESSURE SWITCH	NEW	H090-DEW2-PRS07		09-N-0004	
SLUDGE HOLDING TANKS	SLUDGE HOLDING TANK NO. 1 PRESSURE INDICATOR	NEW	H090-DEW2-PTM01		09-N-0004	
SLUDGE HOLDING TANKS	RECIRCULATION PUMP NO. 1 INTAKE PRESSURE INDICATOR	NEW	H090-DEW2-PTM02		09-N-0004	
SLUDGE HOLDING TANKS	RECIRCULATION PUMP NO. 1 DISCHARGE PRESSURE INDICATOR	NEW	H090-DEW2-PTM03		09-N-0004	
SLUDGE HOLDING TANKS	RECIRCULATION PUMP NO. 2 INTAKE PRESSURE INDICATOR	NEW	H090-DEW2-PTM04		09-N-0004	
SLUDGE HOLDING TANKS	RECIRCULATION PUMP NO. 2 DISCHARGE PRESSURE INDICATOR	NEW	H090-DEW2-PTM05		09-N-0004	
SLUDGE HOLDING TANKS	RECIRCULATION PUMP NO. 1	NEW	H090-DEW2-RCP01		09-N-0004	44 42 56.05
SLUDGE HOLDING TANKS	RECIRCULATION PUMP NO. 2	NEW	H090-DEW2-RCP02		09-N-0004	44 42 56.05
SLUDGE FEED PUMPS	DRAIN BALL VALVE NO. 1	NEW	H090-DEW1-BLV01		09-N-0005	40 27 02
SLUDGE FEED PUMPS	DRAIN BALL VALVE NO. 2	NEW	H090-DEW1-BLV02		09-N-0005	40 27 02
SLUDGE FEED PUMPS	DRAIN BALL VALVE NO. 3	NEW	H090-DEW1-BLV03		09-N-0005	40 27 02
SLUDGE FEED PUMPS	POLYMER INJECTION BALL VALVE NO. 4	NEW	H090-DEW1-BLV04		09-N-0005	40 27 02
SLUDGE FEED PUMPS	DRAIN BALL VALVE NO. 5	NEW	H090-DEW1-BLV05		09-N-0005	40 27 02
SLUDGE FEED PUMPS	DRAIN BALL VALVE NO. 6	NEW	H090-DEW1-BLV06		09-N-0005	40 27 02
SLUDGE FEED PUMPS	POLYMER INJECTION VALVE NO. 7	NEW	H090-DEW1-BLV07		09-N-0005	40 27 02
SLUDGE FEED PUMPS	DRAIN BALL VALVE NO. 8	NEW	H090-DEW1-BLV08		09-N-0005	40 27 02
SLUDGE FEED PUMPS	DRAIN BALL VALVE NO. 9	NEW	H090-DEW1-BLV09		09-N-0005	40 27 02
SLUDGE FEED PUMPS	POLYMER INJECTION BALL VALVE NO. 10	NEW	H090-DEW1-BLV10		09-N-0005	40 27 02
SLUDGE FEED PUMPS	POTABLE WATER BALL VALVE NO. 11	NEW	H090-DEW1-BLV11		09-N-0005	40 27 02
SLUDGE FEED PUMPS	CHECK VALVE FOR SLUDGE FEED PUMP NO. 1	NEW	H090-DEW1-CKV01		09-N-0005	40 27 02
SLUDGE FEED PUMPS	CHECK VALVE FOR SLUDGE FEED PUMP NO. 2	NEW	H090-DEW1-CKV02		09-N-0005	40 27 02
SLUDGE FEED PUMPS	CHECK VALVE FOR SLUDGE FEED PUMP NO. 3	NEW	H090-DEW1-CKV03		09-N-0005	40 27 02
SLUDGE FEED PUMPS	SUPPLEMENTAL SLUDGE/ POLYMER MIXER NO. 1 FLOW INDICATOR	NEW	H090-DEW1-FMT01		09-N-0005	
SLUDGE FEED PUMPS	SUPPLEMENTAL SLUDGE/ POLYMER MIXER NO. 2 FLOW INDICATOR	NEW	H090-DEW1-FMT02		09-N-0005	
SLUDGE FEED PUMPS	SUPPLEMENTAL SLUDGE/ POLYMER MIXER NO. 3 FLOW INDICATOR	NEW	H090-DEW1-FMT03		09-N-0005	
SLUDGE FEED PUMPS	GRINDER NO. 1	NEW	H090-DEW1-GRD01		09-N-0005	46 24 25
SLUDGE FEED PUMPS	SUPPLEMENTAL SLUDGE/ POLYMER MIXER NO. 1	NEW	H090-DEW1-MXR01		09-N-0005	44 44 63.01

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OKLAHOMA
MAY 15th, 2026

GENERAL
LUCITY EQUIPMENT TABLE - 1

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RJL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 01-G-0090 DATE: MAY 2026
ATLAS PAGE NO: 3328 SHEET 35 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:17

LUCITY EQUIPMENT TABLE PART 3

LOCATION	NEW EQUIPMENT DESCRIPTION	STATUS	EQUIPMENT ID	CORRECTED ID	DRAWING NO.	SPEC NO.
SLUDGE FEED PUMPS	SUPPLEMENTAL SLUDGE/ POLYMER MIXER NO. 2	NEW	H090-DEW1-MXR02		09-N-0005	44 44 63.01
SLUDGE FEED PUMPS	SUPPLEMENTAL SLUDGE/ POLYMER MIXER NO. 3	NEW	H090-DEW1-MXR03		09-N-0005	44 44 63.01
SLUDGE FEED PUMPS	PLUG VALVE NO. 1	NEW	H090-DEW1-PGV01		09-N-0005	40 27 02
SLUDGE FEED PUMPS	PLUG VALVE NO. 2	NEW	H090-DEW1-PGV02		09-N-0005	40 27 02
SLUDGE FEED PUMPS	PLUG VALVE NO. 3	NEW	H090-DEW1-PGV03		09-N-0005	40 27 02
SLUDGE FEED PUMPS	PLUG VALVE NO. 4	NEW	H090-DEW1-PGV04		09-N-0005	40 27 02
SLUDGE FEED PUMPS	PLUG VALVE NO. 5 WITH POSITION FEEDBACK	NEW	H090-DEW1-PGV05		09-N-0005	40 27 02
SLUDGE FEED PUMPS	PLUG VALVE NO. 6	NEW	H090-DEW1-PGV06		09-N-0005	40 27 02
SLUDGE FEED PUMPS	PLUG VALVE NO. 7 WITH POSITION FEEDBACK	NEW	H090-DEW1-PGV07		09-N-0005	40 27 02
SLUDGE FEED PUMPS	PLUG VALVE NO. 8	NEW	H090-DEW1-PGV08		09-N-0005	40 27 02
SLUDGE FEED PUMPS	PLUG VALVE NO. 9 WITH POSITION FEEDBACK	NEW	H090-DEW1-PGV09		09-N-0005	40 27 02
SLUDGE FEED PUMPS	PLUG VALVE NO. 10 WITH POSITION FEEDBACK	NEW	H090-DEW1-PGV10		09-N-0005	40 27 02
SLUDGE FEED PUMPS	PLUG VALVE NO. 11 WITH POSITION FEEDBACK	NEW	H090-DEW1-PGV11		09-N-0005	40 27 02
SLUDGE FEED PUMPS	PLUG VALVE NO. 12	NEW	H090-DEW1-PGV12		09-N-0005	40 27 02
SLUDGE FEED PUMPS	SLUDGE FEED PUMP NO. 1 LOW INTAKE PRESSURE SWITCH	NEW	H090-DEW1-PRS01		09-N-0005	
SLUDGE FEED PUMPS	SLUDGE FEED PUMP NO. 1 HIGH DISCHARGE PRESSURE SWITCH	NEW	H090-DEW1-PRS02		09-N-0005	
SLUDGE FEED PUMPS	SLUDGE FEED PUMP NO. 2 LOW INTAKE PRESSURE SWITCH	NEW	H090-DEW1-PRS03		09-N-0005	
SLUDGE FEED PUMPS	SLUDGE FEED PUMP NO. 2 HIGH DISCHARGE PRESSURE SWITCH	NEW	H090-DEW1-PRS04		09-N-0005	
SLUDGE FEED PUMPS	SLUDGE FEED PUMP NO. 3 LOW INTAKE PRESSURE SWITCH	NEW	H090-DEW1-PRS05		09-N-0005	
SLUDGE FEED PUMPS	SLUDGE FEED PUMP NO. 3 HIGH DISCHARGE PRESSURE SWITCH	NEW	H090-DEW1-PRS06		09-N-0005	
SLUDGE FEED PUMPS	DIFFERENTIAL PRESSURE VALVE FOR SLUDGE FEED PUMP NO. 1	NEW	H090-DEW1-PSV01		09-N-0005	40 27 02
SLUDGE FEED PUMPS	DIFFERENTIAL PRESSURE VALVE FOR SLUDGE FEED PUMP NO. 2	NEW	H090-DEW1-PSV02		09-N-0005	40 27 02
SLUDGE FEED PUMPS	DIFFERENTIAL PRESSURE VALVE FOR SLUDGE FEED PUMP NO. 3	NEW	H090-DEW1-PSV03		09-N-0005	40 27 02
SLUDGE FEED PUMPS	CENTRIFUGE SLUDGE FEED PUMP NO. 1	NEW	H090-DEW1-SFP01		09-N-0005	44 42 56.13
SLUDGE FEED PUMPS	CENTRIFUGE SLUDGE FEED PUMP NO. 2	NEW	H090-DEW1-SFP02		09-N-0005	44 42 56.13
SLUDGE FEED PUMPS	CENTRIFUGE SLUDGE FEED PUMP NO. 3	NEW	H090-DEW1-SFP03		09-N-0005	44 42 56.13
SLUDGE FEED PUMPS	POTABLE WATER STRAINER	NEW	H090-DEW1-STR01		09-N-0005	
CENTRIFUGES	BALL VALVE NO. 12	NEW	H090-DEW1-BLV12		09-N-0006	40 27 02
CENTRIFUGES	BALL VALVE NO. 13	NEW	H090-DEW1-BLV13		09-N-0006	40 27 02
CENTRIFUGES	BALL VALVE NO. 14	NEW	H090-DEW1-BLV14		09-N-0006	40 27 02
CENTRIFUGES	BALL VALVE NO. 15	NEW	H090-DEW1-BLV15		09-N-0006	40 27 02
CENTRIFUGES	BALL VALVE NO. 16	NEW	H090-DEW1-BLV16		09-N-0006	40 27 02
CENTRIFUGES	BALL VALVE NO. 17	NEW	H090-DEW1-BLV17		09-N-0006	40 27 02
CENTRIFUGES	CENTRIFUGE NO. 1	NEW	H090-DEW1-CEN01		09-N-0006	43 22 23
CENTRIFUGES	DAMPER FOR ODOROUS FAN NO. 1	NEW	H090-DEW1-DMP01		09-N-0006	
CENTRIFUGES	DAMPER FOR ODOROUS FAN NO. 1	NEW	H090-DEW1-DMP02		09-N-0006	
CENTRIFUGES	FLOW CONTROL VALVE FOR LUBRICATION SYSTEM NO. 1	NEW	H090-DEW1-FCV01		09-N-0006	40 27 02
CENTRIFUGES	GLOBE BALL VALVE NO. 1	NEW	H090-DEW1-GBV01		09-N-0006	40 27 02
CENTRIFUGES	KNIFE GATE FOR CENTRIFUGE NO. 1	NEW	H090-DEW1-KGV01		09-N-0006	
CENTRIFUGES	LUBRICATION SYSTEM NO. 1	NEW	H090-DEW1-LBS01		09-N-0006	
CENTRIFUGES	MAIN DRIVE FOR CENTRIFUGE NO. 1	NEW	H090-DEW1-MOT01		09-N-0006	
CENTRIFUGES	BACK DRIVE FOR CENTRIFUGE NO. 1	NEW	H090-DEW1-MOT02		09-N-0006	
CENTRIFUGES	ODOR CONTROL FAN NO. 1	NEW	H090-DEW1-OCF01		09-N-0006	23 34 05
CENTRIFUGES	PLUG VALVE NO. 13	NEW	H090-DEW1-PGV13		09-N-0006	40 27 02
CENTRIFUGES	DIFFERENTIAL PRESSURE SWITCH FOR ODOROUS AIR FAN NO. 1	NEW	H090-DEW1-PRS21		09-N-0006	
CENTRIFUGES	BALL VALVE NO. 18	NEW	H090-DEW1-BLV18		09-N-0007	40 27 02
CENTRIFUGES	BALL VALVE NO. 19	NEW	H090-DEW1-BLV19		09-N-0007	40 27 02
CENTRIFUGES	BALL VALVE NO. 20	NEW	H090-DEW1-BLV20		09-N-0007	40 27 02
CENTRIFUGES	BALL VALVE NO. 21	NEW	H090-DEW1-BLV21		09-N-0007	40 27 02
CENTRIFUGES	BALL VALVE NO. 22	NEW	H090-DEW1-BLV22		09-N-0007	40 27 02
CENTRIFUGES	BALL VALVE NO. 23	NEW	H090-DEW1-BLV23		09-N-0007	40 27 02
CENTRIFUGES	CENTRIFUGE NO. 2	NEW	H090-DEW1-CEN02		09-N-0007	43 22 23
CENTRIFUGES	CENTRIFUGE NO. 3	NEW	H090-DEW1-CEN03		09-N-0007	43 22 23
CENTRIFUGES	DAMPER FOR ODOROUS FAN NO. 1	NEW	H090-DEW1-DMP03		09-N-0007	
CENTRIFUGES	DAMPER FOR ODOROUS FAN NO. 1	NEW	H090-DEW1-DMP04		09-N-0007	
CENTRIFUGES	FLOW CONTROL VALVE FOR LUBRICATION SYSTEM NO. 2	NEW	H090-DEW1-FCV02		09-N-0007	40 27 02
CENTRIFUGES	FLOW CONTROL VALVE FOR LUBRICATION SYSTEM NO. 3	NEW	H090-DEW1-FCV03		09-N-0007	40 27 02
CENTRIFUGES	GLOBE BALL VALVE NO. 2	NEW	H090-DEW1-GBV02		09-N-0007	40 27 02
CENTRIFUGES	GLOBE BALL VALVE NO. 3	NEW	H090-DEW1-GBV03		09-N-0007	40 27 02
CENTRIFUGES	KNIFE GATE FOR CENTRIFUGE NO. 2	NEW	H090-DEW1-KGV02		09-N-0007	
CENTRIFUGES	KNIFE GATE FOR CENTRIFUGE NO. 3	NEW	H090-DEW1-KGV03		09-N-0007	
CENTRIFUGES	LUBRICATION SYSTEM NO. 2	NEW	H090-DEW1-LBS02		09-N-0007	
CENTRIFUGES	LUBRICATION SYSTEM NO. 3	NEW	H090-DEW1-LBS03		09-N-0007	
CENTRIFUGES	MAIN DRIVE FOR CENTRIFUGE NO. 2	NEW	H090-DEW1-MOT03		09-N-0007	
CENTRIFUGES	BACK DRIVE FOR CENTRIFUGE NO. 2	NEW	H090-DEW1-MOT04		09-N-0007	
CENTRIFUGES	MAIN DRIVE FOR CENTRIFUGE NO. 3	NEW	H090-DEW1-MOT05		09-N-0007	
CENTRIFUGES	BACK DRIVE FOR CENTRIFUGE NO. 3	NEW	H090-DEW1-MOT06		09-N-0007	
CENTRIFUGES	PLUG VALVE NO. 15	NEW	H090-DEW1-PGV15		09-N-0007	40 27 02
CENTRIFUGES	PLUG VALVE NO. 16	NEW	H090-DEW1-PGV16		09-N-0007	40 27 02
POLYMER FEED PUMPS	DRAIN BALL VALVE NO. 24	NEW	H090-DEW1-BLV24		09-N-0008	40 27 02
POLYMER FEED PUMPS	DRAIN BALL VALVE NO. 25	NEW	H090-DEW1-BLV25		09-N-0008	40 27 02
POLYMER FEED PUMPS	DRAIN BALL VALVE NO. 26	NEW	H090-DEW1-BLV26		09-N-0008	40 27 02
POLYMER FEED PUMPS	DRAIN BALL VALVE NO. 27	NEW	H090-DEW1-BLV27		09-N-0008	40 27 02
POLYMER FEED PUMPS	DRAIN BALL VALVE NO. 28	NEW	H090-DEW1-BLV28		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 29	NEW	H090-DEW1-BLV29		09-N-0008	40 27 02
POLYMER FEED PUMPS	DRAIN BALL VALVE NO. 30	NEW	H090-DEW1-BLV30		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 31	NEW	H090-DEW1-BLV31		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 32	NEW	H090-DEW1-BLV32		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 33	NEW	H090-DEW1-BLV33		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 34	NEW	H090-DEW1-BLV34		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 35	NEW	H090-DEW1-BLV35		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 36	NEW	H090-DEW1-BLV36		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 37	NEW	H090-DEW1-BLV37		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 38	NEW	H090-DEW1-BLV38		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 39	NEW	H090-DEW1-BLV39		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 40	NEW	H090-DEW1-BLV40		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 41	NEW	H090-DEW1-BLV41		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 42	NEW	H090-DEW1-BLV42		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 43	NEW	H090-DEW1-BLV43		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 44	NEW	H090-DEW1-BLV44		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 45	NEW	H090-DEW1-BLV45		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 46	NEW	H090-DEW1-BLV46		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 47	NEW	H090-DEW1-BLV47		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 48	NEW	H090-DEW1-BLV48		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 49	NEW	H090-DEW1-BLV49		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 50	NEW	H090-DEW1-BLV50		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 51	NEW	H090-DEW1-BLV51		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 52	NEW	H090-DEW1-BLV52		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 53	NEW	H090-DEW1-BLV53		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 54	NEW	H090-DEW1-BLV54		09-N-0008	40 27 02

LUCITY EQUIPMENT TABLE PART 4

LOCATION	NEW EQUIPMENT DESCRIPTION	STATUS	EQUIPMENT ID	CORRECTED ID	DRAWING NO.	SPEC NO.
POLYMER FEED PUMPS	BALL VALVE NO. 55	NEW	H090-DEW1-BLV55		09-N-0008	40 27 02
POLYMER FEED PUMPS	BALL VALVE NO. 56	NEW	H090-DEW1-BLV56		09-N-0008	40 27 02
POLYMER FEED PUMPS	POLYMER TRUCK FILL CHECK VALVE	NEW	H090-DEW1-CKV04		09-N-0008	40 27 02
POLYMER FEED PUMPS	CHECK VALVE FOR POLYMER BLENDING UNIT NO. 1	NEW	H090-DEW1-CKV05		09-N-0008	40 27 02
POLYMER FEED PUMPS	CHECK VALVE FOR POLYMER BLENDING UNIT NO. 2	NEW	H090-DEW1-CKV06		09-N-0008	40 27 02
POLYMER FEED PUMPS	CHECK VALVE FOR POLYMER BLENDING UNIT NO. 3	NEW	H090-DEW1-CKV07		09-N-0008	40 27 02
POLYMER FEED PUMPS	CENTRIFUGE NO. 1 FLOW INDICATOR FROM POLYMER BLENDING UNITS	NEW	H090-DEW1-FMT04		09-N-0008	
POLYMER FEED PUMPS	CENTRIFUGE NO. 2 FLOW INDICATOR FROM POLYMER BLENDING UNITS	NEW	H090-DEW1-FMT05		09-N-0008	
POLYMER FEED PUMPS	CENTRIFUGE NO. 3 FLOW INDICATOR FROM POLYMER BLENDING UNITS	NEW	H090-DEW1-FMT06		09-N-0008	
POLYMER FEED PUMPS	POLYMER BULK STORAGE TANK RADAR LEVEL INDICATOR	NEW	H090-DEW1-LIT02		09-N-0008	
POLYMER FEED PUMPS	POLYMER BLENDING UNIT NO. 1	NEW	H090-DEW1-PBU01		09-N-0008	44 44 63.01
POLYMER FEED PUMPS	POLYMER BLENDING UNIT NO. 2	NEW	H090-DEW1-PBU02		09-N-0008	44 44 63.01
POLYMER FEED PUMPS	POLYMER BLENDING UNIT NO. 3	NEW	H090-DEW1-PBU03		09-N-0008	44 44 63.01
POLYMER FEED PUMPS	POLYMER FEED PUMP NO. 1	NEW	H090-DEW1-PFP01		09-N-0008	44 44 63.01
POLYMER FEED PUMPS	POLYMER FEED PUMP NO. 2	NEW	H090-DEW1-PFP02		09-N-0008	44 44 63.01
POLYMER FEED PUMPS	POLYMER FEED PUMP NO. 3	NEW	H090-DEW1-PFP03		09-N-0008	44 44 63.01
POLYMER FEED PUMPS	DRAIN PLUG VALVE NO. 17	NEW	H090-DEW1-PGV17		09-N-0008	40 27 02
POLYMER FEED PUMPS	POLYMER MIXER NO. 1	NEW	H090-DEW1-PMX01		09-N-0008	44 44 63.01
POLYMER FEED PUMPS	POLYMER MIXER NO. 2	NEW	H090-DEW1-PMX02		09-N-0008	44 44 63.01
POLYMER FEED PUMPS	POLYMER MIXER NO. 3	NEW	H090-DEW1-PMX03		09-N-0008	44 44 63.01
POLYMER FEED PUMPS	POLYMER RECIRCULATION PUMP NO. 1 LOW DISCHARGE PRESSURE SWITCH	NEW	H090-DEW1-PRS07		09-N-0008	
POLYMER FEED PUMPS	POLYMER RECIRCULATION PUMP NO. 1 HIGH DISCHARGE PRESSURE SWITCH	NEW	H090-DEW1-PRS08		09-N-0008	
POLYMER FEED PUMPS	POLYMER BLENDING UNIT NO. 1 DIFFERENTIAL PRESSURE SWITCH	NEW	H090-DEW1-PRS09		09-N-0008	
POLYMER FEED PUMPS	POLYMER BLENDING UNIT NO. 1 DIFFERENTIAL PRESSURE SWITCH	NEW	H090-DEW1-PRS10		09-N-0008	
POLYMER FEED PUMPS	POLYMER BLENDING UNIT NO. 2 DIFFERENTIAL PRESSURE SWITCH	NEW	H090-DEW1-PRS11		09-N-0008	
POLYMER FEED PUMPS	POLYMER BLENDING UNIT NO. 2 DIFFERENTIAL PRESSURE SWITCH	NEW	H090-DEW1-PRS12		09-N-0008	
POLYMER FEED PUMPS	POLYMER BLENDING UNIT NO. 3 DIFFERENTIAL PRESSURE SWITCH	NEW	H090-DEW1-PRS13		09-N-0008	
POLYMER FEED PUMPS	POLYMER BLENDING UNIT NO. 3 DIFFERENTIAL PRESSURE SWITCH	NEW	H090-DEW1-PRS14		09-N-0008	
POLYMER FEED PUMPS	POLYMER RECIRCULATION PUMP NO. 1	NEW	H090-DEW1-RCP01		09-N-0008	43 40 01
CENTRATE DRAIN PUMP STATION	CENTRATE WET WELL DISCHARGE FLOW INDICATOR	NEW	H090-DEW1-FMT07		09-N-0009	
CENTRATE DRAIN PUMP STATION	CENTRATE WET WELL SUBMERSIBLE LEVEL INDICATOR	NEW	H090-DEW1-LIT03		09-N-0009	
CENTRATE DRAIN PUMP STATION	PLUG VALVE NO. 18	NEW	H090-DEW1-PGV18		09-N-0009	40 27 02
CENTRATE DRAIN PUMP STATION	PLUG VALVE NO. 19	NEW	H090-DEW1-PGV19		09-N-0009	40 27 02
CENTRATE DRAIN PUMP STATION	PLUG VALVE NO. 20	NEW	H090-DEW1-PGV20		09-N-0009	40 27 02
CENTRATE DRAIN PUMP STATION	PLUG VALVE NO. 21	NEW	H090-DEW1-PGV21		09-N-0009	40 27 02
CENTRATE DRAIN PUMP STATION	PLUG VALVE NO. 22	NEW	H090-DEW1-PGV22		09-N-0009	40 27 02
CENTRATE DRAIN PUMP STATION	PLUG VALVE NO. 23	NEW	H090-DEW1-PGV23		09-N-0009	40 27 02
CENTRATE DRAIN PUMP STATION	PLUG VALVE NO. 24	NEW	H090-DEW1-PGV24		09-N-0009	40 27 02
CENTRATE DRAIN PUMP STATION	CENTRATE PUMP NO. 1	NEW	H090-DEW1-PMP01		09-N-0009	44 42 56.09
CENTRATE DRAIN PUMP STATION	CENTRATE PUMP NO. 2	NEW	H090-DEW1-PMP02		09-N-0009	44 42 56.09
CENTRATE DRAIN PUMP STATION	CENTRATE PUMP NO. 3	NEW	H090-DEW1-PMP03		09-N-0009	44 42 56.09
CENTRATE DRAIN PUMP STATION	CENTRATE PUMP NO. 1 LOW INTAKE PRESSURE SWITCH	NEW	H090-DEW1-PRS15		09-N-0009	
CENTRATE DRAIN PUMP STATION	CENTRATE PUMP NO. 1 HIGH DISCHARGE PRESSURE SWITCH	NEW	H090-DEW1-PRS16		09-N-0009	
CENTRATE DRAIN PUMP STATION	CENTRATE PUMP NO. 2 LOW INTAKE PRESSURE SWITCH	NEW	H090-DEW1-PRS17		09-N-0009	
CENTRATE DRAIN PUMP STATION	CENTRATE PUMP NO. 2 HIGH DISCHARGE PRESSURE SWITCH	NEW	H090-DEW1-PRS18		09-N-0009	
CENTRATE DRAIN PUMP STATION	CENTRATE PUMP NO. 3 LOW INTAKE PRESSURE SWITCH	NEW	H090-DEW1-PRS19		09-N-0009	
CENTRATE DRAIN PUMP STATION	CENTRATE PUMP NO. 3 HIGH DISCHARGE PRESSURE SWITCH	NEW	H090-DEW1-PRS20		09-N-0009	
COMPOSTING STORAGE	SPRAY BAR BALL VALVE	NEW	H090-DEW1-BLV57		09-N-0010	40 27 02
COMPOSTING STORAGE	DRAIN BALL VALVE NO. 58	NEW	H090-DEW1-BLV58		09-N-0010	40 27 02
COMPOSTING STORAGE	DRIP PAN WASHDOWN BALL VALVE NO. 59	NEW	H090-DEW1-BLV59		09-N-0010	40 27 02
COMPOSTING STORAGE	DRIP PAN WASHDOWN BALL VALVE NO. 60	NEW	H090-DEW1-BLV60		09-N-0010	40 27 02
COMPOSTING STORAGE	SLUDGE CONVEYOR NO. 1	NEW	H090-DEW1-CNV01		09-N-0010	44 46 13.01
COMPOSTING MIXERS AND CONVEYORS	COMPOST CONVEYOR NO. 1	NEW	H095-COM2-CNV01		09-N-0011	44 46 13.05
COMPOSTING MIXERS AND CONVEYORS	COMPOST CONVEYOR NO. 2	NEW	H095-COM2-CNV02		09-N-0011	44 46 13.05
COMPOSTING MIXERS AND CONVEYORS	WEIGHING SCALE NO. 1 INDICATOR	NEW	H095-COM2-CPL02		09-N-0011	44 46 13.05
COMPOSTING MIXERS AND CONVEYORS	WEIGHING SCALE NO. 2 INDICATOR	NEW	H095-COM2-CPL03		09-N-0011	44 46 13.05
COMPOSTING MIXERS AND CONVEYORS	COMPOST MIXER NO.1	NEW	H095-COM2-MXR01		09-N-0011	44 46 13.05
COMPOSTING MIXERS AND CONVEYORS	COMPOST MIXER NO.2	NEW	H095-COM2-MXR02		09-N-0011	44 46 13.05
COMPOSTING MIXERS AND CONVEYORS	COMPOST SCALE NO. 1	NEW	H095-COM2-SCA01		09-N-0011	44 46 13.05
COMPOSTING MIXERS AND CONVEYORS	COMPOST SCALE NO. 2	NEW	H095-COM2-SCA02		09-N-0011	44 46 13.05
ACTIVE COMPOSTING BLOWER SYSTEM	DAMPER FOR COMPOST FAN NO. 1	NEW	H095-COM2-DMP01		09-N-0012	23 31 13.05
ACTIVE COMPOSTING BLOWER SYSTEM	DAMPER FOR COMPOST FAN NO. 2	NEW	H095-COM2-DMP02		09-N-0012	23 31 13.05
ACTIVE COMPOSTING BLOWER SYSTEM	DAMPER FOR COMPOST FAN NO. 3	NEW	H095-COM2-DMP03		09-N-0012	23 31 13.05
ACTIVE COMPOSTING BLOWER SYSTEM	DAMPER FOR COMPOST FAN NO. 4	NEW	H095-COM2-DMP04		09-N-0012	23 31 13.05
ACTIVE COMPOSTING BLOWER SYSTEM	DAMPER FOR COMPOST FAN NO. 5	NEW	H095-COM2-DMP05		09-N-0012	23 31 13.05
ACTIVE COMPOSTING BLOWER SYSTEM	DAMPER FOR COMPOST FAN NO. 6	NEW	H095-COM2-DMP06		09-N-0012	23 31 13.05
ACTIVE COMPOSTING BLOWER SYSTEM	DAMPER FOR COMPOST FAN NO. 7	NEW	H095-COM2-DMP07		09-N-0012	23 31 13.05
ACTIVE COMPOSTING BLOWER SYSTEM	DAMPER FOR COMPOST FAN NO. 8	NEW	H095-COM2-DMP08		09-N-0012	23 31 13.05
ACTIVE COMPOSTING BLOWER SYSTEM	DAMPER FOR COMPOST FAN NO. 9	NEW	H095-COM2-DMP09		09-N-0012	23 31 13.05
ACTIVE COMPOSTING BLOWER SYSTEM	DAMPER FOR COMPOST FAN NO. 10	NEW	H095-COM2-DMP10		09-N-0012	23 31 13.05
ACTIVE COMPOSTING BLOWER SYSTEM	COMPOST FAN NO. 1	NEW	H095-COM2-FAN01		09-N-0012	23 34 05
ACTIVE COMPOSTING BLOWER SYSTEM	COMPOST FAN NO. 2	NEW	H095-COM2-FAN02		09-N-0012	23 34 05
ACTIVE COMPOSTING BLOWER SYSTEM	COMPOST FAN NO. 3	NEW	H095-COM2-FAN03		09-N-0012	23 34 05

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MAY 15th, 2026

GENERAL
LUCITY EQUIPMENT TABLE - 2

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RJL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 01-G-0091
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 36 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:16

LUCITY EQUIPMENT TABLE PART 5

LOCATION	NEW EQUIPMENT DESCRIPTION	STATUS	EQUIPMENT ID	CORRECTED ID	DRAWING NO.	SPEC NO.
ACTIVE COMPOSTING BLOWER SYSTEM	COMPOST FAN NO. 4	NEW	H095-COM2-FAN04		09-N-0012	23 34 05
ACTIVE COMPOSTING BLOWER SYSTEM	COMPOST FAN NO. 5	NEW	H095-COM2-FAN05		09-N-0012	23 34 05
ACTIVE COMPOSTING BLOWER SYSTEM	COMPOST FAN NO. 6	NEW	H095-COM2-FAN06		09-N-0012	23 34 05
ACTIVE COMPOSTING BLOWER SYSTEM	COMPOST FAN NO. 7	NEW	H095-COM2-FAN07		09-N-0012	23 34 05
ACTIVE COMPOSTING BLOWER SYSTEM	COMPOST FAN NO. 8	NEW	H095-COM2-FAN08		09-N-0012	23 34 05
ACTIVE COMPOSTING BLOWER SYSTEM	COMPOST FAN NO. 9	NEW	H095-COM2-FAN09		09-N-0012	23 34 05
ACTIVE COMPOSTING BLOWER SYSTEM	COMPOST FAN NO. 10	NEW	H095-COM2-FAN10		09-N-0012	23 34 05
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM01		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM02		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM03		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM04		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM05		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM06		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM07		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM08		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM09		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM10		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM11		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM12		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM13		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM14		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM15		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM16		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM17		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM18		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM19		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM20		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM21		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM22		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM23		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM24		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM25		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM26		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM27		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM28		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM29		09-N-0012	
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP TEMPERATURE PROBE FOR COMPOST BAY	NEW	H095-COM2-TTM30		09-N-0012	
BIOFILTER	BIOFILTER NO. 1	NEW	H095-COM2-BFT01		09-N-0013	
BIOFILTER	FRESH AIR INTAKE DAMPER NO. 11	NEW	H095-COM2-DMP11		09-N-0013	23 31 13.05
BIOFILTER	FRESH AIR INTAKE DAMPER NO. 12	NEW	H095-COM2-DMP12		09-N-0013	23 31 13.05
BIOFILTER	BIOFILTER FAN DAMPER NO. 13	NEW	H095-COM2-DMP13		09-N-0013	23 31 13.05
BIOFILTER	BIOFILTER FAN DAMPER NO. 14	NEW	H095-COM2-DMP14		09-N-0013	23 31 13.05
BIOFILTER	BIOFILTER FAN DAMPER NO. 15	NEW	H095-COM2-DMP15		09-N-0013	23 31 13.05
BIOFILTER	BIOFILTER FAN DAMPER NO. 16	NEW	H095-COM2-DMP16		09-N-0013	23 31 13.05
BIOFILTER	BIOFILTER DAMPER NO. 17	NEW	H095-COM2-DMP17		09-N-0013	23 31 13.05
BIOFILTER	BIOFILTER FAN NO. 1	NEW	H095-COM2-FAN11		09-N-0013	23 34 05
BIOFILTER	BIOFILTER FAN NO. 2	NEW	H095-COM2-FAN12		09-N-0013	23 34 05
BIOFILTER	BIOFILTER FAN NO. 1 DISCHARGE FLOW INDICATOR	NEW	H095-COM2-FMT01		09-N-0013	
BIOFILTER	BIOFILTER FAN NO. 2 DISCHARGE FLOW INDICATOR	NEW	H095-COM2-FMT02		09-N-0013	
BIOFILTER	BIOFILTER FAN NO. 1 DISCHARGE PRESSURE INDICATOR	NEW	H095-COM2-PTM01		09-N-0013	
BIOFILTER	BIOFILTER FAN NO. 2 DISCHARGE PRESSURE INDICATOR	NEW	H095-COM2-PTM02		09-N-0013	
BIOFILTER	BIOFILTER FAN NO. 1 DISCHARGE TEMPERATURE INDICATOR	NEW	H095-COM2-TTM31		09-N-0013	
BIOFILTER	BIOFILTER FAN NO. 2 DISCHARGE TEMPERATURE INDICATOR	NEW	H095-COM2-TTM32		09-N-0013	
SCREENING, CURING, AND STORAGE	CURING FAN NO. 1	NEW	H095-COM3-FAN01		09-N-0014	23 34 05
SCREENING, CURING, AND STORAGE	CURING FAN NO. 2	NEW	H095-COM3-FAN02		09-N-0014	23 34 05
SCREENING, CURING, AND STORAGE	CURING FAN NO. 3	NEW	H095-COM3-FAN03		09-N-0014	23 34 05
SCREENING, CURING, AND STORAGE	CURING FAN NO. 4	NEW	H095-COM3-FAN04		09-N-0014	23 34 05
SCREENING, CURING, AND STORAGE	REOTEMP TEMPERATURE PROBE FOR CURING BAY	NEW	H095-COM3-TTM01		09-N-0014	
SCREENING, CURING, AND STORAGE	REOTEMP TEMPERATURE PROBE FOR CURING BAY	NEW	H095-COM3-TTM02		09-N-0014	
SCREENING, CURING, AND STORAGE	REOTEMP TEMPERATURE PROBE FOR CURING BAY	NEW	H095-COM3-TTM03		09-N-0014	
SCREENING, CURING, AND STORAGE	REOTEMP TEMPERATURE PROBE FOR CURING BAY	NEW	H095-COM3-TTM04		09-N-0014	
SCREENING, CURING, AND STORAGE	REOTEMP TEMPERATURE PROBE FOR CURING BAY	NEW	H095-COM3-TTM05		09-N-0014	
SCREENING, CURING, AND STORAGE	REOTEMP TEMPERATURE PROBE FOR CURING BAY	NEW	H095-COM3-TTM06		09-N-0014	
SCREENING, CURING, AND STORAGE	REOTEMP TEMPERATURE PROBE FOR CURING BAY	NEW	H095-COM3-TTM07		09-N-0014	
SCREENING, CURING, AND STORAGE	REOTEMP TEMPERATURE PROBE FOR CURING BAY	NEW	H095-COM3-TTM08		09-N-0014	
SANITARY LIFT STATION	AIR RELIEF VALVE FOR SANITARY PUMP NO. 1	NEW	H110-LFT1-ARV01		09-N-0015	40 27 02
SANITARY LIFT STATION	AIR RELIEF VALVE FOR SANITARY PUMP NO. 2	NEW	H110-LFT1-ARV02		09-N-0015	40 27 02
SANITARY LIFT STATION	CHECK VALVE FOR SANITARY PUMP NO. 1	NEW	H110-LFT1-CKV01		09-N-0015	40 27 02
SANITARY LIFT STATION	CHECK VALVE FOR SANITARY PUMP NO. 2	NEW	H110-LFT1-CKV02		09-N-0015	40 27 02
SANITARY LIFT STATION	PLUG VALVE FOR SANITARY PUMP NO. 1	NEW	H110-LFT1-PGV01		09-N-0015	40 27 02
SANITARY LIFT STATION	PLUG VALVE FOR SANITARY PUMP NO. 2	NEW	H110-LFT1-PGV02		09-N-0015	40 27 02
SANITARY LIFT STATION	SANITARY PUMP NO. 1	NEW	H110-LFT1-PMP01		09-N-0015	33 32 13
SANITARY LIFT STATION	SANITARY PUMP NO. 2	NEW	H110-LFT1-PMP02		09-N-0015	33 32 13
FUEL TANK	ABOVE GROUND FUEL STORAGE TANK	NEW	H001-OPS1-FTK1		09-N-0016	

LOCATION	NEW PANELS, VFDs, AND PLCs DESCRIPTION	STATUS	EQUIPMENT ID	CORRECTED ID	DRAWING NO.	SPEC NO.
DEWATERING CENTRIFUGE BUILDING	LIGHTING PANEL FOR DEWATERING CENTRIFUGE FUILDING	NEW	H090-DEW1-LVP01		08-E-6101	26 24 16
DEWATERING CENTRIFUGE BUILDING	POWER PANEL FOR DEWATERING CENTRIFUGE BUILDING	NEW	H090-DEW1-MDP04		08-E-6101	26 24 16
SLUDGE MIXING ELECTRICAL BUILDING	LIGHTING PANEL FOR EXISITNG SLUDGE MIXING BUILDING	NEW	H090-DEW3-LVP01		08-E-6101	26 24 16
COMPOSTING OPERATIONS BUILDING	LIGHTING PANEL FOR COMPOSTING OPERATIONS BUILDING	NEW	H095-COM1-LVP01		08-E-6101	26 24 16
WAS FEED PUMPS	CONTROL PANEL FOR WAS FEED PUMPS	NEW	H040-WAS1-CPL01		09-N-0001	
WAS FEED PUMPS	PLC FOR WAS FEED PUMPS	NEW	H040-WAS1-PLC01		09-N-0001	
WAS FEED PUMPS	VFD FOR WAS PUMP NO. 1	NEW	H040-WAS1-VFD01		09-N-0001	26 29 23
WAS FEED PUMPS	VFD FOR WAS PUMP NO. 3	NEW	H040-WAS1-VFD02		09-N-0001	26 29 23
WAS FEED PUMPS	VFD FOR WAS PUMP NO. 2	NEW	H040-WAS1-VFD03		09-N-0001	26 29 23
SCUM WET WELL	SCUM WET WELL CONTROL PANEL	NEW	H050-FCL1-CPL01		09-N-0002	44 42 56.04
SCUM WET WELL	SCUM WET WELL LOCAL CONTROL PANEL	NEW	H050-FCL1-CPL02		09-N-0002	44 42 56.04
SCUM WET WELL	SCUM WET WELL PLC	NEW	H050-FCL1-PLC01		09-N-0002	
SLUDGE HOLDING TANKS	CONTROL PANEL FOR BLOWER NO. 1	NEW	H090-DEW3-CPL01		09-N-0004	44 42 19.04
SLUDGE HOLDING TANKS	CONTROL PANEL FOR BLOWER NO. 2	NEW	H090-DEW3-CPL02		09-N-0004	44 42 19.04
SLUDGE HOLDING TANKS	CONTROL PANEL FOR BLOWER NO. 3	NEW	H090-DEW3-CPL03		09-N-0004	44 42 19.04
SLUDGE HOLDING TANKS	MAIN CONTROL PANEL FOR SLUDGE HOLDING TANKS	NEW	H090-DEW3-MCP01		09-N-0004	
SLUDGE HOLDING TANKS	PLC FOR SLUDGE HOLDING TANKS	NEW	H090-DEW3-PLC01		09-N-0004	
SLUDGE HOLDING TANKS	VFD FOR BLOWER NO. 1	NEW	H090-DEW3-VFD01		09-N-0004	26 29 23
SLUDGE HOLDING TANKS	VFD FOR BLOWER NO. 2	NEW	H090-DEW3-VFD02		09-N-0004	26 29 23
SLUDGE HOLDING TANKS	VFD FOR BLOWER NO. 3	NEW	H090-DEW3-VFD03		09-N-0004	26 29 23
SLUDGE HOLDING TANKS	VFD FOR RECIRCULATION PUMP NO. 1	NEW	H090-DEW3-VFD04		09-N-0004	26 29 23
SLUDGE HOLDING TANKS	VFD FOR RECIRCULATION PUMP NO. 2	NEW	H090-DEW3-VFD05		09-N-0004	26 29 23

LUCITY EQUIPMENT TABLE PART 6

LOCATION	NEW PANELS, VFDs, AND PLCs DESCRIPTION	STATUS	EQUIPMENT ID	CORRECTED ID	DRAWING NO.	SPEC NO.
SLUDGE FEED PUMPS	CONTROL PANEL FOR GRINDER NO. 1	NEW	H090-DEW1-CPL01		09-N-0005	
SLUDGE FEED PUMPS	VFD FOR CENTRIFUGE SLUDGE FEED PUMP NO. 1	NEW	H090-DEW1-VFD01		09-N-0005	26 29 23
SLUDGE FEED PUMPS	VFD FOR CENTRIFUGE SLUDGE FEED PUMP NO. 2	NEW	H090-DEW1-VFD02		09-N-0005	26 29 23
SLUDGE FEED PUMPS	VFD FOR CENTRIFUGE SLUDGE FEED PUMP NO. 3	NEW	H090-DEW1-VFD03		09-N-0005	26 29 23
SLUDGE FEED PUMPS	MAIN CONTROL PANEL FOR DEWATERING BUILDING	NEW	H090-DEW1-MCP01		09-N-0005 09-N-0006 09-N-0007 09-N-0008 09-N-0009 09-N-0010	
SLUDGE FEED PUMPS	PLC FOR DEWATERING BUILDING	NEW	H090-DEW1-PLC01		09-N-0005 09-N-0006 09-N-0007 09-N-0008 09-N-0009 09-N-0010	
DEWATERING	DEWATERING MAIN CONTROL CENTER NO. 1	NEW	H090-DEW1-MCC01		09-N-0005 09-N-0006 09-N-0009 09-N-0011	
DEWATERING	DEWATERING MAIN CONTROL CENTER NO. 2	NEW	H090-DEW1-MCC02		09-N-0005 09-N-0009 09-N-0011	
CENTRIFUGES	OPERATOR PANEL FOR CENTRIFUGE NO. 1	NEW	H090-DEW1-CPL02		09-N-0006	43 22 23
CENTRIFUGES	STARTER PANEL FOR CENTRIFUGE NO. 1	NEW	H090-DEW1-MDP01		09-N-0006	43 22 23
CENTRIFUGES	OPERATOR PANEL FOR CENTRIFUGE NO. 2	NEW	H090-DEW1-CPL03		09-N-0007	43 22 23
CENTRIFUGES	OPERATOR PANEL FOR CENTRIFUGE NO. 3	NEW	H090-DEW1-CPL04		09-N-0007	43 22 23
CENTRIFUGES	STARTER PANEL FOR CENTRIFUGE NO. 2	NEW	H090-DEW1-MDP02		09-N-0007	43 22 23
CENTRIFUGES	STARTER PANEL FOR CENTRIFUGE NO. 3	NEW	H090-DEW1-MDP03		09-N-0007	43 22 23
POLYMER FEED PUMPS	CONTROL PANEL FOR POLYMER RECIRCULATION PUMP NO. 1	NEW	H090-DEW1-CPL06		09-N-0008	
POLYMER FEED PUMPS	CONTROL PANEL FOR POLYMER BLENDING UNIT NO. 1	NEW	H090-DEW1-CPL07		09-N-0008	44 44 63.01
POLYMER FEED PUMPS	CONTROL PANEL FOR POLYMER BLENDING UNIT NO. 2	NEW	H090-DEW1-CPL08		09-N-0008	44 44 63.01
POLYMER FEED PUMPS	CONTROL PANEL FOR POLYMER BLENDING UNIT NO. 3	NEW	H090-DEW1-CPL09		09-N-0008	44 44 63.01
POLYMER FEED PUMPS	POLYMER FILL PANEL	NEW	H090-DEW1-PNL01		09-N-0008	
CENTRATE DRAIN PUMP STATION	VFD FOR CENTRATE PUMP NO. 1	NEW	H090-DEW1-VFD04		09-N-0009	26 29 23
CENTRATE DRAIN PUMP STATION	VFD FOR CENTRATE PUMP NO. 2	NEW	H090-DEW1-VFD05		09-N-0009	26 29 23
CENTRATE DRAIN PUMP STATION	VFD FOR CENTRATE PUMP NO. 3	NEW	H090-DEW1-VFD06		09-N-0009	26 29 23
COMPOSTING STORAGE	CONTROL PANEL FOR SLUDGE CONVEYOR NO. 1	NEW	H090-DEW1-CPL05		09-N-0010	44 46 13.01
COMPOSTING MIXERS AND CONVEYORS	CONTROL PANEL FOR COMPOSTER MIXERS, SCALES, & CONVEYORS	NEW	H095-COM2-CPL01		09-N-0011	44 46 13.05
COMPOSTING MIXERS AND CONVEYORS	CONTROL PANEL FOR EXHAUST FANS	NEW	H095-COM2-CPL04		09-N-0011	
COMPOSTING MIXERS AND CONVEYORS	MAIN CONTROL PANEL FOR COMPOSTING	NEW	H095-COM1-MCP01		09-N-0011 09-N-0012	
COMPOSTING MIXERS AND CONVEYORS	PLC FOR COMPOSTING	NEW	H095-COM1-PLC01		09-N-0011 09-N-0012 09-N-0013 09-N-0014	
ACTIVE COMPOSTING BLOWER SYSTEM	VFD FOR COMPOST FAN NO. 1	NEW	H095-COM1-VFD01		09-N-0012	26 29 23
ACTIVE COMPOSTING BLOWER SYSTEM	VFD FOR COMPOST FAN NO. 2	NEW	H095-COM1-VFD02		09-N-0012	26 29 23
ACTIVE COMPOSTING BLOWER SYSTEM	VFD FOR COMPOST FAN NO. 3	NEW	H095-COM1-VFD03		09-N-0012	26 29 23
ACTIVE COMPOSTING BLOWER SYSTEM	VFD FOR COMPOST FAN NO. 4	NEW	H095-COM1-VFD04		09-N-0012	26 29 23
ACTIVE COMPOSTING BLOWER SYSTEM	VFD FOR COMPOST FAN NO. 5	NEW	H095-COM1-VFD05		09-N-0012	26 29 23
ACTIVE COMPOSTING BLOWER SYSTEM	VFD FOR COMPOST FAN NO. 6	NEW	H095-COM1-VFD06		09-N-0012	26 29 23
ACTIVE COMPOSTING BLOWER SYSTEM	VFD FOR COMPOST FAN NO. 7	NEW	H095-COM1-VFD07		09-N-0012	26 29 23
ACTIVE COMPOSTING BLOWER SYSTEM	VFD FOR COMPOST FAN NO. 8	NEW	H095-COM1-VFD08		09-N-0012	26 29 23
ACTIVE COMPOSTING BLOWER SYSTEM	VFD FOR COMPOST FAN NO. 9	NEW	H095-COM1-VFD09		09-N-0012	26 29 23
ACTIVE COMPOSTING BLOWER SYSTEM	VFD FOR COMPOST FAN NO. 10	NEW	H095-COM1-VFD10		09-N-0012	26 29 23
ACTIVE COMPOSTING BLOWER SYSTEM	REOTEMP CONTROL PANEL	NEW	H095-COM1-CPL01		09-N-0012 09-N-0014	
ACTIVE COMPOSTING BLOWER SYSTEM	COMPOSTING MAIN CONTROL CENTER	NEW	H095-COM1-MCC01		09-N-0012 09-N-0014	
SCREENING, CURING, AND STORAGE	VFD FOR CURING FAN NO. 1	NEW	H095-COM1-VFD013		09-N-0014	26 29 23
SCREENING, CURING, AND STORAGE	VFD FOR CURING FAN NO. 2	NEW	H095-COM1-VFD014		09-N-0014	26 29 23
SCREENING, CURING, AND STORAGE	VFD FOR CURING FAN NO. 3	NEW	H095-COM1-VFD015		09-N-0014	26 29 23
SCREENING, CURING, AND STORAGE	VFD FOR CURING FAN NO. 4	NEW	H095-COM1-VFD016		09-N-0014	26 29 23
SANITARY LIFT STATION	CONTROL PANEL FOR SANITARY LIFT STATION	NEW	H110-LFT1-CPL01		09-N-0015	33 32 13
WAS FEED PUMPS	HVAC CONTROL PANEL	NEW	H040-WAS1-ACP01		40-WAS1-H-6001	
DEWATERING	HVAC CONTROL PANEL	NEW	H090-DEW1-ACP01		90-D1BL-H-6001	
DEWATERING	HVAC CONTROL PANEL	NEW	H090-DEW2-ACP01		90-D2BL-H-6001	
COMPOSTING BUILDING	HVAC CONTROL PANEL	NEW	H095-COM1-ACP01		95-C1BL-H-6001	

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REUSE OF DOCUMENTS:

GENERAL
LUCITY EQUIPMENT TABLE - 3

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

LICENSED PROFESSIONAL ENGINEER
ORVIL LUGO
35653
OKLAHOMA
MAY 15th, 2026

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/7/26
LEAD ENG.	AZL	5/7/26
FIELD MGR.		5/7/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 01-G-0092
ATLAS PAGE NO: 3328
SHEET 37 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:16

LUCITY EQUIPMENT TABLE PART 7

LOCATION	ELECTRICAL & HVAC DESCRIPTION	STATUS	EQUIPMENT ID	CORRECTED ID	DRAWING NO.	SPEC NO.
WAS FEED PUMPS	AIR CONDITIONING UNIT, OUTDOORS	NEW	H040-WAS1-ACU01		01-G-0036	23-81-00
DEWATERING	AIR CONDITIONING UNIT, OUTDOORS	NEW	H090-DEW1-ACU01		01-G-0036	23-81-00
COMPOSTING	AIR CONDITIONING UNIT, OUTDOORS	NEW	H090-DEW2-ACU01		01-G-0036	23-81-00
DEWATERING	AIR CONDITIONING UNIT, OUTDOORS	NEW	H095-COM1-ACU01		01-G-0036	23-81-00
COMPOSTING OPERATIONS BUILDING	COMPOSTING SWITCHGEAR	NEW	H095-COM1-SWT01		08-E-6002	
COMPOSTING OPERATIONS BUILDING	COMPOSTING TRANSFORMER	NEW	H095-COM1-TRN01		08-E-6002	
DEWATERING CENTRIFUGE BUILDING	DEWATERING TRANSFORMER	NEW	H090-DEW1-TRN01		08-E-6003	26 22 00
SLUDGE MIXING ELECTRICAL BUILDING	TRASFORMER FOR EXISITNG SLUDGE MIXING BUILDING	NEW	H090-DEW3-TRN01		08-E-6003	26 22 00
COMPOSTING OPERATIONS BUILDING	COMPOSTING TRANSFORMER	NEW	H095-COM1-TRN02		08-E-6003	26 22 00
COMPOSTING MIXERS AND CONVEYORS	EXHAUST FAN NO. 1	NEW	H095-COM2-EHF01		09-N-0011	
COMPOSTING MIXERS AND CONVEYORS	EXHAUST FAN NO. 2	NEW	H095-COM2-EHF02		09-N-0011	
COMPOSTING MIXERS AND CONVEYORS	EXHAUST FAN NO. 3	NEW	H095-COM2-EHF03		09-N-0011	
COMPOSTING MIXERS AND CONVEYORS	EXHAUST FAN NO. 4	NEW	H095-COM2-EHF04		09-N-0011	
COMPOSTING MIXERS AND CONVEYORS	EXHAUST FAN NO. 5	NEW	H095-COM2-EHF05		09-N-0011	
COMPOSTING MIXERS AND CONVEYORS	EXHAUST FAN NO. 6	NEW	H095-COM2-EHF06		09-N-0011	
COMPOSTING MIXERS AND CONVEYORS	EXHAUST FAN NO. 7	NEW	H095-COM2-EHF07		09-N-0011	
WAS FEED PUMPS	HVAC FOR WASTE ACTIVATED SLUDGE AREA	NEW	H040-WAS1-HVAC1		09-N-0020	
DEWATERING	HVAC FOR DEWATERING BUILDING	NEW	H090-DEW1-HVAC1		09-N-0020	
SLUDGE MIXING ROOM	HVAC FOR SLUDGE MIXING ROOM	NEW	H090-DEW2-HVAC1		09-N-0020	
COMPOSTING BUILDING	HVAC FOR COMPOSTING BUILDING	NEW	H095-COM1-HVAC1		09-N-0020	
SCUM WET WELL	TERMINAL JUNCTION BOX	NEW	H050-FCL1-TJB01		50-FCL1-E-2000	
SCUM WET WELL	TERMINAL JUNCTION BOX	NEW	H050-FCL1-TJB02		50-FCL1-E-2000	
DEWATERING	BACKFLOW PREVENTOR	NEW	H090-DEW1-BFL01		90-D1BL-P-2000	22-30-00
DEWATERING	BACKFLOW PREVENTOR	NEW	H090-DEW1-BFL02		90-D1BL-P-2000	22-30-00
DEWATERING	BACKFLOW PREVENTOR	NEW	H090-DEW1-BFL03		90-D1BL-P-2000	22-30-00
DEWATERING	BACKFLOW PREVENTOR	NEW	H090-DEW2-BFL01		90-D1BL-P-2000	22-30-00
DEWATERING CENTRIFUGE BUILDING	HOT WATER HEATER	NEW	H090-DEW1-HWH01		90-DEW1-P-2100	22-30-00
COMPOSTING BUILDING	HVAC ELECTRIC HEATER	NEW	H095-COM-HTR01		95-C1BL-H-2000	
COMPOSTING OPERATIONS BUILDING	HOT WATER HEATER	NEW	H095-COM1-HWH01		95-C1BL-P-2000	22-30-00
COMPOSTING OPERATIONS BUILDING	BACKFLOW PREVENTOR	NEW	H095-COM1-BFL01		95-C1BL-P-2100	22-30-00
COMPOSTING OPERATIONS BUILDING	RECIRCULATION PUMP	NEW	H095-COM1-RCP01		95-C1BL-P-2100	22-30-00

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LICENSED PROFESSIONAL ENGINEER
ORVIL LUGO
35653
OKLAHOMA

MAY 15th, 2026

GENERAL
LUCITY EQUIPMENT TABLE - 4

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MN	05/26
LEAD ENG.	RZ	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 01-G-0093 DATE: MAY 2026

ATLAS PAGE NO: 3328 SHEET 38 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:16

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FOR REFERENCE ONLY

SITE CIVIL

RENDERING

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

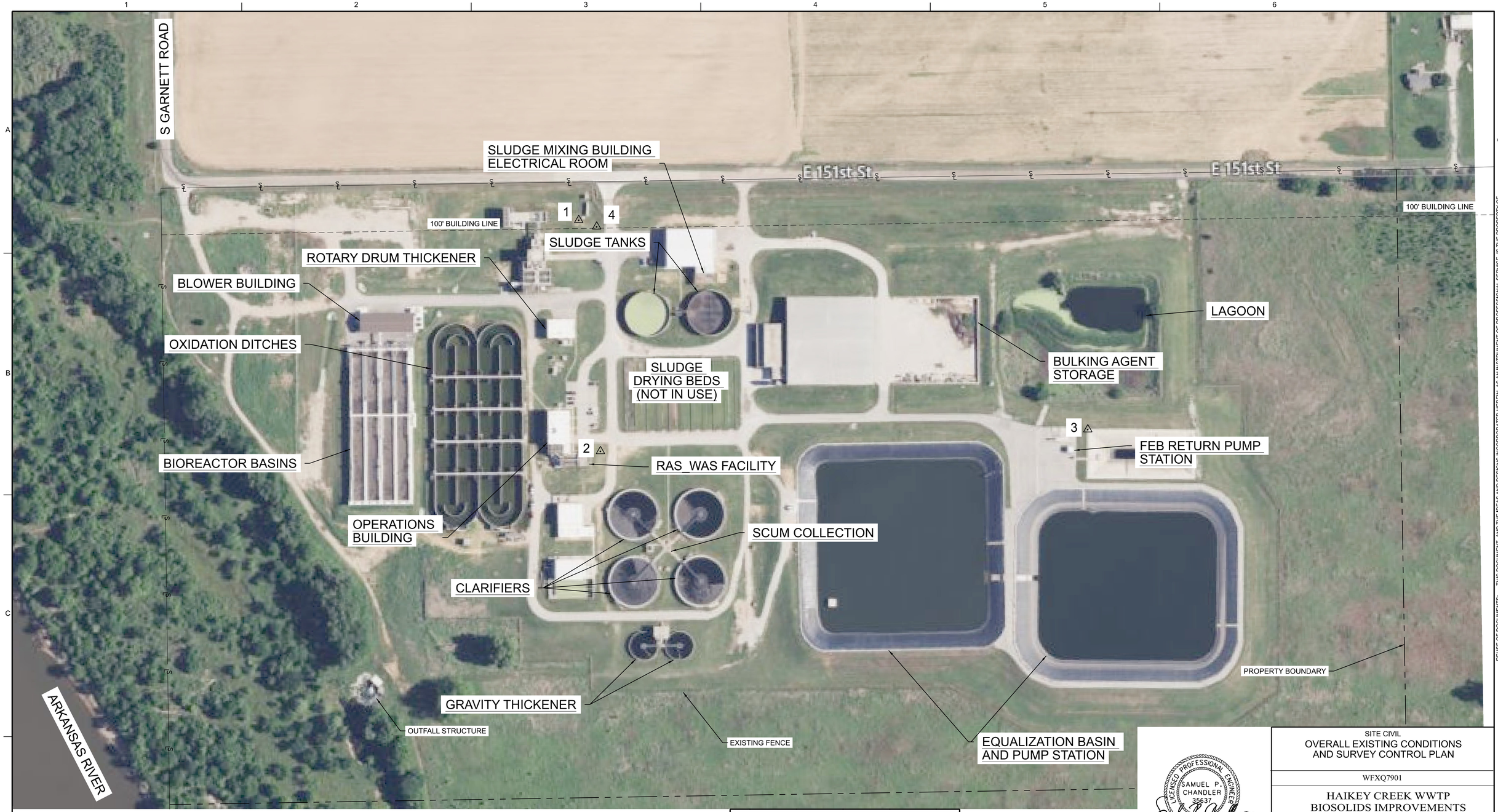
PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	AZL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 05-R-0001			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 39 OF 300 SHEETS

RENDERING
NTS

PLOT DATE: 05\14\2026 PLOT TIME: 8:51:24 AM



CONTROL POINT TABLE				
PT ID	NORTHING	EASTING	ELEV	DESCRIPTION
1	350886.59	2605525.63	600.71	BOX CUT W/ X CUT SET
2	350390.64	2605572.21	601.31	BOX CUT W/ X CUT SET
3	350437.42	2606617.94	599.44	BOX CUT W/ X CUT SET
4	350872.681	2605564.193	600.966	CITY OF TULSA HAIKEY CREEK WASTE TREATMENT PLANT 3" BRASS CAP IN CONCRETE

GENERAL SHEET NOTES

1. SURVEY WAS COMPLETED BY MESHEK AND ASSOCIATES, PLC, IN JULY 2015.
2. TOPOGRAPHIC SURVEY AND CONTROL POINTS ARE BASED ON THE FOLLOWING COORDINATE SYSTEMS AND DATUMS:
   - COORDINATE SYSTEM: OKLAHOMA COORDINATE SYSTEM, NORTH ZONE (3501)
   - UNITS: SURVEY FEET
   - COORDINATES: GRID
   - HORIZONTAL DATUM: NAD83 (2011 ADJUSTMENT), EPOCH 2010
   - VERTICAL DATUM: NAVD88
3. PROTECT ALL EXISTING SURVEY CONTROL POINTS. DAMAGED CONTROL POINTS SHALL BE REPLACED AT NO COST TO THE OWNER.

N

0 100 200 300

1"=100'

LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA
05/18/2026

SITE CIVIL

OVERALL EXISTING CONDITIONS AND SURVEY CONTROL PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 05-C-0100
DATE: MAY 2026
ATLAS PAGE NO: 3328
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PLOT DATE: 14-MAY-2026 PLOT TIME: 10:15

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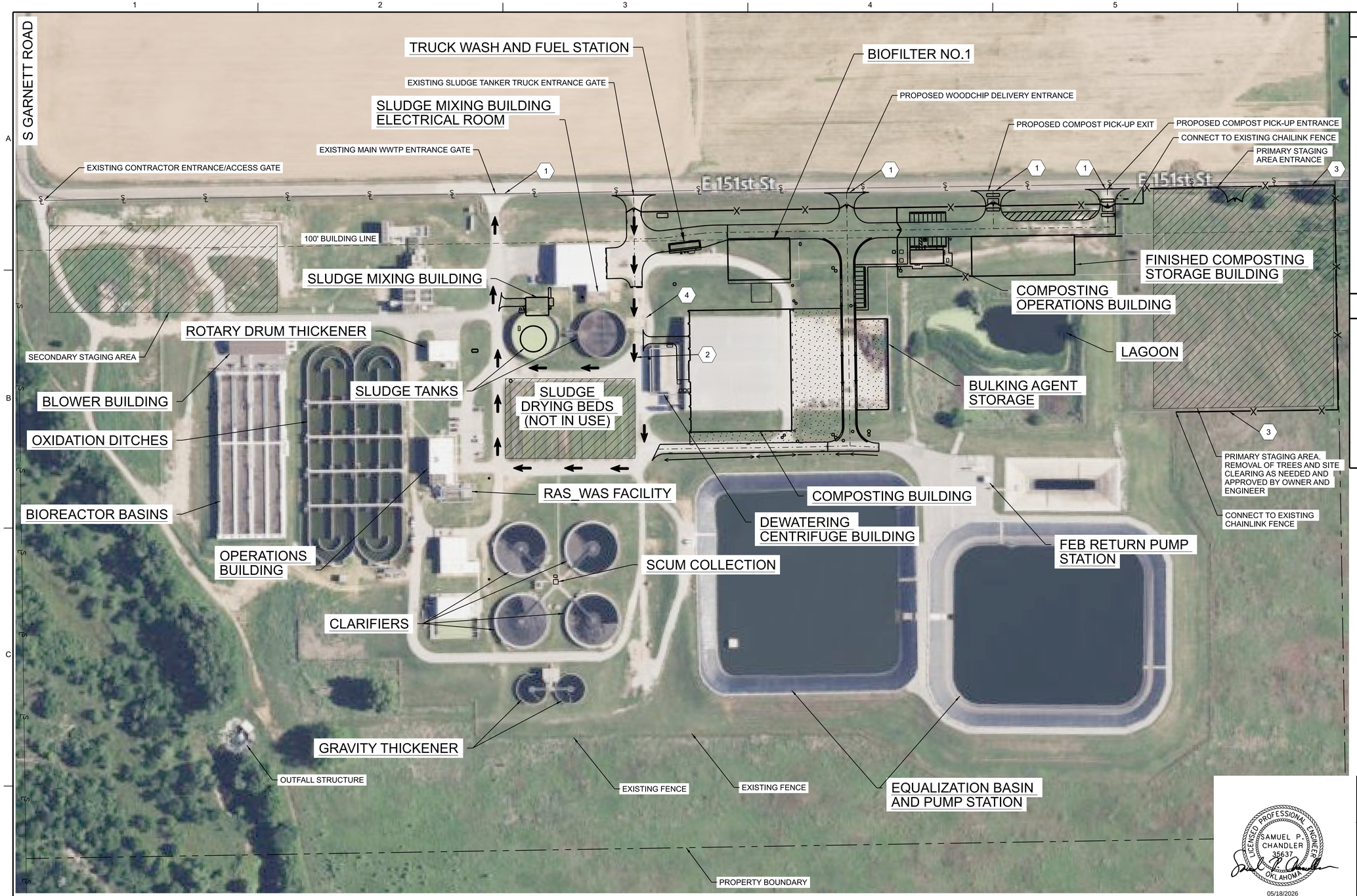

GENERAL SHEET NOTES

1. STAGING AREA SHALL BE FOR CONTRACTOR'S EMPLOYEE PARKING, TRAILERS, AND ON-SITE STORAGE OF MATERIALS.
2. CONTRACTOR SHALL RESTORE STAGING AREA TO ORIGINAL CONDITIONS AFTER CONSTRUCTION IS COMPLETED.
3. FACILITY LOCATIONS SHOWN FOR REFERENCE ONLY, SEE FACILITY DRAWINGS
4. CONSTRUCTION TRAFFIC SHALL REMAIN ADJACENT TO NEW CONSTRUCTION. ACCESS TO ALL OTHER AREAS OF THE PLANT IS NOT PERMITTED.
5. CONTRACTOR TO PROVIDE TEMPORARY SECURITY MEASURES AS NEEDED TO MAINTAIN SECURITY AT ALL TIMES.
6. FOR SURFACE RESTORATION, AND TEMPORARY STABILIZATION, SEE SITE LAYOUT AND GRADING DRAWINGS AND SWPPP.
7. CONTRACTOR SHALL PROVIDE TEMPORARY FACILITIES AS SPECIFIED IN SECTION 01 50 00.

SHEET KEYNOTES

1. CONTRACTOR TO PROVIDE CONSTRUCTION SAFETY AND TRAFFIC SIGNAGE ALONG FRONTAGE ON EAST 151ST STREET SOUTH.
2. MAINTAIN ACCESS ROUTE SHOWN AT ALL TIMES DURING CONSTRUCTION. EXISTING SLUDGE TANKER TRUCK ENTRANCE GATE AND EXISTING MAIN WWTP ENTRANCE GATE MUST REMAIN ACCESSIBLE AND CLEAR OF ALL MATERIALS, VEHICLES, AND OBSTRUCTIONS AT ALL TIMES.
3. TEMPORARY CHAINLINK FENCE.
4. SLUDGE TANKER FILL SHALL REMAIN IN SERVICE AT ALL TIME.

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N

0 100 200 300

1"=100'

LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA

05/18/2026

REVISION	BY	DATE

SITE CIVIL

OVERALL CONSTRUCTION STAGING AND SITE ACCESS PLAN

WFXQ7901

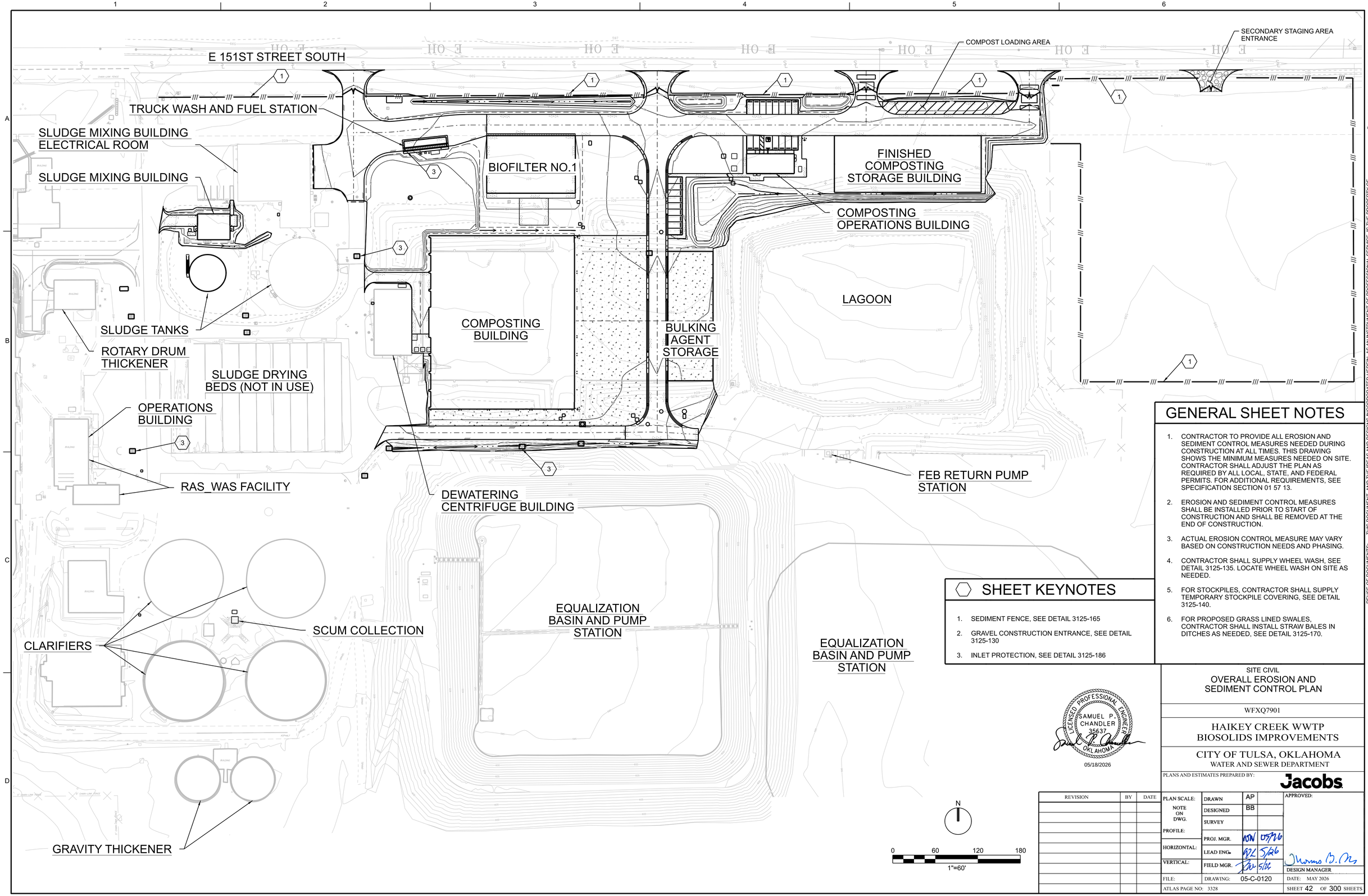
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
PROFILE:	DESIGNED	BB		
HORIZONTAL:	SURVEY			
VERTICAL:	PROJ. MGR.	MSN	05/26	
	LEAD ENG.	AZL	5/26	
	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 05-C-0110			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 41 OF 300 SHEETS

PLOT DATE: 18-MAY-2026 PLOT TIME: 17:17



GENERAL SHEET NOTES

1. CONTRACTOR TO PROVIDE ALL EROSION AND SEDIMENT CONTROL MEASURES NEEDED DURING CONSTRUCTION AT ALL TIMES. THIS DRAWING SHOWS THE MINIMUM MEASURES NEEDED ON SITE. CONTRACTOR SHALL ADJUST THE PLAN AS REQUIRED BY ALL LOCAL, STATE, AND FEDERAL PERMITS. FOR ADDITIONAL REQUIREMENTS, SEE SPECIFICATION SECTION 01 57 13.
2. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO START OF CONSTRUCTION AND SHALL BE REMOVED AT THE END OF CONSTRUCTION.
3. ACTUAL EROSION CONTROL MEASURE MAY VARY BASED ON CONSTRUCTION NEEDS AND PHASING.
4. CONTRACTOR SHALL SUPPLY WHEEL WASH, SEE DETAIL 3125-135. LOCATE WHEEL WASH ON SITE AS NEEDED.
5. FOR STOCKPILES, CONTRACTOR SHALL SUPPLY TEMPORARY STOCKPILE COVERING, SEE DETAIL 3125-140.
6. FOR PROPOSED GRASS LINED SWALES, CONTRACTOR SHALL INSTALL STRAW BALES IN DITCHES AS NEEDED, SEE DETAIL 3125-170.

SHEET KEYNOTES

1. SEDIMENT FENCE, SEE DETAIL 3125-165
2. GRAVEL CONSTRUCTION ENTRANCE, SEE DETAIL 3125-130
3. INLET PROTECTION, SEE DETAIL 3125-186

N

0 60 120 180

1"=60'

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OKLAHOMA

05/18/2026

REVISION	BY	DATE

SITE CIVIL

OVERALL EROSION AND SEDIMENT CONTROL PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	SZL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 05-C-0120			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 42 OF 300 SHEETS

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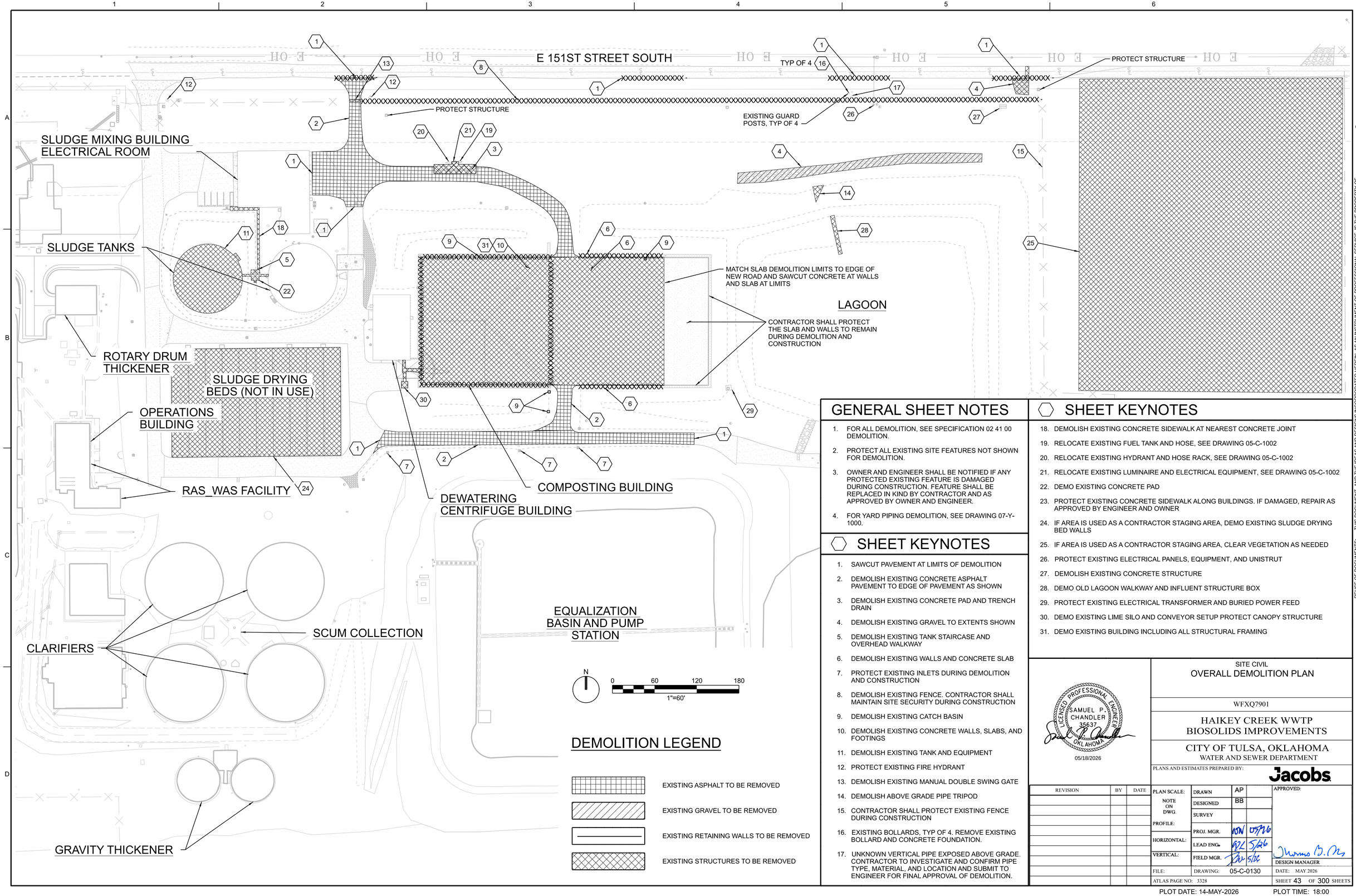

DEMOLITION LEGEND

- EXISTING ASPHALT TO BE REMOVED
- EXISTING GRAVEL TO BE REMOVED
- EXISTING RETAINING WALLS TO BE REMOVED
- EXISTING STRUCTURES TO BE REMOVED

GENERAL SHEET NOTES

1. FOR ALL DEMOLITION, SEE SPECIFICATION 02 41 00 DEMOLITION.
2. PROTECT ALL EXISTING SITE FEATURES NOT SHOWN FOR DEMOLITION.
3. OWNER AND ENGINEER SHALL BE NOTIFIED IF ANY PROTECTED EXISTING FEATURE IS DAMAGED DURING CONSTRUCTION. FEATURE SHALL BE REPLACED IN KIND BY CONTRACTOR AND AS APPROVED BY OWNER AND ENGINEER.
4. FOR YARD PIPING DEMOLITION, SEE DRAWING 07-Y-1000.

SHEET KEYNOTES

1. SAWCUT PAVEMENT AT LIMITS OF DEMOLITION
2. DEMOLISH EXISTING CONCRETE ASPHALT PAVEMENT TO EDGE OF PAVEMENT AS SHOWN
3. DEMOLISH EXISTING CONCRETE PAD AND TRENCH DRAIN
4. DEMOLISH EXISTING GRAVEL TO EXTENTS SHOWN
5. DEMOLISH EXISTING TANK STAIRCASE AND OVERHEAD WALKWAY
6. DEMOLISH EXISTING WALLS AND CONCRETE SLAB
7. PROTECT EXISTING INLETS DURING DEMOLITION AND CONSTRUCTION
8. DEMOLISH EXISTING FENCE. CONTRACTOR SHALL MAINTAIN SITE SECURITY DURING CONSTRUCTION
9. DEMOLISH EXISTING CATCH BASIN
10. DEMOLISH EXISTING CONCRETE WALLS, SLABS, AND FOOTINGS
11. DEMOLISH EXISTING TANK AND EQUIPMENT
12. PROTECT EXISTING FIRE HYDRANT
13. DEMOLISH EXISTING MANUAL DOUBLE SWING GATE
14. DEMOLISH ABOVE GRADE PIPE TRIPOD
15. CONTRACTOR SHALL PROTECT EXISTING FENCE DURING CONSTRUCTION
16. EXISTING BOLLARDS, TYP OF 4. REMOVE EXISTING BOLLARD AND CONCRETE FOUNDATION.
17. UNKNOWN VERTICAL PIPE EXPOSED ABOVE GRADE. CONTRACTOR TO INVESTIGATE AND CONFIRM PIPE TYPE, MATERIAL, AND LOCATION AND SUBMIT TO ENGINEER FOR FINAL APPROVAL OF DEMOLITION.

SHEET KEYNOTES

18. DEMOLISH EXISTING CONCRETE SIDEWALK AT NEAREST CONCRETE JOINT
19. RELOCATE EXISTING FUEL TANK AND HOSE, SEE DRAWING 05-C-1002
20. RELOCATE EXISTING HYDRANT AND HOSE RACK, SEE DRAWING 05-C-1002
21. RELOCATE EXISTING LUMINAIRE AND ELECTRICAL EQUIPMENT, SEE DRAWING 05-C-1002
22. DEMO EXISTING CONCRETE PAD
23. PROTECT EXISTING CONCRETE SIDEWALK ALONG BUILDINGS. IF DAMAGED, REPAIR AS APPROVED BY ENGINEER AND OWNER
24. IF AREA IS USED AS A CONTRACTOR STAGING AREA, DEMO EXISTING SLUDGE DRYING BED WALLS
25. IF AREA IS USED AS A CONTRACTOR STAGING AREA, CLEAR VEGETATION AS NEEDED
26. PROTECT EXISTING ELECTRICAL PANELS, EQUIPMENT, AND UNISTRUT
27. DEMOLISH EXISTING CONCRETE STRUCTURE
28. DEMO OLD LAGOON WALKWAY AND INFLUENT STRUCTURE BOX
29. PROTECT EXISTING ELECTRICAL TRANSFORMER AND BURIED POWER FEED
30. DEMO EXISTING LIME SILO AND CONVEYOR SETUP PROTECT CANOPY STRUCTURE
31. DEMO EXISTING BUILDING INCLUDING ALL STRUCTURAL FRAMING

LICENSED PROFESSIONAL ENGINEER
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OKLAHOMA
05/18/2026

SITE CIVIL
OVERALL DEMOLITION PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
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HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSN	05/26
	LEAD ENG.	AZL	5/26
	FIELD MGR.		5/26
FILE:	DRAWING: 05-C-0130		DESIGN MANAGER
ATLAS PAGE NO: 3328			DATE: MAY 2026
			SHEET 43 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 18:00

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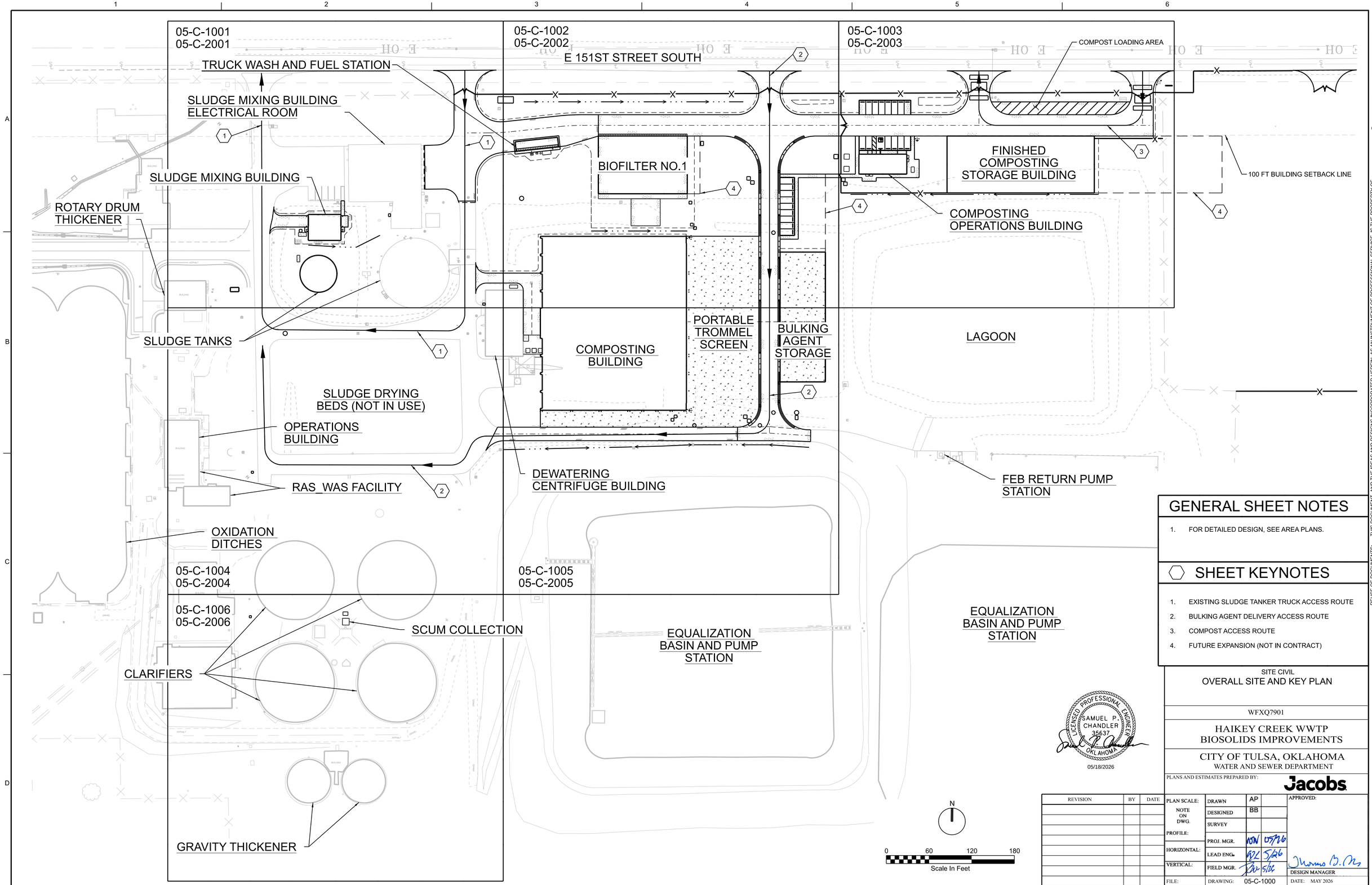

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GENERAL SHEET NOTES

1. FOR DETAILED DESIGN, SEE AREA PLANS.

SHEET KEYNOTES

1. EXISTING SLUDGE TANKER TRUCK ACCESS ROUTE
2. BULKING AGENT DELIVERY ACCESS ROUTE
3. COMPOST ACCESS ROUTE
4. FUTURE EXPANSION (NOT IN CONTRACT)

SITE CIVIL

OVERALL SITE AND KEY PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA
05/18/2026

PLANS AND ESTIMATES PREPARED BY: Jacobs

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PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
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VERTICAL:	PROJ. MGR.		05/18/26
	LEAD ENG.		5/18/26
	FIELD MGR.		5/18/26
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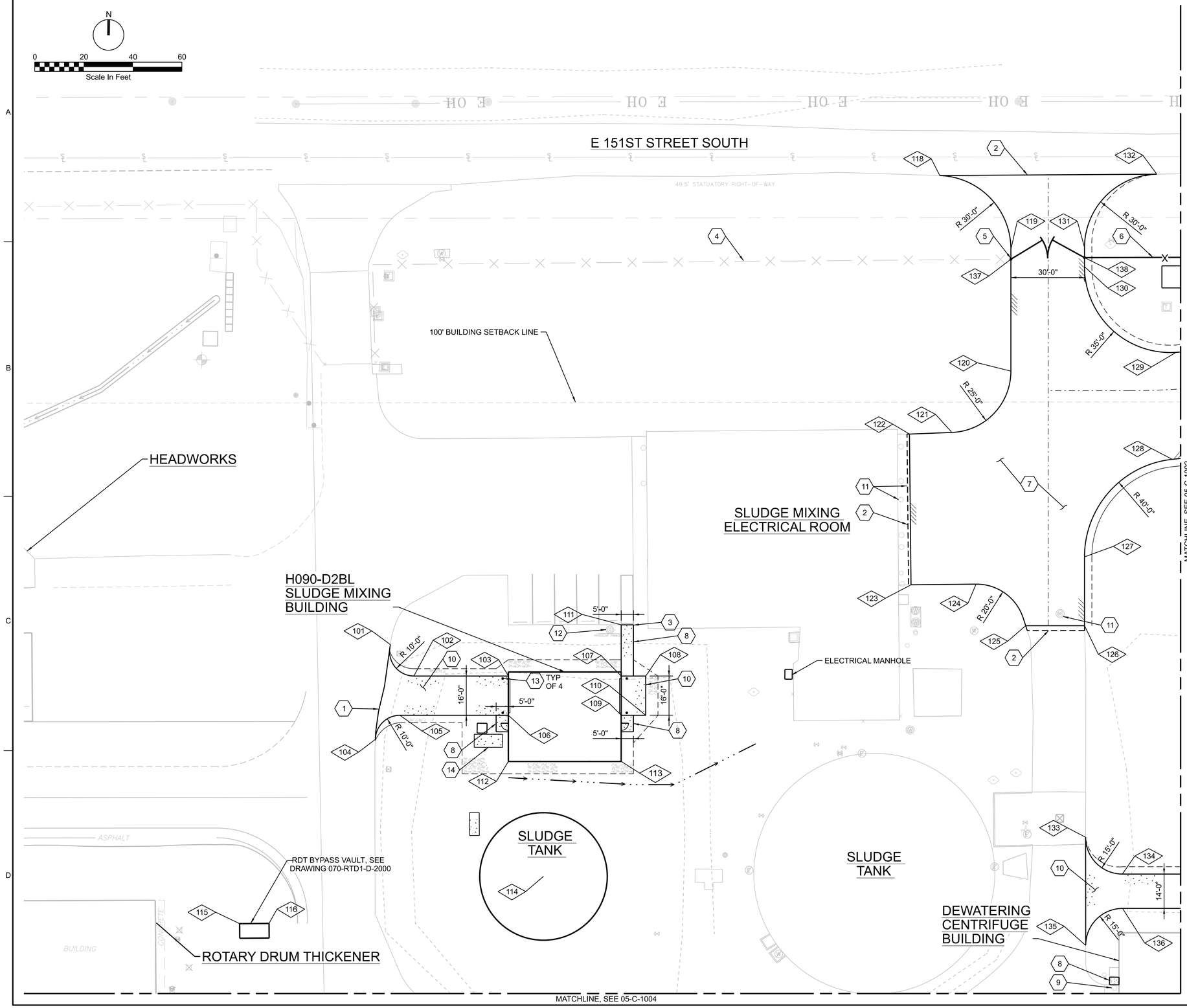
FILE:	DRAWING: 05-C-1000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 44 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 18:01

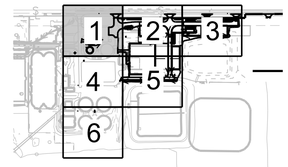


GENERAL SHEET NOTES

1. CONTRACTOR SHALL MAINTAIN ACCESS TO PLANT AT ALL TIMES. ALL OBSTRUCTIONS TO PLANT ACCESS SHALL BE COORDINATED WITH AND APPROVED BY OWNER.
2. PROTECT ALL EXISTING STRUCTURES NOT IMPACTED BY PROPOSED WORK. IF DAMAGED, DURING CONSTRUCTION, RESTORE AND REPAIR EXISTING STRUCTURES IN KIND.
3. RESTORATION LIMITS SHOWN ARE MINIMUM REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL SURFACES DISTURBED DURING CONSTRUCTION.
4. FOR FACILITY NUMBER DESIGNATIONS SEE DRAWING INDEX.
5. FOR ALL YARD PIPING RESTORATION, SEE YARD PIPING DRAWINGS AND PROFILES.
6. FOR ALL ELECTRICAL EQUIPMENT, CONCRETE PADS, AND JUNCTION BOXES, SEE ELECTRICAL SITE DRAWINGS.

SHEET KEYNOTES

1. CONNECT CONCRETE DRIVEWAY TO EXISTING ASPHALT ROAD, SEE DETAIL 3213-250
2. MATCH NEW ASPHALT TO EXISTING ASPHALT, SEE DETAIL 3212-215
3. ADD JOINT AND CONNECT TO EXISTING CONCRETE WALKWAY
4. PROTECT EXISTING FENCE TO REMAIN DURING CONSTRUCTION
5. 30' DOUBLE-LEAF SWING GATE. CONNECT EXISTING FENCE TO NEW GATE POST, SEE DETAIL 3231-415
6. 6' CHAIN LINK FENCE, SEE DETAIL 3231-410
7. ASPHALT PAVEMENT, SEE DETAIL 3212-210
8. CONCRETE SIDEWALK, SEE DETAIL 3213-220
9. REMOVE EXISTING PAINT AND RECOAT BOLLARDS SAFETY YELLOW
10. CONCRETE PAVEMENT, SEE DETAIL 3213-240
11. PROTECT EXISTING SITE FEATURES INCLUDING MANHOLE COVERS, GUARD RAILS AND CLEANOUTS
12. PROTECT EXISTING SIGN
13. PERMANENT GUARD POST, SEE DETAIL 3305-954 AND DETAIL 1 ON DRAWING 05-C-5001.
14. CONCRETE EQUIPMENT PAD, SEE DETAIL 0330-056, TYPE H.



KEY PLAN

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LICENSED PROFESSIONAL ENGINEER
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35637
OKLAHOMA
05/18/2026

SITE CIVIL
SITE PLAN
AREA 1

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

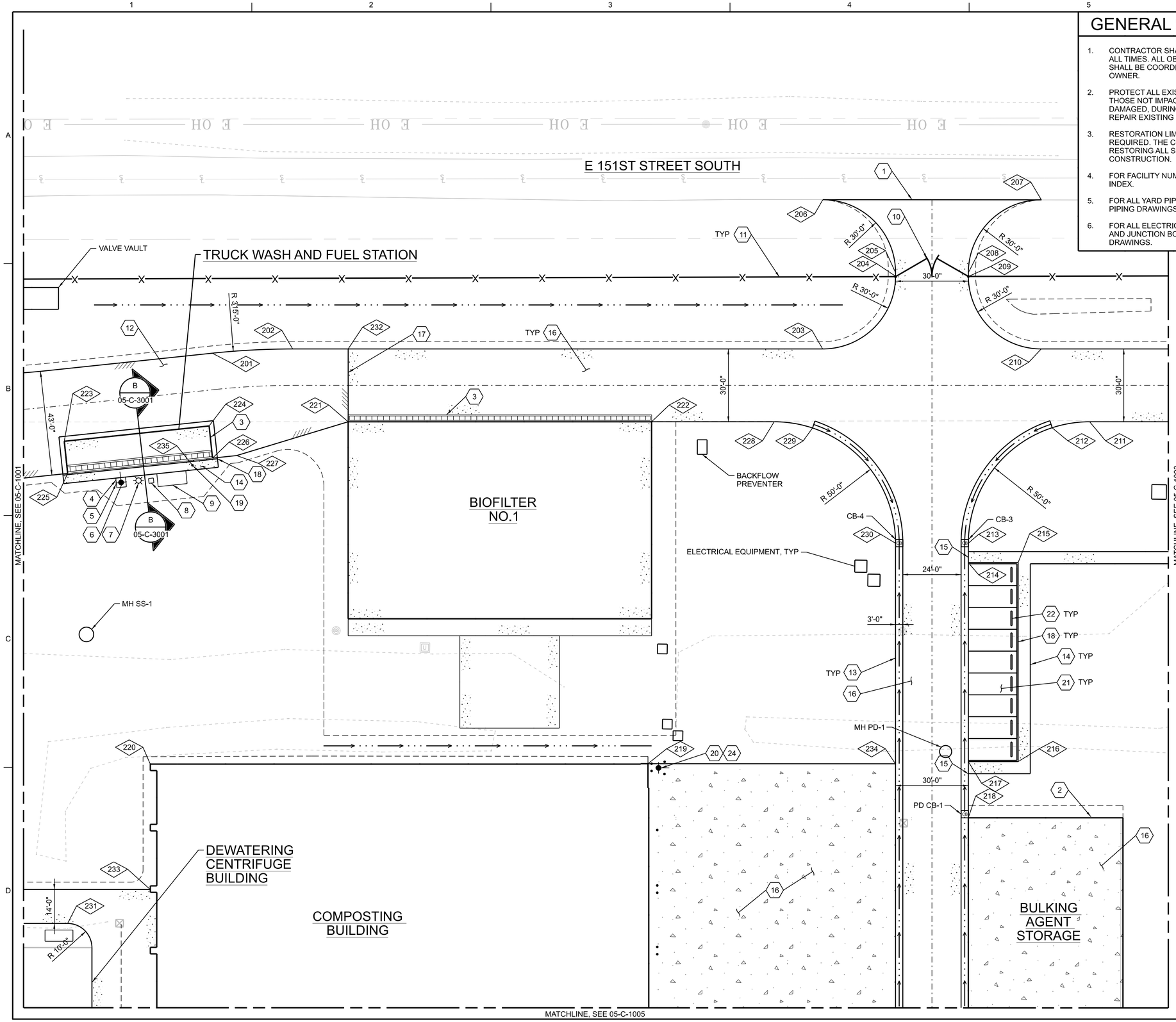
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MW	05/26
HORIZONTAL:	LEAD ENG.	RL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 05-C-1001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 45 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 18:01



GENERAL SHEET NOTES

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3. RESTORATION LIMITS SHOWN ARE MINIMUM REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL SURFACES DISTURBED DURING CONSTRUCTION.
4. FOR FACILITY NUMBER DESIGNATIONS, SEE DRAWING INDEX.
5. FOR ALL YARD PIPING RESTORATION, SEE YARD PIPING DRAWINGS AND PROFILES.
6. FOR ALL ELECTRICAL EQUIPMENT, CONCRETE PADS, AND JUNCTION BOXES, SEE ELECTRICAL SITE DRAWINGS.

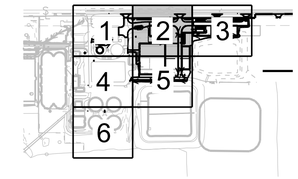
SHEET KEYNOTES

1. MATCH NEW ASPHALT TO EXISTING ASPHALT, SEE DETAIL 3212-215
2. PROTECT AND REUSE EXISTING RETAINING WALL
3. CAST-IN-PLACE TRENCH DRAIN, SEE DETAIL 3344-791
4. POST MOUNTED HOSE RACK, SEE DETAIL 2210-720
5. 4'x4' EQUIPMENT PAD, TYPE H, SEE DETAIL 0330-056
6. RELOCATED POST HYDRANT
7. RELOCATED LUMINAIRE, SEE ELECTRICAL PLANS
8. RELOCATED ELECTRICAL EQUIPMENT, SEE ELECTRICAL PLANS
9. RELOCATED FUEL TANK AND HOSE AND 12'-0"x5'-4" EQUIPMENT PAD, TYPE H, SEE DETAIL 0330-056
10. 30' WIDE DOUBLE SWING GATE, SEE DETAIL 3231-415
11. 6' CHAINLINK FENCE, SEE DETAIL 3231-410
12. ASPHALT CONCRETE PAVEMENT, SEE DETAIL 3213-210
13. CONCRETE VALLEY GUTTER, SEE DETAIL 3216-330
14. TYPICAL CONCRETE SIDEWALK, SEE DETAIL 3213-220
15. SIDEWALK ACCESS RAMP, TYPE 4, SIM, SEE DETAIL 3213-226
16. CONCRETE PAVEMENT, SEE DETAIL 3213-240
17. CONCRETE TO ASPHALT TRANSITION, SEE DETAIL 3213-250
18. CONCRETE CURB, SEE DETAIL 3216-315
19. PERMANENT GUARD POST LOCATED 5 FT FROM FUEL TANK AND CENTERED IN SIDEWALK, SEE DETAIL 3305-954. MOUNT TYPE 1 FIRE EXTINGUISHER TO BOLLARD, SEE SPECIFICATION SECTION 10 44 00. CONTRACTOR TO SUBMIT PROPOSED BOLLARD AND MOUNTING DETAIL.
20. REMOVABLE GUARD POST, SEE DETAIL 3471-811 AND DETAIL 1 ON DRAWING 05-C-5001
21. EMPLOYEE PARKING SPACE, 9' X 20' WITH 4" WIDE WHITE TRAFFIC PAINT AS SPECIFIED IN SECTION 32 17 23
22. PRECAST CONCRETE WHEELSTOP, SEE DETAIL 3217-350
23. 2' WIDE CONCRETE CONTAINMENT CURB. CONSTRUCT MONOLITHICALLY WITH CONCRETE PAD AND WITH A HEIGHT OF 3"
24. HYDRANT, SEE DRAWING 07-Y-2002

N

0 20 40 60

Scale In Feet



KEY PLAN

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LICENSED PROFESSIONAL ENGINEER
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OKLAHOMA
05/18/2026

SITE CIVIL
SITE PLAN
AREA 2

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:
FILE:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26
DRAWING:	05-C-1002	

APPROVED:
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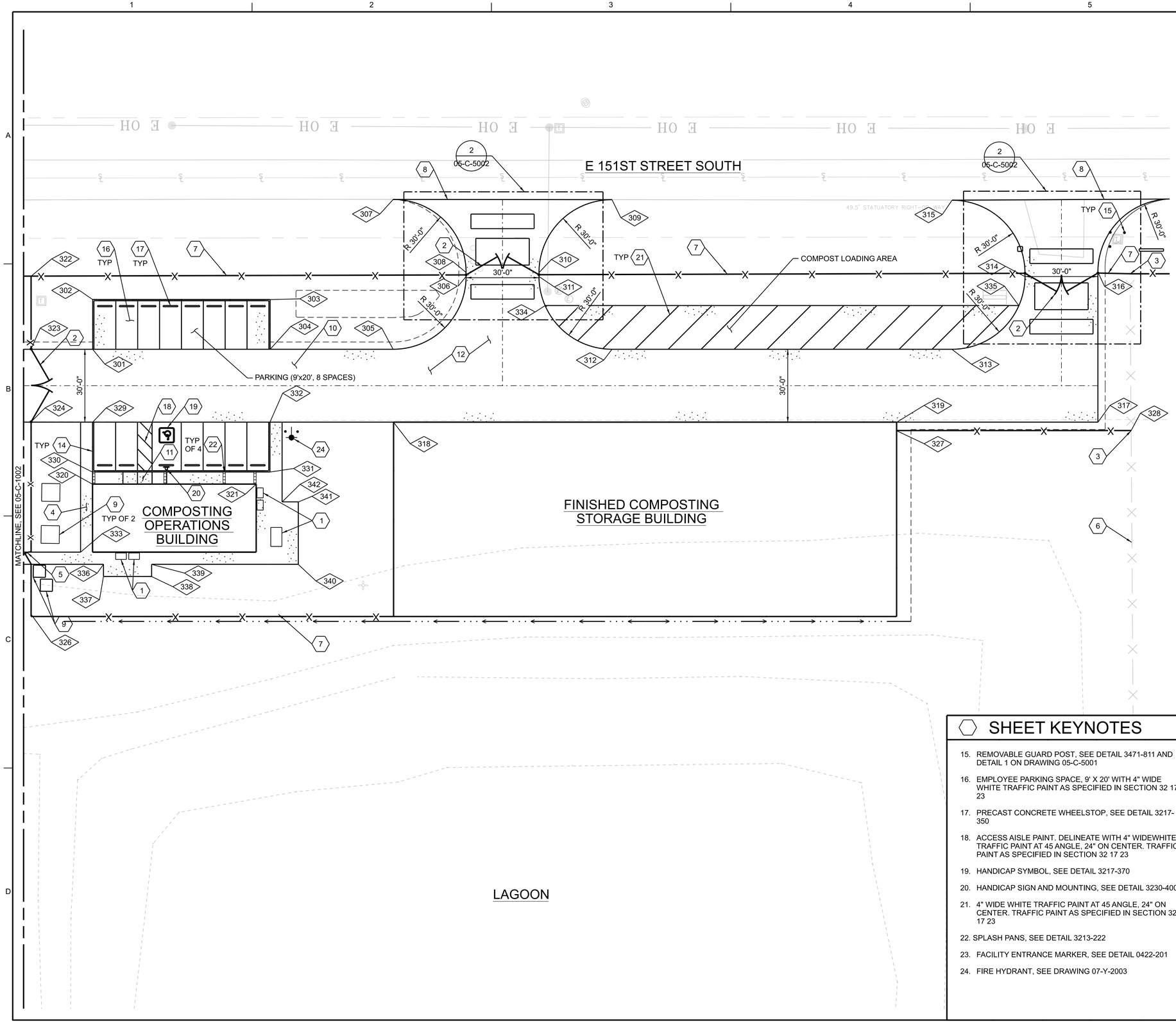
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 46 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 18:01



GENERAL SHEET NOTES

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4. FOR FACILITY NUMBER DESIGNATIONS, SEE DRAWING INDEX.
5. FOR ALL YARD PIPING RESTORATION, SEE YARD PIPING DRAWINGS AND PROFILES.
6. FOR ALL ELECTRICAL EQUIPMENT, CONCRETE PADS, AND JUNCTION BOXES, SEE ELECTRICAL SITE DRAWINGS.

SHEET KEYNOTES

1. HVAC EQUIPMENT AND CONCRETE PAD, SEE SHEET 95-C1BL-H-2000
2. 30' DOUBLE-LEAF SWING GATE, SEE DETAIL 3231-415
3. CONNECT NEW FENCE TO EXISTING FENCE AND POST.
4. TYPICAL CONCRETE SIDEWALK, SEE DETAIL 3213-220
5. 5' SINGLE PEDESTRIAN GATE, SEE DETAIL 3231-420
6. CONTRACTOR SHALL PROTECT EXISTING FENCE TO REMAIN DURING CONSTRUCTION
7. 6' CHAIN LINK FENCE, SEE DETAIL 3231-410
8. PAVEMENT CONNECTION, SEE DETAIL 3212-215
9. ELECTRICAL EQUIPMENT AND CONCRETE PADS, SEE DRAWING 095-C1BL-E-2000
10. ASPHALT CONCRETE PAVEMENT, SEE DETAIL 3212-210
11. SIDEWALK ACCESS RAMP, TYPE 4, SEE DETAIL 3213-226
12. CONCRETE PAVEMENT, SEE DETAIL 3213-240
13. CONCRETE TO ASPHALT TRANSITION, SEE DETAIL 3213-250
14. CONCRETE CURB, SEE DETAIL 3216-315

KEY PLAN

SHEET KEYNOTES

15. REMOVABLE GUARD POST, SEE DETAIL 3471-811 AND DETAIL 1 ON DRAWING 05-C-5001
16. EMPLOYEE PARKING SPACE, 9' X 20' WITH 4" WIDE WHITE TRAFFIC PAINT AS SPECIFIED IN SECTION 32 17 23
17. PRECAST CONCRETE WHEELSTOP, SEE DETAIL 3217-350
18. ACCESS AISLE PAINT. DELINEATE WITH 4" WIDEWHITE TRAFFIC PAINT AT 45 ANGLE, 24" ON CENTER. TRAFFIC PAINT AS SPECIFIED IN SECTION 32 17 23
19. HANDICAP SYMBOL, SEE DETAIL 3217-370
20. HANDICAP SIGN AND MOUNTING, SEE DETAIL 3230-400
21. 4" WIDE WHITE TRAFFIC PAINT AT 45 ANGLE, 24" ON CENTER. TRAFFIC PAINT AS SPECIFIED IN SECTION 32 17 23
22. SPLASH PANS, SEE DETAIL 3213-222
23. FACILITY ENTRANCE MARKER, SEE DETAIL 0422-201
24. FIRE HYDRANT, SEE DRAWING 07-Y-2003

LICENSED PROFESSIONAL ENGINEER
SAMUEL P CHANDLER
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OKLAHOMA

05/18/2026

REVISION	BY	DATE

SITE CIVIL
SITE PLAN
AREA 3

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
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PROFILE:	SURVEY		
	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	SL 5/26	
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FILE:	DRAWING: 05-C-1003		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 47 OF 300 SHEETS

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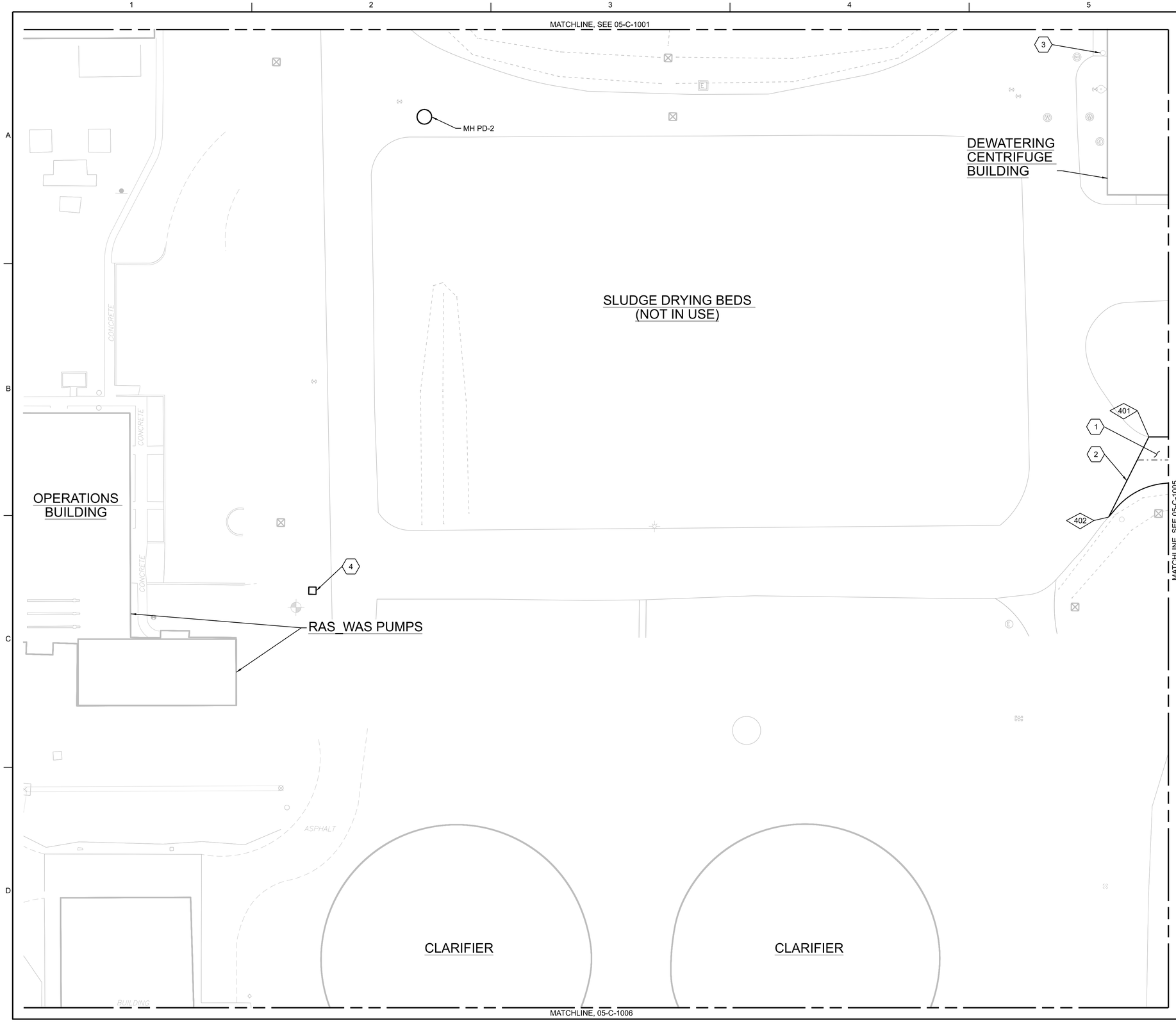


GENERAL SHEET NOTES

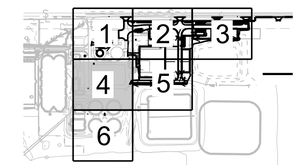
1. CONTRACTOR SHALL MAINTAIN ACCESS TO PLANT AT ALL TIMES. ALL OBSTRUCTIONS TO PLANT ACCESS SHALL BE COORDINATED WITH AND APPROVED BY OWNER.
2. PROTECT ALL EXISTING STRUCTURES OUTSIDE THOSE NOT IMPACTED BY PROPOSED WORK. IF DAMAGED, DURING CONSTRUCTION, RESTORE AND REPAIR EXISTING STRUCTURES IN KIND.
3. RESTORATION LIMITS SHOWN ARE MINIMUM REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL SURFACES DISTURBED DURING CONSTRUCTION.
4. FOR FACILITY NUMBER DESIGNATIONS, SEE DRAWING INDEX.
5. FOR ALL YARD PIPING RESTORATION, SEE YARD PIPING DRAWINGS AND PROFILES.
6. FOR ALL ELECTRICAL EQUIPMENT, CONCRETE PADS, AND JUNCTION BOXES, SEE ELECTRICAL SITE DRAWINGS.

SHEET KEYNOTES

1. ASPHALT CONCRETE PAVEMENT, SEE DETAIL 3212-210
2. PAVEMENT CONNECTION, SEE DETAIL 3212-215
3. REMOVE EXISTING PAINT AND RECOAT BOLLARDS SAFETY YELLOW
4. ELECTRICAL MANHOLE

N

0 20 40 60
Scale In Feet



KEY PLAN

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35537
OKLAHOMA
05/18/2026

SITE CIVIL
SITE PLAN
AREA 4

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

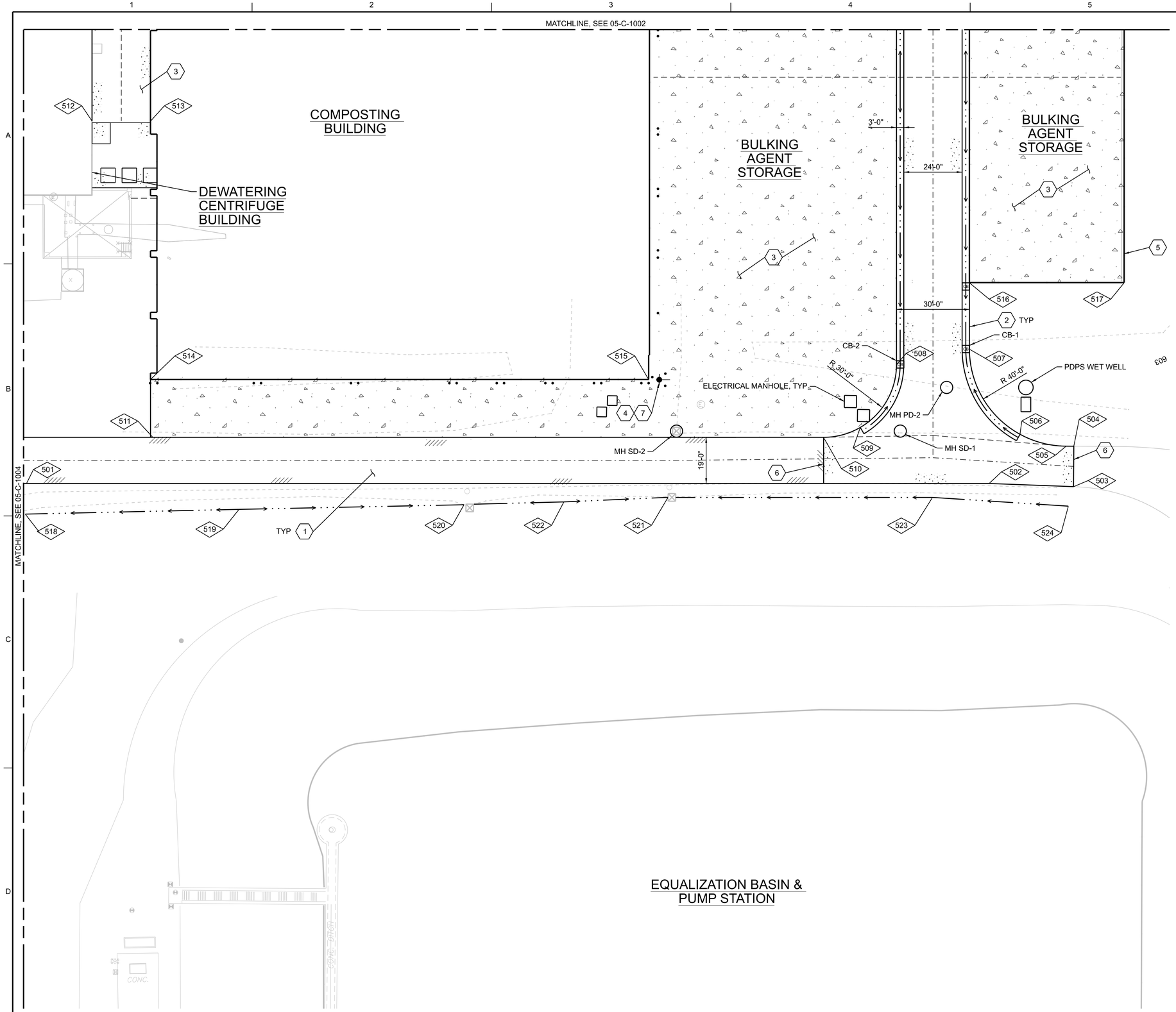
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN	05/26
HORIZONTAL:	LEAD ENG.	AZL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 05-C-1004		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 48 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:06



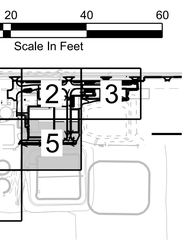
EQUALIZATION BASIN & PUMP STATION

GENERAL SHEET NOTES

1. CONTRACTOR SHALL MAINTAIN ACCESS TO PLANT AT ALL TIMES. ALL OBSTRUCTIONS TO PLANT ACCESS SHALL BE COORDINATED WITH AND APPROVED BY OWNER.
2. PROTECT ALL EXISTING STRUCTURES OUTSIDE THOSE NOT IMPACTED BY PROPOSED WORK. IF DAMAGED, DURING CONSTRUCTION, RESTORE AND REPAIR EXISTING STRUCTURES IN KIND.
3. RESTORATION LIMITS SHOWN ARE MINIMUM REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL SURFACES DISTURBED DURING CONSTRUCTION.
4. FOR FACILITY NUMBER DESIGNATIONS SEE DRAWING 05-C-0100.
5. FOR ALL YARD PIPING RESTORATION, SEE YARD PIPING DRAWINGS AND PROFILES.
6. FOR ALL ELECTRICAL EQUIPMENT, CONCRETE PADS, AND JUNCTION BOXES, SEE ELECTRICAL SITE DRAWINGS.

SHEET KEYNOTES

1. ASPHALT CONCRETE PAVEMENT, SEE DETAIL 3212-210
2. CONCRETE VALLEY GUTTER, SEE DETAIL 3216-330
3. CONCRETE PAVEMENT, SEE DETAIL 3213-240
4. REMOVABLE GUARD POST, SEE DETAIL 3471-811
5. PROTECT AND REUSE EXISTING RETAINING WALL
6. CONCRETE TO ASPHALT TRANSITION, SEE DETAIL 3213-250
7. HYDRANT, SEE DRAWING 07-Y-2005



KEY PLAN

0 20 40 60
Scale In Feet

N

LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA
05/18/2026

SITE CIVIL
SITE PLAN
AREA 5

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:
FILE: DRAWING: 05-C-1005
ATLAS PAGE NO: 3328

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MW	05/7/26
LEAD ENG.	GL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026
SHEET 49 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 18:01

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REUSE OF DOCUMENTS:

MATCHLINE, SEE 05-C-1004

CLARIFIER

CLARIFIER

601

602

ELECTRICAL MANHOLE

SCUM COLLECTION

CONCRETE

DISINFECTION

CLARIFIER

CLARIFIER

GRAVEL

GRAVEL

GRAVEL

GRAVEL

ASPHALT

ASPHALT

BUILDING

GRAVITY THICKENER

GENERAL SHEET NOTES

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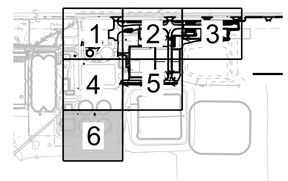
4. FOR FACILITY NUMBER DESIGNATIONS, SEE DRAWING INDEX.
5. FOR ALL YARD PIPING RESTORATION, SEE YARD PIPING DRAWINGS AND PROFILES.
6. FOR ALL ELECTRICAL EQUIPMENT, CONCRETE PADS, AND JUNCTION BOXES, SEE ELECTRICAL SITE DRAWINGS.

N

0 20 40 60

Scale In Feet



KEY PLAN

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA
05/18/2026

SITE CIVIL
SITE PLAN
AREA 6

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MSN	05/7/26	
HORIZONTAL:	LEAD ENG.	SJC	5/6/26	
VERTICAL:	FIELD MGR.		5/6	DESIGN MANAGER
FILE:	DRAWING: 05-C-1006			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 50 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:05

COORDINATE TABLE

POINT NO.	DESCRIPTION	NORTHING	EASTING
101	EDGE OF PAVEMENT, PC	350771.55	2605604.10
102	EDGE OF PAVEMENT, PT	350758.87	2605613.98
103	EDGE OF PAVEMENT	350759.40	2605652.40
104	EDGE OF PAVEMENT, PC	350733.03	2605598.55
105	EDGE OF PAVEMENT, PT	350742.79	2605608.38
106	EDGE OF PAVEMENT	350743.40	2605652.62
107	EDGE OF PAVEMENT	350760.04	2605698.40
108	EDGE OF PAVEMENT	350760.18	2605708.40
109	EDGE OF PAVEMENT	350744.04	2605698.62
110	EDGE OF PAVEMENT	350744.18	2605708.62
111	SIDEWALK	350780.91	2605698.11
112	CORNER OF BUILDING	350724.57	2605652.89
113	CORNER OF BUILDING	350725.21	2605698.88
114	CORNER OF TANK	350677.89	2605667.87
115	CORNER OF VAULT	350656.91	2605544.25
116	CORNER OF VAULT	350657.18	2605556.25
118	EDGE OF PAVEMENT, PC	350965.93	2605825.36
119	EDGE OF PAVEMENT, PT	350936.35	2605854.84
120	EDGE OF PAVEMENT, PC	350886.57	2605855.54
121	EDGE OF PAVEMENT, PT	350861.25	2605831.82
122	EDGE OF PAVEMENT	350860.34	2605814.54
123	EDGE OF PAVEMENT	350798.89	2605816.04
124	EDGE OF PAVEMENT, PC	350799.54	2605842.53
125	EDGE OF PAVEMENT	350782.87	2605863.01
126	EDGE OF PAVEMENT	350783.20	2605886.98
127	EDGE OF PAVEMENT, PC	350811.26	2605886.59
128	EDGE OF PAVEMENT, PT	350851.54	2605921.82
129	EDGE OF PAVEMENT, PC	350895.17	2605922.75
130	EDGE OF PAVEMENT, PT	350929.57	2605884.94
131	EDGE OF PAVEMENT, PC	350937.30	2605884.83
132	EDGE OF PAVEMENT, PT	350967.71	2605913.87
133	EDGE OF PAVEMENT, PC	350696.98	2605888.63
134	EDGE OF PAVEMENT, PT	350682.15	2605903.84
135	EDGE OF PAVEMENT, PC	350652.87	2605889.30
136	EDGE OF PAVEMENT, PT	350668.15	2605904.09
137	SWING GATE	350932.22	2605854.91
138	SWING GATE	350933.27	2605884.89
201	EDGE OF PAVEMENT, PC	350904.48	2606002.21
202	EDGE OF PAVEMENT, PT	350906.69	2606035.32
203	EDGE OF PAVEMENT, PC	350909.73	2606253.63
204	EDGE OF PAVEMENT, PT	350940.15	2606283.21
205	EDGE OF PAVEMENT, PC	350941.64	2606283.19
206	EDGE OF PAVEMENT, PT	350971.22	2606252.83
207	EDGE OF PAVEMENT, PC	350972.42	2606342.88
208	EDGE OF PAVEMENT, PT	350942.00	2606313.19
209	EDGE OF PAVEMENT, PC	350940.57	2606313.21
210	EDGE OF PAVEMENT, PT	350910.99	2606343.62
211	EDGE OF PAVEMENT, PC	350881.27	2606364.04
212	BEGIN VALLEY GUTTER	350878.60	2606348.61
213	EDGE OF PAVEMENT, PT	350830.58	2606314.74
214	BACK OF CURB	350822.58	2606314.85
215	BACK OF CURB	350822.86	2606335.35
216	BACK OF CURB	350740.87	2606336.49
217	BACK OF CURB	350740.58	2606316.01
218	CORNER OF BUILDING	350717.43	2606316.40
219	CORNER OF BUILDING	350737.87	2606184.02
220	CORNER OF BUILDING	350734.84	2605979.04
221	CORNER OF BUILDING	350877.01	2606058.57
222	CORNER OF BUILDING	350878.75	2606183.56
223	EDGE OF CONCRETE	350867.34	2605941.74
224	EDGE OF CONCRETE	350874.48	2606001.32
225	TRENCH DRAIN	350854.11	2605943.33
226	TRENCH DRAIN	350861.26	2606002.90
227	EDGE OF PAVEMENT	350862.45	2606012.83
228	EDGE OF PAVEMENT, PC	350879.46	2606234.05
229	BEGIN VALLEY GUTTER	350877.11	2606249.90
230	EDGE OF PAVEMENT, PT	350830.16	2606284.74
231	EDGE OF PAVEMENT, PC	350668.73	2605945.91
232	END OF CONCRETE PAVEMENT	350907.01	2606058.15
233	EDGE OF PAVEMENT	350683.19	2605979.77
234	EDGE OF CONCRETE	350739.25	2606286.02
235	BOLLARD	350858.18	2605994.69

COORDINATE TABLE

POINT NO.	DESCRIPTION	NORTHING	EASTING
301	BACK OF CURB	350912.11	2606424.47
302	BACK OF CURB	350932.61	2606424.19
303	BACK OF CURB	350933.63	2606497.18
304	BACK OF CURB	350913.16	2606497.47
305	EDGE OF PAVEMENT, PC	350913.84	2606548.10
306	EDGE OF PAVEMENT, PT	350944.25	2606577.68
307	EDGE OF PAVEMENT, PC	350975.50	2606547.20
308	EDGE OF PAVEMENT, PT	350945.92	2606577.66
309	EDGE OF PAVEMENT, PC	350976.66	2606637.33
310	EDGE OF PAVEMENT, PT	350946.25	2606607.66
311	EDGE OF PAVEMENT, PC	350944.67	2606607.68
312	EDGE OF PAVEMENT, PT	350915.09	2606638.09
313	EDGE OF PAVEMENT, PC	350917.04	2606778.08
314	EDGE OF PAVEMENT, PT	350947.46	2606807.66
315	EDGE OF PAVEMENT, PC	350978.39	2606777.24
316	EDGE OF PAVEMENT, PT	350949.72	2606837.63
317	EDGE OF PAVEMENT	350887.88	2606838.49
318	CORNER OF BUILDING	350883.84	2606548.69
319	CORNER OF BUILDING	350886.73	2606755.67
320	CORNER OF BUILDING	350856.62	2606425.18
321	CORNER OF BUILDING	350857.56	2606492.50
322	CORNER FENCE	350941.86	2606398.69
323	SWING GATE	350911.88	2606399.11
324	SWING GATE	350881.88	2606399.53
326	CORNER OF FENCE	350802.77	2606400.63
327	END FENCE	350883.27	2606755.72
328	BEGIN FENCE	350884.62	2606852.21
329	BACK OF CURB	350882.12	2606424.82
330	BACK OF CURB	350861.62	2606425.11
331	BACK OF CURB	350862.63	2606498.10
332	BACK OF CURB	350883.13	2606497.81
333	SIDEWALK	350828.67	2606420.64
334	COMPOST LOADING AREA	350932.70	2606610.35
335	COMPOST LOADING AREA	350935.42	2606805.32
336	CORNER OF SIDEWALK	350823.68	2606430.13
337	CORNER OF SIDEWALK	350818.68	2606430.20
338	CORNER OF SIDEWALK	350818.96	2606450.02
339	CORNER OF SIDEWALK	350823.96	2606449.95
340	CORNER OF SIDEWALK	350824.80	2606510.29
341	CORNER OF SIDEWALK	350850.48	2606509.94
342	CORNER OF SIDEWALK	350850.39	2606503.27
401	EDGE OF PAVEMENT	350465.74	2605922.54
402	EDGE OF PAVEMENT, PC	350432.57	2605906.46
501	EDGE OF PAVEMENT, PC	350446.87	2605932.04
502	EDGE OF PAVEMENT	350452.39	2606328.06
503	EDGE OF PAVEMENT	350451.57	2606362.87
504	EDGE OF PAVEMENT	350468.21	2606362.76
505	EDGE OF PAVEMENT, PC	350468.19	2606359.51
506	END VALLEY GUTTER	350472.82	2606340.54
507	EDGE OF PAVEMENT, PT	350507.63	2606319.24
508	EDGE OF PAVEMENT, PT	350500.86	2606289.33
509	END VALLEY GUTTER	350474.72	2606274.77
510	EDGE OF PAVEMENT, PC	350470.44	2606259.75
511	EDGE OF CONCRETE	350466.60	2605982.79
512	EDGE OF PAVEMENT	350596.41	2605956.94
513	EDGE OF PAVEMENT	350596.73	2605980.97
514	CORNER OF BUILDING	350490.37	2605982.45
515	CORNER OF BUILDING	350493.23	2606187.43
516	CORNER OF BUILDING	350534.96	2606318.86
517	CORNER OF BUILDING	350535.84	2606382.54
518	DITCH CL	350434.26	2605931.74
519	DITCH CL	350437.44	2606019.60
520	DITCH CL	350440.63	2606112.21
521	DITCH CL	350444.84	2606196.01
522	DITCH CL	350442.37	2606153.25
523	DITCH CL	350446.33	2606304.87
524	DITCH CL	350443.51	2606360.85
601	CONCRETE SLAB	350203.10	2605708.94
602	CONCRETE SLAB	350203.16	2605715.94

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA
05/18/2026

SITE CIVIL
LOCATION
COORDINATES

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

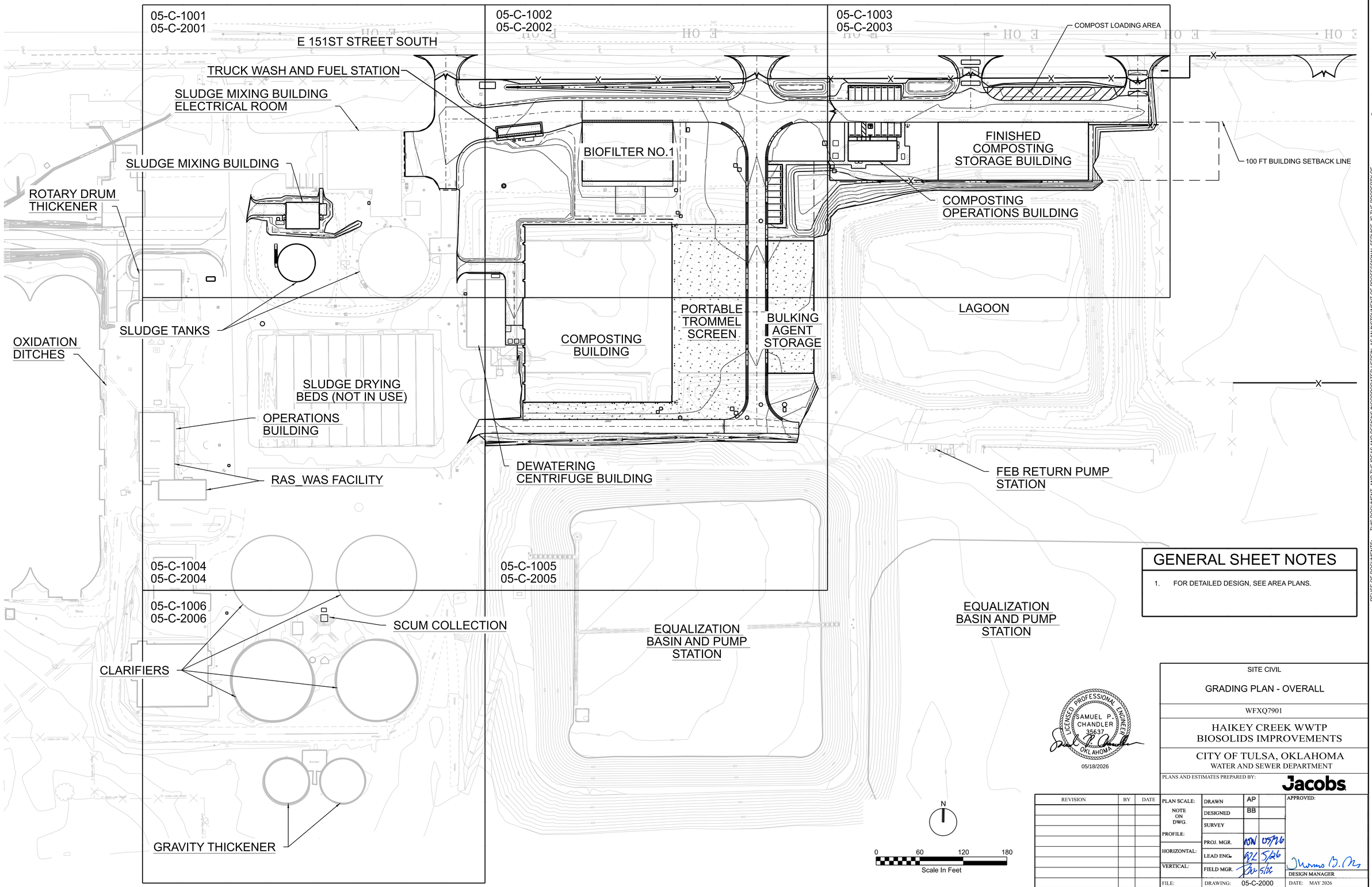
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MW	05/26
LEAD ENG.	RZ	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 05-C-1010
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 51 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:05



GENERAL SHEET NOTES

1. FOR DETAILED DESIGN, SEE AREA PLANS.

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA
05/18/2026

SITE CIVIL

GRADING PLAN - OVERALL

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 05-C-2000
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 52 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 18:00

GENERAL SHEET NOTES

1. FOR GENERAL CIVIL NOTES, SEE DRAWING 01-G-0011.
2. FOR YARD PIPING AND TRENCH RESTORATION, SEE 07-Y DRAWINGS.
3. FOR SITE ELECTRICAL, SEE 09-E DRAWINGS.
4. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER IF FIELD CONDITIONS VARY FROM WHAT IS SHOWN ON THE DRAWINGS.

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COORDINATE TABLE

POINT NO.	DESCRIPTION	NORTHING	EASTING
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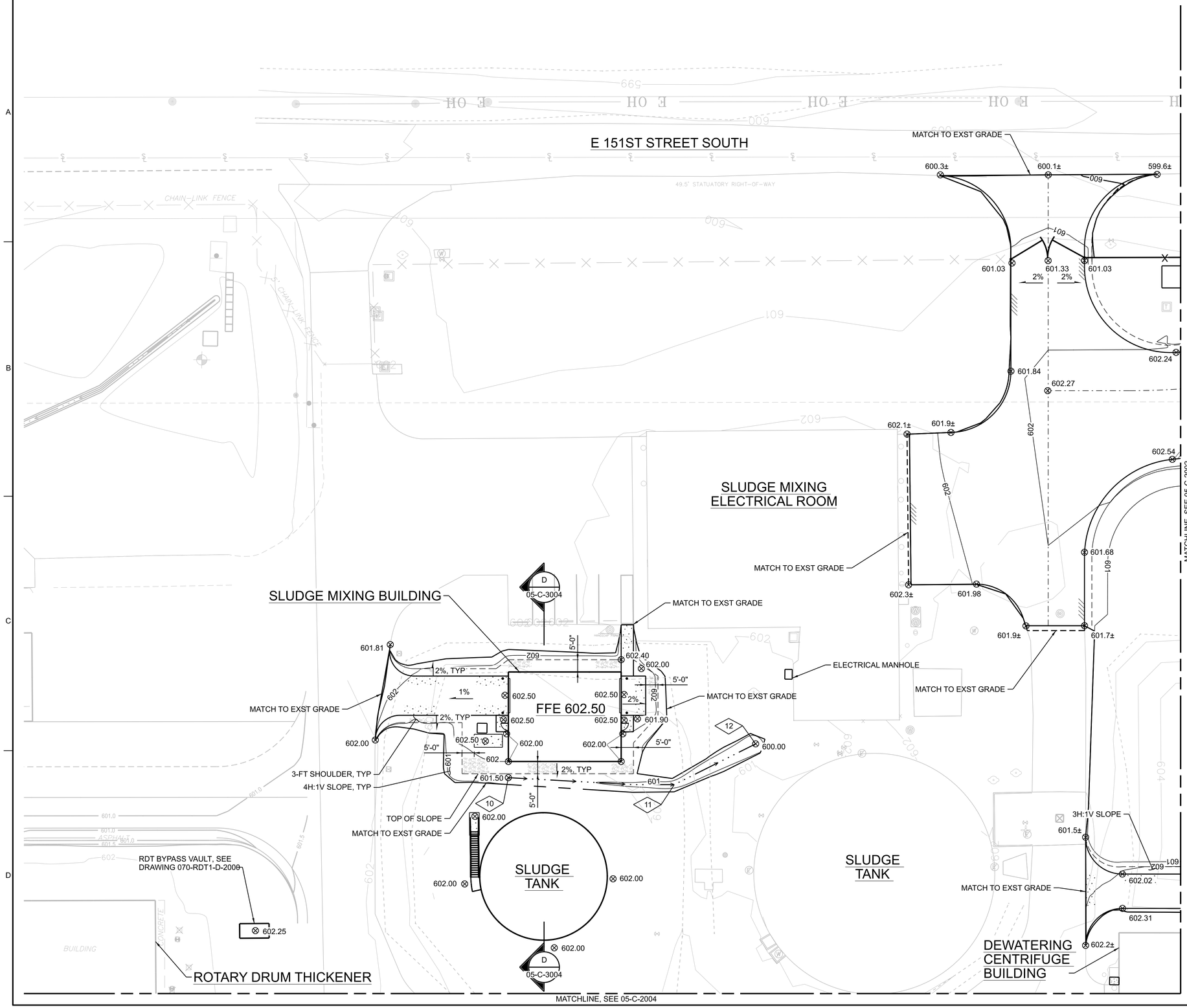
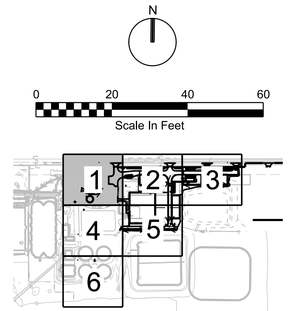
11	CENTER OF DITCH	350716.08	2605720.66
12	CENTER OF DITCH	350733.15	2605753.60





KEY PLAN

SAMUEL P. CHANDLER 35537 LICENSED PROFESSIONAL ENGINEER OKLAHOMA
05/18/2026

SITE CIVIL
GRADING PLAN
AREA 1

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

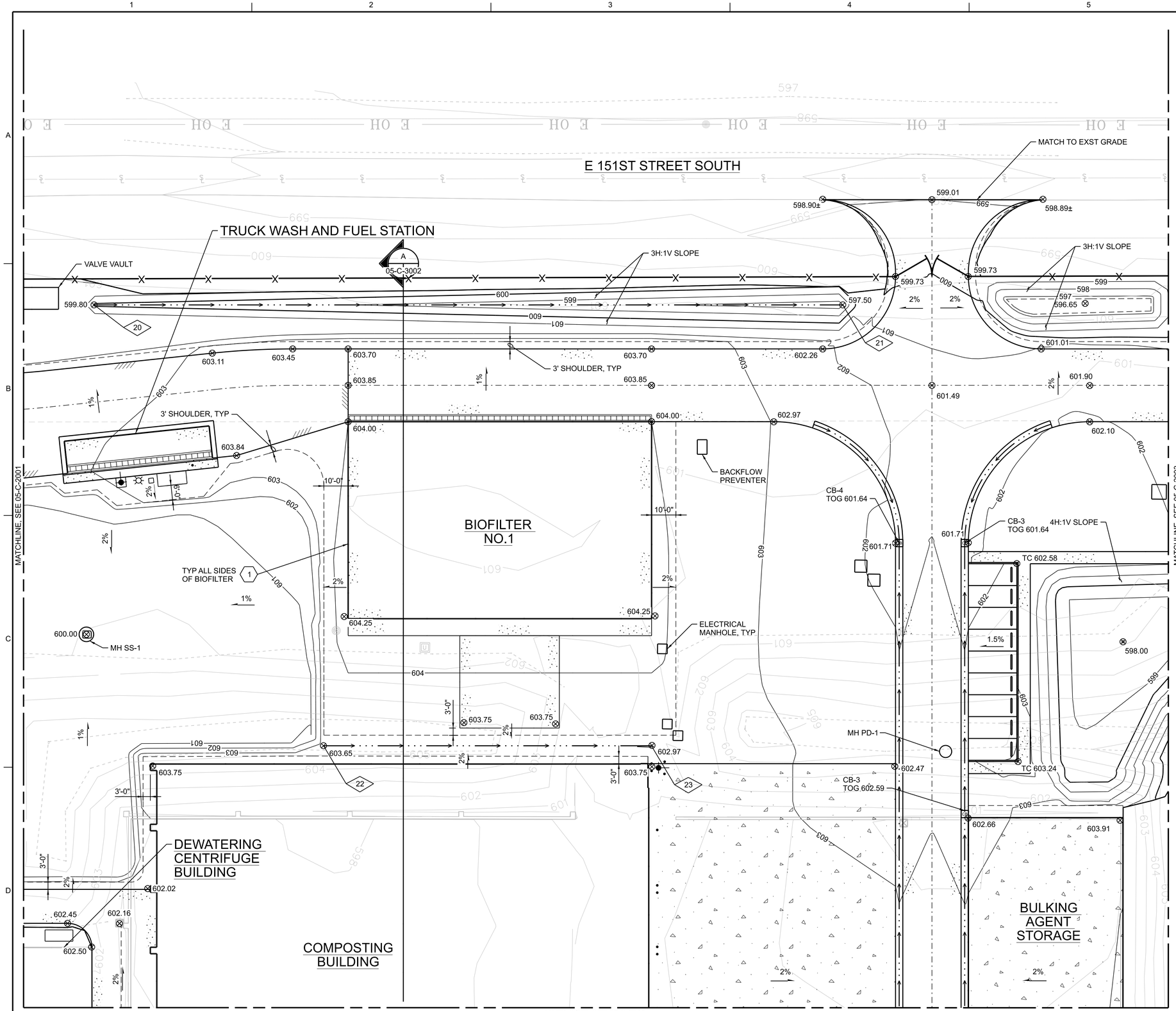
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	AZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 05-C-2001
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 53 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 18:01



GENERAL SHEET NOTES

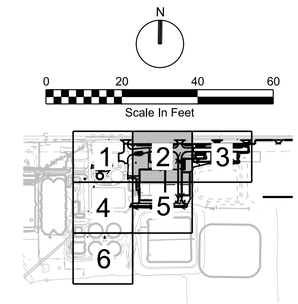
1. FOR GENERAL CIVIL NOTES, SEE DRAWING 01-G-0011.
2. FOR YARD PIPING AND TRENCH RESTORATION, SEE 07-Y DRAWINGS.
3. FOR SITE ELECTRICAL, SEE 09-E DRAWINGS.
4. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER IF FIELD CONDITIONS VARY FROM WHAT IS SHOWN ON THE DRAWINGS.

SHEET KEYNOTES

1. PROPOSED GRADE SHALL MATCH TOP OF CONCRETE ELEVATION ALONG EDGE OF BIOFILTER.

COORDINATE TABLE

POINT NO.	DESCRIPTION	NORTHING	EASTING
20	CENTER OF DITCH	350923.67	2605953.23
21	CENTER OF DITCH	350927.97	2606261.64
22	CENTER OF DITCH	350743.36	2606050.28
23	CENTER OF DITCH	350745.24	2606185.42



KEY PLAN

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA
05/18/2026

SITE CIVIL
GRADING PLAN
AREA 2

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

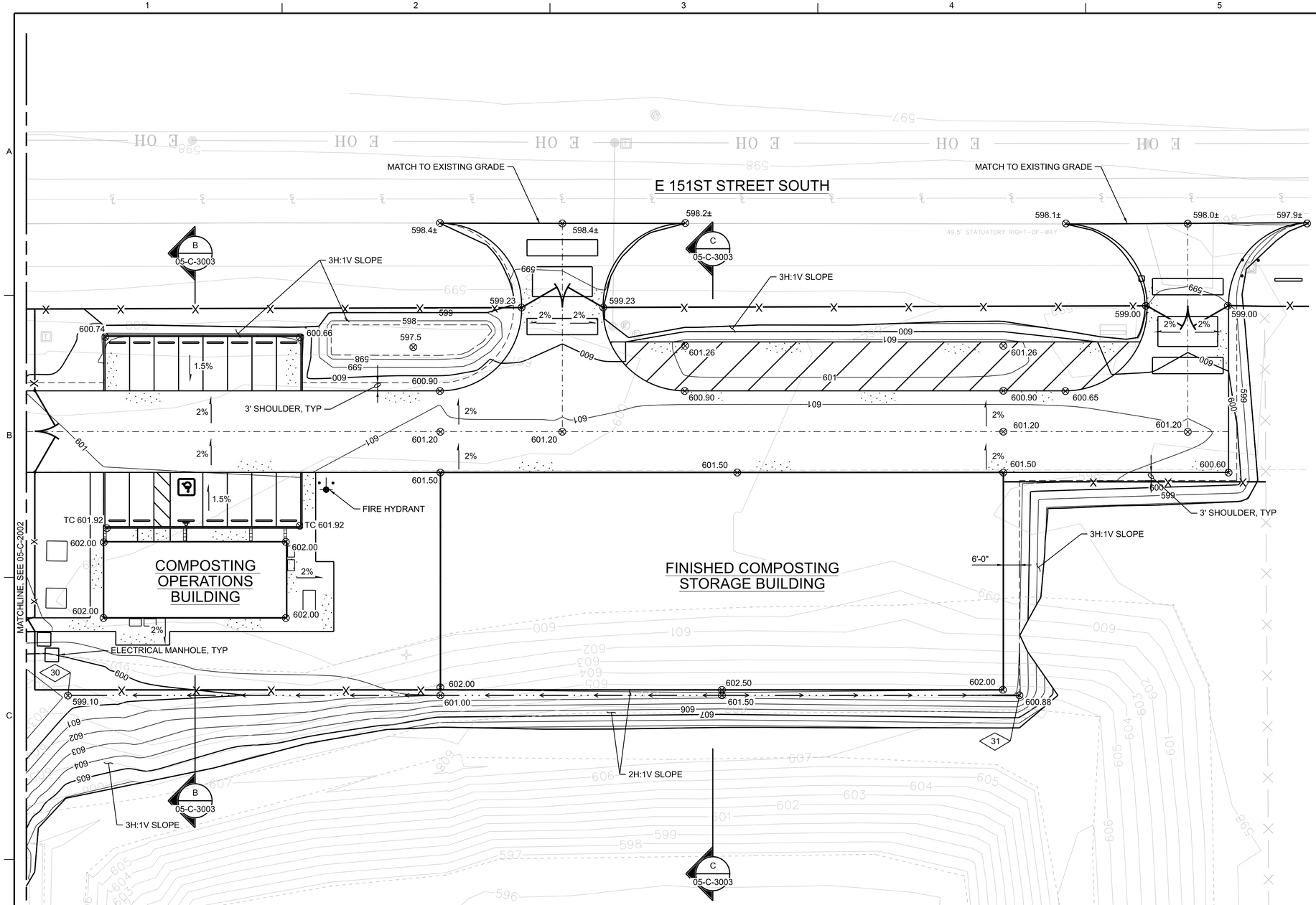
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MW	05/26
LEAD ENG.	AZ	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 05-C-2002
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 54 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 20:51

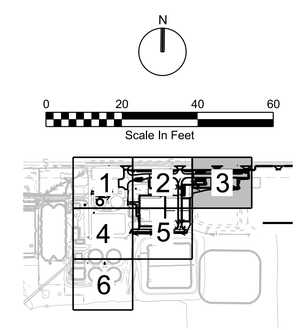


GENERAL SHEET NOTES

1. FOR GENERAL CIVIL NOTES, SEE DRAWING 01-G-0011.
2. FOR YARD PIPING AND TRENCH RESTORATION, SEE 07-Y DRAWINGS.
3. FOR SITE ELECTRICAL, SEE 09-E DRAWINGS.
4. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER IF FIELD CONDITIONS VARY FROM WHAT IS SHOWN ON THE DRAWINGS.

COORDINATE TABLE

POINT NO.	DESCRIPTION	NORTHING	EASTING
30	CENTER OF DITCH	350799.96	2606414.14
31	CENTER OF DITCH	350804.84	2606762.71



KEY PLAN

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OKLAHOMA
05/18/2026

SITE CIVIL
GRADING PLAN
AREA 3

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 05-C-2003
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 55 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:06

MATCHLINE, SEE 05-C-2001

MH PD-2

FFE 603.25

DEWATERING CENTRIFUGE BUILDING

SLUDGE DRYING BEDS (NOT IN USE)

OPERATIONS BUILDING

RAS_WAS FACILITY

CLARIFIER

CLARIFIER

601.7±

MATCH TO EXISTING GRADE

601.0±

599.53

MATCHLINE, SEE 05-C-2005

MATCHLINE, SEE 05-C-2006

CONCRETE

ASPHALT

BUILDING

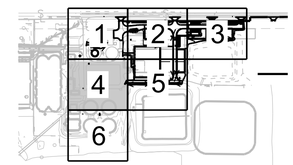
GENERAL SHEET NOTES

1. FOR GENERAL CIVIL NOTES, SEE DRAWING 01-G-0011.
2. FOR YARD PIPING AND TRENCH RESTORATION, SEE 07-Y DRAWINGS.
3. FOR SITE ELECTRICAL, SEE 09-E DRAWINGS.
4. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER IF FIELD CONDITIONS VARY FROM WHAT IS SHOWN ON THE DRAWINGS.

N

0 20 40 60

Scale In Feet



KEY PLAN

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LICENSED PROFESSIONAL ENGINEER
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OKLAHOMA

05/18/2026

SITE CIVIL
GRADING PLAN
AREA 4

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN	05/26
HORIZONTAL:	LEAD ENG.	AZL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 05-C-2004		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 56 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:06

MATCHLINE, SEE 05-C-2002

MATCHLINE, SEE 05-C-2001

COMPOSTING BUILDING

DEWATERING CENTRIFUGE BUILDING

BULKING AGENT STORAGE

EQUALIZATION BASIN & PUMP STATION

FIRE HYDRANT

ELECTRICAL MANHOLE, TYP

MH PD-2

MH SD-2

MH SD-1

PD CB-2 TOG 602.53

CB-1 TOG 602.25

CB-2 TOG 602.20

PDPS WET WELL

MATCH TO EXISTING GRADE

CONC. DITCH

CONC.

A 05-C-3001

A 05-C-3002

GENERAL SHEET NOTES

1. FOR GENERAL CIVIL NOTES, SEE DRAWING 01-G-0011.
2. FOR YARD PIPING AND TRENCH RESTORATION, SEE 07-Y DRAWINGS.
3. FOR SITE ELECTRICAL, SEE 09-E DRAWINGS.
4. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER IF FIELD CONDITIONS VARY FROM WHAT IS SHOWN ON THE DRAWINGS.

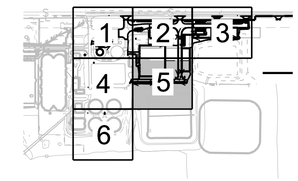
COORDINATE TABLE

POINT NO.	DESCRIPTION	NORTHING	EASTING
50	GRADE BREAK	350617.69	2606187.69
51	GRADE BREAK	350619.08	2606287.69
52	GRADE BREAK	350619.50	2606317.79
53	GRADE BREAK	350620.37	2606380.01
54	CENTER OF DITCH	350443.51	2606360.85
55	CENTER OF DITCH	350446.33	2606304.87
56	CENTER OF DITCH, GRADE BREAK	350442.37	2606153.25
57	CENTER OF DITCH, GRADE BREAK	350437.44	2606019.60

N

0 20 40 60

Scale In Feet



KEY PLAN

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LICENSED PROFESSIONAL ENGINEER
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35637
OKLAHOMA

05/18/2026

SITE CIVIL
GRADING PLAN
AREA 5

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:
FILE:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/18/26
LEAD ENG.		5/18/26
FIELD MGR.		5/18/26

DRAWING: 05-C-2005

ATLAS PAGE NO: 3328

APPROVED:

DESIGN MANAGER

DATE: MAY 2026

SHEET 57 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 18:01

MATCHLINE, SEE 05-C-2004

CLARIFIER

CLARIFIER

ELECTRICAL MANHOLE

1

2

SCUM COLLECTION

CONCRETE

DISINFECTION

CLARIFIER

CLARIFIER

GRAVEL

GRAVEL

GRAVEL

GRAVEL

ASPHALT

ASPHALT

BUILDING

GRAVITY THICKENER

GENERAL SHEET NOTES

1. FOR GENERAL CIVIL NOTES, SEE DRAWING 01-G-0011.
2. FOR YARD PIPING AND TRENCH RESTORATION, SEE 07-Y DRAWINGS.
3. FOR SITE ELECTRICAL, SEE 09-E DRAWINGS.
4. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER IF FIELD CONDITIONS VARY FROM WHAT IS SHOWN ON THE DRAWINGS.

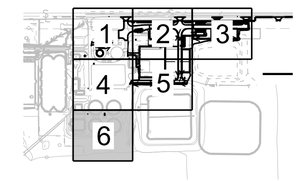
SHEET KEYNOTES

1. CONTRACTOR TO FIELD VERIFY ELEVATION OF EXISTING GRADE. TOP OF CONCRETE OF NEW VAULT SHALL BE 6 INCHES ABOVE SURROUNDING GRADE.
2. TOP OF CONCRETE SHALL BE FLUSH WITH EXISTING STRUCTURE.

N

0 20 40 60

Scale In Feet



KEY PLAN

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LICENSED PROFESSIONAL ENGINEER
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05/18/2026

SITE CIVIL
GRADING PLAN
AREA 6

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

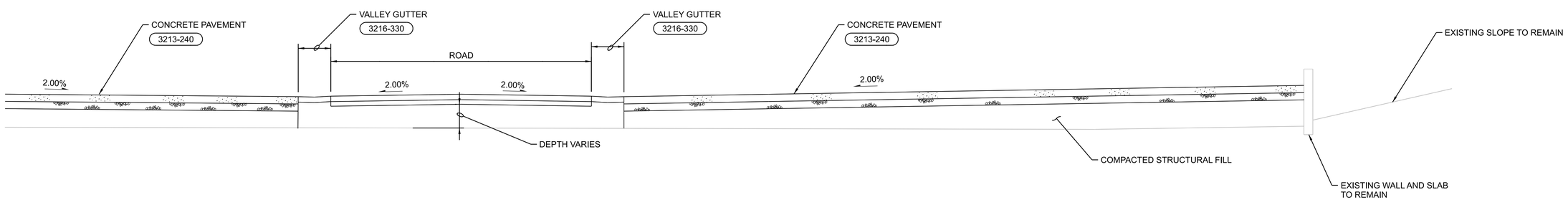
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
PROFILE:	DESIGNED	BB		
	SURVEY			
HORIZONTAL:	PROJ. MGR.	MN	05/26	
	LEAD ENG.	SZ	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 05-C-2006			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 58 OF 300 SHEETS

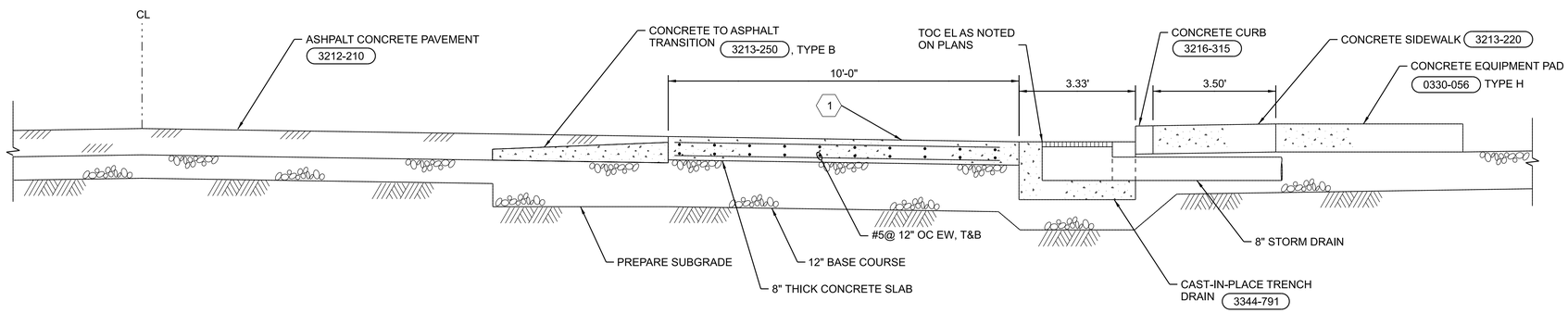
PLOT DATE: 12-MAY-2026 PLOT TIME: 13:05



A TYPICAL ROAD SECTION AT BULKING AGENT STORAGE

1"=5'-0"

05-C-2005



B TRUCK WASH SECTION

1/2"=1'-0"

05-C-1002

NOTES:

1. PROVIDE CONTROL JOINTS EVERY 15' MAX.

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LICENSED PROFESSIONAL ENGINEER
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35637
OKLAHOMA

05/18/2026

SITE CIVIL
SECTIONS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

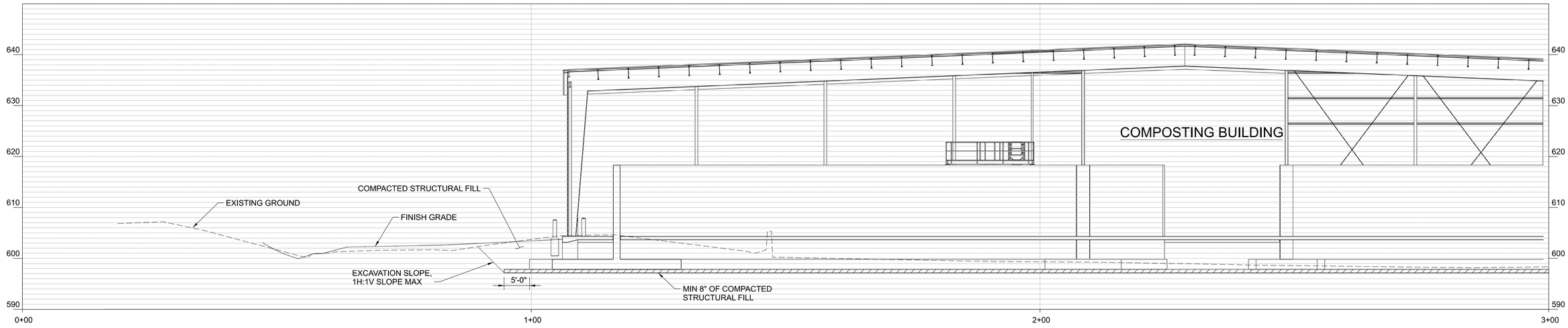
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

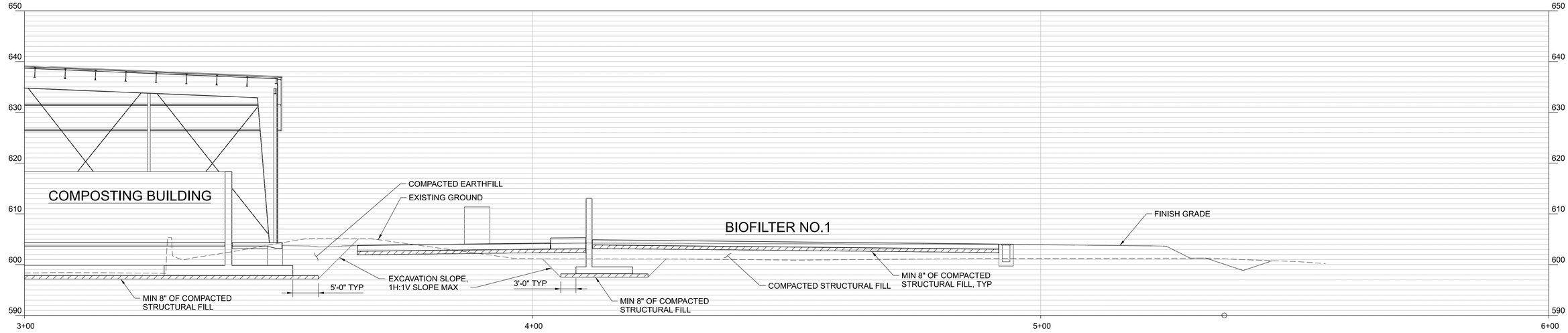
DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 05-C-3001
ATLAS PAGE NO: 3328
SHEET 59 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:06





A SECTION
H:1"=10'-0"
V:1"=10'-0"

05-C-2002
05-C-2005

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P CHANDLER
35637
OKLAHOMA

05/18/2026

REVISION	BY	DATE

SITE CIVIL
SECTIONS

WFXQ7901

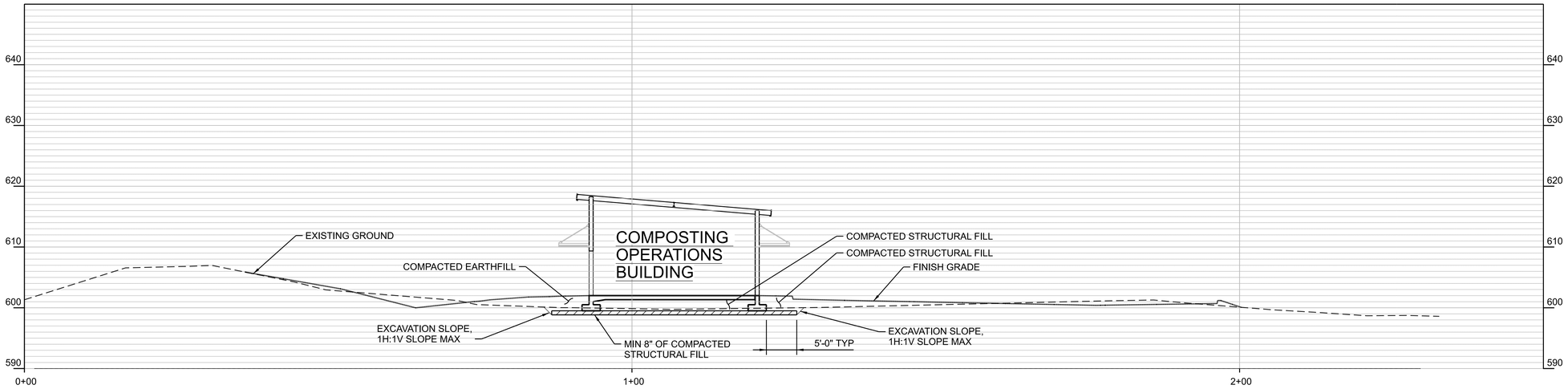
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

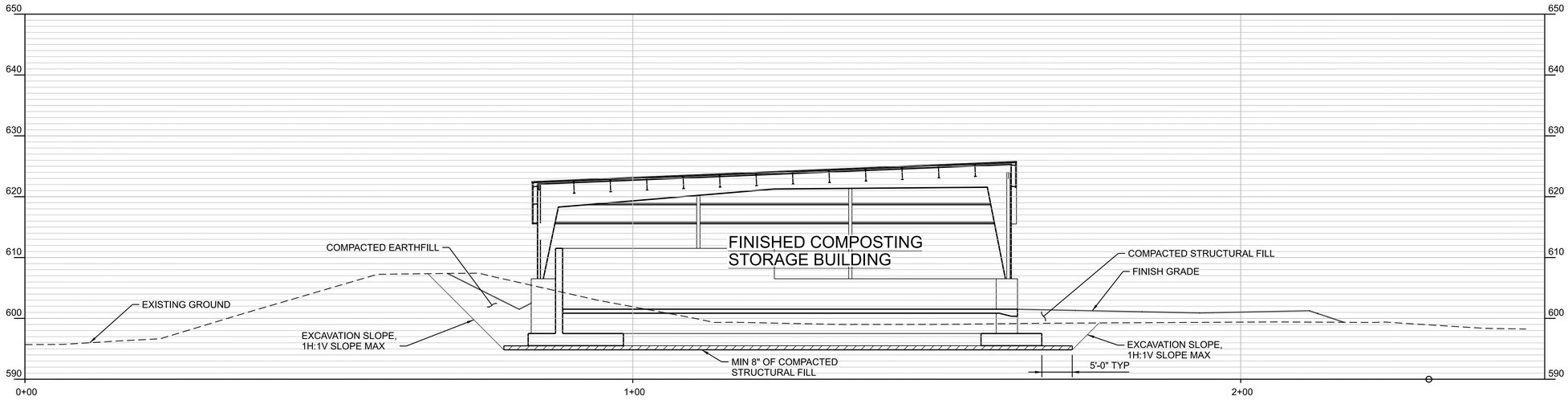
PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	AZL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 05-C-3002			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 60 OF 300 SHEETS

PLOT DATE: 05\12\2026 PLOT TIME: 11:48:43 AM



B SECTION
H:1"=10'-0"
V:1"=10'-0"
05-C-2003



C SECTION
H:1"=10'-0"
V:1"=10'-0"
05-C-2003

LICENSED PROFESSIONAL ENGINEER
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OKLAHOMA
05/18/2026

SITE CIVIL
SECTIONS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RJL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 05-C-3003
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 61 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:07

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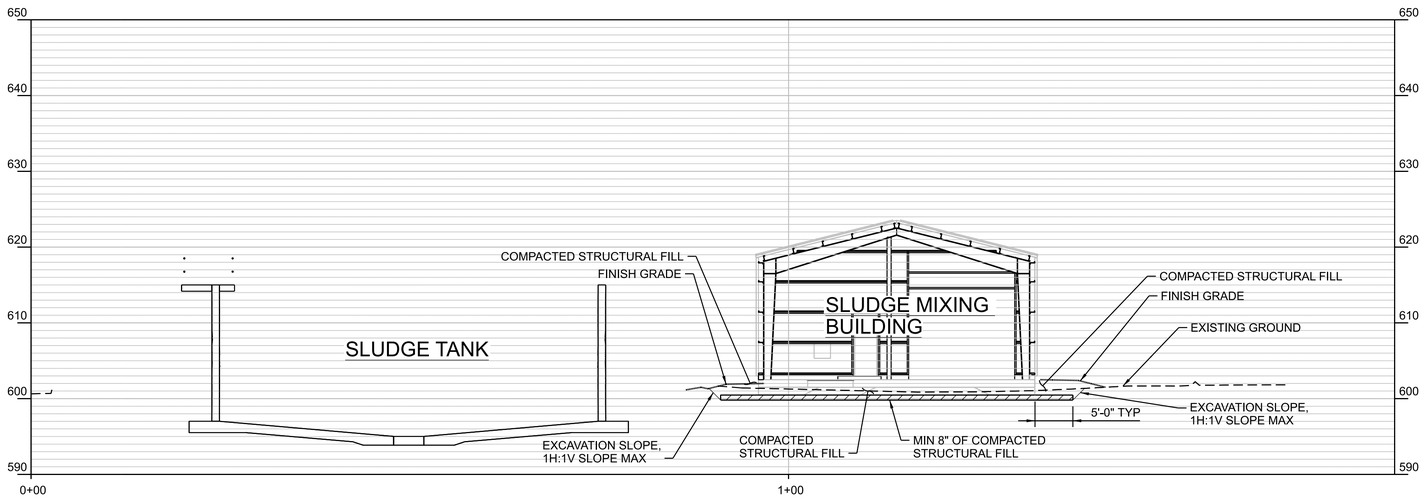

D SECTION

H:1"=10'-0"
V:1"=10'-0"

05-C-2001

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LICENSED PROFESSIONAL ENGINEER
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OKLAHOMA

05/18/2026

SITE CIVIL
SECTIONS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

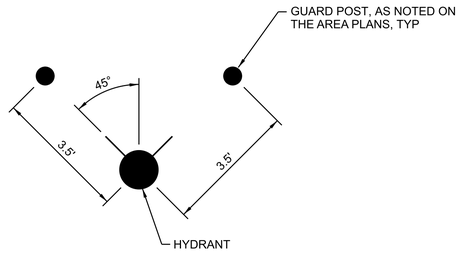
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

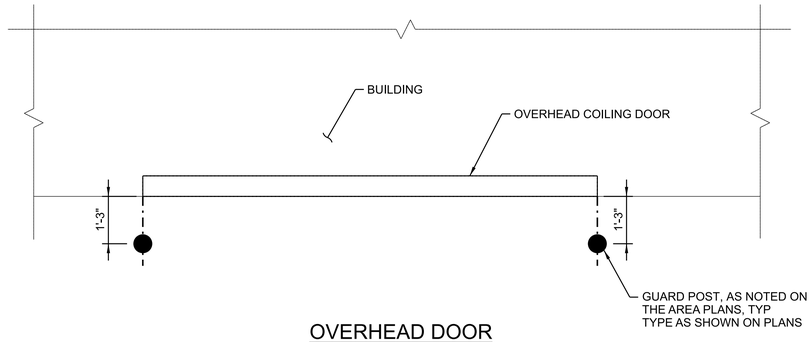
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MSN	05/7/26	
HORIZONTAL:	LEAD ENG.	SJC	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 05-C-3004			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 62 OF 300 SHEETS

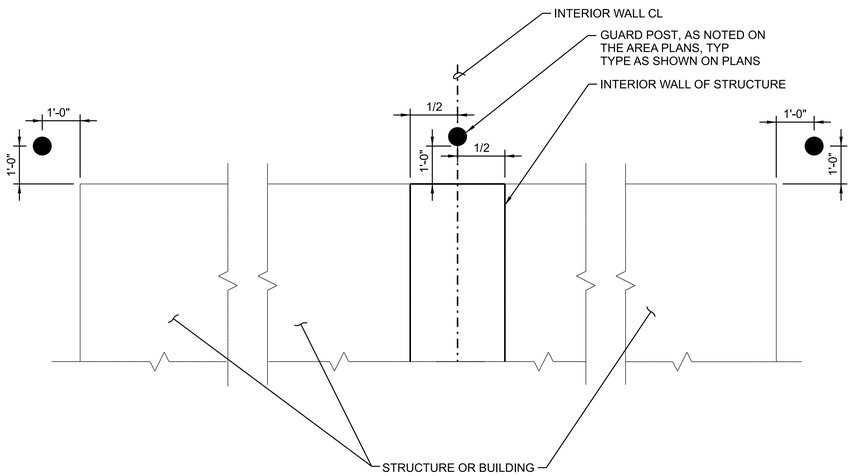
PLOT DATE: 12-MAY-2026 PLOT TIME: 13:07



HYDRANT



OVERHEAD DOOR



INTERIOR WALL OR STRUCTURE/EQUIPMENT CORNER

1 GUARD POST LAYOUT

NTS

05-C-1001
05-C-1002
05-C-1003

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA
05/18/2026

SITE CIVIL
DETAILS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

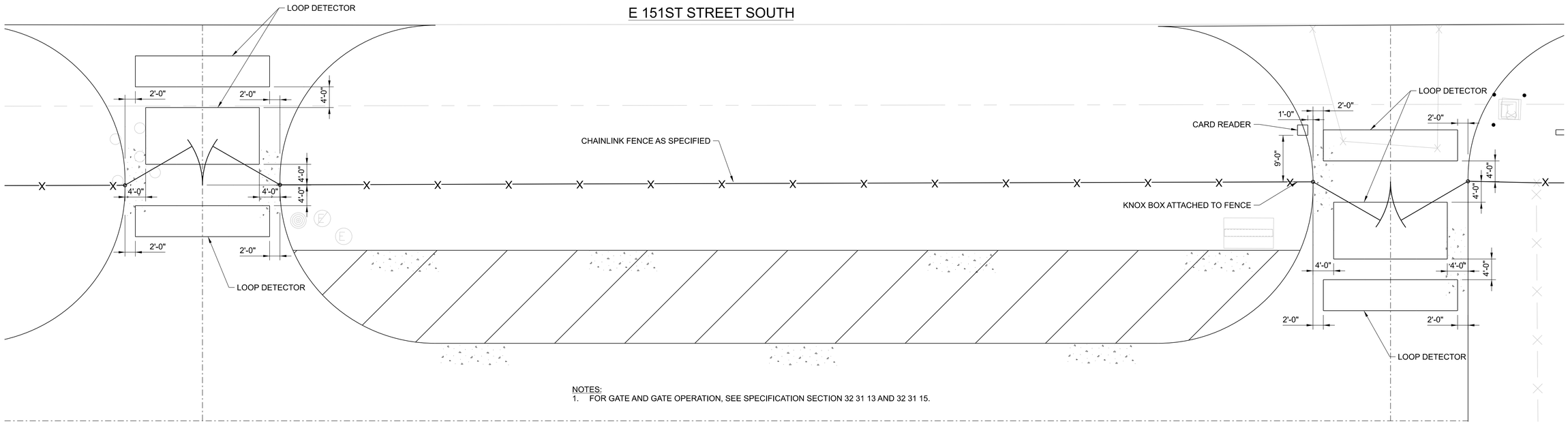
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	SJC	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 05-C-5001			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 63 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 18:00



NOTES:
1. FOR GATE AND GATE OPERATION, SEE SPECIFICATION SECTION 32 31 13 AND 32 31 15.

