

2009-00244

Certificate of Substantial Completion

Project: Water Treatment Plant	Owner: Ohio County Water District	Owner's Contract No.: US231 WTP
Contract: Ohio County Water District Water Treatment Plant		Date of Contract: July 24, 2009
Contractor: Building Crafts, Inc.		Engineer's Project No.: 12007060

This [definitive] Certificate of Substantial Completion applies to:

- All Work under the Contract Documents: The following specified portions:

RECEIVED

JUN 20 2012

PUBLIC SERVICE
COMMISSION

June 20, 2011

Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Project or portion thereof designated above is hereby declared and is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below.

A [definitive] list of items to be completed or corrected, is attached hereto. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

The responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, heat, utilities, insurance and warranties shall be as provided in the Contract Documents except as amended as follows:

- Amended Responsibilities Not Amended

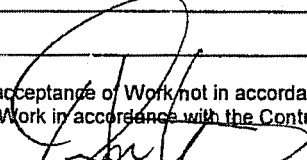
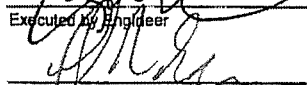
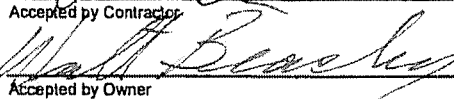
Owner's Amended Responsibilities:

Contractor's Amended Responsibilities:

The following documents are attached to and made part of this Certificate:

Punch list for PAE Bldg, Rapid Mix/Flocculation/Sedimentation, Raw Water intake Area, Ultrafiltration Building Area, GAC Area, Site Work, Chlorine Contact/Clearwell/HSPS, Chlorine & Fluoride Bldg and Operations Bldg.

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

	8-3-11
Executed by Engineer	Date
	8/16/11
Accepted by Contractor	Date
	8/16/11
Accepted by Owner	Date



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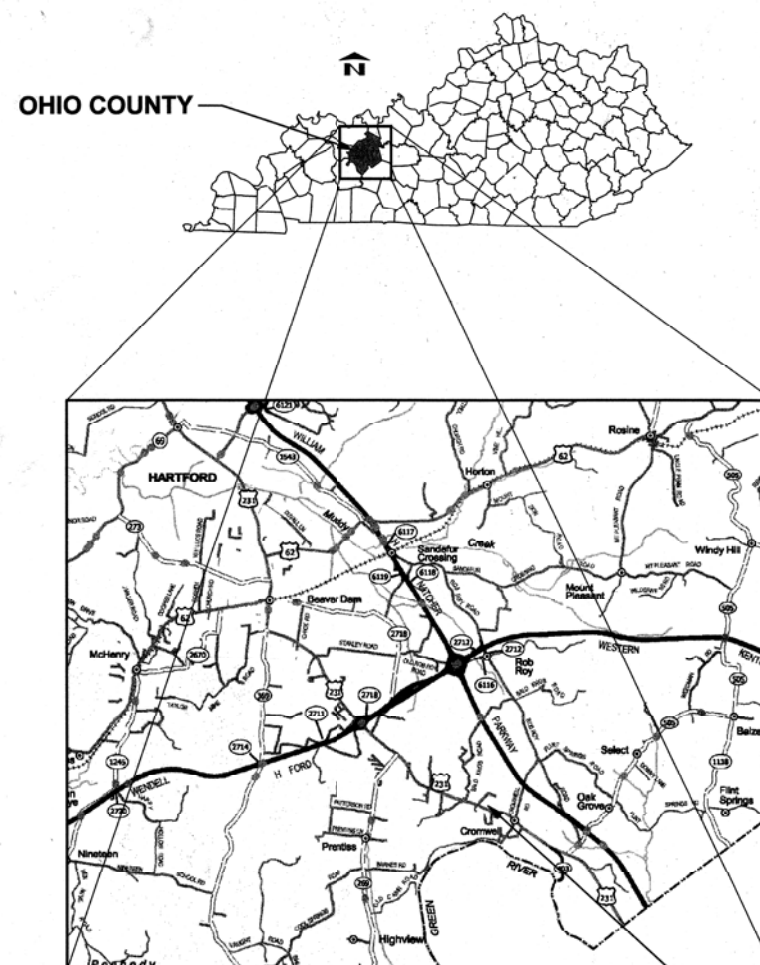
ISSUED:

OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT

Client
OHIO COUNTY WATER DISTRICT
124 WASHINGTON STREET
HARTFORD, KY 42347
(270) 298-7704

Location
CROMWELL, OHIO COUNTY, KY

Project Number
120-07060



VICINITY MAP
NOT TO SCALE



CROMWELL WATER
PLANT SITE

OHIO COUNTY WATER DISTRICT

Harry Storm - Chairman
Julie Cartwright - Secretary
Ronnie Ashburn - Treasurer
Henry Morgan - Commissioner
Waymon Cambron - Commissioner
Mike Wilson - Commissioner
Ben Everly - Commissioner

MAY, 2009 - CONFORMED SET
EDA PROJECT NO. 04-79-05932
KIA PROJECT NO. WX21183012

FUNDING AGENCIES: KENTUCKY INFRASTRUCTURE AUTHORITY (KIA)
RURAL DEVELOPMENT (RD)

GRANT/LOAN NO. F08-08
LOC 6-26-07

PROJECT RECORD

CONFORMED SET 5/09



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Wednesday, July 01, 2009 9:05:05 AM DRAWING: \\netofas3\projects\1207060 Ohio County\CONFORMED SET 5\09\GENERAL\07060 G-101 INDEX.DWG LAYOUT: G-101 USER NAME: JEREMY M. FRONIGILLO



PROJECT RECORD

CONFORMED SET 5/09



BY	
DATE	
MARK	
DESCRIPTION	

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: GROOMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

Project No.: 120-07060
Designed By: GDP
Drawn By: GDP
Checked By:

G-101

UTILITY NOTES:

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF ALL UNDERGROUND FACILITIES WITHIN THE CONSTRUCTION LIMITS. EXISTING UTILITIES DAMAGED DURING THE COURSE OF THE CONTRACT SHALL BE IMMEDIATELY REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
- PRIOR TO ANY EXCAVATION, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE NECESSARY UTILITY AGENCIES AND OBTAIN THE PRECISE LOCATION OF THEIR FACILITIES. ANY UTILITIES UNEARTHED THAT ARE NOT SHOWN ON THESE PLANS CORRECTLY SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE REMOVAL.
- THE CONTRACTOR SHALL REMOVE ALL UNSUITABLE FILL MATERIAL FROM THE SITE, INCLUDING, BUT NOT LIMITED TO, TREE STUMPS, BRANCHES, VEGETATION AND ANY OTHER ORGANIC MATERIAL. ANY MATERIAL REMOVED FROM THE SITE SHALL BE DISPOSED OF IN AN APPROVED LEGAL MANNER BY THE CONTRACTOR.
- DAMAGE DUE TO CONSTRUCTION ACTIVITIES OF ANY STRUCTURE SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

DISTRIBUTION SYSTEM NOTES

- PIPE LINE MATERIALS SHALL BE AS SHOWN ON THE PLANS.
- VALVES AND MAINS SHALL BE LOCATED WITH MARKER POSTS OR PIPES PER DETAIL.
- VALVES SHALL BE LOCATED ADJACENT TO THE FITTINGS IN THE BRANCHES AS SHOWN ON THE PLANS.
- THE LENGTH OF MAINS SHOWN ARE APPROXIMATE AND MAY BE MORE OR LESS TO FIT THE FIELD CONDITIONS.
- MAINS ADJACENT TO A ROAD CUT SECTION SHALL BE LAID DEEPER AND/OR LOCATED TO PREVENT RELOCATION OR DAMAGE BY FUTURE EXCAVATION OF BANK.
- ALL MAINS AND SERVICE LINES TO BE ABANDONED SHALL BE DISCONNECTED FROM THE LIVE MAINS AND THE LIVE MAINS SHALL BE SEALED AND BLOCKED AS SPECIFIED.
- HIGHWAY (STATE AND FEDERAL) ROADWAYS AND RAILROAD CROSSINGS SHALL BE MADE WITH A BORE AND CASING AS SHOWN ON THE PLANS AND PER THE RESPECTIVE PERMIT.
- THE DESCRIPTIONS AND LOCATIONS OF EXISTING WATER MAINS AND OTHER UTILITIES ARE FROM RECORDS AND HEARSAY EVIDENCE ONLY. THE EXACT LOCATION, PROTECTION AND REPAIR (IF DAMAGED) SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- THERE ARE EXISTING TELEPHONE, ELECTRIC, NATURAL GAS LINES AND POSSIBLE OTHER UTILITIES. THE CONTRACTOR SHALL CONTACT THE OWNER OF EACH UTILITY FOR ASSISTANCE IN LOCATION AND PROTECTION. THE EXACT LOCATION, PROTECTION AND REPAIR (IF DAMAGED) SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL CONDITIONS OF EASEMENTS.
- WATER MAIN DEPTH SHALL BE 36" TO TOP OF PIPE IN PRIVATE R/W, 42" TO TOP OF PIPE IN STATE R/W AND MAXIMUM OF 60" TO TOP OF PIPE IN ALL CONDITIONS UNLESS OTHERWISE NOTED ON THE PLANS.

GENERAL NOTES

- THE CONTRACTOR SHALL FIELD LOCATE EXISTING STRUCTURES AND PIPING AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES HE ENCOUNTERS BEFORE BEGINNING HIS CONSTRUCTION OPERATIONS. SITE (YARD) PIPING LAYOUT OR DIMENSIONS ARE GIVEN TO SHOW THE ENGINEER'S INTENT AND TO AID THE CONTRACTOR IN PIPE INSTALLATION.
- GENERALLY, THE LIMITS OF CONSTRUCTION SHALL BE THE FENCE LINES, UNLESS OTHERWISE NOTED. ANY ADDITIONAL EASEMENTS REQUIRED FOR CONSTRUCTION SHALL BE ACQUIRED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER. A WRITTEN REQUEST FOR ANY ADDITIONAL EASEMENTS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE OWNER PRIOR TO ANY CONSTRUCTION OPERATIONS.
- DIMENSIONS OF EXISTING STRUCTURES AND/OR SITE RESTRICTIONS ARE APPROXIMATE. ALL NECESSARY DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURES & TOPOGRAPHY SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD PRIOR TO HIS CONSTRUCTION OPERATIONS.
- GENERALLY, ALL EXISTING EQUIPMENT, PIPING, VALVING, ETC., SHOWN TO BE REMOVED, SHALL, AFTER REMOVAL, BE DISPOSED OF BY THE CONTRACTOR UNLESS SHOWN OTHERWISE ON THESE DRAWINGS. CONTRACTOR SHALL CONSULT PLANT REPRESENTATIVE BEFORE DISPOSAL OF ANY ITEMS.
- ALL WALL PENETRATIONS FOR PIPING SHALL CONFORM TO THE STANDARD DETAILS AS REQUIRED BY THE CONTRACT DRAWINGS AND SPECIFICATIONS UNLESS OTHERWISE NOTED.
- ALL BURIED PIPES SHALL HAVE A MINIMUM OF 3'-0" OF COVER AS MEASURED VERTICALLY FROM FINISHED GRADE TO THE TOP OF PIPE, UNLESS OTHERWISE NOTED.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO WORK ALL APPLICABLE DRAWINGS AND THE APPROPRIATE SPECIFICATIONS AS A UNIT. ANY OMISSIONS, DELETIONS, OR CONFLICTS ARISING AS A RESULT OF FAILURE TO INCORPORATE ALL DRAWINGS AND SPECIFICATIONS WHICH APPLY SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDED COST TO THE OWNER.
- NOT ALL PIPE SUPPORTS HAVE BEEN SHOWN, HOWEVER ALL PIPING, INSIDE AND OUTSIDE, SHALL BE ADEQUATELY SUPPORTED AND BLOCKED SO AS NOT TO PRODUCE UNDUE STRAIN OR VIBRATION ON PIPE JOINTS OR EQUIPMENT.
- ALL PIPING ABANDONED IN PLACE SHALL BE PROPERLY CAPPED OR PLUGGED AT EACH END AND RENDERED LEAKPROOF.
- EXACT LOCATIONS OF DUCTS, CONDUITS, LIGHT FIXTURES AND PIPES SHALL BE FIELD LOCATED AND COORDINATED WITH THE WORK OF SUBCONTRACTORS.
- ALL TRADES AND ALL SUBCONTRACTORS SHALL NOTIFY THE GENERAL CONTRACTOR OF THE SIZES AND LOCATIONS OF ALL OPENINGS AND RECESSES IN STRUCTURES WHICH MAY BE REQUIRED FOR THEIR WORK.
- ALL EXISTING PAVING DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED IN ACCORDANCE WITH STANDARD DETAILS.
- CONTRACTOR SHALL FIELD LOCATE AND EXPOSE UTILITIES BEFORE INSTALLING PIPE OR CONDUITS.
- CONTRACTOR IS RESPONSIBLE FOR ALL DEWATERING, SHEETING, AND SHORING REQUIRED FOR EXCAVATION AND SHALL SUBMIT "PE" STAMPED PLANS PRIOR TO ANY EXCAVATION.
- ALL NON-POTABLE WATER OUTLETS WHERE READILY ACCESSIBLE TO PLANT EMPLOYEES' USE SHALL BEAR THE FOLLOWING SIGN: "NON-POTABLE WATER - DO NOT DRINK"

GEOTECHNICAL INFORMATION

A GEOTECHNICAL REPORT WAS PREPARED FOR THIS PROJECT AND IS AVAILABLE. REFER TO SPECIFICATION SECTION 00220 - GEOTECHNICAL DATA.

FLOWSTREAM IDENTIFICATION

ABBREVIATION	FLOW STREAM IDENTIFICATION	PIPE/DUCT MATERIAL	PIPE MATERIAL ABBREV.	SPEC NUMBER	PIPE LINING	DESIGN PRESSURE (PSI)	TEST PRESSURE (PSI)
ACh	ALUMINUM CHLOROHYDRATE	POLYVINYL CHLORIDE	PVC	15064	N/A	50	100
AHP	HIGH PRESSURE AIR	STAINLESS STEEL	SST	15066	N/A	100	150
ALP	LOW PRESSURE AIR	STAINLESS STEEL	SST	15066	N/A	10' WCH	15
BYP	GA C BYPASS	DUCTILE IRON PIPE	DP	15062	CEMENT MORTAR	30	75
CA	CITRIC ACID	POLYVINYL CHLORIDE	PVC	15064	N/A	50	100
CD8	CHLORINE DIOXIDE SOLUTION	POLYVINYL CHLORIDE	PVC	15064	N/A	60	100
CF	CARBON FILL (GA C)	CARBON STEEL	CS	11245	EPOXY LINING	50	125
CI	CLEARWELL INFLUENT	DUCTILE IRON PIPE	DP	15062	CEMENT MORTAR	30	75
CP	CLEAN-IN-PLACE SOLUTION	POLYVINYL CHLORIDE	PVC	15064	N/A	25	75
CLG	CHLORINE GAS	POLYVINYL CHLORIDE	PVC	15090	N/A	VACUUM	50
CLS	CHLORINE SOLUTION	POLYVINYL CHLORIDE	PVC	15090	N/A	30	100
D	PLANT DRAIN	DUCTILE IRON PIPE	DP	15062	EPOXY LINING	GRAVITY	15' WCH
DR-2	PLANT DRAIN	POLYVINYL CHLORIDE	PVC	15064	N/A	GRAVITY	15' WCH
FM	FORCE MAIN	DUCTILE IRON PIPE	DP	15062	CEMENT MORTAR	50	100
FW	FINISHED WATER (POTABLE)	DUCTILE IRON PIPE	DP	15062	CEMENT MORTAR	220	275
GA CF	GA C FILTRATE	DUCTILE IRON PIPE	DP	15062	CEMENT MORTAR	30	75
GA CS	GA C SUPPLY	DUCTILE IRON PIPE	DP	15062	CEMENT MORTAR	40	100
HFA	HYDROFLUOSILICIC ACID	POLYVINYL CHLORIDE	PVC	15090	N/A	50	100
MF	MEMBRANE FEED	POLYVINYL CHLORIDE	PVC	15064	N/A	10	50
NAC	SODIUM CHLORIDE	POLYVINYL CHLORIDE	PVC	15090	N/A	10	50
NAOH	SODIUM HYDROXIDE (25%)	POLYVINYL CHLORIDE	PVC	15090	N/A	50	100
NAP	SODIUM PERMANGANATE	POLYVINYL CHLORIDE	PVC	15090	N/A	50	100
NAS	SODIUM BISULFITE	POLYVINYL CHLORIDE	PVC	15090	N/A	50	100
OCL	SODIUM HYPOCHLORITE (12.5%)	POLYVINYL CHLORIDE	PVC	15090	N/A	50	100
PAC	PAC SOLUTION	POLYVINYL CHLORIDE	PVC	15090	N/A	75	150
PERM-1	MEMBRANE PERMEATE (FILTRATE)	POLYVINYL CHLORIDE	PVC	15064	N/A	40	100
PERM-2	MEMBRANE PERMEATE (FILTRATE)	STAINLESS STEEL	SST	15066	N/A	40	100
PSW	PLANT SERVICE WATER	POLYVINYL CHLORIDE	PVC	15064	N/A	80	150
RW	RAW WATER	DUCTILE IRON PIPE	DP	15062	CEMENT MORTAR	40	100
SW-1	SAMPLE LINE	POLYVINYL CHLORIDE	PVC	15064	N/A	50	100
FL-1	SAMPLE LINE	POLYVINYL CHLORIDE	PVC	15064	N/A	50	100
SC	SPENT CARBON (GA C)	CARBON STEEL	CS	11245	EPOXY LINING	50	125
SL	SLUDGE	DUCTILE IRON PIPE	DP	15062	EPOXY LINING	25	75
SS	SANITARY SEWER	POLYVINYL CHLORIDE	PVC	15070	N/A	GRAVITY	15' WCH
SW	SETTLED WATER	DUCTILE IRON PIPE	DP	15062	CEMENT MORTAR	10	50

GENERAL NOTES

- ALL BURIED PIPE JOINTS SHALL BE RESTRAINED
- COAT BURIED PIPE PER PIPE SPECIFICATION
- TEST LINES PER SECTION 15044 UNLESS OTHERWISE NOTED
- LABEL ALL PIPING PER SECTION 15000
- THE SUFFIX -DC REFERS TO DUAL CONTAINED PIPING
- ALL EXPOSED EXTERIOR PIPING SHALL BE HEAT TRACED AND INSULATED PER SPEC. 15080 AND 15768.

