WASTEWATER TREATMENT PLANT IMPROVEMENTS

FOR THE

CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS

WAUKESHA, WISCONSIN

SEPTEMBER 2013

VOLUME 1

CITY OF WAUKESHA

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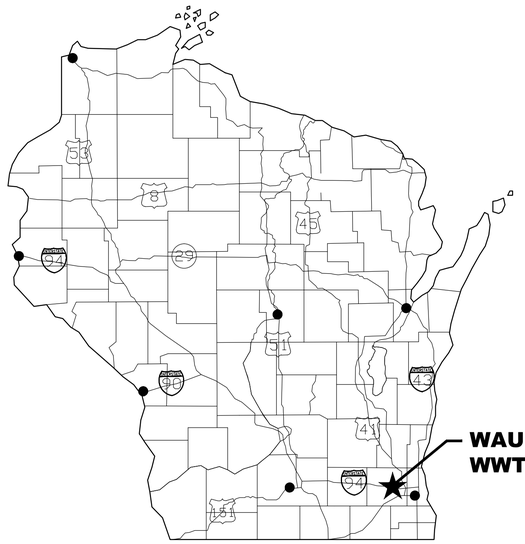
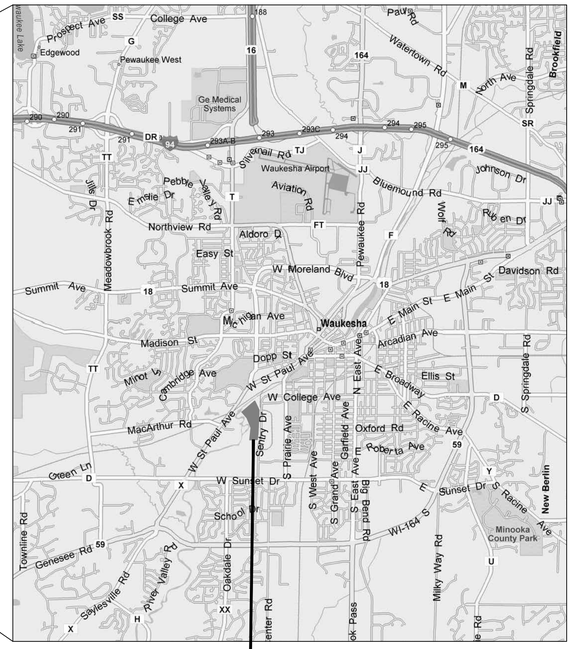


PROJECT LOCATION MAP
NO SCALE



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FOR STRAND ASSOCIATES, INC.

SCOTT W. STEARNS — DATE 8/16/2013
32938 — LICENSE # — RENEWAL DATE 7/31/2014

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MIKE SILL — DATE 8/16/2013
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PAGES OR SHEETS COVERED BY THIS CERTIFICATION:
ALL HVAC & PLUMBING DRAWINGS

JOB NO.
1226.004

PROJECT MGR.
SCOTT W. STEARNS

STRAND ASSOCIATES®

SHEET
1
00-G0.01

File: S:\MAD\1200--1299\1226\004\Acad\Drawings\00-G0.01.dwg Time: Aug 15, 2013 - 9:28am

VOLUME 1

SHEET NO.	DRAWING NO.	TITLE
00-GENERAL		
1	00-G0.01	VOLUME 1 TITLE SHEET AND LOCATION MAPS
2	00-G0.02	LIST OF DRAWINGS - VOLUME 1
3	00-G0.03	DESIGN CRITERIA - 1
4	00-G0.04	DESIGN CRITERIA - 2
5	00-G0.05	STANDARD SYMBOLS - 1
6	00-G0.06	STANDARD SYMBOLS - 2
7	00-G0.07	STANDARD SYMBOLS - 3
8	00-G0.08	ABBREVIATIONS
9	00-G6.01	OVERALL PROCESS SCHEMATIC
10	00-G6.02	DIGESTER SLUDGE FEED AND TRANSFER SCHEMATIC
11	00-G6.03	DIGESTER MIXING SCHEMATIC
12	00-G6.04	GAS SAFETY AND STORAGE SCHEMATIC
13	00-G6.05	GAS HANDLING SCHEMATIC
14	00-G6.06	SLUDGE HOT WATER SYSTEM SCHEMATIC - 1 OF 2
15	00-G6.07	SLUDGE HOT WATER SYSTEM SCHEMATIC - 2 OF 2
16	00-G6.08	CENTRATE MIXING AND RETURN SCHEMATIC
17	00-G6.09	DEWATERING SCHEMATIC
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18	02-D1.01	OVERALL SITE DEMOLITION PLAN
19	02-C1.01	OVERALL SITE LOCATION PLAN
20	02-C1.02	OVERALL SITE GRADING PLAN
21	02-C1.03	DETAILED SITE GRADING PLAN - 1
22	02-C1.04	DETAILED SITE GRADING PLAN - 2
23	02-C1.05	DETAILED SITE GRADING PLAN - 3
24	02-C1.06	DETAILED SITE GRADING PLAN - 4
25	02-C1.07	DETAILED SITE GRADING PLAN - 5
26	02-C1.08	DETAILED SITE GRADING PLAN - 6
27	02-C1.09	DETAILED SITE GRADING PLAN - 7
28	02-C1.10	DETAILED SITE GRADING PLAN - 8
29	02-C1.11	OUTFALL CONSTRUCTION - PLAN AND PROFILE AND SITE DETAILS
30	02-C1.12	OUTFALL CONSTRUCTION - CROSS SECTIONS
31	02-CL1.01	EROSION CONTROL PLAN
32	02-CL1.02	LANDSCAPING PLAN AND DETAILS
33	02-CMD1.01	YARD PIPING DEMOLITION PLAN - 1
34	02-CMD1.02	YARD PIPING DEMOLITION PLAN - 2
35	02-CMD1.03	YARD PIPING DEMOLITION PLAN - 3
36	02-CM1.01	OVERALL YARD PIPING PLAN
37	02-CM1.02	DETAILED YARD PIPING PLAN - 1
38	02-CM1.03	DETAILED YARD PIPING PLAN - 2
39	02-CM1.04	DETAILED YARD PIPING PLAN - 3
40	02-CM1.05	DETAILED YARD PIPING PLAN - 4
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42	02-CM1.07	DETAILED YARD PIPING PLAN - 6
43	02-CM1.08	DETAILED YARD PIPING PLAN - 7
44	02-CM1.09	DETAILED YARD PIPING PLAN - 8
45	02-CED1.01	ELECTRICAL SITE DEMOLITION PLAN - 1
46	02-CED1.02	ELECTRICAL SITE DEMOLITION PLAN - 2
47	02-CE1.01	OVERALL SITE ELECTRICAL PLAN
48	02-CE1.02	DETAILED SITE ELECTRICAL PLAN - 1
49	02-CE1.03	DETAILED SITE ELECTRICAL PLAN - 2
50	02-CE1.04	DETAILED SITE ELECTRICAL PLAN - 3
51	02-CE1.05	DETAILED SITE ELECTRICAL PLAN - 4
52	02-CE1.06	DETAILED SITE ELECTRICAL PLAN - 5
53	02-CE1.07	DETAILED SITE ELECTRICAL PLAN - 6
54	02-CE1.08	DETAILED SITE ELECTRICAL PLAN - 7
55	02-CE1.09	DETAILED SITE ELECTRICAL PLAN - 8
100-SEPTAGE RECEIVING STATION		
56	100-AS1.01	SEPTAGE RECEIVING STATION - ROOF PLAN
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57	110-D1.01	PRELIMINARY TREATMENT BUILDING - BASEMENT DEMOLITION PLAN
58	110-D1.02	PRELIMINARY TREATMENT BUILDING - FIRST FLOOR DEMOLITION PLAN
59	110-AS1.01	PRELIMINARY TREATMENT BUILDING - ROOF PLAN
60	110-ASM1.01	PRELIMINARY TREATMENT BUILDING - BASEMENT PLAN
61	110-ASM1.02	PRELIMINARY TREATMENT BUILDING - FIRST FLOOR PLAN
62	110-H1.01	PRELIMINARY TREATMENT BUILDING - BASEMENT HVAC PLAN
63	110-PH1.02	PRELIMINARY TREATMENT BUILDING - FIRST FLOOR PLUMBING AND HVAC PLAN
64	110-E1.01	PRELIMINARY TREATMENT BUILDING - BASEMENT ELECTRICAL PLAN
65	110-E1.02	PRELIMINARY TREATMENT BUILDING - FIRST FLOOR ELECTRICAL PLAN
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66	115-AS1.01	ROOF PLAN
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67	120-D1.01	PRIMARY CLARIFIERS - DEMOLITION PLAN
68	120-AS1.01	PRIMARY CLARIFIERS - PLAN

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69	140-D1.01	BASEMENT DEMOLITION PLAN
70	140-D1.02	PRIMARY EFFLUENT PUMP BUILDING - FIRST FLOOR DEMOLITION PLAN
71	140-ASM1.01	PRIMARY EFFLUENT PUMP BUILDING - BASEMENT PLAN
72	140-PH1.01	PRIMARY EFFLUENT PUMP BUILDING - BASEMENT PLUMBING AND HVAC PLAN
73	140-SPH1.02	PRIMARY EFFLUENT PUMP BUILDING - FIRST FLOOR STRUCTURAL, PLUMBING, AND HVAC PLAN
74	140-E1.01	PRIMARY EFFLUENT PUMP BUILDING - BASEMENT ELECTRICAL PLAN
75	140-E1.02	PRIMARY EFFLUENT PUMP BUILDING - FIRST FLOOR ELECTRICAL PLAN
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76	150-D1.01	SECOND STAGE PUMPING STATION - BASEMENT DEMOLITION PLAN
77	150-D1.02	SECOND STAGE PUMPING STATION - FIRST FLOOR DEMOLITION PLAN
78	150-ASM1.01	SECOND STAGE PUMPING STATION - BASEMENT PLAN AND SECTION
79	150-ASM1.02	SECOND STAGE PUMPING STATION - FIRST FLOOR PLAN
80	150-PH1.01	SECOND STAGE PUMPING STATION - BASEMENT PLUMBING AND HVAC PLAN
81	150-PH1.02	SECOND STAGE PUMPING STATION - FIRST FLOOR PLUMBING, AND HVAC PLAN
82	150-E1.01	SECOND STAGE PUMPING STATION - BASEMENT ELECTRICAL PLAN
83	150-E1.02	SECOND STAGE PUMPING STATION - FIRST FLOOR ELECTRICAL PLAN
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84	200-DASME1.01	AERATION AND FINAL CLARIFIER SPLITTER BOXES - PLANS
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85	210-DASM1.01	AERATION TANKS - PLAN
86	210-E1.01	AERATION TANKS - ELECTRICAL PLAN
220-BLOWER BUILDING		
87	220-D1.01	BLOWER BUILDING - DEMOLITION PLAN
88	220-D1.02	BLOWER BUILDING - MEZZANINE DEMOLITION PLAN
89	220-AS1.01	BLOWER BUILDING - ROOF PLAN
90	220-ASM1.01	BLOWER BUILDING - PLAN
91	220-ASM3.01	BLOWER BUILDING - SECTIONS
92	220-H1.01	BLOWER BUILDING - HVAC PLAN
93	220-H1.02	BLOWER BUILDING - MEZZANINE HVAC PLAN
94	220-E1.01	BLOWER BUILDING - ELECTRICAL PLAN
95	220-E1.02	BLOWER BUILDING - MEZZANINE ELECTRICAL PLAN
230-FINAL CLARIFIERS		
96	230-D1.01	FINAL CLARIFIERS - DEMOLITION PLAN AND SECTION
97	230-ASM1.01	FINAL CLARIFIERS - PLAN
98	230-ASM3.01	FINAL CLARIFIERS - SECTION AND DETAILS
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99	236-DASM1.01	SECONDARY EFFLUENT DIVERSION STRUCTURE - PLANS AND SECTIONS
240-RAS/WAS BUILDING		
100	240-D1.01	RAS/WAS BUILDING - BASEMENT DEMOLITION PLAN
101	240-D1.02	RAS/WAS BUILDING - FIRST FLOOR DEMOLITION PLAN
102	240-AS1.01	RAS/WAS BUILDING - ROOF PLAN
103	240-ASM1.02	RAS/WAS BUILDING - FIRST FLOOR PLAN
104	240-H1.01	RAS/WAS BUILDING - BASEMENT HVAC PLAN
105	240-PH1.02	RAS/WAS BUILDING - FIRST FLOOR PLUMBING AND HVAC PLAN
106	240-ASME1.01	RAS/WAS BUILDING - BASEMENT ELECTRICAL PLAN
107	240-E1.02	RAS/WAS BUILDING - FIRST FLOOR ELECTRICAL PLAN
250-CHEMICAL FEED AND STORAGE BUILDING		
108	250-D1.01	CHEMICAL FEED AND STORAGE BUILDING - BASEMENT DEMOLITION PLAN
109	250-D1.02	CHEMICAL FEED AND STORAGE BUILDING - FIRST FLOOR DEMOLITION PLAN
110	250-ASM1.01	CHEMICAL FEED AND STORAGE BUILDING - FLOOR PLANS
111	250-ASM3.01	CHEMICAL FEED AND STORAGE BUILDING - BUILDING SECTIONS
112	250-PH1.01	CHEMICAL FEED AND STORAGE BUILDING - BASEMENT PLUMBING AND HVAC PLAN
113	250-PH1.02	CHEMICAL FEED AND STORAGE BUILDING - FIRST FLOOR PLUMBING AND HVAC PLAN
114	250-FP1.01	CHEMICAL FEED AND STORAGE BUILDING - FIRE PROTECTION PLANS
115	250-E1.01	CHEMICAL FEED AND STORAGE BUILDING - BASEMENT ELECTRICAL PLAN
116	250-E1.02	CHEMICAL FEED AND STORAGE BUILDING - FIRST FLOOR ELECTRICAL PLAN
310-FILTER BUILDING		
117	310-D1.01	FILTER BUILDING - BASEMENT DEMOLITION PLAN
118	310-D1.02	FILTER BUILDING - FIRST FLOOR DEMOLITION PLAN
119	310-ASM1.01	FILTER BUILDING - BASEMENT PLAN - 1
120	310-ASM1.02	FILTER BUILDING - BASEMENT PLAN - 2
121	310-ASM1.03	FILTER BUILDING - BASEMENT PLAN - 3
122	310-ASM1.04	FILTER BUILDING - FIRST FLOOR PLAN - 1
123	310-ASM1.05	FILTER BUILDING - FIRST FLOOR PLAN - 2
124	310-ASM1.06	FILTER BUILDING - FIRST FLOOR PLAN - 3
125	310-ASM3.01	FILTER BUILDING - SECTIONS - 1
126	310-H1.01	FILTER BUILDING - BASEMENT HVAC PLAN
127	310-H1.02	FILTER BUILDING - FIRST FLOOR HVAC PLAN
128	310-FP1.01	FILTER BUILDING - FIRE PROTECTION PLANS
129	310-E1.01	FILTER BUILDING - BASEMENT ELECTRICAL PLAN
130	310-E1.02	FILTER BUILDING - FIRST FLOOR ELECTRICAL PLAN
330-DISINFECTION BUILDING		
131	330-D1.01	PRETREATMENT BUILDING - DEMOLITION PLAN
132	330-AS1.01	PRETREATMENT BUILDING - FLOOR AND ROOF PLANS
133	330-P1.01	PRETREATMENT BUILDING - PLUMBING PLANS
134	330-H1.01	PRETREATMENT BUILDING - HVAC PLAN
135	330-E1.01	PRETREATMENT BUILDING - ELECTRICAL PLAN

SHEET NO.	DRAWING NO.	TITLE
400-SLUDGE THICKENING BUILDING		
136	400-D1.01	SLUDGE THICKENING BUILDING - BASEMENT DEMOLITION PLAN - NORTH
137	400-D1.02	SLUDGE THICKENING BUILDING - BASEMENT DEMOLITION PLAN - SOUTH
138	400-D1.03	SLUDGE THICKENING BUILDING - FIRST FLOOR DEMOLITION PLAN - NORTH AND SOUTH
139	400-ASM1.01	SLUDGE THICKENING BUILDING - BASEMENT PLAN - SOUTH
140	400-H1.01	SLUDGE THICKENING BUILDING - BASEMENT HVAC PLAN - NORTH
141	400-H1.01	SLUDGE THICKENING BUILDING - BASEMENT HVAC PLAN - SOUTH
142	400-H1.01	SLUDGE THICKENING BUILDING - FIRST FLOOR PLUMBING AND HVAC PLAN
143	400-E1.01	SLUDGE THICKENING BUILDING - BASEMENT ELECTRICAL PLAN - NORTH
144	400-E1.02	SLUDGE THICKENING BUILDING - BASEMENT ELECTRICAL PLAN - SOUTH
145	400-E1.03	SLUDGE THICKENING BUILDING - FIRST FLOOR ELECTRICAL PLAN - NORTH
430-DEWATERING BUILDING		
146	430-D1.01	DEWATERING BUILDING - BASEMENT DEMOLITION PLAN
147	430-D1.02	DEWATERING BUILDING - FIRST FLOOR DEMOLITION PLAN
148	430-D1.03	DEWATERING BUILDING - SECOND FLOOR DEMOLITION PLAN
149	430-AS1.01	DEWATERING BUILDING - ROOF PLAN
150	430-ASM1.01	DEWATERING BUILDING - BASEMENT PLAN
151	430-ASM1.02	DEWATERING BUILDING - FIRST FLOOR PLAN
152	430-ASM1.03	DEWATERING BUILDING - SECOND FLOOR PLAN
153	430-ASM3.01	DEWATERING BUILDING - SECTIONS
154	430-M6.01	DEWATERING BUILDING - POLYMER FEED SYSTEM AND WASHWATER SCHEMATICS
155	430-P1.01	DEWATERING BUILDING - FIRST FLOOR PLUMBING PLAN
156	430-P1.02	DEWATERING BUILDING - SECOND FLOOR PLUMBING PLAN
157	430-P7.01	DEWATERING BUILDING - PLUMBING ISOMETRICS
158	430-H1.01	DEWATERING BUILDING - BASEMENT HVAC PLAN
159	430-H1.02	DEWATERING BUILDING - FIRST FLOOR HVAC PLAN
160	430-H1.03	DEWATERING BUILDING - SECOND FLOOR HVAC PLAN
161	430-E1.01	DEWATERING BUILDING - BASEMENT ELECTRICAL PLAN
162	430-E1.02	DEWATERING BUILDING - FIRST FLOOR ELECTRICAL PLAN
163	430-E1.03	DEWATERING BUILDING - SECOND FLOOR ELECTRICAL PLAN
440-SLUDGE STORAGE BUILDING		
164	440-AS1.01	SLUDGE STORAGE BUILDING - ROOF PLAN
450-LIQUID SLUDGE STORAGE TANK		
165	450-AS1.01	LIQUID SLUDGE STORAGE TANK - ROOF PLAN
166	450-DAS1.01	LIQUID SLUDGE STORAGE TANK - ELECTRICAL PLAN

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

LIST OF DRAWINGS VOLUME - 1

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO.
1226.004

PROJECT MGR.
SCOTT W. STEARNS

STRAND ASSOCIATES®

SHEET
2
00-G0.02

DRAFTING SYMBOLS

DETAIL NOTATION

A / 99-ASM5.01 — DETAIL LETTER; DRAWING THAT DETAIL IS SHOWN ON

SECTION NOTATION

1 / 99-ASM3.01 — SECTION NUMBER; DRAWING THAT SECTION IS SHOWN ON

SECTION (SCALE) 1 / 99-ASM3.01 — SECTION NUMBER; DRAWING THAT SECTION IS SHOWN ON

ELEVATION NOTATION

A / 99-ASM2.01 — ELEVATION LETTER; DRAWING THAT ELEVATION IS SHOWN ON

EQUIPMENT IDENTIFICATION

Type / Group — TYPE OF EQUIPMENT; EQUIPMENT GROUP

NAME / 9999 — ROOM IDENTIFICATION

101A — DOOR IDENTIFICATION

999 — WINDOW IDENTIFICATION

1 A — KEY/SPECIFIC NOTE CALL-OUT

X — PARTITION TYPE REFERENCE

A — CENTER LINE OF BEAM-COLUMN FRAME SYSTEM/GRID LINE

M11 — POINTS OF VIEW BEING CONSIDERED MATCH LINE

3 — REVISION

+EL 1000.00 — FINISH ELEVATION

EL 1000.00 — SPOT ELEVATION

EXISTING OBJECTS ARE SCREENED

EXISTING OBJECTS TO BE ABANDONED

EXISTING OBJECTS TO BE DEMOLISHED

HIDDEN OBJECT

FUTURE OBJECT

OBJECT SUPPLIED BY OWNER

ARCHITECTURAL SYMBOLS

EARTH

SAND, PLASTER, STUCCO

CONCRETE

BRICK

CONCRETE BLOCK

ACOUSTIC BLOCK

ASHLAR STONE VENEER

METAL

METAL LATH

WOOD-FINISH

WOOD-FRAMING

PLYWOOD

ACOUSTICAL TILE

GYPSUM BOARD

BATT INSULATION

RIGID INSULATION

CHECKERED PLATE

GRATING

HANDRAIL

TOPOGRAPHICAL SYMBOLS

AREA OF THE SITE

CORPORATE LIMITS

PROPERTY LINE AND/OR RIGHT OF WAY

RIGHT OF WAY MARKER

CONSTRUCTION EASEMENT ON SEWER AND WATER PLANS

PERMANENT EASEMENT ON SEWER AND WATER PLANS

SECTION LINE

CENTER LINE

4 — BENCH MARK

2 — SOIL BORING

PROPERTY STAKE

PRIVATE WELL

EXISTING UTILITY POLE

NEW UTILITY POLE

BURIED TELEPHONE CABLE PEDESTAL

SIGN

LIGHT POLE

DECIDUOUS TREE

CONIFEROUS TREE

DECIDUOUS SHRUBS

CONIFEROUS SHRUBS

INTERMITTENT STREAM

STREAM OR RIVER

WETLAND AREA

RAILROAD – LARGE SCALE

BRIDGE

EXISTING CULVERT

SILT FENCE

FENCE

GUARD RAIL

CURB, GUTTER AND INLET

REJECT CURB

960 — CONTOUR LINES

EXISTING DEPRESSION

TOP OF CUT OR BERM

UNDERGROUND UTILITY SYMBOLS

6" W — NEW WATER MAIN AND VALVE MANHOLE

6" W — WATER MAIN AND VALVE IN ROAD BOX

6" W — EXISTING WATER MAIN AND FIRE HYDRANT

6" W — NEW WATER MAIN AND FIRE HYDRANT WITH AUXILIARY VALVE

6" S — EXISTING SANITARY SEWER AND MANHOLE

6" S — NEW SANITARY SEWER AND MANHOLE

6" ST — EXISTING STORM SEWER AND MANHOLE (I-INLET)

6" ST — NEW STORM SEWER AND MANHOLE (I-INLET)

6" F — FORCE MAIN

F — VALVE MANHOLE ON FORCE MAIN

S — WYE BRANCH

S R — RISER

S MR — MODIFIED RISER

T — TELEPHONE OR TV CABLE AND MANHOLE

2" G — GAS MAIN

E — UNDERGROUND ELECTRIC CABLE

EXISTING WATER MAIN, SEWER MANHOLE, AND FORCE MAIN IN PROFILE

NEW WATER MAIN, SEWER, MANHOLE AND FORCE MAIN IN PROFILE

CULVERT IN PROFILE

NEW GRADE LINE

SLOPE INTERCEPT

ORIGINAL GROUND IN PROFILE

ROCK IN PROFILE

SURVEY OR REFERENCE LINE

165° — POINT OF INTERSECTION

POINT ON REFERENCE LINE

BUILDING IN PROFILE

DIRECTION OF TRAFFIC

CAUTION — NOTATION FOR COMBUSTIBLE FLUIDS

PIPING SYMBOLS

FLANGE JOINT

GROOVED JOINT

MECHANICAL JOINT

PUSH – ON JOINT

RUBBER EXPANSION JOINT

SOLVENT WELD OR THREADED JOINT

PIPE COUPLING WITH TENSION TIES

SMALL DIAMETER PIPE

WALL PIPE

WALL SLEEVE

FABRICATED WALL SLEEVE

SHUT OFF VALVE

FLOOR STAND IN PLAN

STOP PLATE – EMBEDDED

SLIDE GATE – EMBEDDED

SLIDE GATE – SURFACE MOUNTED

SLUICE GATE

P/VR — PRESSURE/VACUUM RELIEF

LIQUID RING COMPRESSOR

OP — ORIFICE PLATE

M — MANOMETER

FD — FLOOR DRAIN

RD — ROOF DRAIN

HD — HUB DRAIN

HOSE BIBB

WATER HAMMER ARRESTER

8 — WATER SUPPLY/DRAINAGE FIXTURE UNITS

THERMOMETER

TRAP PRIMER

YARD HYDRANT

ELBOW DOWN

ELBOW UP

M — METER

STRAINER

TEE DOWN

TEE UP

UNION

GAS PRESSURE REGULATOR

PI — PRESSURE INDICATOR

PT — PRESSURE TRANSMITTER

TE — TEMPERATURE ELEMENT

TI — TEMPERATURE INDICATOR

TT — TEMPERATURE TRANSMITTER

MANUAL AIR VENT

CONCENTRIC REDUCER

ECCENTRIC REDUCER

FLEXIBLE CONNECTOR

GAUGE DIAPHRAM SEAL

SUCTION DIFFUSER

SIGHT FLOW INDICATOR

MOISTURE SEPARATOR

FLAME CHECK

TUBE IN TUBE HEAT EXCHANGER

SPIRAL HEAT EXCHANGER

AIR FILTER

VALVE SYMBOLS

AIR PRESSURE RELIEF VALVE

BALANCING VALVE

BALL VALVE

BALL CHECK VALVE

BUTTERFLY VALVE

CHECK VALVE

GAS SHUTOFF PLUG VALVE

GATE VALVE

GLOBE VALVE

LP — LOW PRESSURE CHECK VALVE

PRESSURE REDUCING VALVE

PVR — PRESSURE RELIEF VALVE

TELESCOPIC VALVE

3-WAY VALVE

TRIPLE DUTY VALVE

PRESSURE/VACUUM RELIEF VALVE

PIPING DESIGNATIONS

A	AIR
CA	COMPRESSED AIR
CW	COLD WATER
CWR	COLD WATER RETURN
CWS	COLD WATER SUPPLY
DEW	DISINFECTED EFFLUENT WATER
G	NATURAL GAS PIPING
HW	HOT WATER
HHWR	HEATING HOT WATER RETURN
HHWS	HEATING HOT WATER SUPPLY
LPC	LOW PRESSURE CONDENSATE
LPS	LOW PRESSURE STEAM
NPW	NONPOTABLE WATER
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
SPD	SUMP PUMP DISCHARGE
SW	SOFT WATER
----------	VENT PIPE
– – – – – – – –	WASTE BELOW GRADE
————	WASTE ABOVE GRADE
— – — – —	STORM BELOW GRADE
—— · —— · ——	STORM ABOVE GRADE

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

STANDARD SYMBOLS - 1

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

STRAND ASSOCIATES®

SHEET 5
00-G0.05

ELECTRICAL SYMBOLS

LIGHTING

- FIXTURE SYMBOL (TYPICAL) A–INDICATES FIXTURE TYPE 2–INDICATES CIRCUIT NUMBER b–INDICATES SWITCHING OR GROUP LIGHTING SOLID CIRCLE INDICATES ALWAYS ON
- INCANDESCENT, HID, SURFACE OR PENDANT
- INCANDESCENT, HID, WALL
- 1X4 FLUORESCENT, SURFACE OR PENDANT
- 1X8 FLUORESCENT, SURFACE OR PENDANT
- FLUORESCENT, WALL
- 1X4 FLUORESCENT, RECESSED
- 2X2 FLUORESCENT, RECESSED
- 2X4 FLUORESCENT, RECESSED
- CAN, FLUORESCENT OR HID
- EXIT, SURFACE, PENDANT OR RECESSED
- EXIT, WALL
- EMERGENCY LIGHTING

SWITCHES

- $ SINGLE POLE
- $2 TWO POLE
- $3 THREE WAY
- $4 FOUR WAY
- $K KEYED
- $D DIMMER
- $M MANUAL MOTOR SWITCH (3 PHASE)
- $WP WEATHER PROOF
- $P SWITCH WITH PILOT LIGHT
- LC LIGHTING CONTROL STATION
- R3 LOCKOUT STOP SWITCH
- DP DOOR POSITION SWITCH
- PC PHOTOCELL
- IS CURRENT SWITCH

EQUIPMENT AND WIRING

- GROUND ROD 10'–5/8" DIA. COPPER CLAD
- TRANSFORMER
- DISCONNECT, F=FUSED, B=CIRCUIT BREAKER, BLANK=NON–FUSED
- MOTOR STARTER MAGNETIC
- CIRCUIT BREAKER COMBINATION STARTER
- JUNCTION BOX
- T LINE VOLTAGE THERMOSTAT
- T LINE VOLTAGE THERMOSTAT W/REMOTE BULB
- P–01–01 480V LOAD, REFER TO MCC SCHEDULE FOR EQUIPMENT NUMBER
- VFD VARIABLE FREQUENCY DRIVE

POWER SYMBOLS

- E UNDERGROUND ELECTRIC
- OH OVERHEAD ELECTRIC
- 2(X) CIRCUIT NUMBER (TYPICAL); OTHERWISE SHOWN PANEL DESIGNATION (TYP.); DUPLEX, 125 VOLT, WP INDICATES WEATHERPROOF
- DUPLEX, 125 VOLT, ABOVE FURNITURE
- DOUBLE DUPLEX, 125 VOLT, ABOVE FURNITURE
- DOUBLE DUPLEX, 125 VOLT
- EWC SINGLE CONVENIENCE, 125 VOLT FOR ELECTRIC WATER COOLER
- EXPLOSION–PROOF, ABOVE FURNITURE
- EXPLOSION–PROOF
- FIXED EQUIPMENT CONNECTION
- POWER OUTLET, VOLTAGE & AMPERAGE AS INDICATED
- AUTOMATIC TRANSFER SWITCH (ONE–LINE DIAGRAM)
- CIRCUIT BREAKER (ONE–LINE DIAGRAM)
- M METER (ONE–LINE DIAGRAM)
- PANELBOARD

FIRE ALARM AND DETECTION SYMBOLS

- FACP FIRE ALARM CONTROL PANEL
- FAAP FIRE ANNUNCIATOR CONTROL PANEL
- STROBE; WALL MOUNT – ADA RATED; STROBE CANDELA RATING 80" AFF
- H HORN STROBE; WALL MOUNT – ADA RATED; STROBE CANDELA RATING 80" AFF
- S SPEAKER STROBE; WALL MOUNT – ADA RATED; STROBE CANDELA RATING 80" AFF
- FA H HORN; WALL MOUNT – ADA RATED
- FA S SPEAKER; WALL MOUNT – ADA RATED
- F STROBE; CEILING MOUNT – ADA RATED; STROBE CANDELA RATING
- H HORN STROBE; CEILING MOUNT – ADA RATED; STROBE CANDELA RATING
- S SPEAKER STROBE; CEILING MOUNT – ADA RATED; STROBE CANDELA RATING
- ARA AREA OF RESCUE ASSISTANCE
- EMERGENCY TELEPHONE SYSTEM
- H HEAT DETECTOR; CEILING MOUNT
- 2 SMOKE DETECTOR; CEILING MOUNT
- 2 R ELEVATOR RECALL SMOKE DETECTOR
- NOX NITROUS OXIDE SENSOR
- CO CARBON MONOXIDE SENSOR
- DSD DUCT SMOKE DETECTOR; SWITCH INDICATION; DUCT SIZE
- RTS REMOTE TEST SWITCH; SWITCH INDICATION
- FIRE ALARM PULL STATION
- SPS SPRINKLER FLOW SWITCH
- TM SPRINKLER VALVE TAMPER SWITCH
- B FIRE ALARM BELL

TECHNOLOGY SYMBOLS

- DATA JACK
- PHONE JACK
- VOICE AND DATA JACKS
- VOIP WALL MOUNT VOIP PHONE JACK 54" AFF
- SCADA NETWORK JACK
- DATA RACK
- COAX CABLE
- POWER POLE
- PA H PA SYSTEM HORN SPEAKER; 10'–0" AFF
- PA S PA SYSTEM SPEAKER
- A SPEAKER; CEILING MOUNT A=SPEAKER TYPE
- K KEY PAD
- GBD GLASS BREAK DETECTOR
- MS MOTION SENSOR
- P PUSH BUTTON
- ES ELECTRIC STRIKE
- ML MAGNETIC LOCK
- I INTERCOM STATION
- OS ## OCCUPANCY SENSOR; SEE SPECIFICATION FOR SENSOR TYPE
- CR CARD READER
- RVC REMOTE VOLUME CONTROL
- I INTERCOM STATION

DUCTWORK SYMBOLS

- SUPPLY DUCT (UP OR SECTION)
- SUPPLY OR OUTSIDE AIR DUCT (DOWN/OR AWAY)
- EXHAUST DUCT (UP OR SECTION)
- EXHAUST OR RETURN DUCT (DOWN/OR AWAY)
- ROUND DUCTWORK UP
- ROUND DUCTWORK DOWN
- FLEXIBLE CANVAS CONNECTION
- TURNING VANES

DAMPER SYMBOLS

- M AUTOMATIC DAMPER
- BDD BACKDRAFT DAMPER
- MANUAL VOLUME DAMPER
- FD 1–1/2 HR. FIRE DAMPER

FIELD MOUNTED CONTROLS

- T THERMOSTAT
- H ROOM HUMIDISTAT
- P PRESSURE SENSOR
- S ROOM SENSOR
- S DUCT SMOKE DETECTOR
- PRESSURE GAUGE

EQUIPMENT SYMBOLS

- ACU ACCUMULATOR
- AIR FLOW DIRECTION
- BASE MOUNTED PUMP
- BLOWER
- CEILING DIFFUSER WITH FLEXIBLE DUCT
- CENTRIFUGAL PUMP
- CONNECT TO EXISTING
- DT DRIP TRAP
- DUCT BOOST COIL
- Type Group EQUIPMENT TAG
- FA FLAME ARRESTER
- FC FLAME CELL
- FT FLAME TRAP ASSEMBLY
- G GRINDER
- INLINE PUMP
- POSITIVE DISPLACEMENT PUMP
- ROOF EXHAUST FAN
- UNIT HEATER
- VARIABLE AIR VOLUME (VAV) BOX WITH ELECTRIC REHEAT COIL
- VARIABLE AIR VOLUME (VAV) BOX WITH HEATING HOT WATER REHEAT COIL
- FLOATING MIXER
- SCREW CONVEYOR

ACTUATORS

- M MOTOR (ELECTRIC)
- P PNEUMATIC
- S SOLENOID

PROCESS EQUIPMENT TAG NUMBER

D–W–X–Y

D: EQUIPMENT TYPE
- M = MECHANICAL EQUIPMENT
- P = PUMP
- E = EJECTOR
- G = GATE
- T = TANK
- PRV = PRESSURE RELIEF VALVE
- PCV = PRESSURE CONTROL VALVE
- FV = FLOW VALVE
- FCV = FLOW CONTROL VALVE

W: UNIT PROCESS NUMBER
- 1 = SEPTAGE RECEIVING, SCREENING, AND GRIT REMOVAL
- 2 = PRIMARY INFLUENT
- 3 = PRIMARY SETTLING AND FILTRATION AND SECOND STAGE PUMPING
- 4 = PRIMARY EFFLUENT PUMPING
- 5 = AERATION
- 6 = FINAL CLARIFICATION AND RAS/WAS PUMPING
- 8 = FILTRATION
- 9 = DISINFECTION AND POST AERATION
- 10 = ANAEROBIC DIGESTION
- 11 = DIGESTED SLUDGE HANDLING
- 12 = LIQUID SLUDGE STORAGE
- 13 = SLUDGE DEWATERING
- 14 = CENTRIFUGE DEWATERING POLYMER AND FERRIC CHLORIDE FEED SYSTEMS

X: LOOP NUMBER
Y: UNIT NUMBER
Z: ADDITIONAL UNIT NUMBER (USE ONLY WHEN MULTIPLE UNITS HAVE THE SAME W–X–Y)

INSTRUMENTATION EQUIPMENT

- FIRST LETTER, SEE TABLE BELOW
- SUCCEEDING LETTERS, SEE TABLE BELOW
- PS INSTRUMENTATION IDENTIFICATION ABBREVIATION/MODIFIER
- H–O–A CONTROL DEVICE/SELECTOR SWITCH ABBREVIATION, SEE MCC SCHEDULE
- EQUIPMENT NUMBER

D–W–X–Y

D:
- M = MECHANICAL EQUIPMENT
- P = PUMP
- E = EJECTOR
- G = GATE
- T = TANK
- PSV = PRESSURE RELIEF VALVE
- PCV = PRESSURE CONTROL VALVE

W: UNIT PROCESS NUMBER
X: LOOP NUMBER
Y: UNIT NUMBER

Instrumentation Identification Abbreviation Table

Abbreviation	Definition
A	Air
B	Building Flooding Float
D	Door
DO	Dissolved Oxygen
F	Ball Float
FS	Foam Sensor
GD	Gas Detector
L	Limit Switch
M	Magnetic
MG	Methane Gas
ORP	Oxygen Reduction Potential
PA	Presence/Absence
PH	pH
PROX	Proximity
R	Radar
S	Submersible, Hydrogen Sulfide
TM	Thermal Mass
TSS	Total Suspended Solids
U	Ultrasonic
W	Water

Instrument Identification Table

	First Letter (S)		Succeeding Letters		
Letter	Process or Initiating Variable	Modifier	Readout or Passive Function	Output Function	Modifier
A	Analysis (+)		Alarm		
B	Burner Flame		Users Choice (+)	Users Choice (+)	Users Choice (+)
C	Conductivity			Control	
D	Density (S.G.)	Differential			
E	Voltage		Primary Element		
F	Flow Rate	Ratio			
G	Gauge		Glass	Gate	
H	Hand (Manual)				High
I	Current		Indicate		
J	Power	Scan			
K	Time of Schedule			Control Station	
L	Level		Light (Pilot)		Low
M	Motion				Middle
N	Users Choice (+)		Users Choice (+)	Users Choice (+)	Users Choice (+)
O	Users Choice (+)		Orifice		
P	Pressure (or Vacuum)	Pressure	Point (Test Connection)		
Q	Quantity or Event (+)	Integrate	Integrate		
R			Record or Print		
S	Speed or Frequency	Safety		Switch	
T	Temperature			Transmit	
U	Multivariable (+)		Multifunction (+)		
V	Viscosity			Valve	
W	Weight Force Torque		Well		
X	Unclassified (+)		Unclassified (+)	Unclassified (+)	Unclassified (+)
Y	Users Choice (+)			Relay or Compute (+)	
Z	Position			Drive, Actuate or Unclassified Final Control Element	

(+) When used. Explanation is shown adjacent to instrument symbol

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STANDARD SYMBOLS - 2

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004
PROJECT MGR. SCOTT W. STEARNS

STRAND ASSOCIATES®

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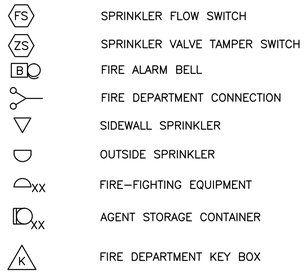
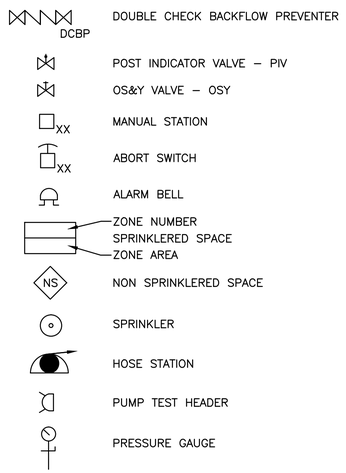
FIRE PROTECTION ABBREVIATIONS

AHJ	AUTHORITY HAVING JURISDICTION
CA	CLEAN AGENT
CO_2	CARBON DIOXIDE
DISCH	DISCHARGE
DP	DRY PENDANT SPRINKLERS
ESFR	EARLY SUPPRESSION FAST RESPONSE
FACP	FIRE ALARM CONTROL PANEL
FDC	FIRE DEPARTMENT CONNECTION
FH	FIRE HYDRANT
FO	FOAM
FP	FIRE PUMP
FS	FLOW SWITCH
JP	JOCKEY PUMP
NRS	NON RISING STEM
OS&Y	OUTSIDE SCREW & YOKE
PIV	POST INDICATOR VALVE
PRV	PRESSURE REDUCING VALVE
SF	SQUARE FOOT
TS	TAMPER SWITCH

FIRE PROTECTION SYMBOLS



FIRE PROTECTION SYMBOLS



HAZARD CLASSIFICATION SYMBOLS

FIRE PROTECTION GENERAL NOTES

1. COORDINATE WITH OTHER TRADES TO ELIMINATE ANY CONFLICTS BETWEEN PIPING, DUCTWORK, ELECTRICAL WORK, ETC.
2. ALL WORK SHALL BE STRICTLY COORDINATED AMONG ALL INDIVIDUAL CONTRACTORS BEFORE ANY WORK IS PERFORMED.
3. DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK, AND IS PARTIALLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.
4. BEFORE STARTING ANY WORK, CONTRACTOR SHALL EXAMINE THE COMPLETE SET OF DRAWINGS FOR ALL TRADES, INCLUDING ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL VERIFY ALL DIMENSIONS, SPACE REQUIREMENTS, AND POINTS OF CONNECTION TO ALL FIXTURES AND EQUIPMENT. MAKE ANY MINOR ADJUSTMENTS NECESSARY TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE AND THE WORK OF OTHER TRADES.
5. CONTRACTOR SHALL PROVIDE ACCESSIBILITY TO ALL VALVES AND CONTROL DEVICES. FURNISH ACCESS PANELS WHERE SHOWN OR REQUIRED FOR ACCESS TO ALL CONCEALED VALVES OR OTHER EQUIPMENT FURNISHED UNDER THIS CONTRACT WHERE NO OTHER MEANS IS PROVIDED.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF ALL REQUIRED PIPING OFFSETS FOR COMPLETE SYSTEM INSTALLATION.

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STANDARD SYMBOLS - 3

WASTEWATER TREATMENT PLANT IMPROVEMENTS
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WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

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GENERAL EQUIPMENT ABBREVIATIONS

AC	AIR COMPRESSOR
ACU	ACCUMULATOR
ADT	AUTOMATIC DRIP TRAP
AFT	AUTOMATIC FILTER
AOV	AIR OPERATED VALVE
AS	ADJUSTABLE SPEED
AST	AUTOMATIC STRAINER
B	BLOWER
BC	BRIDGE CRANE
BF	BLIND FLANGE
BFP	BELT FILTER PRESS
BFPFP	BFP FEED PUMP
BFV	BUTTERFLY VALVE
BLP	BIOSOLIDS LOADING PUMP
BLR	BOILER
BSTM	BIOSOLIDS STORAGE MIXER
CENT	CENTRIFUGE
CNTP	CENTRATE PUMP
CENTP	CENTRIFUGE FEED PUMP
CP	CHEMICAL PUMP
COMP	COMPRESSOR
CON	CONVEYOR
DBC	DEWATERED BIOSOLIDS CONVEYOR
DT	DRIP TRAP
DOW	DOWNWARD OPENING WEIR GATE
FC	FINAL CLARIFIER
FCD	FINAL CLARIFIER DRIVE
FILT	FILTER
FM	FLOW METER
FT	FLAME TRAP
GFM	GAS FLOW METER
GP	GRIT PUMP
GRN	GRINDER
GT	GRIT TRAP
GW	GRIT WASHER
H	HOIST
HBT	HYDROPNEUMATIC BOOSTER TANK
HTX	HEAT EXCHANGER
IP	INFLUENT PUMP
MA	MOTORIZED ACTUATOR
MBV	MOTORIZED BALL VALVE
MFS	MECHANICAL FINE SCREEN
MIX	MIXER
MOV	MOTOR OPERATED VALVE
MST	MANUAL STRAINER
OCD	OVERHEAD COILING DOOR
OCE	ODOR CONTROL EQUIPMENT
PC	PROGRESSING CAVITY PUMP
PCD	PRIMARY CLARIFIER DRIVE
PF	POLYMER FEEDER
PFP	POLYMER FEED PUMP
PREP	PRIMARY EFFLUENT PUMP
PRSP	PRIMARY SLUDGE PUMP
RAD	REFRIGERATED AIR DRYER
RASP	RETURN ACTIVATED SLUDGE PUMP
RM	RAPID MIXER
SA	SAMPLER
SCMP	SCUM PUMP
SCW	SCREENINGS WASHER
SEJ	SEWAGE EJECTOR
SG	SLIDE GATE
SLG	SLUICE GATE
SP	SUMP PUMP
SSC	SCREENINGS SCREW CONVEYOR
STG	STOP GATE
STR	STRAINER
SV	SOLENOID VALVE
SWP	SCREENINGS WASHER/PRESS
TV	TELESCOPING VALVE
TWASP	TWAS PUMP
UV	ULTRAVIOLET DISINFECTION
WASP	WAS PUMP

FLUID ABBREVIATIONS

A	AIR
BWS	BACKWASH SUPPLY
BYP	BYPASS
CA	COMPRESSED AIR
CC	CARRIER CONDUIT
CHS	CHEMICAL SLUDGE
CDG	COMPRESSED DIGESTER GAS
CLS	CHLORINE SOLUTION
CNT	CENTRATE
CS	CHLORINE SOLUTION
CW	COLD WATER
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
D	DRAIN
DCT	DECANT
DFE	DISINFECTED FINAL EFFLUENT
DG	DIGESTER GAS
DIV	DIVERSION
DRL	DIGESTER RECIRCULATION
DS	DIGESTED SLUDGE
DSL MD	DIGESTER SLUDGE MIXER DISCHARGE
DSL MS	DIGESTER SLUDGE MIXER SUCTION
F	FILTRATE
FC	FERRIC CHLORIDE
FI	FILTER INFLUENT
FE	FILTER EFFLUENT
FM	FORCE MAIN
G	NATURAL GAS
GR	GRIT
GS	GREASE
HW	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HHWR	HEATING HOT WATER RETURN
HHWS	HEATING HOT WATER SUPPLY
ML	MIXED LIQUOR
NAOH	SODIUM HYDROXIDE
NG	NATURAL GAS
OF	OVERFLOW
OC	ODOR CONTROL
PD	PLANT DRAIN
PDP	PERFORATED DRAIN PIPE
PE	PRIMARY EFFLUENT
PEC	POLYELECTROLYTE CHEMICAL
PI	PRIMARY INFLUENT
PLE	PLANT EFFLUENT
PRC	PHOSPHORUS REMOVAL CHEMICAL
PRF	PROCESS RETURN FLOW
PS	POLYMER SOLUTION
PSD	PRIMARY SLUDGE
PSM	PRIMARY SCUM
RAS	RETURN ACTIVATED SLUDGE
RCY	RECYCLE
RHWR	RADIANT HOT WATER RETURN
RHWS	RADIANT HOT WATER SUPPLY
RSD	RECIRCULATED SLUDGE
RW	RAW WASTEWATER
SAM	SAMPLE
SAN	SANITARY SEWER
SB	SODIUM BISULFITE
SCM	SCUM
SE	SECONDARY EFFLUENT
SH	SODIUM HYPOCHLORITE
SI	SECONDARY INFLUENT
SL	SLUDGE
SP	STEAM PIPING
SPD	SUMP PUMP DISCHARGE
SPT	SEPTAGE
ST	STORM SEWER
SW	SERVICE WATER
SW2	SOFTENED W2 WATER
SWS	SEAL WATER SUPPLY
SWW	SURFACE WASH WATER
TOF	THICKENER OVERFLOW
TSL	THICKENED SLUDGE
TUF	THICKENER UNDERFLOW
TWAS	THICKENED WASTE ACTIVATED SLUDGE
UD	UNDERDRAIN
V	VENT
WAS	WASTE ACTIVATED SLUDGE
WWD	WASHWATER DRAIN
W1	POTABLE WATER
W2	NON-POTABLE WATER
W3	FLUSHING WATER

PLUMBING ABBREVIATIONS

AEW	APRON END WALL
BF	BLIND FLANGE
CA	COMPRESSED AIR
CB	CATCH BASIN
CD	CONDENSATE DRAIN
CI	CAST IRON
CO	CLEAN OUT
COND	CONDENSATE
CPVC	CHLORINATED POLYVINYL CHLORIDE
CW	COLD WATER
D	DRAIN
DCBP	DOUBLE CHECK BACKFLOW PREVENTER
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT
DI	DUCTILE IRON
ESEW	EMERGENCY SHOWER EYEWASH
EW	EYEWASH
EWC	ELECTRIC WATER COOLER
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
HB	HOSE BIBB
HD	HUB DRAIN
HDPE	HIGH DENSITY POLYETHYLENE
HP	HIGH POINT
HR	HOSE REEL
HWL	HIGH WATER LEVEL
HW	HOT WATER
HWR	HOT WATER RETURN
IE	INVERT ELEVATION
IWP	INDIRECT WASTE PIPE
L	LAVATORY
LP	LOW POINT
MB	MOP BASIN
MH	MANHOLE
MV	MUD VALVE
ORD	OVERFLOW ROOF DRAIN
PHW	PROCESS HOT WATER
P	PUMP
POC	POINT OF CONNECTION
PRV	PRESSURE REDUCING VALVE
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PVR	PRESSURE VACUUM RELIEF ASSEMBLY
QC	QUICK CONNECT
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
RZBP	REDUCED ZONE BACKFLOW PREVENTER
S	SINK
SD	SHOWER DRAIN
SEJ	SEWAGE EJECTOR
SHR	SHOWER
SP	SUMP PUMP
SS	STAINLESS STEEL
SV	SOLENOID VALVE
SVS	SERVICE SINK
T	TANK
TD	TRENCH DRAIN
U	URINAL
V	VENT
VB	VACUUM BREAKER
VCP	VITRIFIED CLAY PIPE
VTR	VENT THRU ROOF
W	WASTE PIPE
WCO	WALL CLEANOUT
WC	WATER CLOSET
WH	WATER HEATER
WS	WATER SOFTENER
WSFU	WATER SERVICE FIXTURE UNIT

GENERAL/HVAC ABBREVIATIONS

AA	ANALYTICAL ANLYSIS
ACH	AIR CHANGES PER HOUR
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
AP	ACCESS PANEL
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
COND	CONDENSATE
DAT	DISCHARGE AIR TEMPERATURE
DB	DRY BULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROL
DG	DOOR GRILLE
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EL	ELEVATION
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
FC	FAIL CLOSED
FLA	FULL LOAD AMPS
FO	FAIL OPEN
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FT	FEET
GA	GAUGE
GPM	GALLONS PER MINUTE
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSANDS OF BTU PER HOUR
MC	MECHANICAL CONTRACTOR
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OC	ON CENTER
OV	OUTLET VELOCITY
PD	PRESSURE DROP
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
RA	RETURN AIR
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SP	STATIC PRESSURE

HVAC EQUIPMENT ABBREVIATIONS

ACCU	AIR COOLED CONDENSING UNIT
AFR	ARCHITECTURAL FINE TUBE RADIATION
AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
BLR	BOILER
BB	BASEBOARD
C	CONVECTOR
CD	CEILING DIFFUSER
CH	CHILLER
CT	COOLING TOWER
CUH	CABINET UNIT HEATER
CWP	CONDENSER WATER PUMP
CHWP	CHILLED WATER PUMP
DC	DRY COOLER
DH	DEHUMIDIFIER
DL	DRUM LOUVER
EBB	ELECTRIC BASEBOARD
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EJ	EXPANSION JOINT
EL	EXPANSION LOOP
ER	EXHAUST REGISTER
ERC	ELECTRIC REHEAT COIL
ERU	ENERGY RECOVERY UNIT
EUH	ELECTRIC UNIT HEATER
EWH	ELECTRIC WALL HEATER
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FR	FINNED TUBE RADIATION
FUR	FURNACE
GDF	GAS DUCT FURNACE
GRV	GRAVITY ROOF VENTILATOR
GUH	GAS UNIT HEATER
HC	HEATING COIL
HP	HEAT PUMP
HRP	HEAT RECOVERY PUMP
HU	HUMIDIFIER
HWH	HOT WATER UNIT HEATER
HWP	HOT WATER PUMP
HTX	HEAT EXCHANGER
ICF	INDUSTRIAL CEILING FAN
IR	INFRARED HEATER
L	LOUVER
MAU	MAKE-UP AIR UNIT
P	PUMP
PWP	PROCESS WATER PUMP
RF	RETURN FAN
RG	RETURN GRILLE
RHWP	RADIANT HOT WATER PUMP
RR	REGISTER
RTU	ROOFTOP UNIT
SD	SUCTION DIFFUSER
SF	SUPPLY FAN
SG	SUPPLY GRILLE
SR	SUPPLY REGISTER
ST	STEAM TRAP
SUH	STEAM UNIT HEATER
TCP	TEMPERATURE CONTROL PANEL
TG	TRANSFER GRILLE
UH	UNIT HEATER
UV	UNIT VENTILATOR
VAV	VARIABLE AIR VOLUME BOX
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
WSHP	WATER SOURCE HEAT PUMP
XT	EXPANSION TANK

ELECTRICAL ABBREVIATIONS

A	AMPERE
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
A/V	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
C	CONDUIT
CAT	CATALOG
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CL	CENTERLINE
COL	COLUMN
CT	CURRENT TRANSFORMER
CU	COPPER
D	DEDICATED
DC	DIRECT CURRENT
DISC	DISCONNECT
DWG	DRAWING
E	EMERGENCY
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EMT	ELECTRICAL METALLIC TUBING
EOL	END OF LINE DEVICE
EWC	ELECTRIC WATER COOLER
EX	EXISTING
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FLA	FULL LOAD AMPERES
FPP	FIBER PATCH PANEL
FT	FEET
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT INTERRUPTER
GFCI	GROUND FAULT CKT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL
GRS	GALVANIZED RIGID STEEL
HP	HORSEPOWER
HSC	HYDRAULIC SYSTEM CENTER
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING, & AIR CONDITIONING
HZ	HERTZ
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
JB	JUNCTION BOX
KCMIL	ONE THOUSAND CIRCULAR MILS
KO	KNOCKOUT
KVA	KILOVOLT AMPERES
KVAR	KILOVOLT AMPERES REACTIVE
KW	KILOWATT
LP	LIGHTING PANEL
LTG	LIGHTING
LV	LOW VOLTAGE
MC	METAL CLAD
MCC	MOTOR CONTROL CENTER
MCB	MAIN CIRCUIT BREAKER
MCCB	MOLDED CASE CIRCUIT BREAKER
MCM	THOUSAND CIRCULAR MILS
MCP	MOTOR CIRCUIT PROTECTOR
MDP	MAIN DISTRIBUTION PANELBOARD
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MM	MULTI-MODE
MO	MOTOR OPERATED
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
MTG	MOUNTING
MV	MEDIUM VOLTAGE
N	NEUTRAL
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NAC	NOTIFICATION APPLIANCE CIRCUIT PANEL
NEC	NATIONAL ELECTRIC CODE
NM	NONMETALLIC
NO	NORMALLY OPEN
NS	NETWORK SWITCH
NTS	NOT TO SCALE
OL	OVERLOAD
OT	OVERTEMP
PR	PAIR
P	POLE
PB	PULL BOX
PC	PULL CORD
PDC	POWER DISTRIBUTION CENTER
PH	PH SENSOR
ø	PHASE
PMG	PAD MOUNTED SWITCHGEAR
PMT	PAD MOUNTED TRANSFORMER
PNL	PANELBOARD
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PTZ	PAN, TILT, ZOOM CAMERA
PVC	POLYVINYL CHLORIDE
PWR	POWER
RSC	RIGID GALVANIZED STEEL CONDUIT
RTS	REMOTE TEST SWITCH
RVSS	REDUCED VOLTAGE SOLID STATE
SC	SHORT CIRCUIT
SCADA	SUPERVISORY CONTROL AND DATA
SCC	SUPERVISORY CONTROL CENTER
SE	SERVICE ENTRANCE
SEC	SECONDARY
SH	SHIELDED
SM	SINGLE-MODE
SS	STAINLESS STEEL
STP	SHIELDED TWISTED PAIR
SV	SOLENOID VALVE
SW	SWITCH
TEL	TELEPHONE
TS2W	TWO SPEED TWO WINDING
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE OR WATT
WL	WET LOCATION
WP	WEATHERPROOF
XFMR	TRANSFORMER
XP	EXPLOSION PROOF
Y	WYE

STRUCTURAL ABBREVIATIONS

AB	ANCHOR BOLT
ADDL	ADDITIONAL
ADH	ADHESIVE
ALUM	ALUMINUM
APPROX	APPROXIMATE
BLDG	BUILDING
BOF	BOTTOM OF FOOTING
BOT	BOTTOM OF FOOTING
BRG	BEARING
BTWN	BETWEEN
C TO C	CENTER TO CENTER
CHKD	CHECKERED
CJ	CONTROL JOINT
C/L	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNNIT
COL	COL
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CSJ	CONSTRUCTION JOINT
CTRL	CONTROL
DBL	DOUBLE
DTL	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DWG(S)	DRAWING(S)
DWL(S)	DOWEL(S)
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
ENGR	ENGINEER(ED)
EQUIP	EQUIPMENT
EW	EACH WAY
EWEF	EACH WAY EACH FACE
EXIST	EXISTING
EXT	EXTENSION, EXTERIOR, EXTERNAL
FD	FLOOR DRAIN
FON	FOUNDATION
FIN	FINISH
FIN GR	FINISH GRADE
FTG	FOOTING
FURN	FURNISH, FURNISHED
GA	GAUGE
GALV	GALVANIZED
GA	GRADE
HGT	HEIGHT
HORIZ	HORIZONTAL
IE	INVERT ELEVATION
IN	INCHES
INT	INTERIOR, INTERNAL
JT	JOINT
K	KIPS
MAX	MAXIMUM
MET	METAL
MEZ	MEZZANINE
MIN	MINIMUN, MINUTE
MTL	MATERIAL
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER, ODOR CONTROL
OD	OUTSIDE DIAMETER
OPP	OPPOSITE
PL	PLATE
PROJ	PROJECTION
PRV	POWER ROOF VENTILATOR, PRESSURE REDUC
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
REINF	REINFORCING
RO	ROUGH OPENING
SCHED	SCHEDULE
SH	SHEET
SJ	SAWED CONTRCTION JOINT
SIM	SIMILAR
SPA	SPACING, SPACES
SQ	SQUARE
STD	STANDARD
STL	STEEL
STR	STRUCTURAL
T&B	TOP AND BOTTOM
T	TOP
TEMP	TEMPERATURE, TEMPORARY
THK	THICK, THICKNESS
T/D	TOP OF
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOS	TOP OF STEEL
TOW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
USGS	UNITED STATES GEOLOGICAL SURVEY
VERT	VERTICAL
W/	WITH
WL	WATER LEVEL
W/O	WITHOUT
WS	WATERSTOP
WT	WEIGHT
WWF	WELDED WIRE FABRIC

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ABBREVIATIONS

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO.
1226.004

PROJECT MGR.
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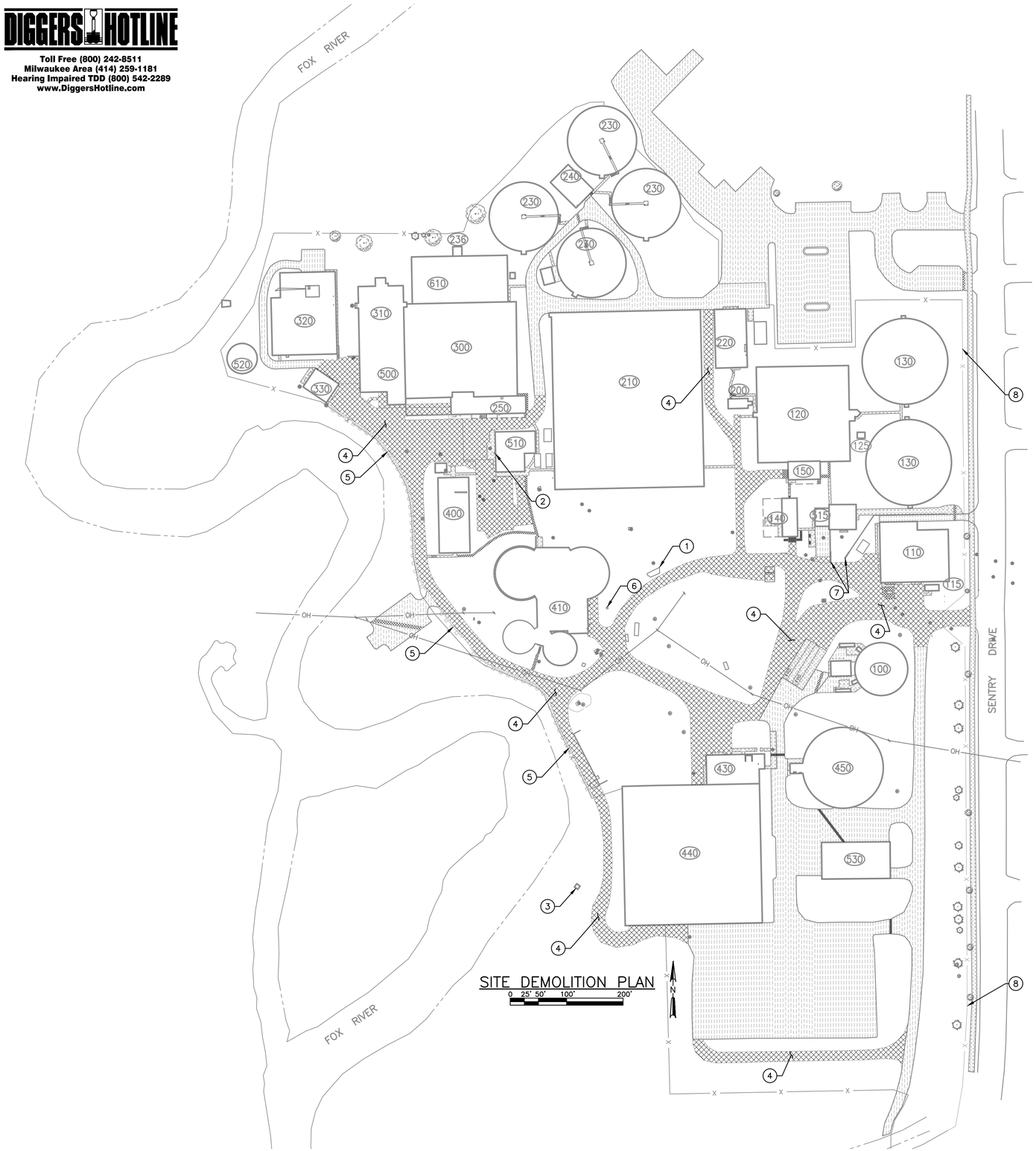

SITE DEMOLITION PLAN
0 25' 50' 100' 200'

LEGEND:

- EXISTING ASPHALT PAVEMENT
- EXISTING SIDEWALK/CONCRETE PAVEMENT
- EXISTING GRAVEL

GENERAL NOTES:

1. PROVIDE CLEARING AND GRUBBING AS NECESSARY THAT EFFECT NEW CONSTRUCTION. COORDINATE LIMITS OF REMOVAL WITH OWNERS REPRESENTATIVE.
2. PAVEMENT AREAS SHOWN FOR REMOVAL ARE APPROXIMATE.
3. SEE STRUCTURE DEMOLITION SHEETS FOR ADDITIONAL DEMOLITION REQUIREMENTS.
4. REFER TO CONSTRUCTION SEQUENCE IN DIVISION 1 SPECIFICATIONS FOR GENERAL SEQUENCE OF WORK.
5. ALL TREES, BUSHES, AND PLANTINGS NOT SHOW TO BE REMOVED SHALL BE PROTECTED.