WEST ENTRANCE

EAST ENTRANCE

2 GATED ENTRANCE

1"=10'-0"

05-C-1003

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA
05/18/2026

SITE CIVIL
DETAILS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

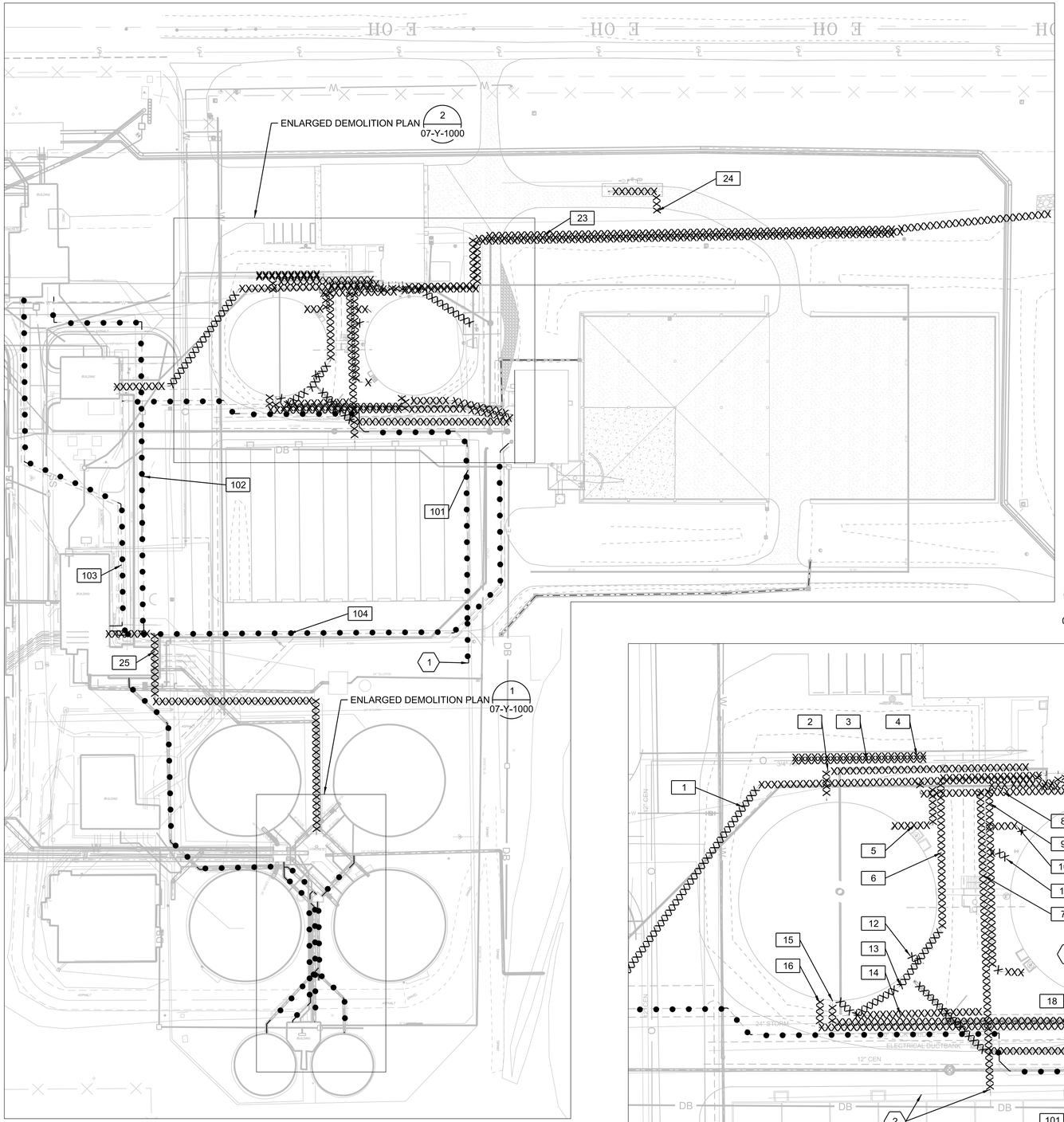
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MSN	05/7/26	
HORIZONTAL:	LEAD ENG.	SJC	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 05-C-5002			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 64 OF 300 SHEETS

PLOT DATE: 05\11\2026 PLOT TIME: 2:19:33 PM



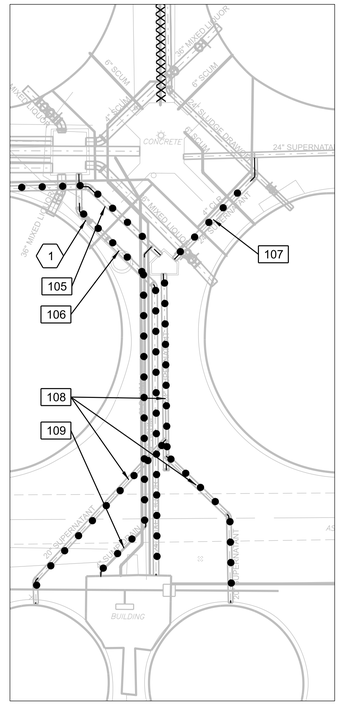
OVERALL DEMOLITION PLAN

1"=60'

N

0 60 120 180

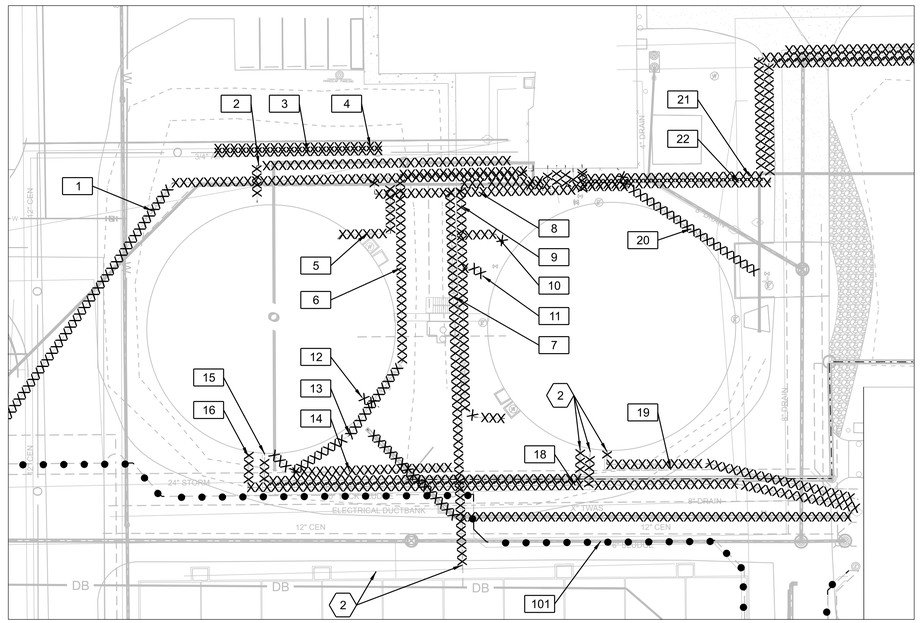
Scale In Feet



1 ENLARGED DEMOLITION PLAN

1"=30'-0"

07-Y-1000



2 ENLARGED DEMOLITION PLAN

1"=30'-0"

07-Y-1000

GENERAL SHEET NOTES

1. SEE CIVIL FOR DEMOLITION OF STRUCTURES.

SHEET KEYNOTES

1. CLOSE VALVE AND CAP UPSTREAM PIPE. CONSTRUCT THRUST BLOCK PER 3311-765.
2. CAP PIPE 1' OUTSIDE FACILITY OR TEE AS SHOWN.
3. DEMO PIPING BETWEEN SPLITTER BOXES IF DRYING BED LOCATION IS DEMOLISHED AND USED FOR CONTRACTOR STAGING AREA.

DEMO PIPELINE

LINE NO.	SIZE	SERVICE	TYPE	DESCRIPTION
1	6"	THICKENED SLUDGE	PVC	FROM SLUDGE THICKENER BUILDING TO SLUDGE MANAGEMENT CENTER (THIS LINE IS TO REMAIN IN SERVICE UNTIL THE COMPLETION OF THE NEW SLUDGE HOLDING TANK)
2	10"	AIR	DIP	FROM SLUDGE HOLDING TANK TO SLUDGE MANAGEMENT CENTER
3	2"	CITY WATER	CU	DEMO TO EXTENTS SHOWN
4	3/4"	HP AIR	CU	DEMO TO EXTENTS SHOWN
5	8"	SLUDGE RECIRC	PVC	FROM SLUDGE FOLDING TANK 1 TO SLUDGE MANAGEMENT CENTER
6	6"	SLUDGE RECIRC	PVC	FROM SLUDGE HOLDING TANK 1 TO SLUDGE MANAGEMENT CENTER
7	8"	SLUDGE TRANSFER	PVC	FROM DRYING BEDS TO SLUDGE MANAGEMENT CENTER
8	6"	THICKENED SLUDGE	PVC	FROM TEE TO SLUDGE MANAGEMENT CENTER
9	6"	SLUDGE RECIRC	PVC	FROM SLUDGE HOLDING TANK 2 TO SLUDGE MANAGEMENT CENTER
10	8"	OVERFLOW	DIP	FROM SLUDGE HOLDING TANK 2 TO TEE
11	8"	SLUDGE RECIRC	PVC	FROM SLUDGE HOLDING TANK 2 TO TEE
12	8"	SLUDGE RECIRC	PVC	FROM SLUDGE HOLDING TANK 1 TO TEE
13	8"	OVERFLOW	DIP	FROM SLUDGE HOLDING TANK 1 TO TEE
14	8"	SLUDGE TRANSFER	PVC	FROM SLUDGE HOLDING TANK 1 TO TEE
15	6"	SLUDGE	PVC	FROM SLUDGE HOLDING TANK 1 TO TANK 2
16	10"	THICKENED SLUDGE	PVC	FROM SLUDGE HOLDING TANK 1 TO SLUDGE DEWATERING BUILDING
18	6"	SLUDGE	PVC	FROM SLUDGE HOLDING TANK 2 TO TEE
19	10"	THICKENED SLUDGE	PVC	FROM SLUDGE HOLDING TANK 2 TO SLUDGE DEWATERING BUILDING
20	6"	SLUDGE LOADING	PVC	FROM SLUDGE MANAGEMENT CENTER TO LOADING STAND
21	6"	SLUDGE	PVC	FROM SLUDGE MANAGEMENT CENTER TO SLUDGE STORAGE AREA
22	8"	SLUDGE	PVC	FROM SLUDGE MANAGEMENT CENTER TO SLUDGE STORAGE AREA
23	8"	DRAIN	PVC	FROM MANHOLE TO POND DRAIN INLET
24	8"	DRAIN	PVC	FROM TRUCK WASH TO MANHOLE
25	6"	SCUM	DIP	FROM EXISTING SCUM EJECTOR PIT TO WAS
26	6"	SCUM	DIP	FROM CLARIFIER 4 TO SCUM EJECTOR PIT

ABANDON PIPE

LINE NO.	SIZE	SERVICE	TYPE	DESCRIPTION
101	6"	SLUDGE	PVC	FROM VALVE TO RDT FACILITY
102	48"	INFLUENT	RCP	FROM OPERATION BUILDING TO HEADWORKS (REPURPOSE ABANDONED PIPE AS CONDUIT FOR NEW TWAS LINES AS SHOWN IN YARD PIPING PROFILES)
103	36"	INFLUENT	DIP	FROM OPERATION BUILDING TO HEADWORKS
104	12"	FILTRATE	DIP	FROM OPERATION BUILDING TO DEWATERING BUILDING
105	24"	OVERFLOW	DIP	FROM CONTROL CHAMBER NO. 2 TO RAS
106	24"	ML	DIP	FROM GRAVITY THICKENER CONTROL BULDING TO ML JUNCTION
107	24"	OVERFLOW	DIP	FROM CONTROL CHAMBER NO.2 TO DISINFECTION
108	24"	OVERFLOW	DIP	FROM CLARIFIERS TO CONTROL CHAMBER NO. 2
109	4"	SCUM SUCTION	DIP	FROM GRAVITY THICKENER CONTROL BULDING TO ML JUNCTION

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REUSE OF DOCUMENTS:

LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA

05/18/2026

YARD PIPING

DEMOLITION PLAN OVERALL

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

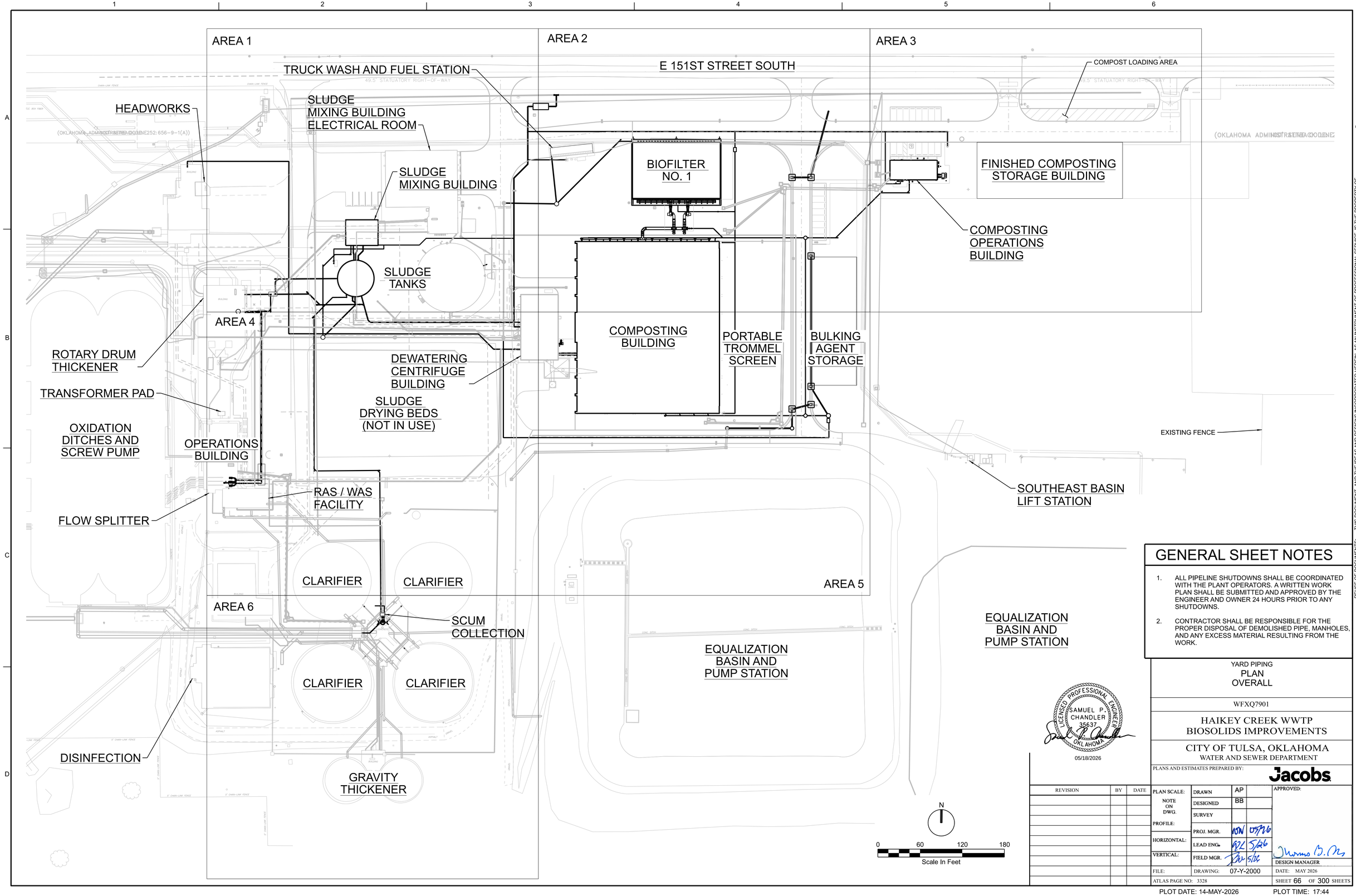
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MW	05/26
HORIZONTAL:	LEAD ENG.	AZ	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 07-Y-1000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 65 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 19:07



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GENERAL SHEET NOTES

1. ALL PIPELINE SHUTDOWNS SHALL BE COORDINATED WITH THE PLANT OPERATORS. A WRITTEN WORK PLAN SHALL BE SUBMITTED AND APPROVED BY THE ENGINEER AND OWNER 24 HOURS PRIOR TO ANY SHUTDOWNS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF DEMOLISHED PIPE, MANHOLES, AND ANY EXCESS MATERIAL RESULTING FROM THE WORK.

YARD PIPING
PLAN
OVERALL

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA
05/18/2026

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MW	05/7/26
LEAD ENG.	RL	5/7/26
FIELD MGR.		5/7/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE:
DRAWING: 07-Y-2000
ATLAS PAGE NO: 3328
SHEET 66 OF 300 SHEETS

PLOT DATE: 14-MAY-2026
PLOT TIME: 17:44

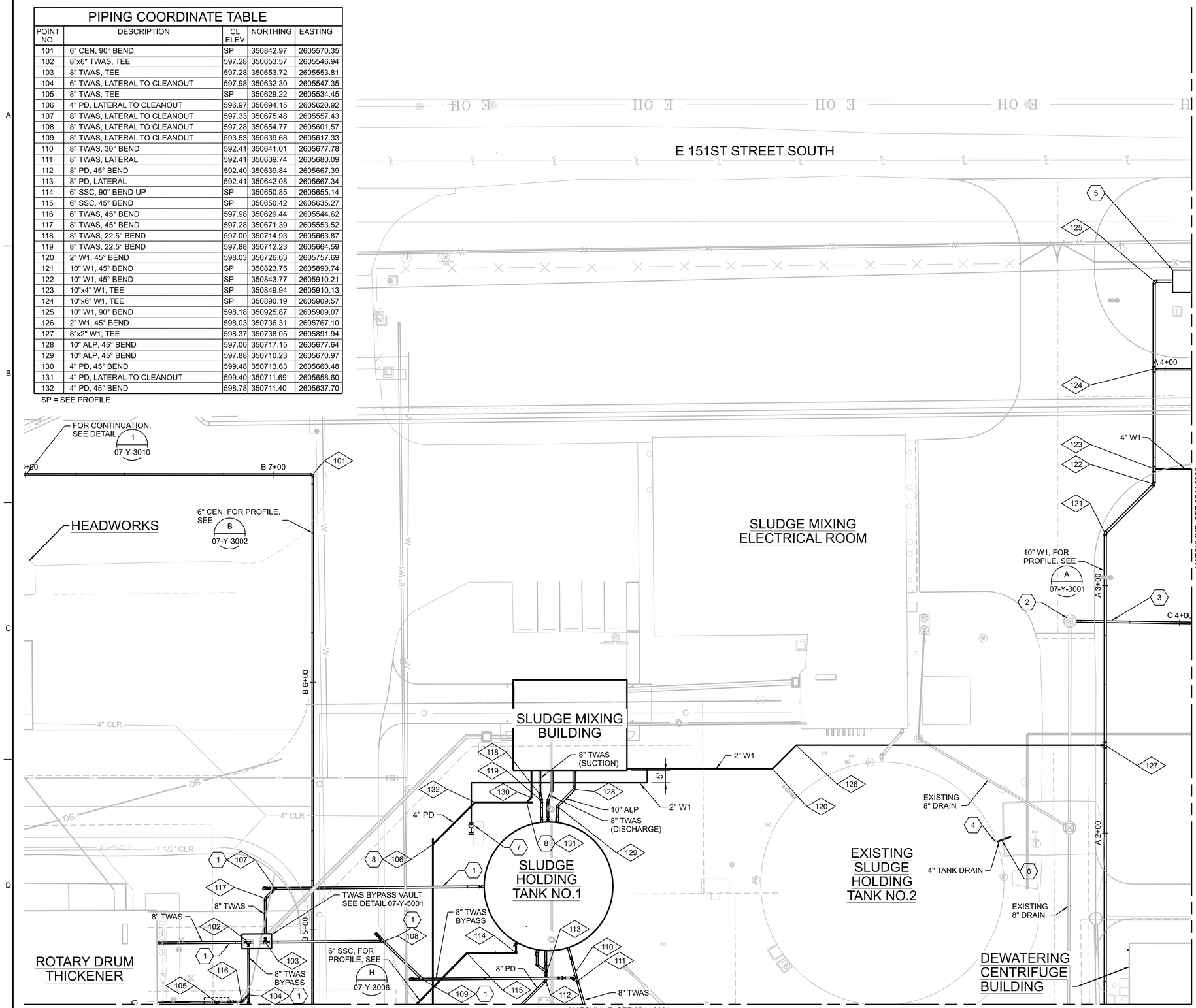
PIPING COORDINATE TABLE

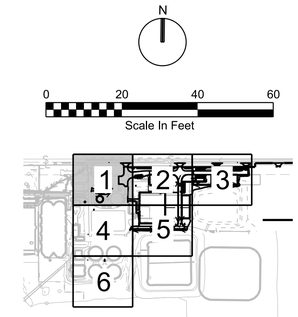
POINT NO.	DESCRIPTION	CL ELEV	NORTHING	EASTING
101	6" CEN, 90° BEND	SP	350842.97	2605570.35
102	8"x6" TWAS, TEE	597.28	350653.57	2605546.94
103	8" TWAS, TEE	597.28	350653.72	2605553.81
104	6" TWAS, LATERAL TO CLEANOUT	597.98	350632.30	2605547.35
105	8" TWAS, TEE	SP	350629.22	2605534.45
106	4" PD, LATERAL TO CLEANOUT	596.97	350694.15	2605620.92
107	8" TWAS, LATERAL TO CLEANOUT	597.33	350675.48	2605557.43
108	8" TWAS, LATERAL TO CLEANOUT	597.28	350654.77	2605601.57
109	8" TWAS, LATERAL TO CLEANOUT	593.53	350639.68	2605617.33
110	8" TWAS, 30° BEND	592.41	350641.01	2605677.78
111	8" TWAS, LATERAL	592.41	350639.74	2605680.09
112	8" PD, 45° BEND	592.40	350639.84	2605667.39
113	8" PD, LATERAL	592.41	350642.08	2605667.34
114	6" SSC, 90° BEND UP	SP	350650.85	2605655.14
115	6" SSC, 45° BEND	SP	350650.42	2605635.27
116	6" TWAS, 45° BEND	597.98	350629.44	2605544.62
117	8" TWAS, 45° BEND	597.28	350671.39	2605553.52
118	8" TWAS, 22.5° BEND	597.00	350714.93	2605663.87
119	8" TWAS, 22.5° BEND	597.88	350712.23	2605664.59
120	2" W1, 45° BEND	598.03	350726.63	2605757.69
121	10" W1, 45° BEND	SP	350823.75	2605890.74
122	10" W1, 45° BEND	SP	350843.77	2605910.21
123	10"x4" W1, TEE	SP	350849.94	2605910.13
124	10"x6" W1, TEE	SP	350890.19	2605909.57
125	10" W1, 90° BEND	598.18	350925.87	2605909.07
126	2" W1, 45° BEND	598.03	350736.31	2605767.10
127	8"x2" W1, TEE	598.37	350738.05	2605891.94
128	10" ALP, 45° BEND	597.00	350717.15	2605677.64
129	10" ALP, 45° BEND	597.88	350710.23	2605670.97
130	4" PD, 45° BEND	599.48	350713.63	2605660.48
131	4" PD, LATERAL TO CLEANOUT	599.40	350711.69	2605658.60
132	4" PD, 45° BEND	598.78	350711.40	2605637.70

SP = SEE PROFILE

SHEET KEYNOTES

1. PROVIDE 45° WYE FOR PRESSURIZED EXTERIOR CLEANOUT 4027-187.
2. CORE DRILL INTO EXISTING MANHOLE PER 3305-730.
3. CROSSING SANITARY SEWER PIPE AND POTABLE WATER LINE SHALL NOT HAVE PIPE JOINTS WITHIN 10' OF CROSSING.
4. CORE DRILL EXISTING TANK 6" ABOVE EXISTING GRADE PER 3305-730
5. INSTALL 10" METER WITH PRESSURE SUSTAINING VALVE ASSEMBLY AND VAULT PER CITY OF TULSA STD. 534
6. INSTALL GATE VALVE V136 SAME SIZE AS PIPE 6" FROM SIDE OF TANK.
7. INSTALL NON-FREEZE POST HYDRANT PER 4027-154.
8. PROVIDE 45° WYE FOR EXTERIOR CLEANOUT PER 3305-740.





KEY PLAN

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA
05/18/2026

YARD PIPING
YARD PIPING PLAN
AREA 1

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:
FILE:
ATLAS PAGE NO: 3328

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MW	05/26
LEAD ENG.	RL	5/26
FIELD MGR.		5/26
DRAWING:	07-Y-2001	

APPROVED:
DESIGN MANAGER
DATE: MAY 2026
SHEET 67 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:45

PIPING COORDINATE TABLE

POINT NO.	DESCRIPTION	CL ELEV	NORTHING	EASTING
201	10" W1, 90° BEND	598.18	350926.43	2605949.66
202	12"x10" W1, TEE	598.18	350942.66	2605949.42
203	6"x4" W1, TEE	599.33	350894.30	2606204.18
204	6" PD, LATERAL TO CLEANOUT	SP	350878.23	2606039.81
205	6" PD	595.84	350855.58	2605943.87
206	4" W1, 90° BEND UP	598.22	350850.71	2605965.39
207	4" W2, TEE	597.48	350780.38	2606205.77
208	2" W2, 45° VERT BEND	601.00	350780.33	2606202.26
209	4" W2, TEE	599.33	350736.45	2606206.38
210	4" PD, LATERAL TO CLEANOUT	SP	350745.18	2606349.60
211	4" PD, LATERAL	591.28	350742.94	2606188.94
212	4" CON, 45° BEND	593.76	350756.07	2606175.44
213	4" W1, 11.25° VERT BEND	597.48	350885.01	2606204.31
214	12" RCP SD OUTLET	597.50	350925.01	2606336.82

SP = SEE PROFILE

SHEET KEYNOTES

1. PROVIDE 45° WYE FOR EXTERIOR CLEANOUT 3305-740.
2. INSTALL NON-FREEZE POST HYDRANT PER 4027-154.
3. CROSSING SANITARY SEWER PIPE AND POTABLE WATER LINE SHALL NOT HAVE PIPE JOINTS WITHIN 10' OF CROSSING.
4. FIELD VERIFY AND CONNECT TO EXISTING 12" WATER LINE HOT TAP USING TAPPING SLEEVE PER CITY OF BROKEN ARROW GUIDELINES.
5. INSTALL 10" METER WITH PRESSURE SUSTAINING VALVE ASSEMBLY AND VAULT PER CITY OF TULSA STANDARD DETAIL 534.
6. INSTALL BACKFLOW PREVENTER ASSEMBLY, SEE DETAIL 3360-120.
7. INSTALL 48" DIAMETER MANHOLE PER SPECIFICATION SECTION 33 05 13B AND CITY OF BROKEN ARROW STANDARD DETAIL STD SS-08.
8. INSTALL PREFABRICATED CULVERT END SECTION PER ODOT STANDARD DETAIL R-30. COORDINATE PIPE OUTLET WITH CIVIL GRADING AND DRAINAGE.

E 151ST STREET SOUTH

EXISTING 12" CITY WATER

TRUCK WASH AND FUEL STATION

BIOFILTER NO.1

DEWATERING CENTRIFUGE BUILDING

COMPOSTING BUILDING

BULKING AGENT STORAGE

202 4

201 10" W1

5

6" W1, FOR PROFILE, SEE A 07-Y-3001

8 214 12" RCP SD OUTLET, IE 597.00

J 1+00

12" RCP SD, FOR PROFILE, SEE J 07-Y-3005

A 5+00 A 6+00 A 7+00 A 8+00

203

1 204

213

4" W1

6

205 206

4" W1

2

C 3+00

8" PD

6" PD, FOR PROFILE, SEE C 07-Y-3003

7, SIM, GRATED MH COVER
MH SS-1
STA 3+69.24
N 350787.90
E 2605951.97
RIM EL 600.00
IE (NE) 596.83 IN
IE (N) 596.66 IN
IE (W) 596.56 OUT

C 2+00 C 4+00

CB-4
STA 2+24.04
N 350830.88
E 2606291.46
TOG EL 601.64
IE (E) 597.43 OUT

CB-3
STA 1+97.44
N 350831.26
E 2606318.45
TOG EL 601.64
IE (W) 597.33 IN
IE (E) 597.23 OUT

J 2+00

12" RCP SD

4" W2

208 207

2" W2

4" CON

212 211

42" FA

D 5+00

4" PD, FOR PROFILE, SEE D 07-Y-3003

4" PD, FOR PROFILE, SEE E 07-Y-3004

E 2+00

D 4+00 E 1+00

3 2 209

7 MH PD-1
STA D 3+85.53 =
STA E 1+00.00
N 350744.58
E 2606306.57
RIM EL 602.73
IE (E) 595.83 IN
IE (W) 590.83 IN
IE (S) 590.63 OUT

3344-780
PD CB-1
N 350718.91
E 2606314.80
TOG EL 602.66
IE 598.63

210 1

12" PD

4" W2

D 3+00

MATCHLINE, SEE 07-Y-2001

MATCHLINE, SEE 07-Y-2003

MATCHLINE, SEE 07-Y-2005

N

0 20 40 60
Scale In Feet

KEY PLAN

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
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OKLAHOMA
05/18/2026

YARD PIPING
YARD PIPING PLAN
AREA 2

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MW	05/26
HORIZONTAL:	LEAD ENG.	AZ	5/26
VERTICAL:	FIELD MGR.		5/26
FILE:	DRAWING: 07-Y-2002		DESIGN MANAGER
ATLAS PAGE NO: 3328			DATE: MAY 2026
			SHEET 68 OF 300 SHEETS

PLOT DATE: 05\15\2026 PLOT TIME: 7:04:05 AM

PIPING COORDINATE TABLE

POINT NO.	DESCRIPTION	CL ELEV	NORTHING	EASTING
301	6"x4" W1, TEE	SP	350897.00	2606417.96
302	6" W1, TEE	596.42	350898.23	2606506.47
303	6" W1, 90° BEND UP	596.42	350876.92	2606506.76
304	2" W1, 90° BEND	596.41	350823.01	2606418.99
305	2" W1, 90° BEND UP	596.41	350823.31	2606440.41
306	4" PD, LATERAL TO CLEANOUT	SP	350810.05	2606412.68
307	4" PD, LATERAL TO CLEANOUT	SP	350810.57	2606450.27
308	4" PD, 45° BEND	SP	350813.64	2606453.28

SP = SEE PROFILE

SHEET KEYNOTES

1. PROVIDE 45° WYE FOR EXTERIOR CLEANOUT 3305-740.
2. FIRE HYDRANT, PER CITY OF BROKEN ARROW STANDARD DRAWING W09 AND STANDARD CONSTRUCTION SPECIFICATION 423.
3. INSTALL BLIND FLANGE.

E 151ST STREET SOUTH

COMPOST LOADING AREA

6" W1, FOR PROFILE, SEE A 07-Y-3001

A 9+00

A 10+00

302

301

3

2-1/2" W1

2 303

305

304

1 307

308

4" PD, FOR PROFILE, SEE E 07-Y-3004

306 1

FINISHED COMPOSTING STORAGE BUILDING

COMPOSTING OPERATIONS BUILDING

LAGOON

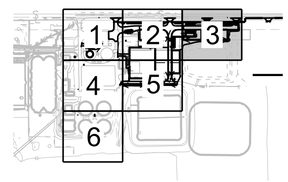
MATCHLINE, SEE 07-Y-2002

MATCHLINE, SEE 07-Y-2005

N

0 20 40 60

Scale In Feet



KEY PLAN

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA

05/18/2026

YARD PIPING

YARD PIPING PLAN AREA 3

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:

DESIGN MANAGER

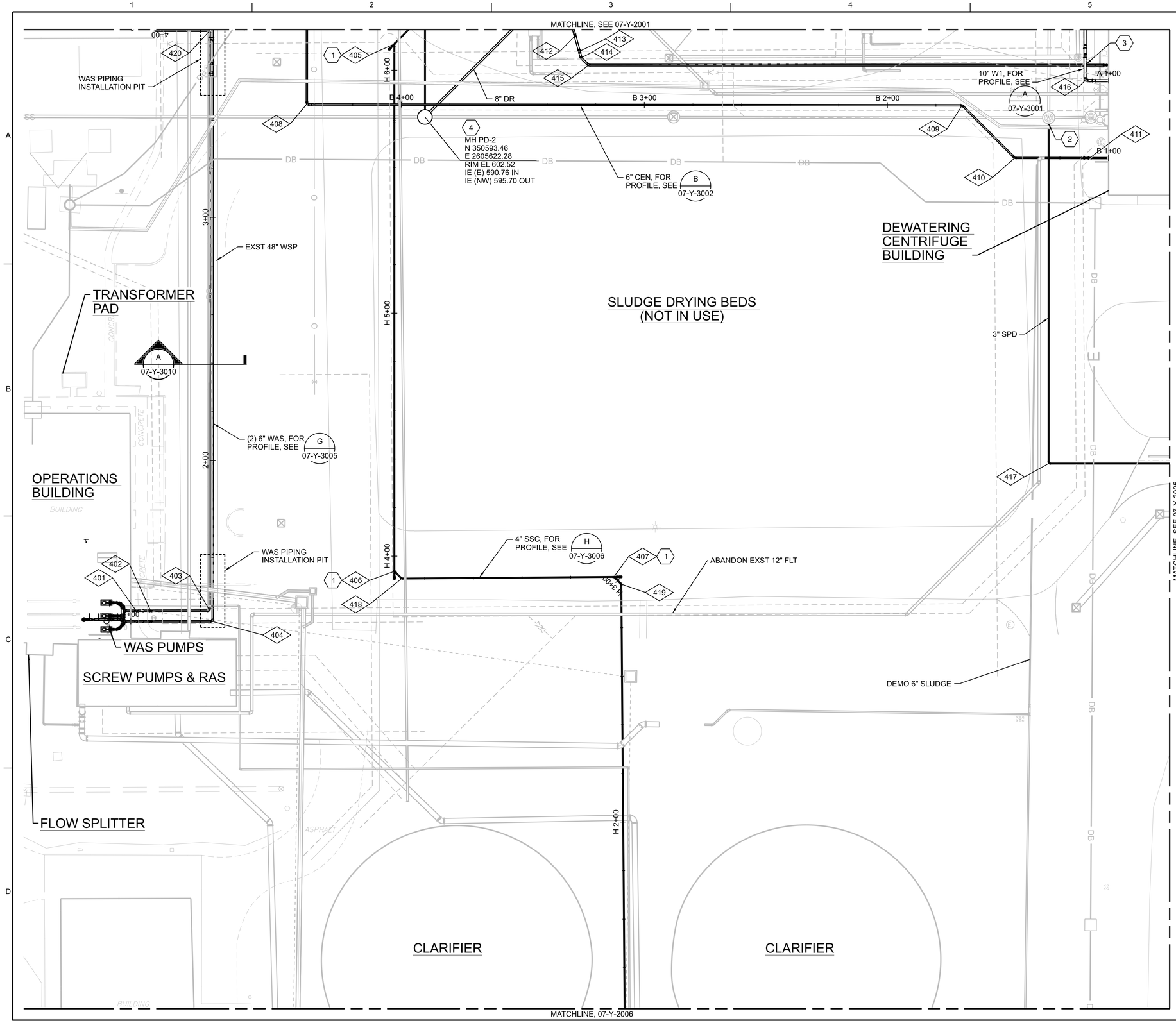
FILE: DRAWING: 07-Y-2003

DATE: MAY 2026

ATLAS PAGE NO: 3328

SHEET 69 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:46



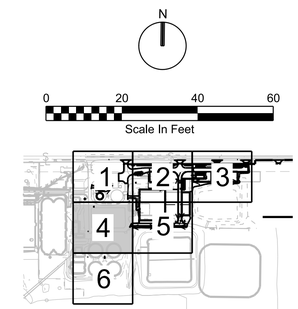
SHEET KEYNOTES

1. PROVIDE 45° WYE FOR PRESSURIZED EXTERIOR CLEANOUT 4027-187.
2. CORE DRILL INTO EXISTING MANHOLE PER 3305-730.
3. CROSSING SANITARY SEWER PIPE AND POTABLE WATER LINE SHALL NOT HAVE PIPE JOINTS WITHIN 10' OF CROSSING.
4. INSTALL 48" DIAMETER MANHOLE PER SPECIFICATION SECTION 33 05 13B AND CITY OF BROKEN ARROW STANDARD DETAILS.

PIPING COORDINATE TABLE

POINT NO.	DESCRIPTION	CL ELEV	NORTHING	EASTING
401	6" WAS, 45° VERT BEND	600.99	350388.61	2605506.28
402	6" WAS, 45° VERT BEND	594.97	350388.69	2605512.25
403	6" WAS, 90° BEND	594.38	350389.05	2605536.56
404	6" WAS, 90° BEND	SP	350384.63	2605537.87
405	4" SSC, LATERAL TO CLEANOUT	SP	350623.27	2605609.28
406	4" SSC, LATERAL TO CLEANOUT	SP	350406.29	2605612.33
407	4" SSC, LATERAL TO CLEANOUT	SP	350405.27	2605702.71
408	6" CEN, 90° BEND	SP	350597.93	2605573.62
409	6" CEN, 45° BEND	SP	350601.34	2605843.29
410	6" CEN, 45° BEND	SP	350579.99	2605865.22
411	6" CEN, 45° VERT BEND	SP	350580.39	2605896.03
412	8" TWAS, 45° VERT BEND	592.41	350627.71	2605683.60
413	8" TWAS, 45° VERT BEND	599.01	350621.36	2605685.45
414	8" TWAS, 30° BEND	599.01	350618.66	2605686.24
415	8" TWAS, 45° BEND	599.01	350615.73	2605689.30
416	10" W1, 90° BEND	SP	350612.24	2605893.71
417	3" SPD, 90° BEND	598.39	350454.41	2605880.92
418	4" SCC, 45° BEND	SP	350403.35	2605615.40
419	4" SCC, 45° BEND	SP	350402.34	2605705.78
420	6" TWAS, 90° BEND	600.00	350627.68	2605533.23

SP = SEE PROFILE



KEY PLAN

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REUSE OF DOCUMENTS:

LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA
05/18/2026

YARD PIPING
YARD PIPING PLAN
AREA 4

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RJL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 07-Y-2004
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 70 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:43

MATCHLINE, SEE 07-Y-2002

MATCHLINE, SEE 07-Y-2004

COMPOSTING BUILDING

DEWATERING CENTRIFUGE BUILDING

BULKING AGENT STORAGE

BULKING AGENT STORAGE

4" W2

4" PD, FOR PROFILE, SEE D 07-Y-3003

12" PD

D 2+00

3344-780
PD CB-2
N 350533.44
E 2606317.38
TOG EL 602.88
IE (N) 596.80 IN
IE (S) 596.70 OUT

1 MH PD-2
STA F 1+00.00 =
STA D 1+32.61
N 350491.68
E 2606310.09
RIM EL 602.69
IE (W) 591.05 IN
IE (N) 588.14 IN
IE (E) 587.94 OUT

12" RCP SD

12" PD

CB-1
STA 2+47.25
N 350508.31
E 2606322.95
TOG EL 602.25
IE (W) 596.54 OUT

2 501

4" PD, FOR PROFILE, SEE F 07-Y-3004

12" RCP SD

PDPS WET WELL
STA D 1+00.00
N 350492.14
E 2606342.70
RIM EL 605.74
IE (W) 587.60 IN

F 2+00

F 1+00

D 1+00

K 1+00

K 2+00

CB-2
STA 2+19.13
N 350501.58
E 2606296.04
TOG EL 602.20
IE (E) 596.41 IN
IE (S) 596.21 OUT

3 EXST CB

EXST 24" SD

MH SD-2
STA 1+00.00
N 350472.86
E 2606204.40
RIM EL 602.59
IE (E) 595.43 IN
EXST IE (W) 595.2± OUT

12" RCP SD, FOR PROFILE, SEE K 07-Y-3005

MH SD-1
STA 1+92.08
N 350474.14
E 2606296.47
RIM EL 602.33
IE (N) 596.08 IN
IE (W) 595.88 OUT

502

3" SPD, 3' MIN COVER

EQUALIZATION BASIN & PUMP STATION

CONC.

HIGH CONC. CURB

SHEET KEYNOTES

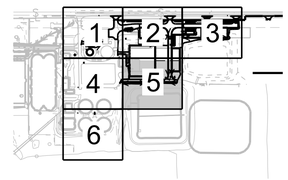
1. INSTALL 48" DIAMETER MANHOLE PER SPECIFICATION SECTION 33 05 13B AND CITY OF BROKEN ARROW STANDARD DETAILS.
2. INSTALL NON-FREEZE POST HYDRANT PER 4027-154.
3. DEMOLISH CATCH BASIN AND UPSTREAM STORM DRAIN PIPING.
4. CONTRACTOR TO FIELD VERIFY LOCATION AND DETERMINE DOWNSTREAM INVERT ELEVATION AND CONFIRM THAT INVERT ELEVATIONS OF PROPOSED STORM DRAIN PIPES WILL WORK.

PIPING COORDINATE TABLE

POINT NO.	DESCRIPTION	CL ELEV	NORTHING	EASTING
501	4" W2, 90° BEND	599.33	350493.46	2606209.77
502	3" SPD, 90° BEND	591.90	350489.73	2606169.85

N

0 20 40 60
Scale In Feet



KEY PLAN

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA
05/18/2026

YARD PIPING
YARD PIPING PLAN
AREA 5

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

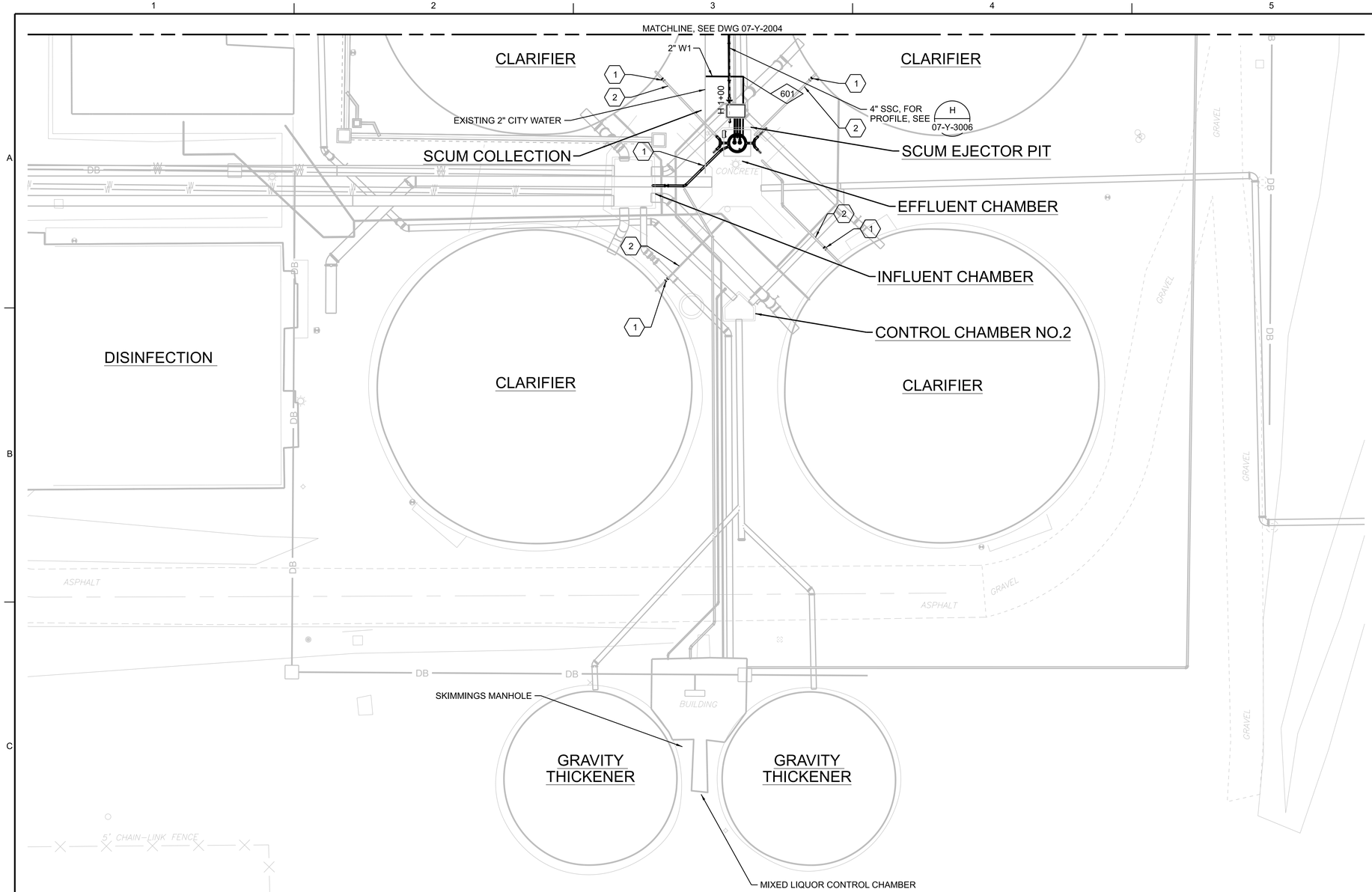
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:
FILE:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MW	05/7/26
LEAD ENG.	RZ	5/7/26
FIELD MGR.		5/7/26

DRAWING: 07-Y-2005

APPROVED:
DESIGN MANAGER
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 71 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:45



SHEET KEYNOTES

1. INSTALL BURIED RESTRAINED MJxMJ GATE VALVE V132 SAME SIZE AS PIPE WITH VALVE BOX PER STANDARD DETAIL 4027-640 AND SECTION 33 05 01 AND 40 27 02.
2. MOVE AND REINSTALL EXISTING CLARIFIER SCUM LINE CLEANOUT DOWNSTREAM OF NEW PLUG VALVE.

PIPING COORDINATE TABLE

POINT NO.	DESCRIPTION	CL ELEV	NORTHING	EASTING
601	2" W1, 90° BEND	602.00	350212.79	2605714.93

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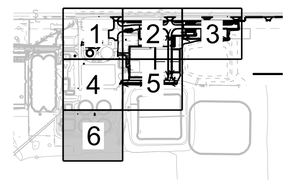
N

0 20 40 60
Scale In Feet



KEY PLAN

LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA
05/18/2026

YARD PIPING
YARD PIPING PLAN
AREA 6

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

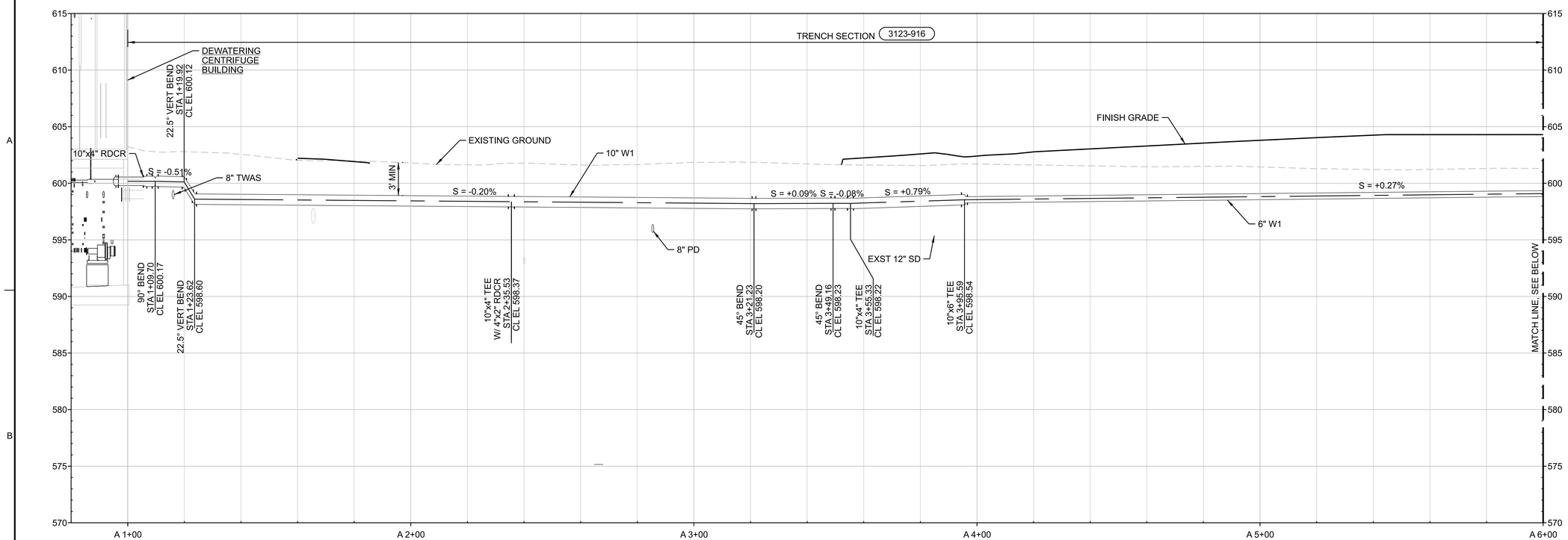
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

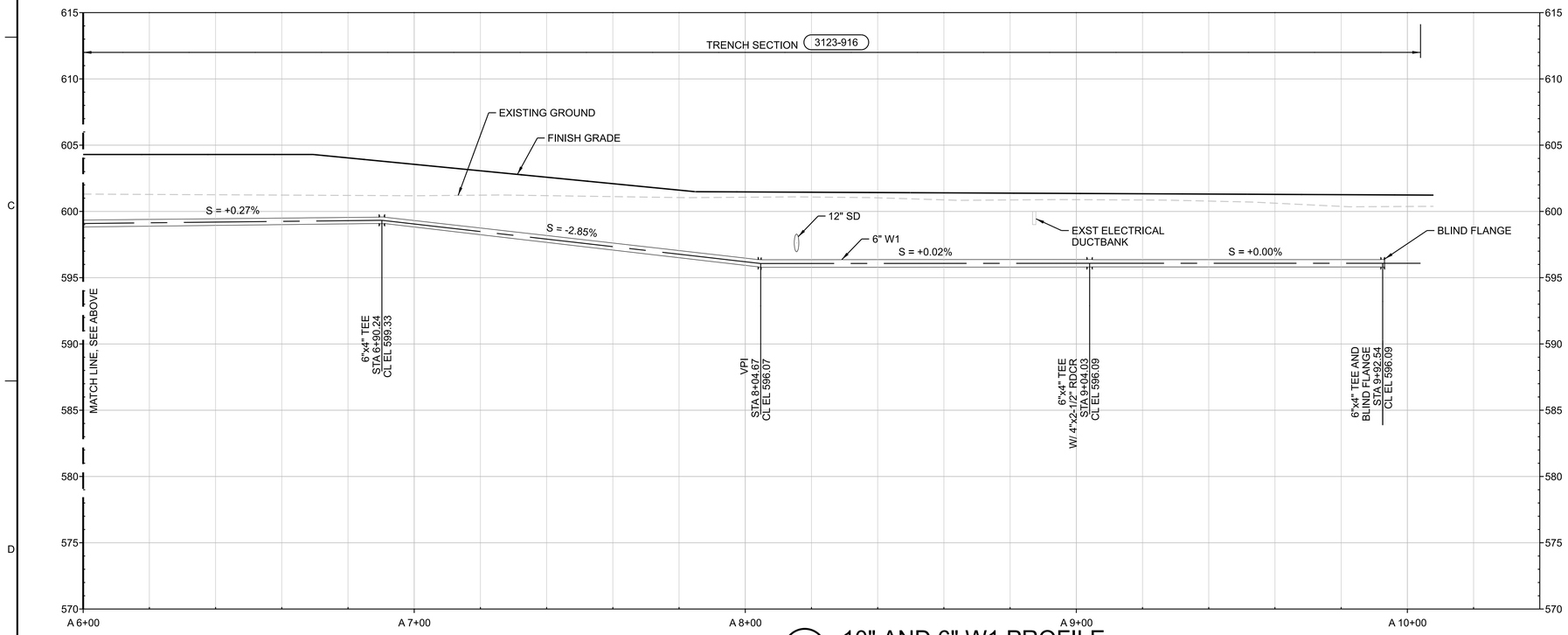
PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	SJL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 07-Y-2006			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 72 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:44





A 10" AND 6" W1 PROFILE

H: 1"=20'-0"
V: 1"=5'-0"

07-Y-2001
07-Y-2002
07-Y-2003
07-Y-2004

GENERAL SHEET NOTES

1. SEE GENERAL NOTES ON DRAWING 07-Y-2000.
2. PIPING SHOWN CONTINUOUS THROUGH STRUCTURES. SEE FACILITY DRAWINGS TO MATCH LOCATION WITH PROCESS PIPING. FIELD VERIFY LOCATION, INVERT ELEVATION AND CONNNECTION TYPE BEFORE ESTABLISHING YARD PIPE HORIZONTAL LOCATION AND VERTICAL GRADES.

YARD PIPING

10" AND 6" W1 PROFILE

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35537
OKLAHOMA
05/18/2026

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN	05/26
HORIZONTAL:	LEAD ENG.	AZL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 07-Y-3001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 73 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 19:01

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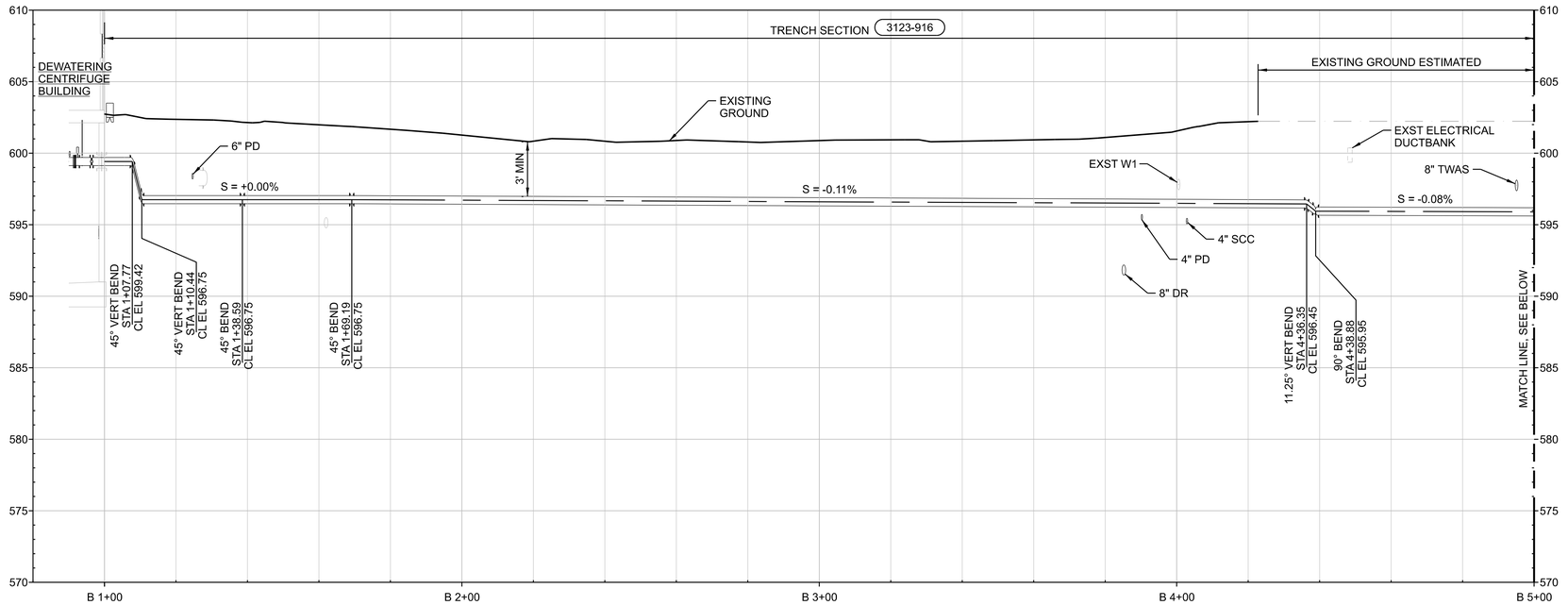
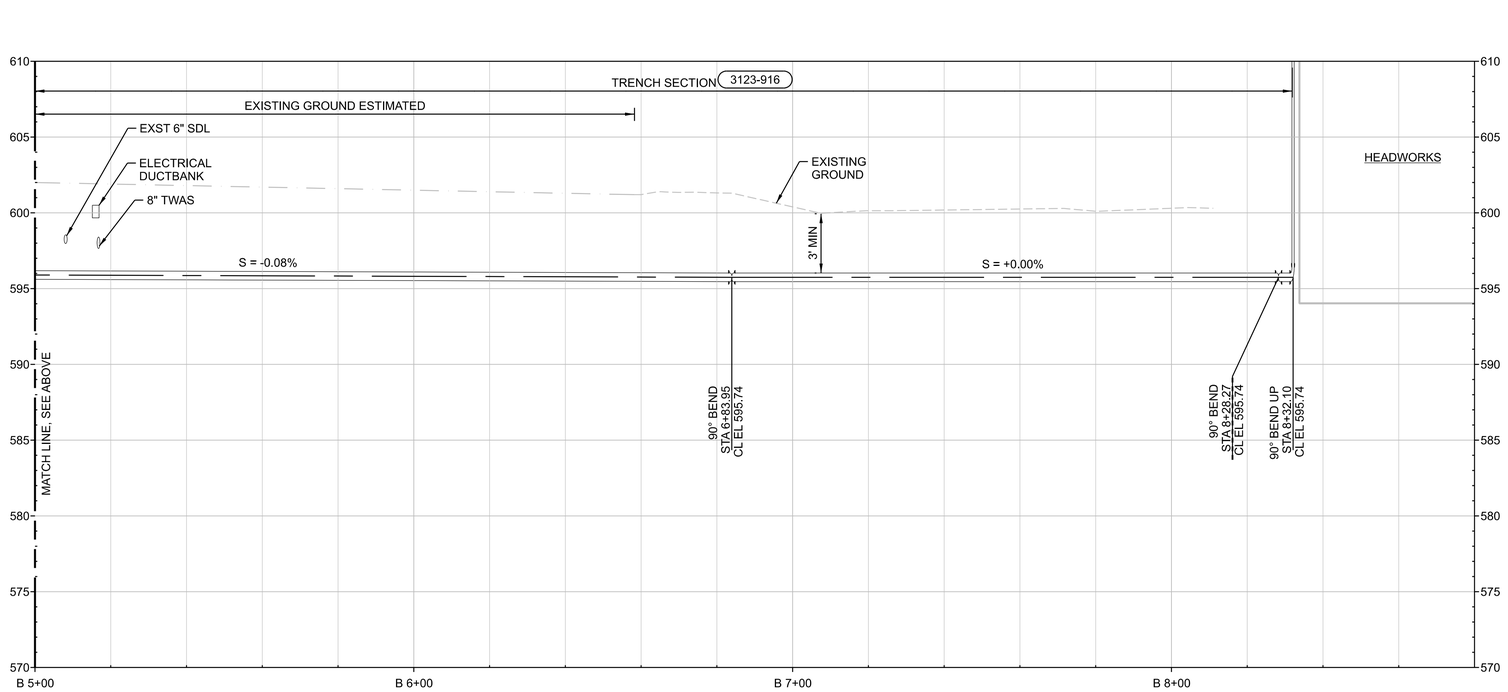
GENERAL SHEET NOTES

1. SEE GENERAL NOTES ON DRAWING 07-Y-2000.
2. PIPING SHOWN CONTINUOUS THROUGH STRUCTURES, SEE FACILITY DRAWINGS TO MATCH LOCATION WITH PROCESS PIPING. FIELD VERIFY LOCATION, INVERT ELEVATION AND CONNNECTION TYPE BEFORE ESTABLISHING YARD PIPE HORIZONTAL LOCATION AND VERTICAL GRADES.





B 6" CEN PROFILE
H: 1"=20'-0"
V: 1"=5'-0"
07-Y-2001
07-Y-2004

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA
05/18/2026

YARD PIPING

6" CEN PROFILE

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

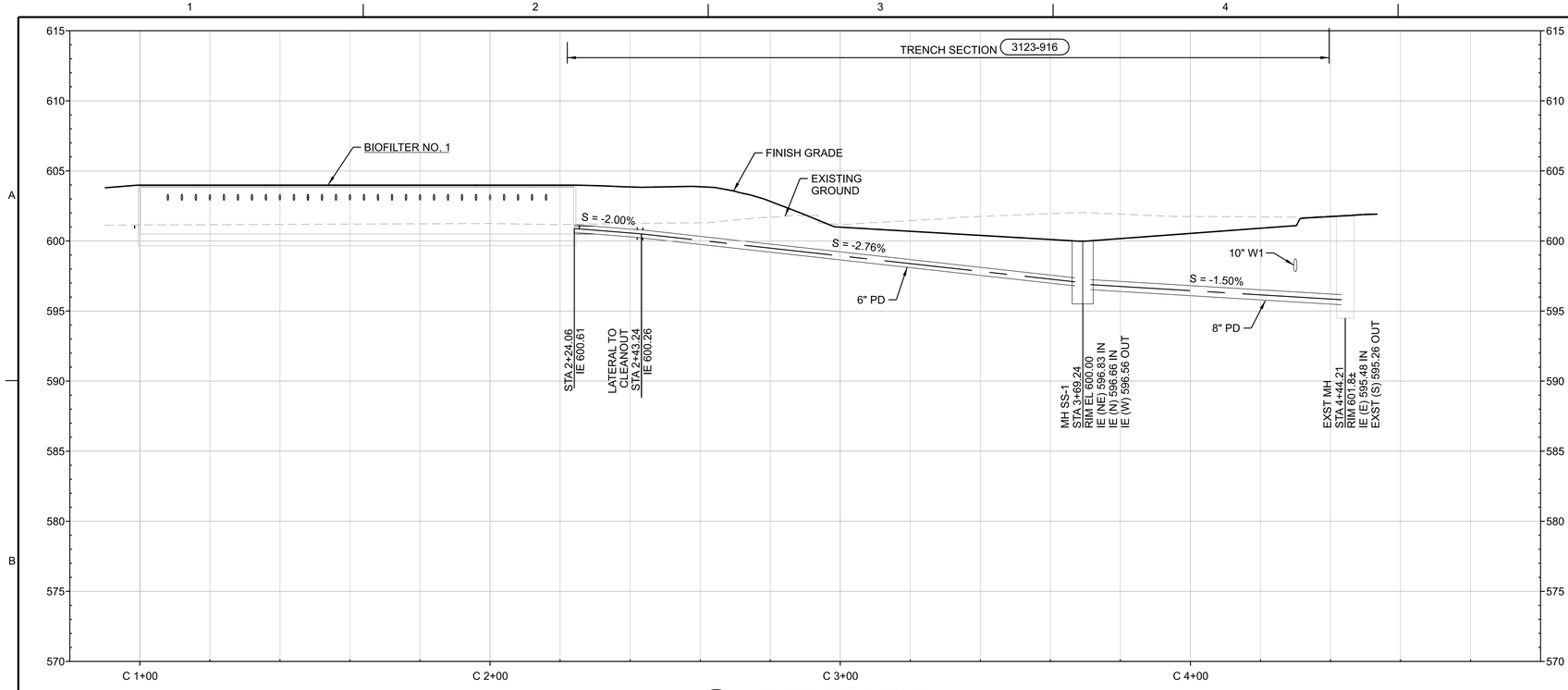
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RJL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 07-Y-3002
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 74 OF 300 SHEETS

PLOT DATE: 05\15\2026 PLOT TIME: 7:25:18 AM



C 8" PD PROFILE

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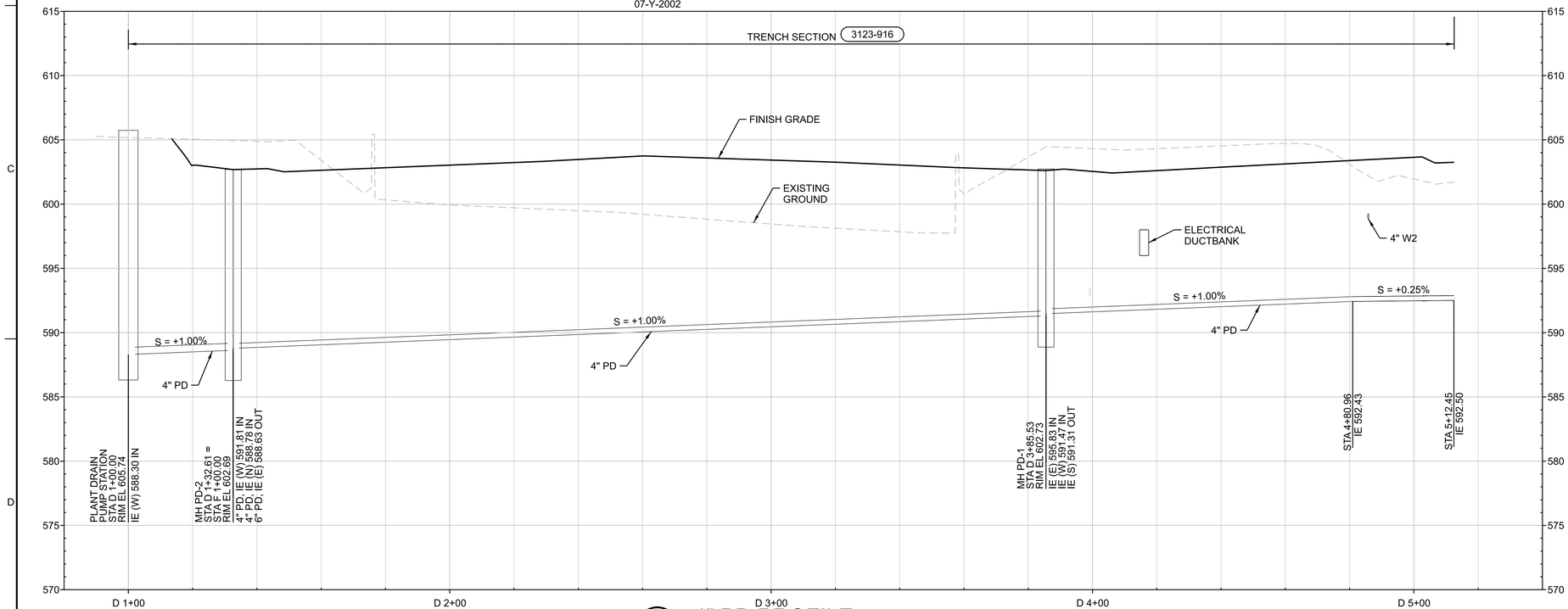
V: 1"=5'-0"

07-Y-2002



D 4" PD PROFILE

H: 1"=20'-0"
V: 1"=5'-0"

07-Y-2002
07-Y-2005

GENERAL SHEET NOTES

1. SEE GENERAL NOTES ON DRAWING 07-Y-2000.
2. PIPING SHOWN CONTINUOUS THROUGH STRUCTURES, SEE FACILITY DRAWINGS TO MATCH LOCATION WITH PROCESS PIPING. FIELD VERIFY LOCATION, INVERT ELEVATION AND CONNNECTION TYPE BEFORE ESTABLISHING YARD PIPE HORIZONTAL LOCATION AND VERTICAL GRADES.
3. ALL MANHOLES SHALL BE 48" DIAMETER PER DETAIL 3305-710.

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35537
OKLAHOMA

05/18/2026

REVISION	BY	DATE

YARD PIPING

8" PD AND 4" PD PROFILES

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

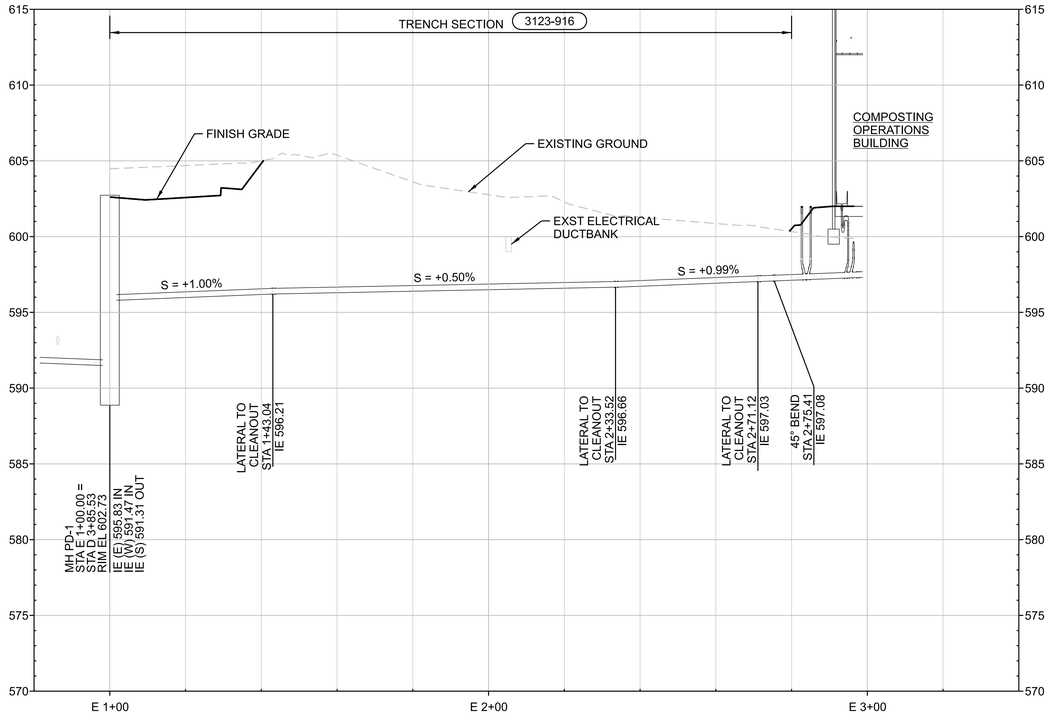
PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	AZL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 07-Y-3003		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 75 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:43

GENERAL SHEET NOTES

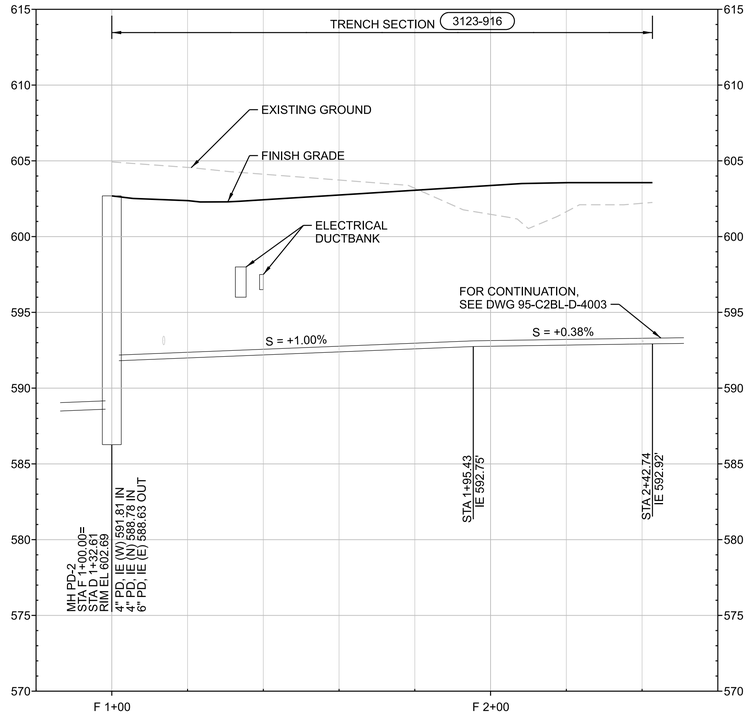
1. SEE GENERAL NOTES ON DRAWING 07-Y-2000.
2. PIPING SHOWN CONTINUOUS THROUGH STRUCTURES, SEE FACILITY DRAWINGS TO MATCH LOCATION WITH PROCESS PIPING. FIELD VERIFY LOCATION, INVERT ELEVATION AND CONNNECTION TYPE BEFORE ESTABLISHING YARD PIPE HORIZONTAL LOCATION AND VERTICAL GRADES.



E 4" PD PROFILE

H: 1"=20'-0"
V: 1"=5'-0"

07-Y-2002
07-Y-2003



F 4" PD PROFILE

H: 1"=20'-0"
V: 1"=5'-0"

07-Y-2005

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35537
OKLAHOMA

05/18/2026

YARD PIPING

4" PD PROFILES

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

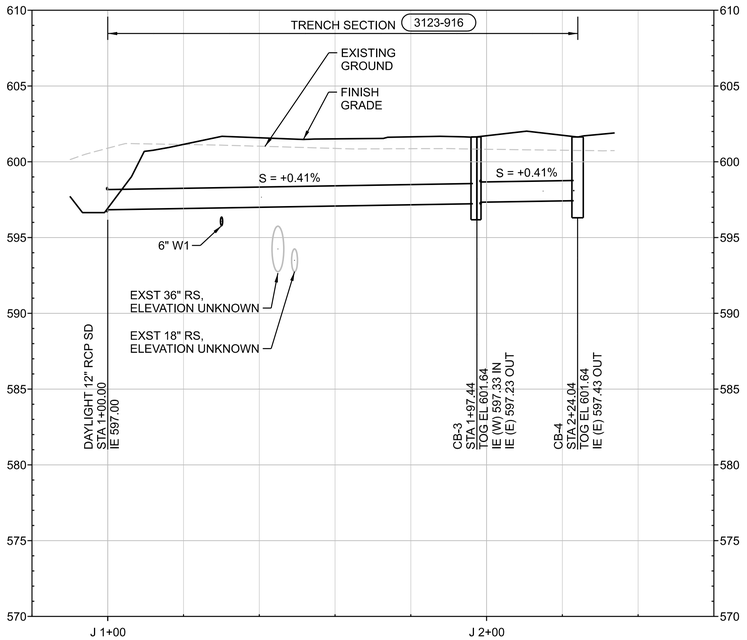
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSN 05/26	
	LEAD ENG.	SPC 5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 07-Y-3004		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 76 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:43



J — 12" SD PROFILE
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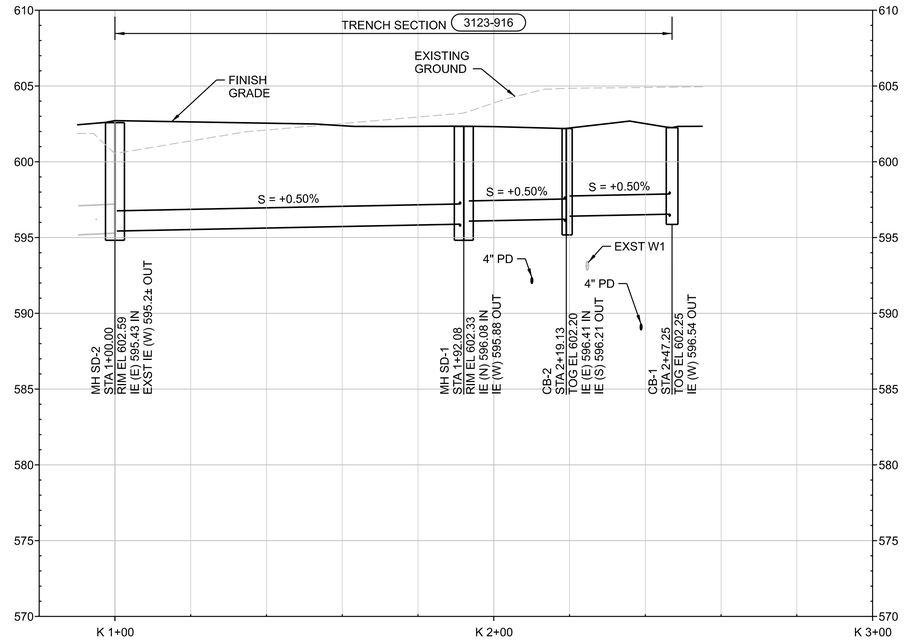
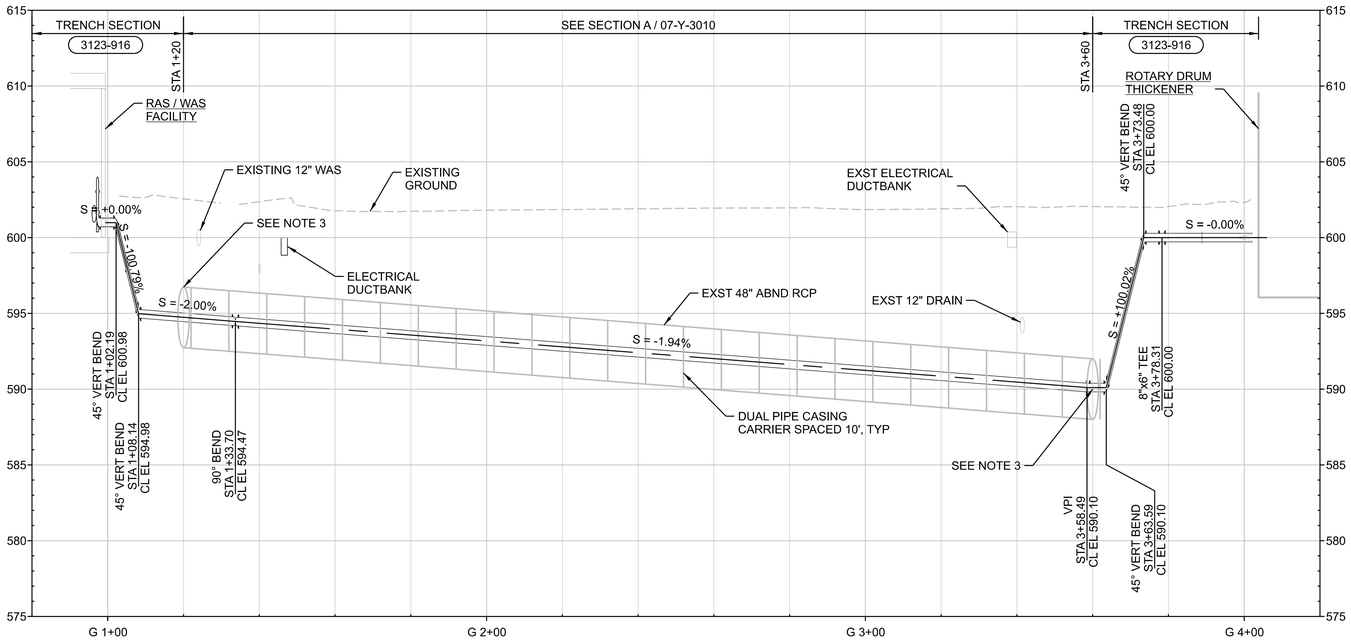
V: 1"=5'-0"
07-Y-2002



K — 12" SD PROFILE
H: 1"=20'-0"
V: 1"=5'-0"
07-Y-2005



G — (2) 6" WAS PROFILE
H: 1"=20'-0"
V: 1"=5'-0"
07-Y-2001
07-Y-2004

GENERAL SHEET NOTES

1. SEE GENERAL NOTES ON 07-Y-2000.
2. PIPING SHOWN CONTINUOUS THROUGH STRUCTURES, SEE FACILITY DRAWINGS TO MATCH LOCATION WITH PROCESS PIPING. FIELD VERIFY LOCATION, INVERT ELEVATION AND CONNECTION TYPE BEFORE ESTABLISHING YARD PIPE HORIZONTAL LOCATION AND VERTICAL GRADE.
3. CONTRACTOR TO PLACE BOTH 6" WAS LINES WITHIN EXISTING ABANDONED 48" RCP TO THE LIMITS SHOWN. FILL ENTIRETY OF 48" RCP WITH CLSM. PLUG ABANDONED 48" WITH CONCRETE 2' MIN FROM EXPOSED PIPE END AT START AND END.

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA
05/18/2026

YARD PIPING

6" WAS PROFILE

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

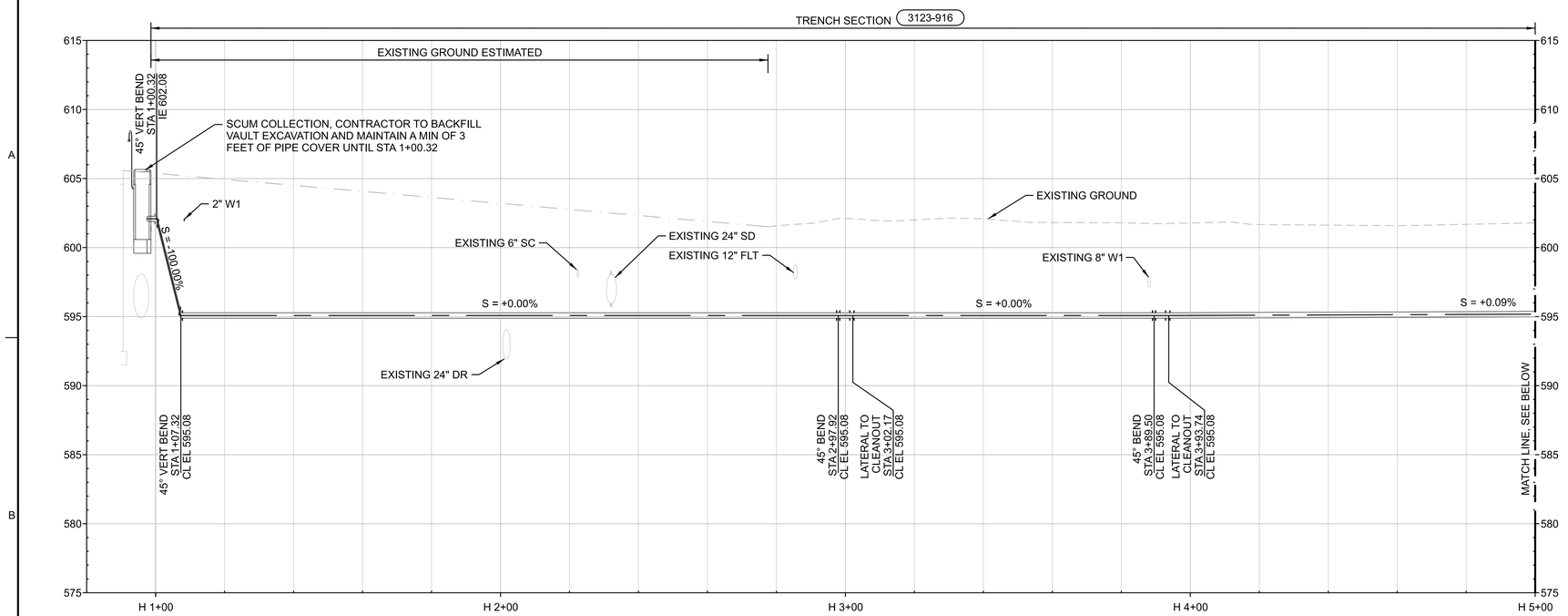
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

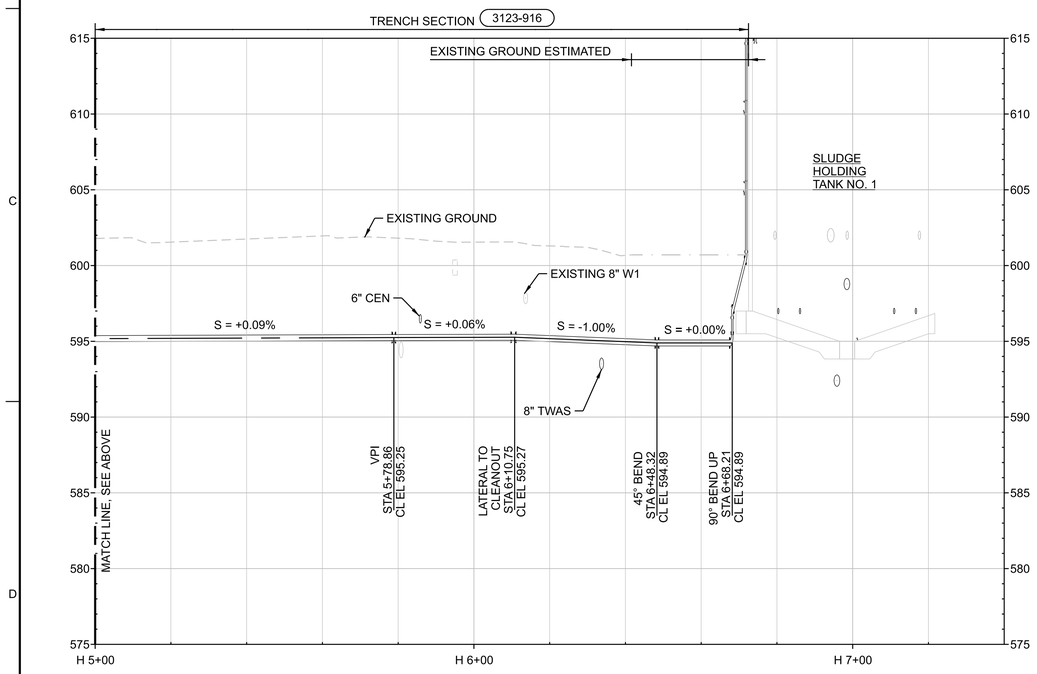
PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	SZL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 07-Y-3005			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 77 OF 300 SHEETS

PLOT DATE: 05\15\2026 PLOT TIME: 7:45:48 AM





H 6" SCC PROFILE

H: 1"=20'-0"
V: 1"=5'-0"

07-Y-2001
07-Y-2004
07-Y-2006

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35537
OKLAHOMA
05/18/2026

YARD PIPING

6" SCC PROFILE

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

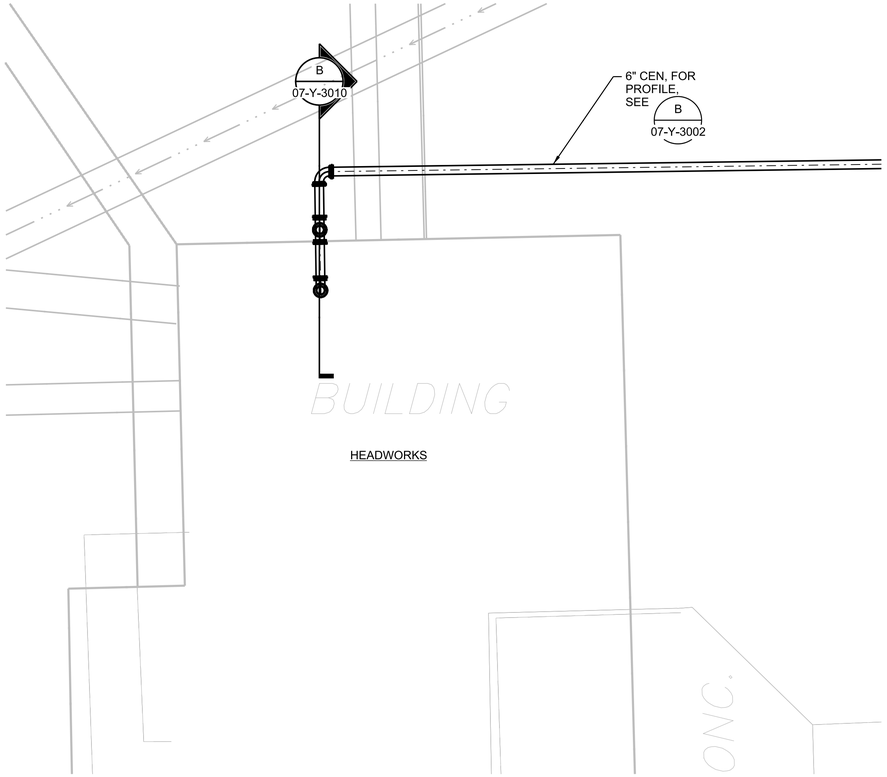
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

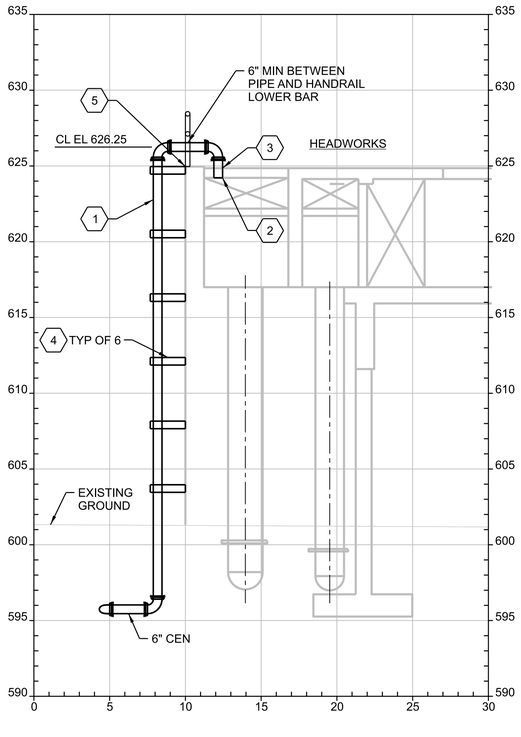
PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	SPL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 07-Y-3006		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 78 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:43

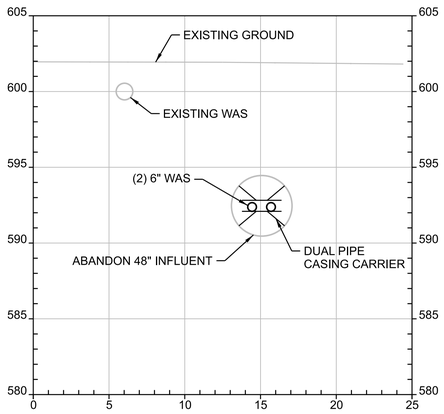


N

1 ENLARGED PLAN
1"=5'-0"
07-Y-2001



B SECTION
1"=5'-0"
07-Y-3010



A SECTION
1"=5'-0"
07-Y-2004

SHEET KEYNOTES

1. PIPE HEAT TRACE AND INSULATION TO BE PROVIDED FOR CENTRATE RETURN PIPING. SEE SECTION 40 05 33.
2. PROVIDE DUCKBILL FITTING AT THE END OF CENTRATE RETURN PIPING.
3. DEMOLISH MINIMAL PORTION OF GRATING ABOVE THE ENTRY TO THE SCREEN CHANNEL TO PROVIDE PIPE PENETRATION FOR CENTRATE RETURN PIPING.
4. PIPE SUPPORT EVERY 4 FEET ON FACE OF WALL, SEE DETAIL 4005-505.
5. PIPE SUPPORT ON FLOOR TO ANCHOR HORIZONTAL STRETCH OF CENTRATE PIPING TO CONCRETE, DETAIL 4005-505.

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
35637
OKLAHOMA
05/18/2026

YARD PIPING

ENLARGED PLAN AND SECTION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

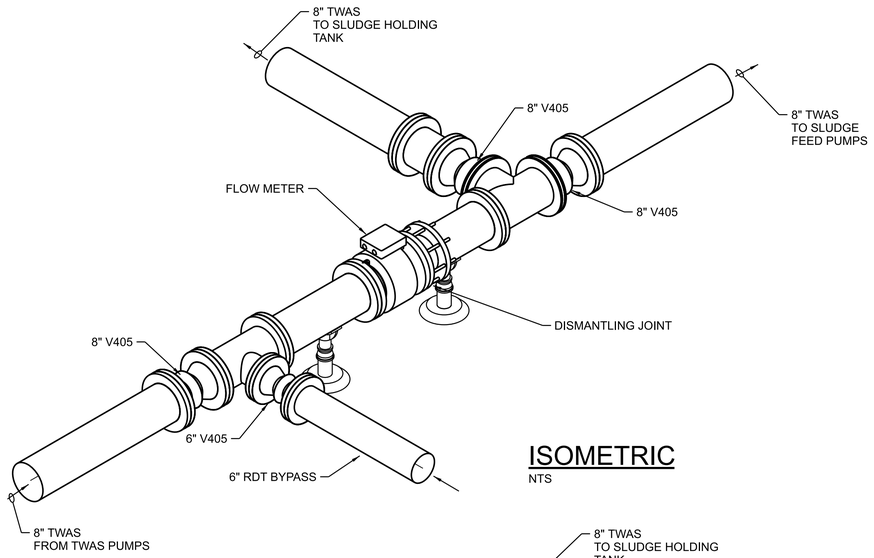
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

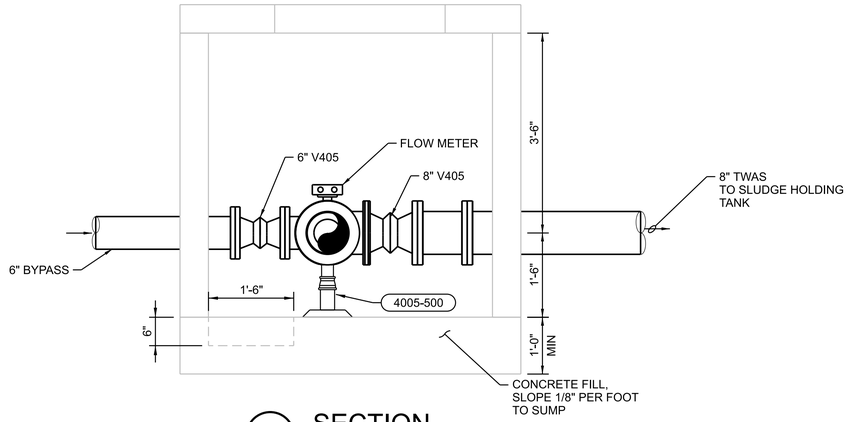
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	SJC 5/26	
VERTICAL:	FIELD MGR.	[illegible] 5/26	DESIGN MANAGER
FILE:	DRAWING: 07-Y-3010		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 79 OF 300 SHEETS

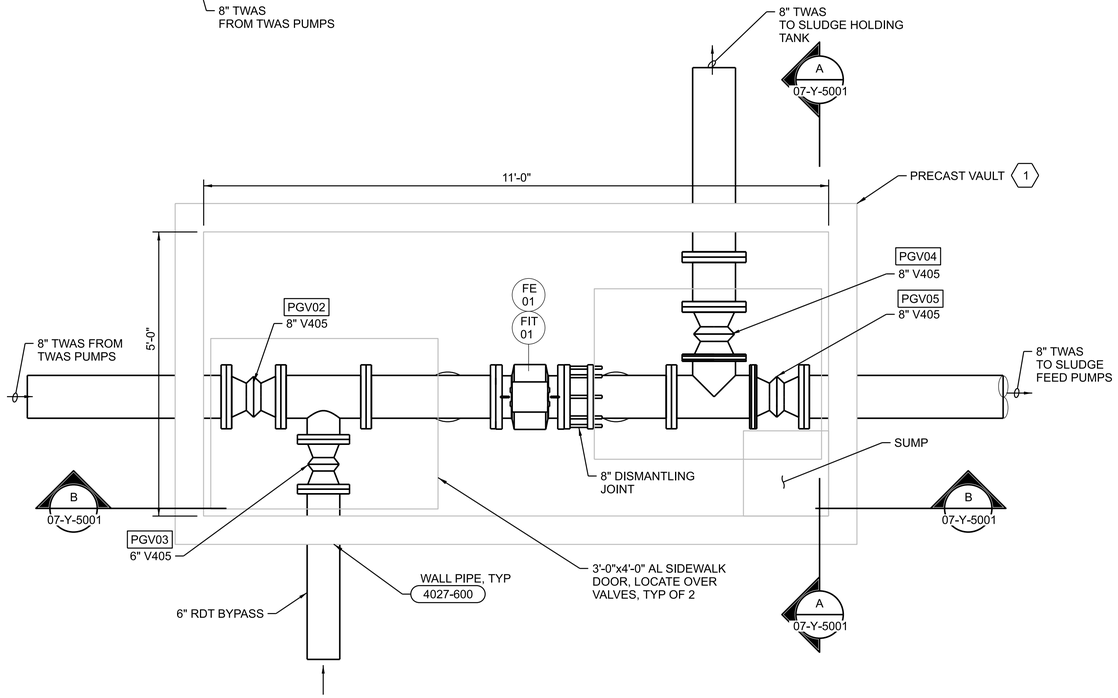
PLOT DATE: 14-MAY-2026 PLOT TIME: 17:45



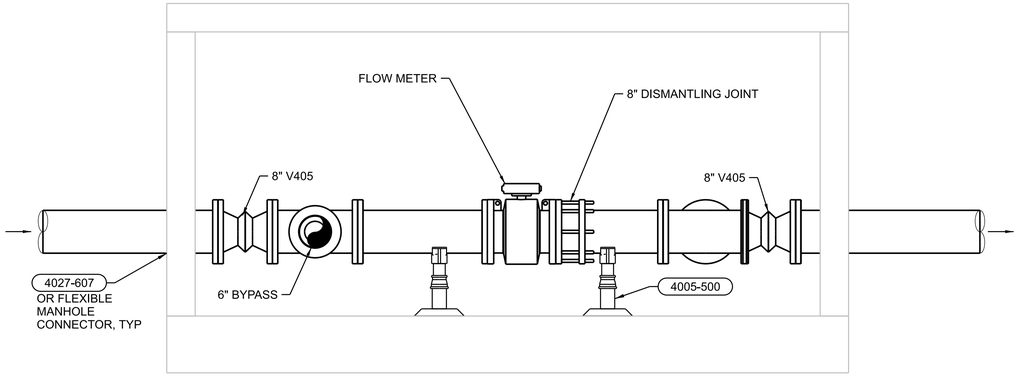
ISOMETRIC
NTS



A SECTION
3/4"=1'-0"
07-Y-5001



VAULT PLAN
3/4"=1'-0"



B SECTION
3/4"=1'-0"
07-Y-5001

SHEET KEYNOTES

1. FOR PRECAST VAULTS, SEE SPECIFICATION SECTION 33 05 16.13B, PRECAST CONCRETE UTILITY STRUCTURE.

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LICENSED PROFESSIONAL ENGINEER
SAMUEL P. CHANDLER
25637
OKLAHOMA
05/18/2026

YARD PIPING
RDT BYPASS VAULT
PLAN AND SECTIONS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 07-Y-5001
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 80 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:42

08-E-2001

08-E-2002

08-E-2003

E 151ST STREET SOUTH

EXISTING SWITCHGEAR

TRUCK WASH AND FUEL STATION

SLUDGE MIXING BUILDING ELECTRICAL ROOM

GRIT BUILDING

HEADWORKS

SLUDGE MIXING BUILDING

BIOFILTER NO. 1

COMPOST LOADING AREA

FINISHED COMPOSTING STORAGE BUILDING

COMPOSTING OPERATIONS BUILDING

SLUDGE THICKENING

H090-D1CT

EXISTING SLUDGE HOLDING TANK NO.2

ROTARY DRUM THICKENER

COMPOSTING BUILDING

BULKING AGENT STORAGE

LAGOON

DEWATERING CENTRIFUGE BUILDING

SLUDGE DRYING BEDS (NOT IN USE)

OXIDATION DITCHES

OPERATIONS BUILDING

RAS WAS FACILITY

SE BASIN LIFT STATION

SCREW PUMPS & RAS

FLOW SPLITTER

08-E-2004

08-E-2005

08-E-2006

CLARIFIERS

SCUM COLLECTION

EQUALIZATION BASIN & PUMP STATION

EQUALIZATION BASIN & PUMP STATION

CLARIFIERS

DISINFECTION

GRAVITY THICKENER

SHEET KEYNOTES

1. CONTRACTOR TO PRESERVE 13.2kV-480V TRANSFORMER DURING CONSTRUCTION.

N

0 60 120 180

Scale In Feet

LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

SITE ELECTRICAL
ELECTRICAL
SITE PLAN - OVERALL

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	WSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 08-E-2000
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 81 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 15:39

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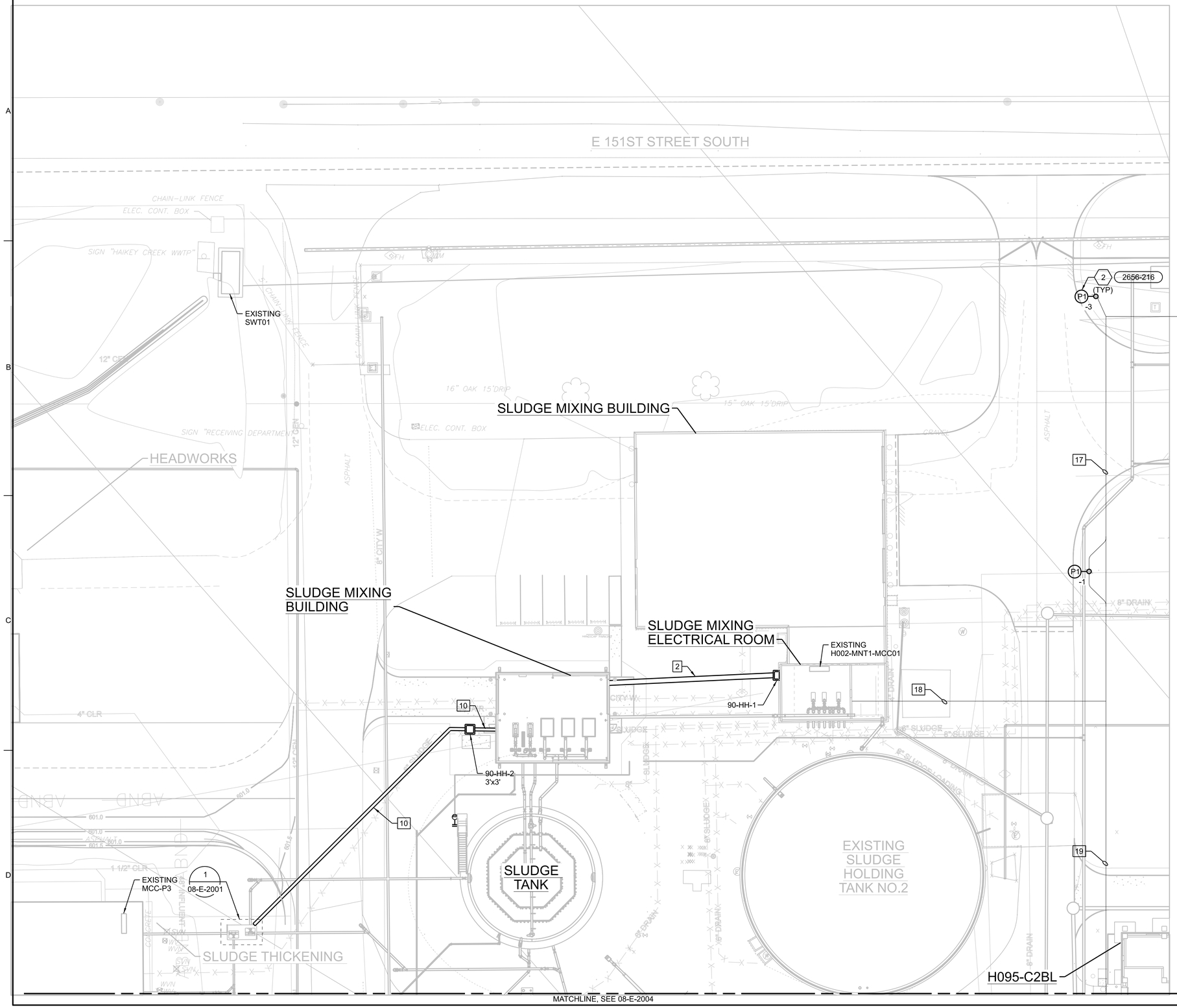
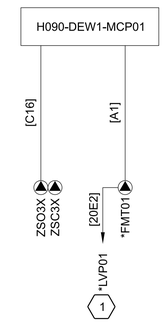
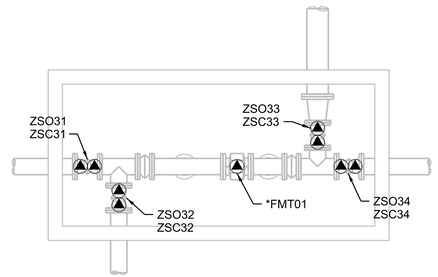




RDT BYPASS VAULT RISER DIAGRAM

(X= 1, 2, 3, 4)



1 RDT BYPASS VAULT ENLARGED PLAN

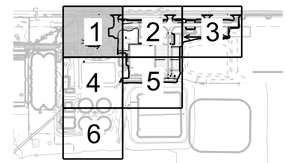
3/8"=1'-0"

08-E-2001

N

0 20 40 60

Scale In Feet



KEY PLAN

GENERAL SHEET NOTES

1. COMPLETE TAG NUMBER INCLUDES THE "H070-RTD1-" PREFIX.

SHEET KEYNOTES

1. COMPLETE TAG NUMBER INCLUDES THE "H090-DEW3-" PREFIX.
2. SITE LIGHTS POWERED FROM PANELBOARD H095-COM1-LVP01 LOCATED IN COMPOSTING OPERATIONS BUILDING. CIRCUIT AS SHOWN. PROVIDE [20E2] TO PANELBOARD AND BETWEEN LIGHTS.

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

SITE ELECTRICAL

SITE PLAN
AREA 1

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

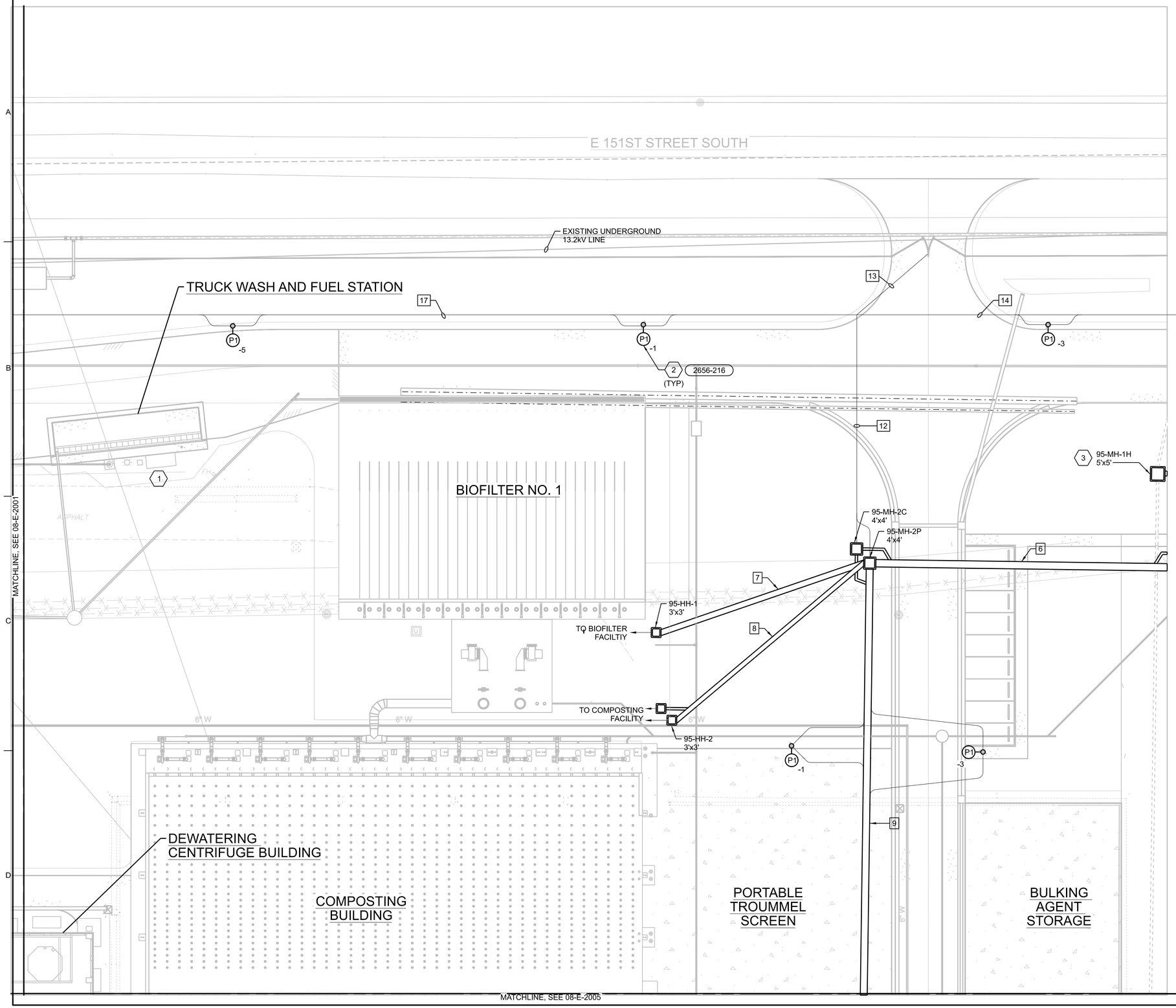
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
PROFILE:	DESIGNED	BB		
HORIZONTAL:	SURVEY			
VERTICAL:	PROJ. MGR.	MSW	05/26	
	LEAD ENG.	BIL	5/26	
	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 08-E-2001			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 82 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 15:39

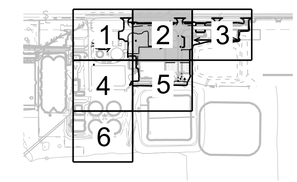


SHEET KEYNOTES

1. REFER TO 05-C-1002 FOR RELOCATED ELECTRICAL EQUIPMENT. CONTRACTOR TO CONFIRM CONDUIT AND CABLE SIZE.
2. SITE LIGHTS POWERED FROM PANELBOARD H095-COM1-LVP01 LOCATED IN COMPOSTING OPERATIONS BUILDING. CIRCUIT AS SHOWN. PROVIDE [20E2] TO PANELBOARD AND BETWEEN LIGHTS.
3. CONTRACTOR TO INTERCEPT 13.8kV DUCTBANK LINE GOING TO EQUALIZATION BASIN.

N

0 20 40 60
Scale In Feet



KEY PLAN

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
Blair I. Beaderstadt
05/18/2026

SITE ELECTRICAL

SITE PLAN
AREA 2

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

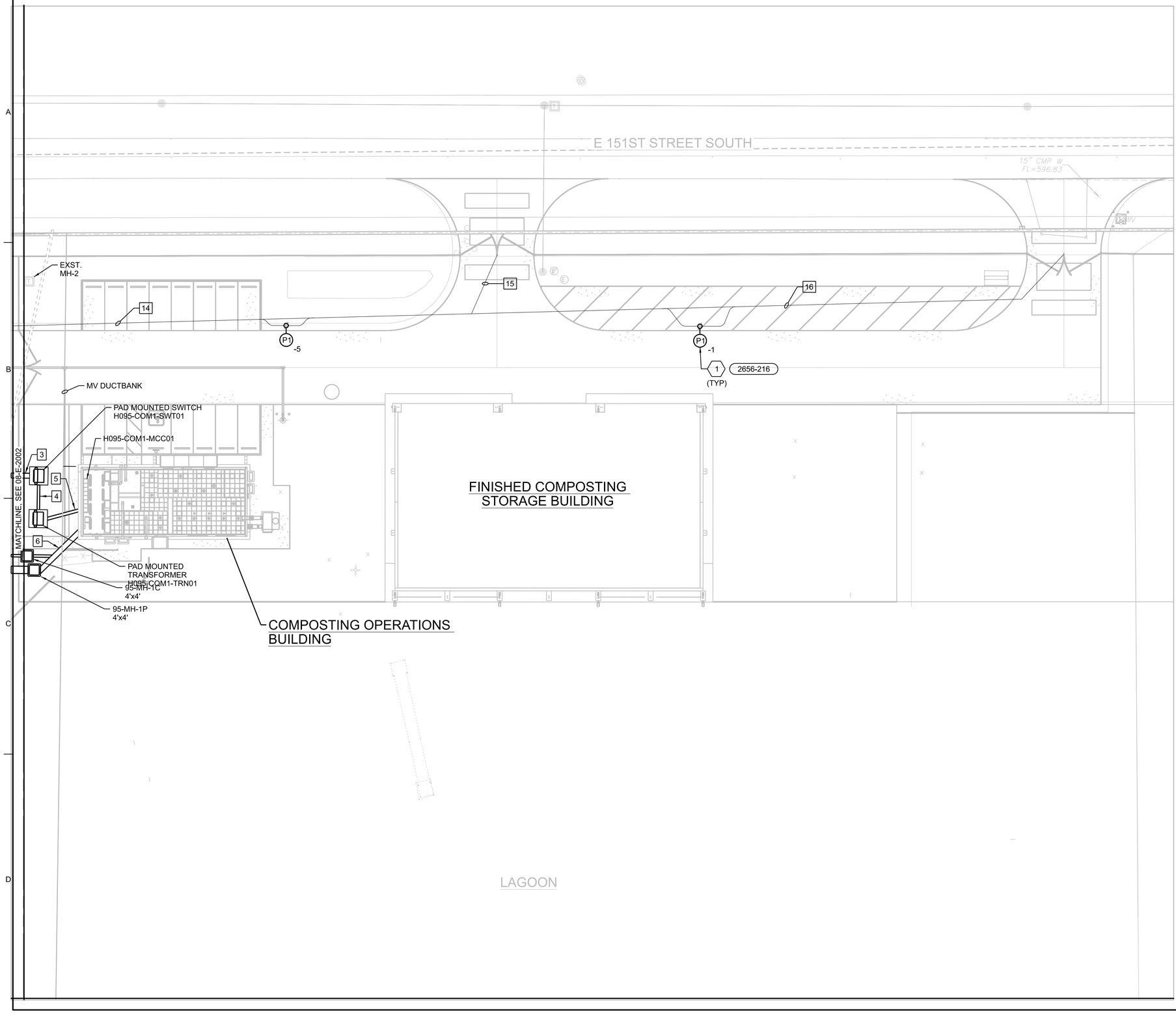
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MW	05/26
LEAD ENG.	RZ	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 08-E-2002
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 83 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 15:39



SHEET KEYNOTES

1. SITE LIGHTS POWERED FROM PANELBOARD H095-COM1-LVP01 LOCATED IN COMPOSTING OPERATIONS BUILDING. CIRCUIT AS SHOWN. PROVIDE [20E2] TO PANELBOARD AND BETWEEN LIGHTS.

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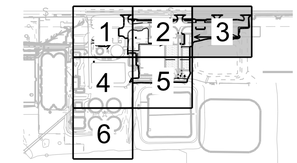
REUSE OF DOCUMENTS:

N

0 20 40 60
Scale In Feet



KEY PLAN

LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

SITE ELECTRICAL

SITE PLAN
AREA 3

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
	PROJ. MGR.	MSN	05/26
HORIZONTAL:	LEAD ENG.	BZL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING:	08-E-2003	DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 84 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 15:39

MATCHLINE, SEE 08-E-2001

SHEET KEYNOTES

1. USE EXISTING CONDUIT FROM OUTDOOR SWITCHBOARD, MS-1A.

EXISTING TRN01/02

EMH-1 (EXISTING)

EMH-1B

EXISTING MS-1A

20

11B

11A

1

EMH-2 (EXISTING)

19

ELECTRICAL ROOM (EXISTING), SEE DWG 90-D1BL-E-2000

H090-DEW1-MCC01/02

EMH-3 (EXISTING)

DEWATERING CENTRIFUGE BUILDING

SLUDGE DRYING BEDS (NOT IN USE)

OPERATIONS BUILDING

EXISTING H001-OPS1-MCC01/02

HH-1P

HH-1

RAS WAS FACILITY

H040-RAS1

MHH-1

PT#11189 GRATE INLET TOP OF GRATE 24" RCP FL(NE)=592.80' FL(S)=592.65'

ELEC. CONT. BOX

ELECTRIC MH TR=601.23

GRATE INLET TOP=592.00 FL=589.

INLET Q.03 FL=589.40

H050

H050

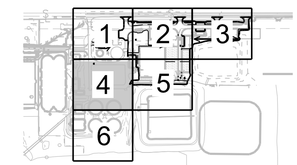
MATCHLINE, SEE 08-E-2006

MATCHLINE, SEE 08-E-2008

N

0 20 40 60

Scale In Feet



KEY PLAN

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA

05/18/2026

SITE ELECTRICAL

SITE PLAN AREA 4

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

APPROVED:

DESIGN MANAGER

FILE: DRAWING: 08-E-2004

DATE: MAY 2026

ATLAS PAGE NO: 3328

SHEET 85 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 15:39

MATCHLINE, SEE 08-E-2002

MATCHLINE, SEE 08-E-2004

COMPOSTING BUILDING

EXISTING DEWATERING CENTRIFUGE BUILDING

PORTABLE TROMMEL SCREEN

BULKING AGENT STORAGE

TO COMPOSTING BUILDING

95-HH-3 3'x3'

95-MH-3 4'x4'

EXST. HH-4

ASPHALT ROAD

PT#11190 GRATE INLET TOP OF GRATE ELEVATION=599.52' 24" RCP FL(E)=593.17' FL(SW)=593.12'

PT#11191 GRATE INLET TOP OF GRATE ELEVATION=599.64' 24" RCP FL(E)=594.46' FL(W)=594.67" (FL OBSTRUCTED BY DEBRIS)

PT#11192 GRATE INLET TOP OF GRATE ELEVATION=600.32' 24" RCP FL(W)=594.90' 18" RCP FL(N)=595.02'

PT#11193 GRATE INLET TOP OF GRATE ELEVATION=595.54' FL(E)=595.50'

FL=599.49

2656-216 (TYP)

ATION=600.05'

AIR RELIEF VALVE

AIR RELIEF VALVE

ELEC. CONT. BOX

ELEC. CONT. BOX

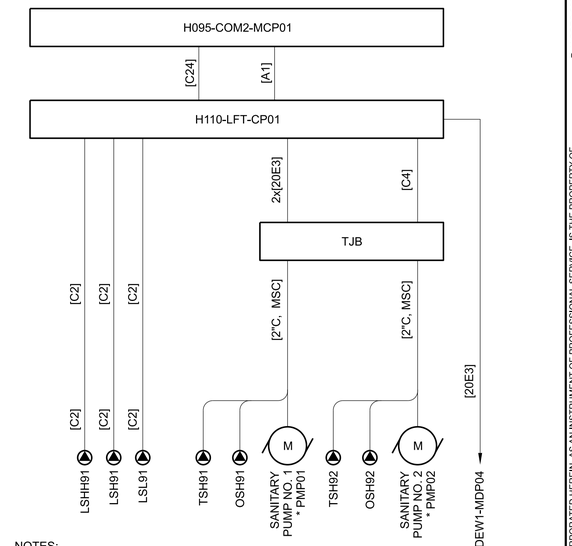
EC. CONT. BOX

CONC. DITCH

EQUALIZATION BASIN & PUMP STATION

SHEET KEYNOTES

1. SITE LIGHTS POWERED FROM PANELBOARD H095-COM1-LVP01 LOCATED IN COMPOSTING OPERATIONS BUILDING. CIRCUIT AS SHOWN. PROVIDE [20E2] TO PANELBOARD AND BETWEEN LIGHTS.



NOTES:

1. COMPLETE TAG NUMBER INCLUDES THE "H110-LFT1-" PREFIX.

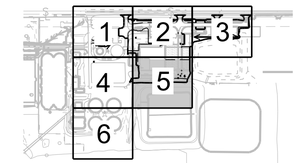
SANITARY LIFT STATION RISER DIAGRAM

NTS

N

0 20 40 60

Scale In Feet



KEY PLAN

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA

05/18/2026

SITE ELECTRICAL

SITE PLAN AREA 5

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.		05/26
	LEAD ENG.		5/26
	FIELD MGR.		5/26
FILE:	DRAWING: 08-E-2005		DESIGN MANAGER
ATLAS PAGE NO: 3328			DATE: MAY 2026
			SHEET 86 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 15:39

MATCHLINE, SEE 08-E-2004

H050 CLARIFIER

H050 CLARIFIER

HH-2P

HH-2

HH-3

H050
SCUM COLLECTION
FACILITY

DISINFECTION

H050
CLARIFIER

H050
CLARIFIER

H070-THK1
GRAVITY
THICKENER

H070-THK1
GRAVITY
THICKENER

BUILDING

24" STEEL PIPE
FL=599.74

5' CHAIN-LINK FENCE

5' CHAIN-LINK FENCE

ASPHALT

GRAVEL

6" SLUDGE

24" SUPERNATANT

20" SUPERNATANT

4" SUMP DRAIN

4" DRAIN

4" CLR

36" MIXED LIQUOR

6" SCUM

6" SLUDGE

BOLLARD

SSMH
TR=607.39

SSMH
TR=604.36

CURB INLET
TG=599.46
FL=592.X3

CURB INLET
TG=598.48
FL=593.54

MATCHLINE, NOT USED

N

0 20 40 60
Scale In Feet

KEY PLAN

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA

05/18/2026

SITE ELECTRICAL

SITE PLAN
AREA 6

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

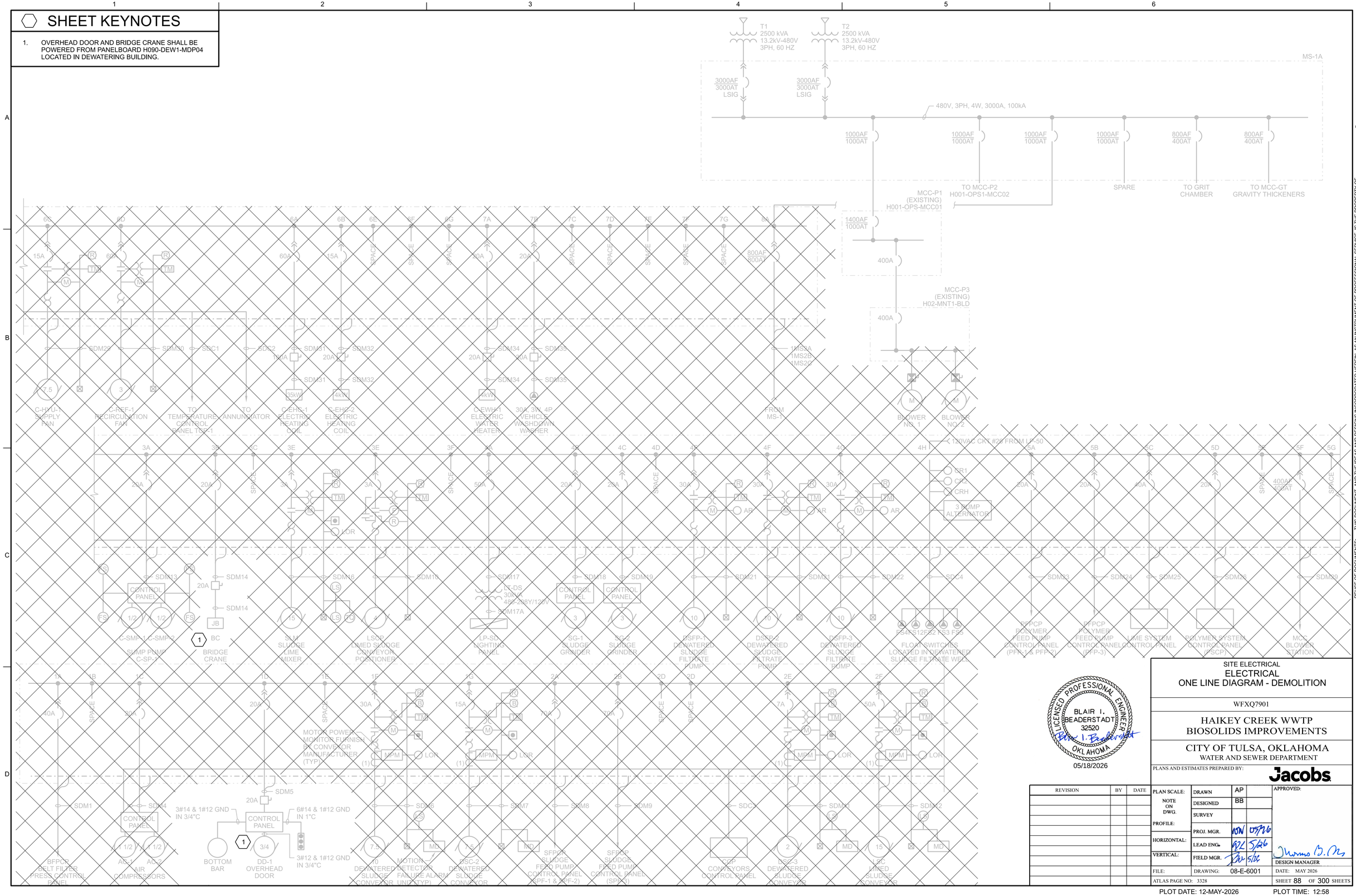
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSW 05/26	
	LEAD ENG.	BIB 5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 08-E-2006		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 87 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 15:39

SHEET KEYNOTES

1. OVERHEAD DOOR AND BRIDGE CRANE SHALL BE POWERED FROM PANELBOARD H090-DEW1-MDP04 LOCATED IN DEWATERING BUILDING.



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LICENSED PROFESSIONAL ENGINEER
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OKLAHOMA
05/18/2026

SITE ELECTRICAL
ELECTRICAL
ONE LINE DIAGRAM - DEMOLITION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

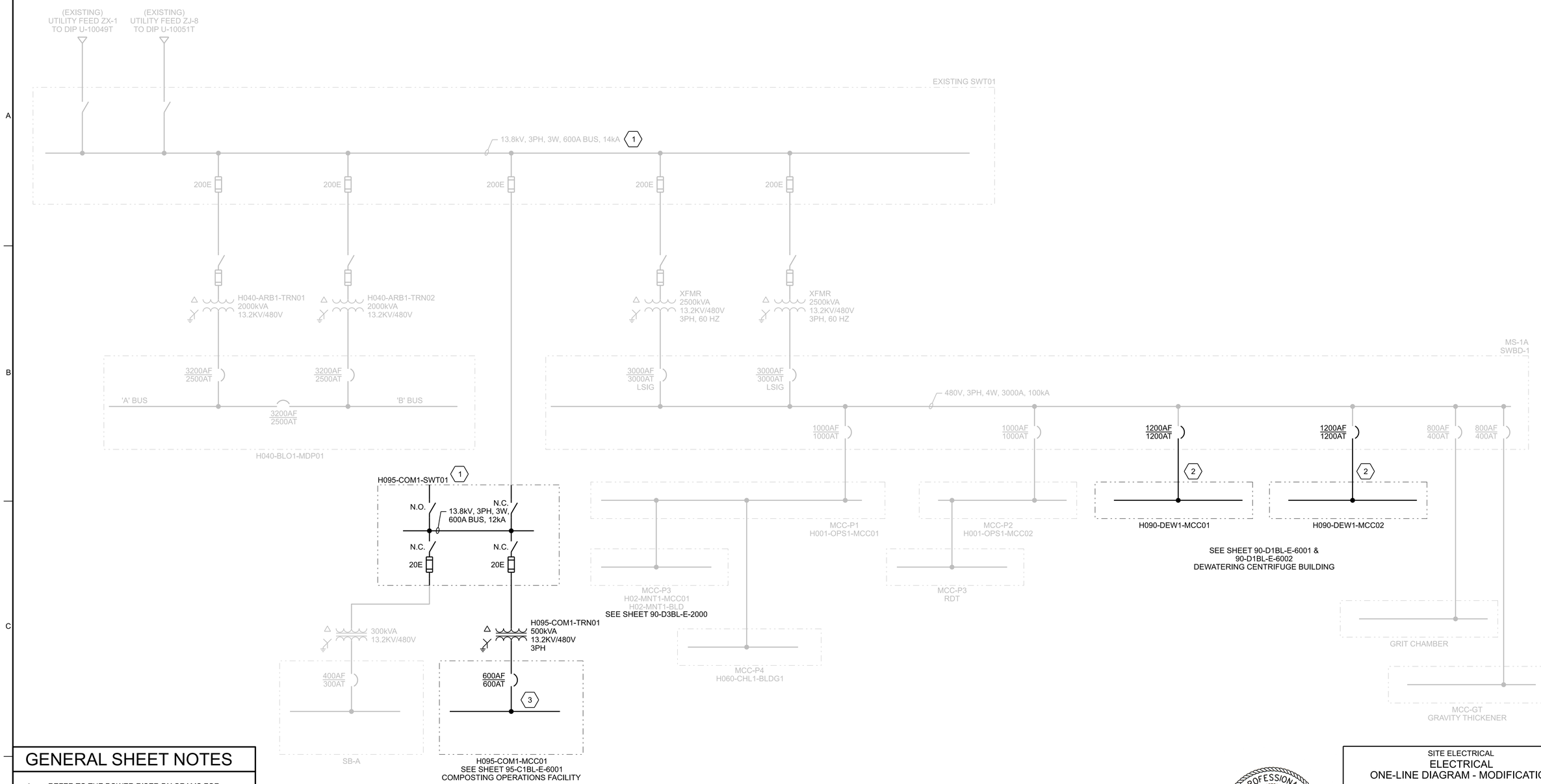
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MW	05/26
LEAD ENG.	BZ	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 08-E-6001
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 88 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 12:58



GENERAL SHEET NOTES

1. REFER TO THE POWER RISER DIAGRAMS FOR ADDITIONAL CONDUIT AND WIRE CALLOUTS.
2. CIRCUIT BREAKER TO HAVE PADLOCKABLE OPERATING HANDLE WHEN DE-ENERGIZED.

SHEET KEYNOTES

1. PRELIMINARY CALCULATED AVAILABLE FAULT CURRENT PROVIDED BY PSO/AEP AS FOLLOWS: 3PH, 1340 AMPS X/R 2.919 AND 1PH, 800AMPS X/R 3.034. CONTRACTOR TO CONFIRM WITH THE UTILITY AT THE TIME OF CONSTRUCTION.
2. PRELIMINARY CALCULATED AVAILABLE FAULT CURRENT = 26,297.99 AMPS. FINAL AVAILABLE FAULT CURRENT SHALL BE PROVIDED BY THE SHORT CIRCUIT STUDY SPECIFIED IN SECTION 25 05 70, ELECTRICAL SYSTEM ANALYSIS.
3. PRELIMINARY CALCULATED AVAILABLE FAULT CURRENT = 11,601.41 AMPS. FINAL AVAILABLE FAULT CURRENT SHALL BE PROVIDED BY THE SHORT CIRCUIT STUDY SPECIFIED IN SECTION 26 05 70, ELECTRICAL SYSTEM ANALYSIS.

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05/18/2026

SITE ELECTRICAL
ELECTRICAL ONE-LINE DIAGRAM - MODIFICATION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RJL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 08-E-6002
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 89 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 12:58

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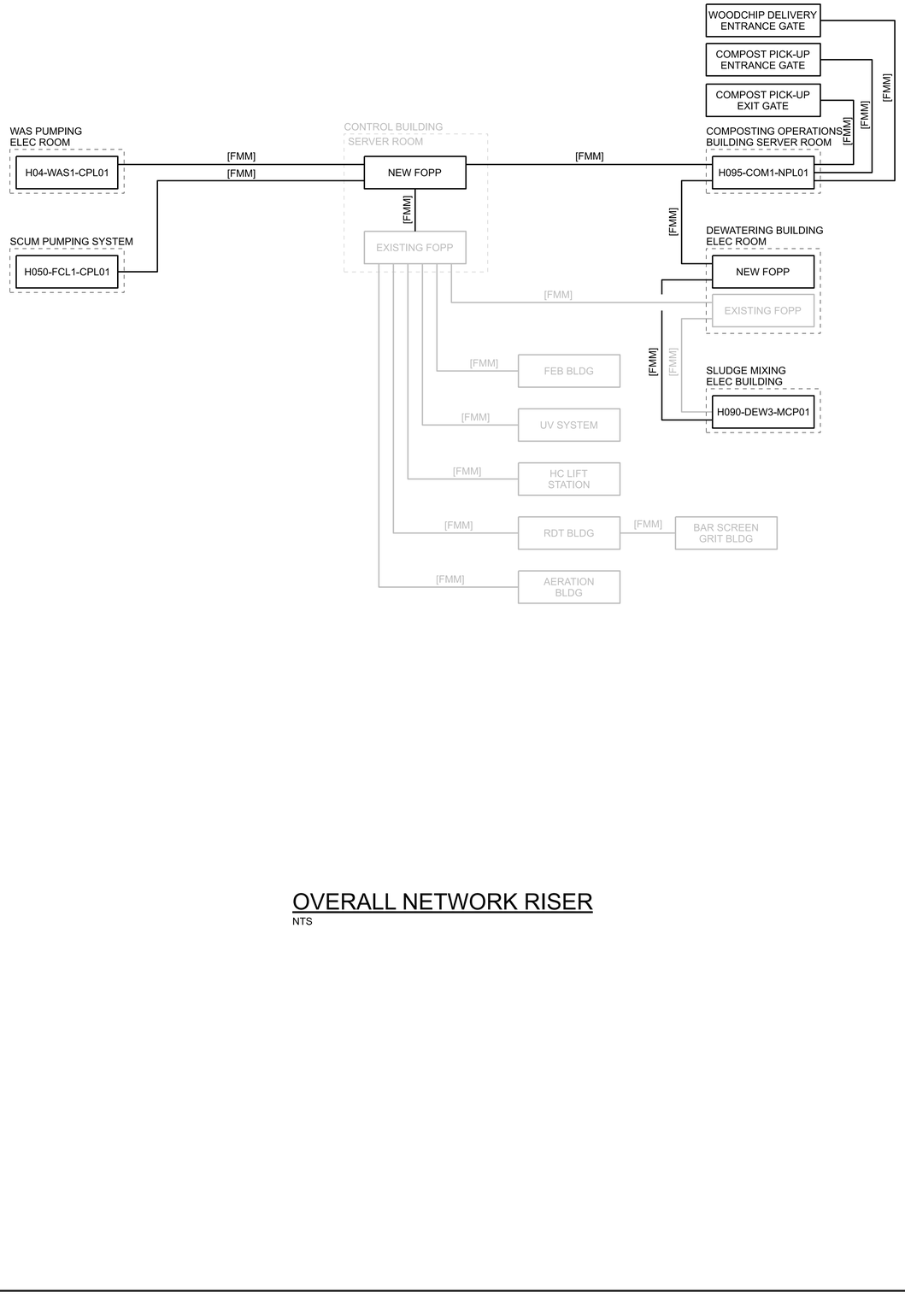
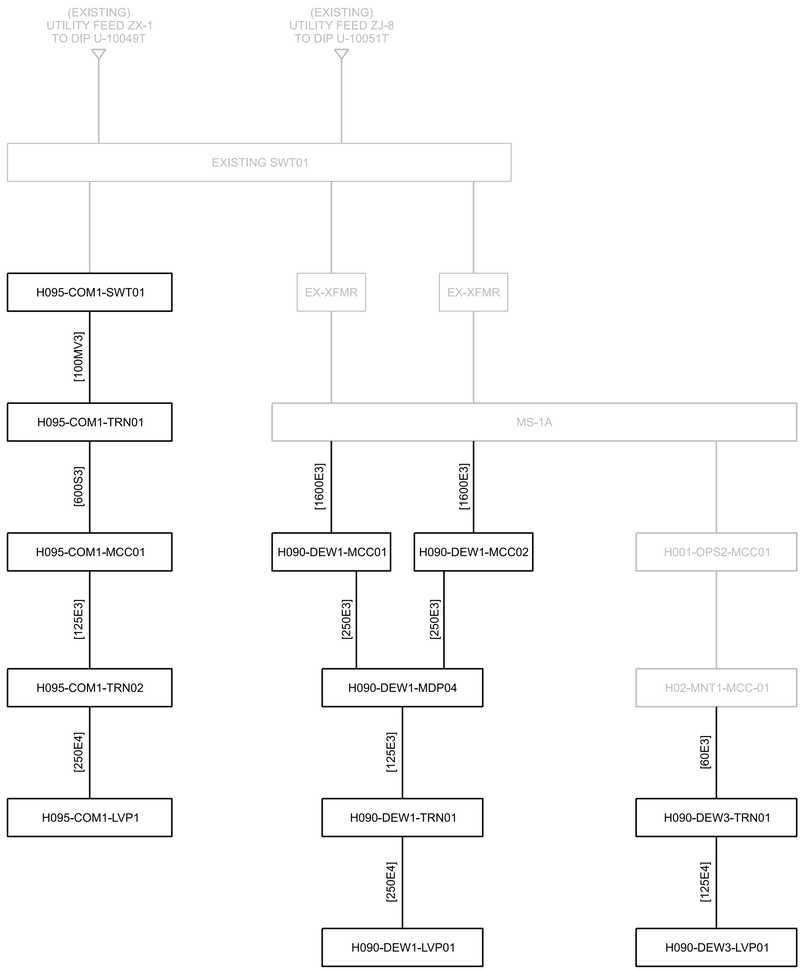


OVERALL NETWORK RISER

NTS



POWER RISER DIAGRAM

NTS

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LICENSED PROFESSIONAL ENGINEER
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32520
OKLAHOMA
05/18/2026

SITE ELECTRICAL

ELECTRICAL POWER AND NETWORK RISER DIAGRAMS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 08-E-6003 DATE: MAY 2026

ATLAS PAGE NO: 3328 SHEET 90 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 12:59

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTE
1	H001-OPS2-MCC02	H050-FCL1-CPL02	1	1"	480V	POWER	
	PANEL A	H050-FCL1-CPL01	1	1"	120	POWER	
	OPERATION'S SERVER ROOM	H050-FCL1-CPL01	1	2"	FMM	CONTROL	
	HH-1	HH-3	2	2"	EMPTY	POWER	
	HH-1	HH-3	2	2"	EMPTY	CONTROL	

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTES
2	H02-MNT1-MCC01	H090-DEW2-BLO01	1	3"	480V	POWER	
	H02-MNT1-MCC01	H090-DEW2-BLO02	1	3"	480V	POWER	
	H02-MNT1-MCC01	H090-DEW2-BLO03	1	3"	480V	POWER	
	H090-DEW3-VFD04	H090-DEW2-RCP01	1	2"	480V	POWER	
	H090-DEW3-VFD05	H090-DEW2-RCP02	1	2"	480V	POWER	
	H02-MNT1-MCC01	H090-DEW2-ACU01	1	2"	480V	POWER	
	H090-DEW3-LVP01	H090-DEW2-BLT01	1	2"	120V	POWER	
	H090-DEW3-LVP01	H090-DEW2-RECEPTACLE	2	2"	120V	POWER	
	H090-DEW3-MCP01	H090-DEW2-LCP01			DISCRETE	CONTROL	
	H090-DEW3-MCP01	SD-1	1	1"	DISCRETE	CONTROL	
	H090-DEW3-MCP01	SD-2			DISCRETE	CONTROL	
	H090-DEW3-MCP01	DPS-1			DISCRETE	CONTROL	
	H090-DEW3-MCP01	DPS-2			DISCRETE	CONTROL	
	H090-DEW3-MCP01	H090-DEW1-PTM01	1	2"	ANALOG	CONTROL	
	H090-DEW3-MCP01	H090-DEW1-LIT01			ANALOG	CONTROL	
	H090-DEW3-LVP01				120V	POWER	
	H090-DEW3-MCP01	H090-DEW2-BLO01	1	2"	ANALOG	CONTROL	
	H090-DEW3-MCP01	H090-DEW2-BLO02			ANALOG	CONTROL	
	H090-DEW3-MCP01	H090-DEW2-BLO03			ANALOG	CONTROL	
	H090-DEW3-MCP01	H090-DEW2-BLO01	1	2"	DISCRETE	CONTROL	
	H090-DEW3-MCP01	H090-DEW2-BLO02			DISCRETE	CONTROL	
	H090-DEW3-MCP01	H090-DEW2-BLO03			DISCRETE	CONTROL	
	H090-DEW3-MCP01	H090-DEW2-PRS01	1		DISCRETE	CONTROL	
	H090-DEW3-MCP01	H090-DEW2-PRS02	1		DISCRETE	CONTROL	
	H090-DEW3-MCP01	H090-DEW2-PRS03	1		DISCRETE	CONTROL	
	H090-DEW3-MCP01	H090-DEW2-PRS04	1	2"	DISCRETE	CONTROL	
	H090-DEW3-MCP01	H090-DEW2-PRS05	1		DISCRETE	CONTROL	
	H090-DEW3-MCP01	H090-DEW2-PRS06	1		DISCRETE	CONTROL	
	H090-DEW3-MCP01	H090-DEW2-PRS07	1		DISCRETE	CONTROL	
	H090-DEW3-MCP01	H090-DEW2-PTM02	1	2"	ANALOG	CONTROL	
	H090-DEW3-MCP01	H090-DEW2-PTM03	1		ANALOG	CONTROL	
	H090-DEW3-MCP01	H090-DEW2-PTM04	1		ANALOG	CONTROL	
	H090-DEW3-MCP01	H090-DEW2-PTM05	1		ANALOG	CONTROL	
	H090-DEW3-MCP01	ZSO31	1	2"	DISCRETE	CONTROL	
	H090-DEW3-MCP01	ZSO32			DISCRETE	CONTROL	
	H090-DEW3-MCP01	ZSO33			DISCRETE	CONTROL	
	H090-DEW3-MCP01	ZSO34			DISCRETE	CONTROL	
	H090-DEW3-MCP01	ZSC31			DISCRETE	CONTROL	
	H090-DEW3-MCP01	ZSC32			DISCRETE	CONTROL	
	H090-DEW3-MCP01	ZSC33			DISCRETE	CONTROL	
	H090-DEW3-MCP01	ZSC34			DISCRETE	CONTROL	
	H090-DEW3-MCP01	H070-RTD1-FMT01	1	1"	ANALOG	CONTROL	
	H090-DEW3-LVP01				120V	POWER	
	H02-MNT1-MCC01	H090-HH-1P	3	4"	EMPTY	POWER	
	H02-MNT1-LVP01	H090-HH-1P	8	2"	EMPTY	POWER	
	H090-DEW3-CLP02	H090-HH-1P	2	1"	EMPTY	CONTROL	

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTES
3	EXISTING SWT01	H095-COM1-SWT01	1	4"	13.2 kV	POWER	
	EXISTING SWT01	H095-COM1-SWT01	1	4"	EMPTY	POWER	

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTES
4	H095-COM1-SWT01	H095-COM1-TRN01	1	4"	13.2 kV	POWER	
	H095-COM1-SWT01	H095-COM1-TRN01	1	4"	EMPTY	POWER	

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTES
5	H095-COM1-TRN01	H095-COM1-MCC01	2	4"	480V	POWER	
	H095-COM1-TRN01	H095-COM1-MCC02	1	4"	EMPTY	POWER	

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTES
7	H095-COM1-VFD11	H095-COM1-FAN11	1	3"	480V	POWER	
	H095-COM1-VFD12	H095-COM1-FAN12	1	3"	480V	POWER	
	H095-COM1-LVP01	BIOFILTER RECPTACL	1	1"	120V	POWER	
	H095-COM1-LVP01	H095-COM2-FMT01	1	1"	120V	POWER	
	H095-COM1-LVP01	H095-COM2-FMT02	1	1"	120V	POWER	
	H095-COM1-LVP01	H095-COM2-DMP11	1	1"	120V	POWER	
	H095-COM1-LVP01	H095-COM2-DMP12	1	1"	120V	POWER	
	H095-COM1-LVP01	H095-COM2-DMP13	1	1"	120V	POWER	
	H095-COM1-LVP01	H095-COM2-DMP14	1	1"	120V	POWER	
	H095-COM1-LVP01	H095-COM2-DMP15	1	1"	120V	POWER	
	H095-COM1-LVP01	H095-COM2-DMP16	1	1"	120V	POWER	
	H095-COM1-MCP01	H095-COM2-FMT01	1	2"	ANALOG	CONTROL	
	H095-COM1-MCP01	H095-COM2-FMT02			ANALOG	CONTROL	
	H095-COM1-MCP01	H095-COM2-DMP11			ANALOG	CONTROL	
	H095-COM1-MCP01	H095-COM2-DMP12			ANALOG	CONTROL	
	H095-COM1-MCP01	H095-COM2-DMP13			ANALOG	CONTROL	
	H095-COM1-MCP01	H095-COM2-DMP14			ANALOG	CONTROL	
	H095-COM1-MCP01	H095-COM2-DMP15			ANALOG	CONTROL	
	H095-COM1-MCP01	H095-COM2-DMP16			ANALOG	CONTROL	
	H095-COM1-MCP01	H095-COM2-PTM01	1	1"	ANALOG	CONTROL	
	H095-COM1-MCP01	H095-COM2-PTM02			ANALOG	CONTROL	
	H095-COM1-MCP01	H095-COM2-TTM31			ANALOG	CONTROL	
	H095-COM1-MCP01	H095-COM2-TTM32			ANALOG	CONTROL	
	H095-COM1-MCP01	HS83			DISCRETE	CONTROL	
	H095-COM1-MCP01	HS84			DISCRETE	CONTROL	
	H095-COM1-VFD11	TSH93	1	1"	DISCRETE	CONTROL	
	H095-COM1-VFD12	TSH94	1	1"	DISCRETE	CONTROL	
	H095-COM1-MCP01	H095-COM2-CPL01	1	1"	DISCRETE	CONTROL	
	H095-COM1-MCC01	TSH81	1	2"	DISCRETE	CONTROL	
	H095-COM1-MCC01	TSH82			DISCRETE	CONTROL	
	H095-COM1-MCC01	TSH83			DISCRETE	CONTROL	
	H095-COM1-MCC01	TSH84			DISCRETE	CONTROL	
	H095-COM1-MCC01	TSH85			DISCRETE	CONTROL	
	H095-COM1-MCC01	TSH86			DISCRETE	CONTROL	
	H095-COM1-MCC01	TSH87			DISCRETE	CONTROL	
	H095-COM1-MCC01	TSH88			DISCRETE	CONTROL	
	H095-COM1-MCC01	TSH89			DISCRETE	CONTROL	
	H095-COM1-MCC01	TSH80			DISCRETE	CONTROL	
	H095-COM1-MCC01	TSH95	1	1"	DISCRETE	CONTROL	
	H095-COM1-MCC01	TSH96			DISCRETE	CONTROL	
	H095-COM1-MCC01	TSH97			DISCRETE	CONTROL	
	H095-COM1-MCC01	TSH98			DISCRETE	CONTROL	
	H095-COM1-MCC01	95-MH-1P	2	3"	EMPTY	POWER	
	H095-COM1-LVP01	95-MH-1P	4	2"	EMPTY	POWER	
	H095-COM1-MCP01	95-MH-1C	4	1"	EMPTY	CONTROL	
	H095-COM1-MCC01	WOODCHIP DELIVERY ENTRANCE GATE	1	1"	480	POWER	
	H095-COM1-LVP01	WOODCHIP DELIVERY ENTRANCE GATE	1	1"	120	POWER	
	H095-COM1-NPL01	WOODCHIP DELIVERY ENTRANCE GATE	1	2"	FMM	CONTROL	
	H095-COM1-MCC01	COMPOST PICK-UP ENTRANCE GATE	1	1"	480	POWER	
	H095-COM1-LVP01	COMPOST PICK-UP ENTRANCE GATE	1	1"	120	POWER	
	H095-COM1-NPL01	COMPOST PICK-UP ENTRANCE GATE	1	2"	FMM	CONTROL	
	H095-COM2-LVP01	COMPOST PICK-UP EXIT GATE	1	1"	480	POWER	
	H095-COM1-LVP01	COMPOST PICK-UP EXIT GATE	1	1"	120	POWER	
	H095-COM1-NPL01	COMPOST PICK-UP EXIT GATE	1	2"	FMM	CONTROL	
	H095-COM1-NPL01	H090-DEW1-MCP01	1	2"	FMM	CONTROL	
	H095-COM1-NPL01	EMH-3	1	2"	FMM	CONTROL	BETWEEEN FOPP IN SERVER ROOM AND H095-COM1-NPL01

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTES
8	H095-COM1-MCC01	H095-COM2-FAN01	1	2"	480V	POWER	
	H095-COM1-MCC01	H095-COM2-FAN02	1	2"	480V	POWER	
	H095-COM1-MCC01	H095-COM2-FAN03	1	2"	480V	POWER	
	H095-COM1-MCC01	H095-COM2-FAN04	1	2"	480V	POWER	
	H095-COM1-MCC01	H095-COM2-FAN05	1	2"	480V	POWER	
	H095-COM1-MCC01	H095-COM2-FAN06	1	2"	480V	POWER	
	H095-COM1-MCC01	H095-COM2-FAN07	1	2"	480V	POWER	
	H095-COM1-MCC01	H095-COM2-FAN08	1	2"	480V	POWER	
	H095-COM1-MCC01	H095-COM2-FAN09	1	2"	480V	POWER	
	H095-COM1-MCC01	H095-COM2-FAN10	1	2"	480V	POWER	
	H095-COM2-MCC01	TSH81	1	2"	DISCRETE	CONTROL	
	H095-COM2-MCC01	TSH82			DISCRETE	CONTROL	
	H095-COM2-MCC01	TSH83			DISCRETE	CONTROL	
	H095-COM2-MCC01	TSH84			DISCRETE	CONTROL	
	H095-COM2-MCC01	TSH85			DISCRETE	CONTROL	
	H095-COM2-MCC01	TSH86			DISCRETE	CONTROL	
	H095-COM2-MCC01	TSH87			DISCRETE	CONTROL	
	H095-COM2-MCC01	TSH88			DISCRETE	CONTROL	
	H095-COM2-MCC01	TSH89			DISCRETE	CONTROL	
	H095-COM2-MCC01	TSH80			DISCRETE	CONTROL	
	95-MH-2P	95-HH-2P	2	2"	EMPTY	POWER	
	95-MH-2P	95-HH-2C	2	1"	EMPTY	CONTOL	

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTES
9	H095-COM1-MCC01	H095-COM3-FAN01	1	2"	480V	POWER	
	H095-COM1-MCC01	H095-COM3-FAN02	1	2"	480V	POWER	
	H095-COM1-MCC01	H095-COM3-FAN03	1	2"	480V	POWER	
	H095-COM1-MCC01	H095-COM3-FAN04	1	2"	480V	POWER	
	H095-COM1-MCP01	H095-COM2-CPL01	1	1"	DISCRETE	CONTROL	
	H095-COM2-MCC01	TSH95	1	1"	DISCRETE	CONTROL	
	H095-COM2-MCC01	TSH96			DISCRETE	CONTROL	
	H095-COM2-MCC01	TSH97			DISCRETE	CONTROL	
	H095-COM2-MCC01	TSH98			DISCRETE	CONTROL	
	95-MH-2P	95-MH-3P	2	2"	EMPTY	POWER	
	95-MH-2C	95-MH-3C	2	1"	EMPTY	CONTOL	

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTES
10	H090-DEW3-MCP01	H070-RTD1-FMT01	1	1"	120V	POWER	
	H090-DEW3-LVP01				ANALOG	CONTROL	
	H090-DEW3-MCP01	ZSO31	1	2"	DISCRETE	CONTROL	
	H090-DEW3-MCP01	ZSO32			DISCRETE	CONTROL	
	H090-DEW3-MCP01	ZSO33			DISCRETE	CONTROL	
	H090-DEW3-MCP01	ZSO34			DISCRETE	CONTROL	
	H090-DEW3-MCP01	ZSC31			DISCRETE	CONTROL	
	H090-DEW3-MCP01	ZSC32			DISCRETE	CONTROL	
	H090-DEW3-MCP01	ZSC33			DISCRETE	CONTROL	
	H090-DEW3-MCP01	ZSC34			DISCRETE	CONTROL	

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTE
11A	MS-1A	H090-DEW1-MCC01	1	4"	480V	POWER	REUSE EXISTING CONDUIT
	MS-1A	H090-DEW1-MCC01	1	4"	480V	POWER	REUSE EXISTING CONDUIT
	MS-1A	H090-DEW1-MCC01	1	4"	480V	POWER	REUSE EXISTING CONDUIT
	MS-1A	H090-DEW1-MCC01	1	4"	480V	POWER	REUSE EXISTING CONDUIT
	MS-1A	SPARE	1	4"	EMPTY	POWER	
	MS-1A	1MS1	1	4"	480V	POWER	
	MS-1A	SPARE	1	3"	EMPTY	POWER/CONTROL	
	MS-1A	SPARE	1	3"	EMPTY	POWER/CONTROL	
	MS-1A	SPARE	1	3"	EMPTY	POWER/CONTROL	
	MS-1A	FO	1	3"	FMM	CONTROL	
	MS-1A	SPARE	1	3"	EMPTY	POWER/CONTROL	
	MS-1A	SPARE	1	3"	EMPTY	POWER/CONTROL	
11B	MS-1A	H090-DEW1-MCC02	1	4"	480V	POWER	
	MS-1A	H090-DEW1-MCC02	1	4"	480V	POWER	
	MS-1A	H090-DEW1-MCC02	1	4"	480V	POWER	
	MS-1A	H090-DEW1-MCC02	1	4"	480V	POWER	
	MS-1A	SPARE	1	4"	EMPTY	POWER	
	EMH-1B	EMH-3	1	2"	EMPTY	POWER	BETWEEEN FOPP IN SERVER ROOM AND H095-COM1-NPL01

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTE
12	H095-COM1-MCC01	WOODCHIP DELIVERY ENTRANCE GATE	1	1"	480	POWER	
	H095-COM1-LVP01	WOODCHIP DELIVERY ENTRANCE GATE	1	1"	120	POWER	
	H095-COM1-NPL01	WOODCHIP DELIVERY ENTRANCE GATE	1	2"	FMM	CONTROL	
	H095-COM1-MCC01	COMPOST PICK-UP ENTRANCE GATE	1	1"	480	POWER	
	H095-COM1-LVP01	COMPOST PICK-UP ENTRANCE GATE	1	1"	120	POWER	
	H095-COM1-NPL01	COMPOST PICK-UP ENTRANCE GATE	1	2"	FMM	CONTROL	
	H095-COM1-MCC01	COMPOST PICK-UP EXIT GATE	1	1"	480	POWER	
	H095-COM1-LVP01	COMPOST PICK-UP EXIT GATE	1	1"	120	POWER	
	H095-COM1-NPL01	COMPOST PICK-UP EXIT GATE	1	2"	FMM	CONTROL	
	H095-COM1-NPL01	H090-DEW1-MCP01	1	2"	FMM	CONTROL	
	H095-COM1-NPL01	EMH-3	1	2"	FMM	CONTROL	

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTE
13	H095-COM1-MCC01	WOODCHIP DELIVERY ENTRANCE GATE	1	1"	480	POWER	
	H095-COM1-LVP01	WOODCHIP DELIVERY ENTRANCE GATE	1	1"	120	POWER	
	H095-COM1-NPL01	WOODCHIP DELIVERY ENTRANCE GATE	1	2"	FMM	CONTROL	

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTE
14	H095-COM1-MCC01	COMPOST PICK-UP ENTRANCE GATE	1	1"	480	POWER	
	H095-COM2-LVP01	COMPOST PICK-UP ENTRANCE GATE	1	1"	120	POWER	
	H095-COM1-NPL01	COMPOST PICK-UP ENTRANCE GATE	1	2"	FMM	CONTROL	
	H095-COM1-MCC01	COMPOST PICK-UP EXIT GATE	1	1"	480	POWER	
	H095-COM1-LVP01	COMPOST PICK-UP EXIT GATE	1	1"	120	POWER	
	H095-COM1-NPL01	COMPOST PICK-UP EXIT GATE	1	2"	FMM	CONTROL	

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTE
15	H095-COM1-MCC01	COMPOST PICK-UP EXIT GATE	1	1"	480	POWER	
	H095-COM1-LVP01	COMPOST PICK-UP EXIT GATE	1	1"	120	POWER	
	H095-COM1-NPL01	COMPOST PICK-UP EXIT GATE	1	2"	FMM	CONTROL	

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTE
16	H095-COM1-MCC01	COMPOST PICK-UP ENTRANCE GATE	1	1"	480	POWER	
	H095-COM1-LVP01	COMPOST PICK-UP ENTRANCE GATE	1	1"	120	POWER	
	H095-COM1-NPL01	COMPOST PICK-UP ENTRANCE GATE	1	2"	FMM	CONTROL	

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTE
17	H095-COM1-NPL01	H090-DEW1-MCP01	1	2"	FMM	CONTROL	
	H095-COM1-NPL01	EMH-3	1	2"	FMM	CONTROL	BETWEEEN FOPP IN SERVER ROOM AND H095-COM1-NPL01

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTE
18	H090-DEW1-MCP01	H090-DEW3-MCP01	1	2"	FMM	CONTROL	

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTE
19	H095-COM1-NPL01	H090-DEW1-MCP01	1	2"	FMM	CONTROL	
	H095-COM1-NPL01	EMH-3	1	2"	FMM	CONTROL	BETWEEEN FOPP IN SERVER ROOM AND H095-COM1-NPL01
	H090-DEW1-MCP01	H090-DEW3-MCP01	1	2"	FMM	CONTROL	

DUCT BANK	FROM	TO	CONDUIT SETS	CONDUIT SIZE	TYPE		NOTE
20	OPERATION'S SERVER ROOM	EMH-1B	1	2"	FMM	CONTROL	BETWEEEN FOPP IN SERVER ROOM AND H095-COM1-NPL01

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

SITE ELECTRICAL
ELECTRICAL DUCTBANK SCHEDULE

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 08-E-6004 DATE: MAY 2026
ATLAS PAGE NO: 3328 SHEET 91 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:01

H090-DEW1-MDP04

MAIN BREAKER LSI **100** AMPS
MAIN LUGS **N/A** AMPS
BUS RATING 225 AMPS
AIC RATING 35,000 AMPS

Phase	Circuit	Mount	NEMA	Voltage
3	42	Surface	1	277 / 480

Ckt. #	Circuit Description	Wire Size	Trip Amps	Brkr. Pole	A Phase Load kVA	B Phase Load kVA	C Phase Load kVA	Brkr. Pole	Trip Amps	Wire Size	Circuit Description	Ckt. #
1					3.00	25.00						2
3	H110-LFT1-CPL01		20	3		3.00	25.00	3	125		H090-DEW1-TRN01	4
5							3.00	25.00				6
7	SPARE		20	3	3.00							8
9						3.00		3	20		OVERHEAD DOOR	10
11							3.00					12
13	SPARE		20	3	1.00							14
15						1.00		3	20		BRIDGE CRANE	16
17							1.00					18
19	SPACE											20
21								3	20		SPARE	22
23												24
25	SPACE											26
27											SPACE	28
29												30
31	SPACE											32
33											SPACE	34
35												36
37	SPACE											38
39											SPACE	40
41												42
			Phase kVA		32.000	32.000	32.000					
			Total kVA		96.000	Total Amps	115.61					

H090-DEW1-LVP01

MAIN BREAKER LSI **300** AMPS
MAIN LUGS **N/A** AMPS
BUS RATING 400 AMPS
AIC RATING 10,000 AMPS

Phase	Circuit	Mount	NEMA	Voltage
3	84	Surface	1	120 / 208

Ckt. #	Circuit Description	Wire Size	Trip Amps	Brkr. Pole	A Phase Load kVA	B Phase Load kVA	C Phase Load kVA	Brkr. Pole	Trip Amps	Wire Size	Circuit Description	Ckt. #
1	H090-DEW1-CPL06		20	1	1.00	1.20		1	20		MAIN LIGHTING	2
3	H090-DEW1-CPL07		20	1		1.00	0.80	1	20		ELEC. SOR. BATH. LIGHTING	4
5	H090-DEW1-CPL08		20	1			1.00	0.80	1	20		STAIRS, PUMP ROOM LIGHTING	6
7	H090-DEW1-CPL09		20	1	1.00	1.00		1	20		OUTDOOR RECPT.	8
9	H090-DEW1-FMT01		20	1		0.60	1.2	1	20		CANOPY LIGHTING	10
11	H090-DEW1-FMT02		20	1			0.60	1.00	2	20	H090-DEW1-MCP01	12
13	H090-DEW1-FMT03		20	1	0.60	1.00						14
15	H090-DEW1-FMT04		20	1		0.60		1	20		SPARE	16
17	H090-DEW1-FMT05		20	1			0.60					18
19	H090-DEW1-FMT06		20	1	0.60	1.50		1	20		EMERGENCY LIGHTS	20
21	H090-DEW1-FMT07		20	1		1.00	1.50	1	20		COMPOST FAC. LIGHTS (A)	22
23	H090-DEW1-MTR01		20	1			0.50	5.00	1	20	COMPOST FAC. LIGHTS (B)	24
25	H090-DEW1-MXR01		20	1	1.00	3.64					H090-DEW1-MCP01	26
27	H090-DEW1-MXR02		20	1		1.00	3.64	2	50		H090-DEW1-CU01	28
29	H090-DEW1-MXR03		20	1			1.00	1.85	1	20	COMPOST STOR. LIGHTS	30
31	H090-DEW1-PNL01		20	1	0.50	3.64						32
33	WC01		20	1		0.50	3.64	2	50		H090-DEW1-CU02	34
35	H090-DEW1-CPL01		20	1			1.00		1	20	SPARE	36
37	UPPER LEVEL RECEPTACLE		20	1	1.44	3.64		2	50		H090-DEW1-CU03	38
39	LOWER LEVEL RECEPTACLE		20	1		0.36	3.64					40
41	FC01		40	2			3.64	0.50	1	20	EMERGENCY LIGHTS	42
43					3.64	0.5			1	20	FACP	44
45	FC02		40	2		3.64	0.5		1	20	FART	46
47									1	20	SPARE	48
49	FC03		40	2	3.64	0.50			1	20	SPARE	50
51						3.64	0.50		1	20	SPARE	52
53	H090-DEW1-MCP01		20	2			1.00				SPACE	54
55	SPACE										SPACE	56
57	SPACE										SPACE	58
59	SPACE										SPACE	60
61	SPD		20	3							SPACE	62
63											SPACE	64
65											SPACE	66
			Phase kVA		30.040	27.760	18.490					
			Total kVA		76.290	Total Amps	212.01					

H095-COM1-LVP01

MAIN BREAKER LSI **300** AMPS
MAIN LUGS **N/A** AMPS
BUS RATING 400 AMPS
AIC RATING 10,000 AMPS

Phase	Circuit	Mount	NEMA	Voltage
3	84	Surface	1	120 / 208

Ckt. #	Circuit Description	Wire Size	Trip Amps	Brkr. Pole	A Phase Load kVA	B Phase Load kVA	C Phase Load kVA	Brkr. Pole	Trip Amps	Wire Size	Circuit Description	Ckt. #
1	REFRIGERATOR RECPT.		20	1	1.50	0.7		1	20		HALL, VESTIBULE LIGHTS	2
3	MICROWAVE RECPT.		20	1		1.50	0.11	1	20		LOCKER, BATHROOM LIGHTS	4
5	SINK RECPT.		20	1			1.50	0.2	1	20	ELECTRIC ROOM LIGHTS	6
7	TRAIN. ROOM RECPT.		20	1	1.08	4.00		1	40		TRAINING ROOM LIGHTS	8
9	TRAIN. ROOM TABLE RECPT.		20	1		1.08	3.24	1	20		ADMIN, OFFICE, SERVER LIGHTS	10
11	OFFICE AND ADMIN RECPT.		20	1			1.26	0.14	1	20	JANITOR CLOSET LIGHTS	12
13	BATHROOM RECEPTICALS		20	1	0.54	1.00		1	20		OUTDOOR LIGHTS	14
15	OUTSIDE RECPT.		20	1		0.36	0.17	1	20		EMERGENCY LIGHTS	16
17	H095-COM1-MCP01		20	1			1.00	1	20		SPARE	18
19	H095-COM1-CPL01		20	1	1.00	0.10		1	20		RF MODEM	20
21	WC01		20	1		0.50	3.64	2	50		H095-COM1-CU01	22
23	WC02		20	1			0.50	3.64				24
25	H095-COM2-FMT-01		20	1	0.20	0.50		1	20		EMERGENCY LIGHTS	26
27	H095-COM2-FMT-02		20	1		0.20	3.30	2	35		H095-COM1-CU01	28
29	H095-COM2-DMP11		20	1			1.00	3.30				30
31	H095-COM2-DMP12		20	1	1.00	3.30		2	35		H095-COM1-CU02	32
33	H095-COM2-DMP13		20	1		1.00	3.30					34
35	H095-COM2-DMP14		20	1			2.00	2.00	2	30	H095-COM1-CU03	36
37	H095-COM2-DMP15		20	1	1.00	2.00						38
39	H095-COM2-DMP16		20	1		1.00	2.00	2	30		H095-COM1-CU04	40
41	ELECTRICAL ROOM RECEPTACLE		20	1			0.18	2.00				42
43	H095-COM1-RCP01		20	1	2.00			1	20		OUTSIDE RECPTACLE	44
45	DRINK FOUNTAIN		20	1		0.10	0.50	1	20		H095-COM1-HTR01	46
47	SPARE		20	1				5.00	1	20	BIOFILTER RECEPTACLE	48
49	SPACE								1	20	FACP	50
51	SPACE								1	20	FART	52
53	SPACE							0.70	1	20	SITE LIGHTING	54
55	SPACE								1	20	SPARE	56
57	SPACE										SPACE	58
59	SPACE										SPACE	60
61	SPD		30	3							SPACE	62
63											SPACE	64
65											SPACE	66
			Phase kVA		19.920	22.000	24.420					
			Total kVA		66.340	Total Amps	184.36					

PANEL A

MAIN BREAKER LSI **175** AMPS
MAIN LUGS **N/A** AMPS
BUS RATING N/A AMPS
AIC RATING 10,000 AMPS

Phase	Circuit	Mount	NEMA	Voltage
3	42	Surface	1	120 / 208

Ckt. #	Circuit Description	Wire Size	Trip Amps	Brkr. Pole	A Phase Load kVA	B Phase Load kVA	C Phase Load kVA	Brkr. Pole	Trip Amps	Wire Size	Circuit Description	Ckt. #
1	2ND FL. LIGHTS OFFICE		20	1				1	20		RESTROOM LIGHTS WOMEN	2
3	2ND FL. LIGHTS OFFICE		20	1				1	20		RESTROOM LIGHTS MEN	4
5	2ND FL. LIGHTS		20	1				1	20		CORRIDOR LIGHTS	6
7	2ND FL. LIGHTS		20	1				1	20		ELECTRIC ROOM LIGHTS	8
9	2ND FL. LIGHTS HALL		20	1				1	20		2ND FL. LIGHTS - LAB	10
11	2ND FL. LIGHTS RESTROOM		20	1				1	20		2ND FL. LIGHTS - LAB	12
13	2ND FL. RECEPTACLES OFFICE		20	1				1	20		2ND FL. RECEPTACLES - LAB	14
15	2ND FL. RECEPTACLES BREAK ROOM		20	1				1	20		2ND FL. RECEPTACLES - TIME CLOCK & EWC	16
17	2ND FL. RECEPTACLES LAB		20	1				1	20		EMERGENCY, STAIRS, SHOP, - LIGHTS	18
19	2ND FL. RECEPTACLES LAB		20	1				1	20		EFFLUENT CHAMBER, POLE LIGHT - RECEPS	20
21	POLE LIGHT - RECEPS		20	1				1	20		INFLUENT SIGNAL AT, BT, CT	22
23	POLE LIGHT - RECEPS		20	1				1	20		SAMPLER EFFLUENT	24
25	2ND FL. RECEPS - LAB COUNTER		20	1				1	20		EFLUENT SUMP PUMP & LIGHT	26
27	2ND FL. RECEPS - LAB COUNTER		20	1				2	30		2 PHASE 30 AMP RECEP	28
29	EMER. LIGHTS		20	1								30
31	2ND FL. 2 PH 30 AMP RECEPS		30	2				1	20		U.C.P. EXHAUST FAN 3-1	32
33								1	20		2ND FL. RECEPS - SOUTH	34
35	MECH. ROOM RECEPS RESTROOM		20	1				1	20		1ST ELECT. ROOM RECEP 2ND RECEP SOUTH	36
37	RECEP OFFICE MECHANICAL ROOM		20	1				1	20		2 PHASE 30 AMP VACUUM PUMP	38
39	PUMP ROOM B.C. & MAGNETIC		20	1				1	20		PUMP ROOM GARAGE LIGHTS	40
41	RECEPS GARAGE & PUMPS ROOM		20	1				1	20		H040-WAS1-FMT01	42
43	2ND FL. SAMPLER - OUTSIDE		20	1				1	20		2ND FL. MCP	44
45	2ND FL. FLOWSPUTTER		20	1				1	20		2ND FL. OP	46
47	2ND FL. SENDING UNITS 3A-3B-3C		20	1				1	20		FLOWMETER OFFICE & OUTSIDE LTS	48
49	MWEO LIQUOR FLOW METER		20	1				1	20		TELEMETERING	50
51	P-1 HEAT STRIP		20	1				1	20		1C	52
53	TIME CLOCK1T, CONTACTOR F2 HT.		20	1				1	20		TELEPHONE	54
55	TANK DRAINAGE PUMP CONST.PANEL		20	1				1	20		ICE MACHINE	56
57	DOME LIGHT		20	1				1	20		CLARIFIER 4	58
59	H040-WAS1-CPL01		20	1	1.00			1	20		LIGHT + RECEP	60
			Phase kVA		1.000	0.000	0.500					
			Added kVA		1.500	Added Amps	4.17					

H090-DEW3-LVP01

MAIN BREAKER LSI **N/A** AMPS
MAIN LUGS **N/A** AMPS
BUS RATING 200 AMPS
AIC RATING 10,000 AMPS

Phase	Circuit	Mount	NEMA	Voltage
3	42	Surface	1	120 / 208

Ckt. #	Circuit Description	Wire Size	Trip Amps	Brkr. Pole	A Phase Load kVA	B Phase Load kVA	C Phase Load kVA	Brkr. Pole	Trip Amps	Wire Size	Circuit Description	Ckt. #
	1	H090-DEW1-LIT01		20	1	0.60	1.50				1	20		SLUDGE MIX. LIGHTING	2
	3	H070-RDT-FMT01		20	1			0.70	1.60		1	20		SLUDGE MIX. RECPTACLE	4
	5	FC01		35	2					3.40	1	20		SLUDGE ELE. RECPTACLE	6
	7					3.40	1.00				1	20		SLU. MIX. OUT. RECPTACLE	8
	9	FC02		30	2			3.40			1	20		SPARE	10
	11									3.40	1	20		SPARE	12
	13	H090-DEW3-MCP01		20	1	1.00								SPACE	14
	15	SPARE		20	1									SPACE	16
	17	SPARE		20	1									SPACE	18
	19	SPARE		20	1									SPACE	20
	21	SPARE		20	1									SPACE	22
	23	SPACE												SPACE	24
	25	SPACE												SPACE	26
	27	SPACE												SPACE	28
	29	SPACE												SPACE	30
	31	SPACE												SPACE	32
	33	SPACE												SPACE	34
	35	SPACE												SPACE	36
	37	SPACE												SPACE	38
	39	SPACE												SPACE	40
	41	SPACE												SPACE	42
				Phase kVA		7.500		5.900		8.600					
				Total kVA		22.000		Total Amps		61.14					

SHEET KEYNOTES

1. VERIFY THE MOTOR NAMEPLATE RATING FOR OVERHEAD DOOR AND BRIDGE CRANE PRIOR TO PURCHASING CIRCUIT BREAKER.
2. VERIFY THE AVAILABLE CIRCUIT IN THE PANEL PRIOR TO PURCHASING CIRCUIT BREAKER.