SPECIFIC NOTES

- DISINFECT PIPING PER SECTION 15140
- LININGS/PIPE SHALL BEAR ANSIS/NSF 61 APPROVAL
- TEST SAMPLE LINE WITH PIPE
- WCH = WATER COLUMN HEIGHT

SITE WORK

- UNLESS OTHERWISE NOTED, SLOPE ALL PAVEMENT/AND GRADING AWAY FROM STRUCTURES.
- PROVIDE 6 FOOT WIDE SOD STRIP AROUND ALL NEW STRUCTURES.
- ALL DRAINAGE DITCHES SHALL BE SODDED OR SEEDED USING EROSION CONTROL BLANKETS TO PREVENT SOIL EROSION.
- ALL BERMS & SLOPES OF 2:1 OR GREATER TO BE SEEDED HEAVILY W/FESCUE, (EUONYMUS COLORATUS), UNLESS OTHERWISE NOTED.
- FINAL GRADING SHALL BE COMPLETED IN SUCH A MANNER AS TO ELIMINATE PONDING OF SURFACE WATER.

SITE STORAGE

- USE ONLY STORAGE AREAS APPROVED BY THE OWNER IN COMPLIANCE WITH THE SPECIFICATIONS.

NOISE CONTROL

- USE PROPERLY MAINTAINED EQUIPMENT
- LIMIT CONSTRUCTION TO NORMAL WORKING HOURS

POLLUTION CONTROL

- COMPLY WITH SPECIFICATIONS CONCERNING JOB SITE AND FINAL CLEANING.

TRAFFIC CONTROL

- MAINTAIN TRAFFIC AND PARKING AREAS PER SPECIFICATIONS.
- CONTROL TRAFFIC FLOW PER SPECIFICATIONS.
- PROTECT NEW PAVEMENT PER SPECIFICATIONS.

SITE RESTORATION AND CLEAN-UP

- EXECUTE EXCAVATION AND BACKFILL OPERATIONS TO PREVENT DAMAGE TO OTHER WORK AND TO PREVENT SETTLEMENT AS SPECIFIED.
- REMOVE TEMPORARY MATERIALS AND REPAIR DAMAGE AS SPECIFIED.
- CONDUCT FINAL CLEAN-UP AS SPECIFIED.
- DISPOSE OF MATERIALS, DEBRIS, AND REMOVED PLANTS AS SPECIFIED.
- CONDUCT LANDSCAPE GRADING AS SPECIFIED.

PROTECTION OF SEEDED AREAS

- RESTRICT TRAFFIC OVER SEEDED AREAS AND LANDSCAPE AREAS AS SPECIFIED.

DUST CONTROL

- PROVIDE POSITIVE DUST CONTROL AS SPECIFIED.

TETRA TECH
www.tetra-tech.com
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Suite 200, Loveland, OH 45040
PHONE: (614) 223-5000 FAX: (614) 224-1025

PROJECT RECORD

CONFORMED SET 5/09



BY	DATE	DESCRIPTION
SGN	5/5/09	ADDENDUM 1

Client: OHIO COUNTY WATER DISTRICT
Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

FLOW STREAM ID AND GENERAL NOTES

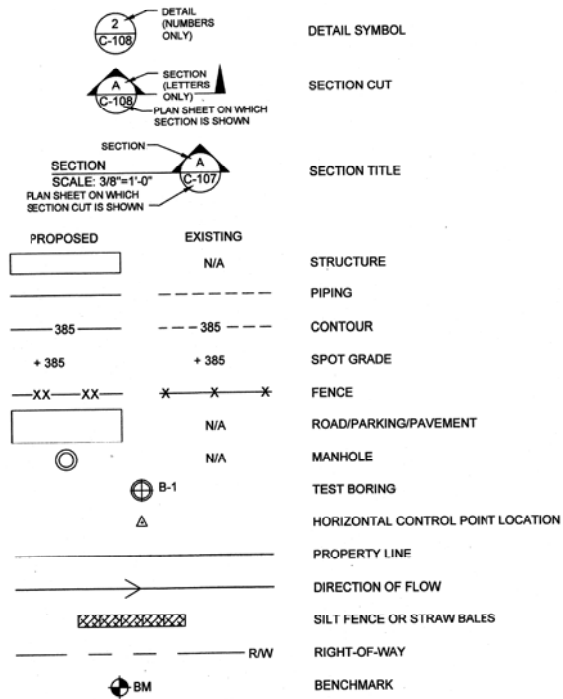
Project No.:	120-07060
Designed By:	GDP
Drawn By:	GDP
Checked By:	

G-102

Wednesday, July 01, 2009 9:06:14 AM DRAWING: \\terracris3\projects\123-07060 Ohio County\CONFORMED SET 5-09\GENERAL\07060-G-102 FLOW STREAM ID AND GENERAL NOTES.DWG LAYOUT: G-102 USER NAME: JEREMY M. FRONCILLO

ABBREVIATIONS

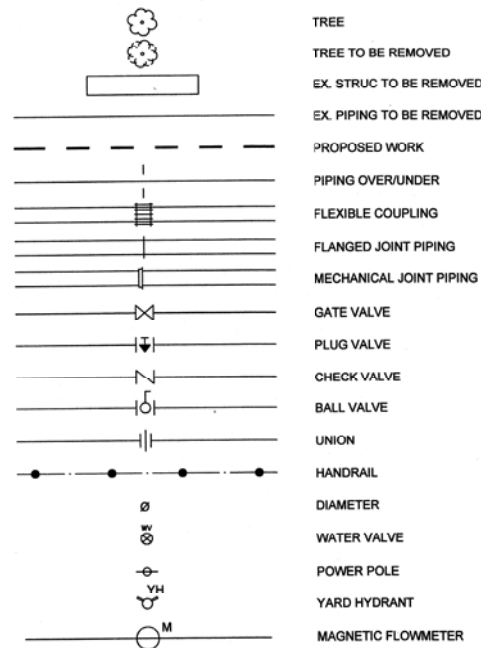
ABAND	ABANDONED
A.F.F.	ABOVE FINISH FLOOR
AL, ALUM	ALUMINUM
APPROX	APPROXIMATE
ATT.	ATTENUATING
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
B	BLOWER
BLWR	BOARD
BD	BUILDING
BLDG	BUTTERFLY VALVE
BRV	C
C	CENTERLINE
C/L	CENTER TO CENTER
C/C	CHECK VALVE
CV	CLEAN OUT
CO	CONCRETE
CLR	CONCRETE MASONRY UNIT
CONC	CONTINUATION
CMU	CORPORATION
CONT	CORRUGATED METAL PIPE
CORP	COUPLING
CMP	POLYVINYL CHLORIDE PIPE
CPLNG	D
CPVC	DEMOLISH
D	DEMOLISHED
DEMO	DOWN
DEMO'D	DRAIN
DN	DUCTILE IRON
DR	DUCTILE IRON PIPE
DI	E
DIP	ELEVATION
E	EQUIPMENT
ELEV	EXISTING
EQUIP	EXPANSION
EX, EXIST	F
EXP	FINISH FLOOR
F	FLG
FF, FIN FL	FL
FLG	FLOOR
FL	FLOOR DRAIN
FD	G
G	GALLON
GAL	GATE VALVE
GV	GAUGE
GA	GYP
GYP	H
H	HAND-OFF-AUTOMATIC
H.O.A.	HANDWHEEL
HW	HEAVY DUTY CRATING
HDG	HEIGHT
HT	HIGH DENSITY POLYETHYLENE
HDPE	HIGH POINT
HP	HORIZONTAL
H	HOSE BIBB
H.B.	I
I	INVERT
INV	M
M	MANHOLE
MH	MANUFACTURER
MFR	MECHANICAL
MECH	MECHANICAL JOINT
MJ	METER
M	MINIMUM
MIN	N
N	NATIONAL PIPE THREAD
NPT	O
O	ON CENTER
O.C.	OPERATOR
OPER	OUTSIDE DIAMETER
O.D.	P
P	PLAIN END
PE	PLUG VALVE
PVC	POLY VINYL CHLORIDE
PSI	POUND PER SQUARE INCH
PD	PRESSURE DISCHARGE
PRV	PRESSURE REDUCING VALVE
R	R
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
REQ'D	REQUIRED
RPM	REVOLUTIONS PER MINUTE
S	S
SWD	SIDE WATER DEPTH
SHT	SHEET
SST, S.STL	STAINLESS STEEL
SD	STANDARD DETAIL
SOC	SOCKET
I	THRU
THRU	T
T	TO BE ABANDONED
TBA	TO BE REMOVED
TBR	TO BE REMOVED AND REPLACED
TBRR	TOP OF
T.O.	TOP OF SLAB
I/S	TOP OF WALL
T/W	TO REMAIN IN SERVICE
TRS	TYPICAL
TYP	U
U	UNLESS OTHERWISE NOTED
U.N.O.	V
V	VERTICAL
VCP	VITRIFIED CLAY PIPE
W	W
W.C.	WATER COLUMN
WSE	WATER SURFACE ELEVATION
W/W	WITH
WD	WOOD



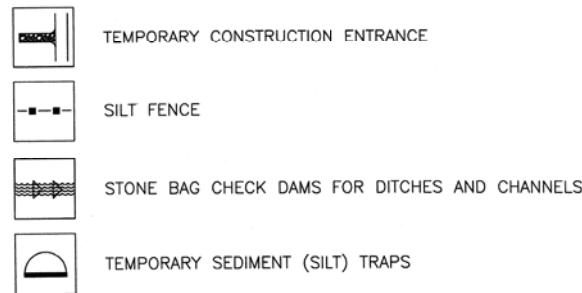
PIPING LEGEND

ACH	ALUMINUM CHLOROHYDRATE
AHP	AIR (HIGH PRESSURE)
ALP	AIR (LOW PRESSURE)
BYP	GAC BYPASS
CA	CITRIC ACID
CDS	CHLORINE DIOXIDE SOLUTION
CF	CARBON FILL (GAC)
CIP	CLEAN-IN-PLACE SOLUTION
CI	CLEARWELL INFLUENT
CLG	CHLORINE GAS
CLG-V	CHLORINE GAS VENT
CLS	CHLORINE SOLUTION
D	PLANT DRAIN
DEC	SLUDGE DECANT
FM	FORCE MAIN
FW	FINISHED WATER (POTABLE)
GACF	GAC FILTRATE
GACS	GAC SUPPLY
HFA	HYDROFLUOSILICIC ACID
ME	MEMBRANE EFFLUENT
MF	MEMBRANE FEED
NAC	SODIUM CHLORITE
NAOH	SODIUM HYDROXIDE (25%)
NAP	SODIUM PERMANGANATE
NAS	SODIUM BISULFITE
OCl	SODIUM HYPOCHLORITE (12.5%)
PAC	PAC SOLUTION
PERM-1	MEMBRANE PERMEATE (FILTRATE) (PVC)
PERM-2	MEMBRANE PERMEATE (FILTRATE) (SST)
PSW	PLANT SERVICE WATER
RW	RAW WATER
SW-1	SAMPLE LINE (PVC)
SW-2	SAMPLE LINE (SST)
SC	SPENT CARBON (GAC)
SL	SLUDGE
SS	SANITARY SEWER
SW	SETTLED WATER

SYMBOLS



EROSION CONTROL SYMBOLS:

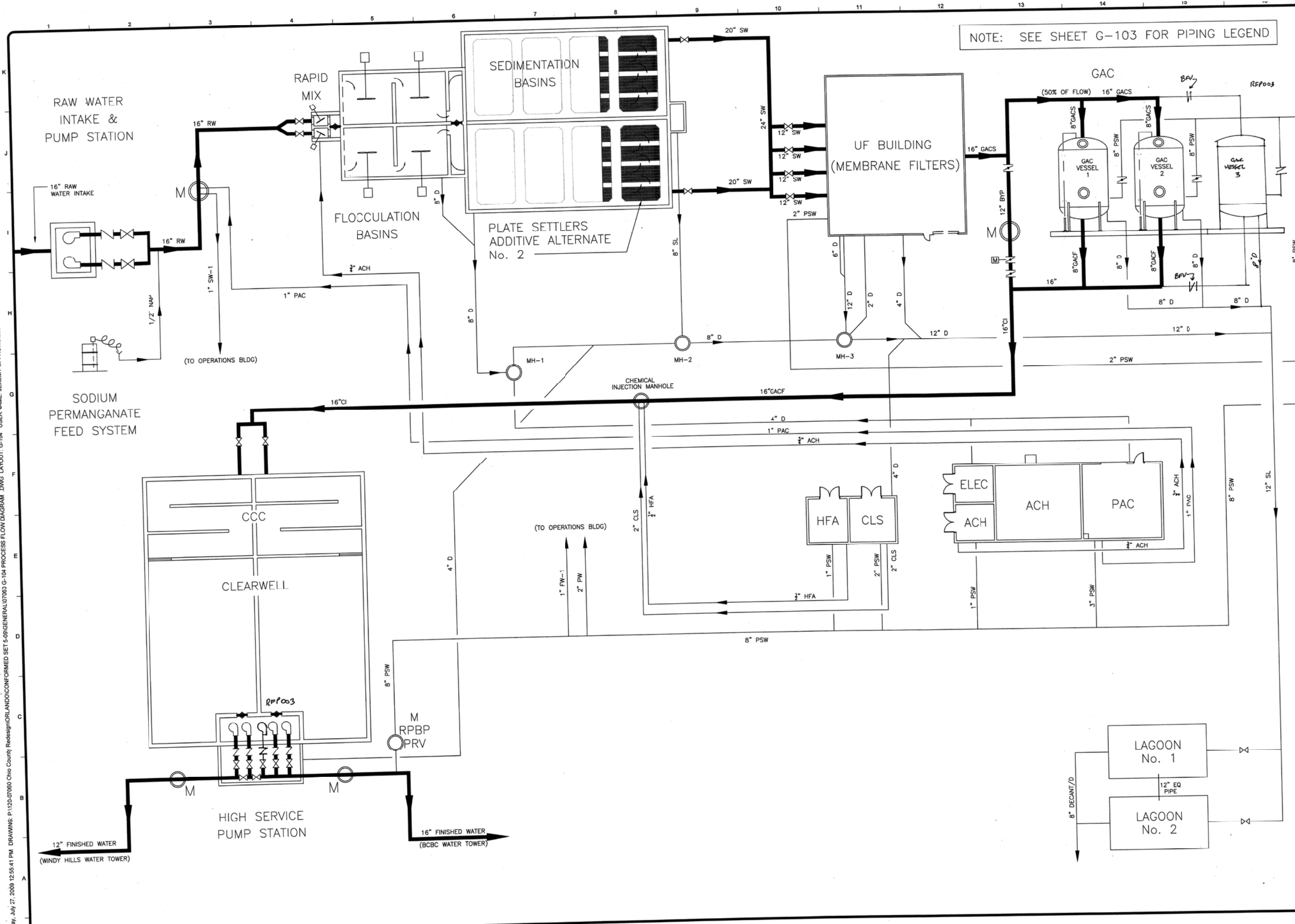


BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

Project No.: 120-07060
Designed By: GDP
Drawn By: GDP
Checked By: GDP

Monday, July 27, 2009 12:55:41 PM DRAWING: P:\120-07060 Ohio County Redesign\ORLANDO\CONFORMED SET 5-09\GENERAL\07060 G-104 PROCESS FLOW DIAGRAM .DWG LAYOUT: G-104 USER NAME: JEREMY M. FRONIGLLO