KEY NOTES:

(1) REMOVE GATE STANDS AND PATCH OPENINGS IN CONCRETE.

(2) REMOVE SUMP AND STEAM PIPING BACK TO BUILDING AND SEAL PENETRATION WATERTIGHT.

(3) ABANDON EXISTING STORM WATER PUMPING STATION NO. 2 AND ASSOCIATED PIPING.

(4) REMOVE EXISTING PAVEMENT AND BASE COURSE (TYP.).

(5) PROTECT EXISTING GUARDRAIL (TYP.).

(6) DEMOLISH WASTE GAS BURNER AND ALL ASSOCIATED APPURTENANCES, PIPING, WIRING, CONDUIT, PANELS, LADDER, LANDING, AND CONCRETE SUPPORT.

(7) DEMOLISH EXISTING CONCRETE RETAINING WALLS AND FOOTINGS BACK TO EL 21.00 CONTOUR. PROTECT 1:3 SLOPE BEHIND WALLS WITH TEMPORARY SOIL RETENTION SYSTEM. PROTECT EXISTING UNDERGROUND UTILITIES.

(8) REMOVE EXISTING CHAIN LINK FENCE, POST AND APPURTENANCES AND PROVIDE CLEARING AND GRUBBING AS NECESSARY FOR REMOVAL AND ALSO INSTALLATION OF NEW FENCE.

STRUCTURE NUMBERS

00 - GENERAL
05 - SITE
100 - SEPTAGE RECEIVING STATION
110 - PRELIMINARY TREATMENT BUILDING
115 - WATER METER / BACKFLOW PREVENTER BUILDING
120 - PRIMARY SETTLING BASINS
125 - ROUGHING FILTER JUNCTION CHAMBER
130 - ROUGHING FILTERS
140 - PRIMARY EFFLUENT PUMP BUILDING
150 - SECOND STAGE PUMPING STATION
200 - AERATION SPLITTER BOX
210 - AERATION TANKS
220 - BLOWER BUILDING
225 - FINAL CLARIFIER SPLITTER BOX
230 - FINAL CLARIFIERS
235 - SECONDARY EFFLUENT JUNCTION CHAMBER
236 - SECONDARY EFFLUENT DIVERSION STRUCTURE
240 - RAS/WAS BUILDING
250 - CHEMICAL FEED AND STORAGE BUILDING
300 - COAGULATION BASIN
310 - FILTER BUILDING
320 - UV DISINFECTION
330 - PRETREATMENT BUILDING
400 - SLUDGE THICKENING BUILDING
410 - PRIMARY DIGESTER COMPLEX
430 - DEWATERING BUILDING
440 - SLUDGE STORAGE BUILDING AND DRYING PAD
450 - LIQUID SLUDGE STORAGE TANK
500 - ADMINISTRATION BUILDING
510 - GENERATOR BUILDING
515 - GENERATOR CONTROL BUILDING
520 - ELEVATED TANK
530 - SERVICE BUILDING
610 - FINAL SETTLING BASINS

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SITE DEMOLITION PLAN

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

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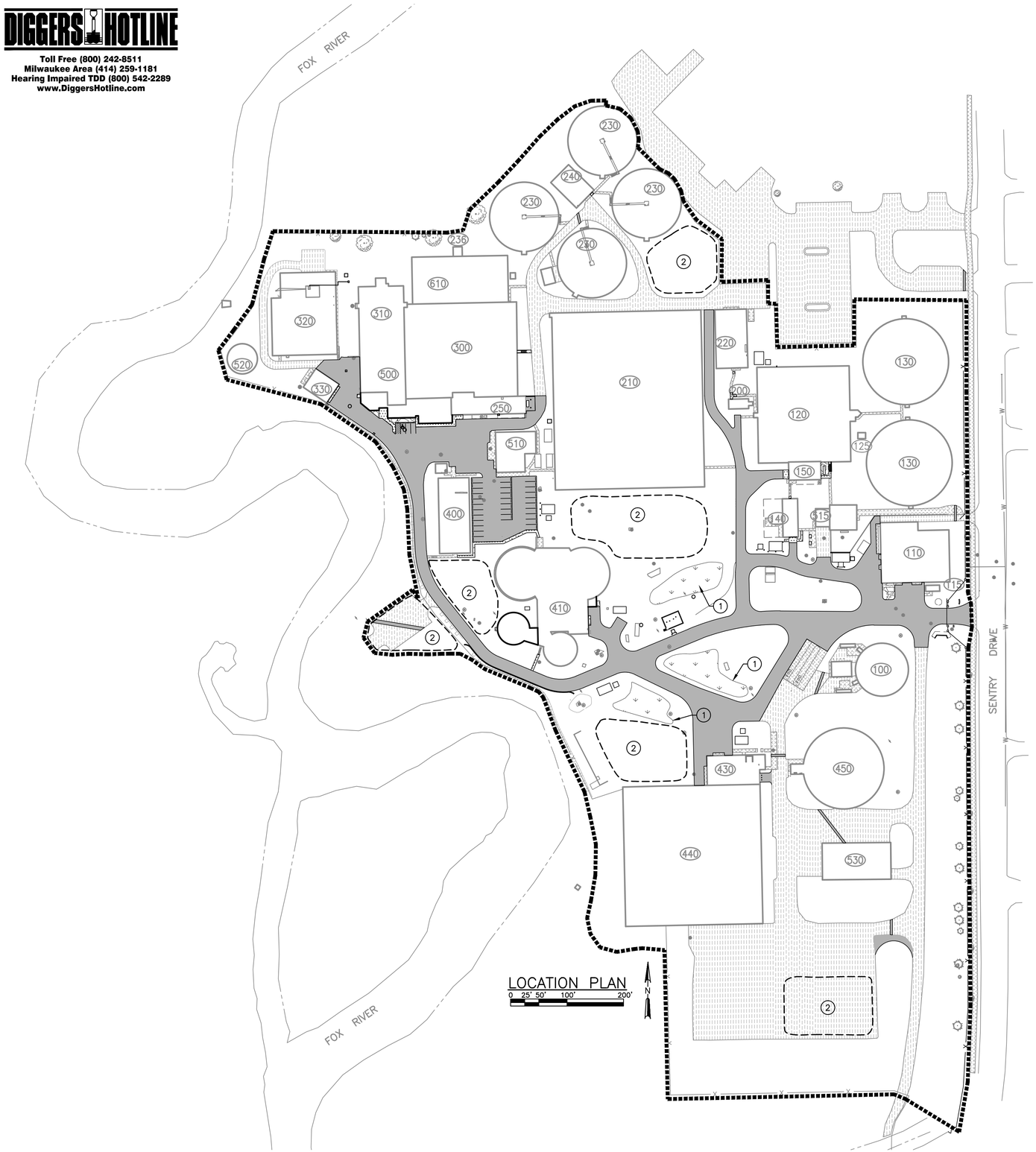

LEGEND:

- EXISTING ASPHALT PAVEMENT
- EXISTING SIDEWALK/CONCRETE PAVEMENT
- EXISTING GRAVEL
- NEW ASPHALT PAVEMENT
- NEW SIDEWALK/CONCRETE PAVEMENT
- AREA OF SITE

KEY NOTES:

(1) SEE SHEET 02–CL1.02 FOR BIORETENTION AREA DETAILS
(2) POTENTIAL STAGING AREA

GENERAL NOTES:

1. ALL COORDINATES ARE ORIENTED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (NAD 27). THE PROJECT BASE POINT IS THE NE CORNER OF SECTION 9, T6N, R19E, GRID COORDINATES, AS PUBLISHED ON THE SEWRPC CONTROL SHEET REVISED 12/2011.

STRUCTURE NUMBERS

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OVERALL SITE LOCATION PLAN

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
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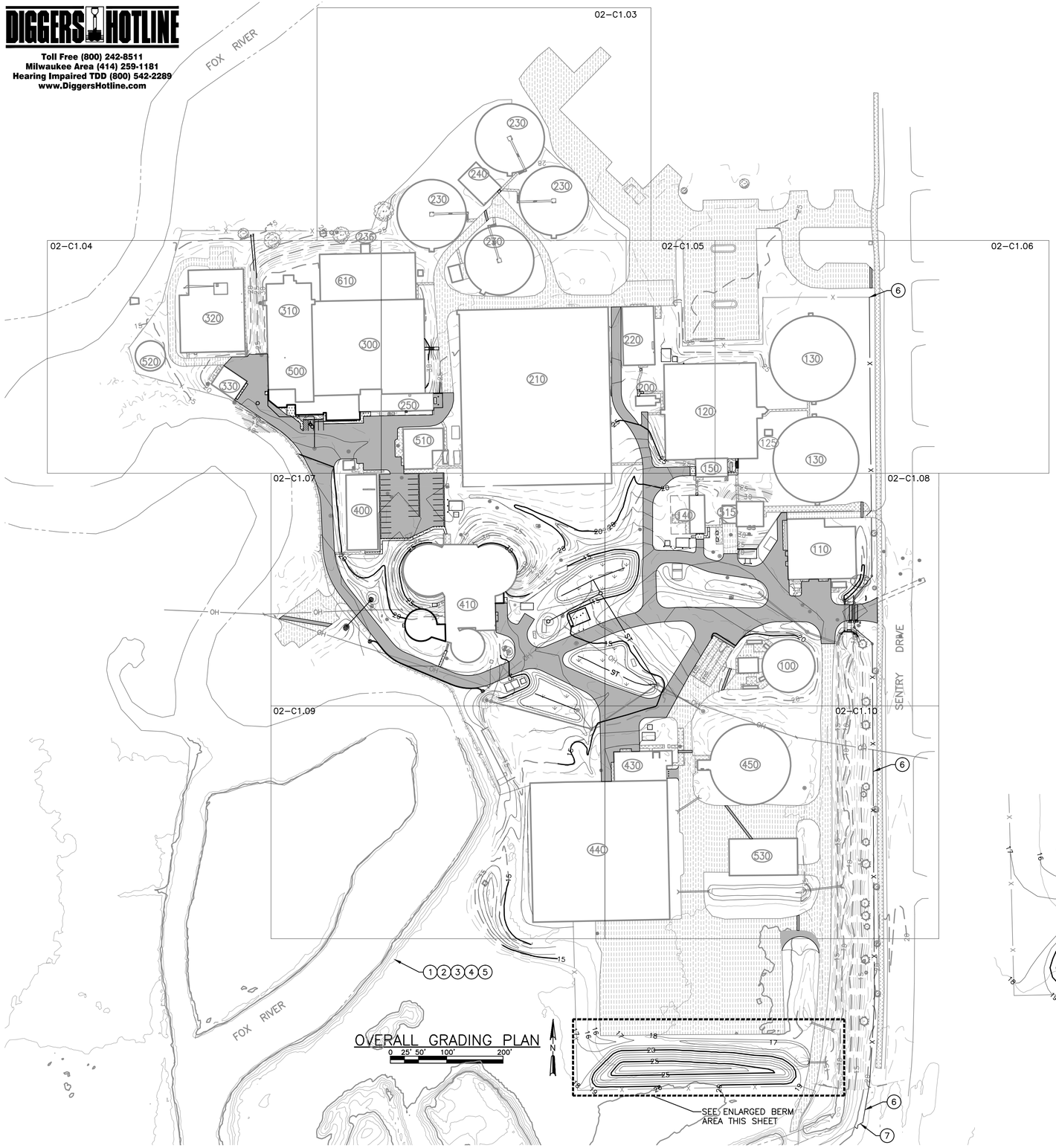

OVERALL GRADING PLAN
0 25' 50' 100' 200'

STRUCTURE NUMBERS

00 - GENERAL
05 - SITE
100 - SEPTAGE RECEIVING STATION
110 - PRELIMINARY TREATMENT BUILDING
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500 - ADMINISTRATION BUILDING
510 - GENERATOR BUILDING
515 - GENERATOR CONTROL BUILDING
520 - ELEVATED TANK
530 - SERVICE BUILDING
610 - FINAL SETTLING BASINS

LEGEND:

- EXISTING ASPHALT PAVEMENT
- EXISTING SIDEWALK/CONCRETE PAVEMENT
- EXISTING GRAVEL
- NEW ASPHALT PAVEMENT
- NEW SIDEWALK/CONCRETE PAVEMENT
- BIORETENTION BASIN
- STONE MULCH

GENERAL NOTES

1. SEE SHEET 05–C5.01 FOR CONSTRUCTION DETAILS.
2. TOP OF CASTING ELEVATIONS TO BE FIELD VERIFIED. ADJUST CASTINGS AS REQUIRED TO MATCH FINISH GRADE UNLESS NOTED OTHERWISE.
3. CONTRACTOR SHALL CONTACT APPROPRIATE AGENCIES FOR LOCATING UTILITIES.
4. CONTRACTOR SHALL ADJUST ALL EXISTING MANHOLE CASTINGS TO MATCH FINISH GRADE.
5. CONTRACTOR SHALL TRIM AND PROVIDE ROOT PRUNING OF EXISTING TREES AS NECESSARY TO INSTALL THE NEW FENCE.

KEY NOTES

(1) PRIOR TO PLACING EXCESS MATERIAL, CONTRACTOR SHALL STRIP EXISTING TOPSOIL, STOCKPILE, AND SALVAGE FOR RESTORATION ON TOP OF THE EXCESS MATERIAL. CONTRACTOR SHALL SUPPLEMENT TOPSOIL IF ADDITIONAL AMOUNT IS NECESSARY.

(2) CONTRACTOR SHALL MAINTAIN STORMWATER DRAINAGE AT ALL TIMES.

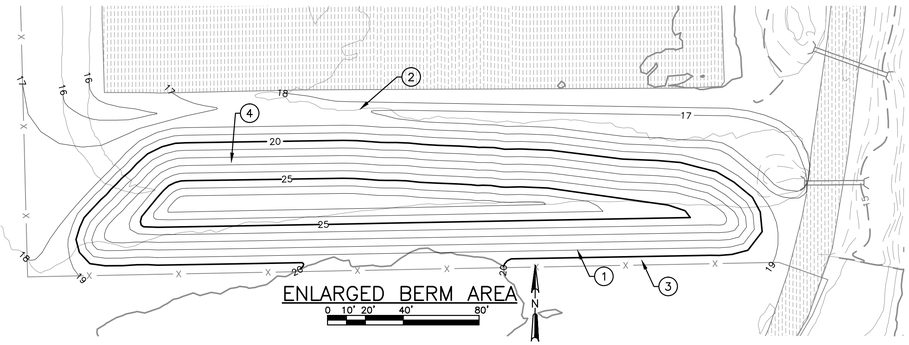
(3) CONTRACTOR SHALL PROVIDE EROSION CONTROL SILT FENCE AND ALL OTHER EROSION CONTROL MEASURES NECESSARY AROUND THE EXCESS MATERIAL UNTIL RESTORATION HAS BEEN ESTABLISHED.

(4) SLOPE OF EXCESS MATERIAL SHALL BE NO GREATER THAN 4H:1V.

(5) ADDITIONAL EXCESS MATERIAL THAT CANNOT BE PLACED AT THE ENLARGED BERM AREA SHALL BE PLACED ALONG THE BERM TO THE EAST. CONTRACTOR SHALL COORDINATE WITH THE CITY OF WAUKESHA ON THE EXACT AREA FOR PLACEMENT OF THE EXCESS MATERIAL.

(6) PROVIDE NEW ORNAMENTAL FENCE AS SPECIFIED.

(7) CONTRACTOR SHALL PROVIDE NEW CHAIN LINK FENCE TO MATCH EXISTING WITH A SIX FOOT WIDE GATE OPENING WITH LOCKING MECHANISM AND NECESSARY APPURTENANCES. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.



ENLARGED BERM AREA
0 10' 20' 40' 80'

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OVERALL SITE GRADING PLAN

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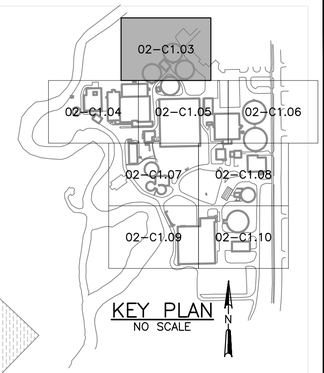
GENERAL NOTES:

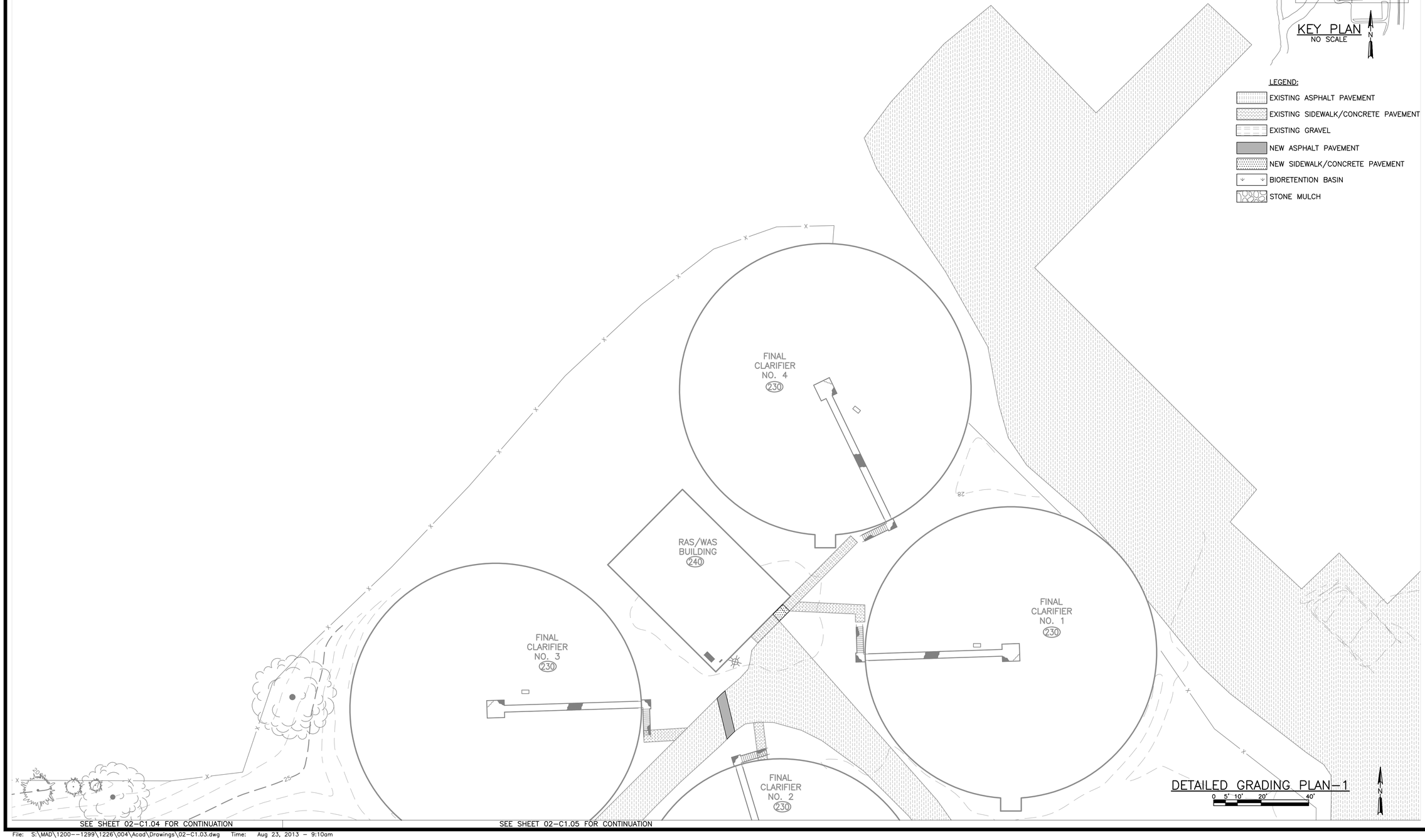
1. SEE GENERAL NOTES ON DRAWING 02-C1.02.



KEY PLAN
NO SCALE

LEGEND:

- EXISTING ASPHALT PAVEMENT
- EXISTING SIDEWALK/CONCRETE PAVEMENT
- EXISTING GRAVEL
- NEW ASPHALT PAVEMENT
- NEW SIDEWALK/CONCRETE PAVEMENT
- BIORETENTION BASIN
- STONE MULCH



DETAILED GRADING PLAN-1

0 5' 10' 20' 40'

SEE SHEET 02-C1.04 FOR CONTINUATION
SEE SHEET 02-C1.05 FOR CONTINUATION

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DETAILED SITE GRADING PLAN - 1

WASTEWATER TREATMENT PLANT IMPROVEMENTS
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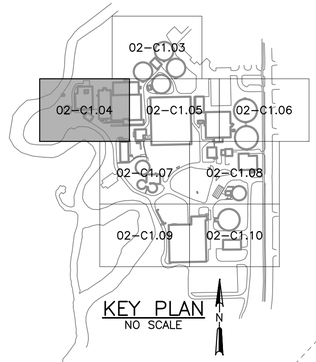

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LEGEND:
- EXISTING ASPHALT PAVEMENT
- EXISTING SIDEWALK/CONCRETE PAVEMENT
- EXISTING GRAVEL
- NEW ASPHALT PAVEMENT
- NEW SIDEWALK/CONCRETE PAVEMENT
- BIORETENTION BASIN
- STONE MULCH

SEE SHEET 02-C1.03 FOR CONTINUATION

FOX RIVER

ELEVATED TANK (520)

UV DISINFECTION (320)

FILTER BUILDING (310)

SECONDARY EFFLUENT DIVERSION STRUCTURE (236)

FINAL SETTLING BASIN (610)

COAGULATION BASIN (300)

MATCH EXISTING ASPHALT (TYP.)

PRETREATMENT BUILDING (330)

MATCH EXISTING CONCRETE

ADMINISTRATION BUILDING (500)
FFE 22.90

CHEMICAL FEED AND STORAGE BUILDING (250)

EL. 22.90
EL. 22.30
EL. 22.20
EL. 22.20
EL. 21.80
EL. 22.95
EL. 22.95
EL. 21.65
EL. 22.70
EL. 22.58
EL. 21.20
EL. 22.58
EL. 22.35
EL. 22.80
EL. 22.45
EL. 21.20
EL. 22.65
EL. 21.10
EL. 21.00
EL. 21.00
EL. 21.65
EL. 20.00
EL. 22.53
EL. 22.70
EL. 19.35
EL. 22.90
EL. 22.70
EL. 22.95
EL. 22.86
EL. 22.86

FLAG POLE

4.0%
5.0%
5.0%
8'-0"
6'-0"
20'-0" (TYP.)
6'-0" (TYP.)
9'-0" (TYP.)

N=368932.41
E=2467240.44

N=368988.27
E=2467440.39

R=150'

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING 02-C1.02.

KEY NOTES:

(1) 4" SCHEDULE 40 PVC

(2) COORDINATE INSTALLATION OF PIPE WITH DIVISION 16 CONTRACTOR.

(3) PROVIDE CONNECTION TO ELECTRICAL MANHOLE. VERIFY INVERT ELEVATION

DETAILED GRADING PLAN-2

0 5' 10' 20' 40'

N

SEE SHEET 02-C1.05 FOR CONTINUATION

SEE SHEET 02-C1.07 FOR CONTINUATION

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DETAILED SITE GRADING PLAN - 2

WASTEWATER TREATMENT PLANT IMPROVEMENTS
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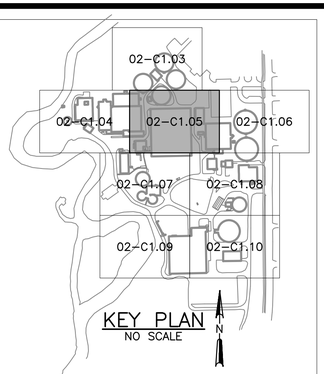

KEY PLAN
NO SCALE

LEGEND:

- EXISTING ASPHALT PAVEMENT
- EXISTING SIDEWALK/CONCRETE PAVEMENT
- EXISTING GRAVEL
- NEW ASPHALT PAVEMENT
- NEW SIDEWALK/CONCRETE PAVEMENT
- BIORETENTION BASIN
- STONE MULCH

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING 02-C1.02.

SEE SHEET 02-C1.04 FOR CONTINUATION

FINAL SETTLING BASIN (610)

235

FINAL CLARIFIER NO. 2 (230)

9R@6.2"=4'-8"
8T@12"=8'-0"

EL. 30.85
EL. 31.00
TW 31.00

CONCRETE STAIR W/ALUMINUM RAILING
A 990-C5.01
A 990-ASM5.05

EL. 26.20
EL. 26.00

30

25

COAGULATION BASIN (300)

CONCRETE RETAINING WALL
K 990-C5.01

15'-11"

TW 30.00
EL. 23.30

MATCH EXISTING ASPHALT (TYP.)

TW 23.00

CHEMICAL FEED AND STORAGE BUILDING (250)

EL. 22.90

EL. 23.00
EL. 22.40

GUARD POST (TYP.)
B 990-C5.01

GENERATOR BUILDING (510)

N=368976.78
E=2467517.66

R=7'

AERATION TANKS (210)

BLOWER BUILDING (220)

EL. 28.00

N=369120.44
E=2467984.84

R=50'

200

PRIMARY SETTLING BASIN (120)

25

R=3'

N=369066.36
E=2467968.08

R=10'

SECOND STAGE PUMPING BUILDING (150)

SEE SHEET 02-C1.06 FOR CONTINUATION

DETAILED GRADING PLAN-3
0 5' 10' 20' 40'

N

SEE SHEET 02-C1.07 FOR CONTINUATION

SEE SHEET 02-CM1.08 FOR CONTINUATION

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

DETAILED SITE GRADING PLAN - 3

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO.
1226.004

PROJECT MGR.
SCOTT W. STEARNS

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SHEET
23
02-C1.05

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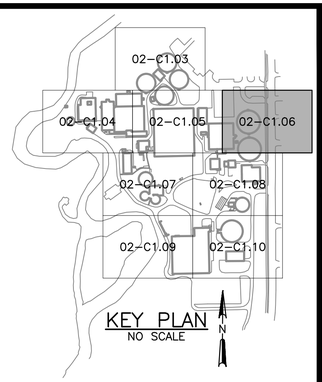
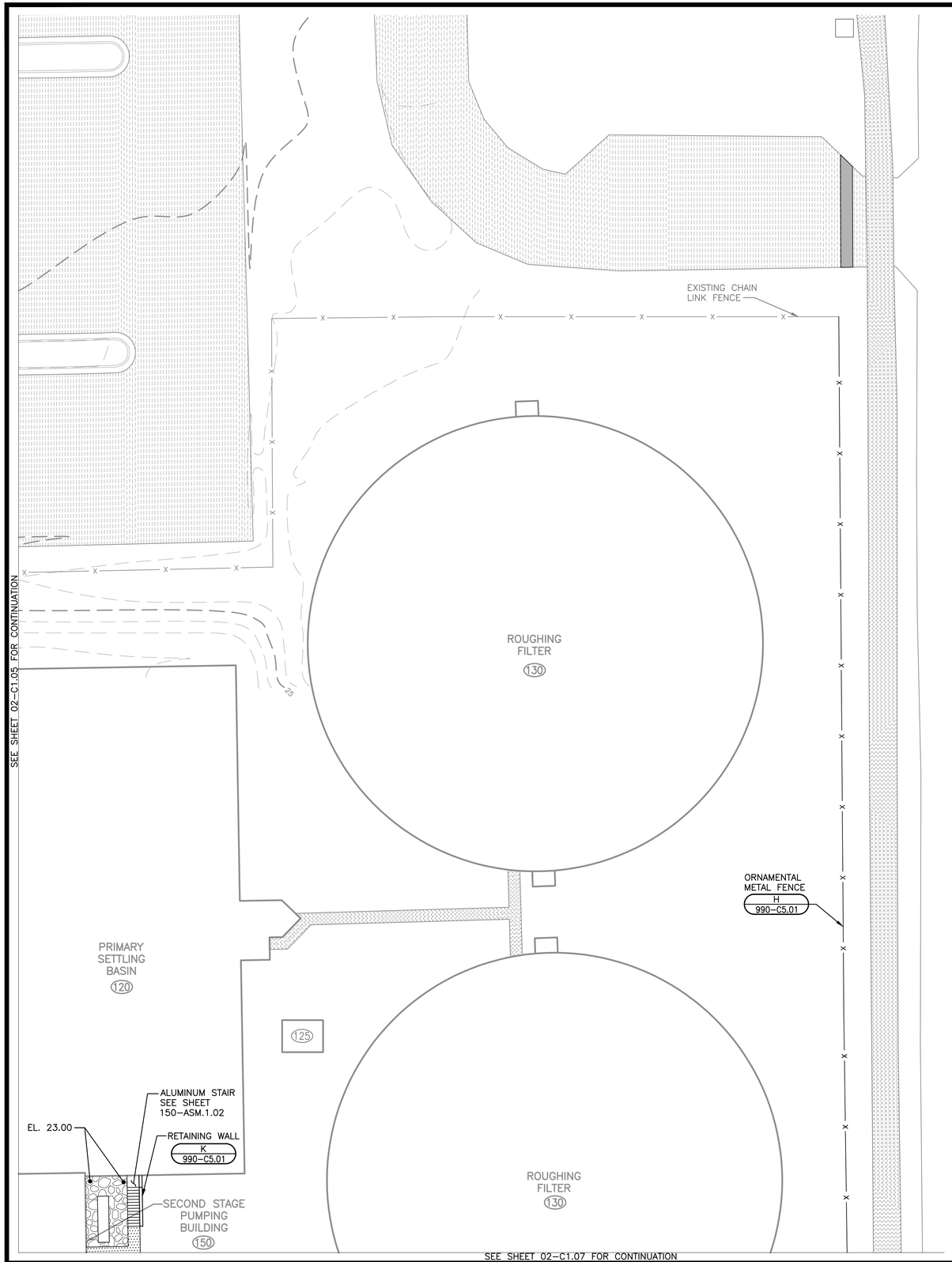


LEGEND:

- EXISTING ASPHALT PAVEMENT
- EXISTING SIDEWALK/CONCRETE PAVEMENT
- EXISTING GRAVEL
- NEW ASPHALT PAVEMENT
- NEW SIDEWALK/CONCRETE PAVEMENT
- BIORETENTION BASIN
- STONE MULCH

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING 02-C1.02.



DETAILED GRADING PLAN-4
0 5' 10' 20' 40'
N

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

DETAILED SITE GRADING PLAN - 4

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

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SHEET 24
02-C1.06

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SEE SHEET 02-C1.04 FOR CONTINUATION

SEE SHEET 02-C1.05 FOR CONTINUATION

FOX RIVER

R=150'

EL. 19.00 EL. 19.55 EL. 18.60 EL. 19.00

N=368909.80
E=2467252.15

SLUDGE THICKENING BUILDING (400)
FFE=23.00±

EL. 22.70 EL. 22.80 EL. 22.80
4'-0"
CURB STOP (TYP.)
EL. 21.45
EL. 22.30
20'-0" (TYP.)
4'-6" (TYP.)
EL. 23.00
EL. 22.30
EL. 22.05
EL. 21.95
EL. 21.35
EL. 22.60
EL. 22.40
EL. 22.20
EL. 21.70
EL. 20.80
EL. 21.60
EL. 22.70
EL. 22.60
EL. 17.60 EL. 18.00 EL. 22.80 EL. 21.90

AERATION TANKS (210)

KEY NOTES:

1. CONTRACTOR SHALL ADJUST THE HEIGHT FOR THE TOP OF THE MODULAR BLOCK RETAINING WALL IN ORDER TO STEP THE TOP OF THE WALL IN RELATION TO THE PROPOSED CONTOURS.
2. CONCRETE STAIR W/ALUMINUM RAILING, SEE DETAIL A/990-C5.01 FIELD VERIFY GRADES. FOR EQUIPMENT PLATFORM SEE DETAIL A/100-AS1.01
3. SALVAGE AND REPLACE EXISTING RIP RAP.

N=368851.67
E=2467555.24

RIM EL. 12.00
15" ST, IE=4.00 SE
12" ST, IE 4.60 SW

EL. 17.65
EL. 17.25
R=130'
EL. 18.20

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING 02-C1.02.

EL. 18.10
AEW 12" ST IE 16.00
MATCH EXISTING ASPHALT
EL. 26.8
EL. 27.00
PRIMARY DIGESTER COMPLEX (410)
FFE=15.00±
EL. 14.88
FFE= 15.00
RIM EL. 11.50
12" ST
I.E. 4.60
EL. 14.00
EL. 13.35
EL. 13.55
ELECTRICAL EQUIPMENT PLATFORM
EL. 13.85
EL. 13.60
EL. 13.80
EL. 19.16
TYP. HIGH PT.
EL. 18.84
TYP. LOW PT.
AT PERIMETER
EL. 14.80
EL. 14.60
EL. 13.60
AEW 12" ST IE 15.25
RIP RAP (TYP.)
R=60'
N=368714.32
E=2467575.66
EL. 18.50
N=368688.61
E=2467663.07
N=368670.57
E=2467725.60
R=70'
N=368691.09
E=2467790.83
REMOVE AND REPLACE FENCING AS NECESSARY FOR CONSTRUCTION
TC 18.45
TC=18.55
EL. 18.25
EL. 14.10
EL. 13.70
EL. 13.90
EL. 14.35
HI-PT
TC=18.75
PROTECT EXISTING FENCE (TYP.)
EL. 18.05
EL. 18.00
N=368660.99
E=2467726.64
EL. 14.15
EL. 13.40
EL. 14.30
N=368590.93
E=2467845.86
EL. 15.00
EL. 17.95
18 INCH CURB AND GUTTER
EL. 17.65
EL. 17.45
EL. 17.20
EL. 17.00
EL. 14.50
PROTECT EXISTING GUARDRAILING (TYP.)
TC 17.90
TC 17.80
EL. 13.30
N=368590.93
E=2467776.81
N=368545.72
E=2467847.14
EL. 13.40

SEE SHEET 02-C1.08 FOR CONTINUATION

SEE SHEET 02-C1.09 FOR CONTINUATION

02-C1.03
02-C1.04 02-C1.05 02-C1.06
02-C1.07 02-C1.08
02-C1.09 02-C1.10

KEY PLAN
NO SCALE

LEGEND:
- EXISTING ASPHALT PAVEMENT
- EXISTING SIDEWALK/CONCRETE PAVEMENT
- EXISTING GRAVEL
- NEW ASPHALT PAVEMENT
- NEW SIDEWALK/CONCRETE PAVEMENT
- BIORETENTION BASIN
- STONE MULCH

DETAILED GRADING PLAN-5
0 5' 10' 20' 40'

FOX RIVER

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

DETAILED SITE GRADING PLAN - 5

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004
PROJECT MGR. SCOTT W. STEARNS

STRAND ASSOCIATES®

SHEET 25 02-C1.07

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SEE SHEET 02-C1.05 FOR CONTINUATION

SEE SHEET 02-C1.06 FOR CONTINUATION

SEE SHEET 02-C1.07 FOR CONTINUATION

SEE SHEET 02-C1.10 FOR CONTINUATION

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ROUGHING FILTER (130)

SECOND STAGE PUMPING BUILDING (150)

PRIMARY EFFLUENT PUMP BUILDING (140)

GRIT BUILDING (515)

PRELIMINARY TREATMENT BUILDING (110)

WATER METER/BACKFLOW PREVENTER BUILDING (115)

SEPTAGE RECEIVING STATION (100)

ALUMINUM RAILING W/TOE BOARD

RETAINING WALL TW EL. 21.00 L 990-C5.01

CONCRETE CONTAINMENT PADS C 990-E5.02

ORNAMENTAL METAL FENCE H 990-C5.01

SWING GATE

PROTECT EXISTING BOLLARDS (TYP.)

1~32' WIDE CANTILEVERED SLIDING GATE

FACILITY SIGN F 990-C5.01

SEE DETAIL D 02-C5.01

GATE/FENCE PIERS, TYP. OF 6 G 990-C5.01

ORNAMENTAL METAL FENCE H 990-C5.01

MATCH EXISTING ASPHALT (TYP.)

33'-0"± FIELD VERIFY

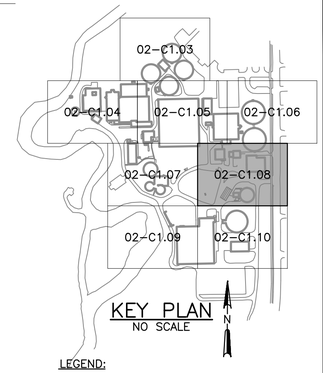
RIM EL. 14.00
15" RCP ST, IE 3.00 N
15" ST, IE 2.84 SE

N=368938.04 E=2468044.24
N=368919.77 E=2468025.54
N=368849.94 E=2468000.54
N=368848.52 E=2468175.38
N=368798.47 E=2468016.37
N=368760.04 E=2468165.77
N=368758.64 E=2468175.76
N=368758.37 E=2468017.49
N=368764.49 E=2468238.09
N=368764.73 E=2468249.96
N=368759.27 E=2468322.29
N=368748.89 E=2467953.73
N=368690.44 E=2468041.67
N=368684.06 E=2468259.05
N=368691.27 E=2468339.70
N=368619.35 E=2468217.12
N=368607.86 E=2467985.01

EL. 16.00 EL. 17.50 EL. 18.00 EL. 15.80 EL. 16.15 EL. 16.40 EL. 17.15 EL. 18.10 EL. 18.25 EL. 18.70 EL. 18.50 EL. 15.80 EL. 18.50 EL. 19.25 EL. 19.50 EL. 19.05 EL. 14.40 EL. 16.44 EL. 17.00 EL. 16.00 EL. 16.30 EL. 17.35 EL. 16.75 EL. 16.50 EL. 17.15 EL. 17.20 EL. 17.40 EL. 17.25 EL. 17.60 EL. 18.15 EL. 18.30 EL. 18.15 EL. 17.55 EL. 17.50 EL. 17.80 EL. 17.50

R=35' R=35' R=10' R=20' R=20' R=20' R=25' R=30' R=20' R=25' R=95' R=30' R=5' R=5' R=15' R=25'

17'-0" 32'-0" 32'-0" 15' 10' 15'



KEY PLAN
NO SCALE

LEGEND:
- EXISTING ASPHALT PAVEMENT
- EXISTING SIDEWALK/CONCRETE PAVEMENT
- EXISTING GRAVEL
- NEW ASPHALT PAVEMENT
- NEW SIDEWALK/CONCRETE PAVEMENT
- BIORETENTION BASIN
- STONE MULCH

KEY NOTES:
1. PROVIDE MEDIUM RIP RAP W/GEOTEXTILE FABRIC.
2. EXTEND EXISTING RCP AND SALVAGE RCP END WALL.

DRIVE

SENTRY

GENERAL NOTES:
1. SEE GENERAL NOTES ON DRAWING 02-C1.02.

DETAILED GRADING PLAN-6
0 5' 10' 20' 40'

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

DETAILED SITE GRADING PLAN - 6
WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004
PROJECT MGR. SCOTT W. STEARNS

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SHEET 26
02-C1.08

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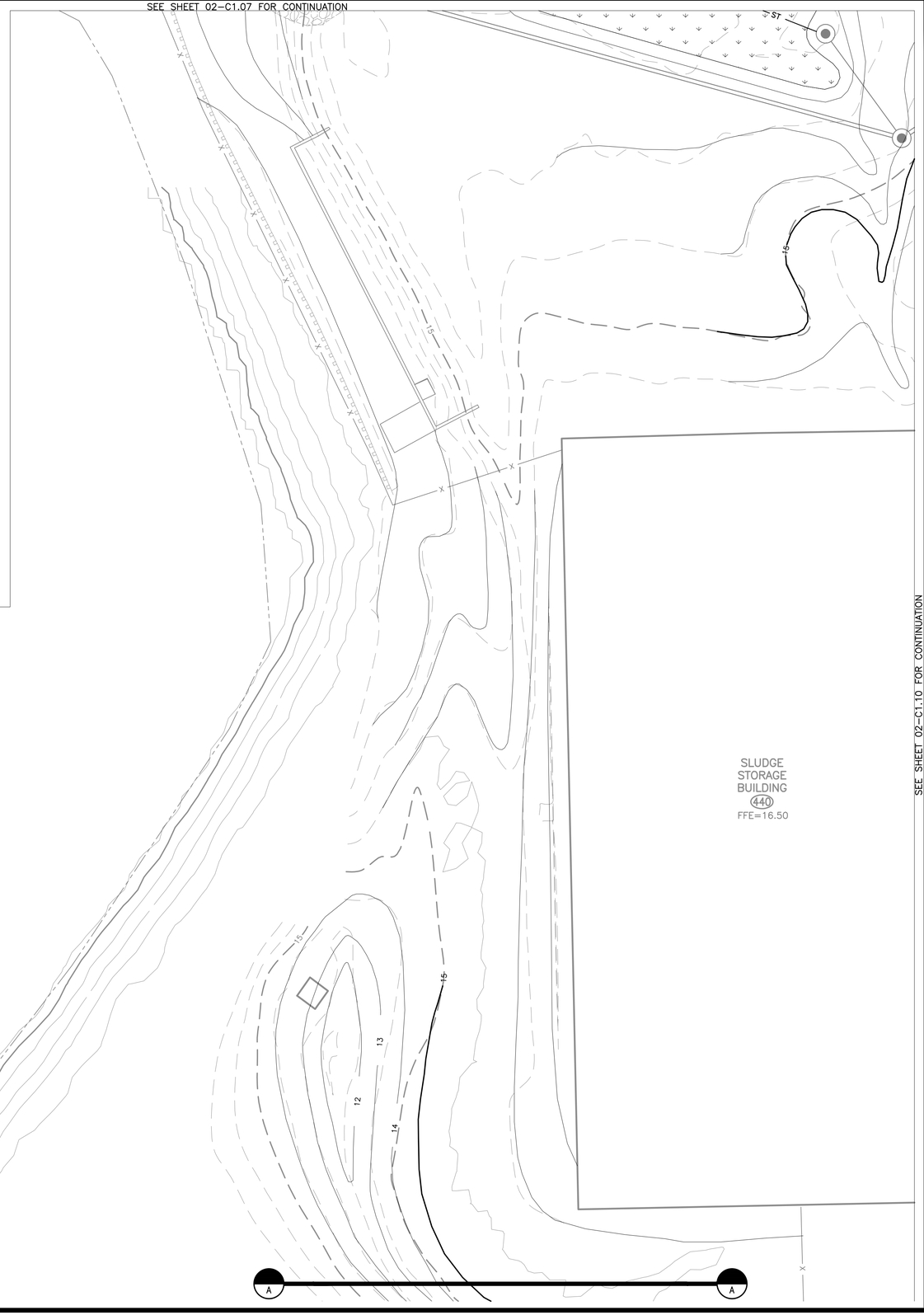

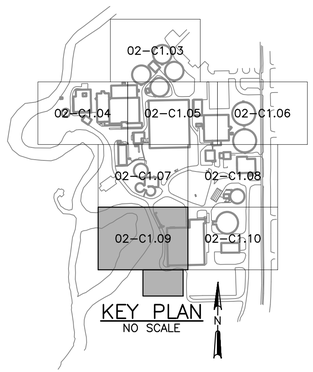

DETAILED GRADING PLAN–7
0 5' 10' 20' 40'
N

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GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING 02–C1.02.

LEGEND:

- EXISTING ASPHALT PAVEMENT
- EXISTING SIDEWALK/CONCRETE PAVEMENT
- EXISTING GRAVEL
- NEW ASPHALT PAVEMENT
- NEW SIDEWALK/CONCRETE PAVEMENT
- BIORETENTION BASIN
- STONE MULCH

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

DETAILED SITE GRADING PLAN - 7

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO.
1226.004

PROJECT MGR.
SCOTT W. STEARNS

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SHEET
27
02-C1.09

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SEE SHEET 02-C1.08 FOR CONTINUATION

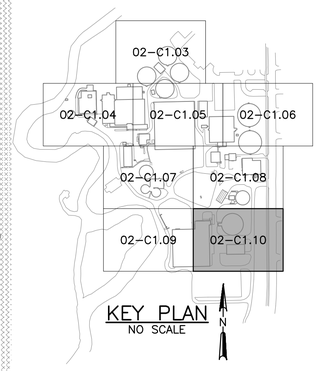
SEE SHEET 02-C1.09 FOR CONTINUATION

N=368528.89
E=2467981.59
R=15'
EL. 17.00
EL. 18.00
EL. 16.75
PROTECT EXISTING SIDEWALK
DEWATERING BUILDING (430)
EL. 16.20
EL. 16.60
LIQUID SLUDGE STORAGE TANK (450)
SLUDGE STORAGE BUILDING (440)
SERVICE BUILDING (530)
ORNAMENTAL METAL FENCE H 990-C5.01
SENTRY DRIVE
OH
FO
15
10

DETAILED GRADING PLAN-8
0 5' 10' 20' 40'
N

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING 02-C1.02.



KEY PLAN
NO SCALE
N

LEGEND:

- EXISTING ASPHALT PAVEMENT
- EXISTING SIDEWALK/CONCRETE PAVEMENT
- EXISTING GRAVEL
- NEW ASPHALT PAVEMENT
- NEW SIDEWALK/CONCRETE PAVEMENT
- BIORETENTION BASIN
- STONE MULCH

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

DETAILED SITE GRADING PLAN - 8

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO.
1226.004

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28
02-C1.10

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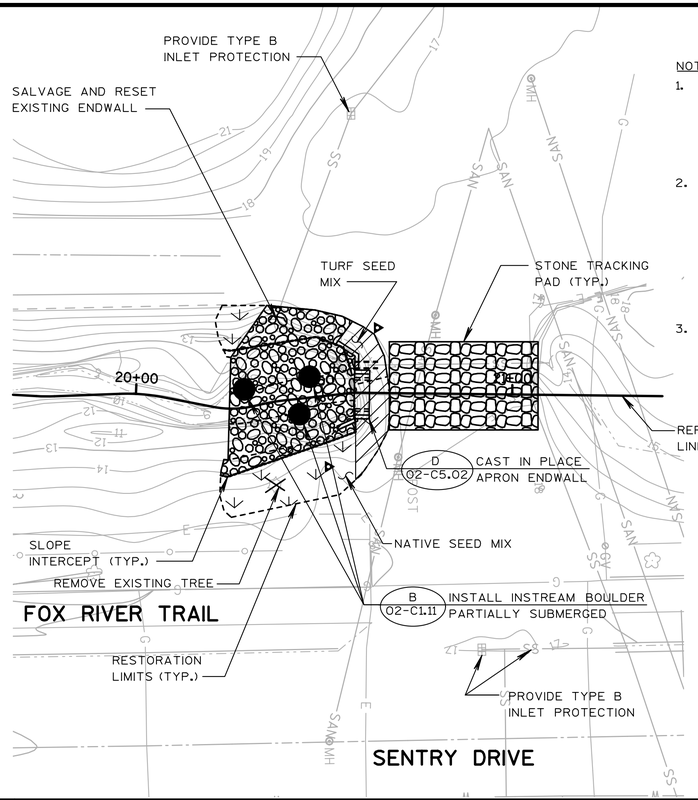

NOTES;

1. ALL EXISTING FACILITIES SURROUNDING THE STREAM INCLUDING UTILITIES, CURB AND GUTTER, RETAINING WALLS, BRIDGES, BIKE PATHS, STREET, PARKING LOTS, AND BEYOND RESTORATION LIMITS (SHOWN ON THE RESTORATION PLAN) SHALL BE REPAIRED AT CONTRACTORS EXPENSE IF DAMAGED.

2. CLEARING AND GRUBBING: IN AREAS WHERE NEW BANK TREATMENT IN LOCATED AMONGST EXISTING TREES, SAVE ONLY THE TREES THAT ARE CIRCLED (ALL OTHERS SHALL BE CLEARED). IN AREAS WHERE NEW BANK TREATMENT DOES NOT AFFECT EXISTING TREES, TREES DO NOT NEED TO BE CLEARED UNLESS NECESSARY FOR ACCESS WHILE CIRCLED TREES SHALL BE SAVED.

3. ALL AREAS RECEIVING SEEDING SHALL BE PROVIDED WITH A CLASS II, TYPE C EROSION MAT.

FIELD STONE RIPRAP

NATIVE SEED MIX

NATIVE SEED MIX

IN-STREAM BOULDER

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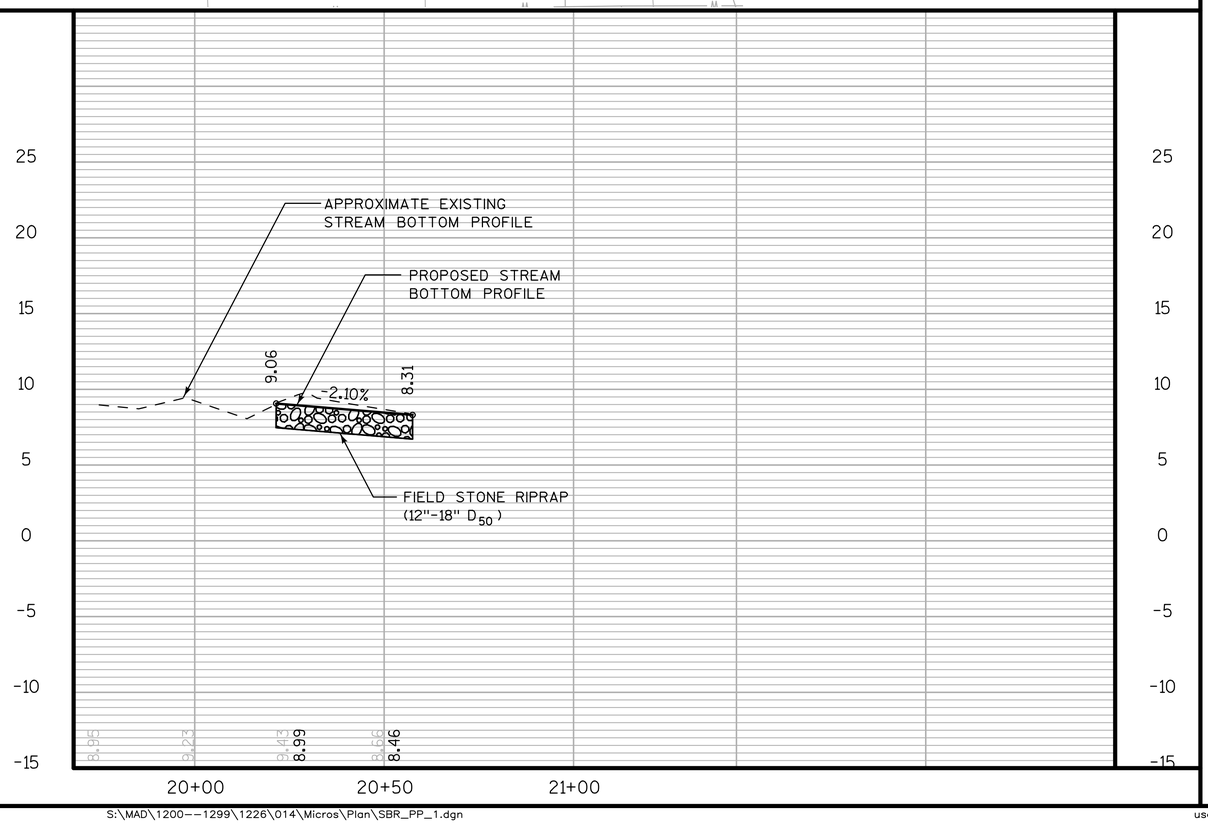
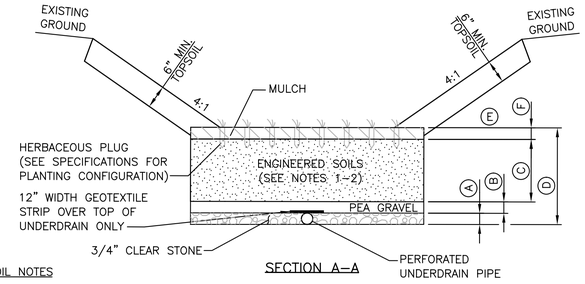
0 FEET 50 100





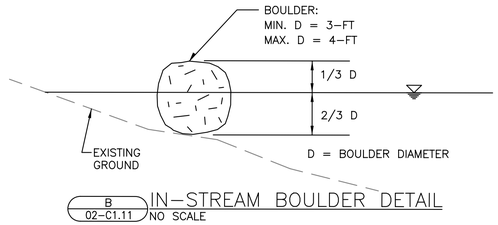
SECTION A-A

ENGINEERED SOIL NOTES

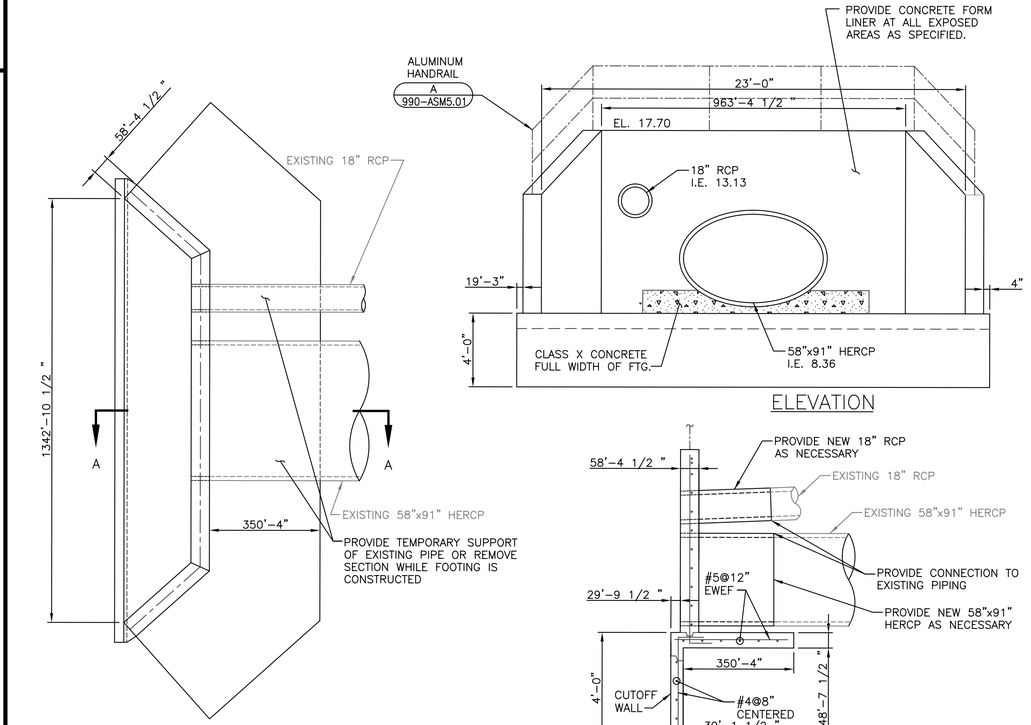
1. ENGINEERED SOIL SHALL ONLY BE USED ON THE BOTTOM FOOTPRINT OF THE BIORETENTION BASIN.
2. PEA GRAVEL SHALL BE CLEAN AND LARGE ENOUGH SO IT DOES NOT FALL THROUGH THE PEFORATIONS ON THE UNDERDRAIN.