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

SITE ELECTRICAL
ELECTRICAL
PANELBOARD SCHEDULES

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	BJL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 08-E-6101
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 92 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 12:58

LUMINAIRE SCHEDULE							
FIXTURE TYPE	VOLTAGE (VAC)	LAMP TYPE	WATTS	LUMENS	MOUNT	DESCRIPTION	CATALOGUE NUMBER
L1	120-277	LED	49	5,335	CEILING SURFACE	WIDE LINEAR DISTRIBUTION, 49 WATT INPUT, 5335 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 COLOR RENDERING INDEX, UV-STABILIZED, INJECTION-MOLDED, IMPACT-RESISTANT, FROSTED POLYCARBONATE HOUSING,CLEAR POLYCARBONATE LENS LENS, -29°C TO +40°C OPERATING TEMPERATURE RATING, 5 YEAR WARRANTY	HOLOPHANE EVT4 LED LINEAR EVT4 6000LM PCL WD MVOLT GZ10 40K 80 CRI
L2	120-277	LED	67	7,407	CEILING SURFACE	WIDE LINEAR DISTRIBUTION, 67 WATT INPUT, 7407 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 COLOR RENDERING INDEX, UV-STABILIZED, INJECTION-MOLDED, IMPACT-RESISTANT, FROSTED POLYCARBONATE HOUSING,CLEAR POLYCARBONATE LENS LENS, -29°C TO +40°C OPERATING TEMPERATURE RATING, 5 YEAR WARRANTY	HOLOPHANE EVT4 LED LINEAR EVT4 8000LM PCL WD MVOLT GZ10 40K 80 CRI
L3	120-277	LED	23.8	4,079	CEILING SURFACE	WIDE LINEAR DISTRIBUTION, 23.8 WATT INPUT, 4079 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 COLOR RENDERING INDEX, ONE-PIECE 5VA FIBERGLASS HOUSING WITH INTEGRAL PERIMETER CHANNEL UTILIZING CONTINUOUS POURED-IN-PLACE NEMA 4X GASKET,CLEAR DEEP LENS LENS, -35° C TO +35°C. OPERATING TEMPERATURE RATING, 5 YEAR WARRANTY	LITHONIA FEM-LED LOW-PROFILE ENCLOSED AND GASKETED FEM L48 4000LM IMACD WD MVOLT GZ10 40K 80CRI
T1	120-277	LED	46.6	6,250	CEILING RECESSED	WIDE LINEAR DISTRIBUTION, 46.6 WATT INPUT, 6250 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 COLOR RENDERING INDEX, COMPONENTS ARE COATED WITH A PROPRIETARY PAINT BLEND AND DIE-FORMED,CURVED, RIBBED LENS, -30°C TO +40°C OPERATING TEMPERATURE RATING, 5 YEAR WARRANTY	BLT SERIES LED 2BLT4 60L ADP LP840
T2	120-277	LED	33.1	3,518	CEILING RECESSED	33.1 WATT INPUT, 3518 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 90 COLOR RENDERING INDEX, ONE-PIECE COLD-ROLLED STEEL COATED POLYESTER,SMOOTH (VTS) REFLECTOR SURFACE,ACRYLIC LINEAR PRISMATIC LENS, 5 YEAR WARRANTY	LITHONIA VT SERIES LED TROFFER 2VTL2 40L ADP EZ1 LP940 NES7
H1	120-277	LED	61.1	11,039	STANDARD CHAIN/CABLE MOUNT	WIDE LINEAR DISTRIBUTION, 61.1 WATT INPUT, 11039 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 COLOR RENDERING INDEX, COMBINATION STEEL AND ALUMINUM,NO LENS, -30°C TO +55°C OPERATING TEMPERATURE RATING, 5 YEAR WARRANTY	ALBEO ABV4 SERIES LED HIGH BAY LIGHTING ABV4 0 12 48 W1 ST
H2	120-347	LED	175	24000	PENDANT MOUNTED	MEDIUM DISTRIBUTION, 175 WATT INPUT, 24000 LUMEN OUTPUT, 5000K COLOR TEMPERATURE, 80 COLOR RENDERING INDEX, CAST DRIVER HOUSING,POLYCARBONATE LENS, -40°C TO +55°C OPERATING TEMPERATURE RATING, 5 YEAR WARRANTY	CPRB LED ROUND BAY CPRB ALO14 UVOLT SWW9 80CRI DWH
H3	120-277	LED	35	5000	PENDANT MOUNTED	WIDE DISTRIBUTION 35 WATT INPUT, 5000 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 COLOR RENDERING INDEX, GALVANIZED STEEL MOUNTING/PLASTER FRAME; GALVANIZED STEEL JUNCTION BOX WITH BOTTOM-HINGED ACCESS COVERS AND SPRING LATCHES,PRISMATIC BOROSILICATE GLASS LENS, -40°C TO +65°C STANDARD, 5 YEAR WARRANTY	HOLOPHANE PXLW LED ROUND LOW BAY PXLW 5000LM WD MVOLT 40K 80CRI PM PCS DNXD
H4	120-277	LED	34	4891	SURFACE MOUNTED	DISTRIBUTION 34 WATT INPUT, 4891 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 70 COLOR RENDERING INDEX, SUPER DURABLE TGIC THERMOSET POWDER COAT FINISH,PRECISION MOLDED MICRO PRISMATIC ACRYLIC LENSES AND BACK REFLECTORS LENS, WET LOCATION STANDARD, 5 YEAR WARRANTY	LITHONIA VCVL LED VCVL LED V4 P2 40K 70CRI T5M MVOLT SRM PIR3FC3V DNAXD

LUMINAIRE SCHEDULE							
FIXTURE TYPE	VOLTAGE (VAC)	LAMP TYPE	WATTS	LUMENS	MOUNT	DESCRIPTION	CATALOGUE NUMBER
U1	120-277	LED	32	3,215	WALL SURFACE	TYPE T2M DISTRIBUTION, 32 WATT INPUT, 3215 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 70 COLOR RENDERING INDEX, DIE CAST ALUMINUM HOUSING,ACRYLIC LENS, 0°C TO +40°C OPERATING TEMPERATURE RATING, 5 YEAR WARRANTY	LITHONIA WDGE2 LED P3 40K 80CIR TFTM MVOLT SRM PE PIR1FC3V DBLXD
U2	120	LED	15	1210	WALL SURFACE	TYPE IV DISTRIBUTION, 15 WATT INPUT, 1210 LUMEN OUTPUT, 4000K COLOR TEMPERATURE,80 COLOR RENDERING INDEX, EXTRUDED ALUMINUM HOUSING,ACRYLIC LENS, 25°C OPERATING TEMPERATURE RATING, 5 YEAR WARRANTY, 4' LUMINAIRE LENGTH	PEERLESS PEERLESS SQUARE WALL LED SQW4 STW 8FT 80CRI 40K I500LMF 800LMF MIN10 ZT 120 SCT EC C032
P1	480	LED	49	6000	POLE MOUNTED	TYPE III DISTRIBUTION, 49 WATT INPUT, 6000 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 70 COLOR RENDERING INDEX, CAST DRIVER HOUSING,IMPACT RESISTANT TEMPERED GLASS LENS, -40°C TO +50°C OPERATING TEMPERATURE RATING, 5 YEAR WARRANTY	EVOLVE EVOLVE ERL1 ERL1-506B740
S1	120-277	LED	8.9	750	CEILING RECESSED	8.9 WATT INPUT, 750 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, 80 COLOR RENDERING INDEX, GALVANIZED STEEL MOUNTING/PLASTER FRAME; GALVANIZED STEEL JUNCTION BOX WITH BOTTOM-HINGED ACCESS COVERS AND SPRING LATCHES,DIFFUSING OPTICAL LENS, WET LOCATION STANDARD, 5 YEAR WARRANTY	LITHONIA LDN6 ROUND SERIES LDN6 40/07 L06 AE LD MVOLT GZ10
X1	120	LED	0.62	-	WALL SURFACE	EXIT LIGHT PLACED BY EXIT DOORS, WALL SURFACE MOUNTED, ENGINEERING-GRADE THERMOPLASTIC HOUSING, UNIVERSAL MOUNTING CANOPY FOR TOP OR END MOUNT (CANOPY INCLUDED), 120 VAC INPUT, +10°C TO +40°C, 5 YEAR WARRANTY	LITHONIA LQM QUANTUM LED EMERGENCY EXIT LQM S W 3 R 120/277 M6
X2	120	LED	3.5	160	WALL SURFACE	EXIT LIGHT AND EXIT LIGHTING, WALL SURFACE MOUNTED, ENGINEERING-GRADE THERMOPLASTIC HOUSING, UNIVERSAL MOUNTING CANOPY FOR TOP OR END MOUNT (CANOPY INCLUDED), 120 VAC INPUT, +10°C TO +40°C, 5 YEAR WARRANTY	LITHONIA LQM QUANTUM LED EMERGENCY EXIT LHQM LED G SD M6

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GENERAL SHEET NOTES

1. FOR LUMINAIRES SHOWN AS EMERGENCY BACKUP LIGHTING. CONTRACTOR SHOULD SELECT THE BATTERY PACK OPTION WHEN PURCHASING.

LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

SITE ELECTRICAL
ELECTRICAL
LIGHTING SCHEDULE

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

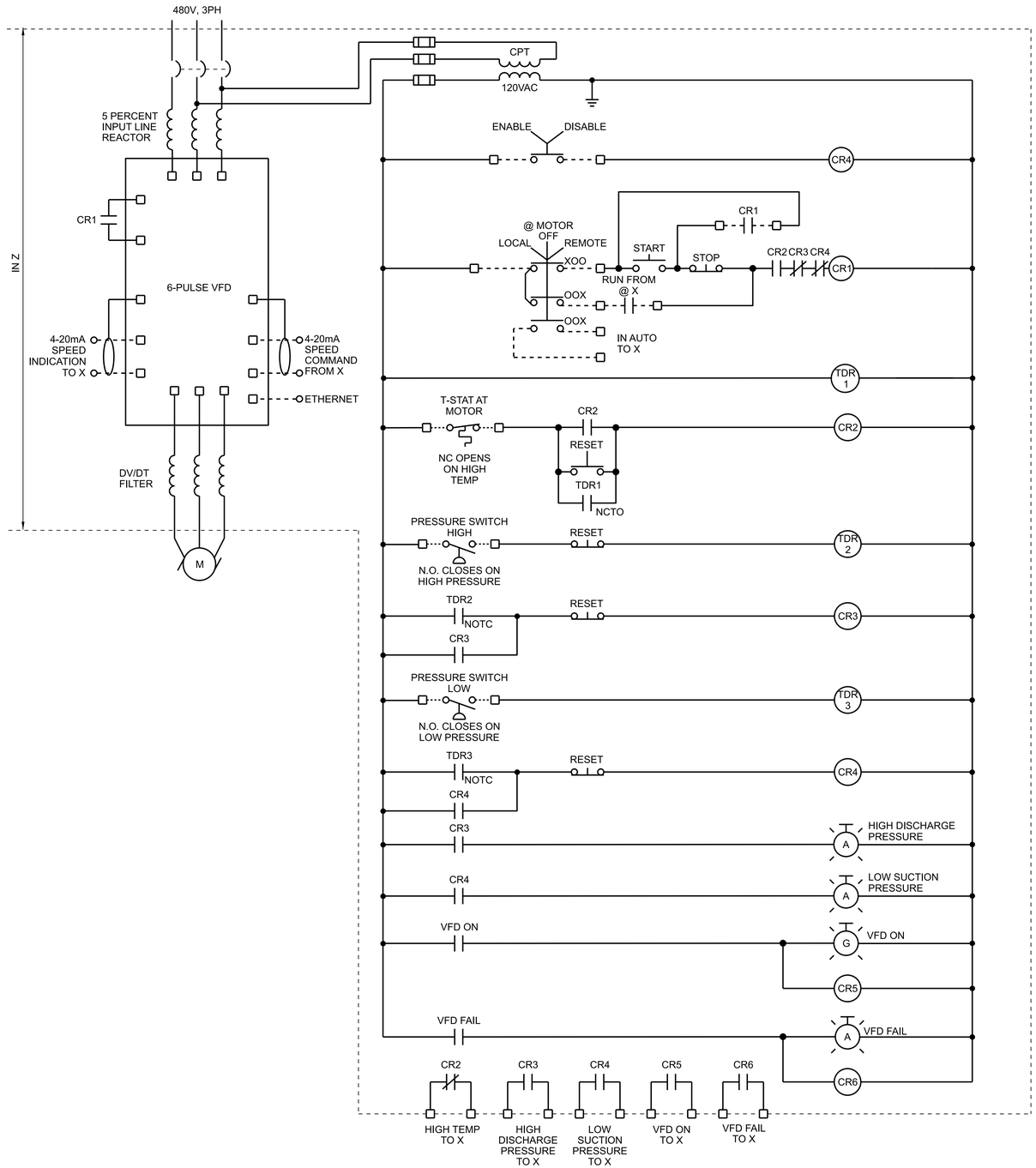
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 08-E-6102
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 93 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 12:57



WAS PUMP NO. 1	H040-WAS1-WSP01
WAS PUMP NO. 2	H040-WAS1-WSP02
WAS PUMP NO. 3	H040-WAS1-WSP03
CENTRIFUGE SLUDGE FEED PUMP NO. 1	H090-DEW1-SFP01
CENTRIFUGE SLUDGE FEED PUMP NO. 2	H090-DEW1-SFP02
CENTRIFUGE SLUDGE FEED PUMP NO. 3	H090-DEW1-SFP03

NOTE:

X = H040-WAS1-PLC01, H090-DEW1-PLC01

Z = H001-OPS1-MCC01, H001-OPS1-MCC02, H090-DEW1-MCC01, H090-DEW1-MCC02

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

SITE ELECTRICAL

MOTOR CONTROL DIAGRAMS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

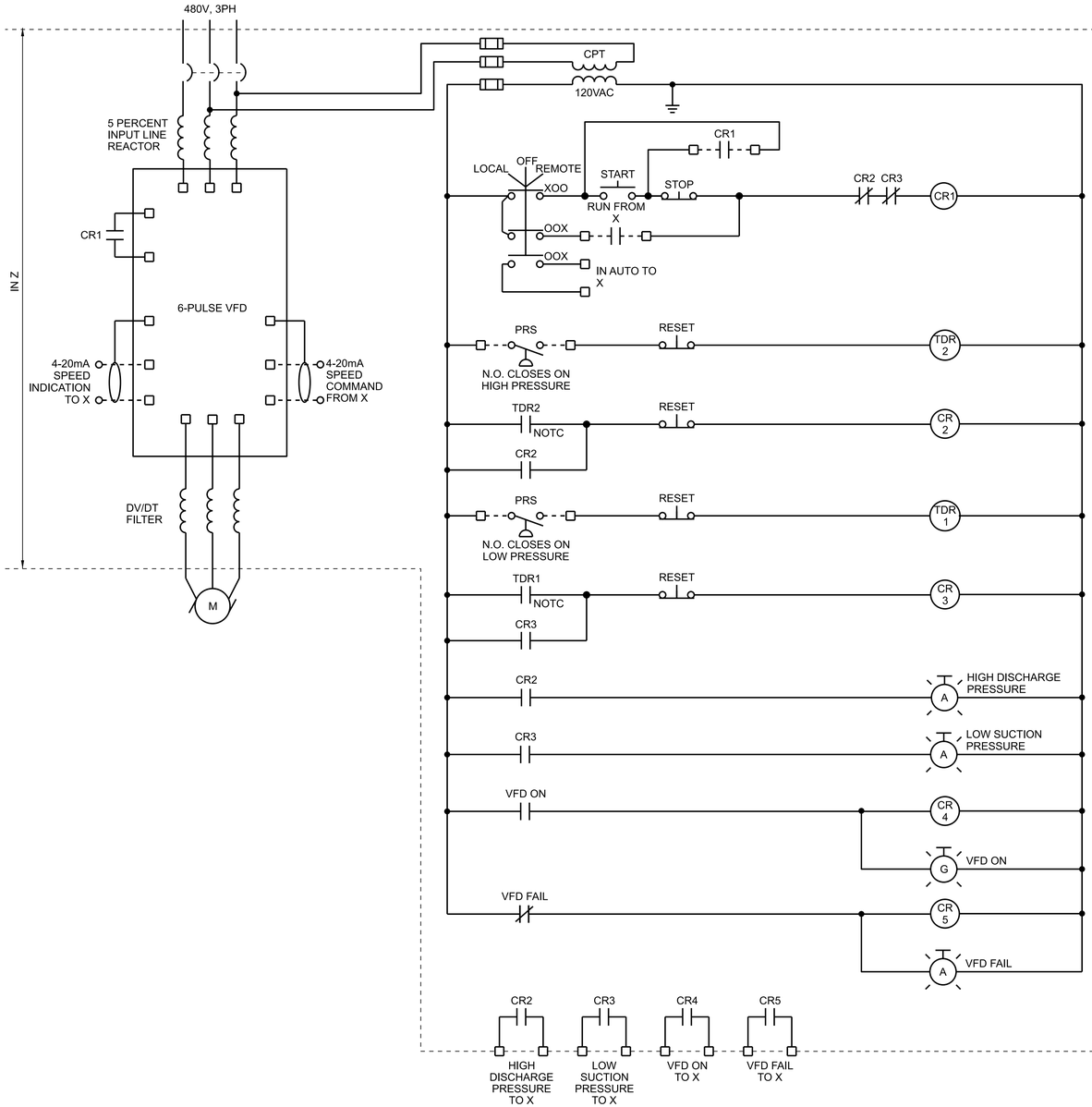
DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MN	05/26
LEAD ENG.	BZ	5/26
FIELD MGR.		5/26

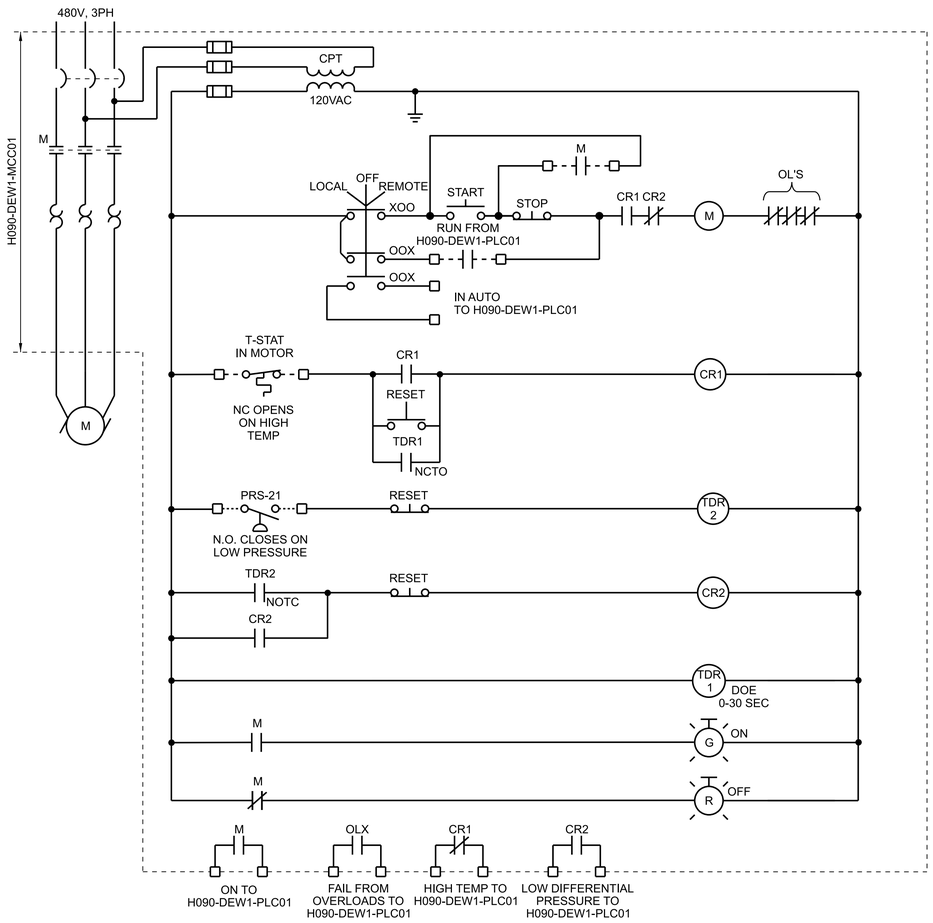
APPROVED:
DESIGN MANAGER

FILE: DRAWING: 08-E-6111 DATE: MAY 2026

ATLAS PAGE NO: 3328 SHEET 94 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 12:58





ODOR CONTROL FAN NO. 1 — H090-DEW1-OCF01

RECIRCULATION PUMP NO. 1 — H090-DEW2-RCP01
RECIRCULATION PUMP NO. 2 — H090-DEW2-RCP02

CENTRATE PUMP NO. 1 — H090-DEW1-PMP04
CENTRATE PUMP NO. 2 — H090-DEW1-PMP05
CENTRATE PUMP NO. 3 — H090-DEW1-PMP06

NOTE:

X = H090-DEW3-PLC01, H090-DEW1-PLC01

Z = H090-DEW1-MCC01, H090-DEW1-MCC02, SLUDGE MIXING ELECTRICAL BUILDING

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LICENSED PROFESSIONAL ENGINEER
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05/18/2026

SITE ELECTRICAL

MOTOR CONTROL DIAGRAMS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

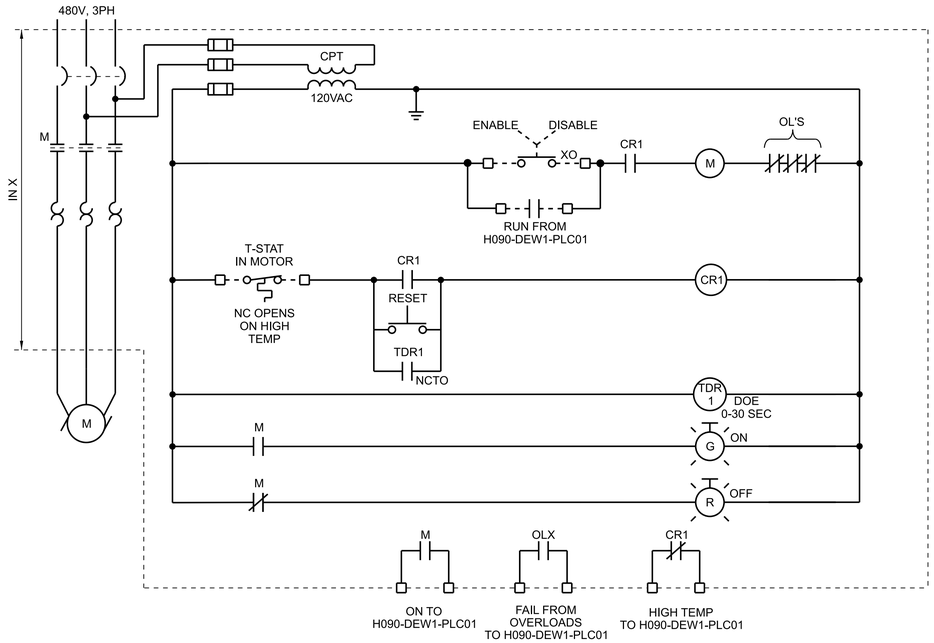
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

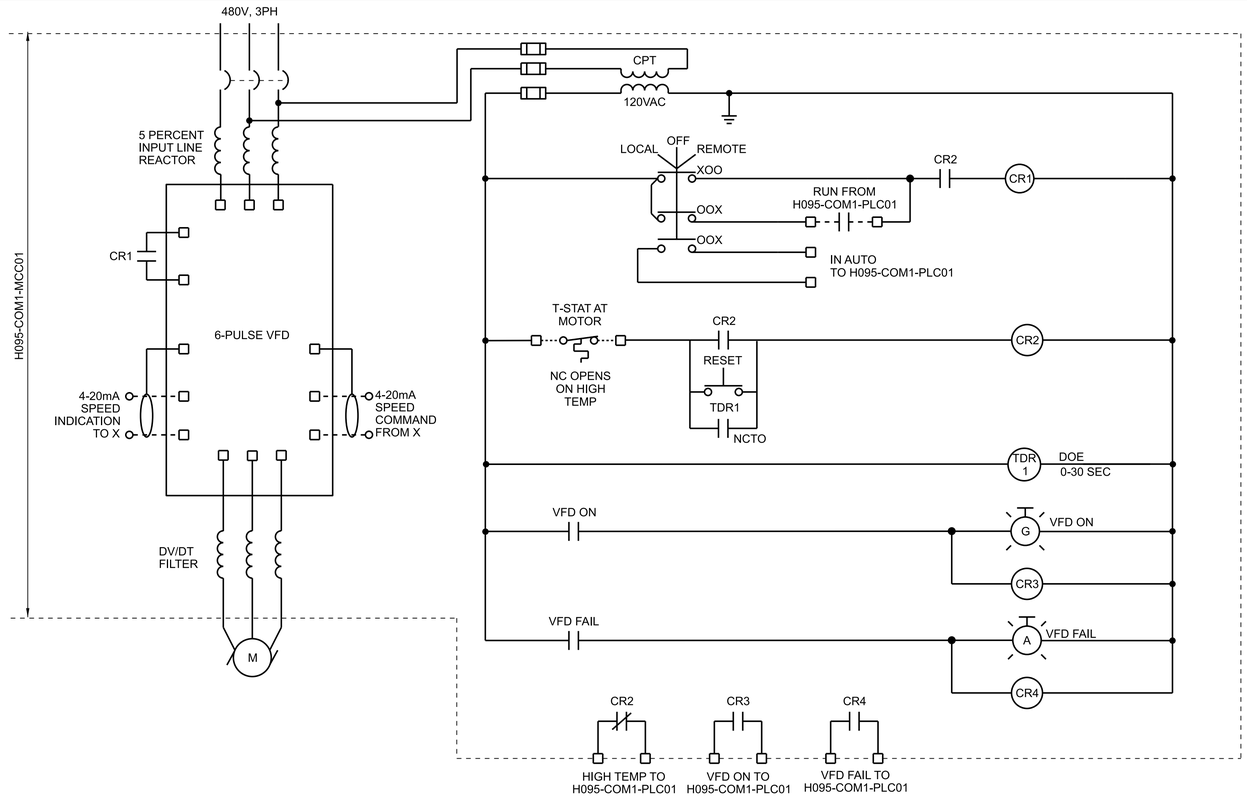
PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN	05/26
HORIZONTAL:	LEAD ENG.	BZL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING:	08-E-6112	DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 95 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 12:58





EXHAUST FAN NO. 1	H095-COM2-EHF01
EXHAUST FAN NO. 2	H095-COM2-EHF02
EXHAUST FAN NO. 3	H095-COM2-EHF03
EXHAUST FAN NO. 4	H095-COM2-EHF04
EXHAUST FAN NO. 5	H095-COM2-EHF05
EXHAUST FAN NO. 6	H095-COM2-EHF06
EXHAUST FAN NO. 7	H095-COM2-EHF07

NOTES:

1. H090-DEW1-MCC01, H090-DEW1-MCC02

COMPOST FAN NO. 1	H095-COM2-FAN01
COMPOST FAN NO. 2	H095-COM2-FAN02
COMPOST FAN NO. 3	H095-COM2-FAN03
COMPOST FAN NO. 4	H095-COM2-FAN04
COMPOST FAN NO. 5	H095-COM2-FAN05
COMPOST FAN NO. 6	H095-COM2-FAN06
COMPOST FAN NO. 7	H095-COM2-FAN07
COMPOST FAN NO. 8	H095-COM2-FAN08
COMPOST FAN NO. 9	H095-COM2-FAN09
COMPOST FAN NO. 10	H095-COM2-FAN10

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LICENSED PROFESSIONAL ENGINEER
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OKLAHOMA
05/18/2026

SITE ELECTRICAL

MOTOR CONTROL DIAGRAMS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

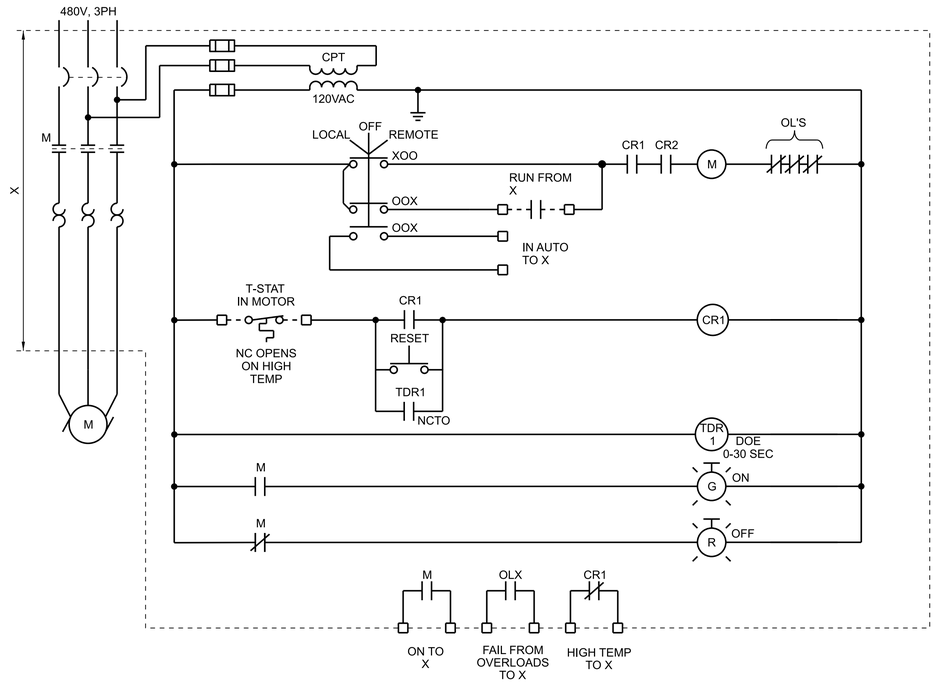
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 08-E-6113
ATLAS PAGE NO: 3328
SHEET 96 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 12:59



TYPICAL NEMA 1/2 SPARES

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
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05/18/2026

SITE ELECTRICAL

MOTOR CONTROL DIAGRAMS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

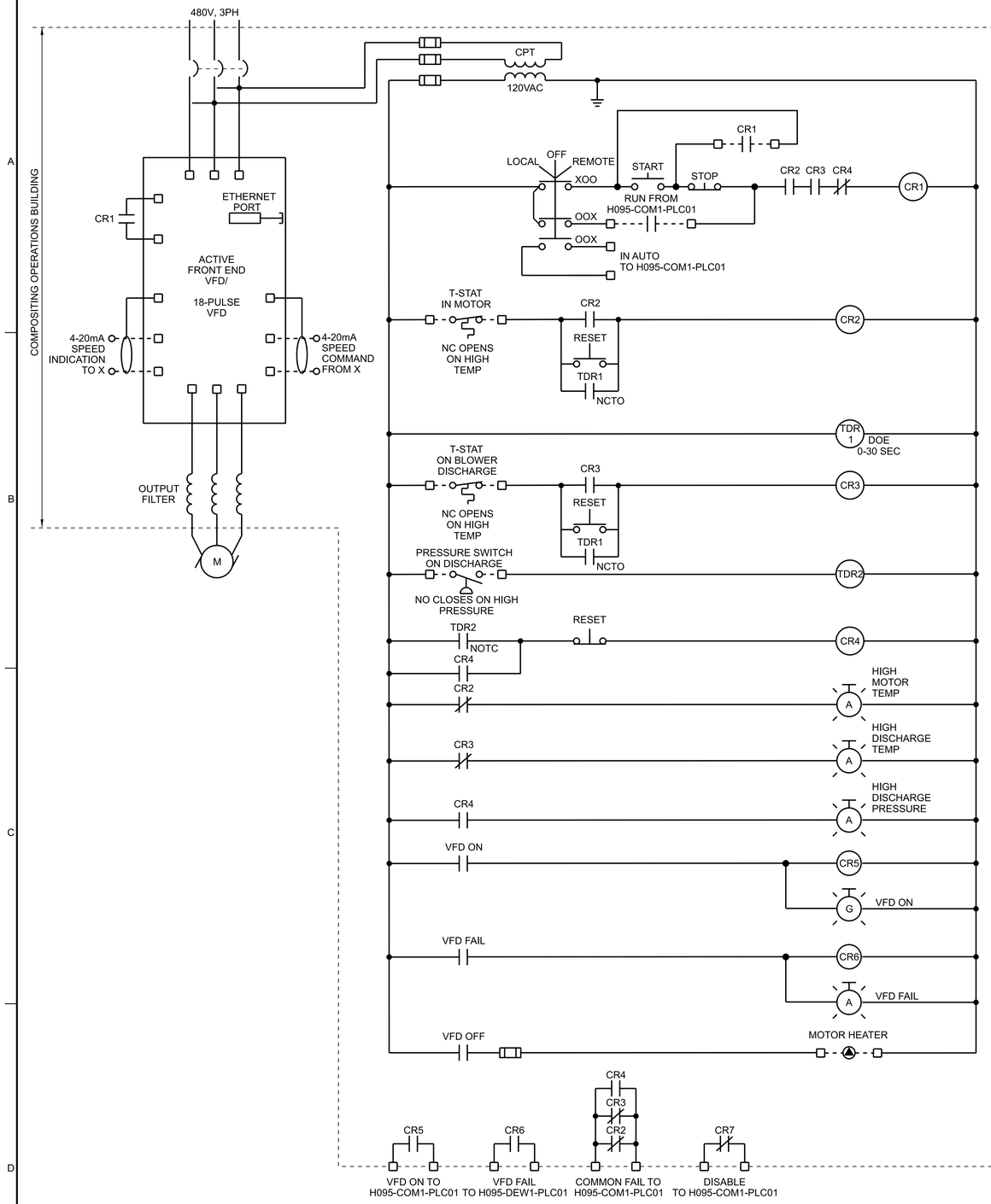
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MN	05/26
LEAD ENG.	BZ	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

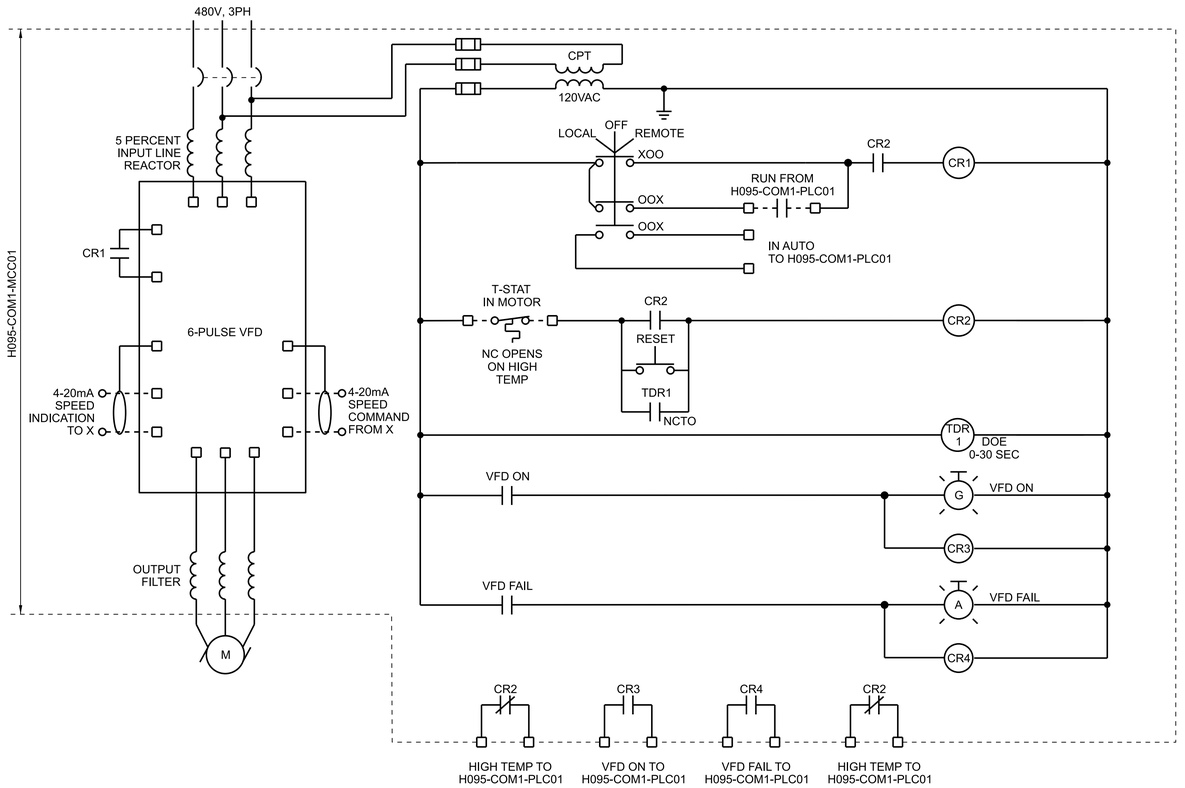
FILE: DRAWING: 08-E-6114
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 97 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 12:58



BIOFILTER FAN NO. 1
BIOFILTER FAN NO. 2

H095-COM2-FAN11
H095-COM2-FAN12



CURING FAN NO. 1
CURING FAN NO. 2
CURING FAN NO. 3
CURING FAN NO. 4

H095-COM3-FAN01
H095-COM3-FAN02
H095-COM3-FAN03
H095-COM3-FAN04

GENERAL SHEET NOTES

1. REFER TO SPECS FOR VENDOR PROVIDED EQUIPMENT

LICENSED PROFESSIONAL ENGINEER
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32520
OKLAHOMA
05/18/2026

SITE ELECTRICAL

MOTOR CONTROL DIAGRAMS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	BJL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 08-E-6115
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 98 OF 300 SHEETS

PLOT DATE: 12-MAY-2026
PLOT TIME: 13:31

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H040-WAS1-CPL01

H040-WAS1-PLC01

GENERAL SHEET NOTES

1. SMALL ASTERISKS AT THE BEGINNING OF INSTRUMENTATION TAGS HAVE THE COMPLETE TAG NUMBER PREFIX OF "H040-WAS1". REFER TO PROCESS AND INSTRUMENTATION LEGEND SHEET 01-G-0055. ALL EQUIPMENT AND INSTRUMENT TAGS SHALL INCLUDE THE COMPLETE TAG ON ALL NAMEPLATES. LARGE ASTERISKS AFTER TAG NUMBERS INDICATOR EITHER PROVIDED BY ELECTRICAL OR VENDOR PACKAGE. SEE LEGEND AND INSTRUMENTATION SHEET 01-G-0055 FOR CLARIFICATION.
2. SEE INSTRUMENTATION AND CONTROLS LEGEND FOR SURGE SUPPRESSOR (SS) TABLE.

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H001-OPS1-MCC01 — 480V — H040-WAS1-VFD01**

H001-OPS1-MCC02 — 480V — H040-WAS1-VFD02**

H001-OPS1-MCC02 — 480V — H040-WAS1-VFD03**

VFD01 / VFD02 / VFD03 signals: LOW SUCTION PRESSURE, HIGH MOTOR TEMPERATURE, START/STOP, IN REMOTE, RUNNING STATUS, FAULT, SPEED FEEDBACK, SPEED COMMAND, HIGH DISCHARGE PRESSURE, ETH

VFD01 / VFD02 / VFD03 signals: OPEN STATUS, CLOSED STATUS

FLOW — SS-2 — 19

POWER — 22

POWER — 20, 4

POWER — 6, 7

POWER — 21, 12, 9, 10

OPEN STATUS — (5) — 1, 3, 13, 15, 17

CLOSED STATUS — (5) — 2, 8, 14, 16, 18

120V UPS — SS-4 — *FMT 01 — MSC — FE 11

FROM RAS SPLITTER STRUCTURE — *PGV09 — M — 8" WAS

8" WAS — *PGV01 — *PRS 01 — PI 11 — PE 11 — *BLV01 — TSH 11 — HS 11 LOR/SS ** — M — AS — WAS PUMP NO. 1 H040-WAS1-WSP01 HP: 5 — *ARV01 — *PRS 02 — PI 12 — PE 02 — *CKV01 — *BLV04

4" WAS — *PGV04 — ZSO 14 — ZSC 14 — 1, 2

6" WAS — *BLV07 — A 09-N-0003 TO ROTARY DRUM THICKENERS

8" WAS — *PGV02 — *PRS 03 — PI 13 — PE 13 — *BLV02 — TSH 13 — HS 13 LOR/SS ** — M — AS — WAS PUMP NO. 3 H040-WAS1-WSP03 HP: 5 — *ARV02 — *PRS 04 — PI 14 — PE 14 — *CKV02 — *BLV05

4" WAS — *PGV05 — ZSO 15 — ZSC 15 — 3, 8

6" WAS — *PGV07 — ZSO 17 — ZSC 17 — 15, 16

8" WAS — *PGV03 — *PRS 05 — PI 15 — PE 15 — *BLV03 — TSH 12 — HS 12 LOR/SS ** — M — AS — WAS PUMP NO. 2 H040-WAS1-WSP02 HP: 5 — *ARV03 — *PRS 06 — PI 16 — PE 16 — *CKV03 — *BLV06

4" WAS — *PGV06 — ZSO 16 — ZSC 16 — 13, 14

6" WAS — *PGV08 — ZSO 18 — ZSC 18 — 17, 18

6" WAS — *BLV08 — B 09-N-0003 TO ROTARY DRUM THICKENERS

LICENSED PROFESSIONAL ENGINEER — ORVIL LUGO 35653 — OKLAHOMA

MAY 15th, 2026

REVISION	BY	DATE

INSTRUMENTATION AND CONTROL
P&ID
WAS FEED PUMPS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	05/7/26	
	LEAD ENG.	5/7/26	
	FIELD MGR.	5/7/26	DESIGN MANAGER
FILE:	DRAWING: 09-N-0001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 99 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:19

H050-FCL1-CPL01

H050-FCL1-PLC01

MOISTURE ALARM (2) | HIGH TEMPERATURE ALARM (2) | START/STOP (2) | IN REMOTE (2) | RUNNING STATUS (2) | FAULT (2)

HIGH LEVEL ALARM | HIGH HIGH LEVEL ALARM | LOW LOW LEVEL ALARM | IN REMOTE (2) | OPEN STATUS (2) | CLOSED STATUS (2) | OPEN COMMAND (2) | CLOSED COMMAND (2) | HIGH PRESSURE | HIGH PRESSURE

PRESSURE SS-2 | PRESSURE SS-2 | LEVEL SS-2

480V

H050-FCL1-CPL02◆

INTRINSICALLY SAFE
RELAY CONTROL PANEL

HS 21 LOR/SS | YL 21 ON | YL 22 DISCHARGE | YL 23 RECIRC | LAHH 21 | LALL 21 | HS 22 LOR/SS | YL 24 ON

TAH 21 TEMP | XA 21 SEAL | MA 21 FAULT | MN 21 RUN | TAH 22 TEMP | XA 22 SEAL | MA 22 FAULT | MN 22 RUN

1 | 2 | 7

FLOAT SWITCH TERMINAL BOX

SEAL-OFF FITTING (3) → 8 | 9 | 10

POWER 3 | POWER 6 | 4 | 5

7 → SS-4 *LIT 01 "MSC"

PUMP POWER AND CONTROL TERMINAL BOX

POWER | POWER

SCUM TANK

WASHDOWN SPRAY BAR 2" W2

VALVE VAULT

FROM PLANT POTABLE WATER LOOP

*BFL01 | *BLV01

1/2" D

1 → SS-4 *PTM 01 | 4 → *PRS 01

*ARV01 → *BLV02 → PE 21 → 4" SSC → *CKV01 → *PGV01

1" D → *BLV04 → D

6 → POWER → M → *PGV04 → 4" SSC → C 09-N-0004 TO SLUDGE HOLDING TANK

YARD PIPE

SCUM WET WELL

FROM INFLUENT CHAMBER → 6" SSC → *GTV01 NO

FROM SECONDARY CLARIFIER NO. 1 → 6" SSC → *GTV02 NO

FROM SECONDARY CLARIFIER NO. 2 → 6" SSC → *GTV03 NO

6" SSC

FROM SECONDARY CLARIFIER NO. 3 → 6" SSC → *GTV04 NO

FROM SECONDARY CLARIFIER NO. 4 → 6" SSC → *GTV05 NO

6" SSC

4" SSC

POWER → M → 3 → RECIRCULATION → 4" SSC → *PGV02

2 → SS-4 *PTM 02 | 5 → *PRS 02

*ARV02 → *BLV03 → PE 22 → 4" SSC → *CKV02 → *PGV03

1" D → *BLV05 → D

8 → LSHH 21

9 → LSH 21

4" SSC → 2" D → *DBV01

10 → LSLL 21

"MSC" | "MSC"

POWER | POWER | POWER | POWER

TSH 21 | OSH 21 | M | TSH 22 | OSH 22 | M

CS SECONDARY SCUM PUMP NO. 1 H050-FCL1-SCP01 HP: 5

CS SECONDARY SCUM PUMP NO. 2 H050-FCL1-SCP02 HP: 5

EXISTING SCUM EJECTOR PUMP PIT

GENERAL SHEET NOTES

1. SMALL ASTERISKS AT THE BEGINNING OF INSTRUMENTATION TAGS HAVE THE COMPLETE TAG NUMBER PREFIX OF "H050-FCL1". REFER TO PROCESS AND INSTRUMENTATION LEGEND SHEET 01-G-0055. ALL EQUIPMENT AND INSTRUMENT TAGS SHALL INCLUDE THE COMPLETE TAG ON ALL NAMEPLATES. LARGE ASTERISKS AFTER TAG NUMBERS INDICATOR EITHER PROVIDED BY ELECTRICAL OR VENDOR PACKAGE. SEE LEGEND AND INSTRUMENTATION SHEET 01-G-0055 FOR CLARIFICATION.

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LICENSED PROFESSIONAL ENGINEER ORVIL LUGO 35653 OKLAHOMA

MAY 15th, 2026

INSTRUMENTATION AND CONTROL
P&ID
SCUM WET WELL

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 09-N-0002 DATE: MAY 2026

ATLAS PAGE NO: 3328 SHEET 100 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:18

GENERAL SHEET NOTES

1. SMALL ASTERISKS AT THE BEGINNING OF INSTRUMENTATION TAGS HAVE THE COMPLETE TAG NUMBER PREFIX OF "H070-RDT1". REFER TO PROCESS AND INSTRUMENTATION LEGEND SHEET 01-G-0055. ALL EQUIPMENT AND INSTRUMENT TAGS SHALL INCLUDE THE COMPLETE TAG ON ALL NAMEPLATES. LARGE ASTERISKS AFTER TAG NUMBERS INDICATOR EITHER PROVIDED BY ELECTRICAL OR VENDOR PACKAGE. SEE LEGEND AND INSTRUMENTATION SHEET 01-G-0055 FOR CLARIFICATION.

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H070-RDT1-LCP01 / H070-RDT1-PLC01: H2S, DENSITY, FLOW (2) — 120V

H070-RDT1-CP * / PLC *: POLYMER (HIGH, SS, MA, SK, SF, YS, FAIL) (2)(2)(2)(2)(4)(4)(2)(2)(2)(2) — 480V; GTSP (SS, MA, SK, SF, YS, FAIL) (4)(4)(2)(2)(2)(2) — 2(1) — FLOW (2) — 41

H070-RDT1-LCP01 / H070-RDT1-PLC01: LEVEL, REMOTE, ON, RUN, SPEED, SPEED, FAIL (2)(2)(2)(2)(2)(2)(2) — 120V

*AIT 01 H2S — MSC — *AE 01 H2S

*DIT 01 — MSC

*FIT 01 — MSC

FROM EXISTING POLYMER SYSTEM — 3" POS

FROM WAS FEED PUMPS
A | 09-N-0001

*DE 01

*FE 01 — M — *MTR01

WAS

POLYMER INJECTION RING

YARD PIPE | RDT FACILITY

POWER

*HS 01 ES

AS

H070-RDT1-SMX01
FLOCCULATOR TANK
M AS DRUM MOTOR

H070-RDT1-RDT01
ROTARY DRUM THICKENER NO. 1

*LSH 01

*PI 01

*PSL 01

TWAS

FROM PLANT WATER SYSTEM — W3

*PCV01

S — FO — *WWSV01 WASHWATER SOLENOID

CS
WASHWATER BOOSTER PUMP
H070-RDT1-BSP01

LIMITS OF RDT SKID *

TYPICAL OF 2

*FIT 02 — 120V

*FE 02 — M — *MTR02

YARD PIPE | RDT FACILITY — MSC

FROM WAS FEED PUMPS
B | 09-N-0001 — 8" TWAS

WAS

FROM EXISTING POLYMER SYSTEM — POS

6" BYPASS

DR — DR

*WWSV02
*PCV02
H070-RDT1-BSP02
H070-RDT1-SMX02

ROTARY DRUM THICKENER NO. 2
H070-RDT1-RDT02

*PI02
*PSL02
*HS02
*LSH02

SAME ABOVE

DRAIN

6" BYPASS

H070-RDT1-VFD01 — 480V

FROM PLANT WATER SYSTEM — W3

S — FO — *SV01

FI 04

*HS 03 ES

POWER

*FSL 01

*PE 03

*PSH 03

*PI 03

TWAS

RDT THICKENED SLUDGE PUMP NO. 1
H070-RDT1-WSP01

TYPICAL OF 2

TO SLUDGE HOLDING TANK NO. 1
D | 09-N-0004

*PIT 01

EXISTING SLUDGE CAKE WELL

W3

*SV02
*FI05
*HS04
*FSL02

*PE04
*PI04
*PSH04

W3

H070-RDT1-WSP02

SAME ABOVE

TO SLUDGE HOLDING TANK NO. 1
E | 09-N-0004

6" BYPASS

H070-RDT1-CP02 *
SAME AS LEFT

POLYMER SOLUTION FEED PUMPS
1 2 3 R/I 4 5 1
HS X (SS) HS X (MA) SHK X FHK X (DOSE) SI X YL X HS X (FAIL)

GRAVITY THICKENED SLUDGE PUMPS
11 12 13 R/I 14 15 16 41
HS X (SS) HS X (SS) SHK X FHK X (SS, SETPOINT) SI X (SS) YL X (SS) YA X (FAIL) FI X (FEED FLOW)

H070-RDT1-CP01 *
SEE SPECIFICATION SECTION 44-48-25 FOR CONTROLS AND INDICATORS LOCATED ON THE FACE OF THE PANEL

LICENSED PROFESSIONAL ENGINEER
ORVIL LUGO 35653
OKLAHOMA
MAY 15th, 2026

INSTRUMENTATION AND CONTROL
P&ID
ROTARY DRUM THICKENERS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 09-N-0003 DATE: MAY 2026
ATLAS PAGE NO: 3328 SHEET 101 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:18

GENERAL SHEET NOTES

1. ALL ITEMS INSIDE RDT BYPASS CONTROL VALVE BOX INCLUDE THE "H070-RDT1-" PREFIX.
2. ALL ITEMS ASSOCIATED WITH SLUDGE HOLDING TANK NO. 1 INCLUDE THE "H090-DEW1-" PREFIX.
3. ALL OTHER ITEMS NOT ASSOCIATED WITH RDT BYPASS VALVE BOX OR SLUDGE HOLDING TANK NO. 1 ON THIS SHEET INCLUDE THE "H090-DEW2-" PREFIX.
4. REFER TO PROCESS AND INSTRUMENTATION LEGEND SHEET 01-G-0055 FOR SURGE SUPRESSOR (SS) TABLE.

H090-DEW3-MCP01

H090-DEW3-PLC01

OPEN STATUS, CLOSED STATUS, FLOW, PRESSURE, LEVEL, START/STOP, IN REMOTE, RUNNING STATUS, FAULT, SPEED FEEDBACK, SPEED COMMAND, HIGH PRESSURE, LOW SUCTION PRESSURE, HIGH DISCHARGE PRESSURE

H090-DEW3-VFD04**

H090-DEW3-VFD05**

480V 480V

SLUDGE MIXING ELECTRICAL BUILDING

C 09-N-0002 FROM SCUM WET WELL

4" SSC

H090-DEW2-CPL01◆

H090-DEW2-VFD01 ◆

H090-DEW2-CPL02◆

H090-DEW2-VFD02 ◆

H090-DEW2-CPL03◆

H090-DEW2-VFD03 ◆

10" ALP, 480V, POWER, M, AS

OUTSIDE AIR

BLOWER NO. 1 ◆ H090-DEW2-BLO01 HP: 100

BLOWER NO. 2 ◆ H090-DEW2-BLO02 HP: 100

BLOWER NO. 3 ◆ H090-DEW2-BLO03 HP: 100

PI 31, PI 32, PI 33, *PRS 01, *PRS 02, *PRS 03

*BFV01, *BFV02, *BFV03

*PGV01

SS-4 *LIT 01

SS-3 *PTM 01

*BLV08

SLUDGE HOLDING TANK NO. 1 H090-DEW1-CTK01

*PGV06, *PGV05, *PGV04, *PGV03, *PGV02

8" TWAS, 8" OF, 8" PD

TO PLANT SANITARY SEWER

FROM FUTURE PRIMARY SLUDGE BLEND TANK

SLUDGE MIXING BUILDING

*ARV01

*PRS 04, *PTM 02, PE 34, *BLV01, *PGV07, *BLV02

HS 31 LOR/SS **, *ARV02, RECIRCULATION PUMP NO. 1 H090-DEW2-RCP01 HP: 20

*PRS 06, *PTM 04, PE 36, *CKV01, *BLV04, *PGV08

*PRS 05, *PTM 03, PE 35, *BLV06, *PGV09, *BLV05

HS 32 LOR/SS **, *ARV03, RECIRCULATION PUMP NO. 2 H090-DEW2-RCP02 HP: 20

*PRS 07, *PTM 05, PE 37, *CKV02, *BLV07, *PGV10, *BLV03

8" TS

TO SLUDGE FEED PUMPS A 09-N-0005

RDT BYPASS CONTROL VALVE BOX

ZSO 31, ZSC 31, ZSO 34, ZSC 34, ZSC 33, ZSC 33, ZSO 32, ZSC 32

120V UPS, SS-4 *FMT 01

*PGV01, *PGV02, *PGV03, *PGV04

D 09-N-0003 FROM ROTARY DRUM THICKENERS

E 09-N-0003 FROM ROTARY DRUM THICKENERS

6" BYPASS

MAY 15th, 2026

REVISION	BY	DATE

INSTRUMENTATION AND CONTROL
P&ID
SLUDGE HOLDING TANKS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSN 05/26	
	LEAD ENG.	AZL 5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 09-N-0004		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 102 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:18

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REUSE OF DOCUMENTS:

H090-DEW1-MCP01

H090-DEW1-PLC01

RUNNING STATUS
START/STOP
IN REMOTE
FAULT
HIGH MOTOR TEMPERATURE
480V
H090-DEW1-CPL01◆
HS 40 LOR/SS **
POWER 1

LEVEL HIGH
DEWATERING BUILDING BASEMENT SUMP FLOODING
LSH 41

LOW SUCTION PRESSURE
HIGH MOTOR TEMPERATURE
START/STOP
IN REMOTE
RUNNING STATUS
FAULT
SPEED FEEDBACK
SPEED COMMAND
HIGH DISCHARGE PRESSURE
ETH
H090-DEW1-MCC01**
480V
H090-DEW1-VFD01**
POWER 2 3 4 5 6

H090-DEW1-MCC02 **
480V
H090-DEW1-VFD02**
POWER 7 8 9 10

H090-DEW1-MCC01 **
480V
H090-DEW1-VFD03**

OPEN STATUS
CLOSED STATUS
(5) (5)
11 13 15 12 14 16
17 23 18 24

FLOW
SUSPENDED SOLIDS
FLOW
SS-2 SS-2 SS-2
19 20 22

POWER
*PSV 01
4" TS
PI 41
*PRS 01
TSH 41
HS 41 LOR/SS **
PI 42
*PRS 02
*BLV01
1 1/2" TS
*PGV04
*BLV02
M
PE 42
6" TS
CENTRIFUGE SLUDGE FEED PUMP 1
H090-DEW1-SFP01
HP: 20
1 1/2" TS
*CKV01
*BLV03
4" TS

*PSV 02
PI 43
*PRS 03
TSH 42
HS 42 LOR/SS **
PI 44
*PRS 04
*PGV06
1 1/2" TS
*BLV05
PE 44
CENTRIFUGE SLUDGE FEED PUMP 2
H090-DEW1-SFP02
HP: 20
*CKV02
*BLV06

*PSV 03
PI 45
*PRS 05
TSH 43
HS 43 LOR/SS **
PI 46
*PRS 06
*PGV08
*BLV08
PE 46
CENTRIFUGE SLUDGE FEED PUMP 3
H090-DEW1-SFP03
HP: 20
*CKV03
*BLV09

ZSO 45
ZSC 45
*PGV05
*ARV01
ZSO 47
ZSC 47
*PGV07
ZSO 49
ZSC 49
*PGV09
ZSO 40
ZSC 40
*PGV10
ZSO 41
ZSC 41
*PGV11

120V UPS
SS-4
*FMT 01
MSC
FE 41
M
*BLV04
SUPPLEMENTAL SLUDGE/POLYMER MIXER NO. 1
H090-DEW1-MXR01
POLYMER INJECTION RING, TYP
A 09-N-0006
TO CENTRIFUGE NO 1

*FMT 02
FE 42
*ARV02
*BLV07
SUPPLEMENTAL SLUDGE/POLYMER MIXER NO. 2
H090-DEW1-MXR02
B 09-N-0007
TO CENTRIFUGE NO 2

*FMT 03
FE 43
*ARV03
*BLV10
SUPPLEMENTAL SLUDGE/POLYMER MIXER NO. 3
H090-DEW1-MXR03
C 09-N-0007
TO CENTRIFUGE NO 3

YARD PIPE | DEWATERING BUILDING

POWER 1
M
GRINDER 1
H090-DEW1-GRD01
120V UPS
SS-4
*MTR 01
MSC
AI 41
SS
19

A 09-N-0004
FROM SLUDGE HOLDING TANK NO. 1
8"x6"
6" TS
*PGV01
*PGV02
*PGV03
*PGV12
6" TS
6" TS

A 09-N-0008
FROM UPSTREAM POLYMER INJECTION
4" PO
4" PO

C 09-N-0008
FROM UPSTREAM POLYMER INJECTION
4" PO
4" PO

E 09-N-0008
FROM UPSTREAM POLYMER INJECTION
4" PO
4" PO

POTABLE WATER
*BLV11
*STR01
D 09-N-0008
TO POLYMER FEED PUMPS

GENERAL SHEET NOTES

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2. REFER TO PROCESS AND INSTRUMENTATION LEGEND SHEET 01-G-0055 FOR SURGE SUPRESSOR (SS) TABLE.

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LICENSED PROFESSIONAL ENGINEER
ORVIL LUGO
35653
OKLAHOMA
MAY 15th, 2026

REVISION	BY	DATE

INSTRUMENTATION AND CONTROL
P&ID
SLUDGE FEED PUMPS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSW 05/26	
	LEAD ENG.	RZL 5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 09-N-0005		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 103 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:18

H090-DEW1-MCP01

H090-DEW1-PLC01

ETH

480V

H090-DEW1-CPL02 ◆
CENTRIFUGE NO. 1 - OPERATOR PANEL
1

H090-DEW1-MDP01 ◆
CENTRIFUGE NO. 1 - STARTER PANEL

E-STOP
HS
51

H090-DEW1-MCC01**

OPEN STATUS
CLOSED STATUS
START/STOP
IN REMOTE
RUNNING STATUS
FAULT
SPEED FEEDBACK
SPEED COMMAND
LOW DIFFERENTIAL PRESSURE
HIGH MOTOR TEMPERATURE

POWER

1 2 3 6 9 13 16 18 19 23 24 25 26 27 29 10 17 28 4 5 30 31 7

GENERAL SHEET NOTES

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   LARGE ASTERISKS AFTER TAG NUMBERS INDICATOR EITHER PROVIDED BY ELECTRICAL OR VENDOR PACKAGE. SEE LEGEND AND INSTRUMENTATION SHEET 01-G-0055 FOR CLARIFICATION

(X) SHEET KEYNOTES

1. REFER TO VENDOR SCHEMATICS FOR REQUIRED SIGNALS BETWEEN CONTROL PANELS. PROVIDE CONDUIT AND WIRE AS REQUIRED.
2. SPECIFIC LUBRICATION SYSTEM AND ASSOCIATED CONNECTIONS PROVIDED ARE DEPENDENT ON THE CENTRIFUGE PACKAGE SELECTED. ADJUST AS REQUIRED.

B 09-N-0008
FROM POLYMER METERING PUMPS
3" PO
*BLV12

A 09-N-0005
FROM SLUDGE FEED PUMP NO. 1
*PGV13
4" TWAS
*BLV13
INITIAL POLYMER INJECTION RING

ZSO 53
ZSC 53
TSH 51
TE 51
LSL 51
TT 52
TE 52
TI 52
VT 51
VE 51
VI 51
MAIN DRIVE
*MOT01
BACK DRIVE
*MOT02
TT 53
TE 53
TI 53
VT 52
VE 52
VI 52
BRG
CENTRIFUGE NO. 1
H090-DEW1-CEN01
TSH 50
TT 50
TE 50
ST 51
SE 51
SI 51
ST 52
SE 52
LUBRICATION SYSTEM NO. 1
H090-DEW1-LBS01
120V
*FCV 01
1"
SNV52
*BLV14
SNV51
120V
SNV52
*KGV01
8" OA
6" CEN
4" W2
8"x10"
10" OA
10"x12"
12" OA
*DMP01
14" OA
14"x16"
16"x12"
12" OA
*GBV01
FROM PLANT WATER
E 09-N-0010
FROM CONVEYOR ODOR CONTROL LOCATION 1
F 09-N-0007
FROM COMBINED ODOR CONTROL HEADER FOR CENTRIFUGES NO. 2 AND NO. 3
TO OUTSIDE
16"x8"
ODOR CONTROL EXHAUST STACK
*PRS 21
TSH 59
16" OA
*DMP02
*BLV15
*BLV16
*BLV17
CS
ODOR CONTROL FAN NO. 1
H090-DEW1-OCF01
DWS CONVEYOR
A 09-N-0009
TO CENTRATE WETWELL
B 09-N-0010
TO DEWATERED SLUDGE STORAGE
C 09-N-0007
TO CENTRIFUGE NO. 2 AND CENTRIFUGE NO. 3

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LICENSED PROFESSIONAL ENGINEER
ORVIL LUGO 35653
OKLAHOMA
MAY 15th, 2026

REVISION	BY	DATE

INSTRUMENTATION AND CONTROL
P&ID
CENTRIFUGE NO. 1

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
HORIZONTAL:	PROJ. MGR.	MM 05/26	
VERTICAL:	LEAD ENG.	5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 09-N-0006		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 104 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:20

H090-DEW1-MCP01

H090-DEW1-PLC01

ETH

120V

H090-DEW1-CPL03 ◆
CENTRIFUGE NO. 2 - OPERATOR PANEL

480V

H090-DEW1-MDP02 ◆
CENTRIFUGE NO. 2 - STARTER PANEL

E-STOP HS 52

OPEN STATUS

CLOSED STATUS

ETH

120V

H090-DEW1-CPL04 ◆
CENTRIFUGE NO. 3 - OPERATOR PANEL

480V

H090-DEW1-MDP03 ◆
CENTRIFUGE NO. 3 - STARTER PANEL

E-STOP HS 53

GENERAL SHEET NOTES

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(X) SHEET KEYNOTES

1. REFER TO VENDOR SCHEMATICS FOR REQUIRED SIGNALS BETWEEN CONTROL PANELS. PROVIDE CONDUIT AND WIRE AS REQUIRED.
2. SPECIFIC LUBRICATION SYSTEM AND ASSOCIATED CONNECTIONS PROVIDED ARE DEPENDENT ON THE CENTRIFUGE PACKAGE SELECTED. ADJUST AS REQUIRED.
3. CENTRIFUGE NO. 3: ALT 02, SEE 01-G-0004 PAY QUANTITIES AND NOTES.

D 09-N-0008 FROM POLYMER METERING PUMPS — 3" PO — *BLV18

B 09-N-0005 FROM SLUDGE FEED PUMP NO. 2 — 4" TWAS — *PGV15

INITIAL POLYMER INJECTION RING — *BLV19

ZSO 55 / ZSC 55

TSH 55 / TE 55 / LSL 52 / TT 55

TT 56 / TE 56 / TI 56

VT 53 / VE 53 / VI 53

POWER — M MAIN DRIVE — *MOT03

POWER — M BACK DRIVE — *MOT04

BRG — CENTRIFUGE NO. 2 — H090-DEW1-CEN02 — BRG

TT 54 / TE 54 / TI 54

VT 54 / VE 54 / VI 54

POWER — M

120V — (2) LUBRICATION SYSTEM NO. 2 — H090-DEW1-LBS02

120V — S — *FCV 02 — 1" — SNV56 — *BLV20

TSH 55 / TT 57 / TE 57

ST 53 / SE 53 / SI 53 / SE 54 / ST 54

120V — S — SNV54

120V — S — SNV55

8" OA — S

4" W2 — M — *KGV02 — S

8" OA

F 09-N-0010 FROM CONVEYOR ODOR CONTROL LOCATION 2 — 10" OA — 8"x10" — 10"x12"

4" W2

4" W2

4" W2

6" CEN — B 09-N-0009 TO CENTRATE WETWELL

DWS CONVEYOR — D 09-N-0010 TO DEWATERED SLUDGE STORAGE

C 09-N-0006 FROM PLANT WATER — *GBV02

12" OA — *DMP03 — 12" OA — 12"x14" — 14" OA — F 09-N-0006 TO ODOR CONTROL HEADER

F 09-N-0008 FROM POLYMER METERING PUMPS — 3" PO — *BLV21

ZSO 56 / ZSC 56

TSH 57 / TE 58 / LSL 53 / TT 58

TT 59 / TE 59 / TI 59

VT 55 / VE 55 / VI 55

POWER — M MAIN DRIVE — *MOT05

POWER — M BACK DRIVE — *MOT06

C 09-N-0005 FROM SLUDGE FEED PUMP NO. 3 — 4" TWAS — *PGV16 — *BLV22

INITIAL POLYMER INJECTION RING

BRG — CENTRIFUGE NO. 3 — H090-DEW1-CEN03 (3) — BRG

TT 60 / TE 60 / TI 60

VT 56 / VE 56 / VI 56

POWER — M CS

120V — (2) LUBRICATION SYSTEM NO. 3 — H090-DEW1-LBS03

120V — S — *FCV 03 — 1" — SNV59 — *BLV23

TSH 58 / TT 61 / TE 61

ST 55 / SE 55 / SI 55 / SE 56 / ST 56

120V — S — SNV57

120V — S — SNV58

8" OA — S

4" W2 — M — *KGV03 — S

8" OA

G 09-N-0010 FROM CONVEYOR ODOR CONTROL LOCATION 3 — 10" OA — 8"x10" — 10"x12" — *DMP04

4" W2

4" W2

4" W2

12"x14"

6" CEN — C 09-N-0009 TO CENTRATE WETWELL

DWS CONVEYOR — E 09-N-0010 TO DEWATERED SLUDGE STORAGE

*GBV03

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LICENSED PROFESSIONAL ENGINEER — ORVIL LUGO 35653 — OKLAHOMA

MAY 15th, 2026

REVISION	BY	DATE

INSTRUMENTATION AND CONTROL
P&ID
CENTRIFUGE NO. 2 AND CENTRIFUGE NO. 3

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSN 05/26	
	LEAD ENG.	RJL 5/26	DESIGN MANAGER
	FIELD MGR.	5/26	
FILE:	DRAWING: 09-N-0007		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 105 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:18

H090-DEW1-MCP01

H090-DEW1-PLC01

TANK LEVEL

120V

POLYMER FILL PANEL
H090-DEW1-PNL01

HORN XA 61 — STROBE YL 62 — LI 61

RESET HS 67 — SILENCE HS 68

TANK LEVEL

START/STOP
FAIL
RUNNING STATUS
HIGH PRESSURE ALARM
IN REMOTE
LOW PRESSURE ALARM

120V

H090-DEW1-CPL06

LOR/SS HS 60

OPEN COMMAND
START/STOP
REMOTE MODE
SYSTEM RUNNING
PROCESS FLOW
COMMON ALARM
DIFFERENTIAL PRESSURE LOW

120V

H090-DEW1-CPL07

LOR/SS HS 61

OPEN COMMAND
START/STOP
REMOTE MODE
SYSTEM RUNNING
PROCESS FLOW
COMMON ALARM
DIFFERENTIAL PRESSURE LOW

120V

H090-DEW1-CPL08

LOR/SS HS 62

OPEN COMMAND
START/STOP
REMOTE MODE
SYSTEM RUNNING
PROCESS FLOW
COMMON ALARM
DIFFERENTIAL PRESSURE LOW

120V

H090-DEW1-CPL09

LOR/SS HS 63

OPEN STATUS
CLOSED STATUS
LEVEL HIGH ALARM
FLOW
FLOW
FLOW

POWER

POLYMER TRUCK FILL CONNECTION

*CKV04

D 09-N-0005
POTABLE WATER FROM SLUDGE FEED PUMPS

W1

*LIT 02

V

LE 62

MANWAY

2" PO

1 1/2" TS
*PGV17
DR

4" OF OVER FLOW

MANWAY

POLYMER BULK STORAGE TANK
H090-DEW1-TNK01

*BLV27

*BLV25

*BLV24

PI 67 — *PRS 07 — PE 67

PI 68 — *PRS 08 — PE 68

POLYMER RECIRCULATION PUMP NO. 1
H090-DEW1-RCP01

*BLV26

*BLV29

*BLV28
DR

*BLV30

CONTAINMENT AREA

4" PD
TO PLANT SANITARY SEWER

120V
S
SNV61
PI 61
FI 61
F
*BLV32
*BLV31
*BLV33
POLYMER METERING PUMP NO. 1
H090-DEW1-PFP01
POLYMER MIXER NO. 1
H090-DEW1-PMX01
*PRS 09
*PRS 10
PE 61
PE 62
*BLV34
*BLV35
POLYMER BLENDING UNIT NO. 1
H090-DEW1-PBU01
2 1/2"PO
*CKV05

SNV62
PI 62
FI 62
*BLV37
*BLV36
*BLV38
POLYMER METERING PUMP NO. 2
H090-DEW1-PFP02
POLYMER MIXER NO. 2
H090-DEW1-PMX02
*PRS 11
*PRS 12
PE 63
PE 64
*BLV39
*BLV40
POLYMER BLENDING UNIT NO. 2
H090-DEW1-PBU02
*CKV06

SNV63
PI 63
FI 63
*BLV42
*BLV41
*BLV43
POLYMER METERING PUMP NO. 3
H090-DEW1-PFP03
POLYMER MIXER NO. 3
H090-DEW1-PMX03
*PRS 13
*PRS 14
PE 65
PE 66
*BLV44
*BLV45
POLYMER BLENDING UNIT NO. 3
H090-DEW1-PBU03
*CKV07

ZSO 66 — ZSC 66
*BLV46
3" PO
*BLV51
2 1/2" PO
*FMT 04 (120V UPS)
*BLV52
A 09-N-0005 TO UPSTREAM POLYMER INJECTION
B 09-N-0006 TO CENTRIFUGE 1

ZSO 69 — ZSC 69
*BLV49

ZSO 67 — ZSC 67
*BLV47
3" PO
*BLV53
2 1/2" PO
*FMT 05 (120V UPS)
*BLV54
C 09-N-0005 TO UPSTREAM POLYMER INJECTION
D 09-N-0007 TO CENTRIFUGE 2

ZSO 60 — ZSC 60
*BLV50

ZSO 68 — ZSC 68
*BLV48
3" PO
*BLV55
2 1/2" PO
*FMT 06 (120V UPS)
*BLV56
E 09-N-0005 TO UPSTREAM POLYMER INJECTION
F 09-N-0007 TO CENTRIFUGE 3

SAME POINT

LSH 61

GENERAL SHEET NOTES

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2. REFER TO PROCESS AND INSTRUMENTATION LEGEND SHEET 01-G-0055 FOR SURGE SUPRESSOR (SS) TABLE.

SHEET KEYNOTES

(X)

1. EMERGENCY QUICK CONNECT USED TO FILL POLYMER TANK WITH POLYMER TOTES.

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INSTRUMENTATION AND CONTROL
P&ID
POLYMER FEED PUMPS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

LICENSED PROFESSIONAL ENGINEER ORVIL LUGO 35653 OKLAHOMA
MAY 15th, 2026

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN	05/26
HORIZONTAL:	LEAD ENG.	AZL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 09-N-0008		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 106 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:18

GENERAL SHEET NOTES

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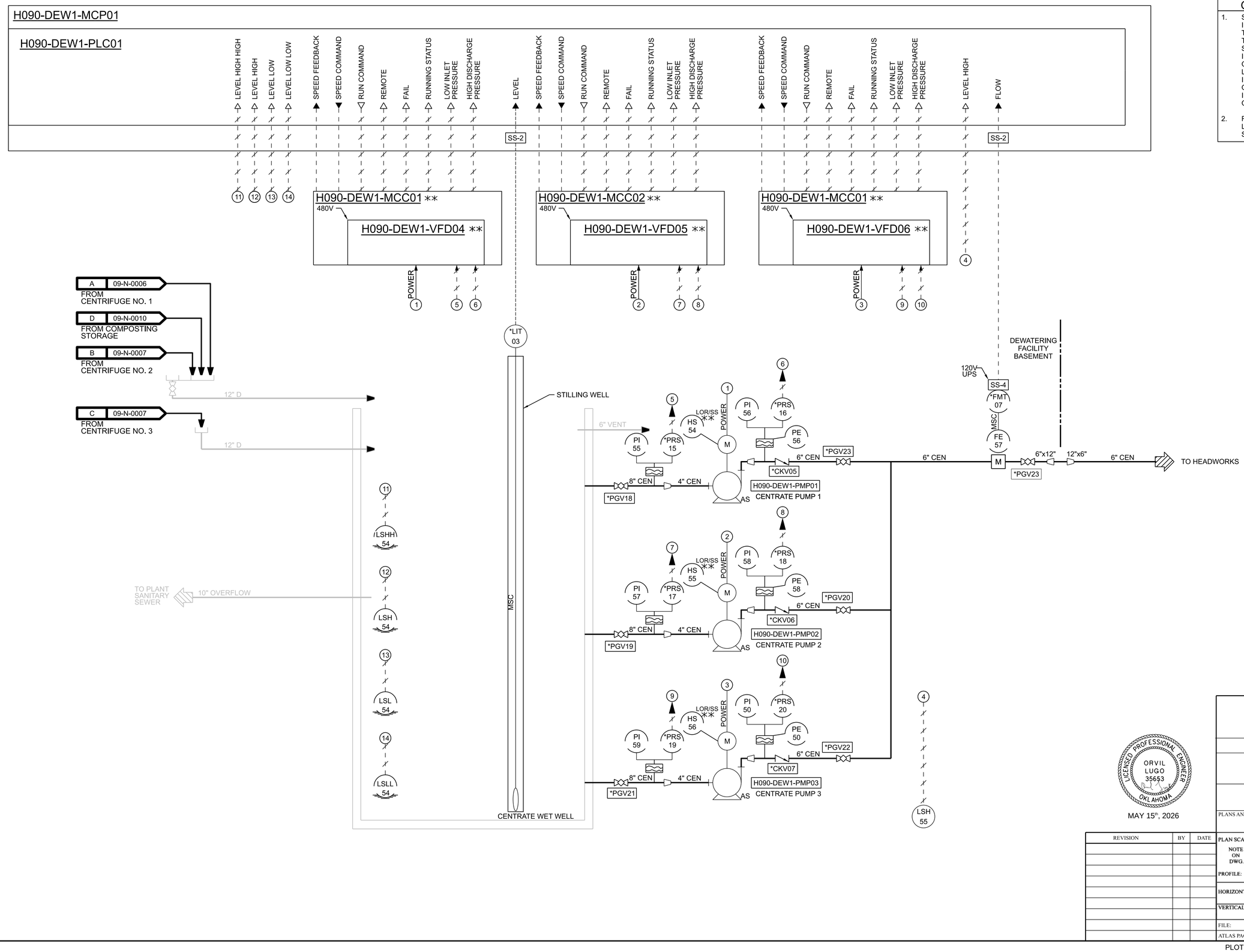

MAY 15th, 2026

REVISION	BY	DATE

INSTRUMENTATION AND CONTROL
P&ID
CENTRATE DRAIN PUMP STATION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
HORIZONTAL:	PROJ. MGR.	MSN 05/26	
VERTICAL:	LEAD ENG.	RZL 5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 09-N-0009		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 107 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:18

H090-DEW1-MCP01

H090-DEW1-PLC01

OPEN/CLOSE
RUN COMMAND
REMOTE STATUS
RUN STATUS
OVERLOAD FAULT
ZERO SPEED FAULT
EMERGENCY STOP FAULT
FAULT RESET
EMERGENCY STOP
EMERGENCY STOP
ELAPSED TIME

A | 09-N-0014 RECYCLED WOODCHIPS
FROM SCREENING

WOODCHIPS FROM CITY OF TULSA

B | 09-N-0006
FROM CENTRIFUGE 1

D | 09-N-0007
FROM CENTRIFUGE 2

E | 09-N-0007
FROM CENTRIFUGE 3

480VAC

H090-DEW1-CPL05 ◆

YL 71 | YA 71 | YA 72 | YA 73 | ETA 71
HOA
HS 71 | HS 72 | HS 73

POWER

OILER

POWER

OCR
HS 70

E-STOP
HS 74
E-STOP
HS 76
E-STOP
HS 75

M

DRIP PAN WASHDOWN
3/4" W2

*BLV60

NON-POTABLE WATER
3" W2
SNV71

3/4" W2
*BLV58
3/4" W2

*BLV57
*BLV59

SPRAY BAR

SLUDGE CONVEYOR ◆
H090-DEW1-CNV01

DEWATERED SLUDGE STORAGE BUNKER

BULKING AGENT STORAGE BUNKER

RECYCLED BULKING AGENT STORAGE BUNKER

A | 09-N-0011
TO COMPOSTING MIXER AND CONVEYOR SYSTEM

DEWATERING BUILDING

OUTSIDE EXTERIOR BETWEEN FACILITIES

COMPOST FACILITY

8" OA
E | 09-N-0006
TO CENTRIFUGE ODOR CONTROL HEADER

8" OA
F | 09-N-0007
TO CENTRIFUGE ODOR CONTROL HEADER

8" OA
G | 09-N-0007
TO CENTRIFUGE ODOR CONTROL HEADER

2" DR
D | 09-N-0009
TO CENTRATE WETWELL

GENERAL SHEET NOTES

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LICENSED PROFESSIONAL ENGINEER
ORVIL LUGO
35653
OKLAHOMA
MAY 15th, 2026

INSTRUMENTATION AND CONTROL
P&ID
COMPOSTING STORAGE

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 09-N-0010
ATLAS PAGE NO: 3328
SHEET 108 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:18

GENERAL SHEET NOTES

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   LARGE ASTERISKS AFTER TAG NUMBERS INDICATOR EITHER PROVIDED BY ELECTRICAL OR VENDOR PACKAGE. SEE LEGEND AND INSTRUMENTATION SHEET 01-G-0055 FOR CLARIFICATION.

H095-COM1-MCP01

H095-COM1-PLC01

WEIGHT (2) | RUN COMMAND (4) | FAIL (4) | RUNNING STATUS (4) | IN REMOTE (4) | EMERGENCY STOP (4)

H090-DEW1-MCP01

H090-DEW1-PLC01

FAIL | RUNNING STATUS

480VAC

H095-COM2-CPL01◆

H095-COM2-CPL02◆ — WI 74 — YA 74

H095-COM2-CPL03◆ — WI 75 — YA 75

WT 74 | WT 75

H090-DEW1-MCC01**

H090-DEW1-MCC02**

H095-COM2-EHF01** | H095-COM2-EHF03** | H095-COM2-EHF05** | H095-COM2-EHF07** | H095-COM2-EHF02** | H095-COM2-EHF04** | H095-COM2-EHF06**

POWER

E-STOP

COMPOST MIXER 1 ◆ H095-COM2-MXR01

COMPOST MIXER 2 ◆ H095-COM2-MXR02

COMPOST SCALE 1 ◆ WE 74 H095-COM2-SCA01

COMPOST SCALE 2 ◆ WE 75 H095-COM2-SCA02

HS 77 | HS 78 | HS 79 | HS 80

A 09-N-0010 FROM COMPOSTING STORAGE

EXHAUST FAN 1 H095-COM2-EHF01

EXHAUST FAN 3 H095-COM2-EHF03

EXHAUST FAN 5 H095-COM2-EHF05

EXHAUST FAN 7 H095-COM2-EHF07

EXHAUST FAN 2 H095-COM2-EHF02

EXHAUST FAN 4 H095-COM2-EHF04

EXHAUST FAN 6 H095-COM2-EHF06

H095-COM2-CPL04**

SS | HS 01** | HS 03** | HS 05** | HS 07** | HS 02** | HS 04** | HS 06**

COMPOST CONVEYOR 1◆ H095-COM2-CNV01

COMPOST CONVEYOR 2◆ H095-COM2-CNV02

MIXED FEED BAY

C 09-N-0012 TO ACTIVE COMPOSTING BLOWER SYSTEM

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LICENSED PROFESSIONAL ENGINEER — ORVIL LUGO 35653 — OKLAHOMA

MAY 15th, 2026

INSTRUMENTATION AND CONTROL

P&ID COMPOSTING MIXER AND CONVEYOR SYSTEM

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MW	05/7/26
LEAD ENG.	RL	5/7/26
FIELD MGR.		5/7/26

APPROVED:

DESIGN MANAGER

FILE: DRAWING: 09-N-0011 DATE: MAY 2026

ATLAS PAGE NO: 3328 SHEET 109 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:18

H095-COM1-CPL01◆

H095-COM1-PLC01

HIGH MOTOR TEMPERATURE
IN REMOTE
RUNNING STATUS
RUN COMMAND
SPEED FEEDBACK
SPEED COMMAND
FAIL

COMPOST TEMPERATURE (3D SIGNALS)

RF MODEM

COMPOSTING OPERATIONS BUILDING ELECTRICAL ROOM

H095-COM1-MCC01**

H095-COM1-VFD01** H095-COM1-VFD03** H095-COM1-VFD05** H095-COM1-VFD07** H095-COM1-VFD09**

H095-COM1-VFD02** H095-COM1-VFD04** H095-COM1-VFD06** H095-COM1-VFD08** H095-COM1-VFD10**

POWER

36"x24"

36" FA

42" FA

42"x36"

A 09-N-0013

TO COMPOSTING BIOFILTER SYSTEM

24" FA

TSH 81 M AS NO *DMP01 COMPOST FAN NO. 1 H095-COM2-FAN01 12" FA

TSH 82 M POWER 1 AS NO *DMP02 COMPOST FAN NO. 2 H095-COM2-FAN02 12" FA

TSH 83 M POWER 2 AS NO *DMP03 COMPOST FAN NO. 3 H095-COM2-FAN03 10" FA

TSH 84 M POWER 3 AS NO *DMP04 COMPOST FAN NO. 4 H095-COM2-FAN04 10" FA

TSH 85 M POWER 4 AS NO *DMP05 COMPOST FAN NO. 5 H095-COM2-FAN05 10" FA

TSH 86 M POWER 5 AS NO *DMP06 COMPOST FAN NO. 6 H095-COM2-FAN06 10" FA

TSH 87 M POWER 6 AS NO *DMP07 COMPOST FAN NO. 7 H095-COM2-FAN07 10" FA

TSH 88 M POWER 7 AS NO *DMP08 COMPOST FAN NO. 8 H095-COM2-FAN08 10" FA

TSH 89 M POWER 8 AS NO *DMP09 COMPOST FAN NO. 9 H095-COM2-FAN09 10" FA

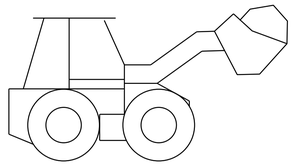
TSH 80 M POWER 9 AS NO *DMP10 COMPOST FAN NO. 10 H095-COM2-FAN10 12" FA

4" CON

D 09-N-0015

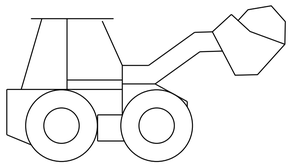
8" FA

COMPOST BAY NO. 1	COMPOST BAY NO. 2	COMPOST BAY NO. 3	COMPOST BAY NO. 4	COMPOST BAY NO. 5	COMPOST BAY NO. 6	COMPOST BAY NO. 7	COMPOST BAY NO. 8	COMPOST BAY NO. 9	COMPOST BAY NO. 10
*TTM 01	*TTM 04	*TTM 07	*TTM 10	*TTM 13	*TTM 16	*TTM 19	*TTM 22	*TTM 25	*TTM 28
*TTM 02	*TTM 05	*TTM 08	*TTM 11	*TTM 14	*TTM 17	*TTM 20	*TTM 23	*TTM 26	*TTM 29
*TTM 03	*TTM 06	*TTM 09	*TTM 12	*TTM 15	*TTM 18	*TTM 21	*TTM 24	*TTM 27	*TTM 30



B 09-N-0014

TO SCREENING AND CURING SYSTEM



C 09-N-0011

FROM COMPOSTING MIXER AND CONVEYOR SYSTEM

GENERAL SHEET NOTES

1. SMALL ASTERISKS AT THE BEGINNING OF INSTRUMENTATION TAGS HAVE THE COMPLETE TAG NUMBER PREFIX OF "H095-COM2-". REFER TO PROCESS AND INSTRUMENTATION LEGEND SHEET 01-G-0055. ALL EQUIPMENT AND INSTRUMENT TAGS SHALL INCLUDE THE COMPLETE TAG ON ALL NAME PLATES. LARGE ASTERISKS AFTER TAG NUMBERS INDICATOR EITHER PROVIDED BY ELECTRICAL OR VENDOR PACKAGE. SEE LEGEND AND INSTRUMENTATION SHEET 01-G-0055 FOR CLARIFICATION.

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REUSE OF DOCUMENTS:

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ORVIL LUGO
35653
OKLAHOMA

MAY 15th, 2026

REVISION	BY	DATE

INSTRUMENTATION AND CONTROL
P&ID
ACTIVE COMPOSTING BLOWER SYSTEM

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	RJL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 09-N-0012		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 110 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:18

GENERAL SHEET NOTES

1. SMALL ASTERISKS AT THE BEGINNING OF INSTRUMENTATION TAGS HAVE THE COMPLETE TAG NUMBER PREFIX OF "H095-COM2-". REFER TO PROCESS AND INSTRUMENTATION LEGEND SHEET 01-G-0055. ALL EQUIPMENT AND INSTRUMENT TAGS SHALL INCLUDE THE COMPLETE TAG ON ALL NAME PLATES. LARGE ASTERISKS AFTER TAG NUMBERS INDICATOR EITHER PROVIDED BY ELECTRICAL OR VENDOR PACKAGE. SEE LEGEND AND INSTRUMENTATION SHEET 01-G-0055 FOR CLARIFICATION.
2. REFER TO PROCESS AND INSTRUMENTATION LEGEND SHEET 01-G-0055 FOR SURGE SUPRESSOR (SS) TABLE.

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H095-COM1-MCP01

H095-COM1-PLC01

POSITION COMMAND (2) SS-3 → 1
POSITION FEED BACK (2) SS-3 → 3
IN REMOTE → 2, 4
IN REMOTE, OPEN STATUS, CLOSED STATUS, OPEN COMMAND, CLOSED COMMAND (4)(4)(4)(4) → 5, 7, 10, 13
START/STOP, IN REMOTE, RUNNING STATUS, FAULT, SPEED FEEDBACK, SPEED COMMAND, HIGH MOTOR TEMPERATURE → H095-COM1-VFD11**
START/STOP, IN REMOTE, RUNNING STATUS, FAULT, SPEED FEEDBACK, SPEED COMMAND, HIGH MOTOR TEMPERATURE → H095-COM1-VFD12**
FLOW SS-3 → 6
PRESSURE SS-2 → 8
TEMPERATURE SS-2 → 9
FLOW SS-3 → 12
PRESSURE SS-2 → 14
TEMPERATURE SS-2 → 15

A 09-N-0012
FROM ACTIVE COMPOSTING BLOWER SYSTEM
36" FA
42" FA

FROM FRESH AIR INTAKE
36" FA
*DMP11
120V
M
LOR/OC **
HS 83
1
2

42" FA
*DMP13
120V
M
5

H095-COM1-VFD11**
POWER
LOR/SS **
HS 85
TSH 93
M
AS BIOFILTER FAN 1
H095-COM2-FAN11

120V UPS
SS-4 *FMT 01
6

30" FA
*DMP14
120V
M
7

SS-4 *PTM 01
8

SS-4 *TTM 31
9

42" FA

IRRIGATION SPRINKLER, TYP OF 4
6" PD
TO PLANT SANITARY SEWER
TRENCH DRAIN
36" FA
2" W2
*DMP17
42" FA
2" W2
36" FA
2" W2
BIOFILTER
H095-COM2-BFT1

FROM FRESH AIR INTAKE
36" FA
*DMP12
120V
M
LOR/OC **
HS 82
3
4

42" FA
*DMP15
120V
M
10

H095-COM1-VFD12**
POWER
LOR/SS **
HS 84
TSH 94
M
AS BIOFILTER FAN 2
H095-COM2-FAN12

120V UPS
SS-4 *FMT 02
12

30" FA
*DMP16
120V
M
13

SS-4 *PTM 02
14

SS-4 *TTM 32
15

42" FA

120V
IRRIGATION CONTROL BOX ◆

PLANT WATER
IRRIGATION VALVE BOX

B 09-N-0015
TO SANITARY LIFT STATION

LICENSED PROFESSIONAL ENGINEER
ORVIL LUGO
35653
OKLAHOMA
MAY 15th, 2026

REVISION	BY	DATE

INSTRUMENTATION AND CONTROL
P&ID
COMPOSTING BIOFILTER SYSTEM

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
HORIZONTAL:	PROJ. MGR.	MM 05/26	
	LEAD ENG.	RL 5/26	DESIGN MANAGER
VERTICAL:	FIELD MGR.	5/26	
FILE:	DRAWING: 09-N-0013		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 111 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:20

H095-COM1-CPL01 ◆

H095-COM1-PLC01

SPEED FEEDBACK
SPEED COMMAND
IN REMOTE
RUNNING STATUS
RUN COMMAND
FAIL
HIGH MOTOR TEMPERATURE
COMPOST TEMPERATURE (11 SIGNALS) (2 ALTERNATE SIGNALS)
RF MODEM
1 2 3 4

GENERAL SHEET NOTES

1. SMALL ASTERISKS AT THE BEGINNING OF INSTRUMENTATION TAGS HAVE THE COMPLETE TAG NUMBER PREFIX OF "H095-COM3-". REFER TO PROCESS AND INSTRUMENTATION LEGEND SHEET 01-G-0055. ALL EQUIPMENT AND INSTRUMENT TAGS SHALL INCLUDE THE COMPLETE TAG ON ALL NAME PLATES. LARGE ASTERISKS AFTER TAG NUMBERS INDICATOR EITHER PROVIDED BY ELECTRICAL OR VENDOR PACKAGE. SEE LEGEND AND INSTRUMENTATION SHEET 01-G-0055 FOR CLARIFICATION.

SHEET KEYNOTES

1. CONTRACTOR TO PROVIDE FIVE OF THE STORAGE BAY TEMPERATURE PROBES. TWO WILL BE FOR FUTURE USE.
2. FINISHED COMPOST STORAGE
   BAYS BETWEEN GRIDS A AND D: BASE BID
   BAYS BETWEEN GRIDS D AND F: ALT 03
   SEE 01-G-0004 PAY QUANTITIES AND NOTES.

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PORTABLE TROMMEL SCREEN

B 09-N-0012
FROM COMPOSTING BLOWER SYSTEM

A 09-N-0010
SCREENED WOODCHIPS TO RECYCLE WOODCHIP BUNKER

CURING BAY, TYP

*TTM 01
*TTM 02
CURING BAY NO. 1

*TTM 03
*TTM 04
CURING BAY NO. 2

*TTM 05
*TTM 06
CURING BAY NO. 3

*TTM 07
*TTM 08
CURING BAY NO. 4

TO PLANT SANITARY SEWER
4" CO

1 2 3 4

H095-COM1-MCC01**
H095-COM1-VFD13**
H095-COM1-VFD14**
H095-COM1-VFD15**
H095-COM1-VFD16**

POWER
TSH 95
TSH 96
TSH 97
TSH 98
M
12" FA
NO
AS
DMP81
DMP82
DMP83
DMP84

CURING FAN NO. 1
H095-COM3-FAN01
CURING FAN NO. 2
H095-COM3-FAN02
CURING FAN NO. 3
H095-COM3-FAN03
CURING FAN NO. 4
H095-COM3-FAN04

OUTSIDE AIR

2

1 *TTM 09 STORAGE BAY NO. 1
1 *TTM 10 STORAGE BAY NO. 2
1 *TTM 11 STORAGE BAY NO. 3
1 *TTM 12 ALTERNATE STORAGE BAY NO. 4
1 *TTM 13 ALTERNATE STORAGE BAY NO. 5

LICENSED PROFESSIONAL ENGINEER
ORVIL LUGO
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OKLAHOMA
MAY 15th, 2026

INSTRUMENTATION AND CONTROL
P&ID
SCREENING, CURING, AND STORAGE SYSTEM

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 09-N-0014 DATE: MAY 2026
ATLAS PAGE NO: 3328 SHEET 112 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:18

H095-COM1-MCP01

H095-COM1-PLC01

MOISTURE ALARM (2)
HIGH TEMPERATURE ALARM (2)
RUNNING STATUS (2)
FAULT (2)
HIGH HIGH LEVEL ALARM
HIGH LEVEL ALARM
LOW LEVEL ALARM

480V

H110-LFT1-CPL01 ◆

*HS 91 LOR/SS
TAH 91 TEMP
XA 91 SEAL
MA 91 FAULT
MN 91 RUN
HS 92 LOR/SS
TAH 92 TEMP
XA 92 SEAL
LAHH 91
MA 92 FAULT
LAH 91
MN 92 RUN

POWER
POWER

1 2 3 4

PUMP POWER AND CONTROL TERMINAL BOX

VALVE VAULT

FROM OPERATIONS BUILDING — 4" SS

D 09-N-0012 — 4" CON
FROM ACTIVE COMPOSTING BLOWER SYSTEM

B 09-N-0013 — 4" CON
FROM COMPOSTING BIOFILTER SYSTEM

1 LSHH 91
2 LSH 91
3 LSL 91

POWER
"MSC"
3" SS
TSH 91
OSH 91
M
CS
SANITARY PUMP NO, 1
H110-LFT1-PMP01
HP: 2.2

POWER
"MSC"
3" SS
TSH 92
OSH 92
M
CS
SANITARY PUMP NO, 2
H110-LFT1-PMP02
HP: 2.2

3" SS
*ARV01 *CKV01 *PGV01
3" SS
TO PLANT SANITARY SEWER

3" SS
*ARV02 *CKV02 *PGV02

GENERAL SHEET NOTES

1. SMALL ASTERISKS AT THE BEGINNING OF INSTRUMENTATION TAGS HAVE THE COMPLETE TAG NUMBER PREFIX OF "H110-LFT1". REFER TO PROCESS AND INSTRUMENTATION LEGEND SHEET 01-G-0055. ALL EQUIPMENT AND INSTRUMENT TAGS SHALL INCLUDE THE COMPLETE TAG ON ALL NAMEPLATES. LARGE ASTERISKS AFTER TAG NUMBERS INDICATOR EITHER PROVIDED BY ELECTRICAL OR VENDOR PACKAGE. SEE LEGEND AND INSTRUMENTATION SHEET 01-G-0055 FOR CLARIFICATION.
2. SEE SECTION 33 32 13 PACKAGE SUBMERSIBLE LIFT STATION FOR LAYOUT, DESIGN CRITERIA, AND INSTALLATION REQUIREMENTS.

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LICENSED PROFESSIONAL ENGINEER
ORVIL LUGO
35653
OKLAHOMA
MAY 15th, 2026

INSTRUMENTATION AND CONTROL
P&ID
SANITARY LIFT STAITION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

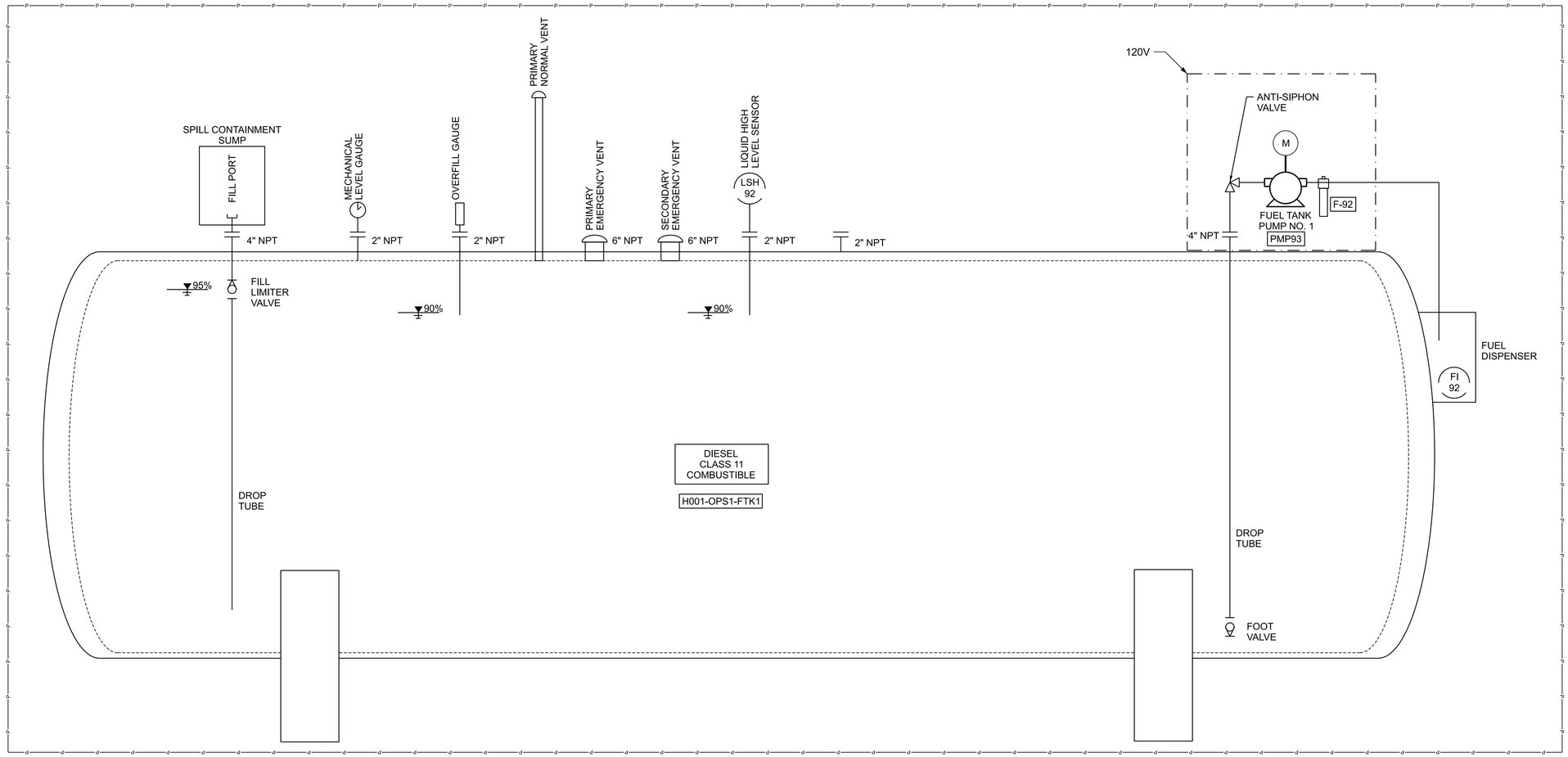
FILE: DRAWING: 09-N-0015 DATE: MAY 2026

ATLAS PAGE NO: 3328 SHEET 113 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:18

GENERAL SHEET NOTES

1. ENTIRE FUEL TANK IS TAGGED TOGETHER AS H001-OPS1-FTK01. INDIVIDUAL INSTRUMENTATION INSIDE PACKAGE SYSTEM ARE NOT LUCITY TAGS, THUS DO NOT HAVE A PREFIX ASSOCIATED WITH THEM.
   ALL EQUIPMENT AND INSTRUMENT TAGS SHALL INCLUDE THE COMPLETE TAG ON ALL NAME PLATES.
2. SEE SECTION 23 13 0 ABOVE GROUND FUEL STORAGE TANK AND ACCESSORIES FOR LAYOUT, DESIGN CRITERIA, AND INSTALLATION REQUIREMENTS.



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LICENSED PROFESSIONAL ENGINEER
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OKLAHOMA
MAY 15th, 2026

REVISION	BY	DATE

INSTRUMENTATION AND CONTROL
P&ID
FUEL PUMP

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

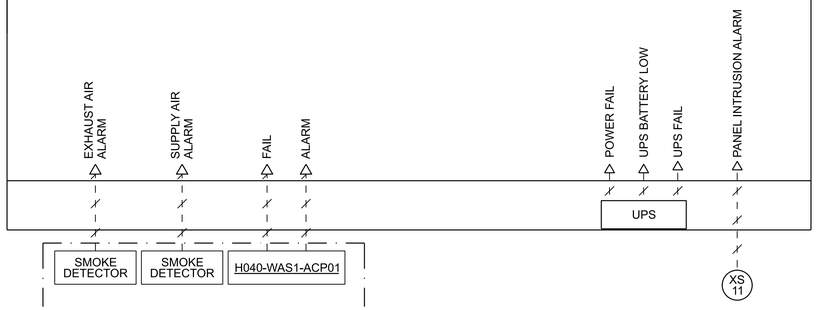
PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	RJL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 09-N-0016			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 114 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:19

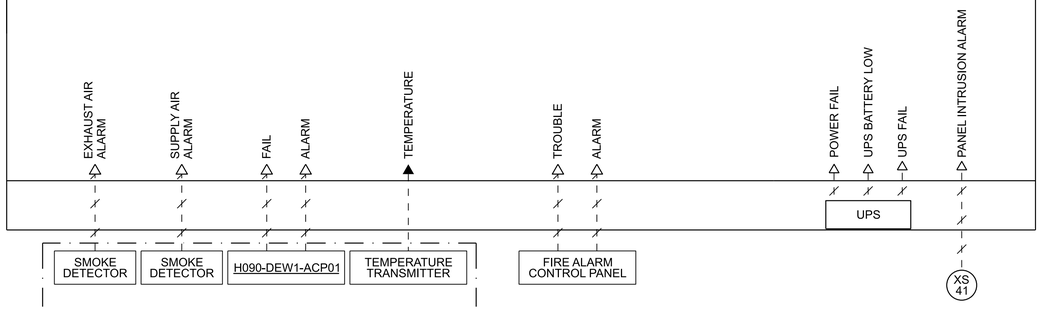
H040-WAS1-CPL01

H040-WAS1-PLC01



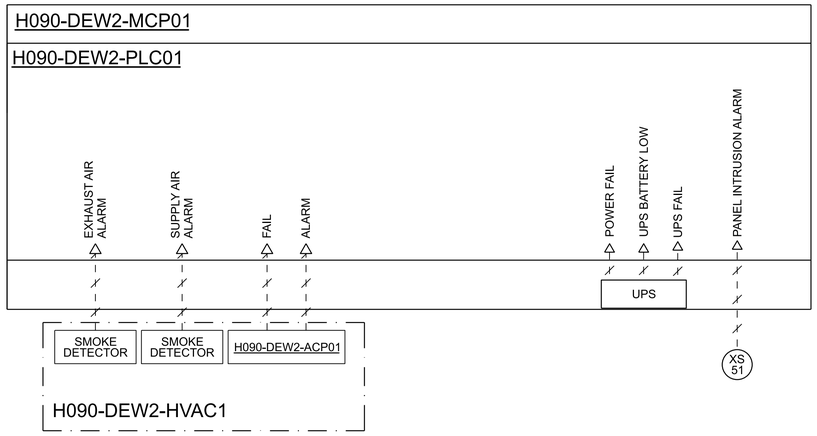
H090-DEW1-MCP01

H090-DEW1-PLC01



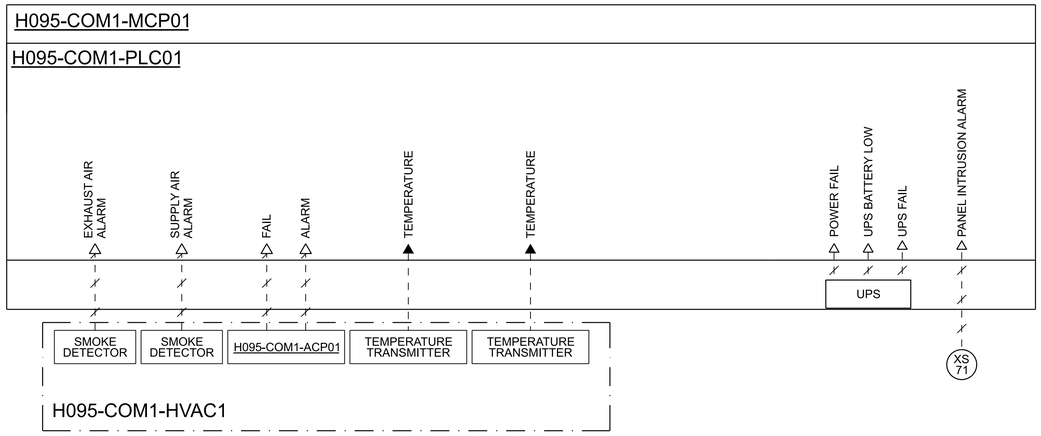
H090-DEW2-MCP01

H090-DEW2-PLC01



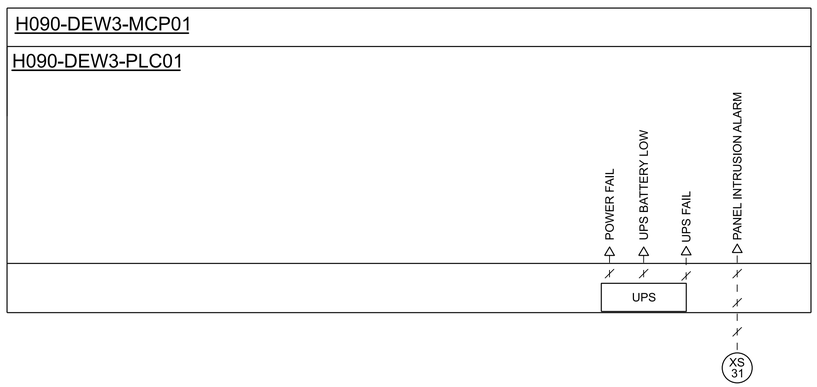
H095-COM1-MCP01

H095-COM1-PLC01



H090-DEW3-MCP01

H090-DEW3-PLC01



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LICENSED PROFESSIONAL ENGINEER
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OKLAHOMA
MAY 15th, 2026

REVISION	BY	DATE

INSTRUMENTATION AND CONTROL
P&ID
SUPPORT SYSTEM MONITORING

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

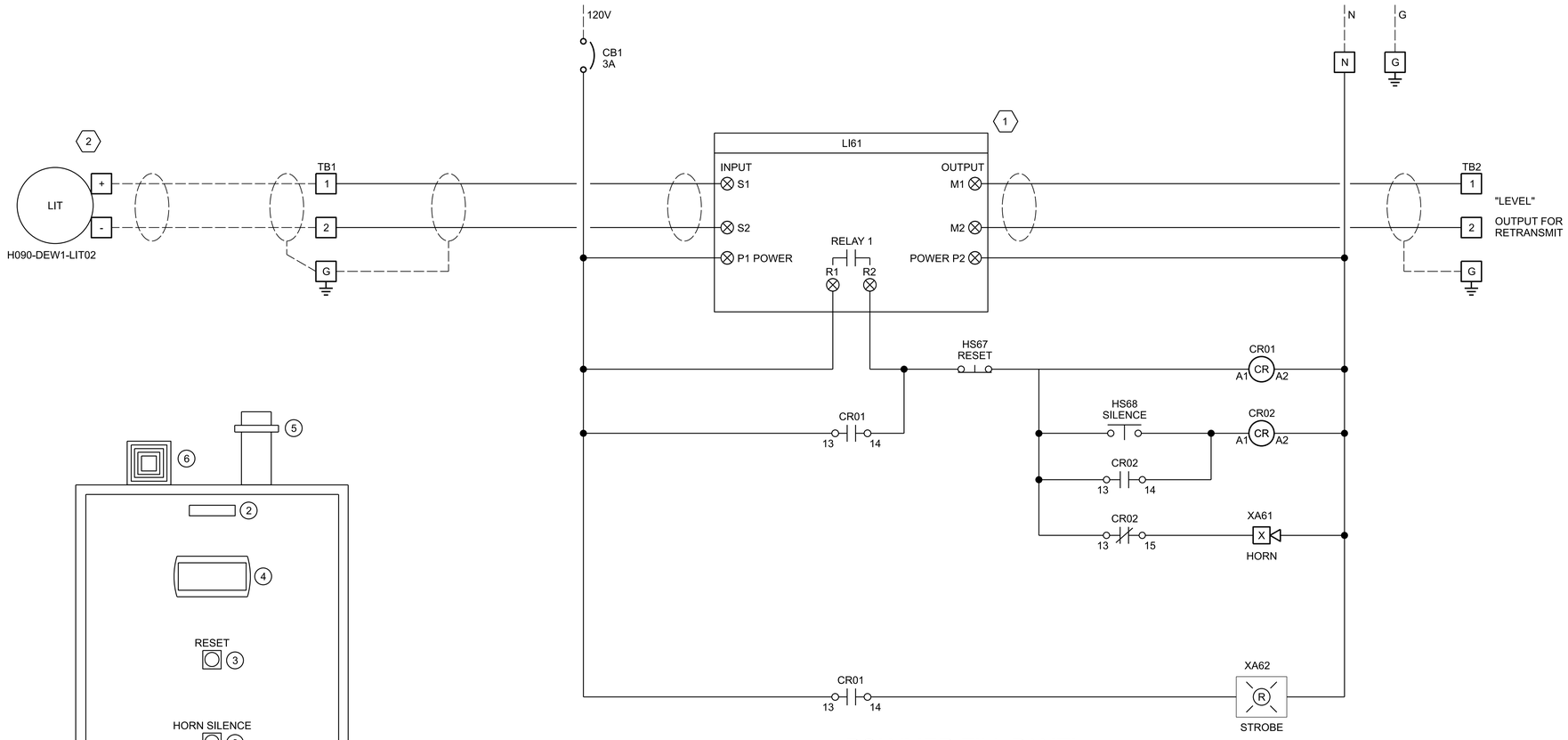
PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
HORIZONTAL:	PROJ. MGR.	MSN 05/26	
VERTICAL:	LEAD ENG.	BBL 5/26	DESIGN MANAGER
	FIELD MGR.	5/26	
FILE:	DRAWING: 09-N-0020		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 115 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:20

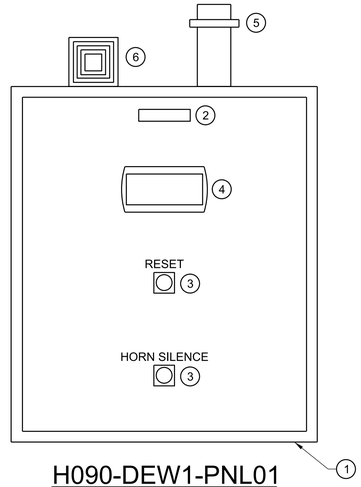
SHEET KEYNOTES

1. CONFIGURE THE DIGITAL PANEL INDICATOR FOLLOWS:
   - MAIN DISPLAY IN PERCENT. ADJUST RANGE SO 100% IS I-INCH BELOW THE OVERFLOW.
   - SECONDARY DISPLAY IN GALLONS
   - HIGH RELAY SET AT 6-INCH BELOW OVERFLOW. 1 -INCH DEADBAND.
2. FOR THE H090-DEW1-PNL01 CONNECT THE INPUT TO THE PLC.



POLYMER FILL PANEL

TYPICAL FOR: POLMER FILL PANEL
H090-DEW1-PNL01



H090-DEW1-PNL01

BILL OF MATERIALS

ITEM	QTY	DESCRIPTION	MANUFACTURER	PART NUMBER	DETAILS
1	1	ENCLOSURE			NEMA 4X SST, 12"Hx12"Wx8"D
2	1	NAMEPLATE			
3	2	BUTTON			
4	1	DIGITAL PANEL INDICATOR			NOTE 1
5	1	STROBE			
6	1	HORN			

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LICENSED PROFESSIONAL ENGINEER
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OKLAHOMA
MAY 15th, 2026

REVISION	BY	DATE

INSTRUMENTATION AND CONTROL
P&ID
POLYMER FILL PANEL

WFXQ7901

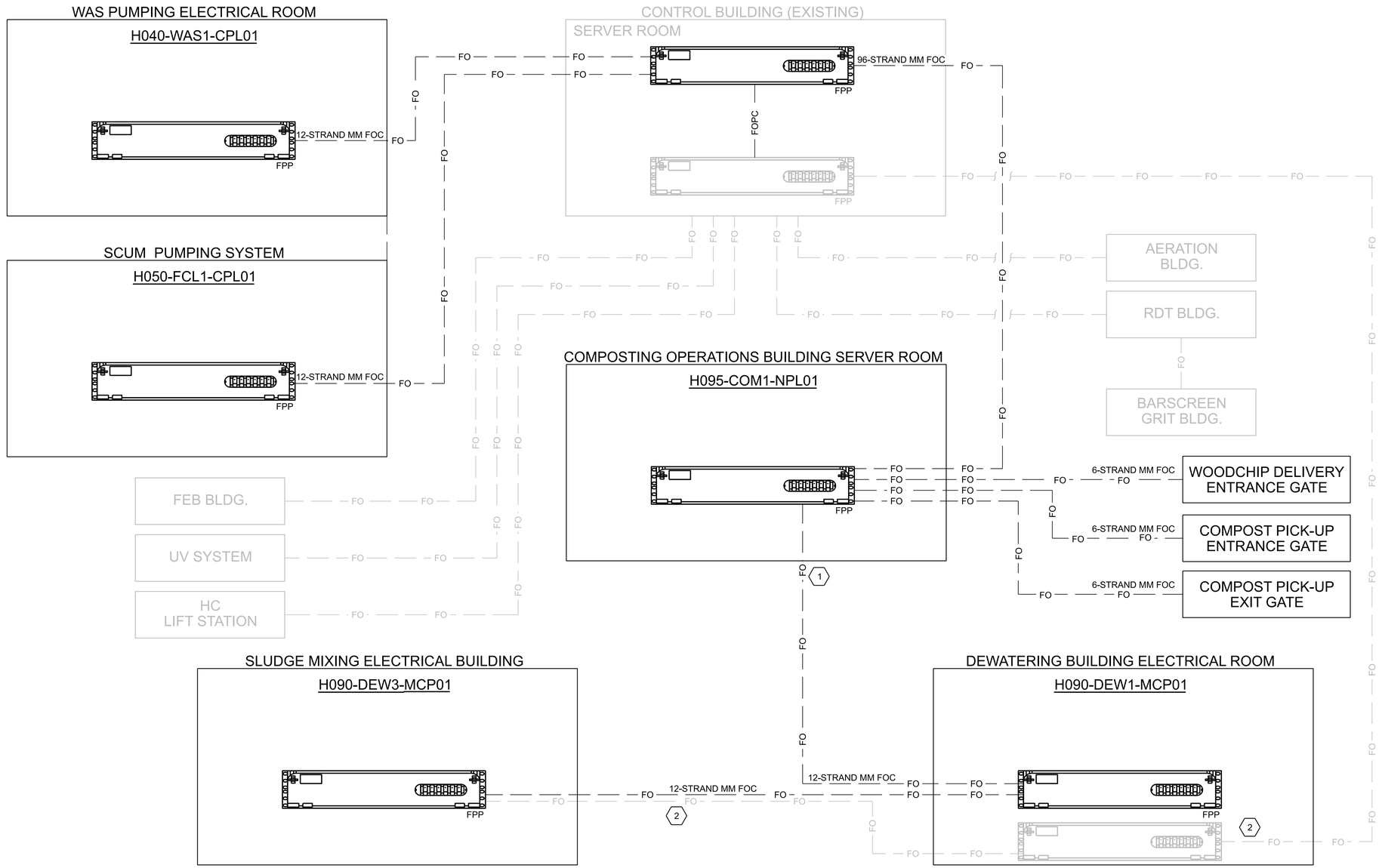
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	RZL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 09-N-0030		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 116 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:18



GENERAL SHEET NOTES

1. PROVIDE AND INSTALL NEW FIBER OPTIC PATCH CABLES.

DRAWING LEGEND

- FO — FIBER OPTIC CONNECTION
- FOPC — FIBER OPTIC PATCH CORD
- ETHERNET NETWORK SWITCH
- INDUSTRIAL ETHERNET SWITCH
- FIBER OPTIC PATCH PANEL (FPP)

(X) SHEET KEYNOTES

1. PROVIDE NEW FIBER OPTIC CABLE INCLUDING NEW ENCLOSURE, FIBER OPTIC PATCH PANELS, AND ALL ASSOCIATED HARDWARE AND APPURTENANCES AS REQUIRED. REFER TO SPECIFICATION SECTION 40 95 80 AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. RETERMINATE EXISTING FIBER OPTIC CABLE IN NEW ENCLOSURE, WITH NEW FIBER OPTIC PATCH PANEL, AND ALL ASSOCIATED HARDWARE AND APPURTENANCES AS REQUIRED. REFER TO SPECIFICATION SECTION 40 95 80 AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE WITH OWNER BEFORE REMOVING ANY CONNECTIONS.

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LICENSED PROFESSIONAL ENGINEER
ORVIL LUGO
35653
OKLAHOMA

MAY 15th, 2026

INSTRUMENTATION AND CONTROL
P&ID
OVERALL FIBER NETWORK ARCHITECTURE

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
	SURVEY		
HORIZONTAL:	PROJ. MGR.	MSN 05/26	
VERTICAL:	LEAD ENG.	RJL 5/26	DESIGN MANAGER
	FIELD MGR.	5/26	
FILE:	DRAWING: 09-N-0101		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 117 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:20

GENERAL SHEET NOTES

1. PROVIDE UPS IN MAIN PLC PANEL TO SERVE PLC HARDWARE POWER SUPPLY: AND NETWORK PANEL POWER AND ALL 4 WIRE FIELD INSTRUMENTS.
2. EACH LOCAL PANEL AND MASTER CONTROL PANEL SHALL HAVE DEDICATED UPS.
3. PROVIDE PATCH CORDS FOR ALL CAT6 AND FIBER CONNECTIONS WITHIN RESPECTIVE ENCLOSURES.
4. PROVIDE RIGID STEEL CONDUIT FOR ALL CAT6 AND FIBER RUNS BETWEEN ENCLOSURES.
5. COORDINATE WITH OWNER PRIOR TO WORKING ON ANY EXISTING NETWORK EQUIPMENT.

DRAWING LEGEND

- ETHERNET CAT6 CONNECTION
- FO — FIBER OPTIC CONNECTION
- FOPC — FIBER OPTIC PATCH CORD
- ETHERNET NETWORK SWITCH
- INDUSTRIAL ETHERNET SWITCH
- FIBER OPTIC PATCH PANEL (FPP)

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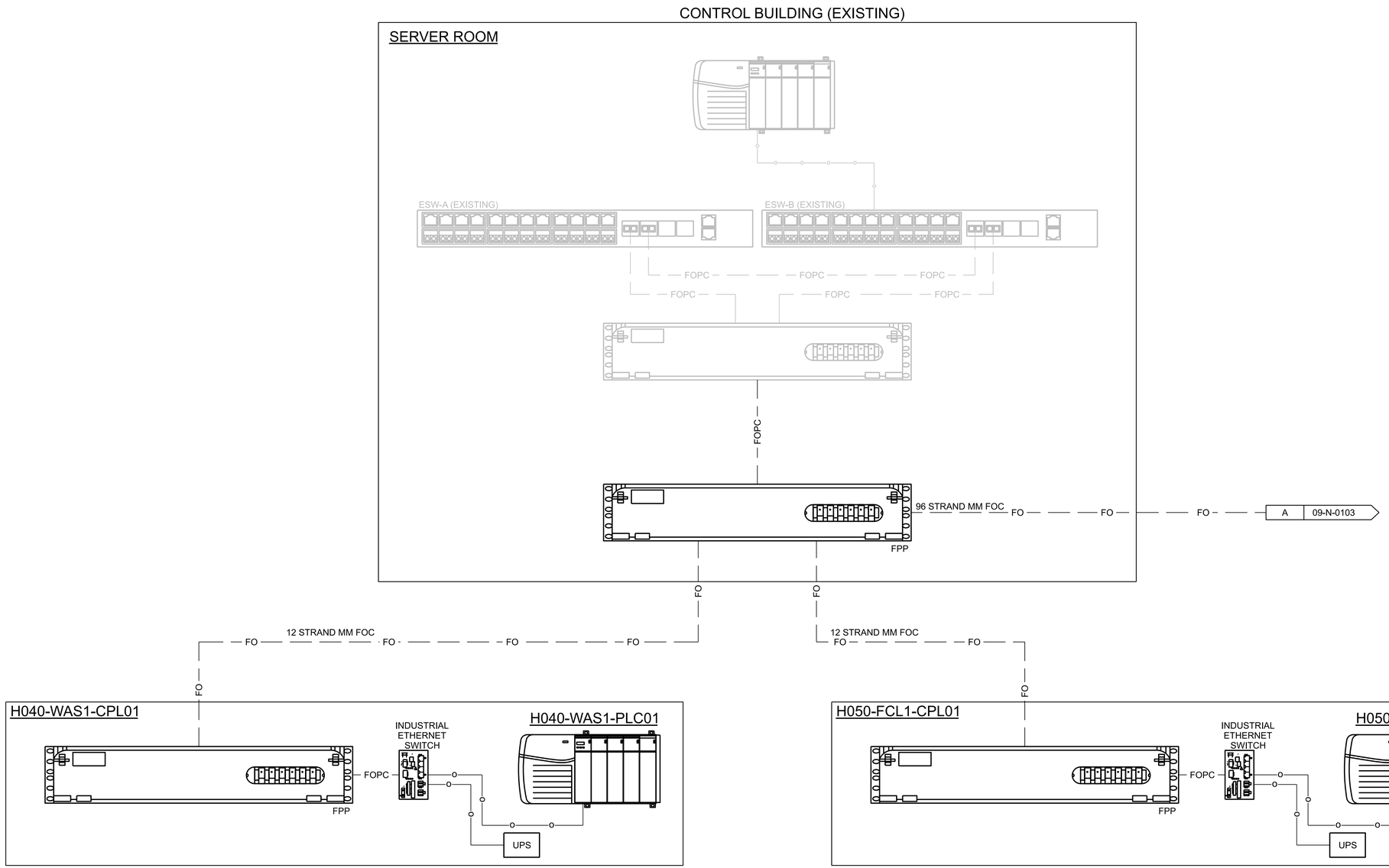

LICENSED PROFESSIONAL ENGINEER
ORVIL LUGO
35653
OKLAHOMA
MAY 15th, 2026

INSTRUMENTATION AND CONTROL
P&ID
BIO-SOLIDS SYSTEM ARCHITECTURE
SHEET 1

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
	PROJ. MGR.	MSN 05/7/26	
HORIZONTAL:	LEAD ENG.	RJL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 09-N-0102		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 118 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:18

GENERAL SHEET NOTES

1. PROVIDE UPS IN MAIN PLC PANEL TO SERVE PLC HARDWARE POWER SUPPLY: AND NETWORK PANEL POWER AND ALL 4 WIRE FIELD INSTRUMENTS.
2. EACH LOCAL PANEL AND MASTER CONTROL PANEL SHALL HAVE DEDICATED UPS.
3. PROVIDE PATCH CORDS FOR ALL CAT6 AND FIBER CONNECTIONS WITHIN RESPECTIVE ENCLOSURES.
4. PROVIDE RIGID STEEL CONDUIT FOR ALL CAT6 AND FIBER RUNS BETWEEN ENCLOSURES.
5. COORDINATE WITH OWNER PRIOR TO WORKING ON ANY EXISTING NETWORK EQUIPMENT.

X SHEET KEYNOTES

1. CONTRACTOR TO PROVIDE TWO ADDITIONAL NETWORK SWITCHES NOT SHOWN FOR THE IT NETWORKS. COMPLETE WITH PATCH FIBER AND COPPER PATCH PANELS, REDUNDANT UPS, AND CABLE MANAGEMENT.

DRAWING LEGEND

- ETHERNET CAT6 CONNECTION
- FO — FIBER OPTIC CONNECTION
- FOPC — FIBER OPTIC PATCH CORD
- ETHERNET NETWORK SWITCH
- INDUSTRIAL ETHERNET SWITCH
- FIBER OPTIC PATCH PANEL (FPP)

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COMPOST OPERATIONS BUILDING SERVER ROOM

A | 09-N-0102 — 96 STRAND MM FOC

6-STRAND MM FOC
6-STRAND MM FOC
6-STRAND MM FOC

1 — FPP

FO, FOPC

ESW-A

ESW-B

- WOODCHIP DELIVERY ENTRANCE GATE
- COMPOST PICK-UP ENTRANCE GATE
- COMPOST PICK-UP EXIT GATE

DEWATERING CENTRIFUGE BUILDING ELECTRICAL ROOM

120V

H090-DEW1-MCP01

(2) FPP — F0PC

OIT

PLC RACK 0

INDUSTRIAL ETHERNET SWITCH

UPS

(2) F0PC

(6)

INDUSTRIAL ETHERNET SWITCH

UPS

PLC RACK 1

- H090-DEW1-CPL02 — (2) — H090-DEW1-MDP01 ◆
  - CENTRIFUGE 1 MAIN DRIVE
  - CENTRIFUGE 1 BACK DRIVE
- H090-DEW1-CPL03 — (2) — H090-DEW1-MDP02 ◆
  - CENTRIFUGE 2 MAIN DRIVE
  - CENTRIFUGE 2 BACK DRIVE
- H090-DEW1-CPL04 — (2) — H090-DEW1-MDP03 ◆
  - CENTRIFUGE 3 MAIN DRIVE
  - CENTRIFUGE 3 BACK DRIVE

SLUDGE MIXING BUILDING ELECTRICAL ROOM

H090-DEW3-MCP01

FPP

F0PC

INDUSTRIAL ETHERNET SWITCH

UPS

H090-DEW3-PLC01

COMPOST OPERATIONS BUILDING ELECTRICAL ROOM

120V

H095-COM1-MCP01

(10)
(4)

INDUSTRIAL ETHERNET SWITCH

UPS

H095-COM1-PLC01

120V

H095-COM1-CPL01 ◆

(10)
(4)

INDUSTRIAL ETHERNET SWITCH

UPS

H095-COM1-PLC01

- H095-COM1-VFDXX (TYP OF 10 COMPOSTING FANS)
- H095-COM1-VFDXX (TYP OF 4 CURING FANS)

H095-COM1-VFD11 — BIOLFILITER FAN NO. 1

H095-COM1-VFD12 — BIOLFILITER FAN NO. 2

LICENSED PROFESSIONAL ENGINEER
ORVIL LUGO
35653
OKLAHOMA
MAY 15th, 2026

REVISION	BY	DATE

INSTRUMENTATION AND CONTROL
P&ID
BIO-SOLIDS SYSTEM ARCHITECTURE
SHEET 2

WFXQ7901

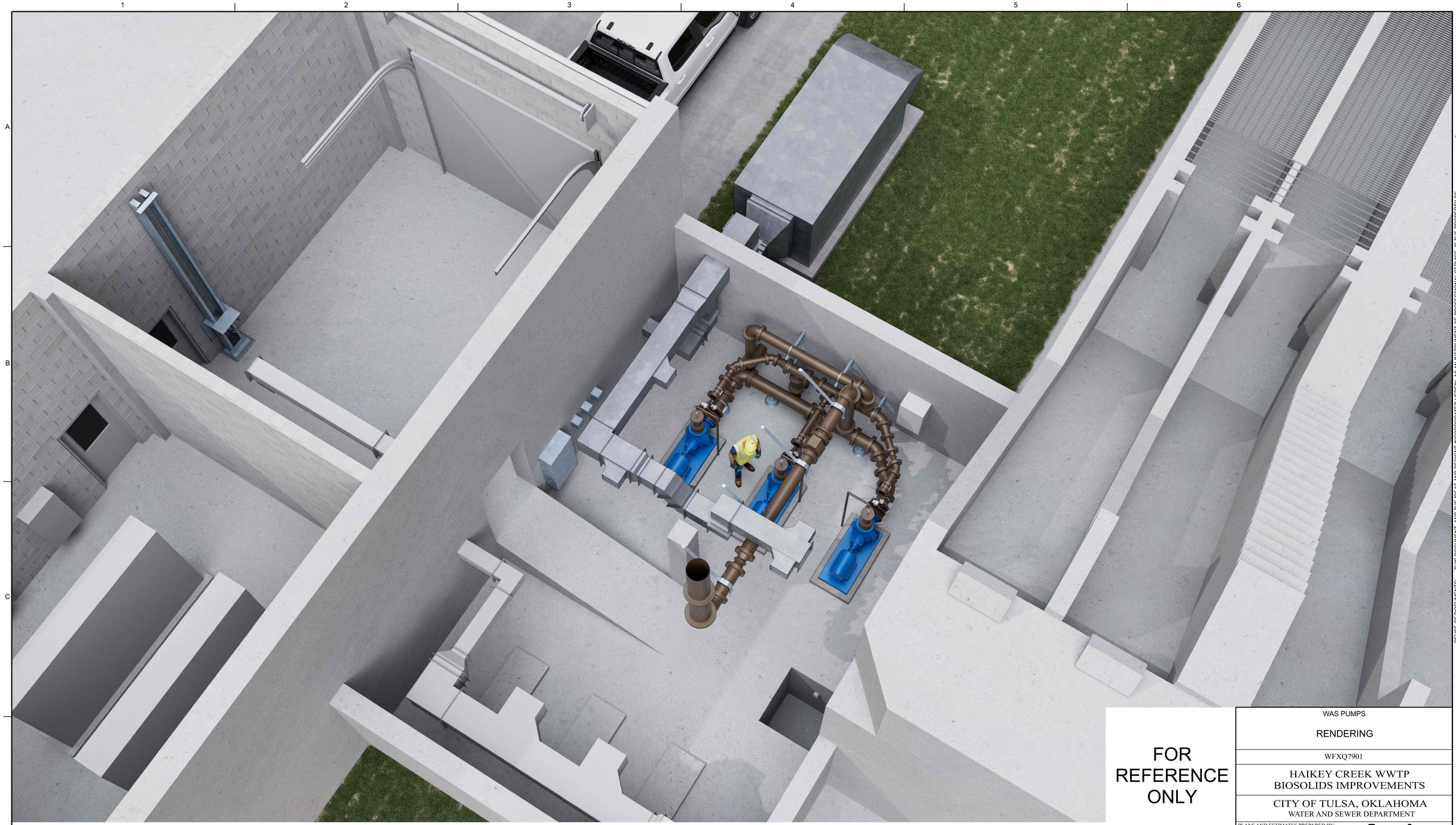
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
PROFILE:	DESIGNED	BB		
HORIZONTAL:	SURVEY			
VERTICAL:	PROJ. MGR.		05/26	
	LEAD ENG.		5/26	
	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 09-N-0103			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 119 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:19



RENDERING
NTS

FOR REFERENCE ONLY

WAS PUMPS

RENDERING

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN	05/26
HORIZONTAL:	LEAD ENG.	AZL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 40-WAS1-R-0001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 120 OF 300 SHEETS

PLOT DATE: 05\14\2026 PLOT TIME: 8:53:21 AM

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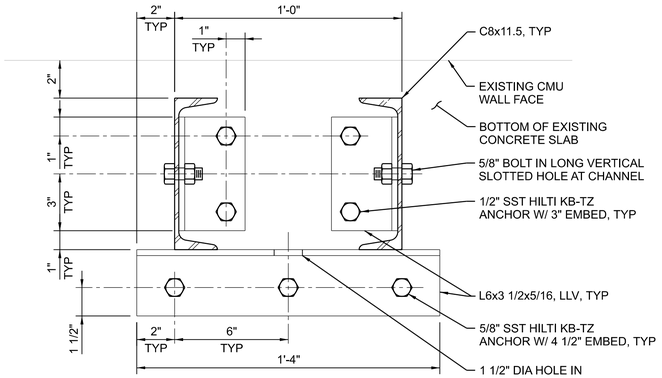
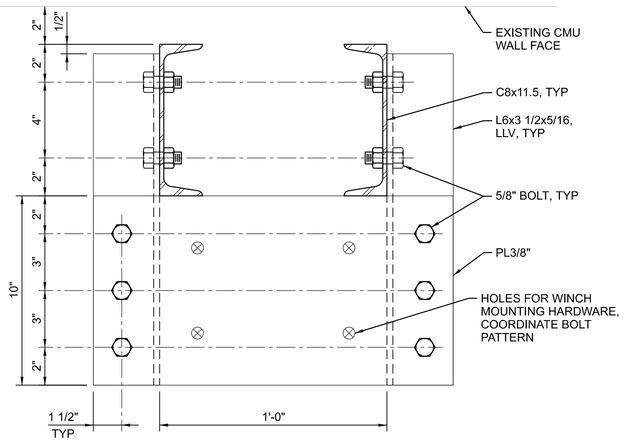
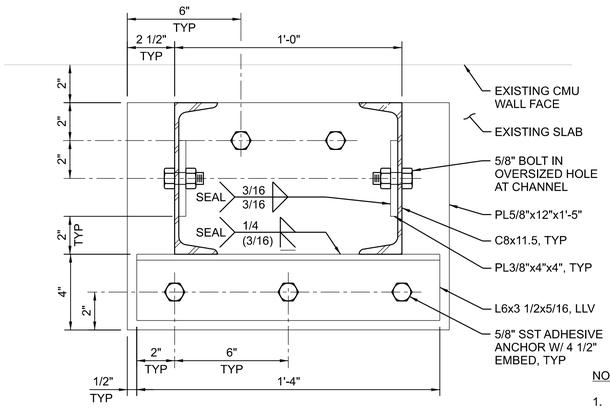


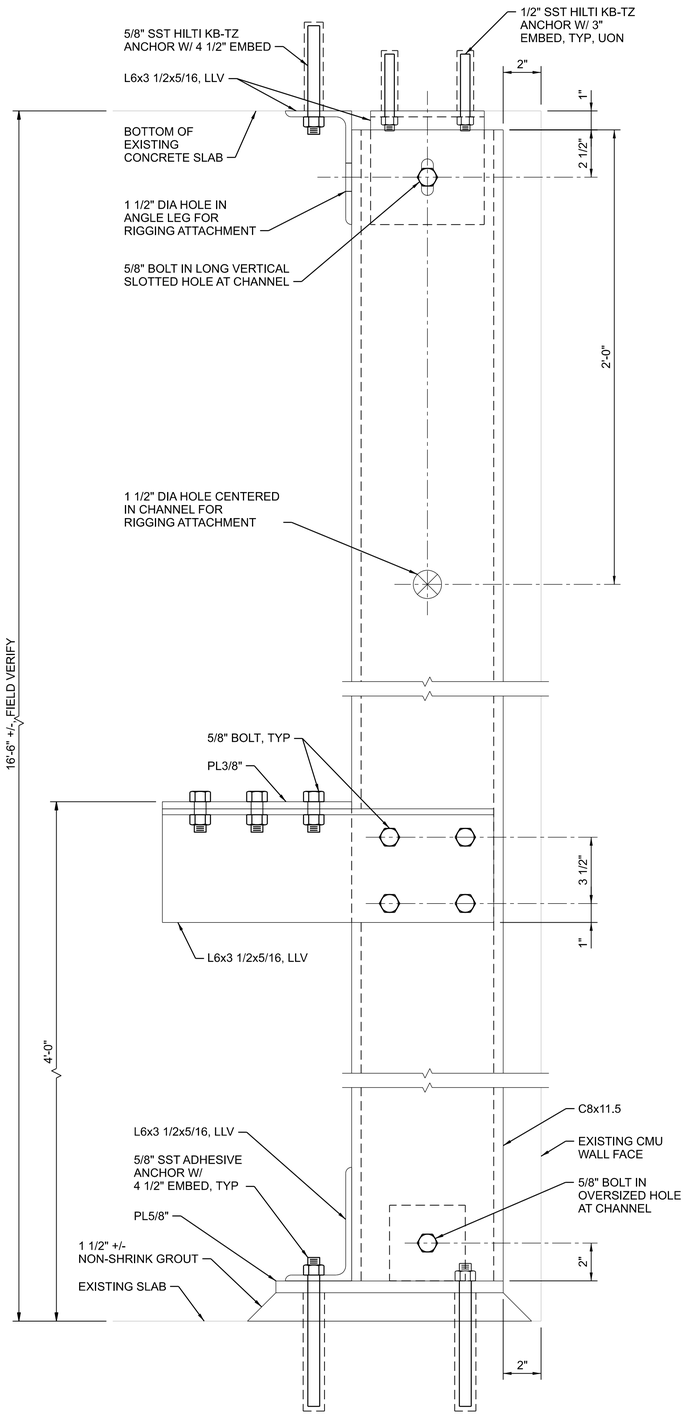
REFLECTED CEILING PLAN



PLAN AT WINCH MOUNT



PLAN AT BASE



SIDE ELEVATION

NOTES:

1. HOT-DIP GALVANIZE AFTER FABRICATION.
2. SUPPORT DESIGNED FOR 2000 LB CAPACITY WINCH.

1 WINCH SUPPORT FRAME
3"=1'-0"
40-WAS1-D-2000

GENERAL FACILITY NOTES

1. FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS 01-G-0020 AND 01-G-0021.
2. FOR STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS, SEE DRAWINGS 01-G-022 THROUGH 01-G-0024.

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/20/2026

WAS FACILITY
STRUCTURAL DETAIL

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

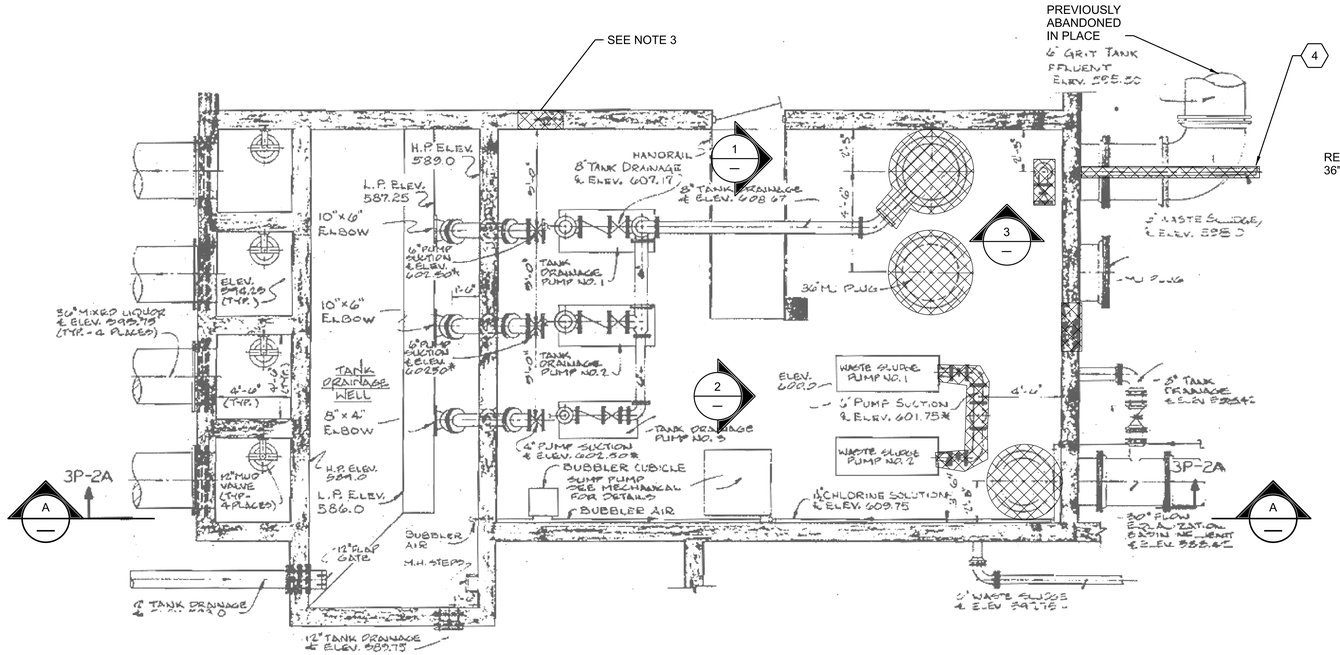
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	AZL	5/26
FIELD MGR.		5/26

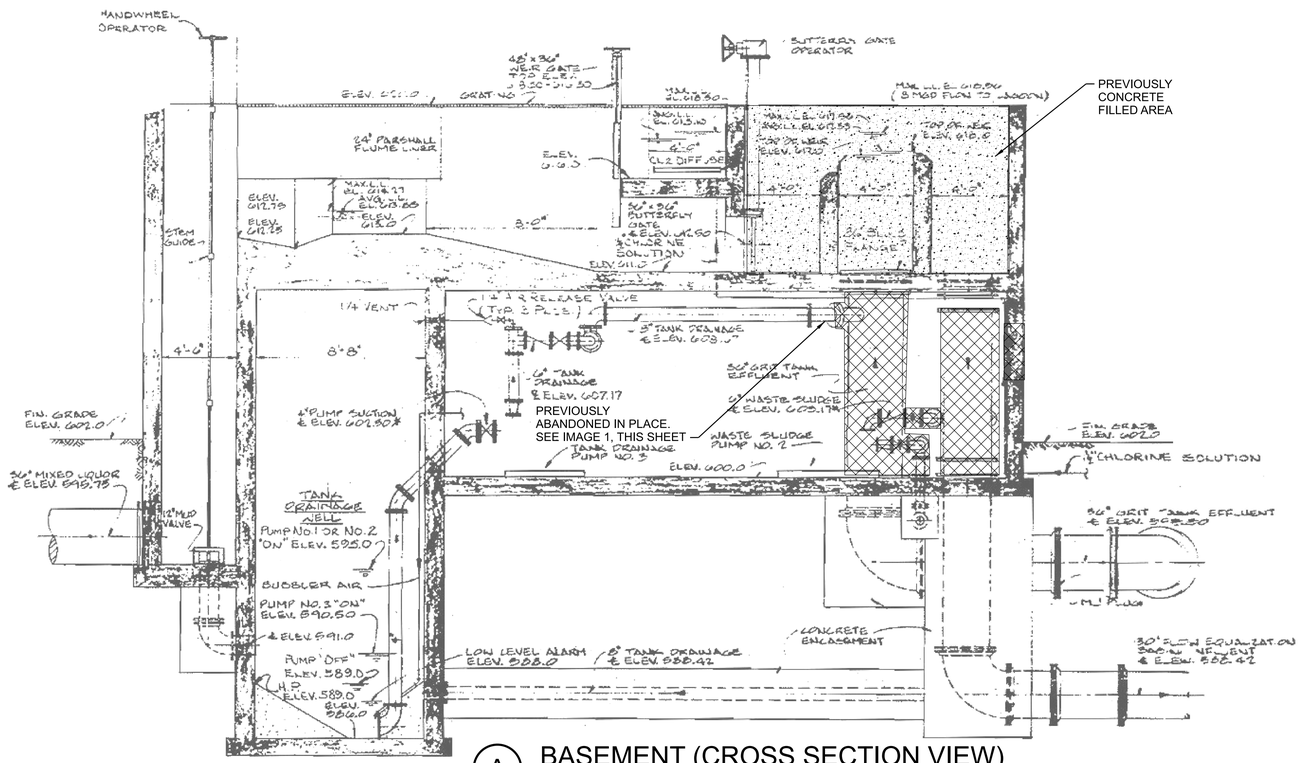
APPROVED:
DESIGN MANAGER
DATE: MAY 2026
SHEET 121 OF 300 SHEETS

FILE: DRAWING: 40-WAS1-S-5001
ATLAS PAGE NO: 3328

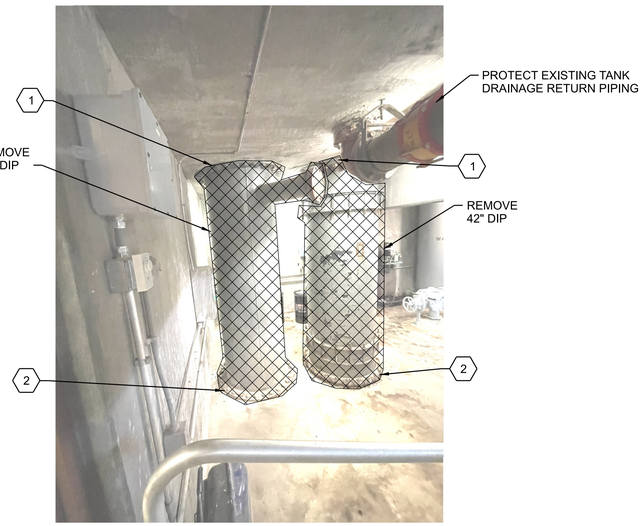
PLOT DATE: 5-MAY-2026 PLOT TIME: 12:23



1 BASEMENT (PLAN VIEW)
NTS



A BASEMENT (CROSS SECTION VIEW)
NTS



1 NORTHEAST WALL
NTS

2 SOUTHEAST WALL
NTS

3 NORTH WALL
NTS

GENERAL SHEET NOTES

1. COORDINATE WITH OWNER FOR GREASE DRUM AND PUMPS RELOCATION.
2. REFER TO SHEET 40-WAS1-D-2000 FOR WAS PUMP STATION PLACEMENTS.
3. REFER TO SHEET 40-H-2000 FOR NORTH WALL AREA 18" H x 20" OPENING. REPAIR NEW CONCRETE PER 0330-106 SIM.

SHEET KEYNOTES

1. INSTALL BLIND FLANGE OR 1/2" CIRCULAR STEEL PLATE AND EMBED SEVERAL BOLTS INTO EXISTING SPOOL.
2. FILL PIPE WITH CONCRETE FILL TO MINIMUM OF BOTTOM OF FIRST ELBOW. FINISH EXPOSED SURFACE TO MATCH EXISTING CONCRETE SLAB.
3. DEMOLISH LOUVER, FRAME, AND ANCHORS. IN-FILL CONCRETE WALL OPENING PER 0330-106 SIM.
   DEMOLITION INCLUDES ELECTRICAL WIRING/ CONDUIT BACK TO A TERMINATION POINT.
4. EXISTING 6" WAS PIPE CONNECTED TO CURRENT PUMPED GRAVITY THICKENER SLUDGE FEED TO ROTARY DRUM THICKENER FACILITY. DEMO TO BURIED TEE AND BLIND FLANGE OR MECHANICALLY PLUG WAS PIPE. COORDINATE WITH OPERATIONS TO ENSURE NON-PRESSURED SYSTEM.

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

WAS PUMPS
PROCESS
DEMOLITION PLANS AND DETAILS

WFXQ7901

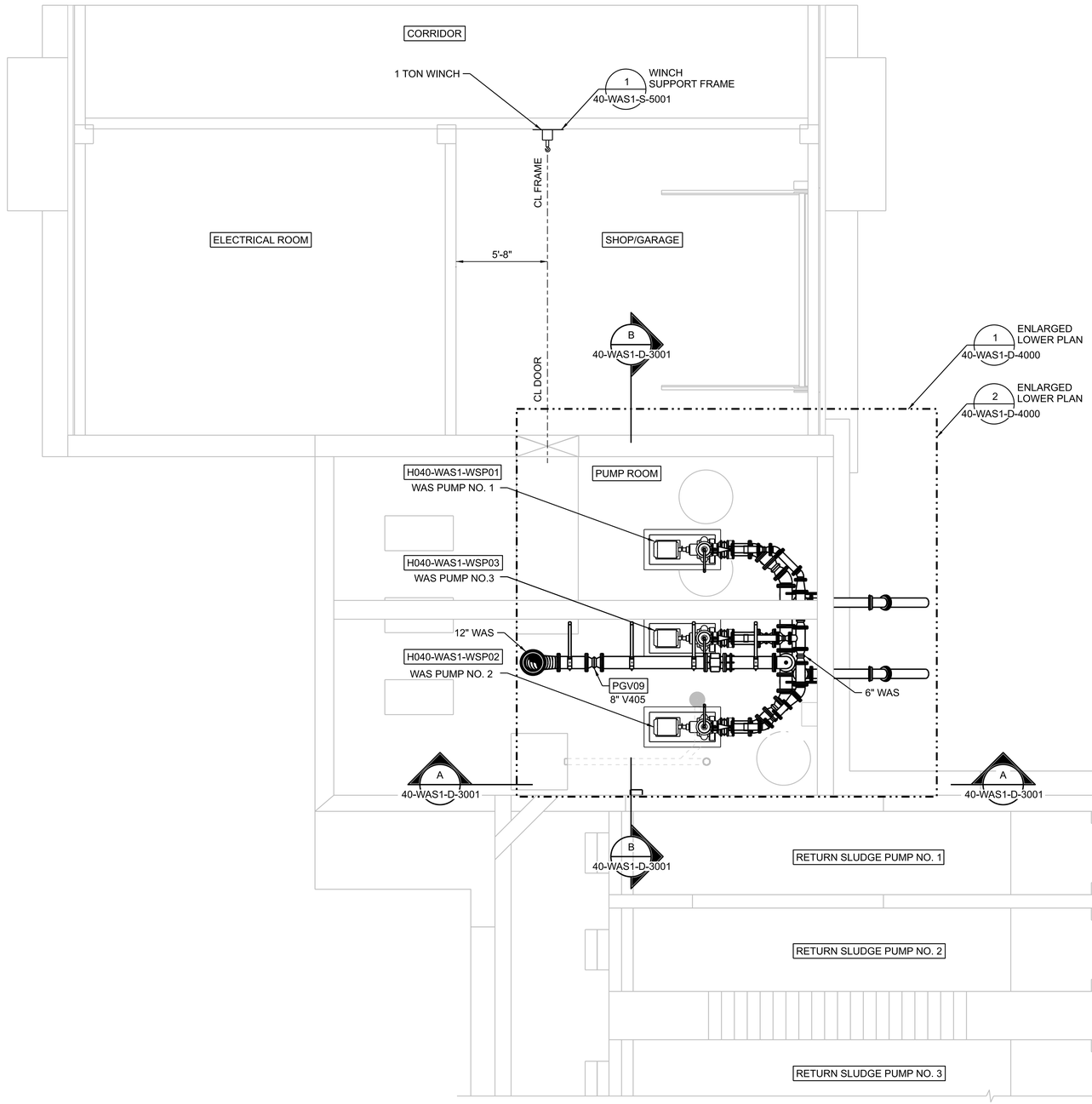
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
PROFILE:	DESIGNED	BB		
HORIZONTAL:	SURVEY			
VERTICAL:	PROJ. MGR.	MSN	05/26	
	LEAD ENG.	RJL	5/26	
	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 40-WAS1-D-1001			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 122 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 15:55



N

PLAN
1/4"=1'-0"

GENERAL NOTES

1. FIELD VERIFY WINCH LOCATION IS CENTERED FOR EQUIPMENT REMOVAL IN PUMP ROOM BASEMENT.
2. COORDINATE WITH ENGINEER ANY CONFLICTS WITH PERSONNEL ACCESS.
3. VERIFY CABLE LENGTH REACHES PAST THE BOTTOM OF THE PUMP ROOM RAMP PRIOR TO INSTALLATION.

SHEET KEYNOTES

1, APPROXIMATE LOCATION OF EXISTING 6" WAS SUCTION FEED TO EXISTING BASEMENT WAS PUMP HEADER. CONTRACTOR TO SUBMIT TEMPORARY ISOLATION PLAN FOR DEMOLITION ACTIVITIES. OPTIONAL SOLUTION: INSTALL TEMPORARY INFLATABLE PLUG ATTACHED VIA POLE.

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

WAS PUMPS
PROCESS
PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

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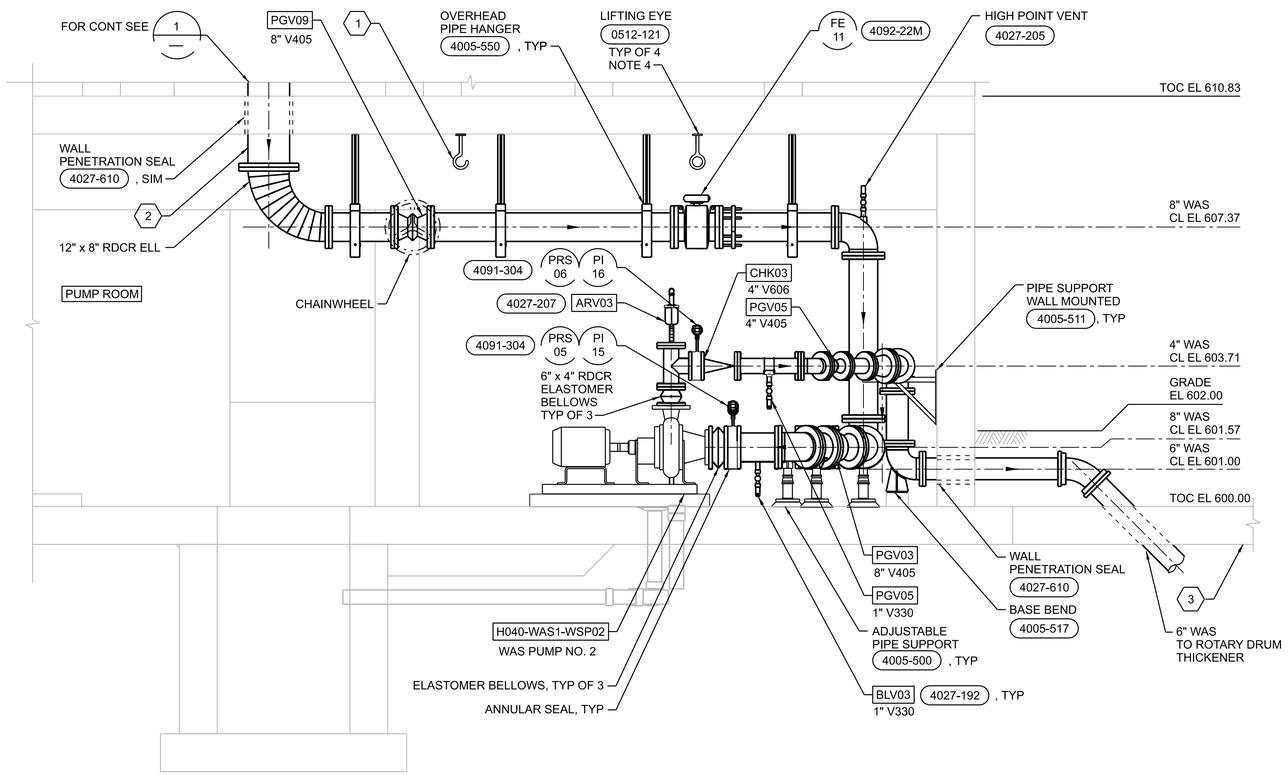
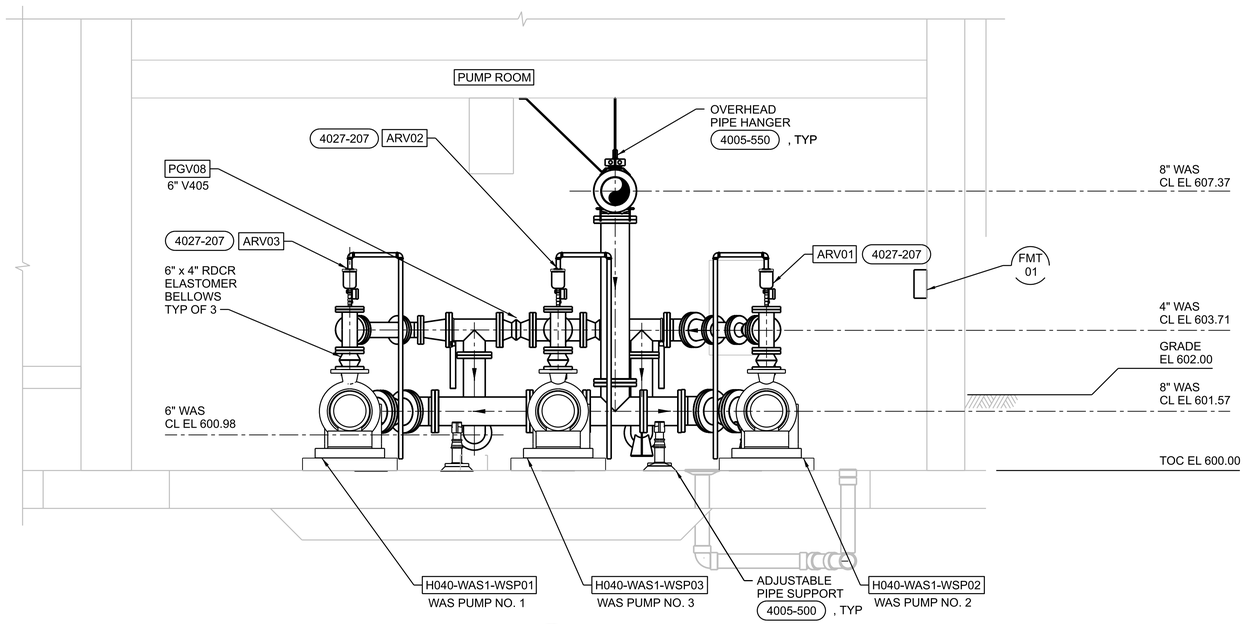
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSN	05/26
	LEAD ENG.	RJL	5/26
	FIELD MGR.		5/26
FILE:	DRAWING: 40-WAS1-D-2000		DESIGN MANAGER
ATLAS PAGE NO: 3328			DATE: MAY 2026
			SHEET 123 OF 300 SHEETS

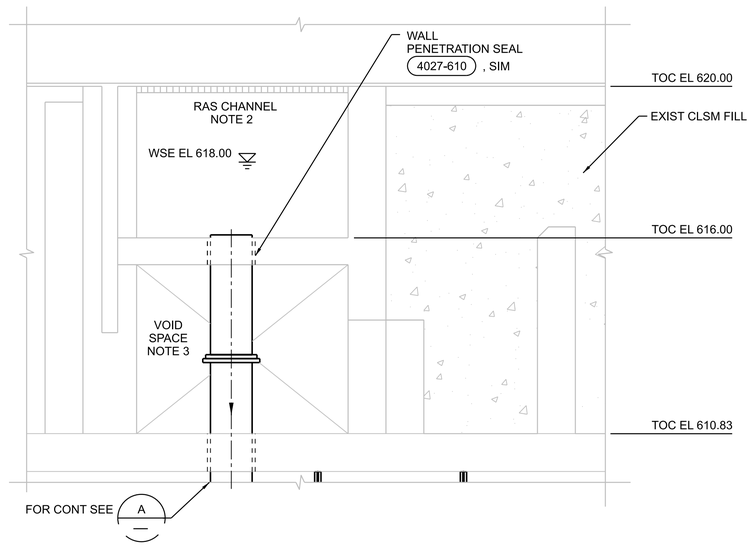
PLOT DATE: 14-MAY-2026 PLOT TIME: 15:55



A SECTION
1/2"=1'-0"
40-WAS1-D-2000



B SECTION
1/2"=1'-0"
40-WAS1-D-2000



1 DETAIL
1/2"=1'-0"

GENERAL NOTES

1. INSTALL 2" THICK FOAM BOARD, 24" WIDE, ON TOP OF SHALLOW BURIED PIPE SECTIONS.
2. COORDINATE WITH THE OWNER AND OPERATIONS STAFF ON MEANS AND METHODS OF WAS PIPE PENETRATIONS INTO EXISTING CHANNEL. PENETRATION MAY NOT PROCEED UNTIL WRITTEN APPROVAL IS PROVIDED BY OWNER.
3. VOID SPACE IS SHOWN BASED ON AVAILABLE RECORD DRAWINGS. CONDITIONS MAY VARY.
4. INSTALL LIFTING EYE CENTERED ABOVE FLOW METER AND ALL THREE WAS PUMPS.

SHEET KEYNOTES

1. INSTALL CEILING HOOK 0512-121 , SIM TO STORAGE CHAIN ON VALVE OPERATOR, HOOK PLACEMENT SHALL BE OFFSET ENOUGH THAT CHAIN DOES NOT SAG INTO HEADSPACE AND HAVE ENOUGH SLACK FOR EASY OPERATOR REMOVAL DURING VALVE USES.
2. FLANGED x PLAIN END (PE) PIPE SECTION TO BE FIELD MEASURED. PE x PE WITH RESTRAINED FLANGED ADAPTER BOLTED TO REDUCING ELBOW IS AN ACCEPTABLE ALTERNATIVE.
3. SECTION CUT SHOWS STRIP FOOTING FROM RAS SCREW PUMP STRUCTURE. BURIED 6" WAS PIPE SHOULD BE OUTSIDE FOOTING FOOTPRINT, SEE DWG 40-WAS1-D-2000 FOR CLARITY.

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

WAS PUMPS
PROCESS
SECTIONS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

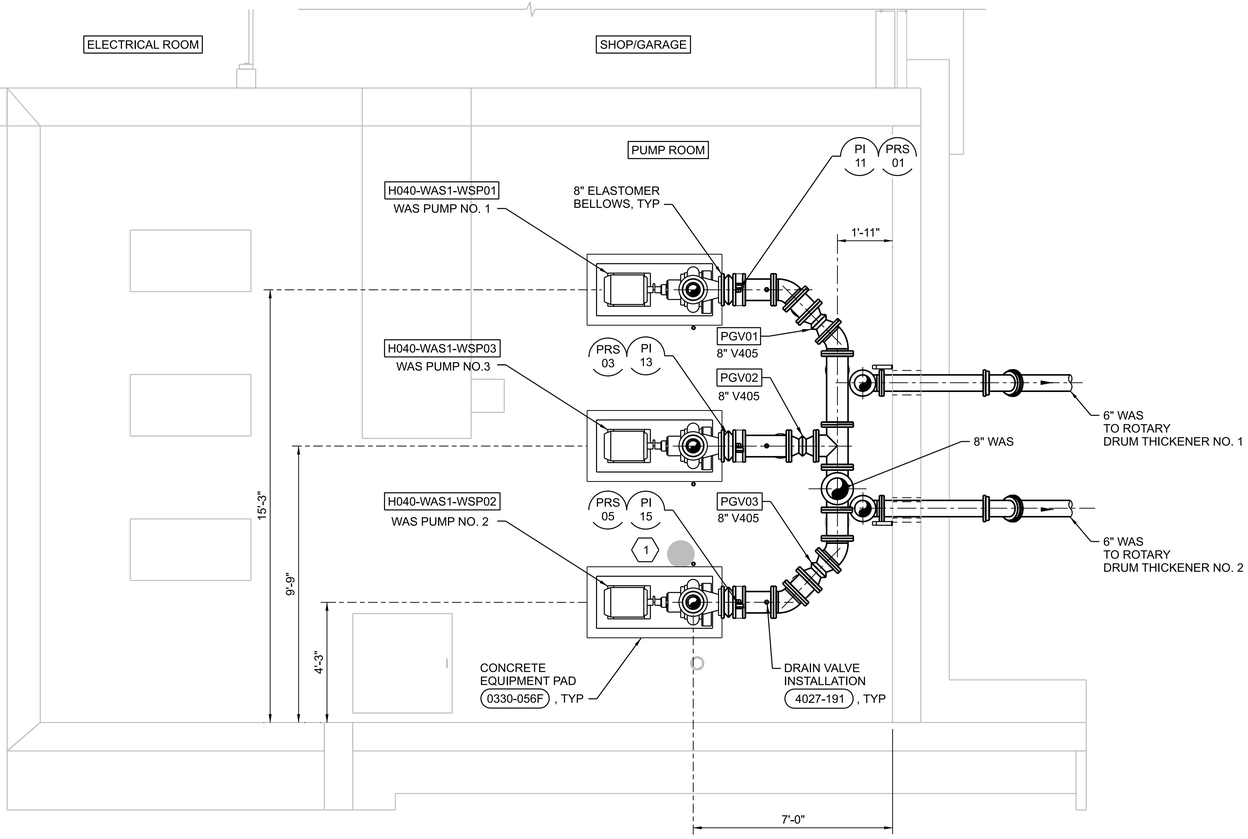
PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MW	05/17/26	
HORIZONTAL:	LEAD ENG.	AZL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 40-WAS1-D-3001			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 124 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 15:55

SHEET KEYNOTES

1. CONTRACTOR TO VERIFY LOCATION AND SIZE OF EXISTING FLOOR DRAIN. ADJUST PUMP PAD TO NOT IMPEDE DRAIN.

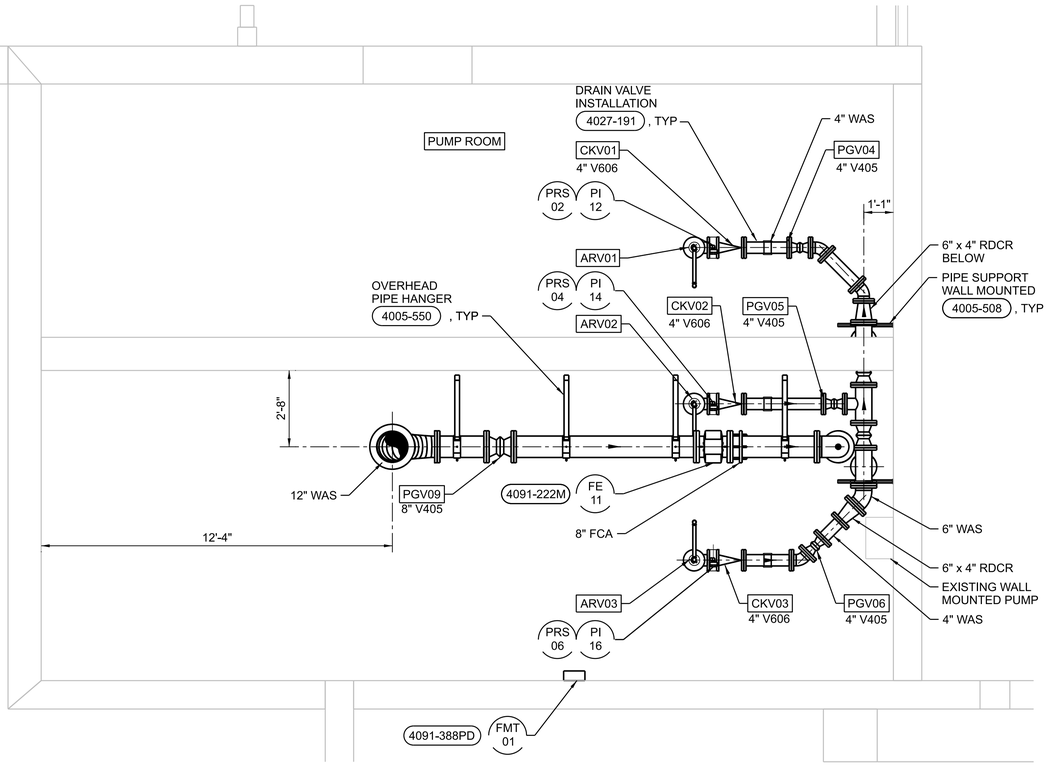


N

1 ENLARGED LOWER PLAN

3/8"=1'-0"

40-WAS1-D-2000



N

2 ENLARGED LOWER PLAN

3/8"=1'-0"

40-WAS1-D-2000

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
05/17/2026

REVISION	BY	DATE

WAS PUMPS
PROCESS
ENLARGED PLANS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

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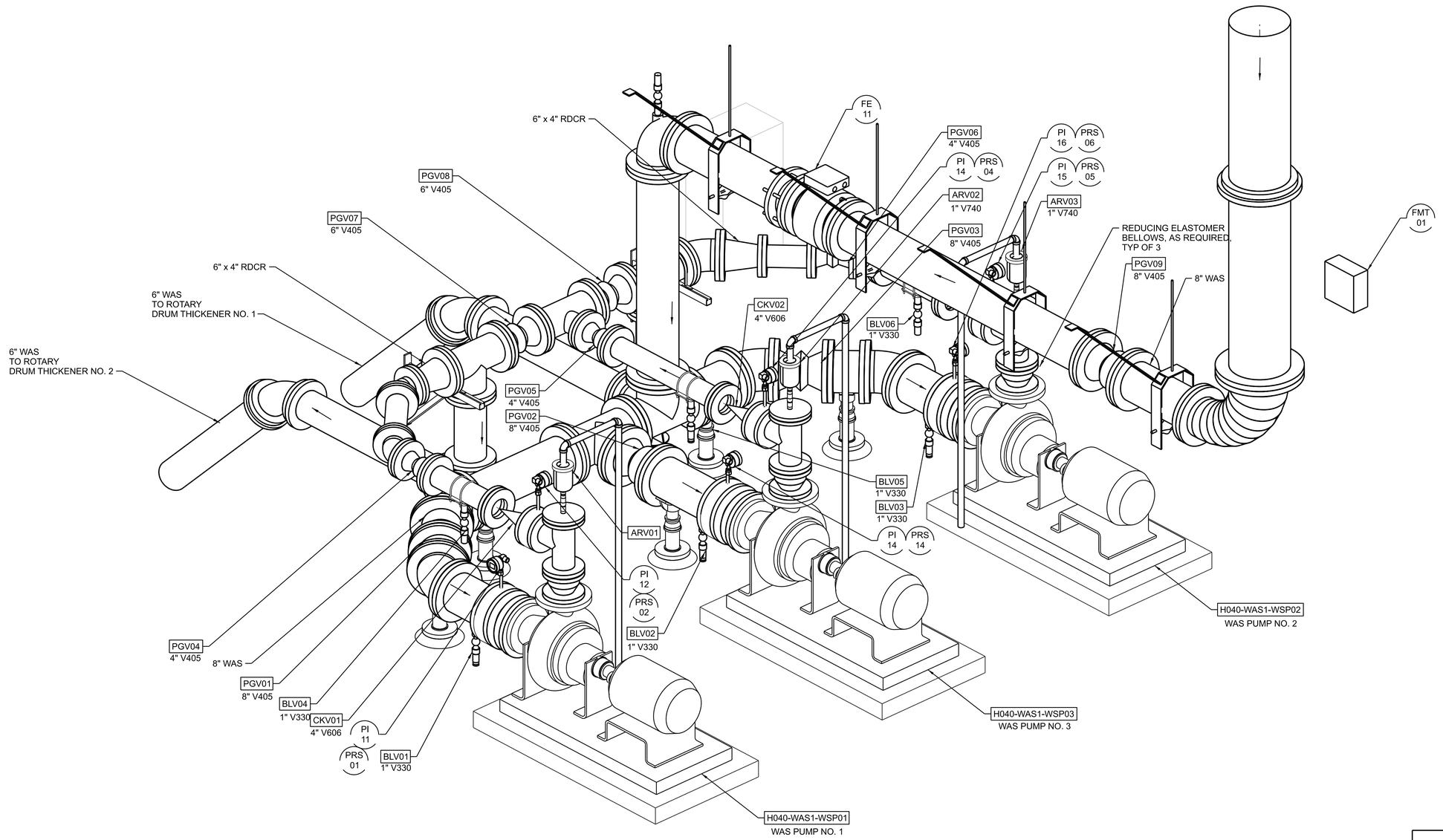
	DESIGNED	BB		
PROFILE:	SURVEY			
HORIZONTAL:	PROJ. MGR.	MSN	05/26	
	LEAD ENG.	BZL	5/26	
VERTICAL:	FIELD MGR.	TJP	5/26	DESIGN MANAGER
FILE:	DRAWING: 40-WAS1-D-4000			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 125 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 15:55



ISOMETRIC VIEW
NTS

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

WAS PUMPS
PROCESS
ISOMETRIC

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

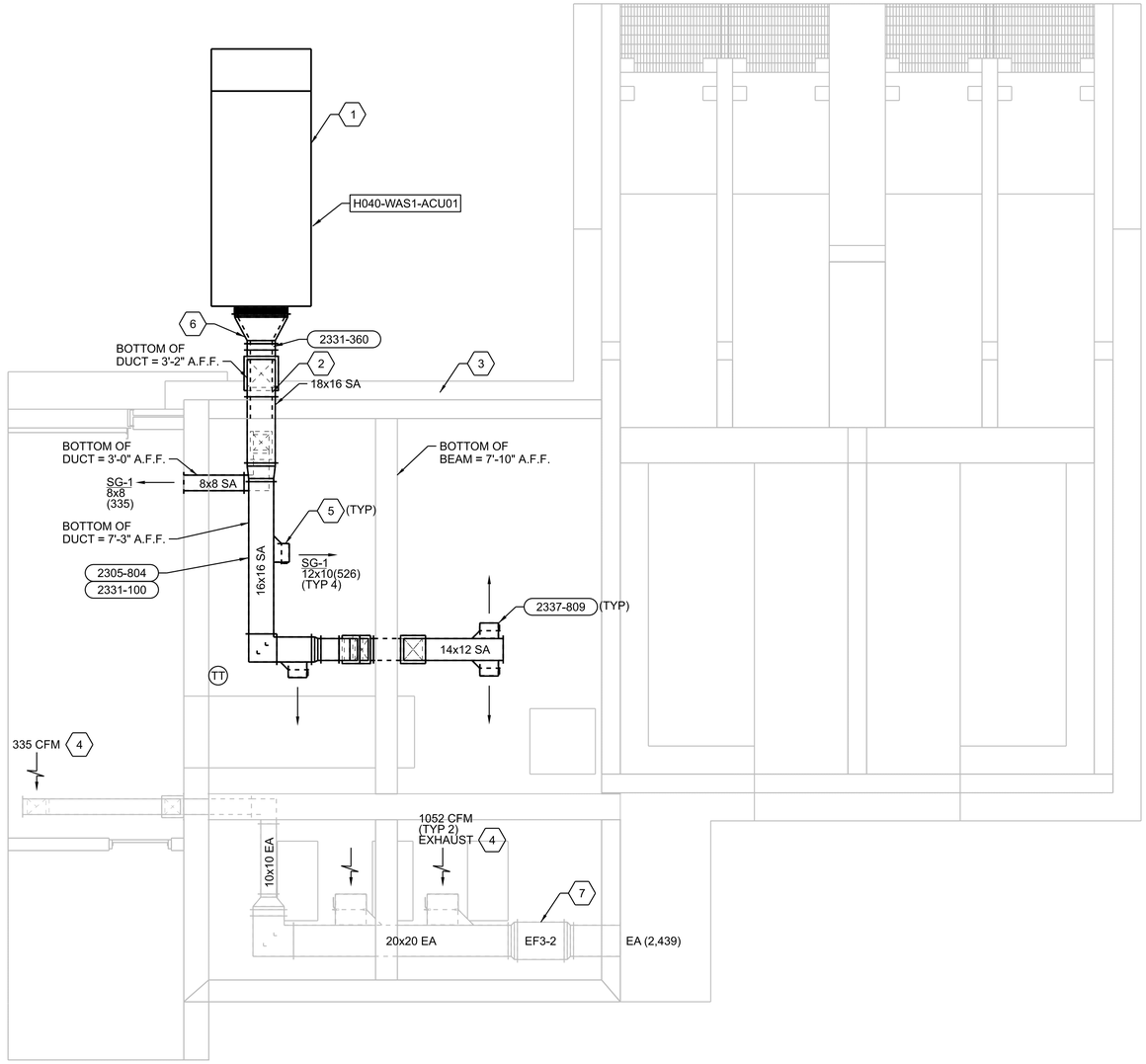
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	AZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 40-WAS1-D-9001
ATLAS PAGE NO: 3328
SHEET 126 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 15:55



N

PLAN
1/4"=1'-0"

SHEET KEYNOTES

1. CONCRETE PAD 6 INCHES LARGER THAN THE DIMENSIONS OF THE EQUIPMENT. PLACE EQUIPMENT CENTERED ON PAD. SEE STRUCTURAL DRAWINGS.
2. SEE ARCHITECTURAL DRAWINGS FOR SEALING OF PENETRATION.
3. SEE STRUCTURAL DRAWINGS FOR SEALING OF EXISTING WALL PENETRATION.
4. BALANCE EXISTING EXHAUST GRILLES TO THE CFM INDICATED ON DRAWING.
5. DIRECT SUPPLY GRILLE VANES TO DISCHARGE AIR TOWARDS THE FLOOR TO PROMOTE AIR MIXING.
6. DIMENSIONS ARE INSIDE FREE AREA.
7. PRIOR TO CONSTRUCTION PROVIDE OPERABILITY REPORT OF EXISTING HVAC EQUIPMENT CONDITION ASSESSING SUITABILITY TO REUSE AT THE NEW CONDITIONS SHOWN. SUBMIT REPORT TO OWNER BEFORE MAKING ANY MODIFICATIONS TO THE EXISTING SYSTEM.

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LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

WAS PUMPS
HVAC
Facility Plan

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

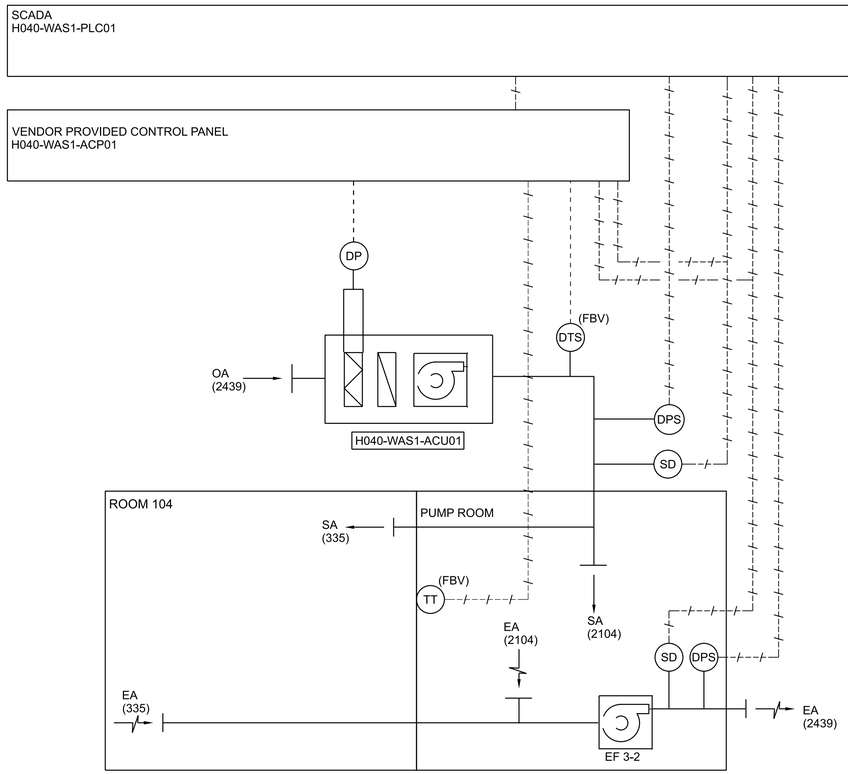
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 40-WAS1-H-2000
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 127 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 14:30



SEQUENCE OF OPERATIONS

GENERAL:

1. A GENERAL ALARM SHALL BE SENT TO THE SCADA SYSTEM VIA 24 VDC DRY CONTACTS RELAY WHEN THERE IS AN EQUIPMENT FAILURE OR ALARM. CONTROL WIRING SHALL BE PROVIDED BY DIVISION 26. SCADA PANEL TERMINATION SHALL BE PROVIDED BY DIVISION 40.
2. ANALOGUE SIGNAL CONVERSION PROGRAMMING SHALL BE DONE BY DIVISION 40 TO COMMUNICATE WITH SCADA NETWORK.

H040-WAS1-ACU01

GENERAL:
THE UNIT OPERATES AS A CONSTANT 100% OUTSIDE AIR MAKEUP UNIT WITH A PROGRAMMABLE THERMOSTAT.

THE UNIT IS ENABLED CONTINUOUSLY.

THE UNIT SHALL OPERATE IN ONE OF THE FOLLOWING SCHEDULED MODES.
1. OCCUPIED
2. UNOCCUPIED

ZONE SET POINTS:
1. OCCUPIED MODE
   VENTILATION ONLY - COOLING
   50F (ADJ) HEATING
2. UNOCCUPIED MODE:
   UNIT IS TURNED OFF AND OUTDOOR AIR DAMPER IS CLOSED.

OCCUPIED MODE RUN CONDITIONS:
FAN CONTROLS:
1. THE FAN VFD SHALL RUN AT A CONSTANT FAN SPEED TO MAINTAIN THE SPACE CFM PER NFPA 820.

COOLING/VENTILATION CONTROLS:
1. IF THE SUPPLY AIR TEMPERATURE IS ABOVE THE HEATING SETPOINT THEN THE UNIT SHALL RUN AT 100% OUTSIDE AIR.
2. ENABLED WHEN THERE IS NO HEATING DEMAND DURING OCCUPIED MODE.

HEATING CONTROLS:
1. IF THE SUPPLY AIR TEMPERATURE IS BELOW THE SUPPLY AIR HEATING SET POINT, THE SCR ELECTRIC HEAT STAGES ON AND MODULATES TO MAINTAIN THE SUPPLY AIR HEATING SET POINT.
2. IF THE SUPPLY AIR TEMPERATURE IS ABOVE HEATING SET POINT, HEATING WILL BEGIN TO STAGE OFF.

SUPPLY AIR TEMPERATURE RESET:
1. THE SUPPLY AIR RESET SOURCE FOR THIS UNIT IS THE SPACE TEMPERATURE. THE SUPPLY AIR TEMPERATURE RESET SOURCE IS USED TO ADJUST THE SUPPLY AIR TEMPERATURE SETPOINT. THE HEATING MODE SETPOINT ARE INDEPENDENTLY CONFIGURED TO BE CONTROLLED BY A COMMON RESET SOURCE.
2. THE HIGH AND LOW LIMIT VALUES ARE DEFINED TO BE 0F (ADJ) LOW AND 200F (ADJ) HIGH.
3. WHEN THE RESET SOURCE IS AT ITS HIGH LIMIT SETPOINT, THE SAT SETPOINT IS RESET TO ITS LOW LIMIT SETPOINT. WHEN THE RESET SOURCE IS AT ITS LOW LIMIT SETPOINT, THE SAT SETPOINT RESETS TO ITS HIGH LIMIT SETPOINT.
4. AS THE RESET SOURCE VALUE MOVES WITHIN THE HIGH AND LOW LIMIT RESET SETPOINTS, THE SUPPLY AIR SETPOINT IS PROPORTIONALLY RESET WITHIN THE HIGH AND LOW SAT SETPOINTS.

ALARMS TO VENDOR CONTROL PANEL:
1. DIRTY FILTER ALARM
2. MECHANICAL HEATING FAILURE
3. EMERGENCY SHUTDOWN
4. THESE ARE A SHORTEN LIST OF ALARMS, FOR COMPREHENSIVE LIST CONSULT EQUIPMENT VENDOR.

GENERAL SHEET NOTES

1. SEE HVAC LEGEND SHEET 01-G-0035.
2. SEE I&C LEGEND SHEETS 01-G-0055 & 01-G-0056.

EMERGENCY SHUTDOWN:
UPON SMOKE DETECTOR ACTIVATION, THE UNIT SHALL SHUTDOWN. THE SMOKE ALARM ACTIVATION SIGNAL SHALL BE HARD WIRED TO THE UNIT CONTROLLER INPUT. SIGNAL SHALL ALSO BE SENT TO SCADA PANEL AND ALARM MONITORING STATION.

VENTILATION ALARM:
IF THE DESIGN AIR FLOW DROPS BELOW 80% REQUIRED TO DECLASSIFY THE SPACE PER NFPA 820, THEN A VENTILATION SIGNAL IS SENT TO SCADA PANEL AND ALARM MONITORING STATION. SIGNAL SHALL TRIGGER AUDIBLE AND VISUAL ALARM TO NOTIFY PERSONAL TO EVACUATE/EXIT FACILITY UNTIL NORMAL HVAC OPERATION IS ACHIEVED.