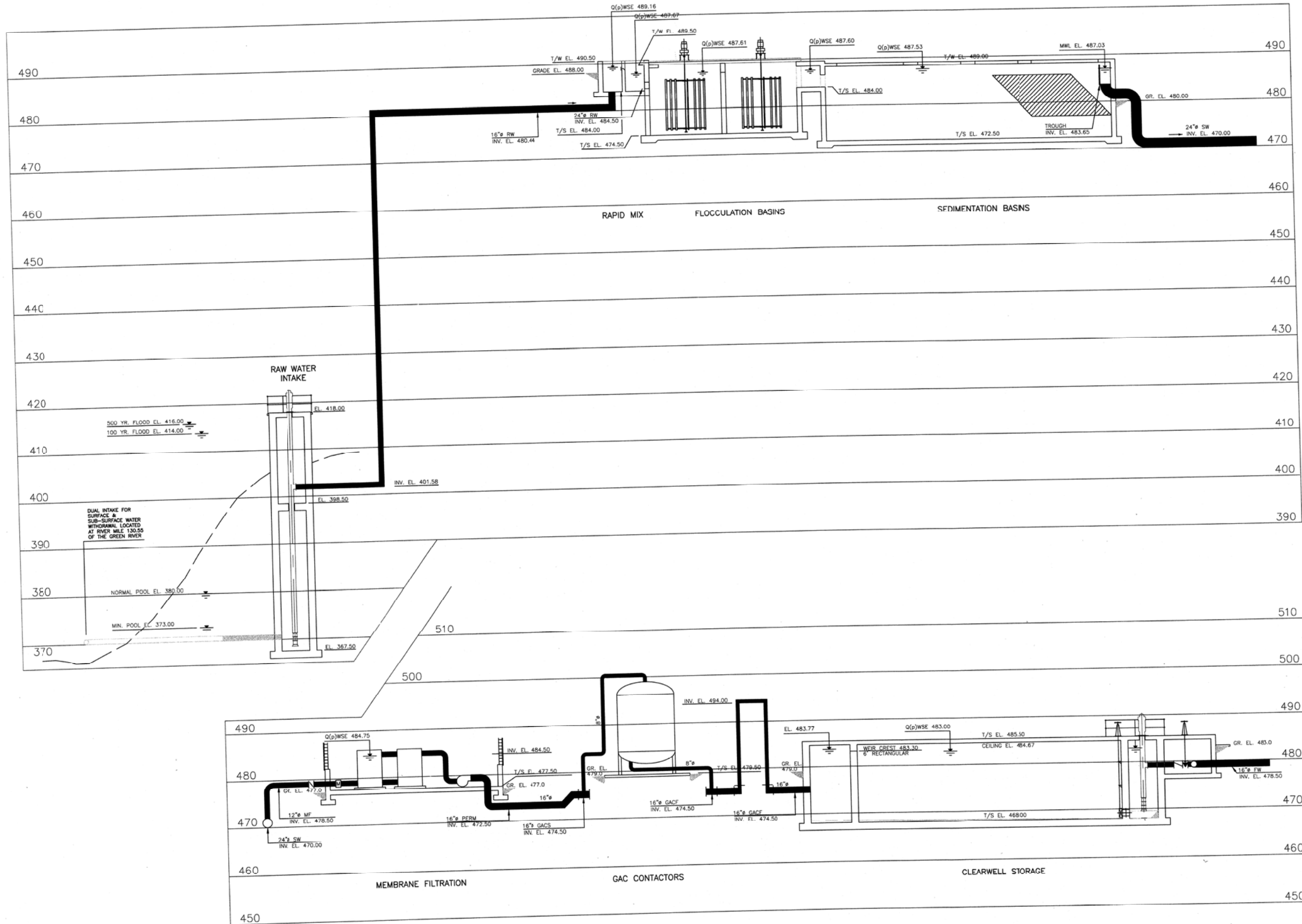
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT

PROCESS FLOW DIAGRAM

Project No.:	120-070
Designed By:	
Drawn By:	
Checked By:	

Monday, July 27, 2009 1:21:45 PM DRAWING: P:\120-07060 Ohio County Redesign\ORLANDO\CONFORMED SET 5-09\GENE\AL07060-G-105 HYDRO PROFILE.DWG LAYOUT: G-105 USER NAME: JEREMY M. FRONGILLO



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PHONE: (859) 223-9000 FAX: (859) 224-1025

PROJECT RECORD

CONFORMED SET 5/09



BY	DATE	DESCRIPTION

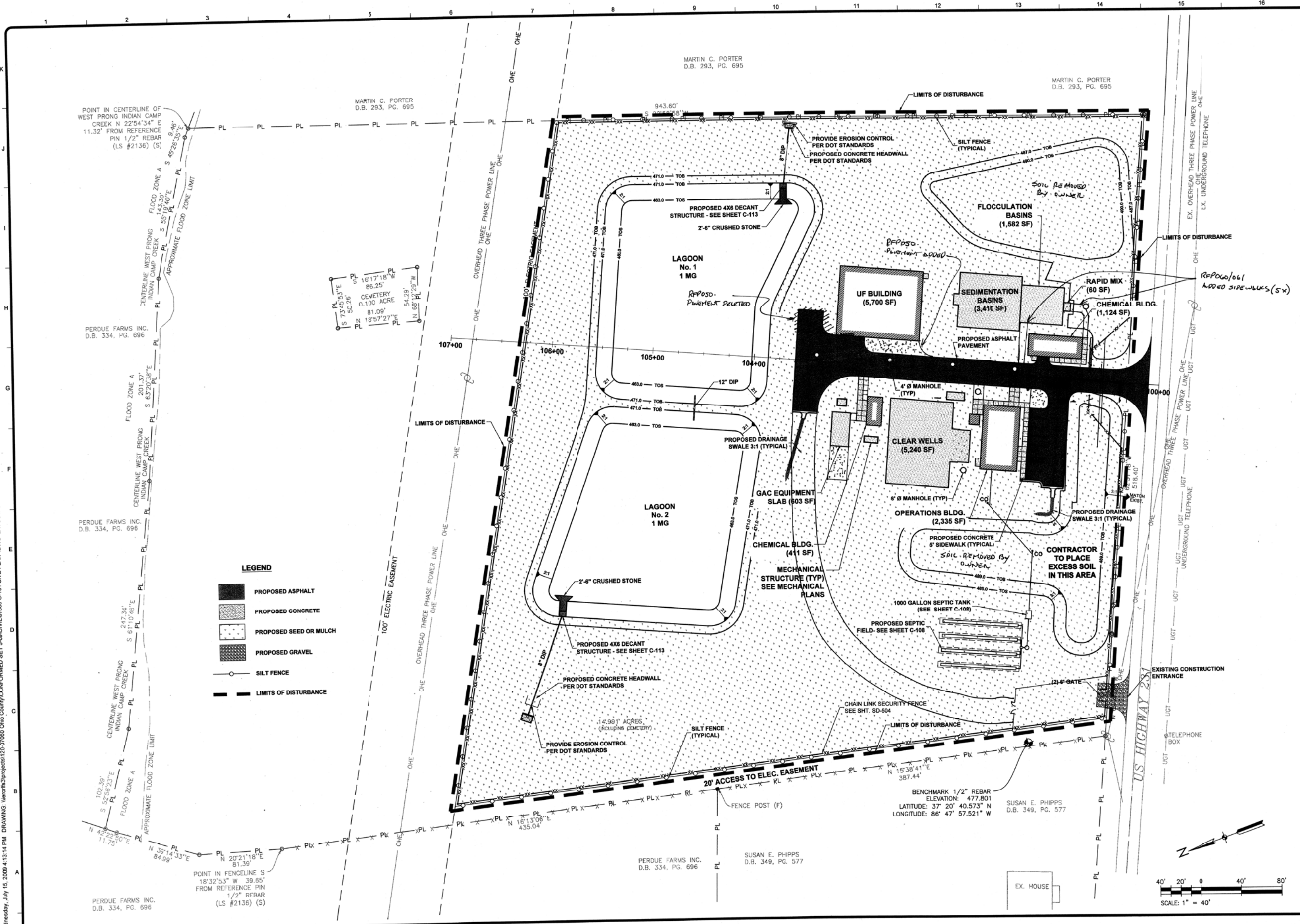
Client: OHIO COUNTY WATER DISTRICT Proj. Loc: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
HYDRAULIC PROFILE

Project No.: 120-0706
Designed By: GDI
Drawn By: GDI
Checked By:

G-105

Copyright: Tetra Tech

Wednesday, July 15, 2009 4:13:14 PM DRAWING: \\netof0183\projects\120-07060 Ohio County\CONFORMED SET 5-09\CIVIL\07060 C-101 SITE PLAN DWG LAYOUT.C-101 USER NAME: JEREMY M. FRONIGILLO

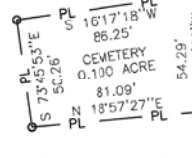


POINT IN CENTERLINE OF WEST PRONG INDIAN CAMP CREEK N 22°54'34" E 111.32' FROM REFERENCE PIN 1/2" REBAR (LS #2136) (S)

PERDUE FARMS INC. D.B. 334, PG. 696

PERDUE FARMS INC. D.B. 334, PG. 696

PERDUE FARMS INC. D.B. 334, PG. 696



LEGEND

- PROPOSED ASPHALT
- ▨ PROPOSED CONCRETE
- ▩ PROPOSED SEED OR MULCH
- ▤ PROPOSED GRAVEL
- SILT FENCE
- LIMITS OF DISTURBANCE

MARTIN C. PORTER D.B. 293, PG. 695

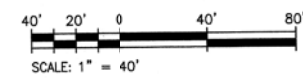
MARTIN C. PORTER D.B. 293, PG. 695

PERDUE FARMS INC. D.B. 334, PG. 696

SUSAN E. PHIPPS D.B. 349, PG. 577

SUSAN E. PHIPPS D.B. 349, PG. 577

BENCHMARK 1/2" REBAR ELEVATION: 477.801
 LATITUDE: 37° 20' 40.573" N
 LONGITUDE: 86° 47' 57.521" W



PROJECT RECORD

CONFORMED SET 5/09



BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT
OVERALL SITE PLAN AND EROSION CONTROL PLAN

Project No.: 120-07060
 Designed By: GDP
 Drawn By: GDP
 Checked By: GDP

C-101

MECHANICAL STRUCTURES GEOMETRY STATION - OFFSET

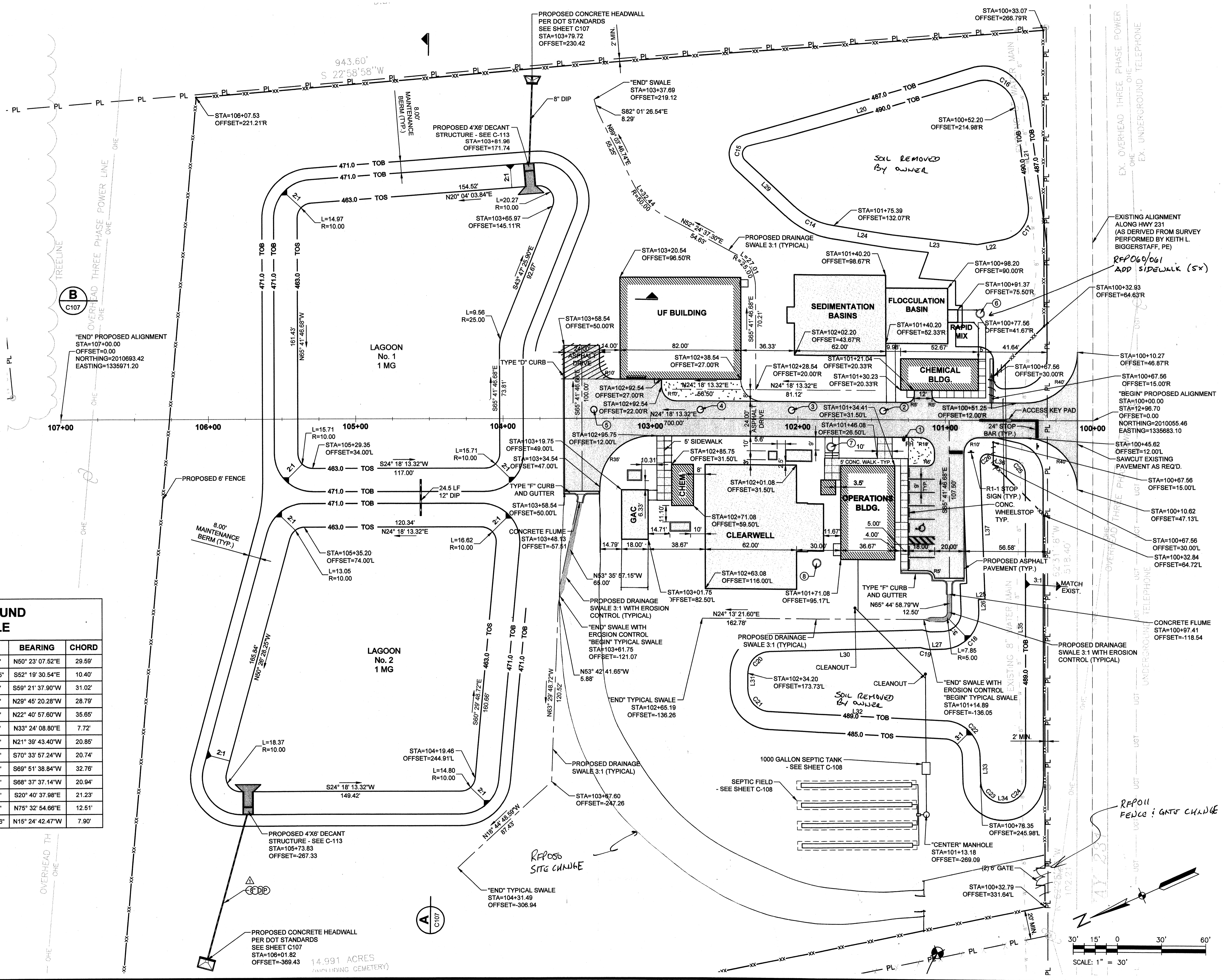
ID	TYPE	STATION OFFSET
1	FIRE HYDRANT	STA=101+28.21 OFF = 13.66'L
2	MANHOLE	STA = 101+42.20 OFFSET = 6.00'R
3	MANHOLE	STA = 102+04.20 OFFSET = 6.00'R
4	MANHOLE	STA = 102+68.20 OFFSET = 6.00'R
5	MANHOLE	STA = 103+38.43 OFFSET = 6.00'R
6	16" MAG METER	STA = 100+76.24 OFFSET = 73.00'R
7	16" MAG METER	STA = 101+77.68 OFFSET = 18.90'L
8	12" MAG METER	STA = 101+87.43 OFFSET = 97.72'L

PROPOSED MOUND LINE TABLE

LINE NO.	BEARING	DISTANCE
L20	S7° 45' 15.74"W	162.056'
L21	N73° 02' 01.22"W	69.050'
L22	N13° 31' 20.66"E	18.185'
L23	N30° 26' 15.44"E	57.179'
L24	N32° 59' 58.28"E	40.865'
L25	N18° 04' 57.46"E	4.501'
L26	N67° 36' 00.50"W	8.057'
L27	N22° 23' 59.50"E	7.559'
L29	N67° 35' 43.19"E	45.849'
L30	N22° 22' 19.89"E	102.729'
L31	N65° 41' 46.68"W	10.911'
L32	S26° 49' 41.15"W	120.258'
L33	N67° 06' 23.48"W	17.680'
L34	S24° 21' 37.76"W	0.562'
L35	S65° 42' 53.73"E	208.941'
L36	N36° 48' 43.06"E	17.120'
L37	N67° 38' 08.01"W	93.438'

PROPOSED MOUND CURVE TABLE

CURVE NO.	RADIUS	LENGTH	DELTA	BEARING	CHORD
C14	50.00'	30.04'	34° 25' 11.33"	N50° 23' 07.52"E	29.59'
C15	6.00'	12.58'	120° 09' 32.55"	S52° 19' 30.54"E	10.40'
C16	21.00'	34.90'	95° 12' 41.76"	S59° 21' 37.90"W	31.02'
C17	21.00'	31.72'	86° 33' 21.88"	N29° 45' 20.28"W	28.79'
C18	25.09'	39.66'	90° 34' 11.25"	N22° 40' 57.60"W	35.65'
C19	22.32'	7.76'	19° 55' 25.98"	N33° 24' 08.80"E	7.72'
C20	15.00'	23.06'	88° 04' 06.56"	N21° 39' 43.40"W	20.85'
C21	15.00'	22.90'	87° 28' 32.17"	S70° 33' 57.24"W	20.74'
C22	24.00'	36.05'	86° 03' 55.37"	S69° 51' 38.84"W	32.76'
C23	15.00'	23.18'	88° 31' 58.76"	S68° 37' 37.14"W	20.94'
C24	15.00'	23.58'	90° 04' 31.50"	S20° 40' 37.98"E	21.23'
C25	10.00'	13.52'	77° 28' 23.21"	N75° 32' 54.66"E	12.51'
C26	5.00'	9.11'	104° 26' 51.06"	N15° 24' 42.47"W	7.90'



Wednesday, July 15, 2009 5:03:22 PM DRAWING: \\norton\projects\120-07060 C-102 SITE GEOMETRY PLAN DWG LAYOUT: C-102 USER NAME: JEREMY M. FRONGILLO

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LEXINGTON KY 40503
PHONE: (859) 223-8000 FAX: (859) 224-1025

PROJECT RECORD

CONFORMED SET 5/09

DATE: 5/5/09
APPENDUM: 1

BY: JMF

MARK: [Symbol]

DESCRIPTION: [Blank]

Client: OHIO COUNTY WATER DISTRICT
Project: OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT

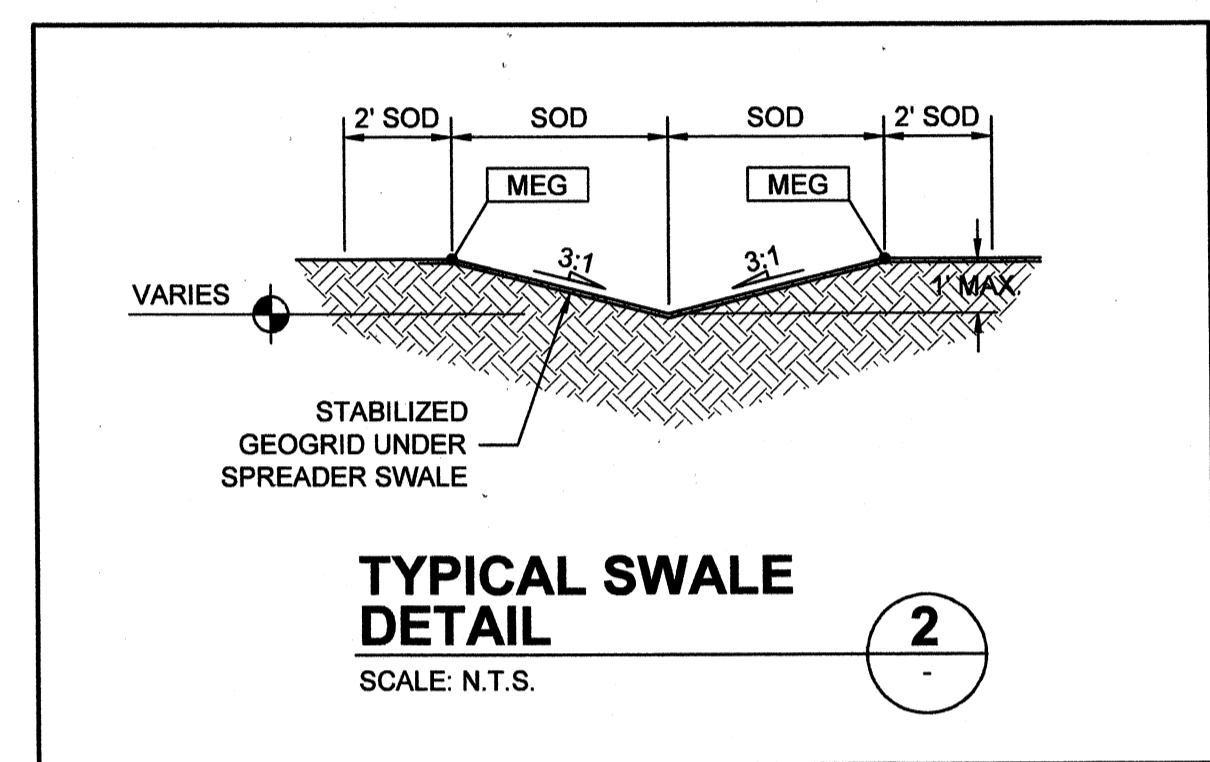
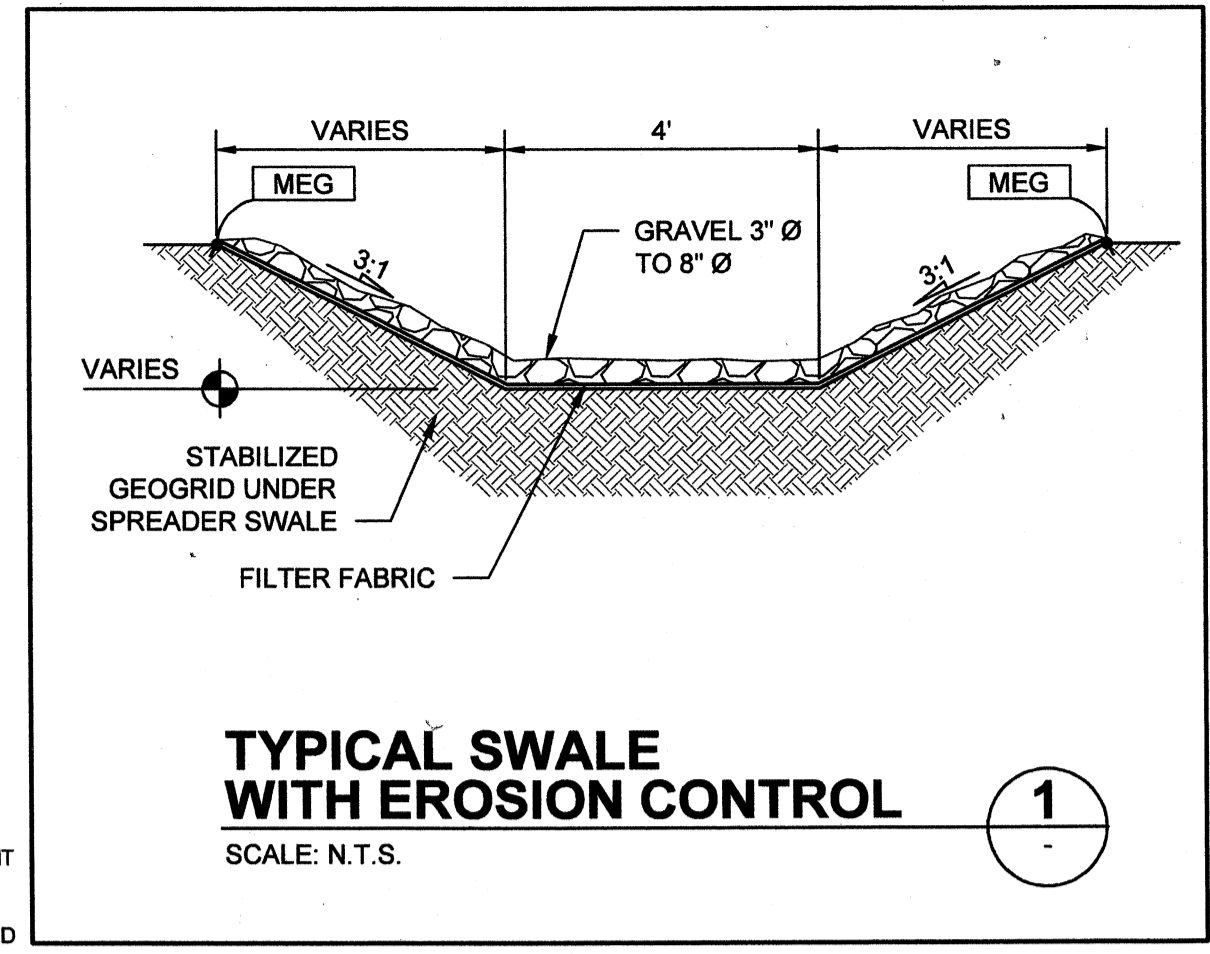
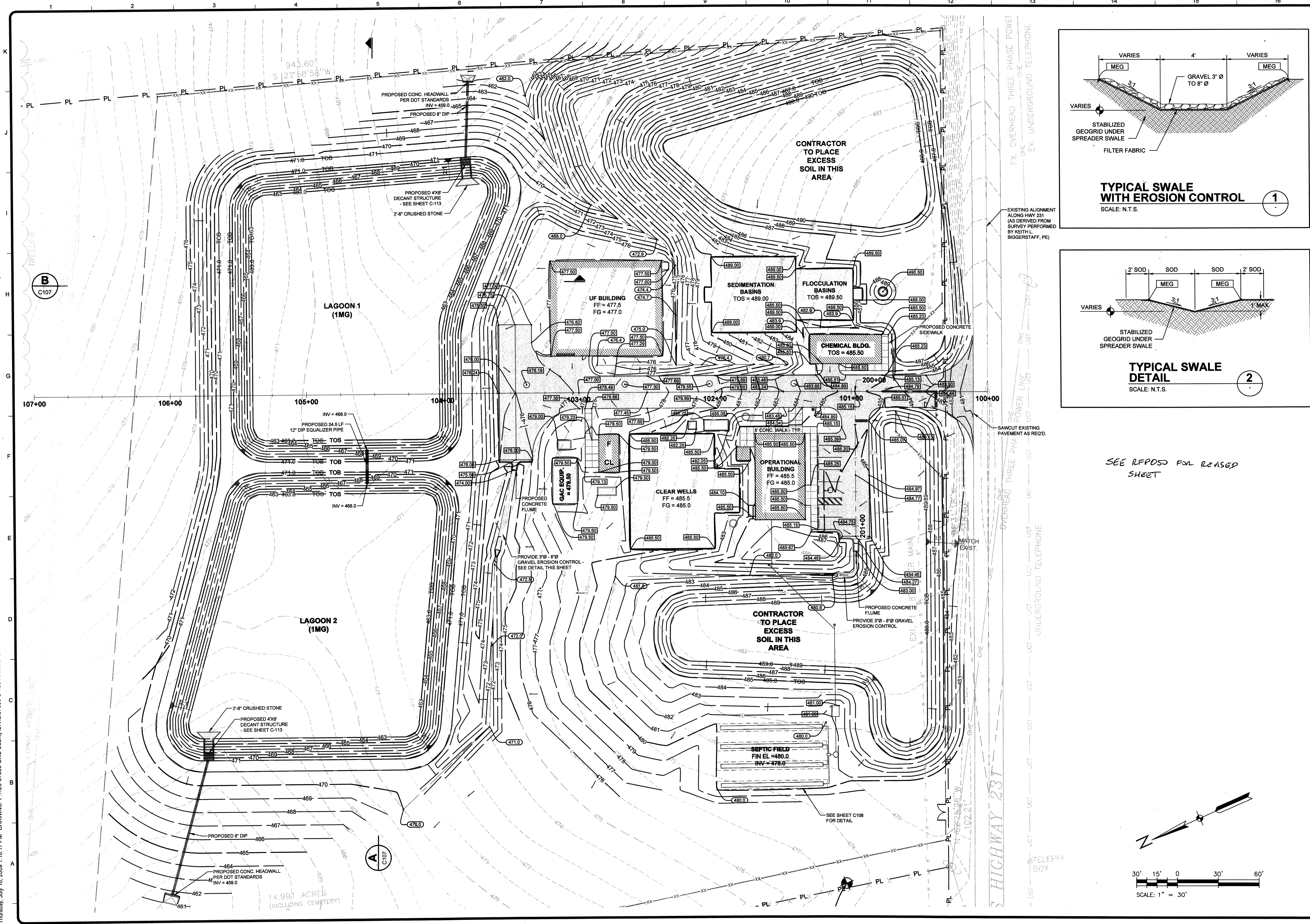
SITE GEOMETRY PLAN

Project No.: 120-07060
Designed By: JRW
Drawn By: HCR
Checked By: JC

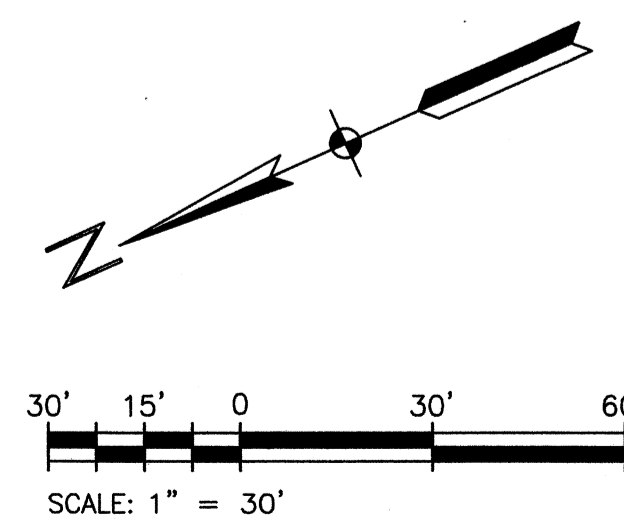
C-102

Copyright: Tetra Tech

Thursday, July 16, 2009 11:18:17 PM DRAWING: P:\120-07060 Ohio County\Civil\07060 C-103 PAVING GRADING AND DRAINAGE PLAN - DWG LAYOUT: C-103 USER NAME: PAULA DAVALOS



SEE RFPDS FOR REVISED SHEET



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800 CORPORATE DRIVE, SUITE 200
LEXINGTON, KY 40503
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PROJECT RECORD

CONFORMED SET 5/09

MARK	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT
Prof. Loc: CROWMELL, OHIO COUNTY, KENTUCKY

Project No.: 120-07060
Designed By: JRW
Drawn By: HCR
Checked By: JC

C-103

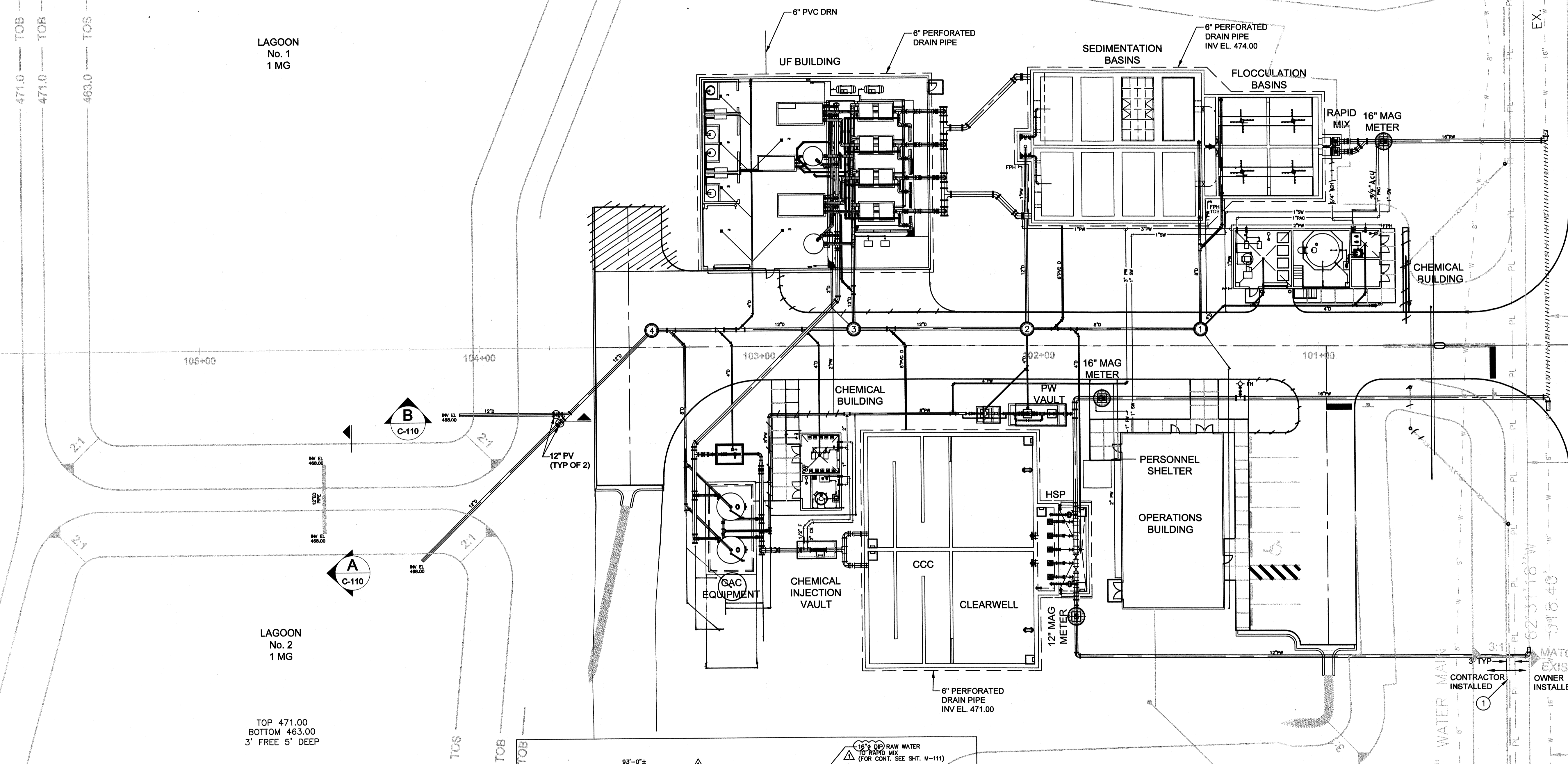
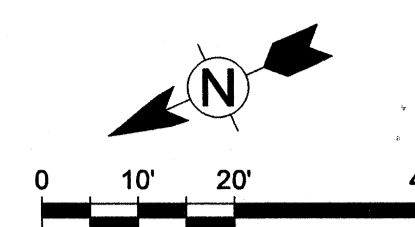
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Tuesday, July 28, 2009 11:12:04 AM DRAWING: P:\120-07060 Ohio County Redesign\ORLANDO\CONFORMED SET 5-09\CIVIL\07060 C-104 YARD PIPING PLAN .DWG LAYOUT: C104 USER NAME: JEREMY M. FRONIGILLO

DECANT STRUCTURE
SEE DWG C-113

① REFERENCE NOTES:

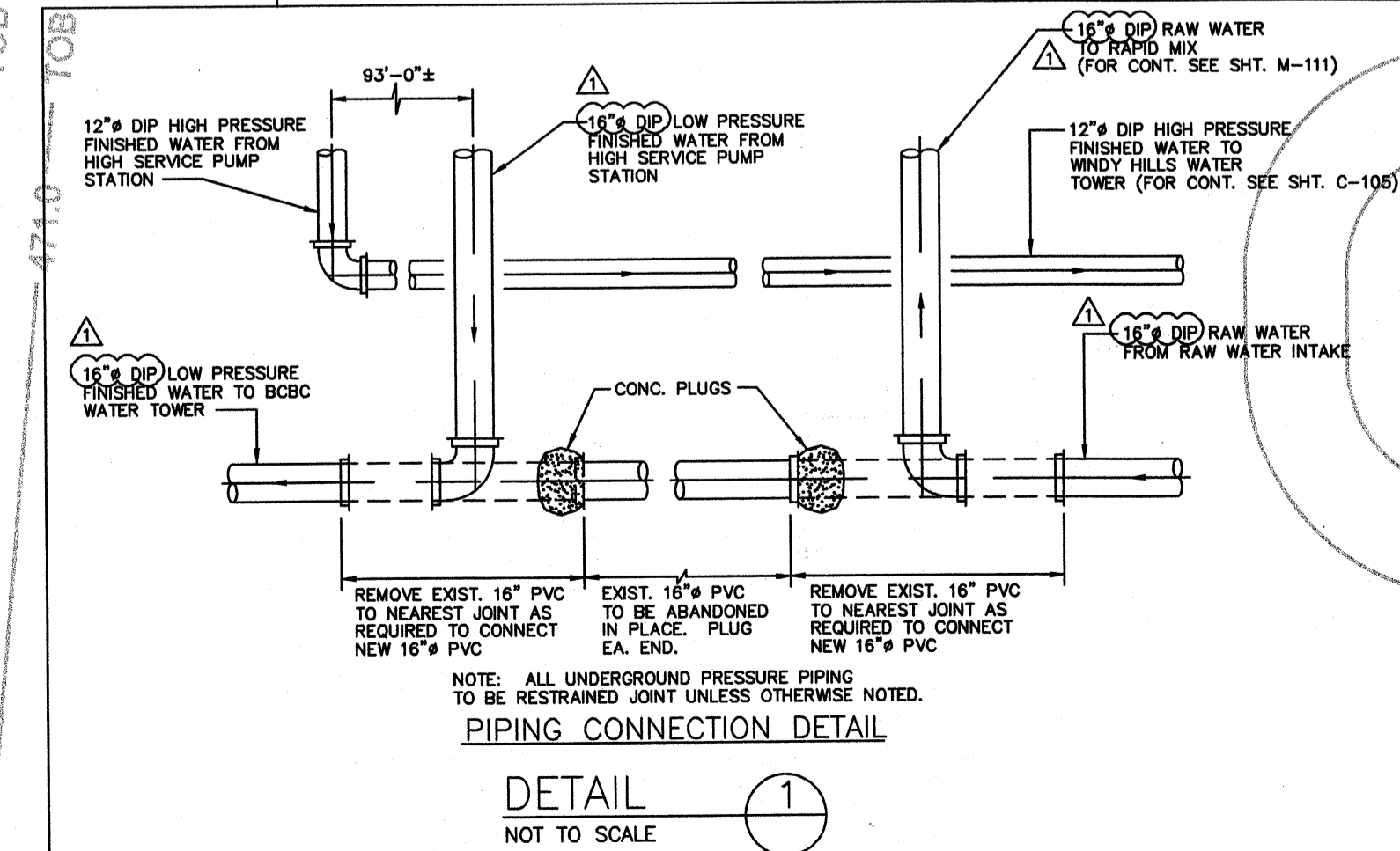
1. THE 12" HIGH PRESSURE WATER EFFLUENT PIPELINE WILL BE CONSTRUCTED BY OCWD. CONTRACTOR SHALL COORDINATE SCHEDULING OF CONNECTIONS FOR ON-SITE PIPELINES WITH OCWD STAFF PRIOR TO INSTALLATION.



LAGOON
No. 1
1 MG

LAGOON
No. 2
1 MG

TOP 471.00
BOTTOM 463.00
3' FREE 5' DEEP



MANHOLE LEGEND:

- No. 1 TOP EL. 483.85
S. INV. EL. 481.34
E. INV. EL. 469.16
N. INV. EL. 469.06
- No. 2 TOP EL. 479.55
S. INV. EL. 468.83
E. INV. EL. 469.02
N. INV. EL. 468.78
W. INV. EL. 474.00
- No. 3 TOP EL. 477.30
S. INV. EL. 468.65
E. INV. EL. 471.00
NE. INV. EL. 474.00
N. INV. EL. 468.60
- No. 4 TOP EL. 476.19
S. INV. EL. 468.44
N. INV. EL. 468.34

SEPTIC TANK W/
LEACH FIELD

SEE DETAIL 1
DISCONNECT & ABANDON
DWG. C-104

PROJECT RECORD

CONFORMED SET 5/09



BY	SN	MARK	DATE	DESCRIPTION
		▲	5/5/09	ADDENDUM 1

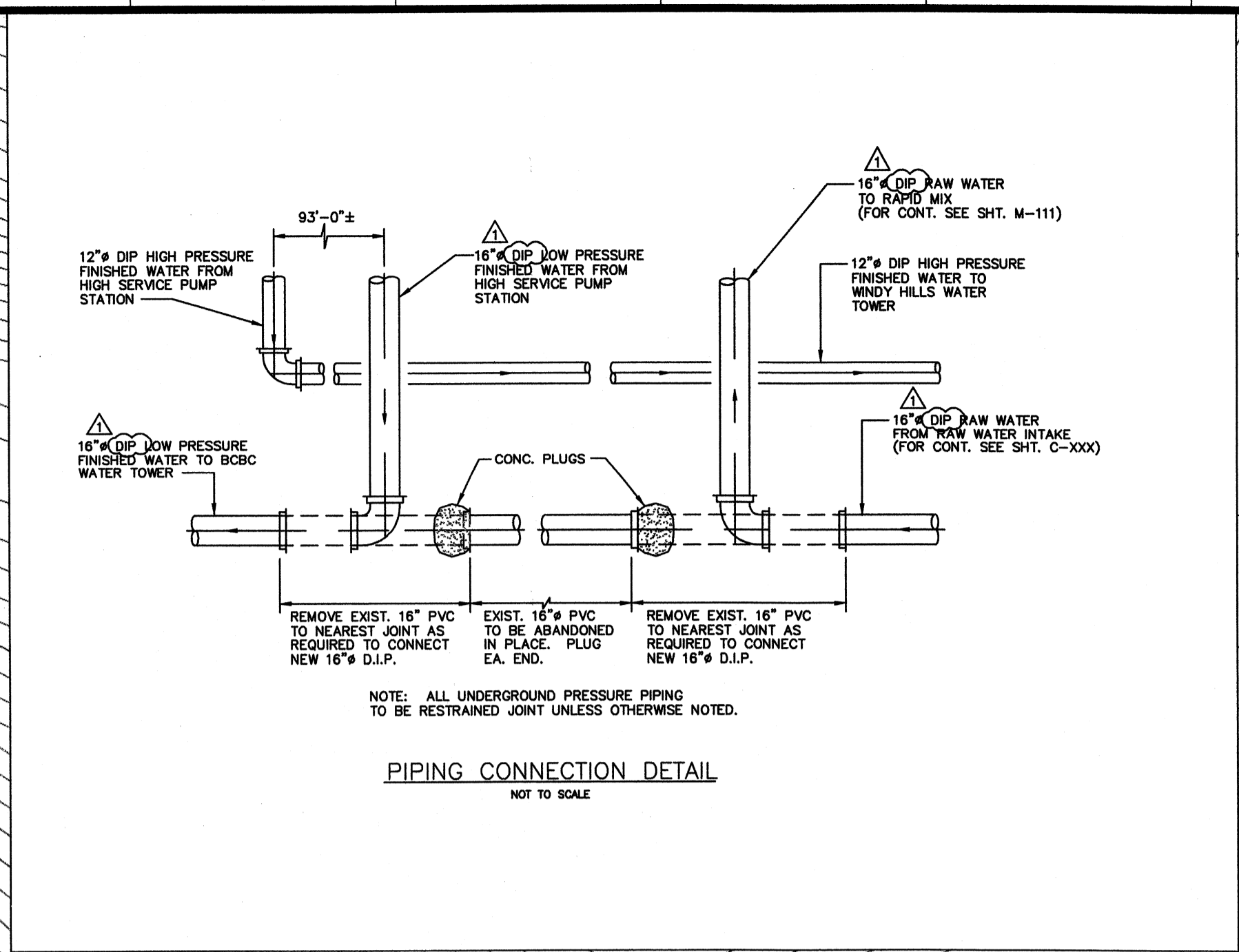
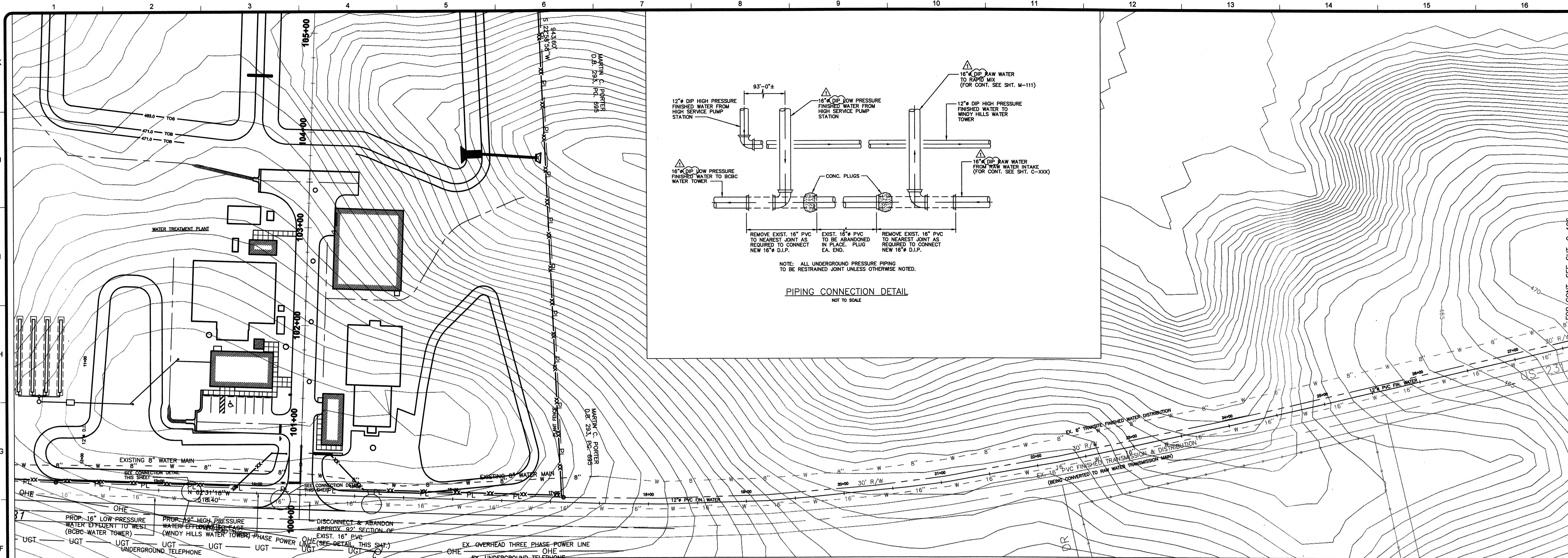
Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMMELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT

Project No.: 120-07060
 Designed By: GDP
 Drawn By: GDP
 Checked By:

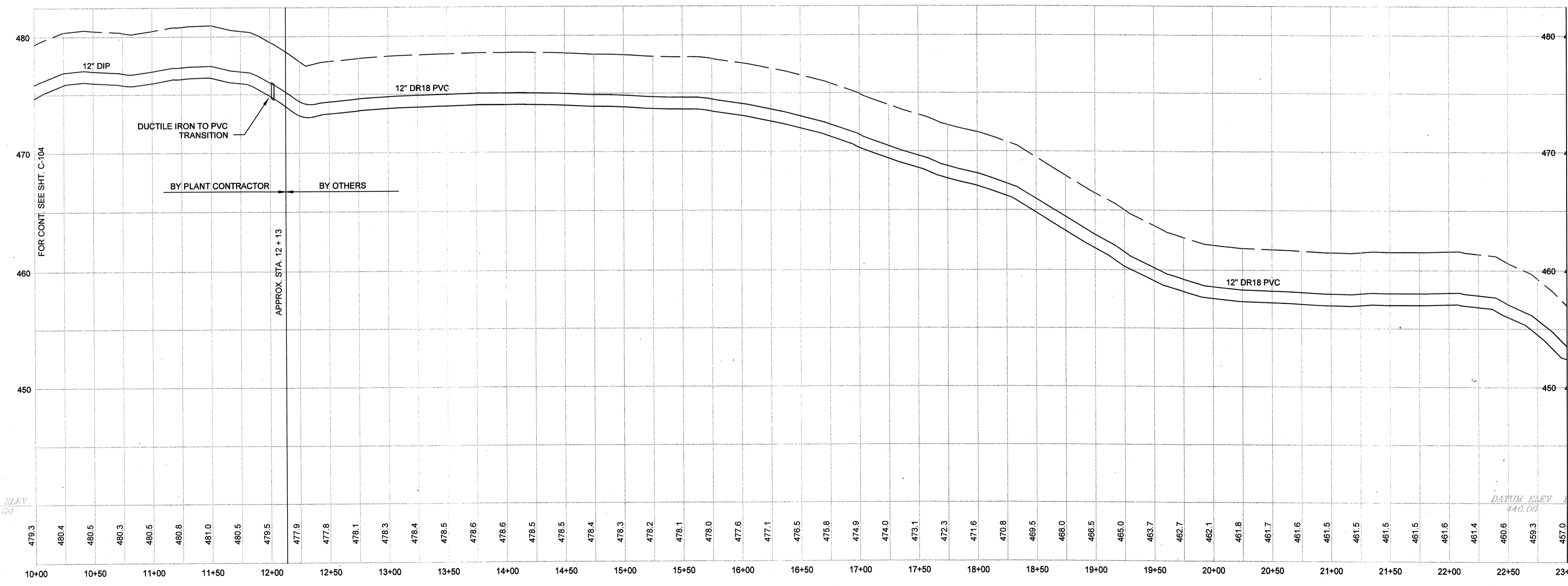
C-104

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Wednesday, July 15, 2009 4:14:20 PM DRAWING: \\erofiles3\projects\120-07060 Ohio County\CONFORMED SET 5-09\CIVIL\07060 C-105-106 & C112 P-P.DWG LAYOUT: C-105 USER NAME: JEREMY M. FRONZILLO



PIPING CONNECTION DETAIL
NOT TO SCALE



FOR CONT. SEE SHT. C-106

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Suite 200, Lexington, Ky. 40503
PHONE: (606) 223-8000 FAX: (606) 224-1025