A
02-C1.11
BIORETENTION BASIN
NO SCALE

DIMENSION	BIORETENTION BASIN		
	1	2	3
A	4"	6"	4"
B	3"	3"	3"
C	1.5'	1.75'	1.5'
D	2.1'	2.5'	2.1'
E	12.25	13	12.25
F	3"	3"	3"



B
02-C1.11
IN-STREAM BOULDER DETAIL
NO SCALE



GENERAL NOTES:

1. DRILL INTO CONCRETE PIPE AND PROVIDE #4@8" DOWELS W/ADHESIVE ANCHORS EMBED 4" (TYP.).

D
02-C1.11
CAST IN PLACE APRON ENDWALL
0 1' 2' 4' 8'

DATE:
REVISIONS
NO.

OUTFALL CONSTRUCTION
PLAN AND PROFILE AND SITE DETAILS

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO.
1226014

PROJECT MGR.
SCOTT W. STEARNS

STRAND ASSOCIATES®

SHEET
29
02-C1.11

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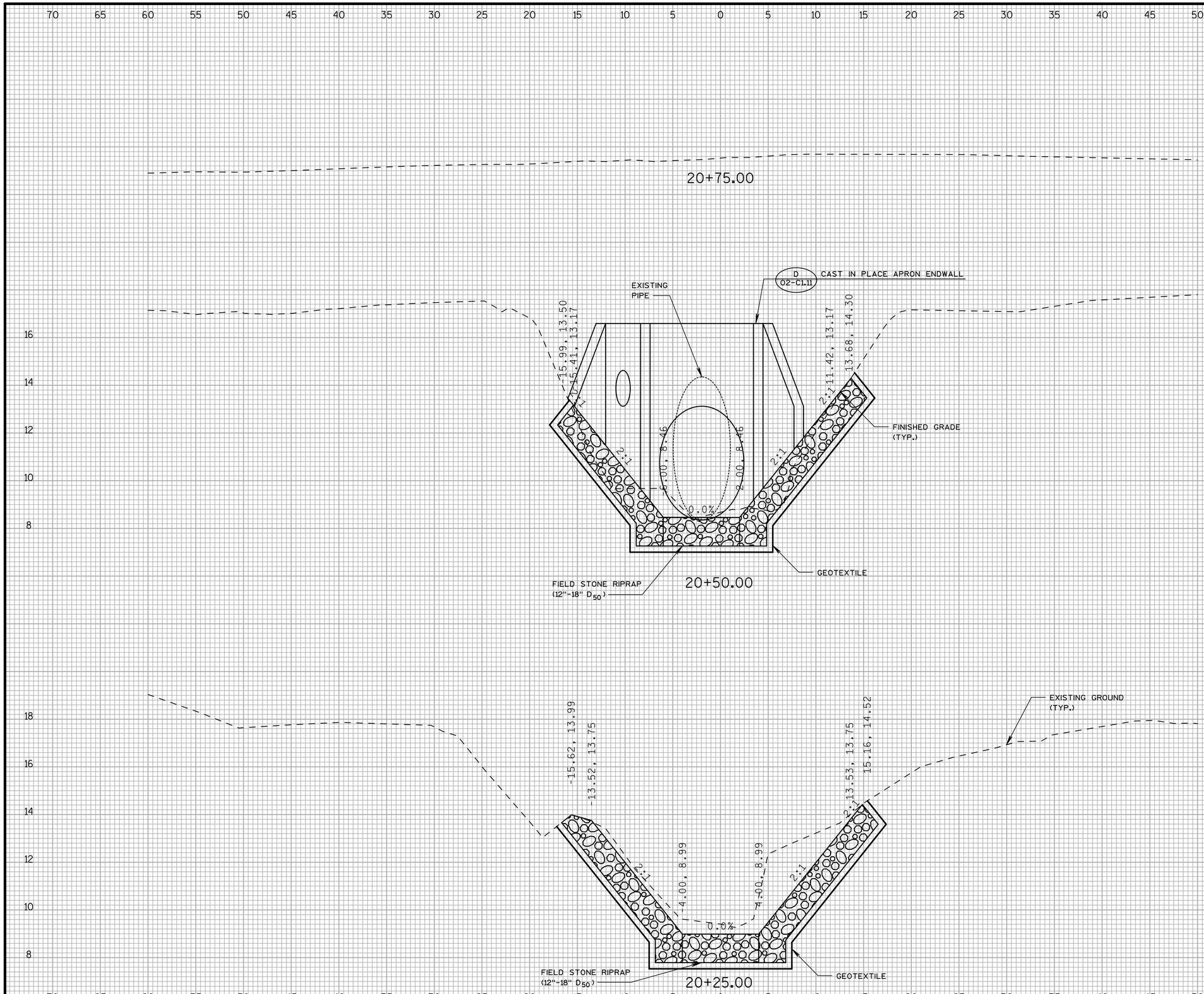

OUTFALL CONSTRUCTION CROSS SECTIONS

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

DATE:

REVISIONS

NO.

JOB NO.
1226014

PROJECT MGR.
SCOTT W. STEARNS

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SHEET
30
02-C1.12

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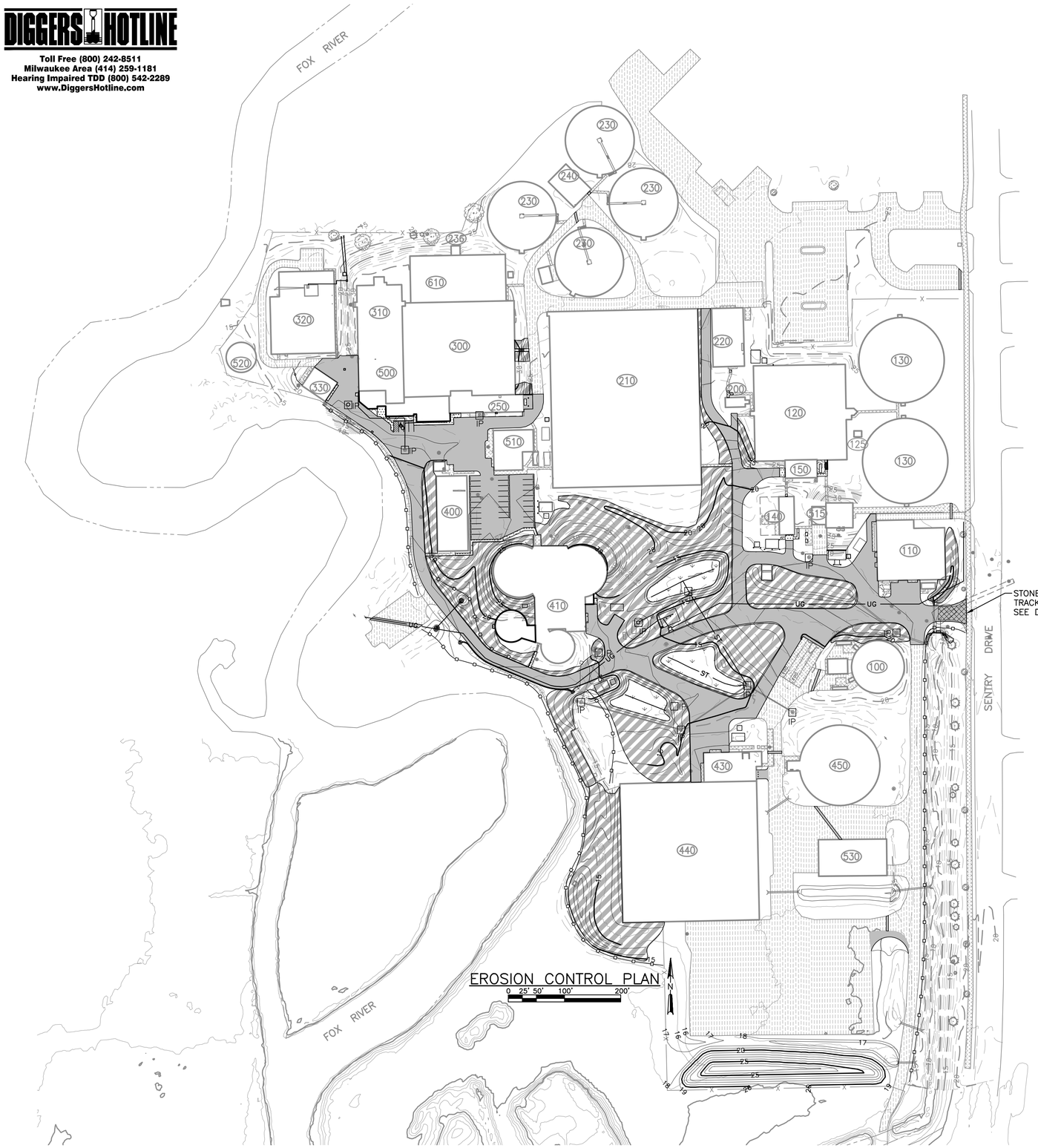
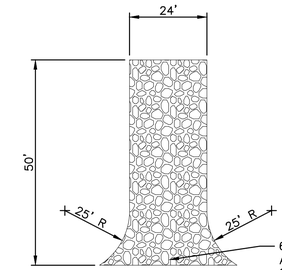


LEGEND:

- EXISTING ASPHALT PAVEMENT
- EXISTING SIDEWALK/CONCRETE PAVEMENT
- EXISTING GRAVEL
- NEW ASPHALT PAVEMENT
- NEW SIDEWALK/CONCRETE PAVEMENT
- BIORETENTION BASIN
- STONE MULCH
- EROSION MAT
- IP INLET PROTECTION
- SILT FENCE



A 05-C-02 STONE TRACKING PAD NO SCALE

STRUCTURE NUMBERS

00 - GENERAL
05 - SITE
100 - SEPTAGE RECEIVING STATION
110 - PRELIMINARY TREATMENT BUILDING
115 - WATER METER / BACKFLOW PREVENTER BUILDING
120 - PRIMARY SETTLING BASINS
125 - ROUGHING FILTER JUNCTION CHAMBER
130 - ROUGHING FILTERS
140 - PRIMARY EFFLUENT PUMP BUILDING
150 - SECOND STAGE PUMPING STATION
200 - AERATION SPLITTER BOX
210 - AERATION TANKS
220 - BLOWER BUILDING
225 - FINAL CLARIFIER SPLITTER BOX
230 - FINAL CLARIFIERS
235 - SECONDARY EFFLUENT JUNCTION CHAMBER
236 - SECONDARY EFFLUENT DIVERSION STRUCTURE
240 - RAS/WAS BUILDING
250 - CHEMICAL FEED AND STORAGE BUILDING
300 - COAGULATION BASIN
310 - FILTER BUILDING
320 - UV DISINFECTION
330 - PRETREATMENT BUILDING
400 - SLUDGE THICKENING BUILDING
410 - PRIMARY DIGESTER COMPLEX
430 - DEWATERING BUILDING
440 - SLUDGE STORAGE BUILDING AND DRYING PAD
450 - LIQUID SLUDGE STORAGE TANK
500 - ADMINISTRATION BUILDING
510 - GENERATOR BUILDING
515 - GENERATOR CONTROL BUILDING
520 - ELEVATED TANK
530 - SERVICE BUILDING
610 - FINAL SETTLING BASINS

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

EROSION CONTROL PLAN

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

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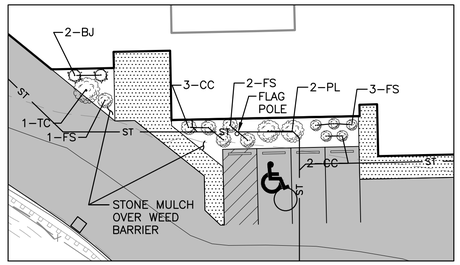
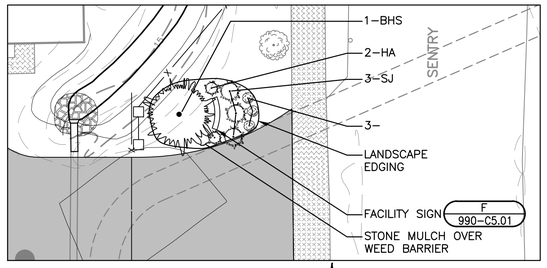
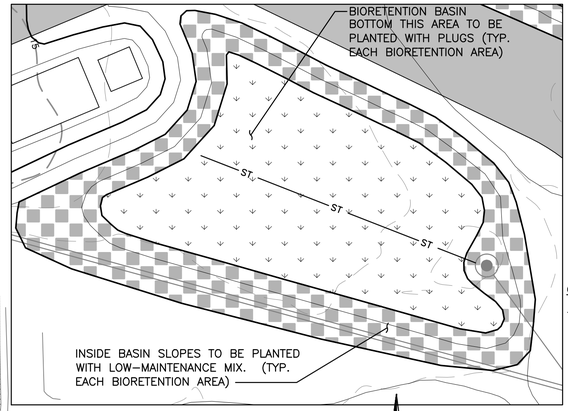




SEE DETAIL M 990-C5.01 FOR PLANT DATA CHART.

LANDSCAPE PLAN-1
0 5' 10' 20' 40'

LANDSCAPE PLAN-2
0 5' 10' 20' 40'

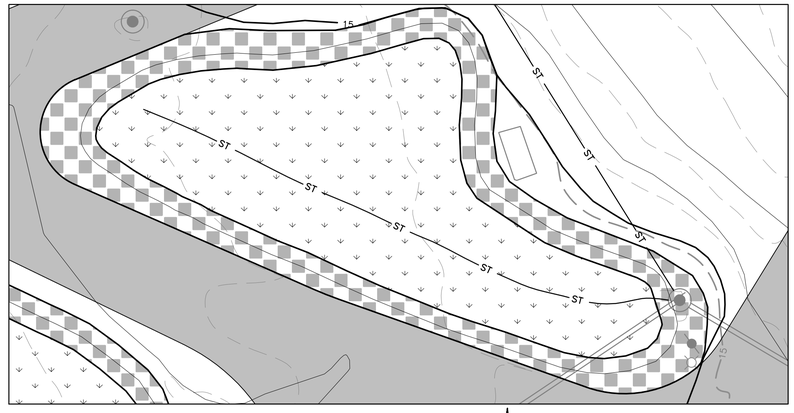


BIORETENTION AREA-1
0 5' 10' 20' 40'

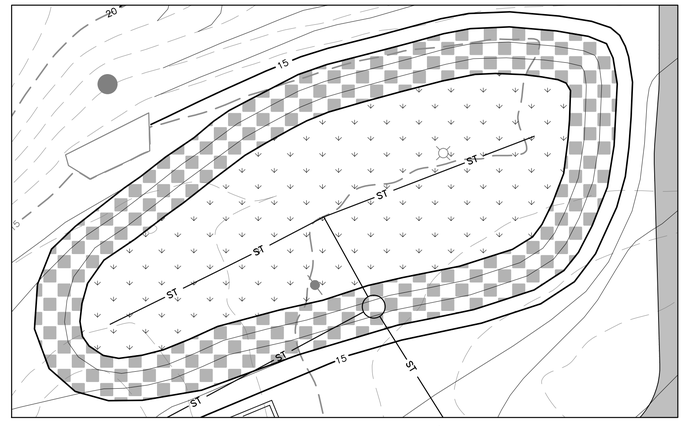
LEGEND:
- EXISTING ASPHALT PAVEMENT
- EXISTING SIDEWALK/CONCRETE PAVEMENT
- EXISTING GRAVEL
- NEW ASPHALT PAVEMENT
- NEW SIDEWALK/CONCRETE PAVEMENT
- BIORETENTION BASIN
- STONE MULCH
- LOW-MAINTENANCE MIX

GENERAL NOTES:

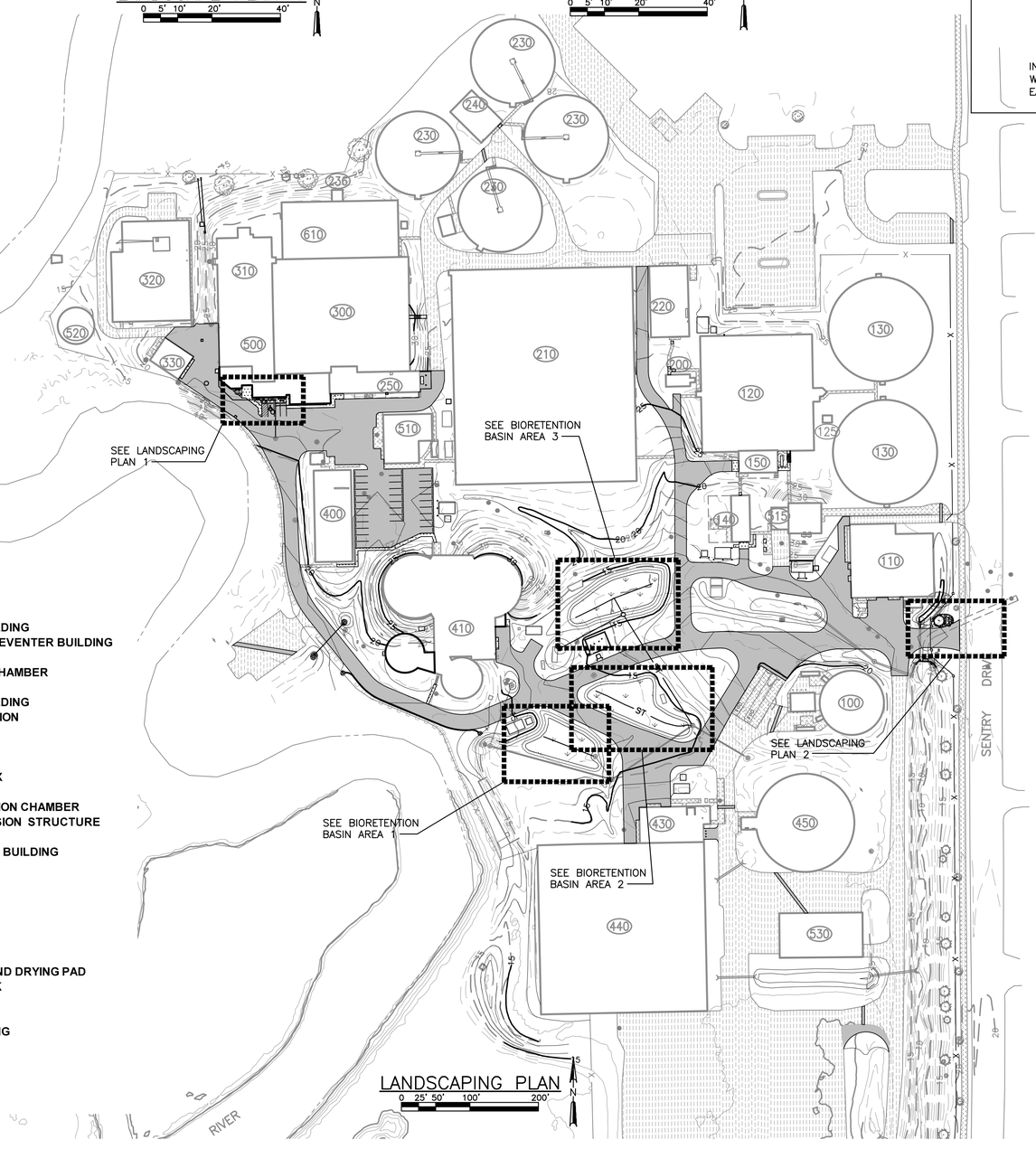
1. FOR CROSS SECTION OF BIORETENTION AREAS, SEE DETAIL A 02-C5.01



BIORETENTION AREA-2
0 5' 10' 20' 40'



BIORETENTION AREA-3
0 5' 10' 20' 40'



LANDSCAPING PLAN
0 25' 50' 100' 200'

STRUCTURE NUMBERS

00 - GENERAL
05 - SITE
100 - SEPTAGE RECEIVING STATION
110 - PRELIMINARY TREATMENT BUILDING
115 - WATER METER / BACKFLOW PREVENTER BUILDING
120 - PRIMARY SETTLING BASINS
125 - ROUGHING FILTER JUNCTION CHAMBER
130 - ROUGHING FILTERS
140 - PRIMARY EFFLUENT PUMP BUILDING
150 - SECOND STAGE PUMPING STATION
200 - AERATION SPLITTER BOX
210 - AERATION TANKS
220 - BLOWER BUILDING
225 - FINAL CLARIFIER SPLITTER BOX
230 - FINAL CLARIFIERS
235 - SECONDARY EFFLUENT JUNCTION CHAMBER
236 - SECONDARY EFFLUENT DIVERSION STRUCTURE
240 - RAS/WAS BUILDING
250 - CHEMICAL FEED AND STORAGE BUILDING
300 - COAGULATION BASIN
310 - FILTER BUILDING
320 - UV DISINFECTION
330 - PRETREATMENT BUILDING
400 - SLUDGE THICKENING BUILDING
410 - PRIMARY DIGESTER COMPLEX
430 - DEWATERING BUILDING
440 - SLUDGE STORAGE BUILDING AND DRYING PAD
450 - LIQUID SLUDGE STORAGE TANK
500 - ADMINISTRATION BUILDING
510 - GENERATOR BUILDING
515 - GENERATOR CONTROL BUILDING
520 - ELEVATED TANK
530 - SERVICE BUILDING
610 - FINAL SETTLING BASINS

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1	ISSUED FOR BIDDING	8/16/13

LANDSCAPING PLAN AND DETAILS
WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

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FOX RIVER

ELEVATED TANK (520)

UV DISINFECTION (320)

FILTER BUILDING (310)

FINAL SETTLING BASIN (610)

SECONDARY EFFLUENT DIVERSION STRUCTURE (236)

COAGULATION BASIN (300)

PRETREATMENT BUILDING (330)

ADMINISTRATION BUILDING (500)

CHEMICAL FEED AND STORAGE BUILDING (250)

1" G
6" W3
3" CS
42" SE
72" SE
4" W3
W3
1 1/2" W3
54" DFE
E
2" G
54" FE
IE 8.00±
8" CWR
20" FE
3" CS
6" W3
2" G
3" CC
2" SDS
24" SBW
12" SBW
20" BWS
30" RW
1" G
2" SAS
6" D
2" W3
12" CWS
20" FE
30" RW
18" RCY/PD
36" RCY/PD
12" RCY/PD
IE
6" CHS
℄ EL 17.00±
8" WAS/SSM
℄ EL 17.00±
6" PSD/PDM
℄ EL 17.00±

SEE SHEET 02-CMD1.02 FOR CONTINUATION

02-CMD1.01
02-CMD1.02
02-CMD1.03

KEY PLAN
NO SCALE

N

YARD PIPING DEMOLITION PLAN-1
0 5' 10' 20' 40'

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

YARD PIPING DEMOLITION PLAN - 1

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
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FOX RIVER

SLUDGE THICKENING BUILDING (400)

AERATION TANKS (210)

PRIMARY DIGESTER COMPLEX (410)

2" W3
2" D
1 1/2" W2
2" NG
12" PD
6" TS
8" BD
8" BD IE 6.60±
24" RCY/PD IE 4.60±
30" RW
20" TUF IE 5.60±
2 1/2" PC
36" RCY/PD
6" PSD/PSM
6" W3
4" NG
2" W1
4" W2
30" RW
20" TUF
4" W3
36" RCY/PD IE 2.33±
1 1/2" W1
36" RCY/PD IE 2.40±
8" D
54" RW
2" G
6" D
6" DG
1" G
1 1/4" W3
12" ST
6" DS
36" RW
15" ST IE 1.95±

SEE SHEET 02-CMD1.03 FOR CONTINUATION

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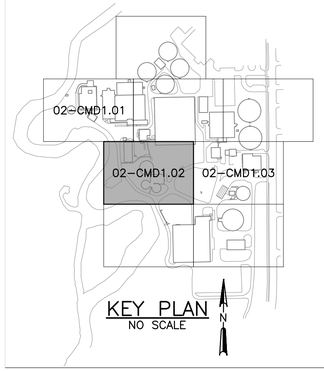

KEY PLAN
NO SCALE

YARD PIPING DEMOLITION PLAN-2
0 5' 10' 20' 40'

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1	ISSUED FOR BIDDING	8/16/13

YARD PIPING DEMOLITION PLAN - 2

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

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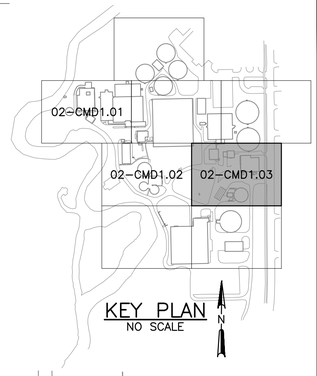

ROUGHING FILTER (130)
SECOND STAGE PUMPING BUILDING (150)
PRIMARY EFFLUENT PUMP BUILDING (140)
GRIT BUILDING (515)
PRELIMINARY TREATMENT BUILDING (110)
WATER METER/BACKFLOW PREVENTER BUILDING (115)
SEPTAGE RECEIVING STATION (100)
SENTRY DRIVE

12" PD IE
42" PI
4" D
48" PE IE
42" PE IE 0.25±
48" PE IE 6.00±
42" PI IE 8.50±
4" W3
24" PE IE 7.41±
6" PSD/PSM
48" PE
54" PI IE 14.__±
42" PI IE 21.00±
6" W3
30" RW
6" D
36" RCY/PD IE 1.26±
42" PI IE 6.00±
42" PI IE 6.00±
2" W1
4" W2
60" RW IE
1" W
60" RW IE −0.48±
6" SPT IE 6.30±
4" NG
30" RW IE 2.66±
8" D IE 4.08±
4" W1
8" W1
4" D
4" W1
8" W1
6" W3
4" W3
36" RCY/PD IE 1.30±
48" RW
36" RW
54" RW
54" RW
36" RCY/PD IE 1.41±
54" RW
8" W1
4" D IE 9.50±
8" W1
12" PD IE 2.46±
8" RCY/PD IE 1.41±
4" NG
36" RCY/PD IE 1.68±
18" PD IE 1.60±
6" G
54" RW
48" RW
6" W3
1 1/4" W1
36" RW
3~16" RW
A
30" RW
2" W3
6" SPT IE 15.00±
4" D
4" D IE 8.25±
6" SPT IE 13.25±
6" D
FIT 1-4-1
FIT 1-4-2
B B
4" G
1" W1
4" W1
2" W3
2" W3
18" PD IE

YARD PIPING DEMOLITION PLAN−3
0 5' 10' 20' 40'
N

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING 02−CM1.01.

DEMOLITION NOTES:

A DEMOLISH STEAM PIPING AS NECESSARY FOR STREAMBANK IMPROVEMENTS.

B REMOVE EXISTING 4−INCH FLOW METER IN BASEMENT. REPLACE FLOW METER WITH PIPE SPOOL PIECE.

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YARD PIPING DEMOLITION PLAN - 3

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

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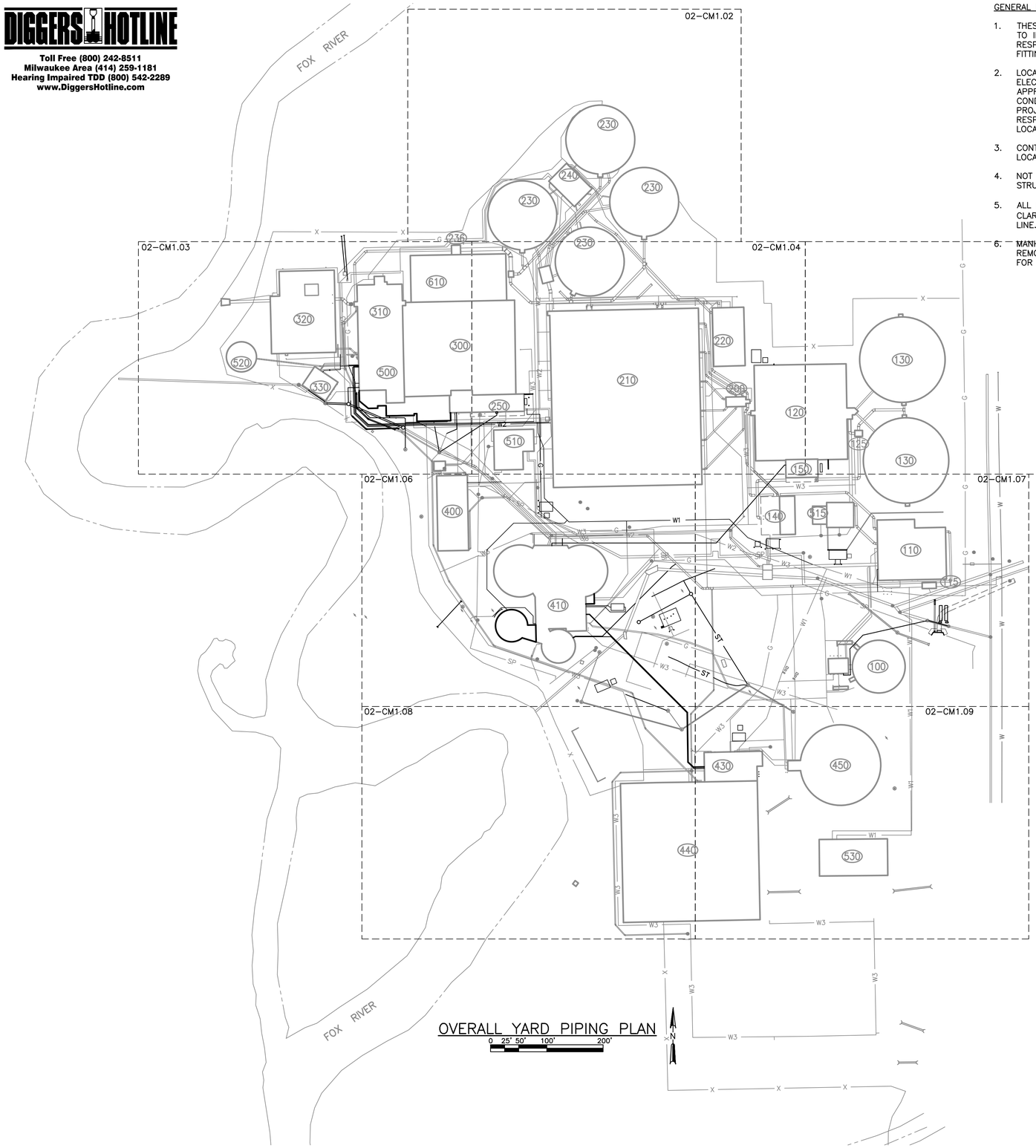

OVERALL YARD PIPING PLAN
0 25' 50' 100' 200'

GENERAL NOTES:

1. THESE DRAWINGS DO NOT INDICATE ALL PIPE FITTINGS REQUIRED TO INSTALL YARD PIPING AS SHOWN. CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND PROVIDING ALL REQUIRED FITTINGS.
2. LOCATIONS AND ELEVATIONS OF EXISTING PIPING, BUILDINGS, ELECTRICAL SERVICES, AND OTHER SITE FEATURES ARE APPROXIMATE. CONTRACTOR SHALL COMPLY WITH GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS, AND DIVISION 1 OF PROJECT MANUAL AND FIELD VERIFY, COORDINATE AND BE RESPONSIBLE FOR SURFACE AND SUBSURFACE STRUCTURE LOCATIONS REQUIRED FOR EXCAVATIONS AND OTHER WORK.
3. CONTRACTOR SHALL CONTACT APPROPRIATE AGENCIES FOR LOCATING UTILITIES.
4. NOT ALL PIPE ELEVATIONS AT STRUCTURES ARE SHOWN. SEE STRUCTURE DRAWINGS FOR DETAILS.
5. ALL PIPING LESS THAN 18" DIA. IS SHOWN SINGLE LINE FOR CLARITY. ALL PIPING 18" DIA. AND LARGER IS SHOWN DOUBLE LINE.
6. MANHOLES AND PIPING DESIGNATED TO BE ABANDONED MAY BE REMOVED AT THE CONTRACTORS OPTION. SEE SPECIFICATIONS FOR ABANDONMENT PROCEDURES.
7. FOR REQUIRED BURIED PIPE INSULATION SEE J / 990-C5.01
8. PROVIDE MECHANICAL (MEGA-LUG OR EQUAL) THRUST RESTRAINT ON ALL PRESSURE PIPE BENDS, PLUGS, CAPS, TEES, AND HYDRANTS.
9. CONTRACTOR SHALL FIELD LOCATE ALL EXISTING PIPING AND ELECTRICAL CONDUITS.
10. PROVIDE MINIMUM 5 FEET OF COVER OVER NEW PIPING. WHERE MIN. OF 5 FEET OF COVER CANNOT BE MAINTAINED, PROVIDE BURIED PIPE INSULATION. MAINTAIN A MINIMUM OF 6 FEET OF CLEARANCE BETWEEN EXTERIOR WALLS OF STRUCTURES AND WATER PIPING.
11. SEE SPECIFICATIONS SECTION 15050 AND DETAILS FOR PIPE PENETRATIONS THROUGH EXISTING WALLS.
12. CONTRACTOR SHALL PROVIDE CURB STOP SHUTOFF VALVES AT ALL BRANCHES OF W1, W2, AND W3 YARD PIPING. SEE SPECIFICATION SECTION 15050 FOR ADDITIONAL REQUIREMENTS.
13. ALL EXTERIOR ABOVE GRADE PIPING AND APPURTENANCES SHALL BE INSULATED AND HEAT TAPED BY CONTRACTOR TO PREVENT FREEZING.
14. PDP AT STRUCTURES SHOWN ON STRUCTURE DRAWINGS.
15. NATURAL GAS PIPING SHALL BE BURIED A MINIMUM 3'-0" BELOW GRADE AT ALL POINTS ALONG PATH.
16. SEE DETAILED YARD PIPING PLANS FOR PIPE SIZES, FLUID ABBREVIATIONS, AND ADDITIONAL NOTES.

STRUCTURE NUMBERS

00 - GENERAL
05 - SITE
100 - SEPTAGE RECEIVING STATION
110 - PRELIMINARY TREATMENT BUILDING
115 - WATER METER / BACKFLOW PREVENTER BUILDING
120 - PRIMARY SETTLING BASINS
125 - ROUGHING FILTER JUNCTION CHAMBER
130 - ROUGHING FILTERS
140 - PRIMARY EFFLUENT PUMP BUILDING
150 - SECOND STAGE PUMPING STATION
200 - AERATION SPLITTER BOX
210 - AERATION TANKS
220 - BLOWER BUILDING
225 - FINAL CLARIFIER SPLITTER BOX
230 - FINAL CLARIFIERS
235 - SECONDARY EFFLUENT JUNCTION CHAMBER
236 - SECONDARY EFFLUENT DIVERSION STRUCTURE
240 - RAS/WAS BUILDING
250 - CHEMICAL FEED AND STORAGE BUILDING
300 - COAGULATION BASIN
310 - FILTER BUILDING
320 - UV DISINFECTION
330 - PRETREATMENT BUILDING
400 - SLUDGE THICKENING BUILDING
410 - PRIMARY DIGESTER COMPLEX
430 - DEWATERING BUILDING
440 - SLUDGE STORAGE BUILDING AND DRYING PAD
450 - LIQUID SLUDGE STORAGE TANK
500 - ADMINISTRATION BUILDING
510 - GENERATOR BUILDING
515 - GENERATOR CONTROL BUILDING
520 - ELEVATED TANK
530 - SERVICE BUILDING
610 - FINAL SETTLING BASINS

NO.	REVISIONS	DATE:
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OVERALL YARD PIPING PLAN

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO.
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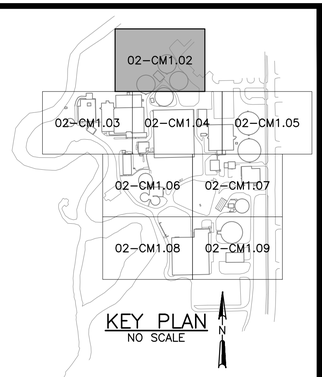
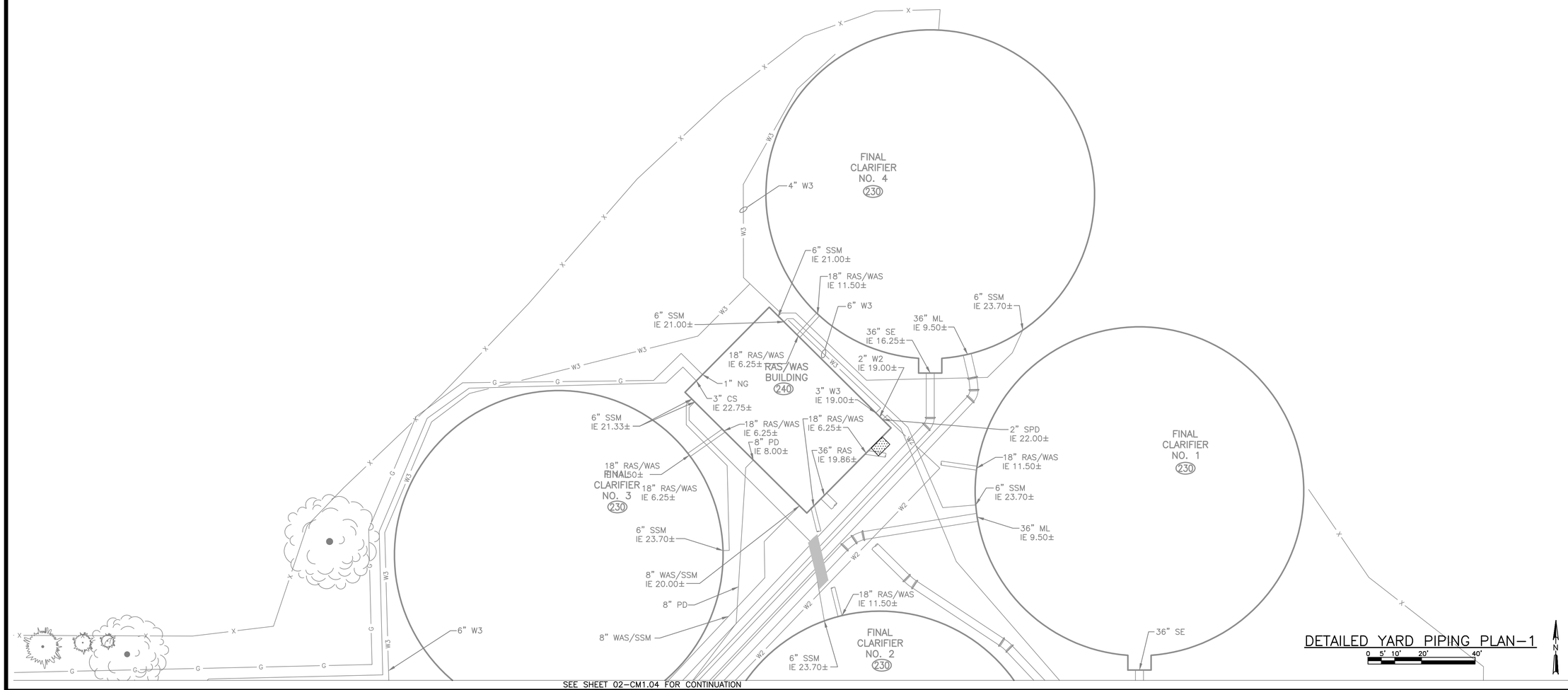
GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING 02-CM1.01.



KEY PLAN
NO SCALE



DETAILED YARD PIPING PLAN-1

0 5' 10' 20' 40'

SEE SHEET 02-CM1.04 FOR CONTINUATION

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

DETAILED YARD PIPING PLAN - 1

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

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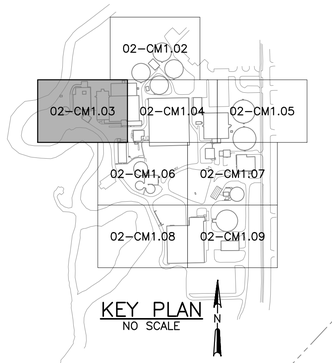

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SEE SHEET 02-CM1.02 FOR CONTINUATION

FOX RIVER

UV DISINFECTION (320)

FILTER BUILDING (310)

FINAL SETTLING BASIN (610)

SECONDARY EFFLUENT DIVERSION STRUCTURE (236)

COAGULATION BASIN (300)

ELEVATED TANK (520)

PRETREATMENT BUILDING (330)

ADMINISTRATION BUILDING (500)

CHEMICAL FEED AND STORAGE BUILDING (250)

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING 02-CM1.01.

KEY NOTES:

(1) CONNECT TO EXISTING 20" FE PIPING. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING 20" FE.

(2) PROVIDE CURB STOP.

(3) CONNECT TO EXISTING G PIPING. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING G PIPING.

(4) CONNECT TO EXISTING 8" SAN PIPING. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING 8" SAN. SLOPE 8" SAN TO NEW MANHOLE.

(5) CONNECT 6" D TO EXISTING 6" D. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING 6" D.

(6) CONNECT TO EXISTING RCY/PD PIPING. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING RCY/PD PIPING.

(7) CONNECT TO EXISTING MANHOLE

(8) PROVIDE NEW GAS SERVICE TO BOILERS. RECONNECT TO EXISTING REGULATORS.

(9) REPLACE 20" FE AS NECESSARY FOR INSTALLATION OF NEW G, W1, W2, AND W3 PIPING.

(10) CONNECT 4" D TO MANHOLE

(11) CONNECT 6" D TO MANHOLE

(12) CONNECT TO PIPING IN STRUCTURE. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING PIPING AND ADJUST PIPING AS NECESSARY.

DETAILED YARD PIPING PLAN-2
0 5' 10' 20' 40'

SEE SHEET 02-CM1.04 FOR CONTINUATION

SEE SHEET 02-CM1.06 FOR CONTINUATION

NO.	REVISIONS	DATE:
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DETAILED YARD PIPING PLAN - 2

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

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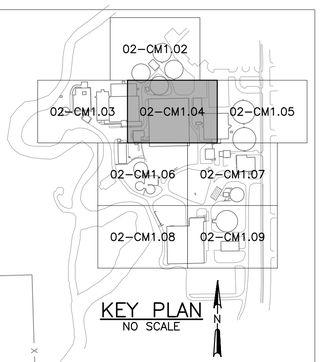

FINAL SETTLING BASIN (610)
FINAL CLARIFIER NO. 2 (230)
COAGULATION BASIN (300)
CHEMICAL FEED AND STORAGE BUILDING (250)
GENERATOR BUILDING (510)
AERATION TANKS (210)
BLOWER BUILDING (220)
PRIMARY SETTLING BASIN (120)
SECOND STAGE PUMPING BUILDING (150)
(200)
(235)

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING 02-CM1.01.

KEY NOTES:

1. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING PSD/PSM PIPING. CONNECT TO EXISTING PIPING AT STRUCTURE 150. DEMOLISH EXISTING PIPING BETWEEN BUILDING AND PIPING BEING ABANDONED. SEE CONSTRUCTION SEQUENCE.
2. CONNECT 8" W1 TO EXISTING 2" W1. CONTRACTOR SHALL PROVIDE NECESSARY REDUCERS. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING W1 PIPING.
3. CONNECT 6" W3 TO EXISTING 6" W3. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING W3 PIPING.
4. CONNECT 2" W2 TO EXISTING W2 PIPING. CONTRACTOR SHALL PROVIDE NECESSARY REDUCERS. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING W2 PIPING.
5. 4" D PIPING FROM SPILL CONTAINMENT BASIN SHALL BE PVC.
6. REPLACE 2" FC PIPING AS NEEDED FOR CONSTRUCTION OF RETAINING WALL.

DETAILED YARD PIPING PLAN-3
0 5' 10' 20' 40'

SEE SHEET 02-CM1.03 FOR CONTINUATION
SEE SHEET 02-CM1.05 FOR CONTINUATION
SEE SHEET 02-CM1.06 FOR CONTINUATION
SEE SHEET 02-CM1.07 FOR CONTINUATION

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

DETAILED YARD PIPING PLAN - 3

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004
PROJECT MGR. SCOTT W. STEARNS

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SHEET 39
02-CM1.04

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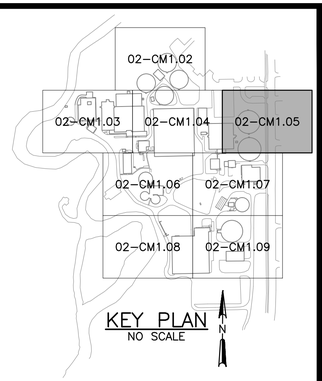
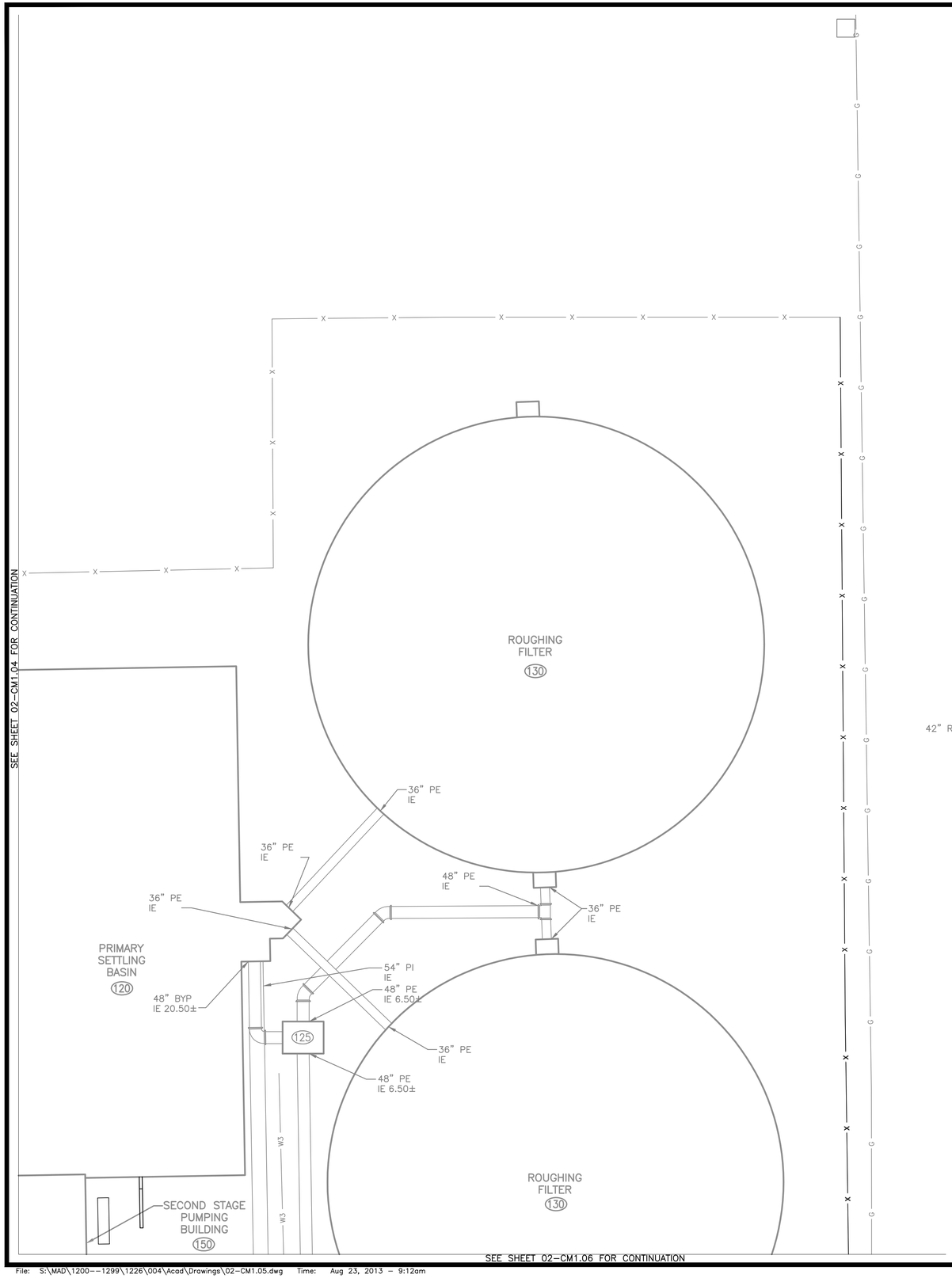


KEY PLAN
NO SCALE

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING 02-CM1.01.



DETAILED YARD PIPING PLAN-4
0 5' 10' 20' 40'
N

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

DETAILED YARD PIPING PLAN - 4

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004
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SHEET 40
02-CM1.05

SEE SHEET 02-CM1.03 FOR CONTINUATION

SEE SHEET 02-CM1.04 FOR CONTINUATION

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING 02-CM1.01.

KEY NOTES:

(1) CONNECT TO EXISTING 6" PSD/PSM AT STRUCTURE 410. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION.

(2) REMOVE AND REPLACE W1 PIPING AS NECESSARY FOR INSTALLATION OF 6" PSD/PSM PIPING.

(3) REMOVE AND REPLACE G PIPING AS NECESSARY FOR INSTALLATION OF 6" PSD/PSM PIPING.

(4) CONNECT 4" W1 TO EXISTING 1 1/2" W1. CONTRACTOR SHALL PROVIDE NECESSARY REDUCERS. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING 1 1/2" W1.

(5) CONNECT TO EXISTING G PIPING. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING G PIPING.

(6) REMOVE AND REPLACE W3 PIPING AS NECESSARY FOR INSTALLATION OF 6" DS AND 12" CENT PIPING.

(7) ROUTE 8" OF PIPE UNDER 54" RW.

(8) PROVIDE HDPE TO STAINLESS STEEL TRANSITION COUPLING.

(9) WASTE GAS BURNER. SEE DETAIL D 990-ASM5.04

(10) REPLACE G AND W2 PIPING AS NECESSARY FOR INSTALLATION OF W1 PIPING.

(11) REPLACE G AND W3 PIPING AS NECESSARY FOR INSTALLATION OF W1 PIPING.

(12) CONNECT 8" OF TO 36" RCY/PD. PROVIDE TAP AND SADDLE FOR CONNECTION.

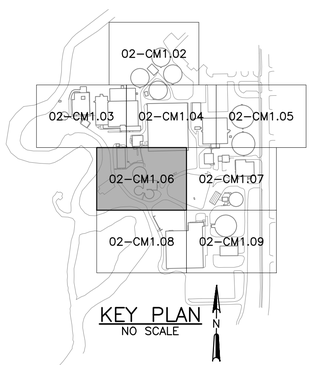
(13) PROVIDE CLEAN OUT.

(14) PROVIDE DUCTILE IRON PIPE ENCASEMENT AS SPECIFIED IN SECTION 02600.

(15) ROUTE 6" PDP TO DAY LIGHT AT APPROXIMATE EL. 18.70. SEE SHEET 410-AS1.01 FOR CONTINUATION.

(16) REPLACE 6" W3 AS NEEDED FOR CONSTRUCTION OF DIGESTER NO. 1.

(17) REROUTE EXISTING PIPING TO AVOID INSTALLATION OF NEW TRANSFORMER AND SWITCHGEAR PADS.



KEY PLAN
NO SCALE

DETAILED YARD PIPING PLAN-5
0 5' 10' 20' 40'

SEE SHEET 02-CM1.07 FOR CONTINUATION

SEE SHEET 02-CM1.08 FOR CONTINUATION

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

DETAILED YARD PIPING PLAN - 5
WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

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SHEET 41
02-CM1.06

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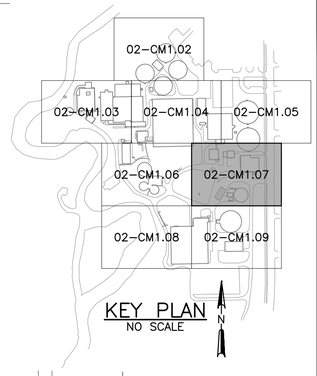
SEE SHEET 02-CM1.04 FOR CONTINUATION

SEE SHEET 02-CM1.05 FOR CONTINUATION

SEE SHEET 02-CM1.06 FOR CONTINUATION

SEE SHEET 02-CM1.09 FOR CONTINUATION



ROUGHING FILTER (130)

SECOND STAGE PUMPING BUILDING (150)

PRIMARY EFFLUENT PUMP BUILDING (140)

GRIT BUILDING (515)

PRELIMINARY TREATMENT BUILDING (110)

WATER METER/BACKFLOW PREVENTER BUILDING (115)

SEPTAGE RECEIVING STATION (100)

12" PD IE

42" PI

4" D

48" PE IE

42" PE IE 0.25±

48" PE IE 6.00±

42" PI IE 8.50±

4" W3

24" PE IE 7.41±

54" PI IE 14.__±

42" PI IE 21.00±

48" PE

6" PSD/PSM

6" W3

30" RW

2" W1

4" W2

60" RW IE -0.30±

8" W1

8" D IE 4.08±

30" RW IE 2.66±

4" NG

6" D

36" RCY/PD IE 1.41±

54" RW

54" RW IE 6.3±

54" RW IE 6.4±

8" RCY/PD IE 1.41±

12" PD IE 2.46±

36" RCY/PD IE 1.68±

18" PD IE 1.60±

18" PD IE

6" G

4" G

42" PI IE 6.00±

36" RCY/PD IE 1.26±

1" W

4" SAN

60" RW IE -0.48±

6" SPT IE 6.30±

2" G

4" D

8" W1

4" W3

36" RCY/PD IE 1.30±

42" RW

48" RW

36" RW

4" D IE 9.50±

54" RW

48" RW IE 6.54±

12" OC IE 15.42

1 1/4" W1

36" RW

3~16" RW

12" OC IE 15.00

30" RW IE 6.93±

30" RW

8" OC IE 13.50

72" ST IE 8.36±

18" RCP IE 12.18±

18" RCP IE 11.96±

2" W3

8" OC IE 14.85

6" SPT IE 15.00±

4" D IE 8.25±

6" SPT IE 13.25±

8" OC IE 24.00

8" OC IE 15.50

1" W1

4" W1

2" W3

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING 02-CM1.01.

KEY NOTES:

(1) CONNECT 12" OC TO EXISTING MANHOLE. 12" OC SHALL BE CERAMIC EPOXY LINED DUCTILE IRON.

(2) CONNECT 8" OC TO EXISTING MANHOLE. SLOPE OC PIPE AT 1/8" PER FOOT BACK TO MANHOLE.

(3) AT BUILDING WALL, ROUTE 8" OC PIPE UP TO IE 24.00 AND CORE HOLE THROUGH WALL. SEE DETAIL D 990-ASM5.02 ROUTE PIPE AND CONNECT TO EXISTING 10" PVC PIPE AT EXISTING ODOR CONTROL UNIT 100-OCU-1. PROVIDE VOLUME CONTROL DAMPER, 10"x8" REDUCER, AND 10" TEE AT ODOR CONTROL UNIT PIPING. CONNECT 10" TEE TO NEW 10"x8" REDUCER AND EXISTING 10" PVC PIPING TO ODOR CONTROL UNIT AND SEPTAGE TANKS. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING ODOR CONTROL UNIT AND PIPING.

(4) REMOVE AND REPLACE W3 PIPING AS NECESSARY FOR INSTALLATION OF 6" PSD/PSM.

(5) NOT USED.

(6) PROVIDE NEW GAS SERVICE

(7) CONNECT TO EXISTING GAS LINE. PIPING CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING GAS PIPING.

(8) DEMOLISH EXISTING TRANSITION FROM 4" W1 TO 8" W1 AND CONNECT TO EXISTING 8" W1.

DETAILED YARD PIPING PLAN-6

0 5' 10' 20' 40'

N

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

DETAILED YARD PIPING PLAN - 6

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

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SHEET 42 02-CM1.07

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SEE SHEET 02-CM1.06 FOR CONTINUATION

SEE SHEET 02-CM1.09 FOR CONTINUATION

15" ST
IE 2.25±

20" FE
IE 5.00±

12" CNT

6" DS

18" PD
IE 5.28±

6" W3

18" PD
IE 5.28±

6" W3

4" W3

18" PD
IE 5.28±

6" W3

SLUDGE
STORAGE
BUILDING
440

FOX RIVER

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING 02-CM1.01.

DIGGERS HOTLINE

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Hearing Impaired TDD (800) 542-2289
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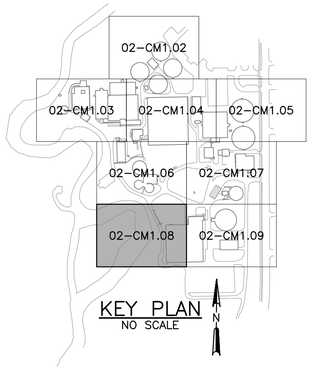

KEY PLAN
NO SCALE

DETAILED YARD PIPING PLAN-7
0 5' 10' 20' 40'

N

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

DETAILED YARD PIPING PLAN - 7

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO.
1226.004

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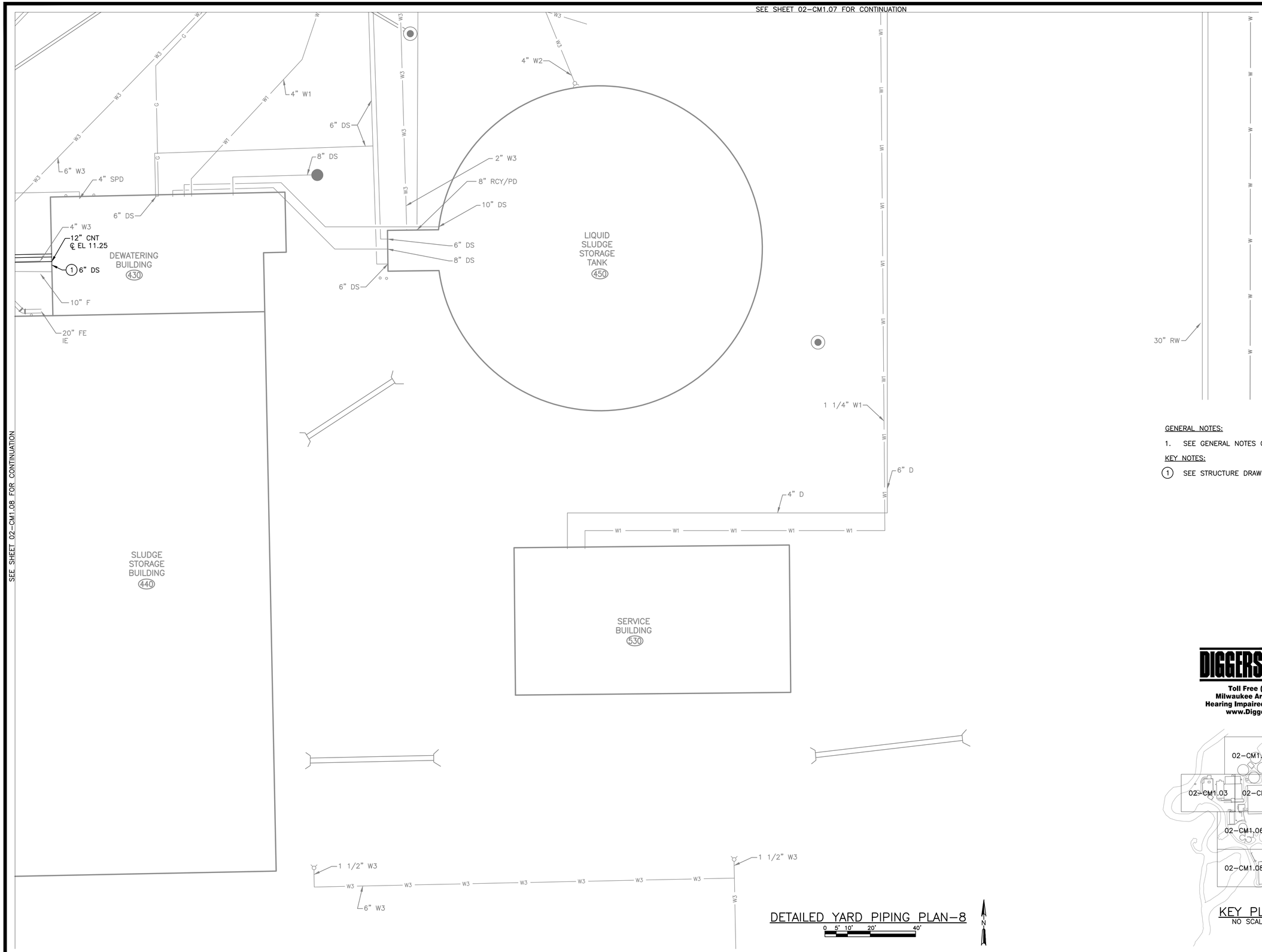
SHEET
43
02-CM1.08

SEE SHEET 02-CM1.07 FOR CONTINUATION

SEE SHEET 02-CM1.08 FOR CONTINUATION



GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING 02-CM1.01.