EF 3-2 (EXISTING FAN)

GENERAL: THE FANS OPERATE AT A CONSTANT SPEED TO MAINTAIN SPACE CFM PER NFPA 820. EXHAUST FAN SHALL BE RECONFIGURED FROM A THERMOSTAT CONTROL TYPE AND OPERATE WITH A RELAY, INTERLOCKED WITH H040-WAS1-ACU01. SEE CORRESPONDING ELECTRICAL SHEET FOR FACILITY 40.

RUN CONDITIONS:
1. THE FANS SHALL BE INTERLOCKED WITH H040-WAS1-ACU01.

ALARMS: HIGH ZONE TEMPERATURE. A TEMPERATURE SENSOR HARD WIRED TO THE SCADA SYSTEM WILL PERFORM THIS MONITORING. THE ZONE HIGH TEMPERATURE ALARM SET POINT SHALL BE 90F (ADJ).

EMERGENCY SHUTDOWN:
UPON SMOKE DETECTOR ACTIVATION, THE UNIT SHALL SHUTDOWN. THE SMOKE ALARM ACTIVATION SIGNAL SHALL BE HARD WIRED TO THE UNIT CONTROLLER INPUT. SIGNAL SHALL ALSO BE SENT TO SCADA PANEL AND ALARM MONITORING STATION.

VENTILATION ALARM:
IF THE DESIGN AIR FLOW DROPS BELOW 80% REQUIRED TO DECLASSIFY THE SPACE PER NFPA 820, THEN A VENTILATION SIGNAL IS SENT TO SCADA PANEL AND ALARM MONITORING STATION. SIGNAL SHALL TRIGGER AUDIBLE AND VISUAL ALARM TO NOTIFY PERSONAL TO EVACUATE/EXIT FACILITY UNTIL NORMAL HVAC OPERATION IS ACHIEVED.

ALARMS TO SCADA

H040-WAS1-ACU01 - VENTILATION FAILURE
EF 3-2 (EXISTING) - VENTILATION FAILURE
SMOKE ALARMS
GENERAL HVAC ALARM

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REUSE OF DOCUMENTS:

LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

WAS PUMPS
HVAC
AIRFLOW SCHEMATIC

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

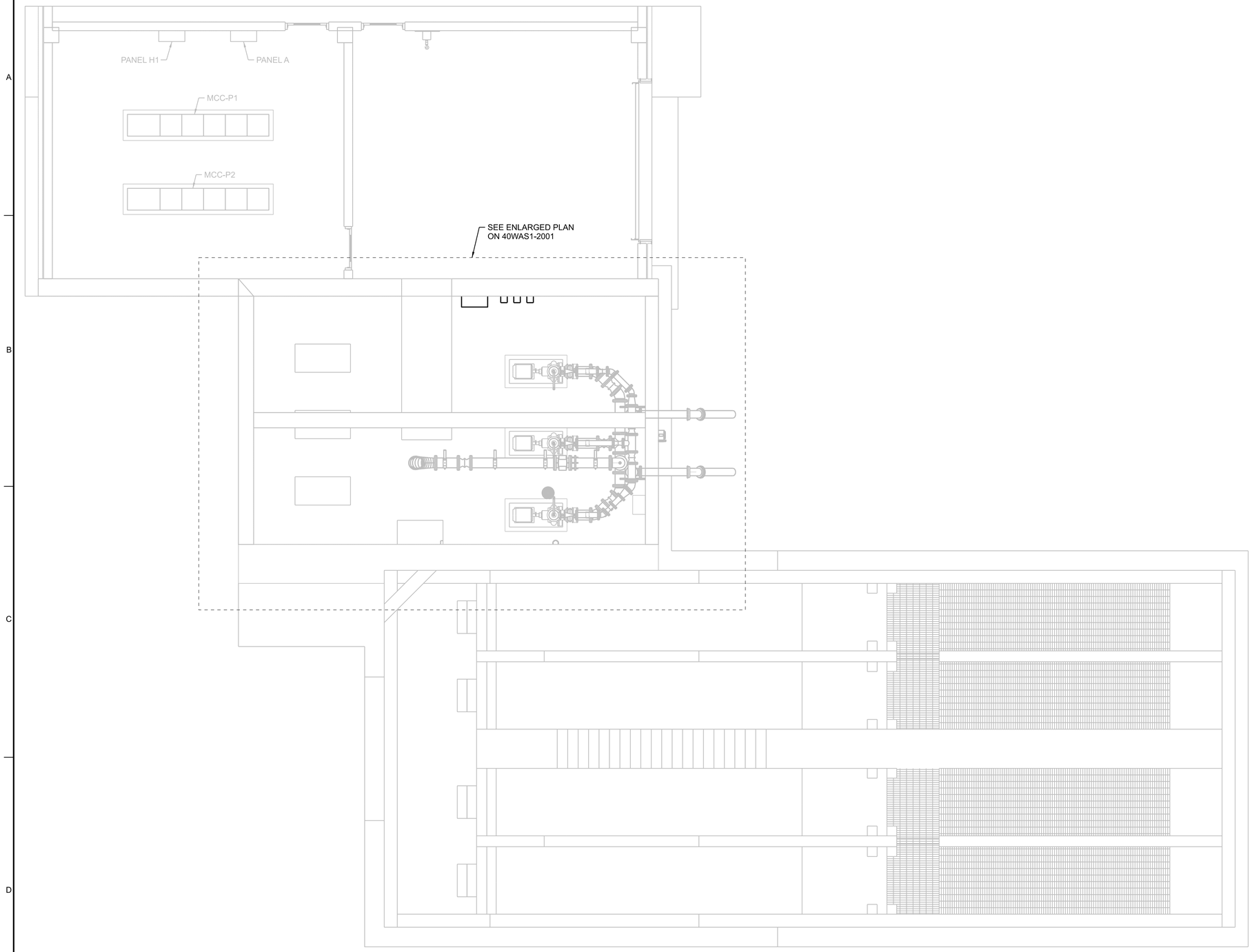
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:
FILE:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/18/26
LEAD ENG.		5/18/26
FIELD MGR.		5/18/26

DRAWING: 40-WAS1-H-6001

APPROVED:
DESIGN MANAGER
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 128 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 14:29



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PLAN
1/4"=1'-0"

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

REVISION	BY	DATE

WAS PUMPS
ELECTRICAL
POWER PLAN

WFXQ7901

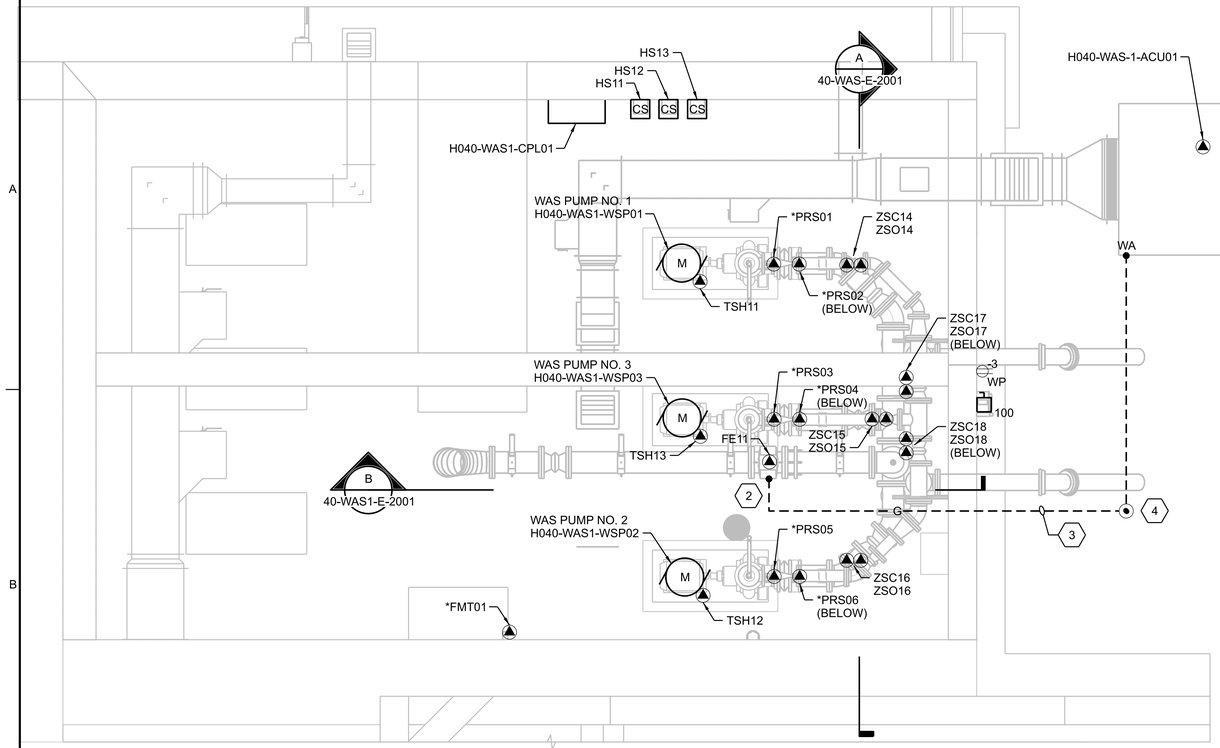
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

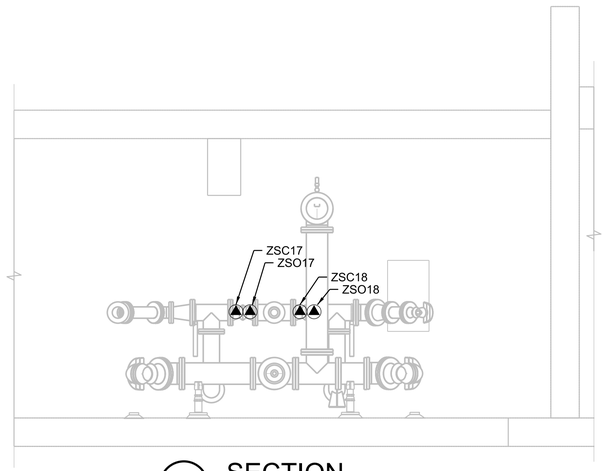
PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
	PROJ. MGR.	MSN	05/26
HORIZONTAL:	LEAD ENG.	BJL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 40-WAS1-E-2000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 129 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:01



ENLARGED PLAN

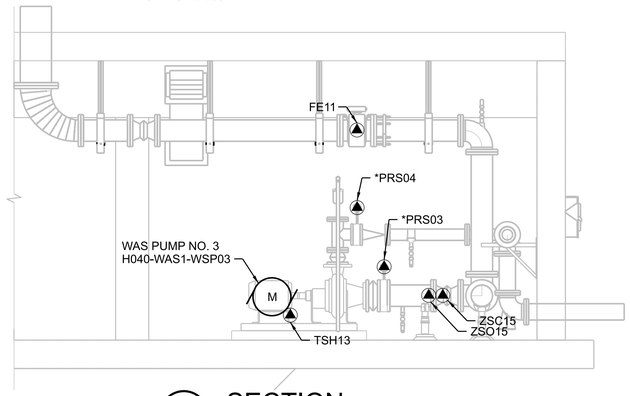
3/8"=1'-0"



A SECTION

3/8"=1'-0"

40-WAS1-E-2001



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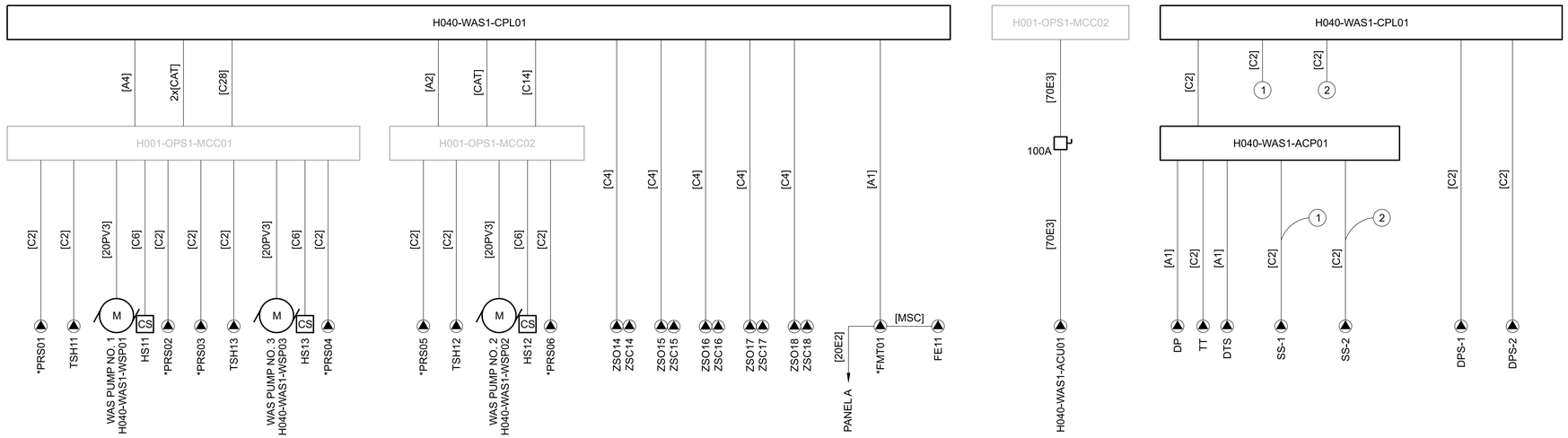
40-WAS1-E-2001



RISER DIAGRAM

NTS

GENERAL SHEET NOTES

1. COMPLETE TAG NUMBER INCLUDES THE H040-WAS1-" PREFIX.
2. MAINTAIN CLEAR SPACE BETWEEN MOTORS TO ALLOW FOR MOTOR DOLLY ACCESS. NO CONDUIT SHALL BE STUBBED UP OR ROUTED WITHIN THIS SPACE, EXCEPT FOR LNFC-B TERMINATING AT THE MOTOR TERMINAL.

SHEET KEYNOTES

1. COMPLETE TAG NUMBER INCLUDES THE 'H090-DEW1-' PREFIX.
2. BOND MAGNETIC FLOWMETER TO EXISTING GROUNDING SYSTEM PER MANUFACTURER INSTALLATION MANUAL.
3. #2 AWG STRANDED, BARE TIN-PLATED COPPER.
4. CONTRACTOR SHALL INSTALL NEW GROUND ROD AND CONNECT TO EXISTING GROUNDING SYSTEM.

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

REVISION	BY	DATE

WAS PUMPS
ELECTRICAL
ENLARGED POWER PLAN, SECTION AND RISER DIAGRAM

WFXQ7901

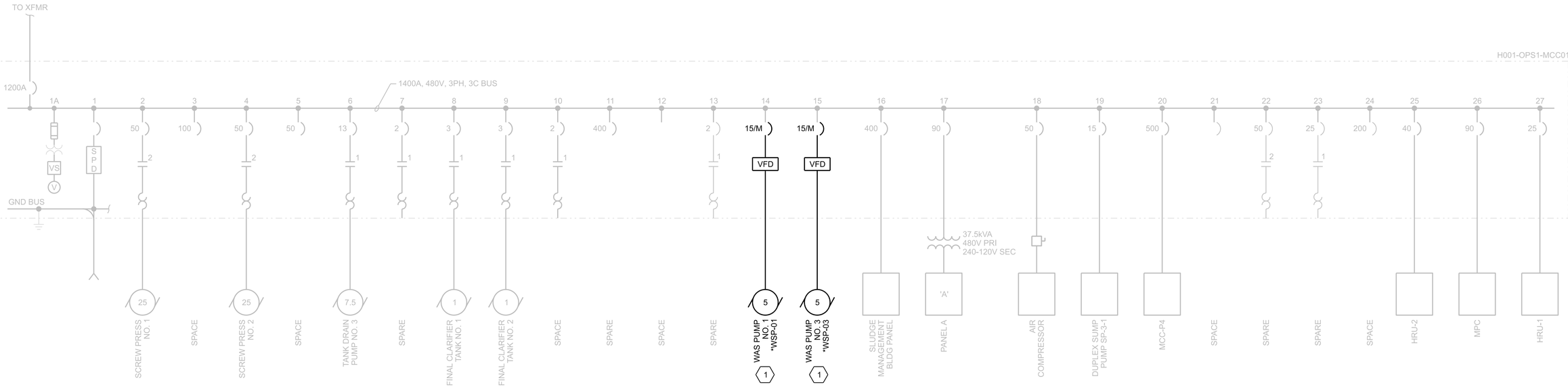
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

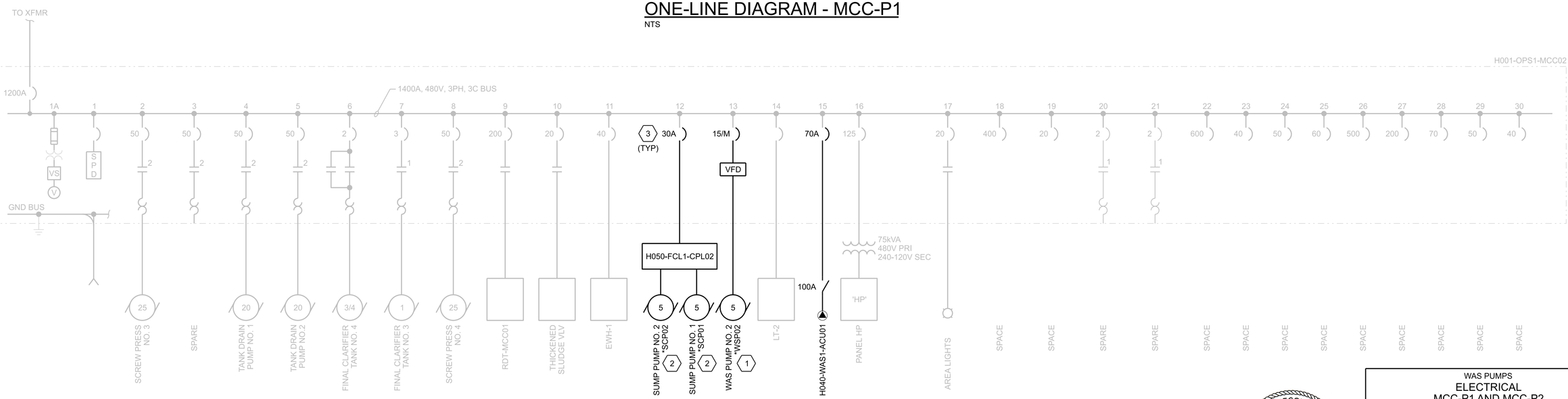
PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	05/26	
	LEAD ENG.	5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 40-WAS1-E-2001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 130 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 12:59



ONE-LINE DIAGRAM - MCC-P1

NTS



ONE-LINE DIAGRAM - MCC-P2

NTS

GENERAL SHEET NOTES

1. REFER TO THE OVERALL POWER RISER DIAGRAM, OVERALL NETWORK RISER DIAGRAM AND INDIVIDUAL FACILITY RISER DIAGRAMS FOR CONDUIT AND WIRE CALLOUTS.
2. CIRCUIT BREAKERS AND STARTERS TO HAVE PADLOCKABLE OPERATING HANDLE WHEN DE-ENERGIZED.

SHEET KEYNOTES

1. COMPLETE TAG NUMBER INCLUDES THE 'H040-WAS1-' PREFIX.
2. COMPLETE TAG NUMBER INCLUDES THE 'H050-FCL1' PREFIX.
3. ENSURE ALL NEW AND REPLACED CIRCUIT BREAKERS MATCH MANUFACTURER AND AIC RATING OF EXISTING MCC.

LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

REVISION	BY	DATE

WAS PUMPS
ELECTRICAL
MCC-P1 AND MCC-P2
ONE-LINE DIAGRAMS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MW	05/26
	LEAD ENG.	BB	5/26
	FIELD MGR.		5/26
FILE:	DRAWING: 40-WAS1-E-6001		DESIGN MANAGER
ATLAS PAGE NO: 3328			DATE: MAY 2026
			SHEET 131 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 12:59

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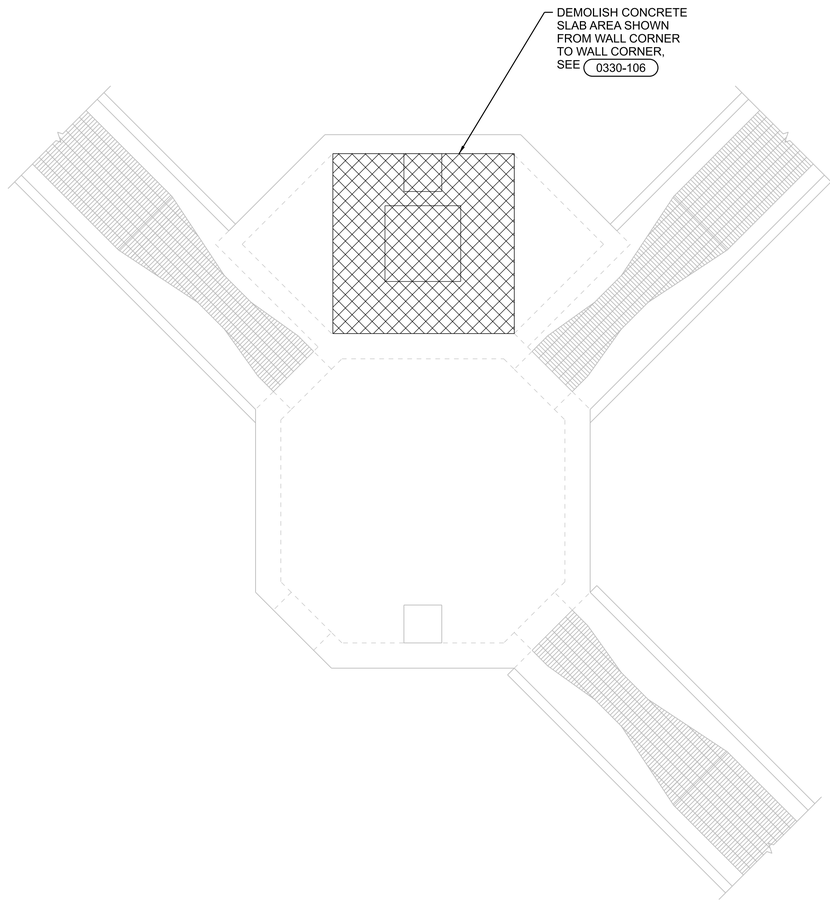

N

PLAN
1/4"=1'-0"

PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

SCUM COLLECTION
STRUCTURAL
DEMOLITION PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	GZL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 50-FCL1-S-1000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 132 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:32

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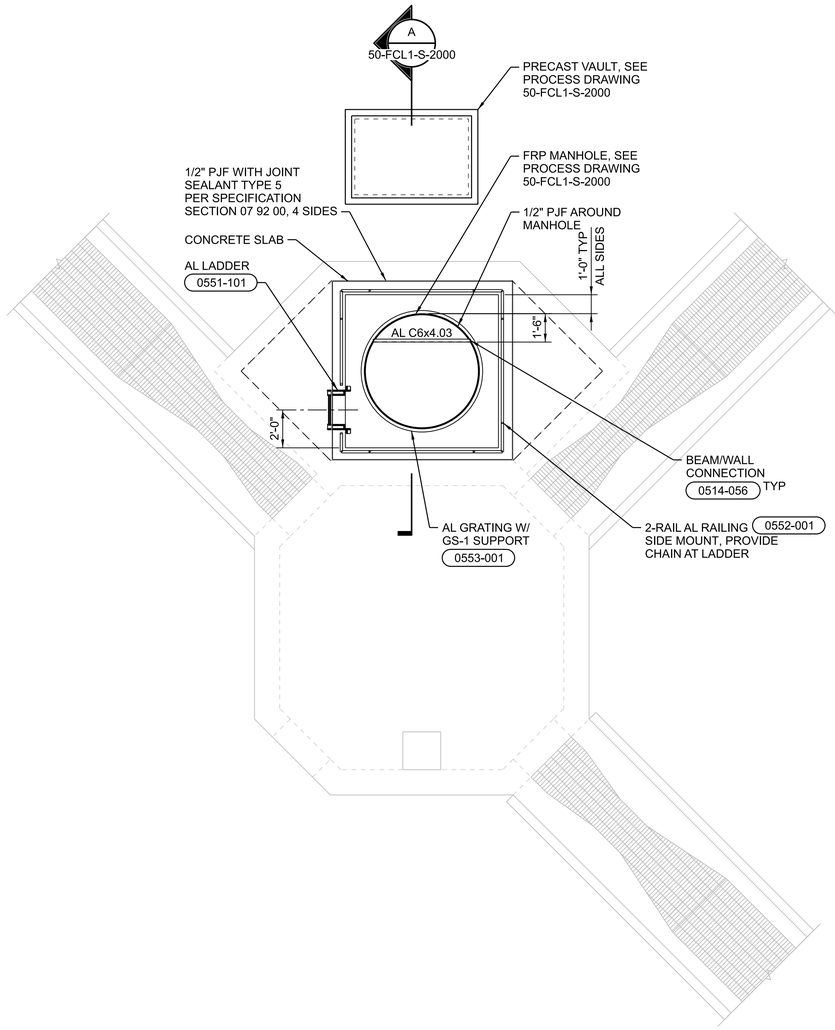
GENERAL FACILITY NOTES

1. FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS 01-G-0020 AND 01-G-0021.
2. FOR STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS, SEE DRAWINGS 01-G-022 THROUGH 01-G-0024.



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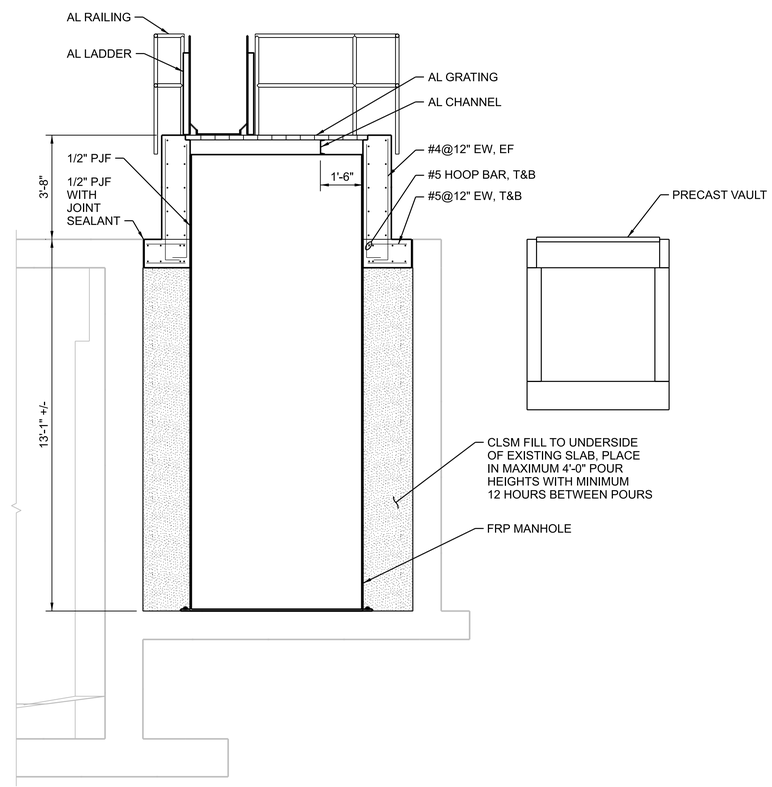
PLAN
1/4"=1'-0"



A SECTION
3/8"=1'-0"
50-FCL1-S-2000

PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

SCUM COLLECTION
STRUCTURAL
PLAN AND SECTION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	KSN 05/26	
	LEAD ENG.	GZL 5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 50-FCL1-S-2000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 133 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:32

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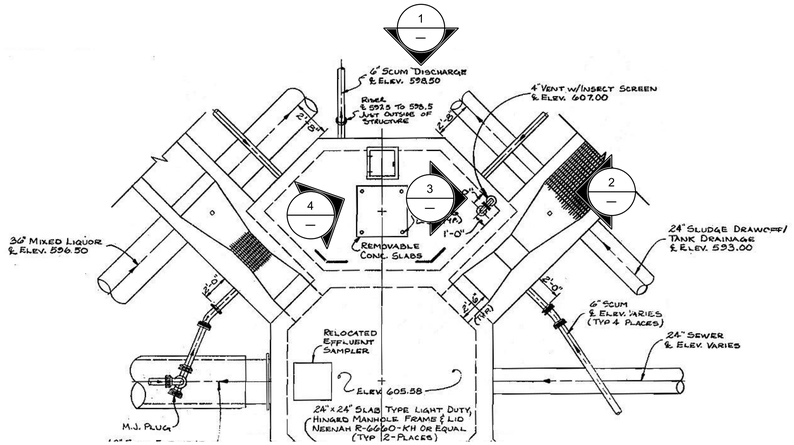
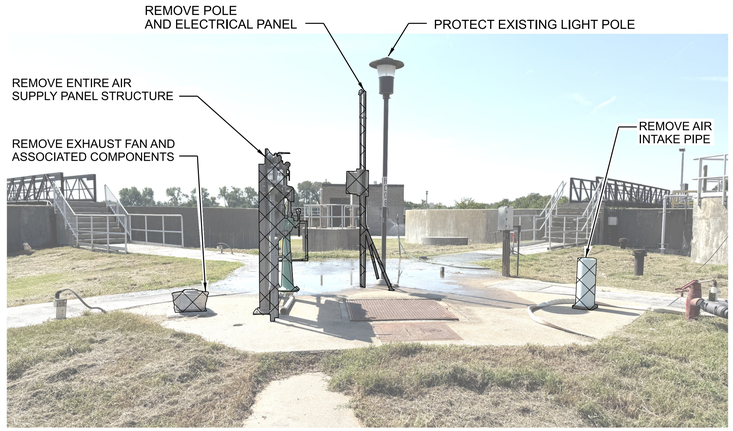


N

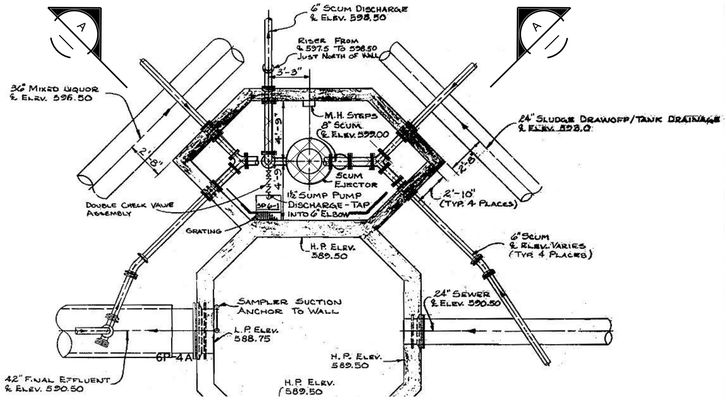
SCUM EJECTOR EXTERIOR (AERIAL VIEW)

NTS



1 — NTS

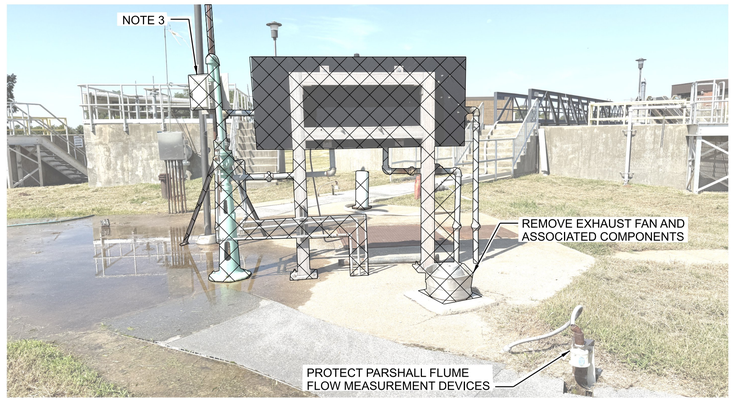
SCUM EJECTOR EXTERIOR



N

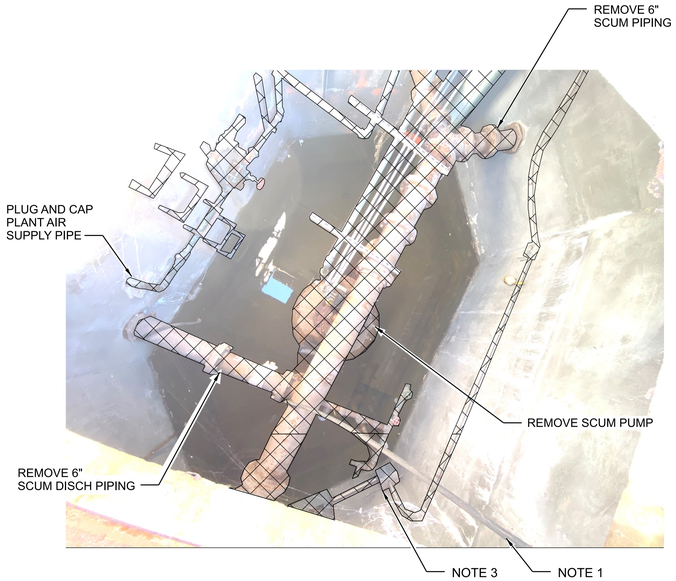
SCUM EJECTOR INTERIOR (AERIAL VIEW)

NTS



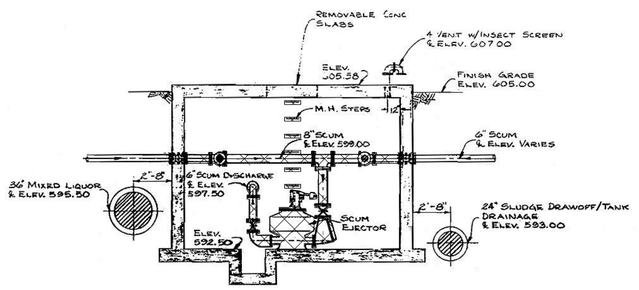
2 — NTS

SCUM EJECTOR AIR SUPPLY PIPING (BACK VIEW)



4 — NTS

SCUM EJECTOR INTERIOR (DOWN VIEW)



A — NTS

SECTION

3 — NTS

SCUM EJECTOR AIR SUPPLY PIPING (FRONT VIEW)

GENERAL SHEET NOTES

1. OWNER SHALL REMOVE MISCELLANEOUS ITEMS SUCH AS CORDS, HOSES, PIPES, TUBES, SACKS, BUCKETS, ROPES, BOTTLES, AND SPRAY BOTTLES AROUND DEMOLITION AREA BEFORE REMOVAL CAN BEGIN.
2. CONTRACTORS SHALL CLEAN SCUM EJECTOR PIT EXTERIOR AND INTERIOR FROM DEBRIS AFTER COMPLETION.
3. ELECTRICAL COMPONENTS ON SCUM WELL SITE SHALL BE INSPECTED TO ENSURE POWER IS DISCONNECTED BEFORE REMOVAL OF SCUM COMPONENTS.
4. REFER TO GRAVITY THICKENER PROCESS FLOW DIAGRAM, SHEET 01-G-0062, FOR DEMOLITION AND ABANDONMENT STEPS.
5. REFER TO YARD PIPING SHEETS FOR BURIED PIPE ABANDONMENT.
6. REFER TO STRUCTURAL SHEET FOR SCUM PIT CONCRETE DEMOLITION.
7. SCUM COLLECTION SYSTEM: ALT01. SEE DRAWING 01-G-0004 PAY QUANTITIES AND NOTES.

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

SCUM COLLECTION
PROCESS
DEMOLITION PLANS, SECTION AND PHOTOS

WFXQ7901

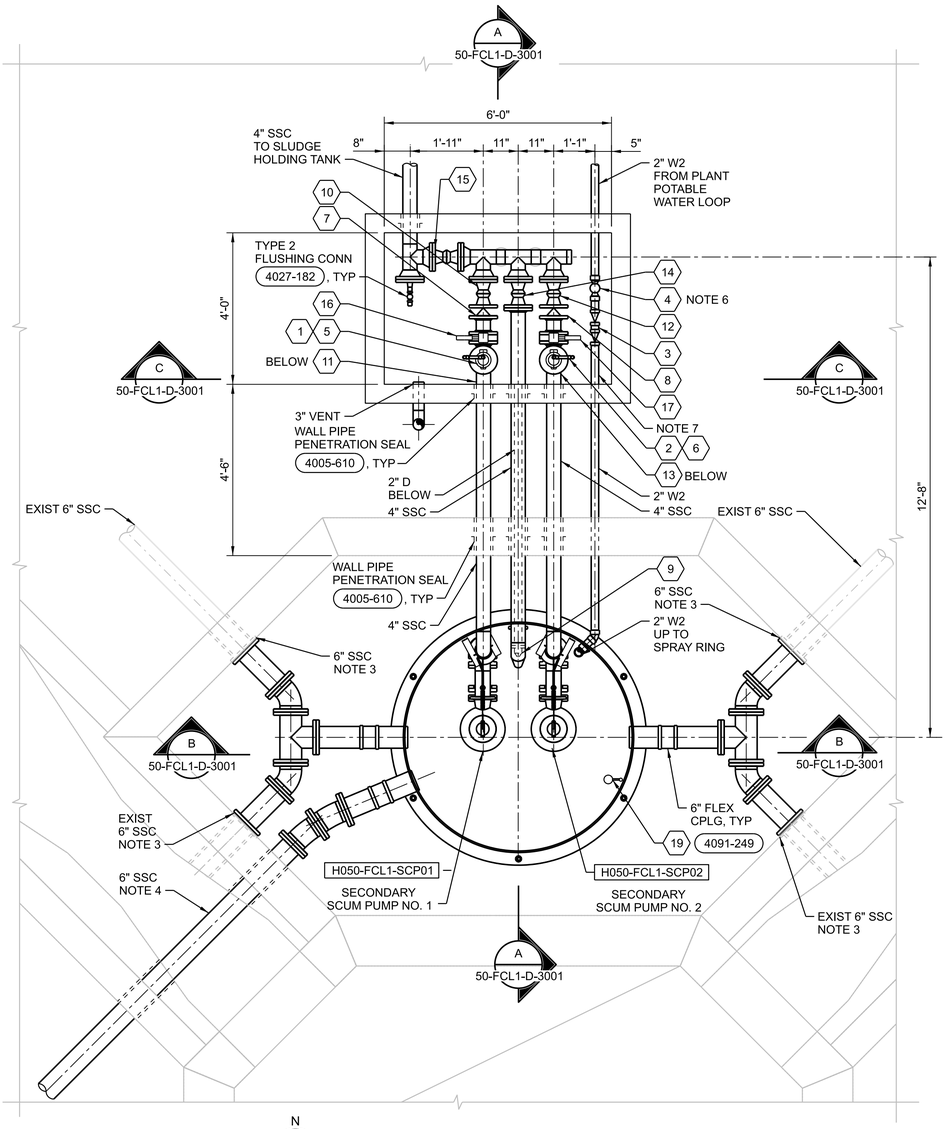
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	AZL	5/26	
VERTICAL:	FIELD MGR.	TP	5/26	DESIGN MANAGER
FILE:	DRAWING: 50-FCL1-D-1000			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 134 OF 300 SHEETS

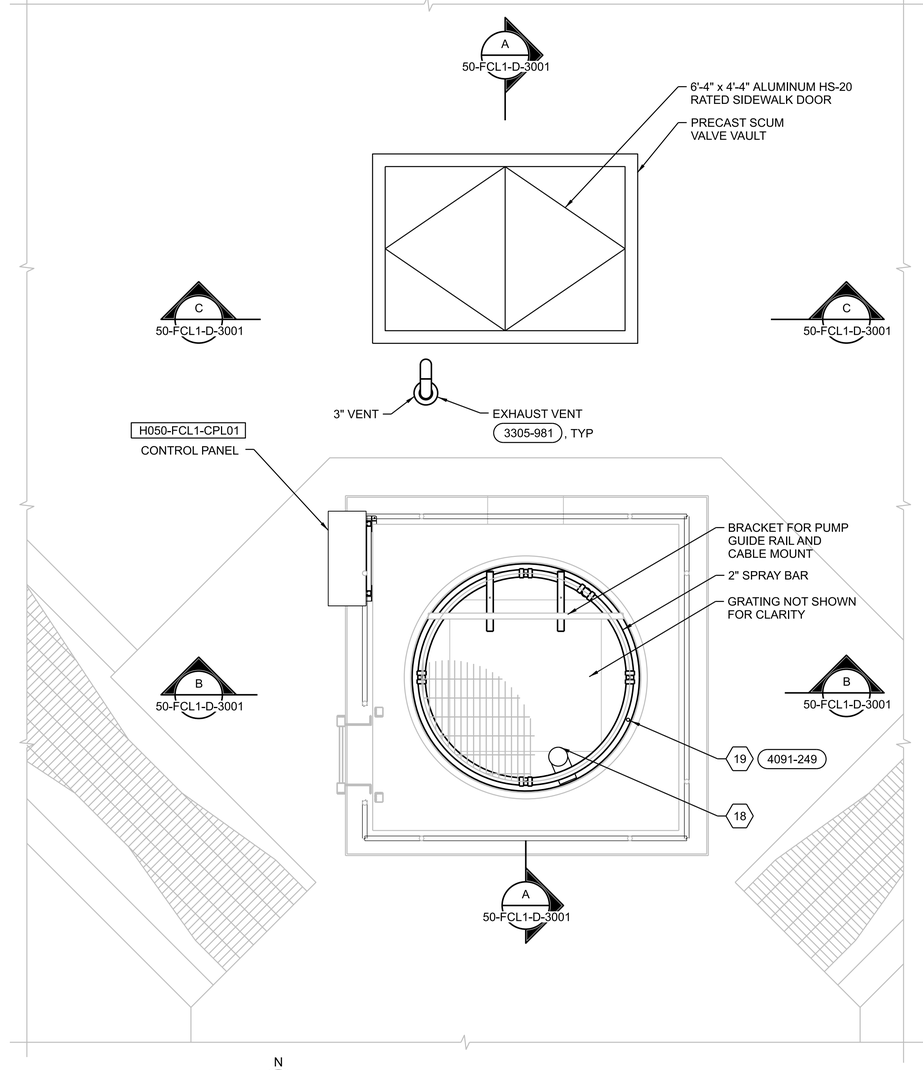
PLOT DATE: 14-MAY-2026 PLOT TIME: 16:02



N

LOWER LEVEL PLAN

1/2"=1'-0"



N

UPPER LEVEL PLAN

1/2"=1'-0"

GENERAL SHEET NOTES

1. COMPLETE TAG NUMBERS INCLUDE THE "H050-FCL1" PREFIX.
2. NEW FRP MANHOLE SHALL BE INSTALLED WITH A CLOSED BOTTOM AND OPEN TOP.
3. FIELD CONFIRM EXISTING PIPE TIE-IN ELEVATIONS AND COORDINATE WITH MANUFACTURER FOR FINAL FRP MANHOLE PIPE TIE-IN ELEVATIONS.
4. DESIGN SHORING AND SUPPORT AS REQUIRED TO PROTECT EXISTING STRUCTURE DURING PIPE INSTALLATION UNDERNEATH FLUME. BACKFILL WITH CLSM TO BOTTOM OF STRUCTURAL SLAB. ANY DAMAGE TO PARSHALL FLUME DURING CONSTRUCTION ACTIVITIES SHALL BE FIXED AT THE CONTRACTORS EXPENSE.
5. SCUM COLLECTION SYSTEM: ALT01. SEE DRAWING 01-G-0004 PAY QUANTITIES AND NOTES.
6. PROVIDE OPERATOR EXTENSION SUCH THAT ISOLATION VALVE CAN BE OPERATED FROM THE SURFACE.
7. INSTALL 1/2" MNPT IRRIGATION AUTOMATIC DRAIN VALVE.
8. SCUM WET WELL AND VALVE VAULT ARE DESIGNED TO BE INDIVIDUALLY INSTALLED AND ASSEMBLED. A PACKAGED FRP LIFT STATION WITH A PRECAST CONCRETE VAULT MAY BE SUBMITTED FOR ENGINEER'S REVIEW AND APPROVAL AS WELL.

SHEET KEYNOTES

1. ARV01 1" V742
2. ARV02 1" V742
3. BFL01 2" V640, 2" V642
4. BLV01 2" V330
5. BLV02 1" V330
6. BLV03 1" V330
7. CKV03 4" V632
8. CKV04 4" V632
9. DBV01 2" V634
10. PGV01 4" V405
11. PGV02 1" V405
12. PGV03 4" V405
13. PGV04 1" V405
14. PGV05 4" V405
15. PGV06 4" V405
16. PE 21 / PTM 01 / PRS 01
17. PE 22 / PTM 02 / PRS 02
18. LIT 01
19. LSLL 21 / LSH 21 / LSHH 21

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

SCUM COLLECTION
PROCESS
LOWER AND UPPER LEVEL PLANS

WFXQ7901

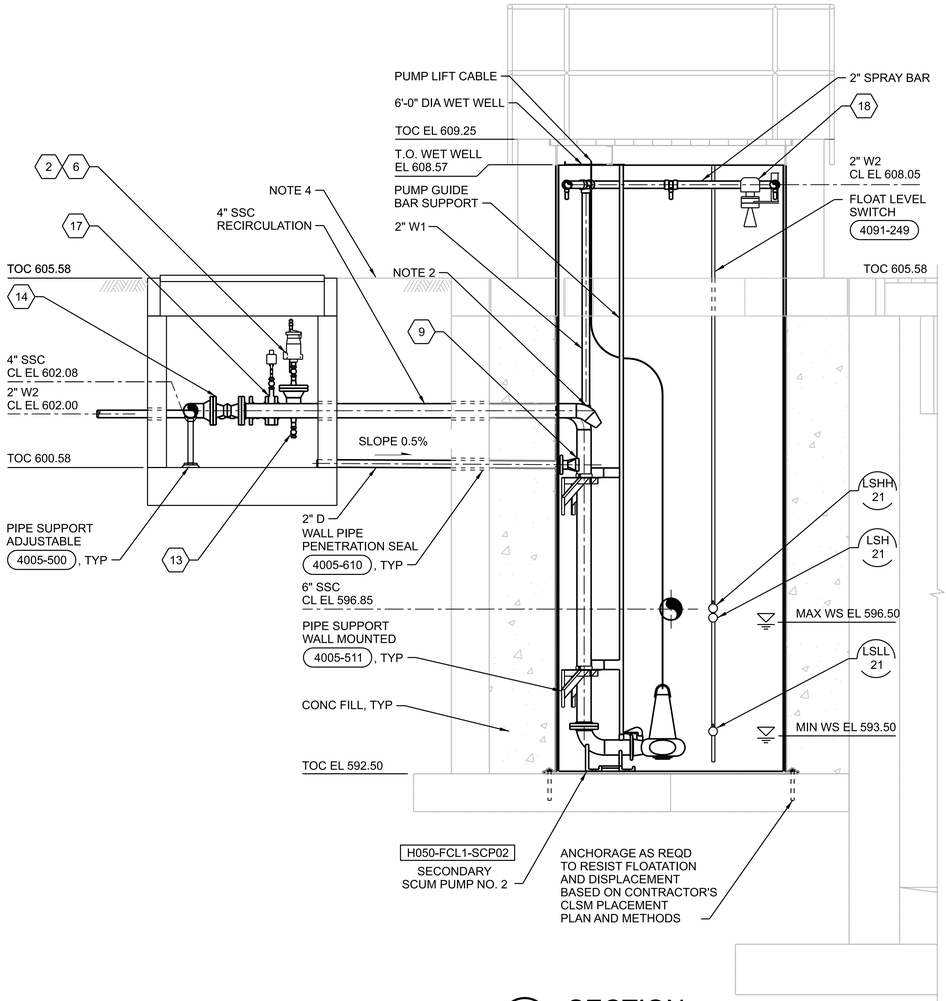
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

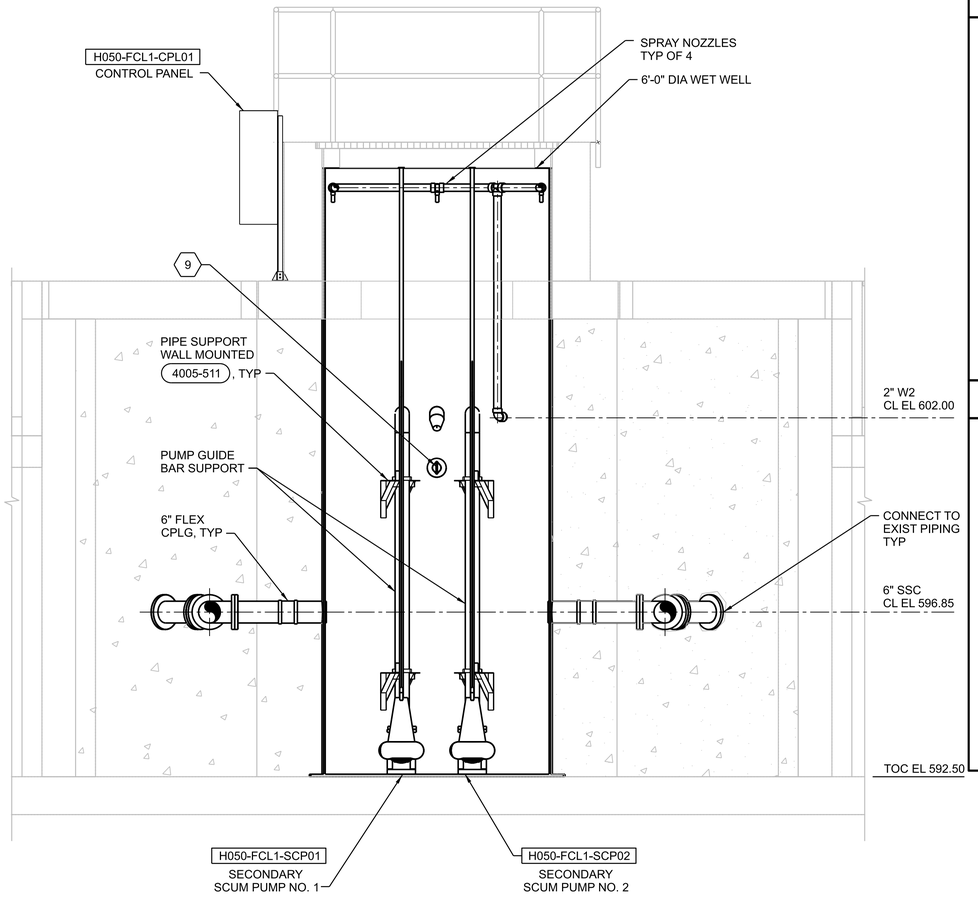
PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSW 05/26	
	LEAD ENG.	AZL 5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 50-FCL1-D-2000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 135 OF 300 SHEETS

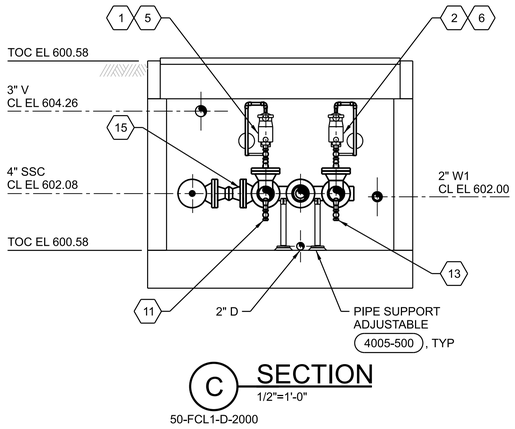
PLOT DATE: 14-MAY-2026 PLOT TIME: 16:02



A SECTION
1/2"=1'-0"
50-FCL1-D-2000



B SECTION
1/2"=1'-0"
50-FCL1-D-2000



C SECTION
1/2"=1'-0"
50-FCL1-D-2000

GENERAL SHEET NOTES

1. COMPLETE TAG NUMBERS INCLUDE THE "H050-FCL1" PREFIX.
2. 4" SSC RECIRCULATION NOZZLE FABRICATED WITH 45° ELL AND 4" x 2" REDUCER.
3. SCUM COLLECTION SYSTEM: ALT01. SEE DRAWING 01-G-0004 PAY QUANTITIES AND NOTES.
4. PROVIDE EARTH FILL BETWEEN WET WELL AND VALVE VAULT. FINISHED SOD SHALL BE APPROXIMATELY 1" BELOW FINISHED CONCRETE SURFACE.
5. FRP WET WELL WITH BASE FLANGE. JOINT OR RISER SECTIONS WILL NOT BE ACCEPTED.
6. ENSURE RADAR LEVEL ELEMENT IS MOUNTED FREE OF OBSTRUCTIONS AND STILL PROVIDES SPACE FOR REMOVAL.
7. INSTALL TEE WITH BRANCH OUTLET VERTICAL WHICH WILL ALSO PROVIDE AS A CLEANOUT ACCESS. AIR VALVE INSTALLATION CAN USE A COMPANION FLANGE OR TAPPED WITH FOR THREADED NIPPLE.

SHEET KEYNOTES

1.	ARV01	1" V752	4027-207
2.	ARV02	1" V752	4027-207
5.	BLV02	1" V330	
6.	BLV03	1" V330	
9.	DBV01	2" V634	
11.	PGV02	1" V405	
13.	PGV04	1" V405	
14.	PGV05	4" V405	
15.	PGV06	4" V405	
17.	PE 22	PTM 02	PRS 02
18.	LIT 01	4027-257	

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

SCUM COLLECTION
PROCESS
SECTIONS

WFXQ7901

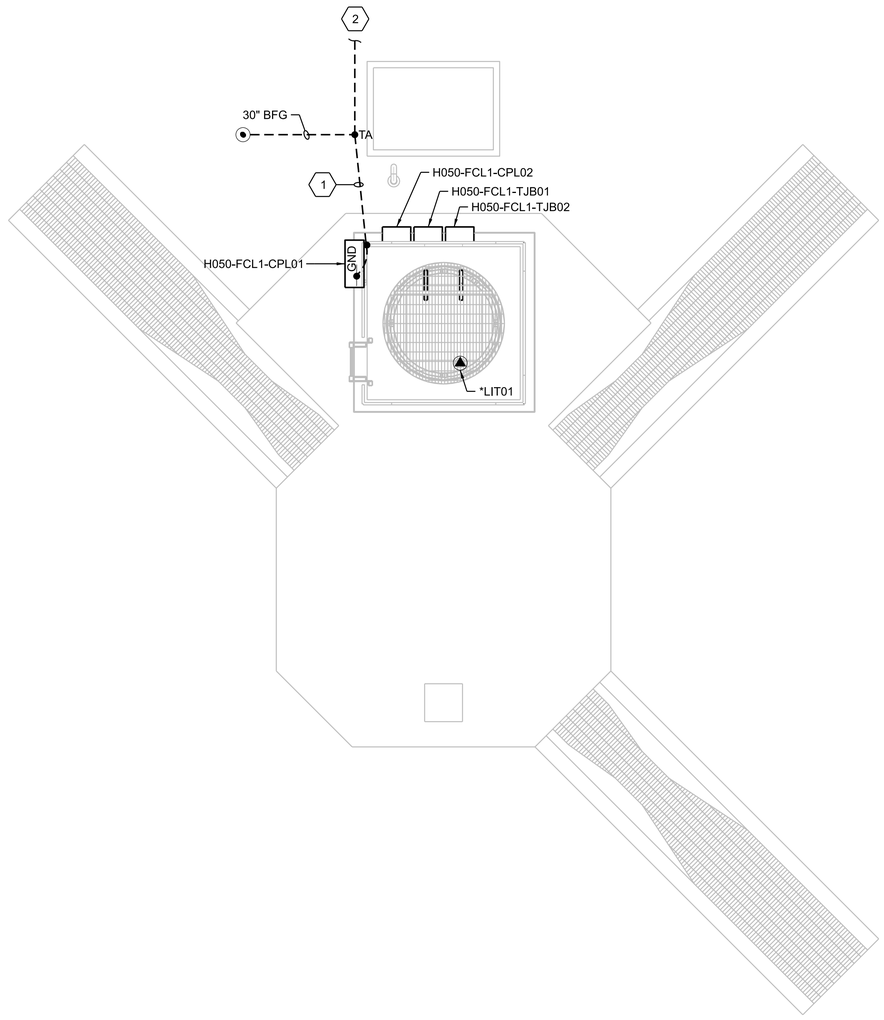
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	AZL	5/26	
VERTICAL:	FIELD MGR.	[illegible]	5/26	DESIGN MANAGER
FILE:	DRAWING: 50-FCL1-D-3001			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 136 OF 300 SHEETS

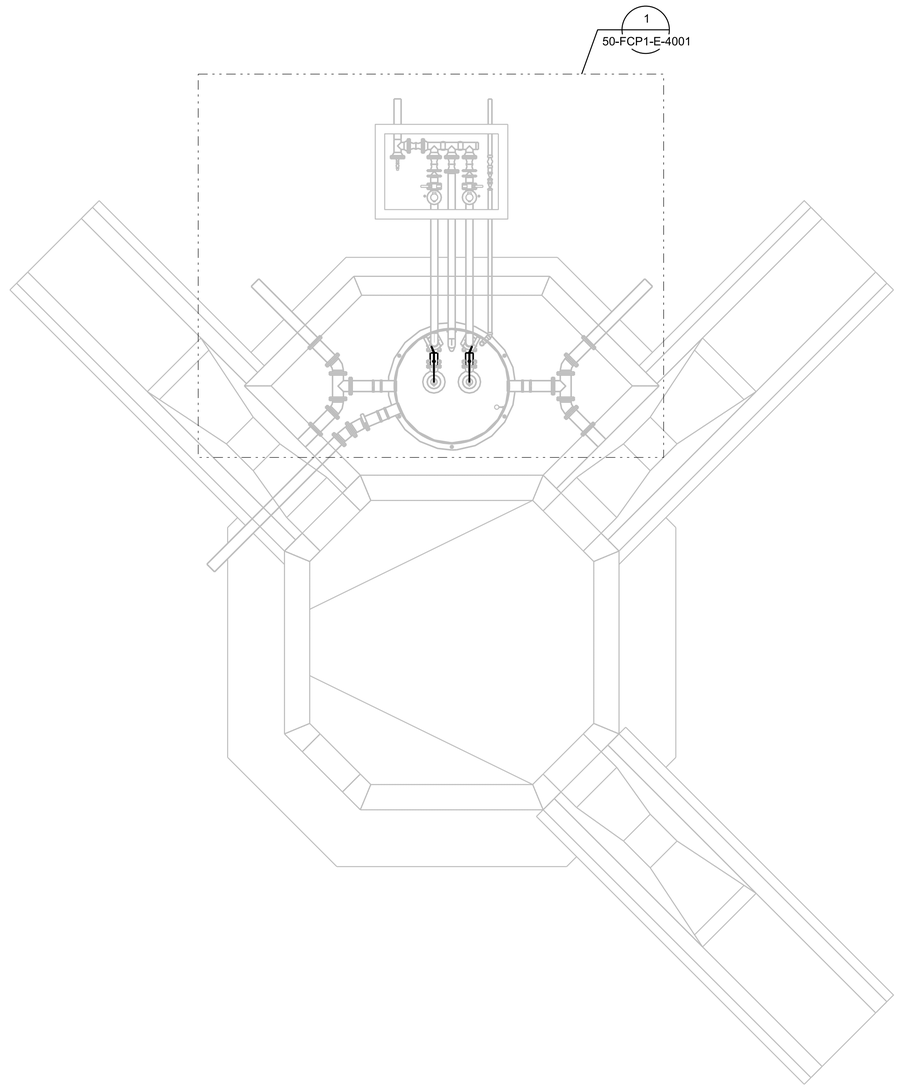
PLOT DATE: 14-MAY-2026 PLOT TIME: 16:02



N

UPPER POWER PLAN

1/4"=1'-0"



N

LOWER POWER PLAN

1/4"=1'-0"

SHEET KEYNOTES

1. SCUM COLLECTION SYSTEM: ALT01. SEE 01-G-0004 PAY QUANTITIES AND NOTES.

SHEET KEYNOTES

1. #4/0 AWG STRANDED BELOW GRADE, BARE, TIN PLATED COPPER.
2. CONTRACTOR SHALL ENSURE CONTINUITY WITH UFER GROUNDING SYSTEM LOCATED IN THE DUCT BANK.

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LICENSED PROFESSIONAL ENGINEER
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05/18/2026

SCUM COLLECTION
ELECTRICAL
UPPER AND LOWER POWER PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	BZL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 50-FCL1-E-2000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 137 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:18

GENERAL SHEET NOTES

1. SCUM COLLECTION SYSTEM: ALT01. SEE 01-G-0004 PAY QUANTITIES AND NOTES.
2. COMPLETE TAG NUMBER INCLUDES THE H050-FCL1-" PREFIX.
3. REFER TO 08-E-6003 FOR OVERALL NETWORK RISER DIAGRAM.
4. REFER TO 50-FCL1-E-2000 FOR CONTROL PANEL AND TJB LOCATION.

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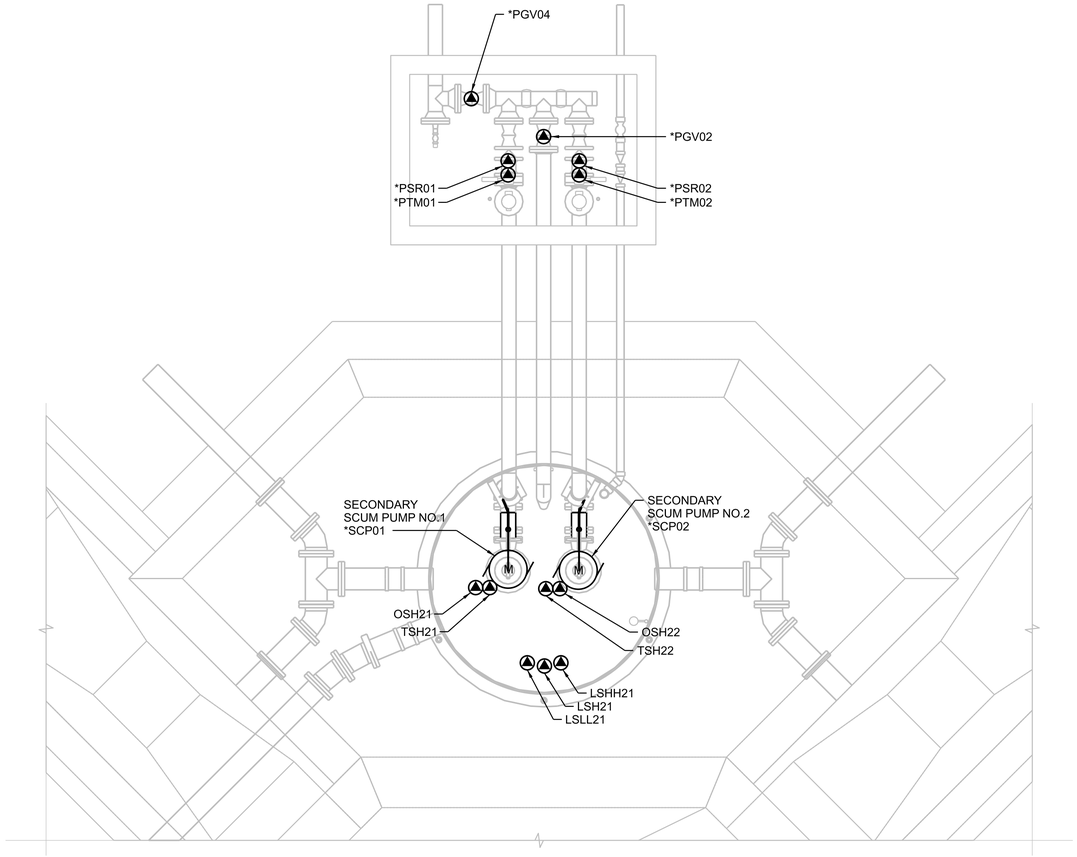

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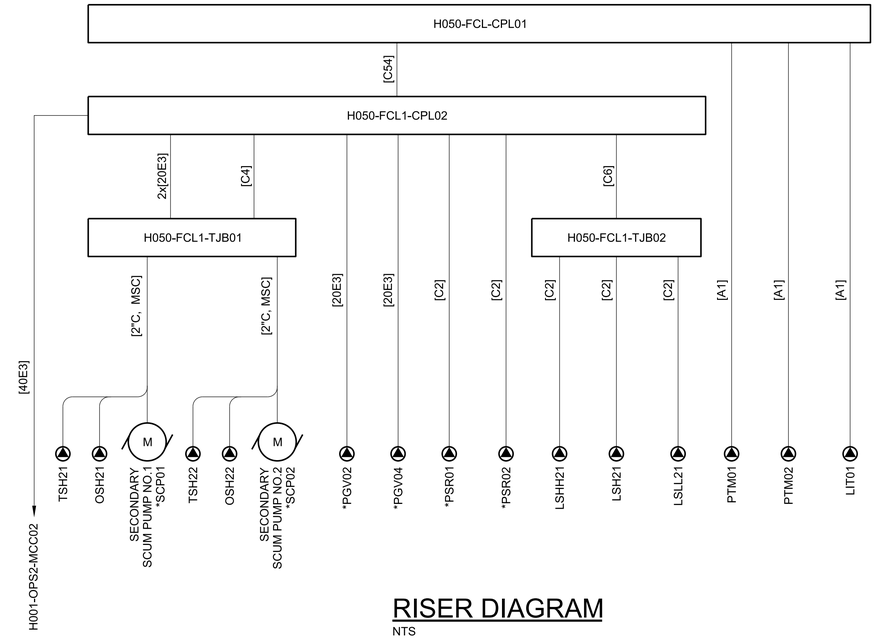
1 LOWER POWER POWER PLAN

1/2"=1'-0"

50-FCL1-E-2000



RISER DIAGRAM

NTS

LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

SCUM COLLECTION
ELECTRICAL
ENLARGED POWER PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

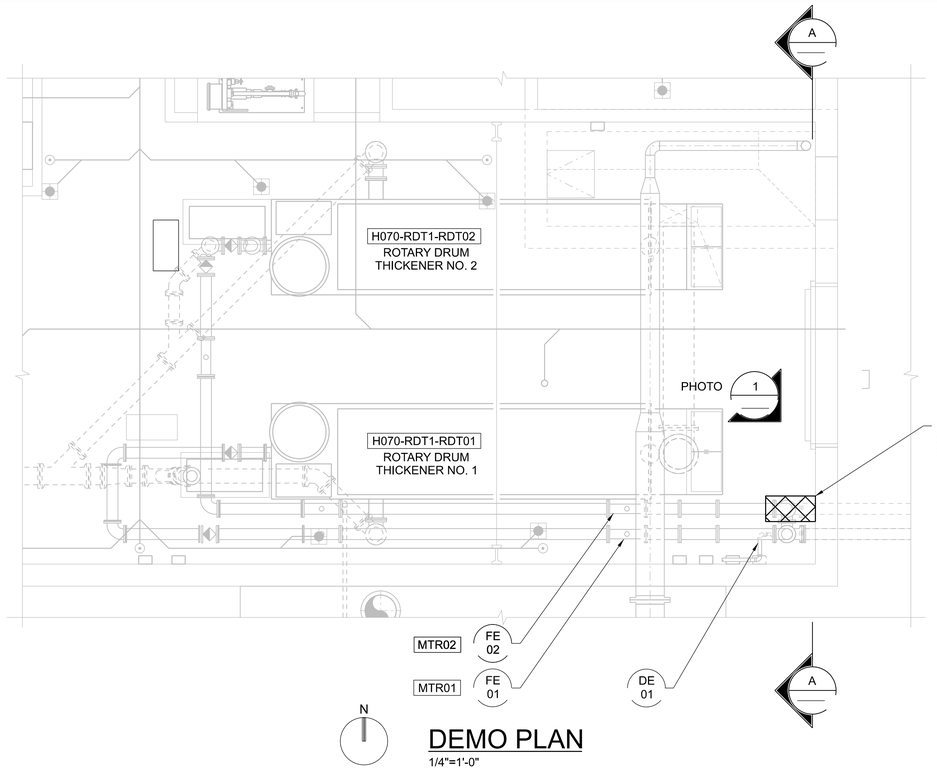
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	BJL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

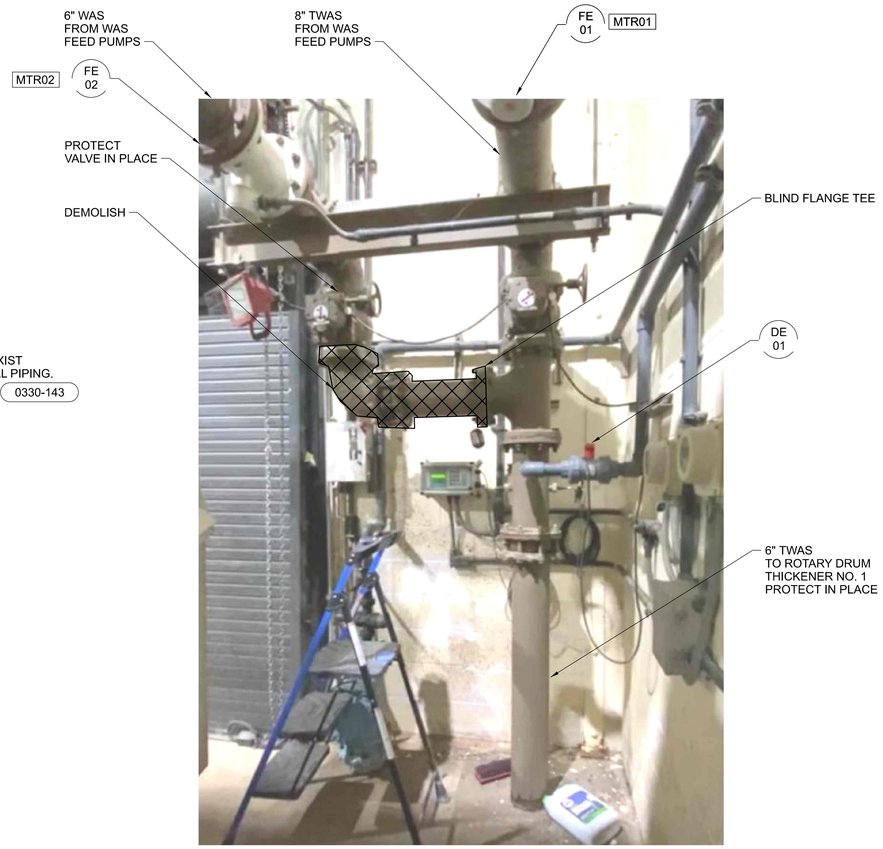
FILE: DRAWING: 50-FCL1-E-4000
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 138 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 12:59



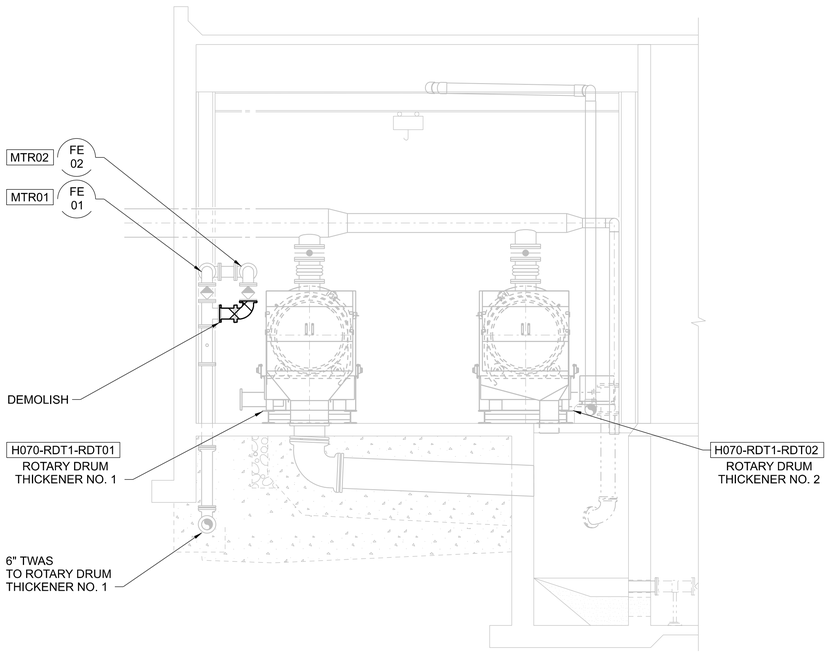
DEMO PLAN

1/4"=1'-0"



1 PHOTO

NTS



A SECTION

1/4"=1'-0"

GENERAL NOTES

1. COORDINATE WITH OWNER AND PLANT STAFF FOR TIE -IN DURATION REQUIREMENTS. CONTRACTORS PLAN FOR DEMO, TIE-IN, AND DURATION SHALL BE APPROVED BY ENGINEER THROUGH A SUBMITTAL PRIOR TO START OF WORK.

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LICENSED PROFESSIONAL ENGINEER
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OKLAHOMA
Tanner Pipher
05/17/2026

ROTARY DRUM THICKENER
PROCESS
DEMOLITION PLAN AND SECTION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

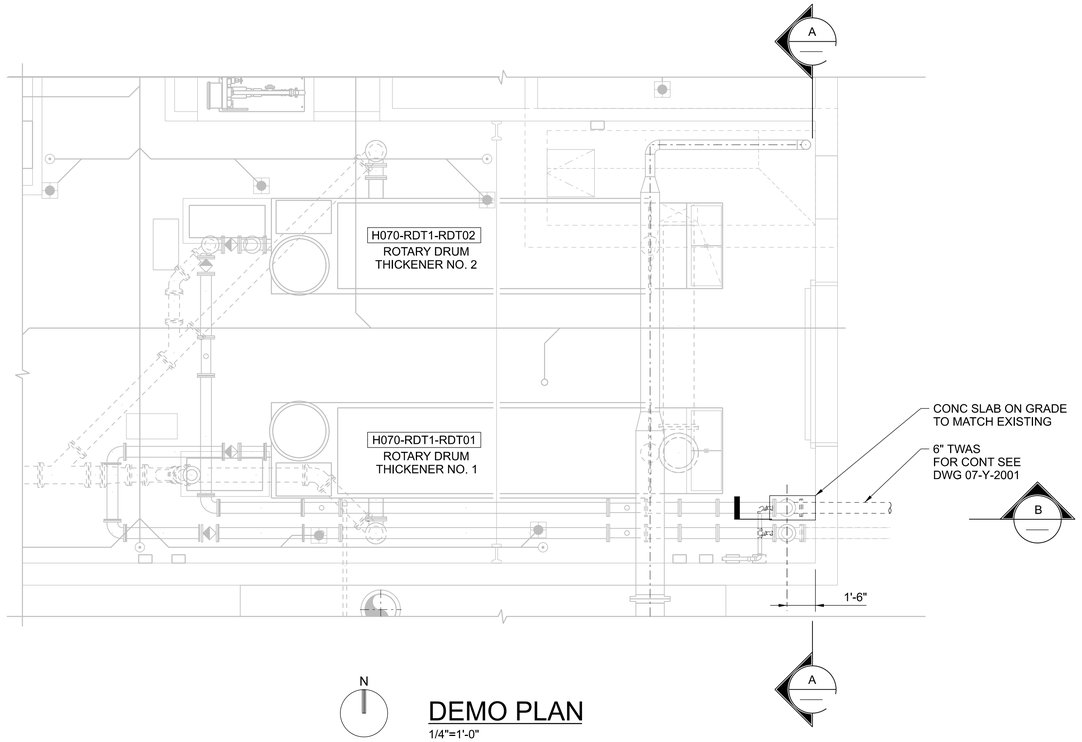
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	RZL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 70-RTD1-D-1000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 139 OF 300 SHEETS

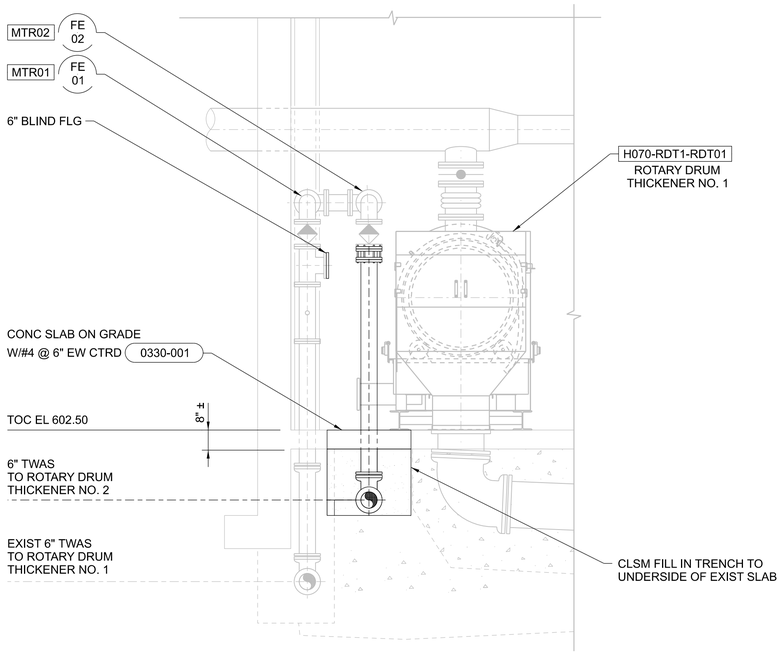
PLOT DATE: 05\13\2026 PLOT TIME: 8:21:15 AM

GENERAL NOTES

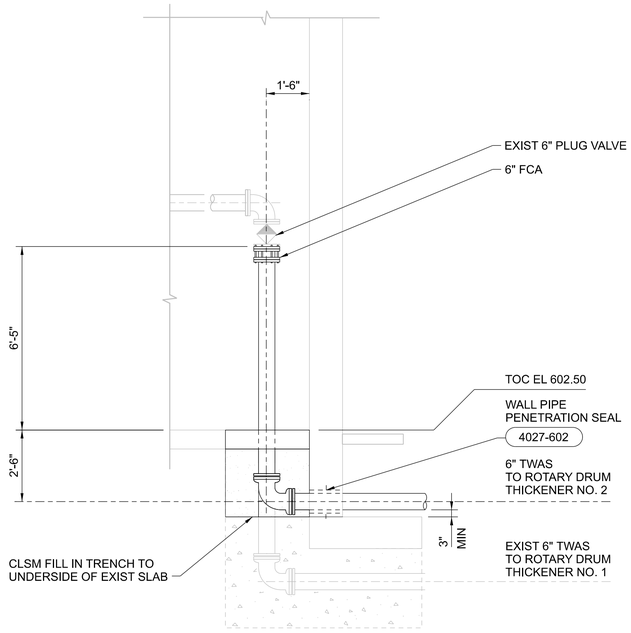
1. COORDINATE WITH OWNER AND PLANT STAFF FOR TIE -IN DURATION REQUIREMENTS. CONTRACTORS PLAN FOR DEMO, TIE-IN, AND DURATION SHALL BE APPROVED BY ENGINEERTHROUGH A SUBMITTAL PRIOR TO START OF WORK.
2. BUIRED 6" TWAS SHALL BE DUCTILE IRON, 5'-0" FROM FACE OF BUILDING WALL INTO THE YARD. FLANGE ADAPTER TO TRANSITION TO YARD PIPE MATERIAL.



DEMO PLAN
1/4"=1'-0"



SECTION
3/8"=1'-0"



SECTION
3/8"=1'-0"

LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

ROTARY DRUM THICKENER
PROCESS
PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
HORIZONTAL:	PROJ. MGR.	MSN 05/17/26	
VERTICAL:	LEAD ENG.	RZL 5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 70-RDT1-D-2000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 140 OF 300 SHEETS

PLOT DATE: 05\13\2026 PLOT TIME: 8:29:44 AM

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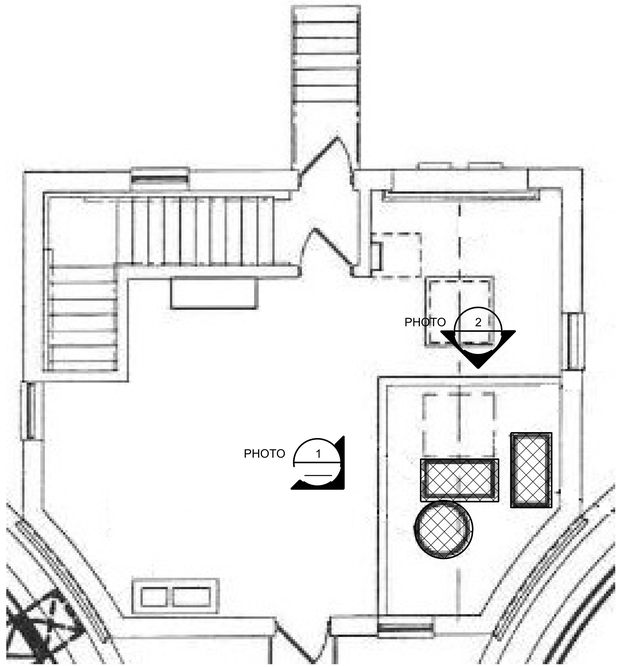
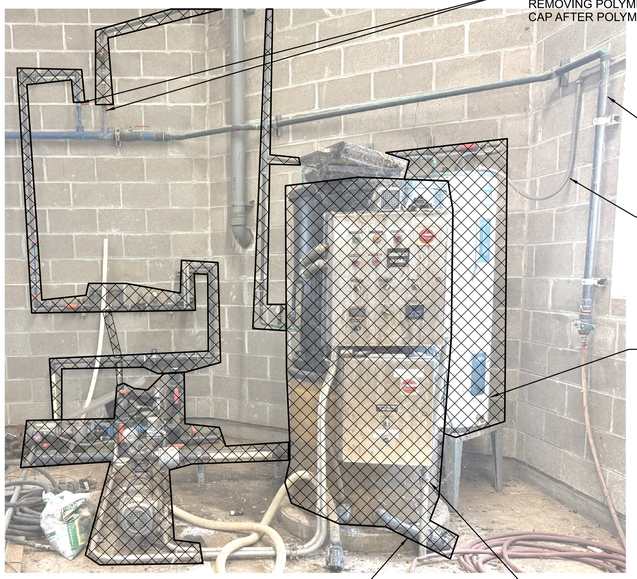
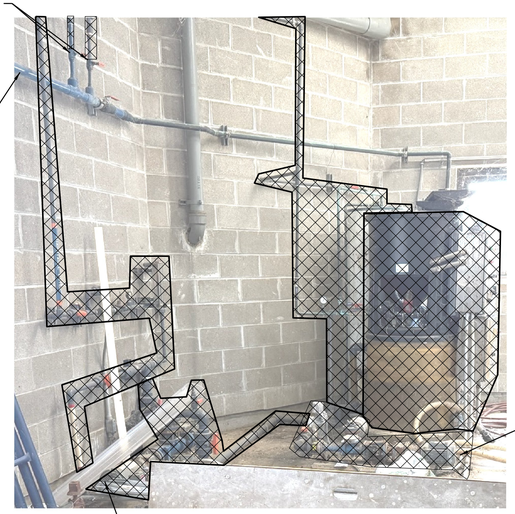


CONTROL ROOM (MAIN FLOOR)
NTS



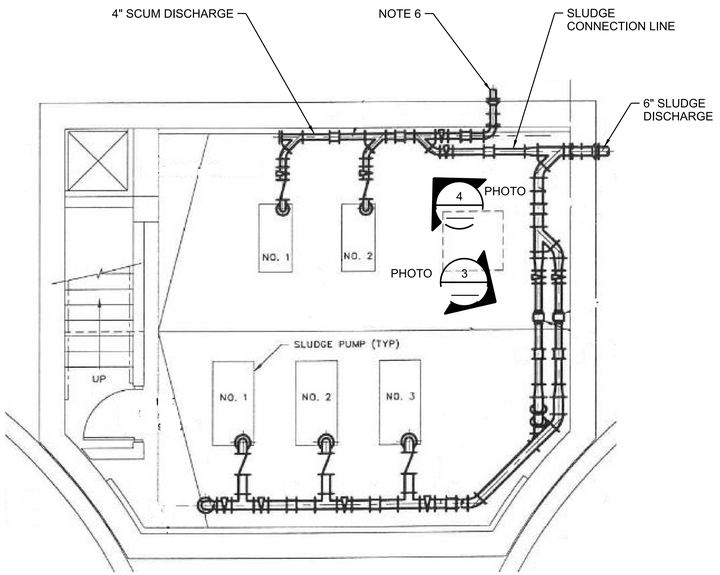
1 POLYMER UNITS
NTS



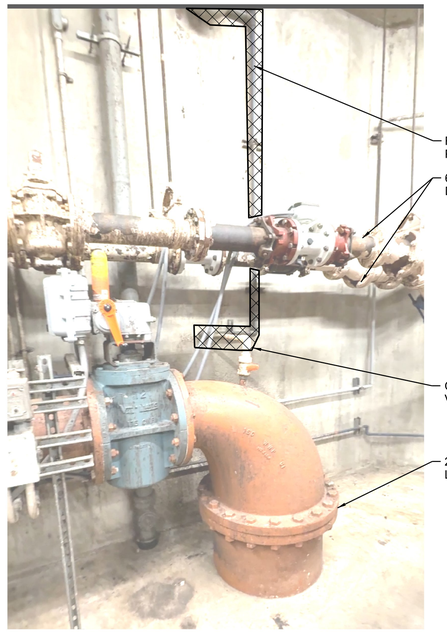
2 POLYMER UNITS (SIDE VIEW)
NTS

GENERAL NOTES

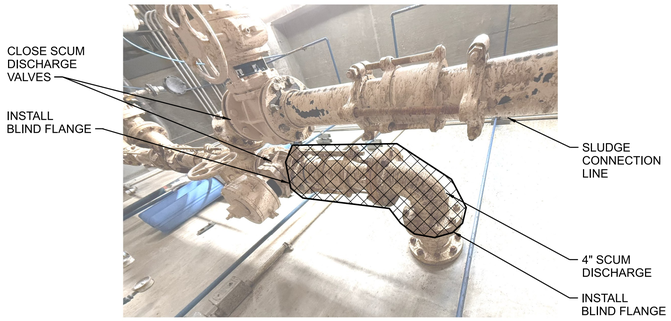
1. ENSURE NEW SCUM PIT IS IN OPERATION PRIOR TO REMOVING POLYMER UNITS AND SCUM DISCHARGE LINE.
2. OWNER WILL REMOVE MISCELLANEOUS ITEMS SUCH AS PANELS, HOSES, PIPES, TUBES, SACKS, BUCKETS, ROPE BUNDLES, AND RAILINGS AROUND DEMOLITION AREA BEFORE REMOVAL CAN BEGIN.
3. CONTRACTORS WILL CLEAN THE CONTROL AND PUMP ROOMS FROM DEBRIS AFTER COMPLETION.
4. POLYMER POWER MUST BE TURNED OFF BEFORE STARTING DEMOLITION IN THE GRAVITY THICKENER CONTROL ROOM.
5. REFER TO GRAVITY THICKENER PROCESS FLOW DIAGRAM SHEET 01-G-0062 FOR DEMOLITION AND ABANDONMENT STEPS.
6. REFER TO YARD PIPING SHEETS FOR BURIED PIPE ABANDONMENT.



PUMP ROOM (BASEMENT)
NTS



3 24" ML INFLUENT PIPE
NTS



4 SCUM DISCHARGE LINES (UP VIEW)
NTS

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
05/21/2026

REVISION	BY	DATE

GRAVITY THICKENER
PROCESS
DEMOLITION PLANS AND EXISTING SYSTEM DIAGRAM

WFXQ7901

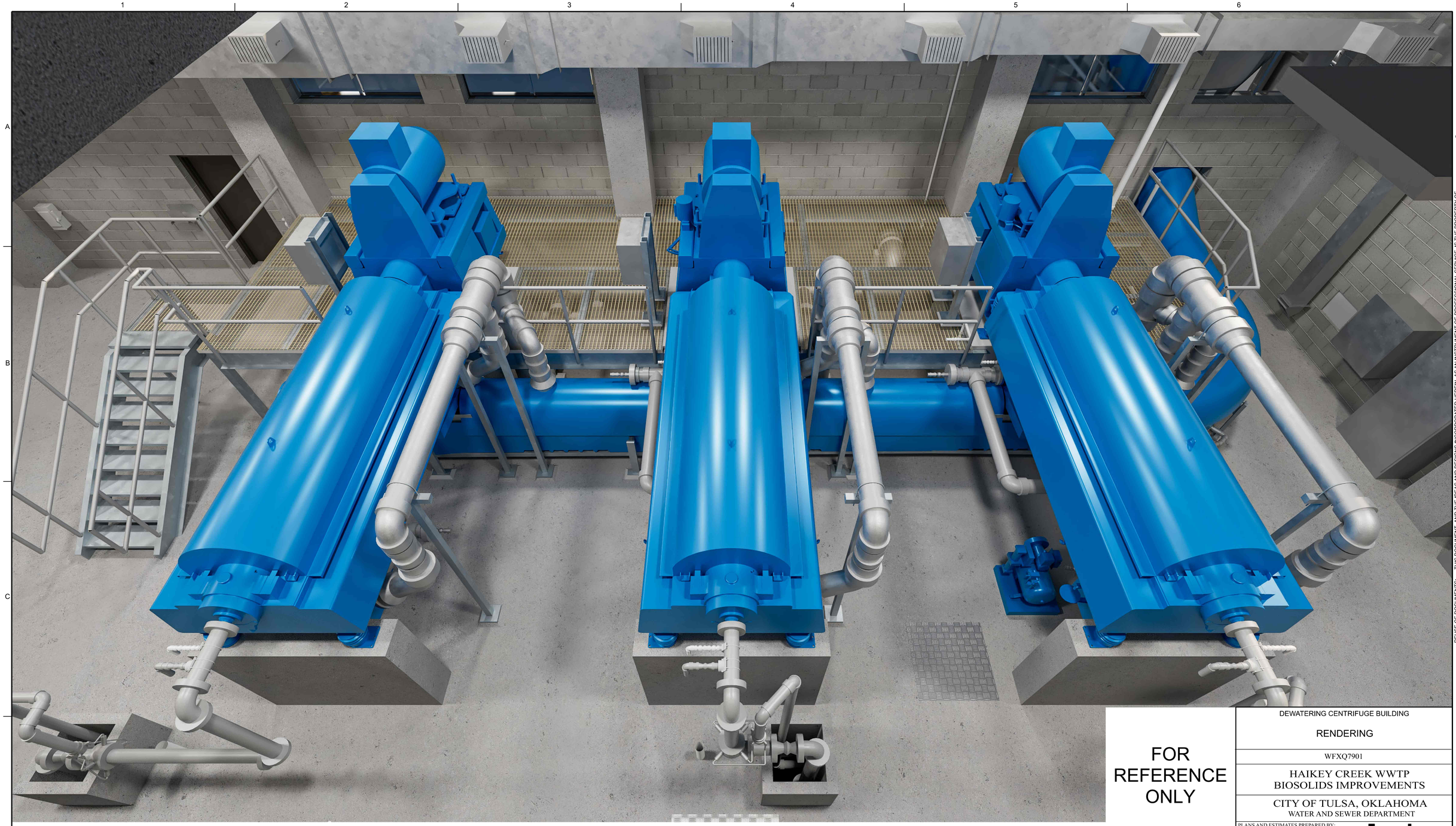
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN	05/26
HORIZONTAL:	LEAD ENG.	RJL	5/26
VERTICAL:	FIELD MGR.		5/26
FILE:	DRAWING: 70-THK1-D-1000		DESIGN MANAGER
ATLAS PAGE NO: 3328			DATE: MAY 2026
			SHEET 141 OF 300 SHEETS

PLOT DATE: 20-MAY-2026 PLOT TIME: 20:29



FOR REFERENCE ONLY

N

RENDERING
NTS

DEWATERING CENTRIFUGE BUILDING

RENDERING

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	AZL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-R-0001			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 142 OF 300 SHEETS

PLOT DATE: 05\14\2026 PLOT TIME: 8:54:58 AM

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DEWATERING CENTRIFUGE BUILDING

RENDERING

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
	PROJ. MGR.	MSN 05/26/26	
HORIZONTAL:	LEAD ENG.	GZL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-R-0002		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 143 OF 300 SHEETS

N

RENDERING
NTS

PLOT DATE: 05\14\2026 PLOT TIME: 8:56:21 AM

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RENDERING
NTS

DEWATERING CENTRIFUGE BUILDING

RENDERING

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

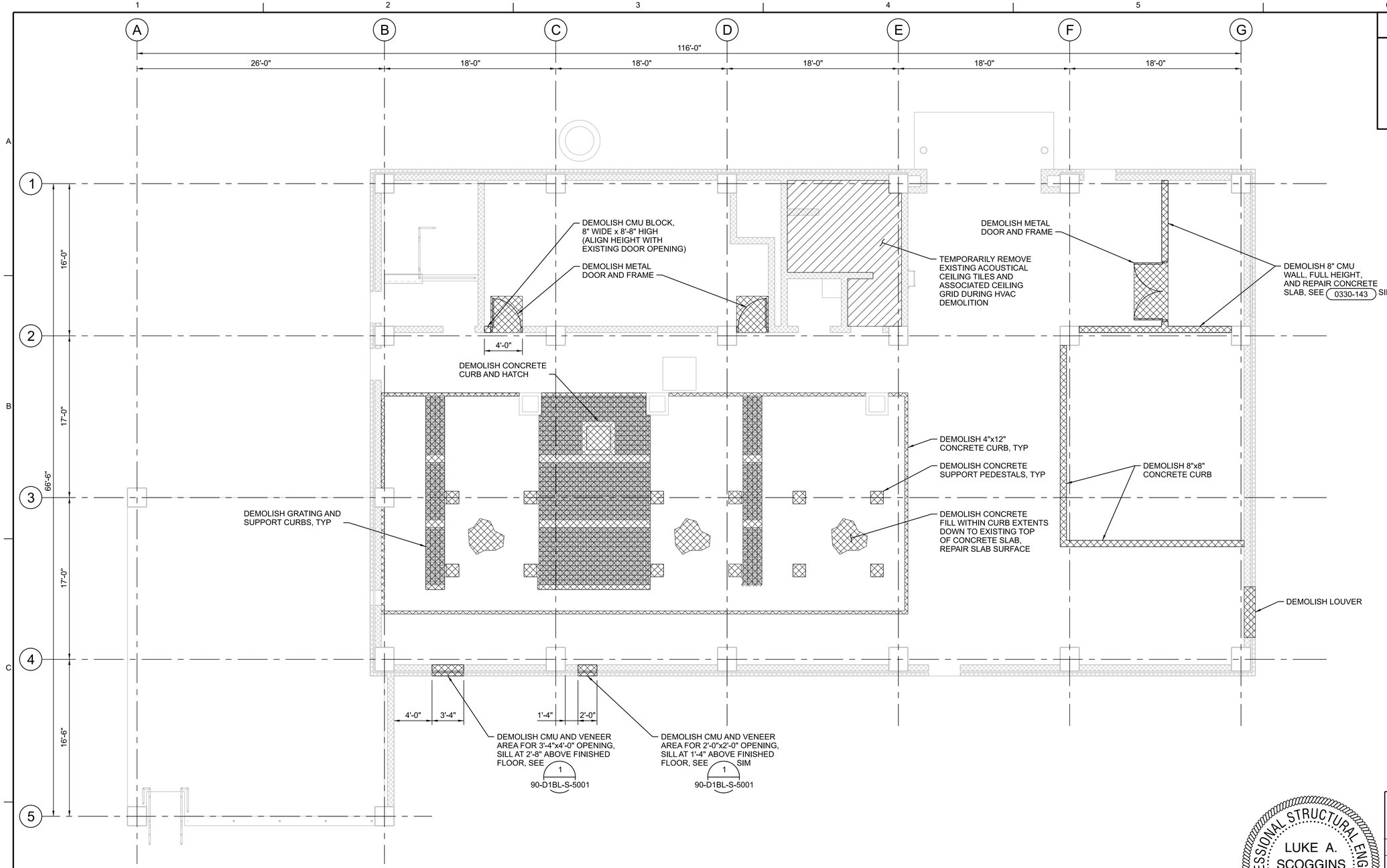
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSN 05/26	
	LEAD ENG.	RZL 5/26	DESIGN MANAGER
FILE:	FIELD MGR.	5/26	DATE: MAY 2026
ATLAS PAGE NO: 3328	DRAWING: 90-D1BL-R-0003		SHEET 144 OF 300 SHEETS

PLOT DATE: 05\14\2026 PLOT TIME: 9:00:52 AM

GENERAL SHEET NOTES

1. EXISTING STRUCTURE DIMENSIONS ARE FOR REFERENCE ONLY. FIELD VERIFY DIMENSIONS THAT RELATE TO NEW WORK, PRIOR TO BEGINNING NEW WORK AND FABRICATION.
2. FOR CONCRETE FILL, CURB, AND SUPPORT DEMOLITION AND REPAIR, SEE STANDARD DETAIL 0330-143.



N

PLAN
3/16"=1'-0"

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

DEWATERING CENTRIFUGE BUILDING
STRUCTURAL
DEMOLITION UPPER LEVEL PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

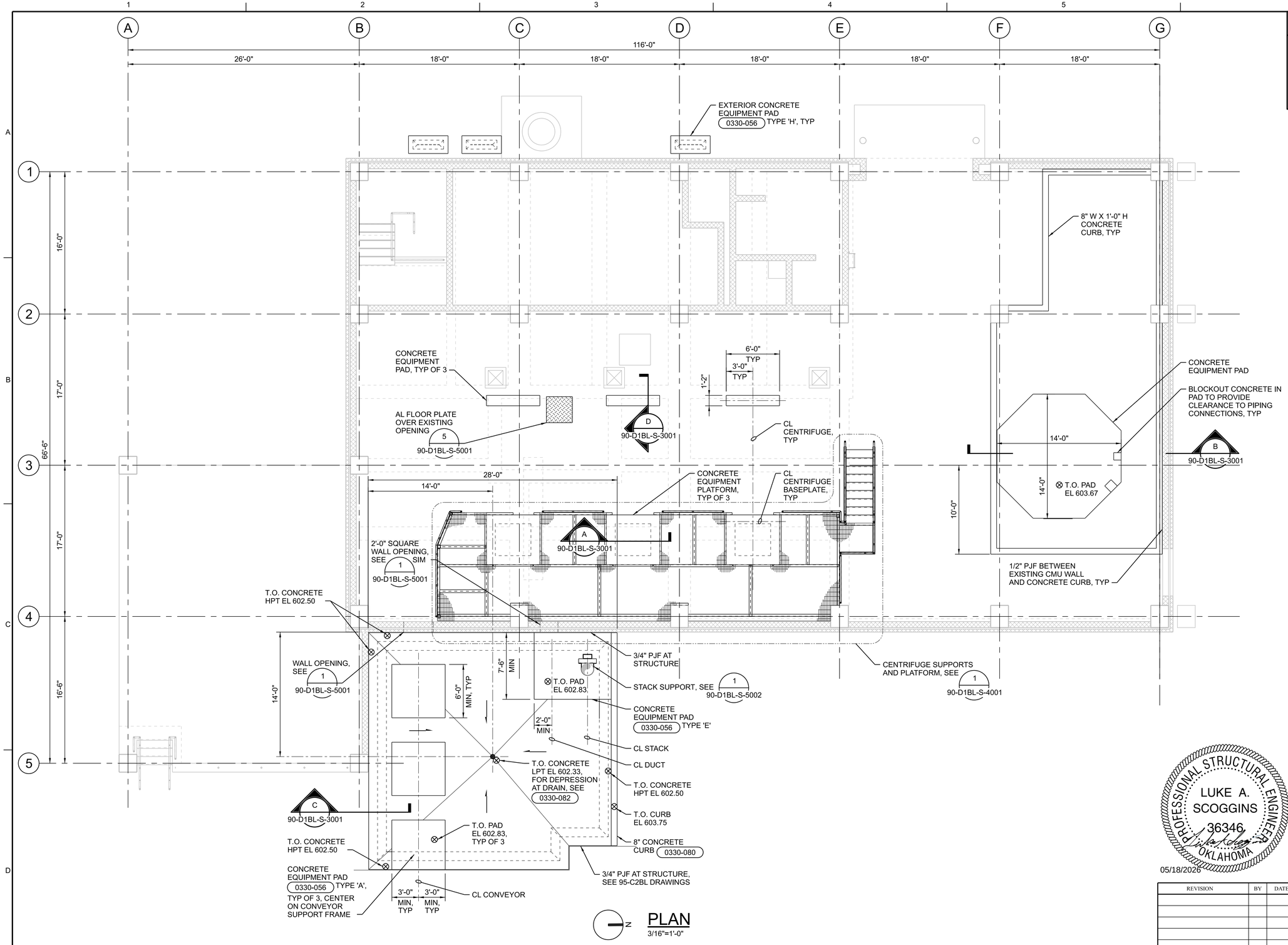
DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	AZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026
FILE: DRAWING: 90-D1BL-S-1100
ATLAS PAGE NO: 3328
SHEET 145 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:33

GENERAL FACILITY NOTES

1. FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS 01-G-0020 AND 01-G-0021.
2. FOR STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS, SEE DRAWINGS 01-G-022 THROUGH 01-G-0024.



PLAN
3/16"=1'-0"

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

DEWATERING CENTRIFUGE BUILDING
STRUCTURAL
UPPER LEVEL PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

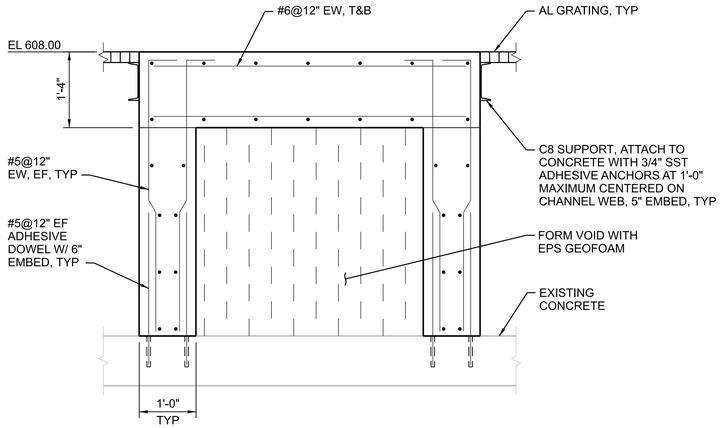
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

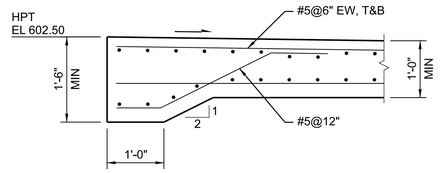
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSN 05/26	
	LEAD ENG.	AZL 5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-S-2100		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 146 OF 300 SHEETS

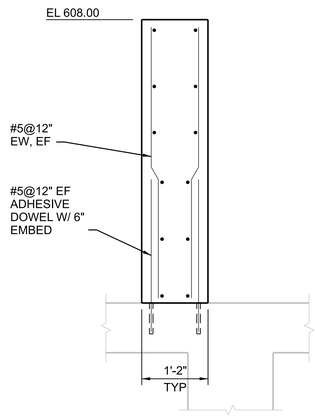
PLOT DATE: 13-MAY-2026 PLOT TIME: 11:34



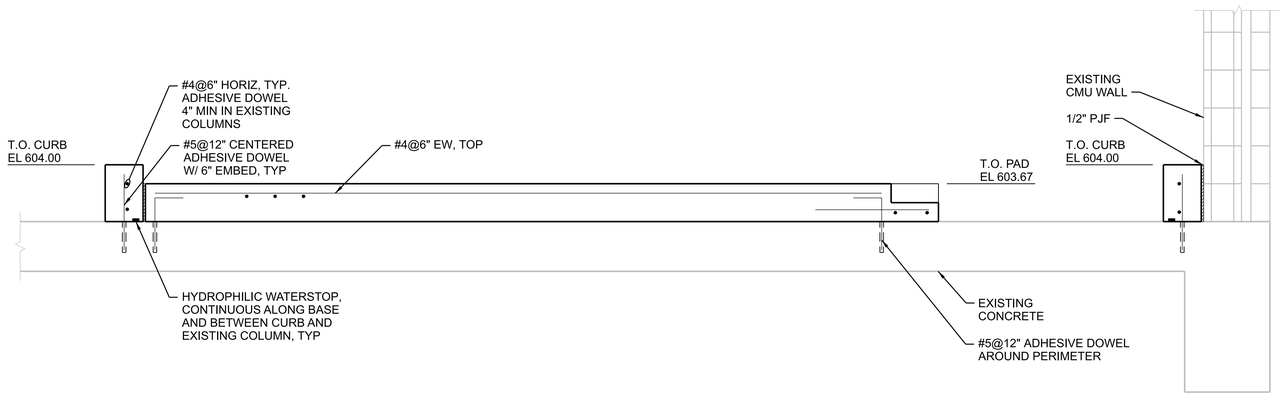
A SECTION
3/4"=1'-0"
90-D1BL-S-2100
90-D1BL-S-4001



C SECTION
3/4"=1'-0"
90-D1BL-S-2100



D SECTION
3/4"=1'-0"
90-D1BL-S-2100



B SECTION
3/4"=1'-0"
90-D1BL-S-2100

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

DEWATERING CENTRIFUGE BUILDING
STRUCTURAL
SECTIONS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

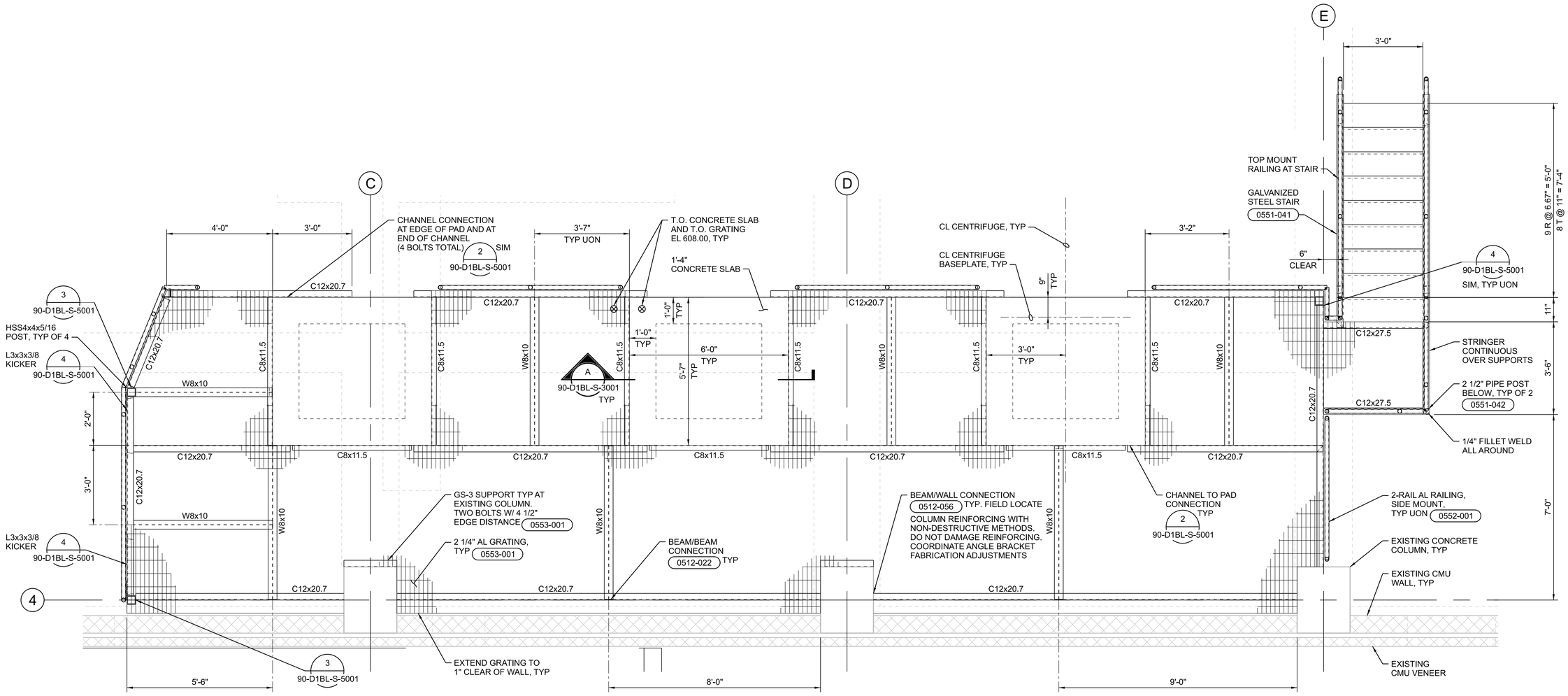
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	GZL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-S-3001			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 147 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:34

GENERAL SHEET NOTES

1. ALL STEEL PLATFORM FRAMING TO BE HOT-DIP GALVANIZED.



N

1 ENLARGED PLAN

1/2"=1'-0"

90-D1BL-S-2100

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PROFESSIONAL STRUCTURAL ENGINEER
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05/18/2026

DEWATERING CENTRIFUGE BUILDING
STRUCTURAL
ENLARGED PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

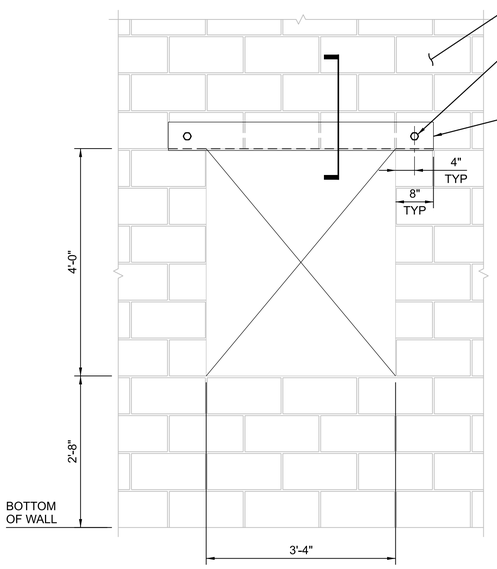
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MW	05/26	
HORIZONTAL:	LEAD ENG.	AZ	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-S-4001			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 148 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:33

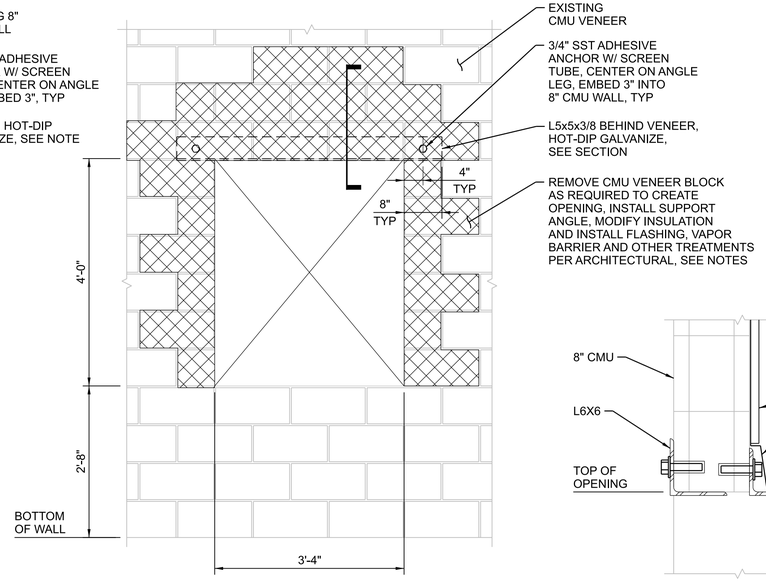


NOTE:

PRIOR TO DEMOLITION OF WALL OPENING, ROUTE HORIZONTAL MORTAR JOINT TO REMOVE MORTAR AND INSTALL ANGLE.

INTERIOR ELEVATION

3/4"=1'-0"

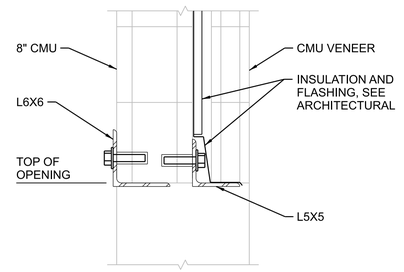


NOTES:

1. CMU VENEER BLOCKS SHALL BE REMOVED AS REQUIRED TO CREATE OPENING AND INSTALL ALL WORK. BLOCK REMOVAL SHALL BE AS REQUIRED TO CREATE A SAFE AND STABLE CONDITION. PROVIDE ADDITIONAL TEMPORARY SHORING AND SUPPORT AS REQUIRED.
2. PROTECT IN PLACE MASONRY VENEER TIES AND REUSE DURING VENEER REINSTALLATION.
3. PRESERVE REMOVED CMU VENEER BLOCKS, PROTECT AND CLEAN. REINSTALL TO FORM FINAL OPENING CONDITIONS. MATCH MORTAR AND APPEARANCE OF EXISTING WALL SURFACES.

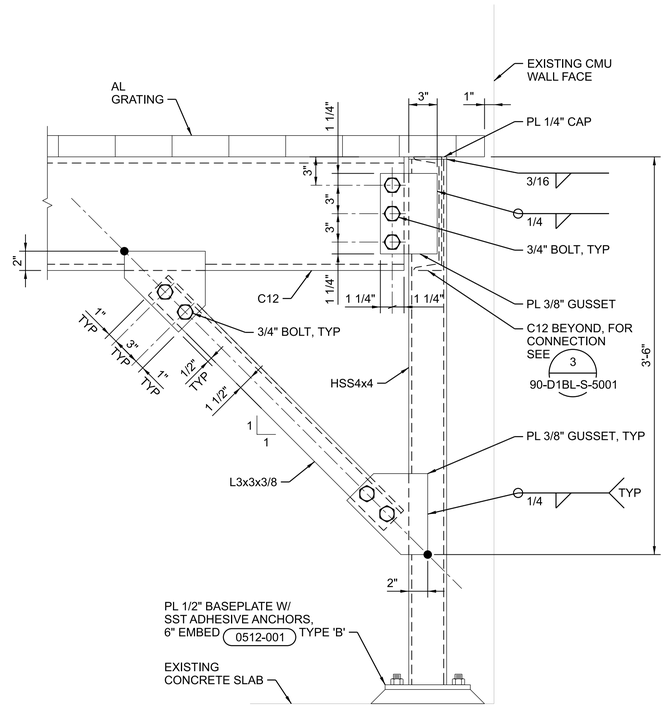
EXTERIOR ELEVATION

3/4"=1'-0"



SECTION

1 1/2"=1'-0"



4 KICKER CONNECTION

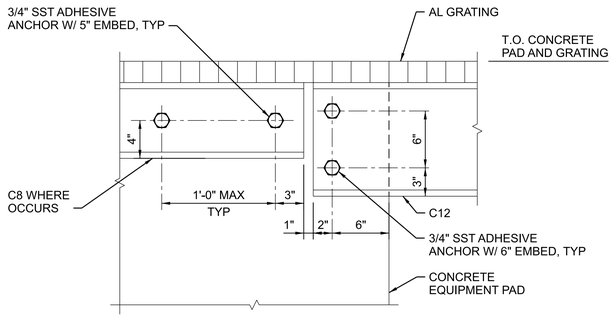
1 1/2"=1'-0"

90-D1BL-S-4001

1 OPENING IN EXISTING CMU

AS SHOWN

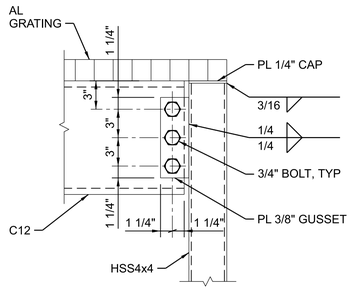
90-D1BL-S-1100
90-D1BL-S-2100



2 CHANNEL TO CONCRETE EQUIPMENT PAD

1 1/2"=1'-0"

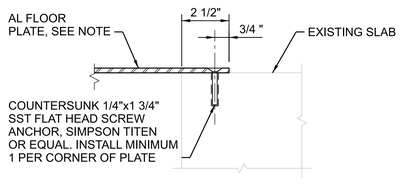
90-D1BL-S-4001



3 POST CONNECTION

1 1/2"=1'-0"

90-D1BL-S-4001
90-D1BL-S-5001



NOTE:

PAINT TOP OF FLOOR PLATE PER SYSTEM 5 IN OSHA YELLOW. SEE SPECIFICATION SECTION 09 90 00, PAINTING AND COATING.

5 DETAIL

3"=1'-0"

90-D1BL-S-2100

PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

DEWATERING CENTRIFUGE BUILDING
STRUCTURAL
DETAILS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENG.		
VERTICAL:	FIELD MGR.		DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-S-5001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 149 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:34

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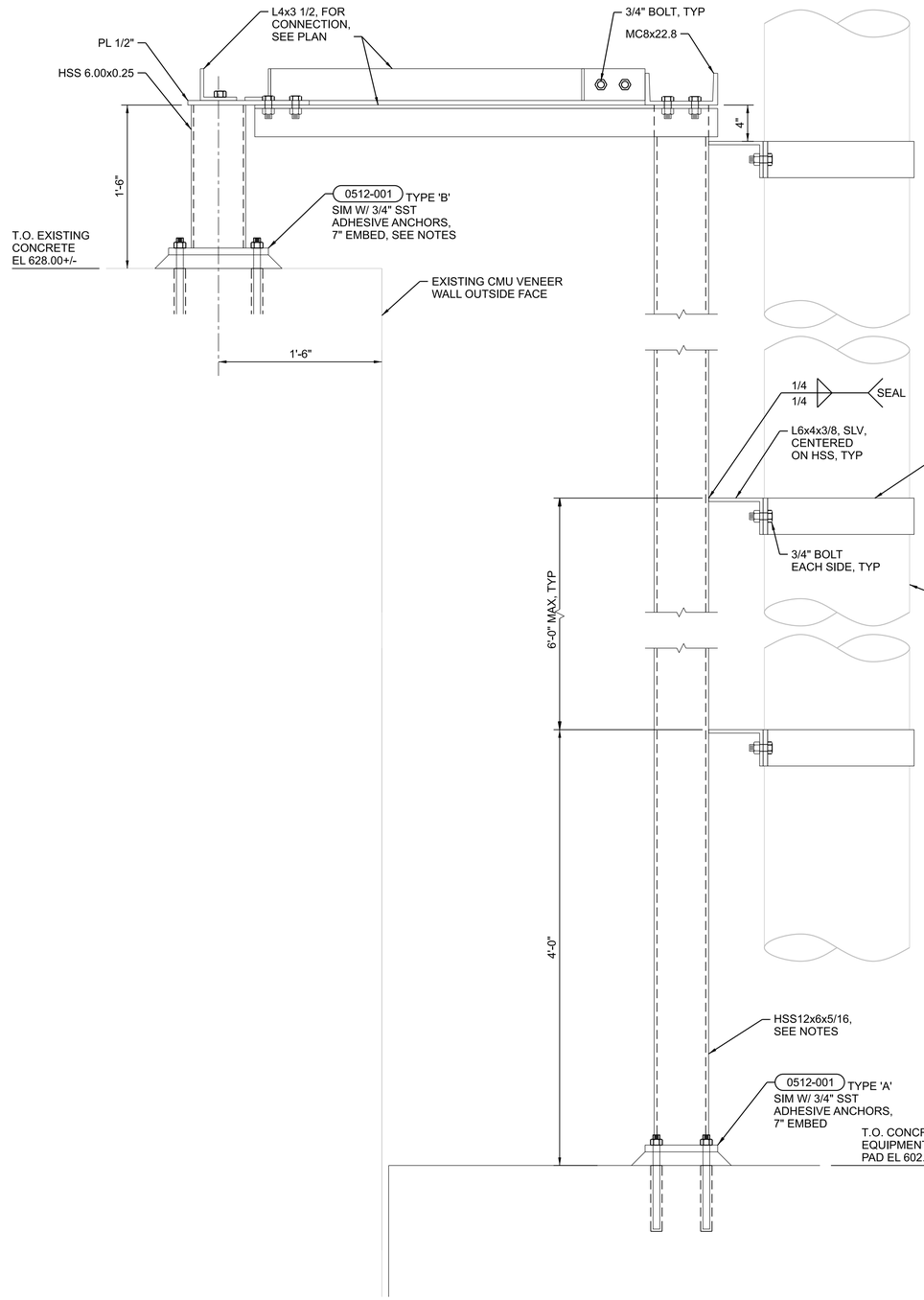
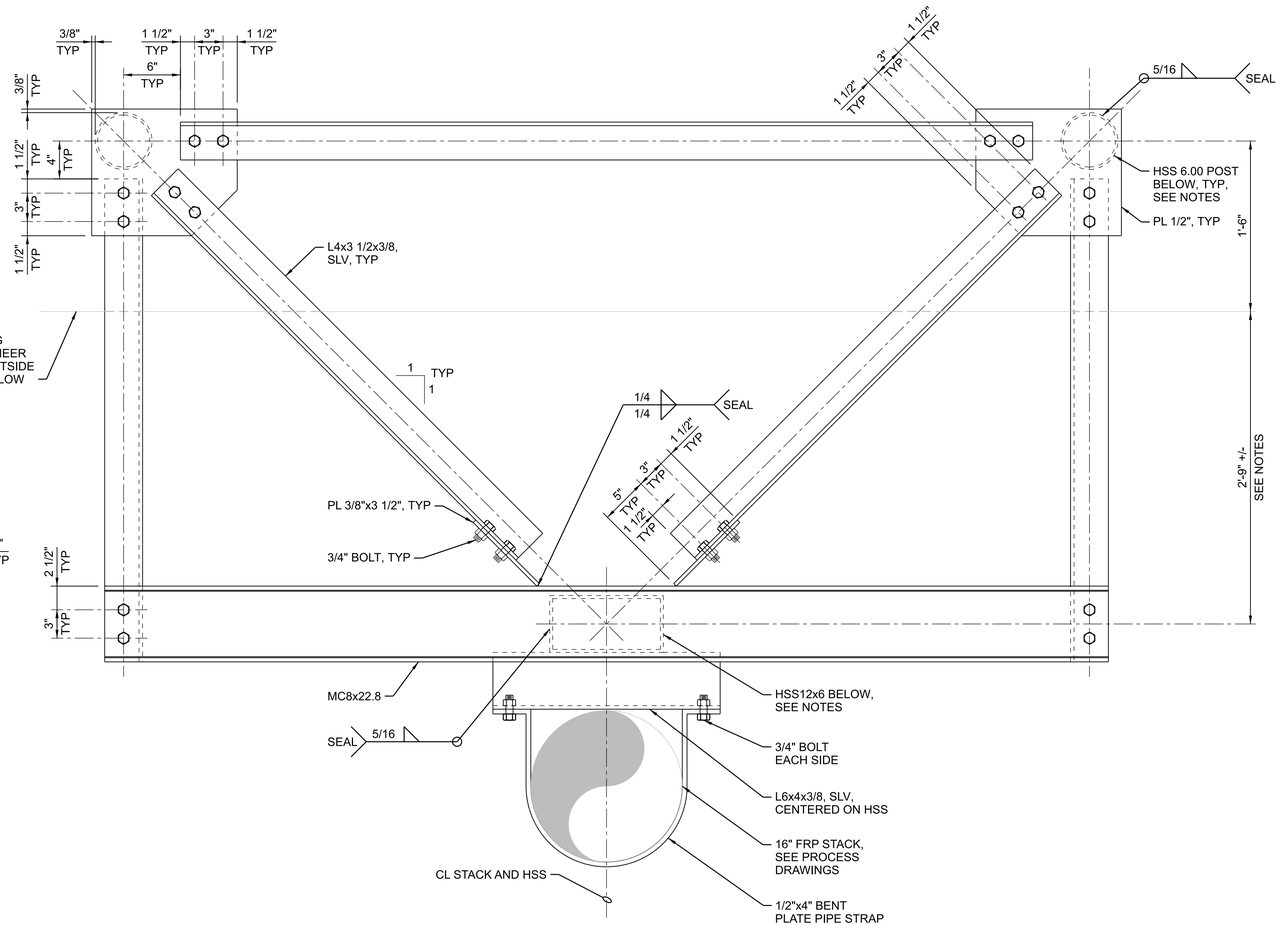


ELEVATION



PLAN

NOTES:

1. COORDINATE STACK INSTALLATION AND SUPPORT AND LOCATE HSS. FIELD VERIFY DISTANCE FROM STRUCTURE.
2. DEMOLISH ROOFING AND INSULATION AS REQUIRED TO INSTALL HSS 6.0 POSTS TO ROOF. REPAIR INSULATION AND ROOFING INCLUDING INSTALLATION OF FLASHING BOOTS AT POSTS.
3. FIELD LOCATE REINFORCING AT EXISTING CONCRETE ROOF USING NON-DESTRUCTIVE METHODS PRIOR TO DRILLING. SUBMIT PROPOSED ANCHOR PLATE LAYOUT MODIFICATIONS TO AVOID DRILLING EXISTING REINFORCING. DO NOT DAMAGE REINFORCING DURING DRILLING.
4. HOT-DIP GALVANIZE ALL STEEL AFTER FABRICATION.

1 STACK SUPPORT DETAIL
1 1/2"=1'-0"
90-D1BL-S-2100

PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

DEWATERING CENTRIFUGE BUILDING
STRUCTURAL DETAIL

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

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	SURVEY		
PROFILE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENG.		
VERTICAL:	FIELD MGR.		DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-S-5002		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 150 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:33

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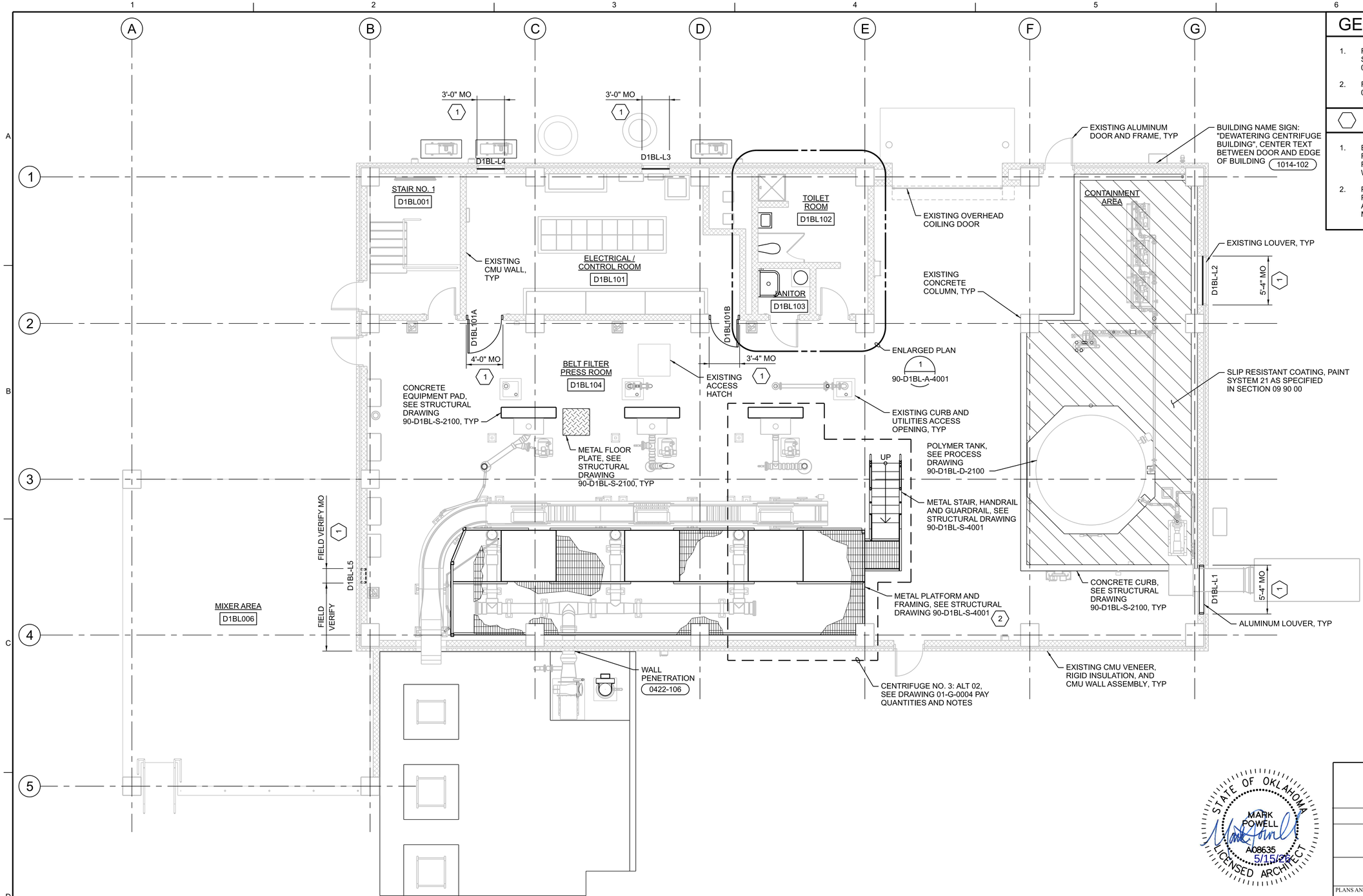
GENERAL SHEET NOTES

1. FOR GENERAL ARCHITECTURAL NOTES, MATERIAL SYMBOLS, LEGEND, WALL TYPES, SEE DRAWING 01-G-0012.
2. FOR BUILDING CODE DATA TABLE, SEE DRAWINGS 01-G-0013.

SHEET KEYNOTES

1. EXISTING STRUCTURE DIMENSIONS ARE FOR REFERENCE ONLY. FIELD VERIFY DIMENSIONS THAT RELATE TO NEW WORK, PRIOR TO BEGINNING NEW WORK AND FABRICATION.
2. PLATFORM AND STAIR ARE ASSOCIATED WITH PROCESS EQUIPMENT AND ARE CONSIDERED AN EQUIPMENT PLATFORM AND NOT SUBJECT TO MEANS OF EGRESS REQUIREMENTS.



N

UPPER LEVEL PLAN - OVERALL

3/16"=1'-0"

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STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

DEWATERING CENTRIFUGE BUILDING
ARCHITECTURAL
UPPER LEVEL PLAN - OVERALL

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

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	SURVEY		
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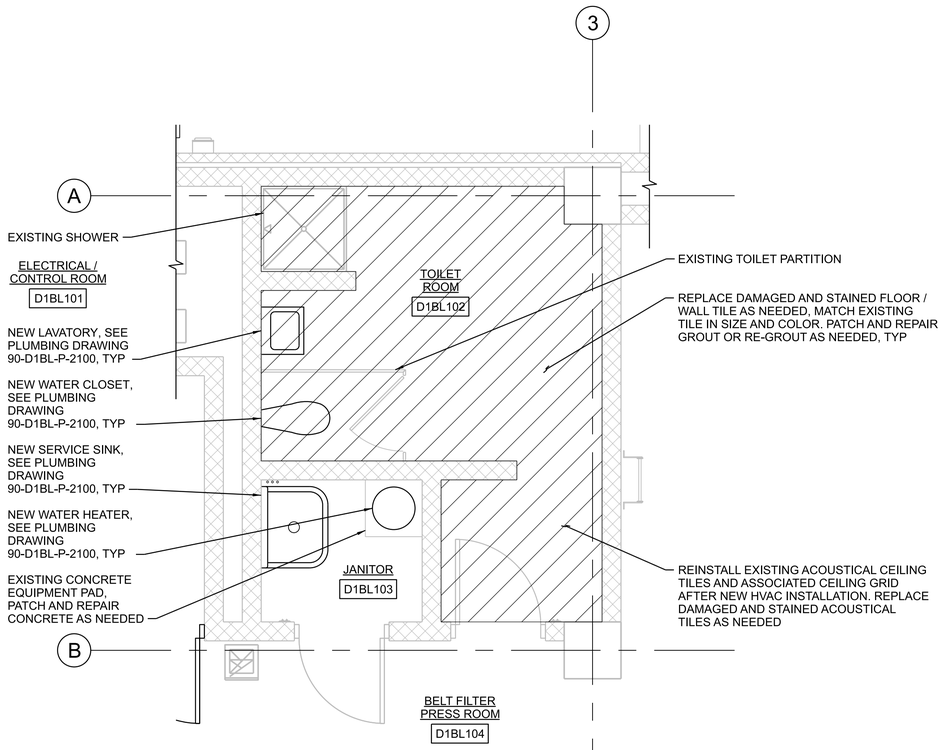
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-A-2100		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 151 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:22



N

1 ENLARGED PLAN
3/8"=1'-0"
90-D1BL-A-2100

LOUVER SCHEDULE

LOUVER TYPE ABBREVIATIONS:
DB DRAINABLE BLADE

OTHER ABBREVIATIONS:
AFF ABOVE FINISH FLOOR (AT GROUND LEVEL)
AL ALUMINUM
FCTY FACTORY
NO. NUMBER

NOTES:
NO. 1 FOR LOUVER DETAILS, SEE DESIGN DETAILS ON VOLUME 6 CONSTRUCTION DOCUMENTS.
NO. 2 FIELD VERIFY EXISTING LOUVER SIZE FOR NEW INSULATED BLANK-OFF PANEL.
NO. 3 FIELD VERIFY ROUGH-OPENING FOR LOUVER.
NO. 4 MATCH EXISTING LOUVERS AT DEWATERING BUILDING.

NO.	OPENING		LOUVER				DETAILS			SILLS			OTHER REQUIREMENTS
	WIDTH	HEIGHT	MATL	TYPE	FINISH	COL	HEAD	JAMB	SILL	MATL	COL	HEIGHT	
D1BL-L1	5'-4" (NOTE 3)	8'-0" (NOTE 3)	AL	DB	FCTY	NOTE 4	0890-001	0890-001 SIM	0890-001	AL	NOTE 4	NOTE 3	
D1BL-L2	5'-4" (NOTE 2)	1'-4" (NOTE 2)	---	EXISTING	---	---	---	---	---	---	---	---	INSULATED BLANK-OFF PANEL (R-8)
D1BL-L3	3'-0" (NOTE 2)	1'-8" (NOTE 2)	---	EXISTING	---	---	---	---	---	---	---	---	INSULATED BLANK-OFF PANEL (R-8)
D1BL-L4	3'-0" (NOTE 2)	1'-8" (NOTE 2)	---	EXISTING	---	---	---	---	---	---	---	---	INSULATED BLANK-OFF PANEL (R-8)
D1BL-L5	NOTE 3	NOTE 3	AL	DB	FCTY	NOTE 4	0890-001	0890-001 SIM	0890-001	AL	NOTE 4	NOTE 3	INSULATED BLANK-OFF PANEL (R-8)

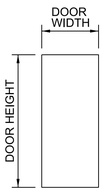
DOOR AND HARDWARE SCHEDULE

ABBREVIATIONS:
COL COLOR
CONSTR CONSTRUCTION
HM HOLLOW METAL

NOTES:
NO. 1 SEE THIS SHEET FOR DOOR AND FRAME TYPES.
NO. 2 FOR DOOR DETAILS, SEE DESIGN DETAILS ON VOLUME 6 CONSTRUCTION DOCUMENTS.
NO. 3 NUMBER CODE IN HARDWARE SET COLUMN REFERS TO HARDWARE SETS IN SPECIFICATION SECTION 08 71 00.
NO. 4 NUMBERS IN FINISH COLUMN REFER TO PAINT SYSTEMS IN SPECIFICATION SECTION 09 90 00.
NO. 5 MATCH EXISTING PAINT COLOR OF EXISTING INTERIOR DOORS AT DEWATERING BUILDING.
NO. 6 FIELD VERIFY ROUGH-OPENING FOR DOOR.

NO.	OPENING															HARDWARE		FIRE PROTECTION RATING	OTHER REQUIREMENTS
	SIZE		DOOR					FRAME				DETAILS							
	WIDTH	HEIGHT	CONSTR	TYPE	GLASS	FINISH	COL	MATL	TYPE	FINISH	COL	HEAD	JAMB	SILL		SET NO.	KEY SIDE		
90D1BL101A	3'-8" NOTE 6	7'-0"	HM	F	---	5	NOTE 5	HM	TD	5	NOTE 5	0811-003	0811-004	0871-003		2	90D1BL104	---	"ELECTRICAL ROOM"
90D1BL101B	3'-0" NOTE 6	7'-0"	HM	F	---	5	NOTE 5	HM	TD	5	NOTE 5	0811-003	0811-004	0871-003		2	90D1BL104	---	"ELECTRICAL ROOM"

DOOR TYPES



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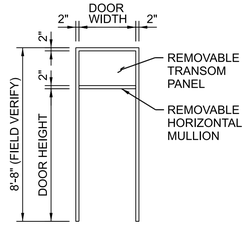
DOOR FRAME TYPES



TD

STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

REVISION	BY	DATE

DEWATERING CENTRIFUGE BUILDING
ARCHITECTURAL
ENLARGED PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSN 05/26	
	LEAD ENG.	5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-A-4001	DATE: MAY 2026	
ATLAS PAGE NO: 3328		SHEET 152 OF 300 SHEETS	

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:22

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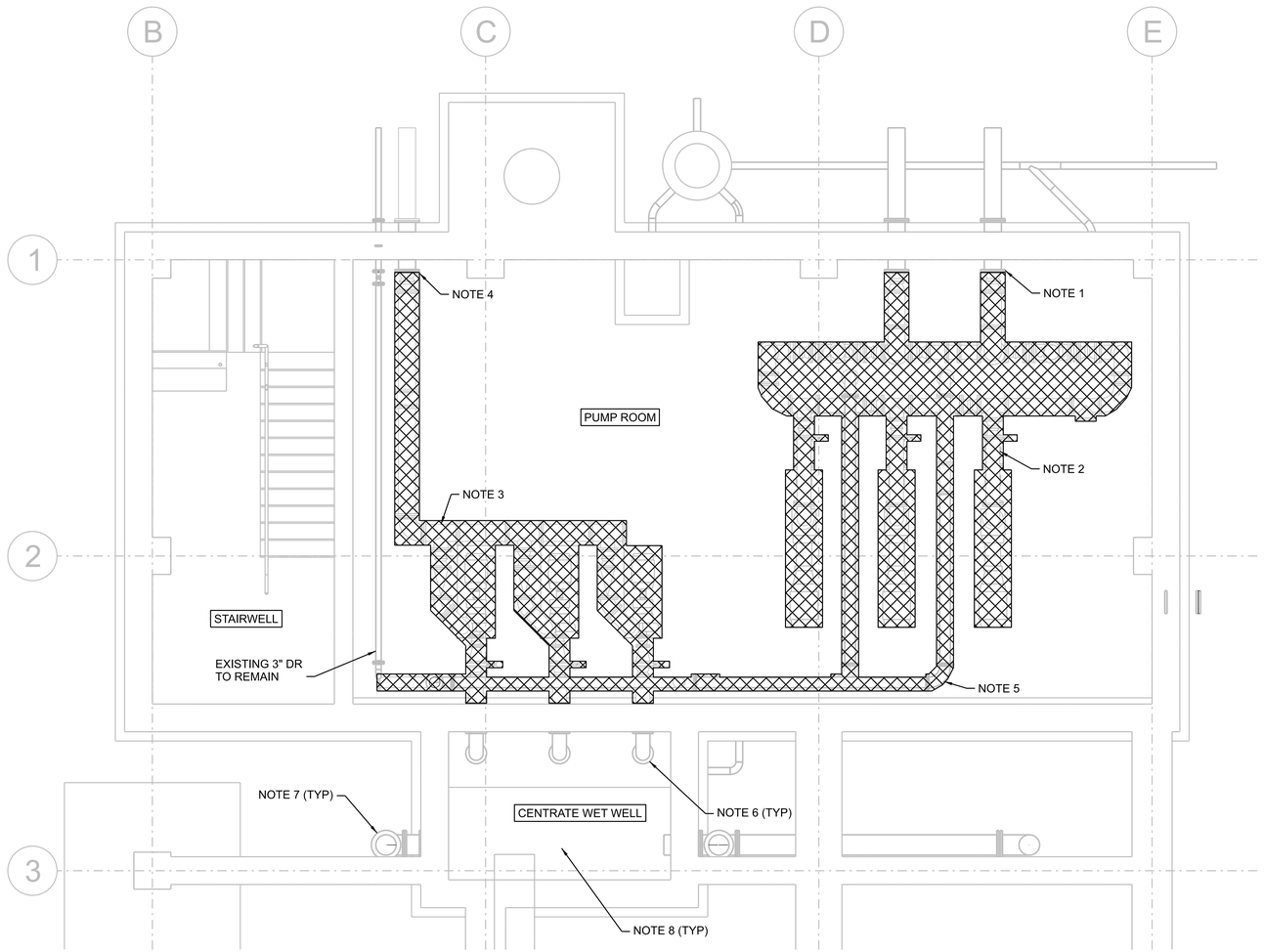
GENERAL SHEET NOTES

1. BLIND FLANGE BOTH EXISTING 10" FEED SLUDGE PIPES.
2. DEMOLISH ALL SLUDGE FEED PUMPS, ASSOCIATED EQUIPMENT PADS, AND ALL INTERIOR SUCTION AND DISCHARGE FEED PIPING.
3. DEMOLISH ALL FILTRATE PUMPS, ASSOCIATED EQUIPMENT PADS, AND ALL INTERIOR SUCTION AND DISCHARGE FILTRATE PIPING. REUSE FILTRATE DISCHARGE FLANGES DIRECTLY ADJACENT TO WET WELL. TYP 3.
4. REUSE FLANGE DIRECTLY ADJACENT TO CENTRATE DISCHARGE WALL PENETRATION. REUSE 10 INCH FILTRATE PIPE WALL PENETRATION FOR NEW CENTRATE PIPE.
5. DEMOLISH ALL INTERIOR AUXILIARY PROCESS PIPING.
6. LEAVE EXISTING FILTRATE SUCTION PIPE ELBOW IN WET WELL.
7. REUSE EXISTING 12 INCH FILTRATE DRAINS TO WET WELL (BELOW GRADE)
8. CLEAN OUT AND FLUSH EXISTING FILTRATE WET WELL AND FILTRATE PIPES INTO THE WET WELL (BELOW GRADE 12 INCH FILTRATE DRAIN PIPING).
9. DEMOLISH CONCRETE PADS PER 0330-143.
10 CLEAN AND RECOAT EXISTING PIPES WITHIN THE BASEMENT LEFT IN PLACE PER 09 90 00.

LEGEND

DEMOLISH



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LOWER LEVEL PLAN

1/4"=1'-0"

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

DEWATERING CENTRIFUGE BUILDING
PROCESS
DEMOLITION LOWER LEVEL PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	AZL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-D-1000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 153 OF 300 SHEETS

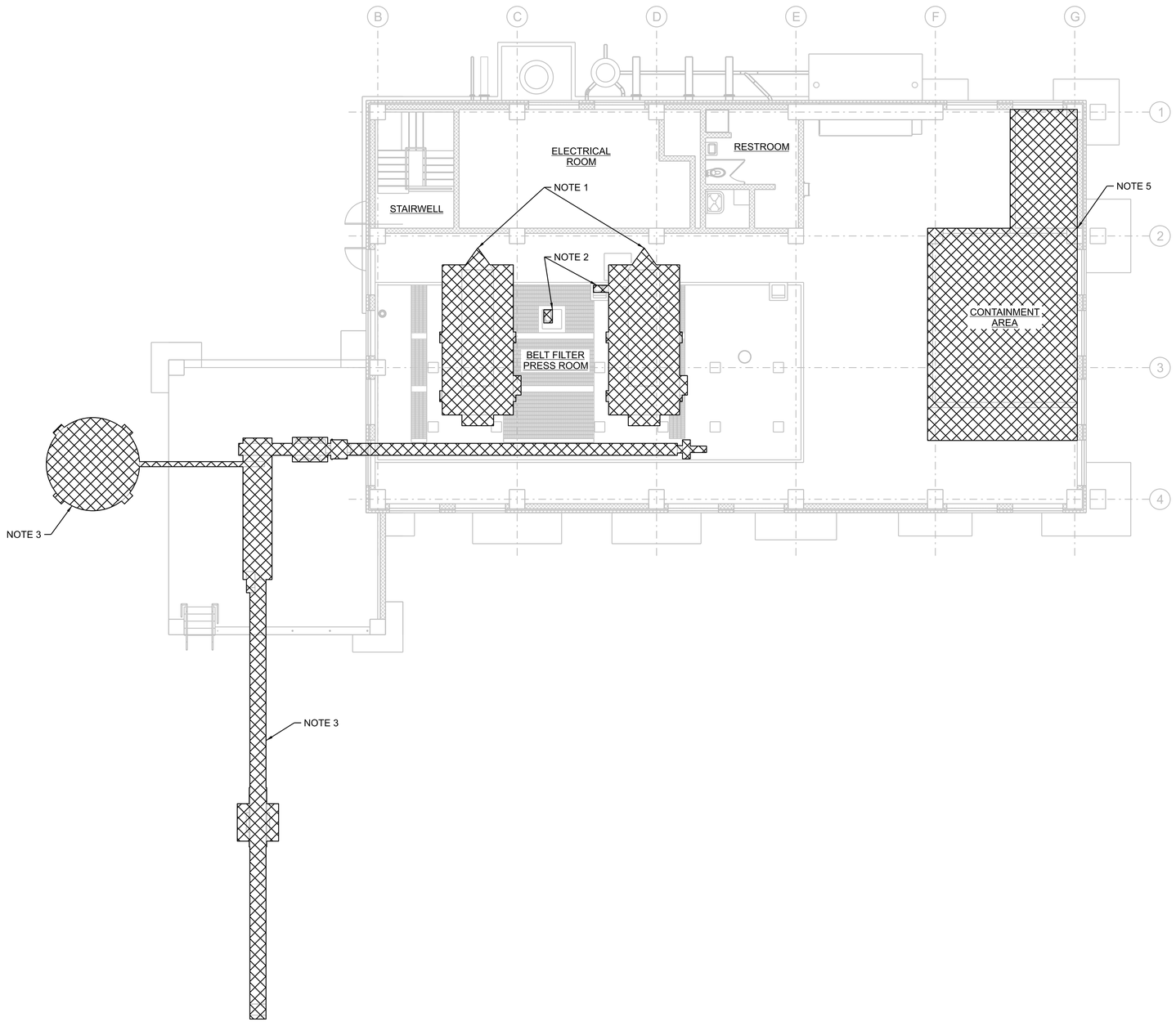
PLOT DATE: 14-MAY-2026 PLOT TIME: 16:17

GENERAL SHEET NOTES

1. DEMOLISH EXISTING BELT FILTER PRESS AND AUXILIARY EQUIPMENT AND PIPING.
2. DEMOLISH ABOVE GRADE PROCESS AND AUXILIARY PIPING FOR THE BELT FILTER PRESS.
3. DEMOLISH ALL LIME STABILIZATION FACILITIES, INCLUDING SCREW CONVEYOR, MOTOR, MIXER AND SILO.
4. SEE DRAWING 90-D1BL-S-1100 FOR DETAILS ON EQUIPMENT PADS, PIERS, AND GRATING DEMOLITION.
5. DEMOLISH ALL EXISTING POLYMER EQUIPMENT AND ASSOCIATED SYSTEMS.
6. DEMOLISH CONCRETE PADS PER 0330-143

LEGEND

DEMOLISH



N

UPPER LEVEL DEMOLITION PLAN

1/8"=1'-0"

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LICENSED PROFESSIONAL ENGINEER
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Tanner Pipher
05/17/2026

DEWATERING CENTRIFUGE BUILDING
PROCESS
DEMOLITION UPPER LEVEL PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MW	05/7/26
LEAD ENG.	RZ	5/26
FIELD MGR.		5/26

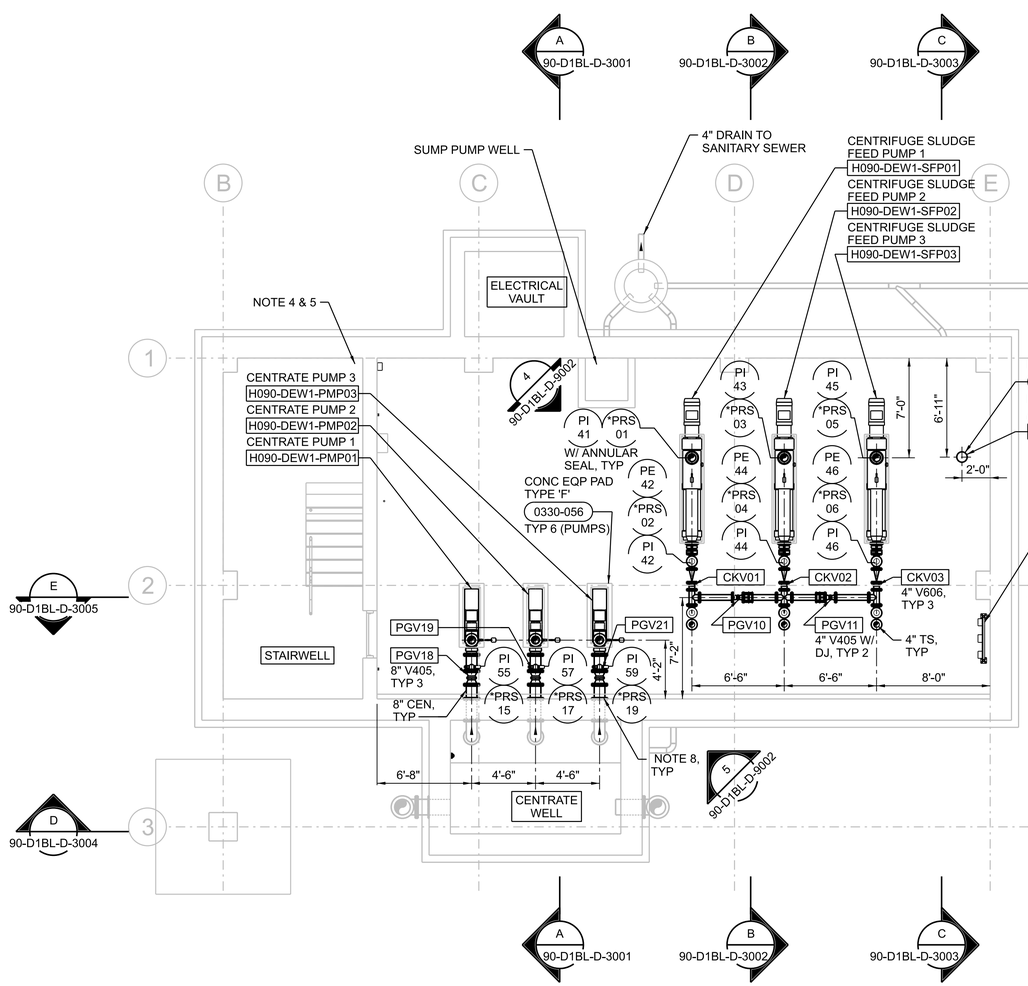
APPROVED:
DESIGN MANAGER

FILE: DRAWING: 90-D1BL-D-1100
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 154 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 16:19

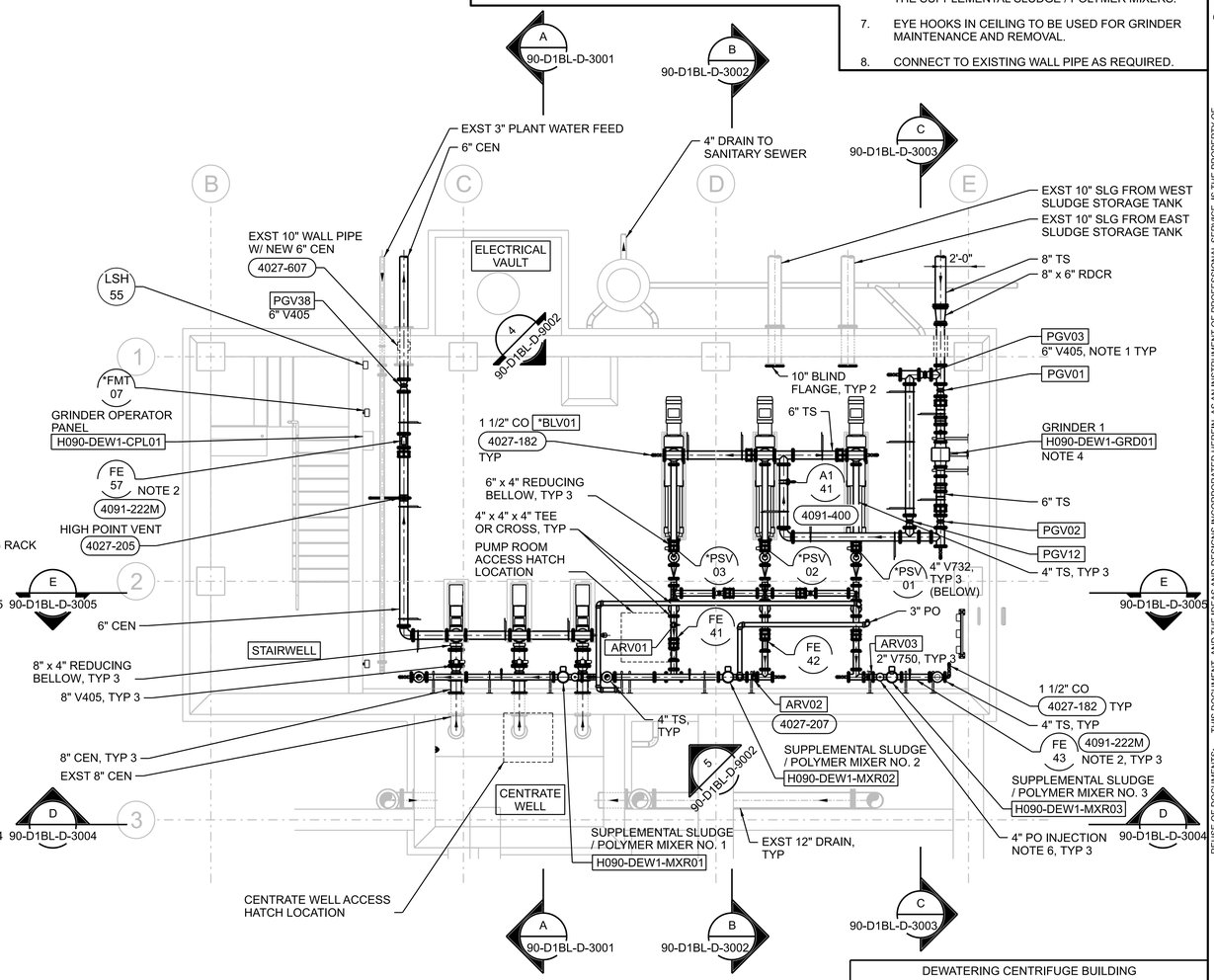
GENERAL SHEET NOTES

1. INFLUENT SLUDGE PIPING FROM HOLDING TANKS ARE ELEVATED AND SUPPORTED FROM THE ROOF BY PIPE HANGERS.
2. RESTRAINED DISMANTLING JOINT SHOWN FOR FITUP AND MAINTENANCE.
3. FIELD LOCATE EXISTING FLOOR DRAINS AND COORDINATE WITH ENGINEER IF EQUIPMENT PADS REQUIRE ADJUSTMENT.
4. SPARE GRINDER IS TO BE PROVIDED AND STORED UNDER STAIRS FOR EASY REPLACEMENT.
5. DAVIT CRANE FOR PUMP MAINTENANCE IS TO BE PROVIDED AND STORED UNDER STAIRS. INITIAL INSTALLATION OF PUMPS WILL UTILIZE THE EXISTING ACCESS HATCH. 2 TON ULINE MODEL NO. H-8462 OR EQUAL
6. 4" POLYMER INJECTORS ARE INTEGRATED WITH THE SUPPLEMENTAL SLUDGE / POLYMER MIXERS.
7. EYE HOOKS IN CEILING TO BE USED FOR GRINDER MAINTENANCE AND REMOVAL.
8. CONNECT TO EXISTING WALL PIPE AS REQUIRED.



LOWER LEVEL PLAN

3/16"=1'-0"



LOWER LEVEL PLAN - PIPING

3/16"=1'-0"

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DEWATERING CENTRIFUGE BUILDING
PROCESS
LOWER LEVEL PLANS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

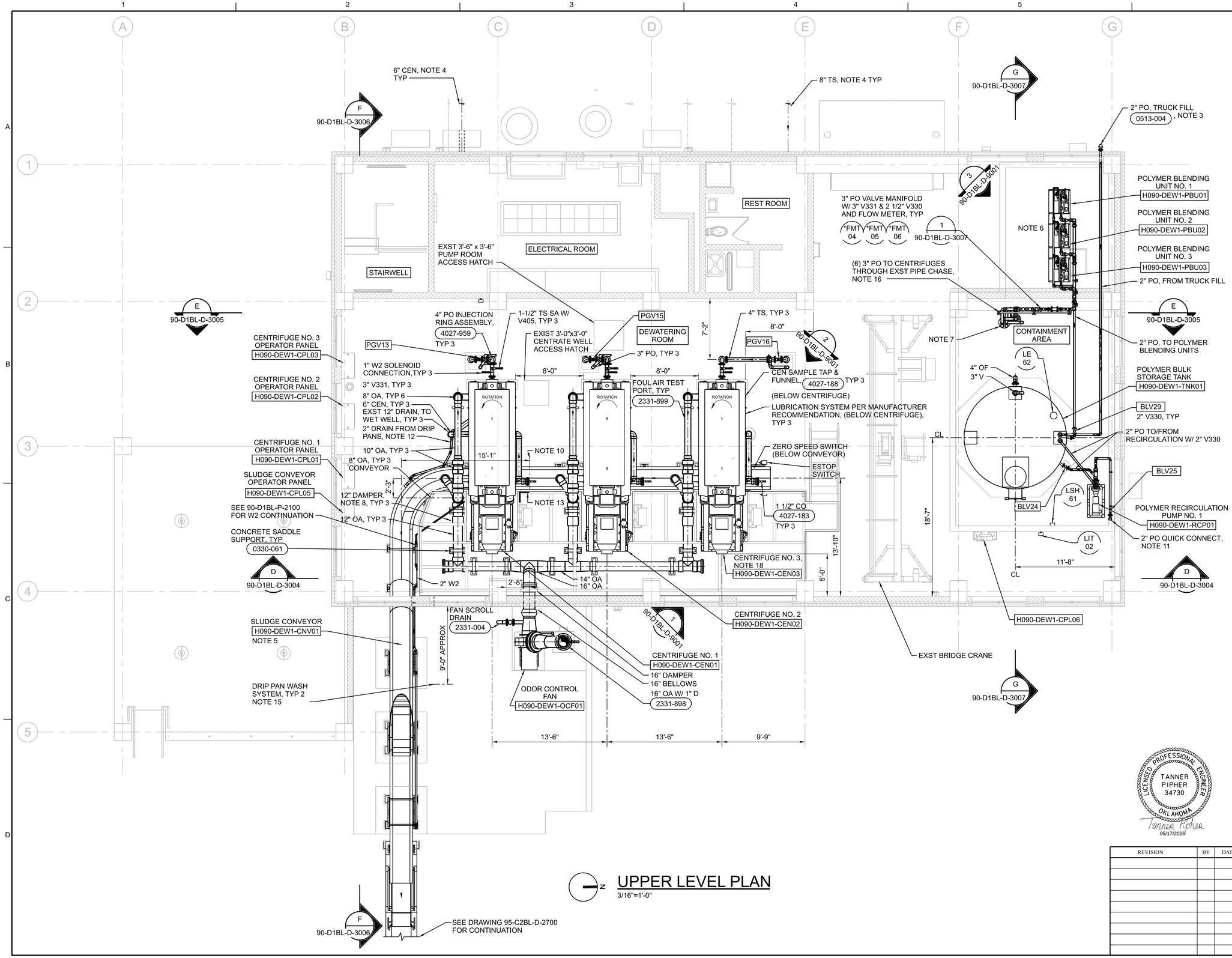
PLANS AND ESTIMATES PREPARED BY: Jacobs

LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MW	05/26
HORIZONTAL:	LEAD ENG.	RL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-D-2000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 155 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 21:20



UPPER LEVEL PLAN

3/16"=1'-0"

GENERAL SHEET NOTES

1. EACH CENTRIFUGE IS EQUIPPED WITH A MOTORIZED SLUDGE CAKE DISCHARGE DRAIN GATE.
2. CENTRIFUGES DISCHARGE DEWATERING CAKE ONTO THE SLUDGE CONVEYOR THEN TRANSFER THE DEWATERED CAKE TO THE RECEIVING BUNKER.
3. CONTRACTOR TO PROVIDE 5-GALLON BUCKET FOR CONTAINMENT WHEN DRAINING POLYMER FILL LINE, POLYMER TRUCK WILL PROVIDE ITS OWN CONTAINMENT, REFER TO DETAIL (0513-004) FOR MORE INFORMATION ON THE POLYMER FILL STATION.
4. FOR YARD PIPING CONNECTIONS, SEE DEWATERING CENTRIFUGE BUILDING PROCESS LOWER LEVEL PLANS.
5. ALIGN SLUDGE CONVEYOR WITH NEW OPENING, SEE DRAWING 90-D1BL-S-2100 AND 90D1BL-S-5001.
6. PROVIDE ANIT-SLIP COATING FOR FLOOR IN CONTAINMENT AREA.
7. PIPE CHASE TO BE RAISED A MINIMUM OF 1-FOOT ABOVE FINISHED FLOOR USING A REMOVABLE PVC CYLINDER AND MANHOLE BOOT. CONTRACTOR TO FIELD VERIFY APPROACH.
8. 12" DAMPERS SHALL HAVE MANUAL OPERATOR ACCESSIBLE FROM PLATFORM.
9. CONTRACTOR TO FIELD VERIFY ODOR CONTROL DUCT AND DRAIN PIPE ROUTING NEAR THE FLOOR, UNDER NO CIRCUMSTANCES CAN ROUTING BLOCK ACCESS BETWEEN CENTRIFUGES.
10. CONVEYOR SPRAY BAR BY SLUDGE CONVEYOR MANUFACTURER.
11. 2" PO QUICK CONNECT ON RECIRCULATION PUMP SUCTION IS TO BE USED TO FILL POLYMER TANK VIA 330-GALLON TOTES IN CASE OF EMERGENCY.
12. CONTRACTOR TO COORDINATE DRIP PAN SYSTEM FOR CONVEYOR SPRAY WASH SYSTEMS (TYPICAL 3), WITH CONVEYOR MANUFACTURER, DRIP PAN SYSTEM SHOULD ENCOMPASS THE ENTIRE CONVEYOR TO CAPTURE WASHDOWN WATER, DRIP PAN DRAIN SHOULD CAPTURE WASHDOWN WATER TO BE CONVEYED TO THE EXISTING 12" DRAINS TO CENTRATE WETWELL, DRIP PAN DRAIN PIPING TO BE FIELD ROUTED, SUBMIT DRIP PAN AND DRAIN DESIGN FOR APPROVAL BY ENGINEER.
13. 3/4" W2 WITH V330 FOR CONNECTION TO SLUDGE CONVEYOR WASH WATER SPRAY BAR.
14. GEA MODEL CF8000 CENTRIFUGE IS BASIS OF DESIGN SEE SPECIFICATION 43 22 23 FOR CENTRIFUGE REQUIREMENTS.
15. COORDINATE DRIP PAN WASH SYSTEM LOCATIONS WITH MANUFACTURER. FIELD VERIFY PRIOR TO ROUTING W2 CONNECTIONS.
16. 16. POLYMER PIPING TO TRANSITION TO CHEMICAL TUBING SUCH THAT POLYMER LINES CAN BE ROUTED THROUGH THE EXISTING PIPE CHASE THAT LEADS TO THE LOWER LEVEL. ALL POLYMER PIPING SHALL BE DOUBLE WALLED FOR SECONDARY CONTAINMENT. ALL POLYMER TUBING SHALL ALSO UTILIZE CONTAINMENT PIPING. REFER TO DETAILS (4027-960) (4027-962) (4027-966) (4027-968) (4027-992) AND (4027-994) FOR CHEMICAL TUBING AND SECONDARY CONTAINMENT INFORMATION.
17. INSTALL ODOR CONTROL DUCT WITH CENTRIFUGE HOOD HINGED OPEN. SEE ROTATION DIRECTION.
18. CENTRIFUGE NO. 3: BID ALTERNATE. SEE 01-G-0004 PAY QUANTITIES AND NOTES.

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REUSE OF DOCUMENTS:

LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

DEWATERING CENTRIFUGE BUILDING
PROCESS
UPPER LEVEL PLAN
OVERALL

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

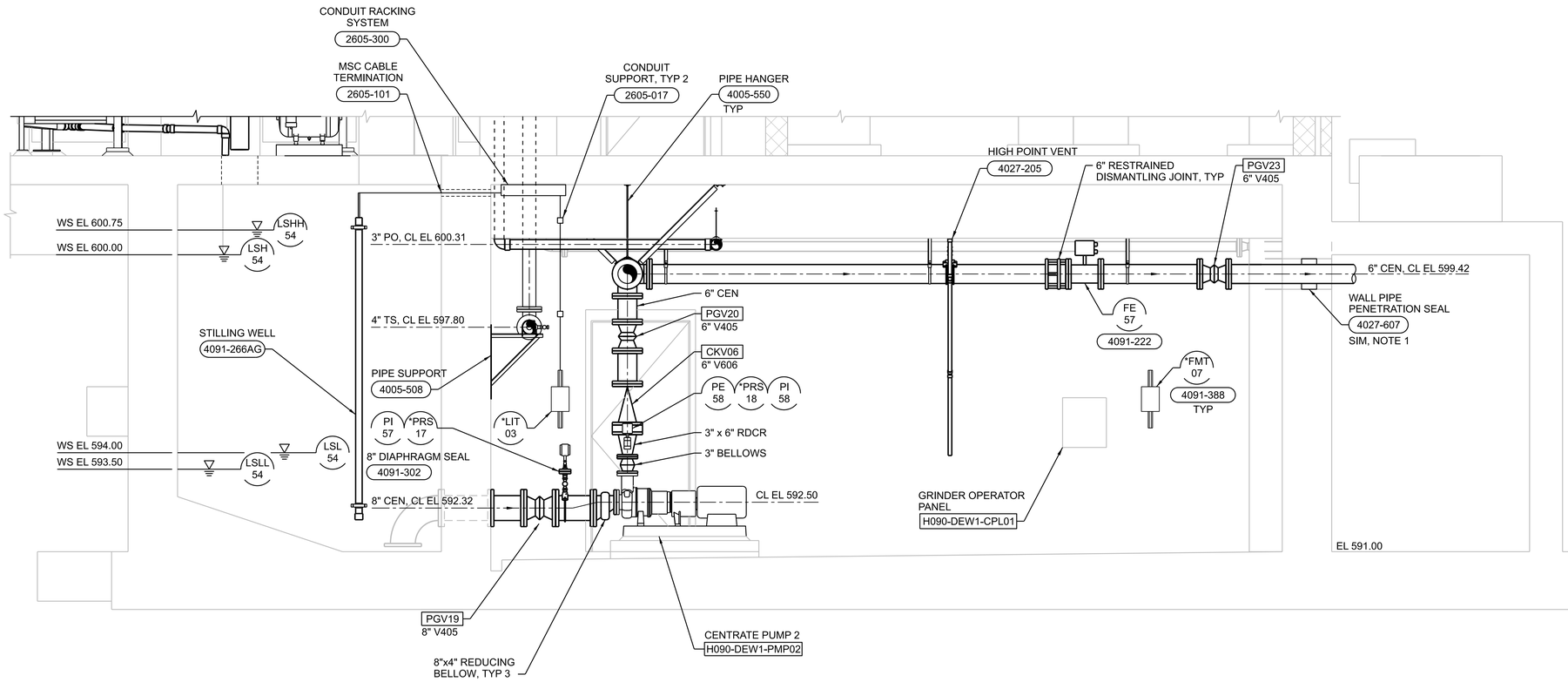
PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
HORIZONTAL:	PROJ. MGR.	MSN	05/26	
	LEAD ENG.	RJL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-D-2100			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 156 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 16:19

GENERAL SHEET NOTES

1. REUSE EXISTING 10" WALL PENETRATION, USE LINK SEAL TO FILL IN ANNULAR SPACE, CONTRACTOR TO VERIFY APPROACH FOR FILLING ANNULAR SPACE ON EXISTING PENETRATION.
2. EXISTING WET WELL TO BE REUSED AS PART OF THIS PROJECT. REMOVE ANY SEDIMENT WITHIN WET WELL, POWERWASH, AND FLUSH OUT WET WELL AND DRAINAGE PIPING INTO THE WET WELL.



A SECTION
1/2"=1'-0"
90-D1BL-D-2000

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LICENSED PROFESSIONAL ENGINEER
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OKLAHOMA
Tanner Pipher
05/17/2026

DEWATERING CENTRIFUGE BUILDING
PROCESS SECTION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

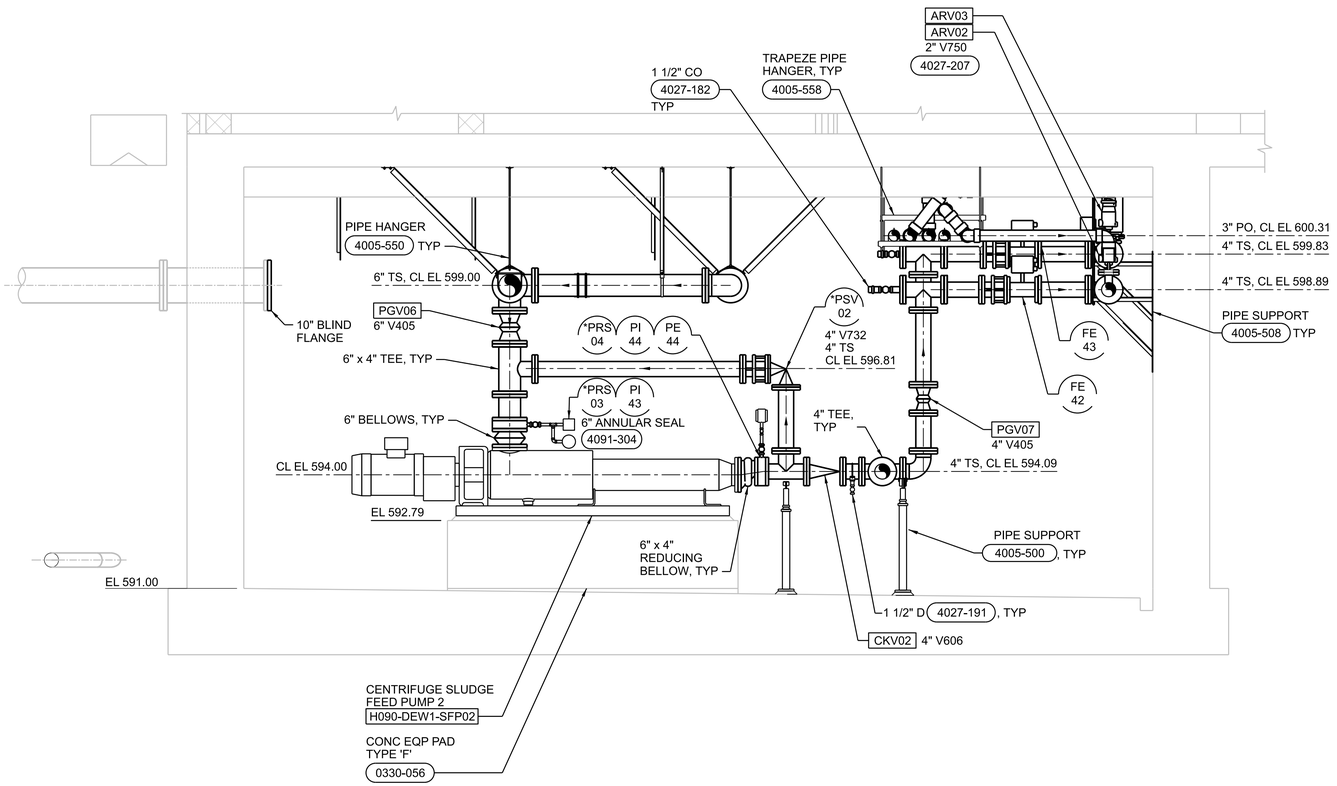
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
PROFILE:	DESIGNED	BB		
HORIZONTAL:	SURVEY			
VERTICAL:	PROJ. MGR.	MSN	05/26	
	LEAD ENG.	RJL	5/26	
	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-D-3001			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 157 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 16:17



B SECTION
1/2"=1'-0"
90-D1BL-D-2000

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LICENSED PROFESSIONAL ENGINEER
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05/17/2026

DEWATERING CENTRIFUGE BUILDING
PROCESS
SECTION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RL	5/26
FIELD MGR.		5/26

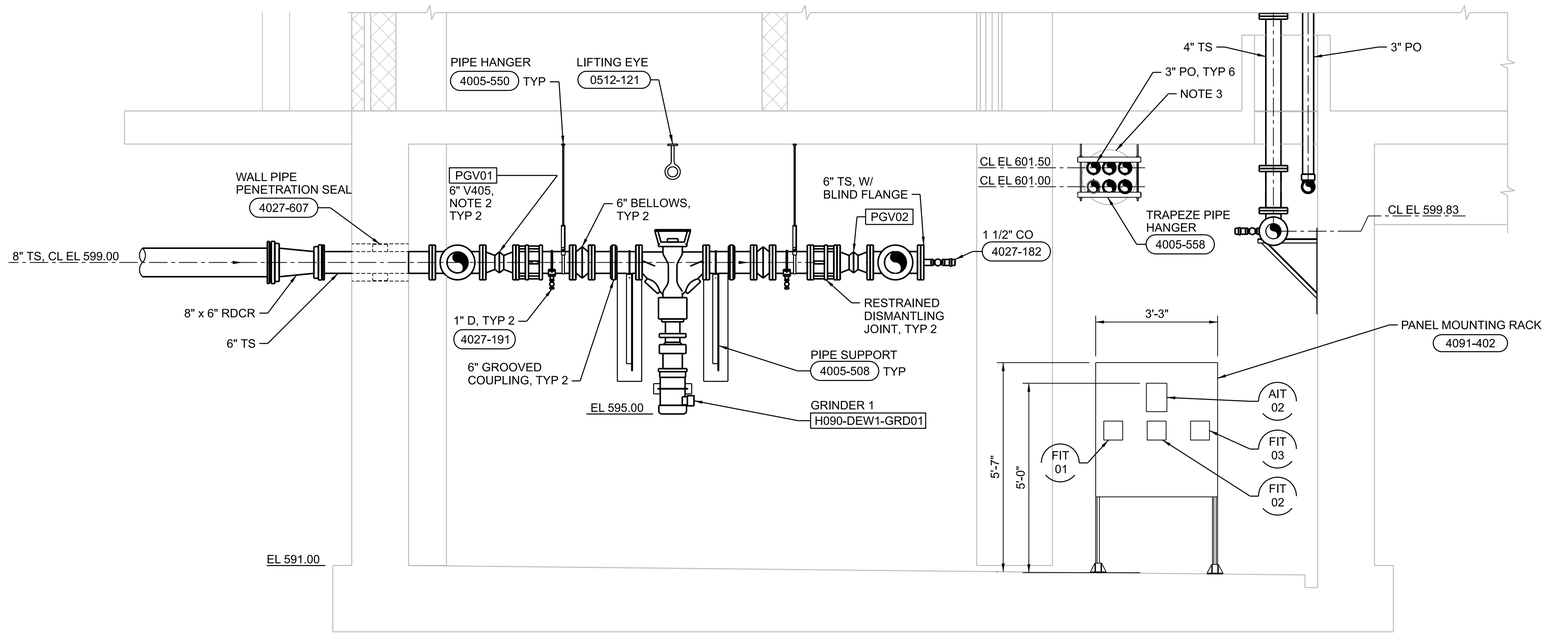
APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 90-D1BL-D-3002
ATLAS PAGE NO: 3328
SHEET 158 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 16:18

GENERAL SHEET NOTES

1. FOR YARD PIPING CONNECTIONS SEE DEWATERING CENTRIFUGE BUILDING PROCES LOWER LEVEL PLANS.
2. PROVIDE HAND WHEEL OR CHAIN VALVE OPERATORS AS DIRECTIED IN SPECIFICATION 40 27 02B.
3. POLYMER PIPING TO TRANSITION TO CHEMICAL TUBING SUCH THAT POLYMER LINES CAN BE ROUTED THROUGH THE EXISTING PIPE CHASE THAT LEADS TO THE LOWER LEVEL. ALL POLYMER PIPING SHALL BE DOUBLE WALLED FOR SECONDARY CONTAINMENT. ALL POLYMER TUBING SHALL ALSO UTILIZE CONTAINMENT PIPING. REFER TO DETAILS 4027-960, 4027-962, 4027-966, 4027-968, 4027-992 AND 4027-994 FOR CHEMICAL TUBING AND SECONDARY CONTAINMENT INFORMATION.