PROJECT RECORD
CONFORMED SET 5/09



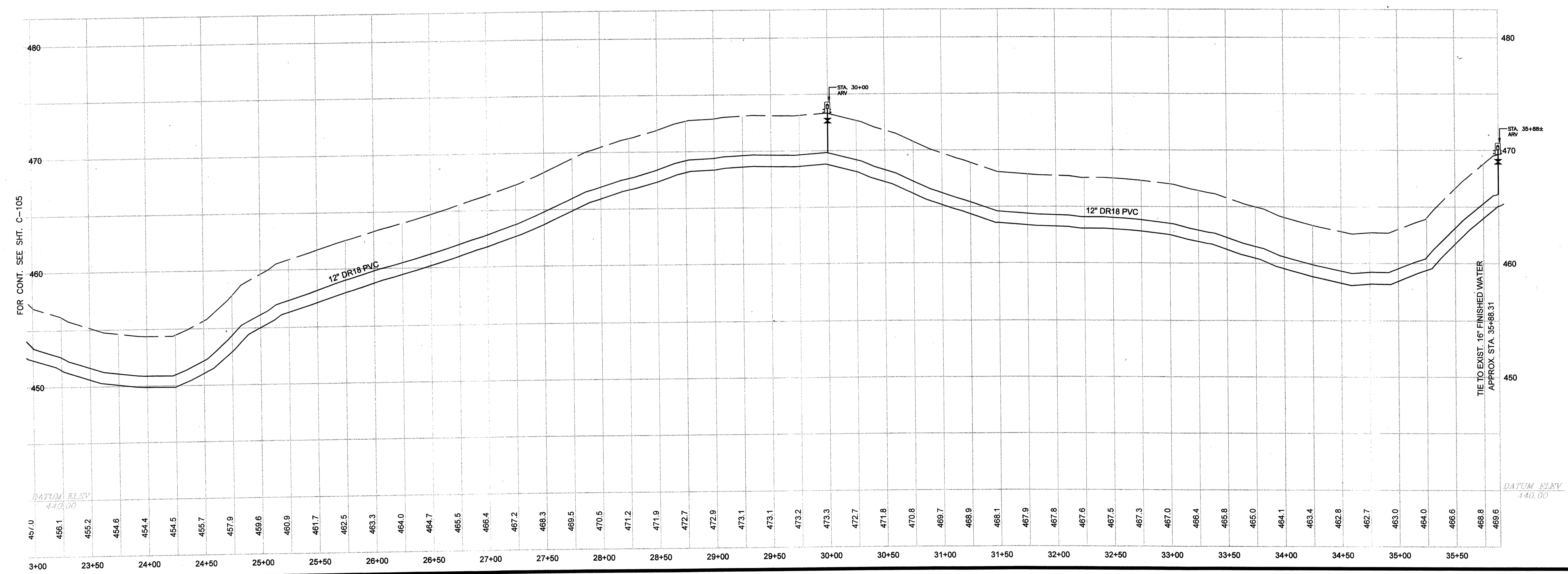
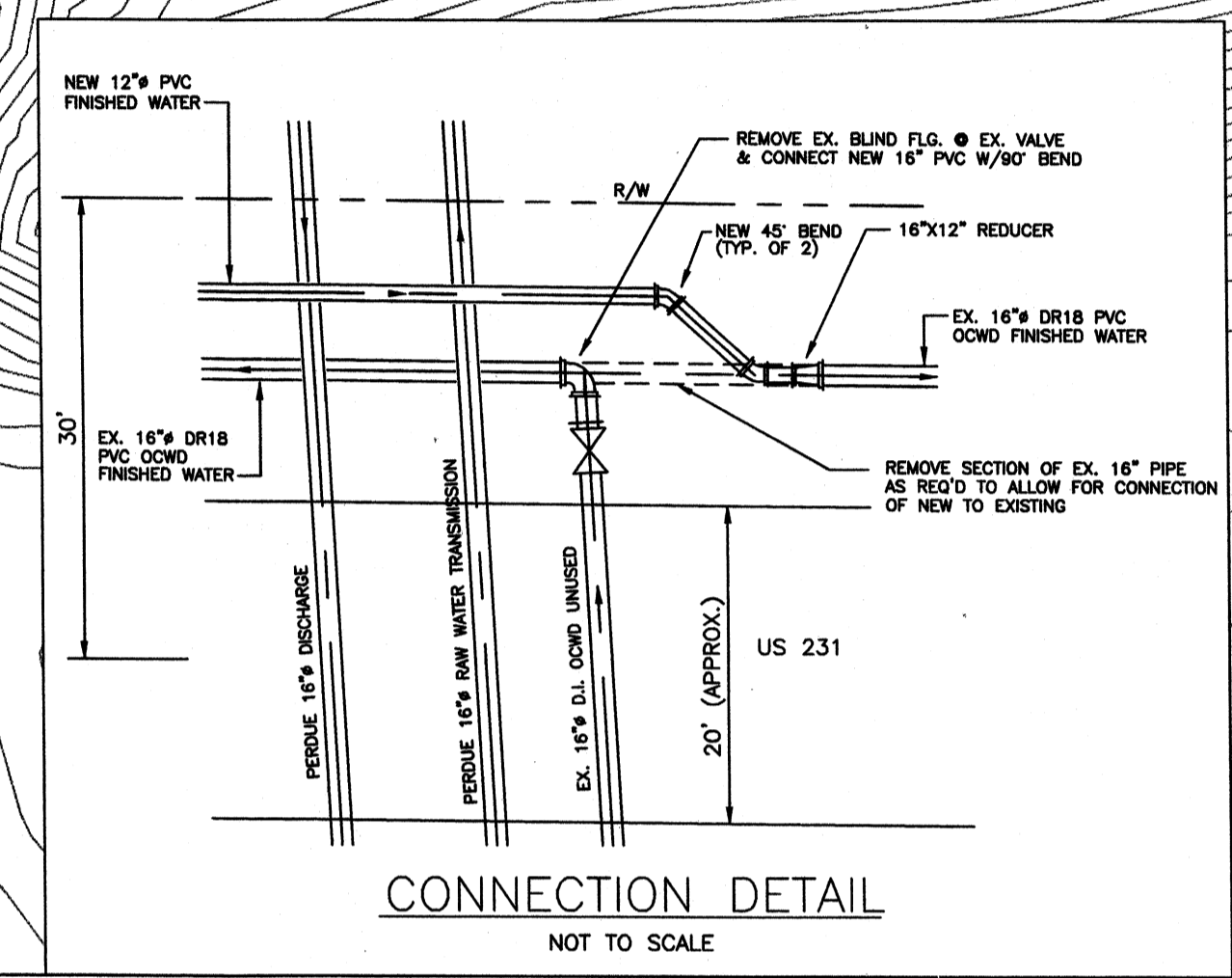
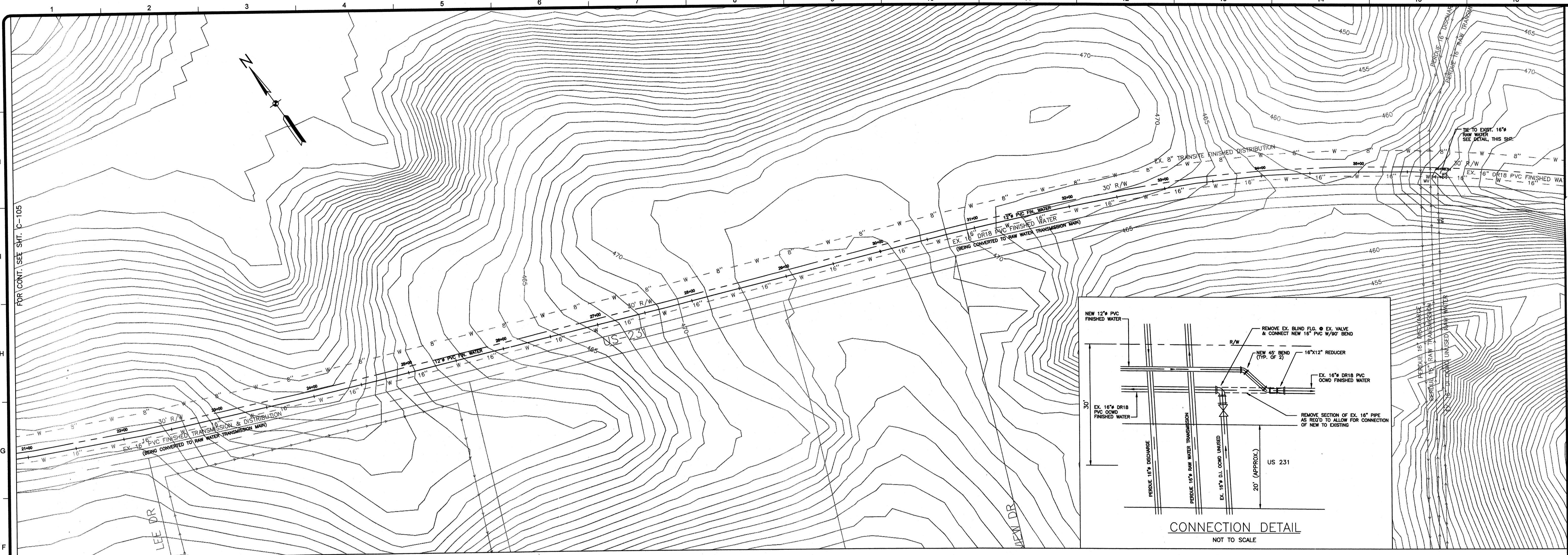
BY	DATE	DESCRIPTION
JMF	5/5/09	ADDENDUM 1

Client: OHIO COUNTY WATER DISTRICT
Ohio County Water District
Water Treatment Plant

Project No.: 120-07060
Designed By: GDP
Drawn By: GDP
Checked By:

C-105

Wednesday, July 01, 2009 10:39:21 AM DRAWING: \\net\dfs3\projects\120-070680 Ohio County\CONFORMED SET 5-09\CIVIL\070680 C-105-106 & C112 P-F .DWG LAYOUT: C-106 USER NAME: JEREMY M. FRONGILLO



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PROJECT RECORD

CONFORMED SET 5/09

BY	DATE	MARK	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

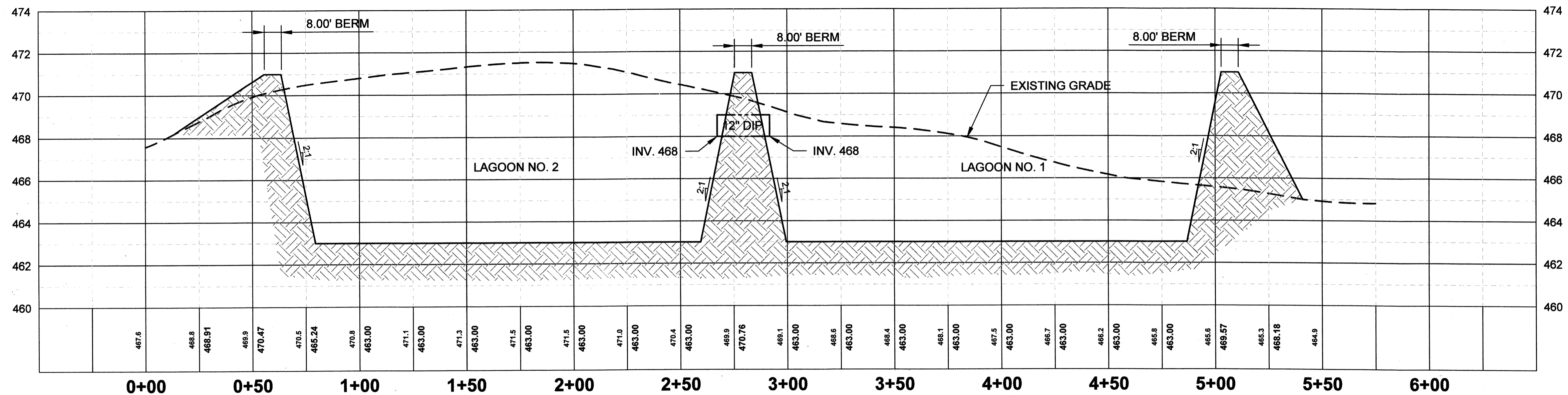
FINISHED WATER LINE 12"

Project No.:	120-070680
Designed By:	GDP
Drawn By:	GDP
Checked By:	

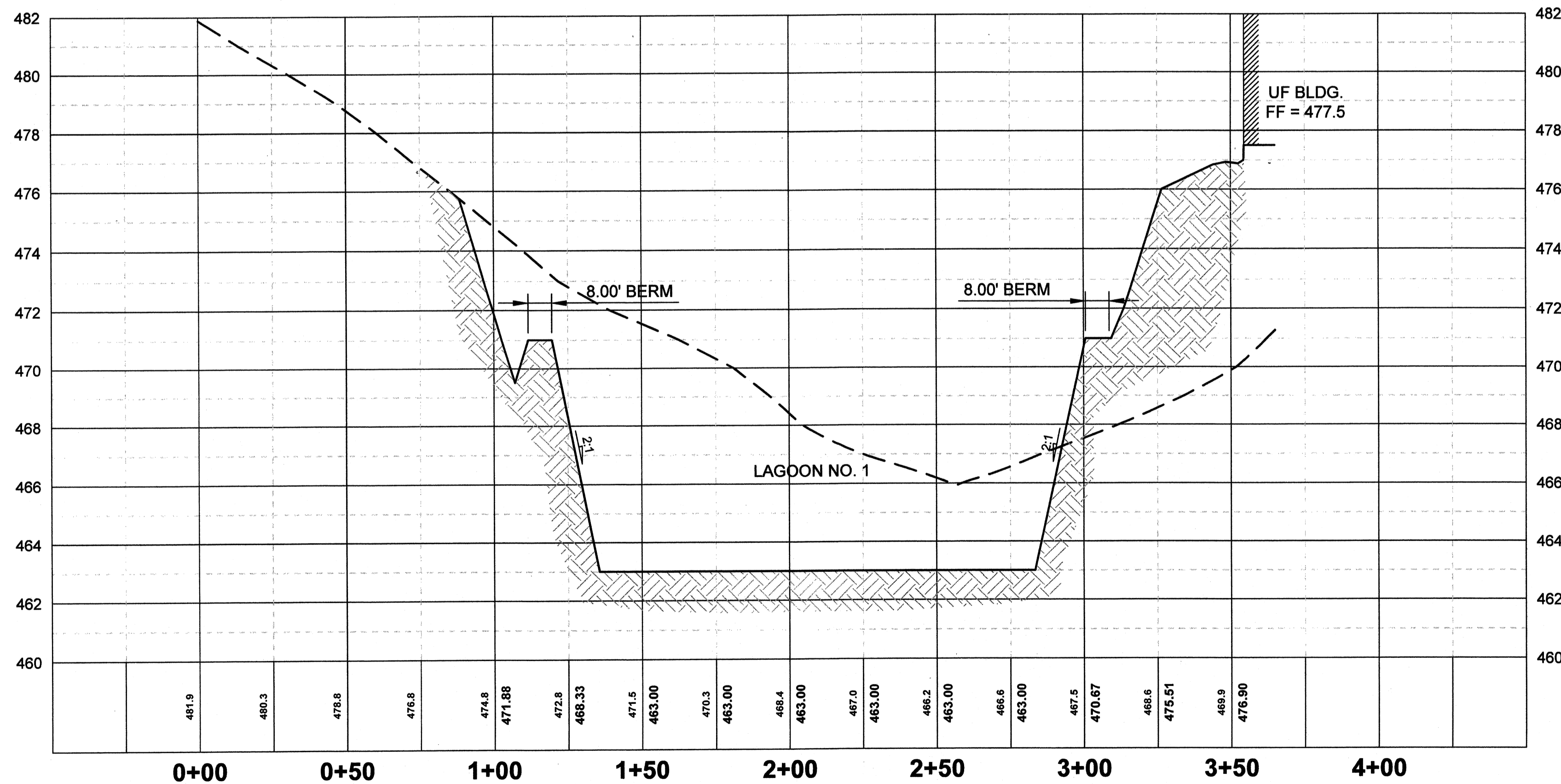
C-106

Copyright: Tetra Tech

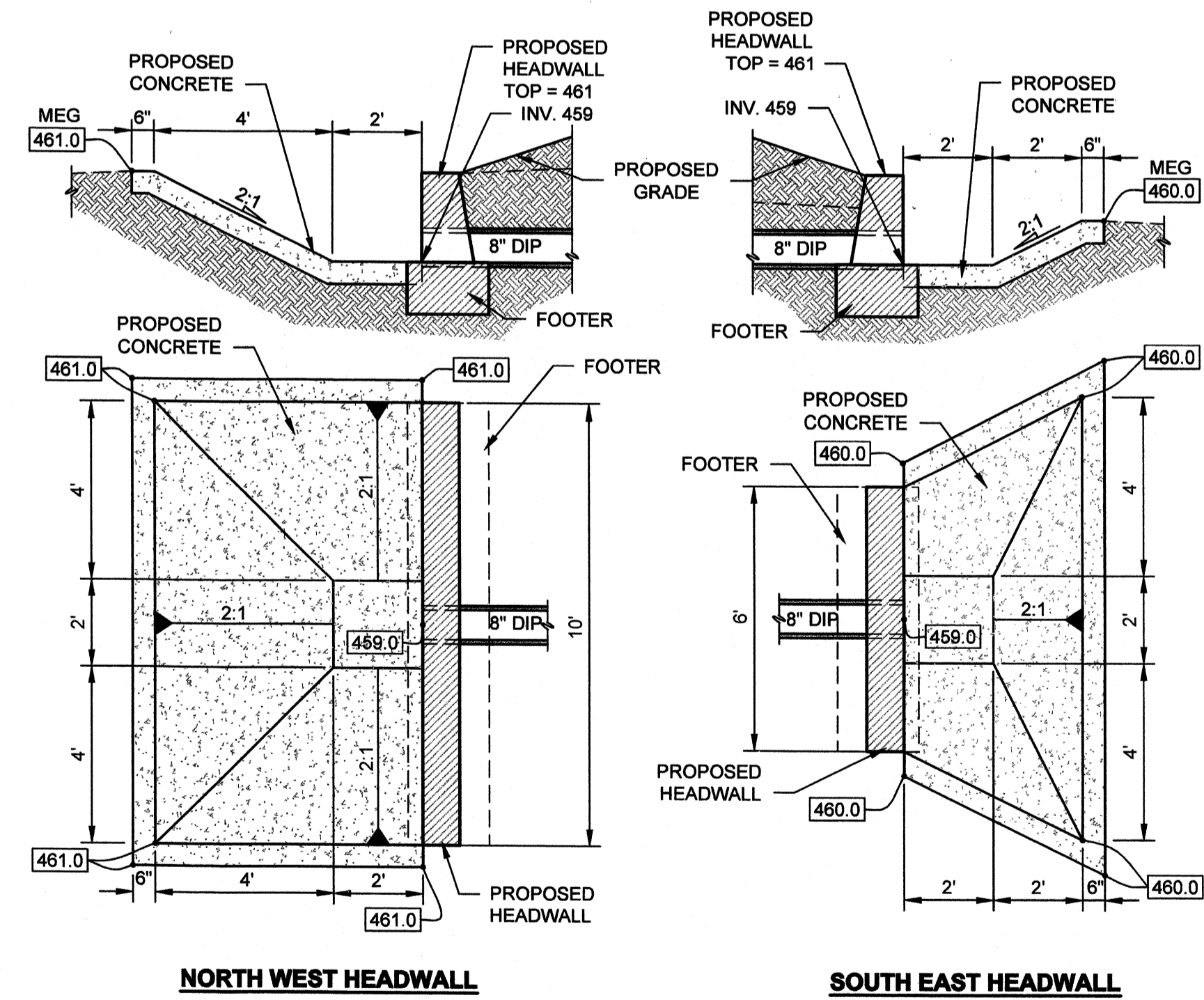
Wednesday, July 01, 2009 10:46:51 AM DRAWING: \\scris3\projects\120-07060 Ohio County\CONFORMED SET 5-09\CIVIL\07060 C-107 SECTIONS.DWG LAYOUT: C-107 SECTIONS USER NAME: JEREMY M. FRONGILLO