KEY NOTES:

(1) SEE STRUCTURE DRAWING FOR PIPE ELEVATIONS.

DETAILED YARD PIPING PLAN-8

0 5' 10' 20' 40'

N

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KEY PLAN
NO SCALE

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DETAILED YARD PIPING PLAN - 8

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

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SHEET
44
02-CM1.09

DEMOLITION NOTES:

A REMOVE EXISTING POLE–MOUNTED ALARM LIGHT AND ALL ASSOCIATED WIRE AND CONDUIT BACK TO ASSOCIATED FINAL CLARIFIER LOCAL CONTROL PANEL (LCP). PLUG HOLES IN ASSOCIATED LIGHT POLE AND LCP.

B REMOVE PAD MOUNTED TRANSFORMERS, PAD, WIRING, CONDUIT, AND DUCTBANK BETWEEN SWITCH AND TRANSFORMER AND TRANSFORMER AND BUILDING.

C REMOVE PAD MOUNTED SWITCH, GROUNDING MANHOLES, PAD, WIRING, CONDUIT, AND DUCTBANK BETWEEN SWITCH AND TRANSFORMER AND TRANSFORMER AND BUILDING.

D REMOVE MAIN 24.9kV SWITCHGEAR, PAD, GROUNDING MANHOLES, CONDUIT, AND WIRING.

E REMOVE LIGHT FIXTURE, SWITCH, CONDUIT, AND WIRING.

F REMOVE ROADWAY LIGHT FIXTURES, BASES, AND WIRING. CONDUIT SHALL BE ABANDONED.

G REMOVE EXISTING GROUND BUS, GROUNDING JUMPERS, AND CONNECTIONS IN MANHOLE.

H REMOVE EXISTING COMMON FAIL ALARM WIRING AND ASSOCIATED EXPOSED CONDUIT FROM CONTROL PANEL BACK TO 240–RTU IN STRUCTURE 240.

J RELOCATE EXISTING CAMERA TO LOCATION SHOWN ON 02–CE1.04. REMOVE ALL ASSOCIATED CONDUIT AND WIRE BACK TO 220–TCC–1.

K REMOVE EXISTING CONCRETE DUCTBANK, CONDUIT, AND WIRE. PREP FOR CONNECTION TO NEW DUCTBANK WHERE DUCTBANK IS SHOWN TO REMAIN.

L REMOVE WIRING FROM 220MCC–1 TO 240MCC–1. CONDUIT SHALL REMAIN.

M REMOVE WIRING BETWEEN EQUIPMENT. CONDUIT SHALL REMAIN.

N REMOVE CONDUIT AND WIRING BETWEEN 220MCC–1 AND 220PMT–5 AND BETWEEN 220PMT–5 AND 220MVMCC–1.

P REMOVE CONDUIT AND PHONE WIRING BETWEEN PEDESTAL ON STRUCTURE 510 AND EXISTING WWTP PHONE SERVICE LOCATION IN STRUCTURE 500. REMOVE EXISTING WWTP PHONE SERVICE AND ASSOCIATED EQUIPMENT.

Q RELOCATE EXISTING CAMERA TO LOCATION SHOWN ON 500–E1.02. REMOVE ALL ASSOCIATED CONDUIT AND WIRE BACK TO STRUCTURE 500 NETWORK PANEL

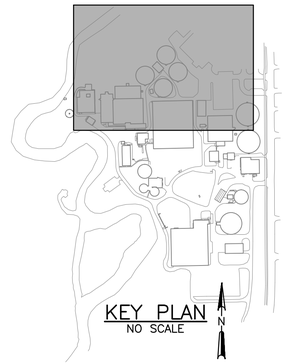
R REMOVE WIRING BETWEEN EQUIPMENT. CONCRETE DUCTBANK AND CONDUIT SHALL REMAIN.

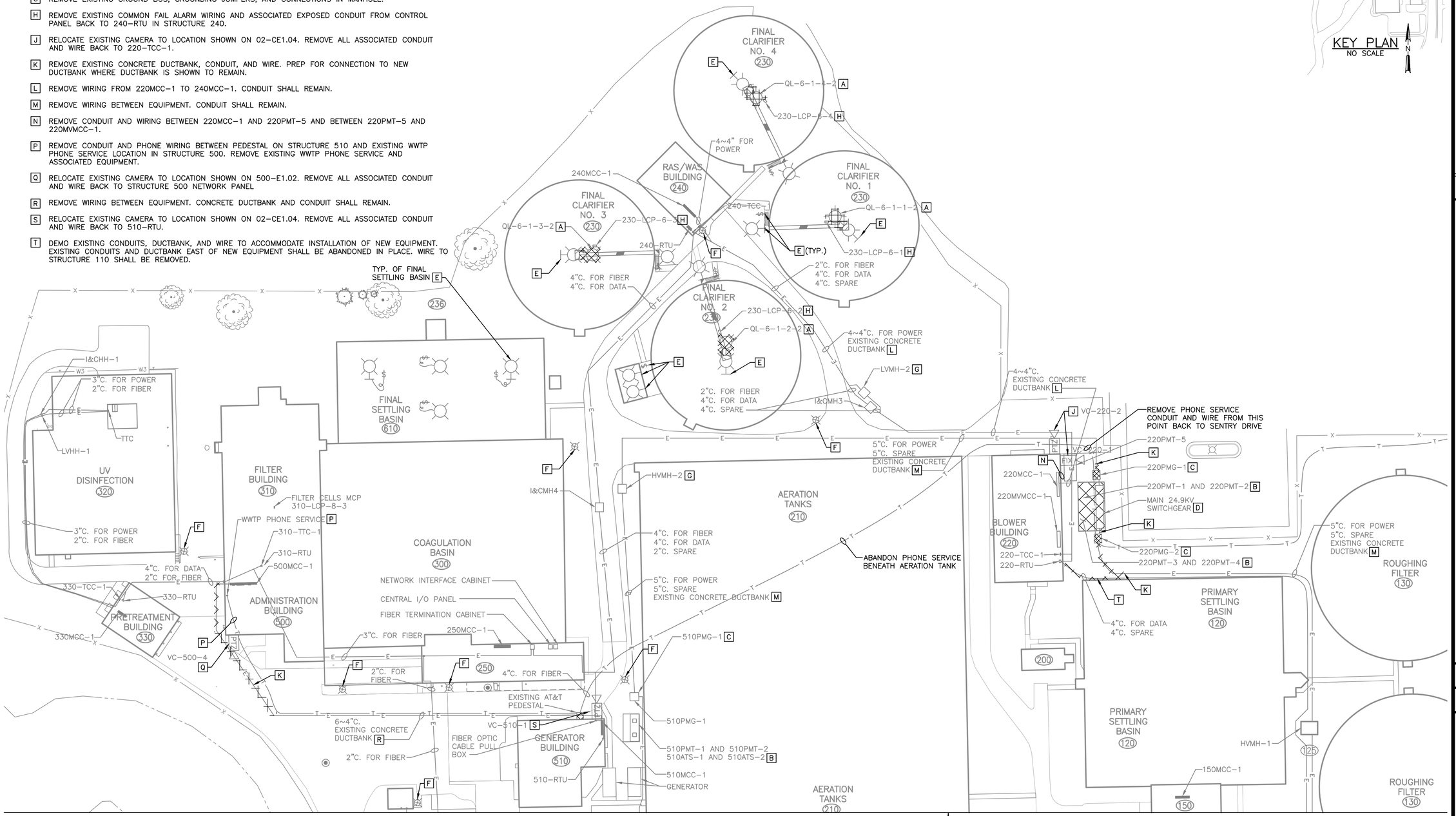
S RELOCATE EXISTING CAMERA TO LOCATION SHOWN ON 02–CE1.04. REMOVE ALL ASSOCIATED CONDUIT AND WIRE BACK TO 510–RTU.

T DEMO EXISTING CONDUITS, DUCTBANK, AND WIRE TO ACCOMMODATE INSTALLATION OF NEW EQUIPMENT. EXISTING CONDUITS AND DUCTBANK EAST OF NEW EQUIPMENT SHALL BE ABANDONED IN PLACE. WIRE TO STRUCTURE 110 SHALL BE REMOVED.

GENERAL NOTES:

1. REFER TO SPECIFICATION SECTION 01010 FOR CONSTRUCTION SEQUENCE AND ASSOCIATED ELECTRICAL WORK REQUIRED.
2. ON STRUCTURES, PATCH ALL HOLES AND DEFORMATIONS RESULTING FROM DEMOLITION TO MATCH EXISTING.





ELECTRICAL DEMOLITION PLAN–NORTH

0 10' 20' 40' 80'

N

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

ELECTRICAL SITE DEMOLITION PLAN - 1

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO.
1226.004

PROJECT MGR.
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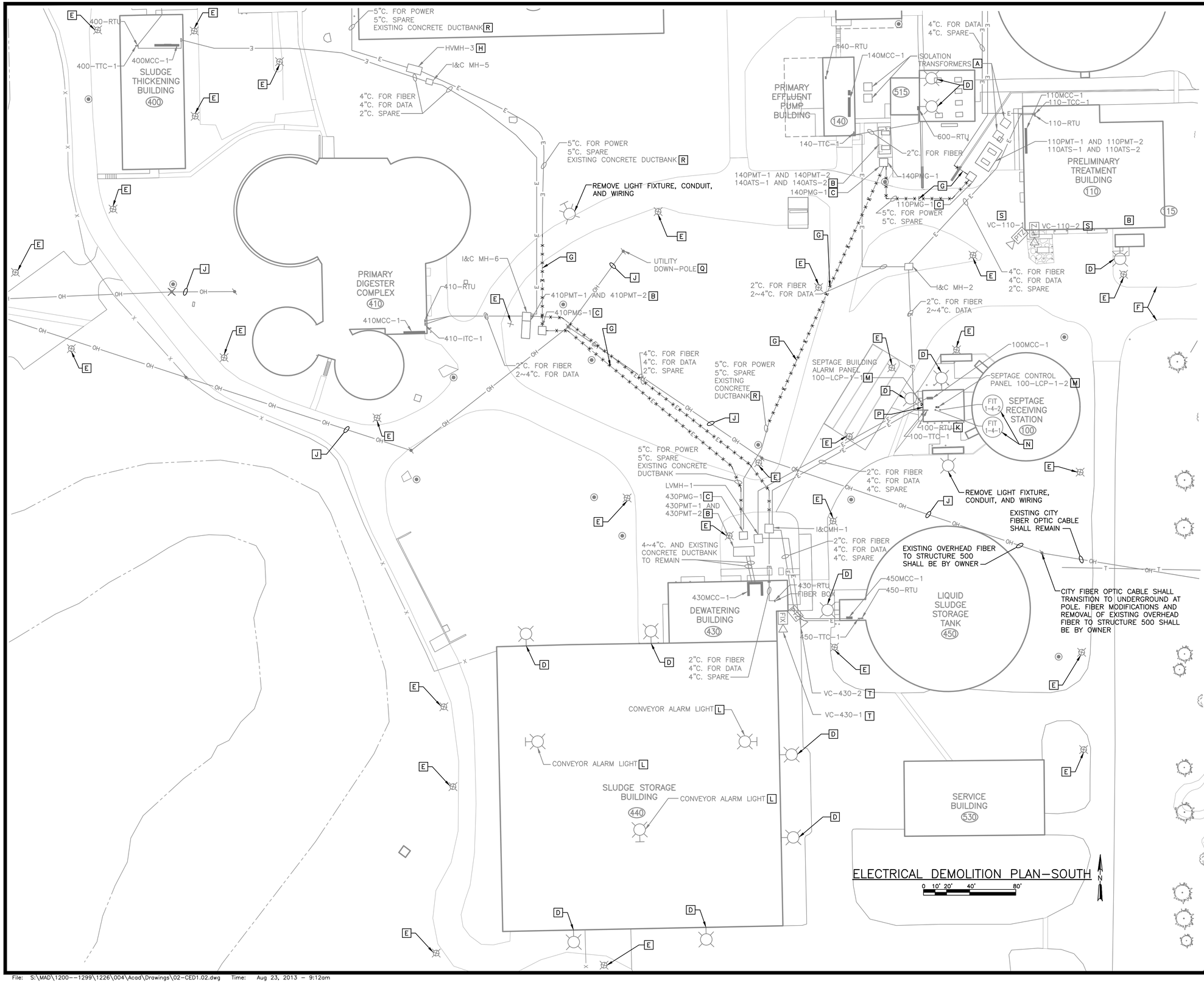

GENERAL NOTES:

1. REFER TO SPECIFICATION SECTION 01010 FOR CONSTRUCTION SEQUENCE AND ASSOCIATED ELECTRICAL WORK REQUIRED.
2. ON STRUCTURES, PATCH ALL HOLES AND DEFORMATIONS RESULTING FROM DEMOLITION, TO MATCH EXISTING.

DEMOLITION NOTES:

- A REMOVE ISOLATION TRANSFORMERS, PAD, CONDUIT, AND WIRING TO VFD'S IN STRUCTURE 110 AND 140.
- B REMOVE PAD MOUNTED TRANSFORMERS, PAD, WIRING, CONDUIT, AND DUCTBANK BETWEEN SWITCH AND TRANSFORMER AND TRANSFORMER AND BUILDING UNLESS NOTED OTHERWISE.
- C REMOVE PAD MOUNTED SWITCH, GROUNDING MANHOLES, PAD, WIRING, CONDUIT, AND DUCTBANK BETWEEN SWITCH AND TRANSFORMER AND TRANSFORMER AND BUILDING.
- D REMOVE LIGHT FIXTURES. EXISTING CONDUIT AND WIRE SHALL REMAIN.
- E REMOVE ROADWAY LIGHT FIXTURES, BASES, AND WIRING. CONDUIT SHALL BE ABANDONED.
- F REMOVE EXISTING GATE OPERATOR, CONTROL STATION, CONDUIT, AND WIRING.
- G REMOVE EXISTING CONCRETE DUCTBANK, CONDUIT, AND WIRE. PREP FOR CONNECTION TO NEW DUCTBANK WHERE DUCTBANK IS SHOWN TO REMAIN.
- H REMOVE EXISTING GROUND BUS, JUMPER WIRES, AND CONNECTIONS IN MANHOLE.
- J EXISTING OVERHEAD LINES AND POLES TO BE REMOVED BY UTILITY COMPANY. COORDINATE WITH UTILITY COMPANY AND CONSTRUCTION SEQUENCE.
- K REMOVE EXISTING ABANDONED BRISTOL BABCOCK PLC COMMUNICATION CABLES WITHIN CONTROL PANEL BACK TO SOURCE.
- L REMOVE ALL WIRE AND CONDUIT ASSOCIATED WITH ALARM LIGHT BACK TO SOURCE. LIGHT SHALL REMAIN FOR CONNECTION TO NEW WIRE AND CONDUIT.
- M REMOVE EXISTING CONTROL PANEL, CONCRETE PAD (WHERE APPLICABLE), AND ALL ASSOCIATED WIRE AND CONDUIT BACK TO SOURCE.
- N REMOVE EXISTING FLOW METER IN BASEMENT, FLOW TRANSMITTER, AND ALL ASSOCIATED WIRE AND CONDUIT.
- P REMOVE EXISTING ANTENNA ON OUTSIDE OF BUILDING AND ASSOCIATED ANTENNA CABLE BACK TO 100-RTU.
- Q ONCE THE EXISTING SERVICES ARE DE-ENERGIZED, REMOVE THE EXISTING UTILITY SERVICE FROM THE UTILITY DOWN-POLE TO THE EXISTING MAIN SWITCHGEAR AT STRUCTURE 220.
- R REMOVE WIRING BETWEEN EQUIPMENT. CONCRETE DUCTBANK AND CONDUIT SHALL REMAIN.
- S RELOCATE EXISTING CAMERA FROM ROOF TO LOCATION SHOWN ON 02-CE1.07. REMOVE ALL ASSOCIATED WIRE BACK TO 110-TCC-1.
- T RELOCATE EXISTING CAMERA FROM ROOF TO LOCATION SHOWN ON 02-CE1.09. REMOVE ALL ASSOCIATED WIRE BACK TO 430-TCC-1.

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ELECTRICAL SITE DEMOLITION PLAN - 2

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

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SHEET 46
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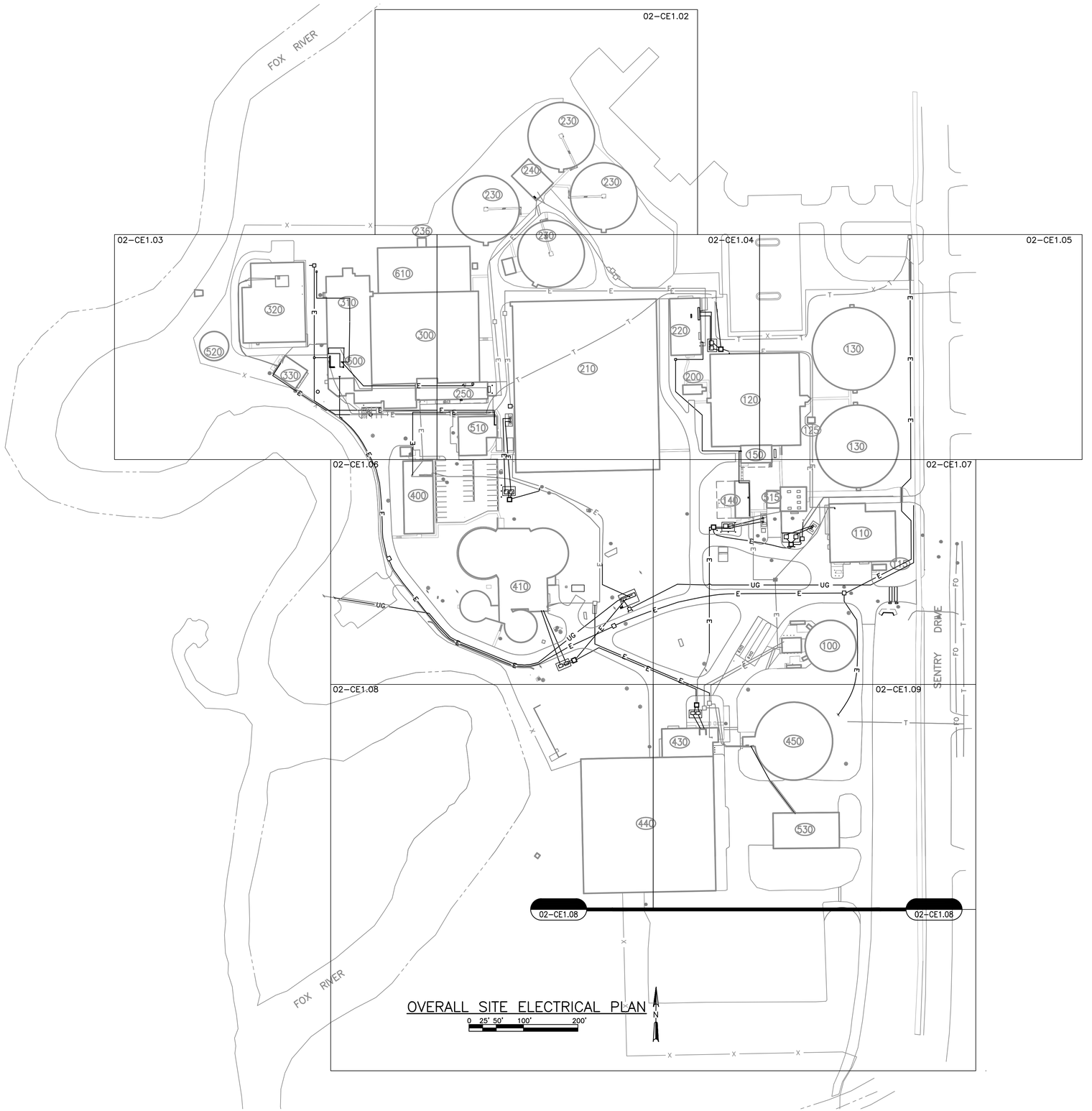

GENERAL NOTES:

1. REFER TO SPECIFICATION SECTION 01010 FOR CONSTRUCTION SEQUENCE AND ASSOCIATED ELECTRICAL WORK REQUIRED.
2. ONLY MAJOR FEEDER ROUTES ARE SHOWN ON SUBSEQUENT ELECTRICAL. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROVIDING ALL HANDHOLES, CONDUIT, WIRE, AND CABLE FOR ALL OTHER FEEDERS, BRANCH CIRCUITS, INSTRUMENTATION, COMMUNICATION, AND CONTROL CIRCUITS NOT SPECIFICALLY SHOWN.
3. WHERE CONDUITS ARE SHOWN ROUTED THROUGH BUILDINGS ON SITE PLAN DRAWINGS, INSTALLATION SHALL BE IN ACCORDANCE WITH AREA CLASSIFICATION DEFINED ON STRUCTURE SPECIFIC DRAWINGS.

STRUCTURE NUMBERS

00 - GENERAL
05 - SITE
100 - SEPTAGE RECEIVING STATION
110 - PRELIMINARY TREATMENT BUILDING
115 - WATER METER / BACKFLOW PREVENTER BUILDING
120 - PRIMARY SETTLING BASINS
125 - ROUGHING FILTER JUNCTION CHAMBER
130 - ROUGHING FILTERS
140 - PRIMARY EFFLUENT PUMP BUILDING
150 - SECOND STAGE PUMPING STATION
200 - AERATION SPLITTER BOX
210 - AERATION TANKS
220 - BLOWER BUILDING
225 - FINAL CLARIFIER SPLITTER BOX
230 - FINAL CLARIFIERS
235 - SECONDARY EFFLUENT JUNCTION CHAMBER
236 - SECONDARY EFFLUENT DIVERSION STRUCTURE
240 - RAS/WAS BUILDING
250 - CHEMICAL FEED AND STORAGE BUILDING
300 - COAGULATION BASIN
310 - FILTER BUILDING
320 - UV DISINFECTION
330 - PRETREATMENT BUILDING
400 - SLUDGE THICKENING BUILDING
410 - PRIMARY DIGESTER COMPLEX
430 - DEWATERING BUILDING
440 - SLUDGE STORAGE BUILDING AND DRYING PAD
450 - LIQUID SLUDGE STORAGE TANK
500 - ADMINISTRATION BUILDING
510 - GENERATOR BUILDING
515 - GENERATOR CONTROL BUILDING
520 - ELEVATED TANK
530 - SERVICE BUILDING
610 - FINAL SETTLING BASINS

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1	ISSUED FOR BIDDING	8/16/13

OVERALL SITE ELECTRICAL PLAN

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO.
1226.004

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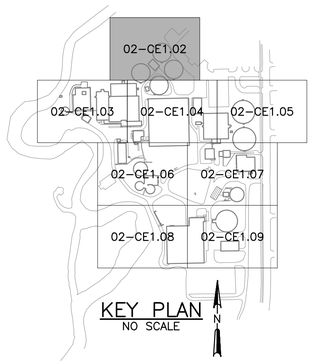

GENERAL NOTES:

1. ROADWAY LIGHT FIXTURES AND CLARIFIER LIGHTING SHALL BE CONTROLLED FROM THE SCADA SYSTEM AS DESCRIBED IN SECTION 16940 OF THE SPECIFICATIONS.
2. REFER TO SPECIFICATION SECTION 16990 – I/O LISTING FOR WIRING ASSOCIATED WITH THE PLANT SCADA SYSTEM.
3. PROVIDE STANDARD OUTDOOR POLYESTER/NYLON TEXTILE INNER DUCT, SIZE AND QUANTITY AS REQUIRED, AS MANUFACTURED BY MAXCELL, OR EQUAL, FOR ROUTING NEW FIBER OPTIC CABLES THROUGH EXISTING FIBER CONDUITS. SPARE CONDUITS MAY BE USED FOR SITE FIBER ROUTING WHERE AVAILABLE IN LIEU OF PROVIDING INNER DUCT.
4. REFER TO SPECIFICATION SECTION 01010 FOR CONSTRUCTION SEQUENCE AND ASSOCIATED ELECTRICAL WORK REQUIRED.

KEY NOTES:

(1) PROVIDE 30MM MOMENTARY PUSHBUTTON FOR SCADA CONTROL OF TANK LIGHTING. PUSHBUTTON AND BOX SHALL BE NEMA 4X.

(2) MOUNT LIGHT FIXTURES TO EXISTING HANDRAIL PER (B / 990-E5.02).

(3) REFER TO SPECIFICATION SECTION 16940 – PART 3 FOR MODIFICATIONS TO EXISTING CONTROL PANEL.

DETAILED SITE ELECTRICAL PLAN–1

0 5' 10' 20' 40'

N

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

DETAILED SITE ELECTRICAL PLAN - 1

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

STRAND ASSOCIATES®

SHEET 48 02-CE1.02

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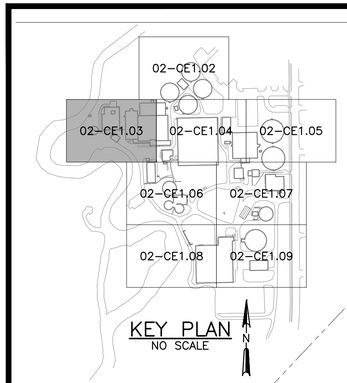

GENERAL NOTES:

1. REFER TO SPECIFICATION SECTION 01010 FOR CONSTRUCTION SEQUENCE AND ASSOCIATED ELECTRICAL WORK REQUIRED.
2. ROADWAY LIGHT FIXTURES AND BASIN LIGHTING SHALL BE CONTROLLED FROM THE SCADA SYSTEM AS DESCRIBED IN SECTION 16940 OF THE SPECIFICATIONS.
3. REFER TO SPECIFICATION SECTION 16990 – I/O LISTING FOR WIRING ASSOCIATED WITH THE PLANT SCADA SYSTEM.
4. PROVIDE STANDARD OUTDOOR POLYESTER/NYLON TEXTILE INNER DUCT, SIZE AND QUANTITY AS REQUIRED, AS MANUFACTURED BY MAXCELL, OR EQUAL, FOR ROUTING NEW FIBER OPTIC CABLES THROUGH EXISTING FIBER CONDUITS. SPARE CONDUITS MAY BE USED FOR SITE FIBER ROUTING WHERE AVAILABLE IN LIEU OF PROVIDING INNER DUCT.

KEY NOTES:

(1) MOUNT FIXTURES TO EXISTING HANDRAIL PER B / 990-E5.02.

(2) PROVIDE 30MM MOMENTARY PUSHBUTTON FOR SCADA CONTROL OF TANK LIGHTING. PUSHBUTTON AND BOX SHALL BE NEMA 4X.

(3) REMOVE EXISTING LIGHT SWITCH AND REPLACE WITH NEW 30MM MOMENTARY PUSHBUTTON FOR SCADA CONTROL OF TANK LIGHTING. PUSHBUTTON AND BOX SHALL BE NEMA 4X.

(4) EXISTING LIGHTING CIRCUIT SHALL BE WIRED THROUGH NEW CONTACTOR IN 250-SCC-1. EXTEND AND MODIFY CONDUIT AND WIRE AS REQUIRED.

(5) PLUG CONDUIT IN HANDHOLE FOR FUTURE FEED TO 320MCC-1.

(6) PROVIDE 2~#10 PLUS GROUND IN 3/4" CONDUIT FROM 310LP-1 TO SAMPLER RECEPTACLE.

(7) REFER TO SPECIFICATION SECTION 16940 – PART 3 FOR MODIFICATIONS TO EXISTING CONTROL PANEL.

(8) EXISTING SAMPLER IS AN ISCO SAMPLER WITH A MODEL 6700 CONTROLLER SETUP TO ACCEPT 4-20MA SIGNAL FROM UV-SCE FOR LOCAL FLOW PACED CONTROL OF THE SAMPLER. MODIFY EXISTING SAMPLER TO ACCEPT A FLOW PACED PULSE FOR REMOTE SAMPLING CONTROL FROM THE PLANT SCADA SYSTEM IN LIEU OF THE EXISTING LOCAL SAMPLER FLOW PACING CONTROL.

(9) PROVIDE PULL STRING IN EACH CONDUIT FOR FUTURE PHONE CABLE INSTALLATION BY AT&T AND CITY FIBER/INSTALLATION BY OWNER.

(10) INTERCONNECT EXISTING AND NEW DUCTBANK. EXISTING CONDUITS SHALL BE EXPOSED TO ALLOW FOR NEW AND EXISTING CONDUITS TO BE CONNECTED. CONNECT NEW AND EXISTING DUCTBANK SIMILAR TO E / 990-E5.01.

(11) PROVIDE PROVISIONS IN MANHOLE/HANDHOLES FOR CONNECTION OF 4" PIPE FOR DRAINAGE.

DETAILED SITE ELECTRICAL PLAN-2

0 5' 10' 20' 40'

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DETAILED SITE ELECTRICAL PLAN - 2

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

STRAND ASSOCIATES®

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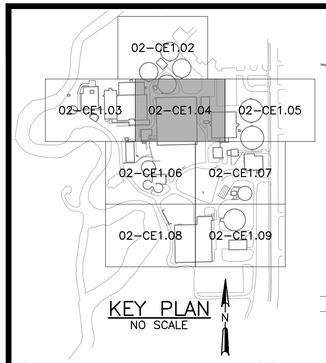

GENERAL NOTES:

1. REFER TO SPECIFICATION SECTION 01010 FOR CONSTRUCTION SEQUENCE AND ASSOCIATED ELECTRICAL WORK REQUIRED.
2. ROADWAY LIGHT FIXTURES AND CLARIFIER LIGHTING SHALL BE CONTROLLED FROM THE SCADA SYSTEM AS DESCRIBED IN SECTION 16940 OF THE SPECIFICATIONS.
3. REFER TO SPECIFICATION SECTION 16990 – I/O LISTING FOR WIRING ASSOCIATED WITH THE PLANT SCADA SYSTEM.
4. PROVIDE STANDARD OUTDOOR POLYESTER/NYLON TEXTILE INNER DUCT, SIZE AND QUANTITY AS REQUIRED, AS MANUFACTURED BY MAXCELL, OR EQUAL, FOR ROUTING NEW FIBER OPTIC CABLES THROUGH EXISTING FIBER CONDUITS. SPARE CONDUITS MAY BE USED FOR SITE FIBER ROUTING WHERE AVAILABLE IN LIEU OF PROVIDING INNER DUCT.

DETAILED SITE ELECTRICAL PLAN–3

0 5' 10' 20' 40'

KEY NOTES:

1. MOUNT LIGHT FIXTURES TO EXISTING HANDRAIL PER B 990-E5.02 .
2. PROVIDE 30MM MOMENTARY PUSHBUTTON FOR SCADA CONTROL OF TANK LIGHTING. PUSHBUTTON AND BOX SHALL BE NEMA 4X.
3. PROVIDE CABLE RACKS AS MANUFACTURED BY MACLEAN POWER SYSTEMS, CATALOG NO. J5126, OR EQUAL ON WALLS OF EXISTING MANHOLE FOR SUPPORT OF CABLES. PROVIDE CABLE HOOKS AND INSULATORS AS REQUIRED, MACLEAN POWER SYSTEMS, CATALOG NO, J5132A AND J5122 RESPECTIVELY, OR EQUAL.
4. PROVIDE NEW GROUND BUS, JUMPER WIRES, AND CONNECTIONS AROUND PERIMETER OF MANHOLE.
5. INTERCONNECT NEW AND EXISTING DUCTBANK. EXISTING CONDUITS SHALL BE EXPOSED TO ALLOW FOR NEW CONDUITS TO BE CONNECTED.
6. CONTRACTOR SHALL RELOCATE CAMERA TO CORNER OF BUILDING AS HIGH AS POSSIBLE. REMOVE EXISTING CAMERA MOUNTING HARDWARE AND INSTALL NEW MOUNTING HARDWARE FURNISHED AS PART OF ALLOWANCE IN SPECIFICATION SECTION 16721. COORDINATE LOCATION OF CAMERAS WITH OWNER PRIOR TO INSTALLATION. EXISTING WIRING AND CONDUIT SHALL BE REMOVED. NEW SIAMESE CABLE SHALL BE FURNISHED BY SPECIFICATION SECTION 16721 SYSTEM SUPPLIER. PROVIDE 1" CONDUIT FOR SIAMESE CABLE BACK TO 220–TTC–1 (VC–220–2) AND 510–SCC–1 (VC–510–1).

KEY NOTES:

7. CONTRACTOR SHALL INSTALL CAMERA ON CORNER OF BUILDING AS HIGH AS POSSIBLE. CAMERA AND MOUNTING HARDWARE FURNISHED AS PART OF ALLOWANCE IN SPECIFICATION SECTION 16721. COORDINATE LOCATION OF CAMERAS WITH OWNER PRIOR TO INSTALLATION.
8. REFER TO SPECIFICATION SECTION 16940–PART 3 FOR MODIFICATIONS TO EXISTING CONTROL PANEL.
9. CONTRACTOR SHALL RELOCATE CAMERA TO CORNER OF BUILDING AS HIGH AS POSSIBLE. REMOVE EXISTING MOUNTING HARDWARE AND INSTALL NEW MOUNTING HARDWARE FURNISHED AS PART OF ALLOWANCE IN SPECIFICATION SECTION 16721. COORDINATE LOCATION OF CAMERAS WITH OWNER PRIOR TO INSTALLATION. EXISTING WIRING SHALL BE REMOVED. INSTALL NEW WIRE IN EXISTING CONDUIT. EXTEND CONDUIT AS REQUIRED.
10. PROVIDE LOW VOLTAGE SWITCHBOARD AS SPECIFIED WITH NEMA 3R ENCLOSURE.

NO.	REVISIONS	DATE:
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DETAILED SITE ELECTRICAL PLAN - 3

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

STRAND ASSOCIATES®

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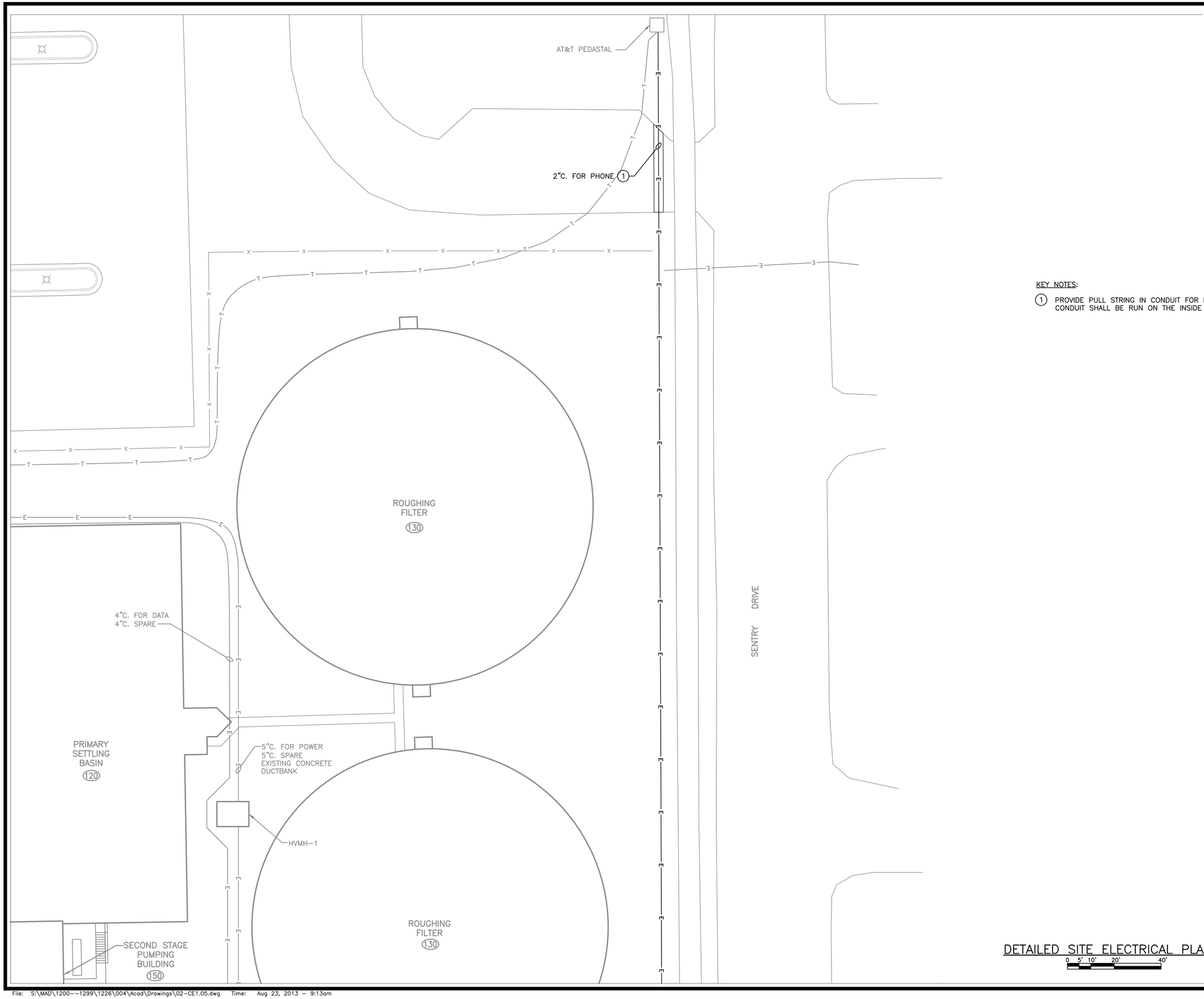

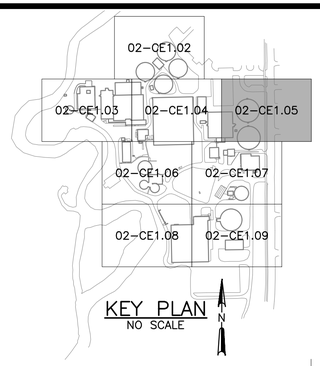

KEY NOTES:

1. PROVIDE PULL STRING IN CONDUIT FOR FUTURE PHONE CABLE INSTALLATION BY AT&T. CONDUIT SHALL BE RUN ON THE INSIDE OF THE FENCE.

DETAILED SITE ELECTRICAL PLAN–4

0 5' 10' 20' 40'

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DETAILED SITE ELECTRICAL PLAN - 4

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO.
1226.004

PROJECT MGR.
SCOTT W. STEARNS

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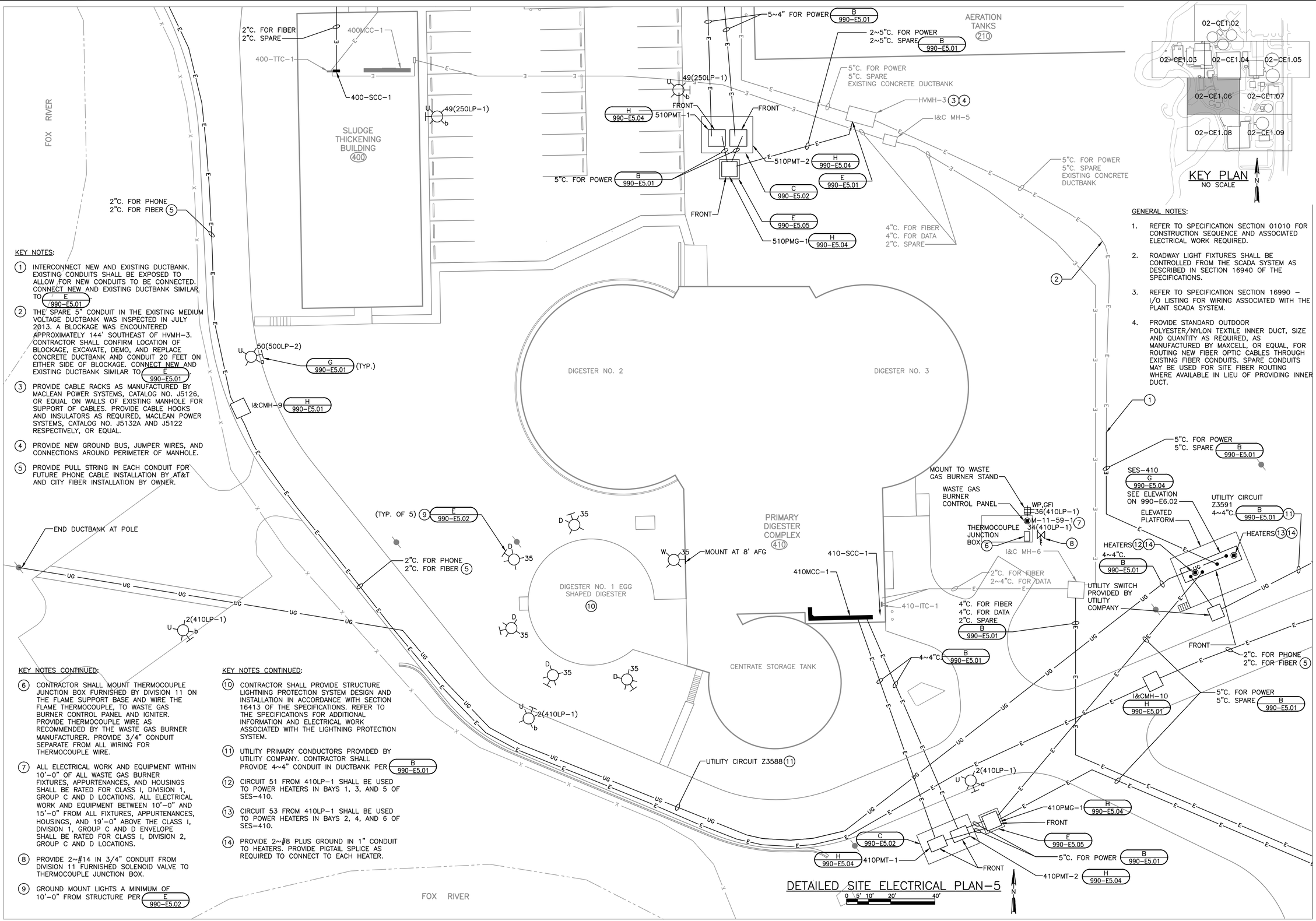
SHEET
51
02-CE1.05



KEY NOTES:

1. INTERCONNECT NEW AND EXISTING DUCTBANK. EXISTING CONDUITS SHALL BE EXPOSED TO ALLOW FOR NEW CONDUITS TO BE CONNECTED. CONNECT NEW AND EXISTING DUCTBANK SIMILAR TO E 990-E5.01.
2. THE SPARE 5" CONDUIT IN THE EXISTING MEDIUM VOLTAGE DUCTBANK WAS INSPECTED IN JULY 2013. A BLOCKAGE WAS ENCOUNTERED APPROXIMATELY 144' SOUTHEAST OF HVMH-3. CONTRACTOR SHALL CONFIRM LOCATION OF BLOCKAGE, EXCAVATE, DEMO, AND REPLACE CONCRETE DUCTBANK AND CONDUIT 20 FEET ON EITHER SIDE OF BLOCKAGE. CONNECT NEW AND EXISTING DUCTBANK SIMILAR TO E 990-E5.01.
3. PROVIDE CABLE RACKS AS MANUFACTURED BY MACLEAN POWER SYSTEMS, CATALOG NO. J5126, OR EQUAL ON WALLS OF EXISTING MANHOLE FOR SUPPORT OF CABLES. PROVIDE CABLE HOOKS AND INSULATORS AS REQUIRED, MACLEAN POWER SYSTEMS, CATALOG NO. J5132A AND J5122 RESPECTIVELY, OR EQUAL.
4. PROVIDE NEW GROUND BUS, JUMPER WIRES, AND CONNECTIONS AROUND PERIMETER OF MANHOLE.
5. PROVIDE PULL STRING IN EACH CONDUIT FOR FUTURE PHONE CABLE INSTALLATION BY AT&T AND CITY FIBER INSTALLATION BY OWNER.

KEY NOTES CONTINUED:

6. CONTRACTOR SHALL MOUNT THERMOCOUPLE JUNCTION BOX FURNISHED BY DIVISION 11 ON THE FLAME SUPPORT BASE AND WIRE THE FLAME THERMOCOUPLE, TO WASTE GAS BURNER CONTROL PANEL AND IGNITER. PROVIDE THERMOCOUPLE WIRE AS RECOMMENDED BY THE WASTE GAS BURNER MANUFACTURER. PROVIDE 3/4" CONDUIT SEPARATE FROM ALL WIRING FOR THERMOCOUPLE WIRE.
7. ALL ELECTRICAL WORK AND EQUIPMENT WITHIN 10'-0" OF ALL WASTE GAS BURNER FIXTURES, APPURTENANCES, AND HOUSINGS SHALL BE RATED FOR CLASS I, DIVISION 1, GROUP C AND D LOCATIONS. ALL ELECTRICAL WORK AND EQUIPMENT BETWEEN 10'-0" AND 15'-0" FROM ALL FIXTURES, APPURTENANCES, HOUSINGS, AND 19'-0" ABOVE THE CLASS I, DIVISION 1, GROUP C AND D ENVELOPE SHALL BE RATED FOR CLASS I, DIVISION 2, GROUP C AND D LOCATIONS.
8. PROVIDE 2~#14 IN 3/4" CONDUIT FROM DIVISION 11 FURNISHED SOLENOID VALVE TO THERMOCOUPLE JUNCTION BOX.
9. GROUND MOUNT LIGHTS A MINIMUM OF 10'-0" FROM STRUCTURE PER E 990-E5.02.

KEY NOTES CONTINUED:

10. CONTRACTOR SHALL PROVIDE STRUCTURE LIGHTNING PROTECTION SYSTEM DESIGN AND INSTALLATION IN ACCORDANCE WITH SECTION 16413 OF THE SPECIFICATIONS. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND ELECTRICAL WORK ASSOCIATED WITH THE LIGHTNING PROTECTION SYSTEM.
11. UTILITY PRIMARY CONDUCTORS PROVIDED BY UTILITY COMPANY. CONTRACTOR SHALL PROVIDE 4~4" CONDUIT IN DUCTBANK PER B 990-E5.01.
12. CIRCUIT 51 FROM 410LP-1 SHALL BE USED TO POWER HEATERS IN BAYS 1, 3, AND 5 OF SES-410.
13. CIRCUIT 53 FROM 410LP-1 SHALL BE USED TO POWER HEATERS IN BAYS 2, 4, AND 6 OF SES-410.
14. PROVIDE 2~#8 PLUS GROUND IN 1" CONDUIT TO HEATERS. PROVIDE PIGTAIL SPLICE AS REQUIRED TO CONNECT TO EACH HEATER.

GENERAL NOTES:

1. REFER TO SPECIFICATION SECTION 01010 FOR CONSTRUCTION SEQUENCE AND ASSOCIATED ELECTRICAL WORK REQUIRED.
2. ROADWAY LIGHT FIXTURES SHALL BE CONTROLLED FROM THE SCADA SYSTEM AS DESCRIBED IN SECTION 16940 OF THE SPECIFICATIONS.
3. REFER TO SPECIFICATION SECTION 16990 – I/O LISTING FOR WIRING ASSOCIATED WITH THE PLANT SCADA SYSTEM.
4. PROVIDE STANDARD OUTDOOR POLYESTER/NYLON TEXTILE INNER DUCT, SIZE AND QUANTITY AS REQUIRED, AS MANUFACTURED BY MAXCELL, OR EQUAL, FOR ROUTING NEW FIBER OPTIC CABLES THROUGH EXISTING FIBER CONDUITS. SPARE CONDUITS MAY BE USED FOR SITE FIBER ROUTING WHERE AVAILABLE IN LIEU OF PROVIDING INNER DUCT.

DETAILED SITE ELECTRICAL PLAN–5

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

DETAILED SITE ELECTRICAL PLAN - 5

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

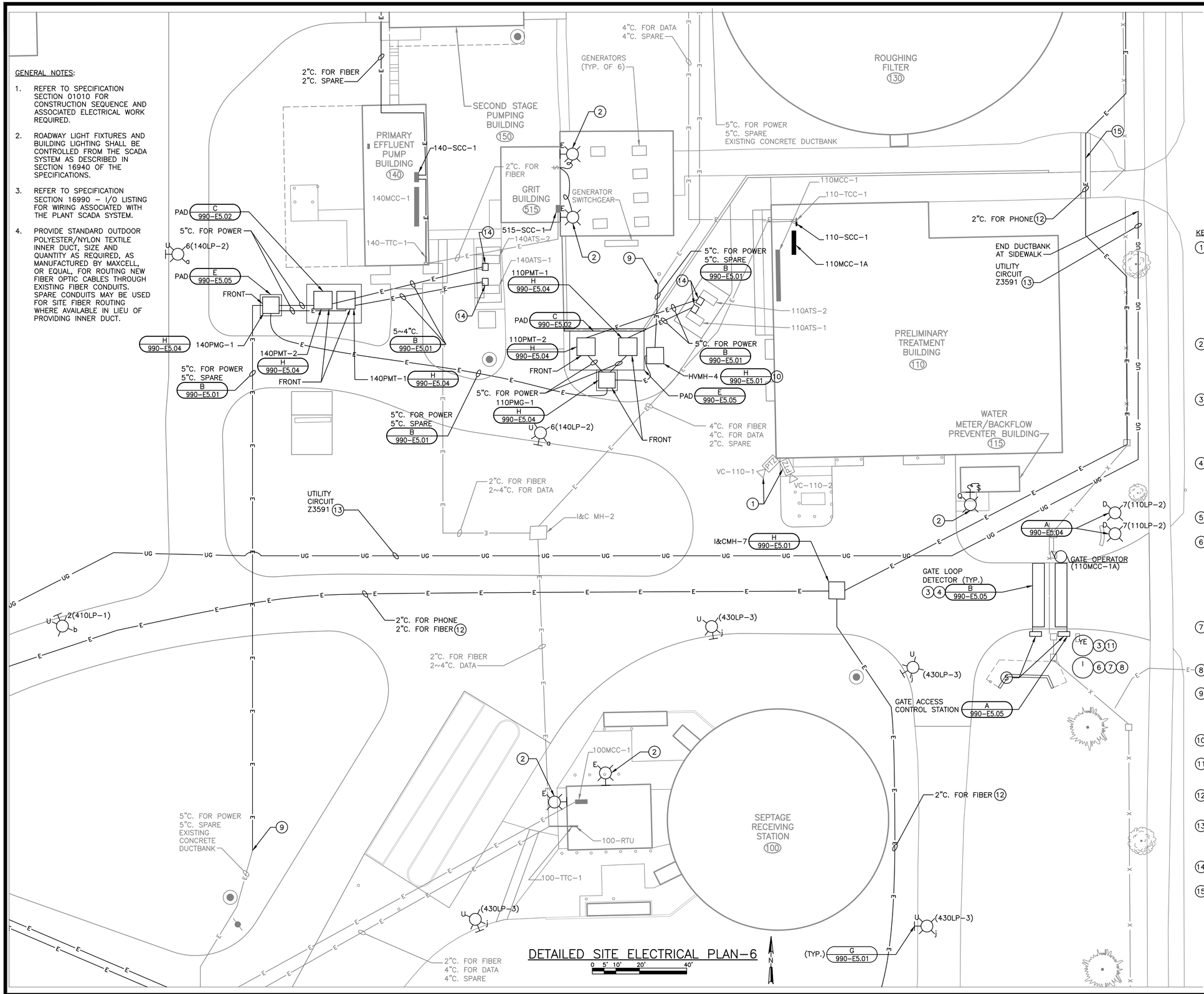
JOB NO. 1226.004
PROJECT MGR. SCOTT W. STEARNS

STRAND ASSOCIATES®

SHEET 52
02-CE1.06

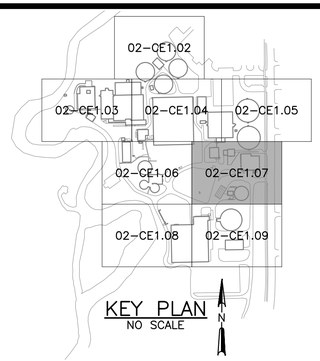
GENERAL NOTES:

1. REFER TO SPECIFICATION SECTION 01010 FOR CONSTRUCTION SEQUENCE AND ASSOCIATED ELECTRICAL WORK REQUIRED.
2. ROADWAY LIGHT FIXTURES AND BUILDING LIGHTING SHALL BE CONTROLLED FROM THE SCADA SYSTEM AS DESCRIBED IN SECTION 16940 OF THE SPECIFICATIONS.
3. REFER TO SPECIFICATION SECTION 16990 – I/O LISTING FOR WIRING ASSOCIATED WITH THE PLANT SCADA SYSTEM.
4. PROVIDE STANDARD OUTDOOR POLYESTER/NYLON TEXTILE INNER DUCT, SIZE AND QUANTITY AS REQUIRED, AS MANUFACTURED BY MAXCELL, OR EQUAL, FOR ROUTING NEW FIBER OPTIC CABLES THROUGH EXISTING FIBER CONDUITS. SPARE CONDUITS MAY BE USED FOR SITE FIBER ROUTING WHERE AVAILABLE IN LIEU OF PROVIDING INNER DUCT.



DETAILED SITE ELECTRICAL PLAN–6

0 5' 10' 20' 40'



KEY NOTES:

1. CONTRACTOR SHALL RELOCATE CAMERA TO CORNER OF BUILDING. MOUNT AS HIGH AS POSSIBLE. REMOVE EXISTING CAMERA MOUNTING HARDWARE AND INSTALL NEW MOUNTING HARDWARE FURNISHED AS PART OF ALLOWANCE IN SPECIFICATION SECTION 16721. COORDINATE LOCATION OF CAMERAS WITH OWNER PRIOR TO INSTALLATION. EXISTING WIRING SHALL BE REMOVED AND NEW CABLE SHALL BE FURNISHED BY SPECIFICATION SECTION 16721 SYSTEM SUPPLIER. INSTALL NEW CABLE IN EXISTING CONDUIT. EXTEND CONDUIT AS REQUIRED.
2. POWER LIGHT FIXTURE FROM SAME CIRCUIT AS REMOVED LIGHT FIXTURE. JUNCTION BOX AND CONDUIT SHALL BE REUSED. MODIFY AND EXTEND EXISTING CONDUIT AND WIRE AS REQUIRED. MOUNT LIGHT FIXTURE IN SAME LOCATION AS REMOVED LIGHT FIXTURE.
3. SLIDING GATE OPERATOR CONTROLS FURNISHED AS SPECIFIED IN DIVISION 2 AND INSTALLED BY DIVISION 16. REFER TO DIVISION 2 OF THE SPECIFICATIONS FOR OPERATING DESCRIPTION AND ADDITIONAL CONTROLS TO BE WIRED BY THIS CONTRACTOR. PROVIDE ALL WIRING PER MANUFACTURER'S INSTRUCTIONS.
4. CONTRACTOR SHALL INSTALL LOOP DETECTOR WIRE IN 1" PVC CONDUIT. PROVIDE ADEQUATE NUMBER OF TURNS IN LOOP DETECTOR CABLE TO ACCURATELY DETECT VEHICLE PASSAGE. LOOP DETECTORS SHALL BE INSTALLED IN ROADWAY BASE COURSE PRIOR TO ROADWAY SURFACING.
5. PROVIDE HANDHOLE FOR LOOP DETECTOR LEAD IN CABLE.
6. INTERCOM SHALL PROVIDE 2 WAY COMMUNICATION WITH STRUCTURE 500 SECRETARY. INTERCOM DEVICE SHALL BE FURNISHED AS SPECIFIED IN DIVISION 2 AND INSTALLED BY THIS CONTRACTOR. CONTRACTOR SHALL PROVIDE 2~#14 IN 3/4" CONDUIT FROM CARD READER/INTERCOM STAND TO GATE MOTOR LOCATION AND 3/4" CONDUIT FROM CARD READER/INTERCOM STAND TO DOOR CONTROLLER IN STRUCTURE 110. PROVIDE WIRING FOR CARD READER DEVICE AS RECOMMENDED BY MANUFACTURER.
7. CARD READER DEVICE SHALL BE POWERED FROM AND COMMUNICATE WITH DOOR CONTROLLER LOCATED IN STRUCTURE 110. REFER TO SHEET 110–E1.02 FOR CONTROLLER LOCATION.
8. CARD READER SHALL BE INSTALLED IN INTERCOM DEVICE STAND.
9. INTERCONNECT EXISTING AND NEW DUCTBANK. EXISTING CONDUITS SHALL BE EXPOSED TO ALLOW FOR NEW CONDUITS TO BE CONNECTED.CONNECT NEW AND EXISTING DUCT BANK SIMILAR TO E 990-E5.01
10. PROVIDE MANHOLE IN LOCATION OF FORMER PAD MOUNTED GEAR 110PMG–1.
11. PROVIDE KNOX KEY SWITCH FOR DEDICATED FIRE DEPARTMENT GATE OVERRIDE. COORDINATE REQUIREMENTS WITH FIRE DEPARTMENT.
12. PROVIDE PULL STRING IN EACH CONDUIT FOR FUTURE PHONE CABLE INSTALLATION BY AT&T AND CITY FIBER INSTALLATION BY OWNER.
13. UTILITY PRIMARY CONDUCTORS PROVIDED BY UTILITY COMPANY. CONTRACTOR SHALL PROVIDE 4~4" CONDUIT IN DUCTBANK PER B 990-E5.01
14. PROVIDE LOW VOLTAGE SWITCHBOARD WITH NEMA 3R ENCLOSURE AS SPECIFIED.
15. CONDUIT SHALL BE LOCATED A MINIMUM OF 12" ABOVE OR 12" BELOW EXISTING WE ENERGIES GAS LINE. COORDINATE WITH WE ENERGIES PRIOR TO BEGINNING ANY EXCAVATION.