C SECTION
1/2"=1'-0"
90-D1BL-D-2000

LICENSED PROFESSIONAL ENGINEER
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OKLAHOMA
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05/17/2026

DEWATERING CENTRIFUGE BUILDING
PROCESS SECTION

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WATER AND SEWER DEPARTMENT

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HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSN 05/26	
	LEAD ENG.	AZL 5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-D-3003		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 159 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 16:21

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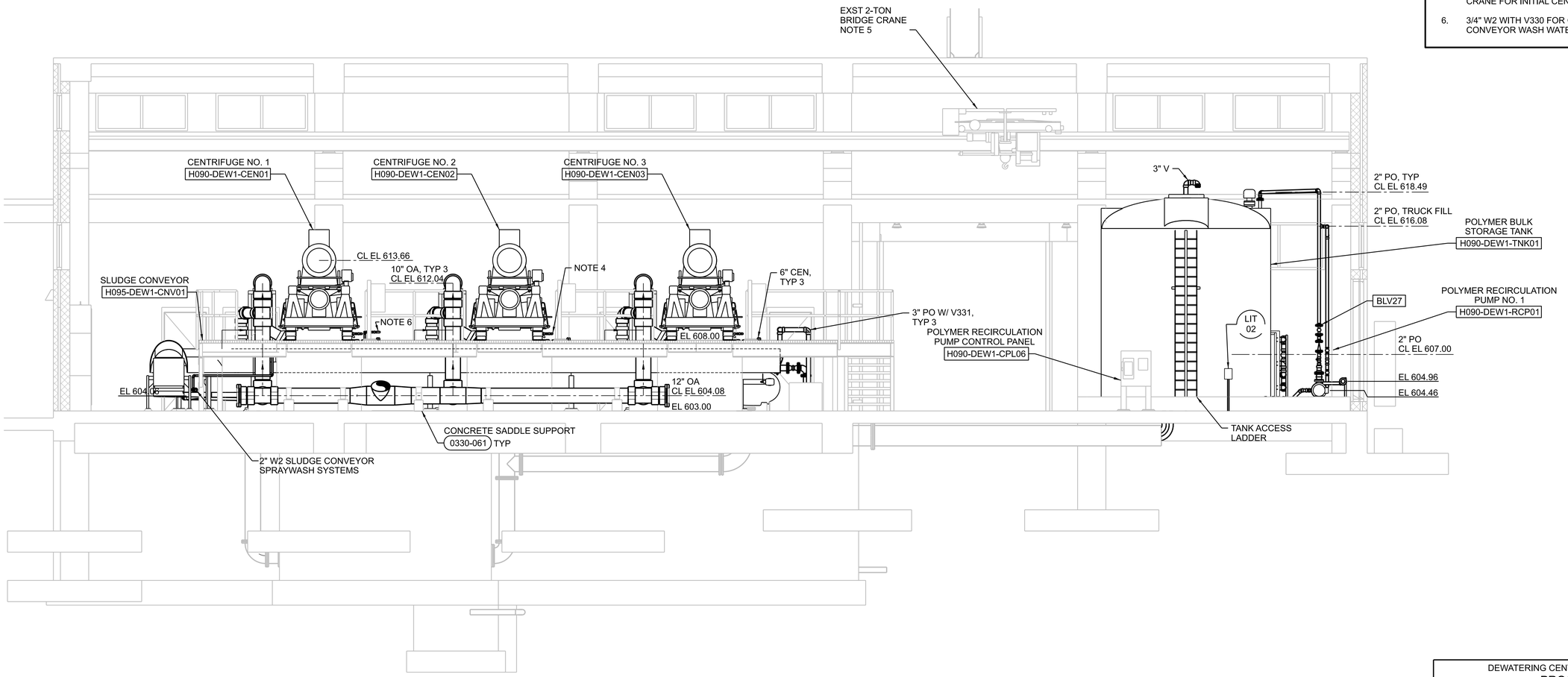
GENERAL SHEET NOTES

1. EACH CENTRIFUGE IS EQUIPPED WITH A MOTORIZED SLUDGE CAKE DISCHARGE DRAIN GATE.
2. FOR YARD PIPING CONNECTIONS SEE DEWATERING CENTRIFUGE BUILDING PROCESS LOWER LEVEL PLANS.
3. TERMINATE 4" OF 9" ABOVE FINISH FLOOR.
4. 1" W2 SOLENOID CONNECTION FOR DIVERTER GATE WASHWATER, TYPICAL 3.
5. EXISTING 2-TON BRIDGE CRANE TO BE INSPECTED AND TESTED. 2-TON CRANE SHALL ONLY BE USED FOR MAINTENANCE OF CENTRIFUGE ROTATING ASSEMBLY. CONTRACTOR TO PROCURE 10-TON CRANE FOR INITIAL CENTRIFUGE INSTALLATION.
6. 3/4" W2 WITH V330 FOR CONNECTION TO SLUDGE CONVEYOR WASH WATER SPRAY BAR.



D SECTION
3/16"=1'-0"

90-D1BL-D-2000
90-D1BL-D-2100

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REUSE OF DOCUMENTS:

LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

DEWATERING CENTRIFUGE BUILDING
PROCESS
SECTION

WFXQ7901

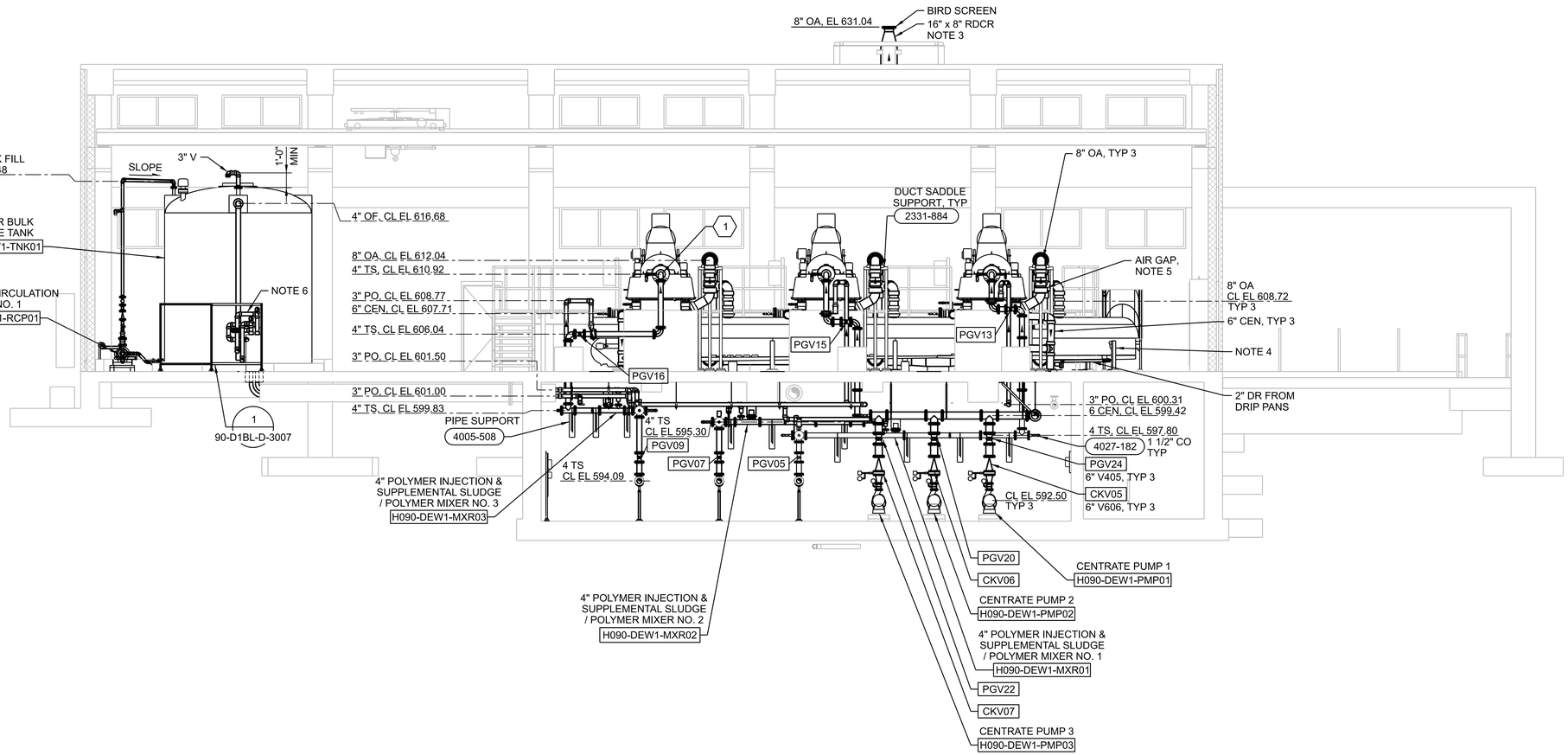
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
HORIZONTAL:	PROJ. MGR.	MSN	05/26	
	LEAD ENG.	GZL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-D-3004			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 160 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 16:17



E SECTION
3/16"=1'-0"
90-D1BL-D-2100

NOTES

1. FOR YARD PIPING CONNECTIONS SEE DEWATERING CENTRIFUGE BUILDING PROCESS LOWER LEVEL LEVEL PLANS.
2. PROVIDE HAND WHEEL OR CHAIN VALVE OPERATORS AS DIRECTED IN SPECIFICATION 40 27 02B.
3. 16" FOUL AIR DUCT TO REDUCE TO 8" AT DISCHARGE OUTLET TO ENSURE SUFFICIENT VELOCITY OUT OF DUCT FOR ODOR CONTROL.
4. CONTRACTOR TO VERIFY CONVEYOR SUPPORTS AND SPACING WITH MANUFACTURER. CONTRACTOR RESPONSIBLE FOR FIELD ROUTING PIPING AROUND CONVEYOR SUPPORTS.
5. DUCT HOOD TO PROVIDE NECESSARY AIR GAP TO PROTECT CENTRIFUGES. COORDINATE WITH CENTRIFUGE MANUFACTURER.
6. CONTRACTOR TO FIELD VERIFY POLYMER PIPE ROUTING TO AND THROUGH EXISTING PIPE CHASE.
7. 4" POLYMER INJECTORS ARE INTEGRATED WITH THE SUPPLEMENTAL SLUDGE / POLYMER MIXERS.

SHEET KEYNOTES

1. CENTRIFUGE FEED "THROAT" OVERALL DRAIN PIPE NOT SHOWN FOR CLARITY. ROUTE DRAIN PIPING DOWN AND CONNECT BACK INTO CENTRATE CHUTE.

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
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OKLAHOMA
Tanner Pipher
05/17/2026

DEWATERING CENTRIFUGE BUILDING
PROCESS
SECTION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

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DESIGN MANAGER

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DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 161 OF 300 SHEETS

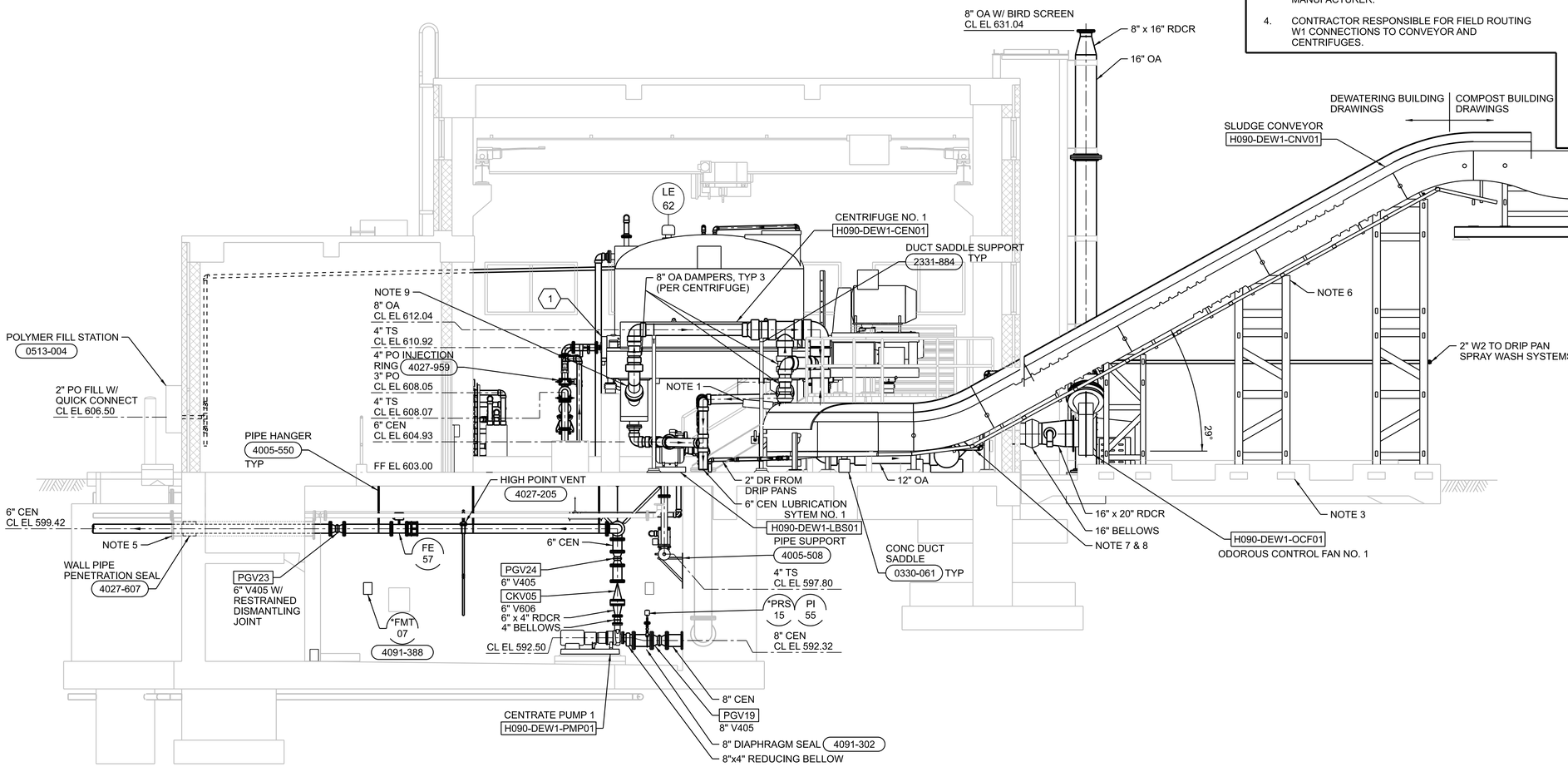
PLOT DATE: 14-MAY-2026 PLOT TIME: 16:18

SHEET KEYNOTES

1. CENTRIFUGE FEED "THROAT" OVERALL DRAIN PIPE NOT SHOWN FOR CLARITY. ROUTE DRAIN PIPING DOWN AND CONNECT BACK INTO CENTRATE CHUTE.

GENERAL SHEET NOTES

1. EACH CENTRIFUGE IS EQUIPPED WITH A MOTORIZED SLUDGE CAKE DISCHARGE DRAIN GATE.
2. FOR YARD PIPING CONNECTIONS SEE DEWATERING CENTRIFUGE BUILDING PROCESS LOWER LEVEL PLAN DRAWING.
3. CONTRACTOR TO COORDINATE CONVEYOR SUPPORT DESIGN AND INSTALLATION WITH MANUFACTURER.
4. CONTRACTOR RESPONSIBLE FOR FIELD ROUTING W1 CONNECTIONS TO CONVEYOR AND CENTRIFUGES.
5. REUSE EXISTING 10" WALL PENETRATION, USE LINK SEAL TO FILL IN ANNULAR SPACE, CONTRACTOR TO VERIFY APPROACH FOR FILLING ANNULAR SPACE ON EXISTING PENETRATION.
6. DRIP PAN WASHDOWN PIPING SHALL BE MOUNTED TO CONVEYOR SUPPORTS, COORDINATE WITH MANUFACTURER TO INSTALL WASHDOWN PIPING.
7. TEE INTO 2" W2 LINE WITH A 1/2" PVC PIPE DOWNSTREAM OF SOLENOID VALVE FOR CONVEYOR WASHDOWN. ROUTE 1/2" PVC ALONG FLOOR, UNDERNEATH CENTRIFUGE AND TERMINATE DOWNWARDS INTO EXISTING FLOOR DRAIN. PIPE SHALL FULLY DRAIN WASHDOWN AND AVOID W2 FREEZE PROTECTION.
8. SUPPORT WASHDOWN PIPING 2" AND BELOW WITH UNISTRUT.
9. EACH OA STREAM MADE AT EQUIPMENT (3 STREAMS PER CENTRIFUGE) SHALL BE INSTALLED WITH QUICK CONNECTIONS TO ACCOUNT FOR EASE OF CENTRIFUGE HOOD ACCESS.



F SECTION
1/4"=1'-0"
90-D1BL-D-2100

LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
05/17/2026

DEWATERING CENTRIFUGE BUILDING
PROCESS
SECTION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
	PROJ. MGR.	MSN	05/26
HORIZONTAL:	LEAD ENG.	RZL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-D-3006		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 162 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 16:19

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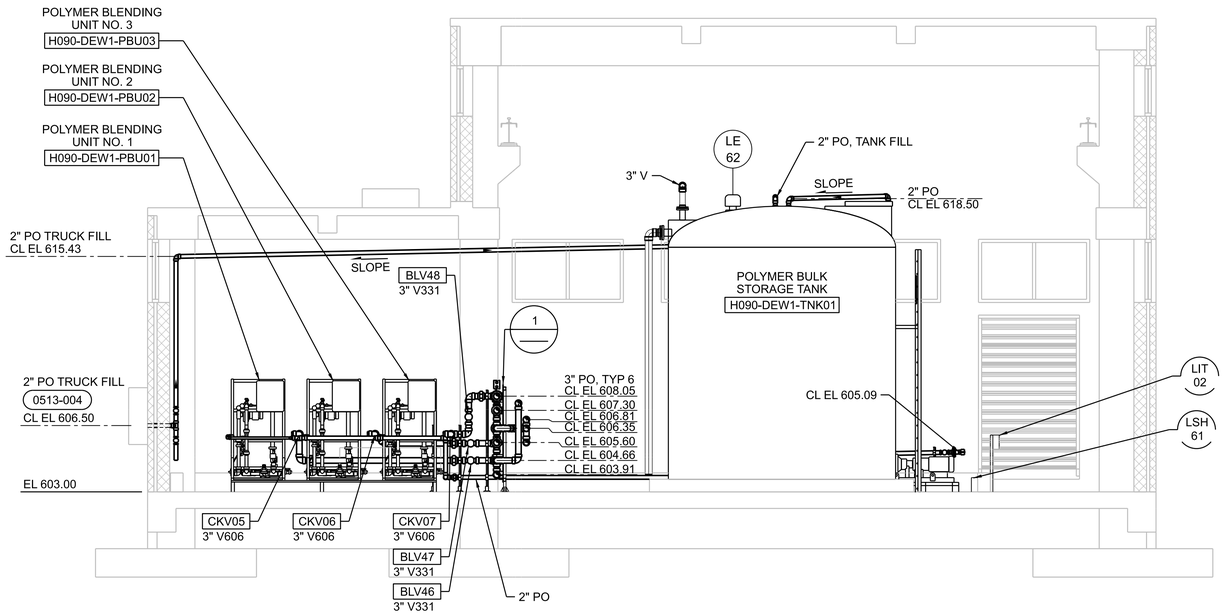
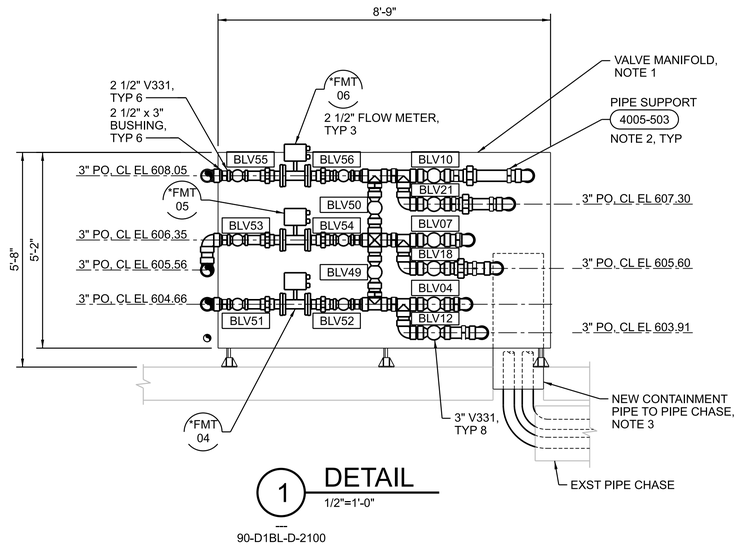
GENERAL SHEET NOTES

1. INSTALL VALVE MANIFOLD SUITABLE FOR CHEMICAL APPLICATIONS. USE 3/4" POLYPROPYLENE BACKBOARD WITH SUPPORTS AS DEFINED ON THE MATERIAL CLASSIFICATION TABLE.
2. VERIFY PIPE SUPPORT METHOD FOR BACKBOARD.
3. SEAL ABOVE GROUND PIPE CHASE FOR POLYMER CONTAINMENT. MANHOLE BOOT AND PVC PIPE SPOOL MAY BE USED TO RAISE PIPE CHASE CONTAINMENT HEIGHT TO A MINIMUM OF 1-FOOT ABOVE FINISHED FLOOR. CONTRACTOR TO FIELD VERIFY APPROACH.



G SECTION
1/4"=1'-0"
90-D1BL-D-2100



1 DETAIL
1/2"=1'-0"
90-D1BL-D-2100

LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

DEWATERING CENTRIFUGE BUILDING
PROCESS SECTION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MM	05/7/26	
HORIZONTAL:	LEAD ENG.	RZ	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-D-3007			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 163 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 16:19

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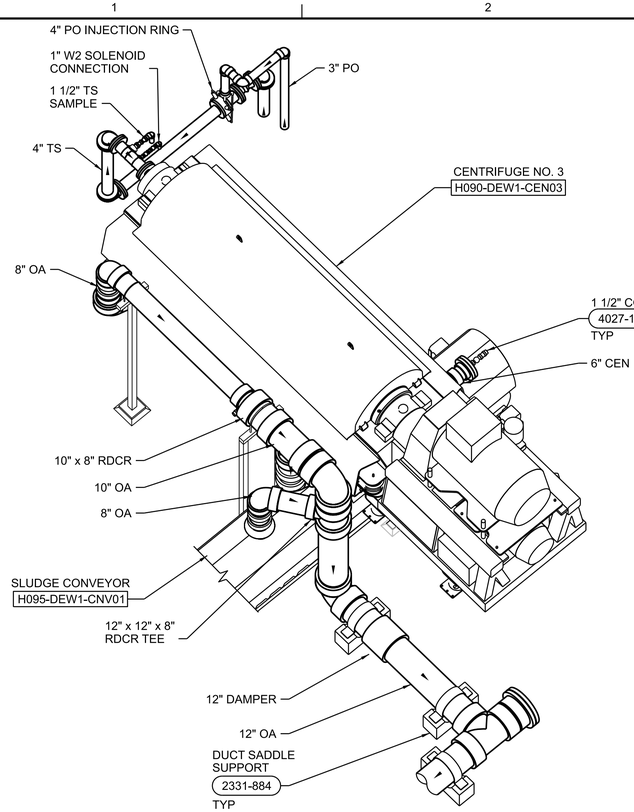
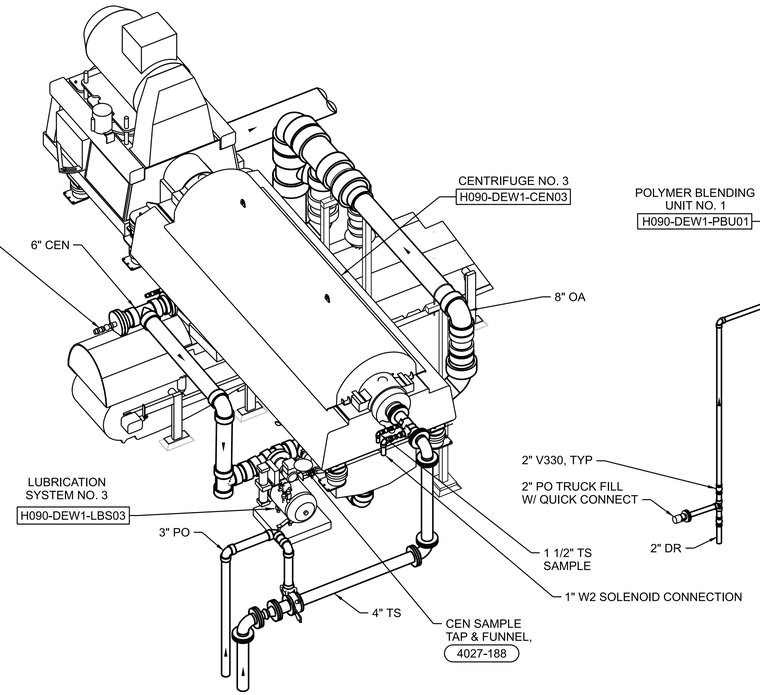


CENTRIFUGE

1 ISOMETRIC
NTS

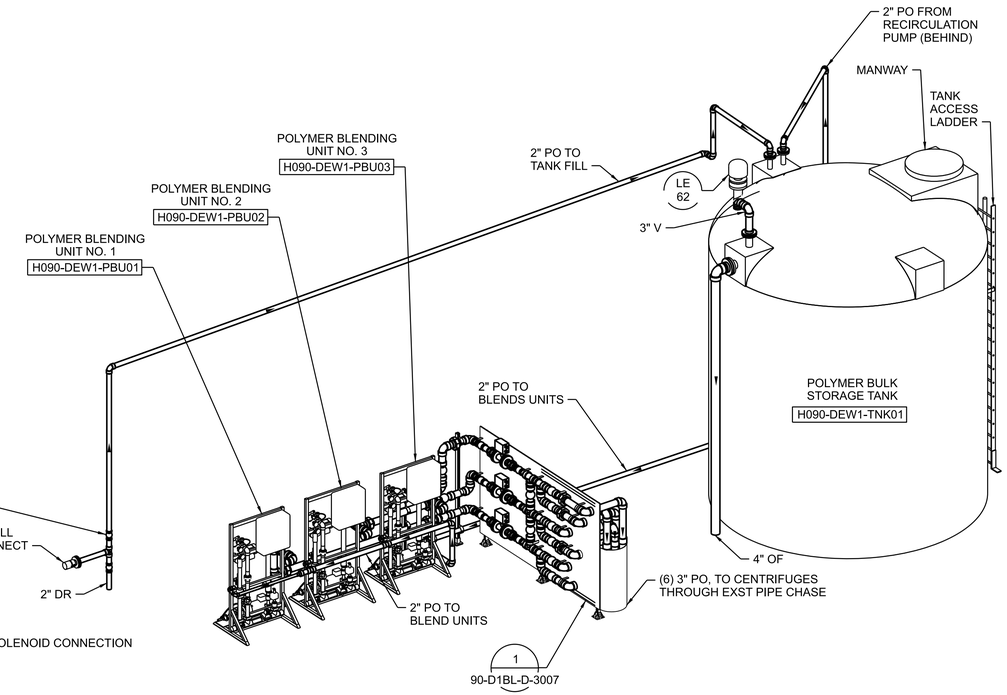
90-D1BL-D-2100



CENTRIFUGE

2 ISOMETRIC
NTS

90-D1BL-D-2100



POLYMER SYSTEM

3 ISOMETRIC
NTS

90-D1BL-D-2100

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OKLAHOMA
Tanner Pipher
05/17/2026

DEWATERING CENTRIFUGE BUILDING
PROCESS ISOMETRICS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

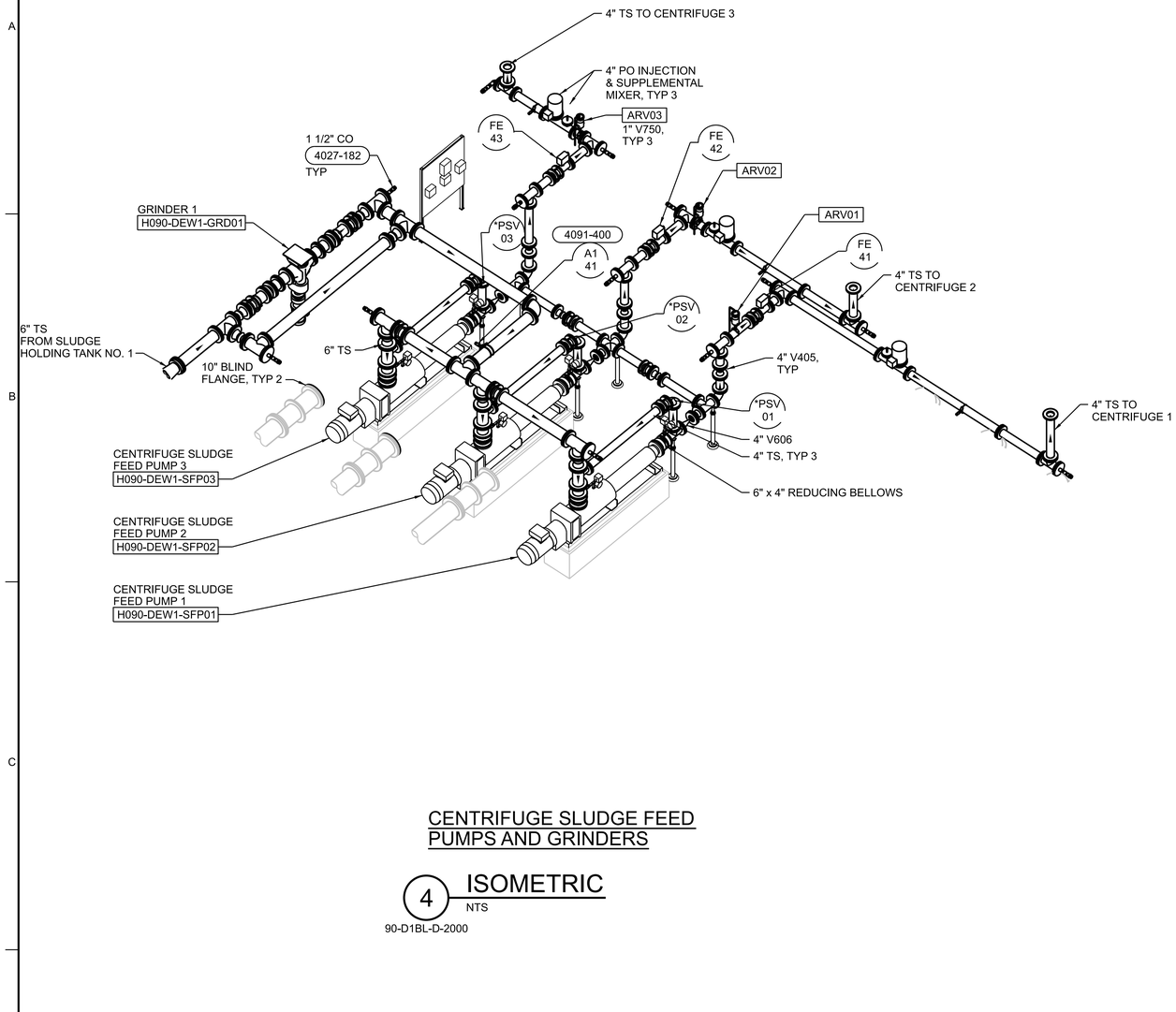
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSN 05/26	
	LEAD ENG.	RJL 5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-D-9001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 164 OF 300 SHEETS

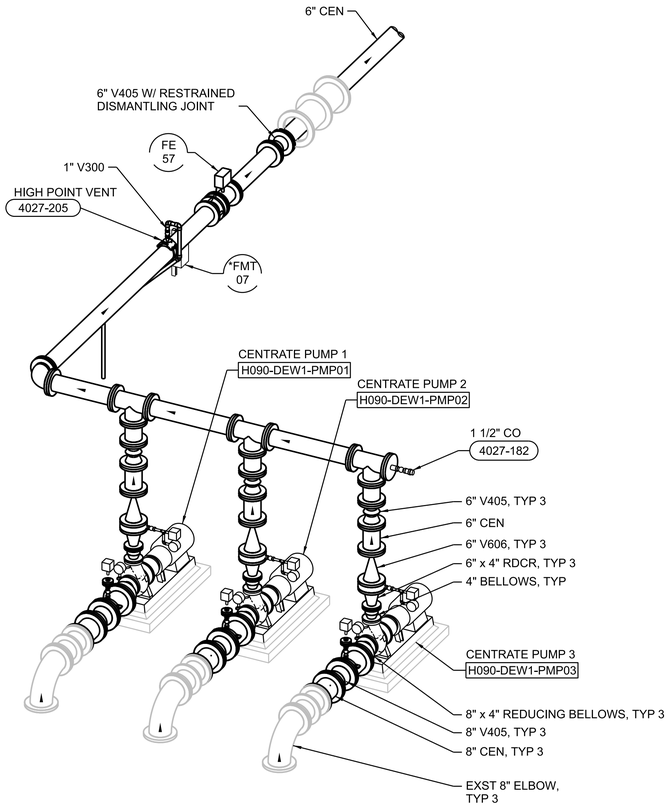
PLOT DATE: 14-MAY-2026 PLOT TIME: 16:19



CENTRIFUGE SLUDGE FEED PUMPS AND GRINDERS

4 ISOMETRIC
NTS

90-D1BL-D-2000



CENTRATE PUMPS

5 ISOMETRIC
NTS

90-D1BL-D-2000

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

DEWATERING CENTRIFUGE BUILDING
PROCESS
ISOMETRICS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

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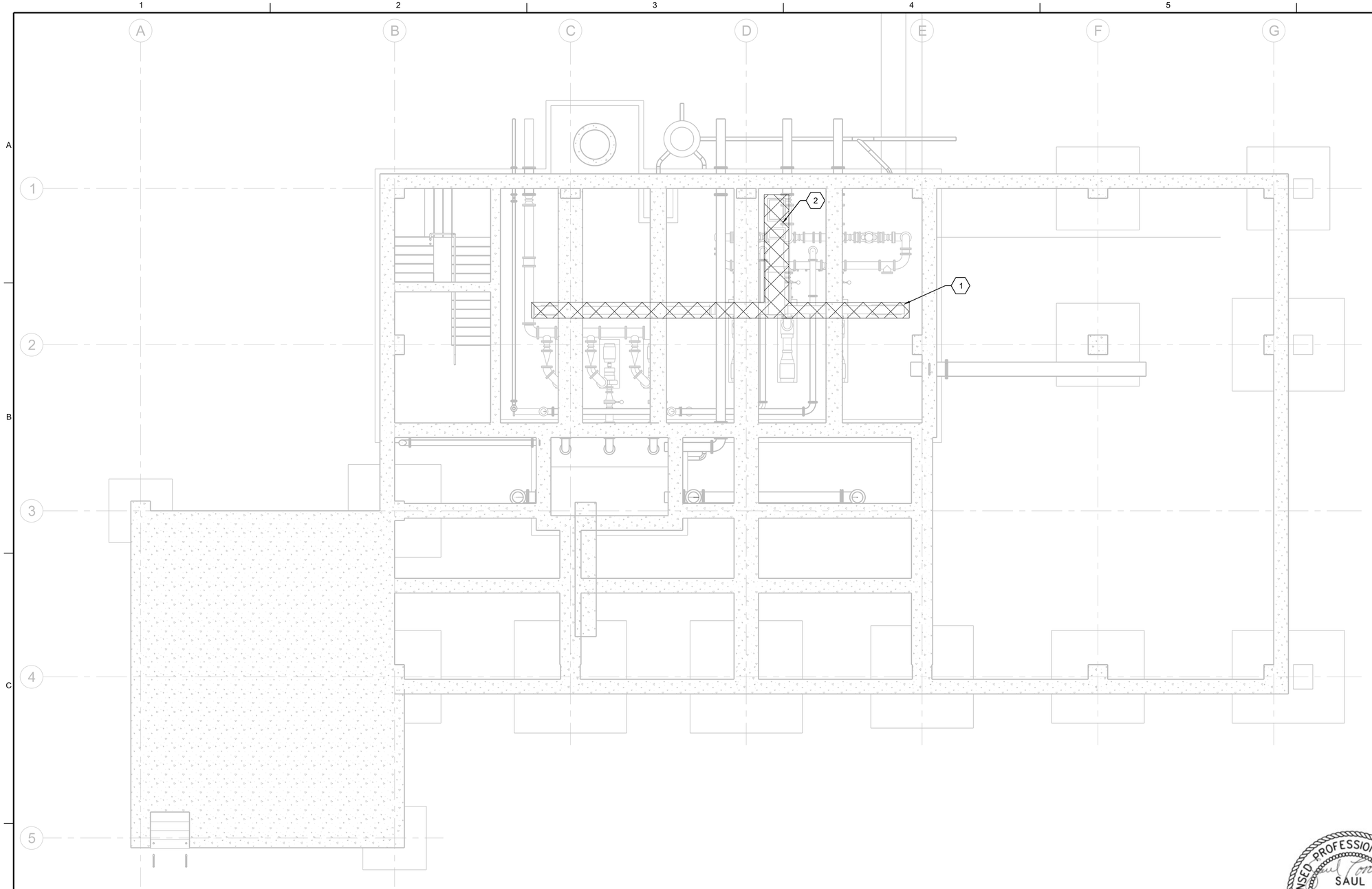
DESIGN MANAGER

FILE: DRAWING: 90-D1BL-D-9002
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 165 OF 300 SHEETS

PLOT DATE: 14-MAY-2026
PLOT TIME: 16:21



GENERAL SHEET NOTES

1. EQUIPMENT SHOWN AS DEMO WILL BE REMOVED IN IT'S ENTIRETY INCLUDING CONTROLS, POWER, AND ACCESSORIES.

SHEET KEYNOTES

1. DEMO EXISTING DUCTWORK AND ASSOCIATED HARDWARE. INCLUDE DEMOLITION OF ANY INSTRUMENTATION, CONDUIT, ETC IF APPLICABLE.
2. CEILING PENETRATION WILL BE USED FOR ROUTING NEW DUCTWORK.

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LOWER LEVEL PLAN
3/16"=1'-0"

LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

DEWATERING CENTRIFUGE BUILDING
HVAC
DEMOLITION
LOWER LEVEL PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

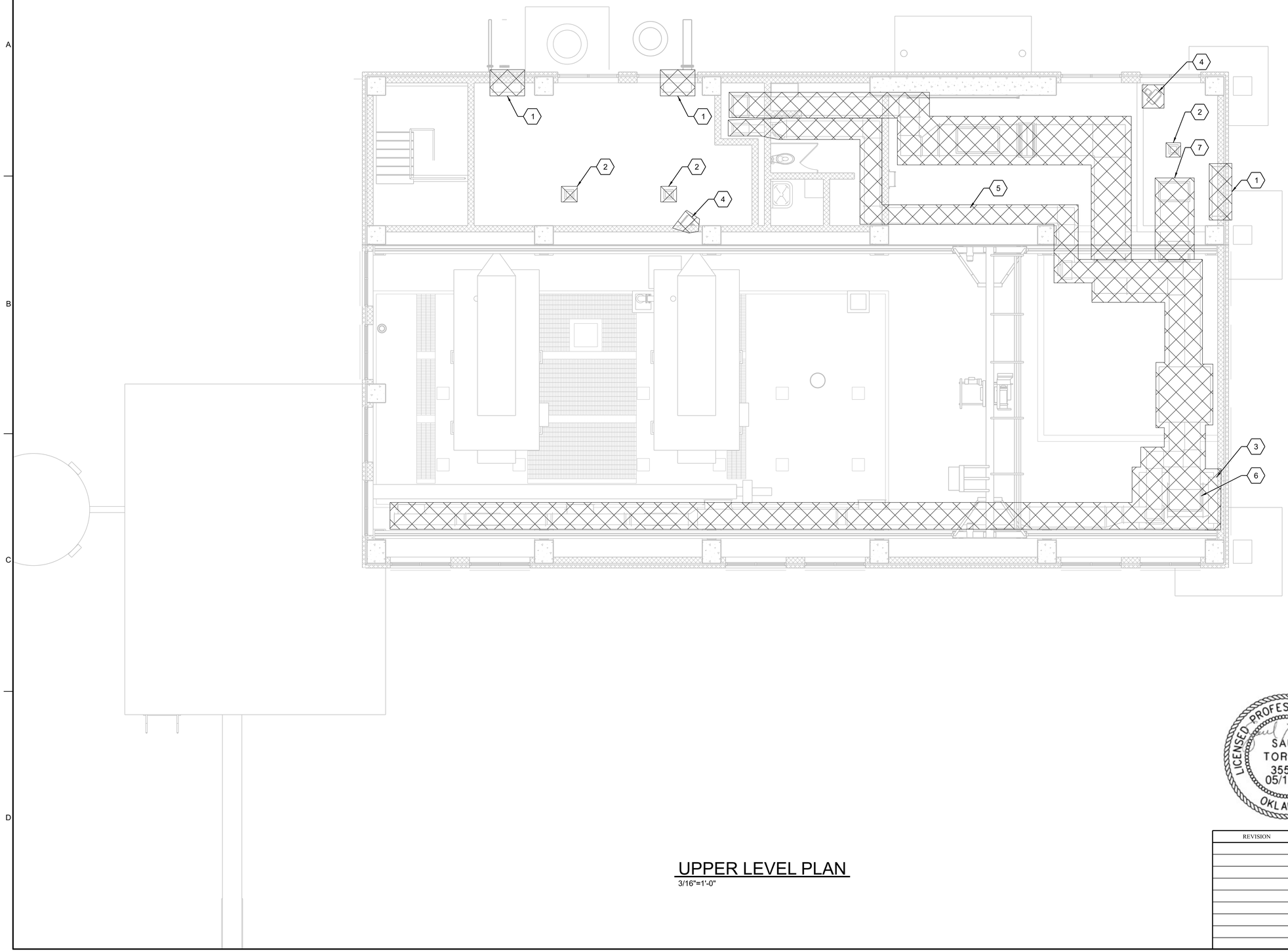
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	AZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 90-D1BL-H-1000
ATLAS PAGE NO: 3328
SHEET 166 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 12:35



GENERAL SHEET NOTES

1. EQUIPMENT SHOWN AS DEMO WILL BE REMOVED IN IT'S ENTIRETY INCLUDING CONTROLS, POWER, AND ACCESSORIES.

SHEET KEYNOTES

1. SEE ARCHITECTURAL DRAWINGS FOR INFILL OF EXTERIOR WALL.
2. DEMO EXISTING EXHAUST FAN AND HARDWARE. ROOF PENETRATION TO BE CAPPED AND FLASHED TO PREVENT WATER INFILTRATION. FLASHING MATERIAL SAME AS DUCTWORK.
3. SEE ARCHITECTURAL DRAWINGS FOR TEMPORARY INFILL OF EXTERIOR WALL FOR FUTURE USE.
4. DEMO EXISTING UNIT HEATER AND ASSOCIATED HARDWARE.
5. DEMO EXISTING DUCTWORK AND ASSOCIATED HARDWARE.
6. DEMO EXISTING VENTILATION EQUIPMENT AND ASSOCIATED HARDWARE
7. EXISTING ROOF OPENING TO REMAIN, SEE DWG 90-H-2002 FOR NEW EXHAUST FAN CONNECTION.

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UPPER LEVEL PLAN

3/16"=1'-0"

LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

DEWATERING CENTRIFUGE BUILDING
HVAC
DEMOLITION
UPPER LEVEL PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
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VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	WSN	05/26
LEAD ENG.	RJL	5/26
FIELD MGR.		5/26

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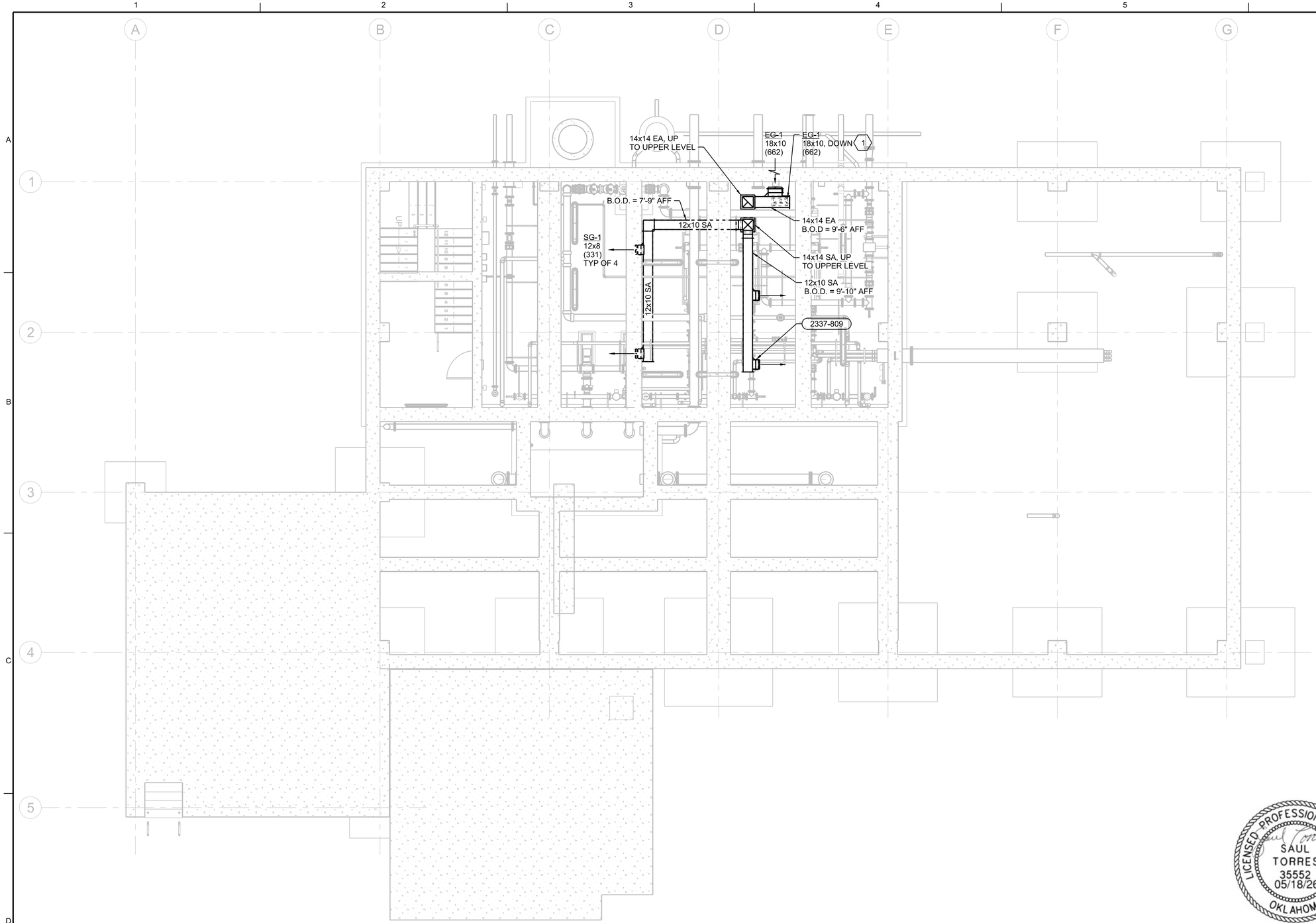
DESIGN MANAGER

FILE: DRAWING: 90-D1BL-H-1100
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 167 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 12:35



SHEET KEYNOTES

1. LOW POINT EXHAUST DUCT MINIMUM 12 INCHES FROM FLOOR. 45 DEGREE DIAGONAL INTLET.

LOWER LEVEL PLAN

3/16"=1'-0"

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LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

DEWATERING CENTRIFUGE BUILDING
HVAC
LOWER LEVEL PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

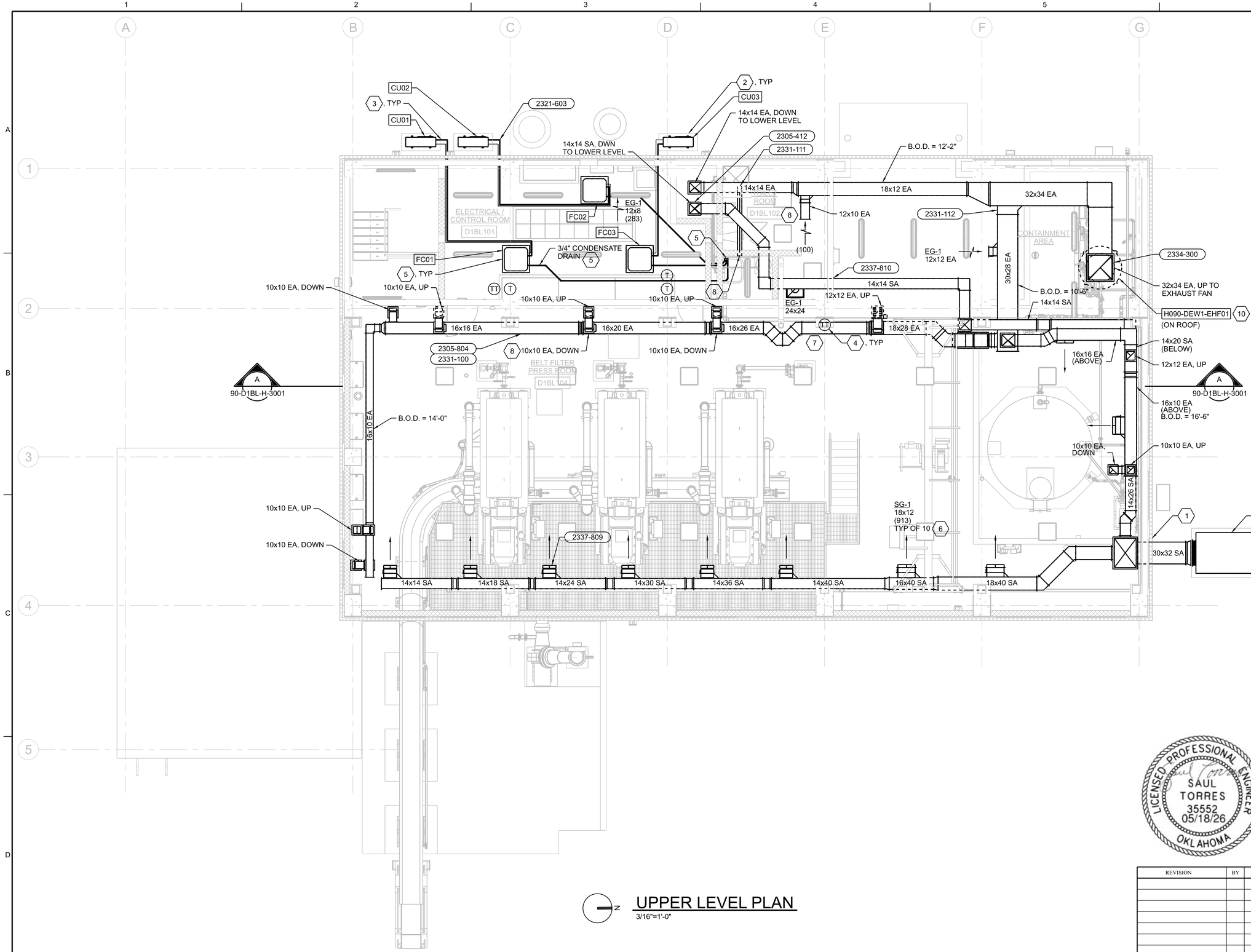
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	SZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 90-D1BL-H-2000
ATLAS PAGE NO: 3328
SHEET 168 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 12:35



SHEET KEYNOTES

1. BLANK OFF THE SURROUNDING EXISTING PENETRATION WITH APPROPRIATE R-VALUE. SEE ARCHITECTURAL DRAWINGS.
2. PROVIDE CONCRETE PAD FOR EQUIPMENT. PAD SHALL BE MINIMUM 12" LARGER THAN EQUIPMENT DIMENSIONS. EQUIPMENT SHALL BE CENTERED ON PAD. SEE STRUCTURAL.
3. CONTRACTOR TO ROUTE REFRIGERANT PIPING AS REQUIRED. SEE ARCHITECTURAL FOR WALL PENETRATION SEAL.
4. THERMOSTAT SHALL BE INSTALLED MINIMUM 52" AFF.
5. ROUTE 3/4" CONDENSATE DRAIN TO NEAREST DRAIN/SERVICE SINK AND TERMINATE WITH 1" AIR GAP.
6. ALTERNATE SUPPLY GRILLE VANES TO DISCHARGE AIR TOWARDS THE FLOOR AND CEILING TO PROMOTE AIR MIXING.
7. LOCATE HCP01 ABOVE THERMOSTAT. PROVIDE 1/4" NYLON OR POLYETHYLENE TUBING WITH 1/2" RIGID ALUMINUM CONDUIT. PROVIDE ACI ROOM & OUTDOOR PICK UP PORT SERIES ENCLOSURES. SEE ARCHITECTURAL DRAWINGS FOR PENETRATION SEAL.
8. COVER WITH 1-INCH SQUARED MESH SAME MATERIAL AS DUCTWORK.
9. LOW/HIGH POINT EXHAUST DUCT MINIMUM 12 INCHES FROM FLOOR/CEILING. 45 DEGREE DIAGONAL OUTLET. COVER WITH 1 INCH SQUARE MESH SAME MATERIAL AS DUCT. (TYP.)
10. VERIFY EXISTING CONDITIONS AND COORDINATE EXHAUST FAN OVERSIZE FLANGE CURB PROCUREMENT WITH EQUIPMENT VENDOR.

UPPER LEVEL PLAN

3/16"=1'-0"

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LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

DEWATERING CENTRIFUGE BUILDING
HVAC
UPPER LEVEL PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

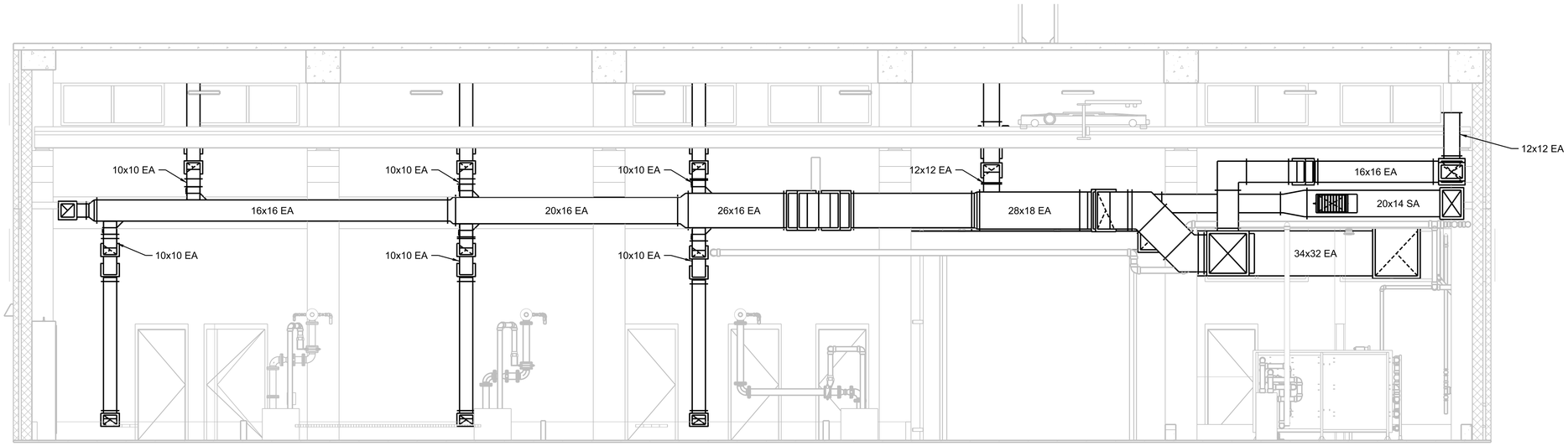
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	SZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 90-D1BL-H-2100
ATLAS PAGE NO: 3328
SHEET 169 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 12:35



A SECTION
1/4"=1'-0"
90-D1BL-H-2100

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LICENSED PROFESSIONAL ENGINEER
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DEWATERING CENTRIFUGE BUILDING
HVAC
SECTION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

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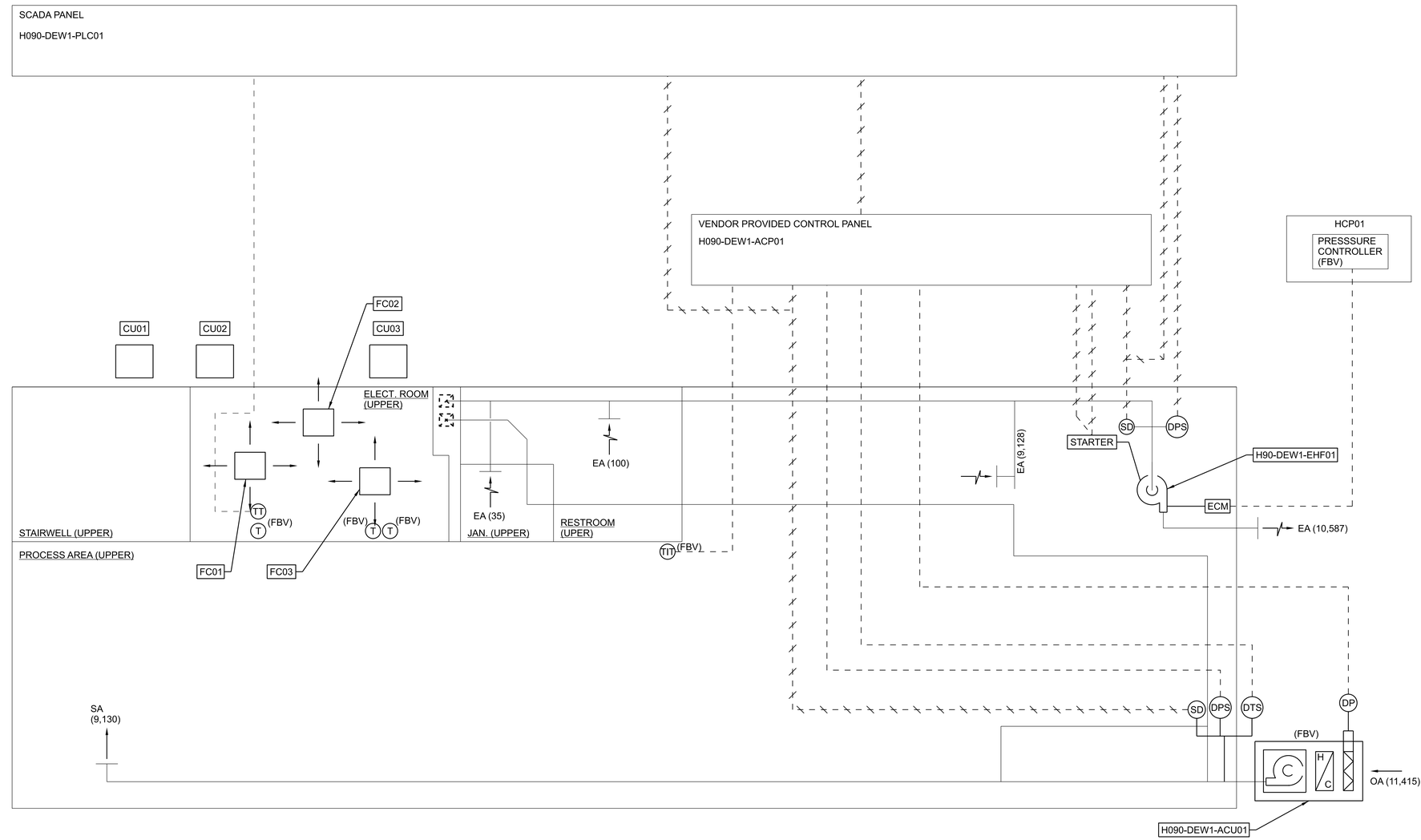
DRAWING: 90-D1BL-H-3001
DATE: MAY 2026

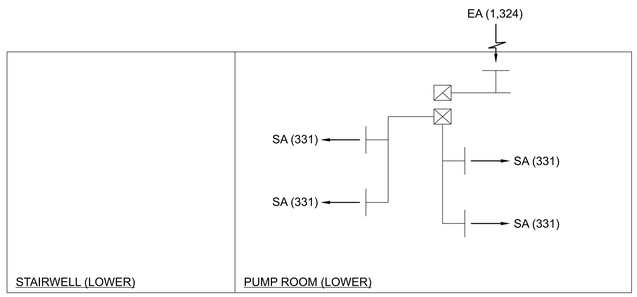
ATLAS PAGE NO: 3328
SHEET 170 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 12:35

GENERAL NOTES

1. SEE HVAC LEGEND SHEET 01-G-0035.
2. SEE I&C LEGEND SHEETS 01-G-0055 & 01-G-0056.





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LICENSED PROFESSIONAL ENGINEER
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OKLAHOMA

DEWATERING CENTRIFUGE BUILDING
HVAC
AIRFLOW SCHEMATIC

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

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SURVEY		
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LEAD ENG.	RZL	5/26
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ATLAS PAGE NO: 3328 SHEET 171 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 12:35

SEQUENCE OF OPERATIONS

GENERAL:

1. A GENERAL ALARM SHALL BE SENT TO THE SCADA SYSTEM VIA 24 VDC DRY CONTACTS RELAY WHEN THERE IS AN EQUIPMENT FAILURE OR ALARM. CONTROL WIRING SHALL BE PROVIDED BY DIVISION 26. SCADA PANEL TERMINATION SHALL BE PROVIDED BY DIVISION 40.
2. ANALOGUE SIGNAL CONVERSION PROGRAMMING SHALL BE DONE BY DIVISION 40 TO COMMUNICATE WITH SCADA NETWORK.

H090-DEW1-ACU01

GENERAL:
THE UNIT OPERATES AS A CONSTANT 100% OUTSIDE AIR MAKEUP UNIT WITH A PROGRAMMABLE THERMOSTAT.

THE UNIT IS ENABLED CONTINUOUSLY.

THE UNIT SHALL OPERATE IN ONE OF THE FOLLOWING SCHEDULED MODES.
1. OCCUPIED
2. UNOCCUPIED

ZONE SET POINTS:
1. OCCUPIED MODE
   VENTILATION ONLY - COOLING
   50F (ADJ) HEATING
2. UNOCCUPIED MODE:
   UNIT IS TURNED OFF AND OUTDOOR AIR DAMPER IS CLOSED.

OCCUPIED MODE RUN CONDITIONS:
FAN CONTROLS:
1. THE FAN VFD SHALL RUN AT A CONSTANT FAN SPEED TO MAINTAIN THE SPACE CFM PER NFPA 820.

COOLING/VENTILATION CONTROLS:
1. IF THE SUPPLY AIR TEMPERATURE IS ABOVE THE HEATING SETPOINT THEN THE UNIT SHALL RUN AT 100% OUTSIDE AIR.
2. ENABLED WHEN THERE IS NO HEATING DEMAND DURING OCCUPIED MODE.

HEATING CONTROLS:
1. IF THE SUPPLY AIR TEMPERATURE IS BELOW THE SUPPLY AIR HEATING SET POINT, THE SCR ELECTRIC HEAT STAGES ON AND MODULATES TO MAINTAIN THE SUPPLY AIR HEATING SET POINT. IF ADDITIONAL HEAT IS REQUIRED, SCR HEAT IS HELD AT FULL CAPACITY AND THE AUXILIARY HEAT WILL MODULATE TO MAINTAIN SUPPLY AIR HEATING SET POINT.
2. IF THE SUPPLY AIR TEMPERATURE IS ABOVE HEATING SET POINT, HEATING WILL BEGIN TO STAGE OFF.

SUPPLY AIR TEMPERATURE RESET:
1. THE SUPPLY AIR RESET SOURCE FOR THIS UNIT IS THE SPACE TEMPERATURE. THE SUPPLY AIR TEMPERATURE RESET SOURCE IS USED TO ADJUST THE SUPPLY AIR TEMPERATURE SETPOINT. THE HEATING MODE SETPOINT ARE INDEPENDENTLY CONFIGURED TO BE CONTROLLED BY A COMMON RESET SOURCE.
2. THE HIGH AND LOW LIMIT VALUES ARE DEFINED TO BE 0F (ADJ) LOW AND 200F (ADJ) HIGH.
3. WHEN THE RESET SOURCE IS AT ITS HIGH LIMIT SETPOINT, THE SAT SETPOINT IS RESET TO ITS LOW LIMIT SETPOINT. WHEN THE RESET SOURCE IS AT ITS LOW LIMIT SETPOINT, THE SAT SETPOINT RESETS TO ITS HIGH LIMIT SETPOINT.
4. AS THE RESET SOURCE VALUE MOVES WITHIN THE HIGH AND LOW LIMIT RESET SETPOINTS, THE SUPPLY AIR SETPOINT IS PROPORTIONALLY RESET WITHIN THE HIGH AND LOW SAT SETPOINTS.

ALARMS TO VENDOR CONTROL PANEL:
1. DIRTY FILTER ALARM
2. MECHANICAL HEATING FAILURE
3. EMERGENCY SHUTDOWN
4. THIS IS A SHORTEN LIST OF ALARMS, FOR COMPREHENSIVE LIST CONSULT EQUIPMENT VENDOR.

EMERGENCY SHUTDOWN:
UPON SMOKE DETECTOR ACTIVATION, THE UNIT SHALL SHUTDOWN. THE SMOKE ALARM ACTIVATION SIGNAL SHALL BE HARD WIRED TO THE UNIT CONTROLLER INPUT. SIGNAL SHALL ALSO BE SENT TO SCADA PANEL AND ALARM MONITORING STATION.

VENTILATION ALARM:
IF THE DESIGN AIR FLOW DROPS BELOW 80% REQUIRED TO DECLASSIFY THE SPACE PER NFPA 820, THEN A VENTILATION SIGNAL IS SENT TO SCADA PANEL AND ALARM MONITORING STATION. SIGNAL SHALL TRIGGER AUDIBLE AND VISUAL ALARM TO NOTIFY PERSONAL TO EVACUATE/EXIT FACILITY UNTIL NORMAL HVAC OPERATION IS ACHIEVED.

H090-DEW1-EHF01

GENERAL: THE FANS OPERATE AT A VARIABLE SPEED TO MAINTAIN SPACE CFM PER NFPA 820.

RUN CONDITIONS:
1. THE FANS SHALL BE INTERLOCKED WITH H040-WAS1-ACU01.
2. FACTORY PROVIDED PRESSURE CONTROLLER SHALL BE PROVIDED TO MAINTAIN THE SPACE AT A NEGATIVE 0.01 IN.WC.
3. PRESSURE CONTROLLER SHALL BE LOCATED IN H090-DEW1-HCP01 WITH A DEDICATED 120V/1P AND 30 AMP CIRCUIT BREAKER PROVIDED BY DIV 26.

EMERGENCY SHUTDOWN:
UPON SMOKE DETECTOR ACTIVATION, THE UNIT SHALL SHUTDOWN. THE SMOKE ALARM ACTIVATION SIGNAL SHALL BE HARD WIRED TO THE UNIT CONTROLLER INPUT. SIGNAL SHALL ALSO BE SENT TO SCADA PANEL AND ALARM MONITORING STATION.

VENTILATION ALARM:
IF THE DESIGN AIR FLOW DROPS BELOW 80% REQUIRED TO DECLASSIFY THE SPACE PER NFPA 820, THEN A VENTILATION SIGNAL IS SENT TO SCADA PANEL AND ALARM MONITORING STATION. SIGNAL SHALL TRIGGER AUDIBLE AND VISUAL ALARM TO NOTIFY PERSONAL TO EVACUATE/EXIT FACILITY UNTIL NORMAL HVAC OPERATION IS ACHIEVED.

FC(01/02/03)

RUN CONDITIONS:
1. THE UNITS ARE ENABLED CONTINUOUSLY AND OPERATE IN A CUTY/STANDBY FASHION.
2. EACH UNIT IS CONTROLLED BY A DEDICATED UNIT MANUFACTURER WALL MOUNTED PROGRAMMABLE THERMOSTAT.
3. SET POINTS SHALL BE MANUALLY SWAPPED TO ENSURE EQUAL RUNTIME FOR EQUIPMENT.
4. THE CONDENSING UNITS SHALL OPERATE AS REQUIRED WHEN THEIR ASSOCIATED AIR CONDITIONING UNIT INITIATES.

COOLING MODE:
FC01 SHALL MAINTAIN SPACE SET POINT OF 80F(ADJ).
FC02 SHALL MAINTAIN SPACE SET POINT OF 85F(ADJ).
FC03 SHALL MAINTAIN SPACE SET POINT OF 90F(ADJ).

HEATING MODE:
FC01 SHALL MAINTAIN SPACE SET POINT OF 35F(ADJ).
FC02 SHALL MAINTAIN SPACE SET POINT OF 40F(ADJ).
FC03 SHALL MAINTAIN SPACE SET POINT OF 45F(ADJ).

ALARMS TO SCADA

H090-DEW1-ACU01 - VENTILATION FAILURE
H090-DEW1-EHF01 - VENTILATION FAILURE
SMOKE ALARMS
HIGH SPACE AIR TEMPERATURE, ELECTRICAL ROOM - 90F (ADJ)
LOW SPACE AIR TEMPERATURE - ELECTRICAL ROOM - 30F (ADJ)

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LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

DEWATERING CENTRIFUGE BUILDING
HVAC
SEQUENCE OD OPERATION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MN	05/26
LEAD ENG.	SZ	5/26
FIELD MGR.		5/26

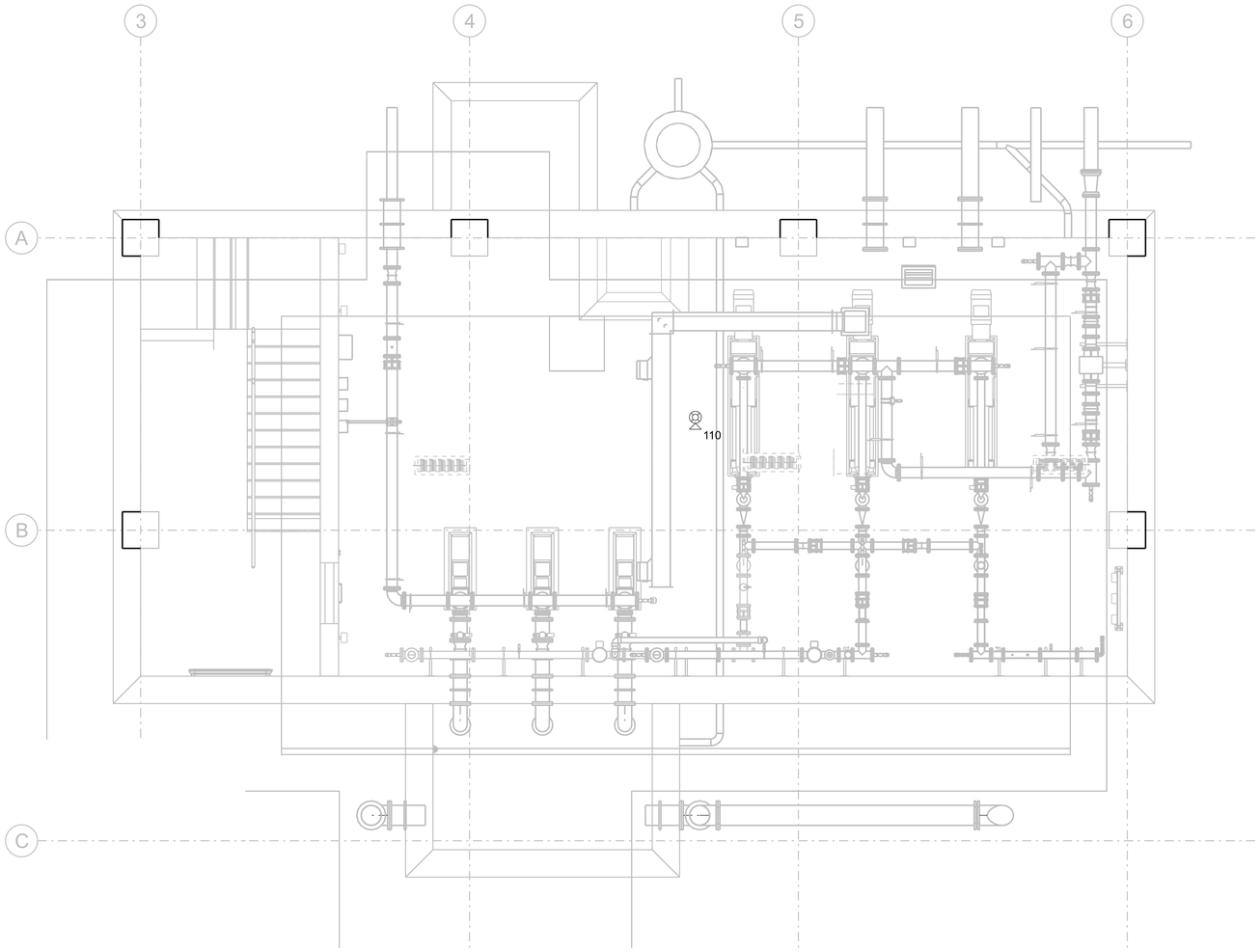
APPROVED:
DESIGN MANAGER

FILE: DRAWING: 90-D1BL-H-6002 DATE: MAY 2026
ATLAS PAGE NO: 3328 SHEET 172 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 12:34

GENERAL SHEET NOTES

1. REFER TO SHEET 01-G-0038 FOR FIRE ALARM GENERAL NOTES AND LEGEND.
2. REFER TO SHEET 90-D1BL-H-2000 FOR COORDINATION WITH MECHANICAL.
3. REFER TO SHEET 90-D1BL-E-2000 AND 90-D1BL-E-2001 FOR COORDINATION WITH ELECTRICAL AND LIGHTING.



LOWER LEVEL PLAN

1/4"=1'-0"

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LICENSED PROFESSIONAL ENGINEER
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05/18/26
OKLAHOMA

DEWATERING CENTRIFUGE BUILDING
FIRE ALARM
LOWER LEVEL PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

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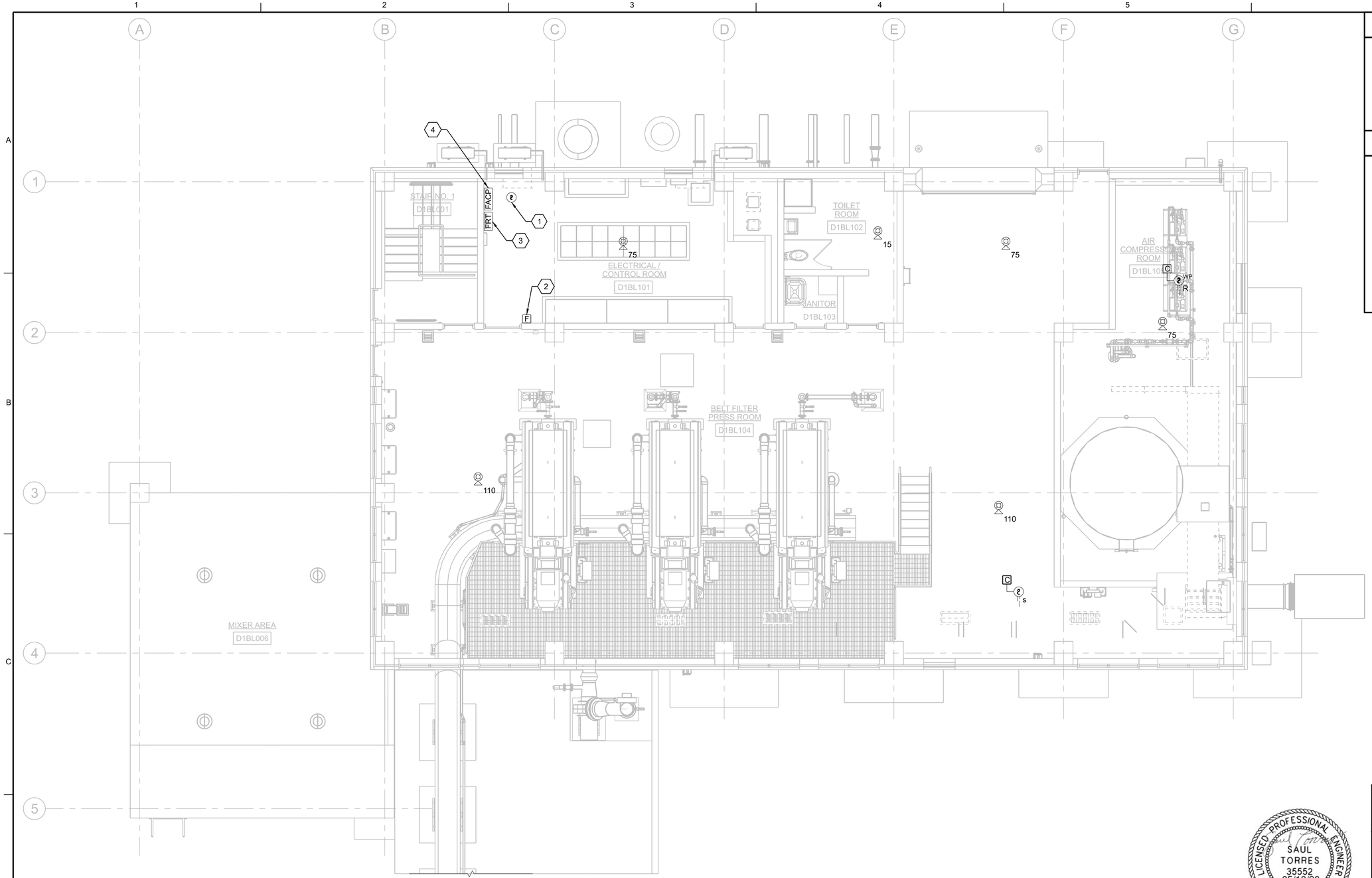
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSN	05/26
	LEAD ENG.	SZL	5/26
	FIELD MGR.		5/26
FILE:	DRAWING: 90-D1BL-F-2000		DESIGN MANAGER
ATLAS PAGE NO: 3328			DATE: MAY 2026
			SHEET 173 OF 300 SHEETS

PLOT DATE: 18-MAY-2026 PLOT TIME: 13:35



GENERAL SHEET NOTES

1. REFER TO SHEET 01-G-0038 FOR FIRE ALARM GENERAL NOTES AND LEGEND.
2. REFER TO SHEET 90-D1BL-H-2100 FOR COORDINATION WITH MECHANICAL.
3. REFER TO SHEET 90-D1BL-E-2100 AND 90-D1BL-E-2101 FOR COORDINATION WITH ELECTRICAL AND LIGHTING.

SHEET KEYNOTES

1. SMOKE DETECTOR FOR PROTECTION OF THE FIRE ALARM PANELS PER NFPA 72.
2. MANUAL FIRE ALARM PULL STATION WITHIN 5 FEET OF AN EXIT DOOR. BUILDING MUST BE PROVIDED WITH A MINIMUM OF ONE FIRE ALARM MANUAL ACTIVATION IN ACCORDANCE WITH IFC 907.2.
3. FIRE ALARM RADIO TRANSCEIVER PANEL FOR SIGNAL TRANSMISSION TO FIRE ALARM MONITORING STATION AND SCADA SYSTEM. CONTRACTOR TO COORDINATE FIRE ALARM MONITORING STATION.
4. ADDRESSABLE FIRE ALARM CONTROL PANEL TO HAVE AN ADDITIONAL DRY CONNECTION TO THE SCADA SYSTEM.

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UPPER LEVEL PLAN

3/16"=1'-0"

LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

DEWATERING CENTRIFUGE BUILDING
FIRE ALARM
UPPER LEVEL PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

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DRAWN	AP	
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SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

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DESIGN MANAGER

FILE: DRAWING: 90-D1BL-F-2100
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 174 OF 300 SHEETS

PLOT DATE: 18-MAY-2026 PLOT TIME: 13:39

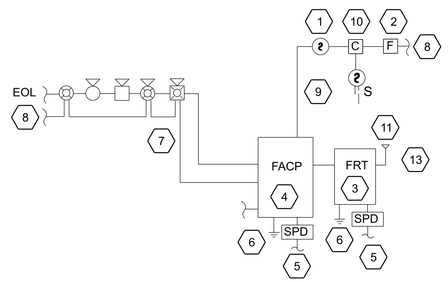
SHEET KEYNOTES

1. SMOKE DETECTOR FOR PROTECTION OF THE FIRE ALARM PANELS PER NFPA 72.
2. MANUAL FIRE ALARM PULL STATION WITHIN 5 FEET OF AN EXIT DOOR. BUILDING MUST BE PROVIDED WITH A MINIMUM OF ONE FIRE ALARM ACTIVATION IN ACCORDANCE WITH THE IFC 907.2.
3. FIRE ALARM RADIO TRANSCEIVER PANEL FOR SIGNAL TRANSMISSION TO FIRE ALARM MONITORING STATION AND SCADA SYSTEM.
4. FIRE ALARM CONTROL PANEL TO MONITOR FIRE ALARM SYSTEM DEVICES.
5. CONNECT TO 120 VAC, 20 AMP DEDICATED CIRCUIT WITH SURGE SUPPRESSION DEVICE.
6. PROVIDE GROUNDING PER NEC-NFPA72.
7. PROVIDE ADDITIONAL NOTIFICATION APPLIANCE CIRCUITS AS REQUIRED SUCH THAT VOLTAGE DROP DOES NOT EXCEED THE MAXIMUM ALLOWED BY THE MANUFACTURER PER CIRCUIT. ADDITIONAL NOTIFICATION CIRCUITS AND ADDITIONAL POWER SUPPLIES MAY BE REQUIRED DEPENDING ON EQUIPMENT PROVIDED.
8. CLASS B CIRCUITS. PROVIDE SEPARATE AUDIBLE AND VISUAL CIRCUITS FOR SILENCE FEATURE.
9. PROVIDE ADDITIONAL SIGNALING LINE CIRCUITS AS REQUIRED FOR QUANTITY OF DEVICES.
10. CONTROL MODULE FOR DUCT SMOKE DETECTORS PROVIDED ON SUPPLY AND RETURN SIDE OF AHUS OVER 2,000 CFM.
11. PROVIDE ANTENNA TO TRANSMIT FIRE ALARM PANEL SIGNALS TO FIRE ALARM MONITORING STATION AND SCADA SYSTEM..

SYSTEM INPUT		SYSTEM OUTPUTS: ACTUATE ALARM SIGNAL INDICATOR AND AUDIBLE	DISPLAY ALARM DEVICE AT FACP	DISPLAY ALARM SIGNAL AT SCADA SYSTEM	ACTUATE SUPERVISORY INDICATOR AND AUDIBLE	DISPLAY SUPERVISORY CONDITION AT FACP	ACTUATE COMMON TROUBLE SIGNAL INDICATOR AND AUDIBLE	DISPLAY TROUBLE CONDITION AT FACP	TRANSMIT FIRE ALARM SIGNAL AT SCADA SYSTEM	TRANSMIT SUPERVISORY SIGNAL TO FIRE ALARM MONITORING STATION	TRANSMIT TROUBLE SIGNAL TO FIRE ALARM MONITORING STATION	ACTUATE OCCUPANT NOTIFICATION THROUGHOUT THE BUILDING	SHUT DOWN ASSOCIATED HVAC UNIT(S)	SILENCE PANEL AND FACILITY AUDIBLES (VISUALS CONTINUE)	CONTROL PANEL RETURNS TO NORMAL (AUDIBLES AND VISUALS STOP)	
		A	B	B1	C	D	E	F	F1	G	H	I	K	L	M	N
ALARM FUNCTIONS																
1	MANUEL FIRE ALARM PULL STATION	●	●	●						●			●				1
2	SMOKE DETECTOR	●	●	●						●			●				2
SUPERVISORY FUNCTIONS																
3	DUCT SMOKE DETECTORS (HVAC UNITS)				●	●	●				●			●			3
TROUBLE FUNCTIONS																
4	FIRE ALARM AC POWER FAILURE						●	●	●			●					4
5	FIRE ALARM SYSTEM LOW BATTERY						●	●	●			●					5
6	OPEN CIRCUIT						●	●	●			●					6
7	GROUND FAULT						●	●	●			●					7
8	NOTIFICATION APPLIANCE CIRCUIT SHORT						●	●	●			●					8
PANEL FUNCTIONS																
9	SYSTEM SILENCE						●	●				●			●		9
10	SYSTEM RESET															●	10
		A	B	B1	C	D	E	F	F1	G	H	I	K	L	M	N	

SEQUENCE OF OPERATIONS

N.T.S



NOTE: FIRE ALARM RISER DIAGRAM IS DIAGRAMMATICAL IN NATURE AND DOES NOT SHOWN EXACT NUMBER OF DEVICES REQUIRED IN THE SYSTEM.

TYPICAL FIRE ALARM RISER DIAGRAM

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LICENSED PROFESSIONAL ENGINEER
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OKLAHOMA

DEWATERING CENTRIFUGE BUILDING
FIRE ALARM
SEQUENCE OF OPERATIONS
AND RISER DIAGRAM

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

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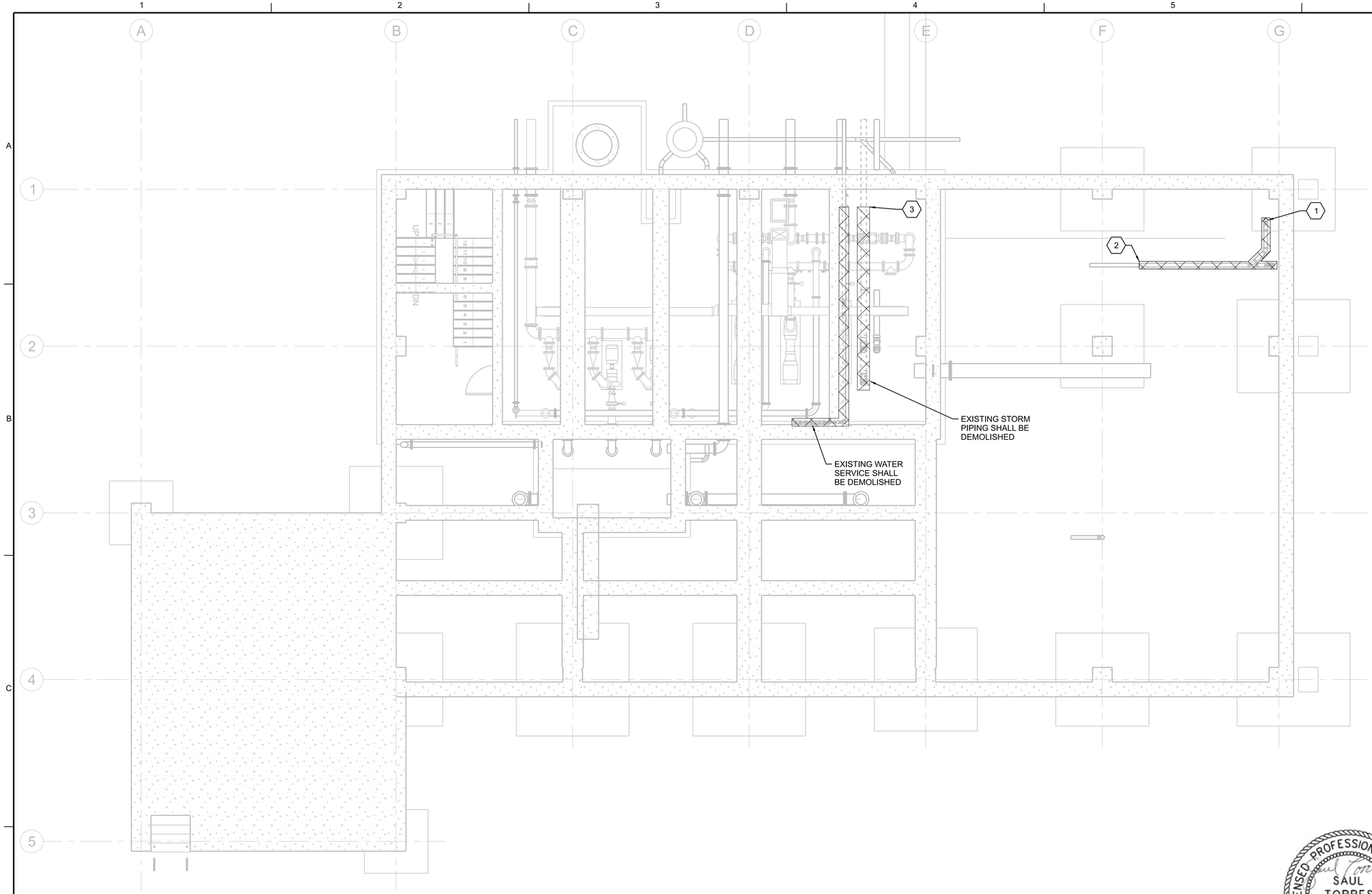
PROFILE:	PROJ. MGR.	MSN	05/26/26
HORIZONTAL:	LEAD ENG.	AZL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-F-6000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 175 OF 300 SHEETS

PLOT DATE: 18-MAY-2026 PLOT TIME: 13:44



SHEET KEYNOTES

1. DEMO EXISTING FLOOR DRAIN.
2. DEMO EXISTING CLEANOUT AND LINE AS SHOWS. SEE STRUCTURAL FOR CONCRETE WORK.
3. CAP STORM DRAIN CONNECTION FOR FUTURE TIE-IN. SEE 90-D1BL-2000.

N

LOWER LEVEL PLAN

3/16"=1'-0"

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05/18/26
OKLAHOMA

DEWATERING CENTRIFUGE BUILDING
PLUMBING
DEMOLITION
LOWER LEVEL PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

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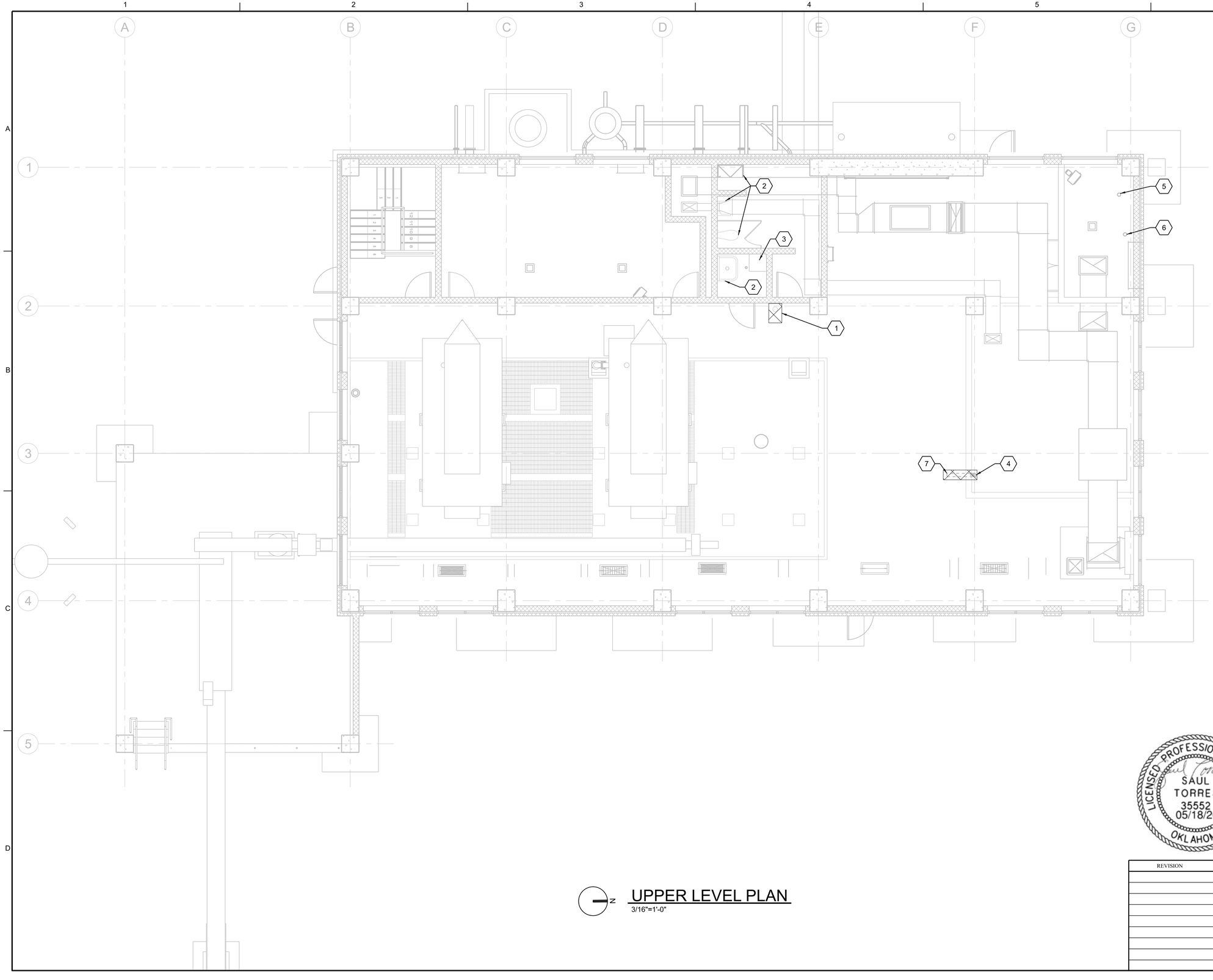
FILE: DRAWING: 90-D1BL-P-1000
ATLAS PAGE NO: 3328
SHEET 176 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 12:42



GENERAL NOTES

1. DEMO ALL EXISTING POTABLE AND NON-POTABLE WATER LINES.

SHEET KEYNOTES

1. DEMO AND CAP STORM WATER DRAIN RISER FOR FUTURE TIE-IN. SEE 90-D1BL-2100.
2. DEMO EXISTING PLUMBING FIXTURES.
3. DEMO EXISTING WATER HEATER AND ASSOCIATED PIPING.
4. RELOCATE EXISTING MUD VALVE. SEE DWG 90-D1BL-P-2100 FOR UPDATED LOCATION. CAP SANITARY CONNECTION FOR FUTURE USE.
5. DEMO EXISTING FLOOR DRAIN.
6. DEMO EXISTING CLEANOUT. SEE STRUCTURAL DRAWINGS FOR CONCRETE REWORK.
7. DEMO PORTION OF THE EXISTING DRAIN LINE AS SHOWN AND CAP. SEE 90-D1BL-P-2100 FOR FUTURE USE.

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N

UPPER LEVEL PLAN
3/16"=1'-0"

LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

DEWATERING CENTRIFUGE BUILDING
PLUMBING
DEMOLITION
UPPER LEVEL PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

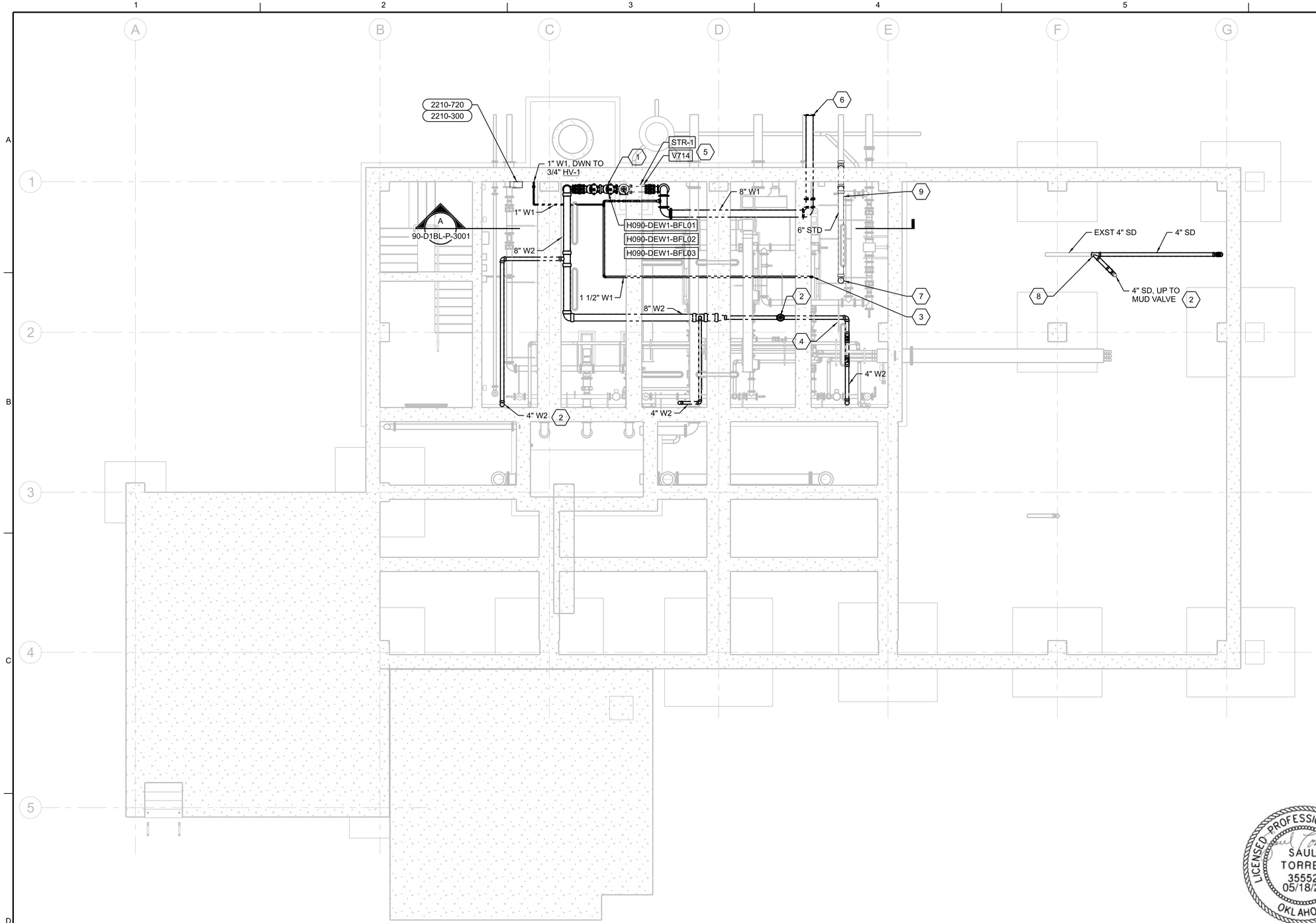
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	AZL	5/26
FIELD MGR.		5/26

FILE: DRAWING: 90-D1BL-P-1100
ATLAS PAGE NO: 3328

APPROVED:
DESIGN MANAGER
DATE: MAY 2026
SHEET 177 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 12:42



SHEET KEYNOTES

1. ROUTE BACKFLOW PREVENTER DISCHARGE TO SUMP.
2. SEE STRUCTURAL DRAWINGS FOR FINAL CORE LOCATION AND DETAILS.
3. USE EXISTING PENETRATION.
4. SEAL PENETRATION
5. LOCATE Y-STRAINER(S) BEFORE THE PRESSURE REDUCING VALVE.
6. SEE CIVIL FOR W1 CONTINUATION.
7. NEW 6" STORM DRAIN LINE FROM ABOVE.
8. CONNECT NEW 4" SD TO EXISTING SANITARY DRAIN. FIELD VERIFY ELEVATION AND MAINTAIN MINIMUM 1/8" SLOPE OF PIPE.
9. TIE-IN NEW 6" STORM DRAIN TO EXISTING STROM DRAIN SERVICE.

N

LOWER LEVEL PLAN

3/16"=1'-0"

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SAUL TORRES
35552
05/18/26
OKLAHOMA

DEWATERING CENTRIFUGE BUILDING
PLUMBING
LOWER LEVEL PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	AZL	5/26
FIELD MGR.		5/26

APPROVED:
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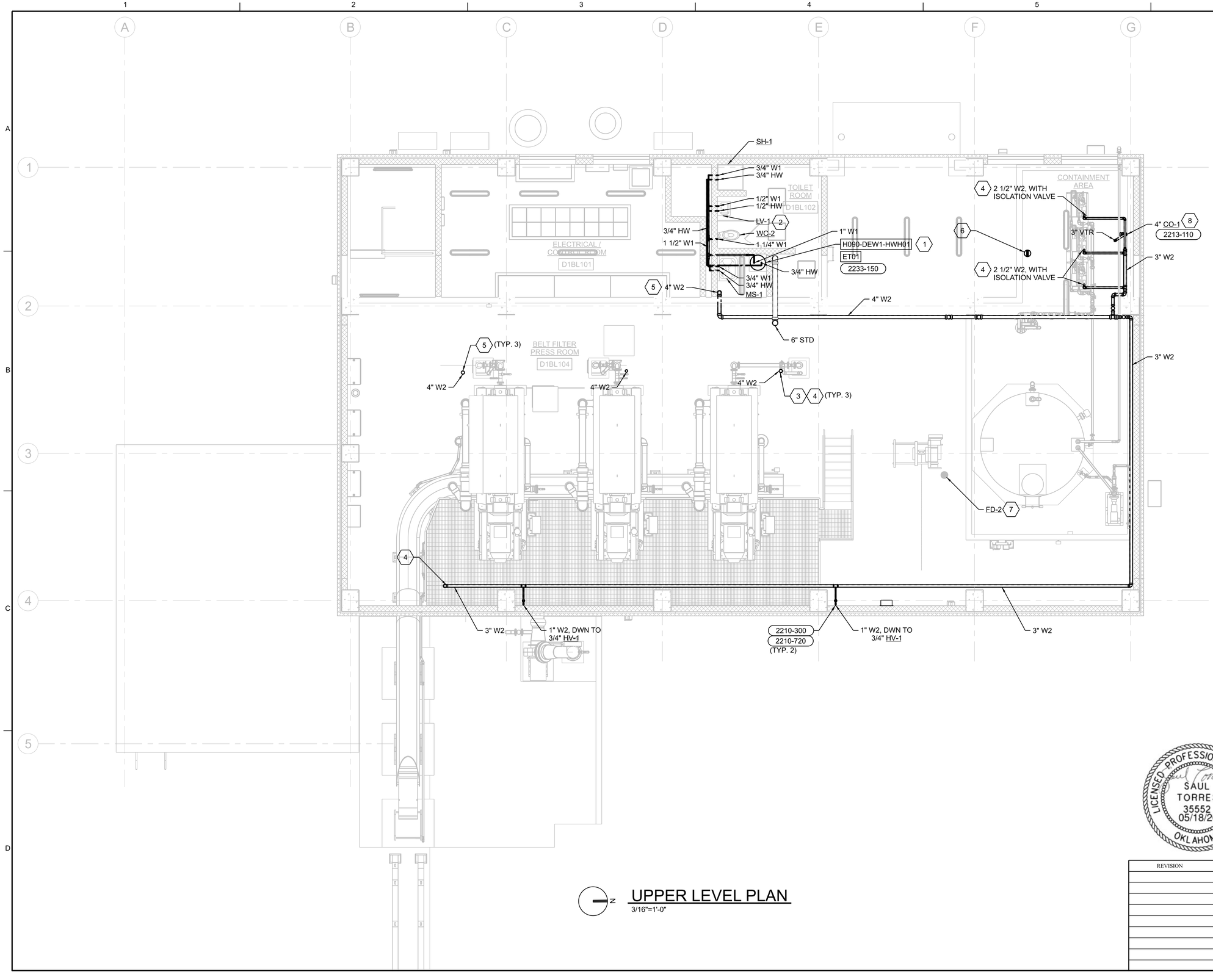
DATE: MAY 2026

FILE: DRAWING: 90-D1BL-P-2000
ATLAS PAGE NO: 3328
SHEET 178 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 12:43



GENERAL SHEET NOTES

1. REFERENCE DETAILS IF OTHERWISE NOT SHOWN ON THE DRAWING.
2. BALL VALVES ARE TO BE USED UNLESS OTHERWISE SHOWN ON THE DRAWING.

SHEET KEYNOTES

1. ROUTE WATER HEATER PRV DISCHARGE TO CLOSEST MOP SINK/DRAIN.
2. PROVIDE MIXING VALVE.
3. 4" W2 WILL HAVE TWO 1" TAPS WITH ISO VALVES AND CAPPED ALONG WITH THE 4" LINE.
4. SEE PROCESS DRAWINGS FOR CONTINUATION.
5. SEE STRUCTURAL DRAWINGS FOR FINAL CORE LOCATION AND DETAILS.
6. PLACE 4" V915 MUD VALVE AND TIE-IN-TO EXISTING SANITARY LINE.
7. SEE STRUCTURAL DRAWINGS FOR FLOOR INFILL. TIE FLOOR DRAIN INTO EXISTING DRAIN SYSTEM.
8. EXTEND SANITARY LINE INSTALL WALL CLEANOUT.

UPPER LEVEL PLAN

3/16"=1'-0"

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OKLAHOMA

DEWATERING CENTRIFUGE BUILDING
PLUMBING
UPPER LEVEL PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

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VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	AZL	5/26
FIELD MGR.		5/26

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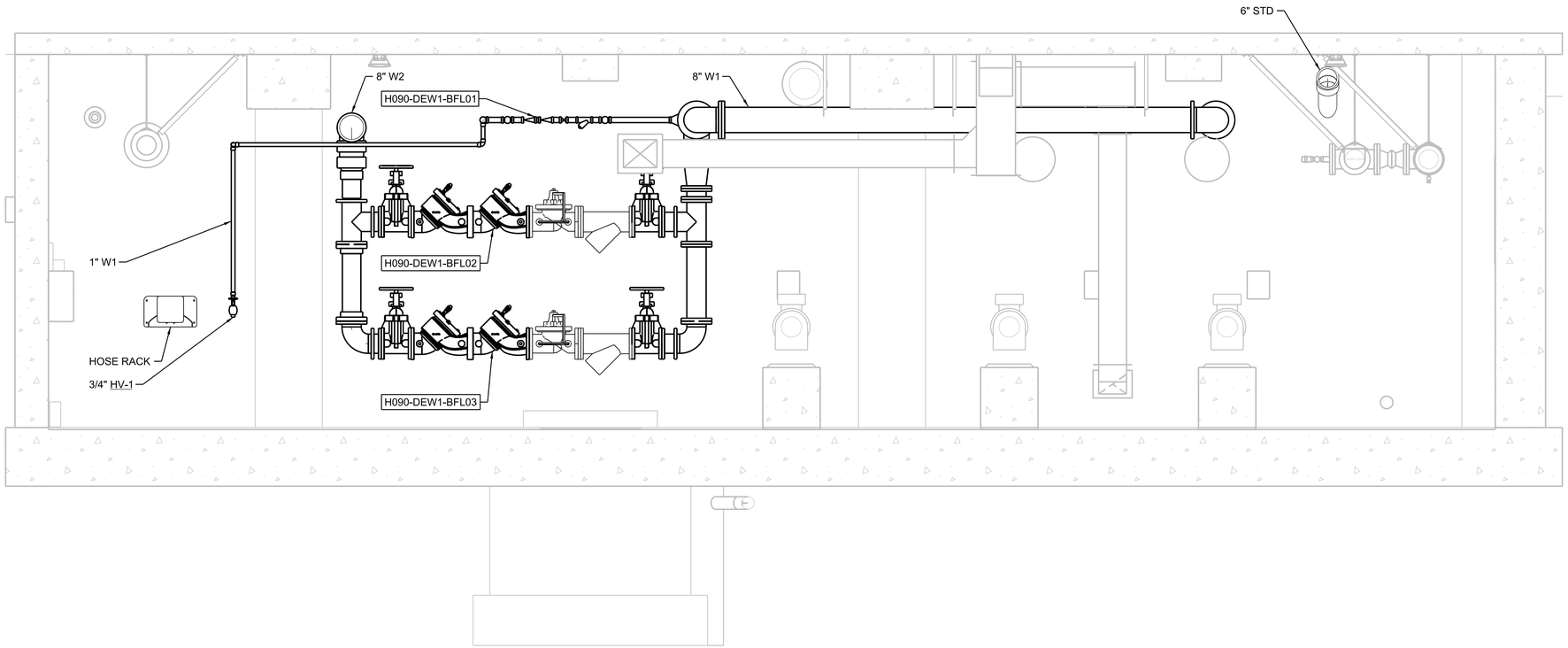
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 90-D1BL-P-2100
ATLAS PAGE NO: 3328
SHEET 179 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 12:43



A SECTION
1/2"=1'-0"
90-D1BL-P-2000

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OKLAHOMA

DEWATERING CENTRIFUGE BUILDING
PLUMBING
SECTION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	WSN	05/26
LEAD ENG.	SJL	5/26
FIELD MGR.		5/26

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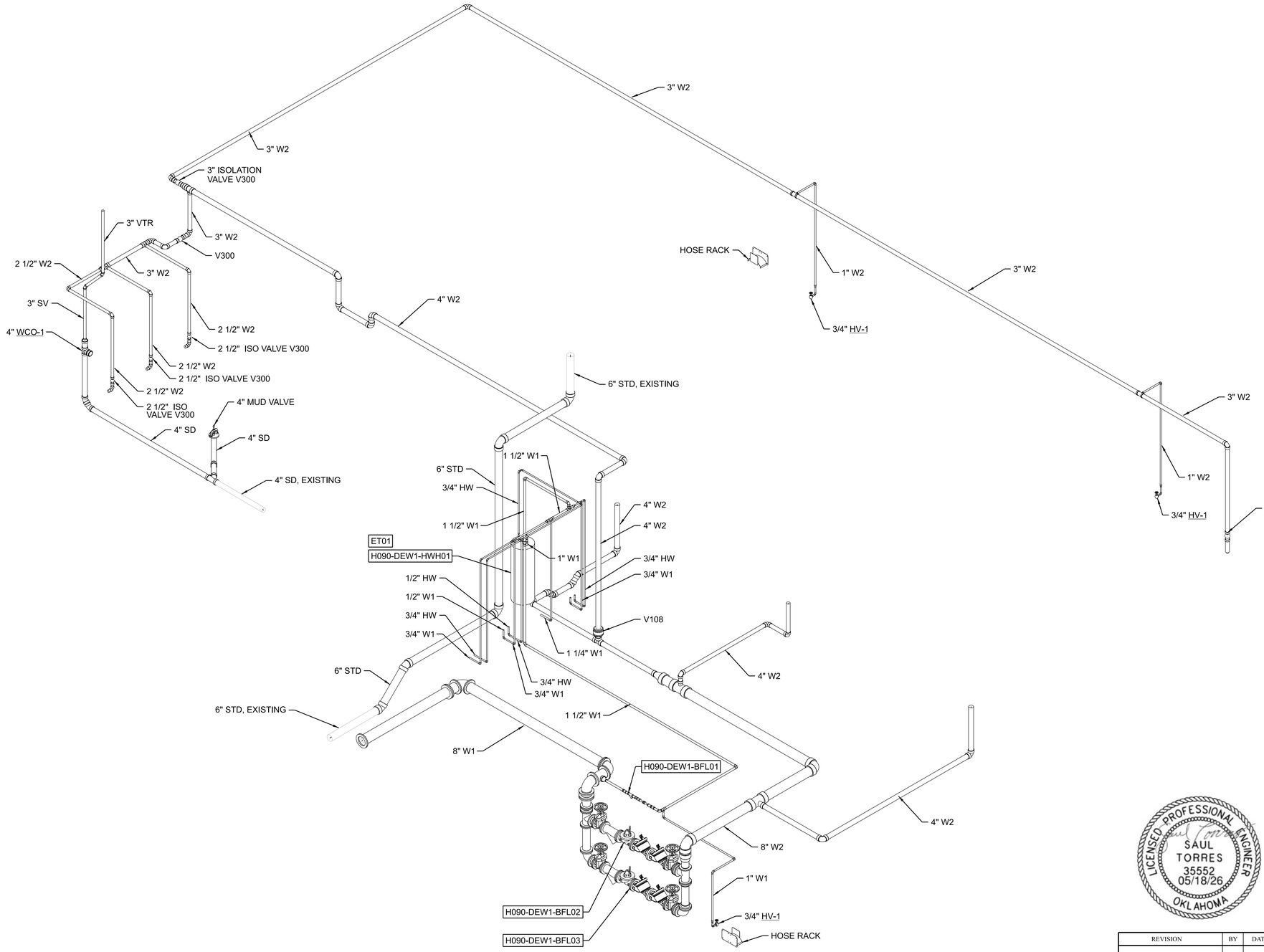
FILE: DRAWING: 90-D1BL-P-3001 DATE: MAY 2026
ATLAS PAGE NO: 3328 SHEET 180 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 13:14



OVERALL ISOMETRIC

NTS

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05/18/26
OKLAHOMA

DEWATERING CENTRIFUGE BUILDING
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OVERALL ISOMETRIC

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	SJL	5/26
FIELD MGR.		5/26

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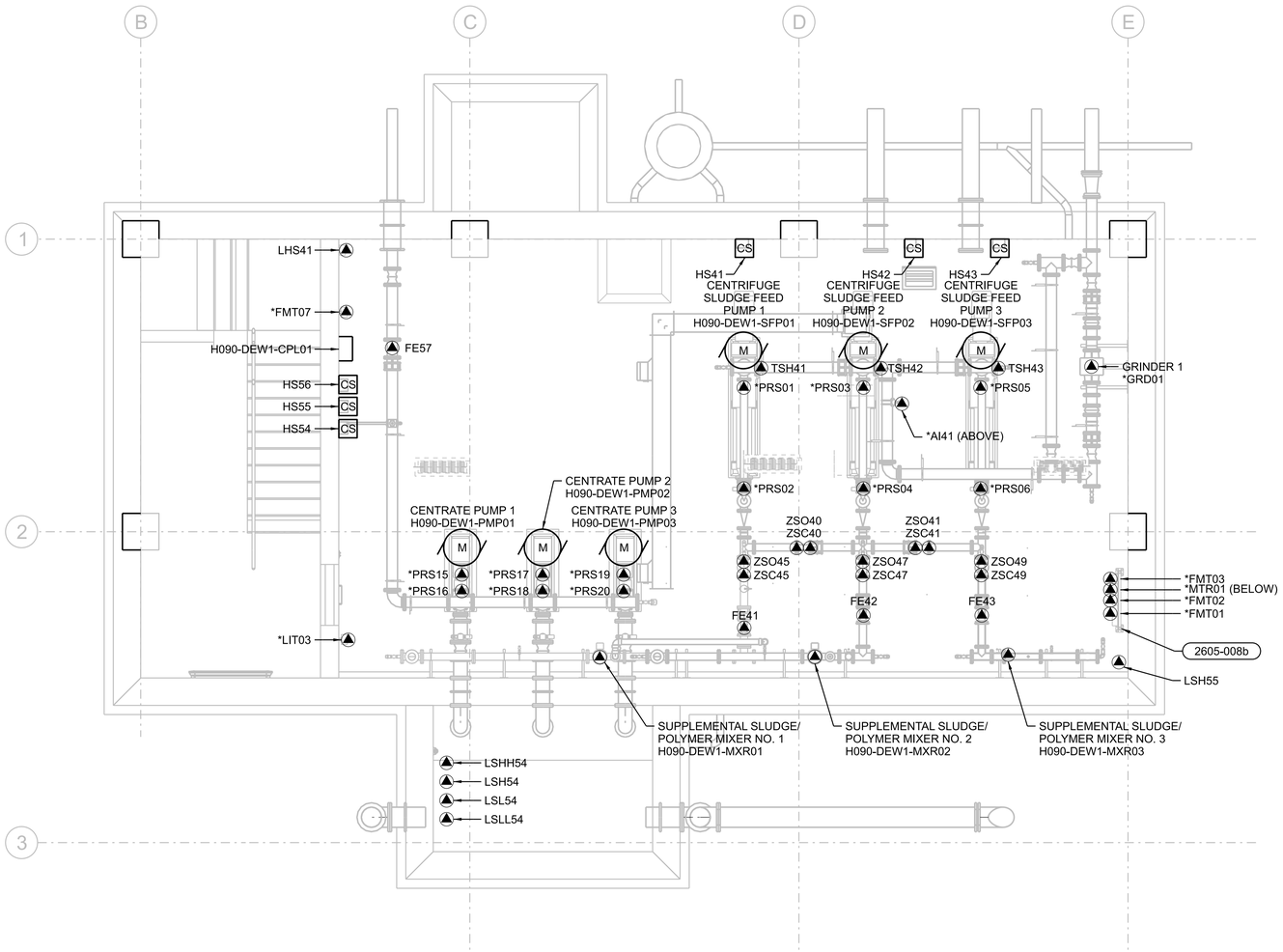
DESIGN MANAGER

FILE: DRAWING: 90-D1BL-P-9001
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 181 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 12:42

GENERAL SHEET NOTES

1. THE COMPLETE TAG NUMBER INCLUDES THE "H090-DEW1-" PREFIX.



LOWER LEVEL POWER PLAN

1/4"=1'-0"

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

DEWATERING CENTRIFUGE BUILDING
ELECTRICAL
LOWER LEVEL
POWER PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

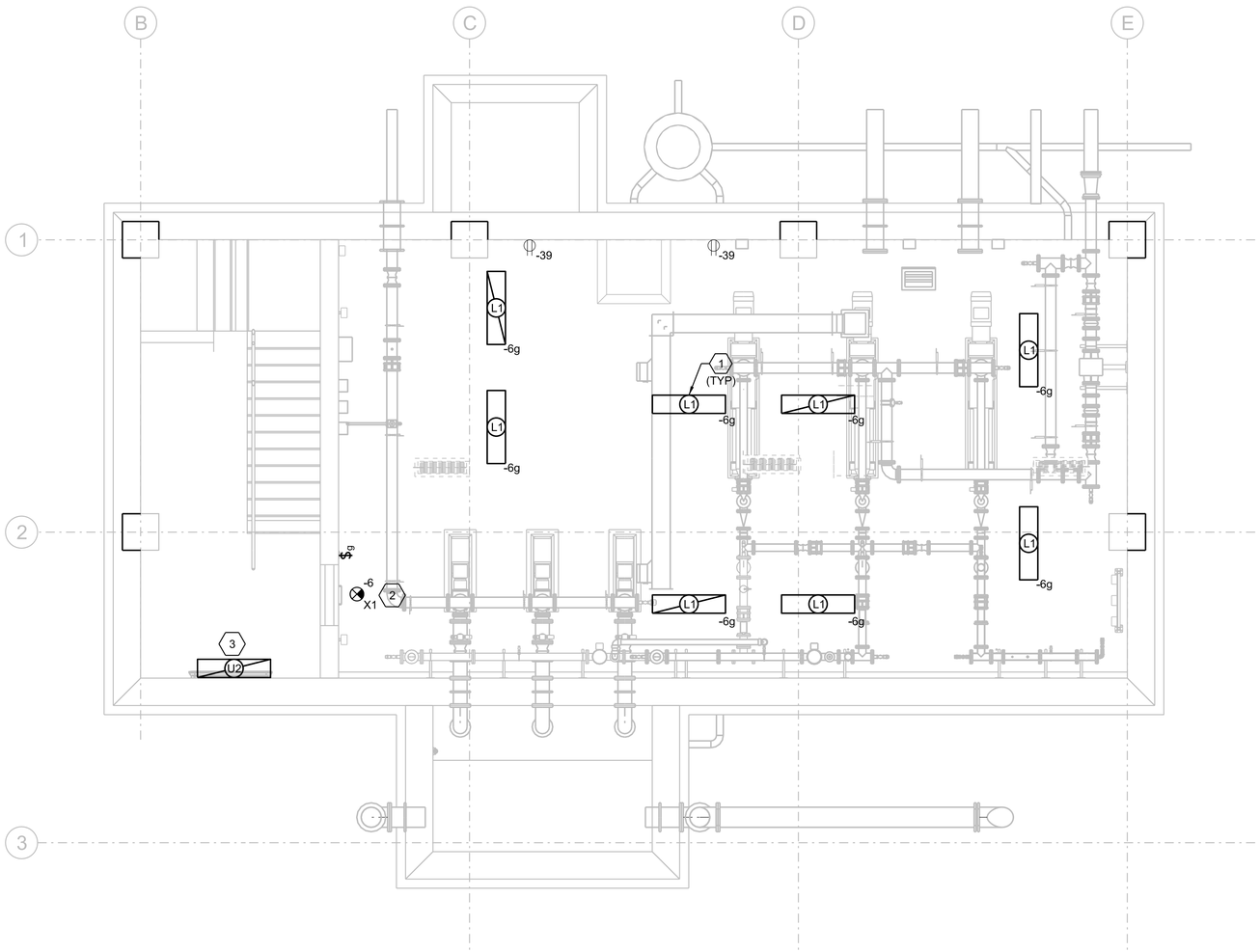
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MW	05/7/26
	LEAD ENG.	BZ	5/6/26
	FIELD MGR.		5/6/26
FILE:	DRAWING: 90-D1BL-E-2000		DESIGN MANAGER
ATLAS PAGE NO: 3328			DATE: MAY 2026
			SHEET 182 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:01



LOWER LEVEL FACILITY PLAN

1/4"=1'-0"

SHEET KEYNOTES

1. INSTALL LIGHT FIXTURE TYPE L1 SUCH THAT THE FIXTURE IS CEILING MOUNTED.
2. INSTALL EXIT SIGN ABOVE DOOR OR DOOR TRANSOM.
3. INSTALL LIGHT FIXTURE TYPE U2 SUCH THAT TOP OF THE FIXTURE IS 7'-0" FROM FINISHED FLOOR.

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

DEWATERING CENTRIFUGE BUILDING
ELECTRICAL
LOWER LEVEL
FACILITY PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

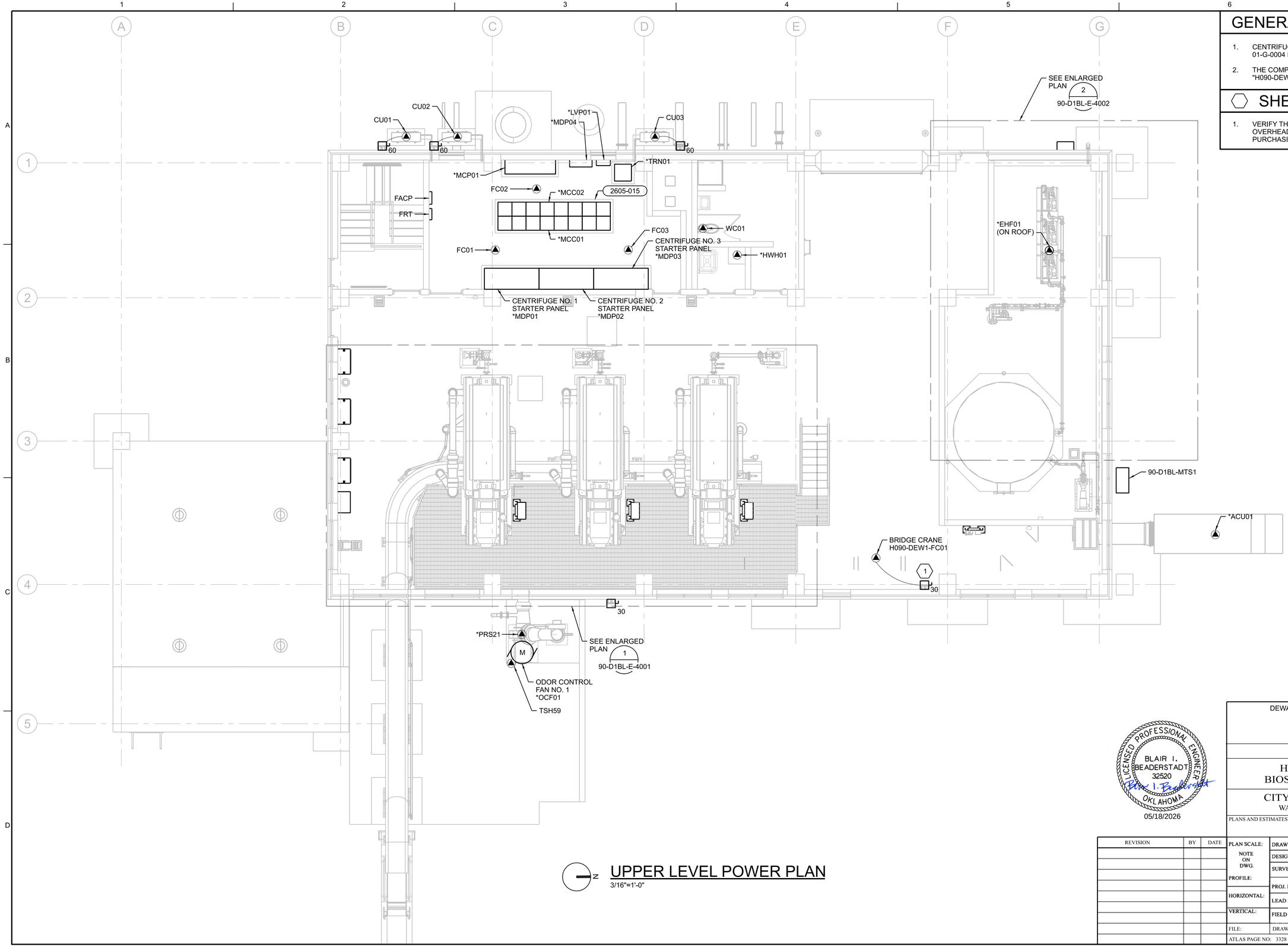
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	BZ	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-E-2001			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 183 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:00



GENERAL SHEET NOTES

1. CENTRIFUGE NO. 3 STARTER PANEL: ALT 02. SEE 01-G-0004 FOR QUANTITIES AND NOTES.
2. THE COMPLETE TAG NUMBER INCLUDES THE "H090-DEW1-" PREFIX.

SHEET KEYNOTES

1. VERIFY THE MOTOR NAMEPLATE RATING FOR OVERHEAD DOOR AND BRIDGE CRANE PRIOR TO PURCHASING DISCONNECT.

UPPER LEVEL POWER PLAN

3/16"=1'-0"

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LICENSED PROFESSIONAL ENGINEER
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OKLAHOMA
05/18/2026

DEWATERING CENTRIFUGE BUILDING
ELECTRICAL
UPPER LEVEL
POWER PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN	05/26
HORIZONTAL:	LEAD ENG.	BJL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-E-2100		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 184 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:00

GENERAL SHEET NOTES

1. CENTRIFUGE NO. 3: ALT02. SEE 01-G-0004 PAY QUANTITIES AND NOTES.

SHEET KEYNOTES

1. INSTALL LIGHT FIXTURE TYPE L1 SUCH THAT THE FIXTURE IS CEILING MOUNTED.
2. INSTALL LIGHT FIXTURE TYPE S1 SUCH THAT THE FIXTURE IS RECESSED IN DROP CEILING.
3. INSTALL LIGHT FIXTURE TYPE H1 SUCH THAT TOP OF THE FIXTURE IS 22'-0' FROM FINISHED FLOOR. CONTRACTOR SHALL ENSURE THE LUMINAIRE DO NOT IMPEDE THE EXISTING CRANE.
4. INSTALL EXIT SIGN ABOVE DOOR OR DOOR TRANSOM.
5. INSTALL LIGHT FIXTURE TYPE U2 SUCH THAT TOP OF FIXTURE IS 7'-0" ABOVE FINISHED FLOOR.
6. #4/0 AWG STRANDED, BARE, TIN-PLATED COPPER.
7. #2/0 AWG STRANDED, XHHW-2 INSULATED, 600VAC.
8. #1/0 AWG STRANDED, XHHW-2 INSULATED, 600VAC.
9. #2 AWG STRANDED, XHHW-2 INSULATED, 600VAC.
10. INSTALL LIGHT FIXTURE TYPE H3 SUCH THAT THE TOP OF THE FIXTURE IS 12'-6" FROM FINISHED FLOOR.

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UPPER LEVEL PLAN

3/16"=1'-0"

LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

DEWATERING CENTRIFUGE BUILDING
ELECTRICAL
UPPER LEVEL
FACILITY PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	BBL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-E-2101		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 185 OF 300 SHEETS

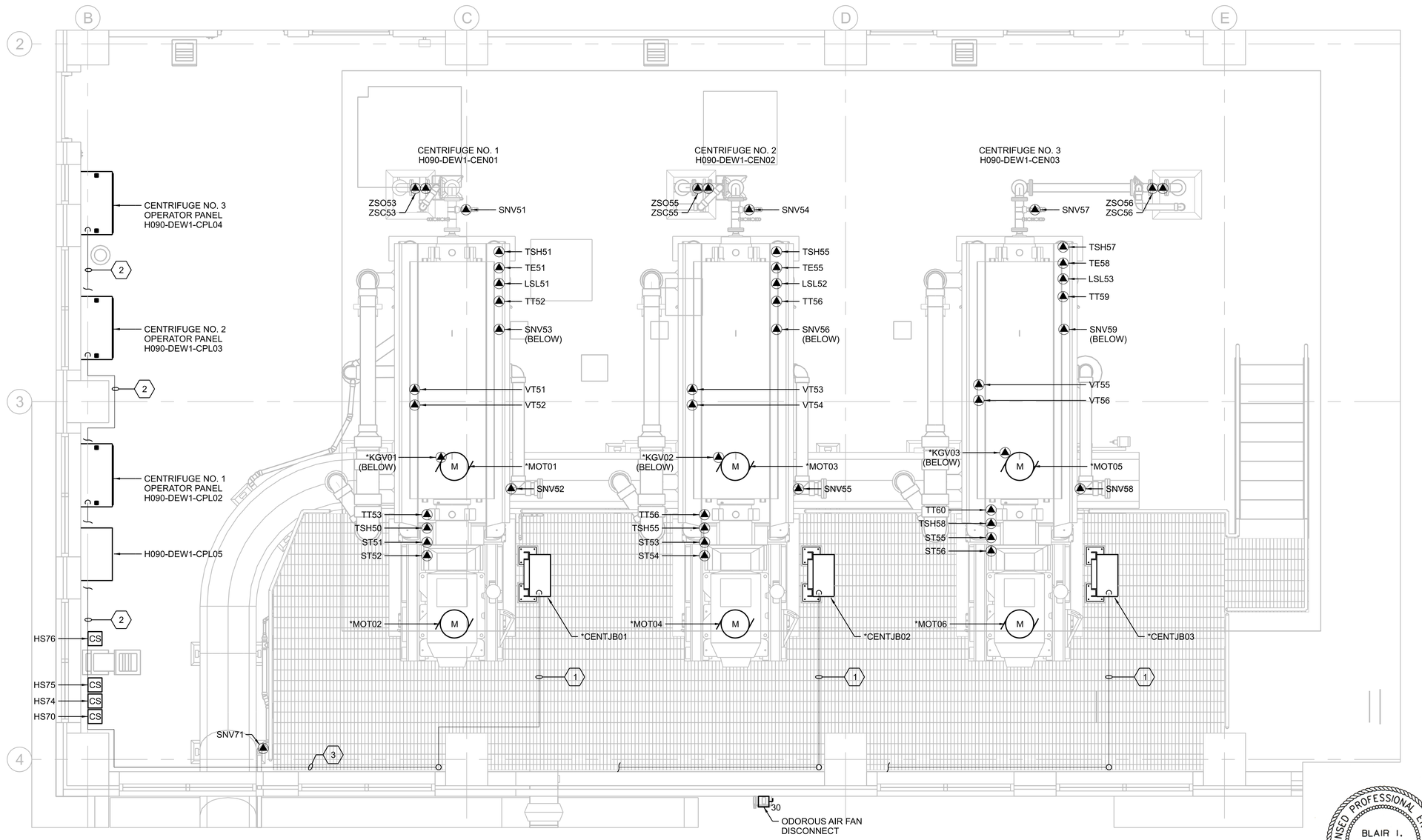
PLOT DATE: 12-MAY-2026 PLOT TIME: 13:00

GENERAL SHEET NOTES

1. CENTRIFUGE NO. 3: ALT02. SEE 01-G-0004 PAY QUANTITIES AND NOTES.
2. THE COMPLETE TAG NUMBER INCLUDES THE "H090-DEW1-" PREFIX.
3. REFER TO PROCESS MECHANICAL DRAWINGS AND VENDOR SHEETS FOR FINAL LOCATION OF INSTRUMENTATION AND EQUIPMENT.

SHEET KEYNOTES

1. CONTRACTOR SHALL ROUTE CONDUITS UNDER PLATFORM TO CENTRIFUGE TJB.
2. CONTRACTOR SHALL ROUTE CONDUIT OVERHEAD ALONG WALL TO CONTROL PANELS.
3. CONTRACTOR TO ROUTE CONDUITS ALONG EXISTING CONDUIT PATHS.



1 ENLARGED POWER PLAN

3/8"=1'-0"

90-D1BL-E-2100

LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

REVISION	BY	DATE

DEWATERING CENTRIFUGE BUILDING

ELECTRICAL
ENLARGED UPPER LEVEL
POWER PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	BJL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-E-4001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 186 OF 300 SHEETS

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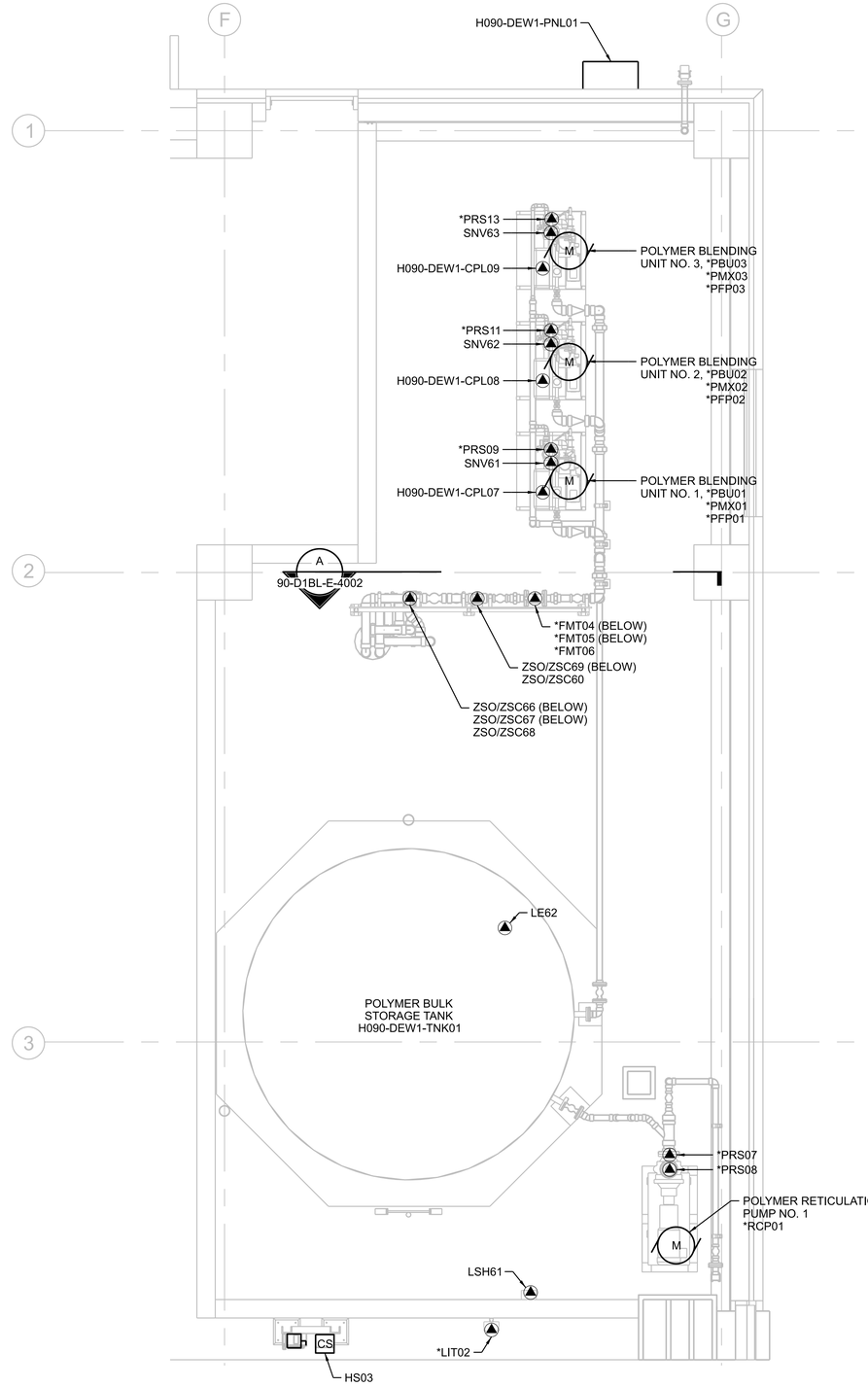
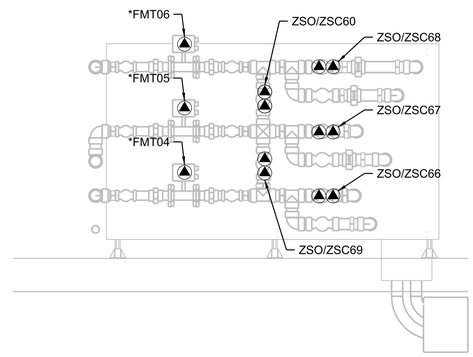


2 ENLARGED POWER PLAN
3/8"=1'-0"
90-D1BL-E-2100



A SECTION
1/2"=1'-0"
90-D1BL-E-4002

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05/18/2026

DEWATERING CENTRIFUGE BUILDING
ELECTRICAL
UPPER LEVEL ENLARGED
POWER PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
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VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 90-D1BL-E-4002 DATE: MAY 2026
ATLAS PAGE NO: 3328 SHEET 187 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:02

H090-DEW1-MCC01 CONNECTED LOAD	
DESCRIPTION	AMP
H090-DEW1-MDP01	245.35
H090-DEW1-MDP03	245.35
CENTRATE PUMP 1	21
CENTRATE PUMP 3	21
SLUDGE FEED PUMP 1	27
SLUDGE FEED PUMP 3	27
DEWATERING EXHAUST FAN	11
GRINDER 1	4.8
BUILDING VENTILATION FAN1	4.8
BUILDING VENTILATION FAN3	4.8
BUILDING VENTILATION FAN5	4.8
BUILDING VENTILATION FAN7	4.8
SLUDGE CONVEYOR	7.6
ODOR CONTROL FAN NO. 1	7.6
H090-DEW1-MDP04	90
DEWATERING HOT WATER HEATER	10
TOTAL	736.9
TOTAL PLUS 25% LARGEST MOTOR	798.2375

* DESIGN LOAD = CONNECTED LOAD PLUS 25% OF LARGEST MOTOR

H090-DEW1-MCC02 CONNECTED LOAD	
DESCRIPTION	AMP
H095-COM2-CPL01	276
H090-DEW1-MDP02	245.35
H095-COM1-ACU01	182
CENTRATE PUMP 2	21
SLUDGE FEED PUMP 2	27
BUILDING VENTILATION FAN2	7.6
BUILDING VENTILATION FAN4	7.6
BUILDING VENTILATION FAN6	7.6
TOTAL	774.15
TOTAL PLUS 25% LARGEST MOTOR	843.15

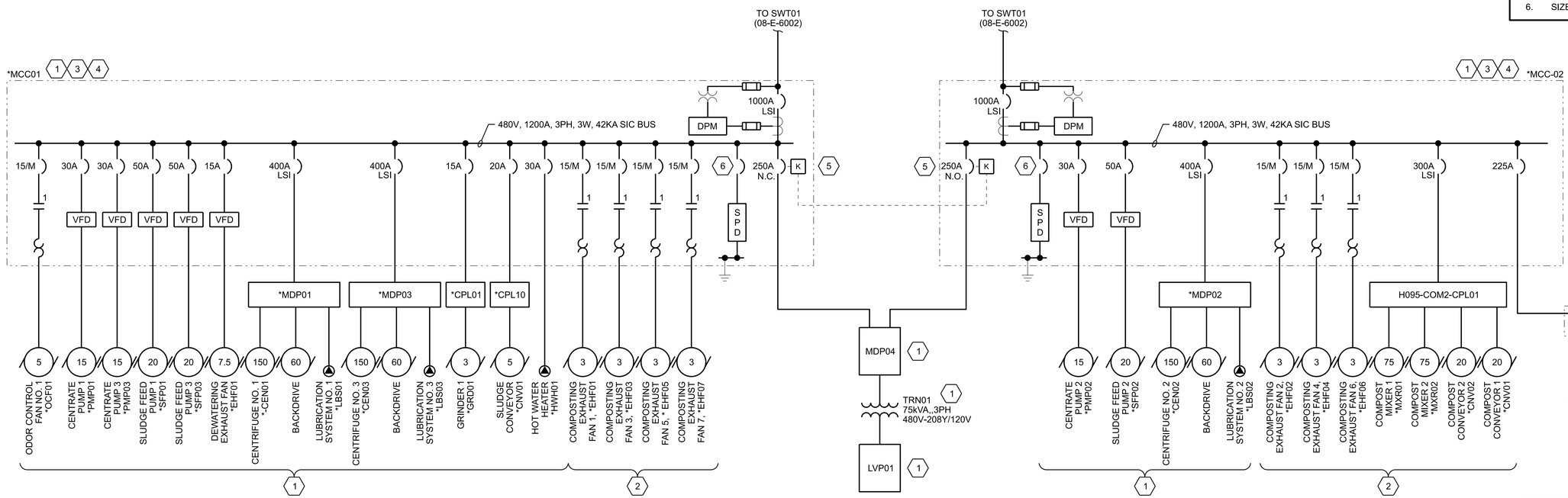
* DESIGN LOAD = CONNECTED LOAD PLUS 25% OF LARGEST MOTOR

GENERAL SHEET NOTES

1. CENTRIFUGE NO. 3 AND STARTER PANEL: ALT02. SEE 01-G-0004 PAY QUANTITIES AND NOTES.
2. REFER TO 08-E-6003 FOR THE OVERALL POWER RISER DIAGRAM, OVERALL NETWORK RISER DIAGRAM AND INDIVIDUAL FACILITY RISER DIAGRAMS FOR CONDUIT AND WIRE CALLOUTS.
3. CIRCUIT BREAKERS AND STARTERS TO HAVE PADLOCKABLE OPERATING HANDLE WHEN DE-ENERGIZED.

SHEET KEYNOTES

1. COMPLETE TAG NUMBER INCLUDES 'H090-DEW1-' PREFIX.
2. COMPLETE TAG NUMBER INCLUDES 'H095-COM2-' PREFIX.
3. REFER TO FRONT ELEVATION ON DWG 90-D1BL-E-6002 FOR SPARE CIRCUIT BREAKER AND COMBINATION STARTER QUANTITY AND SIZE.
4. PRELIMINARY CALCULATED AVAILABLE FAULT = 26,297.99 AMPS. FINAL AVAILABLE FAULT CURRENT SHALL BE PROVIDED BY THE SHORT CIRCUIT STUDY SPECIFIED IN SECTION 26 05 70, ELECTRICAL SYSTEM ANALYSIS.
5. PROVIDE MECHANICAL KEY INTERLOCK PROCEDURAL SIGNS WITH LOCATIONS OF ALL KEYS.
6. SIZE BY MANUFACTURER.



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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

DEWATERING CENTRIFUGE BUILDING
ELECTRICAL
H090-DEW1-MCC01 AND H090-DEW1-MCC02 ONE-LINE DIAGRAM

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

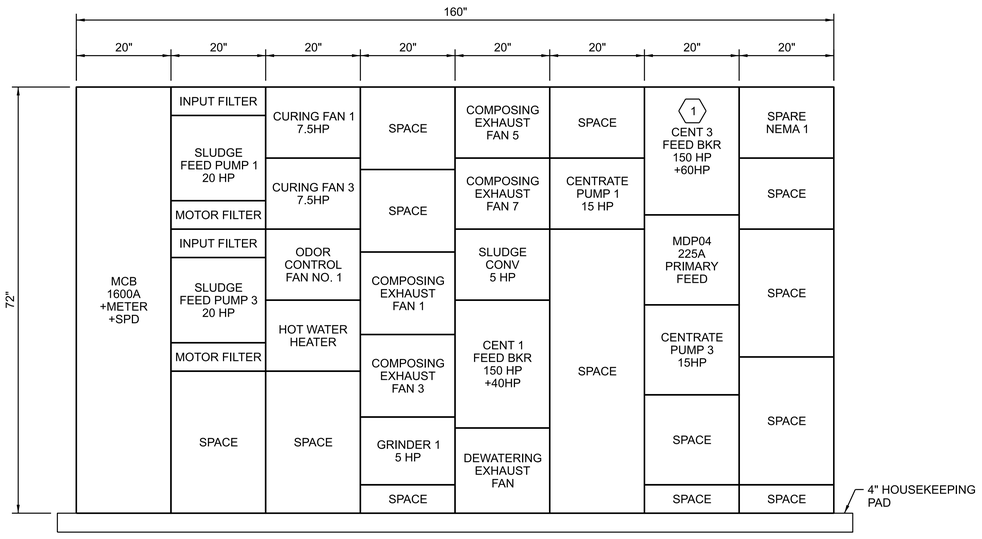
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSN 05/26	
	LEAD ENG.	BJL 5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-E-6001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 188 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 15:09

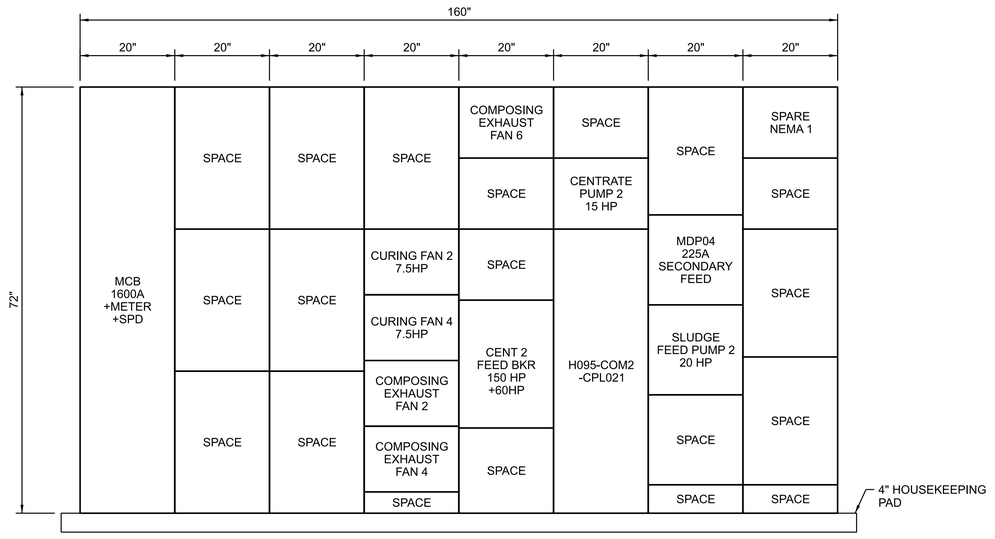
SHEET KEYNOTES

1. BUCKET SHOULD BE USED AS AN ADDED ALTERNATIVE SPARE IF NOT USED.



H090-DEW1-MCC01 - FRONT ELEVATION

NTS



H090-DEW1-MCC02 - FRONT ELEVATION

NTS

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

DEWATERING CENTRIFUGE BUILDING
ELECTRICAL
H090-DEW1-MCC01A & H090-DEW1-MCC01B
FRONT ELEVATIONS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

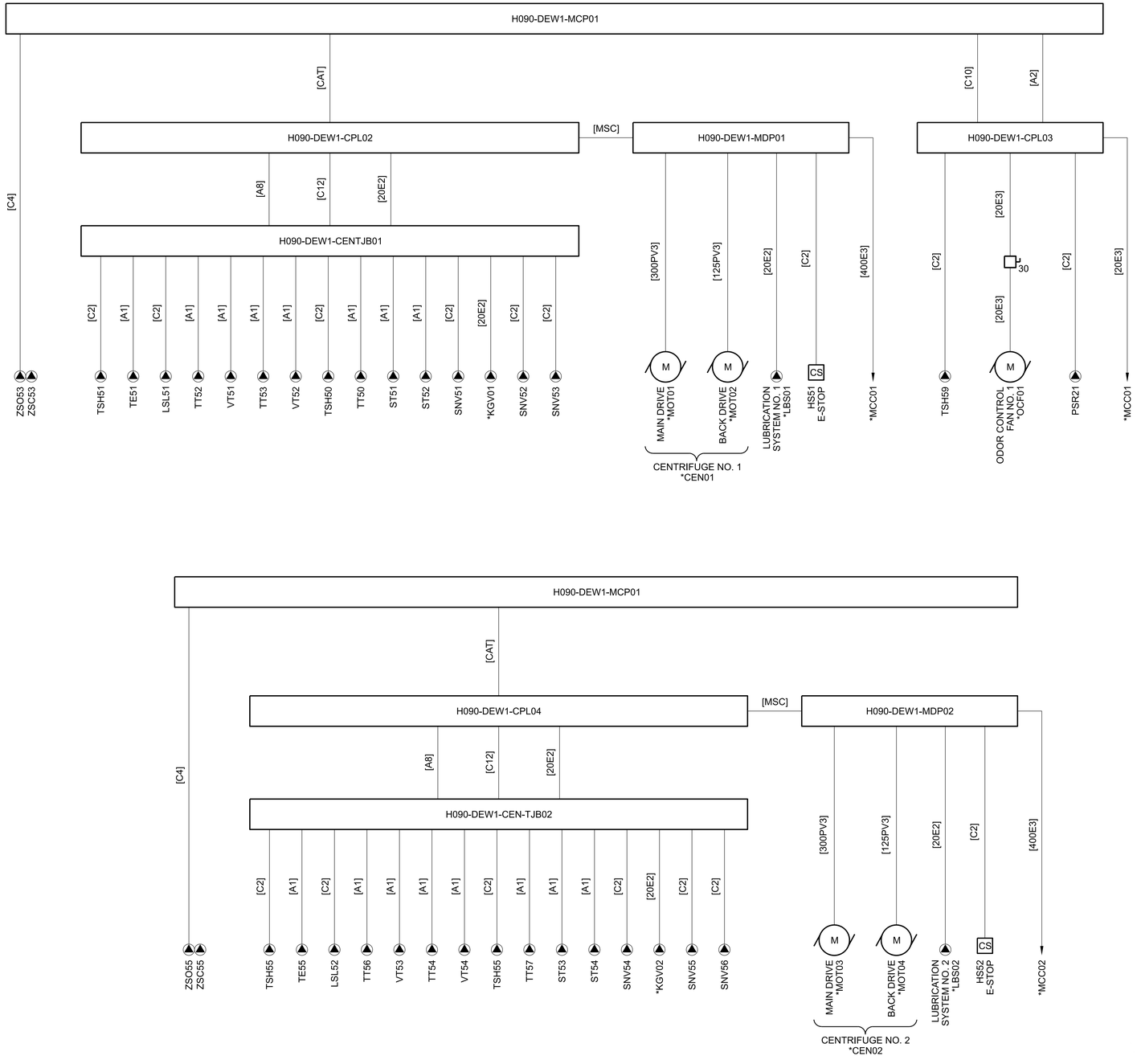
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MN	05/26
LEAD ENG.	BZ	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 90-D1BL-E-6002
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 189 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:03



NOTE:

THE COMPLETE TAG NUMBER INCLUDES THE "H090-DEW1-" PREFIX.

CENTRIFUGE NO. 1 AND NO. 2 - RISER DIAGRAM

NTS

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
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OKLAHOMA
05/18/2026

DEWATERING CENTRIFUGE BUILDING
ELECTRICAL
RISER DIAGRAMS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

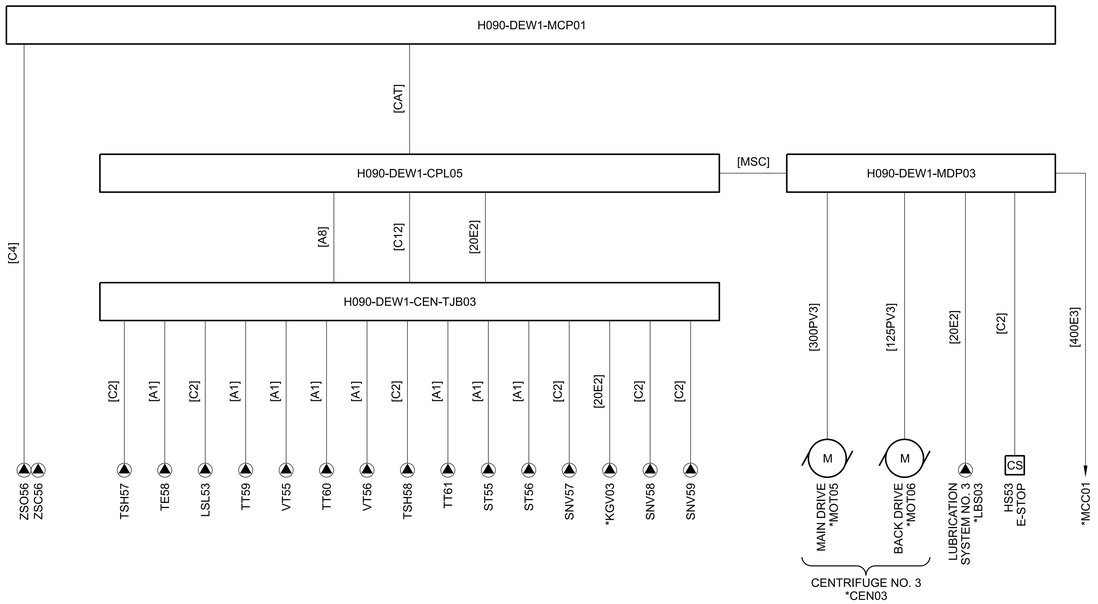
APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 90-D1BL-E-6003
ATLAS PAGE NO: 3328
SHEET 190 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 12:59

GENERAL SHEET NOTES

1. CENTRIFUGE NO. 3: ALT02. SEE 01-G-0004 PAY QUANTITIES AND NOTES.

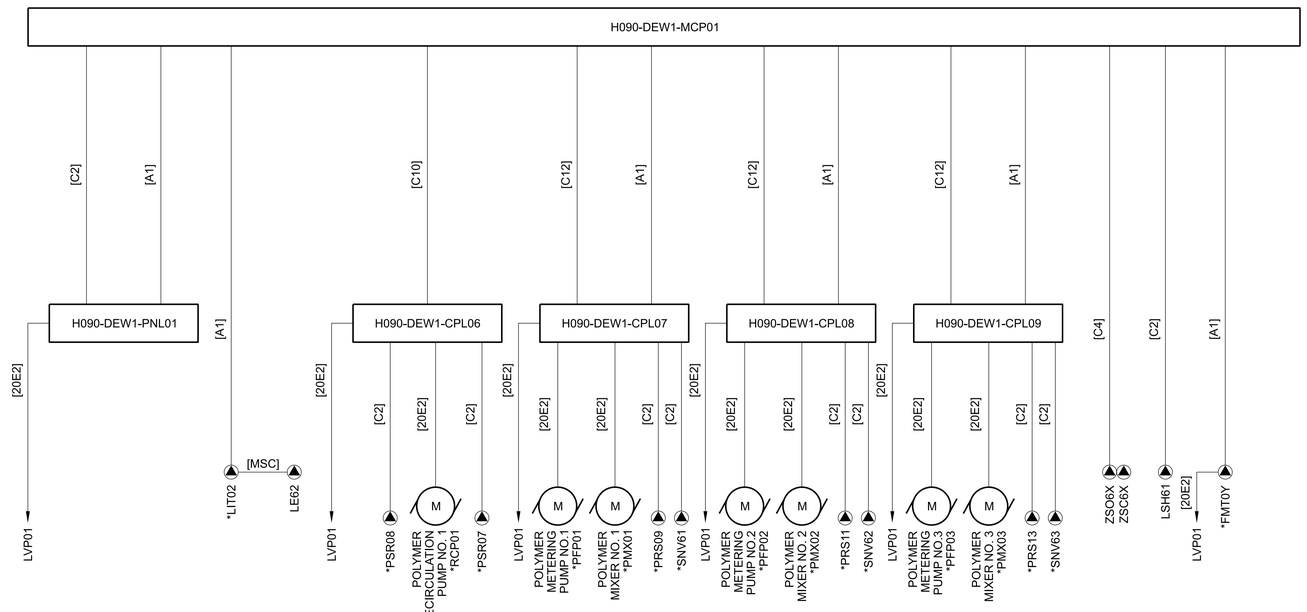


NOTE:

THE COMPLETE TAG NUMBER INCLUDES THE "H090-DEW1-" PREFIX.

CENTRIFUGE NO. 3 - RISER DIAGRAM

NTS



NOTE:

THE COMPLETE TAG NUMBER INCLUDES THE "H090-DEW1-" PREFIX.

POLYMER FEED PUMPS - RISER DIAGRAM

(X = 0, 6, 7, 8, 9) (Y= 4, 5, 6)

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

REVISION	BY	DATE

DEWATERING CENTRIFUGE BUILDING
ELECTRICAL
RISER DIAGRAMS

WFXQ7901

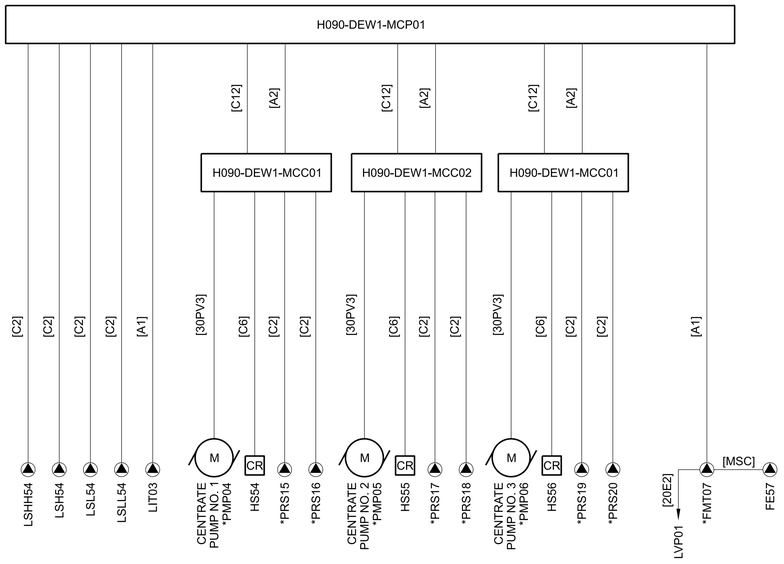
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MN 05/7/26	
HORIZONTAL:	LEAD ENG.	BZ 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-E-6004		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 191 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:00

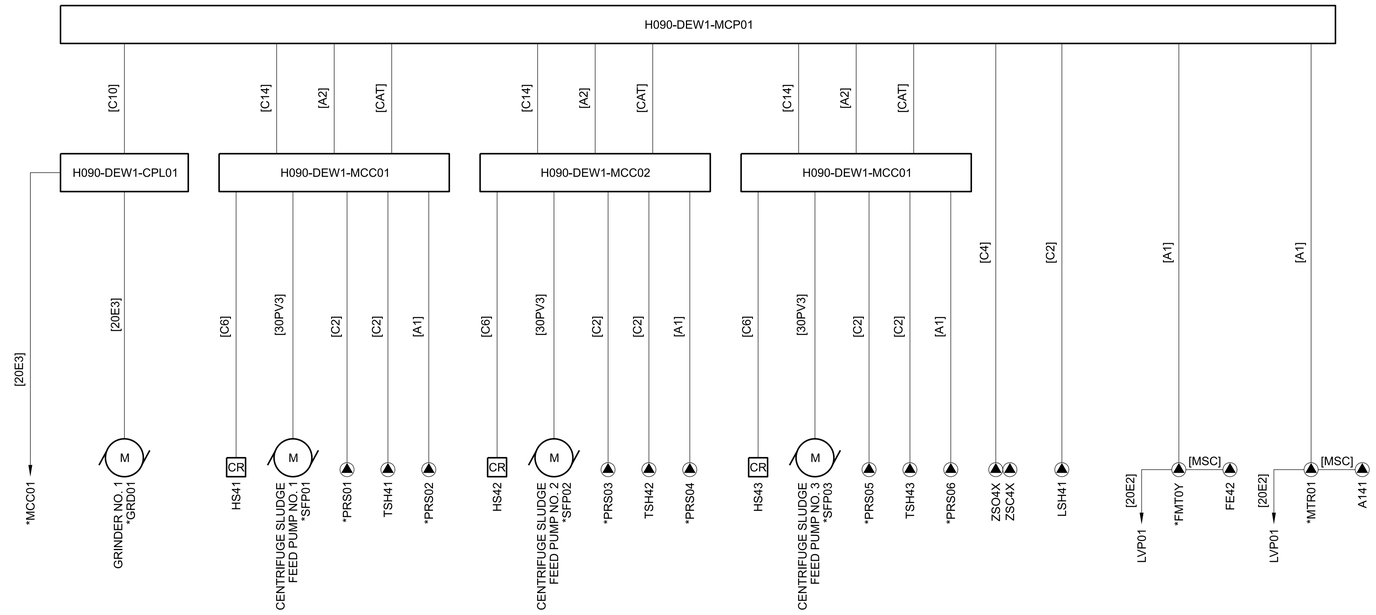


NOTE:

THE COMPLETE TAG NUMBER INCLUDES THE "H090-DEW1-" PREFIX.

CENTRATE DRAIN PUMP STATION

NTS

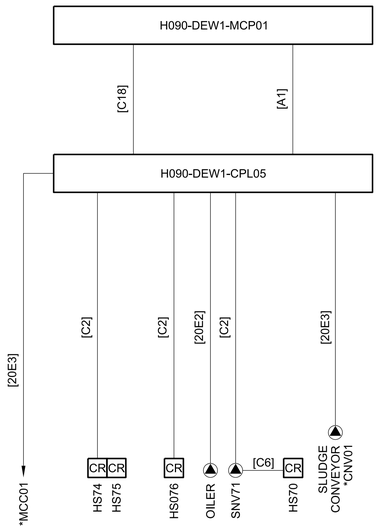


NOTE:

THE COMPLETE TAG NUMBER INCLUDES THE "H090-DEW1-" PREFIX.

SLUDGE FEED PUMPS - RISER DIAGRAM

(X = 0, 1, 5, 7, 9) , (Y = 1, 2, 3), (Z= 1, 2, 3)

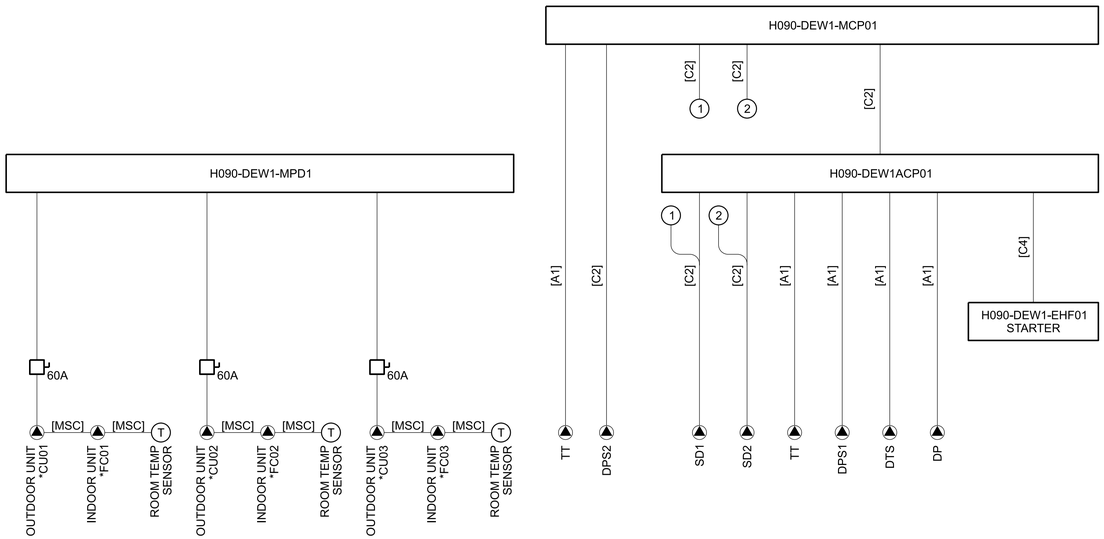


NOTE:

THE COMPLETE TAG NUMBER INCLUDES THE "H090-DEW1-" PREFIX.

COMPOSTING CONVEYOR RISER

NTS

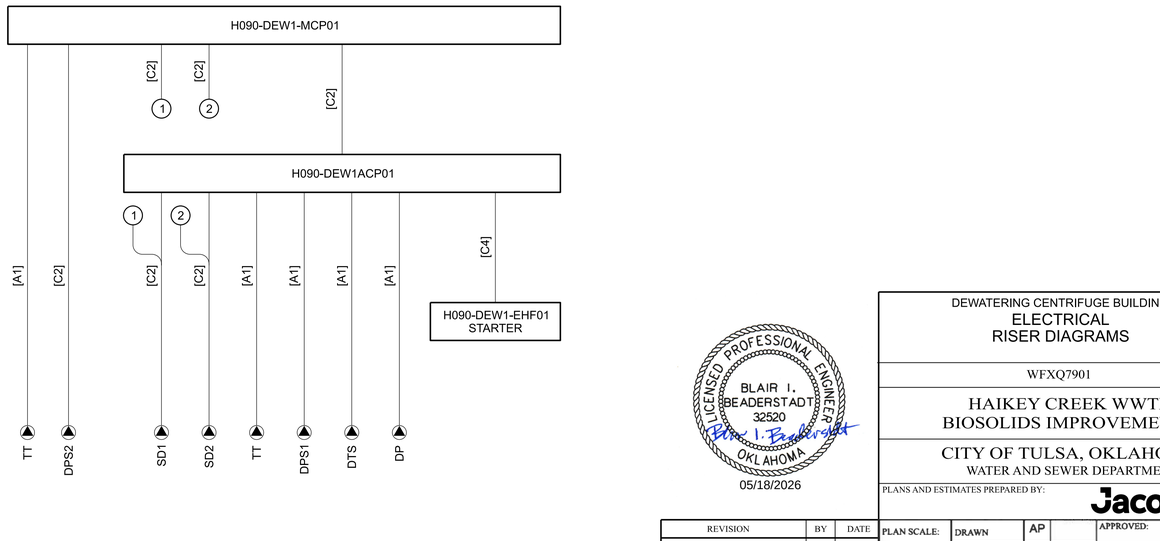


NOTE:

THE COMPLETE TAG NUMBER INCLUDES THE "H090-DEW1-" PREFIX.

DEWATERING BUILDING AHU -RISER DIAGRAM

NTS



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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

REVISION	BY	DATE

DEWATERING CENTRIFUGE BUILDING
ELECTRICAL
RISER DIAGRAMS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
	SURVEY		
HORIZONTAL:	PROJ. MGR.	MSN 05/26	
	LEAD ENG.	BJL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1BL-E-6005		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 192 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:01

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FOR REFERENCE ONLY

N

RENDERING
NTS

SLUDGE MIXING BUILDING

RENDERING

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

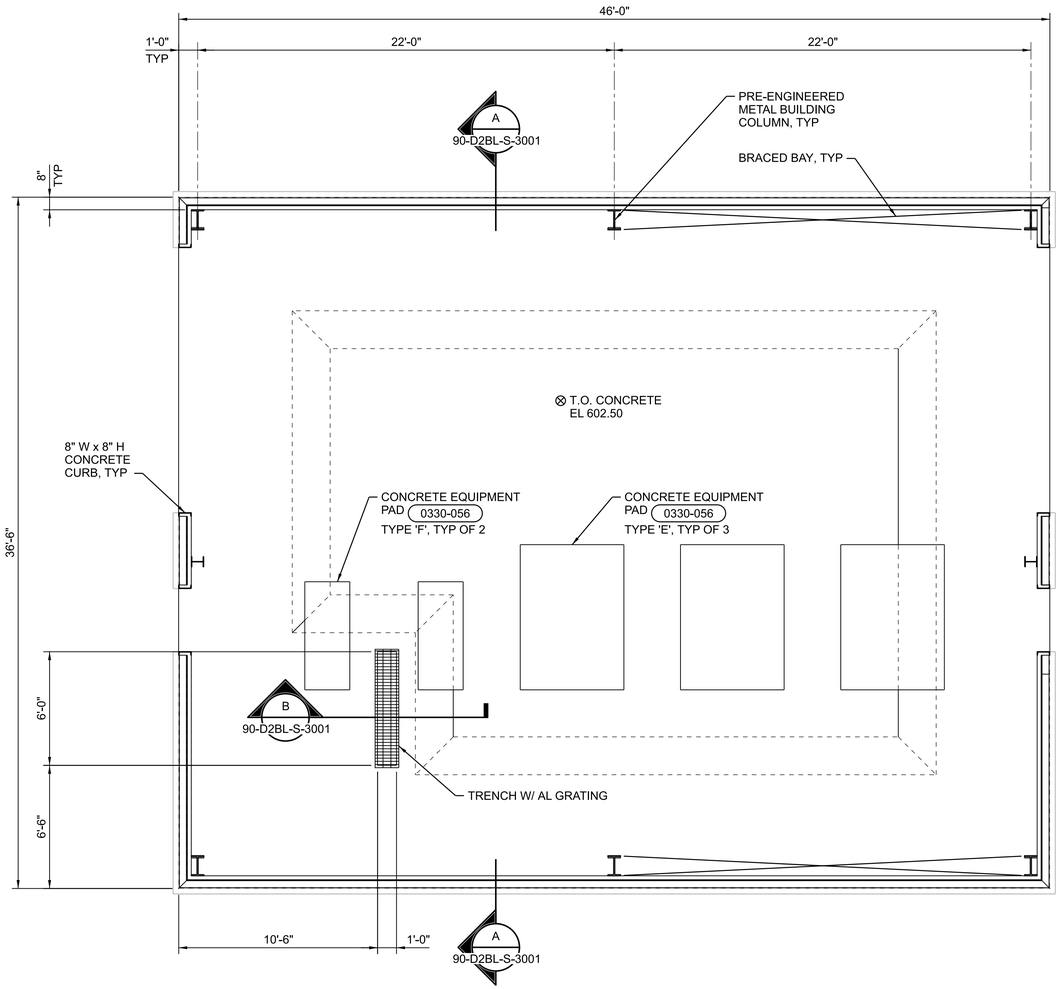
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
	PROJ. MGR.	MW	05/7/26
HORIZONTAL:	LEAD ENG.	RZL	5/7/26
VERTICAL:	FIELD MGR.		5/7/26
			DESIGN MANAGER
FILE:	DRAWING: 90-D2BL-R-0001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 193 OF 300 SHEETS

PLOT DATE: 05\14\2026 PLOT TIME: 9:03:33 AM



N

PLAN
1/4"=1'-0"

GENERAL FACILITY NOTES

1. FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS 01-G-0020 AND 01-G-0021.
2. FOR STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS, SEE DRAWINGS 01-G-022 THROUGH 01-G-0024.
3. FOR PRE-ENGINEERED BUILDING REQUIREMENTS, REFER TO SPECIFICATION SECTION 13 34 19, METAL BUILDING SYSTEMS.
4. DESIGN OF BUILDING COLUMN BASE ANCHORAGE MUST CONSIDER SUPPLEMENTARY ANCHORAGE REINFORCING. COORDINATE REINFORCING FOR FOUNDATION CONCRETE PLACEMENT.