SECTION A
SCALE: H 1"=30' / V 1"=3'
C102



SECTION B
SCALE: H 1"=30' / V 1"=3'
C102



HEADWALL DETAIL
SCALE: 1"=3'-0"
C103



BY

DESCRIPTION

MARK

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

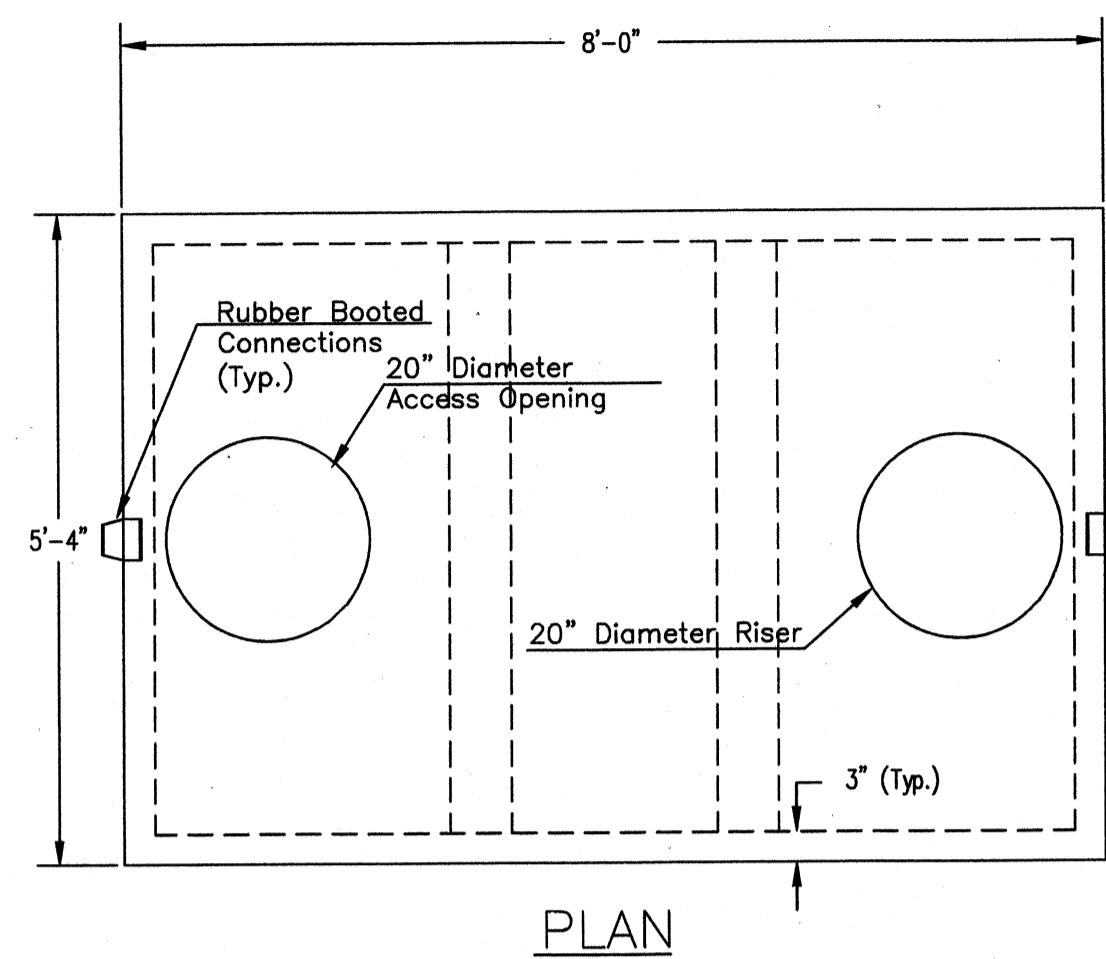
DATE

OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

SECTIONS

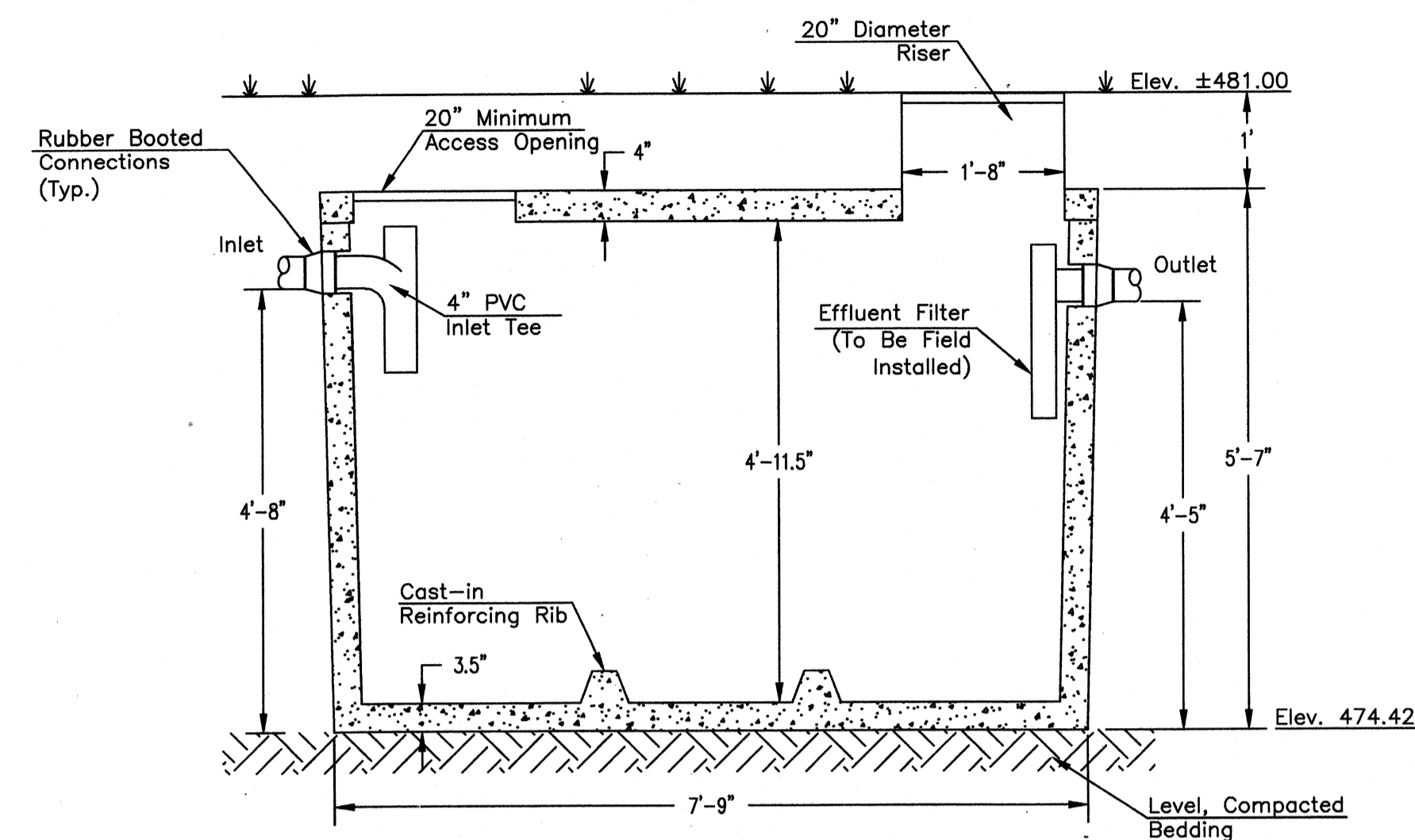
Project No.: 120-07060
Designed By: GDP
Drawn By: GDP
Checked By:

C-107



PLAN

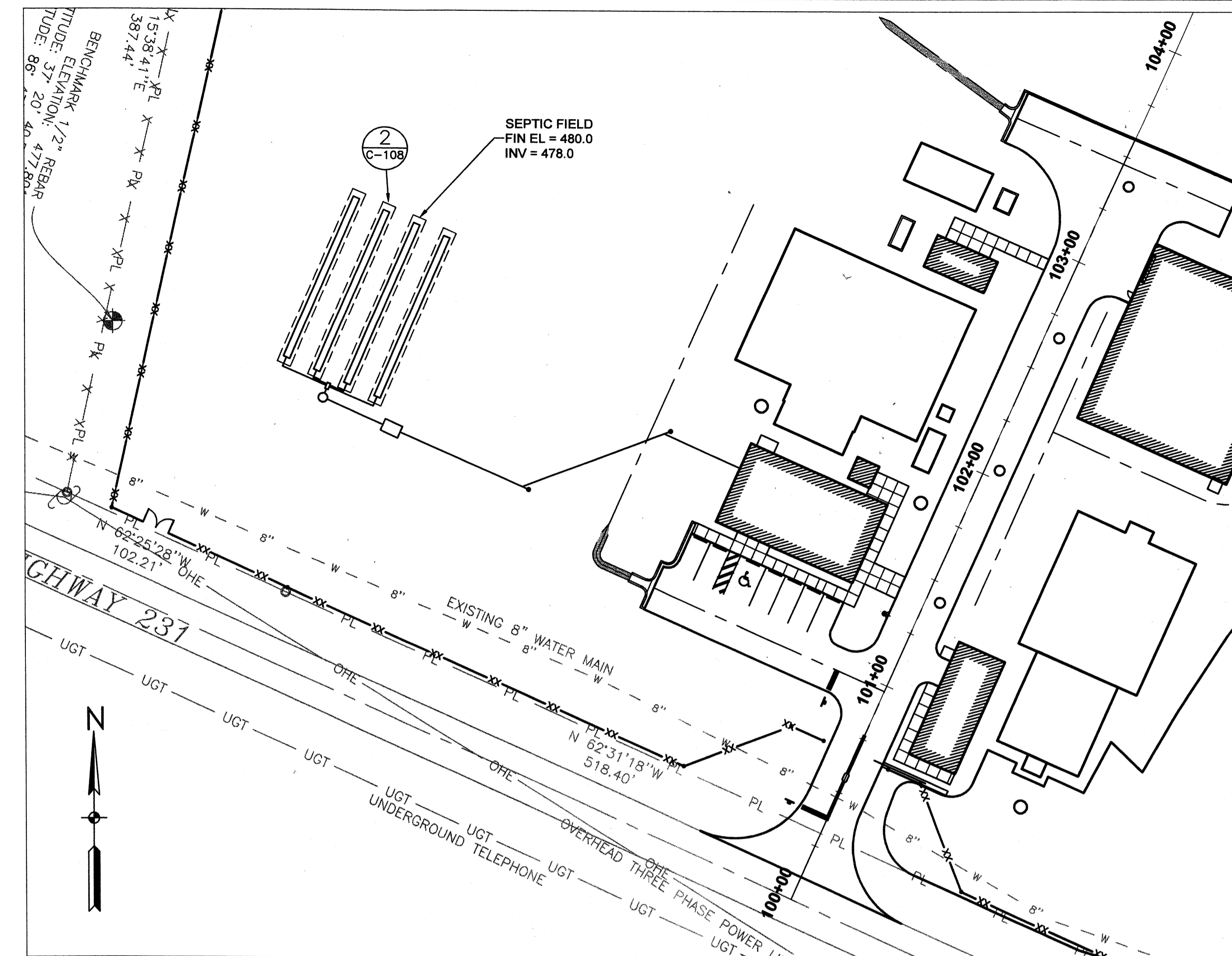
- NOTES:
1. Concrete Minimum Strength 5000 psi @ 28 days
 2. Water Tight To Top of Concrete
 3. Walls Reinforced With 2x4 14/14 WMM
 4. Top and Bottom Reinforced With 6x6 10x10 WMM
 5. Top Reinforced With Additional #3 Rebar @ 12" EW
 6. Joints Sealed with Mastic Sealant
 7. Booted Pipe Connections



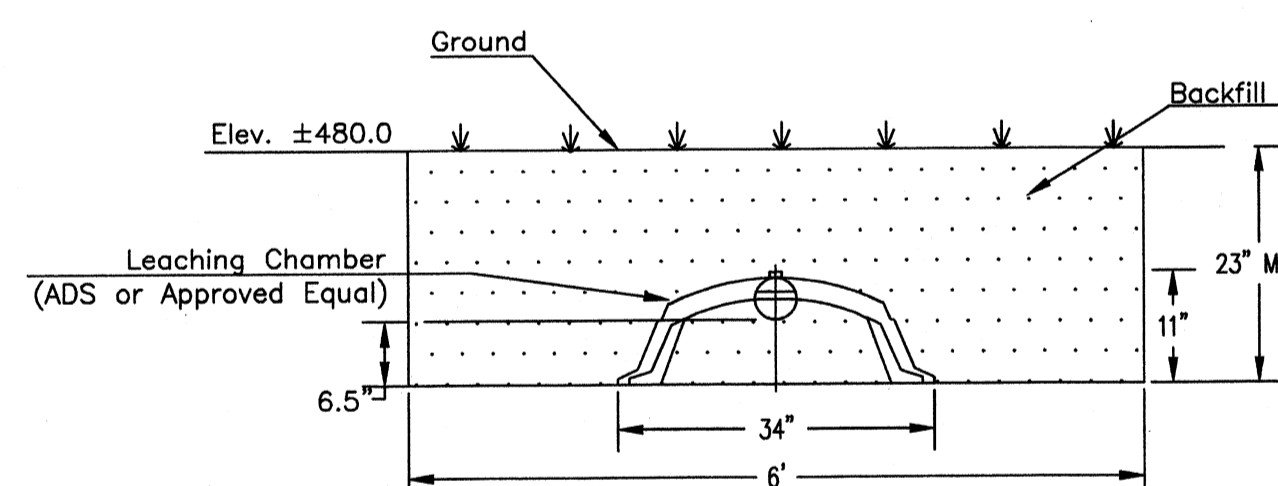
SECTION

1,000 GALLON SEPTIC TANK

DETAIL 1
SCALE: 3/4"=1'-0" (C-108)

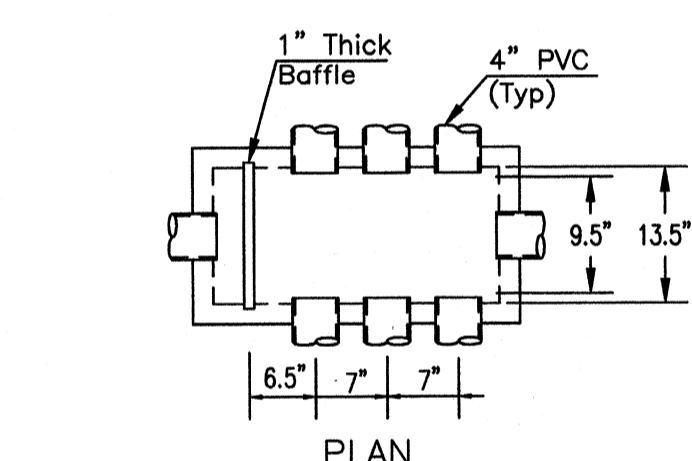


PARTIAL SITE LAYOUT
SCALE: 1"=40'-0"

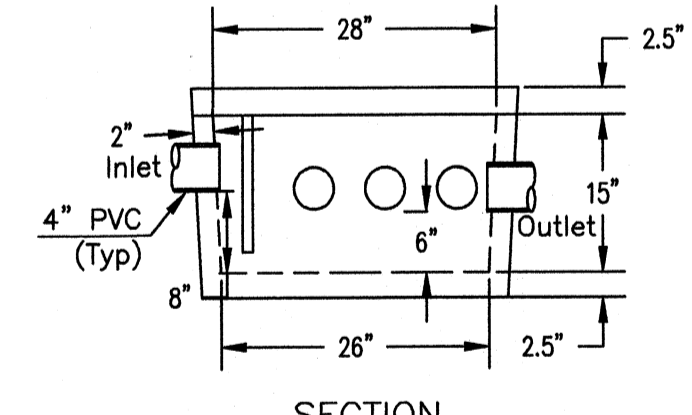


LEACHING CHAMBER TRENCH SECTION

SECTION
SCALE: 1"=1'-0" (A C-108)