NO.	REVISIONS	DATE:
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DETAILED SITE ELECTRICAL PLAN - 6

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

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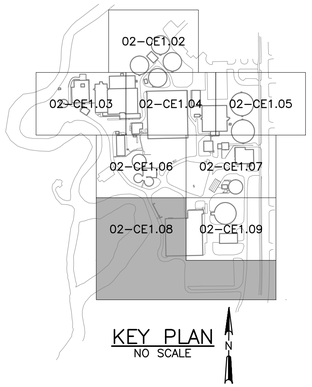


GENERAL NOTES:

1. REFER TO SPECIFICATION SECTION 16940 FOR WIRING ASSOCIATED WITH THE PLANT SCADA SYSTEM.
2. BUILDING LIGHT FIXTURES SHALL BE CONTROLLED FROM THE SCADA SYSTEM AS DESCRIBED IN SECTION 16990 – I/O LISTING OF THE SPECIFICATIONS.
3. PROVIDE STANDARD OUTDOOR POLYESTER/NYLON TEXTILE INNER DUCT, SIZE AND QUANTITY AS REQUIRED, AS MANUFACTURED BY MAXCELL, OR EQUAL, FOR ROUTING NEW FIBER OPTIC CABLES THROUGH EXISTING FIBER CONDUITS. SPARE CONDUITS MAY BE USED FOR SITE FIBER ROUTING WHERE AVAILABLE IN LIEU OF PROVIDING INNER DUCT.
4. REFER TO SPECIFICATION SECTION 01010 FOR CONSTRUCTION SEQUENCE AND ASSOCIATED ELECTRICAL WORK REQUIRED.

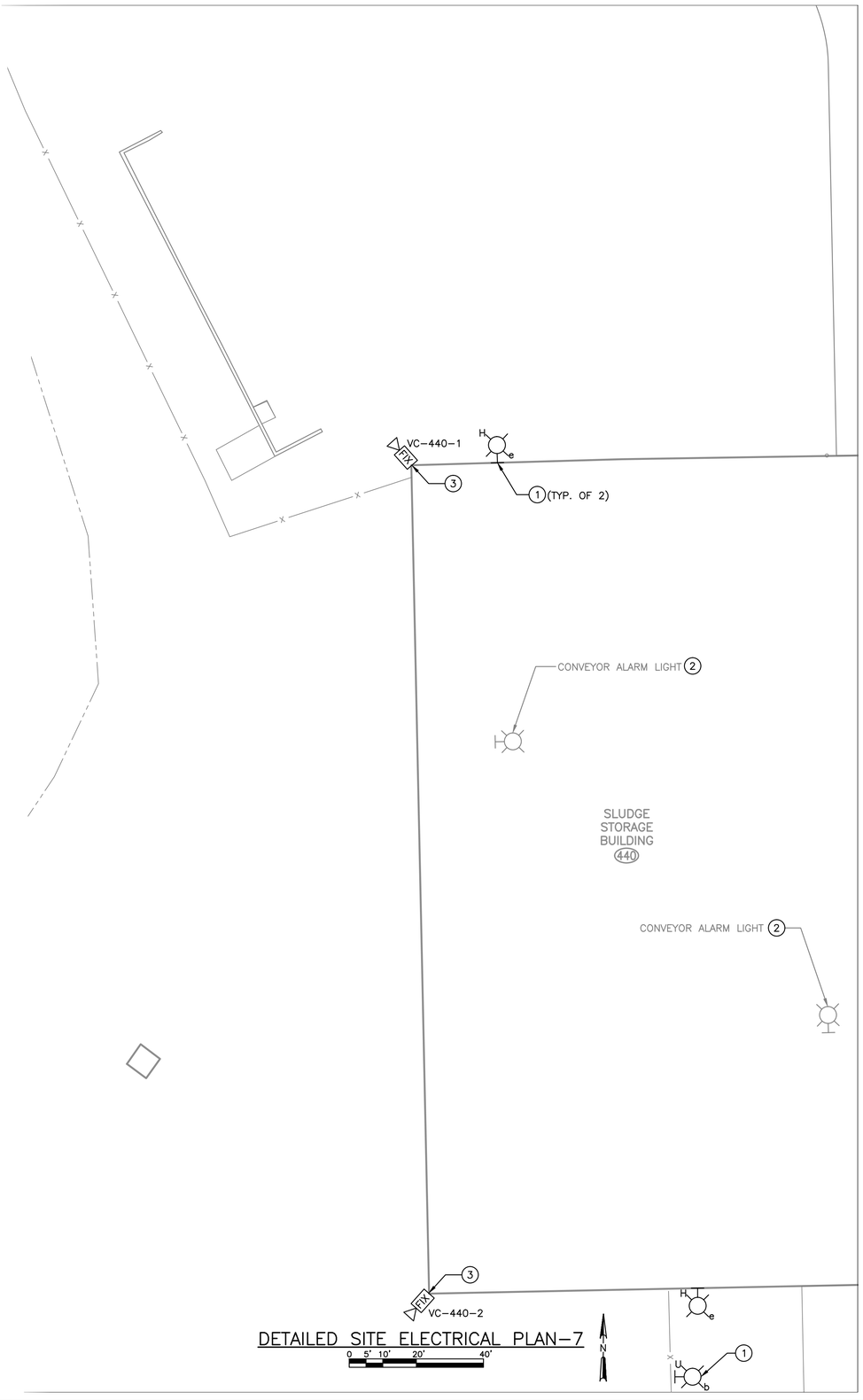
KEY NOTES:

(1) POWER LIGHT FIXTURE FROM SAME CIRCUIT AS REMOVED LIGHT FIXTURE. EXISTING JUNCTION BOX AND CONDUIT SHALL BE REUSED. MODIFY AND EXTEND EXISTING CONDUIT AND WIRE AS REQUIRED. MOUNT LIGHT FIXTURE IN SAME LOCATION AS REMOVED LIGHT FIXTURE. EXISTING LIGHTING CIRCUITS SHALL BE POWERED THROUGH NEW CONTACTOR IN 430-SCC-1.

(2) 120 VOLT POWER TO LIGHT FIXTURE SHALL BE FROM CONVEYOR ALARM LIGHT CIRCUIT IN 430LP-2 INDICATED ON SHEET 430-E1.03. LIGHT FIXTURE POWER CONDUCTORS SHALL BE ROUTED THROUGH A RELAY IN THE CONVEYOR ALARM CONTROLS BUCKET WITHIN 430MCC-1.

(3) CONTRACTOR SHALL INSTALL CAMERA ON CORNER OF BUILDING AS HIGH AS POSSIBLE. CAMERA AND MOUNTING HARDWARE FURNISHED AS PART OF ALLOWANCE IN SPECIFICATION SECTION 16721. COORDINATE LOCATION OF CAMERAS WITH OWNER PRIOR TO INSTALLATION.

DETAILED SITE ELECTRICAL PLAN-9



DETAILED SITE ELECTRICAL PLAN-7

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

DETAILED SITE ELECTRICAL PLAN - 7

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

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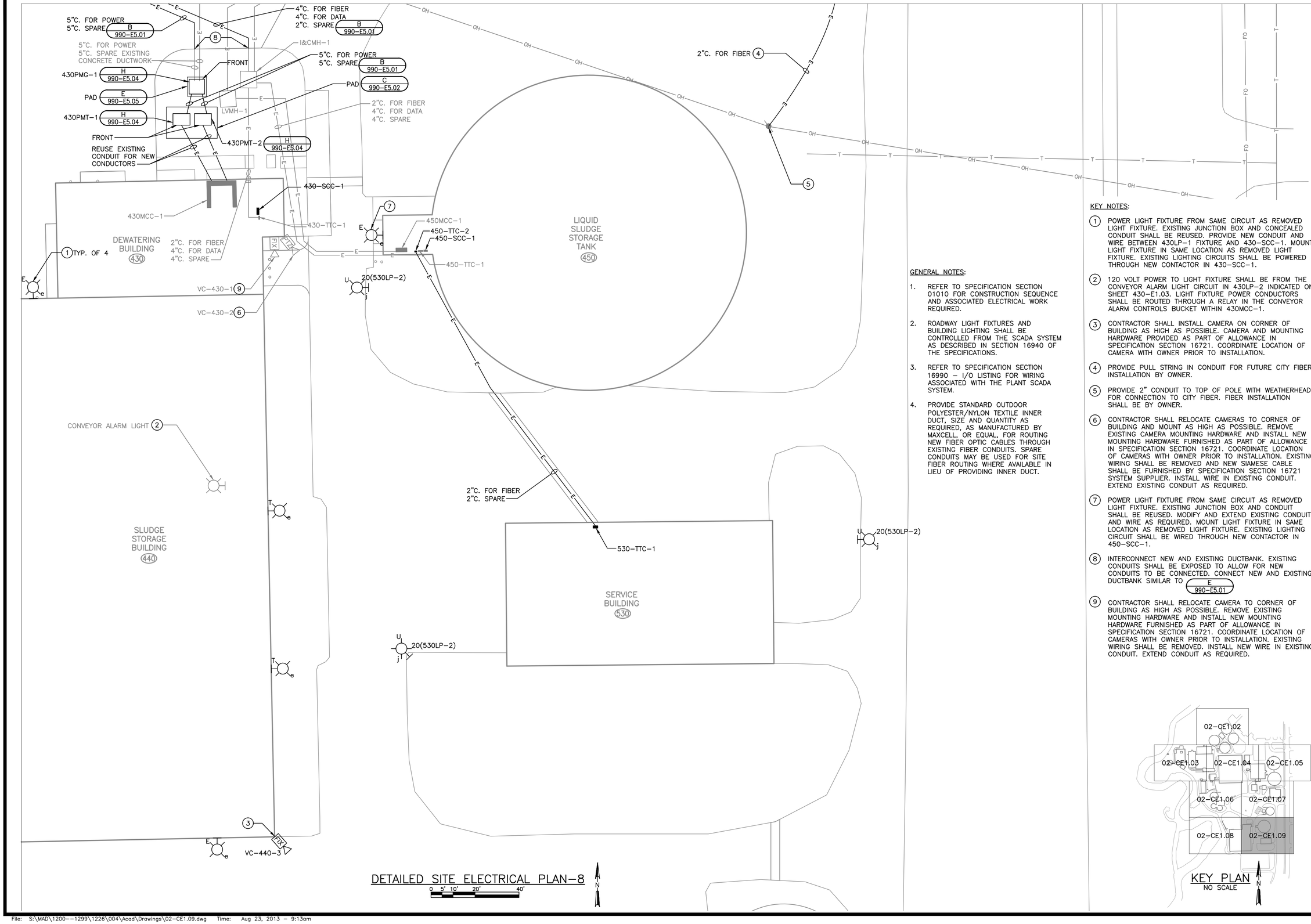

DETAILED SITE ELECTRICAL PLAN-8

0 5' 10' 20' 40'

GENERAL NOTES:

1. REFER TO SPECIFICATION SECTION 01010 FOR CONSTRUCTION SEQUENCE AND ASSOCIATED ELECTRICAL WORK REQUIRED.
2. ROADWAY LIGHT FIXTURES AND BUILDING LIGHTING SHALL BE CONTROLLED FROM THE SCADA SYSTEM AS DESCRIBED IN SECTION 16940 OF THE SPECIFICATIONS.
3. REFER TO SPECIFICATION SECTION 16990 – I/O LISTING FOR WIRING ASSOCIATED WITH THE PLANT SCADA SYSTEM.
4. PROVIDE STANDARD OUTDOOR POLYESTER/NYLON TEXTILE INNER DUCT, SIZE AND QUANTITY AS REQUIRED, AS MANUFACTURED BY MAXCELL, OR EQUAL, FOR ROUTING NEW FIBER OPTIC CABLES THROUGH EXISTING FIBER CONDUITS. SPARE CONDUITS MAY BE USED FOR SITE FIBER ROUTING WHERE AVAILABLE IN LIEU OF PROVIDING INNER DUCT.

KEY NOTES:

1. POWER LIGHT FIXTURE FROM SAME CIRCUIT AS REMOVED LIGHT FIXTURE. EXISTING JUNCTION BOX AND CONCEALED CONDUIT SHALL BE REUSED. PROVIDE NEW CONDUIT AND WIRE BETWEEN 430LP-1 FIXTURE AND 430-SCC-1. MOUNT LIGHT FIXTURE IN SAME LOCATION AS REMOVED LIGHT FIXTURE. EXISTING LIGHTING CIRCUITS SHALL BE POWERED THROUGH NEW CONTACTOR IN 430-SCC-1.
2. 120 VOLT POWER TO LIGHT FIXTURE SHALL BE FROM THE CONVEYOR ALARM LIGHT CIRCUIT IN 430LP-2 INDICATED ON SHEET 430-E1.03. LIGHT FIXTURE POWER CONDUCTORS SHALL BE ROUTED THROUGH A RELAY IN THE CONVEYOR ALARM CONTROLS BUCKET WITHIN 430MCC-1.
3. CONTRACTOR SHALL INSTALL CAMERA ON CORNER OF BUILDING AS HIGH AS POSSIBLE. CAMERA AND MOUNTING HARDWARE PROVIDED AS PART OF ALLOWANCE IN SPECIFICATION SECTION 16721. COORDINATE LOCATION OF CAMERA WITH OWNER PRIOR TO INSTALLATION.
4. PROVIDE PULL STRING IN CONDUIT FOR FUTURE CITY FIBER INSTALLATION BY OWNER.
5. PROVIDE 2" CONDUIT TO TOP OF POLE WITH WEATHERHEAD FOR CONNECTION TO CITY FIBER. FIBER INSTALLATION SHALL BE BY OWNER.
6. CONTRACTOR SHALL RELOCATE CAMERAS TO CORNER OF BUILDING AND MOUNT AS HIGH AS POSSIBLE. REMOVE EXISTING CAMERA MOUNTING HARDWARE AND INSTALL NEW MOUNTING HARDWARE FURNISHED AS PART OF ALLOWANCE IN SPECIFICATION SECTION 16721. COORDINATE LOCATION OF CAMERAS WITH OWNER PRIOR TO INSTALLATION. EXISTING WIRING SHALL BE REMOVED AND NEW SIAMESE CABLE SHALL BE FURNISHED BY SPECIFICATION SECTION 16721 SYSTEM SUPPLIER. INSTALL WIRE IN EXISTING CONDUIT. EXTEND EXISTING CONDUIT AS REQUIRED.
7. POWER LIGHT FIXTURE FROM SAME CIRCUIT AS REMOVED LIGHT FIXTURE. EXISTING JUNCTION BOX AND CONDUIT SHALL BE REUSED. MODIFY AND EXTEND EXISTING CONDUIT AND WIRE AS REQUIRED. MOUNT LIGHT FIXTURE IN SAME LOCATION AS REMOVED LIGHT FIXTURE. EXISTING LIGHTING CIRCUIT SHALL BE WIRED THROUGH NEW CONTACTOR IN 450-SCC-1.
8. INTERCONNECT NEW AND EXISTING DUCTBANK. EXISTING CONDUITS SHALL BE EXPOSED TO ALLOW FOR NEW CONDUITS TO BE CONNECTED. CONNECT NEW AND EXISTING DUCTBANK SIMILAR TO E 990-E5.01
9. CONTRACTOR SHALL RELOCATE CAMERA TO CORNER OF BUILDING AS HIGH AS POSSIBLE. REMOVE EXISTING MOUNTING HARDWARE AND INSTALL NEW MOUNTING HARDWARE FURNISHED AS PART OF ALLOWANCE IN SPECIFICATION SECTION 16721. COORDINATE LOCATION OF CAMERAS WITH OWNER PRIOR TO INSTALLATION. EXISTING WIRING SHALL BE REMOVED. INSTALL NEW WIRE IN EXISTING CONDUIT. EXTEND CONDUIT AS REQUIRED.

KEY PLAN
NO SCALE

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

DETAILED SITE ELECTRICAL PLAN - 8

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

STRAND ASSOCIATES®

SHEET 55 02-CE1.09

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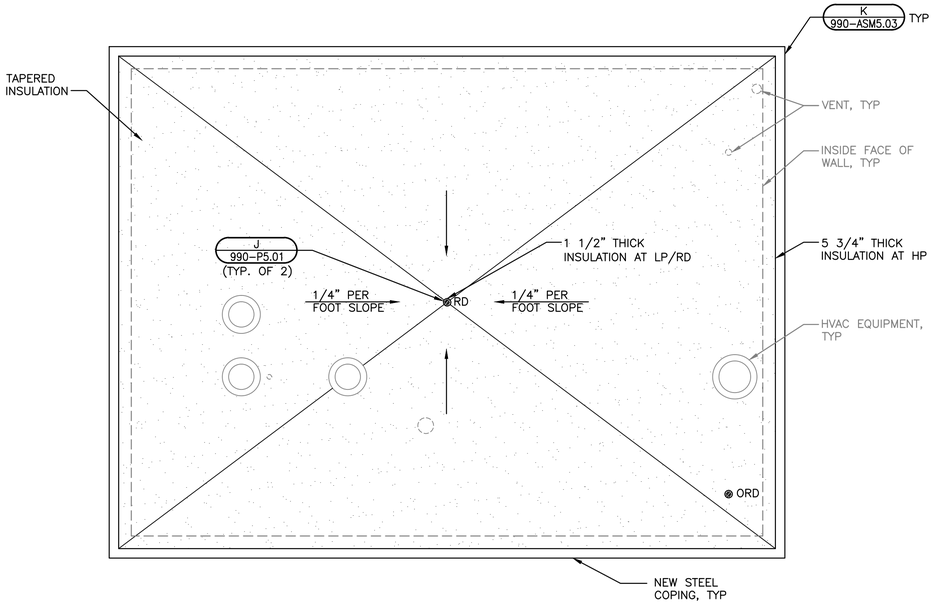


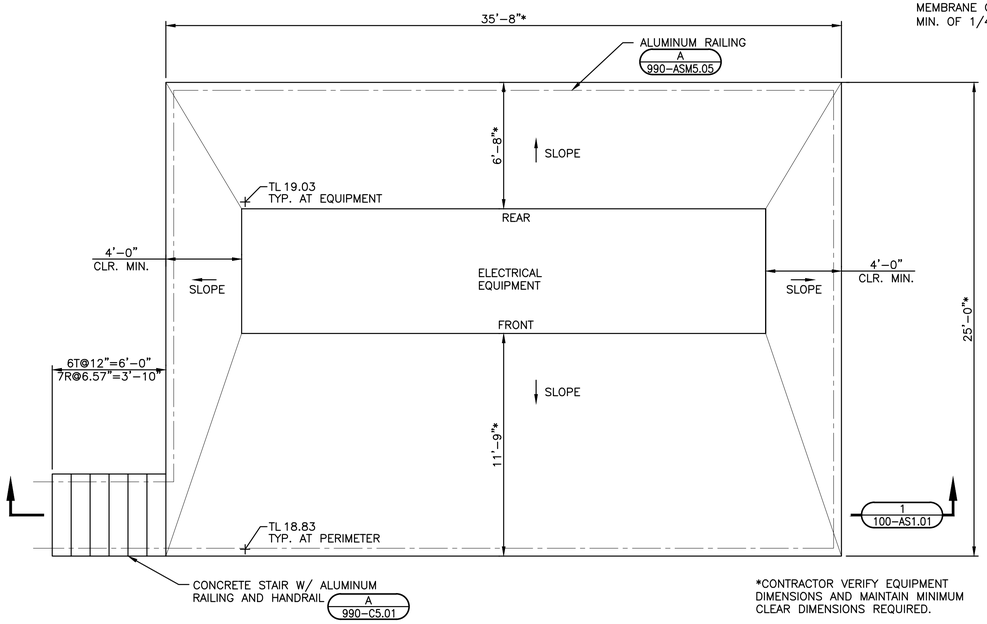
ROOF PLAN

0 1' 2' 4' 8'

N

GENERAL NOTES:

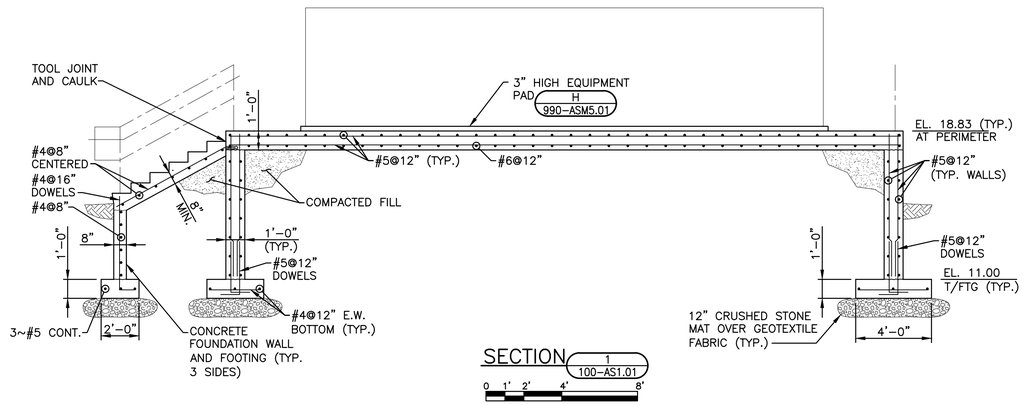
1. EXISTING ROOF MEMBRANE, INSULATION AND ACCESSORIES TO BE REMOVED IN THEIR ENTIRETY, SEE SPECIFICATION SECTION 07565 FOR ADDITIONAL RE-ROOFING INFORMATION.
2. TYPICAL ROOF CONSTRUCTION CONSISTS OF HOT APPLIED MODIFIED BITUMEN ROOF MEMBRANE OVER TAPERED INSULATION AT A MIN. OF 1/4" PER FOOT, SEE K 990-ASM5.02



*CONTRACTOR VERIFY EQUIPMENT DIMENSIONS AND MAINTAIN MINIMUM CLEAR DIMENSIONS REQUIRED.

A 100-AS1.01 ELECTRICAL EQUIPMENT PLATFORM

0 1' 2' 4' 8'



SECTION 1 / 100-AS1.01

0 1' 2' 4' 8'

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SEPTAGE RECEIVING STATION
ROOF PLAN

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

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100-AS1.01

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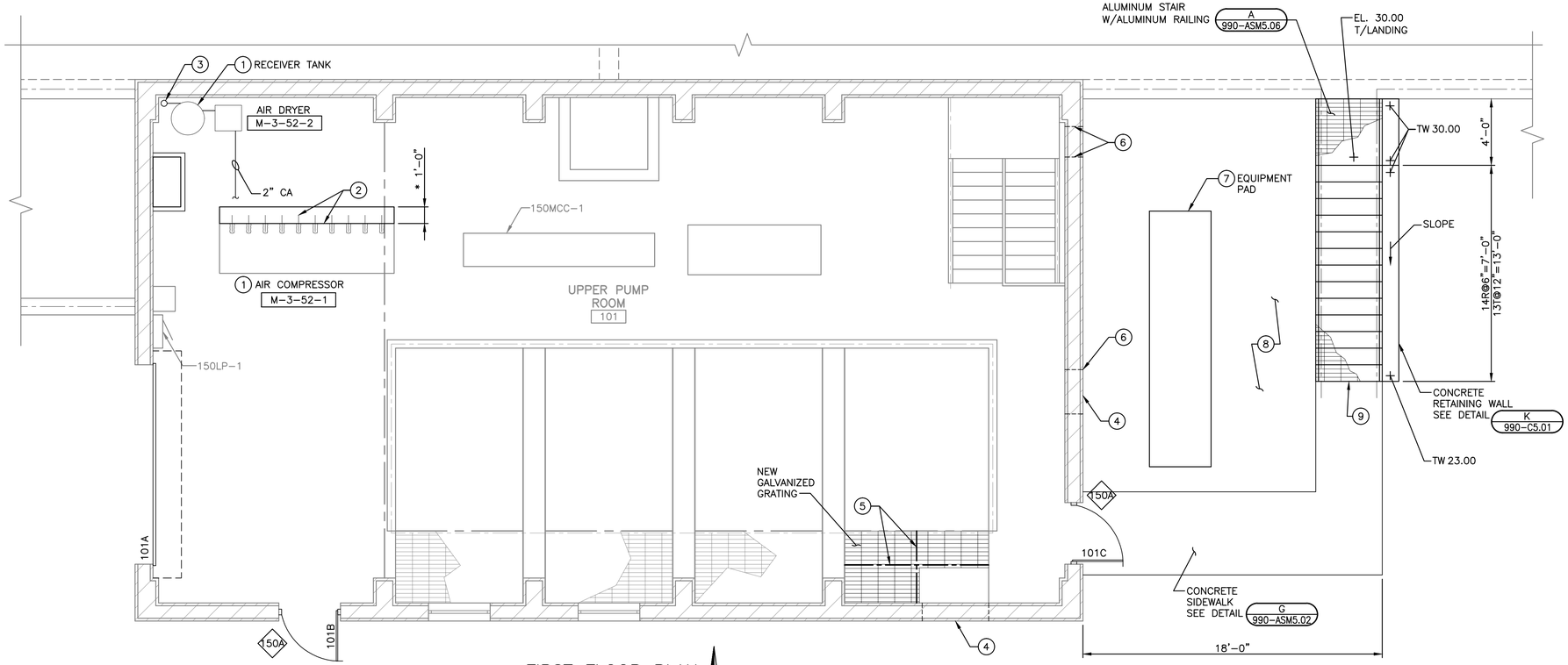
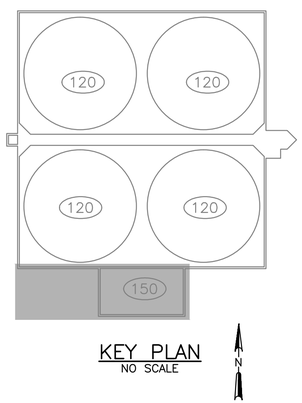


FIRST FLOOR PLAN

0 1' 2' 4' 8'

N



KEY PLAN
NO SCALE

N

* – VERIFY DIMENSION WITH EQUIPMENT MANUFACTURER.

GENERAL NOTES:

1. ALL EXISTING EXTERIOR CAULKED JOINTS INCLUDING BUT NOT LIMITED TO CONTROL, CONCRETE PANEL, EXPANSION, ETC. TO BE RE-CAULKED.

KEY NOTES:

(1) PIPE DRAIN CONNECTIONS TO GUTTER DRAIN IN BASEMENT.

(2) ROUGHEN EXISTING CONCRETE SURFACE TO 1/4 INCH AMPLITUDE. PROVIDE #5@12"x1'-0" DOWELS WITH RESIN ANCHORS. EMBED 6" INTO EXISTING CONCRETE. EXTEND EQUIPMENT PAD PER DETAIL H 990-ASM5.01

(3) RUN 2" CA TO BASEMENT. REPLACE ALL EXISTING CA PIPING AND APPURTENANCES.

(4) PROVIDE NEW LINTEL. SEE LINTEL SCHEDULE FOR SIZE.

(5) C6X8.2 GALVANIZED GRATING SUPPORT CHANNELS. BOLT ENDS TO EXISTING CONCRETE W/CLIP ANGLE OR END PLATE ANGLE W/2~5/8" DIA. SS EXP. BOLTS EACH END, EMBED 4". CHANNEL-TO-CHANNEL CONNECTION SHALL BE A SINGLE CLIP ANGLE W/2~3/4" DIA. GALVANIZED A325 BOLTS.

(6) PROVIDE ESCUTCHEON PLATE.

(7) 8" THICK CONCRETE PAD OVER 8" CRUSHED STONE MAT. REINFORCE WITH #4@8" E.W. CENTERED. VERIFY REQUIRED PAD DIMENSIONS WITH HVAC.

(8) STONE MULCH (TYP.)

(9) STAIR FOUNDATION. SEE DETAIL G 990-ASM5.01

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SECOND STAGE PUMPING STATION
FIRST FLOOR PLAN

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO.
1226.004

PROJECT MGR.
SCOTT W. STEARNS

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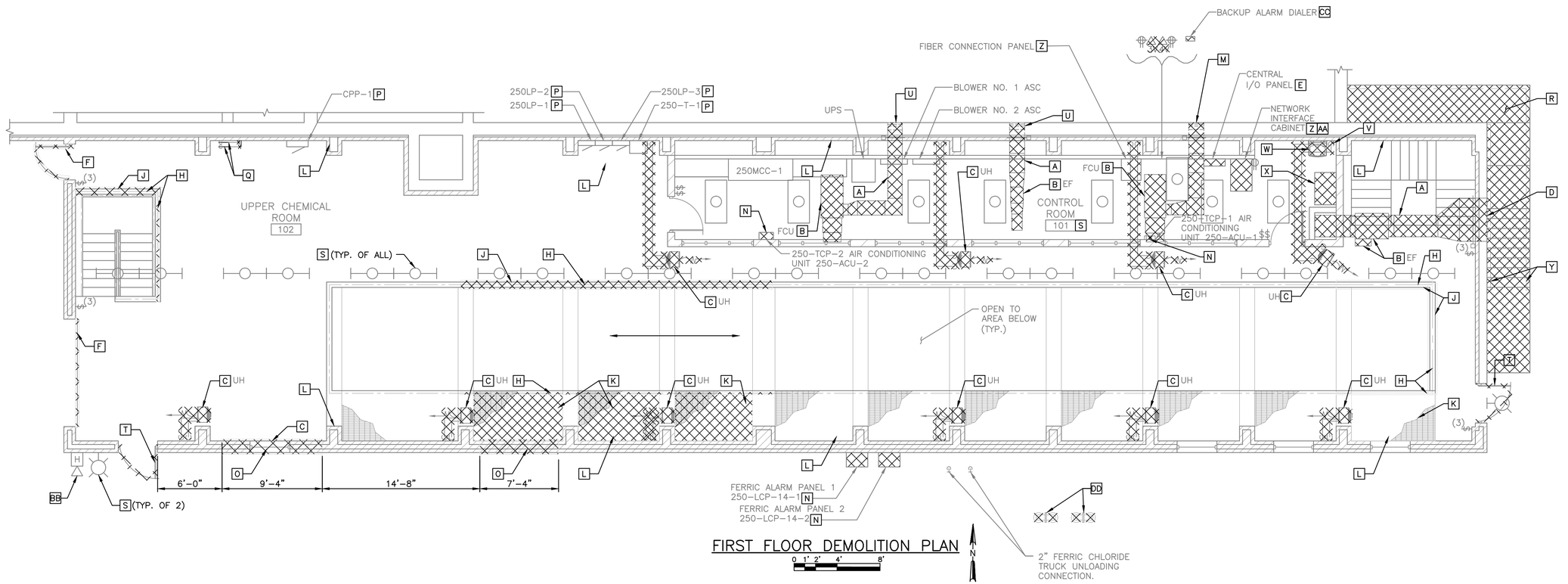
79
150-ASM1.02



FIRST FLOOR DEMOLITION PLAN

0 1' 2' 4' 8'

N

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING 250–D1.01.
2. REFER TO SPECIFICATION SECTION 01010 FOR CONSTRUCTION SEQUENCE.

DEMOLITION KEY NOTES:

- A REMOVE EXISTING DUCTWORK, HANGERS, AND SUPPORTS.
- B REMOVE EXISTING HVAC EQUIPMENT, CONDUIT, WIRING, AND ALL ASSOCIATED APPURTENANCES.
- C REMOVE EXISTING STEAM UNIT HEATER AND ALL ASSOCIATED APPURTENANCES.
- D REMOVE EXISTING LOUVER.
- E RELOCATE EXISTING CENTRAL I/O PANEL TO THE IT ROOM IN STRUCTURE 500 WHERE SHOWN ON THE DRAWINGS. REMOVE ALL ASSOCIATED WIRE AND EXPOSED CONDUIT NOT INDICATED TO BE REUSED. REMOVE EXISTING ABANDONED BRISTOL BABCOCK PLC COMMUNICATION CABLES WITHIN CONTROL PANEL BACK TO SOURCE.
- F SEE DRAWING 500–D1.01 FOR DEMOLITION OF THIS DOOR.
- G REMOVE ALUMINUM WINDOW FRAME, AND GLAZING AND MASONRY WALL AS SHOWN, PROVIDE OPENING FOR NEW OVERHEAD DOOR.
- H REMOVE GUARDRAIL AND ACCESSORIES.
- J REMOVE CONCRETE CURB
- K REMOVE METAL GRATING AND ACCESSORIES.
- L MODIFY EXISTING BRIDGE CRANE, REMOVE RAILS AND ACCESSORIES AND MODIFY AS REQUIRED. BRIDGE CRANE TO REMAIN FUNCTIONAL IN THE NEW VEHICLE STORAGE ROOM AND NOT IN THE CRANE ROOM. SEE 250–ASM1.01 FOR LOCATIONS AND DIMENSIONS.
- M REMOVE EXISTING LOUVER AND ASSOCIATED DUCTWORK. PREP OPENING FOR NEW LOUVER.
- N REMOVE EXISTING CONTROL PANEL AND ALL ASSOCIATED WIRING AND EXPOSED CONDUIT. RELABEL ASSOCIATED CIRCUIT BREAKER AS SPARE.
- O REMOVE EXISTING MASONRY WALL FOR NEW OVERHEAD DOOR, VERIFY DIMENSIONS OF DOOR OPENING AND OPERATOR WITH OVERHEAD DOOR SUPPLIER. SALVAGE EXTERIOR FACE BRICK TO RETURN BACK TO INTERIOR FACE.
- P REMOVE EXISTING LIGHTING PANELS, TRANSFORMER, CONDUIT, AND WIRING BACK TO 250MCC–1. EXISTING CIRCUITS SHALL BE EXTENDED TO NEW PANEL 250LP–1.
- Q REMOVE DOUBLE WALL PVC FC PIPING.
- R REMOVE CONCRETE SIDEWALK AND STAIR.
- S REMOVE LIGHT FIXTURES, SWITCHES, CONDUIT, AND WIRING.
- T REMOVE ALUMINUM WINDOW OR STOREFRONT SYSTEM, INCLUDING DOORS, GLAZING AND FRAME.
- U PATCH OPENING WITH CONCRETE.
- V REMOVE EXISTING WATER HEATER. PREP PIPING FOR RECONNECTION TO NEW WATER HEATER.
- W RELOCATE EXISTING SINK AS REQUIRED FOR INSTALLATION OF NEW WASHER AND DRYER. CONTRACTOR SHALL ADJUST DRAIN, VENT, AND WATER SUPPLY PIPING AS REQUIRED.
- X REMOVE EXISTING CABINETRY.
- Y REMOVE STEEL RAINING AND HANDRAIL.
- Z EXISTING FIBER CONNECTION PANEL SHALL REMAIN. REMOVE ALL EXISTING FIBER JUMPERS FROM CONNECTION PANEL TO NETWORK INTERFACE CABINET AS WELL AS EXISTING FIBER OPTIC CABLE AND EXPOSED CONDUIT FROM CONNECTION PANEL TO EXISTING ADMINISTRATION BUILDING NETWORK RACK IN THE SECOND FLOOR CONFERENCE ROOM IN THE ADMINISTRATION BUILDING.
- AA REMOVE EXISTING NETWORK INTERFACE CABINET AND ALL ASSOCIATED WIRE AND CONDUIT, UNLESS NOTED OTHERWISE. THE EXISTING FIBER OPTIC MEDIA CONVERTER WITHIN THE CABINET SHALL BE RELOCATED TO THE NEW DATA RACK IN THE STRUCTURE 500 IT ROOM.
- BB REMOVE EXISTING ALARM HORN AND ALL ASSOCIATED WIRE AND CONDUIT.
- CC RELOCATE EXISTING WALL–MOUNTED ALARM DIALER TO THE SCADA ROOM IN STRUCTURE 500 WHERE SHOWN ON THE DRAWINGS. REMOVE ALL WIRE AND CONDUIT ASSOCIATED WITH ALARM DIALER.
- DD REMOVE FC VENT PIPING.

NO.	REVISIONS	DATE:
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CHEMICAL FEED AND STORAGE BUILDING
FIRST FLOOR DEMOLITION PLAN

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

STRAND ASSOCIATES®

SHEET 109
250-D1.02

KEY NOTES:

1. BLIND FLANGE.
2. FLOOR LOW POINT IS EL. 0.0±.
3. SEE DRAWING 02–CM1.03 FOR CONTINUATION.
4. 1–HOUR RATED SHAFT ENCLOSURE
5. 2–HOUR RATED FIRE WALL.
6. IN–FILL FLOOR AT AREAS OF EXISTING OPENINGS.
7. 2–HOUR RATED, 8 INCH MASONRY WALL TO BE BUILT ON TOP OF EXISTING CONTROL ROOM WALL TO UNDERSIDE OF ROOF.
8. RE–USE SALVAGED BRICK FROM DEMOLITION TO RETURN EXTERIOR BRICK.
9. CONNECT NEW 2" FC DOUBLE WALL PVC PIPE TO EXISTING PIPE AT WALL AND ROUTE DOWN THROUGH EXISTING FLOOR OPENINGS. SEAL OPENINGS WATER TIGHT.

KEY NOTES CON'T:

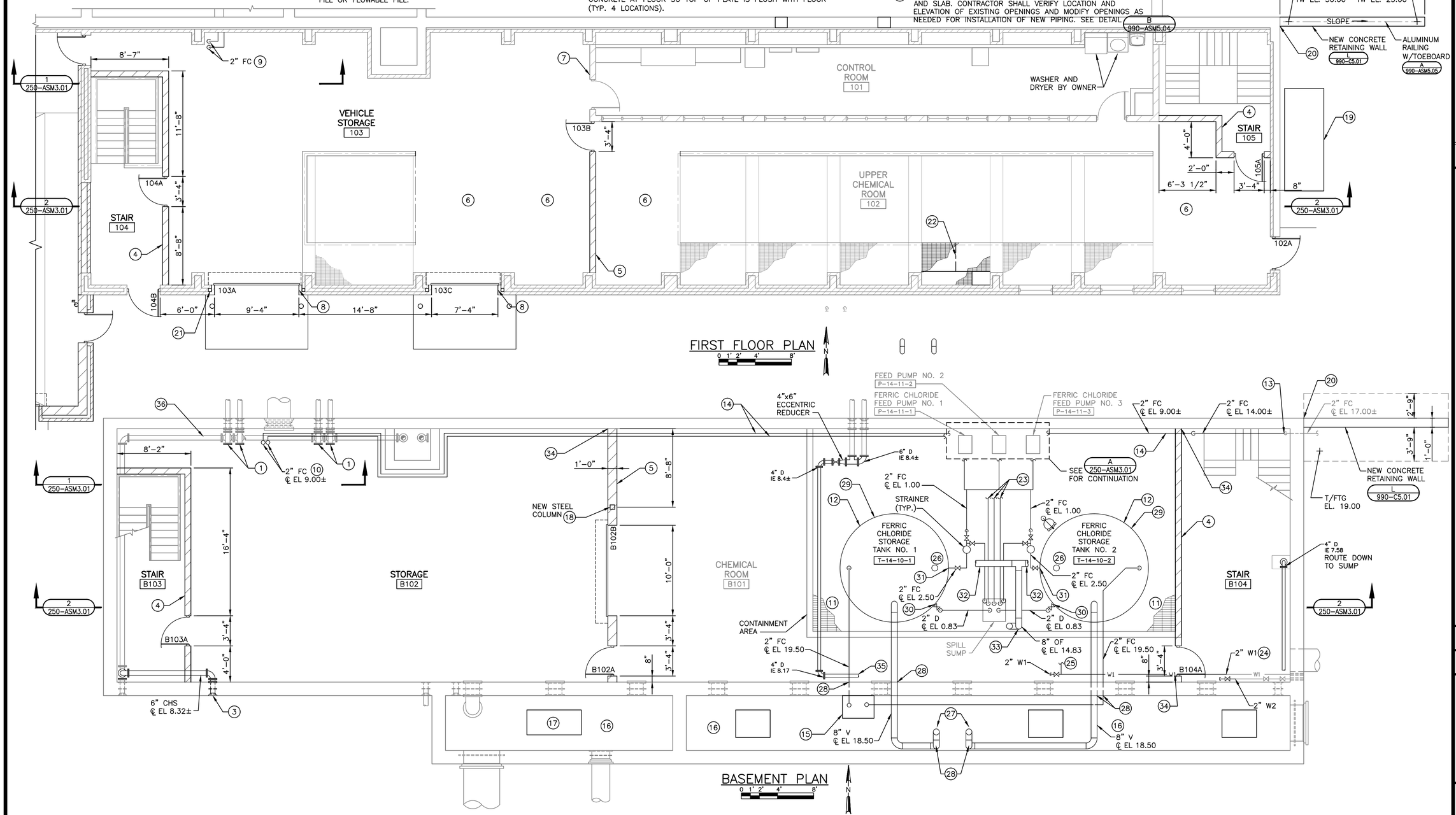
10. 2" FC DOUBLE WALL PVC PIPING FROM ABOVE. HIGH POINT AT ℄ EL. 9.00. ROUTE TO CONTAINMENT AREA WITHOUT ANY LOW POINTS IN PIPING.
11. AS A PART OF BID ALTERNATIVE NO. 1, REPLACE ALL GRATING IN THE CONTAINMENT AREA WITH NEW FIBERGLASS GRATING AT ELEVATION 1.50±. PROVIDE OPENINGS IN GRATING AS NEEDED FOR INSTALLATION OF PIPING.
12. AS A PART OF BID ALTERNATIVE NO. 1, PROVIDE NEW FERRIC CHLORIDE STORAGE TANK.
13. CONNECT TO EXISTING FC PIPING AT WALL.
14. PROVIDE LEAK DETECTION AT LOW POINT AS SPECIFIED. TRANSITION TO SINGLE WALL PVC.
15. PROVIDE SPILL CONTAINMENT PER B / 990–C5.02. FIELD VERIFY LOCATION OF FC FEED CONNECTION.
16. UNDERGROUND STRUCTURES TO BE FILLED WITH COMPACTED FILL OR FLOWABLE FILL.

KEY NOTES CON'T:

17. REPLACE CONCRETE SLAB AFTER UNDERGROUND STRUCTURES ARE FILLED.
18. HSS 6x6x1/4 COLUMN WITH 8x12x7/8 BASE PLATE. BOLT TO FLOOR WITH 4~3/4" THREADED RODS WITH ADHESIVE ANCHORS EMBED 6". SHIM UNDER BASE PLATE FOR FIRM BEARING AT CONCRETE BEAM ABOVE. PROVIDE CAP PLATE PER B / 250–ASM3.01
19. 8" CONCRETE EQUIPMENT PAD OVER 8" CRUSHED STONE MAT. REINFORCE WITH #4@8" EACH WAY CENTERED IN PAD. VERIFY REQUIRED DIMENSIONS WITH HVAC.
20. DOWEL RETAINING WALL INTO EXISTING CONCRETE WITH #5@12"x2'–6" DOWELS. ROUGHEN SURFACE TO 1/4" AMPLITUDE AND PROVIDE ADHESIVE ANCHORS WITH 6" EMBED.
21. HSS 4x4x1/4 COLUMN IN GROUTED MASONRY WITH SINGLE PLATE SHEER CONNECTION TO W12x26 LINTEL. PROVIDE 10x10x3/4 BASE PLATE WITH 4~3/4" THREADED ROD ANCHOR BOLTS AND ADHESIVE ANCHORS EMBED 6". CHIP OUT 3/4" CONCRETE AT FLOOR SO TOP OF PLATE IS FLUSH WITH FLOOR (TYP. 4 LOCATIONS).

KEY NOTES CON'T:

22. C6X8.2 GALVANIZED GRATING SUPPORT CHANNELS. BOLT ENDS TO EXISTING CONCRETE WITH CLIP ANGLE OR END PLATE ANGLE W/2~5/8" DIA. SS EXP. BOLTS EACH END, EMBED 4". CHANNEL–TO–CHANNEL CONNECTION SHALL BE A SINGLE CLIP ANGLE W/2~3/4" DIA. GALVANIZED A325 BOLTS. PROVIDE NEW SECTION OF GALVANIZED GRATING. DO NOT CUT EXISTING CONCRETE REINFORCING.
23. ROUTE 1" D FROM FERRIC CHLORIDE PUMPS TO SPILL SUMP. SEE A / 250–ASM3.01 FOR DRAIN CONNECTION POINTS.
24. CONNECT TO EXISTING PIPING.
25. ROUTE AND CONNECT 2" W1 TO EYEWASH/SHOWER STATION.
26. 2" NPT CONNECTION FOR ULTRASONIC LEVEL TRANSMITTER.
27. ROUTE VENT PIPING TO 6 FT. ABOVE GRADE AND GOOSENECK WITH FIBERGLASS BIRD SCREEN.
28. REUSE EXISTING OPENINGS FOR PENETRATIONS THROUGH WALL AND SLAB. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING OPENINGS AND MODIFY OPENINGS AS NEEDED FOR INSTALLATION OF NEW PIPING. SEE DETAIL B / 990–ASM5.04
29. EXISTING TANK PAD AT ELEVATION 1.50±.
30. 2" DRAIN NOZZLE AS SPECIFIED TO ALLOW COMPLETE DRAINAGE OF TANK.
31. 2" FEED NOZZLE AT ℄ EL 2.50.
32. CONNECT 8" OF TO 8" NOZZLE ON TANK AT ℄ EL. 14.83.
33. ROUTE 8" OF PIPING DOWN TO FIBERGLASS GRATING AND TERMINATE WITH U.
34. WALL PENETRATION C / 990–ASM5.02
35. PIPING CONTINUES ALONG WALL TO EXISTING SUMP. SEE WALL PENETRATION C / 990–ASM5.02. PROVIDE BEVELED FLANGE FILLING AS NEEDED TO SLOPE PIPING AS SHOWN.
36. PAINT ALL EXISTING CHS PIPING AND VALVES.



NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

CHEMICAL FEED ND STORAGE BUILDING
FLOOR PLANS

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

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SHEET 110
250-ASM1.01

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WASTEWATER TREATMENT PLANT IMPROVEMENTS

FOR THE

CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS

WAUKESHA, WISCONSIN

SEPTEMBER 2013

VOLUME 2

CITY OF WAUKESHA

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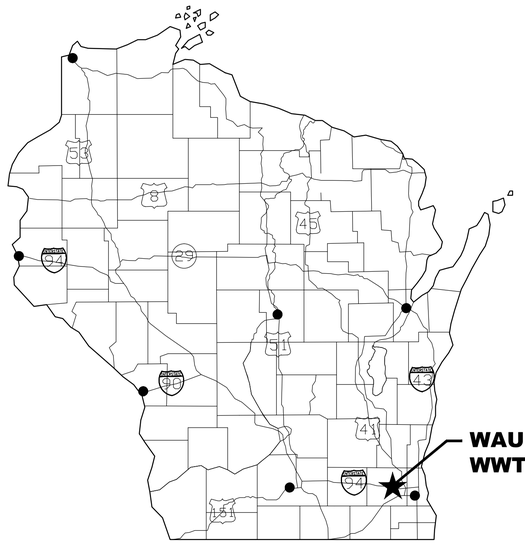

PROJECT LOCATION MAP
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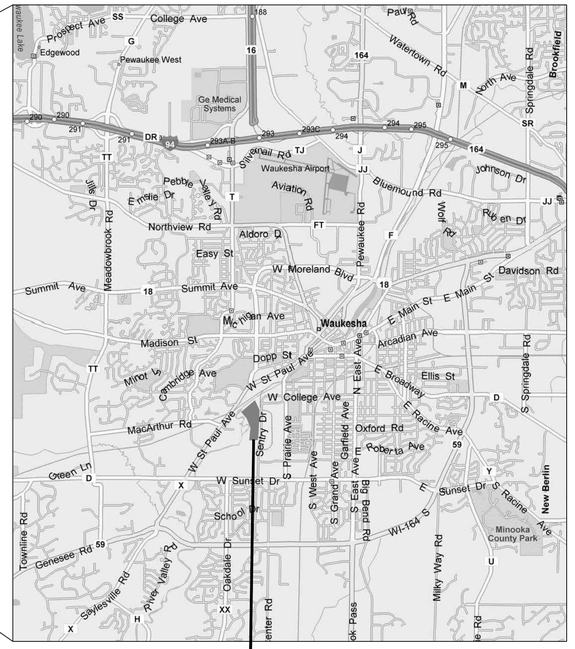

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WISCONSIN — SCOTT W. STEARNS E-32938 MADISON, WI — PROFESSIONAL ENGINEER

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FOR STRAND ASSOCIATES, INC.

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SCOTT W. STEARNS — DATE

32938 — 7/31/2014
LICENSE # — RENEWAL DATE

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ERIC M. FISHER — DATE

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ALL HVAC & PLUMBING DRAWINGS

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SCOTT W. STEARNS

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VOLUME 2

SHEET NO.	DRAWING NO.	TITLE
00-GENERAL		
167	00-G0.09	VOLUME 2 TITLE SHEET AND LOCATION MAPS
168	00-G0.10	LIST OF DRAWINGS - VOLUME 2
410-PRIMARY DIGESTER COMPLEX		
169	410-D1.01	SOUTH DIGESTER ROOM - LOWER DEMOLITION PLAN
170	410-D1.02	MIDDLE DIGESTER ROOM - LOWER DEMOLITION PLAN
171	410-D1.03	NORTH DIGESTER ROOM - LOWER DEMOLITION PLAN
172	410-D1.04	SOUTH DIGESTER ROOM - ROOF DEMOLITION PLAN
173	410-D1.05	MIDDLE DIGESTER ROOM - ROOF DEMOLITION PLAN
174	410-D1.06	NORTH DIGESTER ROOM - ROOF DEMOLITION PLAN
175	410-D3.01	SOUTH DIGESTER ROOM - DEMOLITION SECTIONS
176	410-A2.01	DIGESTER COMPLEX - ELEVATIONS
177	410-A2.02	DIGESTER COMPLEX - OVERALL ROOF PLAN
178	410-A5.01	DIGESTER COMPLEX - WALL SECTIONS
179	410-A5.02	DIGESTER COMPLEX - ROOF DETAILS
180	410-A5.03	DIGESTER COMPLEX - DOOR, LOUVER AND MISCELLANEOUS DETAILS
181	410-A5.04	DIGESTER COMPLEX - LIFE SAFETY AND EXITING PLAN
182	410-AS1.01	SOUTH DIGESTER ROOM - FLOOR PLAN
183	410-AS1.02	MIDDLE DIGESTER ROOM AND BOILER ROOM ADDITION - FLOOR AND ROOF PLANS
184	410-AS1.03	NORTH DIGESTER ROOM - FLOOR PLAN
185	410-AS1.04	SOUTH DIGESTER ROOM - ROOF PLAN
186	410-AS1.05	MIDDLE DIGESTER ROOM - ROOF PLAN
187	410-AS1.06	NORTH DIGESTER ROOM - ROOF PLAN
188	410-AS3.01	SOUTH DIGESTER ROOM - SECTIONS - 1
189	410-AS3.02	DIGESTER COMPLEX - SECTIONS - 2
190	410-AS3.03	DIGESTER COMPLEX - SECTIONS - 3
191	410-AS3.04	DIGESTER COMPLEX - SECTIONS - 4
192	410-S5.01	STANDARD CONCRETE JOINT DETAILS
193	410-S5.02	STANDARD CONCRETE REINFORCING DETAILS
194	410-S5.03	STANDARD CONCRETE BEAM AND SLAB DETAILS
195	410-S5.04	DIGESTER NO. 1 STAIR AND LADDER DETAILS
196	410-S5.05	STRUCTURAL - SECTIONS AND DETAILS - 1
197	410-S5.06	STRUCTURAL - SECTIONS AND DETAILS - 2
198	410-S5.07	CONCRETE REPAIR DETAILS
199	410-M1.01	SOUTH DIGESTER ROOM - LOWER PLAN
200	410-M1.02	MIDDLE DIGESTER ROOM - LOWER PLAN
201	410-M1.03	NORTH DIGESTER ROOM - LOWER PLAN
202	410-M1.04	SOUTH DIGESTER ROOM - ROOF PLAN
203	410-M1.05	MIDDLE DIGESTER ROOM - ROOF PLAN
204	410-M1.06	NORTH DIGESTER ROOM - ROOF PLAN
205	410-M3.01	MIDDLE DIGESTER ROOM - SECTIONS AND DETAILS - 1
206	410-M3.02	NORTH DIGESTER ROOM - SECTIONS AND DETAILS - 2
207	410-P1.01	SOUTH DIGESTER ROOM - LOWER PLUMBING PLAN
208	410-P1.02	MIDDLE DIGESTER ROOM - LOWER PLUMBING PLAN
209	410-P1.03	NORTH DIGESTER ROOM - LOWER PLUMBING PLAN
210	410-P6.01	PLUMBING SCHEMATICS AND DETAILS
211	410-FP1.01	SOUTH DIGESTER ROOM - FIRE PROTECTION PLANS AND SCHEMATICS
212	410-H1.01	DIGESTER COMPLEX - OVERALL HVAC ROOF PLAN
213	410-H1.02	SOUTH DIGESTER ROOM - LOWER HVAC PLAN
214	410-H1.03	MIDDLE DIGESTER ROOM - LOWER HVAC PLAN
215	410-H1.04	NORTH DIGESTER ROOM - LOWER HVAC PLAN
216	410-E1.01	SOUTH DIGESTER ROOM - LOWER ELECTRICAL PLAN
217	410-E1.02	MIDDLE DIGESTER ROOM - LOWER ELECTRICAL PLAN
218	410-E1.03	NORTH DIGESTER ROOM - LOWER ELECTRICAL PLAN
420 - DIGESTERS AND CENTRATE STORAGE		
219	420-D1.01	DIGESTERS NO. 2 AND 3 - LOWER DEMOLITION PLAN
220	420-D1.02	CENTRATE STORAGE TANK - LOWER DEMOLITION PLAN
221	420-D1.03	DIGESTERS NO. 2 AND 3 - ROOF DEMOLITION PLAN
222	420-D1.04	DIGESTERS NO. 3 AND 4 - ROOF DEMOLITION PLAN
223	420-ASM1.01	DIGESTER NO. 1 - UPPER PLAN
224	420-ASM1.02	DIGESTERS NO. 2 AND 3 - ROOF PLAN
225	420-ASM3.01	DIGESTERS NO. 2 - SECTION
226	420-ASM3.02	DIGESTERS NO. 3 - SECTION
227	420-ASM5.01	SECTIONS AND DETAILS
228	420-M1.01	CENTRATE STORAGE TANK - LOWER PLAN
229	420-M1.02	DIGESTERS NO. 2 AND 3 - LOWER PLAN
230	420-M3.01	DIGESTER NO. 1 - SECTION
231	420-M5.01	MECHANICAL DETAILS - 1
232	420-E1.01	DIGESTER NO. 1 - ELECTRICAL PLAN
233	420-E1.02	DIGESTER NO. 2 AND 3 - ELECTRICAL PLAN

SHEET NO.	DRAWING NO.	TITLE
500-ADMINISTRATION BUILDING		
234	500-D1.01	ADMINISTRATION BUILDING - FIRST FLOOR DEMOLITION PLAN
235	500-D1.02	ADMINISTRATION BUILDING - SECOND FLOOR DEMOLITION PLAN
236	500-D1.03	ADMINISTRATION BUILDING - FIRST FLOOR ELECTRICAL DEMOLITION PLAN
237	500-D1.04	ADMINISTRATION BUILDING - SECOND FLOOR ELECTRICAL DEMOLITION PLAN
238	500-D3.01	ADMINISTRATION BUILDING - WALL SECTIONS - 1
239	500-AS1.01	ADMINISTRATION BUILDING - LIFE SAFETY AND EXITING PLAN
240	500-AS1.02	ADMINISTRATION BUILDING - FOUNDATION PLAN
241	500-AS1.03	ADMINISTRATION BUILDING - ROOF FRAMING PLANS - 1
242	500-AS1.04	ADMINISTRATION BUILDING - ROOF FRAMING PLANS - 2
243	500-ASM1.01	ADMINISTRATION BUILDING - FIRST FLOOR PLAN
244	500-ASM1.02	ADMINISTRATION BUILDING - SECOND FLOOR AND ROOF PLANS
245	500-ASM1.03	ADMINISTRATION BUILDING - ENLARGED FLOOR PLANS AND INTERIOR ELEVATIONS
246	500-ASM1.04	ADMINISTRATION BUILDING - ENLARGED LABORATORY PLAN
247	500-ASM1.05	ADMINISTRATION BUILDING - REFLECTED CEILING PLANS
248	500-ASM2.01	ADMINISTRATION BUILDING - ELEVATIONS
249	500-ASM3.01	ADMINISTRATION BUILDING - BUILDING SECTIONS - 1
250	500-ASM3.02	ADMINISTRATION BUILDING - BUILDING SECTIONS - 2
251	500-ASM3.03	ADMINISTRATION BUILDING - WALL SECTIONS - 1
252	500-ASM3.04	ADMINISTRATION BUILDING - WALL SECTIONS - 2
253	500-ASM4.01	ADMINISTRATION BUILDING - INTERIOR ELEVATIONS AND DETAILS
254	500-ASM5.01	ADMINISTRATION BUILDING - WALL TYPES AND DETAILS
255	500-ASM5.02	ADMINISTRATION BUILDING - DETAILS - 2
256	500-ASM5.03	ADMINISTRATION BUILDING - DETAILS - 3
257	500-P1.01	ADMINISTRATION BUILDING - UNDERGROUND PLUMBING PLAN
258	500-P1.02	ADMINISTRATION BUILDING - FIRST FLOOR PLUMBING PLAN
259	500-P1.03	ADMINISTRATION BUILDING - SECOND FLOOR PLUMBING PLAN
260	500-P7.01	ADMINISTRATION BUILDING - PLUMBING SCHEMATICS - 1
261	500-P7.02	ADMINISTRATION BUILDING - PLUMBING SCHEMATICS - 2
262	500-FP1.01	ADMINISTRATION BUILDING - FIRST FLOOR FIRE PROTECTION PLAN
263	500-FP1.02	ADMINISTRATION BUILDING - SECOND FLOOR FIRE PROTECTION PLAN
264	500-H1.01	ADMINISTRATION BUILDING - FIRST FLOOR HVAC PLAN
265	500-H1.02	ADMINISTRATION BUILDING - SECOND FLOOR HVAC PLAN
266	500-H1.03	ADMINISTRATION BUILDING - FIRST FLOOR HYDRONIC PLAN
267	500-H1.04	ADMINISTRATION BUILDING - SECOND FLOOR HYDRONIC PLAN
268	500-H1.05	ADMINISTRATION BUILDING - ENLARGED MECHANICAL ROOM HVAC PLAN
269	500-E1.01	ADMINISTRATION BUILDING - FIRST FLOOR POWER AND SYSTEMS PLAN
270	500-E1.02	ADMINISTRATION BUILDING - SECOND FLOOR POWER AND SYSTEMS PLAN
271	500-E1.03	ADMINISTRATION BUILDING - FIRST FLOOR LIGHTING PLAN
272	500-E1.04	ADMINISTRATION BUILDING - SECOND FLOOR LIGHTING PLAN
273	500-E1.05	ADMINISTRATION BUILDING - ENLARGED ELECTRICAL PLANS - 1
274	500-E1.06	ADMINISTRATION BUILDING - ENLARGED ELECTRICAL PLANS - 2
510-GENERATOR BUILDING		
275	510-D1.01	GENERATOR BUILDING - BASEMENT DEMOLITION PLAN
276	510-D1.02	GENERATOR BUILDING - FIRST FLOOR DEMOLITION PLAN
277	510-AS1.01	GENERATOR BUILDING - FIRST FLOOR AND ROOF PLANS
278	510-PH1.01	GENERATOR BUILDING - FIRST FLOOR PLUMBING AND HVAC PLAN
279	510-E1.01	GENERATOR BUILDING - BASEMENT ELECTRICAL PLAN
280	510-E1.02	GENERATOR BUILDING - FIRST FLOOR ELECTRICAL PLAN
515-GENERATOR CONTROL BUILDING		
281	515-D1.01	GENERATOR CONTROL BUILDING - DEMOLITION PLAN
282	515-PHE1.01	GENERATOR CONTROL BUILDING - PLUMBING, HVAC, AND ELECTRICAL PLANS
520-ELEVATED TANK		
283	520-AS1.01	ELEVATED TANK - PLAN AND SECTION
530-SERVICE BUILDING		
284	530-D1.01	SERVICE BUILDING - DEMOLITION PLAN
285	530-H1.01	SERVICE BUILDING - HVAC PLANS
286	530-E1.01	SERVICE BUILDING - ELECTRICAL PLAN