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

SLUDGE MIXING BUILDING
STRUCTURAL
FOUNDATION PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

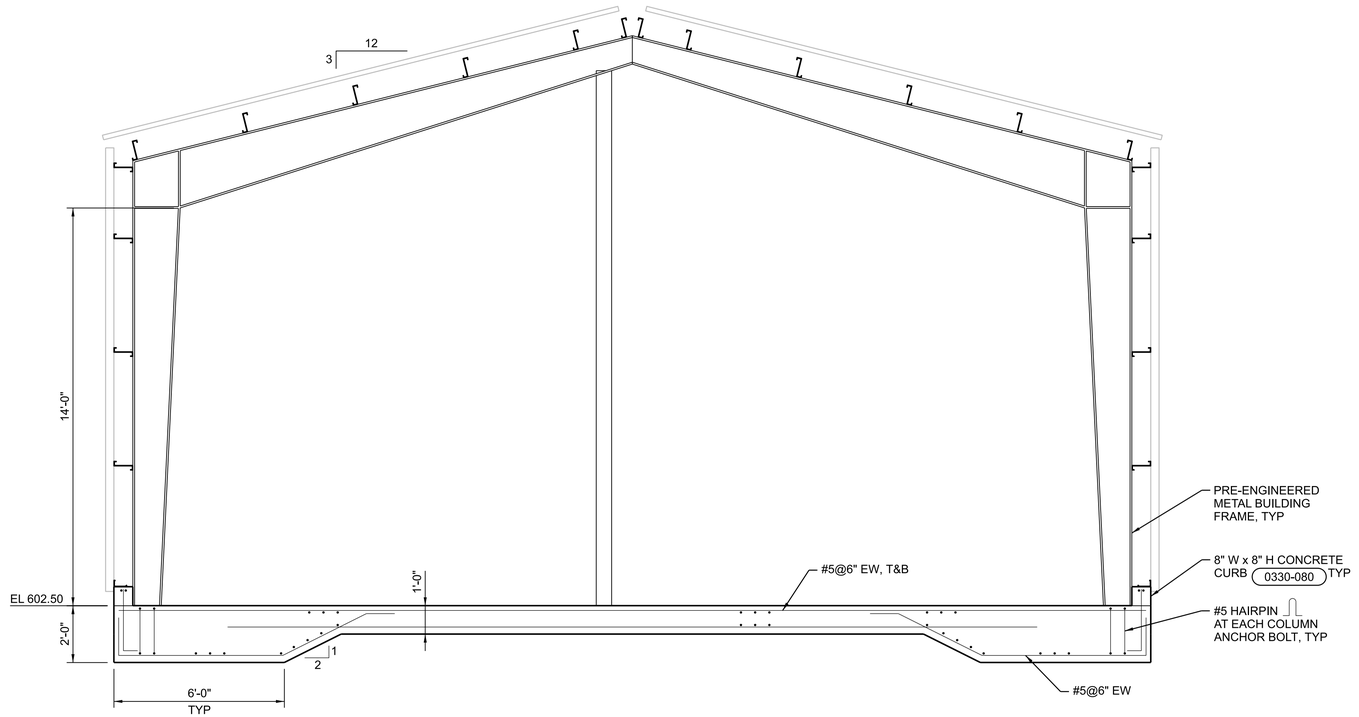
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

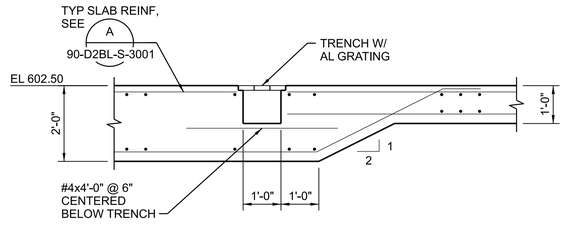
DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	AZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026
FILE: DRAWING: 90-D2BL-S-2000
ATLAS PAGE NO: 3328
SHEET 194 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:35



A SECTION
3/8"=1'-0"
90-D2BL-S-2000
90-D2BL-S-3001



B SECTION
1/2"=1'-0"
90-D2BL-S-2000

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

SLUDGE MIXING BUILDING
STRUCTURAL
SECTIONS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RJL	5/26
FIELD MGR.		5/26

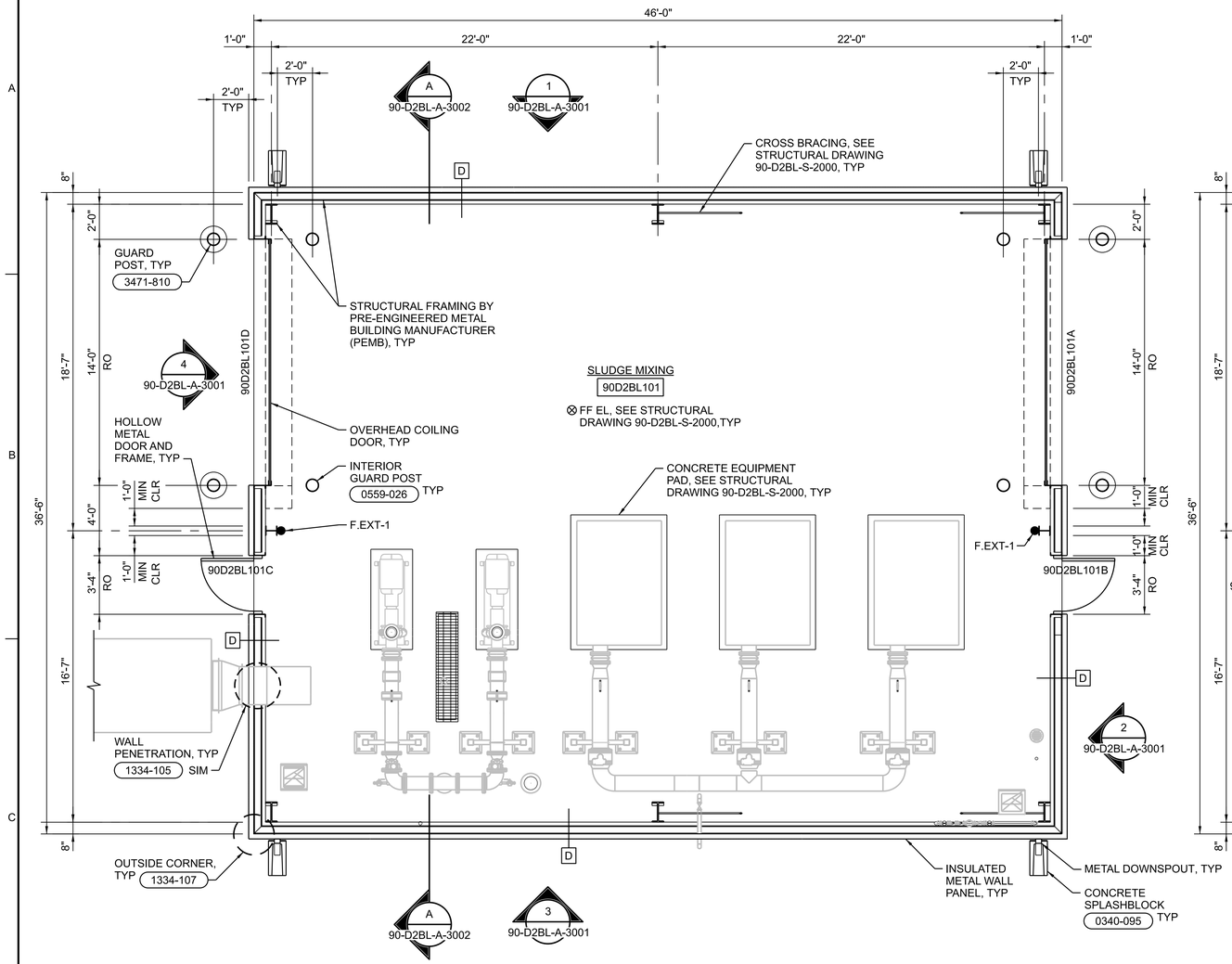
APPROVED:
DESIGN MANAGER

FILE: DRAWING: 90-D2BL-S-3001
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 195 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:36

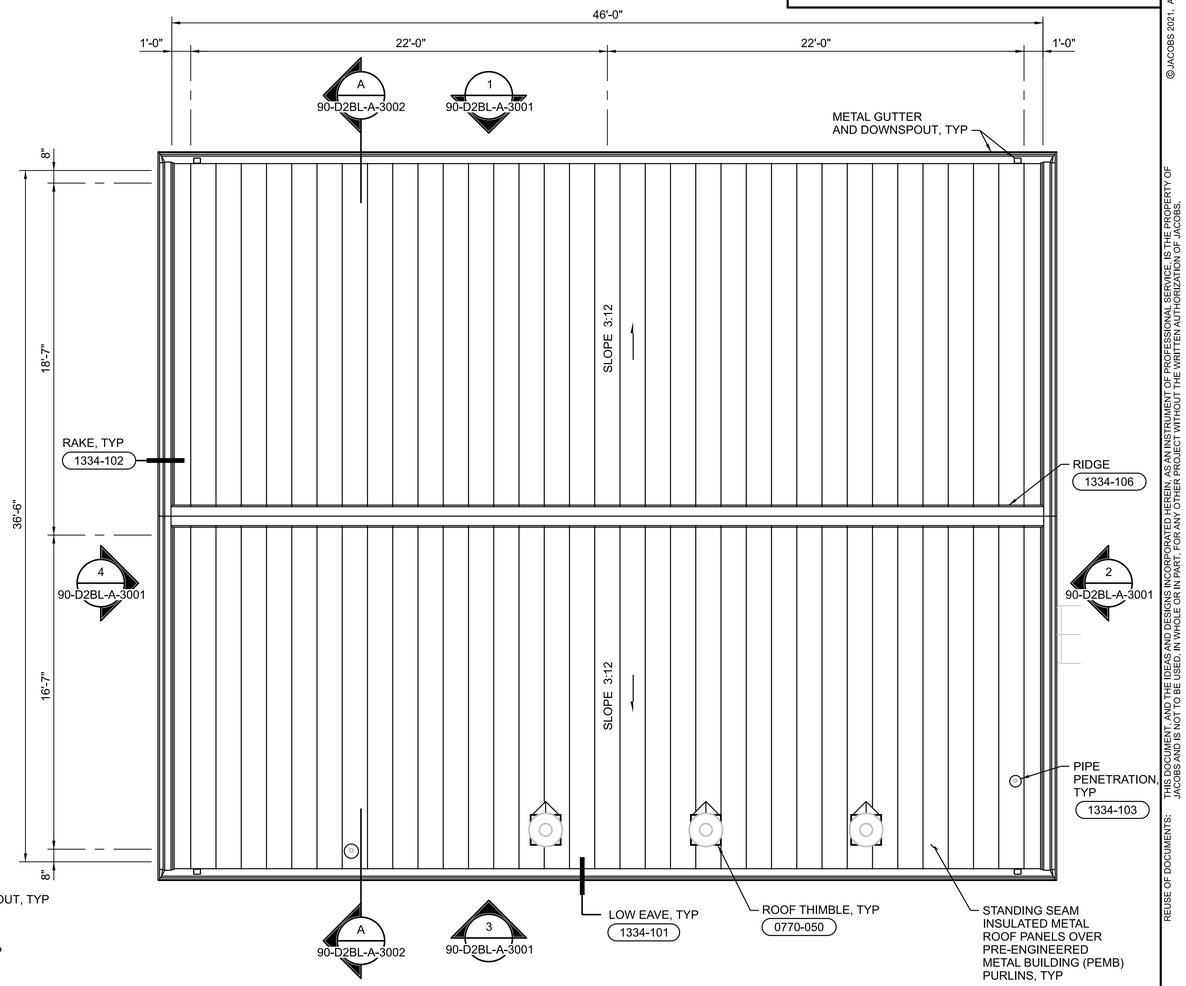
GENERAL SHEET NOTES

1. FOR GENERAL ARCHITECTURAL NOTES, MATERIAL SYMBOLS, LEGEND AND WALL TYPES, SEE DRAWING 01-G-0012.
2. FOR BUILDING CODE DATA TABLE AND LIFE SAFETY PLAN, SEE DRAWING 01-G-0013.



FLOOR PLAN

1/4"=1'-0"



ROOF PLAN

1/4"=1'-0"

STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

SLUDGE MIXING BUILDING
ARCHITECTURAL
FLOOR PLAN AND ROOF PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE:
DRAWING: 90-D2BL-A-2000
ATLAS PAGE NO: 3328
SHEET 196 OF 300 SHEETS

PLOT DATE: 14-MAY-2026
PLOT TIME: 17:23

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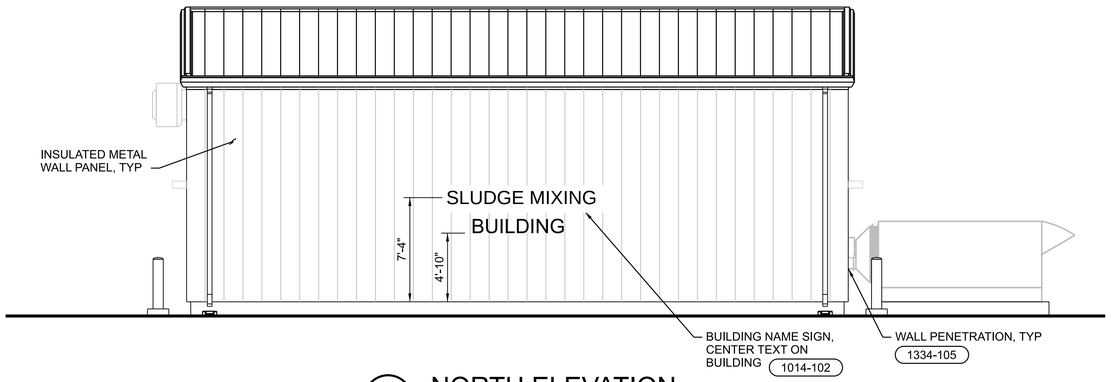
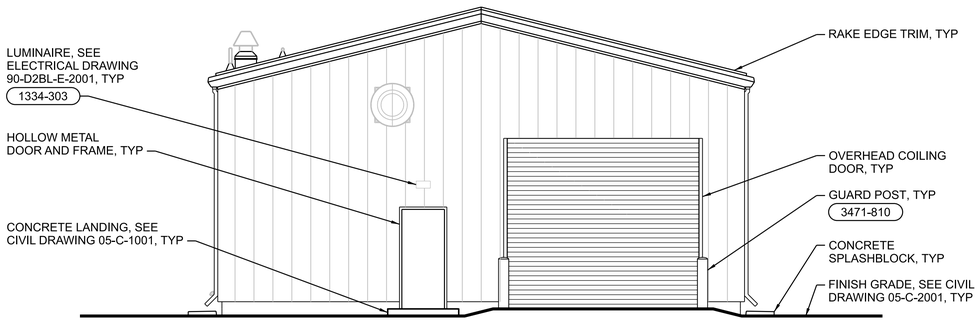


1 NORTH ELEVATION

3/16"=1'-0"

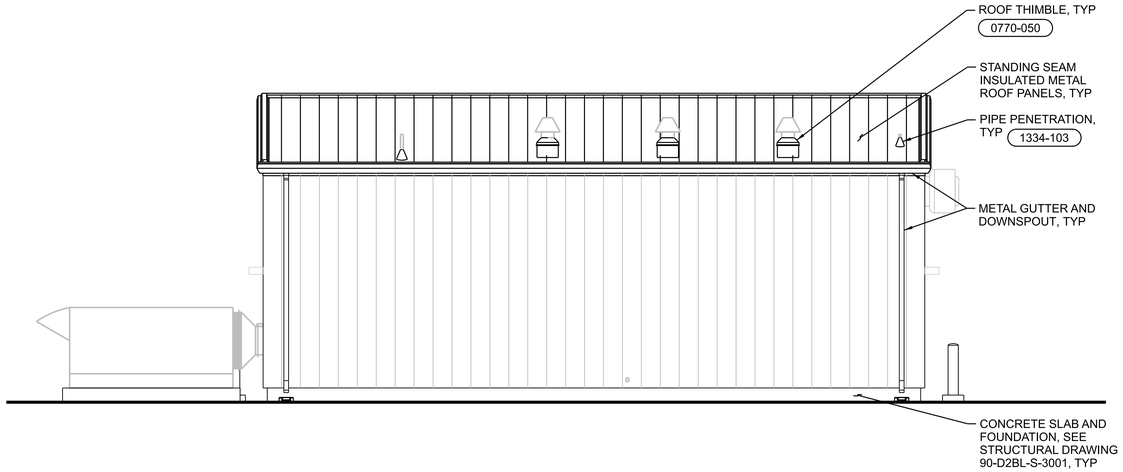
90-D2BL-A-2000



2 EAST ELEVATION

3/16"=1'-0"

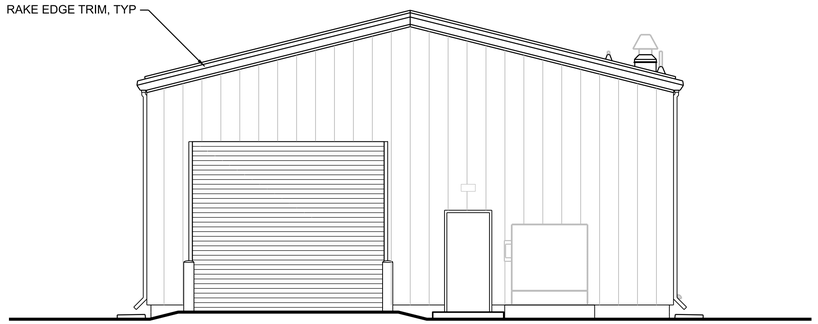
90-D2BL-A-2000



3 SOUTH ELEVATION

3/16"=1'-0"

90-D2BL-A-2000



4 WEST ELEVATION

3/16"=1'-0"

90-D2BL-A-2000

STATE OF OKLAHOMA
MARK
POWELL
A08635
5/15/26
LICENSED ARCHITECT

SLUDGE MIXING BUILDING
ARCHITECTURAL
ELEVATIONS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MM	05/26
LEAD ENG.	RZ	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 90-D2BL-A-3001 DATE: MAY 2026

ATLAS PAGE NO: 3328 SHEET 197 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:24

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INTERIOR FINISH SCHEDULE

ABBREVIATIONS:

CLR	CLEAR	GALV	GALVANIZED	SLR	SEALER
COL	COLOR	HGT	HEIGHT	STL	STEEL
CONC	CONCRETE	IMP	INSULATED METAL PANEL		
FCTY	FACTORY	MATL	MATERIAL		

NOTES:

NO. 1 NUMBERS IN THE FINISH COLUMN REFER TO PAINT SYSTEMS IN SPECIFICATION SECTION 09 90 00.
NO. 2 CODES IN COL COLUMN REFER TO COLOR LIST ON THIS DRAWING.
NO. 3 FOR EXTERIOR FINISHES AND COLORS, SEE EXTERIOR FINISH SCHEDULE ON THIS DRAWING.
NO. 4 PRE-ENGINEERED METAL BUILDING FINISHES AS SPECIFIED IN SECTION 13 34 19.

SPACE		FLOOR			BASE AND WAINSCOT					TYPICAL WALL			OTHER WALL			CEILING				MISCELLANEOUS				OTHER REQUIREMENTS
NO.	NAME	SUB FL	FINISH	COL	HGT	MATL	FINISH	COL	WALLS	MATL	FINISH	COL	MATL	FINISH	COL	HGT	MATL	FINISH	COL	ITEM	MATL	FINISH	COL	
90D2BL101	SLUDGE MIXING	CONC	SLR	CLR	8"	CONC	SLR	CLR	ALL	IMP	FCTY, 5 (NOTE 4)	P-2	---	---	---	VARIES	IMP	FCTY, 5 (NOTE 4)	P-2	PRE-ENGINEERED BUILDING FRAMES / PURLINS & GIRTS	STL / GALV	5 / G60 (NOTE 4), 5	P-2 / P-2	

DOOR AND HARDWARE SCHEDULE

ABBREVIATIONS:

COL	COLOR	MATL	MATERIAL
CONSTR	CONSTRUCTION	MET	METAL
EXT	EXTERIOR	STL	STEEL
FCTY	FACTORY		
HM	HOLLOW METAL		

NOTES:

NO. 1 SEE THIS SHEET FOR DOOR AND FRAME TYPES.
NO. 2 FOR DOOR DETAILS, SEE DESIGN DETAILS ON VOLUME 6 CONSTRUCTION DOCUMENTS.
NO. 3 NUMBER CODE IN HARDWARE SET COLUMN REFERS TO HARDWARE SETS IN SPECIFICATION SECTION 08 71 00.
NO. 4 NUMBERS IN FINISH COLUMN REFER TO PAINT SYSTEMS IN SPECIFICATION SECTION 09 90 00.
NO. 5 CODES IN COL COLUMN REFER TO COLOR LIST ON THIS DRAWING.
NO. 6 FOR GLASS TYPES, SEE SPECIFICATION SECTION 08 80 00.

OPENING															HARDWARE		FIRE PROTECTION RATING	OTHER REQUIREMENTS
NO.	SIZE		DOOR					FRAME				DETAILS						
	WIDTH	HEIGHT	CONSTR	TYPE	GLASS	FINISH	COL	MATL	TYPE	FINISH	COL	HEAD	JAMB	SILL	SET NO.	KEY SIDE		
90D2BL101A	14'-0"	12'-0"	MET	OHCI	---	FCTY	O-1	STL	OHC	FCTY	O-1	0833-101	0833-102	0833-103	1	EXT	---	---
90D2BL101B	3'-0"	7'-0"	HM	F	---	5	P-3	HM	SD	5	P-3	0811-101	0811-102	0871-001	2	EXT	---	---
90D2BL101C	3'-0"	7'-0"	HM	F	---	5	P-3	HM	SD	5	P-3	0811-101	0811-102	0871-001	2	EXT	---	---
90D2BL101D	14'-0"	12'-0"	MET	OHCI	---	FCTY	O-1	STL	OHC	FCTY	O-1	0833-101	0833-102	0833-103	1	EXT	---	---

EXTERIOR FINISH SCHEDULE

NOTES:

NO. 1 NUMBERS IN THE FINISH COLUMN REFER TO PAINT SYSTEMS IN SPECIFICATION SECTION 09 90 00.
NO. 2 CODES IN COLOR COLUMN REFER TO COLOR LIST ON THIS DRAWING.

ITEM / MATERIAL	FINISH	COLOR
STANDING SEAM INSULATED METAL ROOF PANELS	FACTORY	M-1
GUTTERS AND DOWNSPOUTS	FACTORY	M-2
INSULATED METAL WALL PANELS	FACTORY	M-3
EXPOSED MISCELLANEOUS STEEL	PAINT SYSTEM #5	P-1
LUMINAIRES	FACTORY	DARK BRONZE

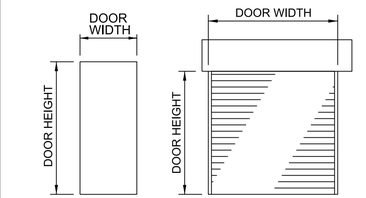
COLOR LIST

NOTES:

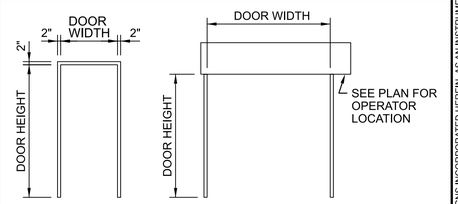
NO. 1 COLOR SELECTIONS FOR THIS PROJECT MAY BE NOTED IN INTERIOR FINISH SCHEDULE, EXTERIOR FINISH SCHEDULE, PIPING SCHEDULE AND ON THE DRAWINGS BY THE LETTER-NUMBER COMBINATION IN THE MARK COLUMN OF THIS LIST.
NO. 2 SOME COLOR SELECTIONS MAY BE MADE IN VARIOUS SPECIFICATION SECTIONS.
NO. 3 VERIFY COLORS WITH OWNER BEFORE BEGINNING WORK. IF A COLOR SELECTION IS NOT MADE, REQUEST ONE FROM THE OWNER.

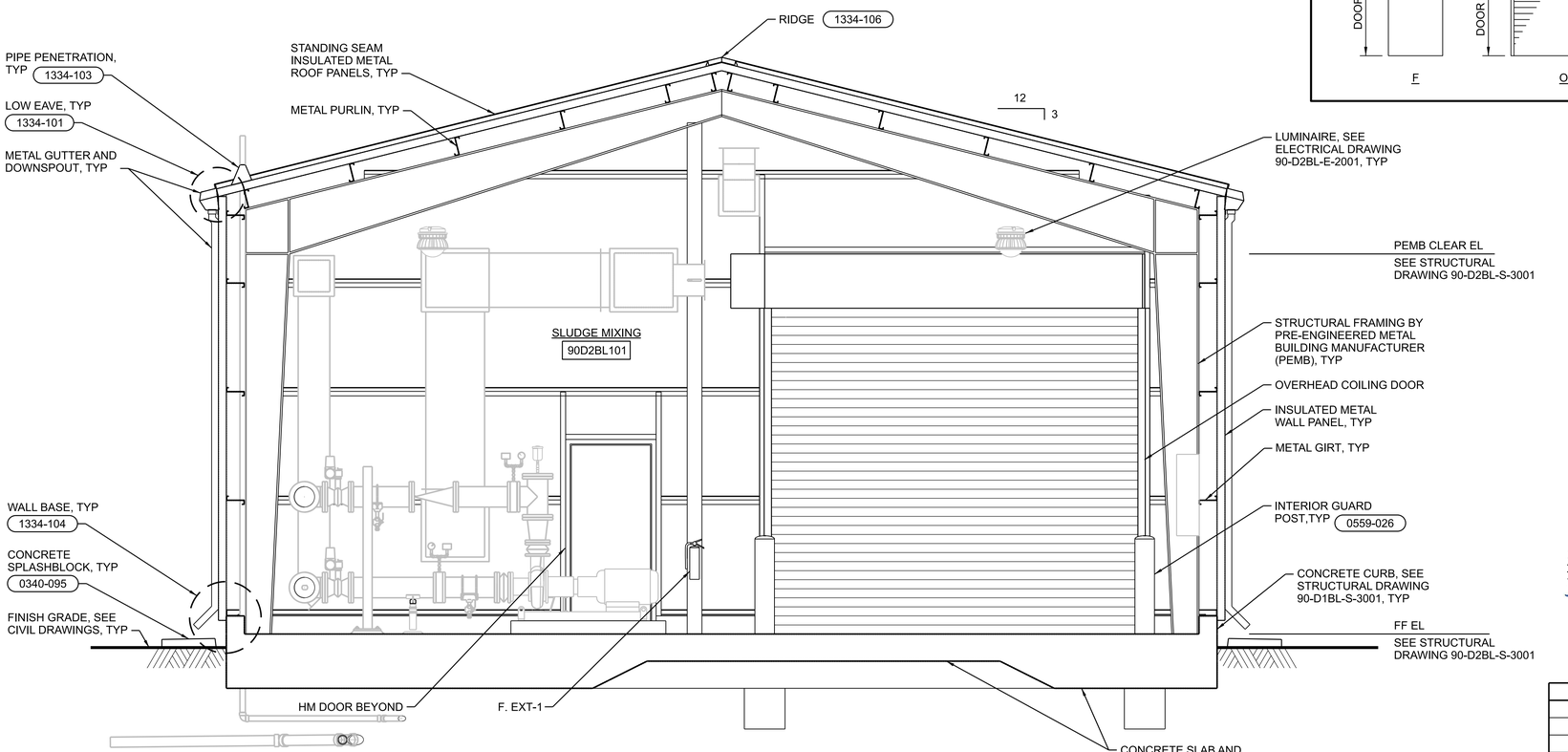
MARK	MATERIAL	MANUFACTURER (NOTE 3)	COLOR (NOTE 3)
OPENINGS			
O-1	OVERHEAD COILING DOOR	CORNELL	RAL 6012
MISCELLANEOUS			
M-1	STANDING SEAM INSULATED METAL ROOF PANELS	NUCOR	DESERT SAND
M-2	GUTTERS AND DOWNSPOUTS	NUCOR	DESERT SAND
M-3	INSULATED METAL WALL PANELS	NUCOR	DESERT SAND
PAINT			
P-1	PAINT (EXPOSED MISCELLANEOUS STEEL)	SHERWIN WILLIAMS	SW6044 - DOESKIN (MATCH M-2)
P-2	PAINT (PRE-ENGINEERED METAL BUILDING FRAME)	SHERWIN WILLIAMS	SW7004 - SNOWBOUND
P-3	PAINT (HM DOORS / FRAMES)	SHERWIN WILLIAMS	SW6216 - JASPER

DOOR TYPES



DOOR FRAME TYPES





A SECTION
3/8"=1'-0"
90-D2BL-A-2000

STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

REVISION	BY	DATE

SLUDGE MIXING BUILDING
ARCHITECTURAL
SECTION AND SCHEDULES

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MSW	05/26	
HORIZONTAL:	LEAD ENG.	RJL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D2BL-A-3002			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 198 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:23

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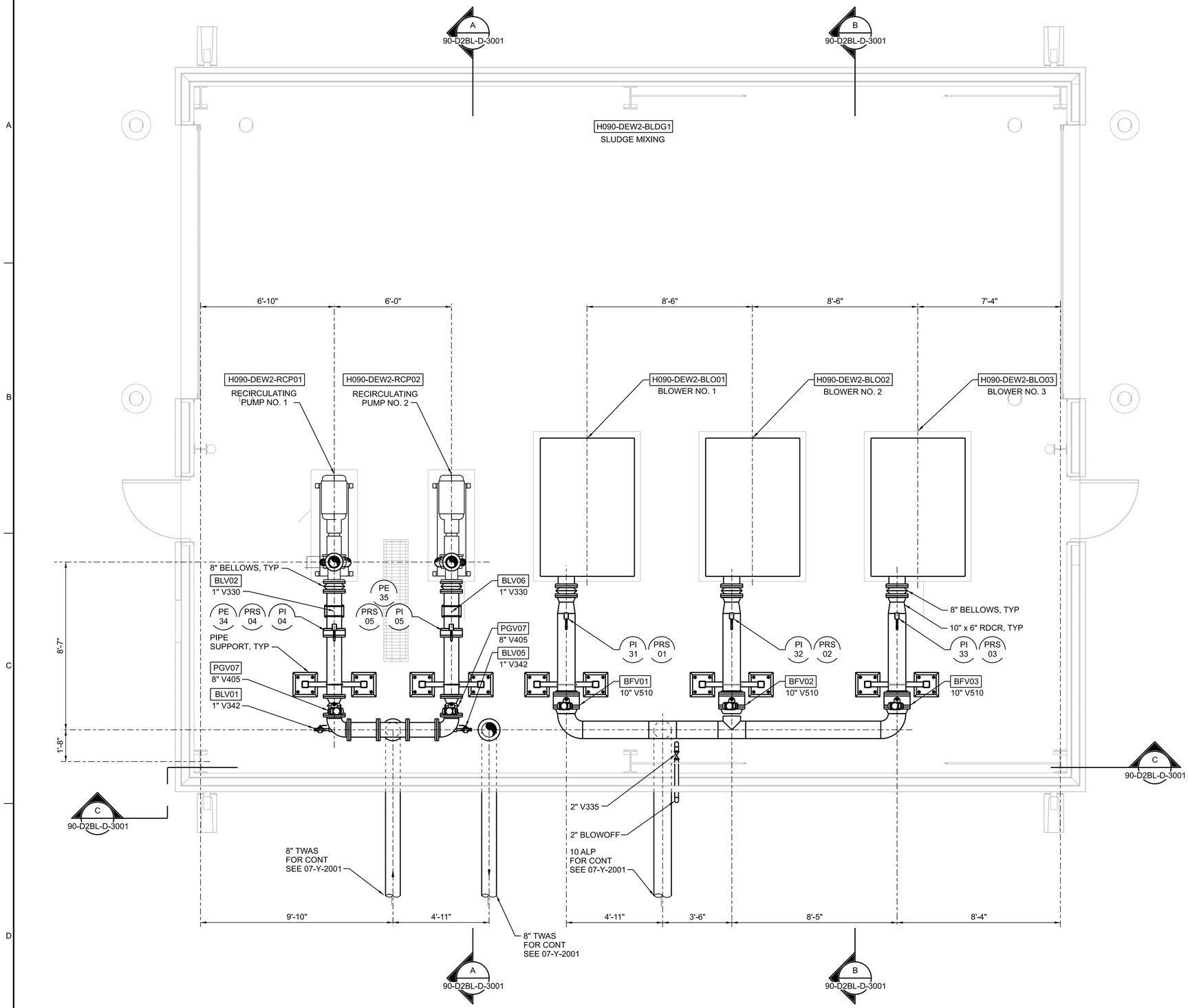

LOWER LEVEL PLAN

3/8" = 1'-0"

GENERAL SHEET NOTES

1. EQUIPMENT SIZES ARE APPROXIMATE. FINAL SIZES TO BE DETERMINED BY VENDOR.
2. ROTARY BLOWER DISCHARGE CONNECTION IS SHOWN AS FLANGED WITH FLEXIBLE BELLOWS. A SLEEV-TYPE CONNECTION WITH FLEXIBLE COUPLING IS ACCEPTABLE.

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

SLUDGE MIXING BUILDING
PROCESS
LOWER FLOOR PLAN

WFXQ7901

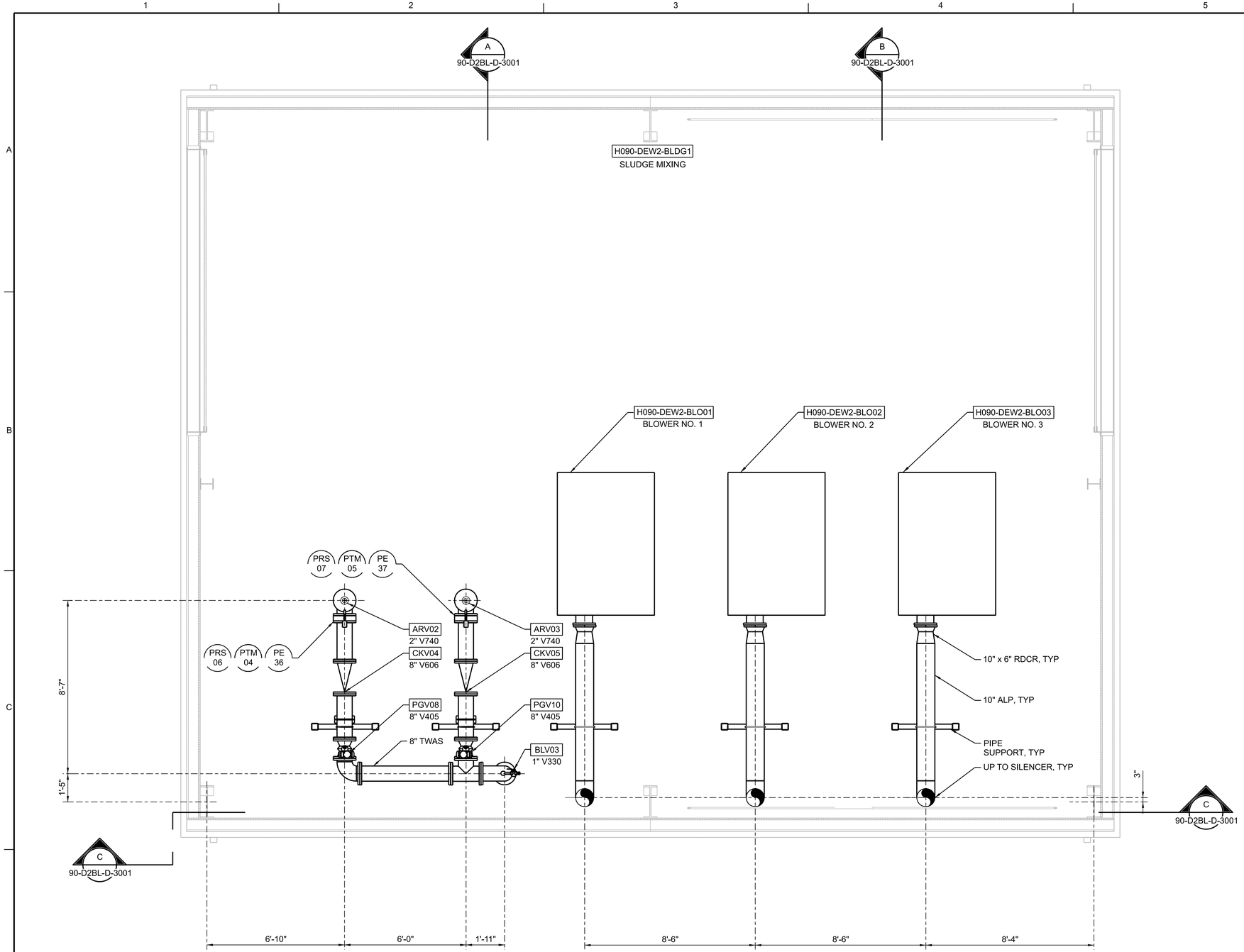
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
HORIZONTAL:	PROJ. MGR.	MSN 05/26	
	LEAD ENG.	RJL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D2BL-D-2000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 199 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 21:35



UPPER LEVEL PLAN

3/8" = 1'-0"

GENERAL SHEET NOTES

1. EQUIPMENT SIZES ARE APPROXIMATE. FINAL SIZES TO BE DETERMINED BY VENDOR.

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

SLUDGE MIXING BUILDING
PROCESS
UPPER LEVEL PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

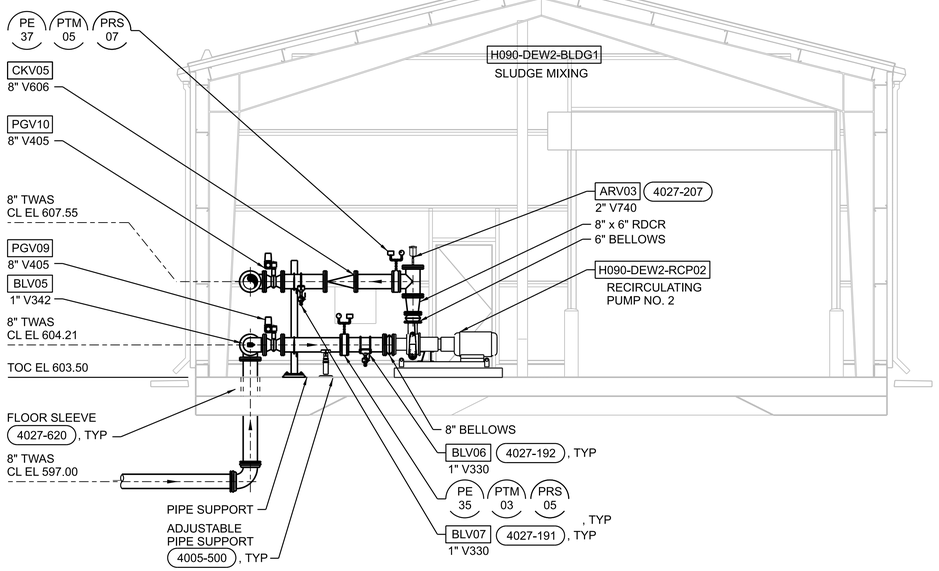
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D2BL-D-2001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 200 OF 300 SHEETS

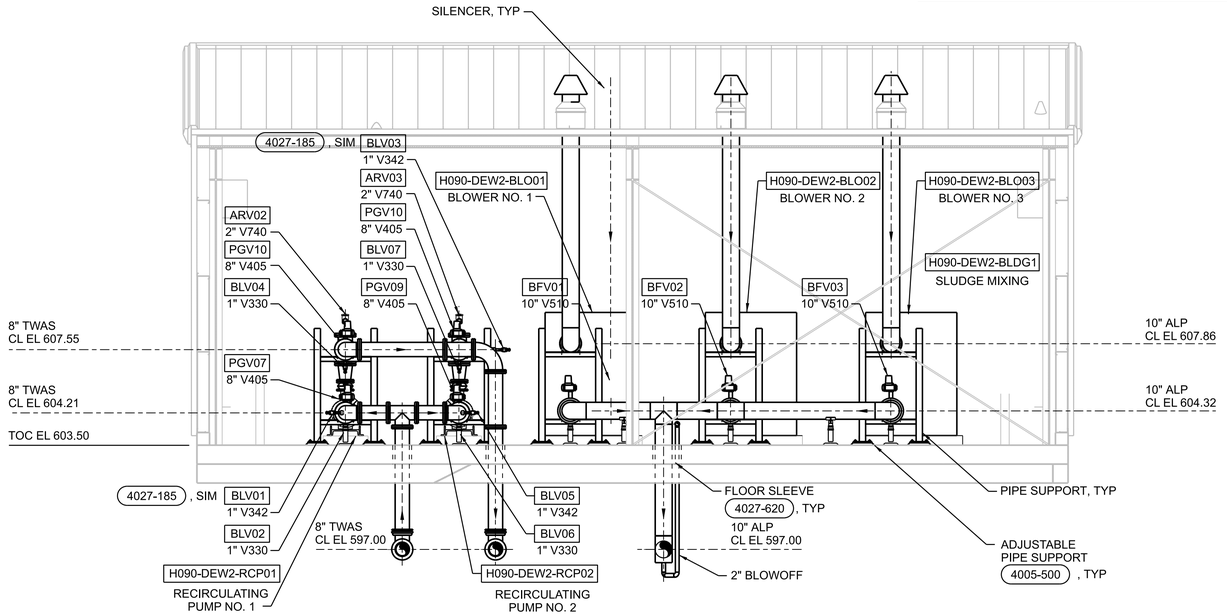
PLOT DATE: 14-MAY-2026 PLOT TIME: 18:13

GENERAL SHEET NOTES

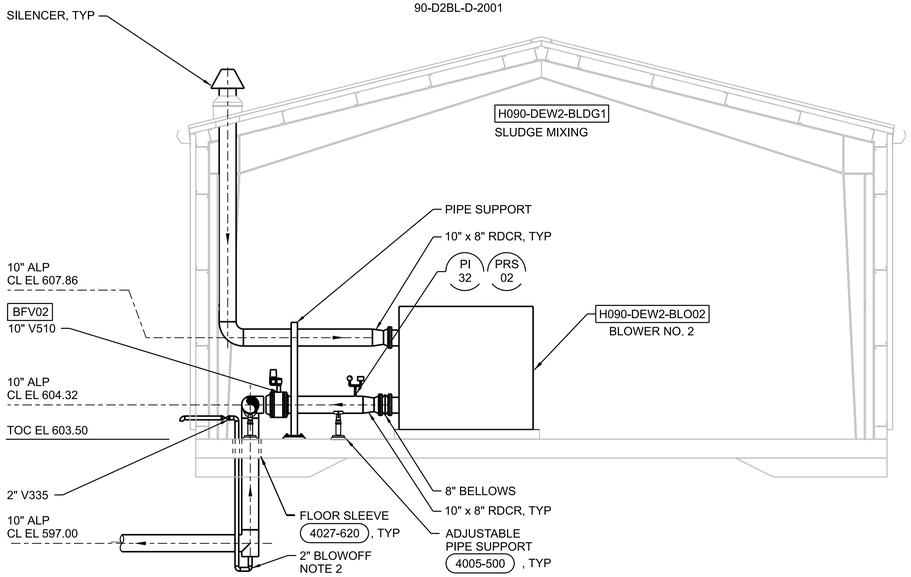
1. ROTARY BLOWER DISCHARGE CONNECTION IS SHOWN AS FLANGED WITH FLEXIBLE BELLOWS. A SLEEV-TYPE CONNECTION WITH FLEXIBLE COUPLING IS ACCEPTABLE.
2. TRANSITION TO ALP PIPE MATERIAL TO PVC SCH 80 FOR 2" BLOWOFF PIPE.
3. ENSURE ALL TAPPED FLUSH CONNECTIONS ARE INSTALLED ON FITTING BOSS ONLY.



A SECTION
1/4"=1'-0"
90-D2BL-D-2000
90-D2BL-D-2001



C SECTION
1/4"=1'-0"
90-D2BLD-2000
90-D2BL-D-2001



B SECTION
1/4"=1'-0"
90-D2BL-D-2000
90-D2BL-D-2001

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

SLUDGE MIXING BUILDING
PROCESS SECTIONS

WFXQ7901

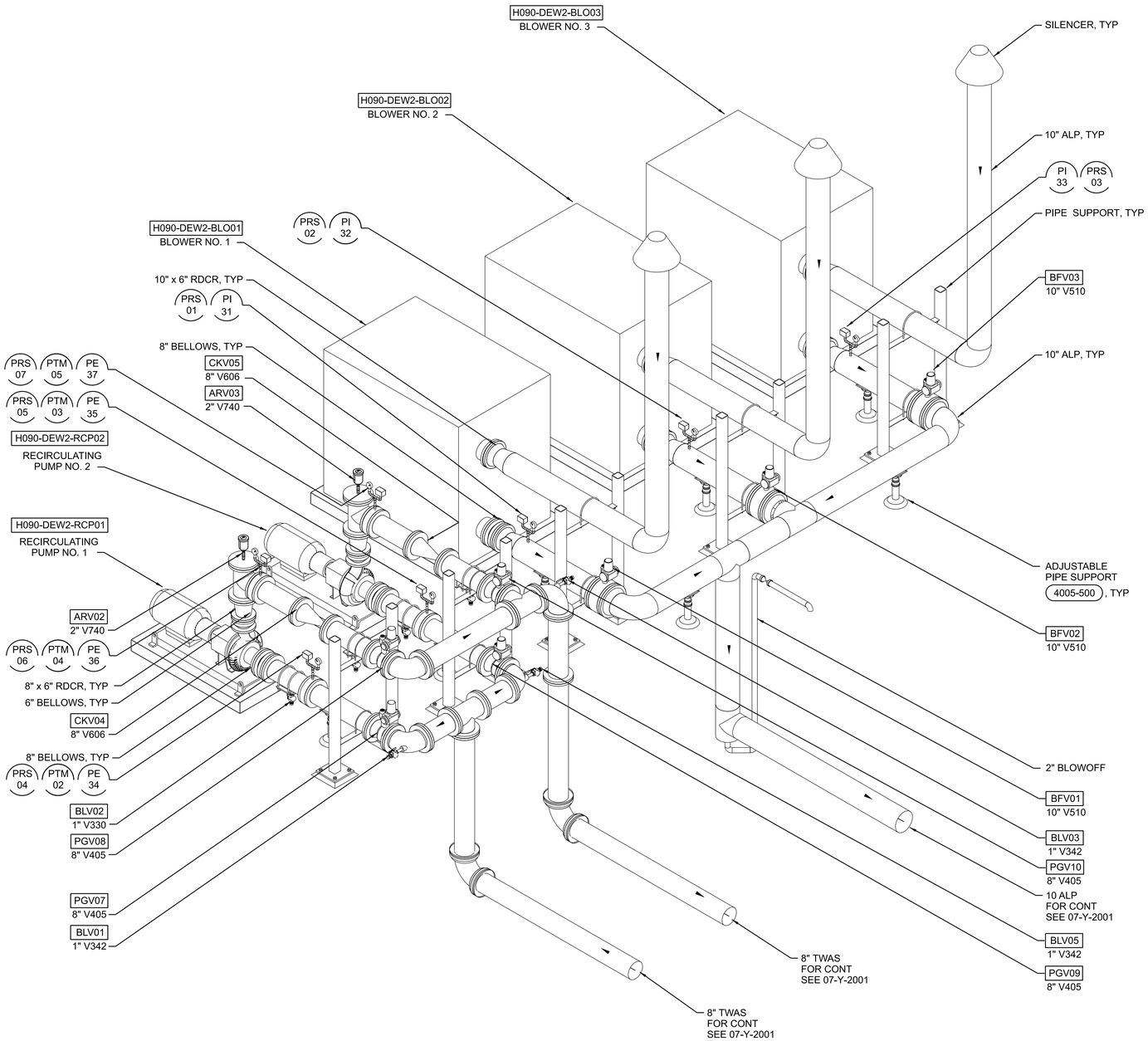
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
HORIZONTAL:	PROJ. MGR.			
	LEAD ENG.			
VERTICAL:	FIELD MGR.			DESIGN MANAGER
FILE:	DRAWING: 90-D2BL-D-3001			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 201 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 18:13



ISOMETRIC VIEW

NTS

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

SLUDGE MIXING BUILDING
PROCESS
ISOMETRIC

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

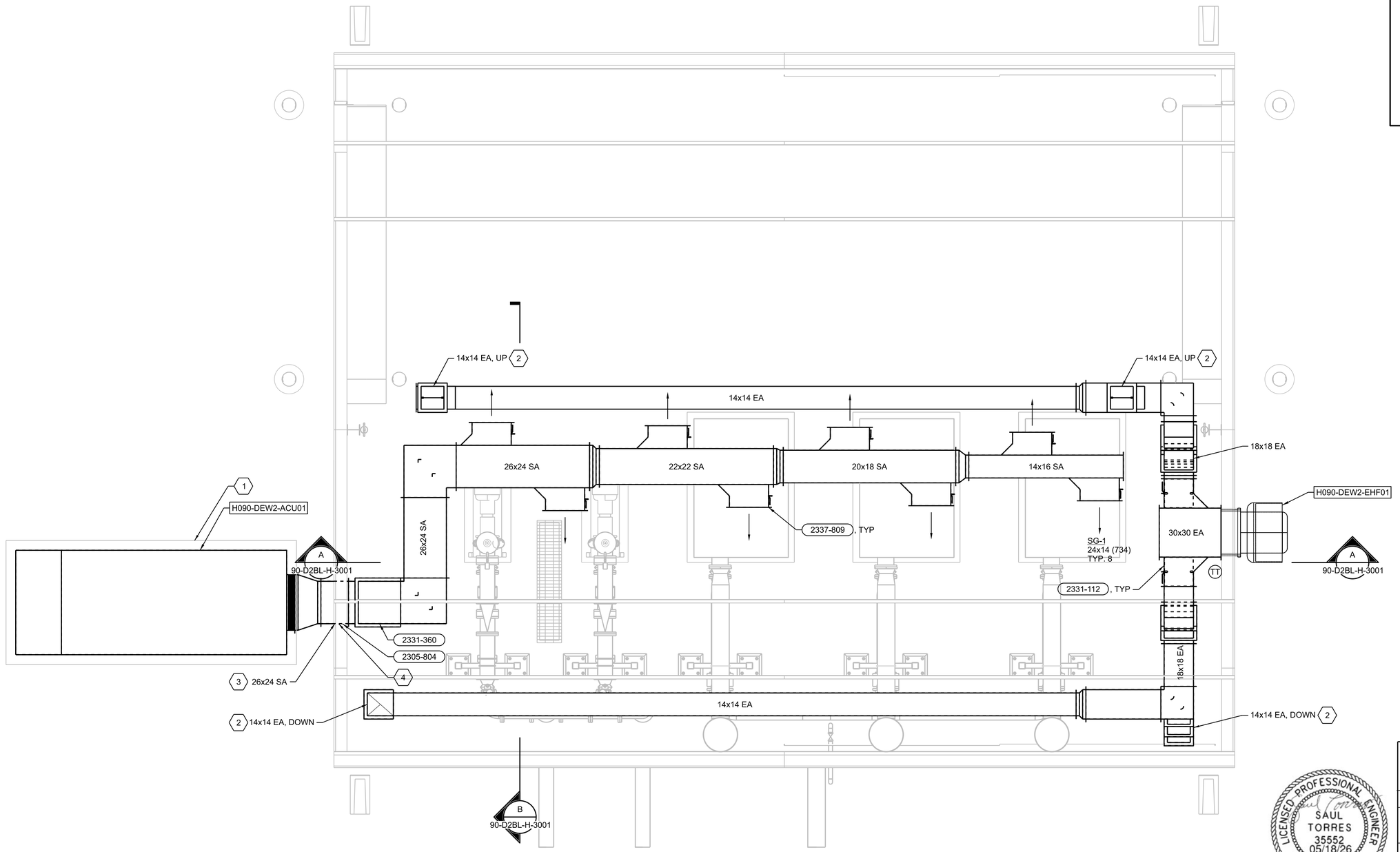
PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	GZL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D2BL-D-9001			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 202 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 18:13

SHEET KEYNOTES

1. CONCRETE PAD 6 INCHES LARGER THAN THE DIMENSIONS OF THE EQUIPMENT. PLACE EQUIPMENT CENTERED ON PAD. SEE STRUCTURAL DRAWINGS.
2. LOW/HIGH DUCT EXHAUST 12 INCHES FROM FLOOR/CEILING. PROVIDE A 45 DEGREE ANGLED INLET AND COVER WITH 1 INCH SQARE MESH SAME MATERIAL AS DUCT.
3. EXTERIOR DUCT DIMENSION ARE INSIDE FREE AREA.
4. SEE ARCHITECTURAL DRAWINGS FOR WALL PENETRATION DETAILS.



N

PLAN
3/8"=1'-0"

LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

SLUDGE MIXING BUILDING
HVAC
PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.		05/26
	LEAD ENG.		5/26
	FIELD MGR.		5/26
FILE:	DRAWING: 90-D2BL-H-2000		DESIGN MANAGER
ATLAS PAGE NO: 3328			DATE: MAY 2026
			SHEET 203 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 12:53

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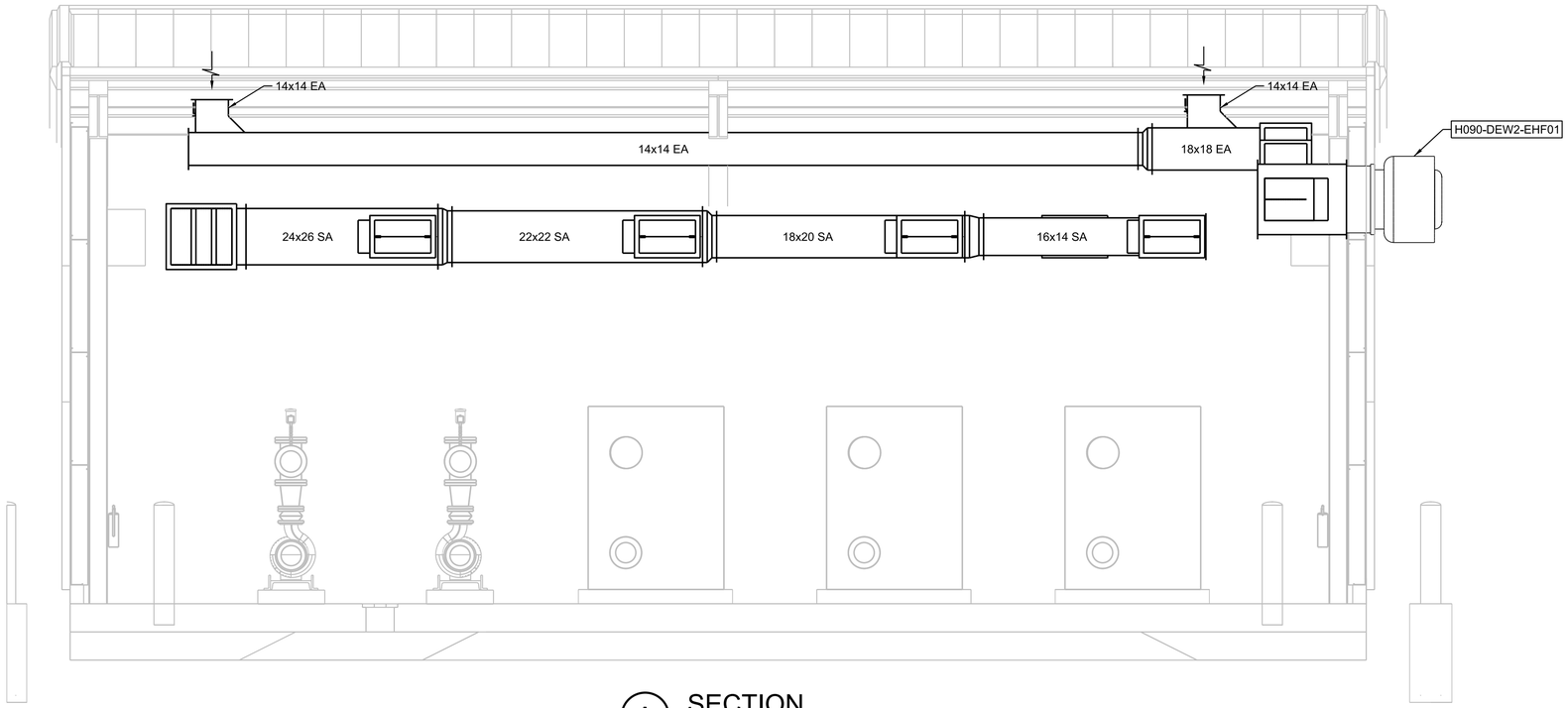
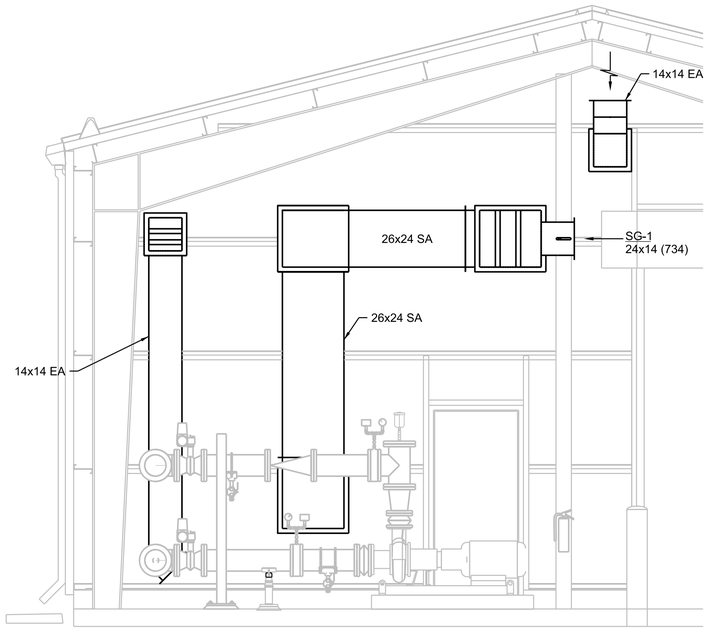


A SECTION
3/8"=1'-0"
90-D2BL-H-2000



B SECTION
3/8"=1'-0"
90-D2BL-H-2000

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LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

SLUDGE MIXING BUILDING
HVAC
SECTIONS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

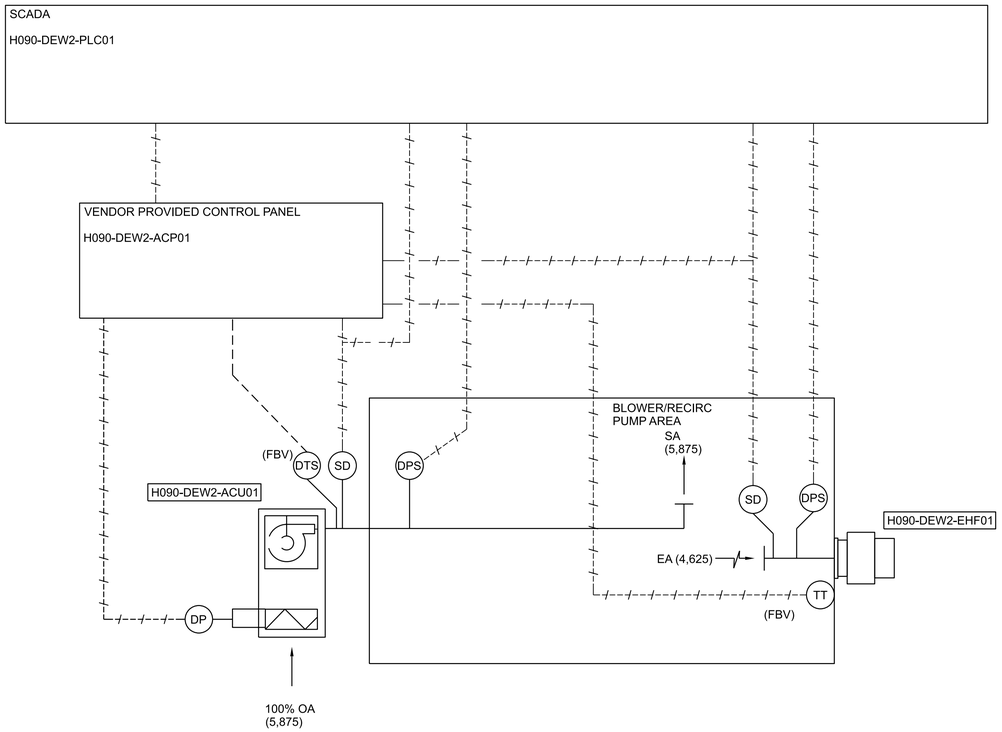
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MSN	05/18/26	
HORIZONTAL:	LEAD ENG.	SJL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D2BL-H-3001			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 204 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 12:53



GENERAL SHEET NOTES

1. SEE HVAC LEGEND SHEET 01-G-0035.
2. SEE I&C LEGEND SHEETS 01-G-0055 & 01-G-0056.

SEQUENCE OF OPERATIONS

GENERAL:

1. A GENERAL ALARM SHALL BE SENT TO THE SCADA SYSTEM VIA 24 VDC DRY CONTACTS RELAY WHEN THERE IS AN EQUIPMENT FAILURE OR ALARM. CONTROL WIRING SHALL BE PROVIDED BY DIVISION 26. SCADA PANEL TERMINATION SHALL BE PROVIDED BY DIVISION 40.
2. ANALOGUE SIGNAL CONVERSION PROGRAMMING SHALL BE DONE BY DIVISION 40 TO COMMUNICATE WITH SCADA NETWORK.

H090-DEW2-ACU01

GENERAL:
THE UNIT OPERATES AS A CONSTANT 100% OUTSIDE AIR MAKEUP UNIT WITH A PROGRAMMABLE THERMOSTAT.

THE UNIT IS ENABLED CONTINUOUSLY.

THE UNIT SHALL OPERATE IN ONE OF THE FOLLOWING SCHEDULED MODES.
1. OCCUPIED
2. UNOCCUPIED

ZONE SET POINTS:
1. OCCUPIED MODE
   VENTILATION ONLY - COOLING
   50F (ADJ) HEATING
2. UNOCCUPIED MODE:
   UNIT IS TURNED OFF AND OUTDOOR AIR DAMPER IS CLOSED.

OCCUPIED MODE RUN CONDITIONS:
FAN CONTROLS:
1. THE FAN VFD SHALL RUN AT A CONSTANT FAN SPEED TO MAINTAIN THE SPACE CFM PER NFPA 820.

COOLING/VENTILATION CONTROLS:
1. IF THE SUPPLY AIR TEMPERATURE IS ABOVE THE HEATING SETPOINT THEN THE UNIT SHALL RUN AT 100% OUTSIDE AIR.
2. ENABLED WHEN THERE IS NO HEATING DEMAND DURING OCCUPIED MODE.

HEATING CONTROLS:
1. IF THE SUPPLY AIR TEMPERATURE IS BELOW THE SUPPLY AIR HEATING SET POINT, THE SCR ELECTRIC HEAT STAGES ON AND MODULATES TO MAINTAIN THE SUPPLY AIR HEATING SET POINT. IF ADDITIONAL HEAT IS REQUIRED, SCR HEAT IS HELD AT FULL CAPACITY AND THE AUXILIARY HEAT WILL MODULATE TO MAINTAIN SUPPLY AIR HEATING SET POINT.
2. IF THE SUPPLY AIR TEMPERATURE IS ABOVE HEATING SET POINT, HEATING WILL BEGIN TO STAGE OFF.

SUPPLY AIR TEMPERATURE RESET:
1. THE SUPPLY AIR RESET SOURCE FOR THIS UNIT IS THE SPACE TEMPERATURE. THE SUPPLY AIR TEMPERATURE RESET SOURCE IS USED TO ADJUST THE SUPPLY AIR TEMPERATURE SETPOINT. THE HEATING MODE SETPOINT ARE INDEPENDENTLY CONFIGURED TO BE CONTROLLED BY A COMMON RESET SOURCE.
2. THE HIGH AND LOW LIMIT VALUES ARE DEFINED TO BE 0F (ADJ) LOW AND 200F (ADJ) HIGH.
3. WHEN THE RESET SOURCE IS AT ITS HIGH LIMIT SETPOINT, THE SAT SETPOINT IS RESET TO ITS LOW LIMIT SETPOINT. WHEN THE RESET SOURCE IS AT ITS LOW LIMIT SETPOINT, THE SAT SETPOINT RESETS TO ITS HIGH LIMIT SETPOINT.
4. AS THE RESET SOURCE VALUE MOVES WITHIN THE HIGH AND LOW LIMIT RESET SETPOINTS, THE SUPPLY AIR SETPOINT IS PROPORTIONALLY RESET WITHIN THE HIGH AND LOW SAT SETPOINTS.

ALARMS TO VENDOR CONTROL PANEL:
1. DIRTY FILTER ALARM
2. MECHANICAL HEATING FAILURE
3. EMERGENCY SHUTDOWN
4. THESE ARE A SHORTEN LIST OF ALARMS, FOR COMPREHENSIVE LIST CONSULT EQUIPMENT VENDOR.

EMERGENCY SHUTDOWN:
UPON SMOKE DETECTOR ACTIVATION, THE UNIT SHALL SHUTDOWN. THE SMOKE ALARM ACTIVATION SIGNAL SHALL BE HARD WIRED TO THE UNIT CONTROLLER INPUT. SIGNAL SHALL ALSO BE SENT TO SCADA PANEL AND ALARM MONITORING STATION.

VENTILATION ALARM:
IF THE DESIGN AIR FLOW DROPS BELOW 80% REQUIRED TO DECLASSIFY THE SPACE PER NFPA 820, THEN A VENTILATION SIGNAL IS SENT TO SCADA PANEL AND ALARM MONITORING STATION. SIGNAL SHALL TRIGGER AUDIBLE AND VISUAL ALARM TO NOTIFY PERSONAL TO EVACUATE/EXIT FACILITY UNTIL NORMAL HVAC OPERATION IS ACHIEVED.

H090-DEW2-EHF01

GENERAL: THE FANS OPERATE AT A CONSTANT SPEED TO MAINTAIN SPACE CFM PER NFPA 820.

RUN CONDITIONS:
1. THE FANS SHALL BE INTERLOCKED WITH H090-DEW1-ACP01. BALANCE FAN WITH POTENTIOMETER.

EMERGENCY SHUTDOWN:
UPON SMOKE DETECTOR ACTIVATION, THE UNIT SHALL SHUTDOWN. THE SMOKE ALARM ACTIVATION SIGNAL SHALL BE HARD WIRED TO THE UNIT CONTROLLER INPUT. SIGNAL SHALL ALSO BE SENT TO SCADA PANEL AND ALARM MONITORING STATION.

VENTILATION ALARM:
IF THE DESIGN AIR FLOW DROPS BELOW 80% REQUIRED TO DECLASSIFY THE SPACE PER NFPA 820, THEN A VENTILATION SIGNAL IS SENT TO SCADA PANEL AND ALARM MONITORING STATION. SIGNAL SHALL TRIGGER AUDIBLE AND VISUAL ALARM TO NOTIFY PERSONAL TO EVACUATE/EXIT FACILITY UNTIL NORMAL HVAC OPERATION IS ACHIEVED.

ALARMS TO SCADA

H090-DEW2-ACU01 - VENTILATION FAILURE
H090-DEW2-EHF01 - VENTILATION FAILURE
SMOKE ALARMS
GENERAL HVAC ALARM

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LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

SLUDGE MIXING BUILDING
HVAC
AIRFLOW SCHEMATIC

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

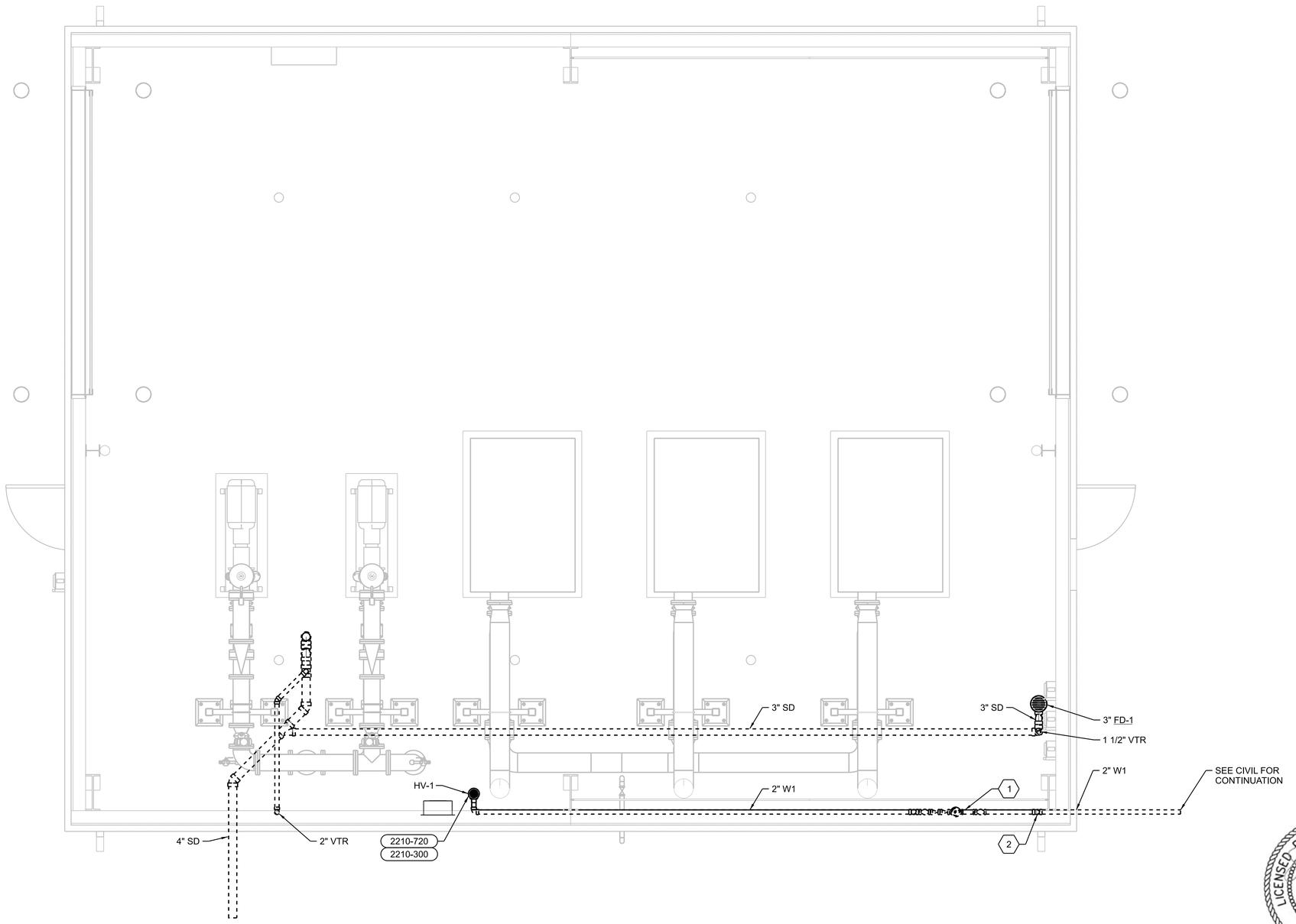
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 90-D2BL-H-6001
ATLAS PAGE NO: 3328
SHEET 205 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 12:53



N

PLAN
3/8"=1'-0"

SHEET KEYNOTES

1. ROUTE DISCHARGE TO CLOSEST DRAIN AND PROVIDE 1 INCH AIR GAP.
2. SEE STRUCTURAL PLANS FOR RISER PENETRATION THROUGH SLAB.

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LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
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05/18/26
OKLAHOMA

SLUDGE MIXING BUILDING
PLUMBING
PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

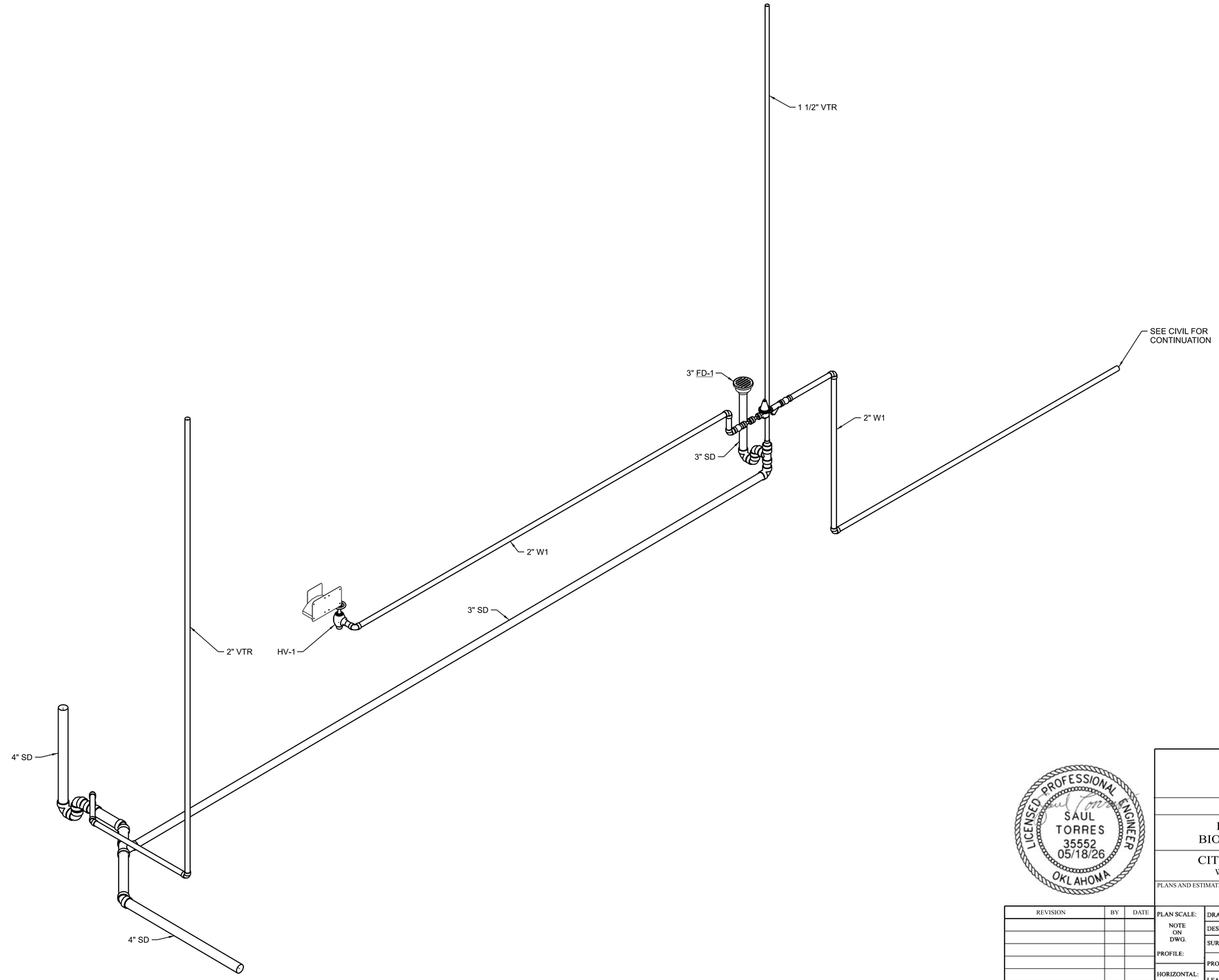
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	SJL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026
FILE: DRAWING: 90-D2BL-P-2000
ATLAS PAGE NO: 3328
SHEET 206 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 12:53



OVERALL ISOMETRIC

NTS

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LICENSED PROFESSIONAL ENGINEER
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SLUDGE MIXING BUILDING
PLUMBING
OVERALL ISOMETRIC

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 90-D2BL-P-9001
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 207 OF 300 SHEETS

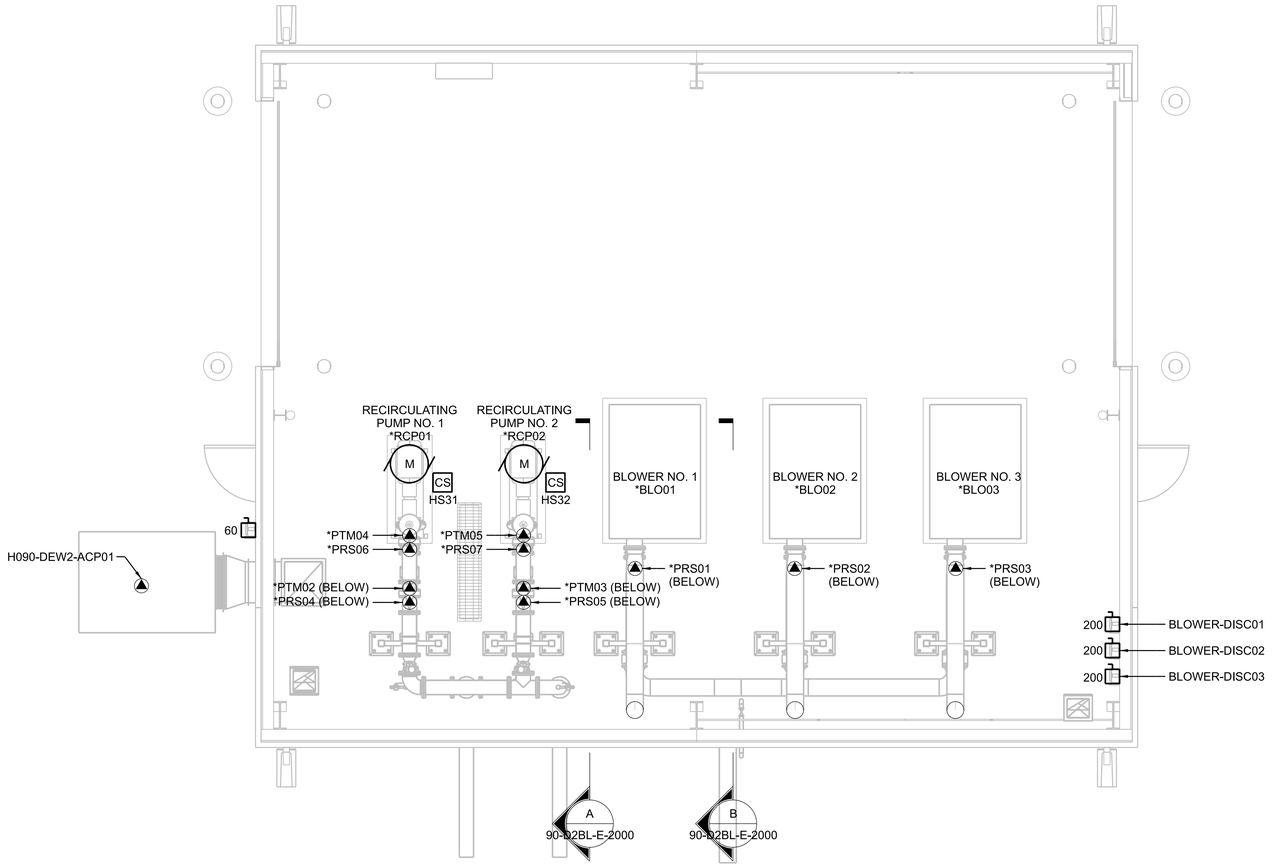
PLOT DATE: 19-MAY-2026 PLOT TIME: 12:53

GENERAL SHEET NOTES

1. COMPLETE TAG NUMBER INCLUDES THE "H090-DEW2-" PREFIX.

SHEET KEYNOTES

1. COMPLETE TAG NUMBER INCLUDES THE "H02-MNT1-" PREFIX.



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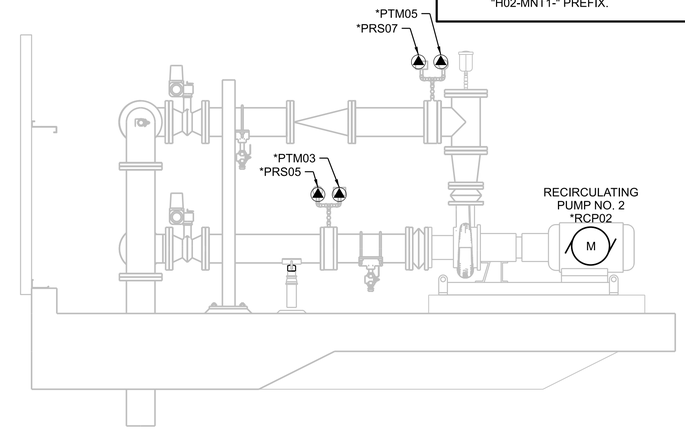
POWER PLAN
1/4"=1'-0"



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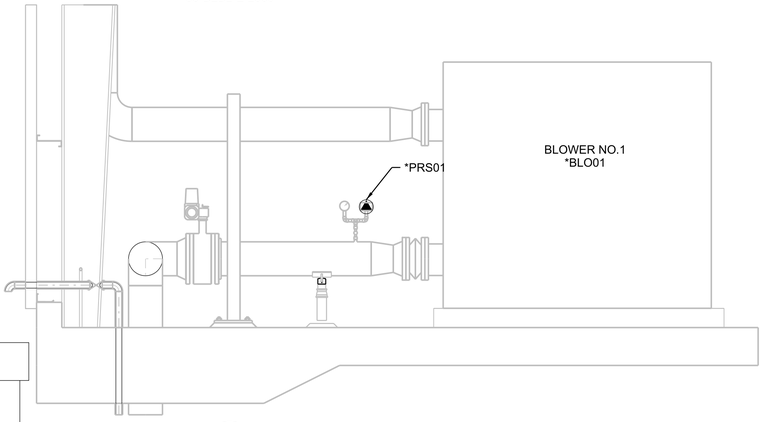
90-D2BL-E-2000



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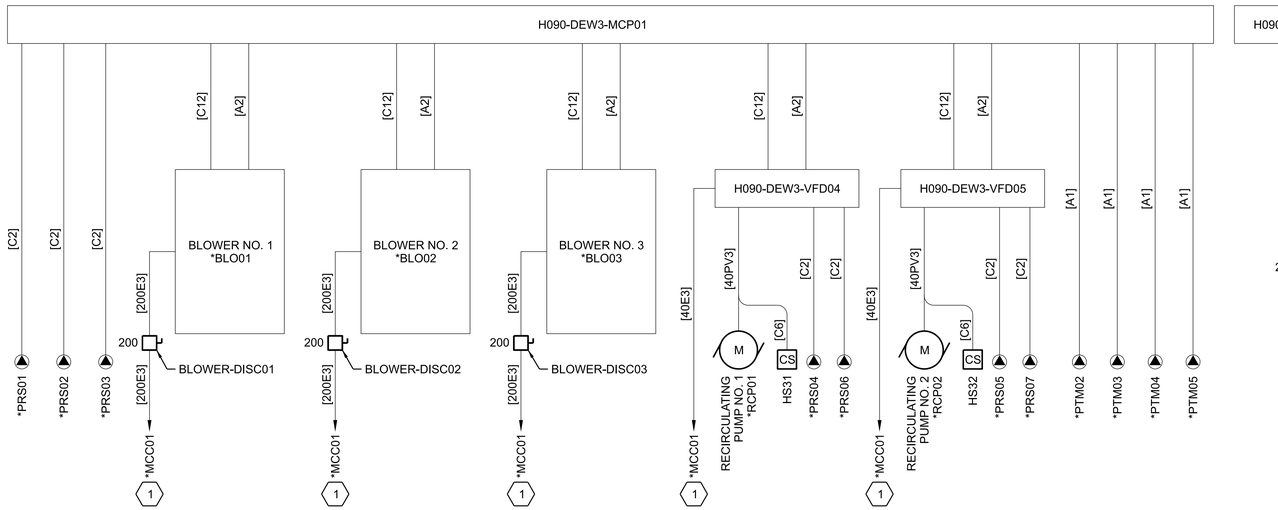
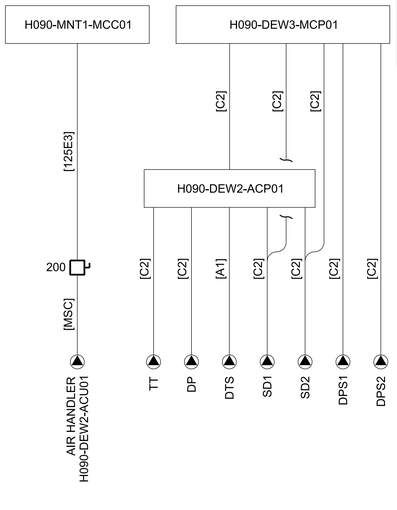
90-D2BL-E-2000



RISER DIAGRAM
NTS



HVAC RISER DIAGRAM
NTS

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LICENSED PROFESSIONAL ENGINEER
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SLUDGE MIXING BUILDING
ELECTRICAL
POWER PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

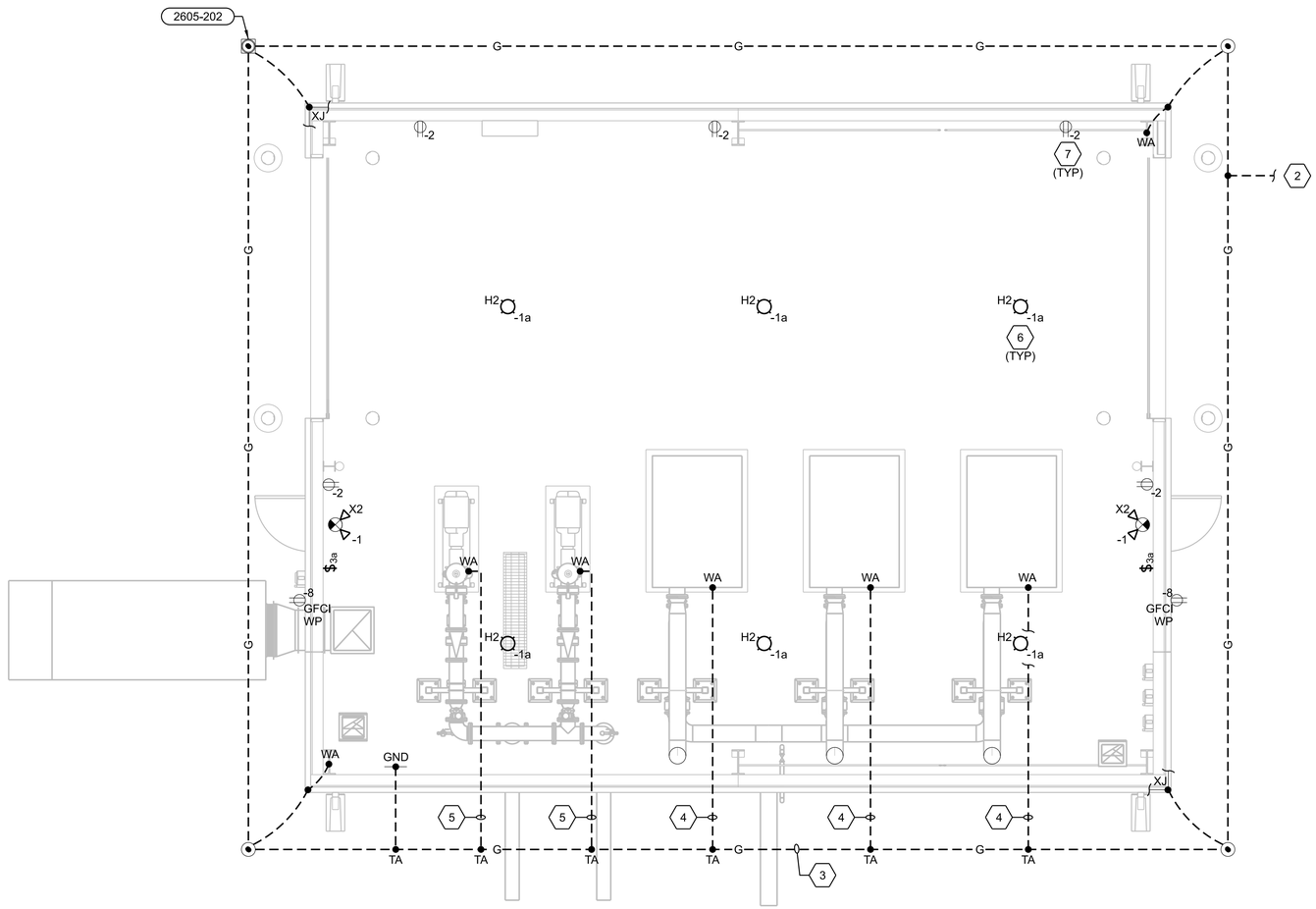
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MW	05/7/26
LEAD ENG.	BZ	5/7/26
FIELD MGR.		5/7/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 90-D2BL-E-2000
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 208 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:19



N

FACILITY PLAN

1/4"=1'-0"

GENERAL SHEET NOTES

1. GROUND RING CONDUCTOR BURIED MINIMUM 30" BELOW FINISHED GRADE.
2. ROUTE 1" PVC, SCH40 CONDUIT 12" AFF TO GROUNDING ELECTRODE, FOR USE WITH GROUND CONDUCTORS OF LIGHTING PROTECTION SYSTEM. COORDINATE NUMBER AND LOCATIONS WITH LIGHTNING PROTECTION CONTRACTOR, REFER TO SPECIFICATION SECTION 26 41 00.

SHEET KEYNOTES

1. INSTALL LIGHT FIXTURE TYPE H2 SUCH THAT THE BOTTOM OF THE FIXTURE IS 13'-6" FROM FINISHED FLOOR.
2. THE #4/0 TIN-PLATED BARE COPPER GROUND ENCASED IN THE DUCTBANK SHALL EXIT THE DUCTBANK AND CONNECT TO THE GROUND RING.
3. #4/0 AWG STRANDED, BARE, TIN-PLATED COPPER.
4. #1/0 AWG STRANDED, XHHW-2 INSULATED, 600VAC.
5. #2 AWG STRANDED, XHHW-2 INSULATED, 600VAC.
6. LIGHTING SHOULD BE ENERGIZED BY H090-DEW3-LVP01 LOCATED IN THE SLUDGE MANAGEMENT BUILDING.
7. RECEPTACLES SHOULD BE ENERGIZED BY H090-DEW3-LVP01 LOCATED INTHE SLUDGE MANAGEMENT BUILDING.
8. WALL MOUNT FIXTURE X2 SUCH THAT THE BOTTOM OF THE FIXTURE IS 1' ABOVE THE TOP OF DOOR FRAME. THE FIXTURE MUST INCLUDE AN LED EMERGENCY SIGN IN TANDEM WITH DUAL EMERGENCY LIGHTS.

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Blair I. Beaderstadt
05/18/2026

SLUDGE MIXING BUILDING
ELECTRICAL
FACILITY PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	05/26	
	LEAD ENG.	5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D2BL-E-2001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 209 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:01

RENDERING
NTS

FOR REFERENCE ONLY

SLUDGE TANKS

RENDERING

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSN 05/26	
	LEAD ENG.	AZL 5/26	DESIGN MANAGER
FILE:	FIELD MGR.	5/26	DATE: MAY 2026
ATLAS PAGE NO: 3328	DRAWING: 90-D1CT-R-0001		SHEET 210 OF 300 SHEETS

PLOT DATE: 05\14\2026 PLOT TIME: 9:01:57 AM

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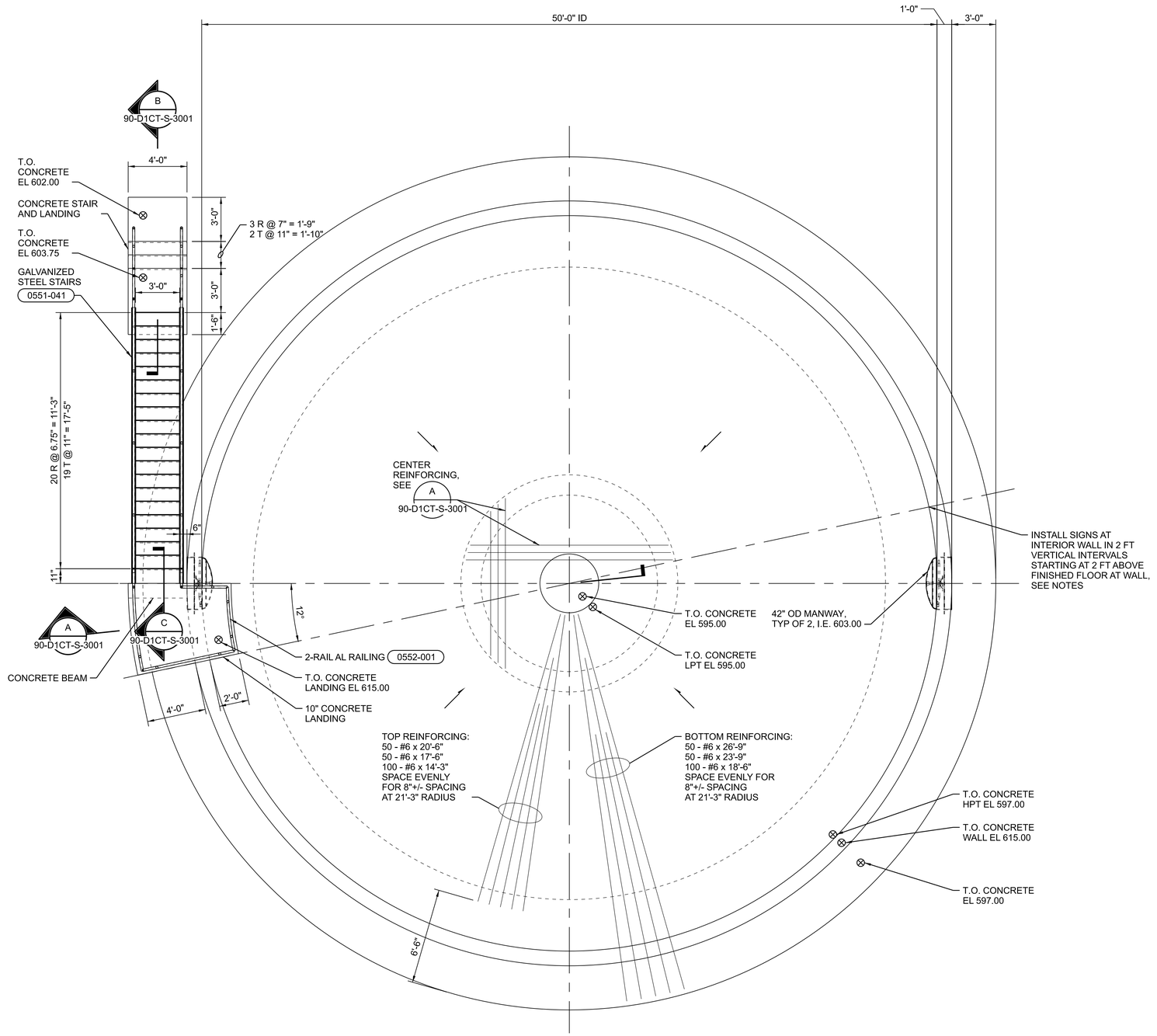
GENERAL FACILITY NOTES

1. FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS 01-G-0020 AND 01-G-0021.
2. FOR STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS, SEE DRAWINGS 01-G-022 THROUGH 01-G-0024.
3. LIQUID TIGHTNESS TESTING WATER LEVEL ELEVATION: 612.00. REFER TO SPECIFICATION SECTION 03 30 00, CAST-IN-PLACE CONCRETE.
4. STRUCTURE HAS BEEN DESIGNED FOR GROUNDWATER ELEVATION OF 601.00 DUE TO A FLOOD EVENT AT STRENGTH LEVEL CAPACITIES EXCLUDING CRACK-CONTROL SERVICEABILITY.
5. STAGGER LAP LOCATIONS OF HORIZONTAL REINFORCING IN WALLS PER STANDARD DETAIL 0330-006.
6. FOR ADDITIONAL REINFORCING AT CONCRETE OPENINGS, REFER TO STANDARD DETAIL 0330-001.
7. SIGN TO HAVE 2" HIGH X 2'-0" LONG HORIZONTAL LINE WITH NUMBER ABOVE INDICATING LOCATION ABOVE FINISHED FLOOR AT WALL IN FEET. SEE SPECIFICATION SECTION 10 14 00, SIGNAGE.



N

PLAN

1/4"=1'-0"

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PROFESSIONAL STRUCTURAL ENGINEER
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OKLAHOMA
05/18/2026

REVISION	BY	DATE

SLUDGE TANKS
STRUCTURAL PLAN

WFXQ7901

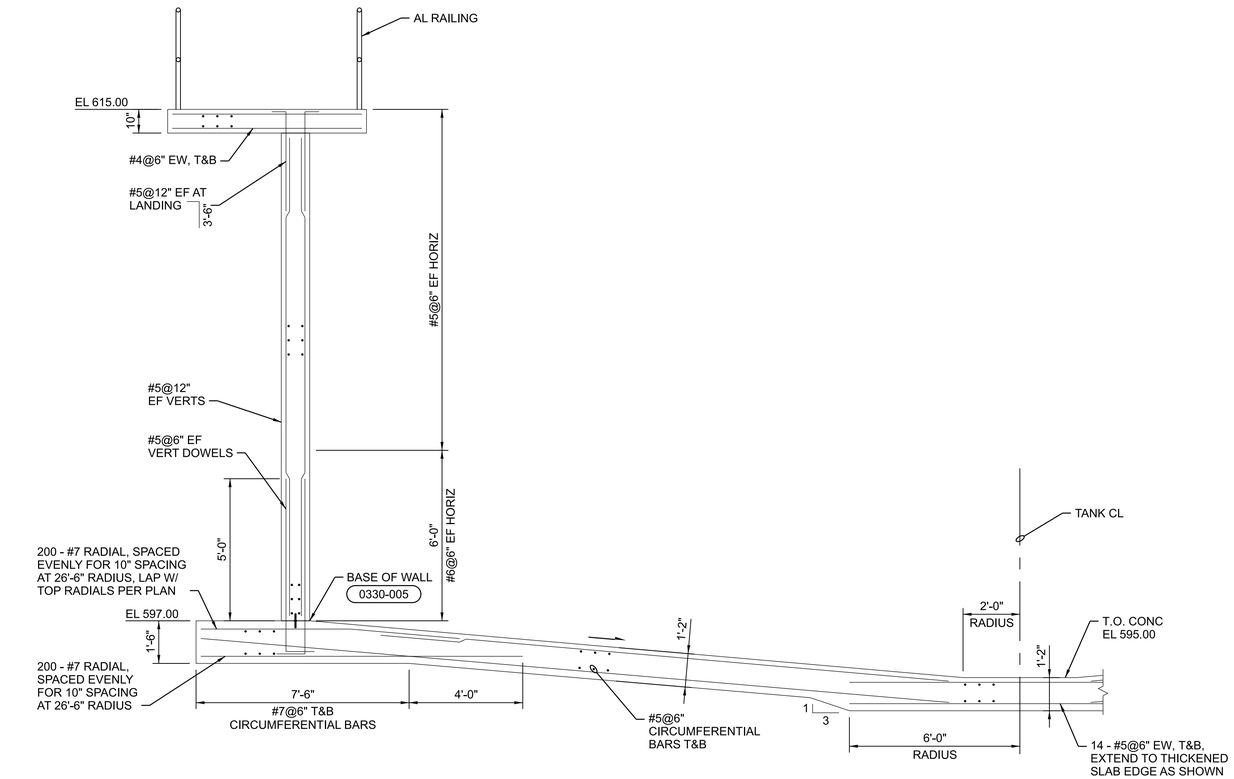
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
PROFILE:	DESIGNED	BB		
HORIZONTAL:	SURVEY			
VERTICAL:	PROJ. MGR.	LUKE	05/26	
	LEAD ENG.	AZL	5/26	
	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1CT-S-2000			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 211 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:35



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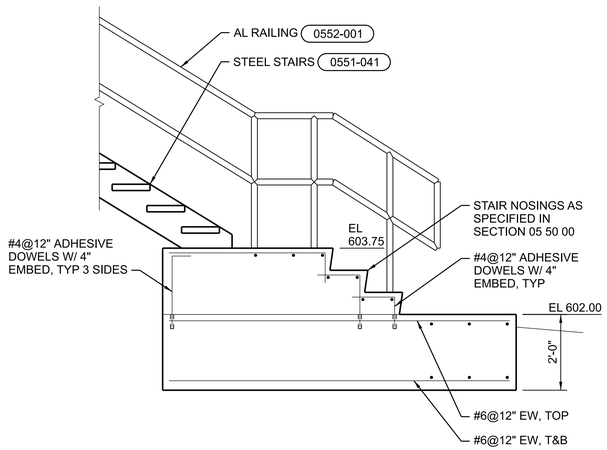
3/8"=1'-0"
90-D1CT-S-2000



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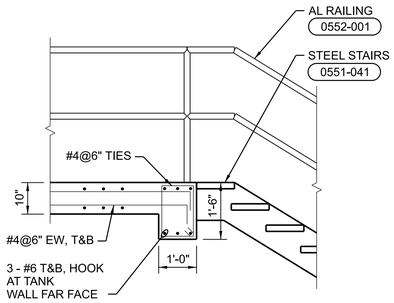

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1/2"=1'-0"
90-D1CT-S-2000

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
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OKLAHOMA
05/18/2026

SLUDGE TANKS
STRUCTURAL SECTIONS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
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VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	WSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

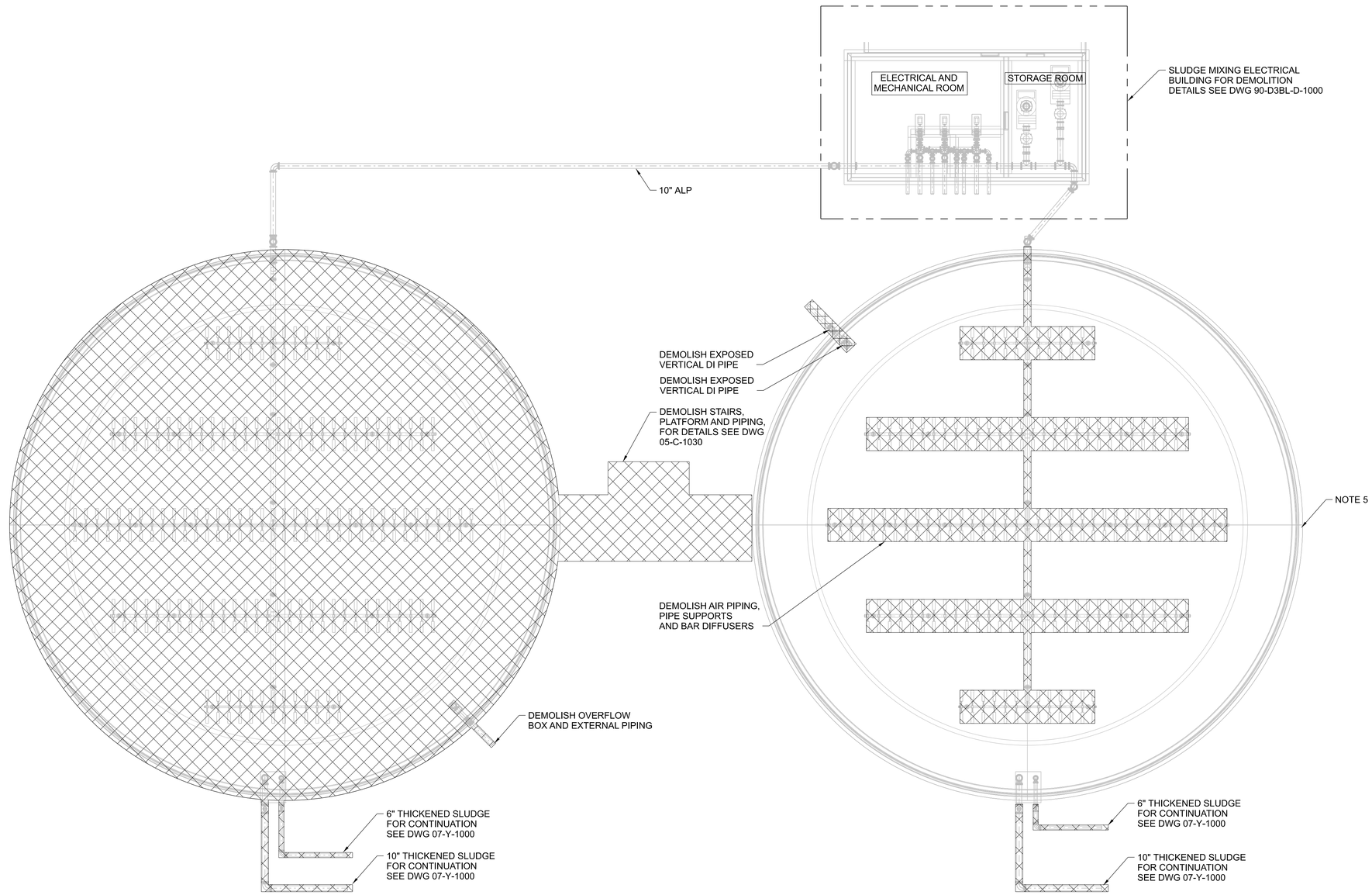
APPROVED:
DESIGN MANAGER

FILE: DRAWING: 90-D1CT-S-3001 DATE: MAY 2026
ATLAS PAGE NO: 3328 SHEET 212 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:34

GENERAL SHEET NOTES

1. SEE SECTION 01 29 00, PAYMENT PROCEDURES FOR BASE BID ON SEDIMENT REMOVAL. AN ESTIMATED DEPTH OF 18" OR 400 CUBIC YARDS ONCE WATER IS REMOVED.
2. THIS DRAWING REPRESENTS LIMITS OF DEMOLITION FOR NEW SLUDGE HOLDING TANK FACILITY.
3. SEE YARD PIPING SHEET 07-Y-2001 FOR RAINWATER TANK DRAINAGE MODIFICATIONS.
4. CONTRACTOR TO COORDINATE WITH OWNER ON SCHEDULE FOR EAST TANK AERATION PIPE, BLOWER, AND ASSOCIATED PROCESS DEMO WITH TREATMENT PLANT ACTIVITIES. SEE SPECIFICATION SECTION 02 41 00, DEMOLITION PART 1.06 SEQUENCING AND SCHEDULING.
5. EXISTING SLUDGE PUMP EQUIPMENT, PIPING, PIPE SUPPORTS, TANKER FILL STATION, PORTABLE STAIRS, AND ASSOCIATED COMPONENTS TO BE ABANDONED IN PLACE AT THE END OF THE PROJECT.
6. PROVIDE A SUBMITTAL(S) PRIOR TO COMMENCEMENT OF WORK ON EXISTING SLUDGE TANKS. SUBMITTAL SHALL COVER:
   - A. METHOD OF SEDIMENT REMOVAL.
   - B. MEASURED VOLUME OF SEDIMENT WITH ENGINEER AND OWNER.
   - C. SCHEDULE FOR CLEANOUT.
   - D. ANY REQUIRED PERMITS AND LICENSES.
   - E. SAFETY PLAN.



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DEMOLITION PLAN

3/32"=1'-0"

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Tanner Pipher
05/17/2026

REVISION	BY	DATE

SLUDGE TANKS
PROCESS
DEMOLITION PLAN

WFXQ7901

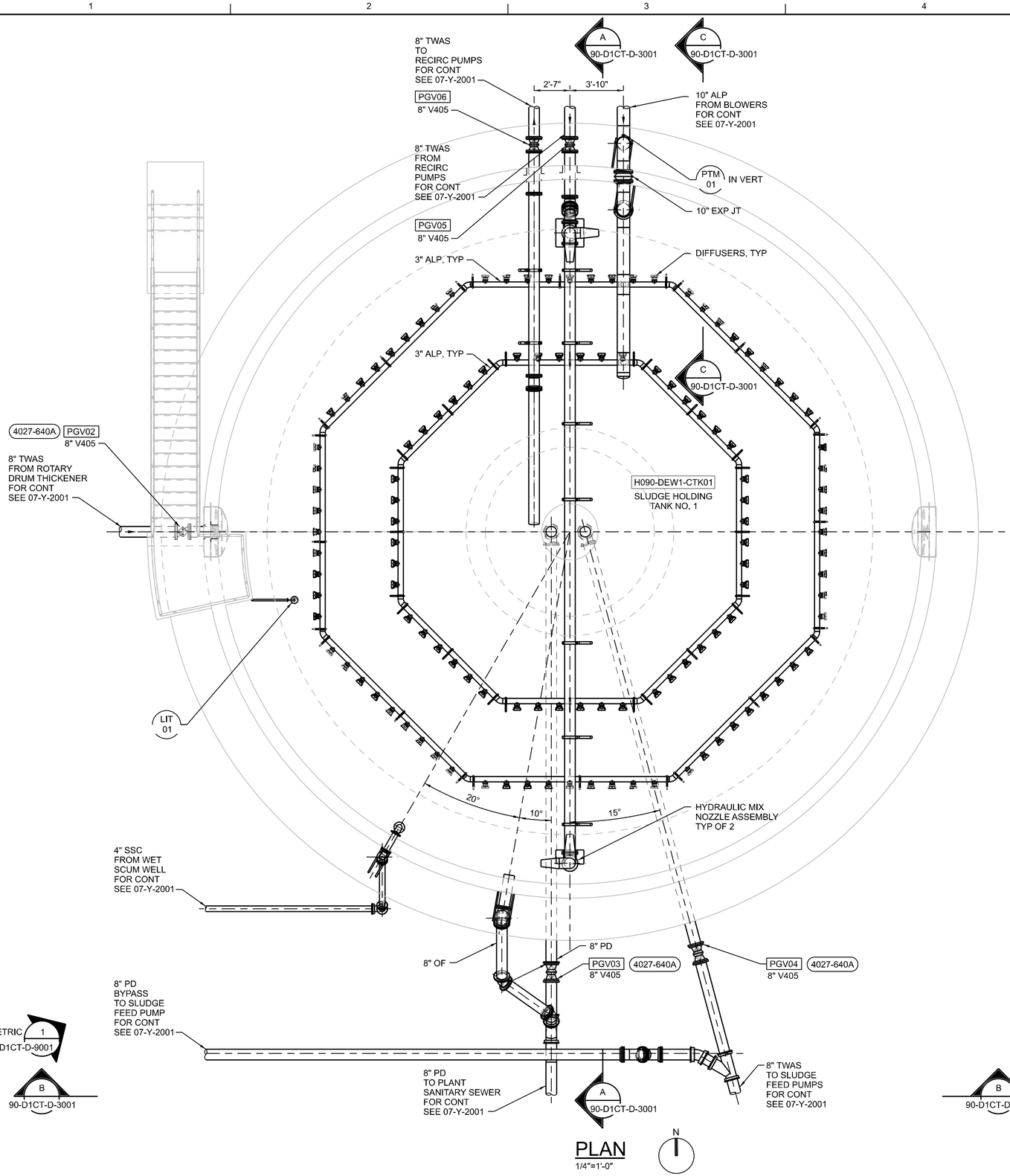
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MSN	05/7/26	
HORIZONTAL:	LEAD ENG.	GZL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1CT-D-1000			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 213 OF 300 SHEETS

PLOT DATE: 05\13\2026 PLOT TIME: 9:20:30 AM



PLAN
1/4"=1'-0"

GENERAL SHEET NOTES

1. EQUIPMENT SIZES ARE APPROXIMATE. FINAL SIZES TO BE DETERMINED BY VENDOR.
2. NOZZLE ASSEMBLY TO BE CONFIGURED BY VENDOR IN THE FIELD.
3. AERATION CHECK VALVES TO BE PROVIDED BY THE VENDOR.
4. EXTEND ALL YARD VALVE STEMS ABOVE GRADE.

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/18/2026

REVISION	BY	DATE

SLUDGE TANKS
PROCESS PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1CT-D-2000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 214 OF 300 SHEETS

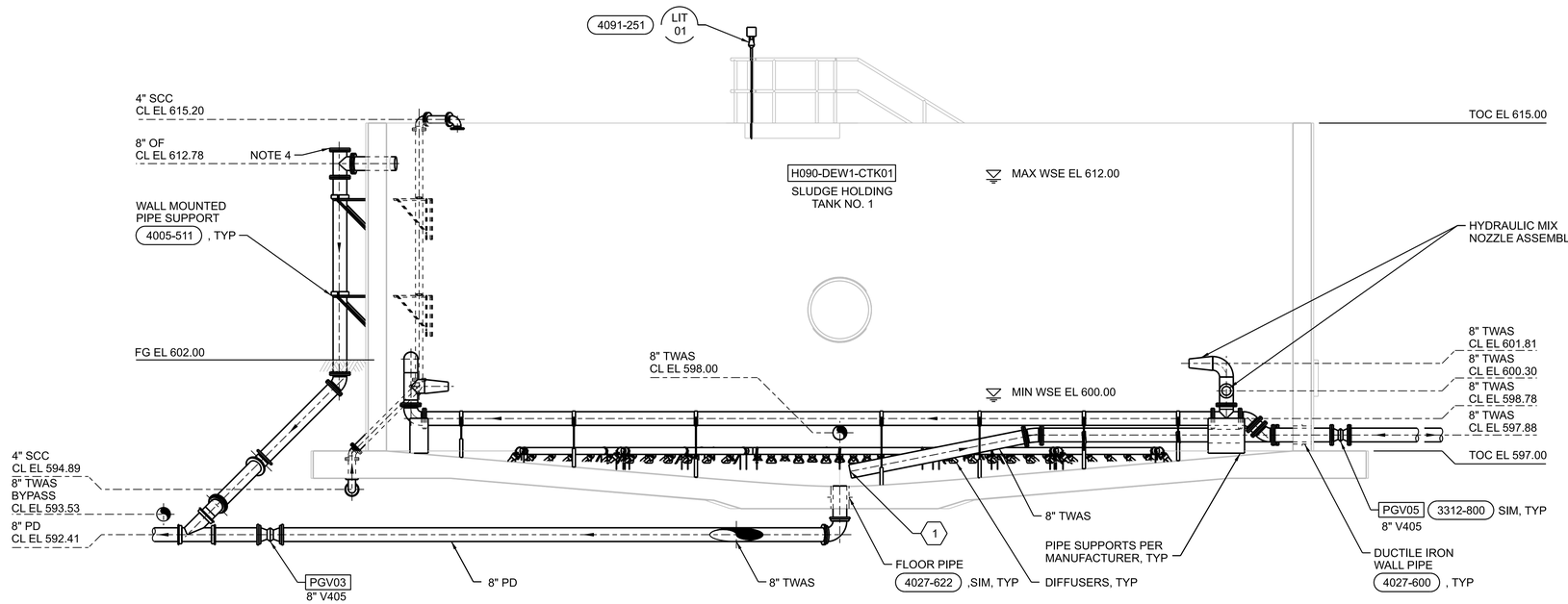
PLOT DATE: 05\12\2026 PLOT TIME: 8:35:03 AM

GENERAL SHEET NOTES

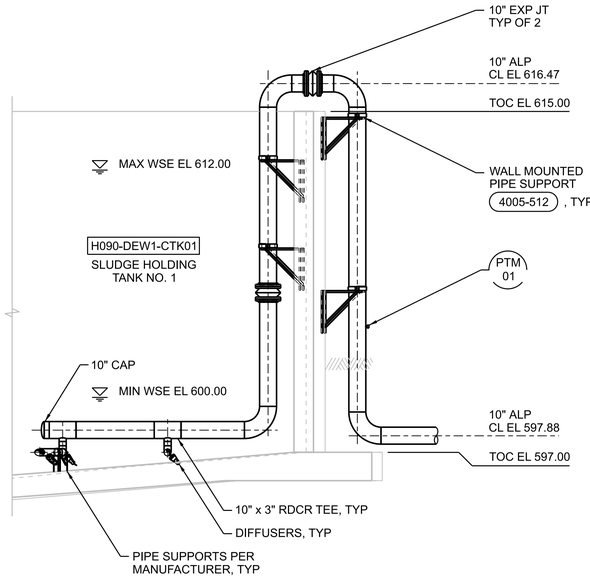
1. EQUIPMENT SIZES ARE APPROXIMATE. FINAL SIZES TO BE DETERMINED BY VENDOR.
2. NOZZLE ASSEMBLY TO BE CONFIGURED BY VENDOR IN THE FIELD.
3. AERATION CHECK VALVES TO BE PROVIDED BY THE VENDOR.
4. FLANGE WITH 24 MESH 304 STAINLESS STEEL SCREEN (0.0075" WIRE) BOLTED BETWEEN FLANGES.
5. INSTALL FLOOR PIPE FLUSH WITH FINISHED TANK FLOOR.

SHEET KEYNOTES

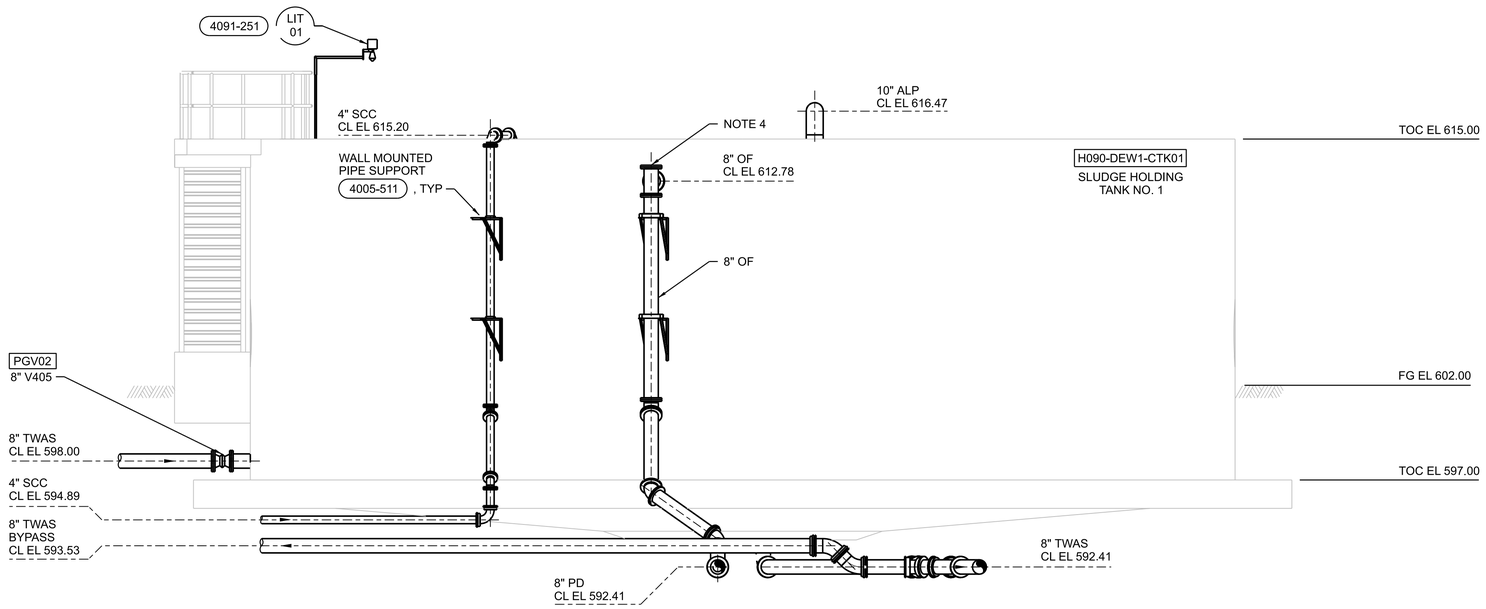
1. INSTALL 8" INLINE FLANGED DUCKBILL CHECK VALVE AT END OF SUCTION PIPE. THE VALVE IS POSITIONED WHERE THE DUCKBILL IS INTERNAL TO THE SUCTION PIPING. THIS VALVE OPERATES SIMILAR TO A FOOT VALVE.



A SECTION
1/4"=1'-0"
90-D1CT-D-2000



C SECTION
1/4"=1'-0"
90-D1CT-D-2000



B SECTION
1/4"=1'-0"
90-D1CT-D-2000

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LICENSED PROFESSIONAL ENGINEER
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Tanner Pipher
05/17/2026

SLUDGE TANKS
PROCESS SECTIONS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

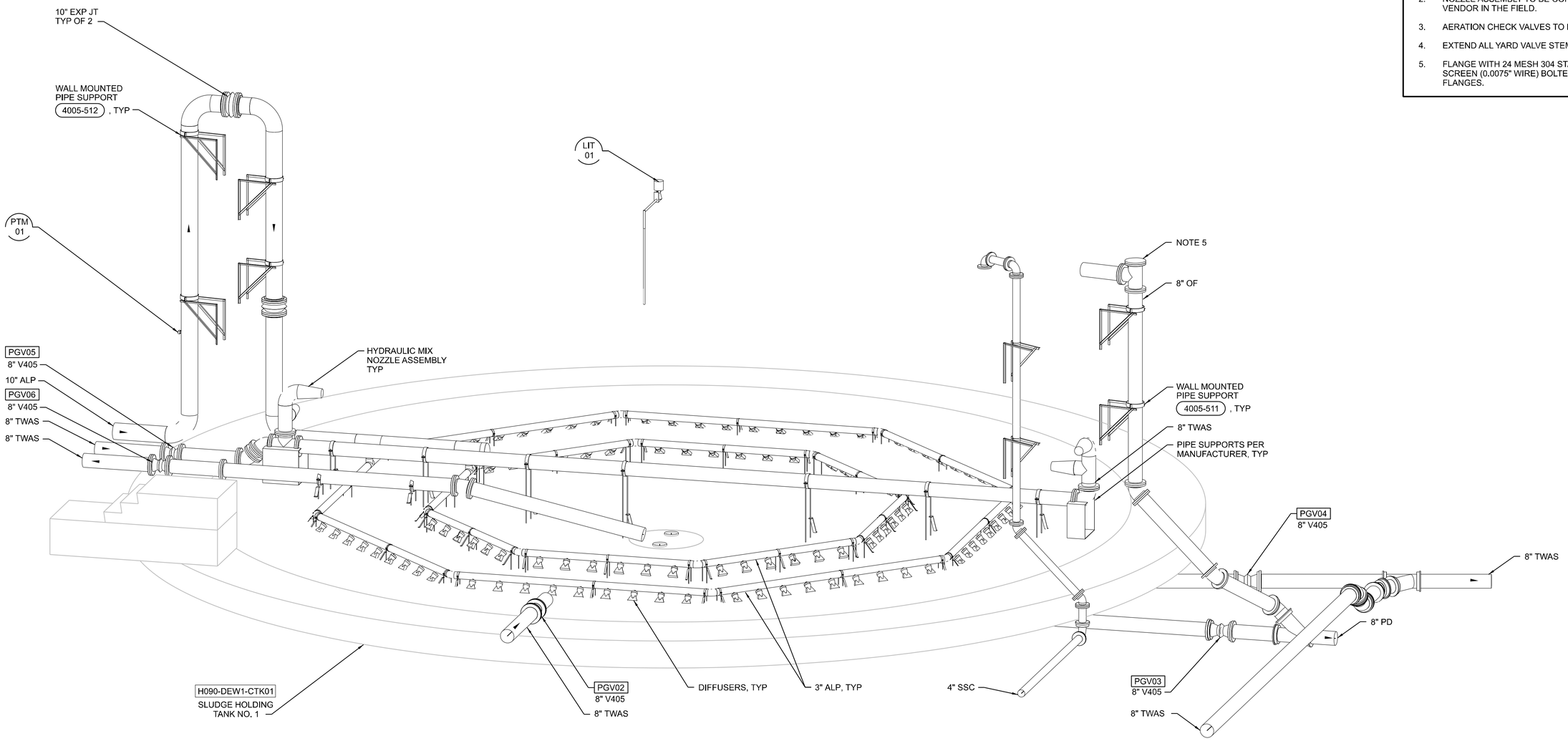
APPROVED:
DESIGN MANAGER

FILE: DRAWING: 90-D1CT-D-3001 DATE: MAY 2026
ATLAS PAGE NO: 3328 SHEET 215 OF 300 SHEETS

PLOT DATE: 15-MAY-2026 PLOT TIME: 15:17

GENERAL SHEET NOTES

1. EQUIPMENT SIZES ARE APPROXIMATE. FINAL SIZES TO BE DETERMINED BY VENDOR.
2. NOZZLE ASSEMBLY TO BE CONFIGURED BY VENDOR IN THE FIELD.
3. AERATION CHECK VALVES TO BE PROVIDED BY THE
4. EXTEND ALL YARD VALVE STEMS ABOVE GRADE.
5. FLANGE WITH 24 MESH 304 STAINLESS STEEL SCREEN (0.0075" WIRE) BOLTED BETWEEN FLANGES.



N

1 ISOMETRIC
NTS

TANK WALLS NOT SHOWN FOR CLARITY

90-D1CT-D-2000

LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA

Tanner Pipher
05/18/2026

REVISION	BY	DATE

SLUDGE TANKS
PROCESS
ISOMETRIC

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	AZL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D1CT-D-9001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 216 OF 300 SHEETS

PLOT DATE: 05\12\2026 PLOT TIME: 8:42:59 AM

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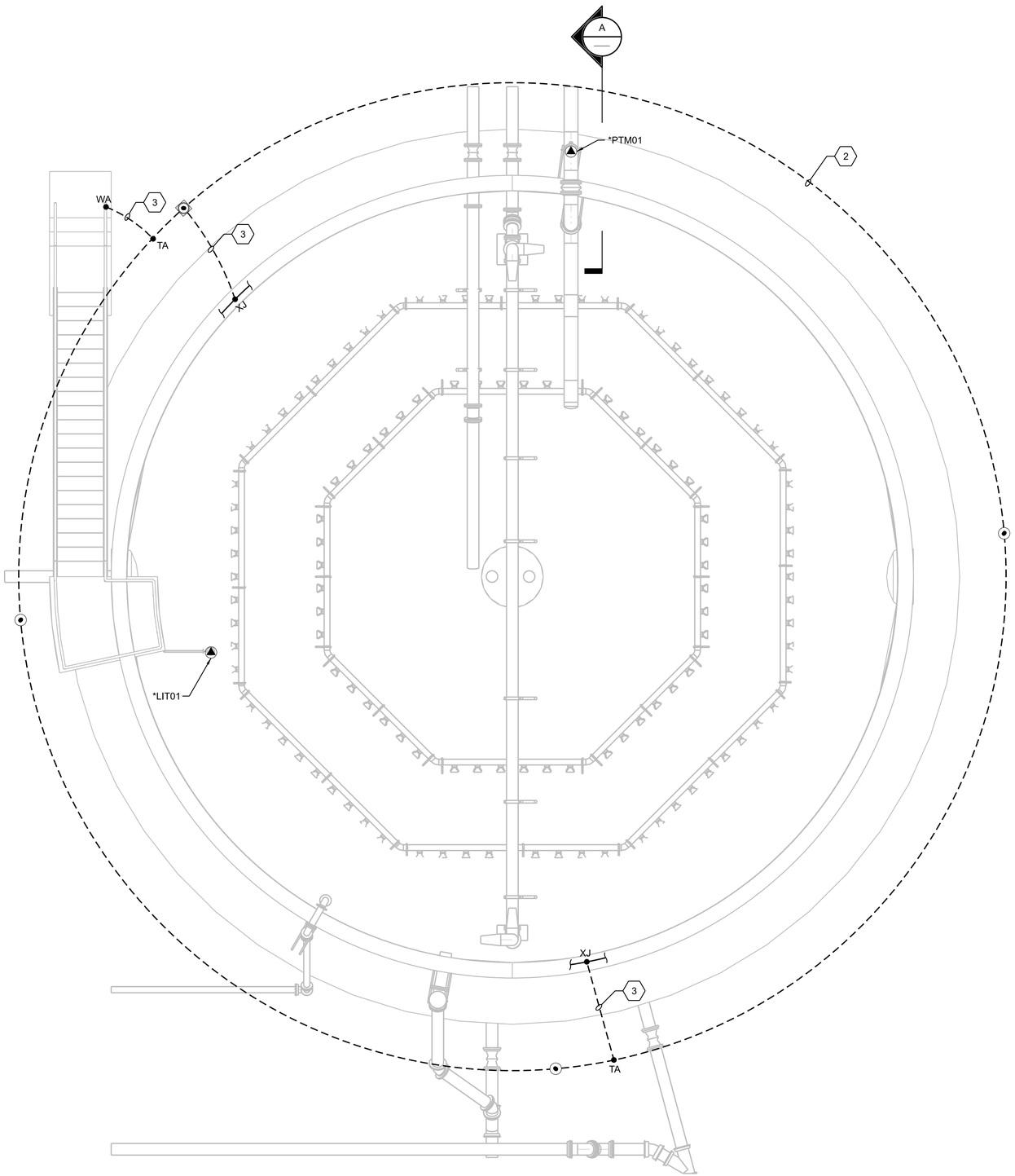
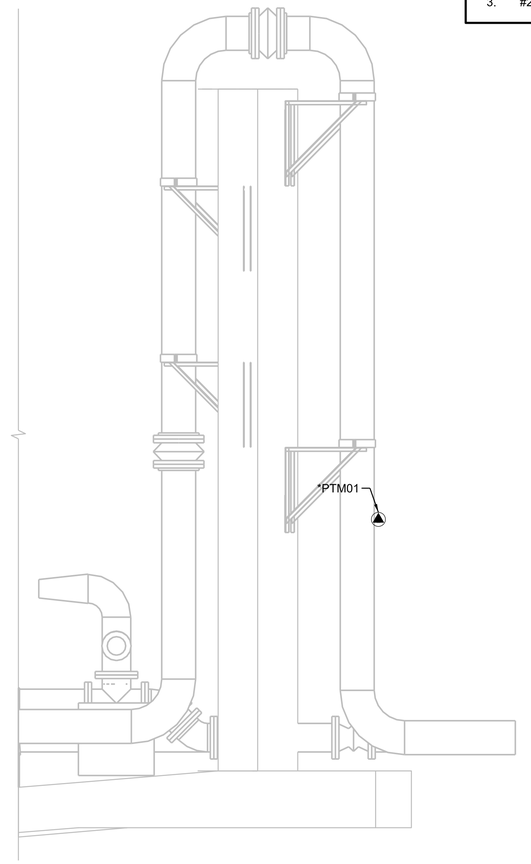


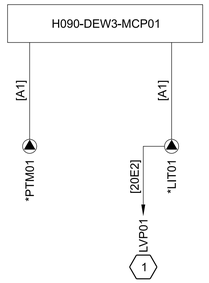
SLUDGE HOLDING TANK NO. 1 POWER PLAN

1/4"=1'-0"



A SECTION

1/2"=1'-0"



RISER DIAGRAM

NTS

GENERAL SHEET NOTES

1. COMPLETE TAG NUMBER INCLUDES THE "H090-DEW1-" PREFIX.

SHEET KEYNOTES

1. COMPLETE TAG NUMBER INCLUDES THE 'H090-DEW3-' PREFIX.
2. #4/0 AWG STRANDED, BARE, TIN-PLATED COPPER.
3. #2/0 AWG STRANDED, XHHW-2 INSULATED, 600VAC.

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
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OKLAHOMA
05/18/2026

SLUDGE TANK 1
ELECTRICAL
POWER PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

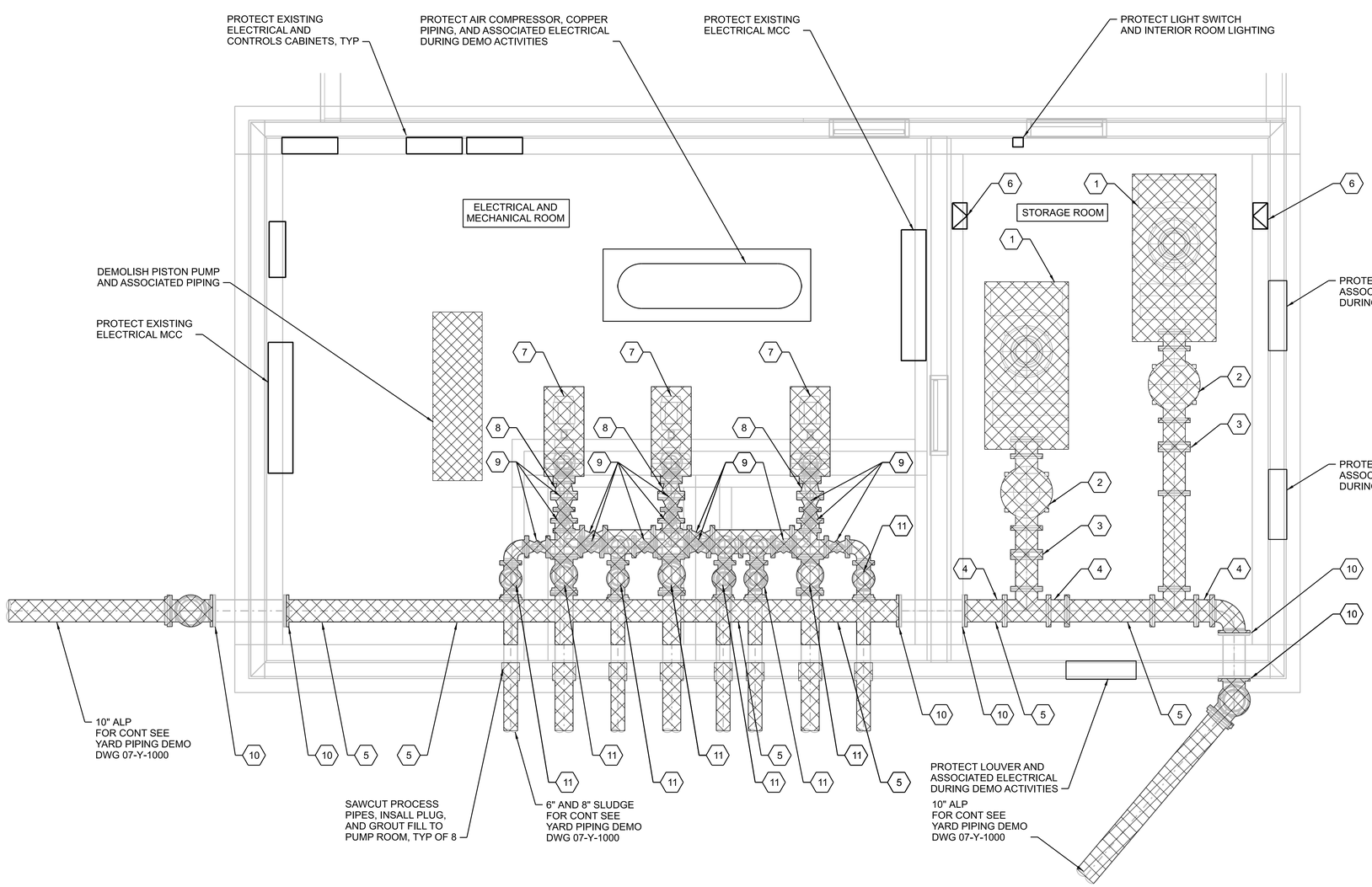
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MW	05/26
	LEAD ENG.	BZ	5/26
	FIELD MGR.		5/26
FILE:	DRAWING: 90-D1CT-E-2000		DESIGN MANAGER
ATLAS PAGE NO: 3328			DATE: MAY 2026
			SHEET 217 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:01



N

DEMOLITION PLAN

3/8"=1'-0"

GENERAL NOTES

1. DEMOLISH ALL INTERIOR INSULTATION BLANKETS ON CEILING AND AROUND TOP SKIRT OF THE BLOWER ROOM.
2. CONTRATOR TO SUBMIT PLAN TO PATCH TIN ROOF PENETRATION FROM BLOWER INTAKE FILTER PENETRATION.
3. PISTON PUMP, PIPING, AND VALVING MODIFICATIONS WERE MADE BY OWNER AND RECORD DRAWINGS WERE NOT PRODUCED FOR ENGINEER TO MODEL. DEMOLITION SHOULD INCLUDE ALL COMPONENTS ASSOCIATED WITH THIS PUMP.
4. ONLY AIR PIPING HAS CONCRETE SUPPORT SADDLES TO DEMOLISH.
5. GRIND EXISTING CONCRETE PUMP PADS TO BE LEVEL WITH FINISHED FLOOR.
6. EXISTING BLOWER ROOM WILL BE REPURPOSED FOR COMPOST HEAVY EQUIPMENT PARTS STORAGE.

SHEET KEYNOTES

1. EXISTING ROTARY LOBE BLOWER SKID, TYP OF 2
2. VERTICAL SILENCER CYLINDER, TYP OF 2
3. AIR VALVE ASSEMBLY, TYP OF 2
4. MANUAL BUTTERFLY VALVE, TYP OF 4
5. CONCRETE PIPE SADDLE, TYP OF 6
6. BLOWER DISCONNECT, TYP OF 2
7. SLUDGE FEED PUMPS, YP OF 3
8. CHECK VALVE, TYP OF 3
9. ISOLATION VALVE, TYP OF 14
10. GROUT AND SEAL EXISTING WALL PIPE PENETRATION
11. SAW CUT AND GRIND PIPES FLUSH WITH FINISHED FLOOR. GROUT FILL UNDERSLAB PIPE SECTION (TYP OF 8)

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/21/2026

REVISION	BY	DATE

EXISTING SLUDGE MIXING ELECTRICAL BUILDING
PROCESS
DEMOLITION PLAN

WFXQ7901

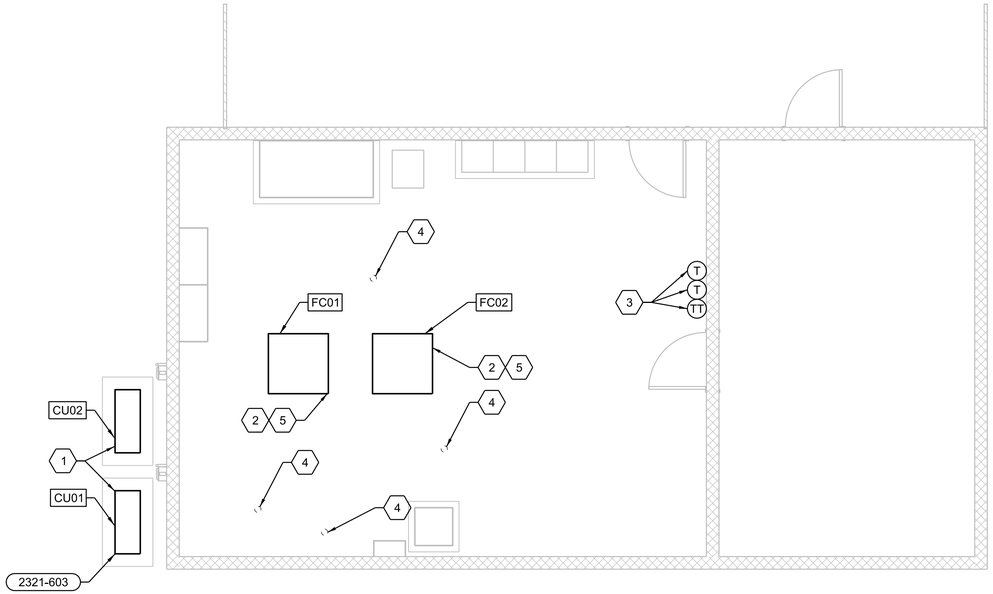
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
HORIZONTAL:	PROJ. MGR.	MSW 05/26	
	LEAD ENG.	5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 90-D3BL-D-1000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 218 OF 300 SHEETS

PLOT DATE: 20-MAY-2026 PLOT TIME: 20:21



2214-100

N

PLAN

1/4"=1'-0"

SHEET KEYNOTES

1. PROVIDE CONCRETE PAD FOR EQUIPMENT. PAD SHALL BE MINIMUM 12" LARGER THAN EQUIPMENT DIMENSIONS. EQUIPMENT SHALL SIT CENTERED ON PAD. COORDINATE WITH STRUCTURAL.
2. ROUTE REFRIGERANT PIPING AS REQUIRED. PROVIDE AIR TIGHT SEAL FOR PENETRATION.
3. THERMOSTAT SHALL BE INSTALLED MIN 52" AFF.
4. DEMO ALL EXISTING FLOOR DRAINS AND CAP PIPE BELOW SLAB.
5. ROUTE DRAINS OUTSIDE THROUGH EXTERIOR WALL TO DRYWELL. ENSURE PROPER SLOPE OF LINE. COORDINATE WALL PENETRATION WITH ARCHITECTURAL.

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LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

EXISTING SLUDGE MIXING ELECTRICAL BUILDING
HVAC
FLOOR PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MN	05/26
LEAD ENG.	SZ	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 90-D3BL-H-2000
ATLAS PAGE NO: 3328
SHEET 219 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 13:03

SCADA PANEL

H095-DEW1-PLC01

SLUDGE MANAGEMENT CENTER

(FBV) T
(FBV) T
TIT

FC01

FC02

CU02

CU01

AREA NOT IN SCOPE

GENERAL NOTES

1. SEE HVAC LEGEND SHEET 01-G-0035.
2. SEE I&C LEGEND SHEETS 01-G-0055 & 01-G-0056.

SEQUENCE OF OPERATIONS

GENERAL:
1. A GENERAL ALARM SHALL BE SENT TO THE SCADA SYSTEM VIA 24 VDC DRY CONTACTS RELAY WHEN THERE IS AN EQUIPMENT FAILURE OR ALARM. CONTROL WIRING SHALL BE PROVIDED BY DIVISION 26. SCADA PANEL TERMINATION SHALL BE PROVIDED BY DIVISION 40.
2. ANALOGUE SIGNAL CONVERSION PROGRAMMING SHALL BE DONE BY DIVISION 40 TO COMMUNICATE WITH SCADA NETWORK.

FC(01/02)

RUN CONDITIONS:
1. THE UNITS ARE ENABLED CONTINUOUSLY AND OPERATE IN A CUTY/STANDBY FASHION.
2. EACH UNIT IS CONTROLLED BY A DEDICATED UNIT MANUFACTURER WALL MOUNTED PROGRAMMABLE THERMOSTAT.
3. SET POINTS SHALL BE MANUALLY SWAPPED TO ENSURE EQUAL RUNTIME FOR EQUIPMENT.
4. THE CONDENSING UNITS SHALL OPERATE AS REQUIRED WHEN THEIR ASSOCIATED AIR CONDITIONING UNIT INITIATES.

COOLING MODE:
FC01 SHALL MAINTAIN SPACE SET POINT OF 80F(ADJ).
FC02 SHALL MAINTAIN SPACE SET POINT OF 85F(ADJ).

HEATING MODE:
FC01 SHALL MAINTAIN SPACE SET POINT OF 40F(ADJ).
FC02 SHALL MAINTAIN SPACE SET POINT OF 45F(ADJ).

ALARMS TO SCADA

HIGH SPACE AIR TEMPERATURE, ELECTRICAL ROOM - 90F (ADJ)
LOW SPACE AIR TEMPERATURE - ELECTRICAL ROOM - 30F (ADJ)

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LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

EXISTING SLUDGE MIXING ELECTRICAL BUILDING
HVAC
AIRFLOW SCHEMATIC

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

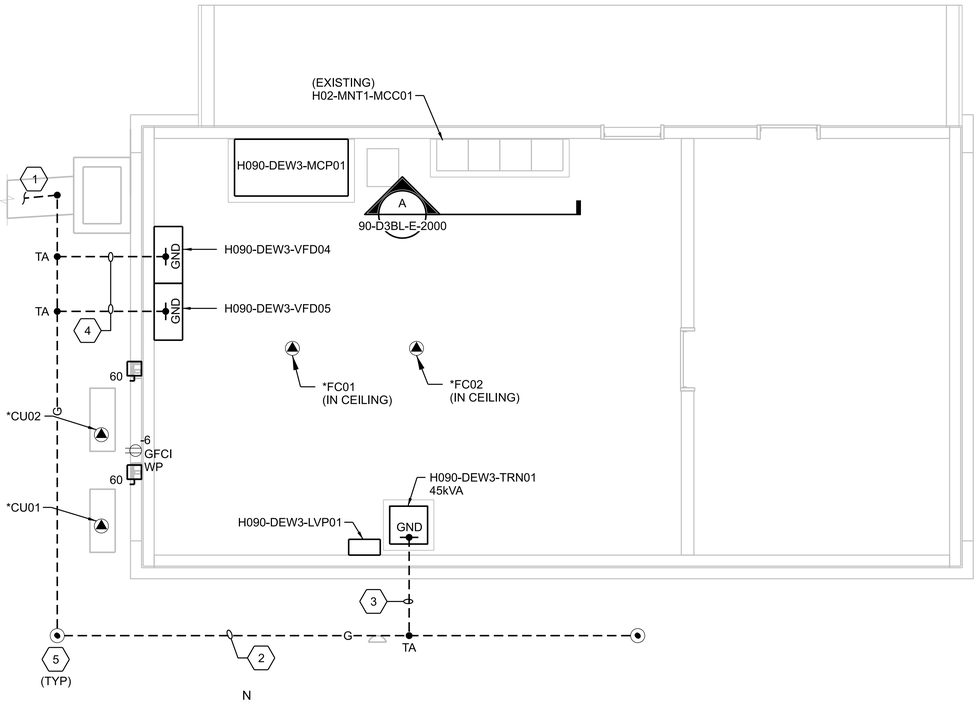
DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 90-D3BL-H-6001 DATE: MAY 2026

ATLAS PAGE NO: 3328 SHEET 220 OF 300 SHEETS

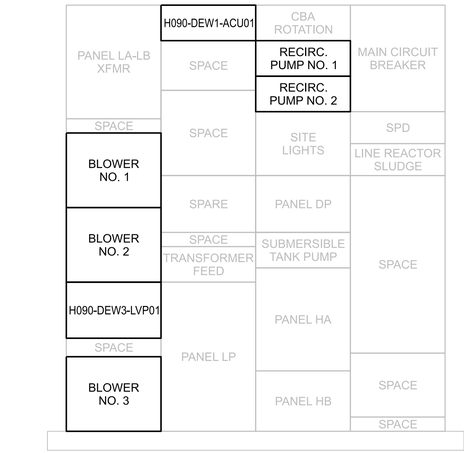
PLOT DATE: 19-MAY-2026 PLOT TIME: 13:03



N

SLUDGE MANAGEMENT BUILDING - POWER PLAN

1/4"=1'-0"



A

H02-MNT1-MCC01 - ELEVATION

3/4"=1'-0"

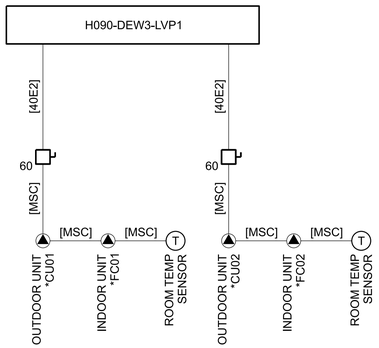
90-D3BL-E-2000

GENERAL SHEET NOTES

1. COMPLETE TAG NUMBER INCLUDES THE "H090-DEW3-" PREFIX.

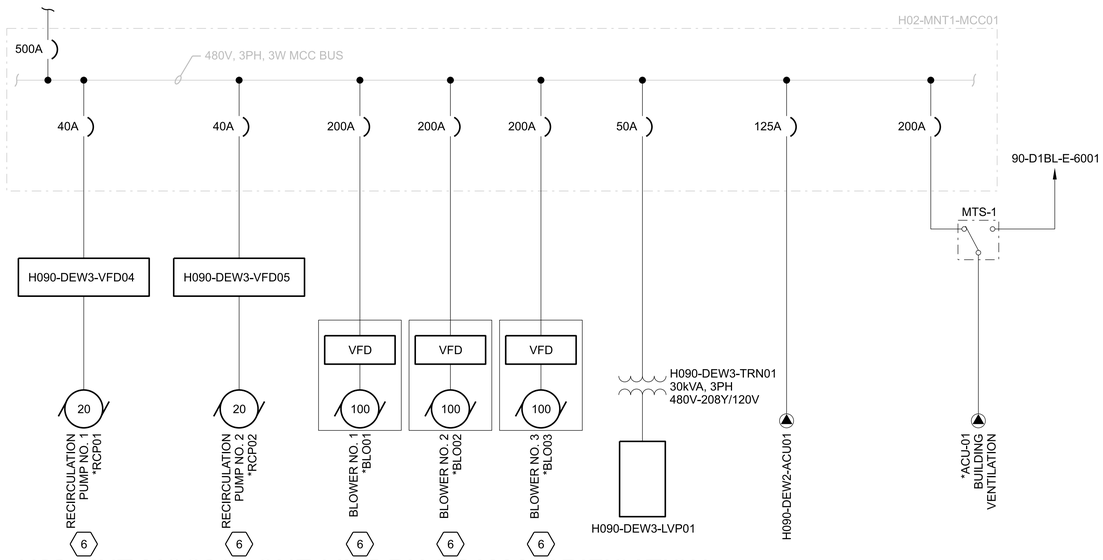
SHEET KEYNOTES

1. THE #4/0 TIN-PLATED BARE COPPER GROUND ENCASED IN THE DUCTBANK SHALL EXIT THE DUCTBANK AND CONNECT TO THE GROUND RING.
2. #4/0 AWG STRANDED, BARE, TIN-PLATED COPPER.
3. #2 AWG STRANDED, BARE, XHHW-2 INSULATED, 600VAC.
4. #1/0 AWG STRANDED, XHHW-2 INSULATED, 600VAC.
5. INSTALL NEW GROUND ROD AND CONNECT TO EXISTING GROUND SYSTEM.
6. COMPLETE TAG NUMBER INCLUDES THE "H090-DEW2-" PREFIX.



HVAC RISER DIAGRAM

NTS



H02-MNT-MCC01 - ONE-LINE DIAGRAM MODIFICATION

NTS

LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

EXISTING SLUDGE MIXING ELECTRICAL BUILDING
ELECTRICAL
POWER PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENG.		
VERTICAL:	FIELD MGR.		DESIGN MANAGER
FILE:	DRAWING: 90-D3BL-E-2000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 221 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:01

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FOR REFERENCE ONLY

RENDERING
NTS

COMPOSTING OPERATIONS BUILDING

RENDERING

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

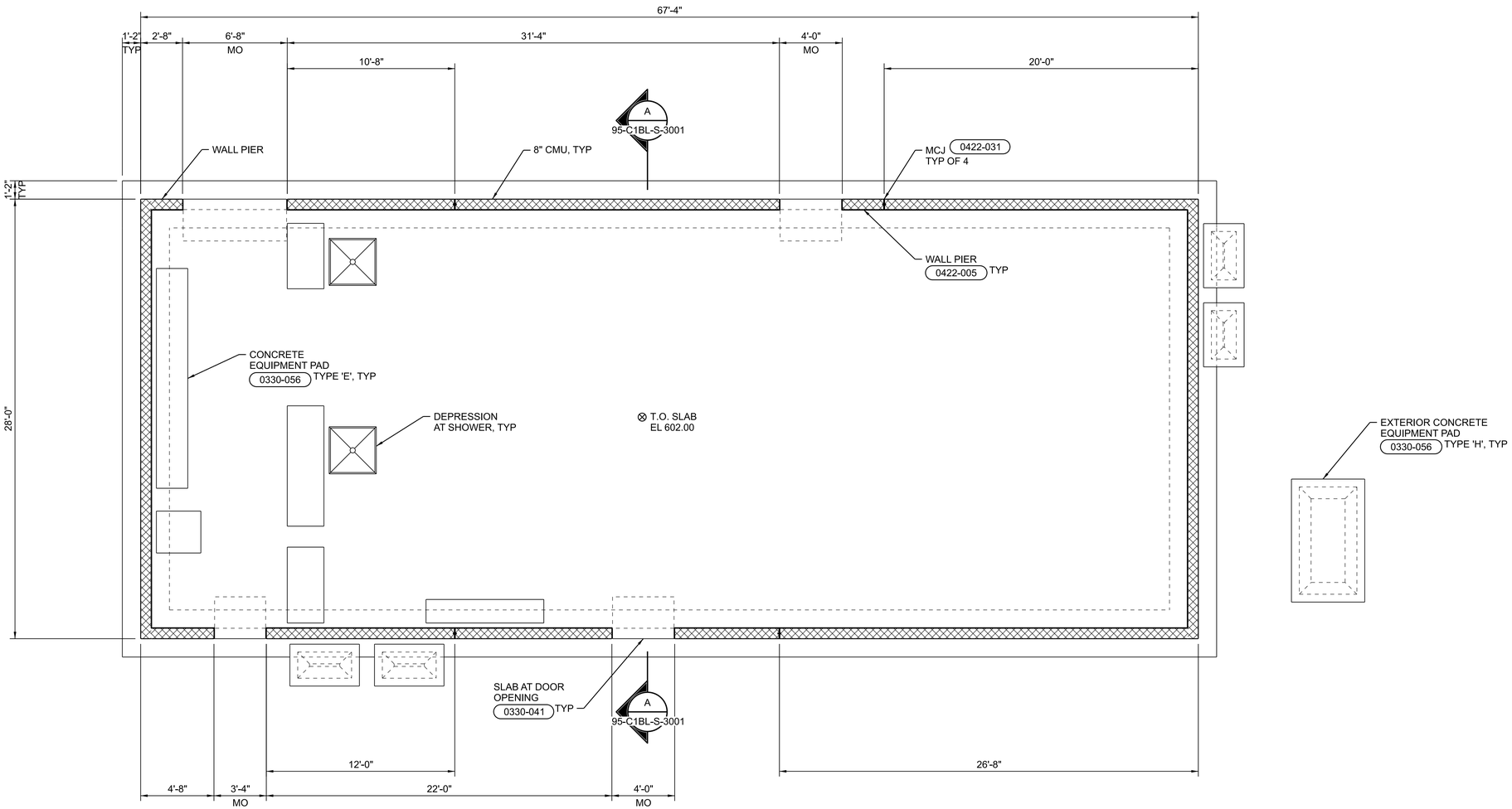
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MW	05/7/26
HORIZONTAL:	LEAD ENG.	RZL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 95-C1BL-R-0001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 222 OF 300 SHEETS

PLOT DATE: 05\14\2026 PLOT TIME: 9:04:49 AM

GENERAL FACILITY NOTES

1. FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS 01-G-0020 AND 01-G-0021.
2. FOR STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS, SEE DRAWINGS 01-G-022 THROUGH 01-G-0024.
3. MAIN LATERAL FORCE RESISTING SYSTEM: INTERMEDIATE REINFORCED MASONRY SHEAR WALLS
   - R = 3.5
   - Cs = 0.05
4. FOR CMU REINFORCING DETAILS, SEE STANDARD DETAIL 0422-004.



N

PLAN

1/4"=1'-0"

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

COMPOSTING OPERATIONS BUILDING
STRUCTURAL
FOUNDATION PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

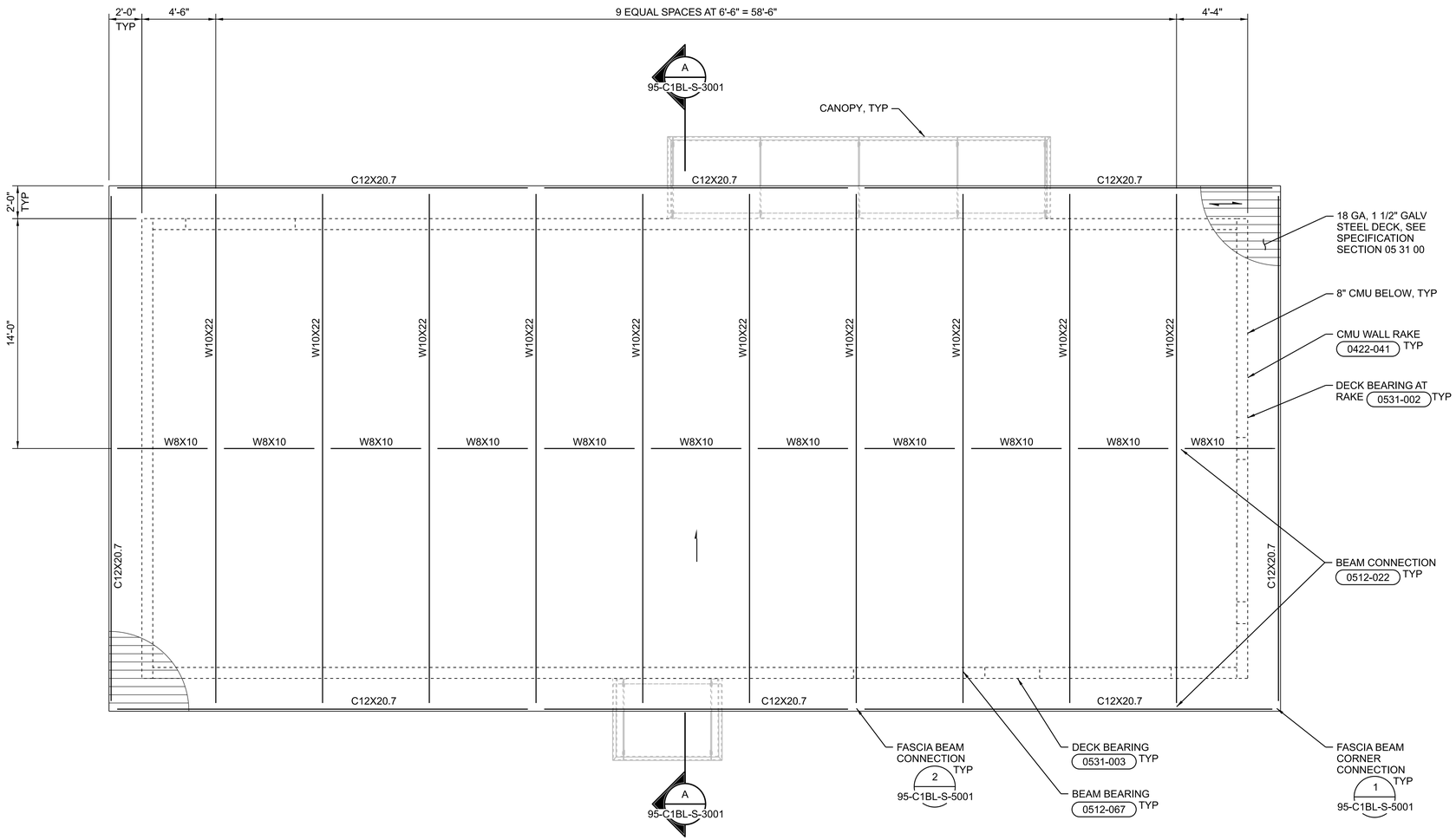
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	GZL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C1BL-S-2000			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 223 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:38



N

PLAN

1/4"=1'-0"

PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

COMPOSTING OPERATIONS BUILDING
STRUCTURAL
ROOF FRAMING PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE:
DRAWING: 95-C1BL-S-2100
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 224 OF 300 SHEETS

PLOT DATE: 13-MAY-2026
PLOT TIME: 11:37

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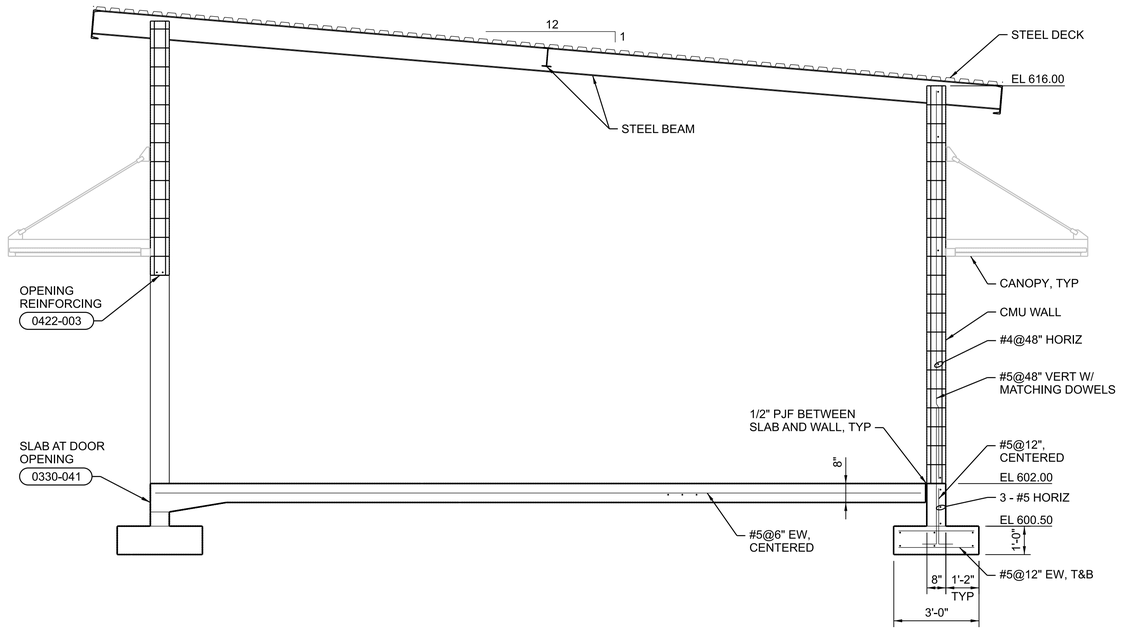

A SECTION

3/8"=1'-0"

95-C1BL-S-2000
95-C1BL-S-2100

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

COMPOSTING OPERATIONS BUILDING
STRUCTURAL
SECTION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

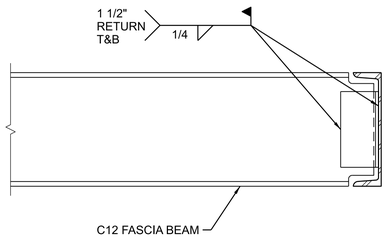
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RJL	5/26
FIELD MGR.		5/26

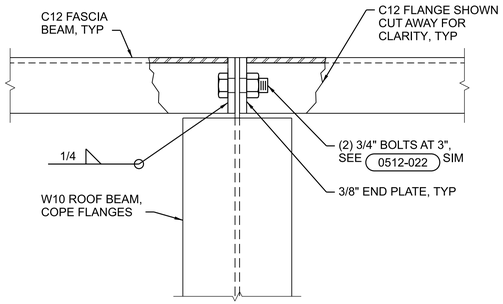
APPROVED:
DESIGN MANAGER

FILE: DRAWING: 95-C1BL-S-3001
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 225 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:38



1 DETAIL
1 1/2"=1'-0"
95-C1BL-S-2100



2 DETAIL
3"=1'-0"
95-C1BL-S-2100

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

COMPOSTING OPERATIONS BUILDING
STRUCTURAL
DETAILS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

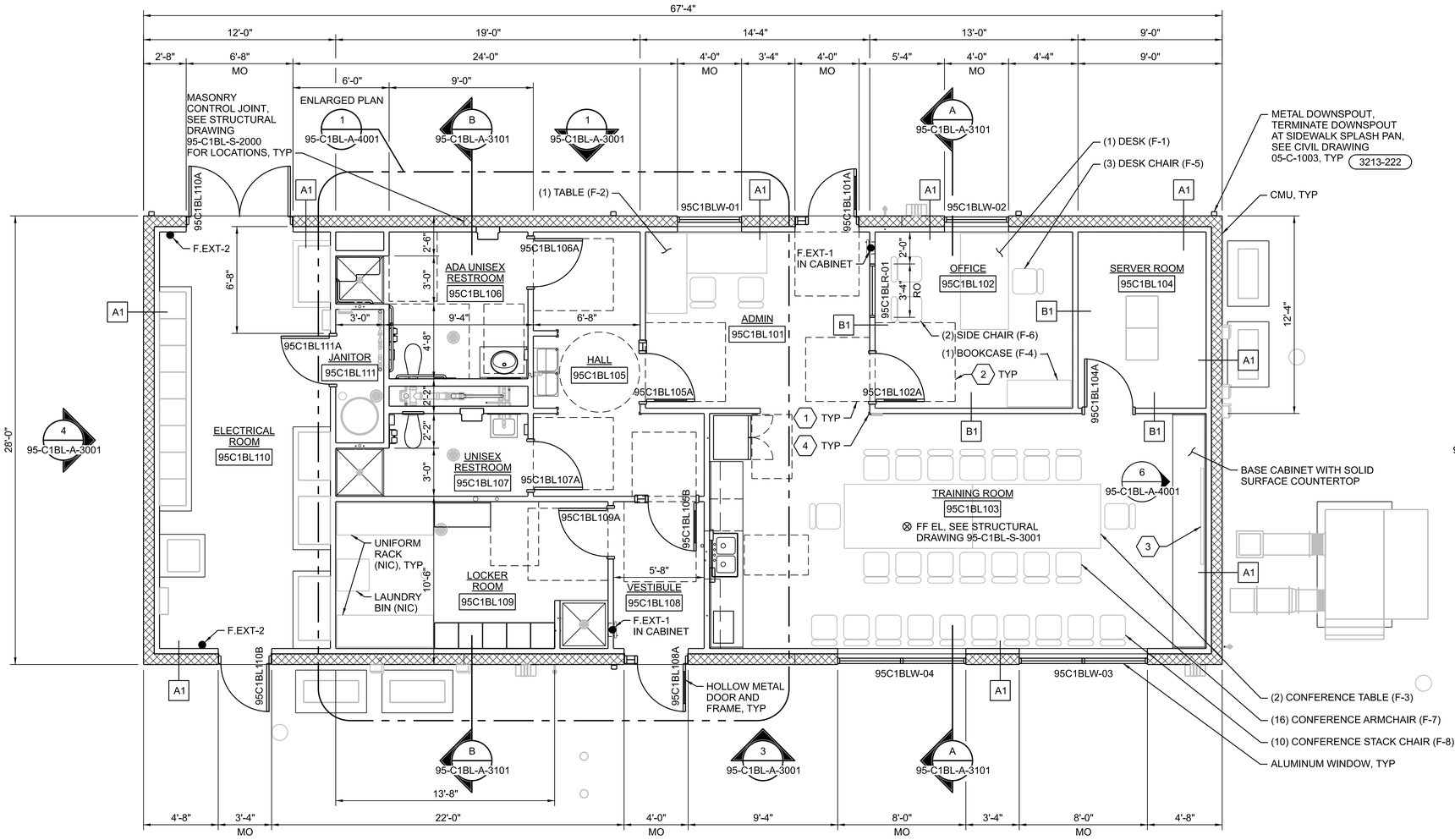
DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 95-C1BL-S-5001 DATE: MAY 2026

ATLAS PAGE NO: 3328 SHEET 226 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:38



N

FLOOR PLAN

1/4"=1'-0"

GENERAL SHEET NOTES

1. FOR GENERAL ARCHITECTURAL NOTES, MATERIAL SYMBOLS, LEGEND, WALL TYPES, SEE DRAWING 01-G-0012.
2. FOR BUILDING CODE DATA TABLE AND LIFE SAFETY PLAN, SEE DRAWING 01-G-0014.
3. ALL ADA MINIMUM CLEAR ZONES TO ACCOUNT FOR ALL FINISHES AND STILL MAINTAIN REQUIRED CLEARANCE.
4. FOR FURNITURE ABBREVIATIONS, SEE SPECIFICATION SECTION 12 50 00, FURNITURE.
5. FOR APPLIANCE ABBREVIATIONS, SEE SPECIFICATION SECTION 11 31 00, APPLIANCES.

SHEET KEYNOTES

1. ADA FRONT APPROACH, PUSH SIDE; MINIMUM ADA CLEAR ZONE TO INCLUDE 12" ON LATCH SIDE OF DOOR AND DEPTH OF 48" MINIMUM.
2. ADA FRONT APPROACH, PULL SIDE; MINIMUM ADA CLEAR ZONE TO INCLUDE 18" ON LATCH SIDE OF DOOR AND DEPTH OF 60" MINIMUM.
3. WALL MOUNTED MONITOR, (NIC / CONTRACTOR INSTALLED). MOUNT BOTTOM OF MONITOR AT 4'-6" AFF, PROVIDE HORIZONTAL METAL STUD BLOCKING BETWEEN FULL HEIGHT STUDS AND 16 GAUGE SHEET METAL BACKING AS REQUIRED TO SUPPORT VIDEO MONITOR AND ASSOCIATED ANCHORING BRACKETS.
4. CORNER GUARD

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REUSE OF DOCUMENTS:

STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

COMPOSTING OPERATIONS BUILDING
ARCHITECTURAL
FLOOR PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

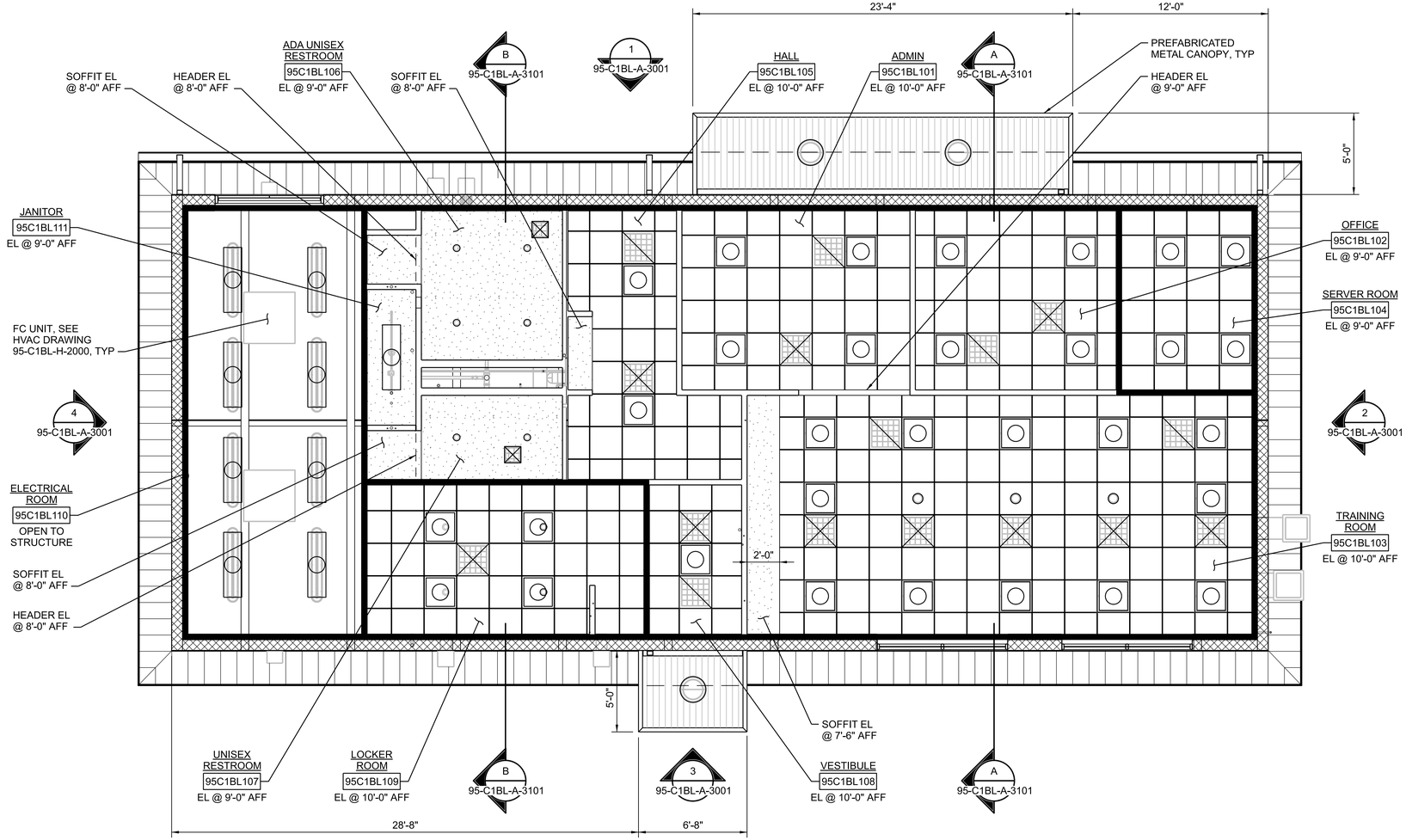
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSW	05/26
LEAD ENG.	AZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 95-C1BL-A-2000
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 227 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:24



N

REFLECTED CEILING PLAN

1/4"=1'-0"

GENERAL SHEET NOTES

1. FOR GENERAL ARCHITECTURAL NOTES, MATERIAL SYMBOLS, LEGEND, AND WALL TYPES, SEE DRAWING 01-G-0012.

REFLECTED CEILING PLAN LEGEND

- SUSPENDED 2'X2' ACOUSTICAL CEILING SYSTEM
- GYPSUM BOARD CEILING (SUSPENDED UNLESS NOTED OR DETAILED OTHERWISE)
- METAL SOFFIT PANELS
- INTERIOR METAL FRAMED WALLS WITH FINISHES INDICATED ON WALL TYPES, EXTEND STUDS TO 6" ABOVE SUSPENDED CEILING AND BRACE TO STRUCTURE
- METAL FRAMED WALLS WITH FINISHES INDICATED ON WALL TYPES. EXTEND WALL TO UNDERSIDE OF STRUCTURAL DECK AND PROVIDE DEFLECTION HEAD TO ALLOW FOR 1" MINIMUM DEFLECTION, SEE DESIGN DETAIL 0929-101.
- RECESSED DOWNLIGHT OR SURFACE MOUNTED PENDANT, SEE ELECTRICAL DRAWING 95-C1BL-E-2001
- WALL MOUNTED EXTERIOR LIGHT, SEE ELECTRICAL DRAWING 95-C1BL-E-2001
- RECESSED LUMINAIRE, SEE ELECTRICAL DRAWING 95-C1BL-E-2001
- PENDANT OR SURFACE MOUNTED LUMINAIRE, SEE ELECTRICAL DRAWING 95-C1BL-E-2001
- EXHAUST, RETURN AIR OR TRANSFER GRILLE, SEE HVAC DRAWING 95-C1BL-H-2000
- SUPPLY AIR GRILLE OR CEILING DIFFUSER, SEE HVAC DRAWING 95-C1BL-H-2000

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STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

COMPOSTING OPERATIONS BUILDING
ARCHITECTURAL
REFLECTED CEILING PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

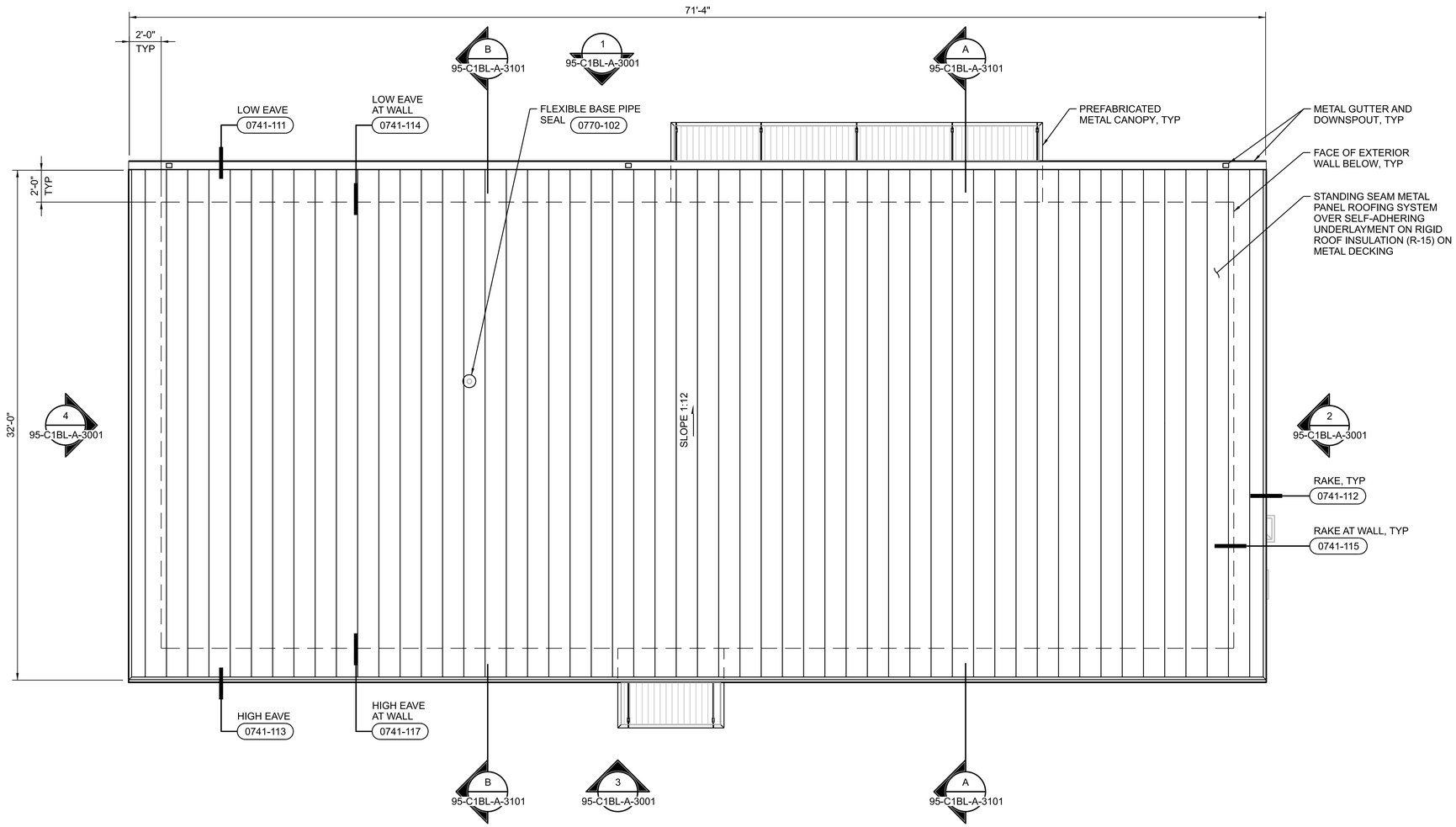
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	RJL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C1BL-A-2050			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 228 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:24

GENERAL SHEET NOTES

1. FOR GENERAL ARCHITECTURAL NOTES, MATERIAL SYMBOLS AND LEGEND, SEE DRAWING 01-G-0012.
2. FOR LOCATION OF STEEL FRAMING AT ROOF PERIMETER, REFER TO STRUCTURAL DRAWING 95-C1BL-S-2100.