SHEET NO.	DRAWING NO.	TITLE
990-SCHEDULES AND DETAILS		
287	990-C5.01	CIVIL DETAILS - 1
288	990-C5.02	CIVIL DETAILS - 2
289	990-ASM5.01	ARCHITECTURAL/STRUCTURAL/MECHANICAL DETAILS - 1
290	990-ASM5.02	ARCHITECTURAL/STRUCTURAL/MECHANICAL DETAILS - 2
291	990-ASM5.03	ARCHITECTURAL/STRUCTURAL/MECHANICAL DETAILS - 3
292	990-ASM5.04	ARCHITECTURAL/STRUCTURAL/MECHANICAL DETAILS - 4
293	990-ASM5.05	ARCHITECTURAL/STRUCTURAL/MECHANICAL DETAILS - 5
294	990-ASM5.06	ARCHITECTURAL/STRUCTURAL/MECHANICAL DETAILS - 6
295	990-ASM6.01	DOOR SCHEDULE
296	990-ASM6.02	WINDOW SCHEDULE AND ELEVATIONS -1
297	990-ASM6.03	WINDOW SCHEDULE AND ELEVATIONS - 2
298	990-ASM6.04	ROOM FINISH SCHEDULE
299	990-ASM6.05	STRUCTURAL SCHEDULES
300	990-P5.01	PLUMBING DETAILS
301	990-P6.01	PLUMBING SCHEDULES
302	990-H5.01	HVAC - DETAILS - 1
303	990-H5.02	HVAC - DETAILS - 2
304	990-H6.01	HVAC SCHEDULES - 1
305	990-H6.02	HVAC SCHEDULES - 2
306	990-H6.03	HVAC SCHEDULES - 3
307	990-H6.04	HVAC SCHEDULES - 4
308	990-H6.05	HVAC SCHEDULES - 5
309	990-H6.06	HVAC SCHEDULES - 6
310	990-H7.01	HVAC SCHEMATICS - 1
311	990-H7.02	HVAC SCHEMATICS - 2
312	990-H7.03	HVAC SCHEMATICS - 3
313	990-H7.04	HVAC SCHEMATICS - 4
314	990-H8.01	HVAC CONTROLS DIAGRAMS - 1
315	990-H8.02	HVAC CONTROLS DIAGRAMS - 2
316	990-H8.03	HVAC CONTROLS DIAGRAMS - 3
317	990-H8.04	HVAC CONTROLS DIAGRAMS - 4
318	990-H8.05	HVAC CONTROLS DIAGRAMS - 5
319	990-H8.06	HVAC CONTROLS DIAGRAMS - 6
320	990-H8.07	HVAC CONTROLS DIAGRAMS - 7
321	990-H8.08	HVAC CONTROLS DIAGRAMS - 8
322	990-E5.01	ELECTRICAL DETAILS - 1
323	990-E5.02	ELECTRICAL DETAILS - 2
324	990-E5.03	ELECTRICAL DETAILS - 3
325	990-E5.04	ELECTRICAL DETAILS - 4
326	990-E5.05	ELECTRICAL DETAILS - 5
327	990-E6.01	ELECTRICAL - ONE LINE DIAGRAM - DEMOLITION 1
328	990-E6.02	ELECTRICAL - ONE LINE DIAGRAM - DEMOLITION 2
329	990-E6.03	ELECTRICAL - ONE LINE DIAGRAM - 1
330	990-E6.04	ELECTRICAL - ONE LINE DIAGRAM - 2
331	990-E6.05	ELECTRICAL - ONE LINE DIAGRAM - 3
332	990-E6.06	ELECTRICAL - EXISTING SCADA RISER DIAGRAM - 1
333	990-E6.07	ELECTRICAL - EXISTING SCADA RISER DIAGRAM - 2
334	990-E6.08	ELECTRICAL - SCADA RISER DIAGRAM - 1
335	990-E6.09	ELECTRICAL - SCADA RISER DIAGRAM - 2
336	990-E6.10	ELECTRICAL - SECURITY SYSTEM RISER DIAGRAM
337	990-E6.11	ELECTRICAL - CITY NETWORK AND CAMERA NETWORK RISER DIAGRAMS
338	990-E6.12	DISTRIBUTION SWITCHGEAR (SES-410) AND 220 ELEVATION
339	990-E6.13	ELECTRICAL - 110MCC-1 SCHEDULE
340	990-E6.14	ELECTRICAL - 140MCC-1, 150MCC-1, 220MCC-1, AND 330MCC-1 SCHEDULE
341	990-E6.15	ELECTRICAL - 240MCC-1, 250MCC-1, AND STRUCTURE 400 VFD SCHEDULES
342	990-E6.16	ELECTRICAL - 410MCC-1 SCHEDULE
343	990-E6.17	ELECTRICAL - 410MCC-1 AND 430MCC-1 SCHEDULE
344	990-E6.18	ELECTRICAL - 430MCC-1 AND VFD SCHEDULE
345	990-E6.19	ELECTRICAL - 500MCC-1 SCHEDULE
346	990-E6.20	ELECTRICAL - 500MCC-1 SCHEDULE
347	990-E6.21	ELECTRICAL - 110MCC-1, 140MCC-1, 150MCC-1, AND 240MCC-1 ELEVATION
348	990-E6.22	ELECTRICAL - 220MCC-1 DEMOLITION AND PROPOSED ELEVATION
349	990-E6.23	ELECTRICAL - 250MCC-1 AND 310MCC-1 ELEVATION
350	990-E6.24	ELECTRICAL - 410MCC-1 ELEVATION
351	990-E6.25	ELECTRICAL - 430MCC-1 DEMOLITION ELEVATION
352	990-E6.26	ELECTRICAL - 430MCC-1 NEW ELEVATION
353	990-E6.27	ELECTRICAL - 500MCC-1 DEMOLITION AND PROPOSED ELEVATION
354	990-E6.28	ELECTRICAL - 500MCC-1, AND 500DP-1 ELEVATIONS
355	990-E6.29	ELECTRICAL PANEL SCHEDULES - 1
356	990-E6.30	ELECTRICAL PANEL SCHEDULES - 2
357	990-E6.31	ELECTRICAL PANEL SCHEDULES - 3
358	990-E6.32	ELECTRICAL PANEL SCHEDULES - 4
359	990-E6.33	ELECTRICAL - WATER TOWER REPEATERS
360	990-E6.34	ELECTRICAL - SCADA SYSTEM RADIO TELEMETRY - DIAGRAM AND LOCATIONS

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

LIST OF DRAWINGS
VOLUME - 2

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

STRAND ASSOCIATES®

SHEET 168
00-G0.10

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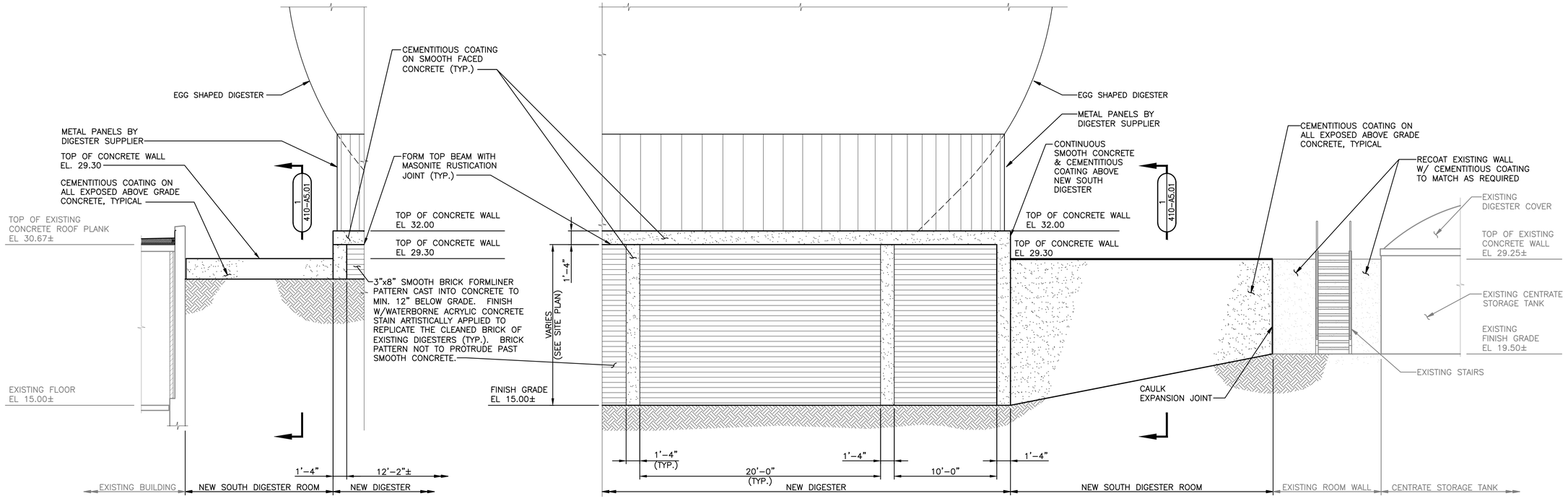

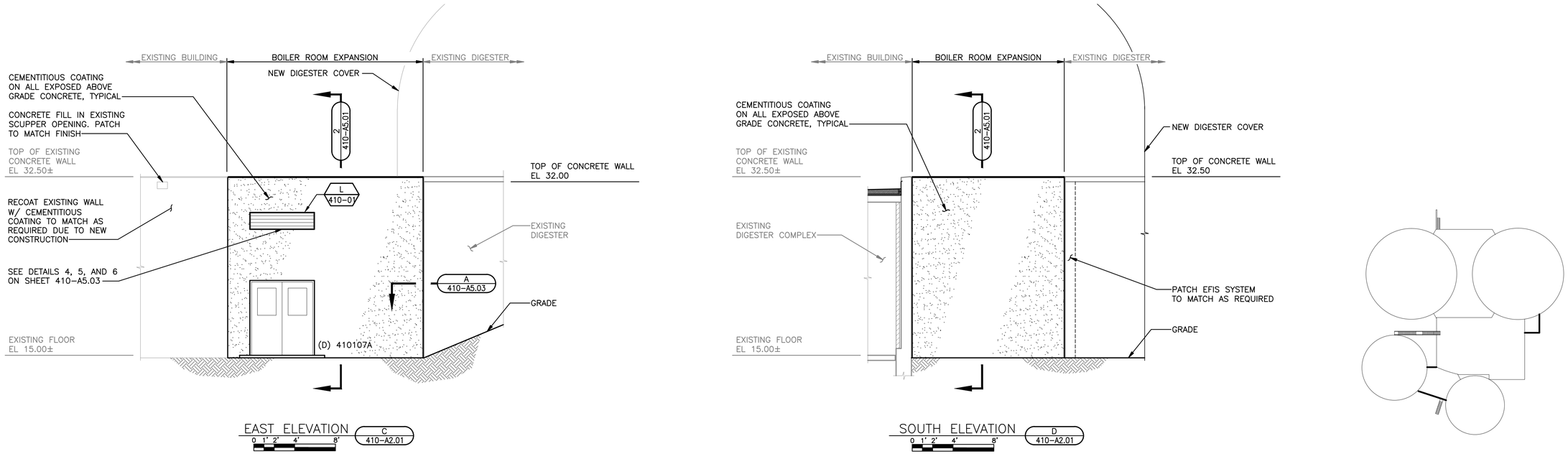

BOILER ROOM EXPANSION

0 1' 2' 4' 8'

KEY PLAN

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

PRIMARY DIGESTER COMPLEX
DIGESTER COMPLEX
ELEVATIONS

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

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SHEET 176
410-A2.01

PLOT DATE:
SAVED DATE:
FILENAME: PW FILE: 410-A2-01.dwg

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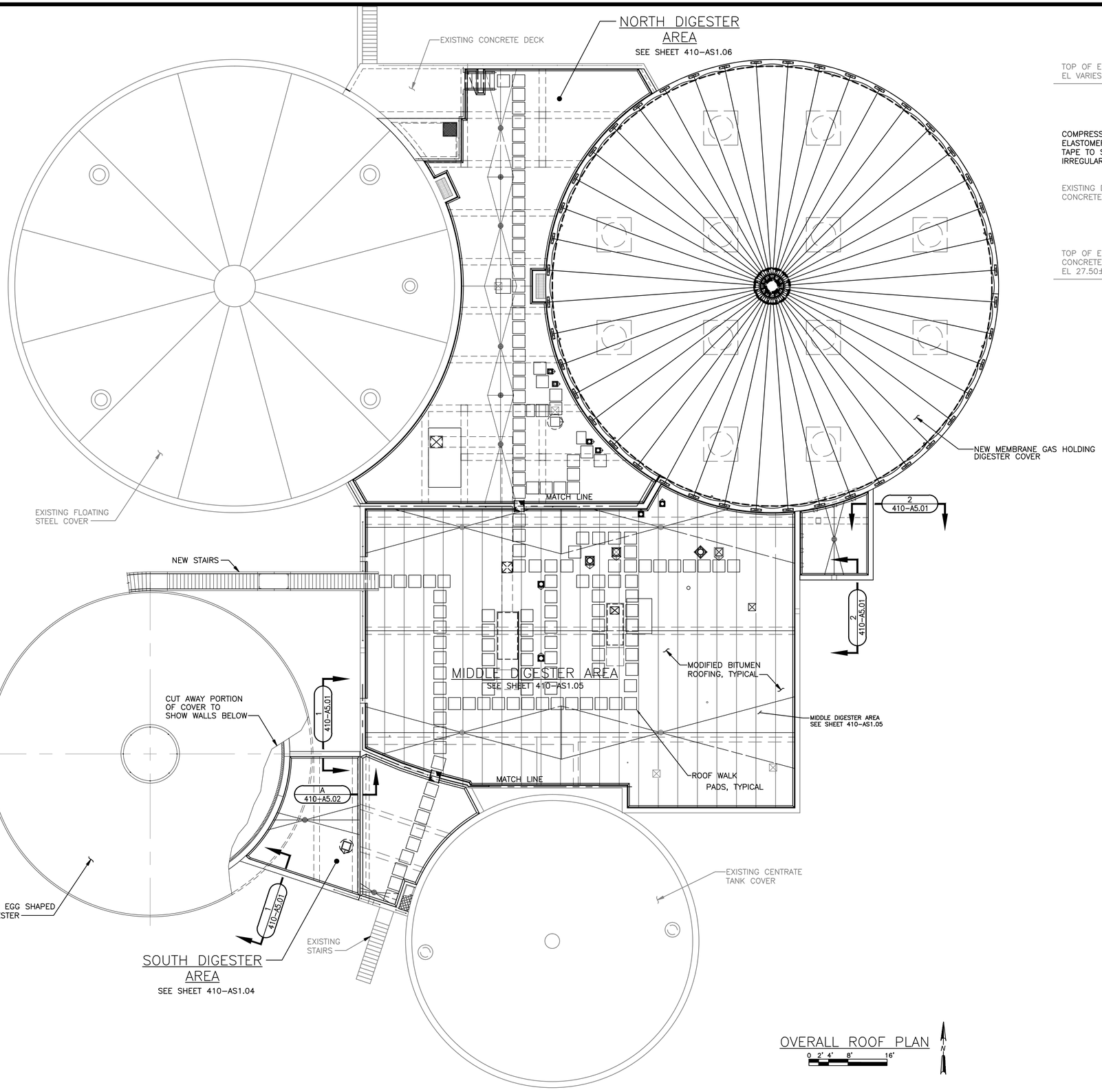
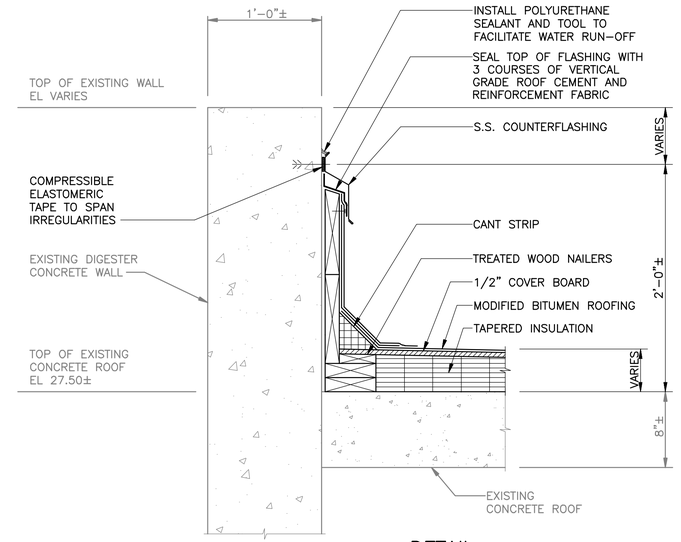


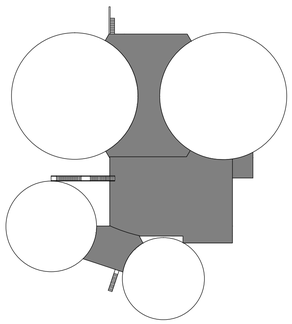
OVERALL ROOF PLAN

0 2' 4' 8' 16'



A 410-A2.02 DETAIL

0 3" 6" 1'



KEY PLAN

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

PRIMARY DIGESTER COMPLEX
DIGESTER COMPLEX
OVERALL ROOF PLAN

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA
WAUKESHA, WISCONSIN

JOB NO. 1226.004

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SHEET 177 410-A2.02

PLOT DATE: 04/03/2013 8:58:12 AM
SAVED DATE: EDM17043
FILENAME: PW FILE: 410-A2.02.dwg

X-1226-ATTR

File: S:\MAD\1200--1299\1226\004\Acad\Drawings (B&V)\410-A2.02.dwg Time: Aug 23, 2013 - 10:51am

ESD FOUNDATION LOADS	
VERTICAL VESSEL LOAD	525 KIPS
VERTICAL PRODUCT LOAD	10890 KIPS
VERTICAL MISC LOAD	60 KIPS
LATERAL WIND LOAD	45 KIPS
LATERAL SEISMIC LOAD	615 KIPS
WIND MOMENT	1330 KIP/FT
SEISMIC MOMENT	16280 KIP/FT

PROVIDE MASS CONC FOR FDN, SEE SPECIFICATION 03700 FOR REQUIREMENTS

PROJECTION OF DIGESTER NO. 1 (ABOVE, 66' DIA)

6'-5" (TYP)

1'-2" (TYP) (6)

R27'-5" (TYP)

20'-11 1/2" (SEE NOTE 3)

(2)-#5 HAIRPIN, TYP AT EA POST

1 410-AS3.03

6'-0"

+27.00

8'-8"

TYP B 410-S5.04

STAIR ABOVE

6" PERFORATED FDN DRAIN, SEE CIVIL PLANS FOR CONTINUATION

C 410-S5.02 8"Hx8"W CURB

SLOPE

CSJ W/WS

4'-0"

SOUTH DIGESTER ROOM 101A

3 410-AS3.01

CSJ W/WS

4'-0"

2'-0"

1'-6"

4'-6"

TOP-MOUNTED ALUM GUARDRAIL

410101A

+19.00

SEE DOOR SCHEDULE

12"

6'-0"

4'-0"

1'-10 1/2"

1 410-AS3.01

G 410-S5.05 TYP. EACH SIDE

4'-6"

2 410-AS3.01

CONC LP EL +15.13

SLOPE

SLOPE

2'-0"

DIGESTER NO. 1 (ABOVE)

F 410-S5.05 TYP. EACH SIDE

7

REINF IN GRID PATTERN

CONC HP EL +15.40 (TYP @ WALLS)

4" CONCRETE BLOCK AND 2" RIGID INSULATION FROM FLOOR TO TOP OF CONCRETE WALL, TYPICAL

+15.40

EXCAVATION SUPPORT SYSTEM BY CONTRACTOR

10.50±

6'-5"

8'-0"

2'-0"±

EXIST FOOTING STEP

A 410-A2.01

11.50±

1 410-A5.01

1 410-AS3.02

12"

3'-5 1/2"

5

C 410-S5.06

W3

+15.00±

EXIST FTG STEP

MIDDLE DIGESTER ROOM

D

B

410101B

1'-6"

12"

F/WALLS TO BE PARALLEL

F/BLOCK ABOVE

CSJ W/WS

8'-4 1/2"

14'-3"

+15.40 (1)

1 410-S5.05

SOUTH DIGESTER ROOM 101

+15.33±

SJ

2'-6"

2'-6"

4" CONCRETE BLOCK AND 2" RIGID INSULATION FROM FLOOR TO CEILING

4

HSS 6x6x1/4 COL

1'-6"

1'-6"

GROUT FILL (2)

1 410-AS3.01

A

CENTRATE STORAGE TANK

EXPANSION JOINT IN 4" CONCRETE BLOCK

2"

12"

1 410-A5.01

B 410-A2.01

1 410-AS3.02

25'-4" ±

D 410-A5.03

B 410-S5.06

GENERAL NOTES:

1. FOUNDATION WALLS AND MAT FOUNDATION HAVE BEEN DESIGNED FOR THE SERVICE LOADS NOTED IN THE ESD FOUNDATION LOAD TABLE. ENGINEER SHALL BE NOTIFIED PRIOR TO CONCRETE CONSTRUCTION IF LOADS ARE GREATER THAN THOSE LISTED IN THE TABLE.

KEY NOTES

(1) FLOOR ELEVATION AT CONSTRUCTION ALLOWS FOR AN ESTIMATED 1 INCH± OF TOTAL SETTLEMENT.

(2) PROVIDE 8-INCH WIDE BY 2-INCH DEEP CONCRETE NOTCH FOR GROUT FILL TO PROVIDE SMOOTH TRANSITION BETWEEN ADJACENT FLOORS. CONCRETE NOTCH TO BE FILLED AFTER ALL LOADS INCLUDING FLUID ARE IMPARTED ON DIGESTER STRUCTURE AND INITIAL SETTLEMENT HAS OCCURRED.

(3) CONTRACTOR TO COORDINATE LOCATION AND DIMENSIONS OF STAIR FOOTING WITH FINAL POST LOCATIONS FROM STAIR FABRICATOR/DESIGNER.

(4) CORNER BAR TYPICAL AT ALL RE-ENTRANT CORNERS. SEE DETAIL ON 410-S5.02.

(5) HIGH POINT 6" FOUNDATION DRAIN, INVERT EL 19.70.

(6) MINIMUM WALL THICKNESS EXCLUDING THICKNESS OF FORM LINER, SHALL BE AS DIMENSIONED. OUTSIDE DIAMETER OF WALL SHALL INCREASE TO ACCOUNT FOR THICKNESS OF FORM LINER.

(7) ADDITIONAL WALL COLUMN AND BEAM REINFORCING REQUIRED AT HVAC DUCT PENETRATION. SEE HVAC PLAN FOR LOCATION AND DETAILS.

SOUTH DIGESTER ROOM FLOOR PLAN

0 1' 2' 4' 8'

KEY PLAN NO SCALE

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

PRIMARY DIGESTER COMPLEX
SOUTH DIGESTER ROOM
FLOOR PLAN
WASTEWATER TREATMENT PLANT
WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

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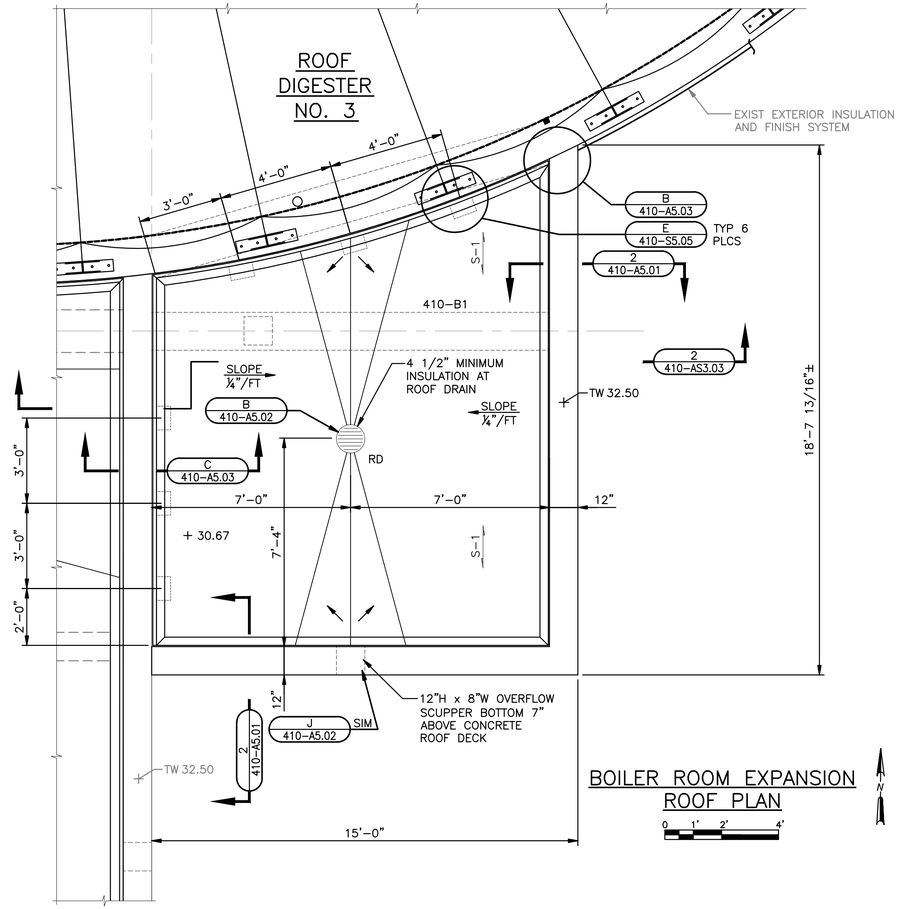
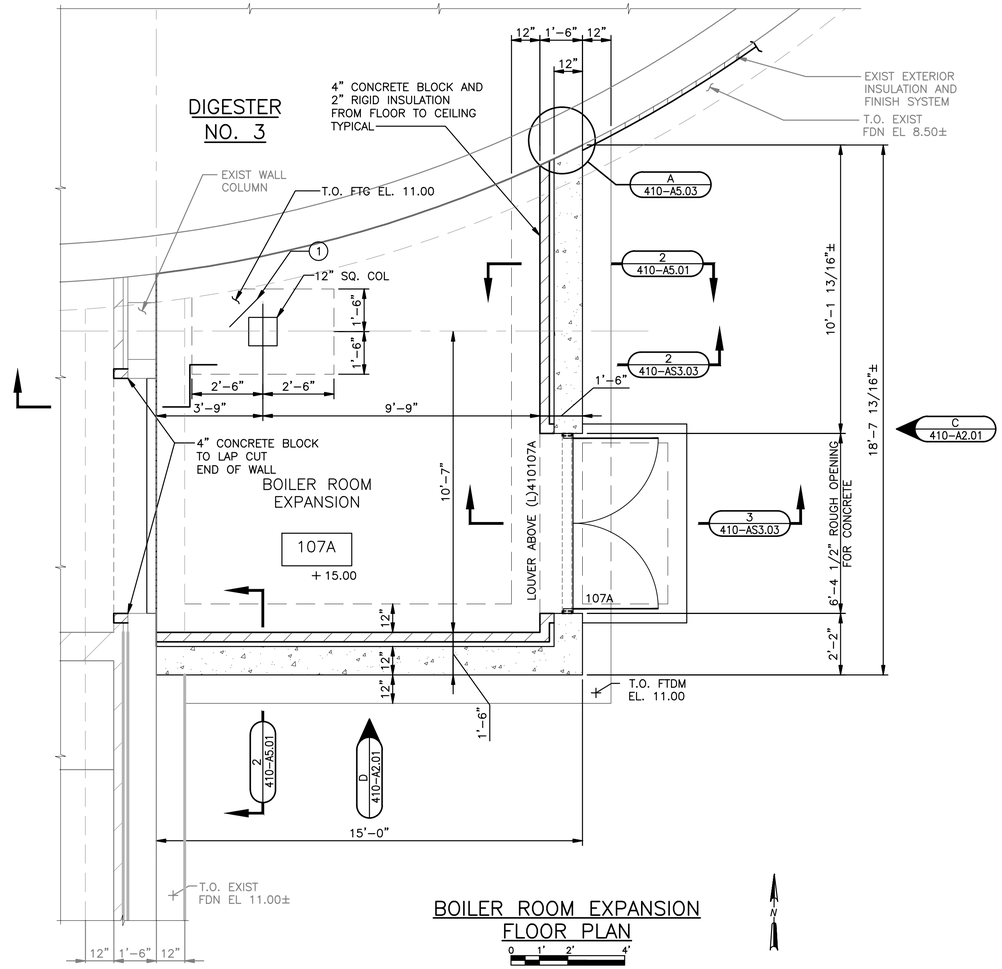
SHEET 182 410-AS1.01

FD177198



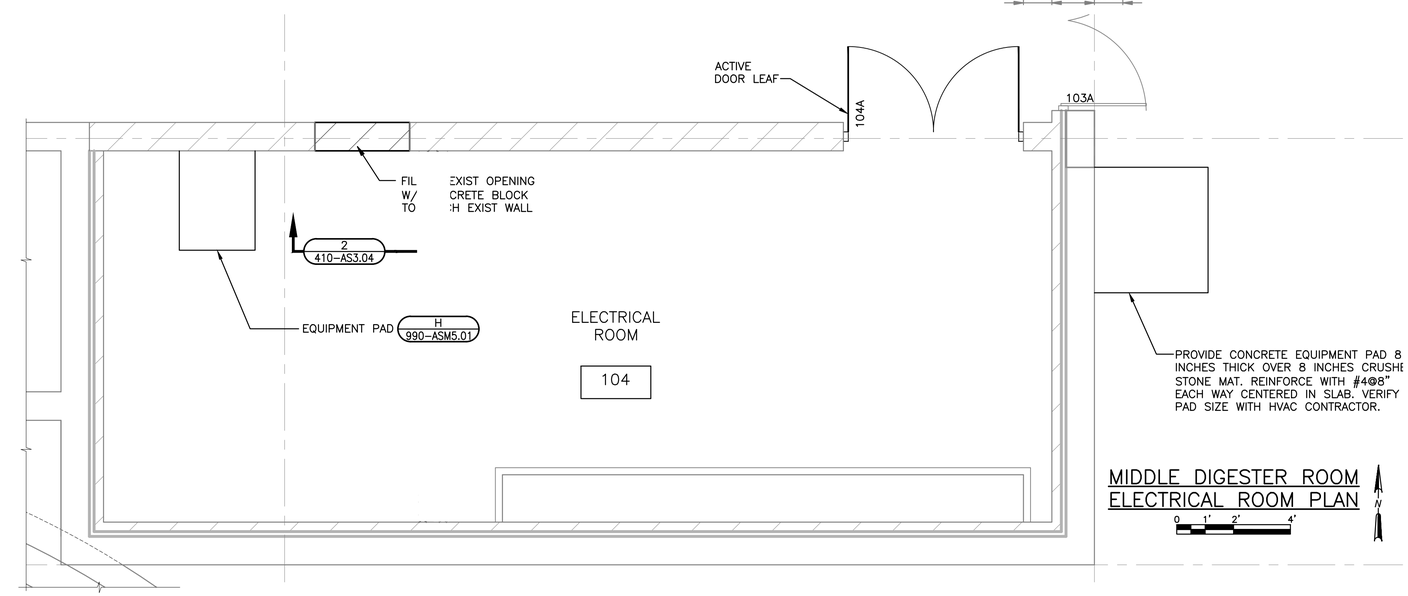
BOILER ROOM EXPANSION ROOF PLAN

0 1' 2' 4'



BOILER ROOM EXPANSION FLOOR PLAN

0 1' 2' 4'

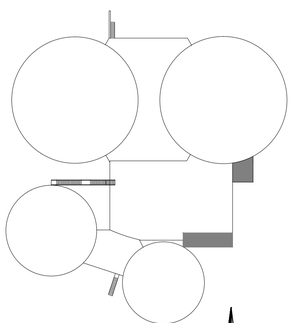


MIDDLE DIGESTER ROOM ELECTRICAL ROOM PLAN

0 1' 2' 4'

KEY NOTES:

(1) CORNER BAR TYPICAL AT ALL RE–ENTRANT CORNERS. SEE DETAIL ON 410–S5.03.



KEY PLAN

NO SCALE

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

PRIMARY DIGESTER COMPLEX
MIDDLE DIGESTER ROOM - BOILER ROOM ADDITION
FLOOR AND ROOF PLANS
WASTEWATER TREATMENT PLANT
WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA
WAUKESHA, WISCONSIN

JOB NO.
1226.004

PROJECT MGR.
SCOTT W. STEARNS

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SHEET
183
410-AS1.02

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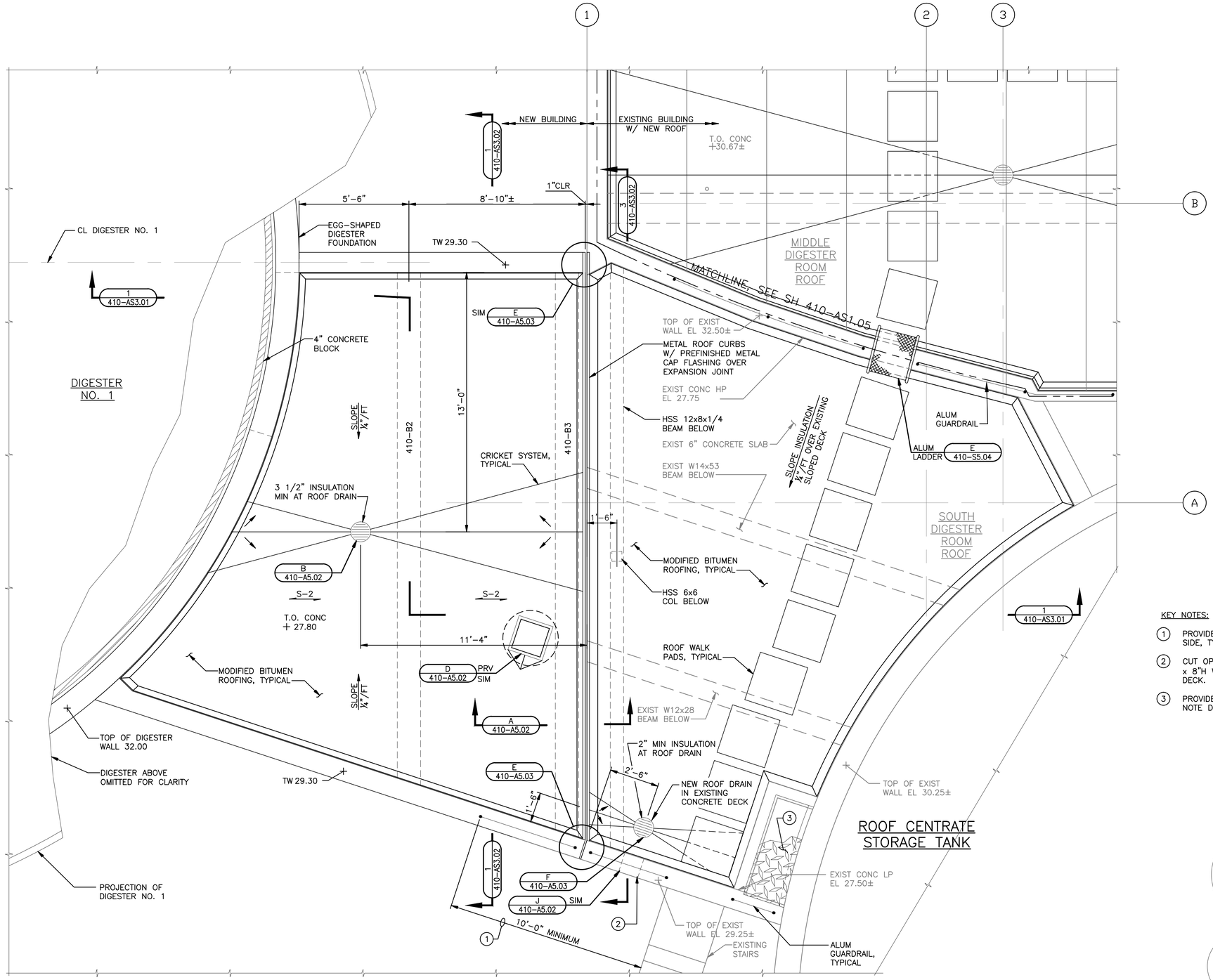


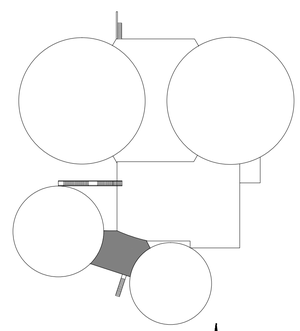
SOUTH DIGESTER ROOM ROOF PLAN

0 1' 2' 4'

N

KEY NOTES:

1. PROVIDE 10'-0" OF ALUMINUM GUARDRAIL EACH SIDE, TYPICAL AT ALL ROOF ACCESS LOCATIONS.
2. CUT OPENING FOR NEW OVERFLOW SCUPPER 12"W x 8"H WITH BOTTOM 5" ABOVE CONCRETE ROOF DECK.
3. PROVIDE 3/8" CHECKERED COVER PLATE PER KEY NOTE D ON SHEET 410-D1.04.



KEY PLAN
NO SCALE

N

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

PRIMARY DIGESTER COMPLEX
SOUTH DIGESTER ROOM
ROOF PLAN
WASTEWATER TREATMENT PLANT
WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA
WAUKESHA, WISCONSIN

JOB NO. 1226.004
PROJECT MGR. SCOTT W. STEARNS

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SHEET 185
410-AS1.04

FD177198

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DIGESTER NO. 2

EXISTING PRIMARY DIGESTER NO.2

T.O. CONC EL 27.50±

E 410-S5.04 ALUM LADDER

MATCHLINE, SEE SH 410-AS1.06

TW EL 32.50±

EXISTING PRIMARY DIGESTER NO.1

DIGESTER NO. 3

ALUM GUARDRAIL

E 410-A5.02 NEW 8" DIA PENETRATION (TYP 2 PLCS)

RD

J 410-A5.02

10'-0" MIN (TYP)

6'-0"

12"

CUT OPENING FOR NEW OVERFLOW SCUPPER 12"W x 8"H WITH BOTTOM 7" ABOVE PRECAST ROOF DECK

GAS PIPING SEE MECHANICAL PROCESS DRAWINGS

DUCT ABOVE SEE HVAC DRAWING FOR SUPPORTS

D 410-A5.02

NEW 14" DIA PENETRATION

3 410-AS3.04

NEW 12" DIA PENETRATION

G 410-A5.02 NEW BOILER EXHAUST

SEE HVAC DRAWINGS FOR MAU

1 AS REQUIRED FOR SMALL DIA. PIPE PENETRATIONS

FOR ENLARGED PLAN SEE SHEET 410-AS1.02

NEW STAIR, SEE SECTION 1/410-AS3.03

T.O. CONC EL 30.67±

SEE HVAC DRAWINGS FOR MAU

MIDDLE DIGESTER ROOF

SLOPE ¼"/FT

ALUM GUARDRAIL (TYP)

HIGH POINT OF ROOF

CONCRETE FILL IN EXISTING SCUPPER OPENING PATCH TO MATCH EXISTING

D 410-A5.02 SIM

CONCRETE FILL IN EXISTING SCUPPER OPENING PATCH TO MATCH EXISTING

D 410-A5.02 SIM

SLOPE ¼"/FT

MODIFIED BITUMEN ROOFING, TYPICAL

E 410-A5.02 NEW 10" DIA PENETRATION AT DG PIPES (TYP 2 PLCS)

PRECAST HOLLOW CORE PLANKS (TYP)

+ TOP OF CONC 30.67±

J 410-A5.02

1'-0"

6'-0"

CUT OPENING FOR NEW OVERFLOW SCUPPER 12"W x 8"H WITH BOTTOM 7" ABOVE PRECAST ROOF DECK

TYPICAL EXISTING VTR

F 410-A5.02

CRICKET SYSTEM, TYPICAL

3 1/2" INSULATION MIN AT DRAIN, TYPICAL

RE-USE EXISTING ROOF DRAIN, TYPICAL

RD

VTR

C 410-A5.02 TYPICAL

B 410-A5.01 TYPICAL

3 410-AS3.04

ALUM GUARDRAIL

T.O. CONC EL 27.50±

SOUTH DIGESTER ROOF

E 410-S5.04 ALUM LADDER

MATCHLINE, SEE SH 410-AS1.04

TW EL 32.50±

SLOPE ¼"/FT

KEY PLAN NO SCALE

KEY NOTES:

1 INFILL EXISTING OPENING. SEE SECTION 3 410-AS3.04

EXISTING PRIMARY DIGESTER NO.3

CENTRATE STORAGE TANK

MIDDLE DIGESTER ROOF PLAN

0 1' 2' 4' 8'

N

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NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

PRIMARY DIGESTER COMPLEX
MIDDLE DIGESTER ROOM
ROOF PLAN
WASTEWATER TREATMENT PLANT
WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA
WAUKESHA, WISCONSIN

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SHEET 186 410-AS1.05

GENERAL NOTES:

1. ALL LOCATIONS AND ELEVATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL EXISTING EQUIPMENT, STRUCTURES, AND PIPING.
   CONTRACTOR SHALL MODIFY EXISTING PIPING AS NECESSARY TO ACCOMMODATE THE INSTALLATION OF NEW VALVES AND EQUIPMENT.
2. SEE SHEETS 00–G6.05 AND 00–G6.06 FOR DIGESTER GAS PIPING SCHEMATICS. UNLESS OTHERWISE SHOWN, ALL DIGESTER GAS PIPING SHALL BE SLOPED MINIMUM 1/4" PER FT. PROVIDE BEVELED FLANGE FILLERS OR PROVIDE SLOPE ON PIPE AS REQUIRED.
3. NOT ALL PIPE SUPPORTS SHOWN ON THESE DRAWINGS. SEE SPECIFICATIONS FOR SPACING REQUIREMENTS. SUPPORT OF PIPES OFF DIGESTER NO. 1 STEEL VESSEL SHALL NOT BE ALLOWED.
4. ALL EQUIPMENT AND ACCESSORIES IN THIS AREA SHALL BE SUITABLE FOR CLASS I, DIVISION 2 ENVIRONMENTS.
5. CHECK VALVES SHOWN ARE BALL CHECK VALVES UNLESS OTHERWISE STATED.
6. DRAIN CONNECTIONS NOT SHOWN. SEE SCHEMATICS FOR LOCATIONS AND DETAIL D ON SHEET 990–ASM5.03.
7. RUNOUTS OF HHWS/HHWR PIPING TO UNIT HEATERS SHALL BE 3/4" UNLESS OTHERWISE NOTED.
8. EXISTING VALVES SHOWN ON PLANS SHALL BE REPAIRED AS INDICATED IN SECTION 15050 OR REPLACED.
9. PROVIDE TAPS AS NECESSARY FOR INSTALLATION OF INSTRUMENTATION AND ACCESSORIES. COORDINATE SIZE AND LOCATION WITH DIVISION 16.

* CONTRACTOR SHALL VERIFY DIMENSIONS, ELEVATIONS, AND PIPE SIZES WITH EQUIPMENT MANUFACTURER.

KEY NOTES:

(A) INSTALL PUMPS AND HEAT EXCHANGER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

(B) INSTALL NEW RECIRCULATION PUMPS, DRAIN/TRANSFER PUMP, HEAT EXCHANGER, CENTRATE RETURN PUMPS, PIPING, AND APPURTENANCES AS SHOWN. *

(C) 6" x 3" REDUCER

(D) CONCRETE EQUIPMENT PAD (TYP. OF 7), SEE DETAIL H ON SHEET 990–ASM5.01.

(E) FLOOR MOUNTED PIPE SUPPORT, SEE DETAIL A ON SHEET 990–ASM5.03. SEE SPECIFICATIONS FOR MAXIMUM SPACING BETWEEN PIPE SUPPORTS.

(F) EXPANSION JOINT, TYPICAL OF 9, SEE SECTION 15050.

(G) BLIND FLANGE

(H) LOCATED ABOVE

(I) ALL PIPING SHOWN WITHIN THIS ROOM TO BE SUPPORTED ENTIRELY OFF THE FLOOR. NO LOADS TO BE TRANSFERRED TO DIGESTER NO.1 NOZZLES.

(J) SLOPE PIPE AT MINIMUM OF 1/8"–INCH PER FOOT TO THE CENTRATE STORAGE TANK.

(K) LIMIT OF SUPPLY FOR MANUFACTURER SUPPLIED EQUIP.

(L) INSULATION OF HEAT EXCHANGER TUBES BY CONTRACTOR, SEE SECTION 15250.

(M) NOZZLE IS HORIZONTAL, CONNECTION ELEVATION REPRESENTS CENTERLINE ELEVATION.

(N) THE FOLLOWING TABLE INDICATES TANK NOZZLE DESCRIPTIONS, SIZES, AND PRELIMINARY ORIENTATIONS AND CONNECTION FLANGE ELEVATIONS. ORIENTATIONS ARE BASED ON DEGREES (CLOCKWISE) FROM THE AZIMUTH (MARKED AS 0') AND RADIUS PROJECTED FROM CENTER OF TANK BOTTOM. CONTRACTOR SHALL VERIFY AND COORDINATE FINAL CONNECTION LOCATIONS AND ELEVATIONS WITH EQUIPMENT MANUFACTURER.

	NOZZLE DIAMETER	NOZZLE DESCRIPTION	RADIUS	AZIMUTH	CONNECTION ELEVATION
N.1	6"	DIGESTER NO.1 FEED	20' – 7"	180°	34.92
N.2	8"	DIGESTER NO.1 RECIRCULATION (TO UPPER JET)	14' – 0"	240°	28.28
N.3	8"	DIGESTER NO.1 RECIRCULATION (TO LOWER JET)	0"	N/A	19.97
N.4	6"	DIGESTER NO.1 DRAIN	7' – 5"	270°	22.17
N.5	10"	DIGESTER NO.1 DISCHARGE	20' – 1"	120°	34.37
N.6	8"	DIGESTER NO.1 RECIRCULATION (PUMP SUCTION)	23' – 9"	315°	38.09
N.7	8"	DIGESTER NO.1 RECIRCULATION (TO FOAM SUPRESSION)	14' – 0"	0°	28.28
N.13	3"	DIGESTER NO.1 LEVEL TRANSMITTER (LIT 11–4–1)	7' – 0"	225°	21.91
N.14	10"	DIGESTER NO.1 GAS TAKEOFF	32' – 11"	0°	50.28
N.15	10"	DIGESTER NO.1 OVERFLOW	20' – 1"	150°	34.37
N.19	30"	DIGESTER NO.1 MANWAY	12' – 0"	315°	27.13

(O) 8"x6" RED, GROOVED JOINTS WHERE SHOWN.

(P) HEAT EXCHANGER FURNISHED UNASSEMBLED BY MFR, TO BE INSTALLED BY CONTRACTOR. PIPING TO BE SUPPORTED OFF OF HEAT EXCHANGER FRAME ON ONE OF FOUR RACKS:

	PASS	RACK	CENTERLINE*	PIPE
P.1	N/A	BOTTOM RACK	18.23	8" RSD BYPASS
P.2	FIRST	SECOND RACK	20.23	6" RSD
P.3	SECOND	THIRD RACK	22.23	6" RSD
P.4	THIRD	UPPER RACK	24.23	6" RSD

(Q) CONCRETE WALL SLEEVE, SEE DETAIL C ON 990–ASM5.02.

(R) SEE DETAIL G ON SHEET 990–ASM5.03.

(S) PRESENCE – ABSENCE DETECTOR

(T) TAP, SEE DETAIL D ON SHEET 990–ASM5.03.

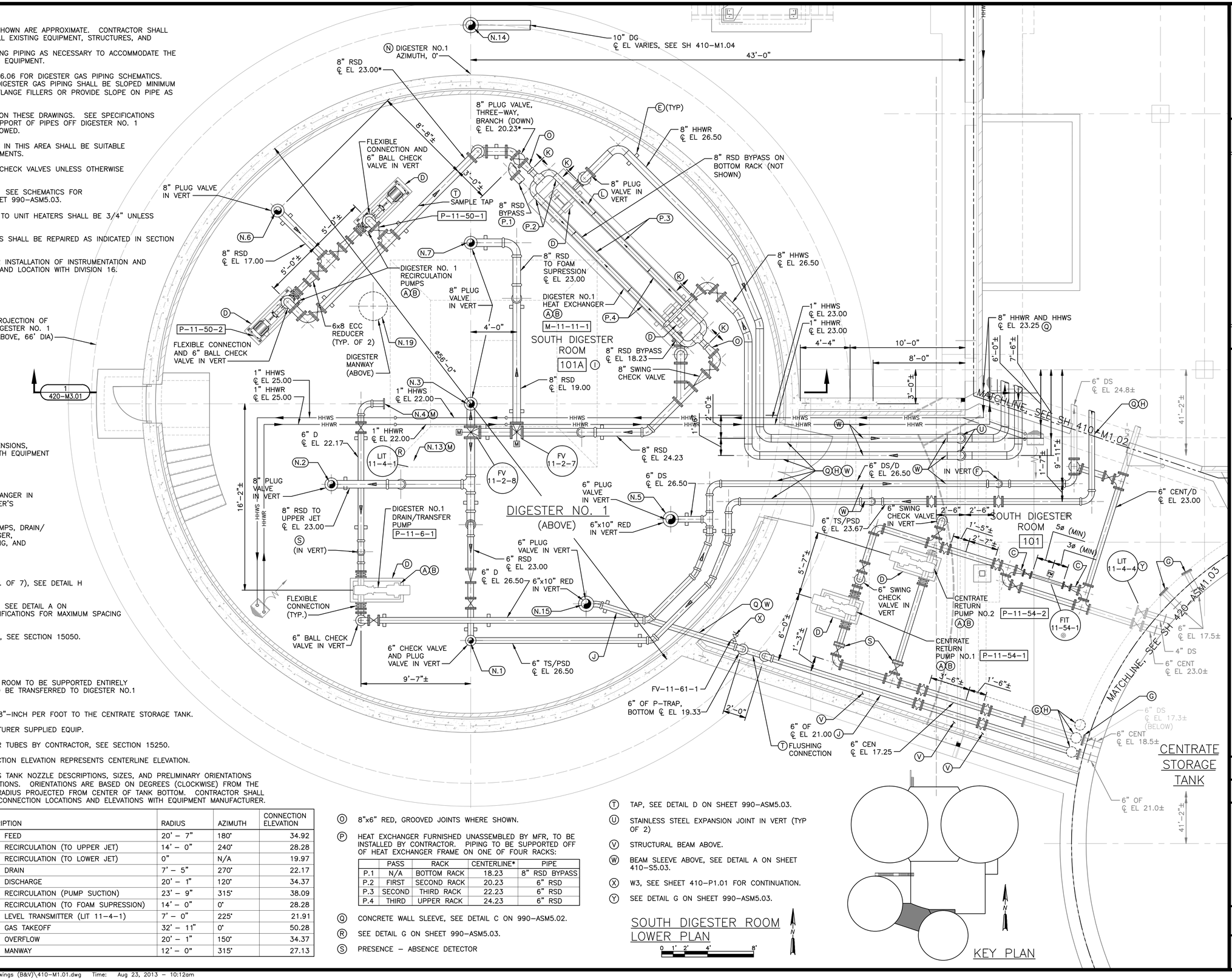
(U) STAINLESS STEEL EXPANSION JOINT IN VERT (TYP OF 2)

(V) STRUCTURAL BEAM ABOVE.

(W) BEAM SLEEVE ABOVE, SEE DETAIL A ON SHEET 410–S5.03.

(X) W3, SEE SHEET 410–P1.01 FOR CONTINUATION.

(Y) SEE DETAIL G ON SHEET 990–ASM5.03.



NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

PRIMARY DIGESTER COMPLEX
SOUTH DIGESTER ROOM
LOWER PLAN
WASTEWATER TREATMENT PLANT
WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA
WAUKESHA, WISCONSIN

JOB NO. 1226.004
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SHEET 199 410-M1.01

FD177198

SLOPE 1/4" PER FOOT

10" DG Ⓒ ℄ EL 48.42±

Ⓑ

SLOPE 1/4" PER FOOT

10" DG ⒸⒹ ℄ EL 44.83±

10" PLUG VALVE

Ⓑ

Ⓔ

Ⓑ

10" DG ℄ EL 34.17±

B

A

MATCHLINE, SEE SH 420-ASM1.01

MATCHLINE, SEE SH 420-ASM1.01

MATCHLINE, SEE SH 410-M1.05

SOUTH DIGESTER ROOM

CENTRATE STORAGE

3

KEY PLAN

N

SOUTH DIGESTER ROOM ROOF PLAN

0 1' 2' 4' 8'

N

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING 410-M1.01

KEY NOTES:

Ⓐ INSTALL PIPING, AND APPURTENANCES AS SHOWN.

Ⓑ PROVIDE FITTINGS AS REQUIRED TO MATCH SLOPE OF STAIRS.

Ⓒ SUPPORT PIPE FROM STAIRS.

Ⓓ INSULATE AND HEAT TRACE.

Ⓔ STAINLESS STEEL EXPANSION JOINT (TYP. OF 2)

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

PRIMARY DIGESTER COMPLEX
SOUTH DIGESTER ROOM
ROOF PLAN
WASTEWATER TREATMENT PLANT
WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA
WAUKESHA, WISCONSIN

JOB NO. 1226.004

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SHEET 202 410-M1.04

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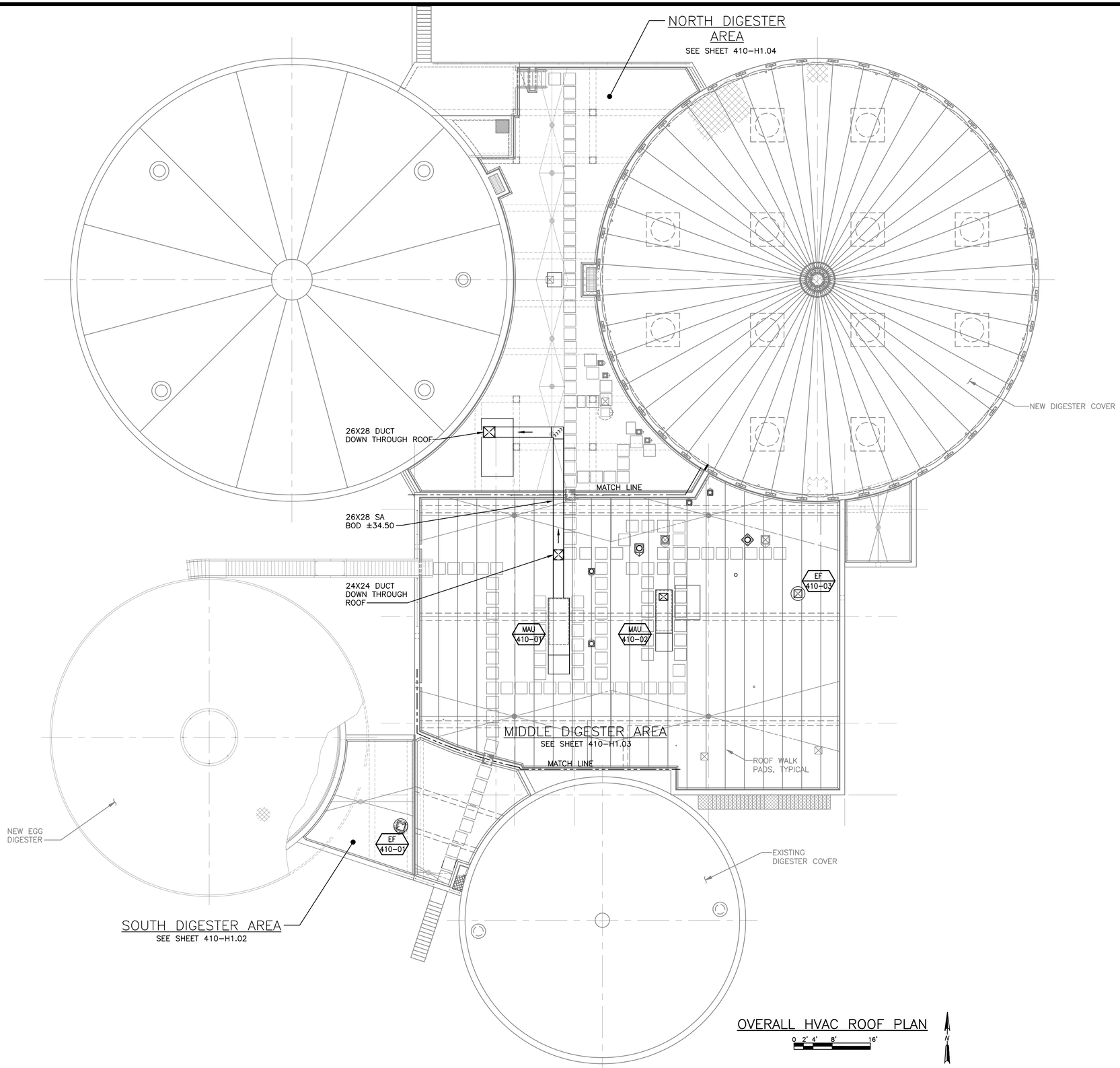
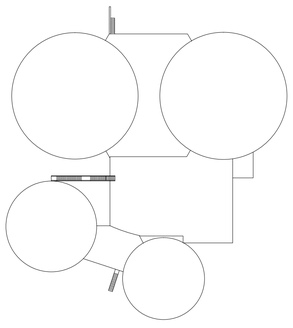


OVERALL HVAC ROOF PLAN

0 2' 4' 8' 16'

N



KEY PLAN

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

PRIMARY DIGESTER COMPLEX
DIGESTER COMPLEX
OVERALL HVAC ROOF PLAN

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

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SHEET 212 410-H1.01

PLOT DATE:
SAVED DATE:
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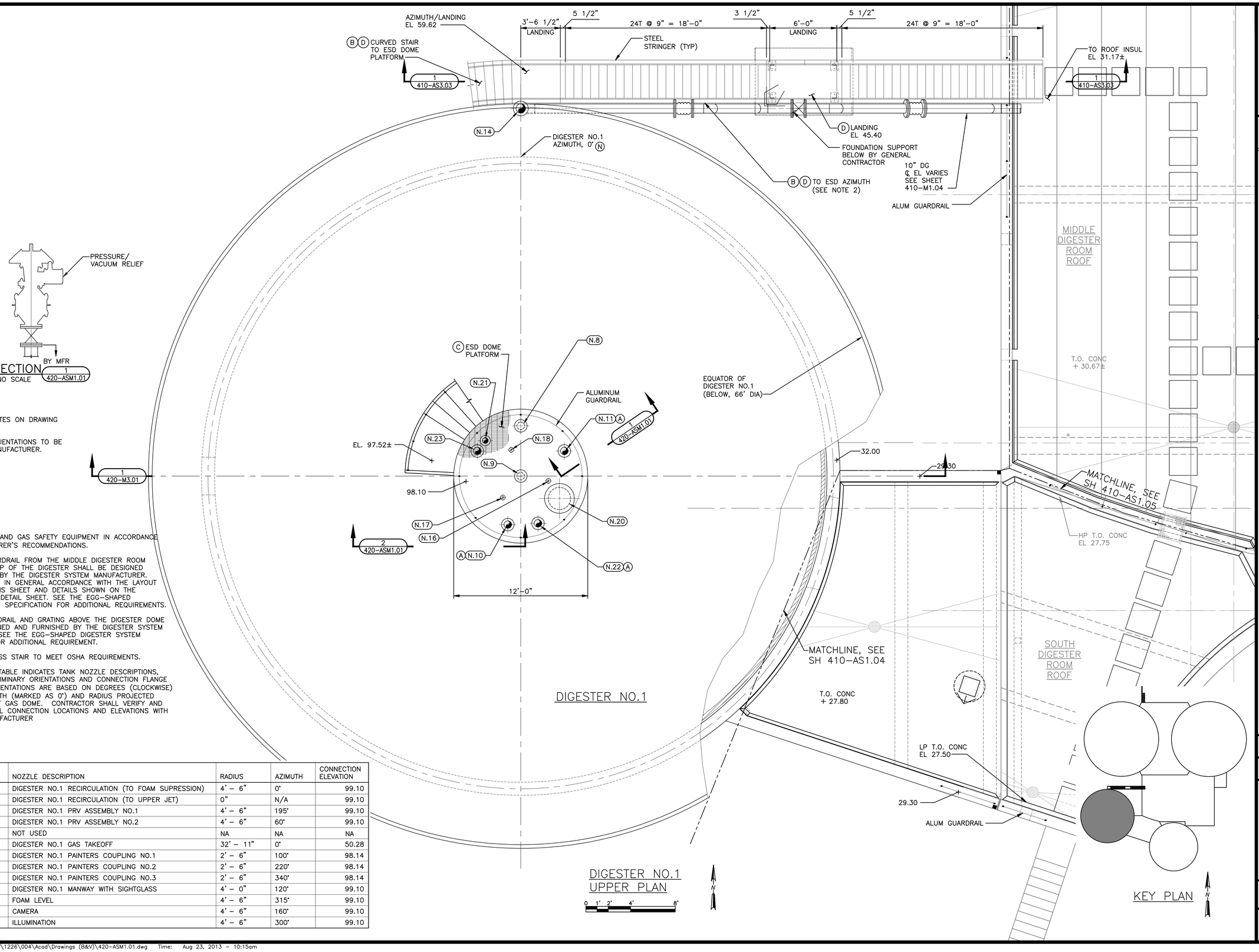

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING 420-M1.01
2. FINAL NOZZLE ORIENTATIONS TO BE PROVIDED BY MANUFACTURER.

KEY NOTES:

(A) INSTALL CAMERA AND GAS SAFETY EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

(B) STAIRS AND GUARDRAIL FROM THE MIDDLE DIGESTER ROOM ROOF TO THE TOP OF THE DIGESTER SHALL BE DESIGNED AND FURNISHED BY THE DIGESTER SYSTEM MANUFACTURER. STAIRS SHALL BE IN GENERAL ACCORDANCE WITH THE LAYOUT INDICATED ON THIS SHEET AND DETAILS SHOWN ON THE STANDARD STAIR DETAIL SHEET. SEE THE EGG-SHAPED DIGESTER SYSTEM SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

(C) PLATFORM, GUARDRAIL AND GRATING ABOVE THE DIGESTER DOME SHALL BE DESIGNED AND FURNISHED BY THE DIGESTER SYSTEM MANUFACTURER. SEE THE EGG-SHAPED DIGESTER SYSTEM SPECIFICATION FOR ADDITIONAL REQUIREMENT.

(D) EQUIPMENT ACCESS STAIR TO MEET OSHA REQUIREMENTS.

(N) THE FOLLOWING TABLE INDICATES TANK NOZZLE DESCRIPTIONS, SIZES, AND PRELIMINARY ORIENTATIONS AND CONNECTION FLANGE ELEVATIONS. ORIENTATIONS ARE BASED ON DEGREES (CLOCKWISE) FROM THE AZIMUTH (MARKED AS 0') AND RADIUS PROJECTED FROM CENTER OF GAS DOME. CONTRACTOR SHALL VERIFY AND COORDINATE FINAL CONNECTION LOCATIONS AND ELEVATIONS WITH EQUIPMENT MANUFACTURER

	NOZZLE DIAMETER	NOZZLE DESCRIPTION	RADIUS	AZIMUTH	CONNECTION ELEVATION
N.8	8"	DIGESTER NO.1 RECIRCULATION (TO FOAM SUPRESSION)	4' – 6"	0°	99.10
N.9	8"	DIGESTER NO.1 RECIRCULATION (TO UPPER JET)	0"	N/A	99.10
N.10	8"	DIGESTER NO.1 PRV ASSEMBLY NO.1	4' – 6"	195°	99.10
N.11	8"	DIGESTER NO.1 PRV ASSEMBLY NO.2	4' – 6"	60°	99.10
N.12	NA	NOT USED	NA	NA	NA
N.14	10"	DIGESTER NO.1 GAS TAKEOFF	32' – 11"	0°	50.28
N.16	2" NPT	DIGESTER NO.1 PAINTERS COUPLING NO.1	2' – 6"	100°	98.14
N.17	2" NPT	DIGESTER NO.1 PAINTERS COUPLING NO.2	2' – 6"	220°	98.14
N.18	2" NPT	DIGESTER NO.1 PAINTERS COUPLING NO.3	2' – 6"	340°	98.14
N.20	24"	DIGESTER NO.1 MANWAY WITH SIGHTGLASS	4' – 0"	120°	99.10
N.21	6"	FOAM LEVEL	4' – 6"	315°	99.10
N.22	8"	CAMERA	4' – 6"	160°	99.10
N.23	8"	ILLUMINATION	4' – 6"	300°	99.10

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

DIGESTERS AND CENTRATE STORAGE
DIGESTER NO. 1
UPPER ROOF PLAN
WASTEWATER TREATMENT PLANT
WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA
WAUKESHA, WISCONSIN

JOB NO.
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SHEET
223
420-ASM1.01

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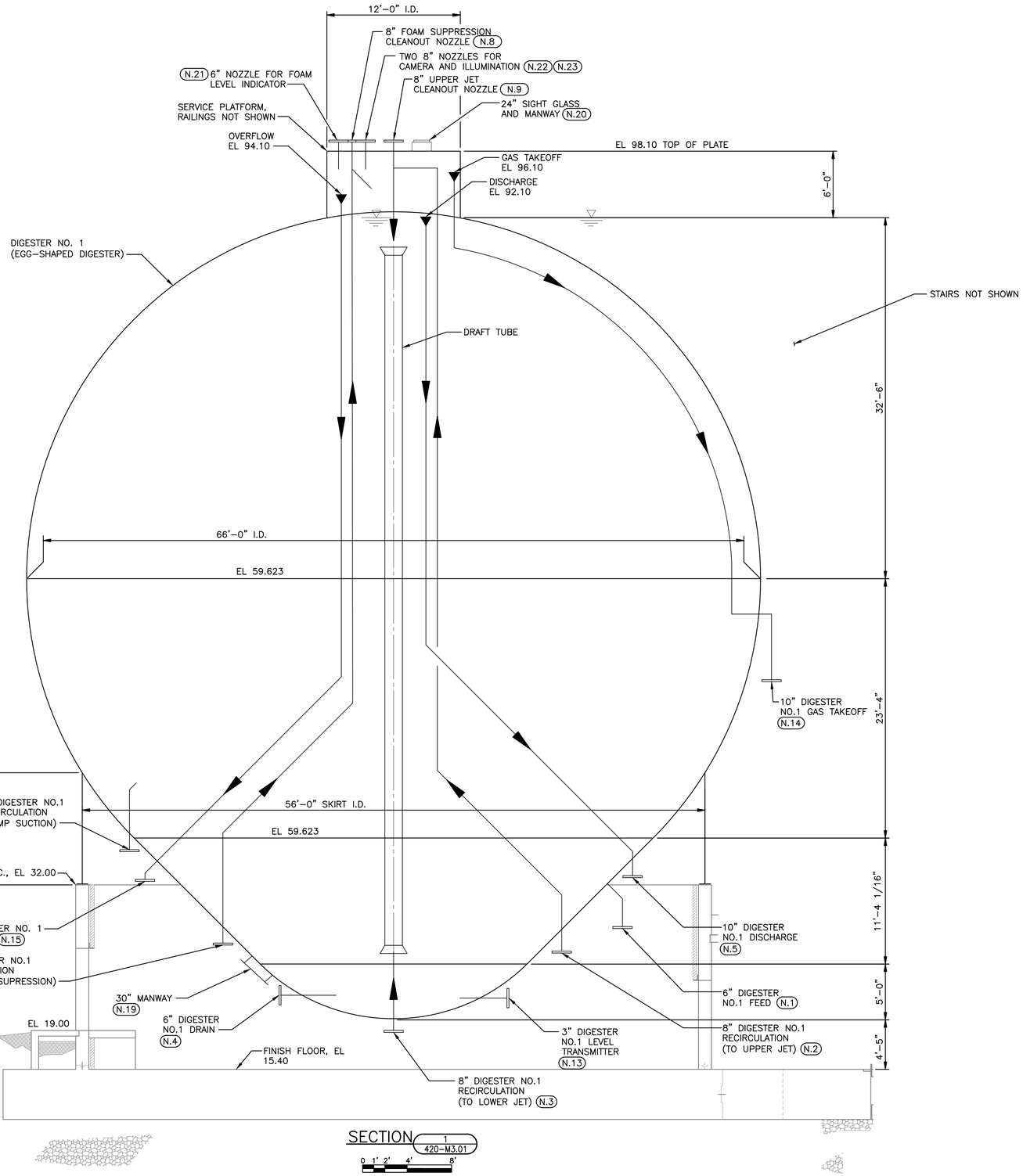

SECTION 1 / 420–M3.01

0 1' 2' 4' 8'

GENERAL NOTES:

1. PIPING IS ROTATED INTO VIEW, SEE PLAN VIEW DRAWING 410–M1.01 AND 420–ASM1.01 FOR LOCATION.

(N) THE FOLLOWING TABLE INDICATES TANK NOZZLE DESCRIPTIONS, SIZES, AND PRELIMINARY ORIENTATIONS AND CONNECTION FLANGE ELEVATIONS. ORIENTATIONS ARE BASED ON DEGREES (CLOCKWISE) FROM THE AZIMUTH (MARKED AS 0° ON SHEET 410–M1.01) AND RADIUS PROJECTED FROM CENTER OF GAS DOME. CONTRACTOR SHALL VERIFY AND COORDINATE FINAL CONNECTION LOCATIONS AND ELEVATIONS WITH EQUIPMENT MANUFACTURER.

	NOZZLE DIAMETER	NOZZLE DESCRIPTION	RADIUS	AZIMUTH	CONNECTION ELEVATION
N.1	6"	DIGESTER NO.1 FEED	20' – 7"	180°	34.92
N.2	8"	DIGESTER NO.1 RECIRCULATION (TO UPPER JET)	14' – 0"	240°	28.28
N.3	8"	DIGESTER NO.1 RECIRCULATION (TO LOWER JET)	0"	N/A	19.97
N.4	6"	DIGESTER NO.1 DRAIN	7' – 5"	270°	22.17
N.5	10"	DIGESTER NO.1 DISCHARGE	20' – 1"	120°	34.37
N.6	8"	DIGESTER NO.1 RECIRCULATION (PUMP SUCTION)	23' – 9"	315°	38.09
N.7	8"	DIGESTER NO.1 RECIRCULATION (TO FOAM SUPRESSION)	14' – 0"	0°	28.28
N.8	8"	DIGESTER NO.1 RECIRCULATION (TO FOAM SUPRESSION)	4' – 6"	0°	99.10
N.9	8"	DIGESTER NO.1 RECIRCULATION (TO UPPER JET)	0"	N/A	99.10
N.12	NA	NOT USED	NA	NA	NA
N.13	3"	DIGESTER NO.1 LEVEL TRANSMITTER	7' – 0"	225°	21.91
N.14	10"	DIGESTER NO.1 GAS TAKEOFF	32' – 11"	0°	50.28
N.15	10"	DIGESTER NO. 1 OVERFLOW	20' – 1"	150°	34.37
N.19	30"	DIGESTER NO.1 MANWAY	12' – 0"	315°	27.13
N.20	24"	DIGESTER NO.1 MANWAY WITH SIGHTGLASS	4' – 0"	120°	99.10
N.21	6"	FOAM LEVEL	4' – 6"	315°	99.10
N.22	8"	CAMERA	4' – 6"	160°	99.10
N.23	8"	ILLUMINATION	4' – 6"	300°	99.10

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

DIGESTERS AND CENTRATE STORAGE
DIGESTER NO. 1 SECTION
WASTEWATER TREATMENT PLANT
WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA
WAUKESHA, WISCONSIN

JOB NO. 1226.004

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SHEET 230 420-M3.01

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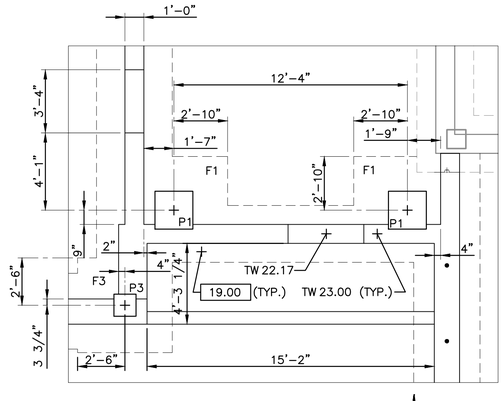
PIER SCHEDULE						
MARK	PIER SIZE	HEIGHT	PIER VERT. REINF. AND DOWELS	TIES	BOT. OF PIER ELEV.	TOP OF PIER ELEV.
P1	2'-0" x 2'-0"	3'-0"	8~#6	#3@12"	El. 19.00	El. 22.00
P2	8" x 1'-2"	VARIES	4~#6	#3@12"	VARIES	El. 22.00
P3	1'-2" x 1'-2"	3'-0"	4~#6	#3@12"	El. 19.00	El. 22.00

NOTES:

1.
2.

FOOTING SCHEDULE			
MARK	FOOTING SIZE	BOTTOM	TOP REINFORCING
F1	5'-8" X 5'-8" X 1'-0"	#5@12"	--
F2	3'-0" X 18'-0" X 1'-9"	#5@6"	#7@6"
F3	5'-0" x 5'-0" x 12"	#5@12"	--



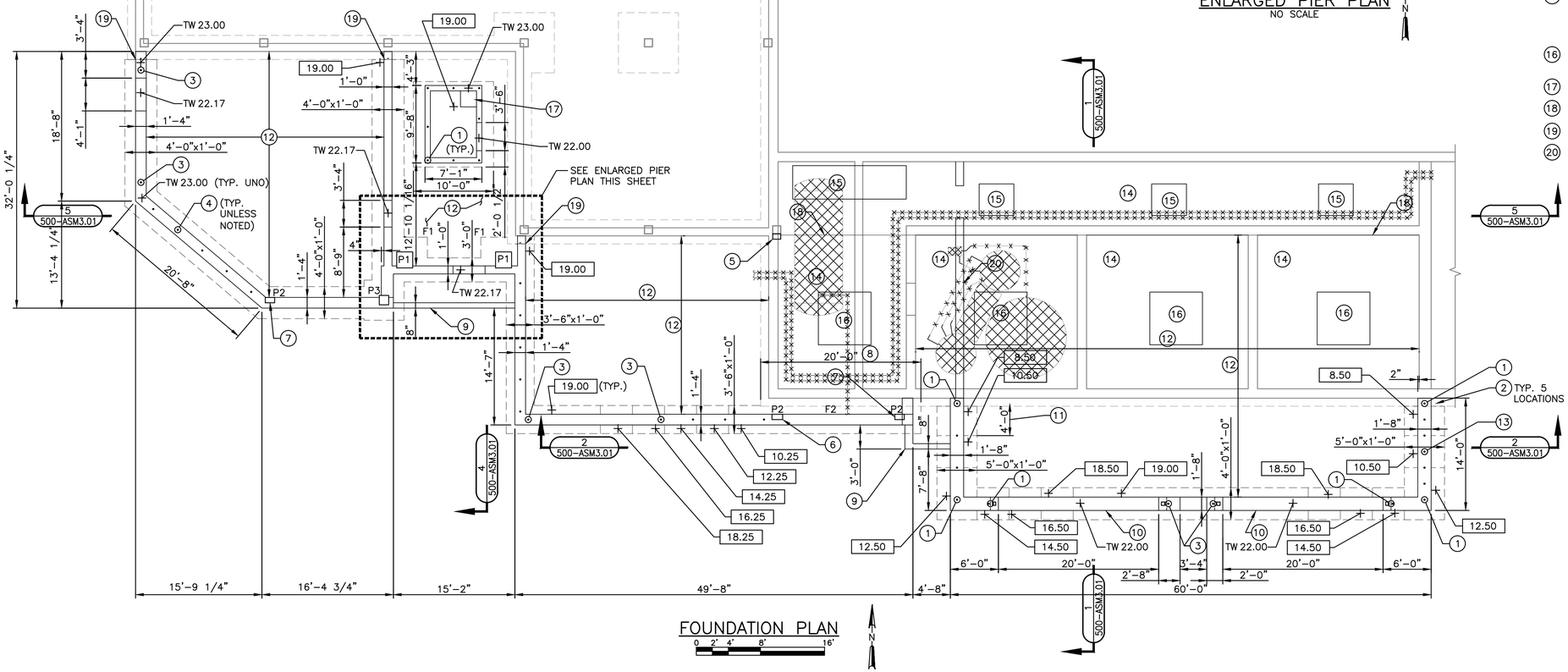
ENLARGED PIER PLAN
NO SCALE

GENERAL NOTES:

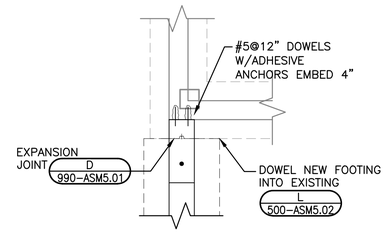
1. PROVIDE SAWN JOINTS PER A 990-ASM5.01 OR B 990-ASM5.01 AT 12'-0" O.C. MAX IN ALL CONCRETE SLABS ON GRADE.

KEY NOTES:

1. 1~#6 MASONRY SHEAR WALL DOWEL. SEE DETAIL K 500-ASM5.02.
2. DOWEL NEW FOOTING AND FOUNDATION WALL INTO EXISTING PER DETAIL L 500-ASM5.02.
3. #6x3'-6" MASONRY DOWEL IN SECOND CORE FROM JAMB, EMBED 6" IN FOUNDATION WITH ADHESIVE ANCHOR. LAP 3'-0" WITH MASONRY VERTICAL BARS.
4. #4@48"x2'-6" MASONRY DOWELS EMBED 6" IN FOUNDATION WITH ADHESIVE ANCHORS. LAP 2'-0" WITH MASONRY VERTICAL BARS (TYP. UNLESS NOTED).
5. FOR BASEPLATE, SEE DETAIL D 500-ASM5.03.
6. SEE DETAIL E 500-ASM5.03.
7. SEE DETAIL F 500-ASM5.03.
8. FOR F2, SEE DETAIL G 500-ASM5.03.
9. STOOP PER DETAIL P 990-ASM5.01.
10. OVERHEAD DOOR APRON PER DETAIL B 990-ASM5.02.
11. TYPICAL FOOTING STEP LENGTH. SEE DETAIL N 990-ASM5.01.
12. 6" FIBER-REINFORCED CONCRETE SLAB ON GRADE OVER VAPOR BARRIER OVER GRANULAR CUSHION. FLOOR SLAB IN VEHICLE STORAGE BAYS TO HAVE IN-SLAB HYDRONIC RADIANT HEATING. WHERE IN-FLOOR RADIANT HEATING IS INSTALLED, PROVIDE 2" RIGID INSULATION CONTINUOUS UNDER FLOOR SLAB AND REINFORCE SLAB W/ WWF 6x6 W2.9xW2.9 ON CHAIRS IN LIEU OF FIBERS. SEE MECHANICAL SPECIFICATIONS FOR PIPE PLACEMENT WITHIN SLAB.
13. #4@24"x2'-6" MASONRY DOWELS EMBED 6" IN FOUNDATION WITH ADHESIVE ANCHORS. LAP 2'-0" WITH MASONRY VERTICAL BARS (TYP. UNLESS NOTED).
14. THESE UNDERGROUND STRUCTURES SHALL BE FILLED WITH COMPACTED FILL OR FLOWABLE FILL.
15. INFILL OPENING WITH 6" CONCRETE SLAB REINFORCED W/#4@12" EA. WAY CENTERED. DRILL IN #4@12" DOWELS ALL AROUND W/ADHESIVE ANCHORS AND EMBED 4".
16. CONCRETE NEED NOT BE REPLACED AT THESE OPENINGS.
17. ELEVATOR SUMP PIT. SEE PLUMBING.
18. SEE DETAIL B 990-ASM5.01.
19. EXPANSION JOINT PER A 500-AS1.02.
20. 12" WIDE CONCRETE CURB T/CURB EL. 23.00. REINFORCE WITH 2~#4 CONT. PROVIDE #4@18" STRAIGHT DOWELS WITH ADHESIVE ANCHORS EMBED 4" IN EXISTING CONCRETE.



FOUNDATION PLAN
0 2' 4' 8' 16'



A 500-AS1.02 EXPANSION JOINT
NO SCALE

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

ADMINISTRATION BUILDING FOUNDATION PLAN

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

STRAND ASSOCIATES®

SHEET 240 500-AS1.02

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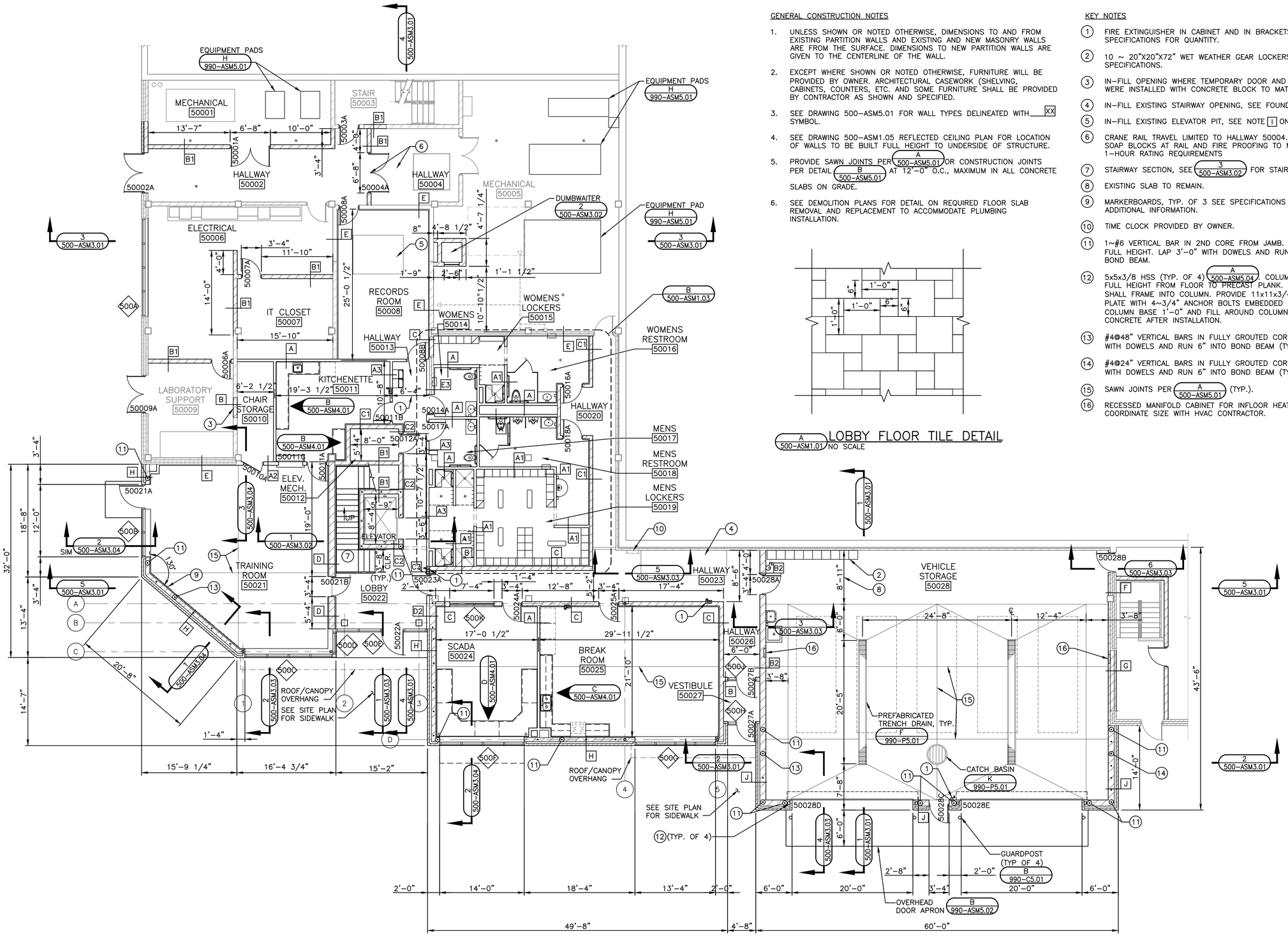

FIRST FLOOR PLAN

0 2' 4' 8' 16'

N

GENERAL CONSTRUCTION NOTES

1. UNLESS SHOWN OR NOTED OTHERWISE, DIMENSIONS TO AND FROM EXISTING PARTITION WALLS AND EXISTING AND NEW MASONRY WALLS ARE FROM THE SURFACE. DIMENSIONS TO NEW PARTITION WALLS ARE GIVEN TO THE CENTERLINE OF THE WALL.
2. EXCEPT WHERE SHOWN OR NOTED OTHERWISE, FURNITURE WILL BE PROVIDED BY OWNER. ARCHITECTURAL CASEWORK (SHELVING, CABINETS, COUNTERS, ETC. AND SOME FURNITURE SHALL BE PROVIDED BY CONTRACTOR AS SHOWN AND SPECIFIED.
3. SEE DRAWING 500-ASM5.01 FOR WALL TYPES DELINEATED WITH XX SYMBOL.
4. SEE DRAWING 500-ASM1.05 REFLECTED CEILING PLAN FOR LOCATION OF WALLS TO BE BUILT FULL HEIGHT TO UNDERSIDE OF STRUCTURE.
5. PROVIDE SAWN JOINTS PER A 500-ASM5.01 OR CONSTRUCTION JOINTS PER DETAIL B 500-ASM5.01 AT 12'-0" O.C., MAXIMUM IN ALL CONCRETE SLABS ON GRADE.
6. SEE DEMOLITION PLANS FOR DETAIL ON REQUIRED FLOOR SLAB REMOVAL AND REPLACEMENT TO ACCOMMODATE PLUMBING INSTALLATION.

A 500-ASM1.01 LOBBY FLOOR TILE DETAIL NO SCALE

KEY NOTES

1. FIRE EXTINGUISHER IN CABINET AND IN BRACKETS, SEE SPECIFICATIONS FOR QUANTITY.
2. 10 ~ 20"X20"X72" WET WEATHER GEAR LOCKERS, SEE SPECIFICATIONS.
3. IN-FILL OPENING WHERE TEMPORARY DOOR AND FRAME WERE INSTALLED WITH CONCRETE BLOCK TO MATCH EXISTING.
4. IN-FILL EXISTING STAIRWAY OPENING, SEE FOUNDATION PLAN.
5. IN-FILL EXISTING ELEVATOR PIT, SEE NOTE 1 ON 500-D1.01.
6. CRANE RAIL TRAVEL LIMITED TO HALLWAY 50004. PROVIDE SOAP BLOCKS AT RAIL AND FIRE PROOFING TO MEET 1-HOUR RATING REQUIREMENTS
7. STAIRWAY SECTION, SEE 3 500-ASM3.02 FOR STAIR DETAILS
8. EXISTING SLAB TO REMAIN.
9. MARKERBOARDS, TYP. OF 3 SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
10. TIME CLOCK PROVIDED BY OWNER.
11. 1~#6 VERTICAL BAR IN 2ND CORE FROM JAMB. GROUTED FULL HEIGHT. LAP 3'-0" WITH DOWELS AND RUN 6" INTO BOND BEAM.
12. 5x5x3/8 HSS (TYP. OF 4) A 500-ASM5.04. COLUMN TO RUN FULL HEIGHT FROM FLOOR TO PRECAST PLANK. STEEL LINTEL SHALL FRAME INTO COLUMN. PROVIDE 11x11x3/4 BASE PLATE WITH 4~3/4" ANCHOR BOLTS EMBEDDED 9". RECESS COLUMN BASE 1'-0" AND FILL AROUND COLUMN WITH CONCRETE AFTER INSTALLATION.
13. #4@48" VERTICAL BARS IN FULLY GROUTED CORE, LAP 2'-0" WITH DOWELS AND RUN 6" INTO BOND BEAM (TYP.).
14. #4@24" VERTICAL BARS IN FULLY GROUTED CORE, LAP 2'-0" WITH DOWELS AND RUN 6" INTO BOND BEAM (TYP.).
15. SAWN JOINTS PER A 500-ASM5.01 (TYP.).
16. RECESSED MANIFOLD CABINET FOR INFLOOR HEATING SYSTEM. COORDINATE SIZE WITH HVAC CONTRACTOR.

NO.	REVISIONS	DATE:
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ADMINISTRATION BUILDING
FIRST FLOOR PLAN

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

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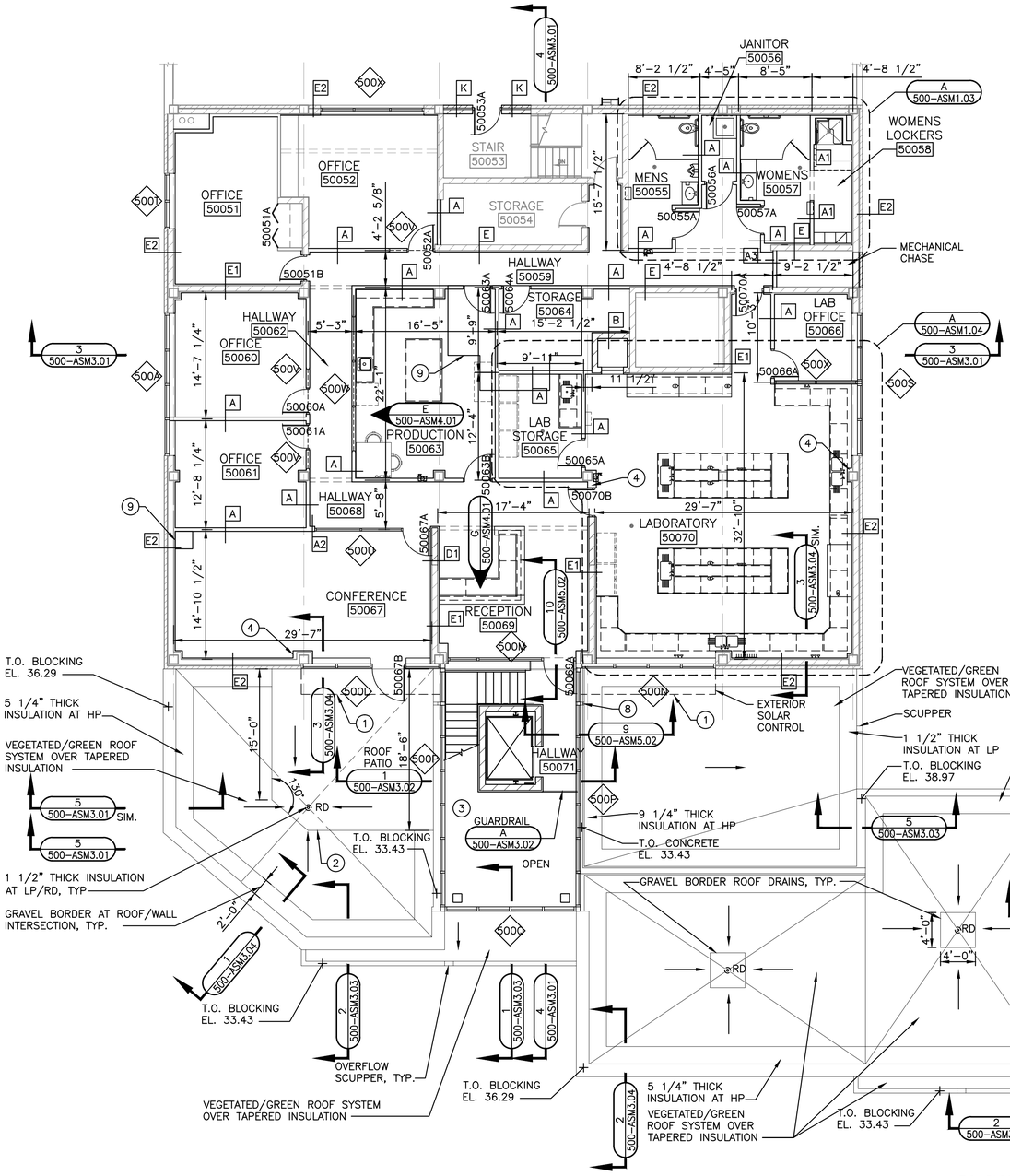
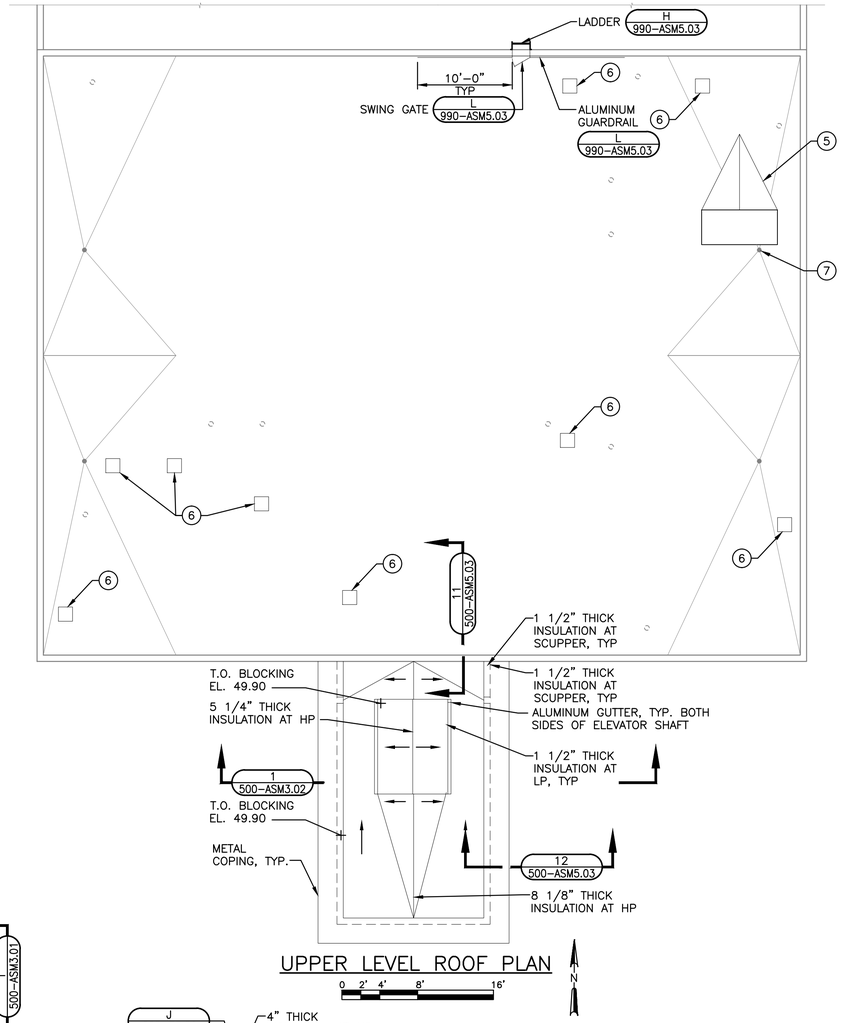


SECOND FLOOR AND LOWER ROOF PLAN

0 2' 4' 8' 16'



UPPER LEVEL ROOF PLAN

0 2' 4' 8' 16'

ROOF PLAN GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, TAPERED INSULATION IS USED TO CREATE SLOPE TO ROOF DRAINS. MINIMUM SLOPE TO BE 1/4" PER FOOT.
2. METAL PANEL TO BE PROVIDED BY ROOF MANUFACTURER/INSTALLER ON THE INSIDE OF ALL PARAPET WALLS HIGHER THAN 12" ABOVE THE ROOF MEMBRANE WHERE EXPOSED TO VEGETATED ROOF, SEE SECTIONS FOR ADDITIONAL INFORMATION.
3. ALL ROOFING ON UPPER ROOF LEVEL SHALL MAINTAIN ANY AND ALL EXISTING WARRANTIES.

KEY NOTES:

1. SUNSHADE.
2. PATIO PAVERS.
3. SEE STAIRWAY SECTION 3/500-ASM3.02 FOR STAIRWAY DETAILS.
4. FURR-OUT AROUND COLUMN FOR PLUMBING CHASE, COORDINATE WITH DIVISION 15000 CONTRACTOR.
5. PROVIDE ROOF CRICKET AS REQUIRED AT AIR INTAKE LOCATION.
6. EXISTING ROOF CURB TO REMAIN. PROVIDE 2" RIGID INSULATION UNDER 1/4" ALUMINUM TREAD PLATE TO COVER OPENING FASTENED TO TOP OF CURB. PROVIDE ROOF MEMBRANE, FLASHING, AND SEALANT FOR WEATHER TIGHT SEAL.
7. RELOCATE ROOF DRAIN AND EXTEND PIPING AS NECESSARY FOR INSTALLATION OF NEW INTAKE.
8. 4" SQUARE DOWNSPOUT, TYP. OF 1.
9. INFILL FLOOR OPENING PER A/500-AS1.04

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ADMINISTRATION BUILDING SECOND FLOOR AND ROOF PLAN

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

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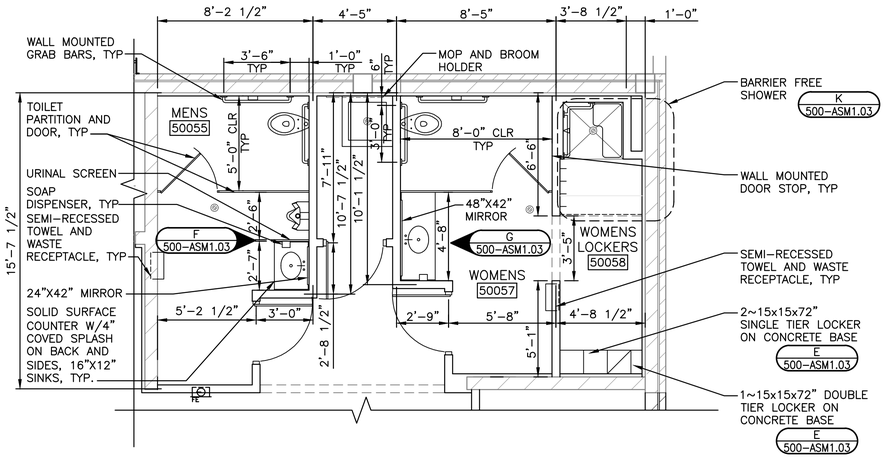
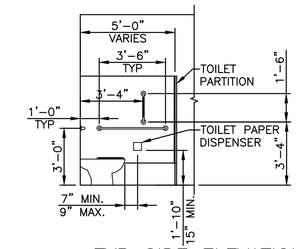
SHEET 244 500-ASM1.02



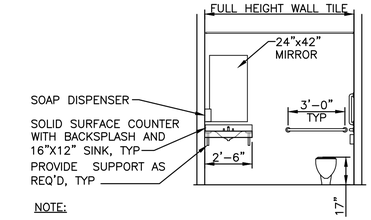
A 500-ASM1.03 ENLARGED FLOOR PLAN

0 1' 2' 4' 8'



C 500-ASM1.03 TYP SIDE ELEVATION

0 1' 2' 4' 8'

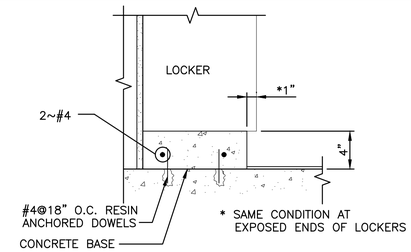


NOTE:

1. ELEVATION IS TYPICAL OF WOMENS 50014.

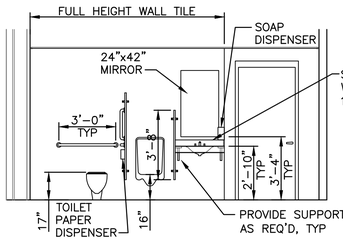
D 500-ASM1.03 MENS 50017 ELEVATION

0 1' 2' 4' 8'



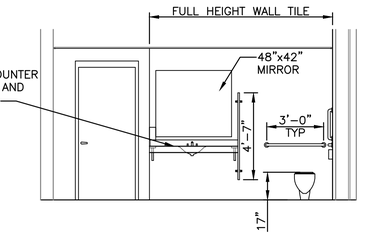
E 90-ASM5.01 LOCKER BASE

0 3" 6" 1'



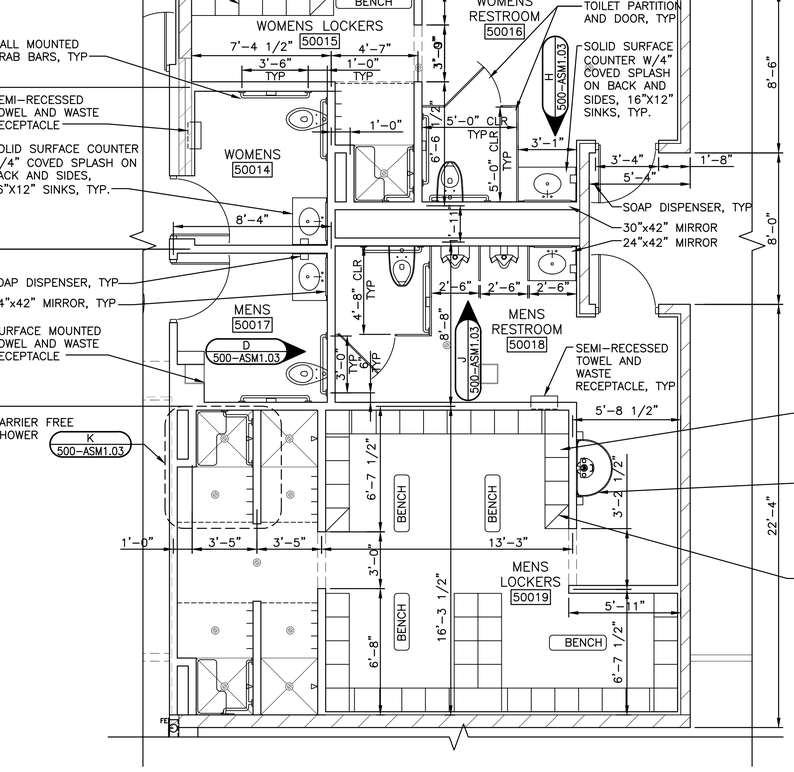
F 500-ASM1.03 MENS 50055 ELEVATION

0 1' 2' 4' 8'



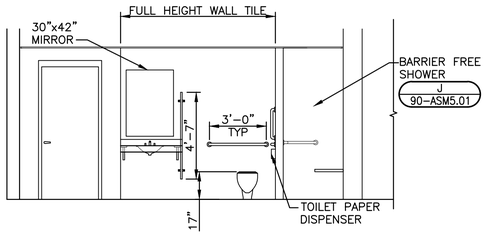
G 500-ASM1.03 WOMENS 50057 ELEVATION

0 1' 2' 4' 8'



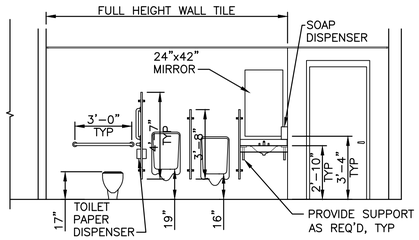
B 500-ASM1.03 ENLARGED FLOOR PLAN

0 1' 2' 4' 8'



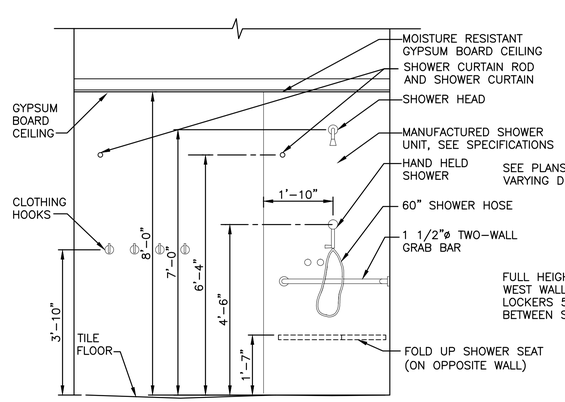
H 500-ASM1.03 WOMENS 50016 ELEVATION

0 1' 2' 4' 8'

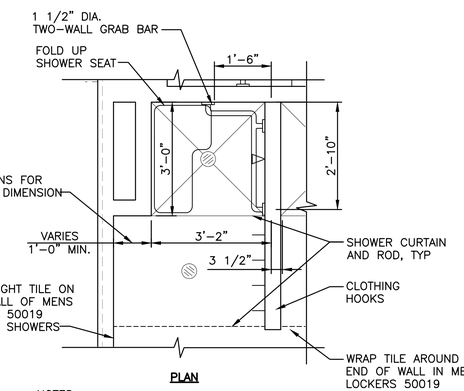


J 500-ASM1.03 MENS 50018 ELEVATION

0 1' 2' 4' 8'



SECTION A-A



PLAN

K 500-ASM1.03 BARRIER FREE SHOWER

0 1' 2' 4'

NOTES:

1. PROVIDE FULL HEIGHT CERAMIC WALL TILE IN SHOWERS AND CHANGING AREAS.
2. DIMENSIONS SHOWN IN PLAN ARE ROUGH OPENING DIMENSIONS, FINISHED SHOWER STALL SHALL BE 3'-0"x3'-0" CLEAR MIN. AFTER INTERIOR FINISH IS APPLIED.
3. GYPSUM BOARD CEILING SHOWN OUTSIDE OF SHOWER CHANGING AREA IS TYPICAL OF MENS LOCKERS 50019, ACOUSTIC CEILING TO BE PROVIDED OUTSIDE OF SHOWER CHANGING AREA IN WOMENS LOCKERS 50015, SEE REFLECTED CEILING PLAN.

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

ADMINISTRATION BUILDING
ENLARGED FLOOR PLANS AND INTERIOR ELEVATIONS

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

STRAND ASSOCIATES®

SHEET 245 500-ASM1.03

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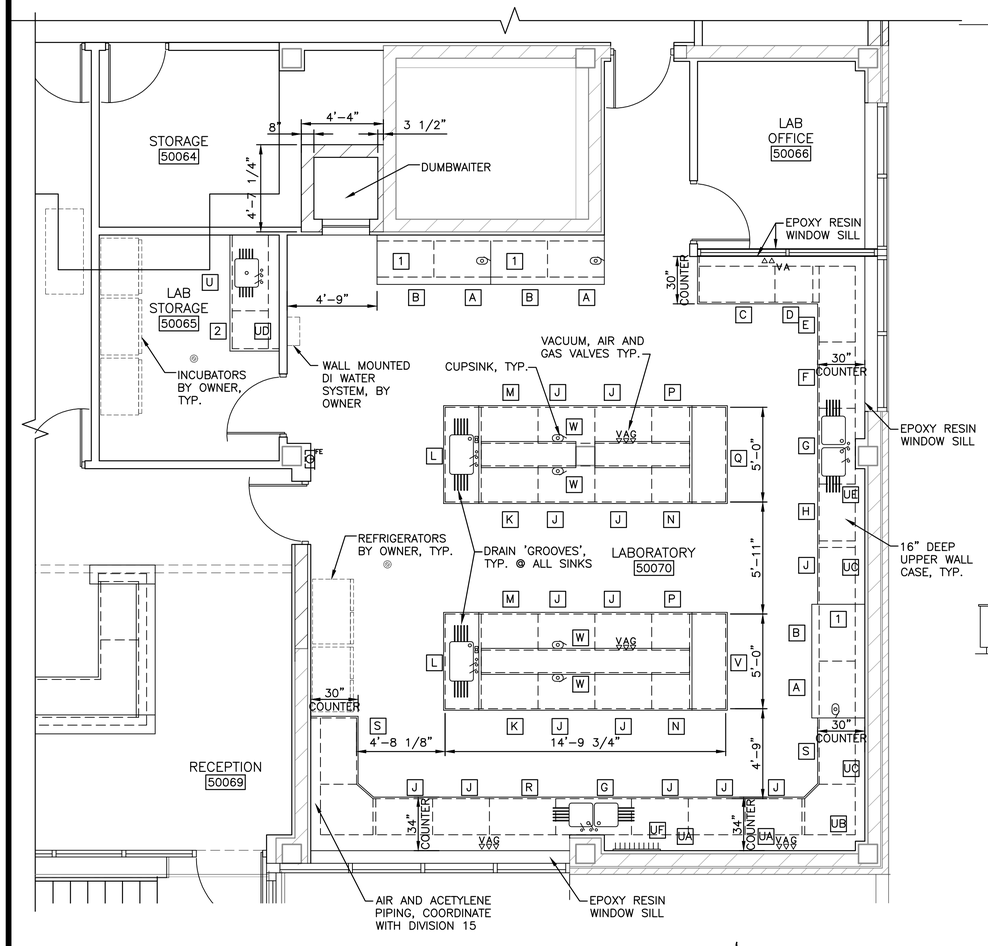
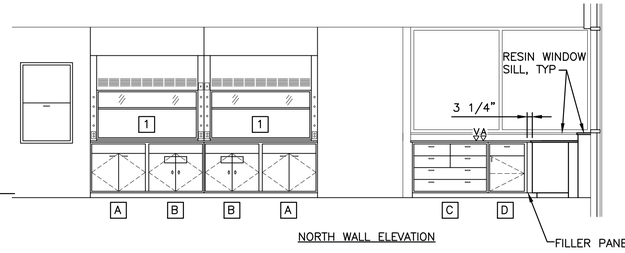
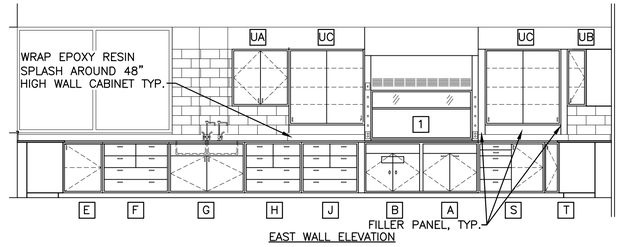


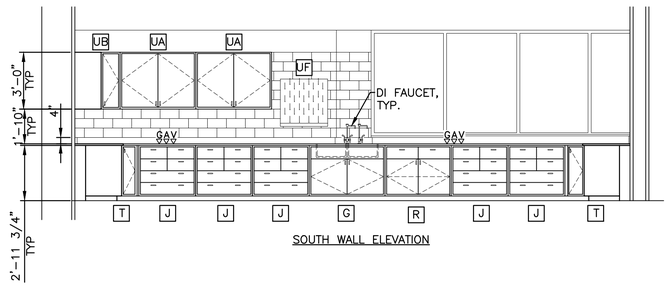
A
500-ASM1.04
ENLARGED FLOOR PLAN
0 1' 2' 4' 8'



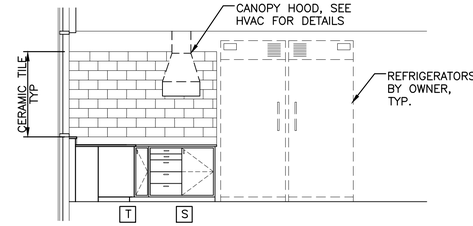
NORTH WALL ELEVATION



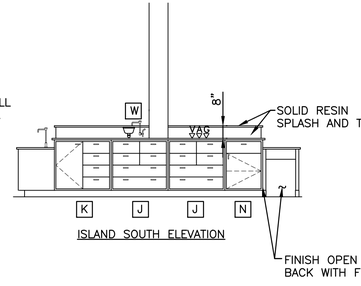
EAST WALL ELEVATION



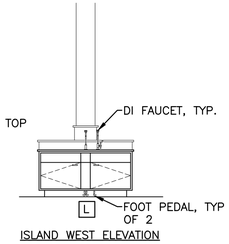
SOUTH WALL ELEVATION



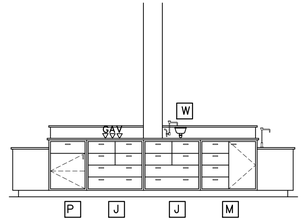
WEST WALL ELEVATION



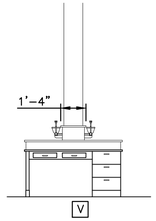
ISLAND SOUTH ELEVATION



ISLAND WEST ELEVATION



ISLAND NORTH ELEVATION



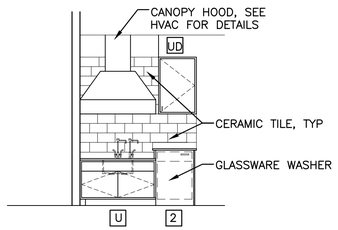
SOUTH ISLAND EAST ELEVATION

NORTH ISLAND EAST ELEVATION

FINISH OPEN SIDES AND
BACK WITH FILLER PANELS

NOTE: ISLAND ELEVATIONS TYPICAL OF
BOTH NORTH AND SOUTH ISLAND EXCEPT
FOR REAGENT RACK, SEE SPECIFICATIONS.

ISLAND ELEVATIONS



LAB STORAGE EAST WALL ELEVATION

NOTE:

1. CONSTRUCTION PHASING MAY NECESSITATE THE GLASSWARE WASHER TO BE TEMPORARILY LOCATED IN LABORATORY 50070. CONTRACTOR TO COORDINATE TEMPORARY LOCATION AND UTILITIES WITH OWNER.
2. CONSTRUCTION PHASING MAY NECESSITATE THE TEMPORARY LOCATION OF THE OWNER PROVIDED INCUBATORS TO LAB OFFICE 50066. CONTRACTOR TO COORDINATE TEMPORARY LOCATION AND UTILITIES WITH OWNER.
3. NEW VACUUM PUMP TO BE PROVIDED, UNIT TO BE LOCATED IN LABORATORY SUPPORT 50009.