N

ROOF PLAN

1/4"=1'-0"

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STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

COMPOSTING OPERATIONS BUILDING
ARCHITECTURAL
ROOF PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

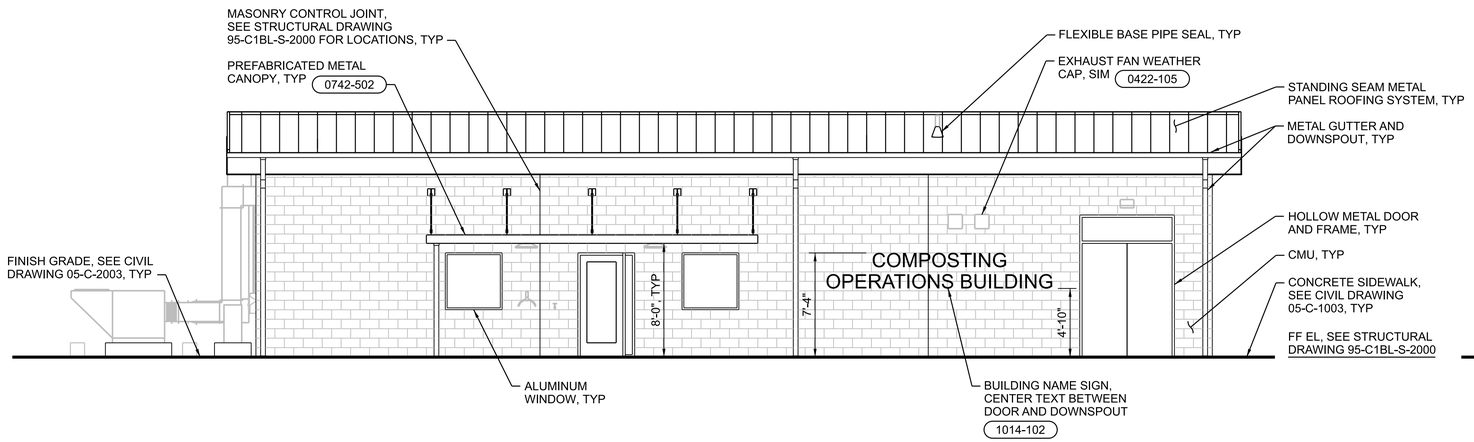
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RJL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 95-C1BL-A-2100
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 229 OF 300 SHEETS

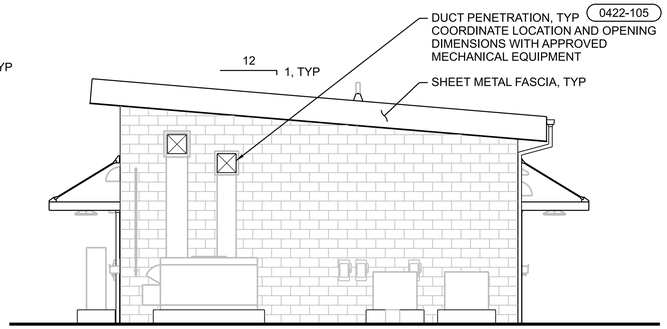
PLOT DATE: 14-MAY-2026 PLOT TIME: 17:24



1 NORTH ELEVATION

3/16"=1'-0"

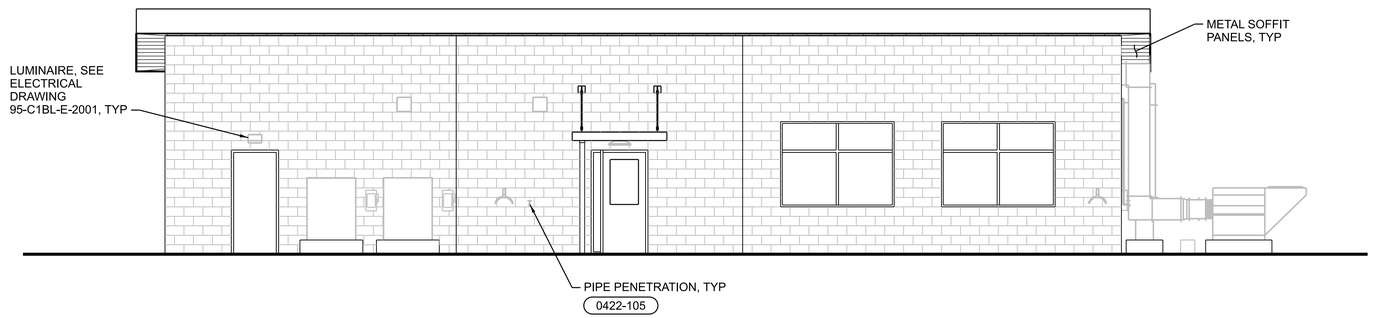
95-C1BL-A-2000
95-C1BL-A-2050
95-C1BL-A-2100



2 EAST ELEVATION

3/16"=1'-0"

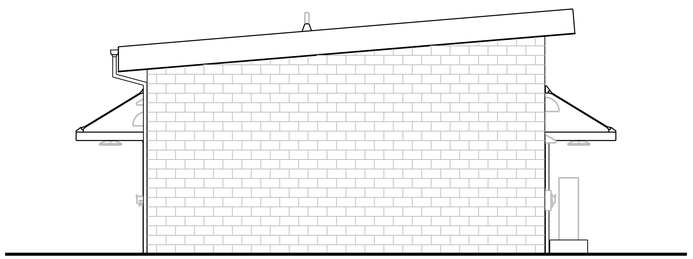
95-C1BL-A-2000
95-C1BL-A-2050
95-C1BL-A-2100



3 SOUTH ELEVATION

3/16"=1'-0"

95-C1BL-A-2000
95-C1BL-A-2050
95-C1BL-A-2100



4 WEST ELEVATION

3/16"=1'-0"

95-C1BL-A-2000
95-C1BL-A-2050
95-C1BL-A-2100

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STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

COMPOSTING OPERATIONS BUILDING
ARCHITECTURAL ELEVATIONS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

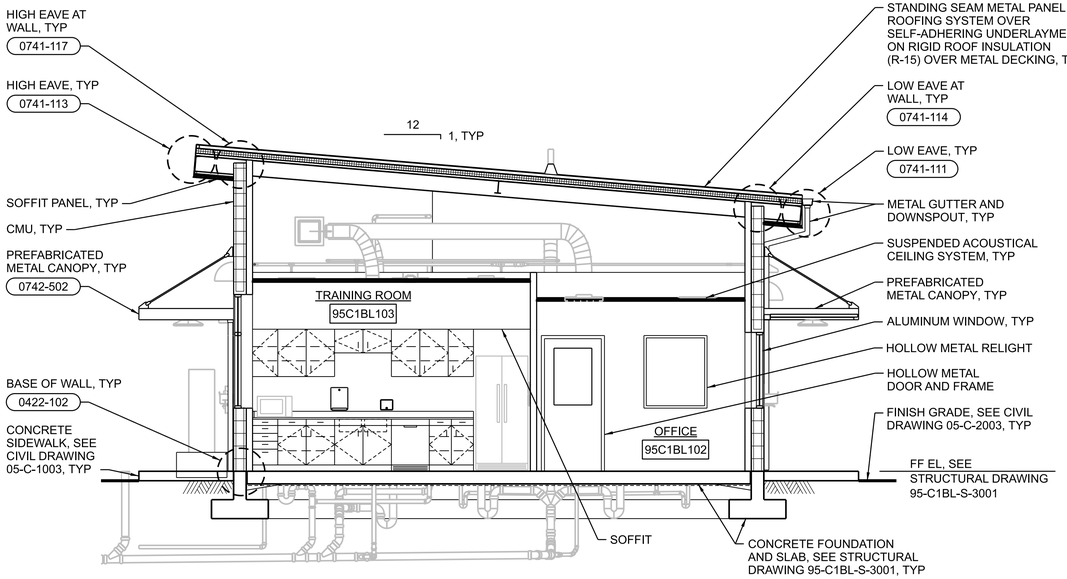
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

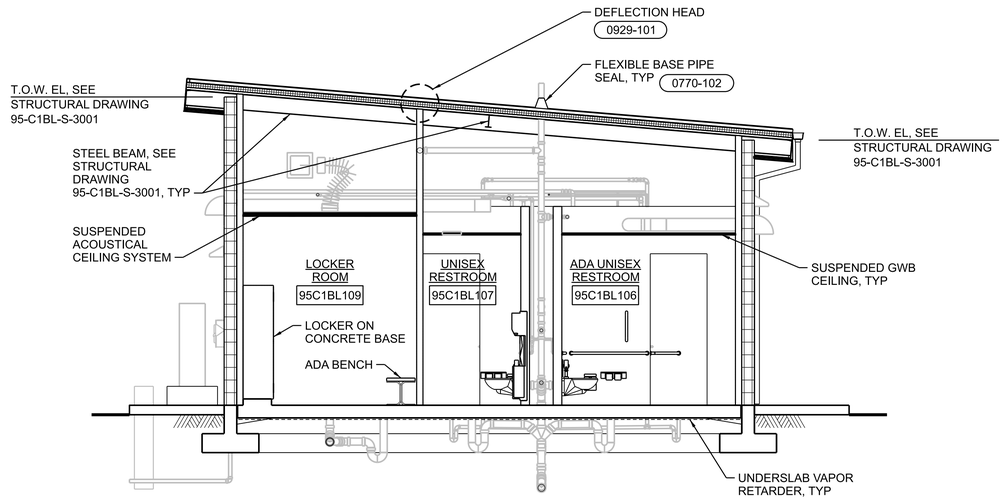
FILE: DRAWING: 95-C1BL-A-3001
ATLAS PAGE NO: 3328
SHEET 230 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:25



A SECTION
1/4"=1'-0"

95-C1BL-A-2000
95-C1BL-A-2050
95-C1BL-A-2100



B SECTION
1/4"=1'-0"

95-C1BL-A-2000
95-C1BL-A-2050
95-C1BL-A-2100

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STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

COMPOSTING OPERATIONS BUILDING
ARCHITECTURAL
SECTIONS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

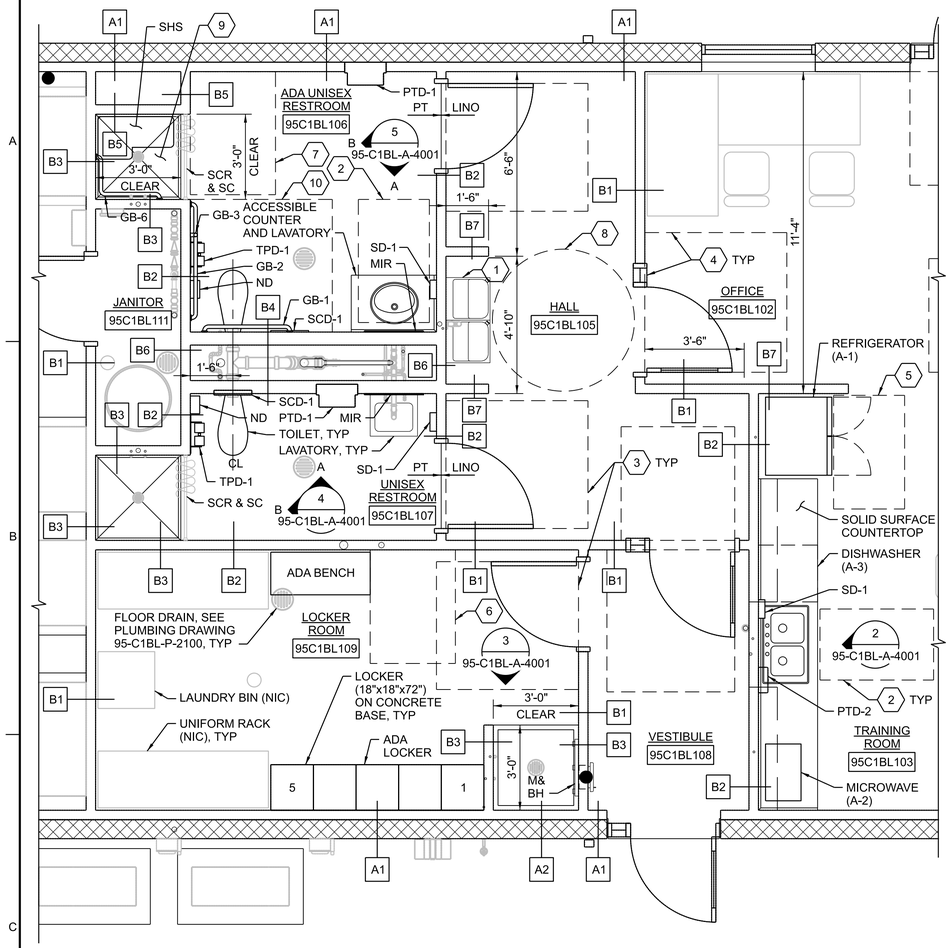
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 95-C1BL-A-3101
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 231 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:24

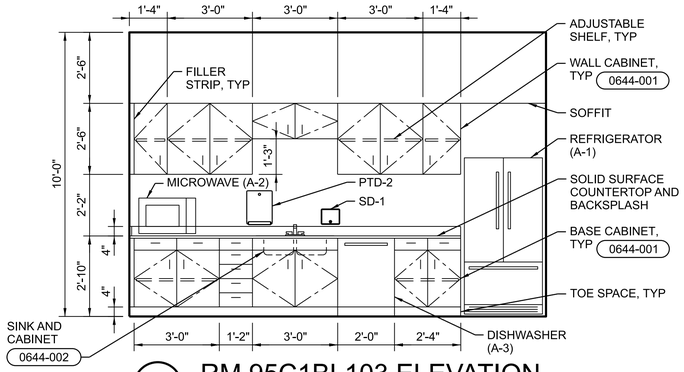


N

1 ENLARGED PLAN

3/8"=1'-0"

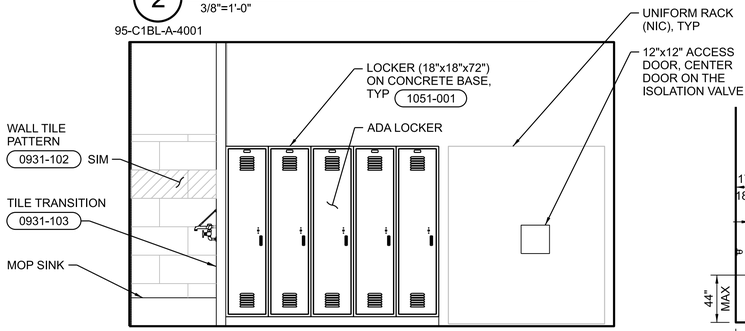
95-C1BL-A-2000



2 RM 95C1BL103 ELEVATION

3/8"=1'-0"

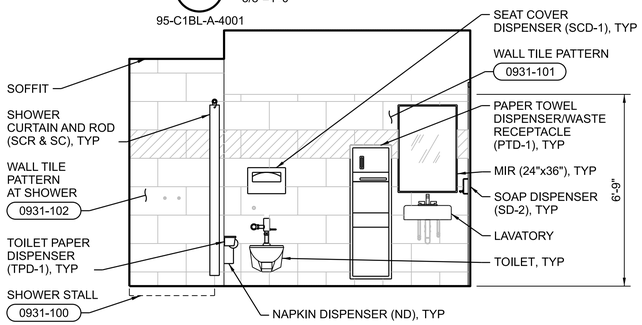
95-C1BL-A-4001



3 RM 95C1BL109 ELEVATION

3/8"=1'-0"

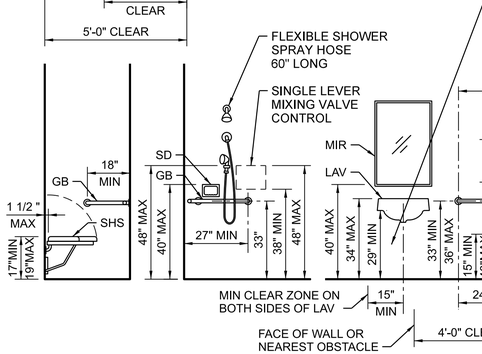
95-C1BL-A-4001



4A RM 95C1BL107 ELEVATION

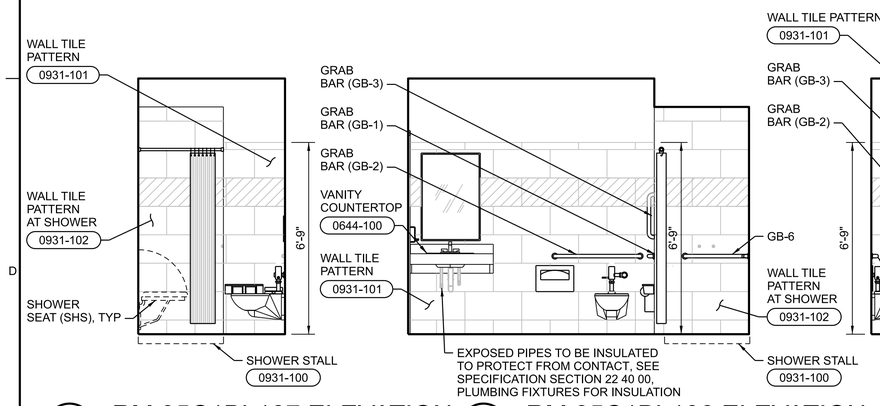
3/8"=1'-0"

95-C1BL-A-4001



ACCESSIBLE FIXTURE MOUNTING LOCATIONS

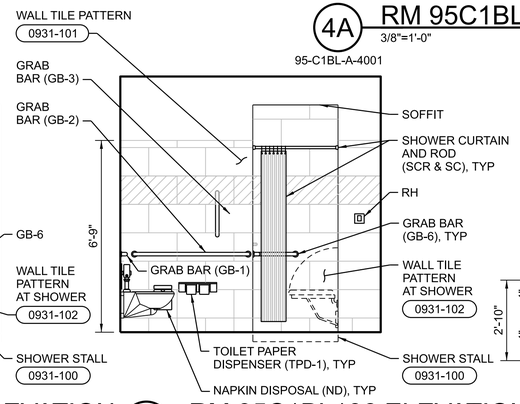
NTS



4B RM 95C1BL107 ELEVATION

3/8"=1'-0"

95-C1BL-A-4001



5A RM 95C1BL106 ELEVATION

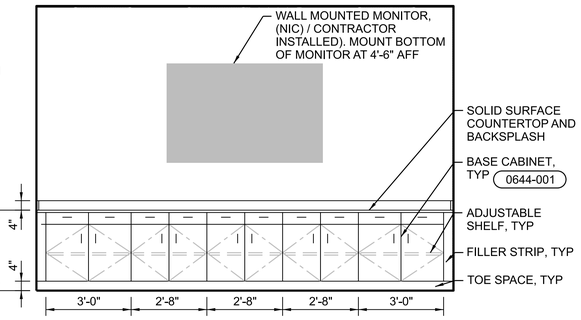
3/8"=1'-0"

95-C1BL-A-4001

5B RM 95C1BL106 ELEVATION

3/8"=1'-0"

95-C1BL-A-4001



6 RM 95C1BL103 ELEVATION

3/8"=1'-0"

95-C1BL-A-2000

GENERAL SHEET NOTES

1. FOR GENERAL ARCHITECTURAL NOTES, MATERIAL SYMBOLS, LEGEND, WALL TYPES, SEE DRAWING 01-G-0012.
2. FOR BUILDING CODE DATA TABLE AND LIFE SAFETY PLAN, SEE DRAWING 01-G-0014.
3. FOR ACCESSORY ABBREVIATIONS, SEE SPECIFICATION SECTION 10 28 00, TOILET AND BATH ACCESSORIES.
4. ALL ADA MINIMUM CLEAR ZONES TO ACCOUNT FOR ALL FINISHES AND STILL MAINTAIN REQUIRED CLEARANCE.
5. FOR APPLIANCE ABBREVIATIONS, SEE SPECIFICATION SECTION 11 31 00, APPLIANCES.

SHEET KEYNOTES

1. HIGH-LOW ELECTRIC DRINKING FOUNTAIN AND BOTTLE FILL STATION, MOUNTED DRINKING WITH THE ADA SPOUT OUTLET AT 36" MAXIMUM ABOVE FINISH FLOOR AND THE SECOND SPOUT OUTLET BETWEEN 38" AND 43" ABOVE FINISH FLOOR.
2. MINIMUM ADA CLEAR ZONE, FRONT APPROACH: 30"x48".
3. ADA FRONT APPROACH, PUSH SIDE; MINIMUM ADA CLEAR ZONE TO INCLUDE 12" ON LATCH SIDE OF DOOR AND DEPTH OF 48" MINIMUM.
4. ADA FRONT APPROACH, PULL SIDE; MINIMUM ADA CLEAR ZONE TO INCLUDE 18" ON LATCH SIDE OF DOOR AND DEPTH OF 60" MINIMUM.
5. MINIMUM ADA CLEAR ZONE, PARALLEL APPROACH: 30"x48".
6. ADA LOCKER BENCH CLEAR ZONE: MINIMUM CLEARANCE OF 48"x36".
7. MINIMUM CLEAR ZONE ADJACENT TO SHOWER; 36"x48".
8. MINIMUM ADA CLEAR ZONE; 60" DIAMETER TURNING CIRCLE.
9. TRANSFER TYPE SHOWER; MINIMUM CLEARANCE OF 36"x36". FRAME SHOWER COMPARTMENT TO ACCOUNT FOR ALL FINISHES AND STILL MAINTAIN REQUIRED CLEARANCES.
10. WATER CLOSET MINIMUM CLEAR ZONE; 60"x56".

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STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

REVISION	BY	DATE

COMPOSTING OPERATIONS BUILDING
ARCHITECTURAL ENLARGED PLAN AND INTERIOR ELEVATIONS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MW	05/26
HORIZONTAL:	LEAD ENG.	AZL	5/26
VERTICAL:	FIELD MGR.		5/26
FILE:	DRAWING: 95-C1BL-A-4001		DESIGN MANAGER
ATLAS PAGE NO: 3328			DATE: MAY 2026
			SHEET 232 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:29

INTERIOR FINISH SCHEDULE

ABBREVIATIONS:

ACT	ACOUSTICAL TILE	FCTY	FACTORY	MET	METAL	SLR	SEALER
CLR	CLEAR	GALV	GALVANIZED	PLAM	PLASTIC LAMINATE	SS	SOLID SURFACING
CMU	CONCRETE MASONRY UNIT	GWB	GYPSUM WALL BOARD	PLAS	PLASTIC	SST	STAINLESS STEEL
COL	COLOR	HGT	HEIGHT	PT	PORCELAIN TILE	WRB	WATER RESISTANT GWB
CONC	CONCRETE	LINO	LINOLEUM TILE	RUB	RUBBER BASE		
EXP	EXPOSED METAL STRUCTURE	MATL	MATERIAL				

NOTES:

NO. 1 NUMBERS IN THE FINISH COLUMN REFER TO PAINT SYSTEMS IN SPECIFICATION SECTION 09 90 00.
NO. 2 CODES IN COL COLUMN REFER TO COLOR LIST ON THIS DRAWING.
NO. 3 WALL SURFACES BEHIND CASEWORK AND OTHER BUILT-IN ITEMS NEED NOT BE PAINTED.
NO. 4 FOR EXTERIOR FINISHES AND COLORS, SEE EXTERIOR FINISH SCHEDULE ON THIS DRAWING.
NO. 5 AT LOCKER BASE PROVIDE CERAMIC TILE, COLOR (W-4). REFER TO DETAIL 1051-001.
NO. 6 8'-0" CEILING HEIGHT AT SHOWER STALL WITH PAINT SYSTEM NO. 116.

SPACE		FLOOR			BASE AND WAINSCOT					TYPICAL WALL			OTHER WALL			CEILING				MISCELLANEOUS				OTHER REQUIREMENTS
NO.	NAME	SUB FL	FINISH	COL	HGT	MATL	FINISH	COL	WALLS	MATL	FINISH	COL	MATL	FINISH	COL	HGT	MATL	FINISH	COL	ITEM	MATL	FINISH	COL	
95C1BL101	ADMIN	CONC	LINO	F-1	4"	RUB	FCTY	F-5	ALL	GWB	115	P-1	---	---	---	10'-0"	ACT	FCTY	C-1 / C-2	CORNER GUARD	SST	FCTY	NATURAL	---
95C1BL102	OFFICE	CONC	LINO	F-1	4"	RUB	FCTY	F-5	ALL	GWB	115	P-1	---	---	---	9'-0"	ACT	FCTY	C-1 / C-2	---	---	---	---	---
95C1BL103	TRAINING ROOM	CONC	LINO	F-1	4"	RUB	FCTY	F-5	ALL	GWB	115	P-1	WRB	116	P-1	10'-0"	ACT	FCTY	C-1 / C-2	CABINETRY / COUNTERTOP	PLAM / SS	FCTY / FCTY	N-3 / N-2	---
95C1BL104	SERVER ROOM	CONC	LINO	F-1	4"	RUB	FCTY	F-5	ALL	GWB	115	P-1	---	---	---	VARIES	EXP	106	P-2	ROOF DECK	GALV MET	10, 5	P-2	---
95C1BL105	HALL	CONC	LINO	F-1	4"	RUB	FCTY	F-5	ALL	GWB	115	P-1	---	---	---	10'-0"	ACT	FCTY	C-1 / C-2	CORNER GUARD / TRANSITION STRIP	SST / STL	FCTY / FCTY	NATURAL / M-3	---
95C1BL106	ADA UNISEX RESTROOM	CONC	PT	F-2, F-3, F-4	---	---	---	---	---	PT	FCTY	W-2, W-3, W-4, W-5	WRB	116	P-1	9'-0", NOTE 6	GWB	116	P-2	VANITY COUNTERTOP	SS	FCTY	N-1	REFER TO DETAIL 0931-101 FOR WALL TILE PATTERN AND TILE LIMITS. REFER TO DETAIL 0931-102 FOR WALL TILE PATTERN AT SHOWER COMPARTMENT.
95C1BL107	UNISEX RESTROOM	CONC	PT	F-2, F-3, F-4	---	---	---	---	---	PT	FCTY	W-4, W-5, W-6	WRB	116	P-1	9'-0", NOTE 6	GWB	116	P-2	VANITY COUNTERTOP	SS	FCTY	N-1	REFER TO DETAIL 0931-101 FOR WALL TILE PATTERN AND TILE LIMITS. REFER TO DETAIL 0931-102 FOR WALL TILE PATTERN AT SHOWER COMPARTMENT.
95C1BL108	VESTIBULE	CONC	LINO	F-1	4"	RUB	FCTY	F-5	ALL	GWB	115	P-1	---	---	---	10'-0"	ACT	FCTY	C-1 / C-2	---	---	---	---	---
95C1BL109	LOCKER ROOM	CONC	PT	F-2, F-3	6"	PT	FCTY	W-2, W-3	ALL, NOTE 5	GWB	115	P-1	WRB	116	P-1	10'-0"	ACT	FCTY	C-1 / C-2	LOCKERS / LOCKER BENCH	MET / PLAS	FCTY / FCTY	N-4 / N-5	---
95C1BL110	ELECTRICAL ROOM	CONC	SLR	CLR	4"	RUB	FCTY	F-5	ALL	GWB	115	P-1	---	---	---	VARIES	EXP	106	P-2	ROOF DECK	GALV MET	10, 5	P-2	---
95C1BL111	JANITOR	CONC	SLR	CLR	4"	RUB	FCTY	F-5	ALL	GWB	115	P-1	---	---	---	9'-0"	GWB	116	P-2	---	---	---	---	---

DOOR AND HARDWARE SCHEDULE

ABBREVIATIONS:

COL	COLOR
CONSTR	CONSTRUCTION
EXT	EXTERIOR
IG-C	CLEAR INSULATING GLASS
HM	HOLLOW METAL
MATL	MATERIAL
SG	SAFETY GLASS

NOTES:

NO. 1 SEE THIS SHEET FOR DOOR AND FRAME TYPES.
NO. 2 FOR DOOR DETAILS, SEE DESIGN DETAILS ON VOLUME 6 CONSTRUCTION DOCUMENTS.
NO. 3 NUMBER CODE IN HARDWARE SET COLUMN REFERS TO HARDWARE SETS IN SPECIFICATION SECTION 08 71 00.
NO. 4 NUMBERS IN FINISH COLUMN REFER TO PAINT SYSTEMS IN SPECIFICATION SECTION 09 90 00.
NO. 5 CODES IN COL COLUMN REFER TO COLOR LIST ON THIS DRAWING.
NO. 6 FOR GLASS TYPES, SEE SPECIFICATION SECTION 08 80 00.
NO. 7 MAXIMUM EFFORT TO OPEN INTERIOR DOORS IS 5 FORCE POUNDS AND 8.5 FORCE POUNDS FOR EXTERIOR DOORS.

OPENING			DOOR					FRAME				DETAILS			HARDWARE		FIRE PROTECTION RATING	OTHER REQUIREMENTS
NO.	SIZE											HEAD	JAMB	SILL	SET NO.	KEY SIDE		
	WIDTH	HEIGHT	CONSTR	TYPE	GLASS	FINISH	COL	MATL	TYPE	FINISH	COL							
95C1BL101A	3'-0"	7'-2"	HM	FG	IG-C	5	P-3	HM	SL	FCTY	P-3	0811-103, 0811-105	0811-104, 0811-029	0811-029, 0871-001	9	EXT	---	"ADMIN"
95C1BL102A	3'-0"	7'-0"	HM	HG	SG	106	P-3	HM	SD	106	P-3	0811-032	0811-032	0871-003	5	95C1BL101	---	"OFFICE"
95C1BL104A	3'-0"	7'-0"	HM	HG	SG	106	P-3	HM	SD	106	P-3	0811-032	0811-032	0871-003	6	95C1BL103	---	"SERVER ROOM"
95C1BL105A	3'-0"	7'-0"	HM	HG	SG	106	P-3	HM	SL	106	P-3	0811-032, 0811-033	0811-032, 0811-029	0811-029, 0871-003	10	95C1BL105	---	"TRAINING"
95C1BL105B	3'-0"	7'-0"	HM	HG	SG	106	P-3	HM	SL	106	P-3	0811-032, 0811-033	0811-032, 0811-029	0811-029, 0871-003	8	95C1BL108	---	"HALL" / "VESTIBULE"
95C1BL106A	3'-0"	7'-0"	HM	F	---	106	P-3	HM	SD	106	P-3	0811-032	0811-032	0871-004	4	95C1BL105	---	"ADA UNISEX RESTROOM"
95C1BL107A	3'-0"	7'-0"	HM	F	---	106	P-3	HM	SD	106	P-3	0811-032	0811-032	0871-004	4	95C1BL105	---	"UNISEX RESTROOM"
95C1BL108A	3'-0"	7'-2"	HM	HG	IG-C	106	P-3	HM	SL	106	P-3	0811-103, 0811-105	0811-104, 0811-029	0811-029, 0871-001	9	EXT	---	---
95C1BL109A	3'-0"	7'-0"	HM	F	---	106	P-3	HM	SD	106	P-3	0811-032	0811-032	0871-004	8	95C1BL108	---	"LOCKER ROOM"
95C1BL110A	(2) 3'-2"	7'-2"	HM	F / F	---	5	P-3	HM	TDD	5	P-3	0811-103, 0811-031	0811-104	0871-001	3	EXT	---	---
95C1BL110B	3'-0"	7'-2"	HM	F	---	5	P-3	HM	SD	5	P-3	0811-103	0811-104	0871-001	2	EXT	---	---
95C1BL111A	3'-0"	7'-0"	HM	F	---	106	P-3	HM	SD	106	P-3	0811-032	0811-032	0871-002	7	95C1BL110	---	"JANITOR"

WINDOW AND RELIGHT SCHEDULE

WINDOW TYPE ABBREVIATIONS:

F FIXED

OTHER ABBREVIATIONS:

AFF	ABOVE FINISH FLOOR (AT GROUND LEVEL)	IG-C	CLEAR INSULATING GLASS
AL	ALUMINUM	MNL	MANUAL OPERATION
FCTY	FACTORY	SG	SAFETY GLASS
		SS	SOLID SURFACING

NOTES:

NO. 1 SEE THIS SHEET FOR WINDOW TYPES.
NO. 2 FOR FRAME DETAILS, SEE STANDARD DETAILS ON VOLUME 6 CONSTRUCTION DOCUMENTS.
NO. 3 CODES IN COL COLUMN REFER TO COLOR LIST ON THIS DRAWING.

OPENING					FRAME				DETAILS			ROLLER SHADES / OPERATION		SILLS			OTHER REQUIREMENTS
NO.	SIZE		WINDOW														
	WIDTH	HEIGHT	TYPE	GLASS	MATL	TYPE	FINISH	COL	HEAD	JAMB	SILL	YES / NO	COLOR	MATL	COLOR	HEIGHT	
95C1BLW-01	4'-0"	4'-0"	F	IG-C	AL	W-1	FCTY	O-2	0841-101	0841-101 SIM	0841-101	YES / MNL	O-3	SS	N-1	3'-4" AFF	---
95C1BLW-02	4'-0"	4'-0"	F	IG-C	AL	W-1	FCTY	O-2	0841-101	0841-101 SIM	0841-101	YES / MNL	O-3	SS	N-1	3'-4" AFF	---
95C1BLW-03	8'-0"	6'-0"	F	IG-C	AL	W-2	FCTY	O-2	0841-101	0841-101 SIM	0841-101	YES / MNL	O-3	SS	N-1	3'-4" AFF	---
95C1BLW-04	8'-0"	6'-0"	F	IG-C	AL	W-2	FCTY	O-2	0841-101	0841-101 SIM	0841-101	YES / MNL	O-3	SS	N-1	3'-4" AFF	---
95C1BLR-01	3'-4"	3'-10"	F	SG	HM	R-1	5	P-3	0811-033	0811-033	0811-033 SIM	YES / MNL	O-3	SS	N-1	3'-4" AFF	---

EXTERIOR FINISH SCHEDULE

NOTES:

NO. 1 NUMBERS IN THE FINISH COLUMN REFER TO PAINT SYSTEMS IN SPECIFICATION SECTION 09 90 00.
NO. 2 CODES IN COLOR COLUMN REFER TO COLOR LIST ON THIS DRAWING.

ITEM / MATERIAL	FINISH	COLOR
SMOOTH-FACE CMU	FACTORY / WATER-REPELLENT SEALER	W-1 / CLEAR
SHEET METAL ROOF PANELS AND SOFFIT PANELS	FACTORY	M-1
GUTTERS AND DOWNSPOUTS	FACTORY	M-2
LUMINAIRES	FACTORY	DARK BRONZE
EXHAUST FAN WEATHER CAP	FACTORY	SIERRA TAN, GF118

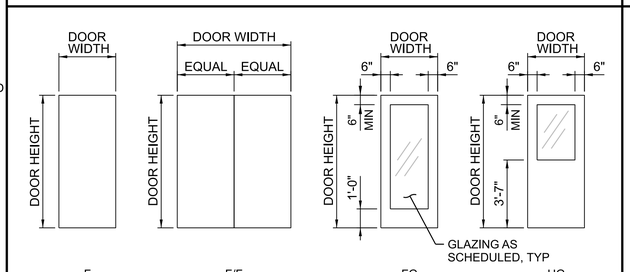
COLOR LIST

NOTES:

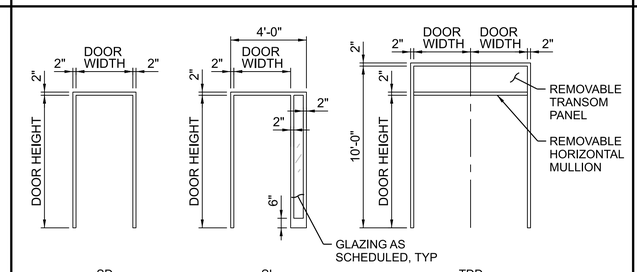
NO. 1 COLOR SELECTIONS FOR THIS PROJECT MAY BE NOTED IN EXTERIOR FINISH SCHEDULE, PIPING SCHEDULE AND ON THE DRAWINGS BY THE LETTER-NUMBER COMBINATION IN THE MARK COLUMN OF THIS LIST.
NO. 2 SOME COLOR SELECTIONS MAY BE MADE IN VARIOUS SPECIFICATION SECTIONS.
NO. 3 VERIFY COLORS WITH OWNER BEFORE BEGINNING WORK. IF A COLOR SELECTION IS NOT MADE, REQUEST ONE FROM THE OWNER.

MARK	ITEM	MANUFACTURER (NOTE 3)	COLOR (NOTE 3)	OTHER REQUIREMENTS
FLOORS				
F-1	LINOLEUM TILE	FORBO MARMOLEUM	MCT-3252, SPARROW	---
F-2	GROUT	MAPEI	5015, BONE	USE WITH F-2, F-3
F-3	PORCELAIN TILE	AMERICAN OLEAN	THEORETICAL / FUNDAMENTAL GRAY, TH94 / 24"x24"	3/16" GROUT JOINT
F-4	PORCELAIN TILE (MOSAIC)	AMERICAN OLEAN	THEORETICAL / FUNDAMENTAL GRAY, TH94 / 2"x2" (TILE AT SHOWER FLOOR)	1/8" GROUT JOINT
F-5	RUBBER BASE	JOHNSONITE	280, SHORELINE	---
WALLS				
W-1	SMOOTH-FACE CMU	AS SPECIFIED	MATCH EXISTING DEWATERING BUILDING	---
W-2	GROUT	MAPEI	5015, BONE	USE WITH W-3
W-3	PORCELAIN TILE (BASE)	AMERICAN OLEAN	THEORETICAL / FUNDAMENTAL GRAY, TH94 / 6"x12" COVE BASE	3/16" GROUT JOINT
W-4	PORCELAIN TILE (FIELD)	AMERICAN OLEAN	THEORETICAL / WHIMSICAL WHITE, TH90 / 12"x24"	GROUT JOINT 3/16" / STAGGERED BRICK-JOINT PATTERN
W-5	PORCELAIN TILE (ACCENT)	AMERICAN OLEAN	THEORETICAL / FUNDAMENTAL GRAY, TH94 / 12"x24"	GROUT JOINT 3/16" / STAGGERED BRICK-JOINT PATTERN
W-6	GROUT	MAPEI	5220, EGGSHELL	USE WITH W-4 AND W-5
CEILINGS				
C-1	ACOUSTIC CEILING TILE	ARMSTRONG	WHITE; 1756 FINE FISSURED HIGH-NRC	---
C-2	ACOUSTIC CEILING GRID	ARMSTRONG	WHITE; PRELUDE ML 15/16" EXPOSED TEE	---
OPENINGS				
O-2	ALUMINUM WINDOWS	KAWNEER	SMOKE GRAY	---
O-3	ROLLER SHADES	MECHOSHADE	CLASSIC BLACKOUT 0701 WHITE	---
FURNISHINGS				
N-1	SOLID SURFACING (WINDOW SILLS & VANITY COUNTERTOP)	CORIAN	CARRARA CREMA	---
N-2	SOLID SURFACING (COUNTERTOPS)	CORIAN	WITCH HAZEL	---
N-3	PLASTIC LAMINATE (CABINETRY)	WILSONART	7911, MANITOBA MAPLE	---
N-4	LOCKERS	PENCO	073, CHAMPAGNE	---
N-5	ACCESSIBLE LOCKER BENCH	ASI	4816, SAHARA BEIGE	---
MISCELLANEOUS				
M-1	SHEET METAL ROOF PANELS AND SOFFIT PANELS	AEP SPAN	COOL MIDNIGHT BRONZE	---
M-2	GUTTER AND DOWNSPOUTS	AEP SPAN	COOL MIDNIGHT BRONZE	---
M-3	TRANSITION STRIP	SCHLUTER	RENO-U / STAINLESS STEEL	FROM TILE TO LINOLEUM FLOORING
M-4	PREFABRICATED METAL CANOPY	MAPES	PEBBLE GRAY	---
PAINT				
P-1	PAINT (WALLS)	SHERWIN-WILLIAMS	SNOWBOUND, SW-7004	---
P-2	PAINT (CEILINGS)	SHERWIN-WILLIAMS	CEILING BRIGHT WHITE, SW-7007	---
P-3	PAINT (HM DOORS / FRAMES)	SHERWIN-WILLIAMS	JASPER, SW-6216	---

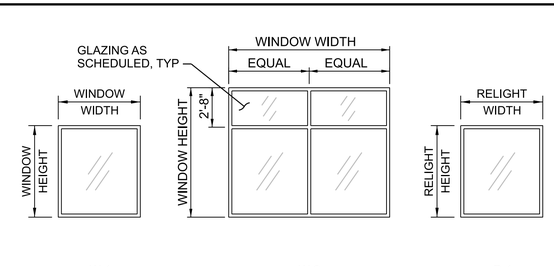
DOOR TYPES



DOOR FRAME TYPES



WINDOW AND RELIGHT TYPES



STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

COMPOSTING OPERATIONS BUILDING
ARCHITECTURAL SCHEDULES

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MW	05/26
LEAD ENG.	RL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE:
DRAWING: 95-C1BL-A-6001
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 233 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:24

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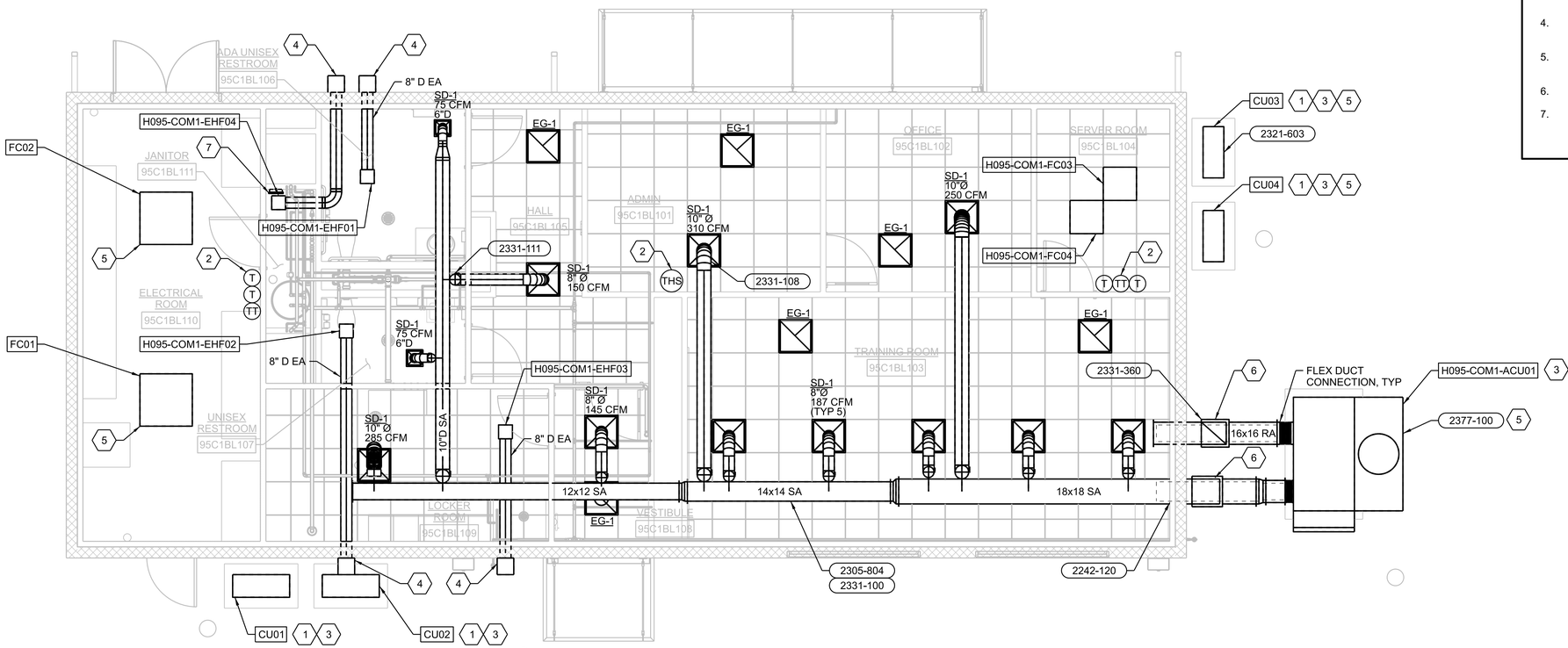
GENERAL SHEET NOTES

1. ALL 90° RECTANGLE FITTING SHALL HAVE DOUBLE-WALL TURNING VANES PER SPECIFICATION SECTION 23 31 13 METAL DUCTS AND ACCESSORIES.

SHEET KEYNOTES

1. SIZE REFRIGERANT LINES PER MANUFACTURER RECOMMENDATIONS.
2. THERMOSTAT SHALL BE INSTALLED MIN 52" AFF.
3. PROVIDE CONCRETE PAD FOR EQUIPMENT. PAD SHALL BE MINIMUM 12" LARGER THAN EQUIPMENT DIMENSIONS. EQUIPMENT SHALL SIT CENTERED ON PAD. SEE STRUCTURAL DRAWINGS.
4. PROVIDE WEATHER CAP FOR EXHAUST FAN EXTERIOR WALL.
5. ROUTE CONDENSATE TO NEAREST FLOOR DRAIN/DRYWELL WITH A 1-INCH AIR GAP.
6. DUCT DIMENSIONS ARE INTERNAL FREE AREA.
7. IN-WALL MOUNTED ELECTRIC UNIT HEATER, H095-COM1-HTR01, QMARK MODEL SED1512, 120V/1P, 1.5kW, 12.5A.



N

FLOOR PLAN

1/4"-1'-0"

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LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

COMPOSTING OPERATIONS BUILDING
HVAC
FLOOR PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

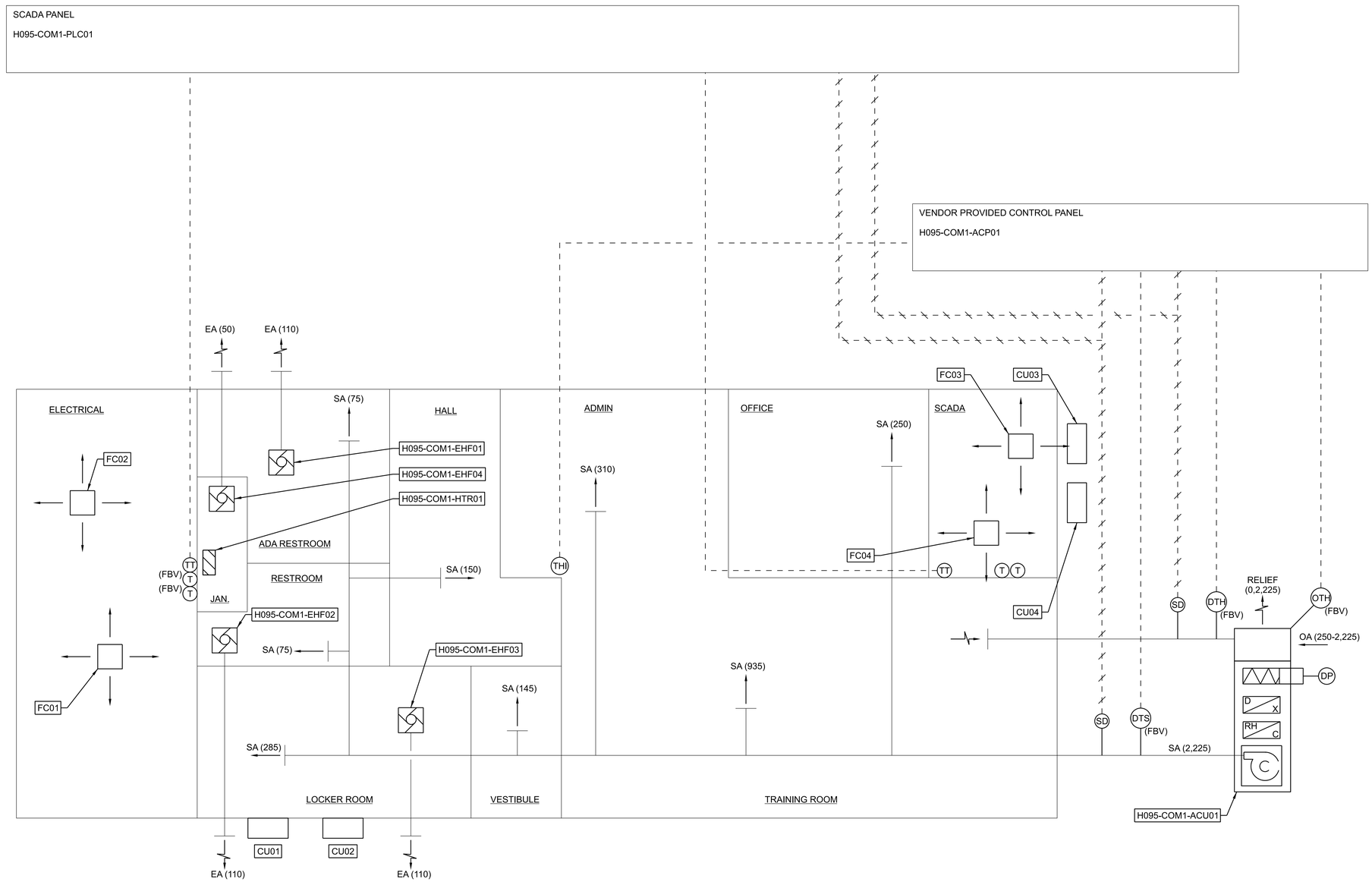
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSN	05/26
	LEAD ENG.	SL	5/26
	FIELD MGR.		5/26
FILE:	DRAWING: 95-C1BL-H-2000		DESIGN MANAGER
			DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 234 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 13:11

GENERAL SHEET NOTES

1. SEE HVAC LEGEND SHEET 01-G-0035.
2. SEE I&C LEGEND SHEETS 01-G-0055 & 01-G-0056.



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LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

COMPOSTING OPERATIONS BUILDING
HVAC
AIRFLOW SCHEMATIC

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
	PROJ. MGR.	MN	05/26
HORIZONTAL:	LEAD ENG.	SZ	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 95-C1BL-H-6001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 235 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 13:11

SEQUENCE OF OPERATIONS

GENERAL:

1. A GENERAL ALARM SHALL BE SENT TO THE SCADA SYSTEM VIA 24 VDC DRY CONTACTS RELAY WHEN THERE IS AN EQUIPMENT FAILURE OR ALARM. CONTROL WIRING SHALL BE PROVIDED BY DIVISION 26. SCADA PANEL TERMINATION SHALL BE PROVIDED BY DIVISION 40.
2. ANALOGUE SIGNAL CONVERSION PROGRAMMING SHALL BE DONE BY DIVISION 40 TO COMMUNICATE WITH SCADA NETWORK.

H095-COM1-ACU01

GENERAL:
THE UNIT OPERATES AS A RECIRCULATION VARIABLE AIR VOLUME UNIT WITH AN ECONOMIZER AND DEHUMIDIFICATION OPERATING WITH A PROGRAMMABLE THERMOSTAT.

THE UNIT IS ENABLED CONTINUOUSLY.

THE UNIT SHALL OPERATE IN ONE OF THE FOLLOWING SCHEDULED MODES.
1. OCCUPIED
2. UNOCCUPIED
3. ECONOMIZER
4. DEHUMIDIFICATION

ZONE SET POINTS:
1. OCCUPIED MODE
   75F (ADJ) COOLING
   70F (ADJ) HEATING
2. UNOCCUPIED MODE:
   85F (ADJ) COOLING
   60F (ADJ) HEATING

OCCUPIED MODE RUN CONDITIONS:
FAN CONTROLS:
1. THE FAN VFD SHALL MODULATE THE FAN SPEED TO MAINTAIN THE SPACE SET POINT.
2. THE UNIT POWER EXHAUSTER VFD SHALL MODULATE THE FAN SPEED TO MAINTAIN THE BUILDING PRESSURE SET POINT.

SUPPLY AIR TEMPERATURE CONTROL:
1. SUPPLY AIR TEMPERATURE SET POINT IS 55F (ADJ).
2. DURING OCCUPIED MODE, THE SUPPLY AIR TEMPERATURE SET POINT SHALL BE RESET BASED ON THE OUTSIDE AIR TEMPERATURE AND ZONE COOLING REQUIREMENTS.
3. AS THE OUTSIDE AIR TEMPERATURE RISES FROM 55F(ADJ) TO 75F (ADJ), THE SUPPLY AIR TEMPERATURE SET POINT SHALL RESET DOWNWARD FROM 60F(ADJ) TO 55F(ADJ).
4. IF THE RETURN AIR TEMPERATURE DROPS BELOW 68F(ADJ) THE SUPPLY AIR TEMPERATURE DROPS BELOW 68F(ADJ) THE SUPPLY AIR TEMPERATURE IS RESET FOR HEATING. AS THE OUTSIDE AIR TEMPERATURE DROPS FROM 55F(ADJ) TO 30F(ADJ), THE SUPPLY AIR TEMPERATURE SET POINT SHALL RESET UPWARDS FROM 60F(ADJ) TO 70F(ADJ).

COOLING CONTROLS:
GENERAL: CONTROLLER SHALL MEASURE THE ZONE TEMERATURE AND MODULATE THE COOLING TO MAINAIN COOLING SET POINT.

COOLING SHALL BE ENABLED WHENEVER:
1. OUTSIDE AIR TEMPERATURE IS GREATER THAN 60F (ADJ.)
2. ECONOMIZER IS DISABLED OR FULLY OPEN.
3. SUPPLY FAN STATUS IS ON.
4. HEATING IS DISABLED.

ECONOMIZER CONTROLS:
1. WHEN THE OUTSIDE AIR ENTHALPY CAN BE USED FOR COOLING, THE ECONOMIZER SHALL BE ENABLED.
2. THE RETURN AIR AND OUTSIDE AIR DAMPERS SHALL MODULATE TO MAINTAIN A MIXED AIR TEMPERATURE 2 DEGREES F (ADJ) BELOW THE SUPPLY AIR TEMPERATURE SET POINT.
3. ECONOMIZER IS THE FIRST STAGE OF COOLING AND CONTROLS THE SUPPLY AIR COOLING SET POINT. THE ECONOMIZER MODULATES BETWEEN MINIMUM POSITION AND FULLY OPEN. IF THE ECONOMIZER IS FULLY OPEN AND SUPPLY AIR TEMPERATURE IS ABOVE SET POINT THEN MECHANICAL COOLING IS ENABLED AND THE ECONOMIZER IS HELD FULLY OPEN.
4. ECONOMIZER IS AT MINIMUM POSITION IN HEATING AND VENT MODES.

HEATING CONTROLS:
1. IF THE SUPPLY AIR TEMPERATURE IS BELOW THE SUPPLY AIR HEATING SET POINT, THE HEAT PUMP STAGES ON AND MODULATES TO MAINTAIN THE SUPPLY AIR HEATING SET POINT. IF ADDITIONAL HEAT IS REQUIRED, HEAT PUMP IS HELD AT FULL CAPACITY AND THE AUXILIARY HEAT WILL MODULATE TO MAINTAIN SUPPLY AIR HEATING SET POINT.
2. IF THE SUPPLY AIR TEMPERATURE IS ABOVE HEATING SET POINT, HEATING WILL BEGIN TO STAGE OFF.

VENT CONTROLS:
1. ENABLED WHEN THERE IS NO HEATING OR COOLING DEMAND DURING OCCUPIED MODE.
2. THE FAN WILL OPERATE AT THE MINIMUM MAIN FAN VFD IN VENT MODE SET POINT FOR A SINGLE ZONE VAV UNIT.

DEHUMIDIFICATION CONTROLS:
1. DEHUMIDIFICATION SHALL BE ENABLED WHEN THE RETURN AIR HUMIDITY IS ABOVE 55%RH (ADJ) AND THE SPACE TEMPERATURE IS LESS THAN OR EQUAL TO THE COOLING SET POINT.
2. THE COMPRESSOR OPERATES AT FULL CAPACITY TO DROP TEMPERATURE BELOW DEW POINT AND REMOVE MOISTURE. IF COIL TEMPERATURE DROPS BELOW 32F, COOLING WILL STAGE OFF.
3. FAN SPEED SHALL RAMP DOWN TO INCREASE LATENT CAPACITY.
4. REHEAT COIL SHALL INITIATE TO MAINTAIN COOLING/HEATING/VENT MODE SUPPLY AIR SET POINT.
5. THE OUTDOOR AIR DAMPER SHALL MAINTAIN MINIMUM POSITION.
6. REHEAT LOCKOUT ENABLED WHEN OUTDOOR AIR TEMPERATURE IS LESS THAN 55F (ADJ).
7. IF THE OUTDOOR ENTHALPY IS LESS THAN THE INDOOR ENTHALPY, ECONOMIZER SHALL ASSIST IN DEHUMIDIFICATION.

UNOCCUPIED MODE RUN CONDITIONS:
1. WHEN THE SYSTEM ENTERS UNOCCUPIED MODE, THE UNIT SHALL CONTINUE TO RUN AND THE SUPPLY FAN RAMPS DOWN TO THE MINIMUM DESIGN AIRFLOW.
2. UPON A COOLING OR HEATING REQUEST FROM THE THERMOSTAT, THE SYSTEM SHALL INITIATE.
3. THE SUPPLY AIR TEMPERATURE CONTROL SHALL BE ENABLED AND SHALL OPERATE UNDER THE OCCUPIED MODE SUPPLY AIR TEMPERATURE CONTROL SEQUENCE.
4. THE SYSTEM SHALL RUN UNTIL THE ZONES CALLING FOR HEATING OR COOLING ARE SATISFIED.

BUILDING PRESSURE:
THE BUILDING SHALL BE KEPT AT A POSITIVE PRESSURE 0.02 IN.WC. (ADJ). IN RELATION TO AMBIENT WHEN THE SYSTEM IS IN THE OCCUPIED MODE OR UNOCCUPIED OVERRIDE MODE. THE UNIT SHALL MODULATE THE POWER EXHAUSTER AND EXHAUST AIR DAMPER TO MAINTAIN BUILDING PRESSURE SETPOINT.

UNOCCUPIED MODE OVERRIDE:
INTEGRAL SWITCH TO THE SPACE THERMOSTAT. OVERRIDE BUTTON SHALL ALLOW FOR A TWO-HOUR (ADJ) UNOCCUPIED OVERRIDE PLACING THE UNIT IN OCCUPIED MODE FOR THE DURATION OF THE OVERRIDE. UPON EXPIRATION OF THE OVERRIDE TIME, THE SYSTEM RETURNS TO THE UNOCCUPIED MODE.

ALARMS:
1. GENERAL UNIT ALARM

EMERGENCY SHUTDOWN:
UPON SMOKE DETECTOR ACTIVATION, THE UNIT SHALL SHUTDOWN. THE SMOKE ALARM ACTIVATION SIGNAL SHALL BE HARD WIRED TO THE UNIT CONTROLLER INPUT. SIGNAL SHALL ALSO BE SENT TO SCADA PANEL AND ALARM MONITORING STATION.

H095-COM1-EHF(01/02/03/04)

GENERAL: THE FANS OPERATE AT A SINGLE SPEED DESIGN AIRFLOW SETTING.

RUN CONDITIONS:
1. THE FANS SHALL BE INDIVIDUALLY INTERLOCKED WITH THE LIGHT SWITCH TO THEIR RESPECTIVE SPACES.

H095-COM1-HTR01

GENERAL: ELECTRIC UNIT HEATER SHALL OPERATE TO MEET SPACE SET POINT OF 40F(ADJ).

RUN CONDITIONS:
1. ELECTRIC UNIT HEATER SHALL INITIATE WITH INTERNAL THERMOSTAT TO MAINTAIN SPACE SET POINT.

FC(01/02/03/04)

RUN CONDITIONS:
1. THE UNITS ARE ENABLED CONTINUOUSLY AND OPERATE IN A CUTY/STANDBY FASHION.
2. EACH UNIT IS CONTROLLED BY A DEDICATED UNIT MANUFACTURER WALL MOUNTED PROGRAMMABLE THERMOSTAT.
3. SET POINTS SHALL BE MANUALLY SWAPPED TO ENSURE EQUAL RUNTIME FOR EQUIPMENT.
4. THE CONDENSING UNITS SHALL OPERATE AS REQUIRED WHEN THEIR ASSOCIATED AIR CONDITIONING UNIT INITIATES.

COOLING MODE:
FC01 SHALL MAINTAIN SPACE SET POINT OF 80F(ADJ).
FC02 SHALL MAINTAIN SPACE SET POINT OF 85F(ADJ).
FC03 SHALL MAINTAIN SPACE SET POINT OF 80F(ADJ).
FC04 SHALL MAINTAIN SPACE SET POINT OF 85F(ADJ).

HEATING MODE:
FC01 SHALL MAINTAIN SPACE SET POINT OF 40F(ADJ).
FC02 SHALL MAINTAIN SPACE SET POINT OF 35F(ADJ).
FC03 SHALL MAINTAIN SPACE SET POINT OF 40F(ADJ).
FC04 SHALL MAINTAIN SPACE SET POINT OF 35F(ADJ).

ALARMS TO SCADA:

HIGH SPACE AIR TEMPERATURE, ELECTRICAL ROOM - 90F (ADJ)
LOW SPACE AIR TEMPERATURE – ELECTRICAL ROOM - 30F (ADJ)
HIGH SPACE AIR TEMPERATURE, SCADA ROOM - 90F (ADJ)
LOW SPACE AIR TEMPERATURE - SCADA ROOM - 30F (ADJ)

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REUSE OF DOCUMENTS:

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35552
05/18/26
OKLAHOMA

REVISION	BY	DATE

COMPOSTING OPERATIONS BUILDING
HVAC
SEQUENCE OF OPERATION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

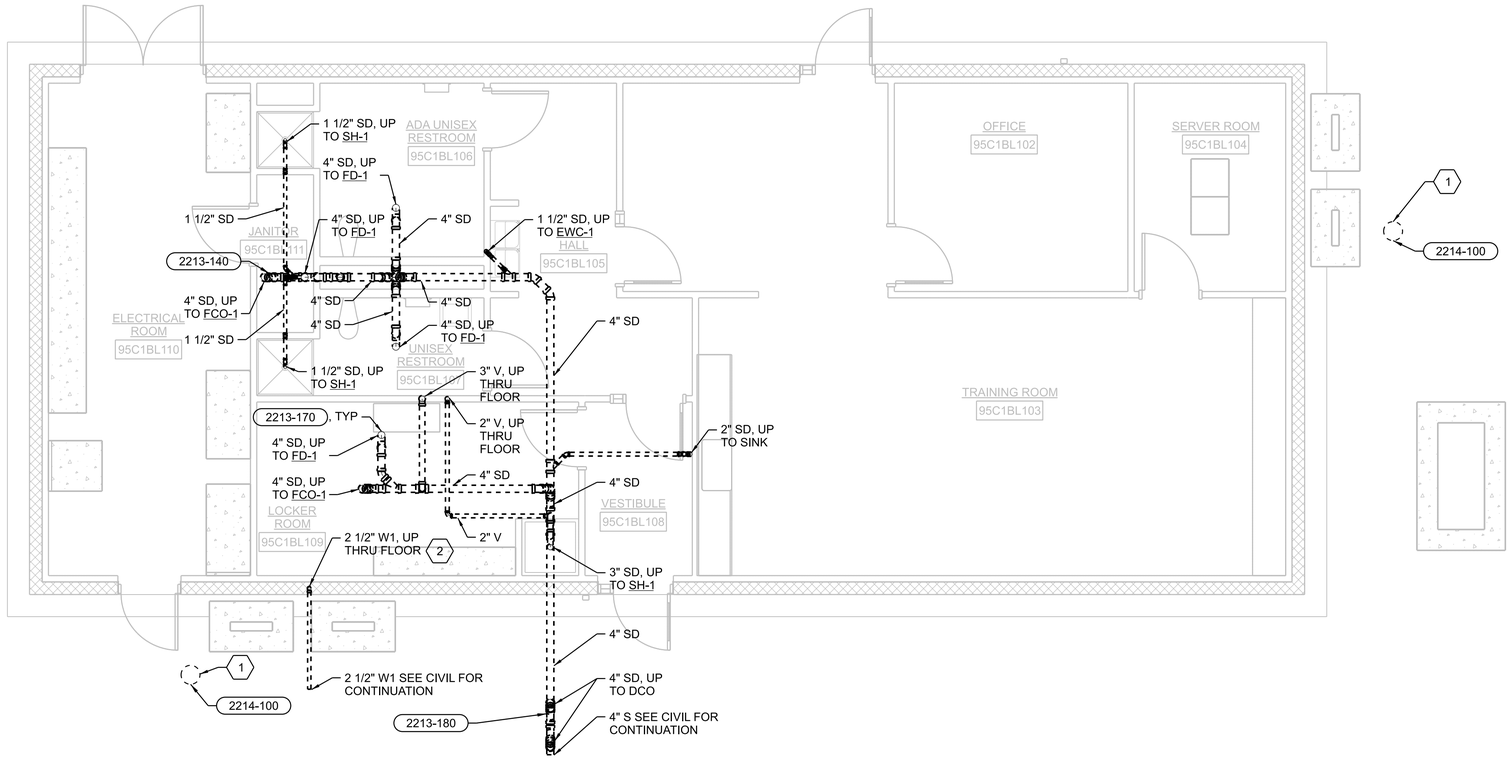
PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	SJL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C1BL-H-6002			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 236 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 13:12

SHEET KEYNOTES

1. DRYWELL, FILLED WITH 1-INCH WASHED ROCK.
2. SEE STRUCTURAL DRAWINGS FOR PENETRATION IN SLAB.



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UNDERSLAB PIPING PLAN

1/4"-1'-0"

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LICENSED PROFESSIONAL ENGINEER
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35552
05/18/26
OKLAHOMA

COMPOSTING OPERATIONS BUILDING
PLUMBING
UNDERSLAB PIPING PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

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PROFILE:
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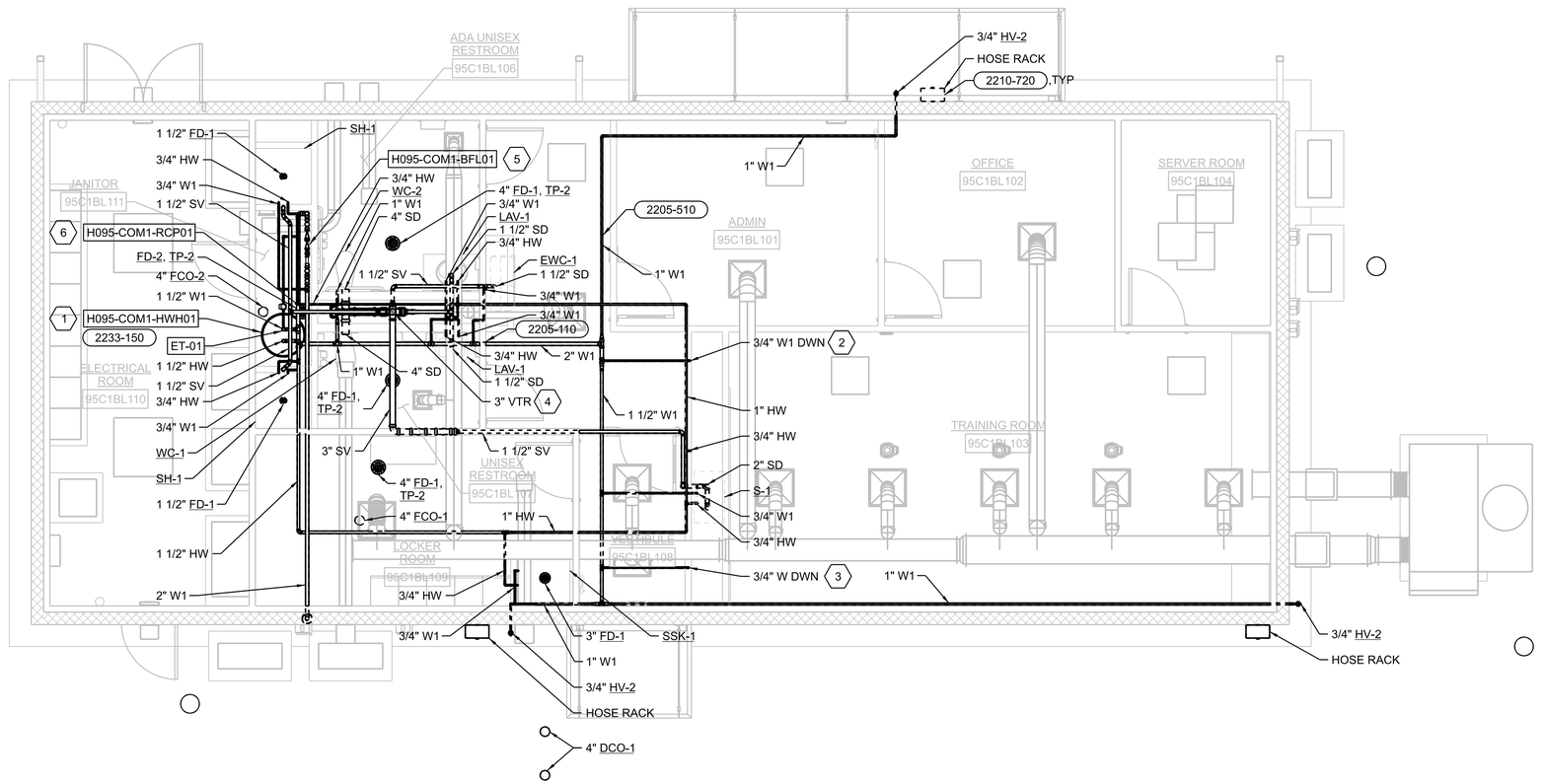
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	AZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026
FILE: DRAWING: 95-C1BL-P-2000
ATLAS PAGE NO: 3328
SHEET 237 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 13:12



FLOOR PLAN

1/4"-1'-0"

SHEET KEYNOTES

1. PROVIDE 24" STAND FOR WATER HEATER TO ALLOW FLOOR DRAIN AND CLEANOUT ACCESS UNDERNEATH.
2. WATER LINE TO SERVICE REFRIGERATOR WATER SYSTEM. PROVIDE SHUT OFF VALVE ON THE 1/4" W1 CONNECTION INSTALLED IN AN OUTLET BOX MOUNTED FLUSH TO THE WALL BEHIND THE REFRIGERATOR.
3. WATER LINE TO SERVICE COFFEE MAKER. PROVIDE SHUT OFF VALVE ON THE 1/4" W1 CONNECTION INSTALLED IN AN OUTLET BOX MOUNTED FLUSH TO THE WALL. COORDINATE OUTLET BOX FINAL LOCATION WITH ARCHITECTURE.
4. SEE ARCHITECTURAL DETAIL FOR VENT TO ROOF.
5. ROUTE BACKFLOW PREVENTER DISCHARGE TO NEAREST FLOOR DRAIN.
6. INSERT BALANCING VALVE UPSTREAM OF THE RECIRCULATING PUMP AND SET AT 5 GPM (ADJ).

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LICENSED PROFESSIONAL ENGINEER
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35552
05/18/26
OKLAHOMA

REVISION	BY	DATE

COMPOSTING OPERATIONS BUILDING
PLUMBING
FLOOR PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
HORIZONTAL:	PROJ. MGR.	WSN	05/26	
	LEAD ENG.	SZL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
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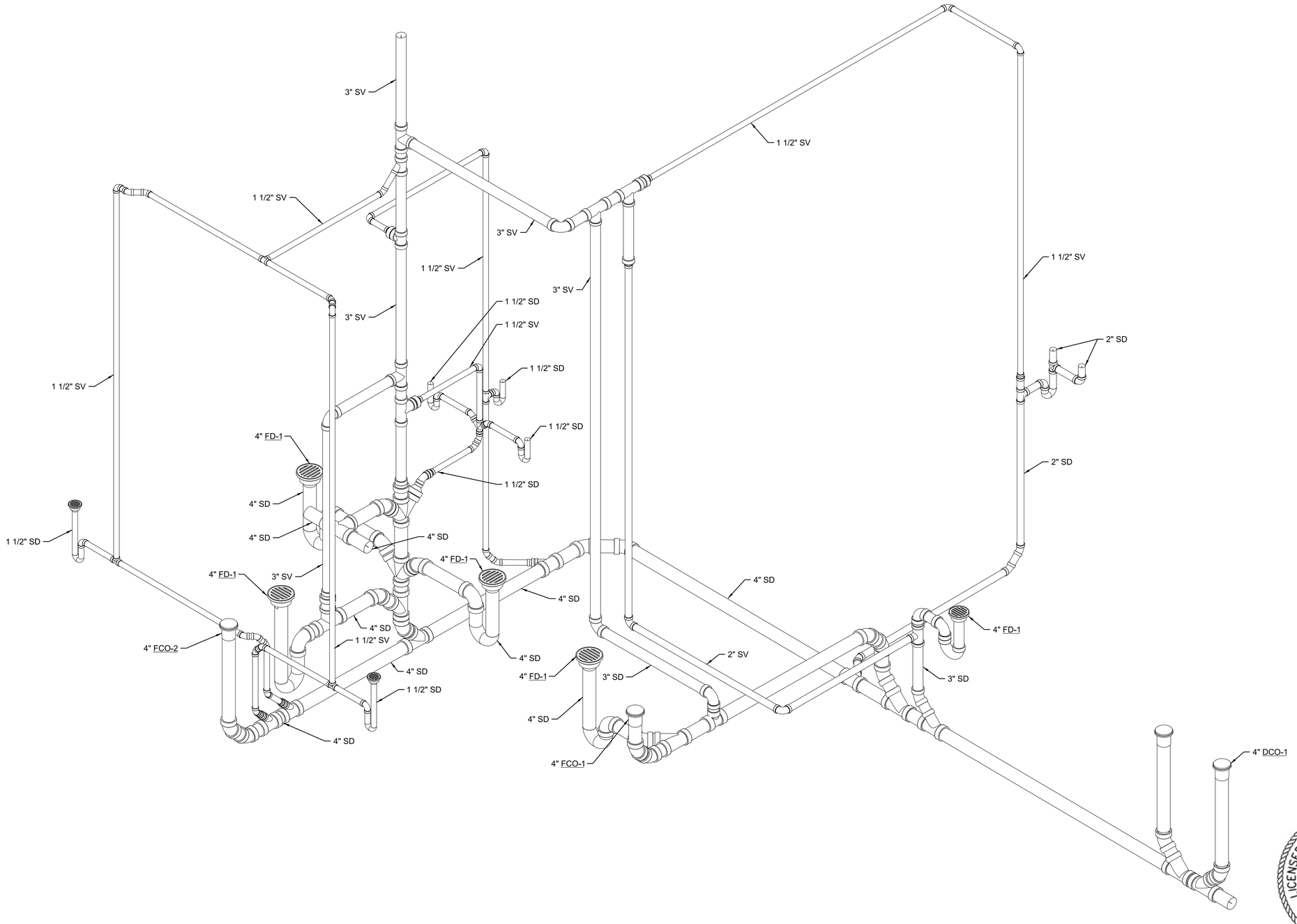
ATLAS PAGE NO: 3328				SHEET 238 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 13:12



DRAIN ISOMETRIC

NTS

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05/18/26
OKLAHOMA

COMPOSTING OPERATIONS BUILDING
PLUMBING
DRAIN ISOMETRIC

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WATER AND SEWER DEPARTMENT

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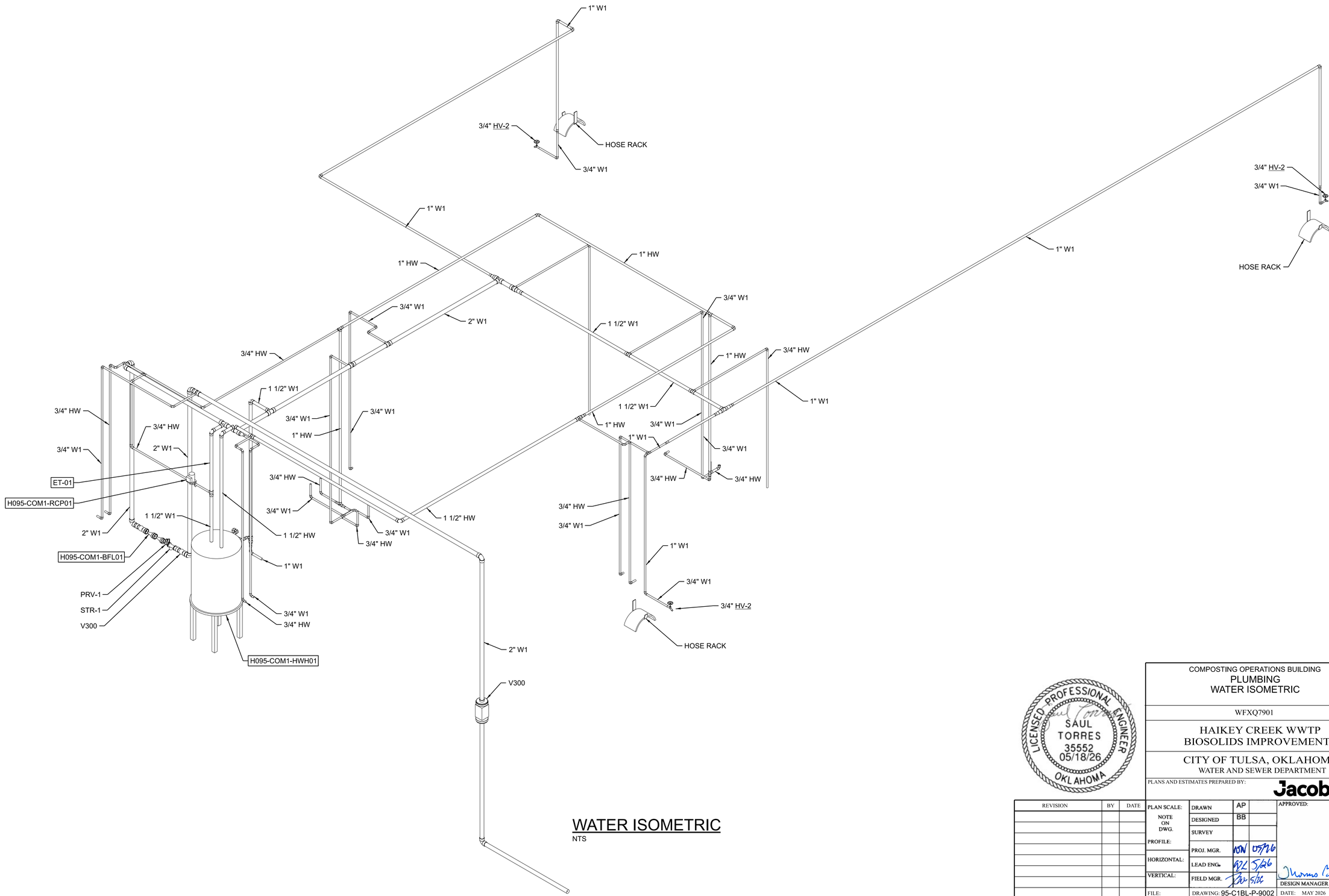
PROFILE:	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	AZL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C1BL-P-9001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 239 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 13:12



WATER ISOMETRIC

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LICENSED PROFESSIONAL ENGINEER
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OKLAHOMA

COMPOSTING OPERATIONS BUILDING
PLUMBING
WATER ISOMETRIC

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

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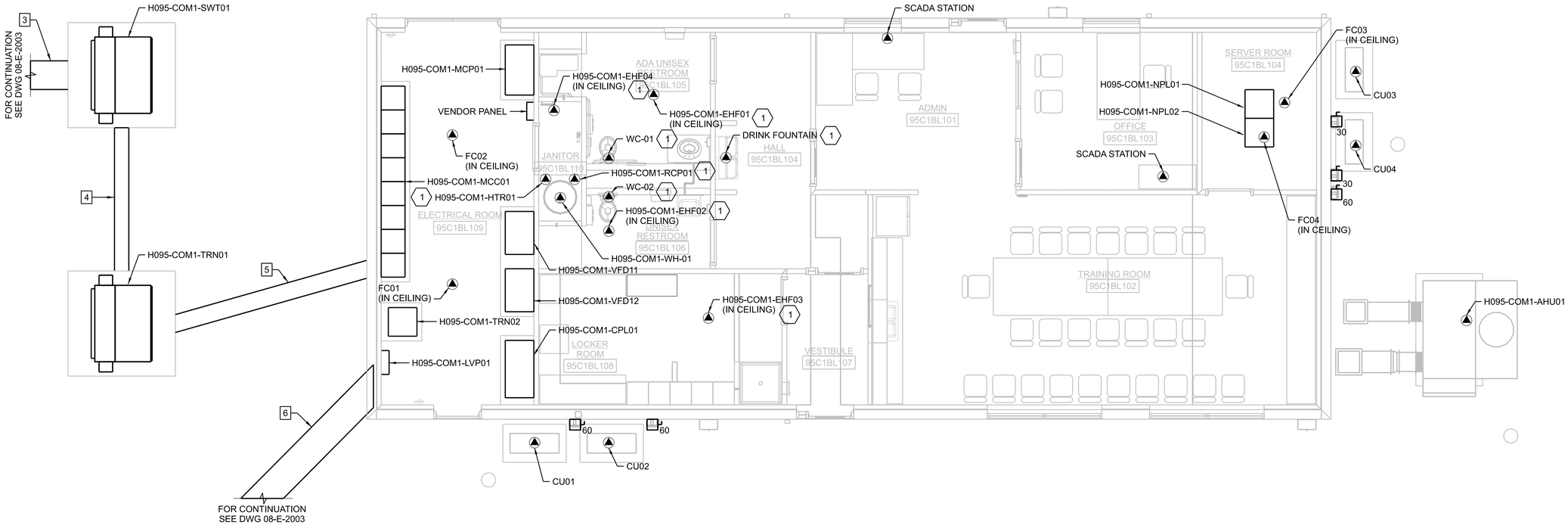
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C1BL-P-9002			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 240 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 13:11

SHEET KEYNOTES

1. PROVIDE [20E2] CIRCUIT FROM H095-COM1-LVP01 TO ENERGIZE EQUIPMENT.



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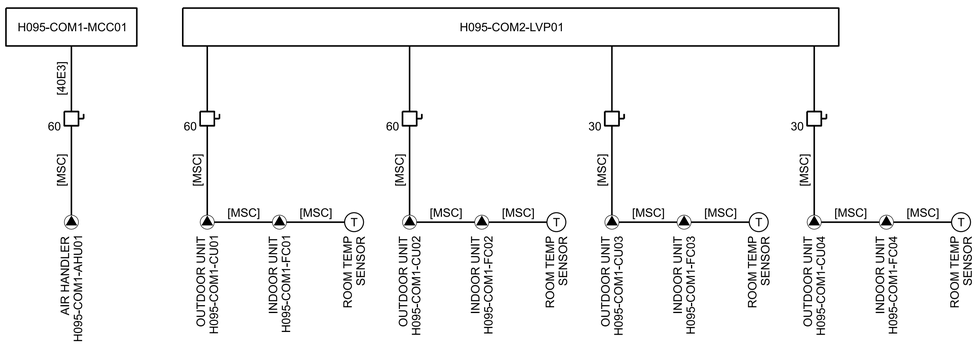
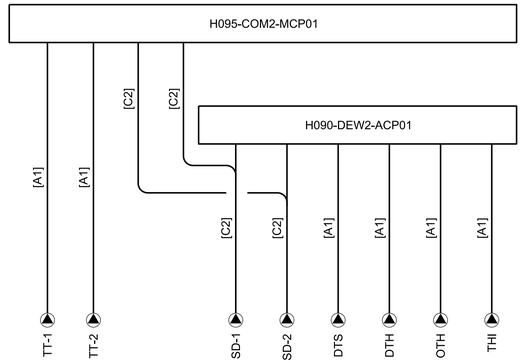
POWER PLAN

1/4"=1'-0"



COMPOST HVAC RISER

NTS



LICENSED PROFESSIONAL ENGINEER
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05/18/2026

COMPOSTING OPERATIONS BUILDING
ELECTRICAL
POWER PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

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VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C1BL-E-2000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 241 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:01

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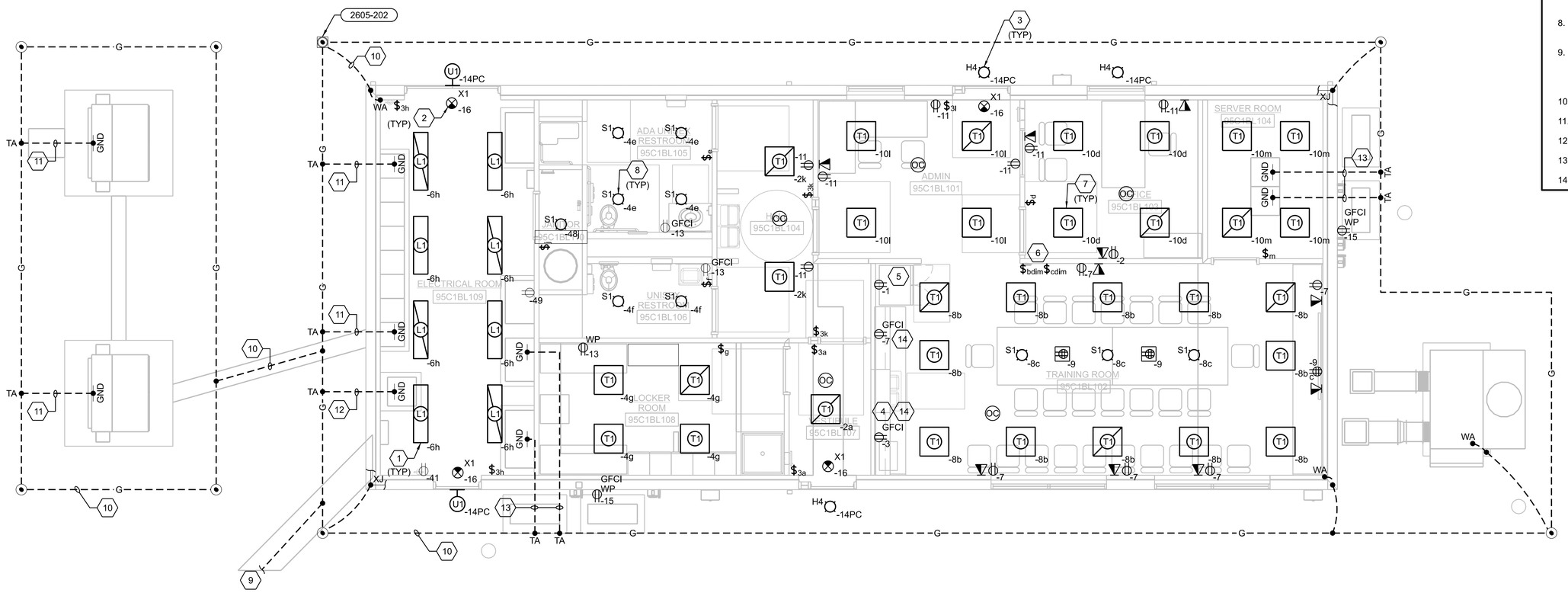
GENERAL SHEET NOTES

1. GROUND RING CONDUCTOR BURIED MINIMUM 30" BELOW FINISHED GRADE.
2. ROUTE 1" PVC, SCH40 CONDUIT 12" AFF TO GROUNDING ELECTRODE, FOR USE WITH GROUND CONDUCTORS OF LIGHTING PROTECTION SYSTEM. COORDINATE NUMBER AND LOCATIONS WITH LIGHTING PROTECTION CONTRACTOR, REFER TO SPECIFICATION SECTION 26 41 00.

SHEET KEYNOTES

1. INSTALL LIGHT FIXTURE TYPE L1 SUCH THAT THE BOTTOM OF THE FIXTURE IS 10'-0" FROM FINISHED FLOOR.
2. INSTALL EXIT SIGN ABOVE DOOR OR DOOR TRANSOM.
3. INSTALL LIGHT FIXTURE H4 UNDER CANOPY.
4. DEDICATED RECEPTACLE FOR MICROWAVE.
5. DEDICATED RECEPTACLE FOR REFRIGERATOR. MOUNT 4' AFF.
6. COMBINED CONFERENCE ROOM DIMMABLE CONTROLLER SWITCH FOR CIRCUITS 'b' AND 'c'.
7. INSTALL LIGHT FIGURE TYPE T1 SUCH THAT THE FIXTURE IS RECESSED IN THE DROP CEILING.
8. INSTALL LIGHT FIXTURE TYPE S1 SUCH THAT THE FIXTURE IS RECESSED IN THE DROP CEILING.
9. THE #4/0 XHHW-2 INSULATED BARE COPPER GROUND ENCASED IN THE DUCTBANK SHALL EXIT THE DUCTBANK AND CONNECT TO THE GROUND RING.
10. #4/0 AWG STRANDED, BARE, TIN-PLATED COPPER.
11. #2/0 AWG STRANDED, XHHW-2 INSULATED, 600VAC.
12. #1/0 AWG STRANDED, XHHW-2 INSULATED, 600VAC.
13. #2 AWG STRANDED, XHHW-2 INSULATED, 600VAC.
14. INSTALL RECEPTACLE ABOVE COUNTER TOP.



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FACILITY PLAN
1/4"=1'-0"

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COMPOSTING OPERATIONS BUILDING
ELECTRICAL
FACILITY PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

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PROJ. MGR.	MSN	05/26
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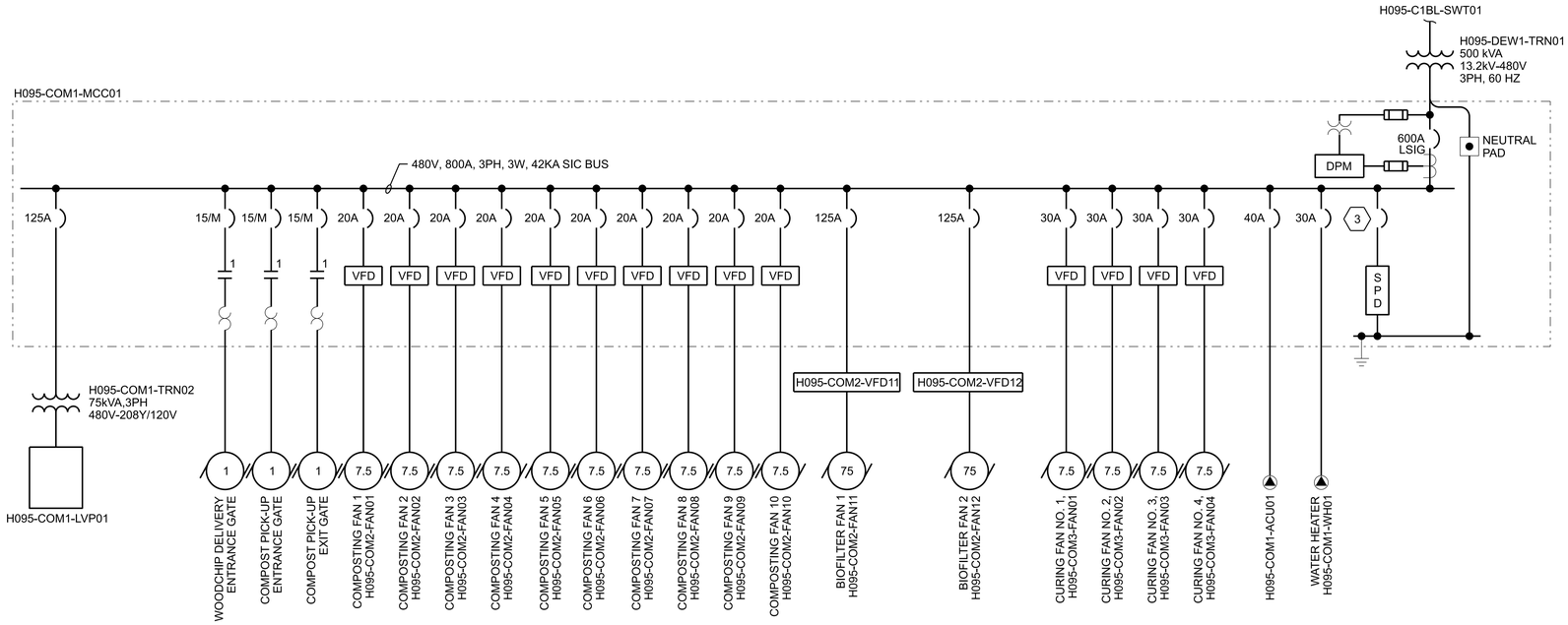
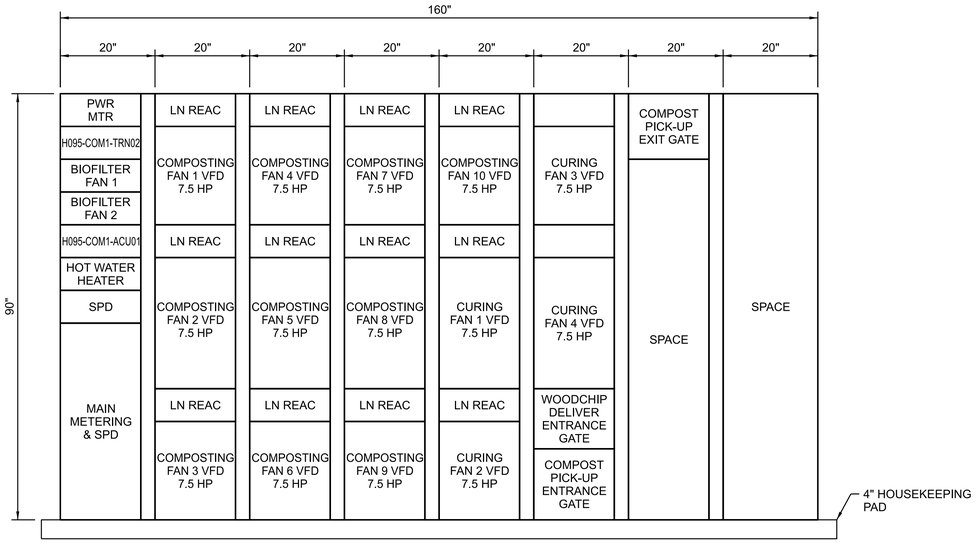
APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 95-C1BL-E-2001
ATLAS PAGE NO: 3328
SHEET 242 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:01



ONE-LINE DIAGRAM
NTS



FRONT ELEVATION
NTS

H095-COM1-MCC01 CONNECTED LOAD	
DESCRIPTION	AMP
BIOFILTER FAN 1	96
BIOFILTER FAN 2	96
COMPOST FAN NO.1	11
COMPOST FAN NO.2	11
COMPOST FAN NO.3	11
COMPOST FAN NO.4	11
COMPOST FAN NO.5	11
COMPOST FAN NO.6	11
COMPOST FAN NO.7	11
COMPOST FAN NO.8	11
COMPOST FAN NO.9	11
COMPOST FAN NO.10	11
CURING FAN NO. 1	11
CURING FAN NO. 2	11
CURING FAN NO. 3	11
CURING FAN NO. 4	11
WOODCHIP DELIVERY ENTRANCE GATE	2.1
COMPOST PICK-UP ENTRANCE GATE	2.1
COMPOST PICK-UP EXIT GATE	2.1
H095-COM1-TRN02	90
H095-COM1-ACU01	30
COMPOST HOT WATER HEATER	10
TOTAL	482.3
TOTAL PLUS 25% LARGEST MOTOR	506.3

GENERAL SHEET NOTES

1. REFER TO 08-E-6003 FOR THE OVERALL POWER RISER DIAGRAM, OVERALL NETWORK RISER DIAGRAM AND INDIVIDUAL FACILITY RISER DIAGRAMS FOR CONDUIT AND WIRE CALLOUTS.
2. CIRCUIT BREAKERS AND STARTERS TO HAVE PADLOCKABLE OPERATING HANDLE WHEN DE-ENERGIZED.
3. SIZE BY MANUFACTURER.

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

COMPOSTING OPERATIONS BUILDING
ELECTRICAL
H095-COM1-MCC01 ONE-LINE DIAGRAM AND FRONT ELEVATION
WFXQ7901
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT
PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:
DRAWN AP
DESIGNED BB
SURVEY
PROJ. MGR. MSN 05/26
LEAD ENG. AZ 5/26
FIELD MGR. 5/26
APPROVED:
DESIGN MANAGER
FILE: DRAWING: 95-C1BL-E-6001
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 243 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 14:55

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FOR REFERENCE ONLY

RENDERING
NTS

COMPOSTING BUILDING

RENDERING

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

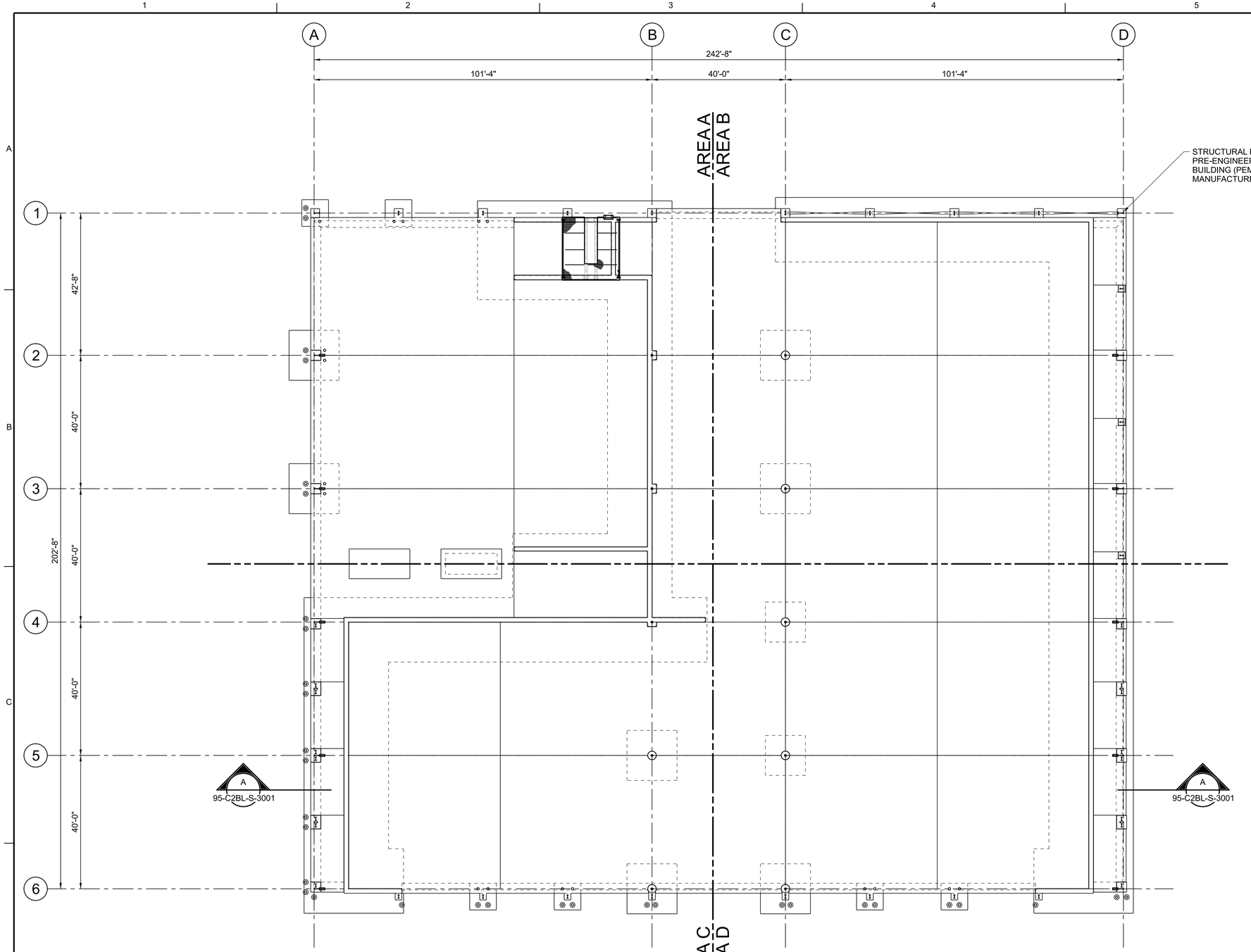
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	RZL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-R-0001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 244 OF 300 SHEETS

PLOT DATE: 05\14\2026 PLOT TIME: 9:07:12 AM



PLAN
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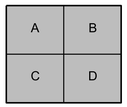

KEYPLAN

GENERAL FACILITY NOTES

1. FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS 01-G-0020 AND 01-G-0021.
2. FOR STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS, SEE DRAWINGS 01-G-022 THROUGH 01-G-0024.
3. FOR PRE-ENGINEERED BUILDING REQUIREMENTS, REFER TO SPECIFICATION SECTION 13 34 19, METAL BUILDING SYSTEMS.
4. DESIGN OF BUILDING COLUMN BASE ANCHORAGE MUST CONSIDER SUPPLEMENTARY ANCHORAGE REINFORCING. COORDINATE REINFORCING FOR FOUNDATION CONCRETE PLACEMENT.
5. FOR ADDITIONAL REINFORCING AT CONCRETE OPENINGS, SEE STANDARD DETAIL 0330-001.
6. ENCASE ALL PIPES BELOW WALL AND PIER FOUNDATIONS, SEE STANDARD DETAIL 0330-016. EXTEND ENCASEMENT HORIZONTALLY A MINIMUM OF 5 FEET BEYOND EDGE OF FOUNDATION.
7. FRAME ON GRIDLINE 6 SHALL BE DESIGNED CONSIDERING TRIBUTARY AREA AS INTERIOR FRAMES AND DETAILED TO ALLOW FOR FUTURE BUILDING EXPANSION/CONTINUATION TO THE EAST.

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

COMPOSTING BUILDING
STRUCTURAL
FOUNDATION PLAN
OVERALL

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

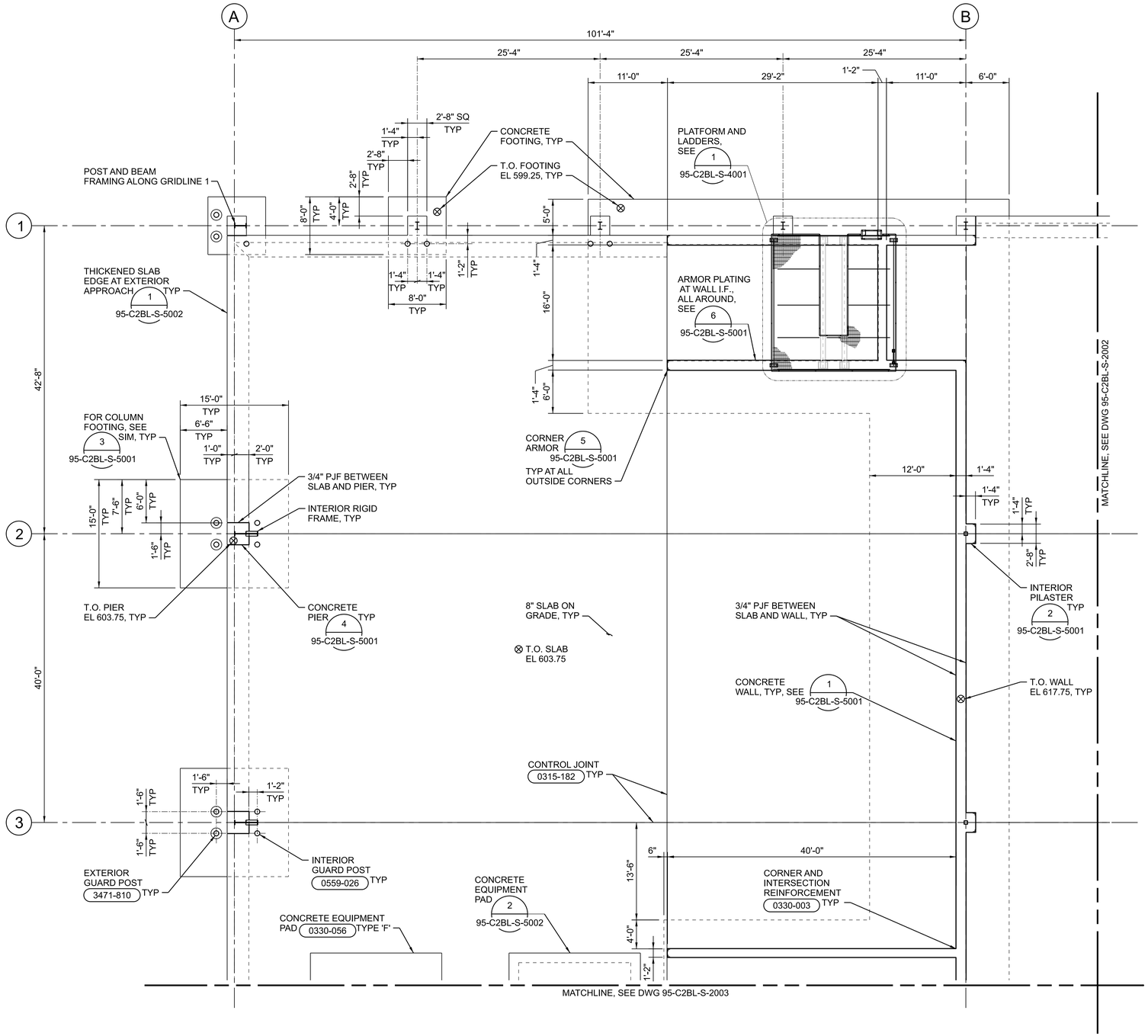
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENG.		
VERTICAL:	FIELD MGR.		DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-S-2000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 245 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:40



PLAN - AREA A

1/8"=1'-0"

A	B
C	D

KEYPLAN

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

COMPOSTING BUILDING
STRUCTURAL
FOUNDATION PLAN
AREA A

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

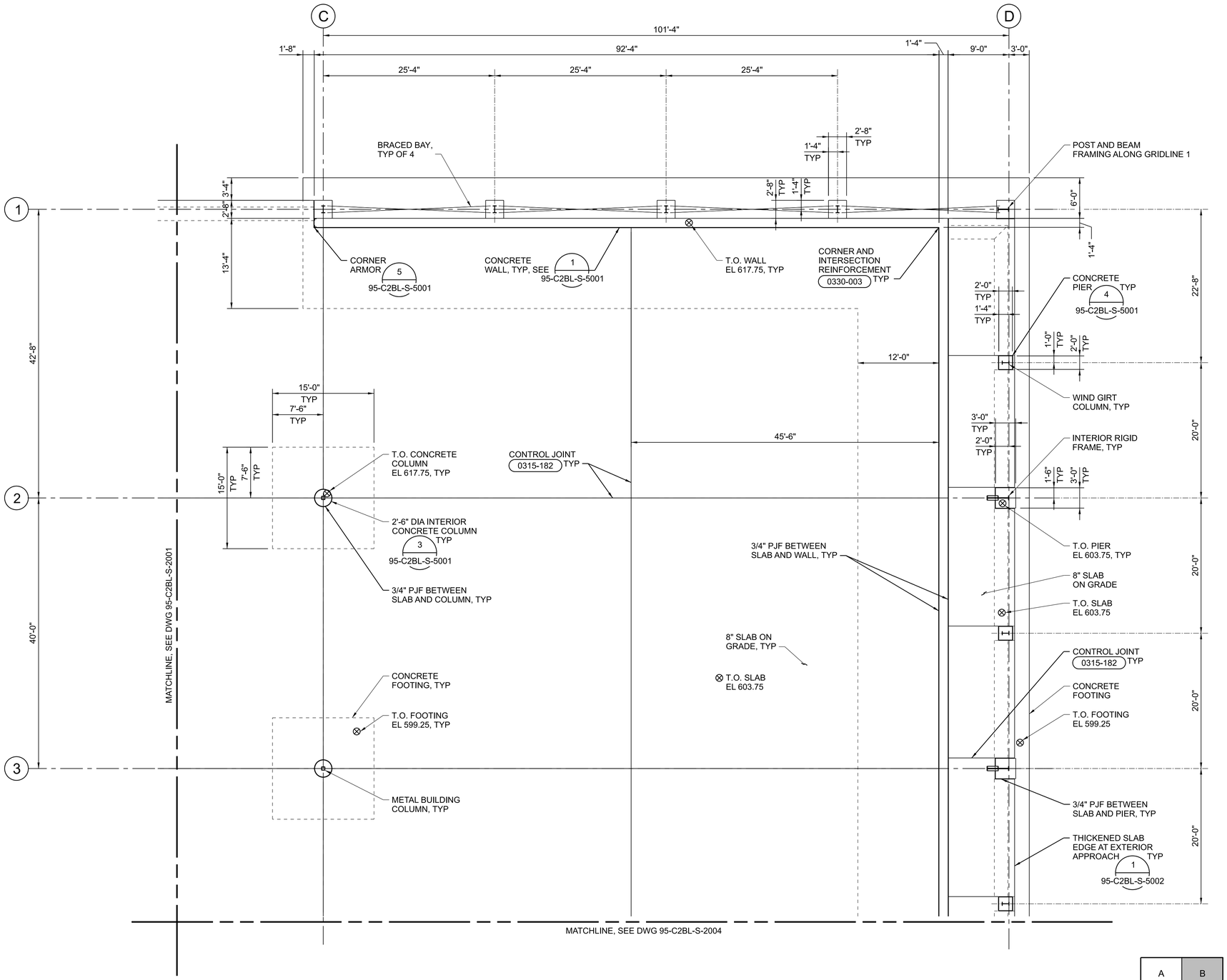
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	APPROVED:
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26
DESIGN MANAGER		

FILE: DRAWING: 95-C2BL-S-2001 DATE: MAY 2026

ATLAS PAGE NO: 3328 SHEET 246 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:39



A	B
C	D

KEYPLAN

PLAN - AREA B

1/8"=1'-0"

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

COMPOSTING BUILDING
STRUCTURAL
FOUNDATION PLAN
AREA B

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

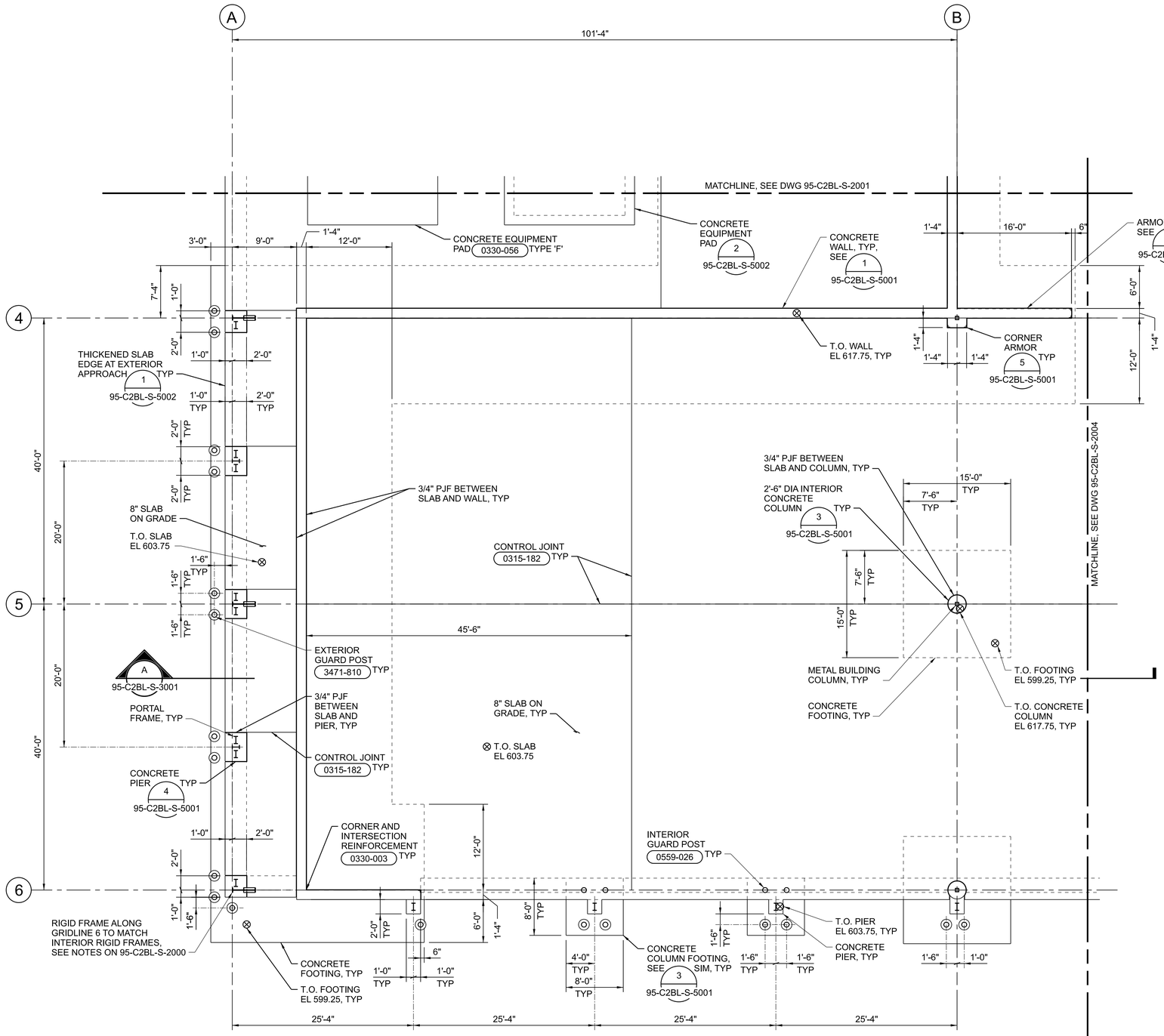
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RJL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 95-C2BL-S-2002
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 247 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:41



N

PLAN - AREA C

1/8"=1'-0"

A	B
C	D

KEYPLAN

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

COMPOSTING BUILDING
STRUCTURAL FOUNDATION PLAN AREA C

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

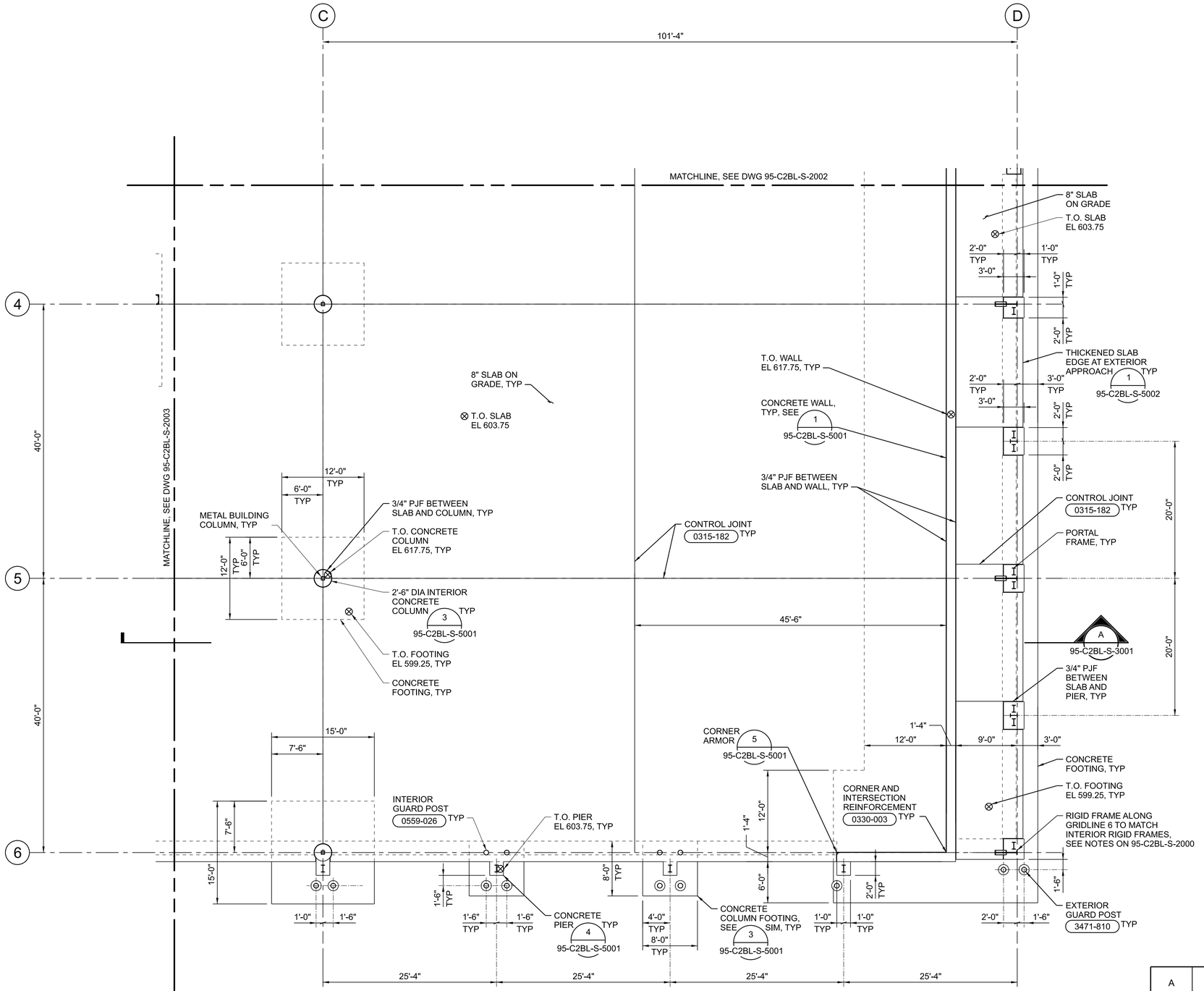
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENG.		
VERTICAL:	FIELD MGR.		DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-S-2003		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 248 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:40



PLAN - AREA D
1/8"=1'-0"

KEYPLAN

A	B
C	D

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
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OKLAHOMA
05/18/2026

COMPOSTING BUILDING
STRUCTURAL
FOUNDATION PLAN
AREA D

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

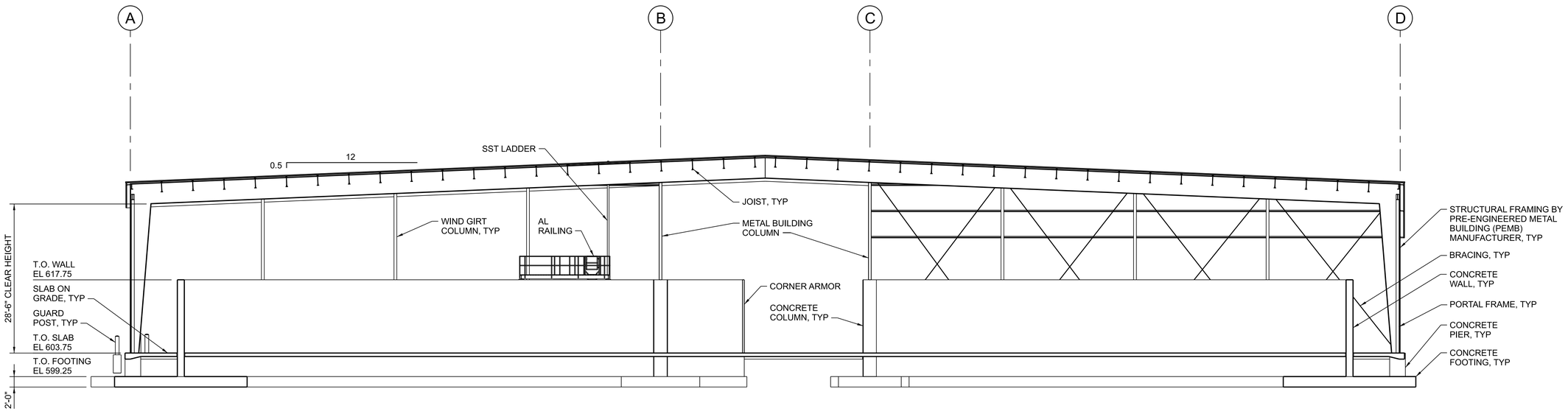
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
	PROJ. MGR.	MSN	05/26
HORIZONTAL:	LEAD ENG.	RZL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-S-2004		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 249 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:41



A SECTION
3/32"=1'-0"

95-C2BL-S-2000
95-C2BL-S-2003
95-C2BL-S-2004

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

COMPOSTING BUILDING
STRUCTURAL
SECTION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

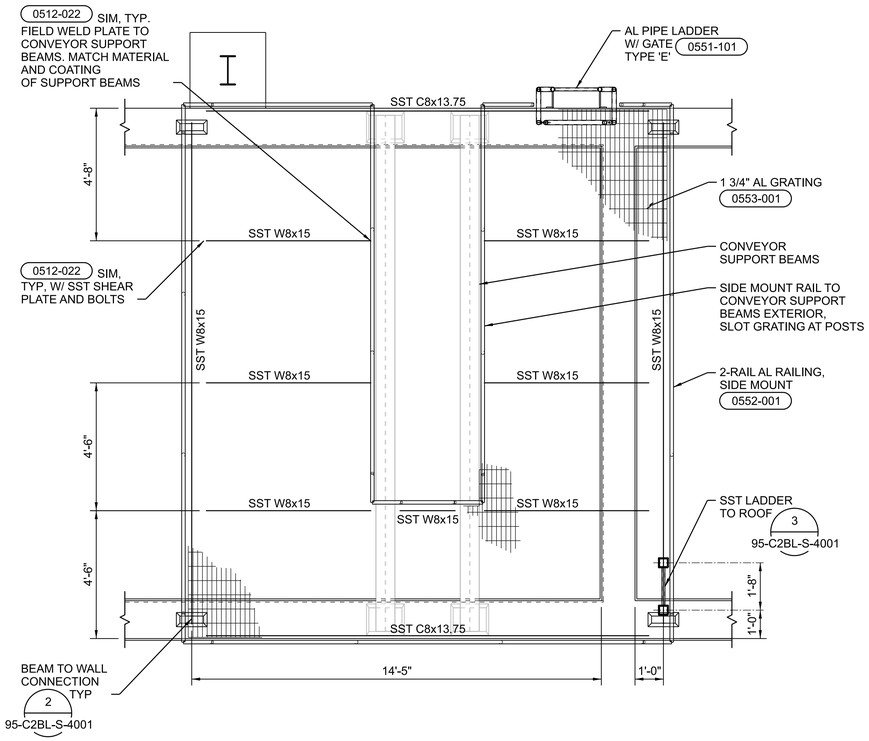
DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 95-C2BL-S-3001 DATE: MAY 2026

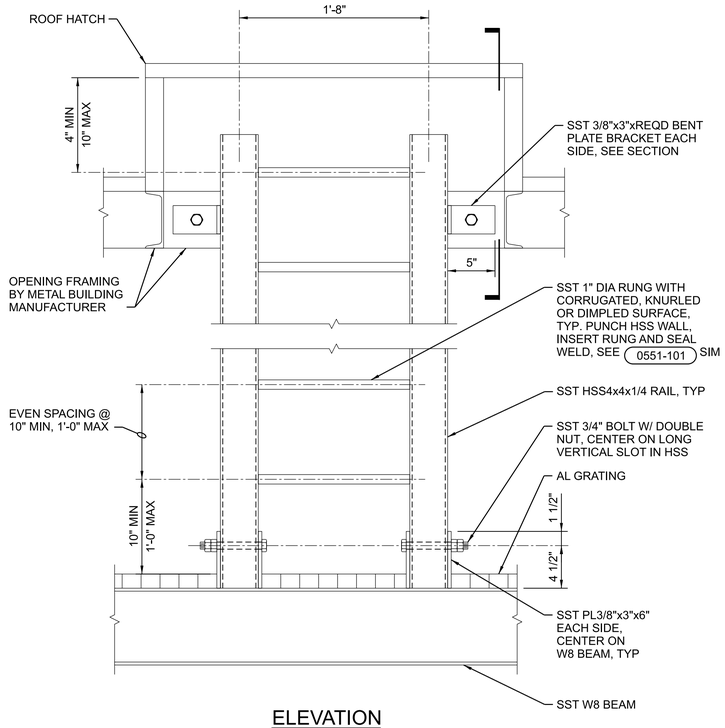
ATLAS PAGE NO: 3328 SHEET 250 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:39

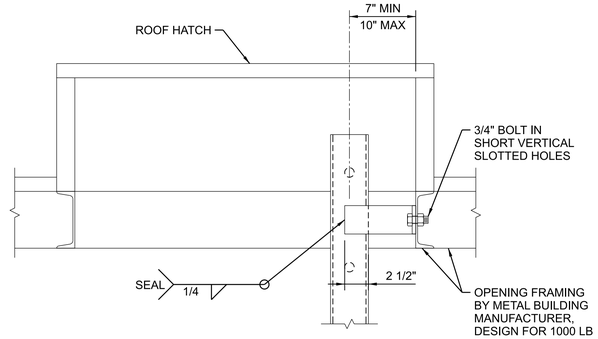


N

1 ENLARGED PLAN
3/8"=1'-0"
95-C2BL-S-2001



ELEVATION

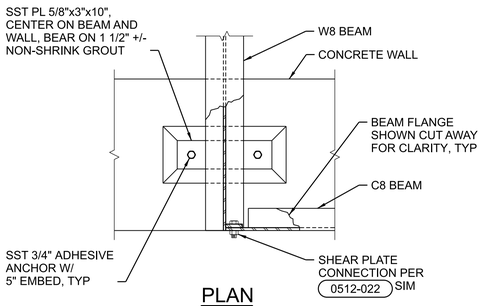


SECTION

NOTE:

INSTALL SST SAFETY CLIMB AND LADDER UP DEVICE.
SEE SPECIFICATION SECTION 05 50 00, METAL FABRICATIONS.

3 DETAIL
1 1/2"=1'-0"
95-C2BL-S-4001



PLAN

2 DETAIL
1 1/2"=1'-0"
95-C2BL-S-4001

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

COMPOSTING BUILDING
STRUCTURAL
ENLARGED PLAN AND DETAILS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

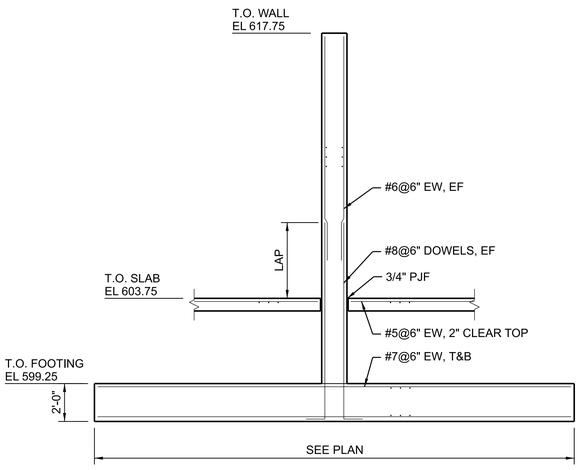
DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	GZ	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 95-C2BL-S-4001 DATE: MAY 2026

ATLAS PAGE NO: 3328 SHEET 251 OF 300 SHEETS

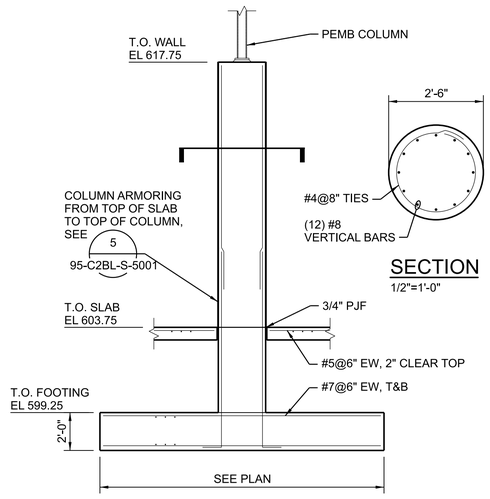
PLOT DATE: 13-MAY-2026 PLOT TIME: 11:41



1 TYPICAL WALL DETAIL

1/4"=1'-0"

95-C2BL-S-2001
95-C2BL-S-2002
95-C2BL-S-2003
95-C2BL-S-2004



ELEVATION

1/4"=1'-0"

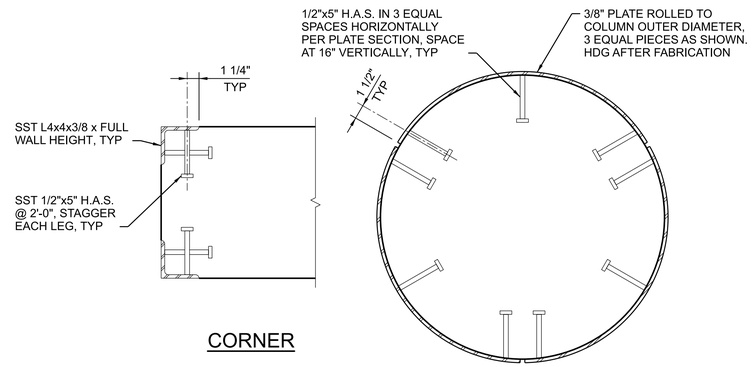
SECTION

1/2"=1'-0"

3 INTERIOR COLUMN DETAIL

AS SHOWN

95-C2BL-S-2001
95-C2BL-S-2002
95-C2BL-S-2003
95-C2BL-S-2004



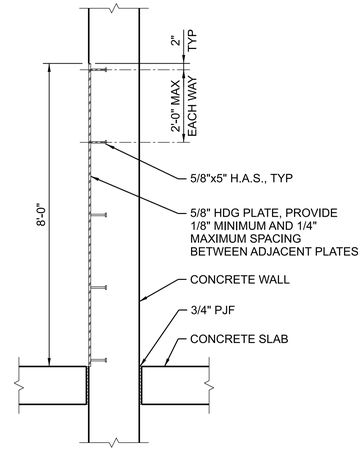
CORNER

COLUMN

5 DETAIL

1 1/2"=1'-0"

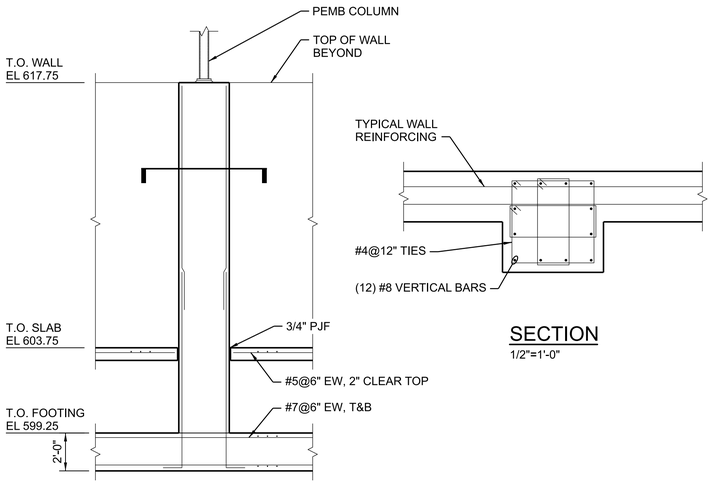
95-C2BL-S-2001
95-C2BL-S-2002
95-C2BL-S-2003
95-C2BL-S-2004
95-C2BL-S-5001



6 DETAIL

1/2"=1'-0"

95-C2BL-S-2001
95-C2BL-S-2003



ELEVATION

1/4"=1'-0"

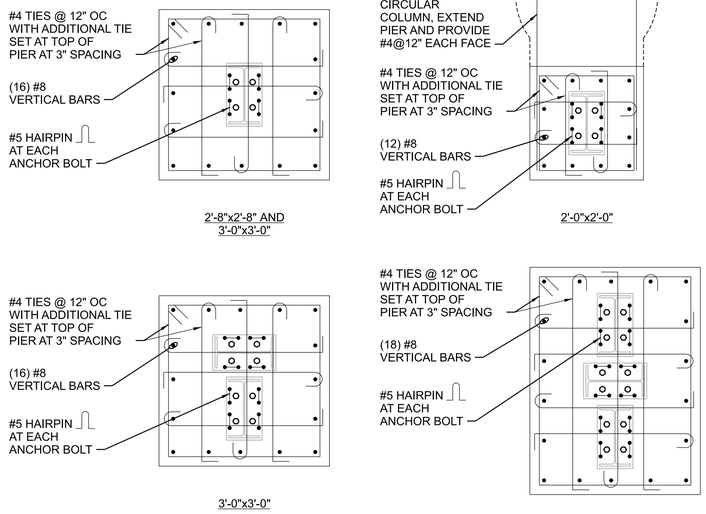
SECTION

1/2"=1'-0"

2 INTERIOR PILASTER DETAIL

AS SHOWN

95-C2BL-S-2001
95-C2BL-S-2003



NOTES:

1. HOOK BARS AT BOTTOM OF FOOTING.
2. COORDINATE WITH PEMB MANUFACTURER FOR FINAL BASE PLATE CONFIGURATIONS.

4 PIER DETAIL

3/4"=1'-0"

95-C2BL-S-2001
95-C2BL-S-2002
95-C2BL-S-2003
95-C2BL-S-2004

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

COMPOSTING BUILDING
STRUCTURAL DETAILS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

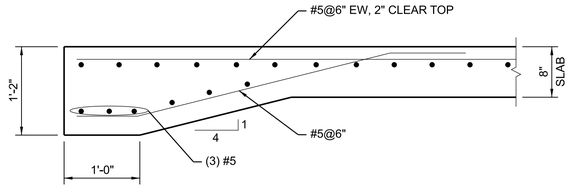
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	AZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

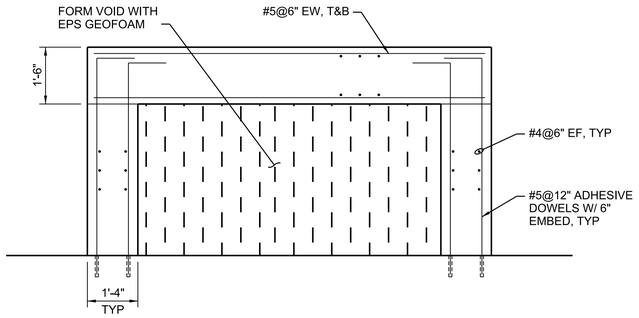
FILE: DRAWING: 95-C2BL-S-5001
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 252 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:39



1 DETAIL
1"=1'-0"

95-C2BL-S-2001
95-C2BL-S-2002
95-C2BL-S-2003
95-C2BL-S-2004



NOTE:

EQUIPMENT PAD SIZE AS REQUIRED FOR EQUIPMENT ANCHORAGE. SEE NOTES ON STANDARD DETAIL 0330-056.

2 DETAIL
1/2"=1'-0"

95-C2BL-S-2001
95-C2BL-S-2003

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

COMPOSTING BUILDING
STRUCTURAL DETAILS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	AZL	5/26
FIELD MGR.		5/26

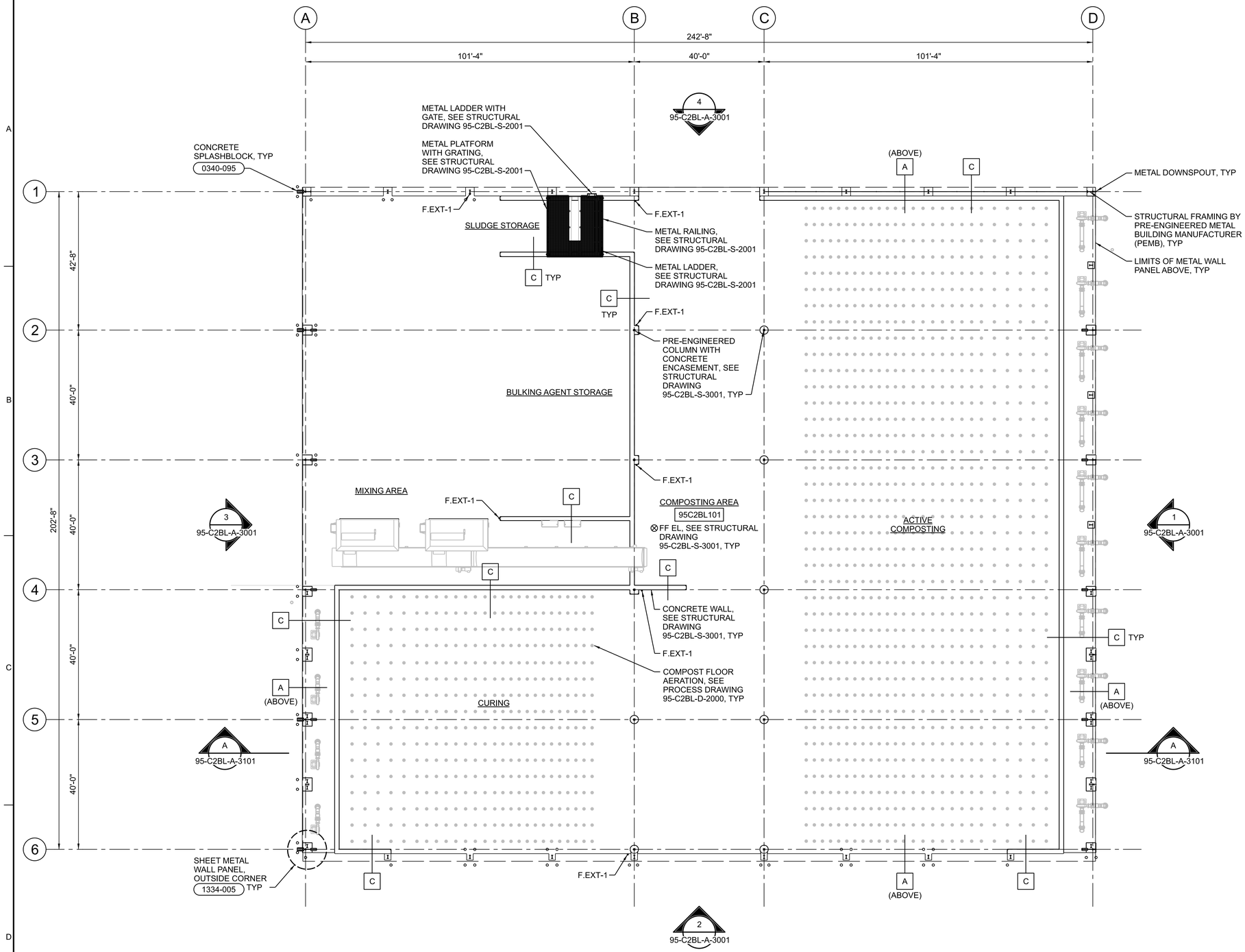
APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 95-C2BL-S-5002
ATLAS PAGE NO: 3328
SHEET 253 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:40

GENERAL SHEET NOTES

1. FOR GENERAL ARCHITECTURAL NOTES, MATERIAL SYMBOLS, LEGEND, AND WALL TYPES, SEE DRAWING 01-G-0012.
2. FOR BUILDING CODE DATA AND LIFE SAFETY PLAN, SEE DRAWING 01-G-0015.



FLOOR PLAN

1/16"=1'-0"

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STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

COMPOSTING BUILDING
ARCHITECTURAL
FLOOR PLAN - OVERALL

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

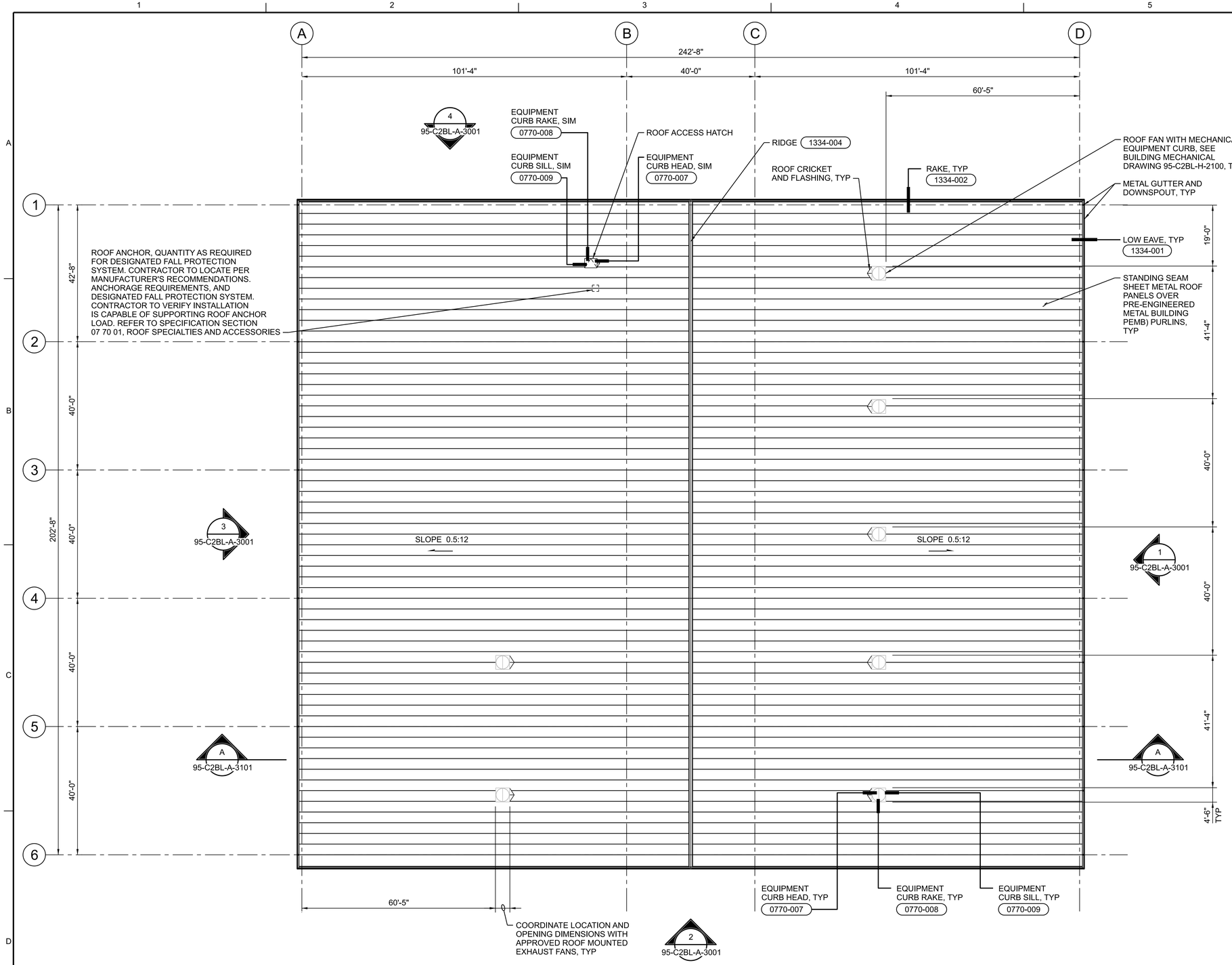
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MN	05/26	
HORIZONTAL:	LEAD ENG.	RZ	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-A-2000			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 254 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:25



N

ROOF PLAN

1/16"=1'-0"

GENERAL SHEET NOTES

1. PRE-ENGINEERED METAL BUILDING MANUFACTURER TO PROVIDE ADDITIONAL FRAMING AS REQUIRED TO SUPPORT ROOF FAN, TYP.

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STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

COMPOSTING BUILDING
ARCHITECTURAL
ROOF PLAN - OVERALL

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

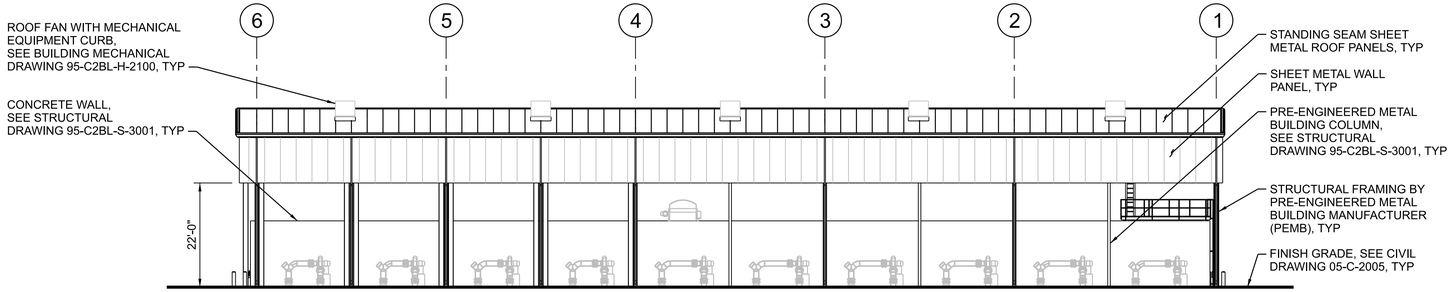
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-A-2100		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 255 OF 300 SHEETS

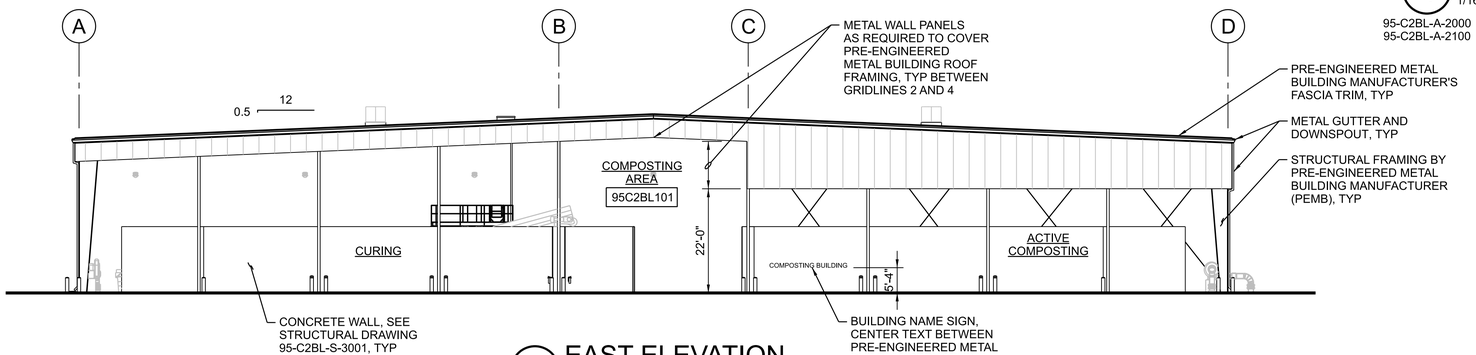
PLOT DATE: 14-MAY-2026 PLOT TIME: 17:25



1 NORTH ELEVATION

1/16"=1'-0"

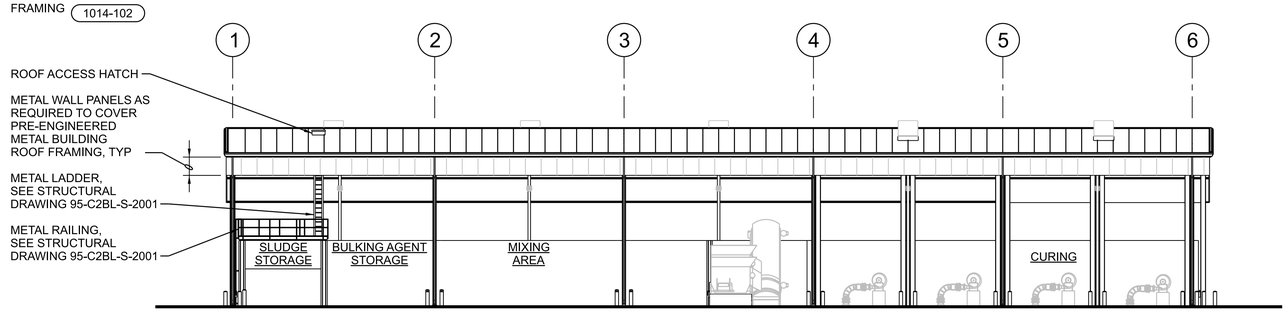
95-C2BL-A-2000
95-C2BL-A-2100



2 EAST ELEVATION

1/16"=1'-0"

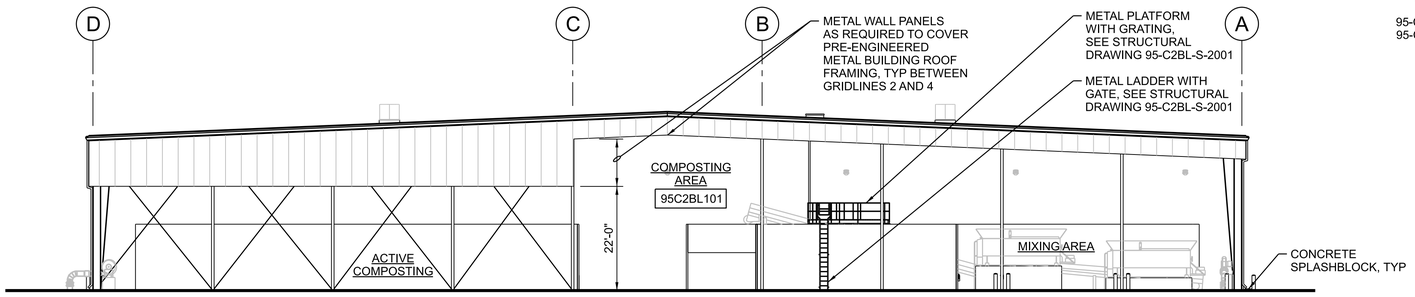
95-C2BL-A-2000
95-C2BL-A-2100



3 SOUTH ELEVATION

1/16"=1'-0"

95-C2BL-A-2000
95-C2BL-A-2100



4 WEST ELEVATION

1/16"=1'-0"

95-C2BL-A-2000
95-C2BL-A-2100

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STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

REVISION	BY	DATE

COMPOSTING BUILDING
ARCHITECTURAL ELEVATIONS

WFXQ7901

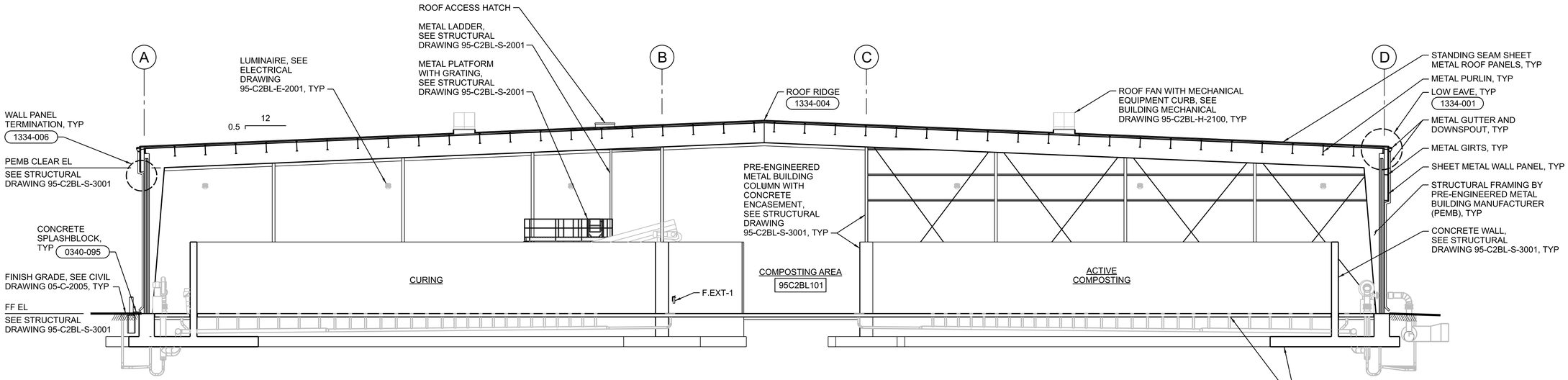
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	AZL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-A-3001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 256 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:26



A SECTION
3/32"=1'-0"

95-C2BL-A-2000
95-C2BL-A-2100

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STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

COMPOSTING BUILDING
ARCHITECTURAL
SECTION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MM	05/26
LEAD ENG.	RZ	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 95-C2BL-A-3101
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 257 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:25

INTERIOR FINISH SCHEDULE

ABBREVIATIONS:

AS	AS SPECIFIED	EXST	EXISTING	MATL	MATERIAL
CLR	CLEAR	FCTY	FACTORY	RP	SHEET METAL ROOF PANEL
COL	COLOR	HGT	HEIGHT	SLR	SEALER
CONC	CONCRETE	GALV	GALVANIZED	WP	SHEET METAL WALL PANEL

NOTES:

NO. 1 NUMBERS IN THE FINISH COLUMN REFER TO PAINT SYSTEMS IN SPECIFICATION SECTION 09 90 00.
NO. 2 CODES IN COL COLUMN REFER TO COLOR LIST ON THIS DRAWING.
NO. 3 FOR EXTERIOR FINISHES AND COLORS, SEE EXTERIOR FINISH SCHEDULE ON THIS DRAWING.
NO. 4 PRE-ENGINEERED METAL BUILDING FINISHES AS SPECIFIED IN SECTION 13 34 19.

SPACE		FLOOR			BASE AND WAINSCOT					TYPICAL WALL			OTHER WALL			CEILING				MISCELLANEOUS				OTHER REQUIREMENTS
NO.	NAME	SUB FL	FINISH	COL	HGT	MATL	FINISH	COL	WALLS	MATL	FINISH	COL	MATL	FINISH	COL	HGT	MATL	FINISH	COL	ITEM	MATL	FINISH	COL	
95C2BL101	COMPOSTING AREA	CONC	SLR	CLR	---	---	---	---	---	WP	FCTY, 5 (NOTE 4)	P-2	CONC	SLR	CLR	VARIES	RP	FCTY, 5 (NOTE 4)	P-2	PRE-ENGINEERED BUILDING FRAMES / PURLINS & GIRTS / COLUMN ENCASEMENT	STL / GALV / CONC	5 / G60 (NOTE 4), 5 / SLR	P-1 / P-1 / CLR	PAINT CONTINUOUS, 3" TALL, HORIZONTAL LINE AT INTERIOR WALL SURFACES OF THE ACTIVE COMPOSTING AREA AND THE CURING AREA. BOTTOM OF LINE TO BE AT 12 FEET ABOVE FINISHED FLOOR. PAINT SYSTEM 4 IN COLOR OSHA SAFETY YELLOW.

EXTERIOR FINISH SCHEDULE

NOTES:

NO. 1 NUMBERS IN THE FINISH COLUMN REFER TO PAINT SYSTEMS IN SPECIFICATION SECTION 09 90 00.
NO. 2 CODES IN COLOR COLUMN REFER TO COLOR LIST ON THIS DRAWING.

ITEM / MATERIAL	FINISH	COLOR
STANDING SEAM SHEET METAL ROOF PANELS	FACTORY	M-1
SHEET METAL WALL PANELS	FACTORY	M-2
GUTTERS AND DOWNSPOUTS	FACTORY	M-3
LUMINAIRES	FACTORY	DARK BRONZE
CONCRETE WALL	SEALER	CLEAR
CONCRETE ENCASEMENT (AT PEMB COLUMN)	PAINT SYSTEM 117	OSHA SAFETY YELLOW

COLOR LIST

NOTES:

NO. 1 COLOR SELECTIONS FOR THIS PROJECT MAY BE NOTED IN INTERIOR FINISH SCHEDULE, EXTERIOR FINISH SCHEDULE, PIPING SCHEDULE AND ON THE DRAWINGS BY THE LETTER-NUMBER COMBINATION IN THE MARK COLUMN OF THIS LIST.
NO. 2 SOME COLOR SELECTIONS MAY BE MADE IN VARIOUS SPECIFICATION SECTIONS.
NO. 3 VERIFY COLORS WITH OWNER BEFORE BEGINNING WORK. IF A COLOR SELECTION IS NOT MADE, REQUEST ONE FROM THE OWNER.

MARK	MATERIAL	MANUFACTURER (NOTE 3)	COLOR (NOTE 3)
MISCELLANEOUS			
M-1	STANDING SEAM SHEET METAL ROOF PANELS	NUCOR	DESERT SAND
M-2	SHEET METAL WALL PANELS	NUCOR	DESERT SAND
M-3	GUTTERS AND DOWNSPOUTS	NUCOR	DESERT SAND
PAINT			
P-1	PAINT (PRE-ENGINEERED METAL BUILDING FRAME)	SHERWIN WILLIAMS	SW6044 - DOESKIN (MATCH M-2)

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STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

COMPOSTING BUILDING
ARCHITECTURAL SCHEDULES

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

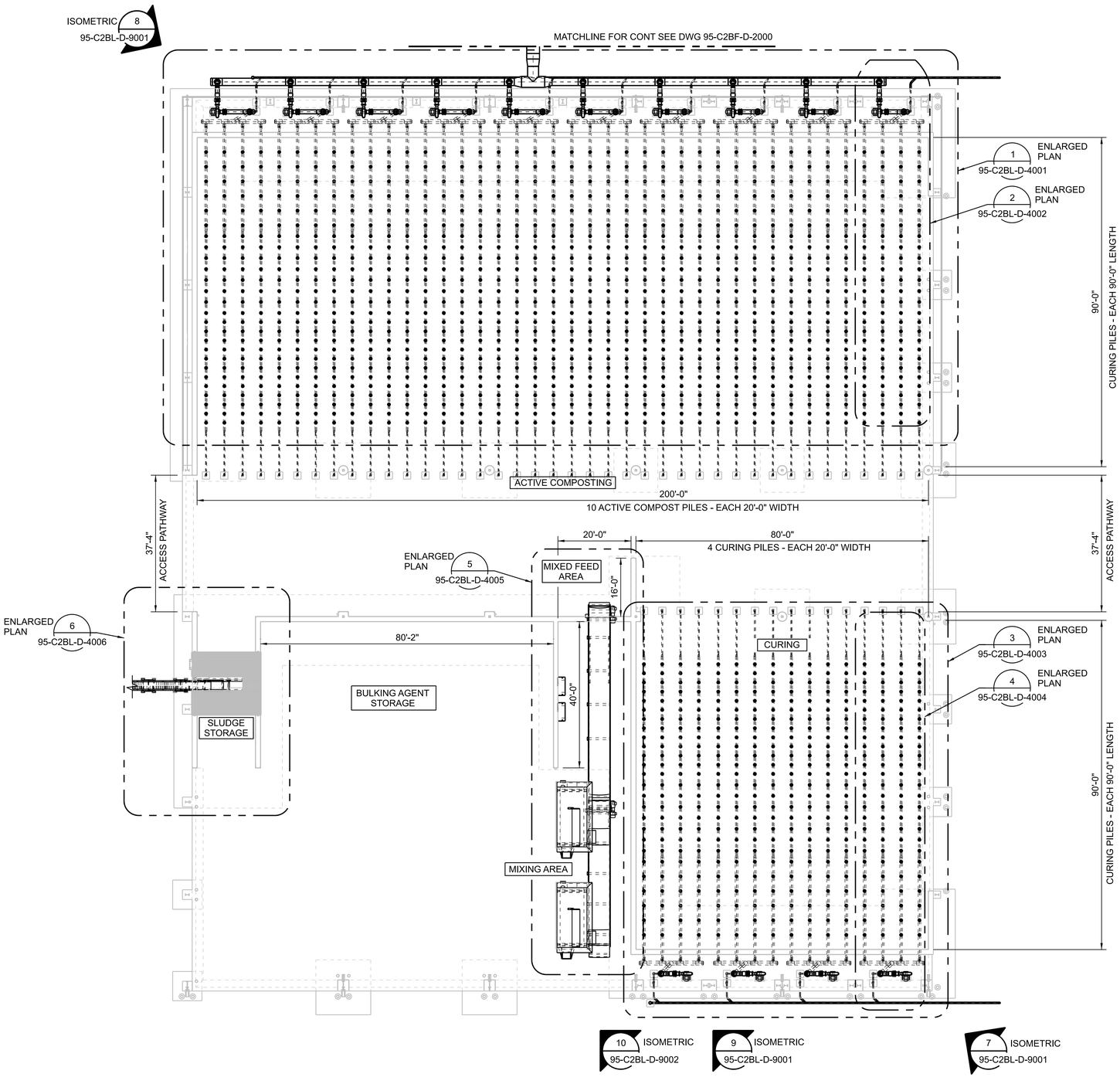
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MN	05/26
LEAD ENG.	RZ	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 95-C2BL-A-6001
ATLAS PAGE NO: 3328
SHEET 258 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:25



COMPOST FACILITY OVERVIEW PLAN

1/16"=1'-0"

GENERAL NOTES

1. SCREENING SHALL HAPPEN AFTER ACTIVE COMPOSTING PHASE, BUT BEFORE MATERIAL IS PLACED ON CURING AERATION LATERALS.
2. SCREENING IS PROVIDED VIA PORTABLE / TRAILER MOUNTED TROMMEL SCREEN, SEE SPECIFICATIONS 01 29 00 FOR EQUIPMENT PROCUREMENT REQUIREMENTS.
3. CONTRACTOR SHALL PROVIDE OWNER WITH HYDROJETTER FOR AERATION LATERAL CLEANOUT OPERATIONS, SEE SPECIFICATIONS 01 29 00 FOR EQUIPMENT PROCUREMENT REQUIREMENTS.
4. CONTRACTOR HAS TWO OPTIONS TO CONNECT 4-INCH RISERS TO FOUL AIR LATERALS

   OPTION (1) PROVIDE 6" x 6" x 4" HDPE TEE
   OPTION (2) FUSE 4" RISER TO 6" FOUL AIR LATERAL, THIS FUSION JOINT SHALL BE SAME STRENGTH AS THE PIPE, CONTRACTOR SHALL TEST ONE JOINT PER 500 JOINTS AND PROVIDE TEST RESULTS TO OWNER.
5. SEE DEWATERING FACILITY DRAWING 90-D1BL-D-2100 FOR CONTINUATION OF THE SLUDGE CONVEYOR.
6. COMPOST FACILITY PROCESS MECHANICAL DRAWINGS ARE ROTATED FOR CLARITY. OTHER DISCIPLINE DRAWINGS MAY BE SHOWN WITH A DIFFERENT NORTH ORIENTATION.
7. 24" FOUL AIR HEADER SHALL MAINTAIN 0.10% SLOPE TOWARDS THE TEE AND CONTINUE TO SLOPE TO THE BURIED SUCTION HEADER OF THE BIOFILTER. A CONDENSATE DRAIN IS LOCATED ON THE BIOFILTER HEADER.

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

COMPOSTING BUILDING
PROCESS
FLOOR PLAN - OVERALL

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

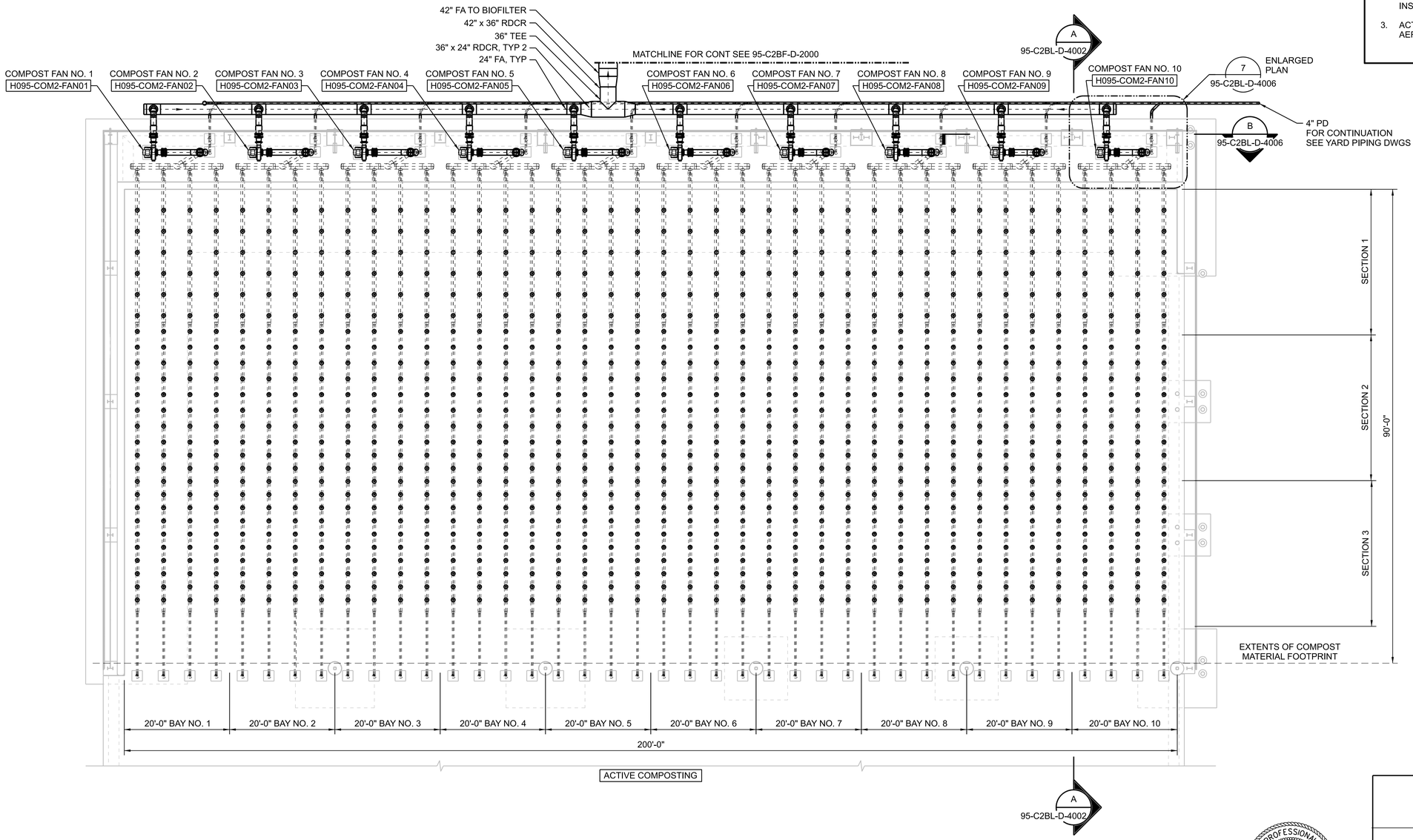
PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE:	DRAWN	AP		APPROVED:
NOTE ON DWG.	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	WSN	05/26	
HORIZONTAL:	LEAD ENG.	RJL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-D-2000			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 259 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 19:12

GENERAL SHEET NOTES

1. MAINTAIN A MINIMUM 1% SLOPE ON CONDENSATE PIPES.
2. SEE ENLARGED PLAN 95-C2BL-D-4006 FOR MORE DETAILS AROUND FAN AND AERATION HEADER INSTALLATION.
3. ACTIVE COMPOSTING FANS ARE NEGATIVE AERATION.



N

1 ACTIVE COMPOSTING ENLARGED PLAN

3/32"=1'-0"

95-C2BL-D-2000

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

COMPOSTING BUILDING
PROCESS
ENLARGED PLAN
ACTIVE COMPOSTING

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MN 05/26	
	LEAD ENG.	RZ 5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-D-4001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 260 OF 300 SHEETS

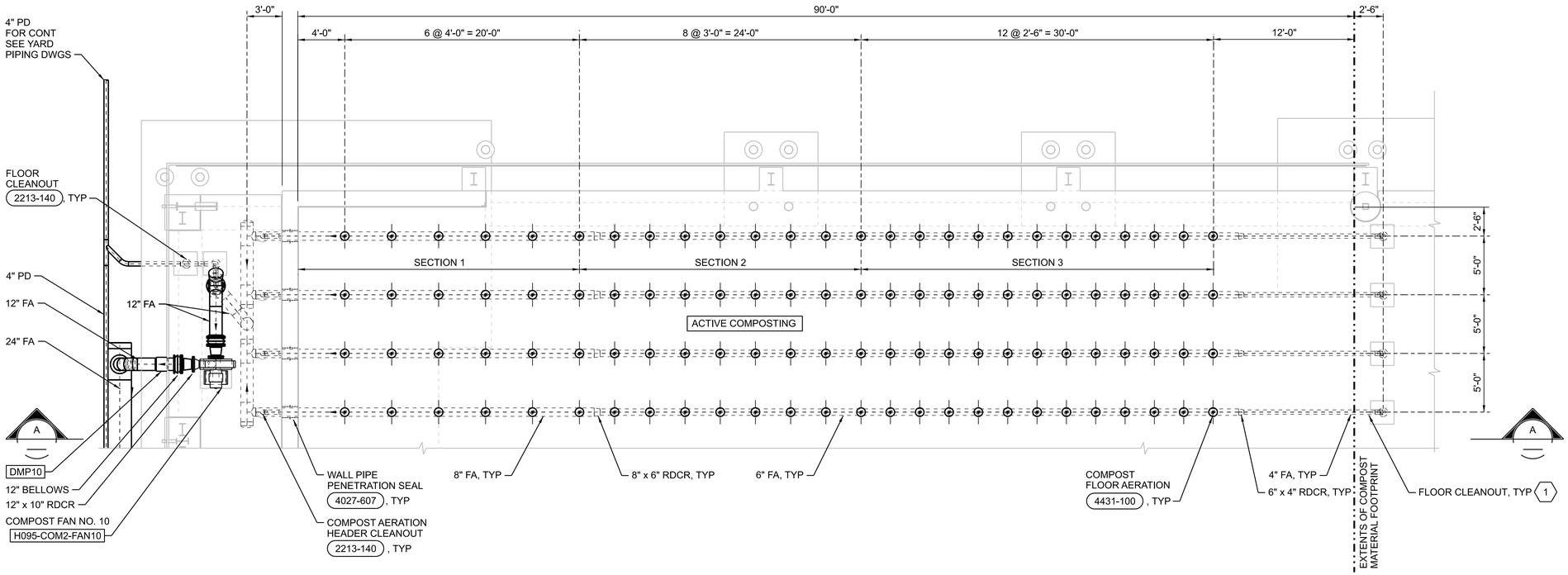
PLOT DATE: 14-MAY-2026 PLOT TIME: 19:12

GENERAL SHEET NOTES

1. MAINTAIN A MINIMUM 1% SLOPE ON CONDENSATE PIPES.
2. CURING FANS ARE POSITIVE AERATION.
3. DIMENSIONS ARE MEASURED FROM FACE OF CONCRETE WALLS.

SHEET KEYNOTES

1. INSTALL FLOOR CLEANOUT FLUSH TO 1/8" RECESSED WITHIN FINISHED FLOOR SUCH THAT LOADER BUCKET BLADES DO NOT SNAG. CLEANOUT ACCESS CAP SHALL BE ALL STAINLESS STEEL AND SECURED WITH SCREWS. ZURN ELKAY MODEL LC-CS06SS 6" SQUARE FLOOR DRAIN ACCESS OR EQUAL.

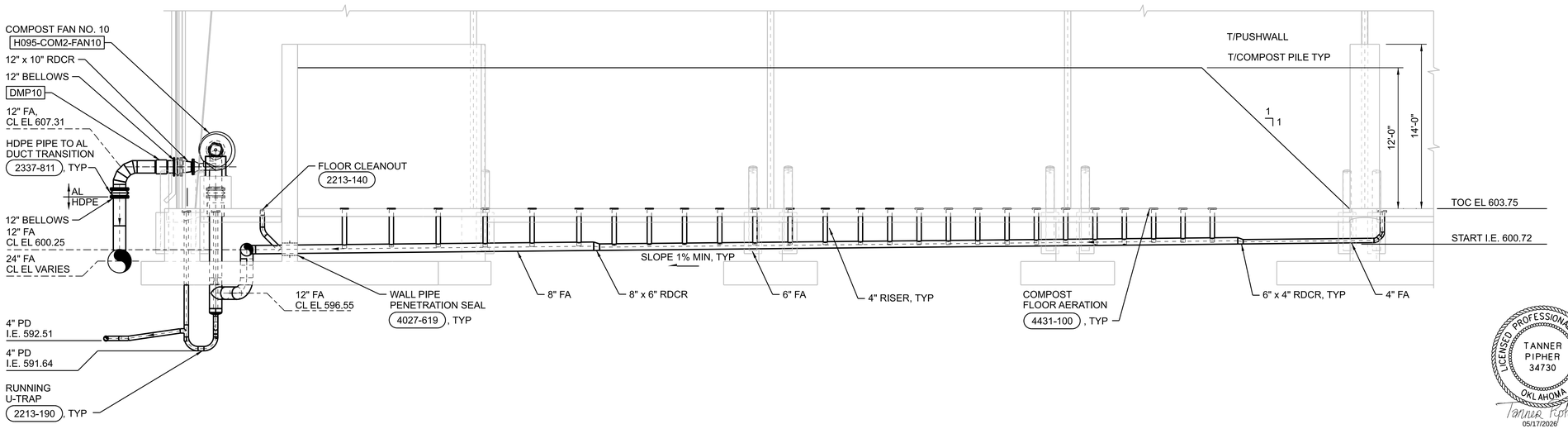


N

2 ACTIVE COMPOSTING ENLARGED PLAN

3/16"=1'-0"

95-C2BL-D-2000



A SECTION

3/16"=1'-0"

COMPOSTING BUILDING
PROCESS
ENLARGED PLAN & SECTION
ACTIVE COMPOSTING

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MSN	05/17/26	
HORIZONTAL:	LEAD ENG.	RZL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-D-4002			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 261 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 19:12

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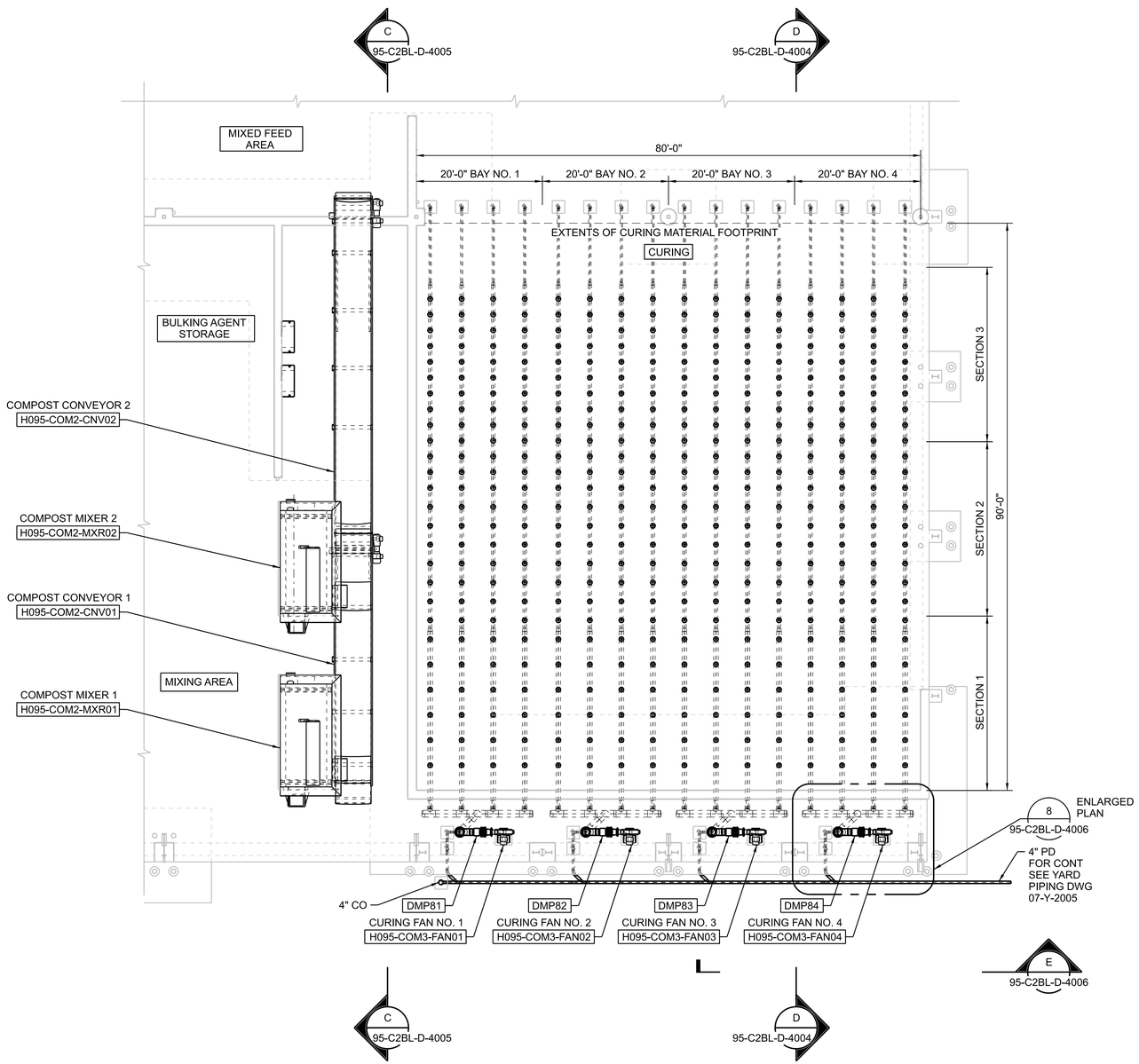
GENERAL SHEET NOTES

1. MAINTAIN A MINIMUM 1% SLOPE ON CONDENSATE PIPES.
2. SEE ENLARGED PLAN 95-C2BL-D-4006 FOR MORE DETAILS AROUND FAN AND AERATION HEADER INSTALLATION.
3. CURING FANS ARE POSITIVE AERATION.