LABORATORY CABINETRY ELEVATIONS
0 1' 2' 4' 8'

NO.	REVISIONS	DATE:
-	ISSUED FOR BIDDING	8/16/13

ADMINISTRATION BUILDING
ENLARGED LABORATORY PLAN

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO.
1226.004

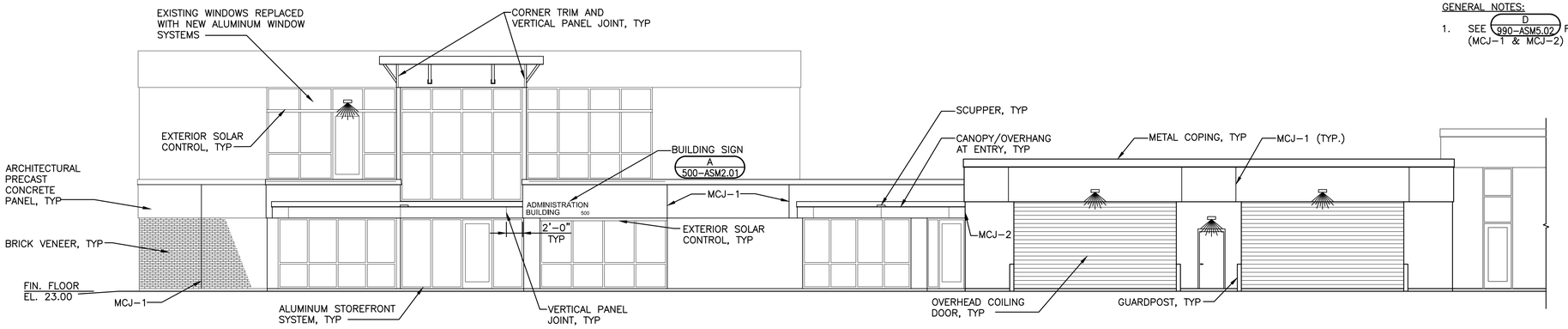
PROJECT MGR.
SCOTT W. STEARNS

STRAND ASSOCIATES®

SHEET
246
500-ASM1.04

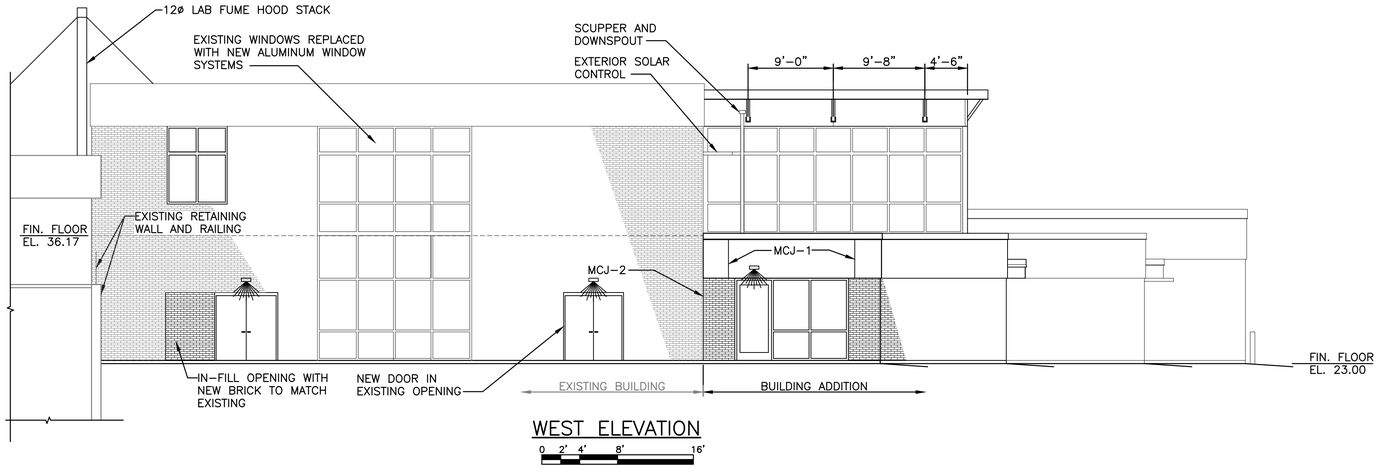
GENERAL NOTES:

1. SEE (D / 990-ASM5.02) FOR MASONRY CONTROL JOINT (MCJ-1 & MCJ-2) DETAILS.



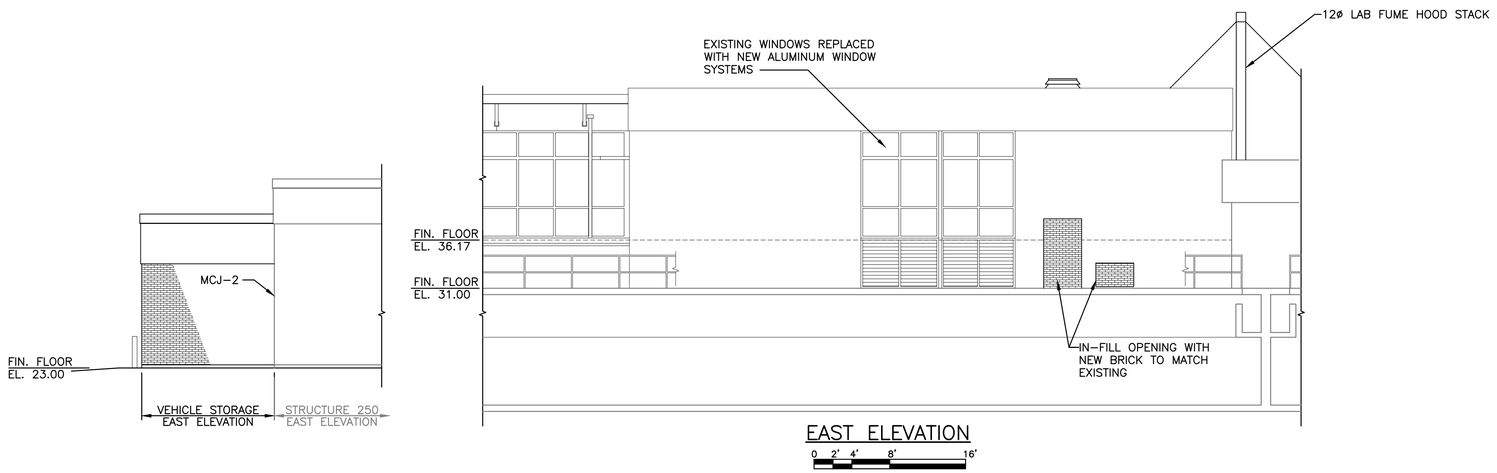
SOUTH ELEVATION

0 2' 4' 8' 16'



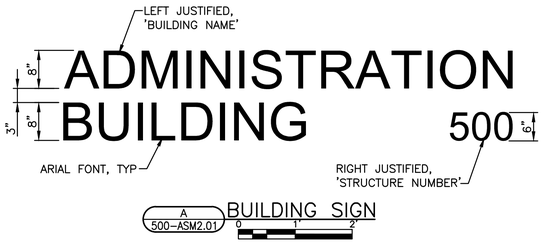
WEST ELEVATION

0 2' 4' 8' 16'



EAST ELEVATION

0 2' 4' 8' 16'



A / 500-ASM2.01 BUILDING SIGN

0 1 2

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

ADMINISTRATION BUILDING ELEVATIONS

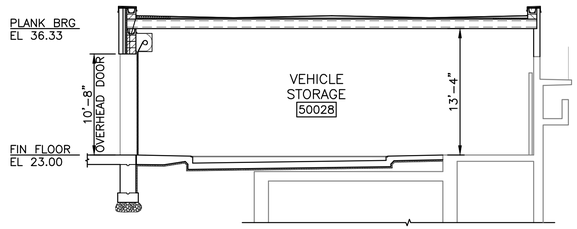
WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

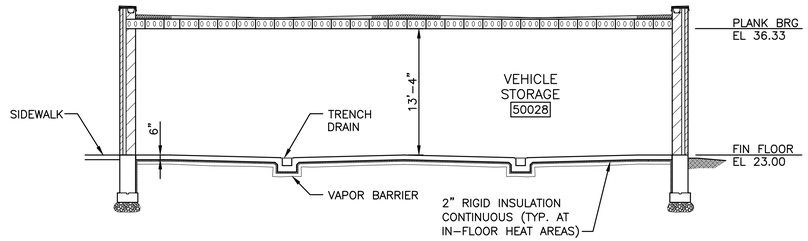
STRAND ASSOCIATES®

SHEET 248 500-ASM2.01



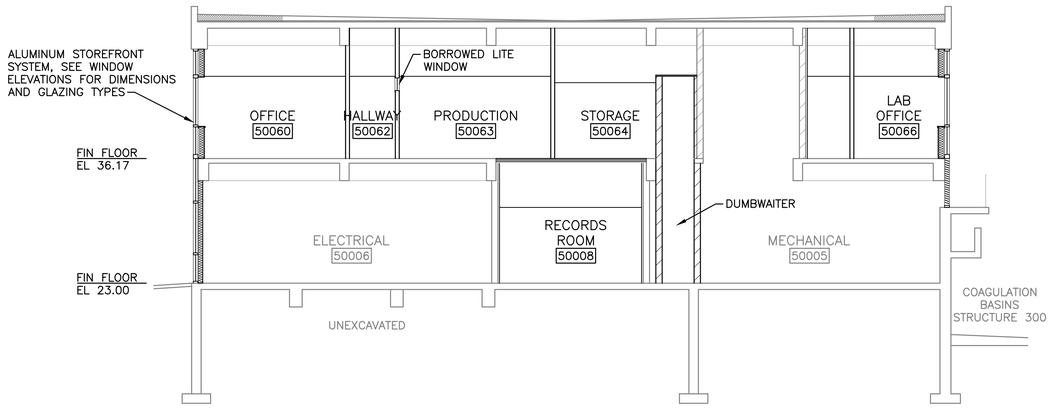
BUILDING SECTION 1 500-AS3.01

0 2' 4' 8' 16'



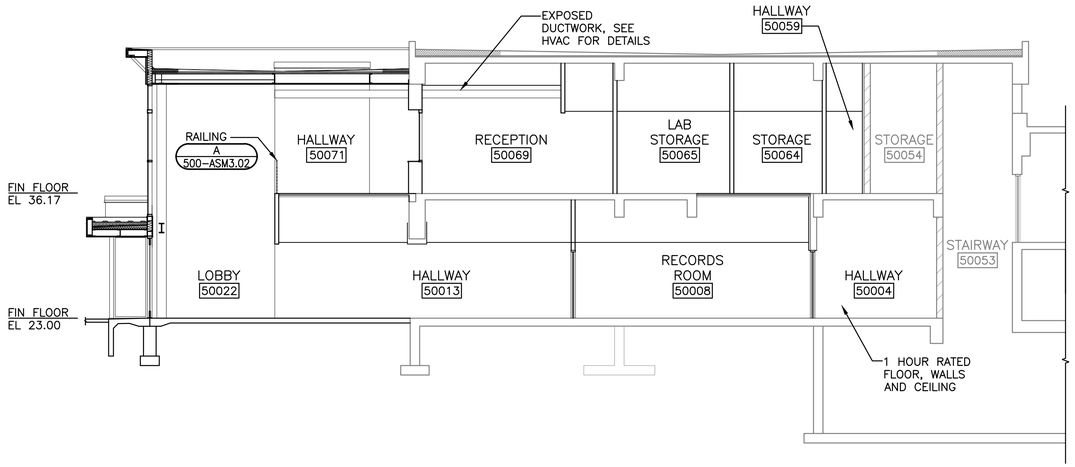
BUILDING SECTION 2 500-AS3.01

0 2' 4' 8' 16'



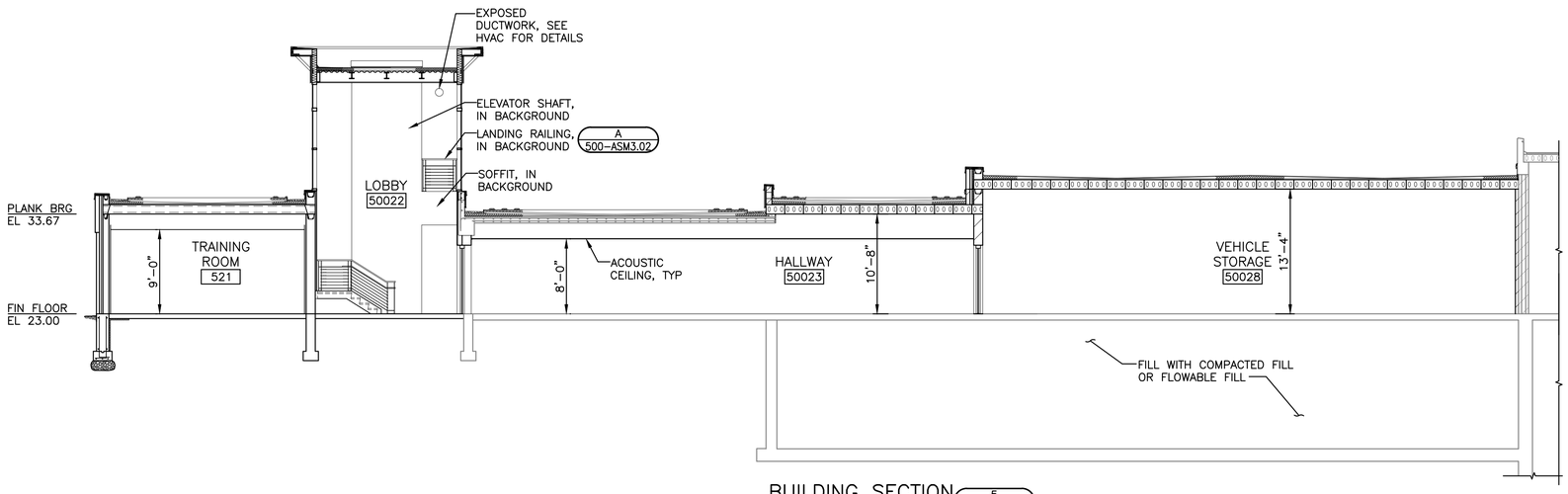
BUILDING SECTION 3 500-AS3.01

0 2' 4' 8' 16'



BUILDING SECTION 4 500-AS3.01

0 2' 4' 8' 16'



BUILDING SECTION 5 500-AS3.01

0 2' 4' 8' 16'

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

ADMINISTRATION BUILDING
BUILDING SECTIONS - 1

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO.
1226.004

PROJECT MGR.
SCOTT W. STEARNS

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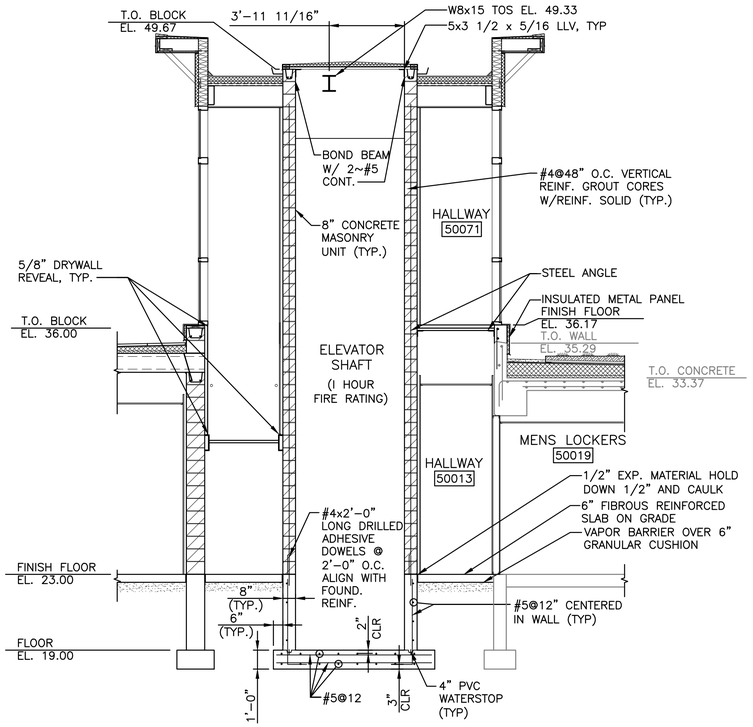
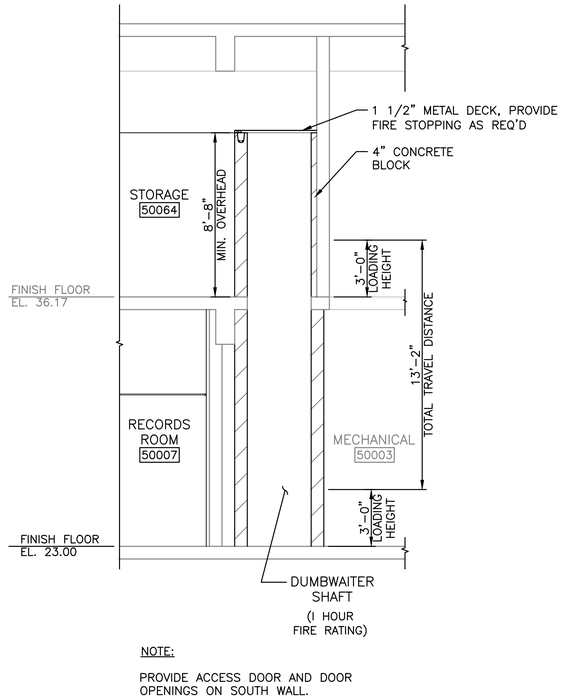


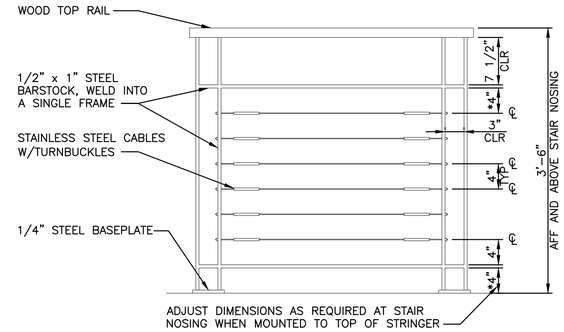
ELEVATOR SECTION 1 / 500-ASM3.02



NOTE:

PROVIDE ACCESS DOOR AND DOOR OPENINGS ON SOUTH WALL.

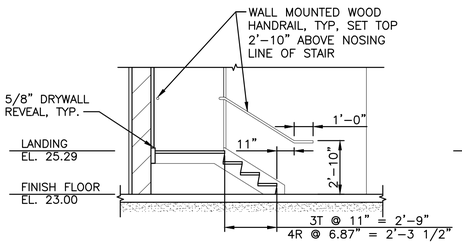
DUMBWAITER SECTION 2 / 500-ASM3.02



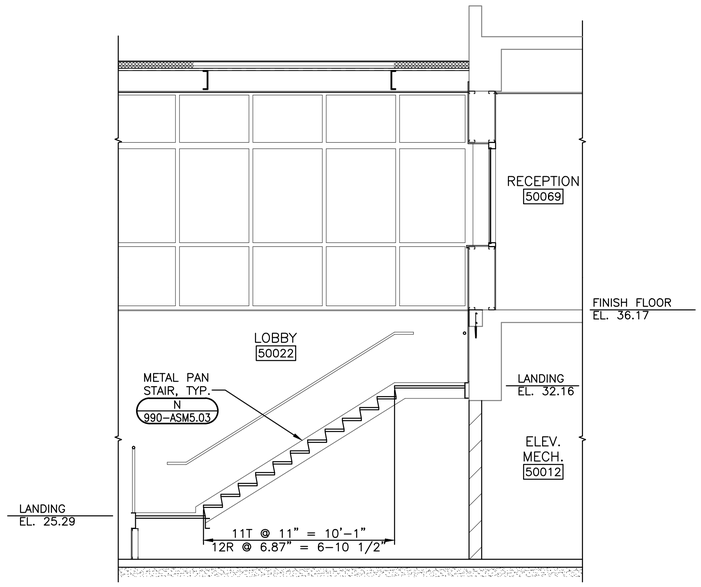
A / 500-ASM3.02 RAILING DETAIL

NOTE:

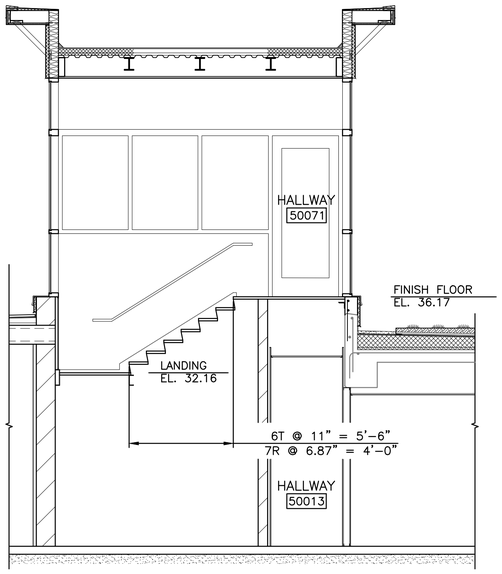
1. STAIR TO HAVE CERAMIC TILE FINISH FOR TREADS.



FLIGHT FROM FINISHED FLOOR TO FIRST LANDING



FLIGHT FROM LANDING TO FIRST LANDING



FLIGHT FROM LANDING TO SECOND FLOOR

STAIRWAY SECTIONS 3 / 500-ASM3.02

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

ADMINISTRATION BUILDING
BUILDING SECTIONS - 2

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004

PROJECT MGR. SCOTT W. STEARNS

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500-ASM3.02

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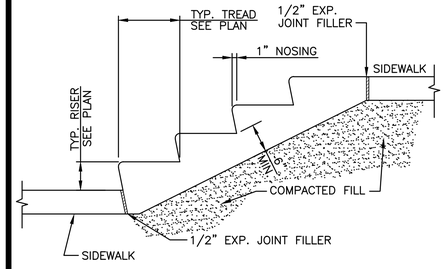
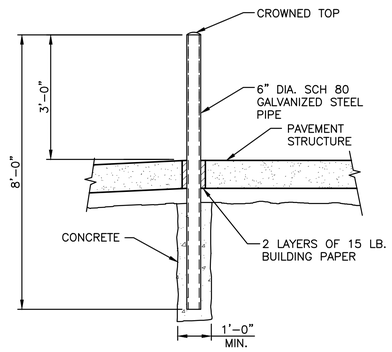
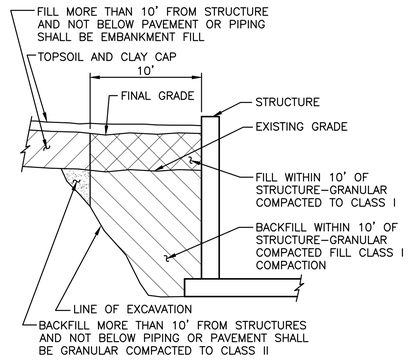


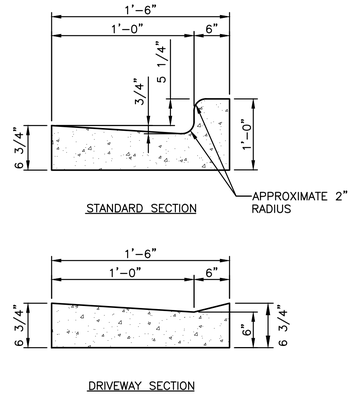
A 990-C5.01 EXTERIOR CONCRETE STAIRS
NO SCALE



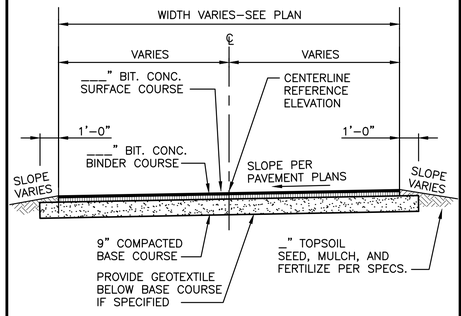
B 990-C5.01 GUARD POST
NO SCALE



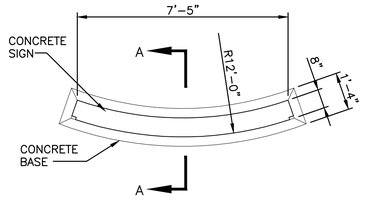
C 990-C5.01 FILL & BACKFILL REQUIREMENTS
NO SCALE



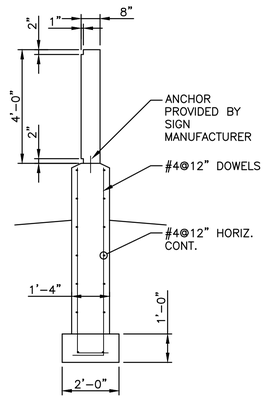
D 990-C5.01 18–INCH CONCRETE CURB AND GUTTER
NO SCALE



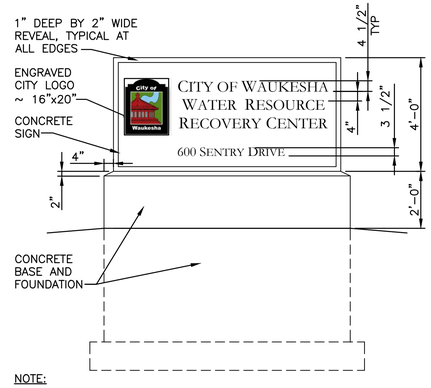
E 990-C5.01 NEW PAVEMENT SECTION
NO SCALE



PLAN



SECTION A–A

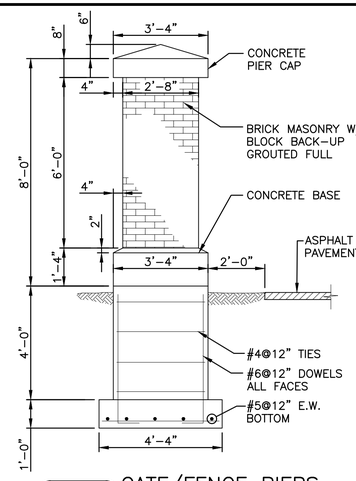


NOTE:

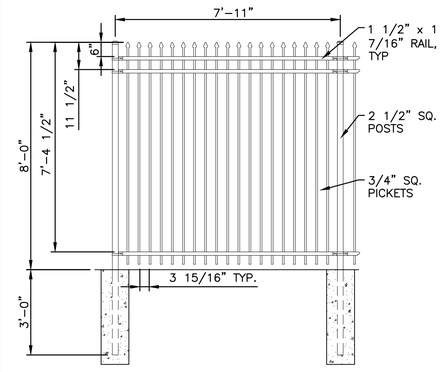
1. PROVIDE A MINIMUM OF 5 COLORS FOR CITY LOGO

ELEVATION

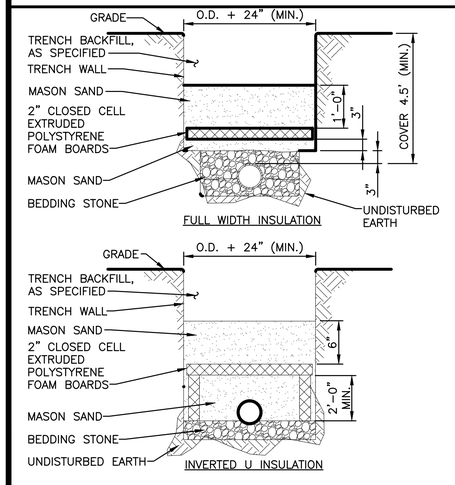
F 990-C5.01 FACILITY SIGN
0 1' 2' 4'



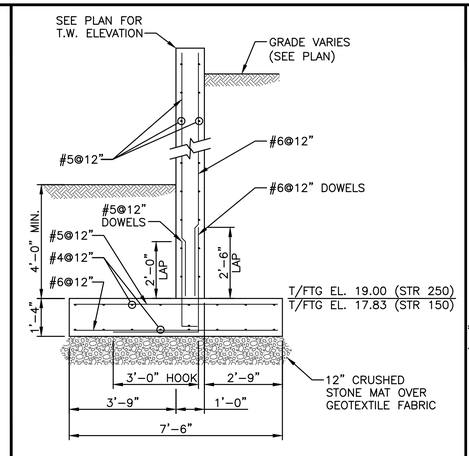
G 990-C5.01 GATE/FENCE PIERS
0 1' 2' 4'



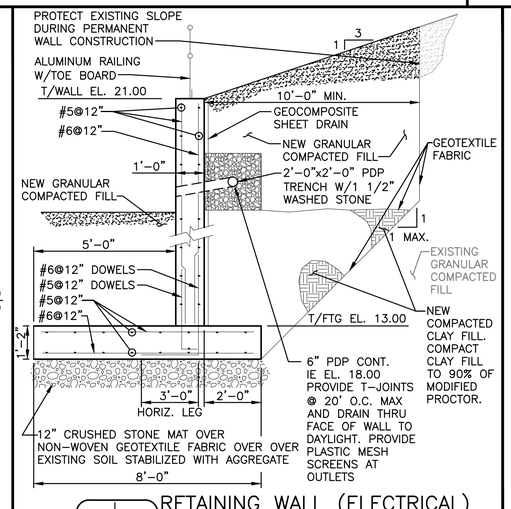
H 990-C5.01 ORNAMENTAL METAL FENCE
0 1' 2' 4'



J 990-C5.01 UNDERGROUND PIPE INSULATION
NO SCALE



K 990-C5.01 RETAINING WALL
NO SCALE



L 990-C5.01 RETAINING WALL (ELECTRICAL)
NO SCALE

PLANT DATA CHART

PLANT CODE	COMMON NAME	SCIENTIFIC NAME	AVG. MATURE HEIGHT	SIZE WHEN PLANTED	ROOT ZONE MODE	MINIMUM SIZE			
						MIN. BALL OR POT SIZE		MIN. HOLE SIZE	
						MIN. CONT. SIZE	MIN. CONT. DEPTH	MIN. HOLE DIA.	MIN. HOLE DEPTH
TREES									
BHS	Black Hills Spruce	Picea glauca 'Densata'	35'	6' HT	B&B	22"	15"	38"	15"
HA	American Arborvitae	Thuja occidentalis 'Holmstrup'	12'	5' HT	B&B	20"	15"	36"	15"
TC	Flowering Crabapple	Malus 'Tina'	6'	1.5"Cal.	B&B	20"	15"	32"	16"
DECIDUOUS SHRUBS									
CC	Cranberry Cotoneaster	Cotoneaster apiculatus	18"	18" HT	POT	12"	9"	28"	9"
FS	Fritschiana Spriea	Spiraea fritschiana Pink Parasols'	2-3' HT	24" HT	POT	12"	9"	28"	9"
PL	Palibin Lilac	Syringa meyeri 'Palibin'	4-5'	3' HT	B&B	12"	9"	28"	9"
EVERGREEN SHRUBS									
AJ	Arcadia Juniper	Juniperus sabina 'Arcadia'	18"	12"	CAN	12"	9"	28"	9"
BJ	Broadmoor Juniper	Juniperus sabina 'Braodmoor'	18"	12"	CAN	12"	9"	28"	9"

M 990-C5.01 PLANT DATA CHART
NO SCALE

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

CIVIL DETAILS - 1

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO.
1226.004

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287
990-C5.01

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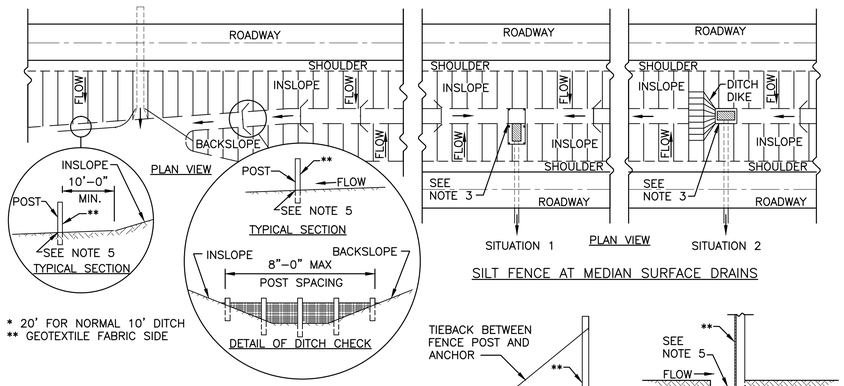
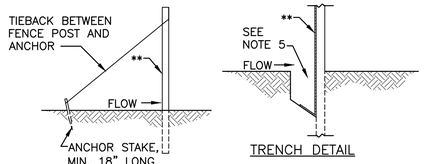


* 20' FOR NORMAL 10' DITCH
** GEOTEXTILE FABRIC SIDE

SILT FENCE AT MEDIAN SURFACE DRAINS

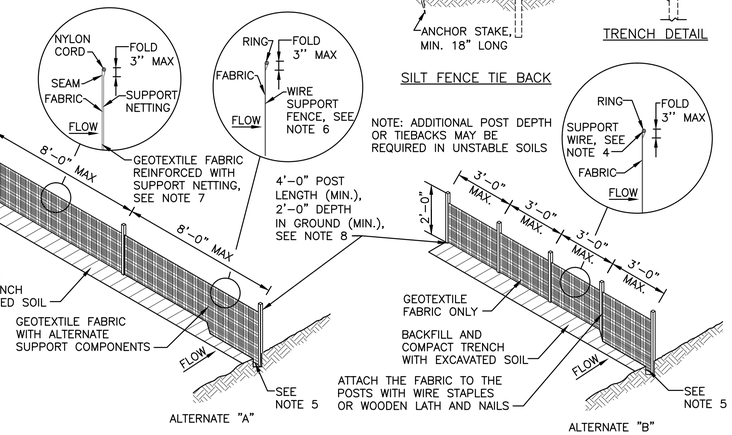
TYPICAL APPLICATIONS OF SILT FENCE



SILT FENCE TIE BACK

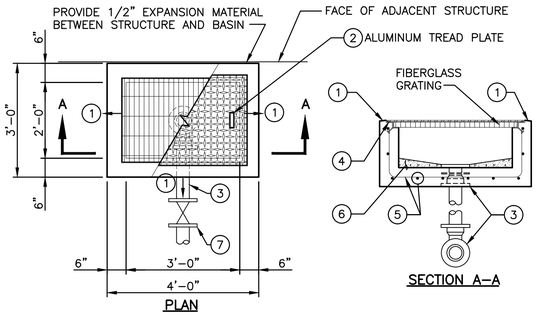
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIEBACKS MAY BE REQUIRED IN UNSTABLE SOILS



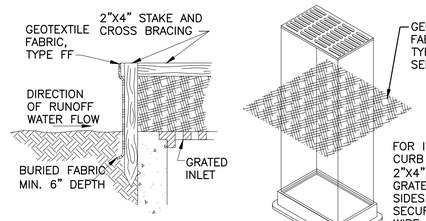
NOTES:
1. DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.
2. WHEN POSSIBLE THE SILT FENCE SHALL BE CONSTRUCTED IN AN ARC OR HORSESHOE SHAPE, WITH THE ENDS POINTING UPSLOPE TO MAXIMIZE BOTH STRENGTH AND EFFECTIVENESS.
3. CROSS BRACE WITH 2"x4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
4. MINIMUM 14 GAGE WIRE REQUIRED, FOLD FABRIC 3" OVER THE WIRE AND STAPLE OR PLACE WIRE RINGS ON 12" C–C.
5. EXCAVATE TRENCH A MINIMUM OF 4" WIDE AND 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC, FOLD MATERIAL TO FIT TRENCH AND BACKFILL AND COMPACT TRENCH WITH EXCAVATED SOIL.
6. WIRE SUPPORT FENCE SHALL BE 14 GAGE MINIMUM WOVEN WIRE WITH A MAXIMUM MESH SPACING OF 6". SECURE TOP OF GEOTEXTILE FABRIC TO TOP OF FENCE WITH STAPLES OR WIRE RINGS AT 12" C TO C.
7. GEOTEXTILE FABRIC SHALL BE REINFORCED WITH AN INDUSTRIAL POLYPROPYLENE NETTING WITH A MAXIMUM MESH SPACING OF 1/4" OR EQUAL. A HEAVY DUTY NYLON TOP SUPPORT CORD OR EQUIVALENT IS REQUIRED.
8. STEEL POSTS SHALL BE STUDDED "TEE" OR "U" TYPE WITH A MINIMUM WEIGHT OF 1.2 LBS/LINEAR FOOT WITHOUT ANCHORS, OR ANCHORS SUFFICIENT TO RESIST POST MOVEMENT ARE REQUIRED. WOOD POSTS SHALL BE A MINIMUM SIZE OF 4" DIAMETER, OR 2 1/2"x3 1/2", EXCEPT WOOD POSTS FOR GEOTEXTILE FABRIC REINFORCED WITH NETTING SHALL BE A MINIMUM SIZE OF 1 1/8"x1 1/8" OAK OR HICKORY.
9. ALTERNATES "A" AND "B" ARE EQUAL AND EITHER MAY BE USED.

A / 990–C5.02 SILT FENCE
NO SCALE

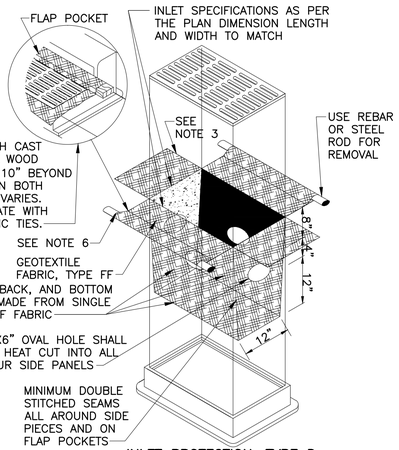


B / 990–C5.02 SPILL CONTAINMENT BASIN
NO SCALE

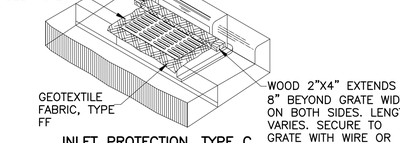
KEY NOTES:
1. PROVIDE 1/2" PITCH AWAY FROM TREAD PLATE TO ADJOINING WALK OR SURFACE. PITCH TOP OF WALL TO MATCH ADJOINING WALK OR SURFACE.
2. PROVIDE DROP–DOWN HANDLES SIMILAR TO HANDLES PROVIDED ON FLOOR DOORS. COORDINATE WITH FIBERGLASS GRATING.
3. PROVIDE PIPING AS INDICATED ON STRUCTURE OR PIPING DRAWINGS. SPILL CONTAINMENT AT GENERATOR HAS NO DRAIN PIPING.
4. PROVIDE COMPRESSIBLE GASKET BONDED TO BOTTOM OF TREAD PLATE (TYP.).
5. REINFORCE WITH #5@8" EACH WAY AS SHOWN.
6. GROUT BOTTOM TO DRAIN OR 9"ø x2" DEEP SUMP.
7. PROVIDE DUCTILE IRON VALVE AND VALVE BOX AS SPECIFIED IN SECTION 02600.



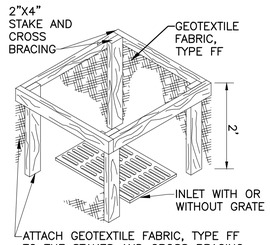
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)
(CAN BE INSTALLED IN ANY INLET WITHOUT CURB BOX)



INLET PROTECTION, TYPE D
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE 2)



INLET PROTECTION, TYPE C
(WITH CURB BOX)



INLET PROTECTION, TYPE A

NOTES:
1. INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.
2. MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENTS EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.
3. WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET, ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.
4. FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
5. FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
6. FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.
7. FOR TYPES B AND C, TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE. THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.
8. FOR TYPE D, DO NOT INSTALL INLET PROTECTION TYPE D INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.
TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY, THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES, TO ACHIEVE THE 3" CLEARANCE.

C / 990–C5.02 INLET PROTECTION TYPE A, B, AND C
NO SCALE

NO.	REVISIONS	DATE:
-	ISSUED FOR BIDDING	8/16/13

CIVIL DETAILS - 2

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004
PROJECT MGR. SCOTT W. STEARNS

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SHEET 288
990-C5.02

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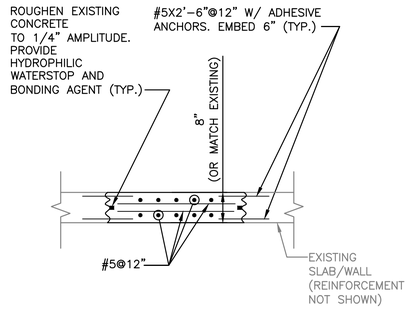
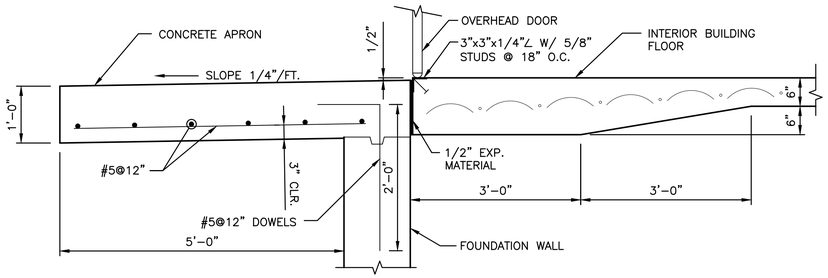
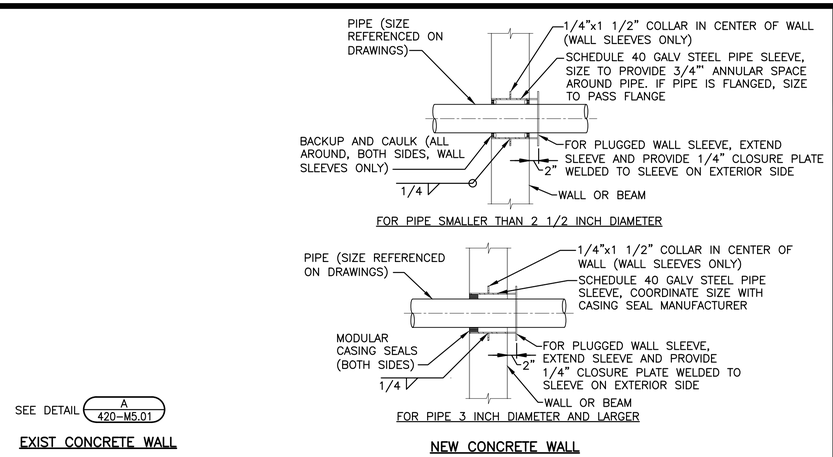


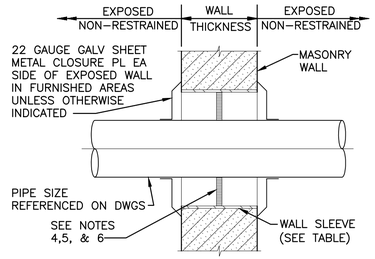
A 990-ASM5.02 FILL EXISTING OPENING
NO SCALE



B 990-ASM5.02 OVERHEAD DOOR SILL/CONCRETE APRON
NO SCALE



C 990-ASM5.02 WALL PIPE PENETRATIONS
NO SCALE

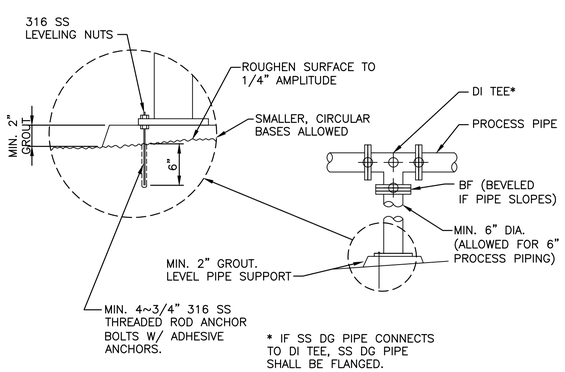


WALL SLEEVE TABLE	
PIPE SIZE	SLEEVE SIZE UNLESS OTHERWISE INDICATED (SEE NOTES 3 & 4)
1"& SMALLER	3"
1 1/4"&1 1/2"	3 1/2"
2" & 2 1/2"	4"
3"	6"
4"	6"
6"	8"
8"& LARGER	PIPE OD+2"±

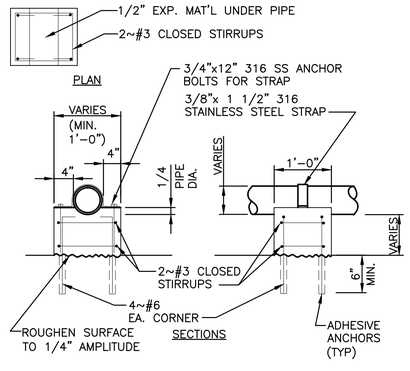
NOTES:

1. SCHEDULE 40 GALV STEEL PIPE FOR PIPING SMALLER THAN 3", SCHEDULE 20 GALV STEEL PIPE FOR PIPING SMALLER THAN 6", AND GALV 1/4" MINIMUM WALL THICKNESS FOR PIPING LARGER THAN 6".
2. FOR PIPING LARGER THAN 3" PROVIDE PIPE SUPPORT WITHIN 3' OF WALL SLEEVE TO PREVENT THE TRANSFER OF PIPE LOADS TO MASONRY WALL WHEN MODULAR CASING SEALS ARE USED.
3. WHERE REQUIRED, USE SLEEVE LARGE ENOUGH FOR FLANGE OR OTHER JOINT RESTRAINT TO PASS THROUGH.
4. FOR PIPE SIZES 1 1/2" IN DIAMETER AND SMALLER, CAULK ANNULAR SPACE AROUND PIPE. FOR PIPE LARGER THAN 1 1/2" IN DIAMETER, USE MODULAR CASING SEALS AND COORDINATE SLEEVE SIZE WITH CASING SEAL MANUFACTURER.
5. PROVIDE MODULAR CASING SEALS ON ALL SLEEVES AT CHLORINE AND AMMONIA FEED AND STORAGE ROOMS AND WHERE INDICATED ON THE DRAWINGS. COORDINATE SLEEVE SIZE WITH CASING SEAL MANUFACTURER.
6. FIRESAFING TO BE PROVIDED AT ALL RATED WALLS INDICATED ON THE DRAWINGS AND INSTALLED PER ACCEPTED UL RATED SYSTEMS.

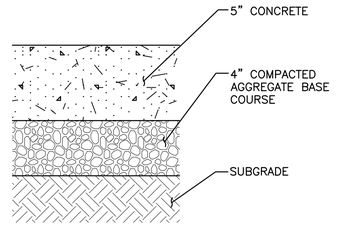
D 990-ASM5.02 MASONRY WALL SLEEVE
NO SCALE



E 990-ASM5.02 ELEVATED PIPE SUPPORT
NO SCALE



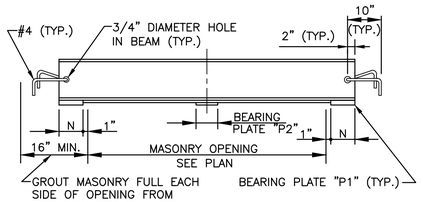
F 990-ASM5.02 CONCRETE PIPE SUPPORT
NO SCALE



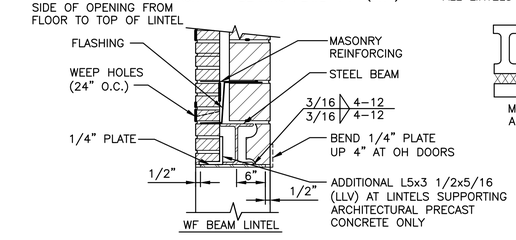
NOTE:

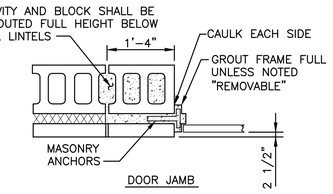
PROVIDE CONTROL JOINTS AT APPROXIMATELY 5 FT. ON CENTER

G 990-ASM5.02 CONCRETE SIDEWALK
NO SCALE



WF BEAM LINTELS				
TYPE	SIZE	N	BEARING PLATE "P_1"	"P_2"
W-1	W8x10	8"	8"x6"x3/8"	----
W-2	W8x18	8"	8"x6"x3/8"	----
W-3	W10x30	10"	10"x8"x3/8"	----
W-4	W8x24	8"	HSS 4"x4"x1/4" COL	----
W-5	W12x26	6"	HSS 4"x4"x1/4" COL	----



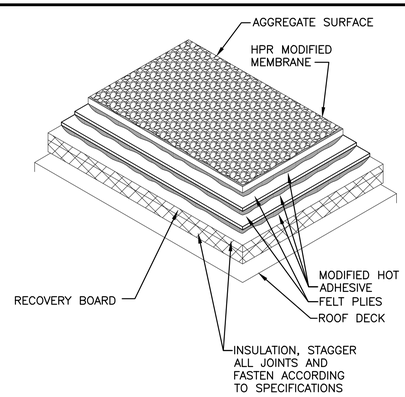


TYPE	MISCELLANEOUS LINTELS
TYPE B-1 8" OR 12" BLOCK TO 3'-4" CLR SPAN	LINTEL BLOCK 2~#5 CONTINUOUS
TYPE A-1	TYP. 3/16 4@12 3/16 4@12; 2~5 x 3½ x 5/16 LLV; ¼" PL; ½" (TYP.)
TYPE A-2 14" CAVITY WALL TO 4'-0" CLR SPAN	∠3 1/2"x2 1/2"x5/16"; ∠5"x3"x5/16"; 3/16 4-12 3/16 4-12; 1/4" PL

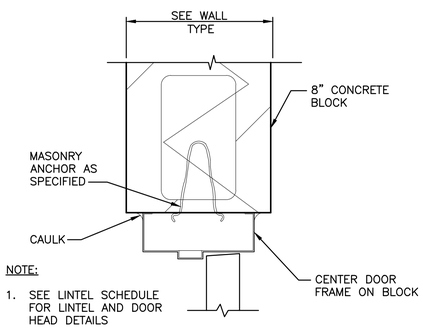
NOTES:

1. LINTELS ARE REQUIRED OVER ALL MASONRY OPENINGS.
2. LINTELS SHALL HAVE A MINIMUM BEARING OF 8".
3. GROUT MASONRY FULL 16" EACH SIDE OF OPENINGS UNDER ALL LINTELS TO FLOOR.
4. LINTELS IN EXTERIOR WALLS SHALL BE GALVANIZED.

J 99-ASM5.02 LINTEL DETAILS
NO SCALE



K 99-ASM5.02 ROOFING DETAIL
NO SCALE



NOTE:

1. SEE LINTEL SCHEDULE FOR LINTEL AND DOOR HEAD DETAILS

HOLLOW METAL JAMB

L 99-ASM5.02 INTERIOR DOOR DETAIL
0 3" 6"

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

ARCHITECTURAL/STRUCTURAL/MECHANICAL DETAILS - 2

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO.
1226.004

PROJECT MGR.
SCOTT W. STEARNS

STRAND ASSOCIATES®

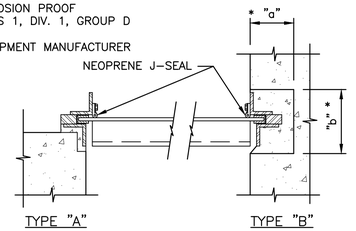
SHEET
290
990-ASM5.02

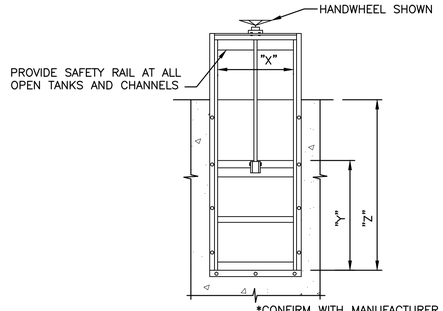
File: S:\MAD\1200--1299\1226\004\Acad\Drawings\990-ASM5.02.dwg Time: Aug 23, 2013 - 10:21am

REFERENCE DWG. NUMBER	EQUIPMENT NUMBER	DIMENSION "X"	DIMENSION "Y"	DIMENSION "Z"	MOUNTING TYPE SIDES	MOUNTING TYPE INVERT	OPERATOR TYPE **	ELECTRICAL RATING	MOTOR (hp) +	CONTROL SERVICE	REMARKS
110-ASM1.01	G-1-10-3	4'-6"	4'-6"	5'-3"	B	B	M	E.P.	1	Open/Close	Provide only new motor operator and stem. See specifications.
110-ASM1.01	G-1-17-3	4'-6"	3'-0"	6'-0"	B	B	M	E.P.	1/2	Open/Close	Provide only new motor operator.
110-ASM1.01	G-2-2-1	6'-0"	3'-6"	8'-3"	?	?	C				
110-ASM1.01	G-2-2-2	6'-0"	3'-6"	8'-3"	?	?	C				
200-DASM1.01	G-5-1-1	3'-6"	2'-0"	4'-0"	B	B	C				
200-DASM1.01	G-5-1-2	3'-6"	2'-0"	4'-0"	B	B	C				
200-DASM1.01	G-5-1-3	3'-6"	2'-0"	4'-0"	B	B	C				
200-DASM1.01	G-5-1-4	3'-6"	2'-0"	4'-0"	B	B	C				
200-DASM1.01	G-5-1-5	3'-6"	2'-0"	4'-0"	B	B	C				
200-DASM1.01	G-5-1-6	3'-6"	2'-0"	4'-0"	B	B	C				
200-DASM1.01	G-5-1-7	3'-6"	2'-0"	4'-0"	B	B	C				
200-DASM1.01	G-5-1-8	3'-6"	2'-0"	4'-0"	B	B	C				
200-DASM1.01	G-5-1-9	3'-6"	2'-0"	4'-0"	B	B	C				
200-DASM1.01	G-5-1-10	3'-6"	2'-0"	4'-0"	B	B	C				
200-DASM1.01	G-5-1-11	3'-6"	2'-0"	4'-0"	B	B	C				
200-DASM1.01	G-5-1-12	3'-6"	2'-0"	4'-0"	B	B	C				
200-DASM1.01	G-6-2-1	4'-0"	3'-0"	3'-6"	B	B	C				
200-DASM1.01	G-6-2-2	4'-0"	3'-0"	3'-6"	B	B	C				
200-DASM1.01	G-6-2-3	4'-0"	3'-0"	3'-6"	B	B	C				
200-DASM1.01	G-6-2-4	4'-0"	3'-0"	3'-6"	B	B	C				
200-DASM1.01	G-6-2-5	4'-0"	3'-0"	3'-6"	B	B	C				
200-DASM1.01	G-6-2-6	4'-0"	3'-0"	3'-6"	B	B	C				
200-DASM1.01	G-6-2-7	4'-0"	3'-0"	3'-6"	B	B	C				
200-DASM1.01	G-6-2-8	4'-0"	3'-0"	3'-6"	B	B	C				
236-DASME1.01	G-6-19-1	4'-0"	6'-0"	17'-0"	A	A	C				
236-DASME1.01	G-6-19-2	12'-0"	5'-0"	8'-0"	A	A	M		2	Modulating	Downward opening weir gate.
310-ASM1.04	G-8-51-1	4'-6"	4'-0"	6'-9"	A	A	M		1/2	Modulating	

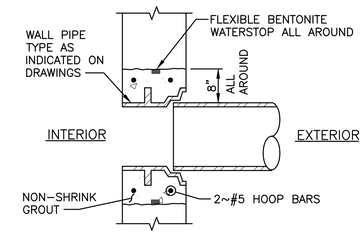
** H – HANDWHEEL
C – CRANK
M – MOTOR
F.S. – FLOOR STAND
E.P. – EXPLOSION PROOF CLASS 1, DIV. 1, GROUP D

† BY EQUIPMENT MANUFACTURER





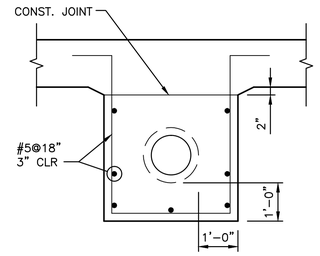
A 990–ASM5.04 SLIDE GATE DETAILS NO SCALE



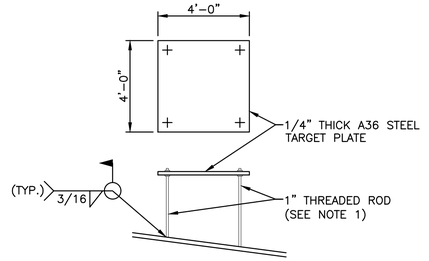
NOTES:

1. FOR 4–INCH AND LARGER PIPE THROUGH WATER TIGHT CONCRETE MEMBERS ONLY.
2. REMOVE CONCRETE FROM EXISTING REINFORCING. BEND EXISTING REINF. AROUND NEW WALL PIPE IF POSSIBLE. IF BARS MUST BE CUT, CUT ONLY AT CENTER AND BEND.

B 990–ASM5.04 EXISTING WALL PIPE PENETRATION NO SCALE



C 990–ASM5.04 PIPE ENCASEMENT NO SCALE

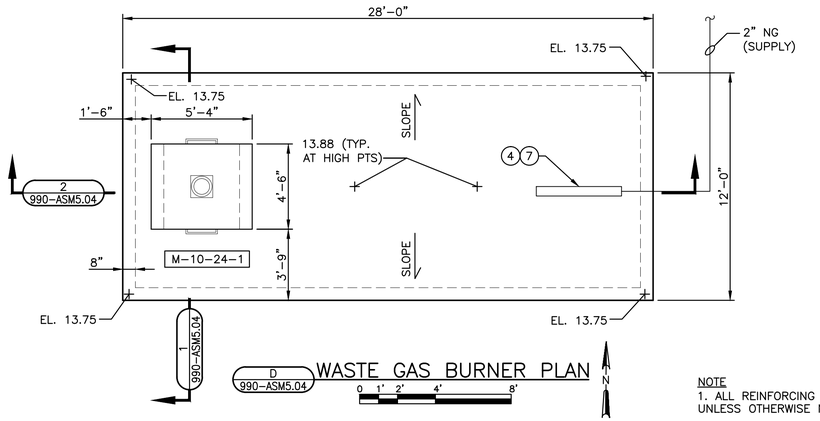


NOTES:
1. CONTRACTOR SHALL VERIFY SIZE WITH DIGESTER COVER SLOPE SUCH THAT TARGET PLATE IS LEVEL.

E 990–ASM5.04 TARGET PLATE NO SCALE

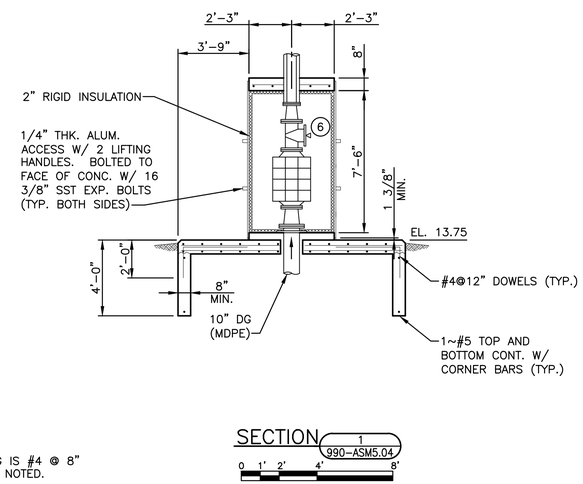
KEY NOTES:

1. 3"x3" SS UNISTRUT WITH CONCRETE FILL. WRAP EXPANSION MATERIAL AROUND UNISTRUT THROUGH CONCRETE.
2. ENCASE PIPE 2'–0" IN BOTH DIRECTIONS FROM CENTERLINE OF FOUNDATION WALL. PIPE SHALL BE ENCASED IN CONCRETE. SEE C 990–ASM5.04
3. CLEAR CRUSHED STONE TO BASE OF FOUNDATION WALL.
4. WASTE GAS BURNER CONTROL PANEL AND VENTURI ASSEMBLY, LOCATE CONTROL PANEL AND PIPING AS REQUIRED BY MANUFACTURER. CONTRACTOR TO PROVIDE 1/2" G AND 2" G BETWEEN CONTROL PANEL AND BURNER. PROVIDE 1/2" FLAME CHECK. PROVIDE REDUCERS AS NECESSARY.
5. PROVIDE 2" FLAME CHECK, PRESSURE REGULATOR AND SHUTOFF VALVE TO REDUCE PRESSURE FROM 5 PSI TO 0.5 PSI.
6. PROVIDE SUFFICIENT SUPPORT FOR VALVE AND FLANGE TRAP ASSEMBLY SUCH THAT NO LOAD IS CARRIED BY TRANSITION FITTING.
7. ALL ELECTRICAL WORK AND EQUIPMENT WITHIN 10'–0" OF ALL WASTE GAS BURNER FIXTURES, APPURTENANCES, AND HOUSINGS SHALL BE RATED FOR CLASS I, DIVISION 1, GROUPS C AND D LOCATIONS. ALL ELECTRICAL WORK AND EQUIPMENT BETWEEN 10'–0" AND 15'–0" FROM ALL FIXTURES, APPURTENANCES, HOUSINGS, AND 19'–0" AGOVE THE CLASS I, DIVISION 1, GROUPS C AND D ENVELOPE SHALL BE RATED FOR CLASS I, DIVISION 2, GROUPS C AND D LOCATIONS.

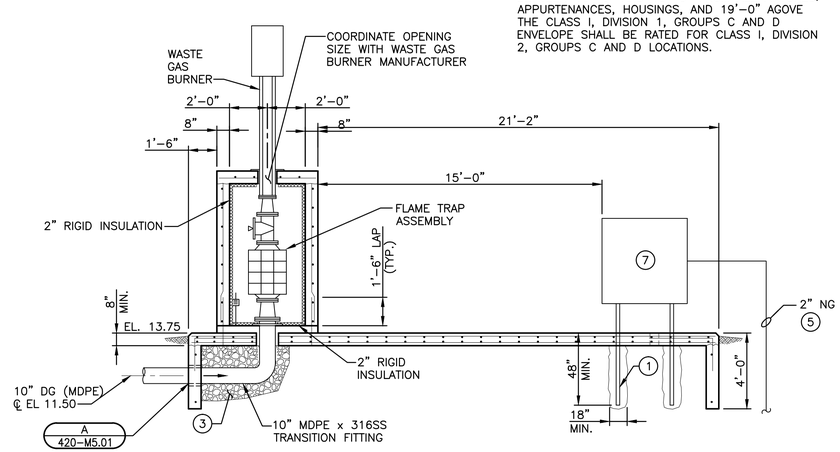


D 990–ASM5.04 WASTE GAS BURNER PLAN 0 1' 2' 4' 8'

NOTE
1. ALL REINFORCING IS #4 @ 8" UNLESS OTHERWISE NOTED.



SECTION 1 990–ASM5.04 0 1' 2' 4' 8'



SECTION 2 990–ASM5.04 0 1' 2' 4' 8'

NOTES
1. ALL REINFORCING IS #4 @ 8" UNLESS OTHERWISE NOTED.
2. CONFIRM ALL DIMENSIONS WITH EQUIPMENT SUPPLIER.
3. PROVIDE SUPPORTS AS NECESSARY FOR ALL EQUIPMENT AND PIPING.

NO.	REVISIONS	DATE:
1	ISSUED FOR BIDDING	8/16/13

ARCHITECTURAL/STRUCTURAL/MECHANICAL DETAILS - 4

WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
WAUKESHA, WISCONSIN

JOB NO. 1226.004
PROJECT MGR. SCOTT W. STEARNS

STRAND ASSOCIATES®

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