N

3 CURING ENLARGED PLAN

3/32"=1'-0"

95-C2BL-D-2000

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

COMPOSTING BUILDING
PROCESS
ENLARGED PLAN
COMPOST CURING

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

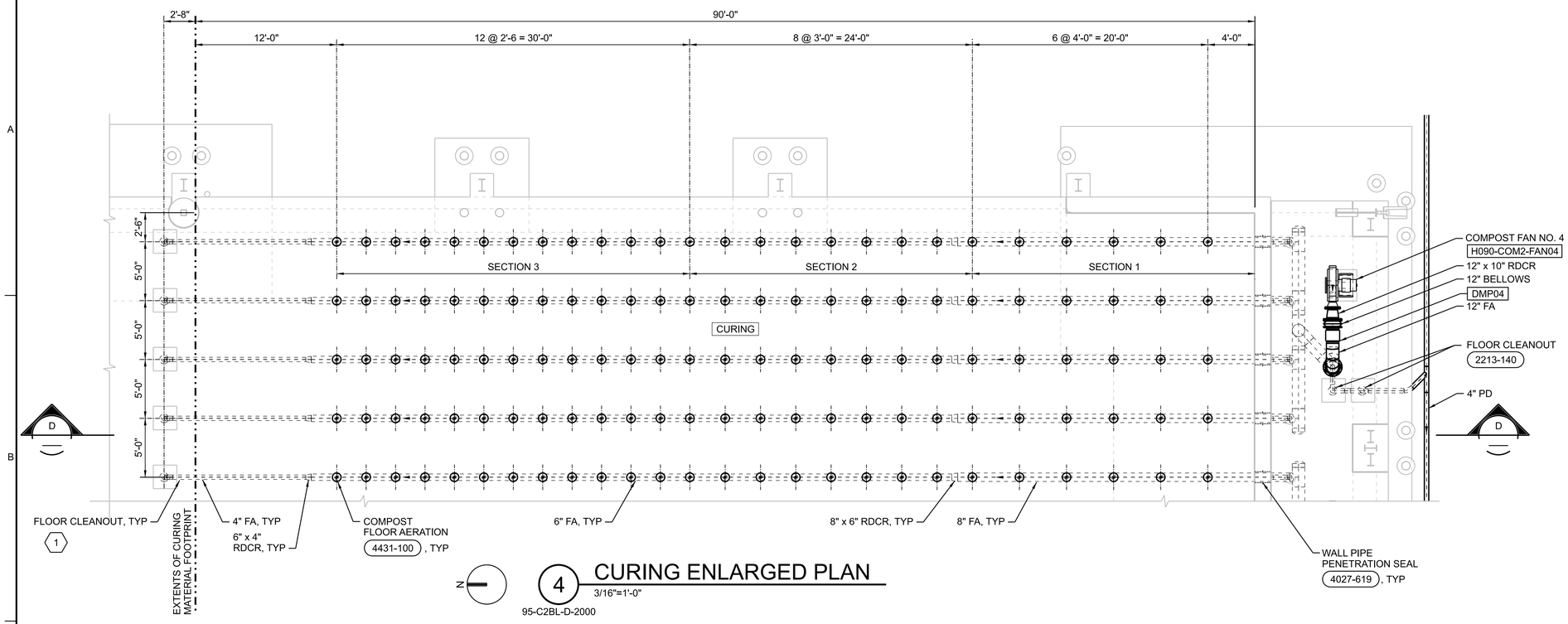
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/17/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 95-C2BL-D-4003
ATLAS PAGE NO: 3328
SHEET 262 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 19:12

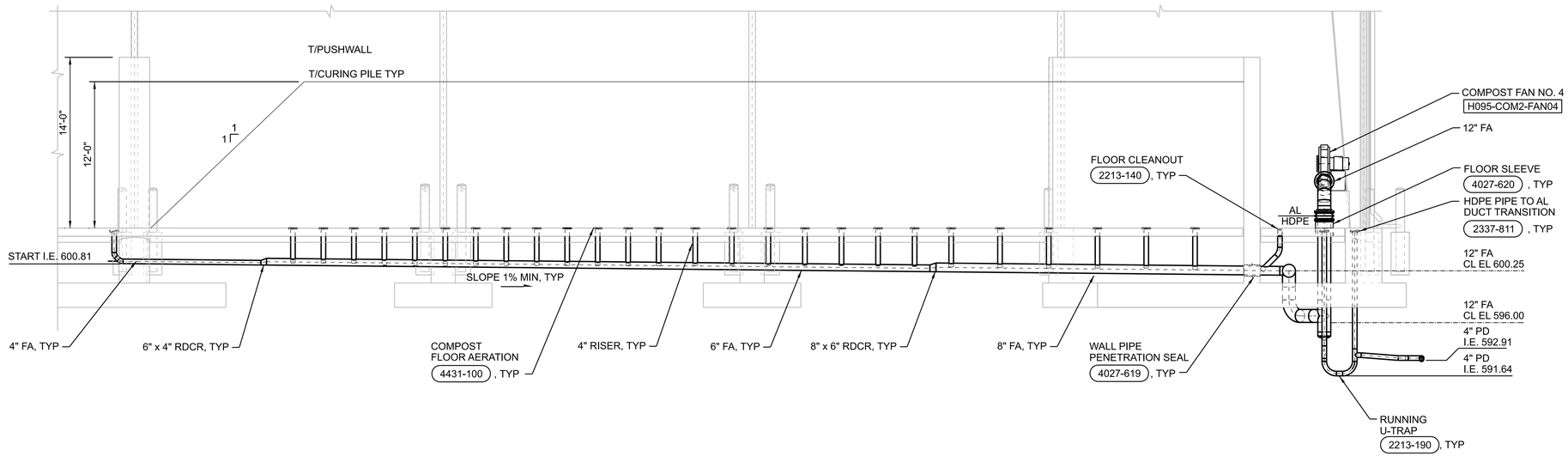


N

4 CURING ENLARGED PLAN

3/16"=1'-0"

95-C2BL-D-2000



D SECTION

3/16"=1'-0"

GENERAL NOTES

1. MAINTAIN A MIN 1% SLOPE ON CONDENSATE PIPES.
2. DIMENSIONS ARE MEASURED FROM FACE OF CONCRETE WALLS.

SHEET KEYNOTES

1. INSTALL FLOOR CLEANOUT FLUSH TO 1/8" RECESSED WITHIN FINISHED FLOOR SUCH THAT LOADER BUCKET BLADES DO NOT SNAG. CLEANOUT ACCESS CAP SHALL BE ALL STAINLESS STEEL AND SECURED WITH SCREWS. ZURN ELKAY MODEL LC-CS06SS 6" SQUARE FLOOR DRAIN ACCESS OR EQUAL.

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

COMPOSTING BUILDING
PROCESS
ENLARGED PLAN & SECTION
COMPOST CURING

WFXQ7901

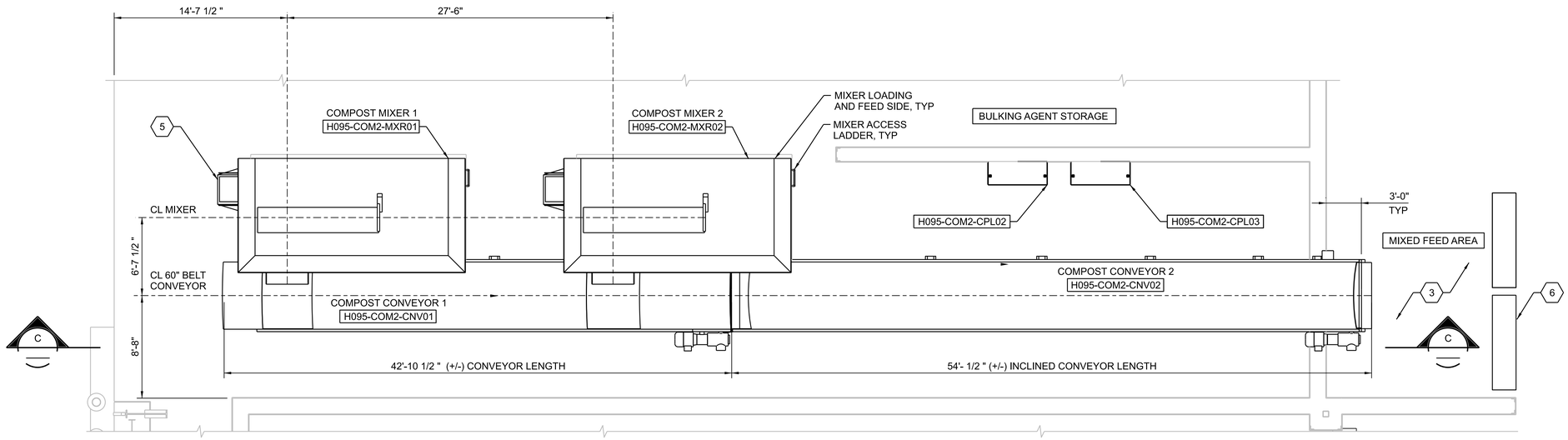
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
	PROJ. MGR.	MSN 05/7/26	
HORIZONTAL:	LEAD ENG.	RZL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-D-4004		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 263 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 19:12

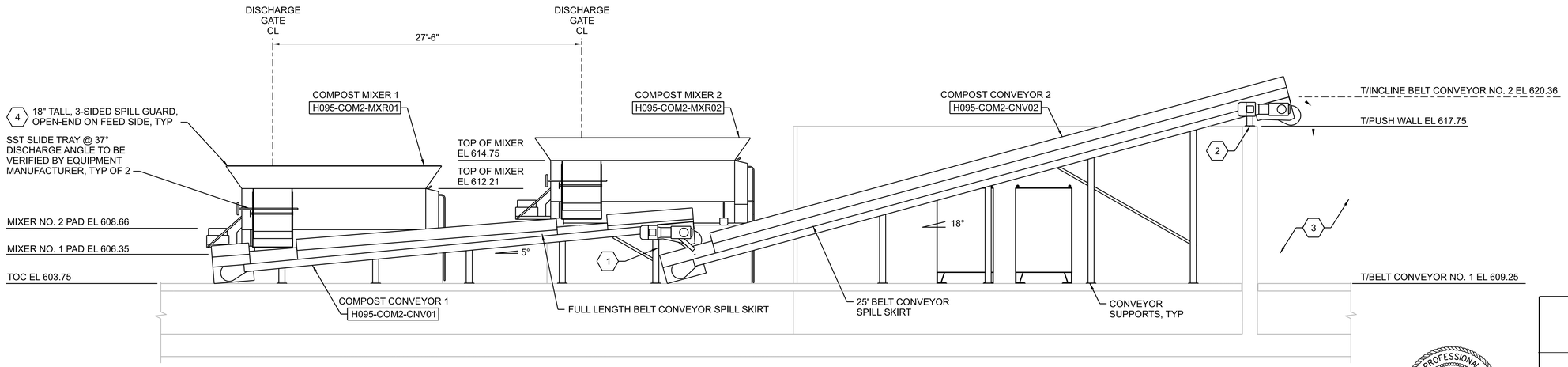


N

5 COMPOST MIXER ENLARGED PLAN

3/16"=1'-0"

95-C2BL-D-2000



C SECTION

3/16"=1'-0"

GENERAL SHEET NOTES

1. SUPPLY BOTH CONVEYORS WITH EMERGENCY E-STOP AND SAFETY PULLCORDS.
2. CLEATED CONVEYOR IS SHOWN AS REPRESENTATIVE. COORDINATE WITH CONVEYOR MANUFACTURER AND VERIFY ALL DIMENSIONS, CONCRETE SUPPORT LOCATIONS, AND MOUNTING LOCATIONS.

SHEET KEYNOTES

1. CONVEYOR OVERLAP IS APPROXIMATELY 48" TO GET OVER THE TAIL OF THE LOAD IDLERS. CONTRACTOR TO COORDINATE FINAL PLACEMENT WITH MANUFACTURER.
2. CONTRACTOR TO COORDINATE WITH CONVEYOR MANUFACTURER ON PUSHWALL MOUNTING. PROVIDE A MINIMUM OF 3FT PAST PUSHWALL FOR CONVEYOR DISCHARGE.
3. FEED STOCK MATERIAL COLLECTED HERE IS TRANSFERRED TO ACTIVE COMPOSTING.
4. MIXER SPILL EXTENSIONS PROVIDED BY MANUFACTURER. CONTRACTOR TO COORDINATE EXACT DIMENSIONS OF SPILL PLATE.
5. COORDINATE WITH MIXER MANUFACTURER FOR MOTOR MOUNT AND SUPPORT REQUIREMENTS. CONCRETE PEDESTAL OR FABRICATED METAL BRACKET.
6. PROVIDE (2) CONCRETE JERSEY BARRIER WALLS 8'-0" (L) x 32" (H). LIFT LUGS SHALL BE PROVIDED IN THE PRECAST CONCRETE.
9. SEE SPECIFICATION SECTION 44 46 13.05 COMPOST MIXER SYSTEM FOR PACKAGED MIXER AND CONVEYOR REQUIREMENTS.
10. COORDINATE DIGITAL SCALE READOUT PANEL LOCATION. DETAIL MUST BE PROVIDED BY THE VENDOR IN SUBMITTAL AND APPROVED BY OWNER'S ENGINEER.

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

COMPOSTING BUILDING
PROCESS
ENLARGED PLAN & SECTION
MIXING

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

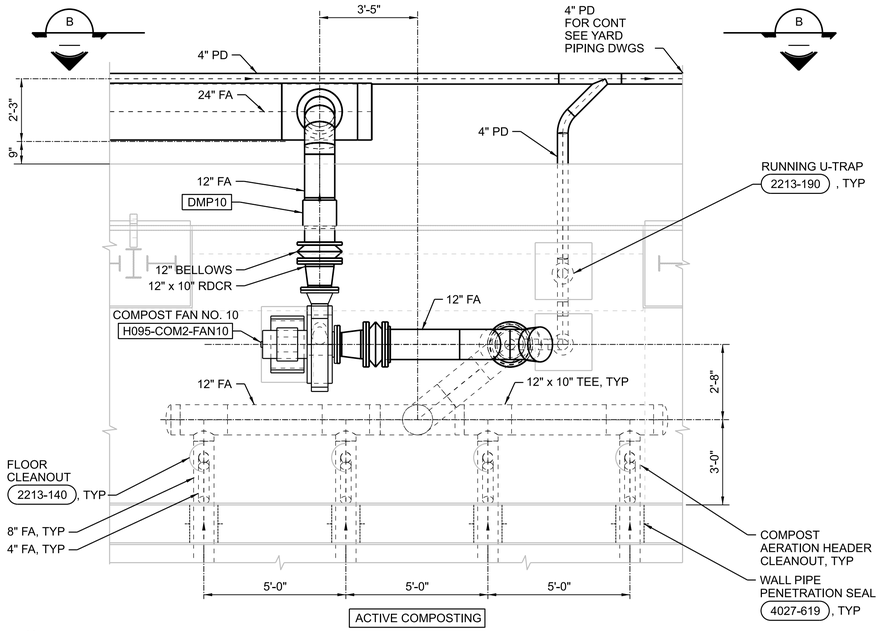
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN 05/17/26	
HORIZONTAL:	LEAD ENG.	RJL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-D-4005		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 264 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 19:12

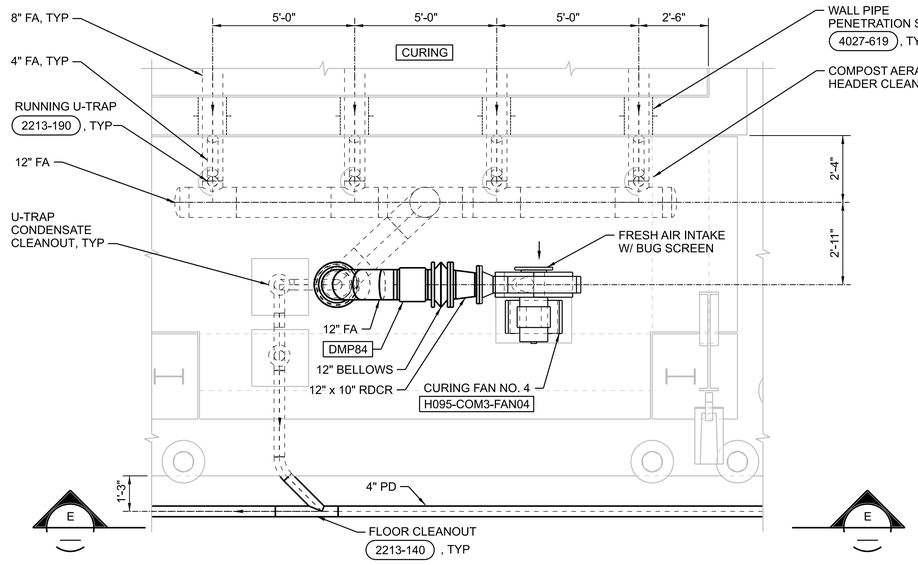


N

7 COMPOSTING FAN HEADER AND FAN ENLARGED PLAN

3/8"=1'-0"

95-C2BL-D-4001



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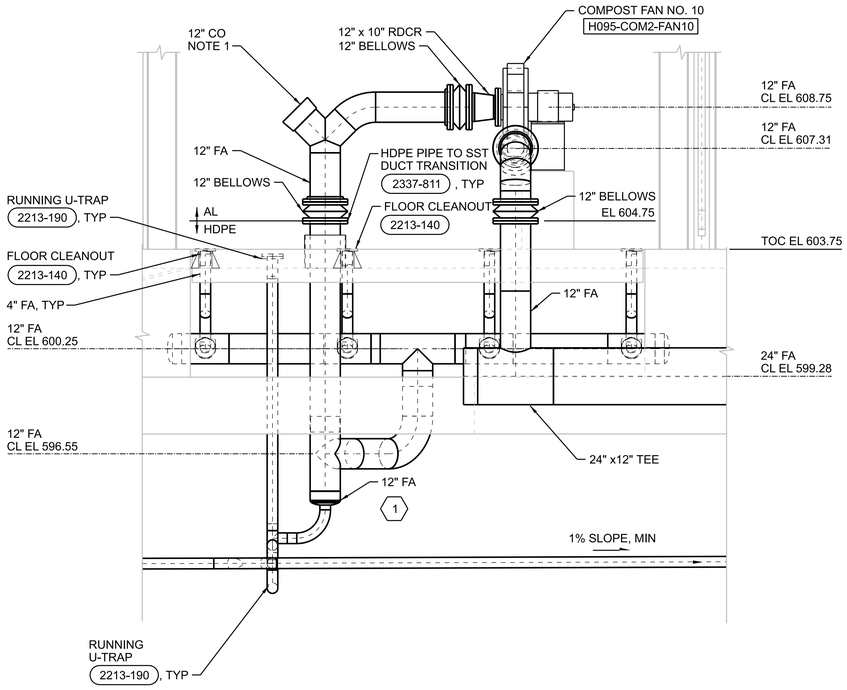
8 CURING FAN HEADER AND FAN ENLARGED PLAN

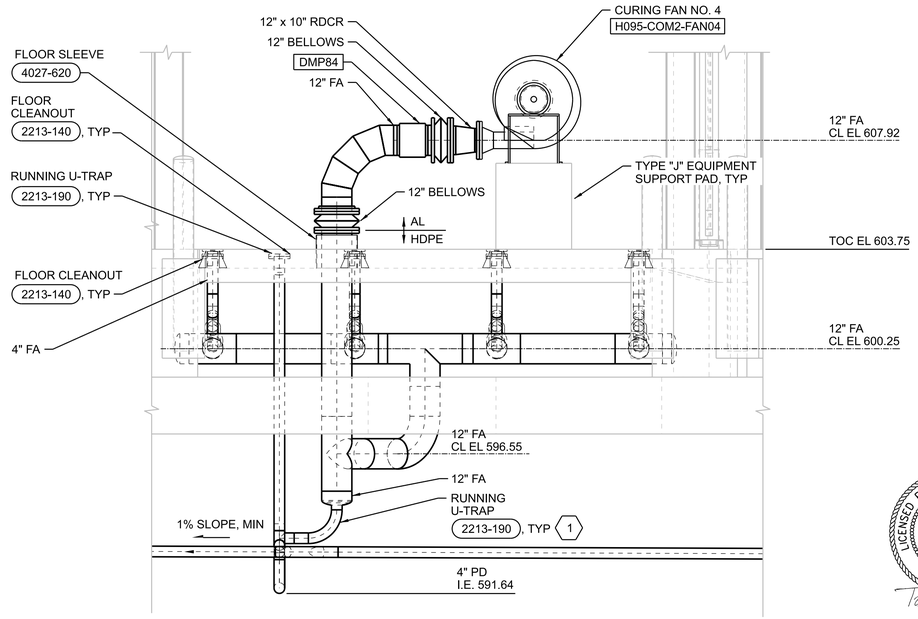
3/8"=1'-0"

95-C2BL-D-4003



B SECTION

3/8"=1'-0"



E SECTION

3/8"=1'-0"

GENERAL SHEET NOTES

1. RUBBER CLEANOUT SHALL BE A RUBBER PIPE CAP WITH SST BAND CLAMP SIMILAR TO FERNCO "QWIK CAP" STYLE. THESE SHALL ONLY BE USED ON SUCTION SIDE OF COMPOST/CURING FANS.
2. COMPOST/CURING FAN PIPE CONNECTIONS SHALL BE ANSI #150 FLANGE STYLE.
3. COMPOST FANS ARE NEGATIVE AERATION, CURING FANS ARE POSITIVE AERATION. NEGATIVE AERATION CONVEYS FOUL AIR THROUGH A BIOFILTER.

SHEET KEYNOTES

1. MAINTAIN A MINIMUM OF 18" CLEARANCE INVERT TO INVERT ELEVATION ON U-TRAPS.

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REVISION	BY	DATE

COMPOSTING BUILDING
PROCESS
ENLARGED PLAN & SECTIONS
COMPOSTING FANS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

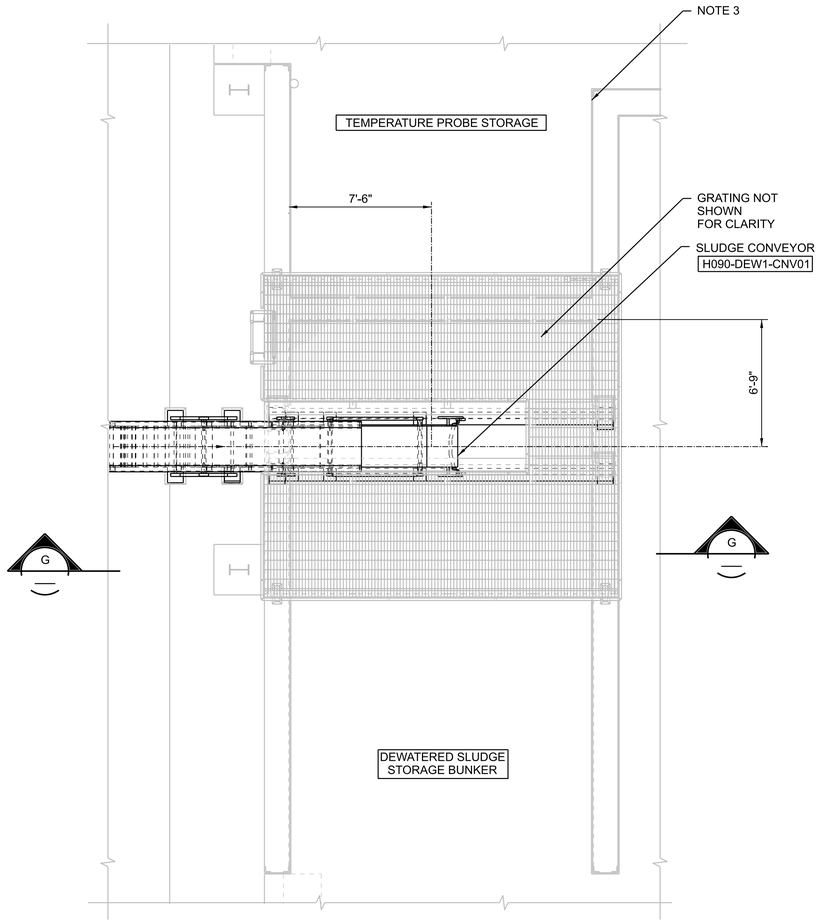
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MW	05/7/26	
HORIZONTAL:	LEAD ENG.	AZ	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-D-4006			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 265 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 19:13

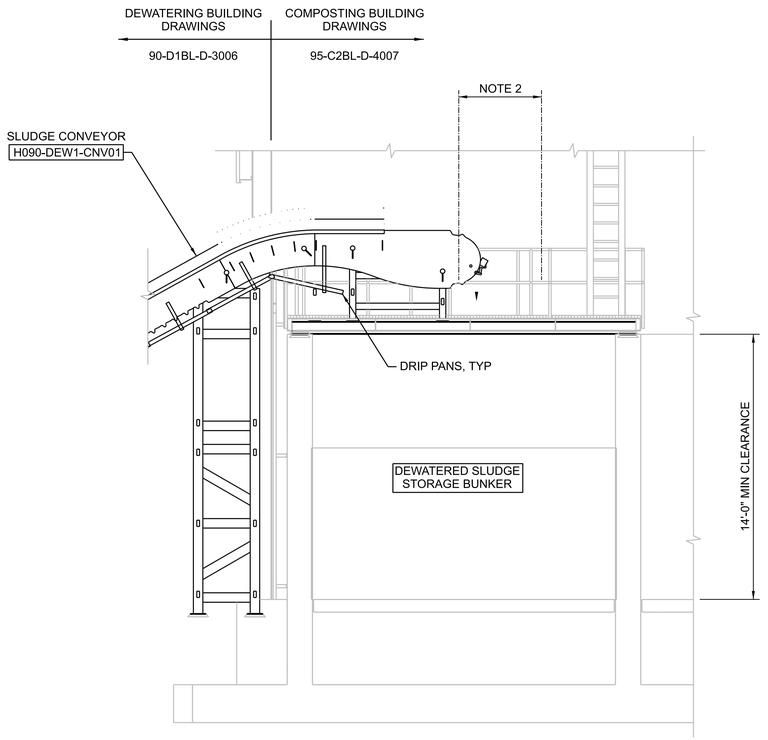


N

6 COMPOST SLUDGE CAKE RECEIVING ENLARGED PLAN

3/16"=1'-0"

95-C2BL-D-2000



G SECTION

1/4"=1'-0"

GENERAL SHEET NOTES

1. CLEATED CONVEYOR IS SHOWN REPRESENTATIVE. COORDINATE WITH CONVEYOR MANUFACTURER AND VERIFY ALL DIMENSIONS, CONCRETE SUPPORT LOCATIONS, AND MOUNTING LOCATIONS.
2. COORDINATE FLOOR GRATE OPENING LOCATION AND SIZE WITH THE CONVEYOR MANUFACTURER. ENSURE CAKE SCRAPPER MATERIAL FALLS THROUGH THE OPENING. ENSURE MINIMUM 4'-6" WIDE WALKWAY IS PROVIDED AROUND GRATE OPENING FOR LADDER ACCESS.
3. COORDINATE WITH TEMPERATURE PROBE VENDOR FOR WALL MOUNTED PROBE STORAGE. WALL MOUNT SHALL BE SHOP FABRICATED IN ACCORDANCE TO SPECIFICATION SECTION 05 50 00 AND APPROVED BY ENGINEER.
4. PROVIDE SQUARE POLYETHYLENE CHUTE MOUNTED TO INTERIOR PLATFORM SUPPORTS. CHUTE SHALL EXTEND 5'-0" BELOW PLATFORM.

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LICENSED PROFESSIONAL ENGINEER
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Tanner Pipher
05/17/2026

REVISION	BY	DATE

COMPOSTING BUILDING
PROCESS
ENLARGED PLAN & SECTION
SLUDGE & MIXING

WFXQ7901

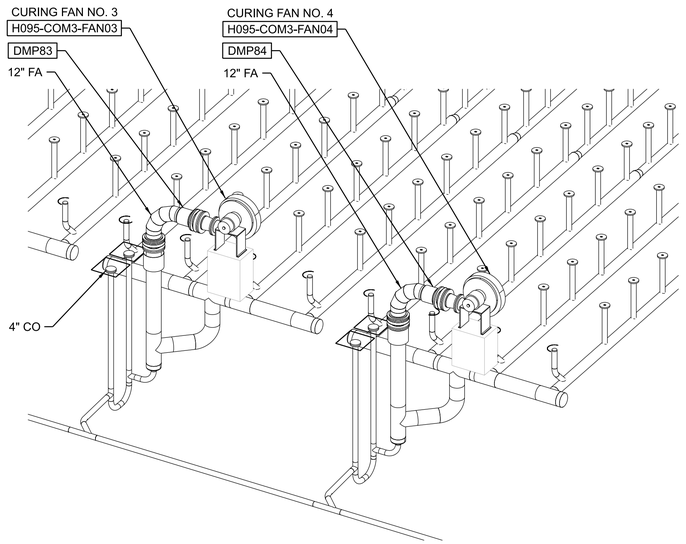
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

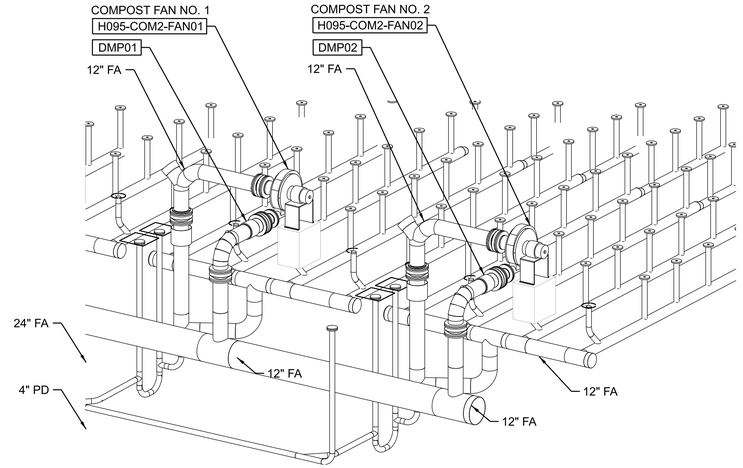
PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
PROFILE:	SURVEY		
	PROJ. MGR.	MSN 05/7/26	
HORIZONTAL:	LEAD ENG.	RZL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-D-4007		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 266 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 19:12



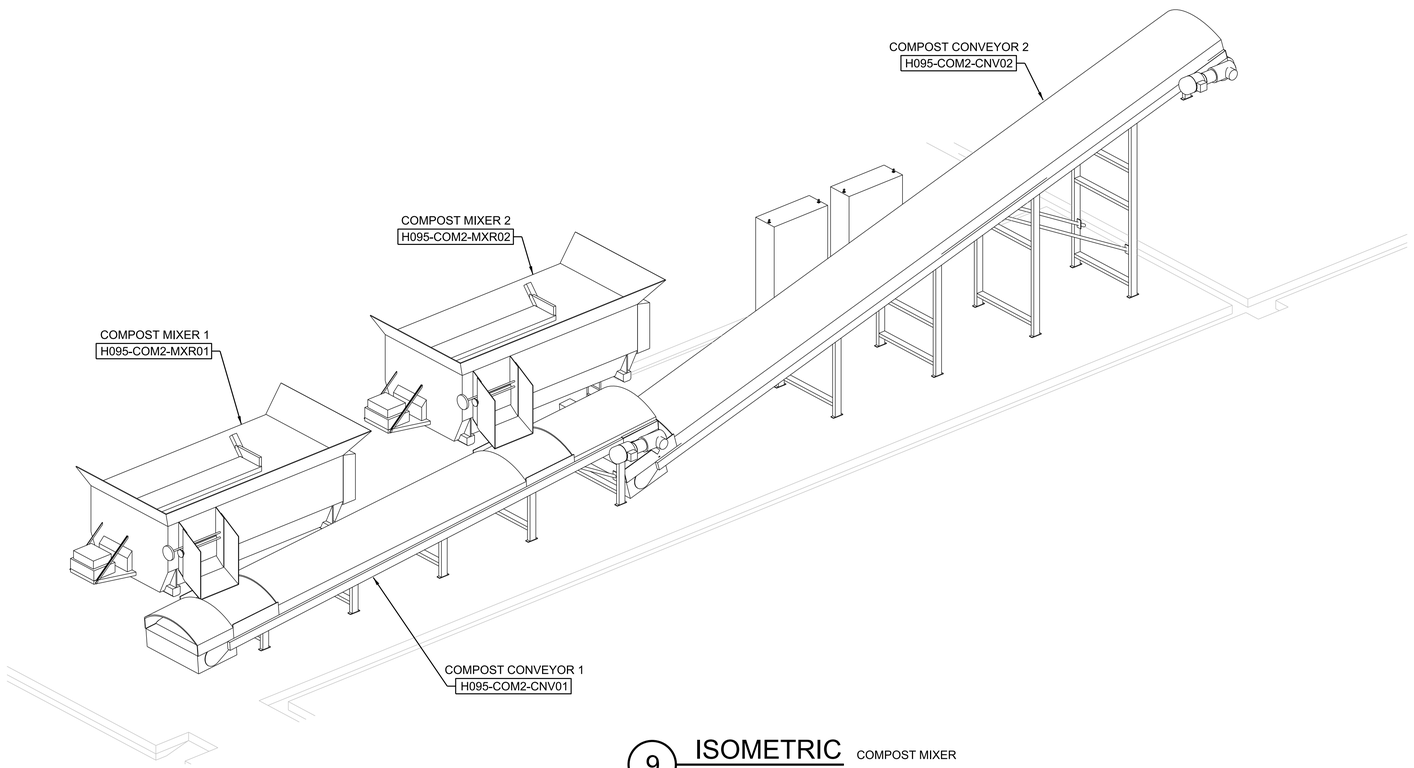
STRUCTURAL NOT SHOW FOR CLARITY

7 ISOMETRIC CURING FAN
NTS
95-C2BL-D-2000



STRUCTURAL NOT SHOW FOR CLARITY

8 ISOMETRIC COMPOST FAN
NTS
95-C2BL-D-2000



9 ISOMETRIC COMPOST MIXER
NTS
95-C2BL-D-2000

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TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

COMPOSTING BUILDING
PROCESS
ISOMETRICS

WFXQ7901

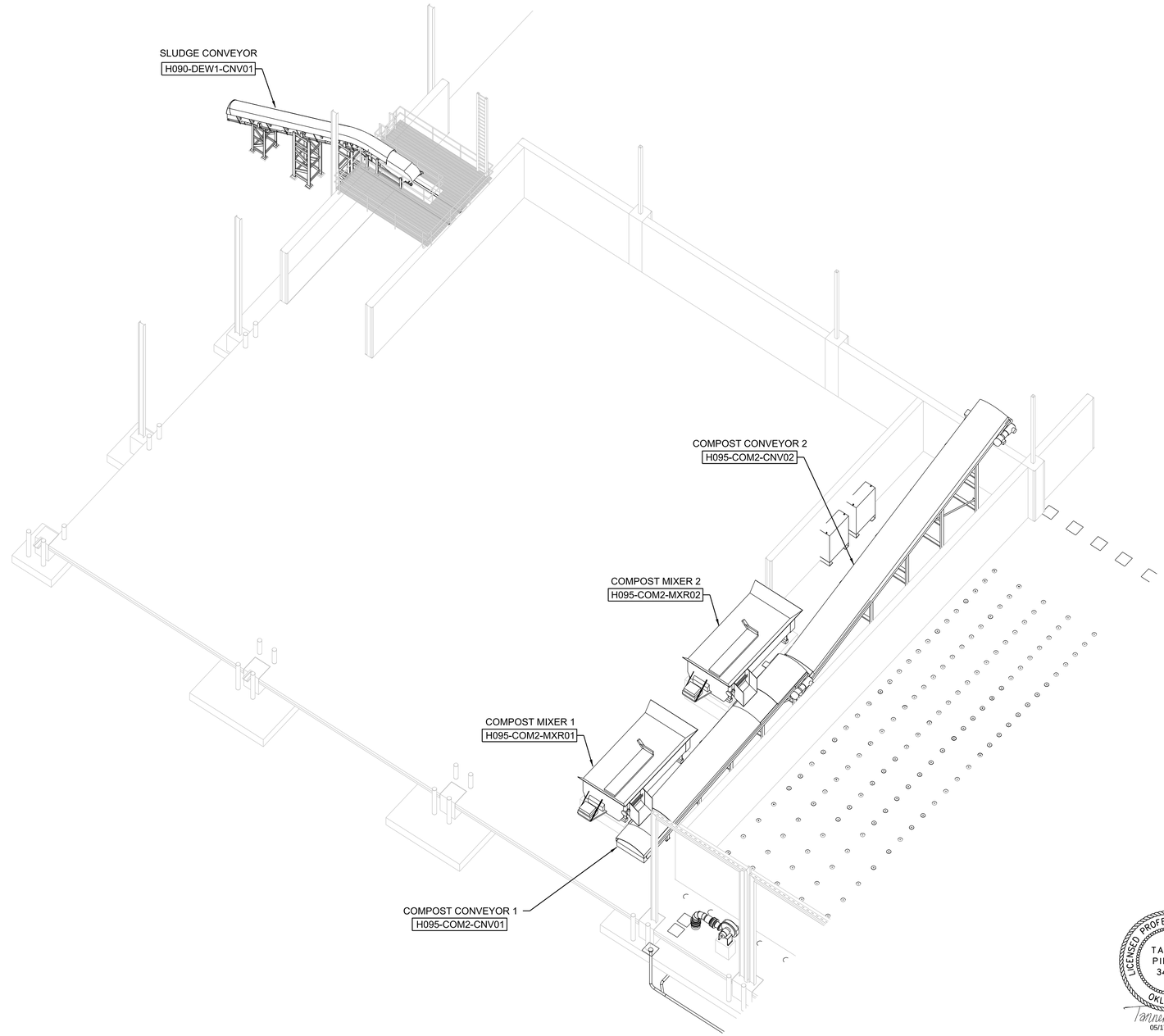
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	RZL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-D-9001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 267 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 19:13



10 ISOMETRIC STORAGE CONVEYOR AND COMPOST MIXING
NTS

95-C2BL-D-2000

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LICENSED PROFESSIONAL ENGINEER
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34730
OKLAHOMA
Tanner Pipher
05/17/2026

COMPOSTING BUILDING
PROCESS
ISOMETRIC

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

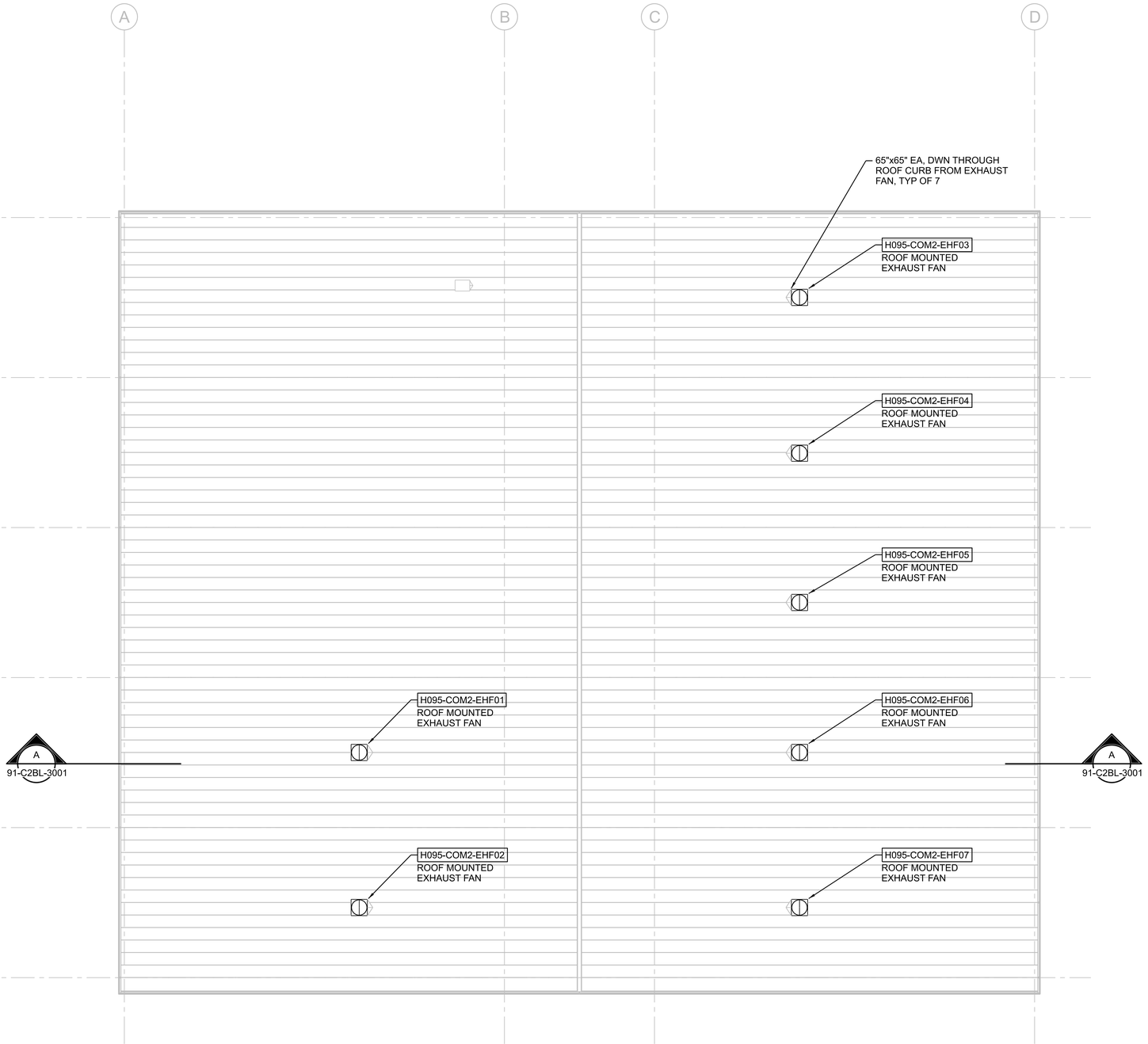
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MSN	05/17/26	
HORIZONTAL:	LEAD ENG.	GZL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-D-9002			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 268 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 19:12



N

ROOF PLAN - OVERALL

1/16"=1'-0"

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LICENSED PROFESSIONAL ENGINEER
SAUL TORRES
35552
05/18/26
OKLAHOMA

ACTIVE COMPOSTING BUILDING
HVAC
ROOF PLAN - OVERALL

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

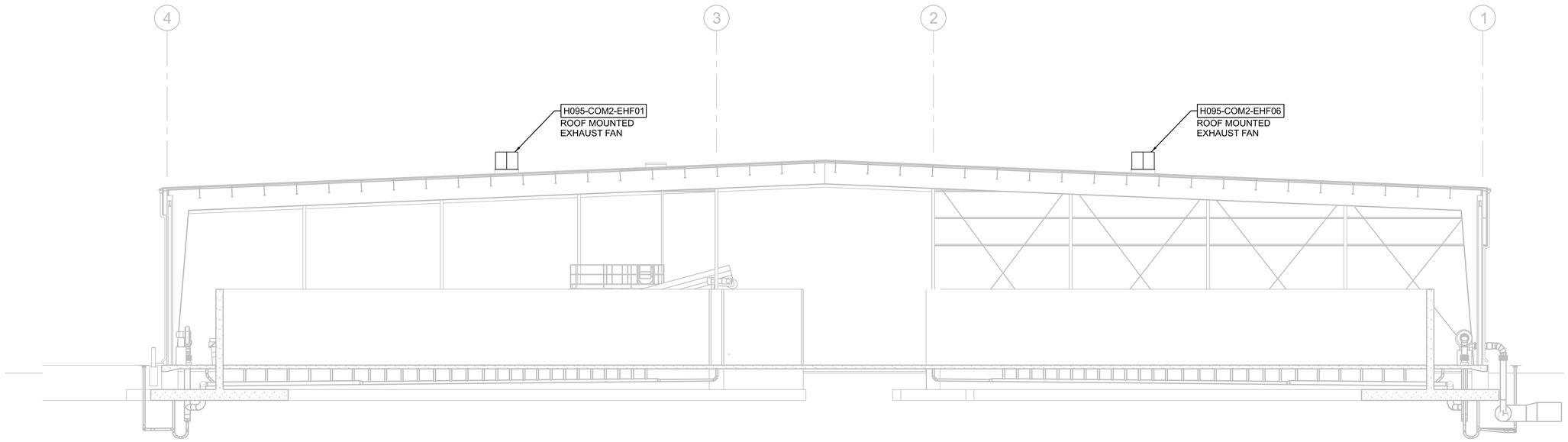
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	SZL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-H-2100			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 269 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 13:20



A SECTION
3/32"=1'-0"
95-C2BL-H-2100

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SAUL TORRES
35552
05/18/26
OKLAHOMA

ACTIVE COMPOSTING BUILDING
HVAC
SECTION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:
FILE:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MN	05/26
LEAD ENG.	AZL	5/26
FIELD MGR.		

DRAWING: 95-C2BL-H-3001

APPROVED:
DESIGN MANAGER
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 270 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 13:20

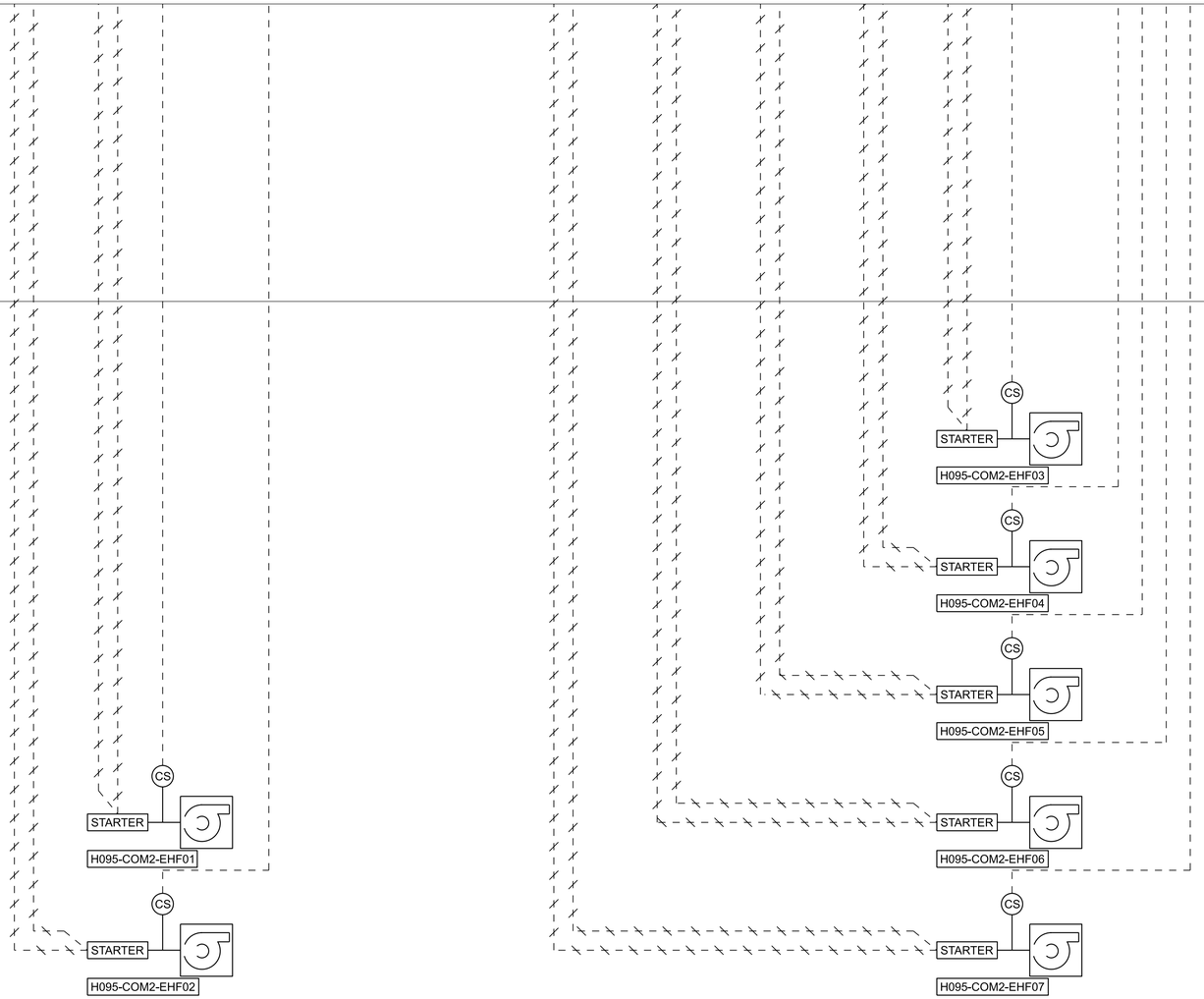
GENERAL SHEET NOTES

1. SEE HVAC LEGEND SHEET 01-G-0035.
2. SEE I&C LEGEND SHEETS 01-G-0055 & 01-G-0056.

SCADA PANEL

H095-COM2-PLC01

COMPOSTING FACILITY



SEQUENCE OF OPERATIONS

GENERAL:

1. A GENERAL ALARM SHALL BE SENT TO THE SCADA SYSTEM VIA 24 VDC DRY CONTACTS RELAY WHEN THERE IS AN EQUIPMENT FAILURE OR ALARM. CONTROL WIRING SHALL BE PROVIDED BY DIVISION 26. SCADA PANEL TERMINATION SHALL BE PROVIDED BY DIVISION 40.
2. ANALOGUE SIGNAL CONVERSION PROGRAMMING SHALL BE DONE BY DIVISION 40 TO COMMUNICATE WITH SCADA NETWORK.

H095-COM2-EHF(01/02/03/04/05/06/07)

RUN CONDITIONS:
1. THE FANS SHALL INDIVIDUALLY RUN CONTINUOUSLY. BALANCE FAN WITH POTENTIOMETER.

ALARMS TO SCADA:

CURRENT SENSOR(S) TO SCADA FOR FAN FAILURE.

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35552
05/18/26
OKLAHOMA

COMPOSTING OPERATIONS BUILDING
HVAC
AIRFLOW SCHEMATIC

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

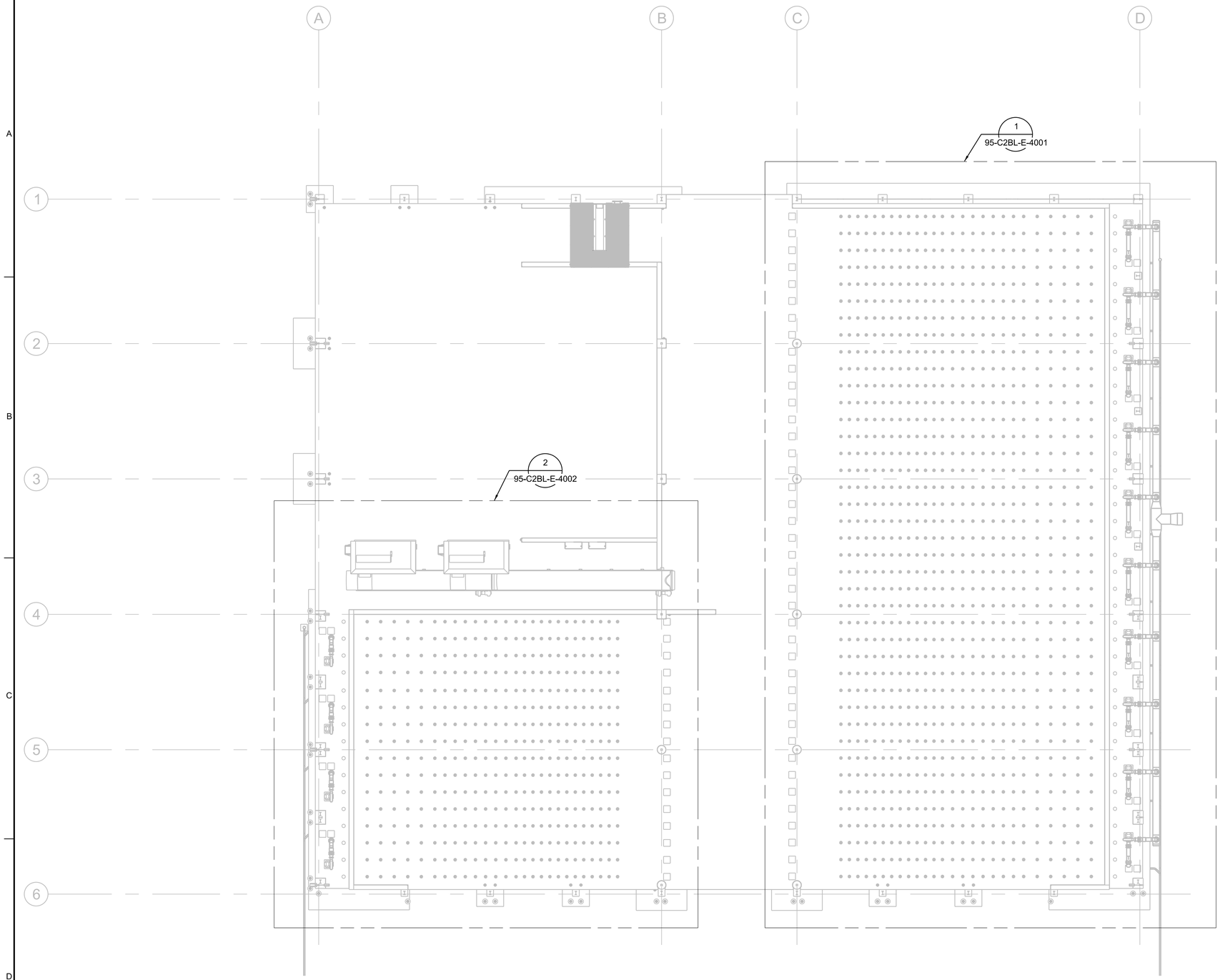
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	WSN	05/26
LEAD ENG.	SJL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 95-C2BL-H-6001
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 271 OF 300 SHEETS

PLOT DATE: 19-MAY-2026 PLOT TIME: 13:20



N

POWER PLAN

1/16"=1'-0"

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA

05/18/2026

COMPOSTING FACILITY
ELECTRICAL
POWER PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

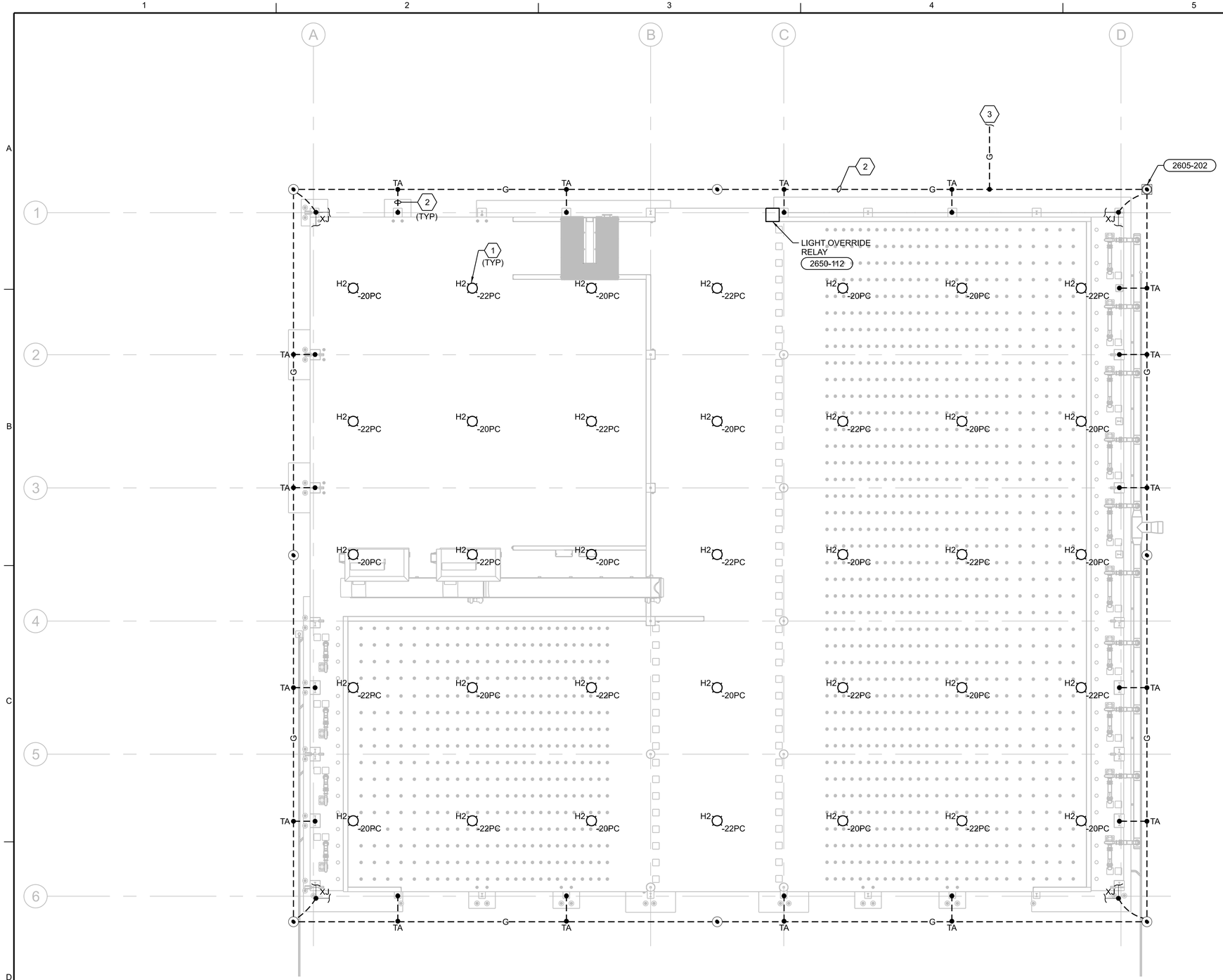
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
PROFILE:	DESIGNED	BB		
HORIZONTAL:	SURVEY			
VERTICAL:	PROJ. MGR.	BBW	05/7/26	
	LEAD ENG.	BBL	5/7/26	
	FIELD MGR.		5/7/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-E-2000			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 272 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:02



GENERAL SHEET NOTES

1. GROUND RING CONDUCTOR BURIED MINIMUM 30" BELOW FINISHED GRADE.
2. LIGHTING SHOULD BE ENERGIZED BY H090-DEW1-LVP01 LOCATED IN THE DEWATERING BUILDING.

SHEET KEYNOTES

1. INSTALL LIGHT FIXTURE TYPE H2 SUCH THE TOP OF THE FIXTURE IS 25'-6" FROM FINISHED FLOOR. LIGHTS INSTALLATION METHOD SHALL BE SUCH TO ELIMINATE ANY MOVEMENT FROM INCLEMENT WEATHER.
2. #4/0 AWG STRANDED, BARE, TIN-PLATED COPPER.
3. BOND TO DEWATERING GROUNDING SYSTEM.

N

FACILITY PLAN

1/16"=1'-0"

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LICENSED PROFESSIONAL ENGINEER
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32520
OKLAHOMA
05/18/2026

COMPOSTING FACILITY
ELECTRICAL
FACILITY PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

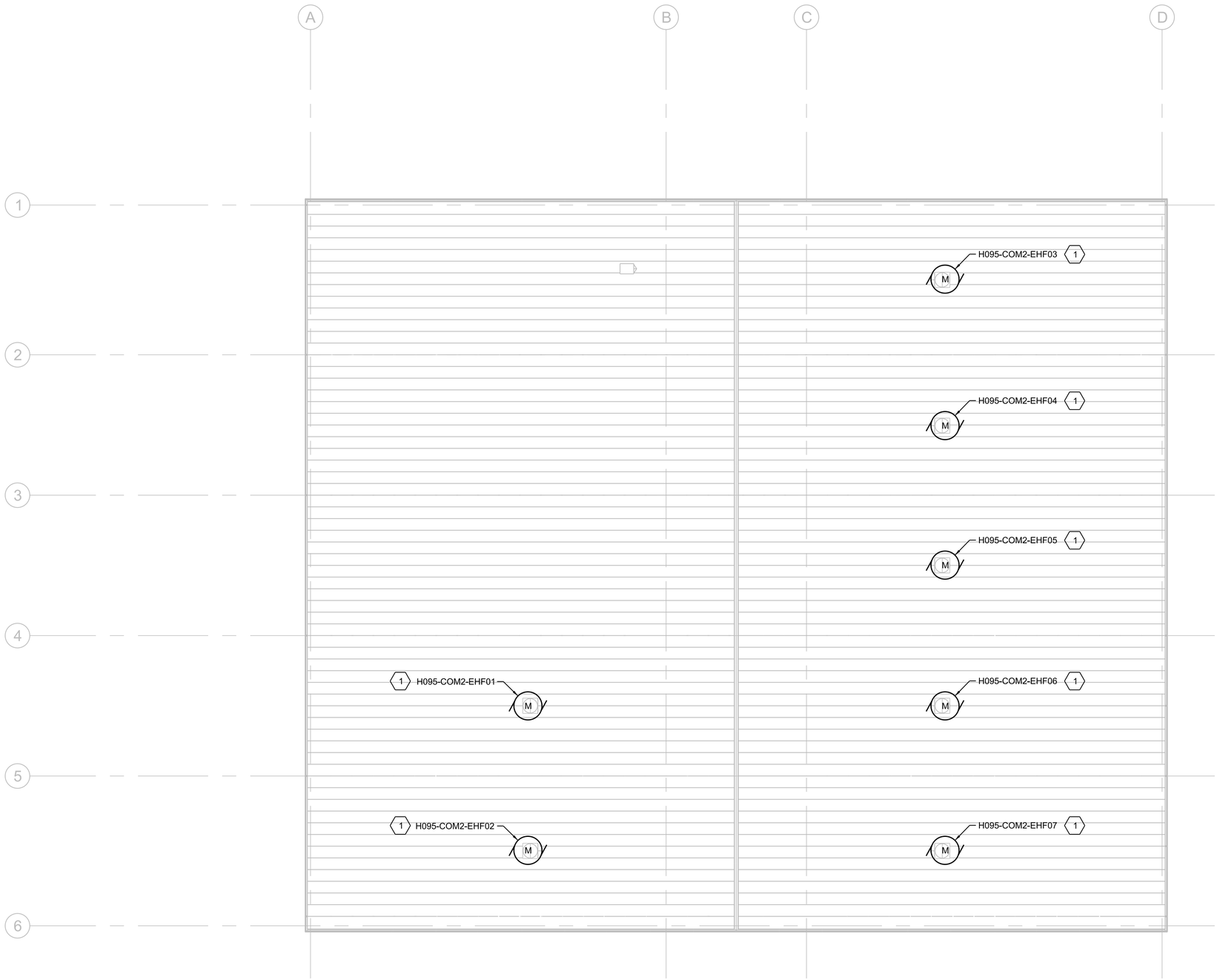
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.	MN	05/26	
HORIZONTAL:	LEAD ENG.	BZ	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-E-2001			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 273 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:03

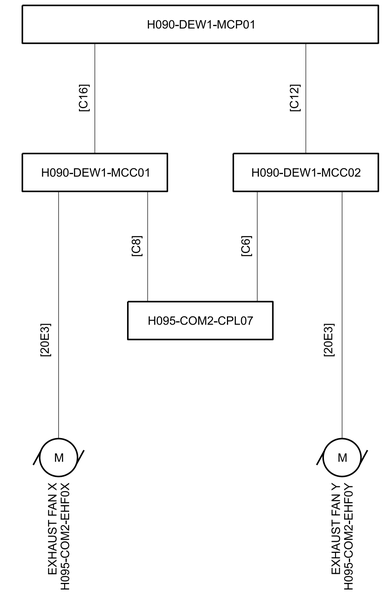
SHEET KEYNOTES

1. EXHAUST FAN TO BE COMPLETE WITH APPROVED DISCONNECTING MEANS.



POWER PLAN

1/16"=1'-0"



RISER DIAGRAM

(X= 1, 3, 5, 7), (Y= 2, 4, 6)

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LICENSED PROFESSIONAL ENGINEER
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32520
OKLAHOMA
05/18/2026

COMPOSTING FACILITY
ELECTRICAL
ROOF POWER PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

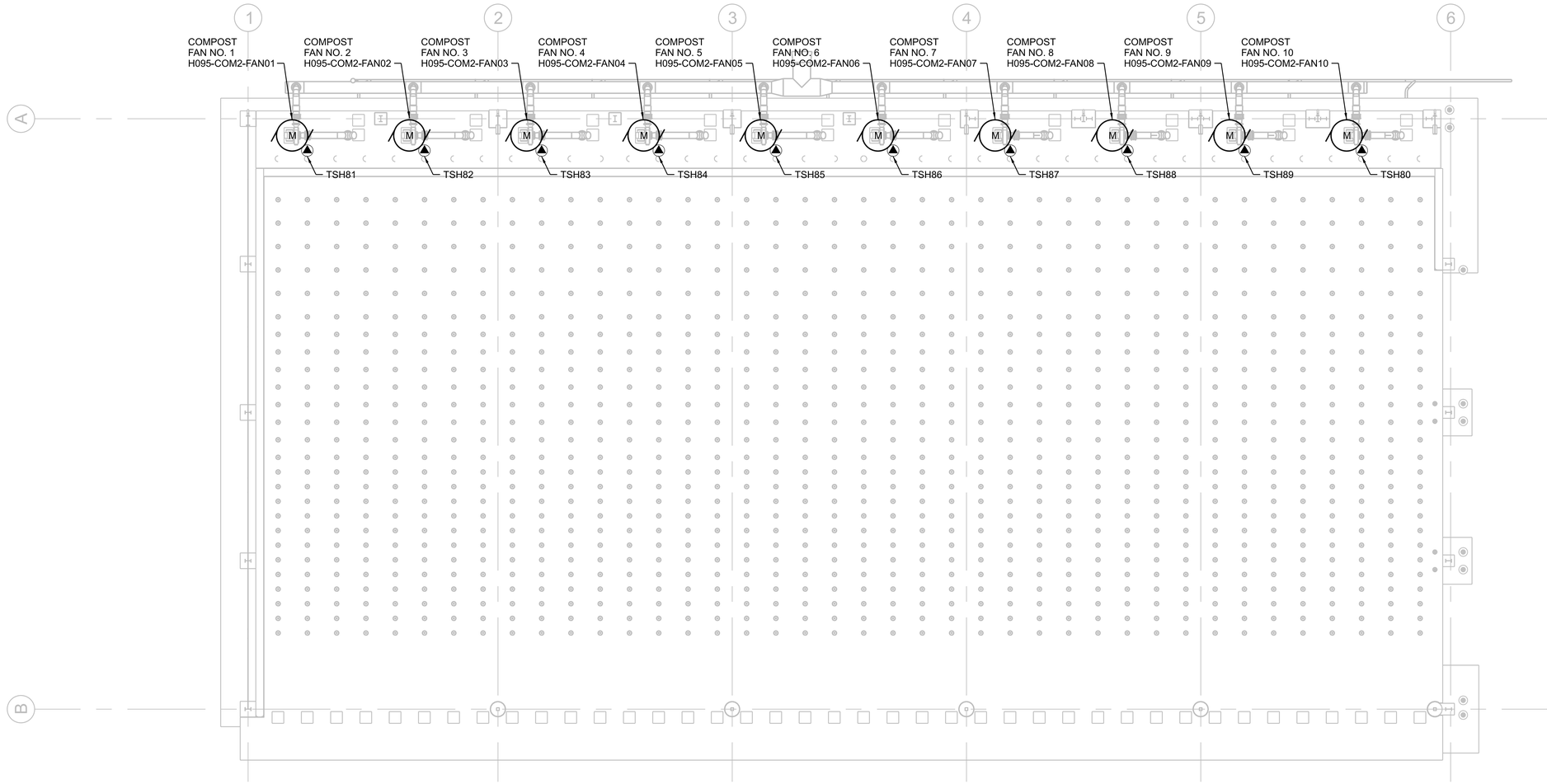
DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:

DESIGN MANAGER

FILE: DRAWING: 95-C2BL-E-2100
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 274 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:02



N

1 ENLARGED PLAN
3/32"=1'-0"
95-C2BL-E-2000

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LICENSED PROFESSIONAL ENGINEER
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32520
OKLAHOMA
05/18/2026

COMPOSTING FACILITY
ELECTRICAL
POWER ENLARGED PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

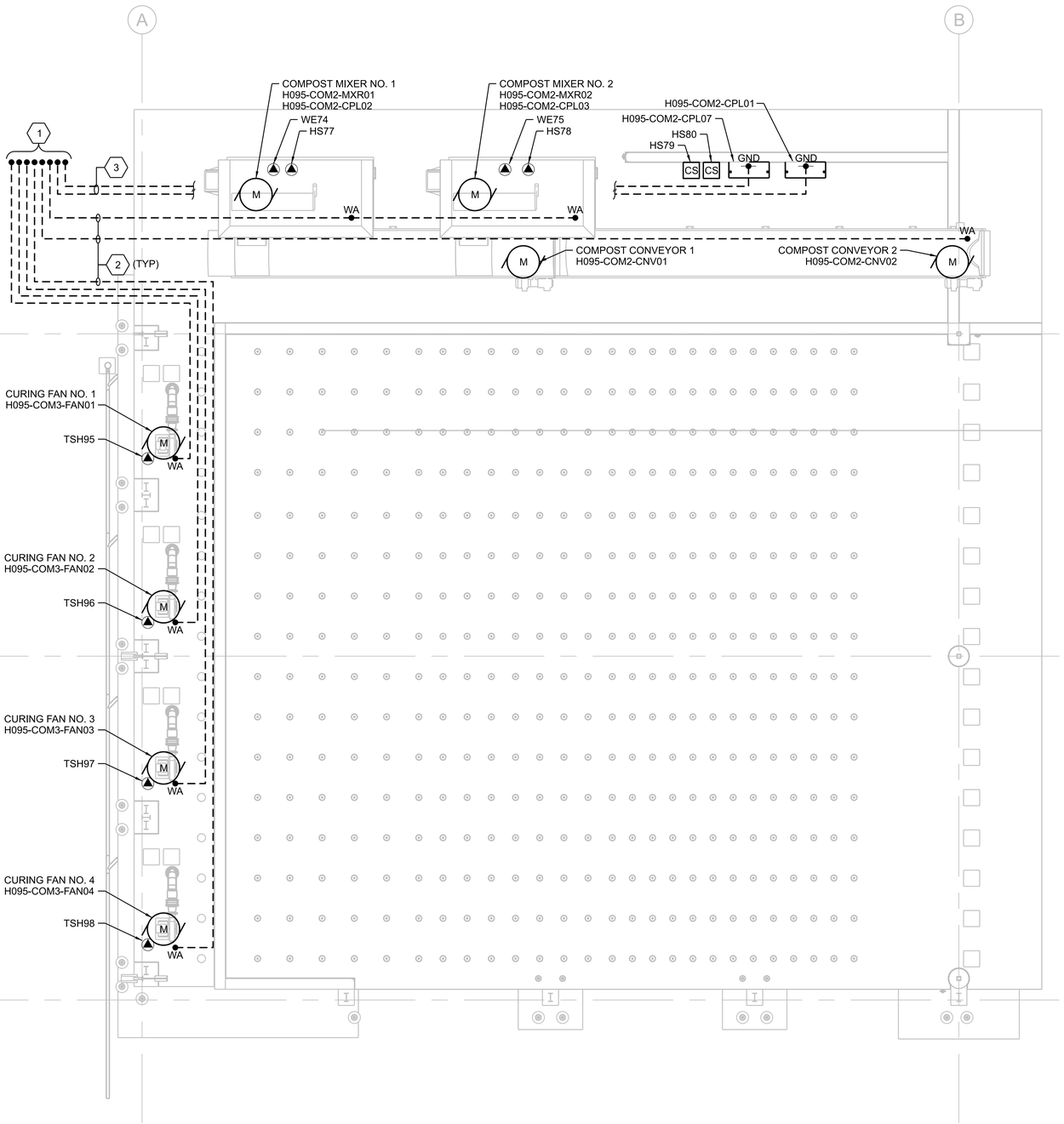
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN	05/26
HORIZONTAL:	LEAD ENG.	BZ	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-E-4001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 275 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:03



SHEET KEYNOTES

1. BOND TO DEWATERING GROUNDING SYSTEM.
2. #2/0 AWG STRANDED, BARE, TIN-PLATED COPPER.
3. #1/0 AWG STRANDED, BARE, TIN-PLATED COPPER.

2 ENLARGED PLAN

1/8"=1'-0"

95-C2BL-E-2000

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32520
OKLAHOMA
05/18/2026

COMPOSTING FACILITY
ELECTRICAL
POWER ENLARGED PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

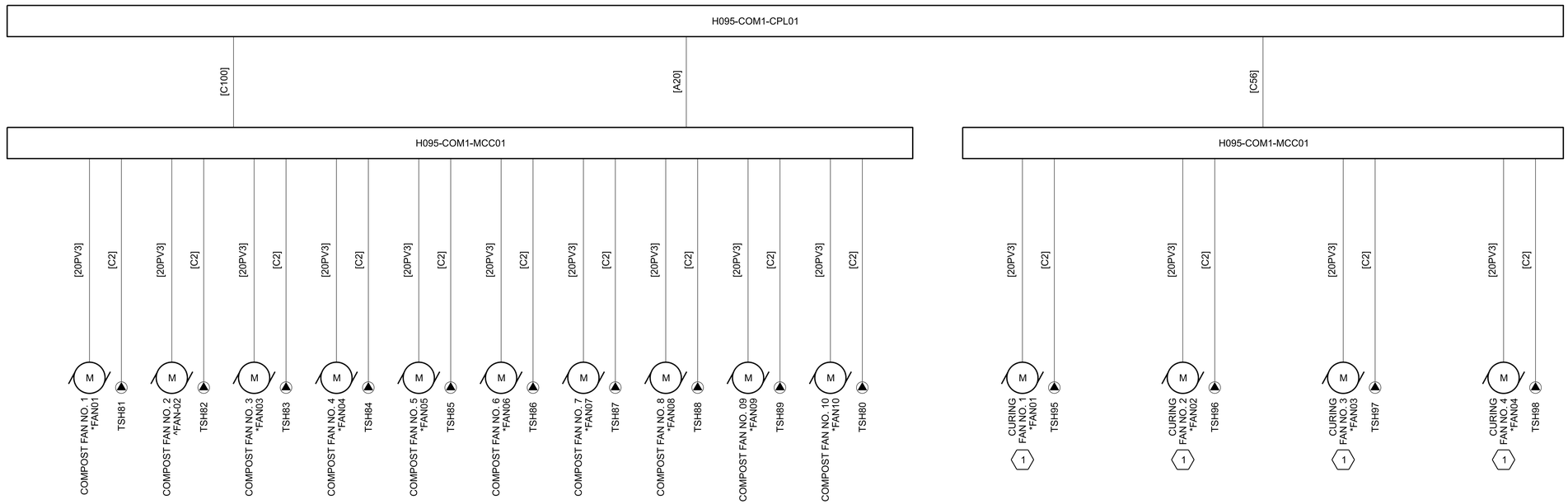
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.		05/26	
HORIZONTAL:	LEAD ENG.		5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-E-4002			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 276 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:02

SHEET KEYNOTES

1. THE COMPLETE TAG NUMBER INCLUDES THE "H095-COM3-" PREFIX.
2. THE COMPLETE TAG NUMBER INCLUDES THE "H090-DEW1-" PREFIX.
3. CONTRACTOR TO REVIEW VENDOR INFORMATION PRIOR TO INSTALLING CONDUIT AND CONDUCTOR.

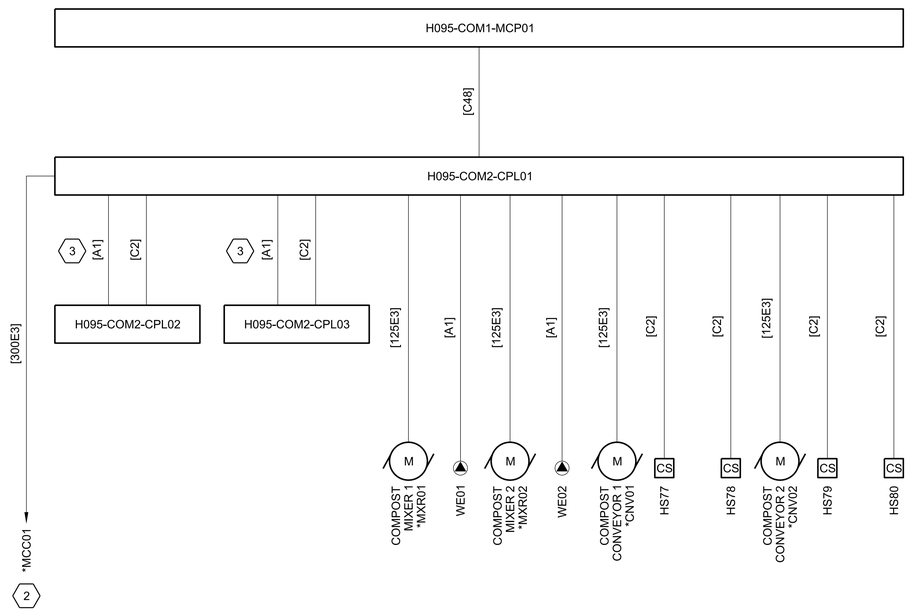


NOTE:

THE COMPLETE TAG NUMBER INCLUDES THE "H095-COM2-" PREFIX.

ACTIVE COMPOSTING BLOWER SYSTEM, MIXER, & CONVEYOR SYSTEM - RISER DIAGRAM

NTS



NOTE:

THE COMPLETE TAG NUMBER INCLUDES THE "H095-COM2-" PREFIX.

COMPOSITNG MIXER & CONVEYOR SYSTEM RISER DIAGRAM

NTS

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32520
OKLAHOMA
05/18/2026

REVISION	BY	DATE

COMPOSTING FACILITY
ELECTRICAL
RISER DIAGRAMS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	BZL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BL-E-6001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 277 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:03

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RENDERING
NTS

FOR REFERENCE ONLY

BIOFILTER FACILITY NO 1

RENDERING

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

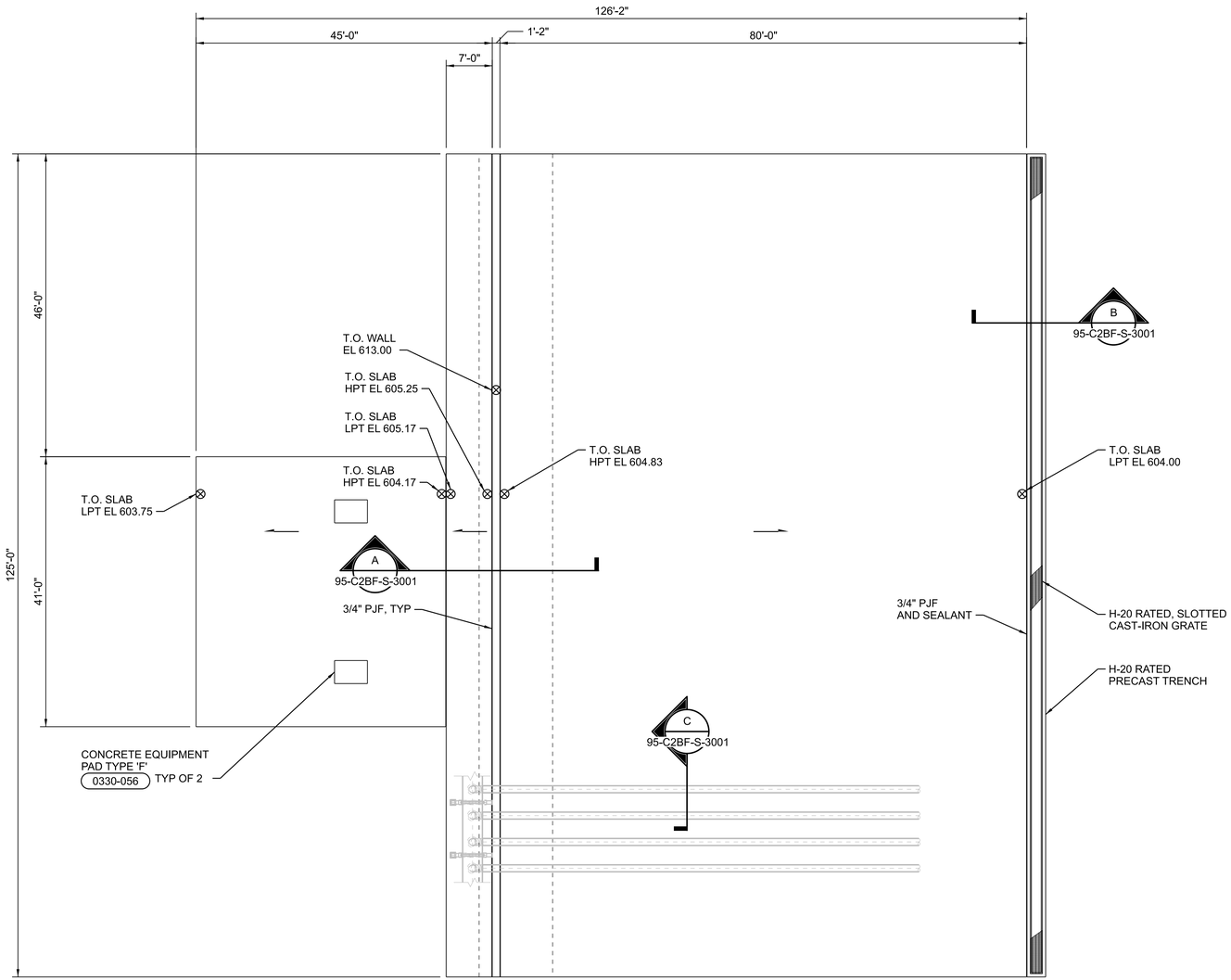
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSN 05/26	
	LEAD ENG.	AZL 5/26	
	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BF-R-0001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 278 OF 300 SHEETS

PLOT DATE: 05\14\2026 PLOT TIME: 9:06:00 AM

GENERAL FACILITY NOTES

1. FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS 01-G-0020 AND 01-G-0021.
2. FOR STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS, SEE DRAWINGS 01-G-022 THROUGH 01-G-0024.
3. FOR ADDITIONAL REINFORCING AT CONCRETE OPENINGS, REFER TO STANDARD DETAIL 0330-001.



N

PLAN

3/32"=1'-0"

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

BIOFILTER NO. 1
STRUCTURAL
FOUNDATION PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

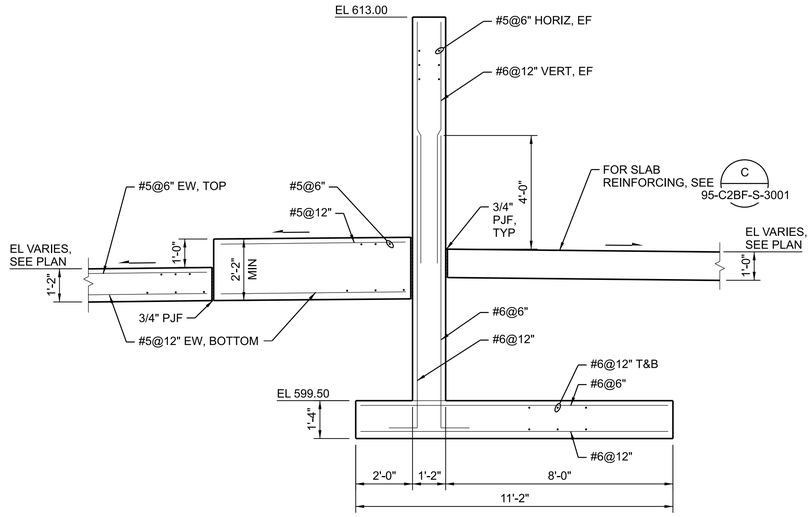
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

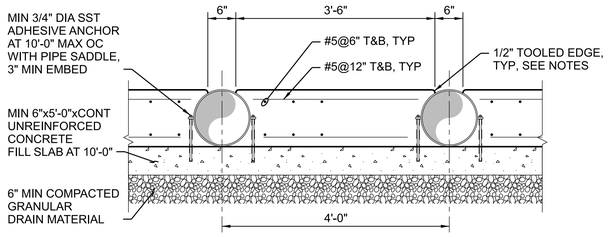
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENG.		
VERTICAL:	FIELD MGR.		DESIGN MANAGER
FILE:	DRAWING: 95-C2BF-S-2000		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 279 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:59



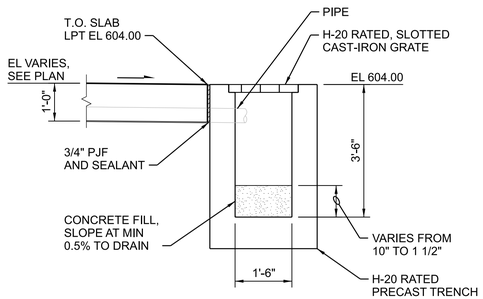
A SECTION
3/8"=1'-0"
95-C2BF-S-2000



NOTES:

1. SET PIPE ELEVATION FLUSH TO TOP OF SLAB SO THAT TOP OF CONCRETE CAN BE FLOATED ACROSS LATERALS.
2. INSTALL CONCRETE SLAB OF SIZE REQUIRED TO RESTRAIN PIPE FROM FLOATATION DURING CONCRETE POUR.
3. AFTER CONCRETE HARDENS, CLEAN OFF TOP OF PIPES AND DRILL HOLES IN PIPE.

C SECTION
3/4"=1'-0"
95-C2BF-S-2000
95-C2BF-S-3001



B SECTION
1/2"=1'-0"
95-C2BF-S-2000

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

BIOFILTER NO. 1
STRUCTURAL SECTIONS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	GZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 95-C2BF-S-3001
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 280 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:38

GENERAL NOTES

1. BIOFILTER FOUL AIR DISCHARGE HEADER TO BE MOUNTED ALONG VERTICAL CONCRETE PUSH WALL.
2. FLEXIBLE CONNECTIONS ARE USED ON TRANSITIONS BETWEEN EXPOSED PIPE (AL) AND BURIED PIPE (HDPE).
2. PROVIDE A 4" DRAIN WITH P-TRAP AT THE END OF EACH 12" FA LATERAL.

ENLARGED PLAN 1 95-C2BF-D-2100

ISOMETRIC 6 95-C2BF-D-2400

42" FA FROM ACTIVE BLOWER DISCHARGE HEADER

MATCHLINE SEE DWG 95-C2BL-D-4001 FOR CONTINUATION

H095-COM2-FAN01
BIOFILTER FAN NO. 1

H095-COM2-FAN02
BIOFILTER FAN NO. 2

4" CON TO MH-PD-1 FOR CONT SEE 07-Y-2002

8" PD I.E. 600.50 TO SANITARY SEWER SYSTEM FOR CONT SEE 07-Y-2002

ENLARGED PLAN 3 95-C2BF-D-2200

H095-COM2-BFT1
BIOFILTER

PAVED ACCESS ROAD

A 95-C2BF-D-2200

A 95-C2BF-D-2200

ENLARGED PLAN 2 95-C2BF-D-2100

8'-6"

8'-6"

125'-0" BIOFILTER LENGTH

3'-7" | 38'-5" | 3'-0" | 1'-2" | 80'-0" BIOFILTER WIDTH | 2'-11"

129'- 3/4 "

BIOFILTER OVERALL PLAN

1/8"=1'-0"

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
05/17/2026

BIOFILTER FACILITY
PROCESS
OVERALL PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

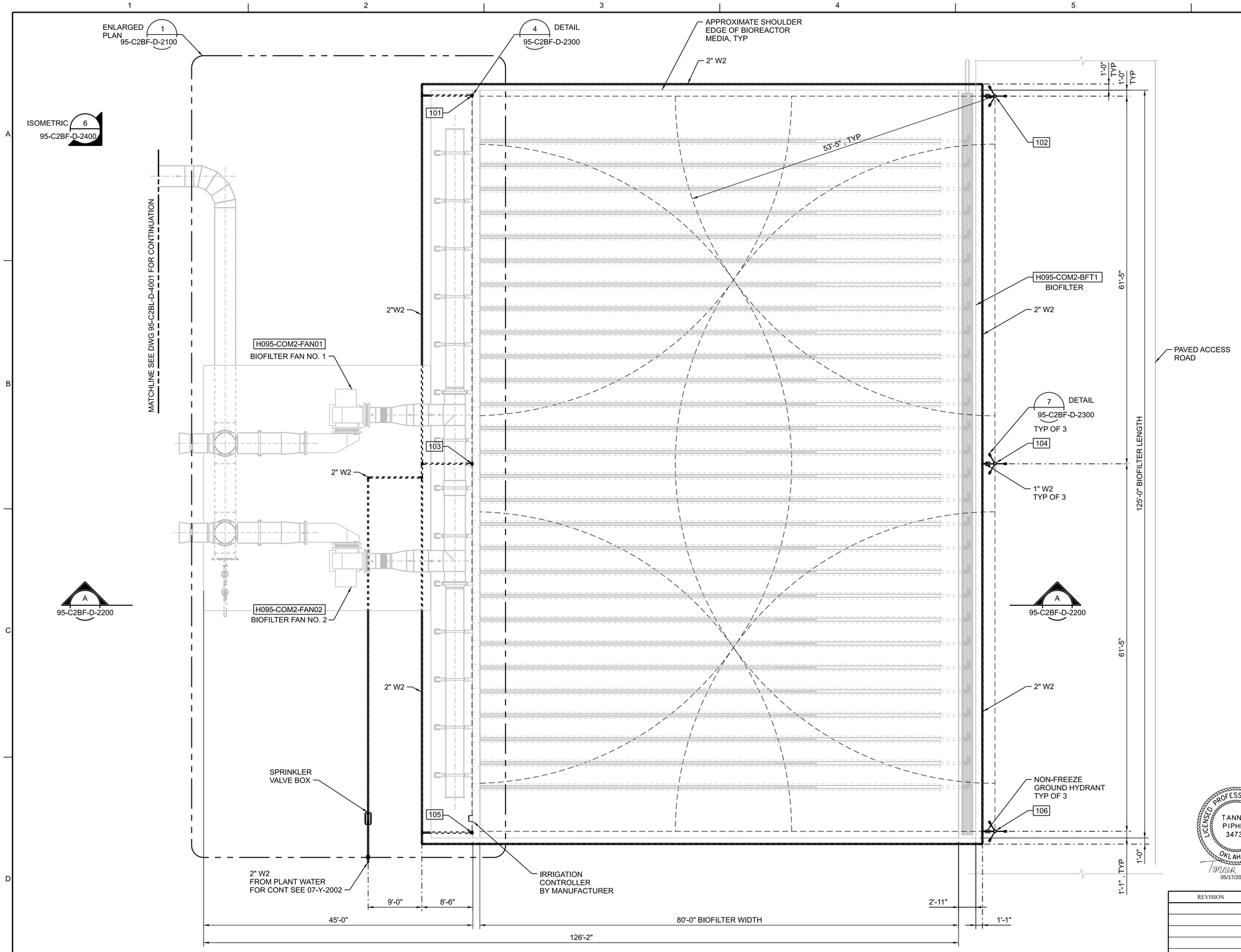
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 95-C2BF-D-2000
ATLAS PAGE NO: 3328
SHEET 281 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 18:59



N

BIOFILTER OVERALL SPRINKLER PLAN

1/8"=1'-0"

GENERAL NOTES

1. ADJUST SPRINKLERS TO COVERAGE ARCS SHOWN. MINIMIZE OVERSPRAY BEYOND EDGES OF BIOFILTER.
2. SLOPE IRRIGATION PIPING DOWN TO DRAIN IN ORDER TO DRAIN VALVES SHOWN ON PLAN VIEW AT 1%, TYPICAL.
3. USE BUSHINGS FOR CONNECTION TO EACH SPRINKLER WHERE REQUIRED.
4. FIELD ADJUST IRRIGATION COVERAGE TO PROVIDE MAXIMUM AMOUNT OF OVERLAP COVERAGE.
5. PERMANENT SPRINKLERS ARE GEAR-DRIVEN, POP UP, ROTOR STYLE NOZZLES. PORTABLE SPRINKLERS ON TRIPODS ARE IMPACT STYLE NOZZLES
6. ENSURE SPRINKLER SUBMITTAL AND SPRINKLER LAYOUT IS APPROVED BY ENGINEER PRIOR TO INSTALLATION OF BURIED IRRIGATION PIPE IS INSTALLED.

SPRINKLER NOZZLE TABLE

NO.	COVERAGE PATTERN	MINIMUM SPRAY RADIUS
101	QUARTER	UP TO 53'-0"
102	QUARTER	UP TO 53'-0"
103	HALF	UP TO 53'-0"
104	HALF	UP TO 53'-0"
105	QUARTER	UP TO 53'-0"
106	QUARTER	UP TO 53'-0"

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

BIOFILTER FACILITY
PROCESS
OVERALL SPRINKLER PLAN

WFXQ7901

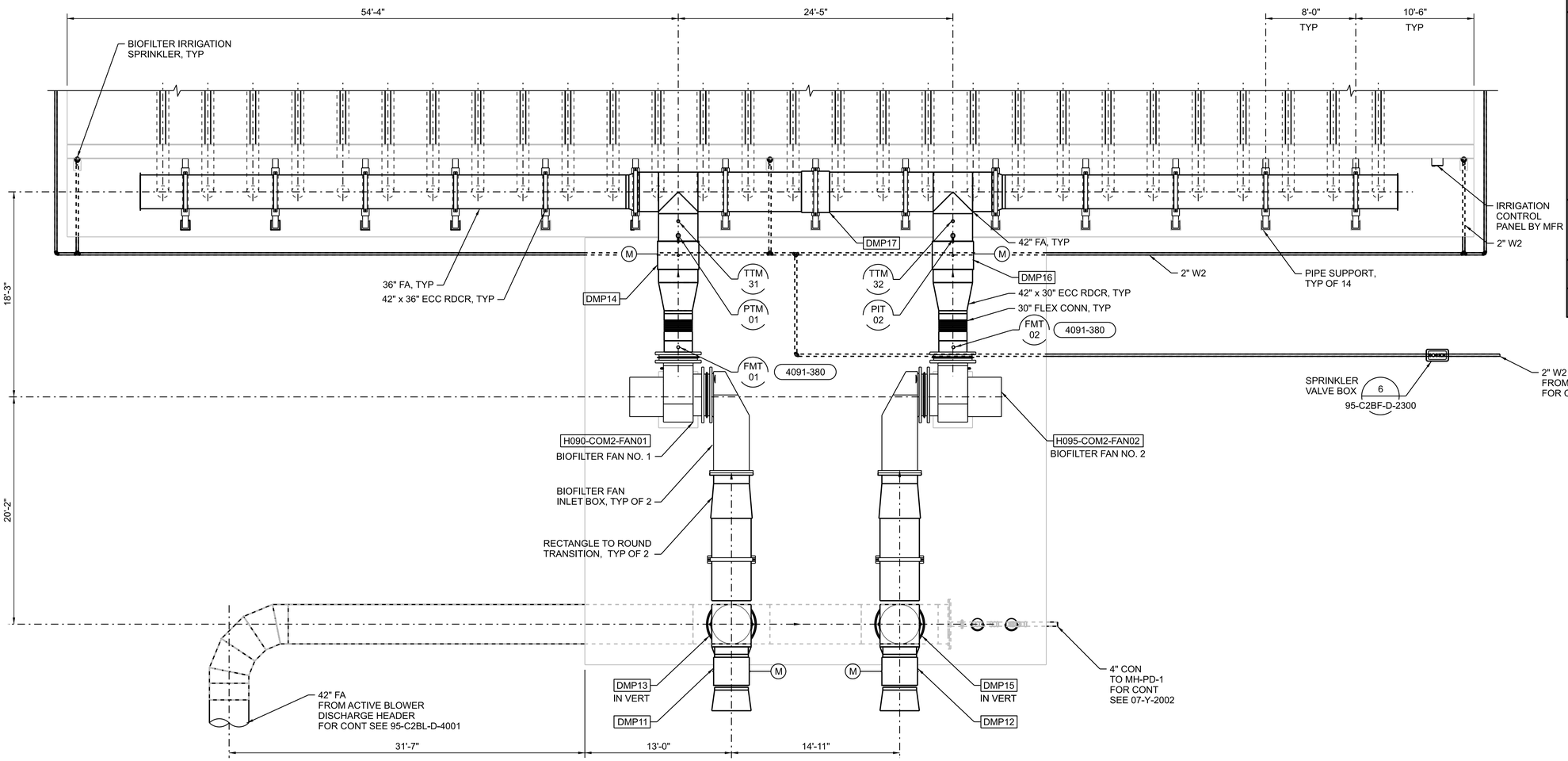
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
	PROJ. MGR.	MSN	05/26	
HORIZONTAL:	LEAD ENG.	RZL	5/26	
VERTICAL:	FIELD MGR.		5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C2BF-D-2050			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 282 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 19:00

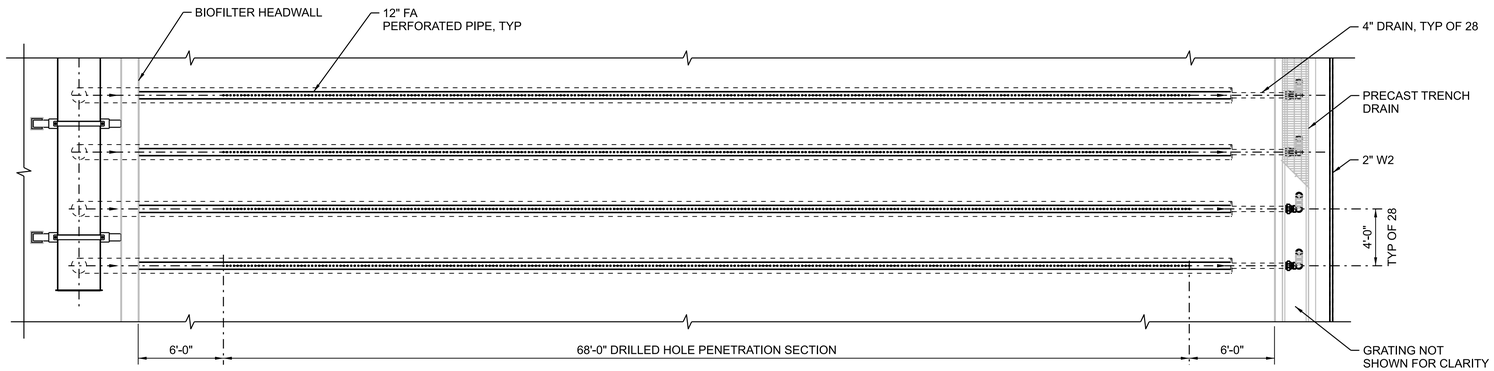


N

1 ENLARGED PLAN

3/16"=1'-0"

95-C2BF-D-2000



N

2 ENLARGED PLAN

3/16"=1'-0"

95-C2BF-D-2000

GENERAL NOTES

1. BIOFILTER FOUL AIR DISCHARGE HEADER TO BE MOUNTED ALONG VERTICAL CONCRETE PUSH WALL.
2. FLEXIBLE CONNECTIONS ARE USED ON TRANSITIONS BETWEEN EXPOSED PIPE (AL) AND BURIED PIPE (HDPE).
3. PROVIDE A 4" DRAIN WITH P-TRAP AT THE EACH OF EACH 12" FA LATERAL.
4. BIOFILTER MEDIA IS ANTICIPATED TO BE 6 FT TALL OF FREE WOODCHIPS.
5. FLEXIBLE CONNECTIONS ARE INSTALLED ON BOOSTER FAN INLET AND OUTLET CONNECTIONS.

PIPE DRILLED HOLE PENETRATION SCHEDULE

NUMBER OF DRILLED HOLES	CL - TO - CL HOLE SPACING DIMENSION	DRILLED HOLE PENETRATION SIZE
272	3"	7/8" DIA

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

REVISION	BY	DATE

BIOFILTER FACILITY
PROCESS
ENLARGED PLANS

WFXQ7901

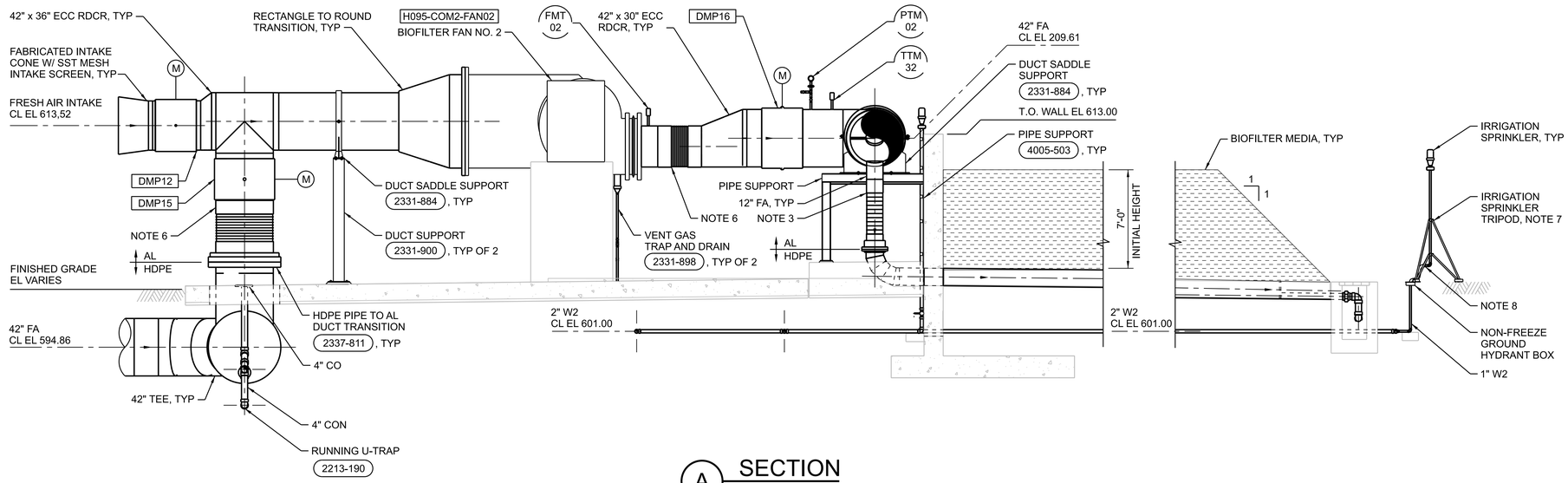
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

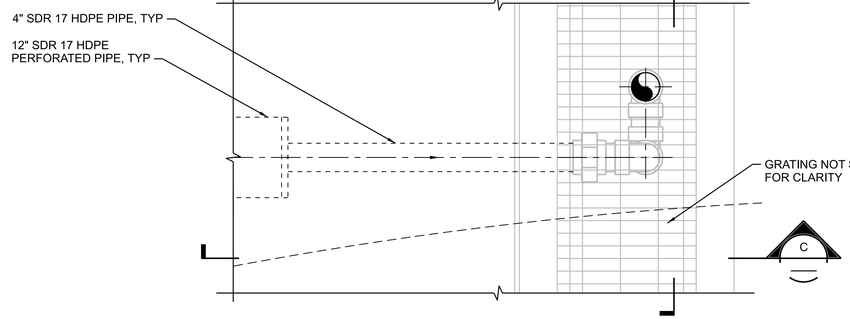
PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MW	05/26
HORIZONTAL:	LEAD ENG.	AZ	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 95-C2BF-D-2100		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 283 OF 300 SHEETS

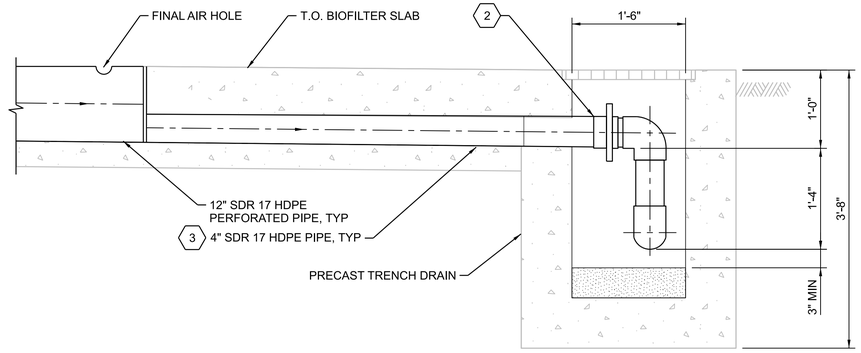
PLOT DATE: 14-MAY-2026 PLOT TIME: 19:00



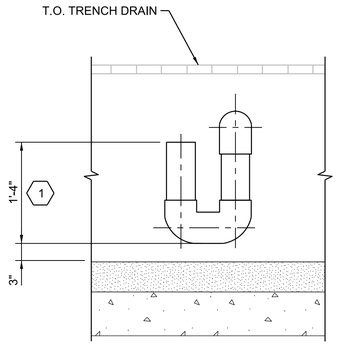
A SECTION
1/4"=1'-0"
95-C2BF-D-2000
95C2BF--D-2050



N
3 ENLARGED PLAN
1"=1'-0"
95-C2BF-D-2000



B SECTION
1"=1'-0"



C SECTION
1"=1'-0"

GENERAL NOTES

1. UP TO SIX (6) BIOFILTER IRRIGATION SPRAY NOZZLES TO BE PROVIDED.
2. BIOFILTER FOUL AIR DISCHARGE HEADER TO BE MOUNTED ALONG VERTICAL CONCRETE PUSH WALL.
3. FLEXIBLE CONNECTIONS ARE USED ON TRANSITIONS BETWEEN EXPOSED PIPE (AL) AND BURIED PIPE (HDPE).
4. PROVIDE A 4" DRAIN WITH P-TRAP AT THE EACH OF EACH 12" FA LATERAL.
5. BIOFILTER MEDIA IS ANTICIPATED TO BE 6 FT TALL OF WOODCHIPS AFTER INITIAL SETTLEMENT OF APPROXIMATELY 1'-0".
6. FLEXIBLE CONNECTIONS ARE INSTALLED ON BOOSTER FAN INLET AND OUTLET CONNECTIONS.
7. IRRIGATION TRIPOD STAND LEGS SHOULD BE SECURED USING SAND BAGS OR SIMILAR WEIGHTED METHODS TO PREVENT THE ROADSIDE SPRINKLERS FROM FALLING.
8. 5'-0" MINIMUM HOSE SHOULD BE USED TO ALLOW THE IRRIGATION STAND TO BE RELOCATED WHEN NEEDED DURING IRRIGATION.

SHEET KEYNOTES

1. MAINTAIN A MINIMUM OF 16" FROM THE INVERT OF THE U-TRAP TO THE TOP OF THE PIPE.
2. PVC UNION THREADED TO SOLVENT WELD.
3. PIPE ELEVATION MUST BE SET AND PIPE EITHER STRAPPED OR FILLED WITH WATER TO PREVENT PIPE FROM FLOATING DURING CONCRETE POUR. CONCRETE POUR TO BE LEVEL WITH TOP OF PIPE SO THAT THE SLAB CAN BE FLOAT FINISHED ACROSS LATERALS. A 1/2" TOOLED EDGE SHOULD BE FORMED AFTER SLAB IS POURED AND LEVELED. AFTER SLAB IS CURED FOR 48 HOURS, SKIN SHOULD BE BROKEN OFF TOP OF PIPE AND HOLES CAN BE DRILLED.

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
05/17/2026

REVISION	BY	DATE

BIOFILTER FACILITY
PROCESS SECTIONS

WFXQ7901

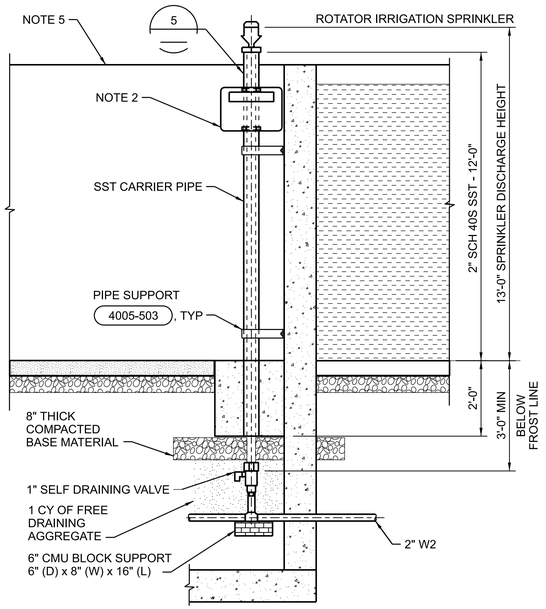
HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

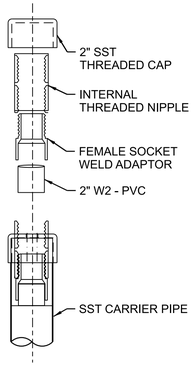
PLANS AND ESTIMATES PREPARED BY: Jacobs

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
PROFILE:	SURVEY			
HORIZONTAL:	PROJ. MGR.	MSN	05/26	
	LEAD ENG.	TP	5/26	
VERTICAL:	FIELD MGR.			DESIGN MANAGER
FILE:	DRAWING: 95-C2BF-D-2200			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 284 OF 300 SHEETS

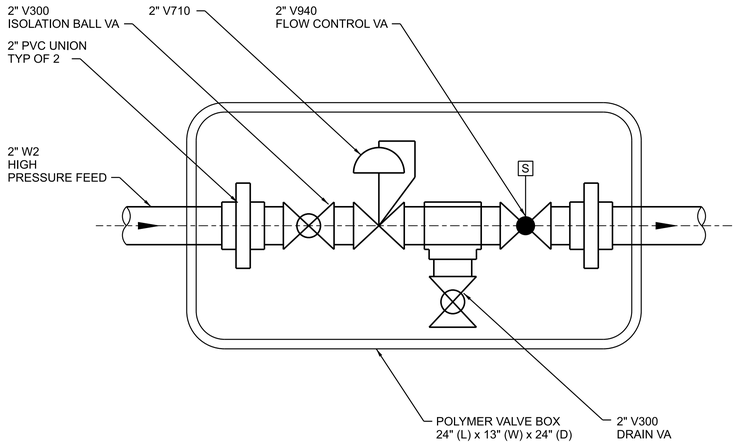
PLOT DATE: 14-MAY-2026 PLOT TIME: 19:00



4 DETAIL BIOFILTER IRRIGATION SPRINKLER (WALL MOUNTED)
NTS
95-C2BF-D-2050



5 DETAIL
NTS



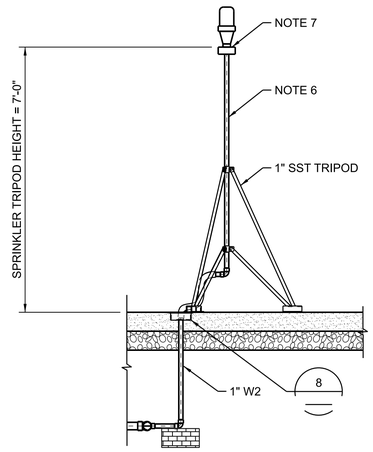
NOTES:

1. PROVIDE VALVE BOX EXTENSIONS AS REQUIRED.
2. TIER 22 TRAFFIC RATED BOX.
3. PROVIDE 3" GRAVEL OR SAND BEDDING UNDER THE ENTIRE VALVE BOX. PLACE SPRINKLER VALVES AND COMPONENTS ALONG THE BASE MATERIAL.
4. USE ADHESIVE TO APPLY 2" INSULATION FOAM BOARD TO THE INSIDE OF THE VALVE BOX LID.
5. COORDINATE FLOW CONTROL VALVE WITH SPRINKLER SYSTEM SUPPLIER AND IRRIGATION CONTROL.

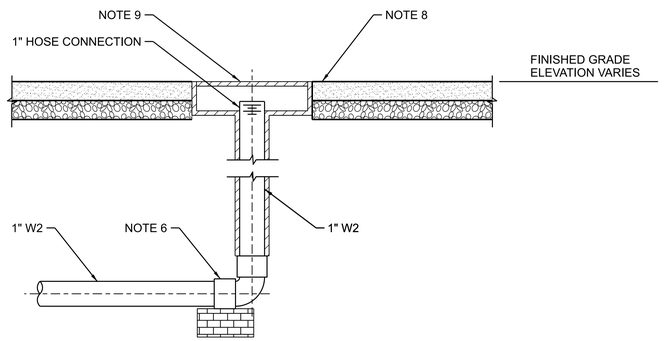
6 DETAIL SPRINKLER VALVE BOX
NTS
95-C2BF-D-2100

SHEET NOTES

1. SEE DRAWING 95-C2BF-D-2050 FOR SPRINKLER LAYOUT, SPRAY ORIENTATION, AND SPRINKLER HEAD TYPES.
2. CAUTION SIGN ONLY REQUIRED FOR NON-POTABLE OR RECLAIMED OR PLANT WATER SYSTEMS. SIGN SHALL BE PLASTIC RESIN UV RESISTANT. USE 1/4" HOT-DIPPED GALVANIZED WITH POLY COATING U-BOLTS TO MOUNT TO SST STAND PIPE.
3. INSTALL CLEAN WASHED STONE FOR DRAINAGE PIT. ENCLOSE CLEAN STONE WITH GEOTEXTILE FABRIC.
4. INSTALL 12" DIAMETER, 2 FT DEEP, CONCRETE ENCASEMENT. CONCRETE MIX SHALL BE MINIMUM OF 3,000 PSI.
5. DETAIL 4 IS MIRRORED FOR EASE OF VIEW.
6. INSTALL ADAPTORS AS REQUIRED.
7. INSTALL MALE TO FEMALE 1" THREADED STAINLESS STEEL PIPE EXTENSIONS AS REQUIRED TO REACH 1'-0" ABOVE COMPOST MEDIA.
8. INSTALL NON-FREEZE GROUND HYDRANT TO BE FLUSH WITH FINISHED GRADE.
9. MARK THE INTERIOR OF HYDRANT LID AS NONPOTABLE WATER.



7 DETAIL BIOFILTER IRRIGATION SPRINKLER (TRIPOD)
NTS
95-C2BF-D-2050



8 DETAIL NONFREEZE GROUND HYDRANT
NTS

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LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

BIOFILTER FACILITY
PROCESS DETAILS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

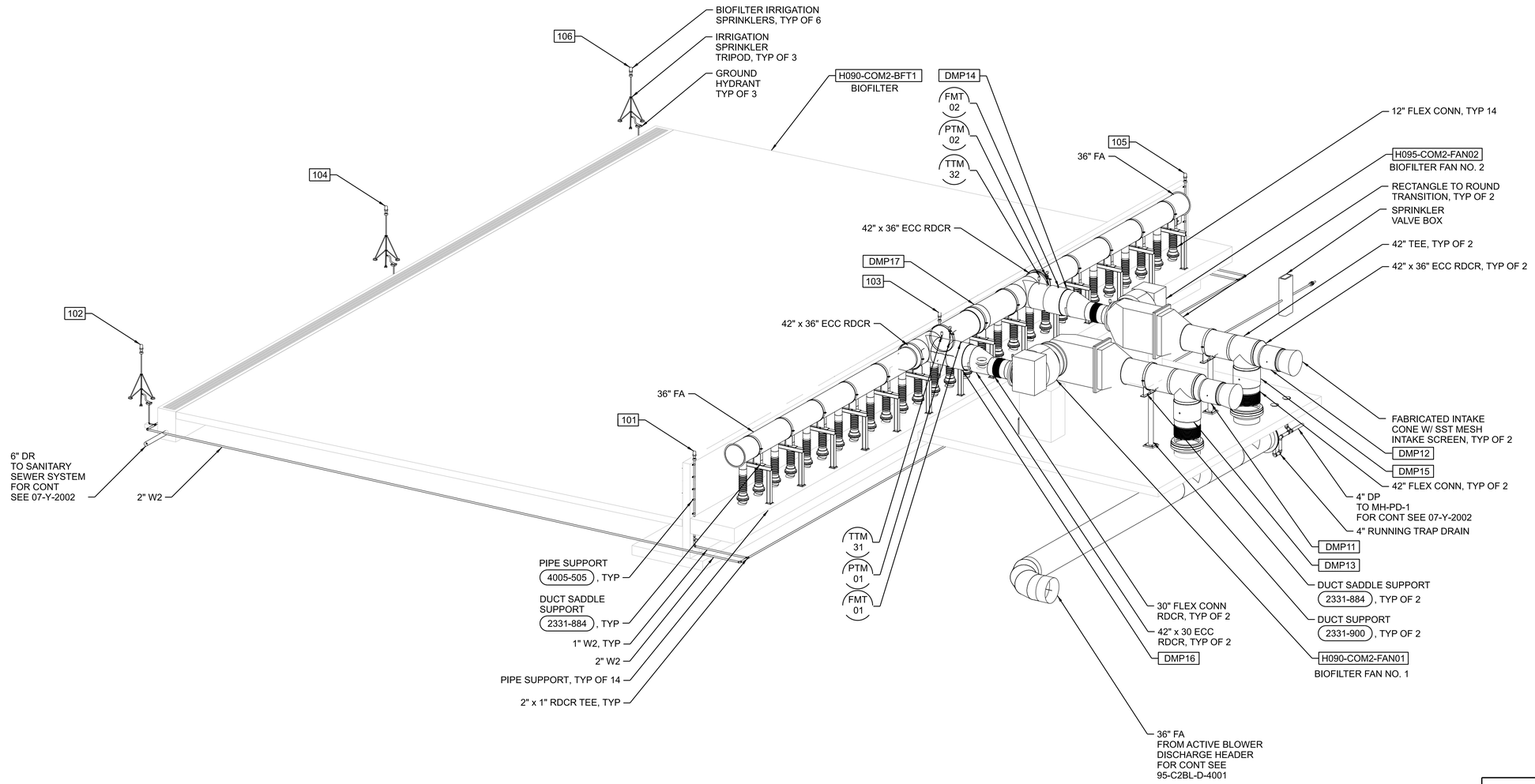
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/17/26
LEAD ENG.	RJL	5/17/26
FIELD MGR.		5/17/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 95-C2BF-D-2300 DATE: MAY 2026
ATLAS PAGE NO: 3328 SHEET 285 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 21:46



N

6 ISOMETRIC
NTS

95-C2BF-D-2050

LICENSED PROFESSIONAL ENGINEER
TANNER PIPHER
34730
OKLAHOMA
Tanner Pipher
05/17/2026

BIOFILTER FACILITY
PROCESS ISOMETRIC

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:
FILE:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MW	05/17/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

DRAWING: 95-C2BF-D-2400

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

ATLAS PAGE NO: 3328
SHEET 286 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 18:59

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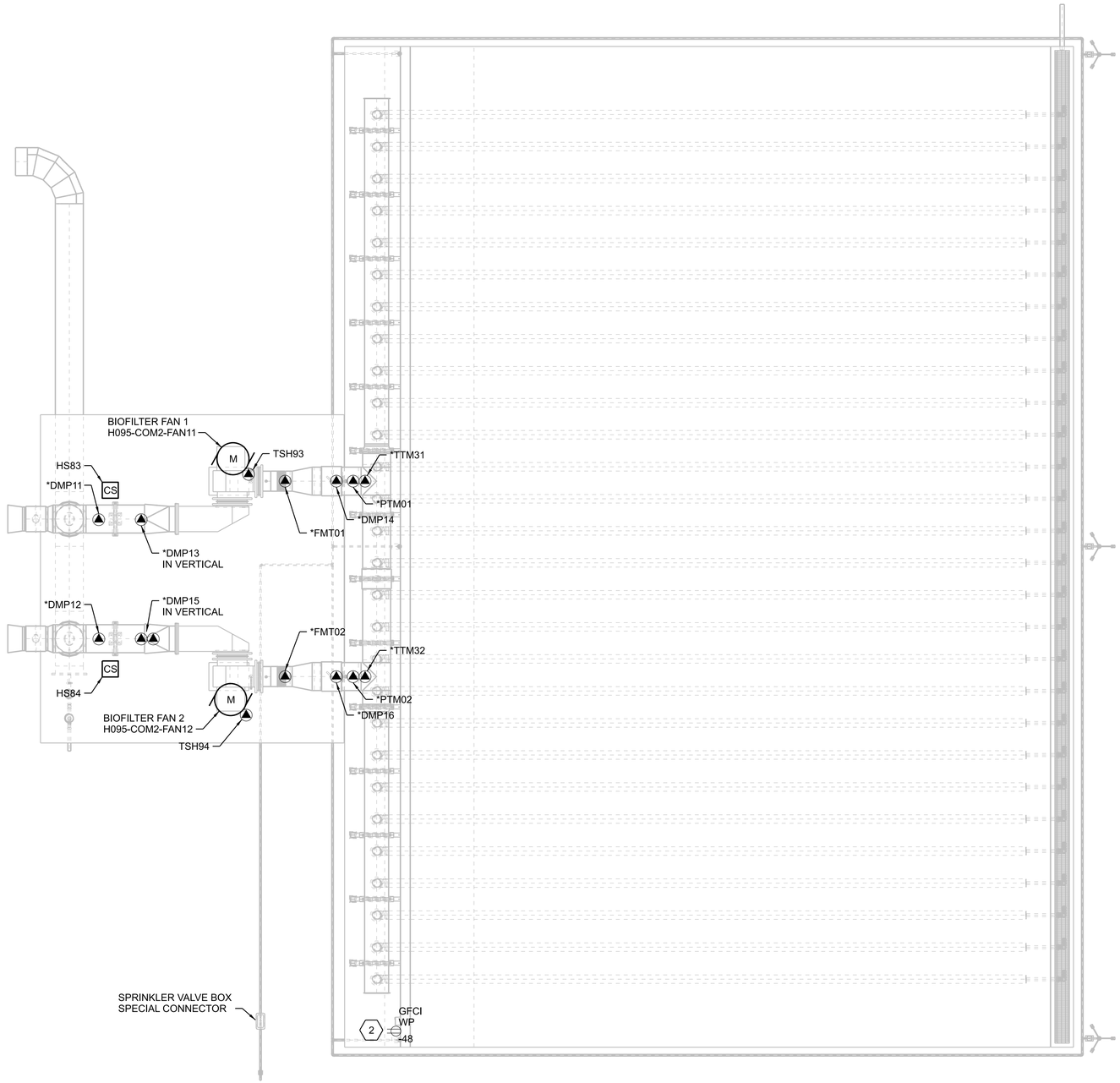
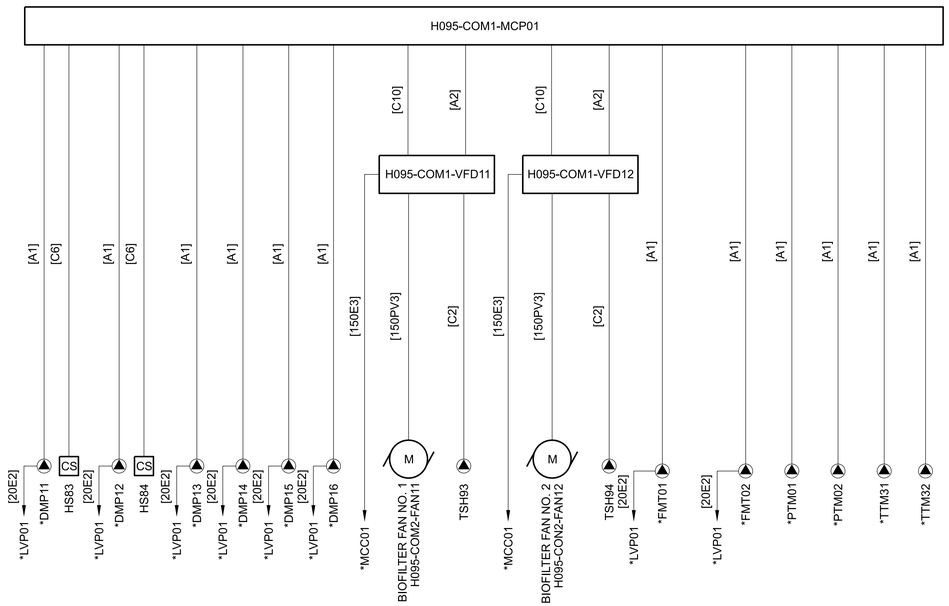
REUSE OF DOCUMENTS:

GENERAL SHEET NOTES

1. COMPLETE TAG NUMBER INCLUDES THE "H95-COM2-" PREFIX.
2. RECEPTACLES SHOULD BE ENERGIZED BY H095-COM1-LVP01 LOCATED INTHE COMPOSTING OPERATIONS BUILDING.



POWER PLAN
1/8"=1'-0"



RISER DIAGRAM
NTS

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

BIOFILTER FACILITY
ELECTRICAL
POWER PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.		05/26
	LEAD ENG.		5/26
	FIELD MGR.		5/26
FILE:	DRAWING: 95-C2BF-E-2000		DESIGN MANAGER
ATLAS PAGE NO: 3328			DATE: MAY 2026
			SHEET 287 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:01

FOR REFERENCE ONLY

RENDERING
NTS

FINISHED COMPOSTING STORAGE BUILDING

RENDERING

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
PROFILE:	DESIGNED	BB	
HORIZONTAL:	SURVEY		
VERTICAL:	PROJ. MGR.	MSN 05/26	
	LEAD ENG.	RZL 5/26	DESIGN MANAGER
	FIELD MGR.	5/26	
FILE:	DRAWING: 95-C3CS-R-0001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 288 OF 300 SHEETS

PLOT DATE: 05\14\2026 PLOT TIME: 9:08:21 AM

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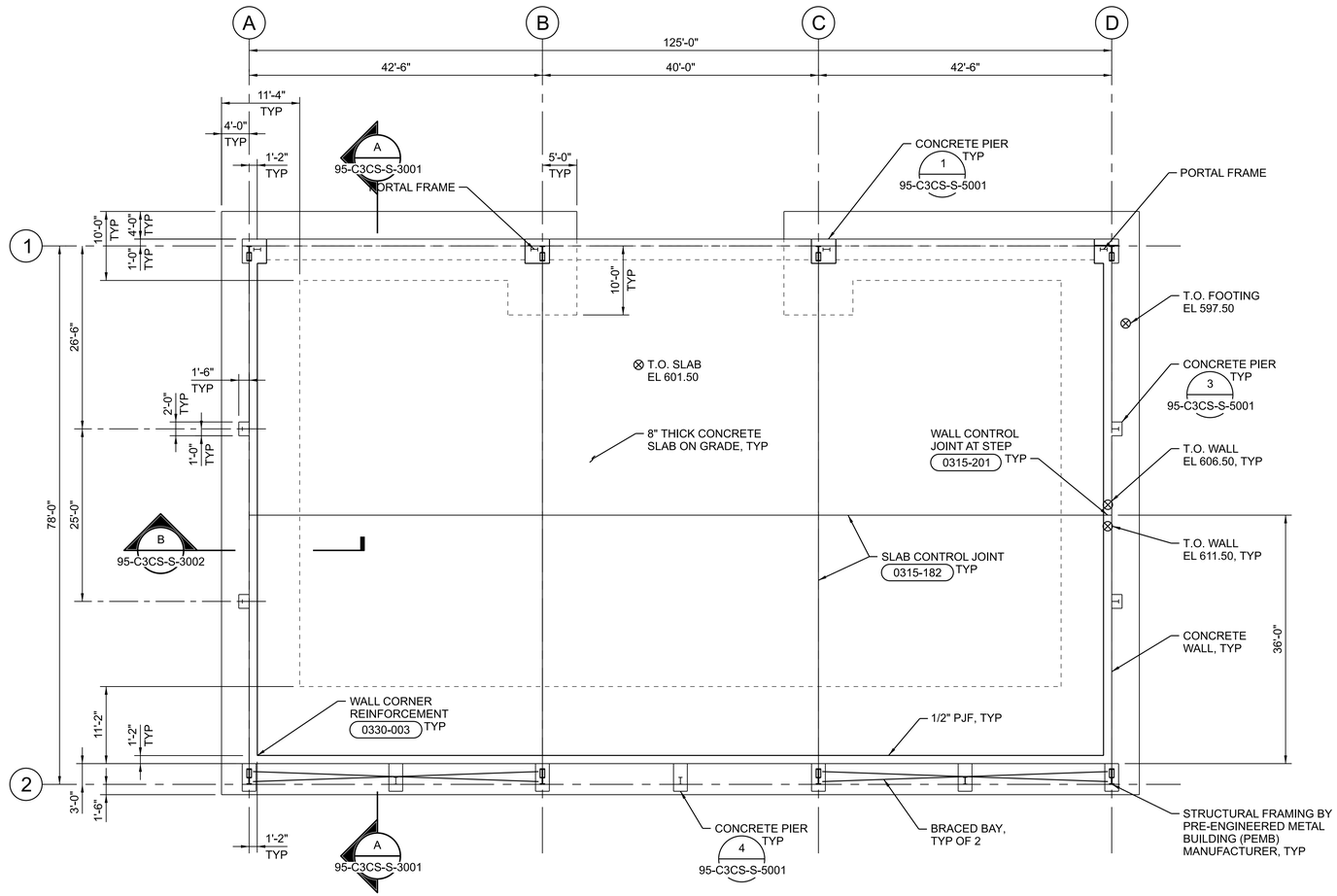
GENERAL FACILITY NOTES

1. FINISHED COMPOST STORAGE: BASE BID. SEE 01-G-0004 PAY QUANTITIES AND NOTES.
2. FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS 01-G-0020 AND 01-G-0021.
3. FOR STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS, SEE DRAWINGS 01-G-022 THROUGH 01-G-0024.



N

PLAN

3/32"=1'-0"

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

FINISHED COMPOSTING STORAGE BUILDING
STRUCTURAL
FOUNDATION PLAN - BASE BID

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	LSN	05/26
LEAD ENG.	RJL	5/26
FIELD MGR.		5/26

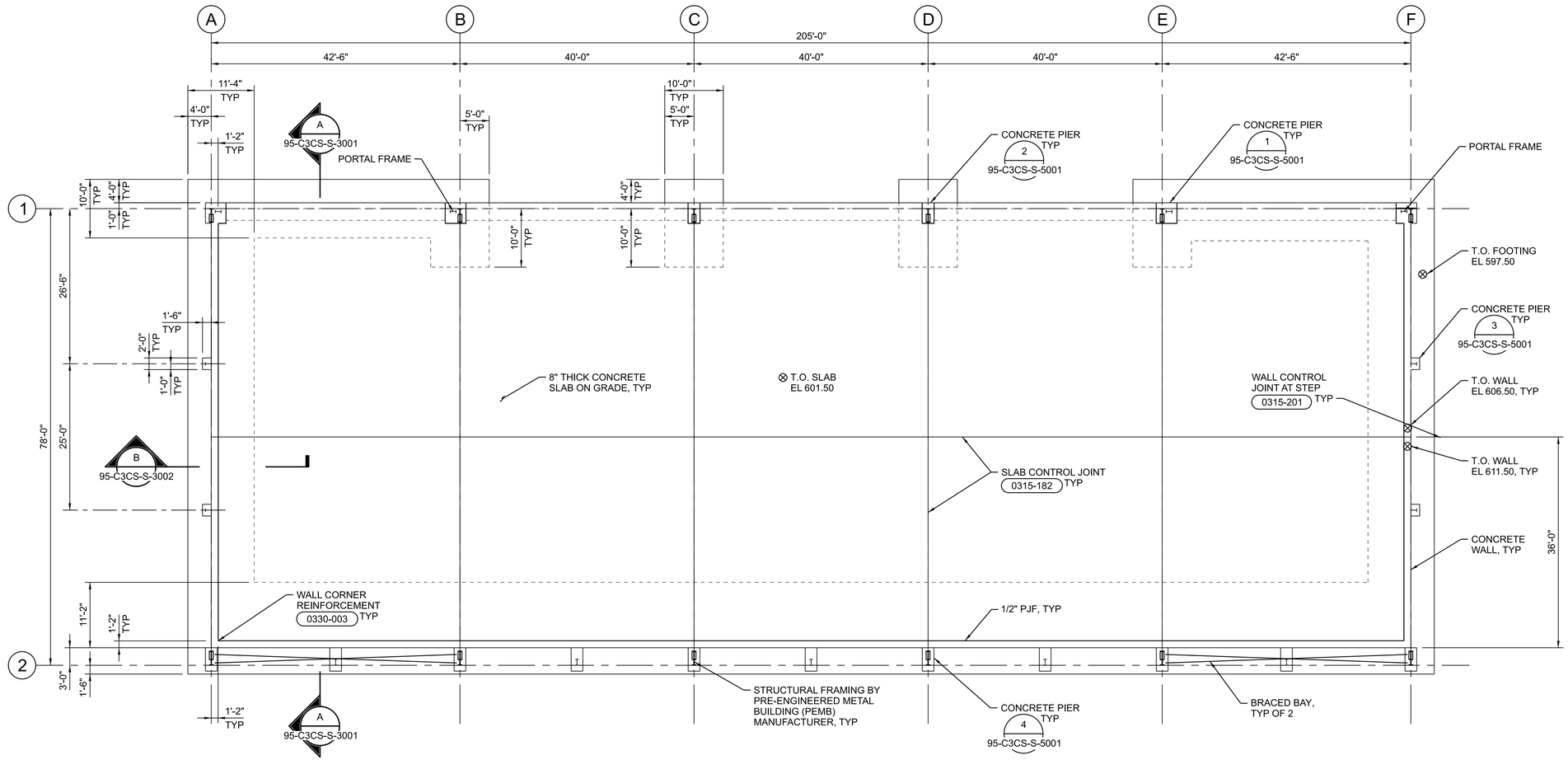
APPROVED:
DESIGN MANAGER

FILE: DRAWING: 95-C3CS-S-2000
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 289 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:40

GENERAL FACILITY NOTES

1. FINISHED COMPOST STORAGE: ALT03. SEE 01-G-0004 PAY QUANTITIES AND NOTES.
2. FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS 01-G-0020 AND 01-G-0021.
3. FOR STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS, SEE DRAWINGS 01-G-022 THROUGH 01-G-0024.



N

PLAN

3/32"=1'-0"

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PROFESSIONAL STRUCTURAL ENGINEER
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36346
OKLAHOMA
05/18/2026

FINISHED COMPOSTING STORAGE BUILDING
STRUCTURAL
FOUNDATION PLAN - ALTERNATE BID

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

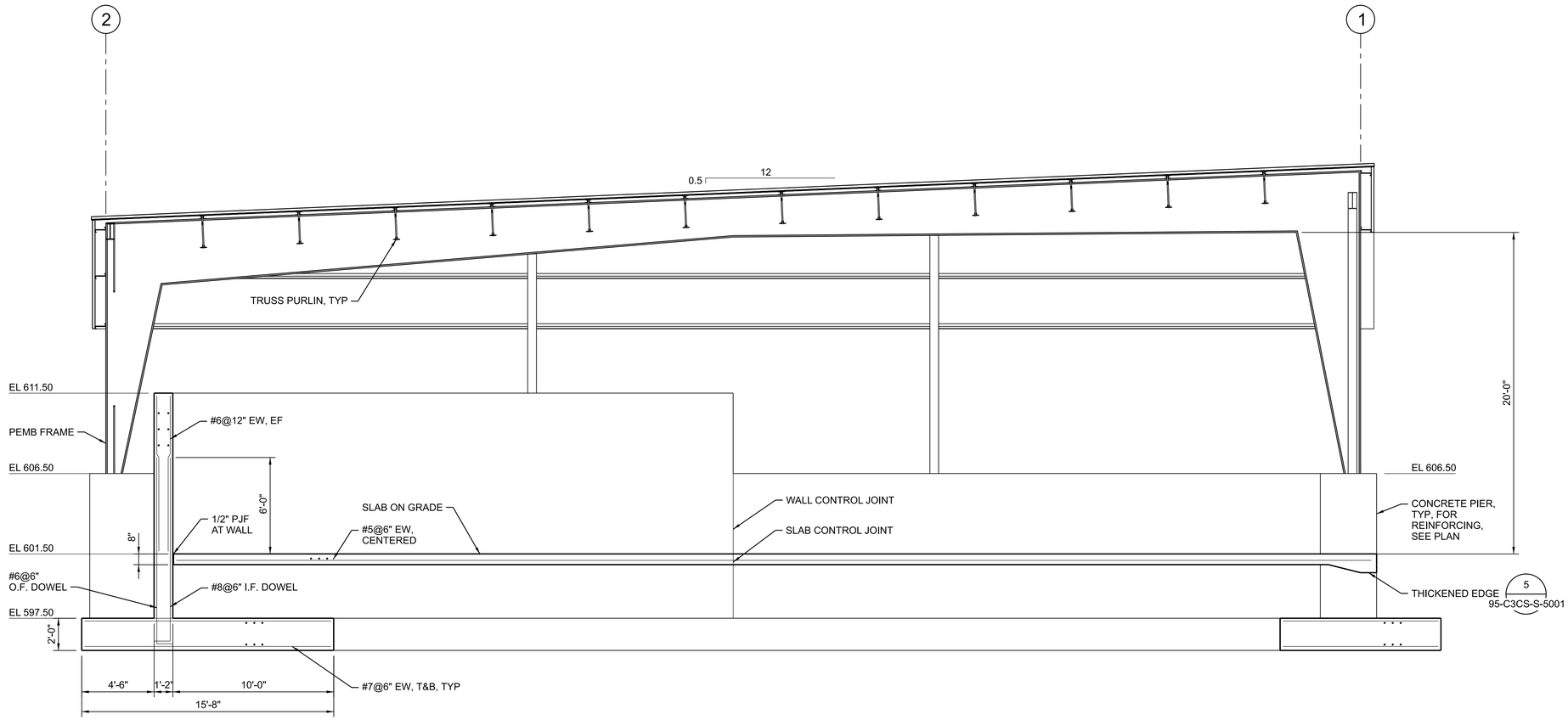
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN	05/26
HORIZONTAL:	LEAD ENG.	RJL	5/26
VERTICAL:	FIELD MGR.		5/26
			DESIGN MANAGER
FILE:	DRAWING: 95-C3CS-S-2010		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 290 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:41



A SECTION

1/4"=1'-0"

95-C3CS-S-2000
95-C3CS-S-2010
95-C3CS-S-3002

PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

FINISHED COMPOSTING STORAGE BUILDING
STRUCTURAL
SECTION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
PROFILE:	DESIGNED	BB		
	SURVEY			
HORIZONTAL:	PROJ. MGR.			
	LEAD ENG.			
VERTICAL:	FIELD MGR.			DESIGN MANAGER
FILE:	DRAWING: 95-C3CS-S-3001			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 291 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:40

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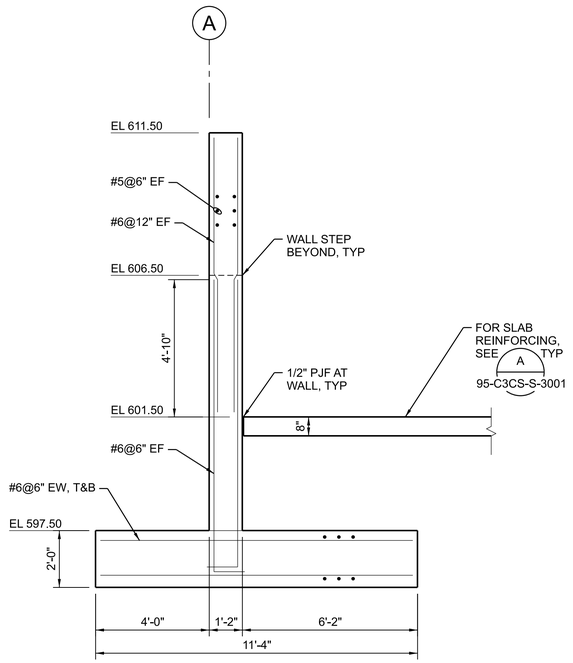

B SECTION

3/8"=1'-0"

95-C3CS-S-2000
95-C3CS-S-2010

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

FINISHED COMPOSTING STORAGE BUILDING
STRUCTURAL
SECTION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/18/26
LEAD ENG.		5/18/26
FIELD MGR.		5/18/26

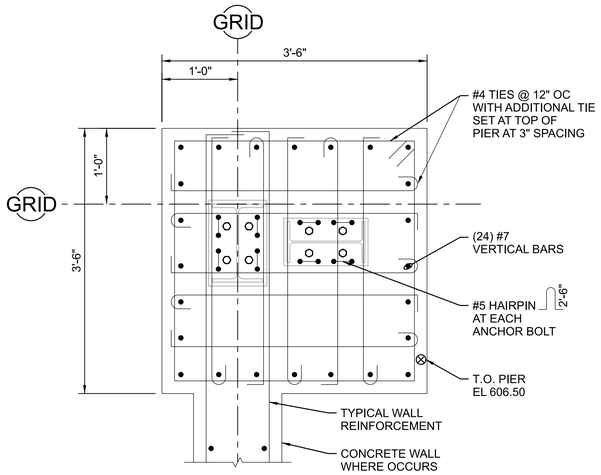
APPROVED:

DESIGN MANAGER

FILE: DRAWING: 95-C3CS-S-3002 DATE: MAY 2026

ATLAS PAGE NO: 3328 SHEET 292 OF 300 SHEETS

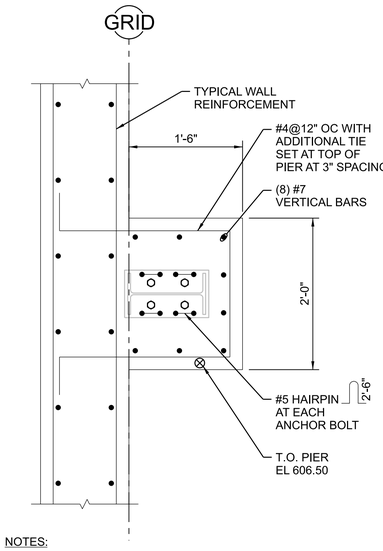
PLOT DATE: 13-MAY-2026 PLOT TIME: 11:39



NOTES:

1. HOOK BARS AT BOTTOM OF FOOTING.
2. COORDINATE WITH PEMB MANUFACTURER FOR FINAL BASE PLATE CONFIGURATIONS.

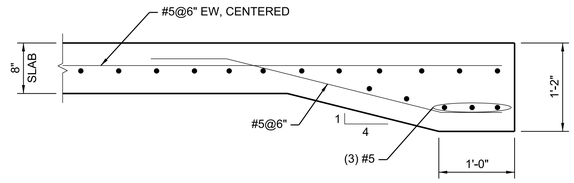
1 DETAIL
1"=1'-0"
95-C3CS-S-2000
95-C3CS-S-2010



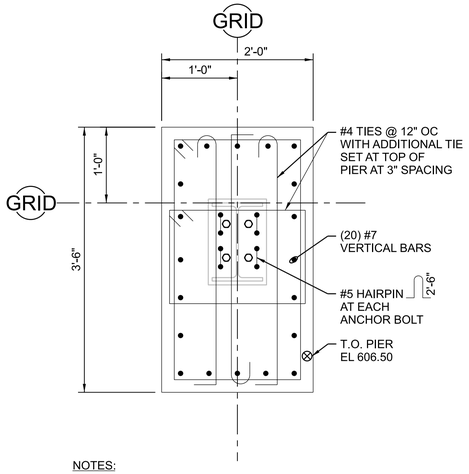
NOTES:

1. HOOK BARS AT BOTTOM OF FOOTING.
2. COORDINATE WITH PEMB MANUFACTURER FOR FINAL BASE PLATE CONFIGURATIONS.

3 DETAIL
1"=1'-0"
95-C3CS-S-2000
95-C3CS-S-2010



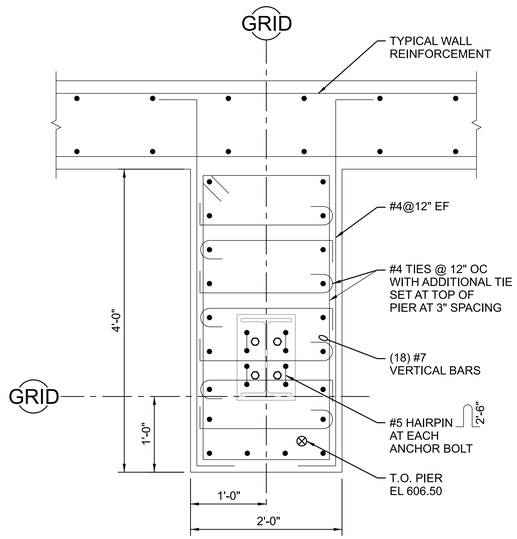
5 DETAIL
1"=1'-0"
95-C3CS-S-3001



NOTES:

1. HOOK BARS AT BOTTOM OF FOOTING.
2. COORDINATE WITH PEMB MANUFACTURER FOR FINAL BASE PLATE CONFIGURATIONS.

2 DETAIL
1"=1'-0"
95-C3CS-S-2010



NOTES:

1. HOOK BARS AT BOTTOM OF FOOTING.
2. COORDINATE WITH PEMB MANUFACTURER FOR FINAL BASE PLATE CONFIGURATIONS.

4 DETAIL
1"=1'-0"
95-C3CS-S-2000
95-C3CS-S-2010

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PROFESSIONAL STRUCTURAL ENGINEER
LUKE A. SCOGGINS
36346
OKLAHOMA
05/18/2026

FINISHED COMPOSTING STORAGE BUILDING
STRUCTURAL
DETAILS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

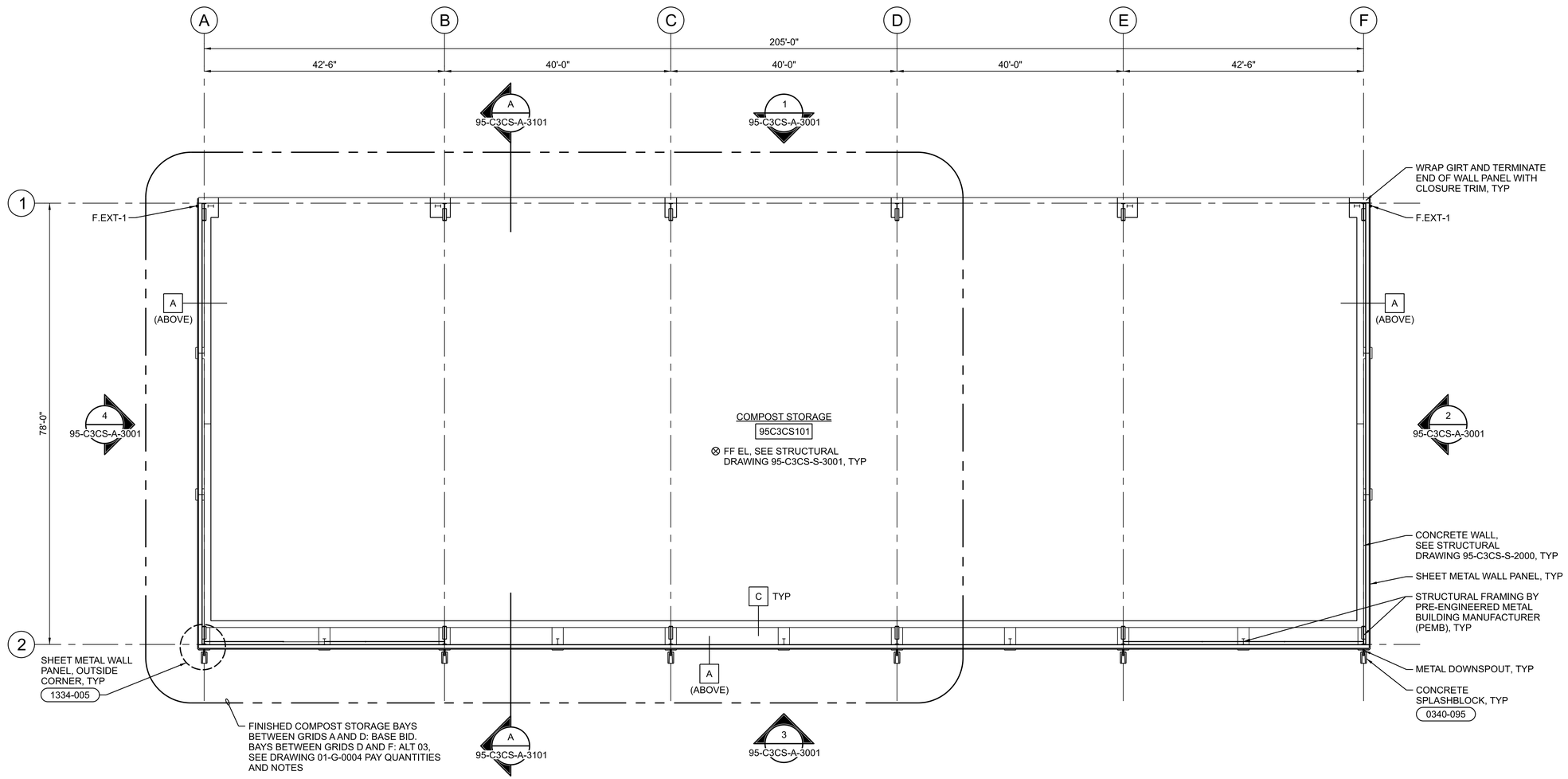
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP		APPROVED:
	DESIGNED	BB		
	SURVEY			
PROFILE:	PROJ. MGR.			
HORIZONTAL:	LEAD ENG.			
VERTICAL:	FIELD MGR.			DESIGN MANAGER
FILE:	DRAWING: 95-C3CS-S-5001			DATE: MAY 2026
ATLAS PAGE NO: 3328				SHEET 293 OF 300 SHEETS

PLOT DATE: 13-MAY-2026 PLOT TIME: 11:39

GENERAL SHEET NOTES

1. FOR GENERAL ARCHITECTURAL NOTES, MATERIAL SYMBOLS, LEGEND AND WALL TYPES, SEE DRAWING 01-G-0012.
2. FOR BUILDING CODE DATA AND LIFE SAFETY PLAN, SEE DRAWING 01-G-0015.



N

FLOOR PLAN

3/32"=1'-0"

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STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

FINISHED COMPOSTING STORAGE BUILDING
ARCHITECTURAL
FLOOR PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

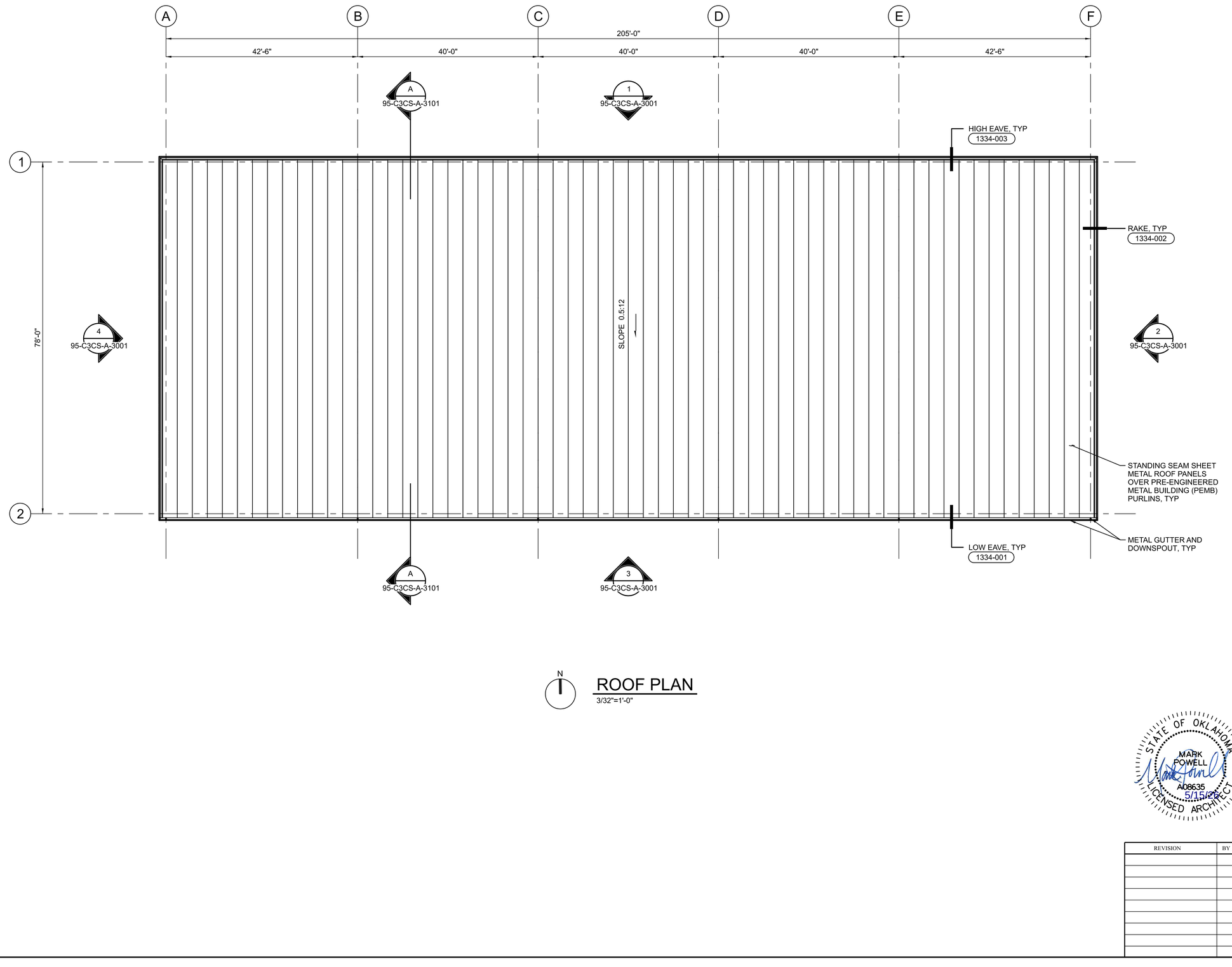
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP		APPROVED:
DESIGNED	BB		
SURVEY			
PROJ. MGR.	MSN	05/26	
LEAD ENG.	RZL	5/26	
FIELD MGR.		5/26	DESIGN MANAGER

FILE: DRAWING: 95-C3CS-A-2000 DATE: MAY 2026
ATLAS PAGE NO: 3328 SHEET 294 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:25



N

ROOF PLAN

3/32"=1'-0"

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STATE OF OKLAHOMA
MARK POWELL
A09635
5/15/26
LICENSED ARCHITECT

FINISHED COMPOSTING STORAGE BUILDING
ARCHITECTURAL
ROOF PLAN

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

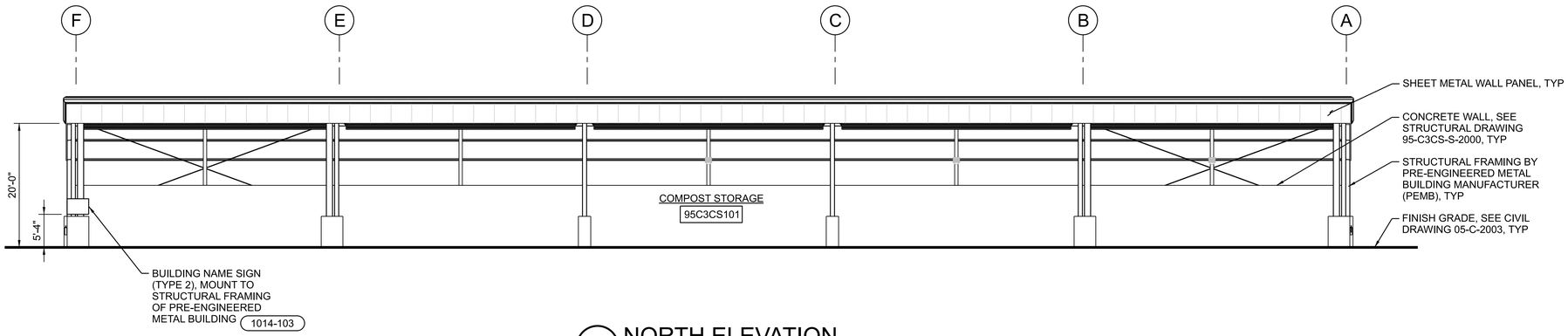
DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER

FILE: DRAWING: 95-C3CS-A-2100 DATE: MAY 2026

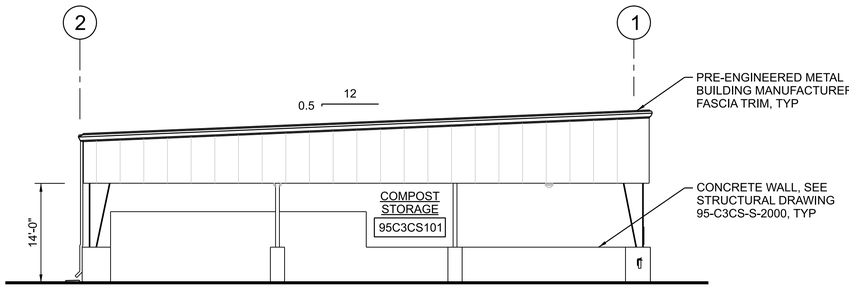
ATLAS PAGE NO: 3328 SHEET 295 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:26



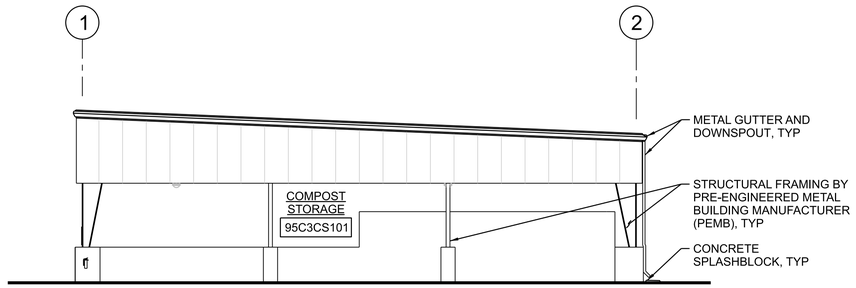
1 NORTH ELEVATION
3/32"=1'-0"

95-C3CS-A-2000
95-C3CS-A-2100



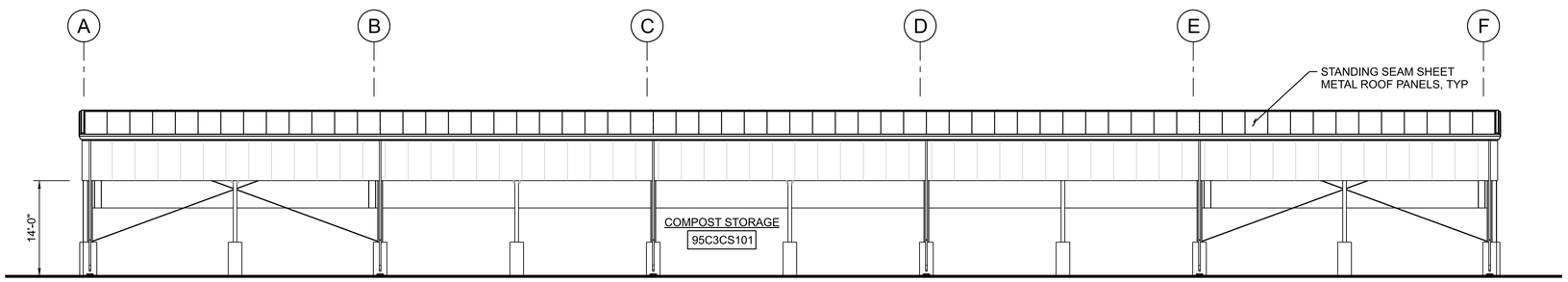
2 EAST ELEVATION
3/32"=1'-0"

95-C3CS-A-2000
95-C3CS-A-2100



4 WEST ELEVATION
3/32"=1'-0"

95-C3CS-A-2000
95-C3CS-A-2100



3 SOUTH ELEVATION
3/32"=1'-0"

95-C3CS-A-2000
95-C3CS-A-2100

STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

FINISHED COMPOSTING STORAGE BUILDING
ARCHITECTURAL ELEVATIONS

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MSN 05/26	
HORIZONTAL:	LEAD ENG.	AZL 5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C3CS-A-3001		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 296 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:26

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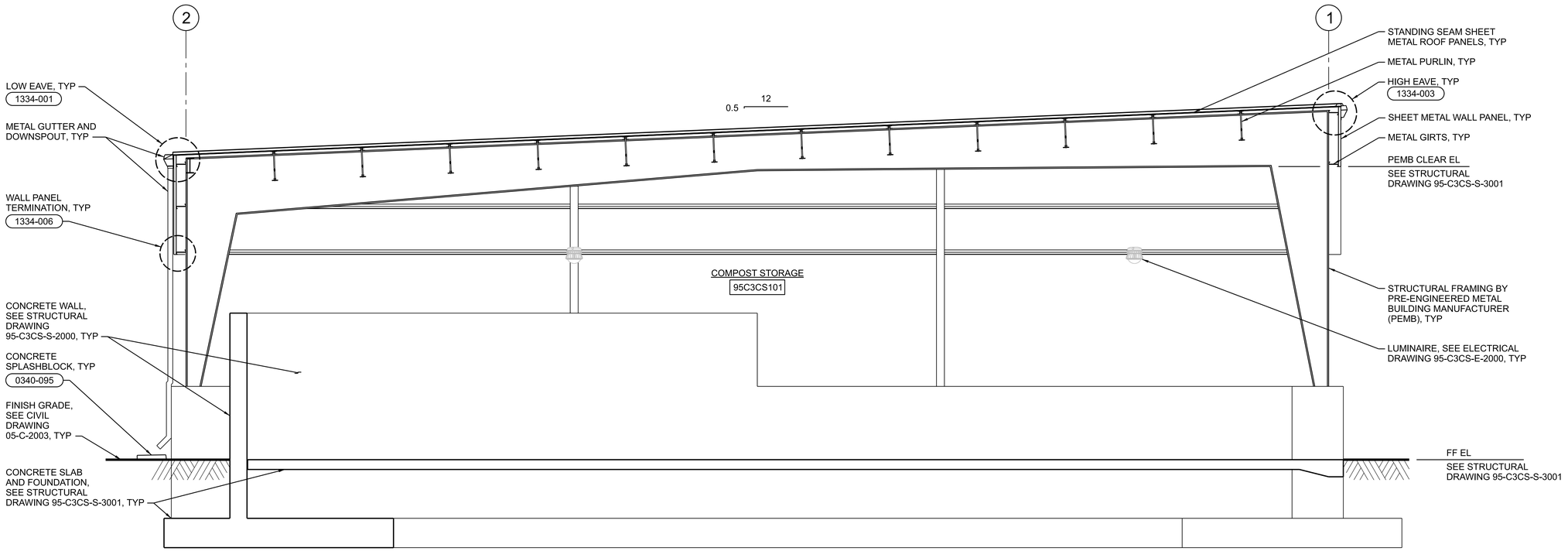

A SECTION

1/4"=1'-0"

95-C3CS-A-2000
95-C3CS-A-2100

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STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

FINISHED COMPOSTING STORAGE BUILDING
ARCHITECTURAL
SECTION

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.	DRAWN	AP	APPROVED:
	DESIGNED	BB	
	SURVEY		
PROFILE:	PROJ. MGR.	MN 05/7/26	
HORIZONTAL:	LEAD ENG.	5/26	
VERTICAL:	FIELD MGR.	5/26	DESIGN MANAGER
FILE:	DRAWING: 95-C3CS-A-3101		DATE: MAY 2026
ATLAS PAGE NO: 3328			SHEET 297 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:27

INTERIOR FINISH SCHEDULE

ABBREVIATIONS:

AS	AS SPECIFIED	EXST	EXISTING	MATL	MATERIAL
CLR	CLEAR	FCTY	FACTORY	RP	SHEET METAL ROOF PANEL
COL	COLOR	HGT	HEIGHT	SLR	SEALER
CONC	CONCRETE	GALV	GALVANIZED	WP	SHEET METAL WALL PANEL

NOTES:

NO. 1 NUMBERS IN THE FINISH COLUMN REFER TO PAINT SYSTEMS IN SPECIFICATION SECTION 09 90 00.
NO. 2 CODES IN COL COLUMN REFER TO COLOR LIST ON THIS DRAWING.
NO. 3 FOR EXTERIOR FINISHES AND COLORS, SEE EXTERIOR FINISH SCHEDULE ON THIS DRAWING.
NO. 4 PRE-ENGINEERED METAL BUILDING FINISHES AS SPECIFIED IN SECTION 13 34 19.

SPACE		FLOOR			BASE AND WAINSCOT					TYPICAL WALL			OTHER WALL			CEILING				MISCELLANEOUS				OTHER REQUIREMENTS
NO.	NAME	SUB FL	FINISH	COL	HGT	MATL	FINISH	COL	WALLS	MATL	FINISH	COL	MATL	FINISH	COL	HGT	MATL	FINISH	COL	ITEM	MATL	FINISH	COL	
95C3CS101	COMPOST STORAGE	CONC	SLR	CLR	---	---	---	---	---	WP	FCTY, 5 (NOTE 4)	P-2	CONC	SLR	CLR	VARIES	RP	FCTY, 5 (NOTE 4)	P-2	PRE-ENGINEERED BUILDING FRAMES / PURLINS & GIRTS	STL / GALV	5 / G60 (NOTE 4), 5	P-1 / P-1	

EXTERIOR FINISH SCHEDULE

NOTES:

NO. 1 NUMBERS IN THE FINISH COLUMN REFER TO PAINT SYSTEMS IN SPECIFICATION SECTION 09 90 00.
NO. 2 CODES IN COLOR COLUMN REFER TO COLOR LIST ON THIS DRAWING.

ITEM / MATERIAL	FINISH	COLOR
STANDING SEAM SHEET METAL ROOF PANELS	FACTORY	M-1
SHEET METAL WALL PANELS	FACTORY	M-2
GUTTERS AND DOWNSPOUTS	FACTORY	M-3
LUMINAIRES	FACTORY	DARK BRONZE
CONCRETE WALL	SEALER	CLEAR

COLOR LIST

NOTES:

NO. 1 COLOR SELECTIONS FOR THIS PROJECT MAY BE NOTED IN INTERIOR FINISH SCHEDULE, EXTERIOR FINISH SCHEDULE, PIPING SCHEDULE AND ON THE DRAWINGS BY THE LETTER-NUMBER COMBINATION IN THE MARK COLUMN OF THIS LIST.
NO. 2 SOME COLOR SELECTIONS MAY BE MADE IN VARIOUS SPECIFICATION SECTIONS.
NO. 3 VERIFY COLORS WITH OWNER BEFORE BEGINNING WORK. IF A COLOR SELECTION IS NOT MADE, REQUEST ONE FROM THE OWNER.

MARK	MATERIAL	MANUFACTURER (NOTE 3)	COLOR (NOTE 3)
MISCELLANEOUS			
M-1	STANDING SEAM SHEET METAL ROOF PANELS	NUCOR	DESERT SAND
M-2	SHEET METAL WALL PANELS	NUCOR	DESERT SAND
M-3	GUTTERS AND DOWNSPOUTS	NUCOR	DESERT SAND
PAINT			
P-1	PAINT (PRE-ENGINEERED METAL BUILDING FRAME)	SHERWIN WILLIAMS	SW6044 - DOESKIN (MATCH M-2)

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STATE OF OKLAHOMA
MARK POWELL
A08635
5/15/26
LICENSED ARCHITECT

FINISHED COMPOSTING STORAGE BUILDING
ARCHITECTURAL SCHEDULES

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

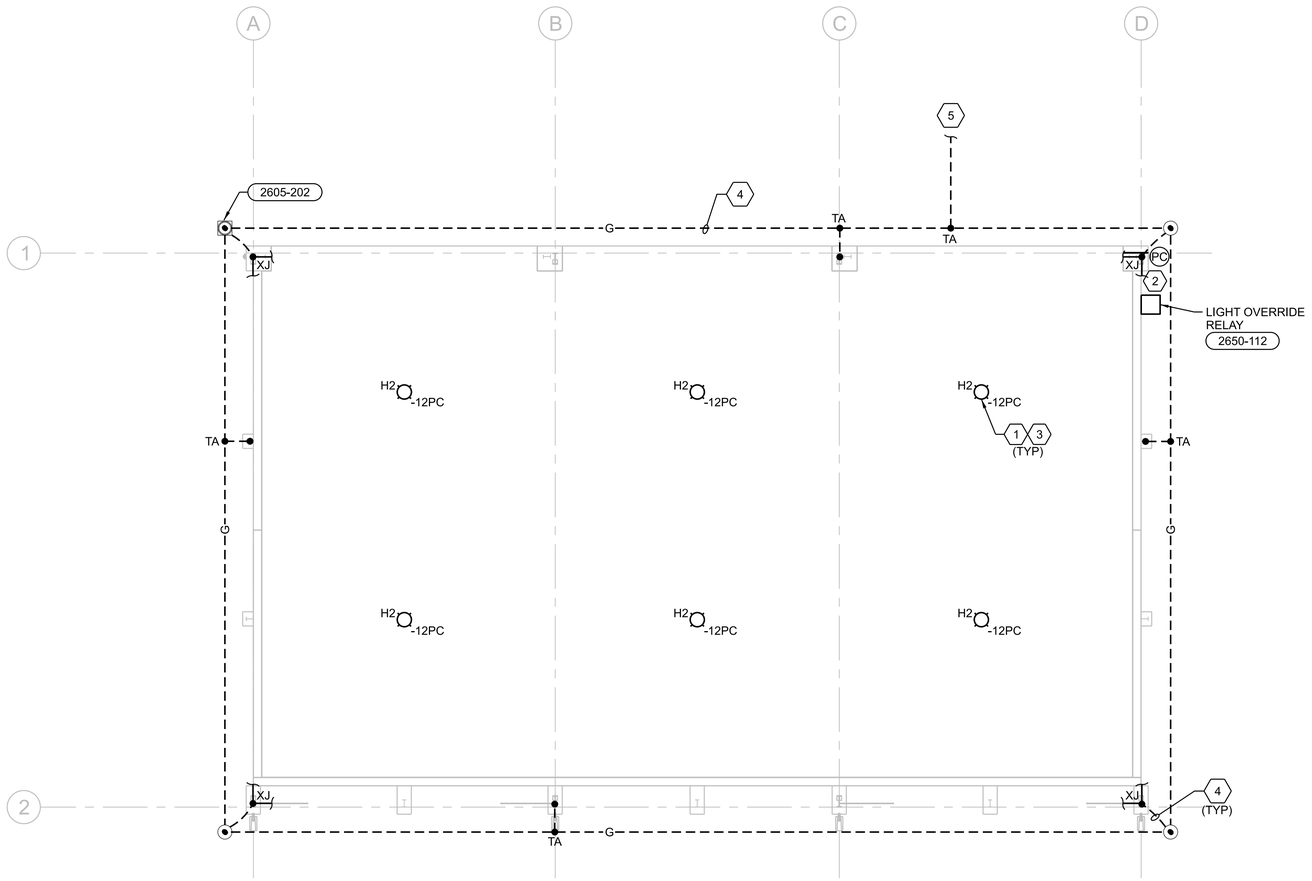
REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	RZL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
FILE: DRAWING: 95-C3CS-A-6001
DATE: MAY 2026
ATLAS PAGE NO: 3328
SHEET 298 OF 300 SHEETS

PLOT DATE: 14-MAY-2026 PLOT TIME: 17:25



N

FACILITY PLAN

3/32"=1'-0"

GENERAL SHEET NOTES

1. FINISHED COMPOST STORAGE: BASE BID. SEE 01-G-0004 PAY QUANTITIES AND NOTES.
2. GROUND RING CONDUCTOR BURIED MINIMUM 30" BELOW FINISHED GRADE.
3. LIGHTING SHOULD BE ENERGIZED BY H090-DEW1-LVP01 LOCATED IN THE DEWATERING BUILDING.

SHEET KEYNOTES

1. INSTALL LIGHT FIXTURE TYPE H2 SUCH THAT THE TOP OF THE FIXTURE IS 14'-6" FROM FINISHED FLOOR. LIGHTS INSTALLATION METHOD SHALL BE SUCH TO ELIMINATE ANY MOVEMENT FROM INCLEMENT WEATHER.
2. PHOTOCELL PC TO BE MOUNTED FACING NORTH.
3. LUMINAIRES TO BE CONTROLLED VIA PHOTOCELL WITH MANUAL OVERRIDE.
4. #4/0 AWG STRANDED, BARE, TIN-PLATED COPPER.
5. BOND TO DEWATERING GROUNDING SYSTEM.

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
Blair I. Beaderstadt
05/18/2026

FINISHED COMPOST STORAGE
ELECTRICAL
FACILITY PLAN
BASE BID

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

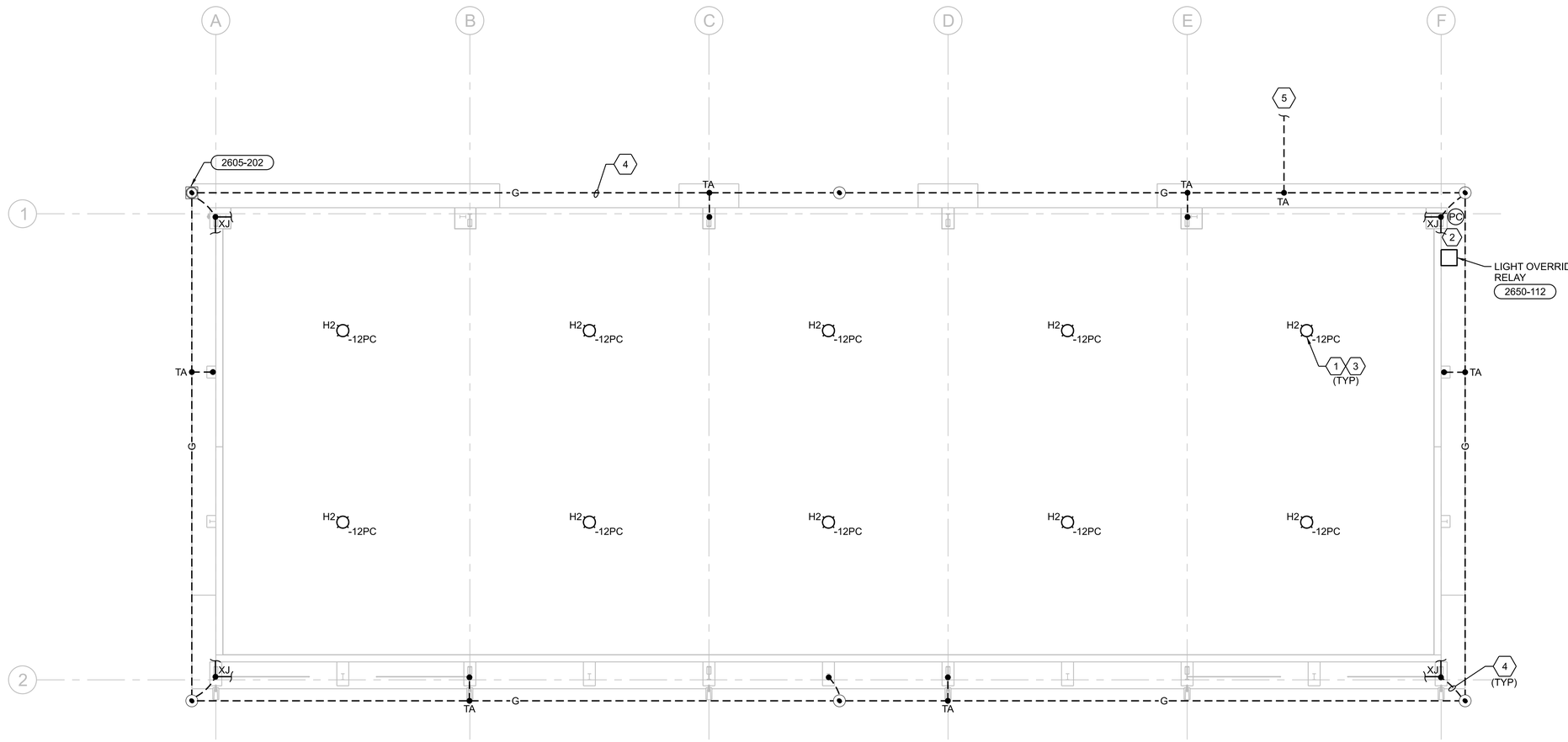
PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.		05/26
LEAD ENG.		5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 95-C3CS-E-2000
ATLAS PAGE NO: 3328
SHEET 299 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:02



N

FACILITY PLAN

3/32"=1'-0"

GENERAL SHEET NOTES

1. FINISHED COMPOST STORAGE: ALT03. SEE 01-G-004 PAY QUANTITIES AND NOTES.
2. GROUND RING CONDUCTOR BURIED MINIMUM 30" BELOW FINISHED GRADE.
3. LIGHTING SHOULD BE ENERGIZED BY H090-DEW1-LVP01 LOCATED IN THE DEWATERING BUILDING.

SHEET KEYNOTES

1. INSTALL LIGHT FIXTURE TYPE H2 SUCH THAT THE TOP OF THE FIXTURE IS 14'-6" FROM FINISHED FLOOR. LIGHTS INSTALLATION METHOD SHALL BE SUCH TO ELIMINATE ANY MOVEMENT FROM INCLEMENT WEATHER.
2. PHOTOCELL PC TO BE MOUNTED FACING NORTH.
3. LUMINAIRES TO BE CONTROLLED VIA PHOTOCELL WITH MANUAL OVERRIDE.
4. #4/0 AWG STRANDED, BARE, TIN-PLATED COPPER.
5. BOND TO DEWATERING GROUNDING SYSTEM.

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LICENSED PROFESSIONAL ENGINEER
BLAIR I. BEADERSTADT
32520
OKLAHOMA
05/18/2026

FINISHED COMPOST STORAGE
ELECTRICAL
FACILITY PLAN
ALTERNATE BID

WFXQ7901

HAIKEY CREEK WWTP
BIOSOLIDS IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Jacobs

REVISION	BY	DATE

PLAN SCALE: NOTE ON DWG.
PROFILE:
HORIZONTAL:
VERTICAL:

DRAWN	AP	
DESIGNED	BB	
SURVEY		
PROJ. MGR.	MSN	05/26
LEAD ENG.	BJL	5/26
FIELD MGR.		5/26

APPROVED:
DESIGN MANAGER
DATE: MAY 2026

FILE: DRAWING: 95-C3CS-E-2010
ATLAS PAGE NO: 3328
SHEET 300 OF 300 SHEETS

PLOT DATE: 12-MAY-2026 PLOT TIME: 13:02