PLAN

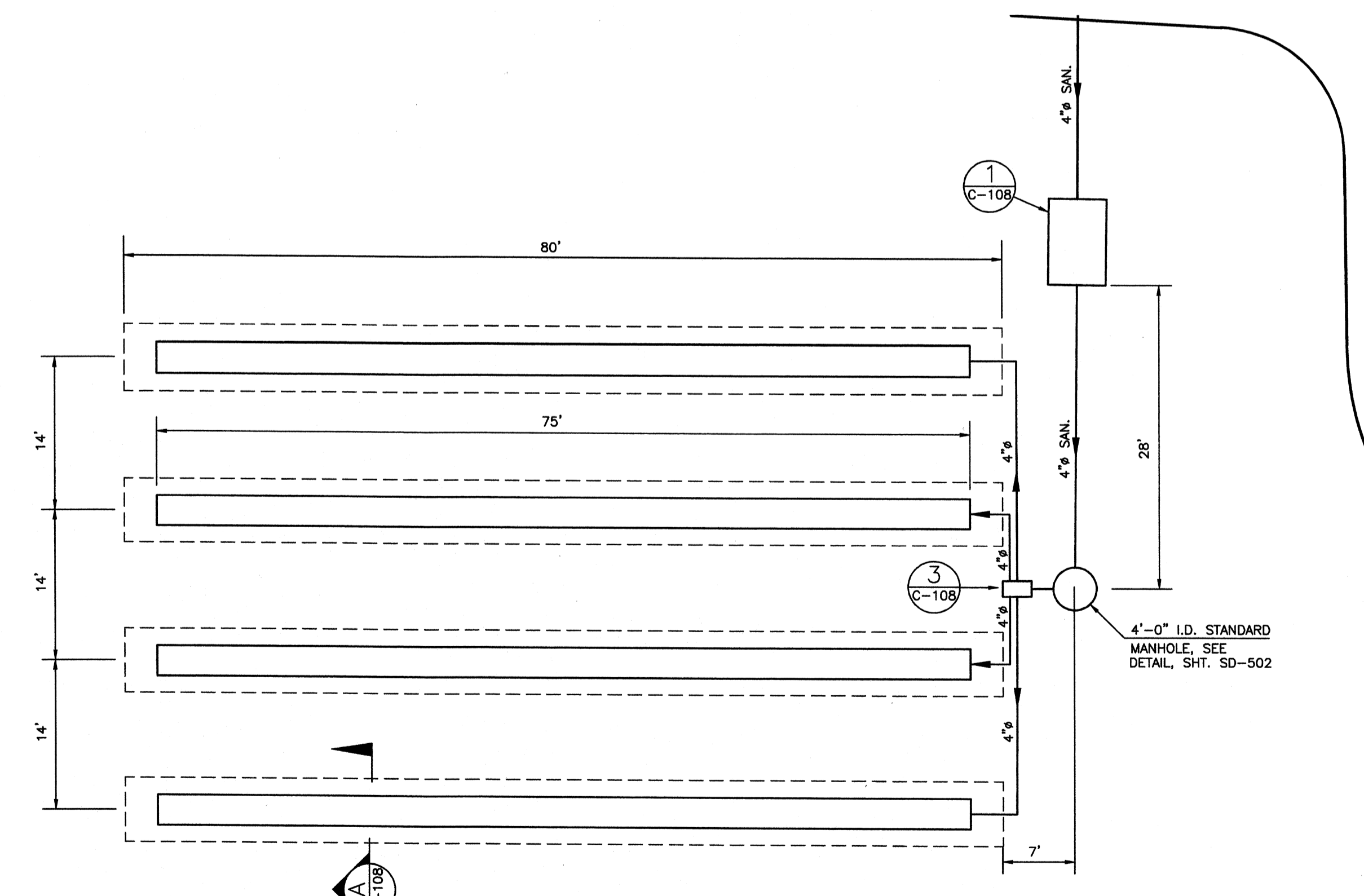


SECTION

- NOTES:
1. Plug Unused Connections With Appropriate Sized Rubber Plugs.
 2. Concrete Minimum Strength 4500 psi @ 28 days

8-HOLE DISTRIBUTION BOX

DETAIL 3
SCALE: 1"=1'-0" (C-108)



SEPTIC SYSTEM LAYOUT
SCALE: 1"=10'-0"

NOTE:
INSTALL SEPTIC SYSTEM IN ACCORDANCE W/ 902KAR10.085

DETAIL 2
SCALE: 1"=10' (C-108)

TETRA TECH
www.tetrattech.com
800 Corporate Drive
Suite 200, Lexington, KY 40503
PHONE: (859) 223-9000 FAX: (859) 224-1025

PROJECT RECORD

CONFORMED SET 5/09
3/17/09

BY	DATE	DESCRIPTION

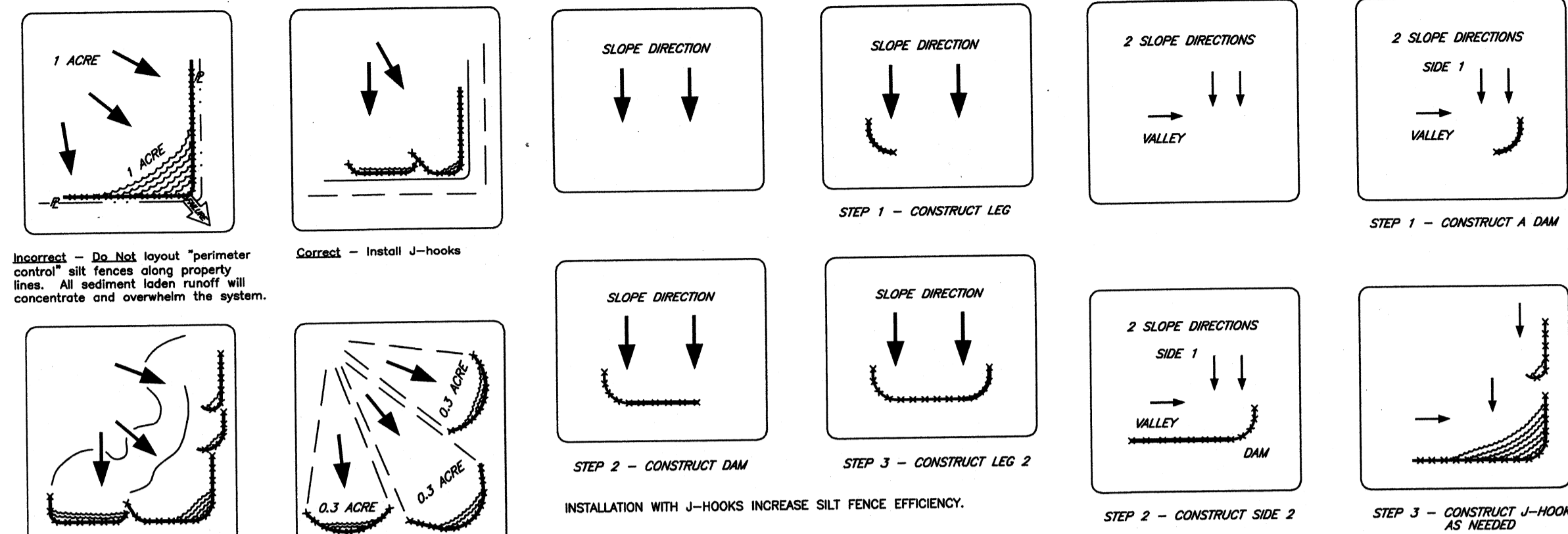
Client: OHIO COUNTY WATER DISTRICT | Prof. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

SEPTIC SYSTEM DETAILS

Project No.:	120-07060
Designed By:	GDP
Drawn By:	GDP
Checked By:	

C-108
Copyright: Tetra Tech

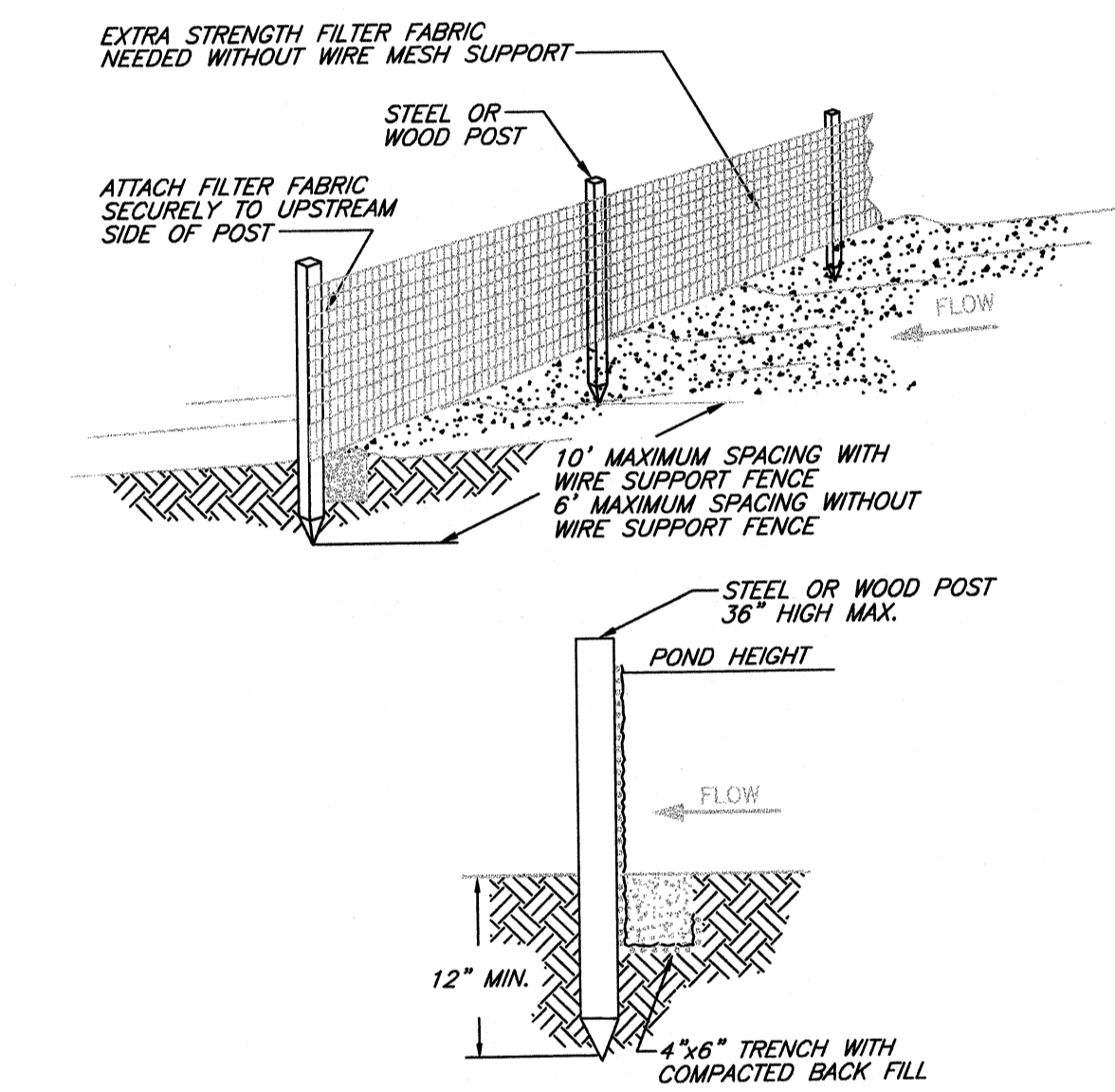
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SILT FENCE PLACEMENT FOR PERIMETER CONTROL

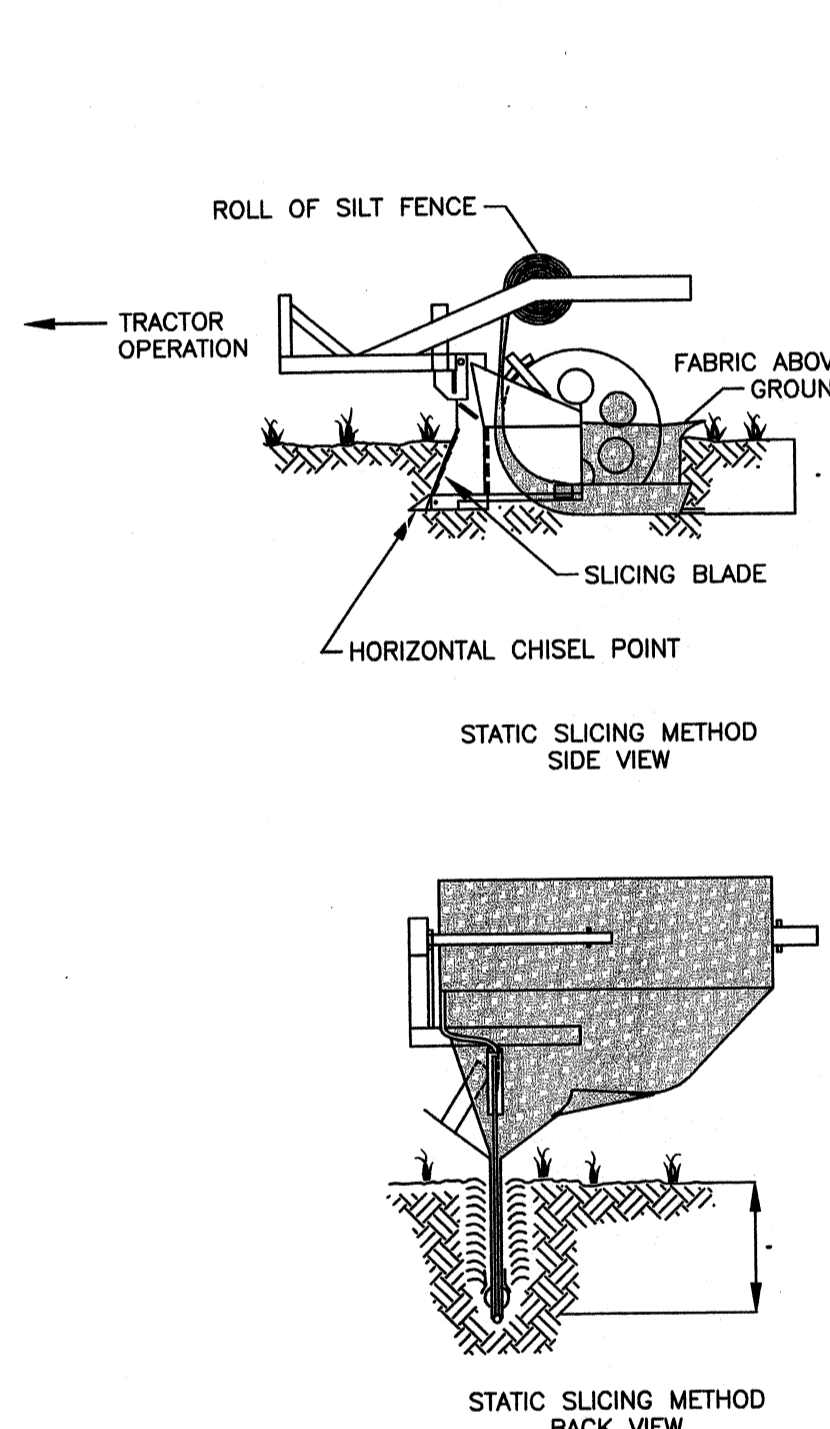
SILT FENCE PLACEMENT FOR ONE SLOPE

SILT FENCE PLACEMENT FOR TWO SLOPES



SILT FENCE INSTALLATION TRENCH METHOD

- NOTES:**
- SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE POND EFFICIENCY.
 - INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 8" MAXIMUM RECOMMENDED STORAGE HEIGHT.
 - REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.



SILT FENCE INSTALLATION SLICING METHOD

- EXTRA-STRENGTH FILTER CLOTH (50 POUNDS/LINEAR INCH MINIMUM TENSILE STRENGTH) SHOULD BE USED. A 2-INCH WIDE LATHE SHALL BE STAPLED OVER THE FILTER FABRIC TO SECURELY FASTEN IT TO THE UPSLOPE SIDE OF THE POSTS. THE STAPLES USED SHOULD BE 1.5-INCH HEAVY-DUTY WIRE STAPLES SPACED A MAXIMUM OF 8-INCHES APART.
- PLACE THE BOTTOM 12-INCHES OF THE FILTER FABRIC INTO THE 6-INCH DEEP TRENCH, EXTENDING THE REMAINING 6-INCHES TOWARDS THE UPSLOPE SIDE OF THE TRENCH AND BACKFILL THE TRENCH WITH SOIL OR GRAVEL AND COMPACT.
- REINFORCED SILT FENCE SHALL USE STEEL POSTS AND 6-INCH BY 6-INCH 14 GAUGE WIRE MESH. THE WIRE MESH SHALL BE FASTENED TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1-INCH LONG, TIE WIRES, OR HOG RINGS. EXTEND THE MESH 6-INCHES INTO THE TRENCH. THE FILTER FABRIC SHALL BE FASTENED TO THE FENCE ON THE UPSLOPE SIDE OF THE WIRE MESH.
- SILT FENCE MOVED TO PROVIDE CONSTRUCTION ACCESS SHALL BE REINSTALLED BY THE END OF THE WORKDAY.
- SILT FENCE SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER TEMPORARY BMP'S ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHOULD BE REMOVED OR STABILIZED ON SITE. DISTURBED AREAS RESULTING FROM FENCE REMOVAL SHALL BE PERMANENTLY STABILIZED PER FINAL RESTORATION REQUIREMENTS.

SILT FENCE NOTES

- THE FENCE SHOULD BE PLACED ACROSS THE SLOPE ALONG A LINE OF UNIFORM ELEVATION (PERPENDICULAR TO THE DIRECTION OF FLOW). THE FENCE SHOULD BE LOCATED AT LEAST 10- FEET FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT. THE ENDS SHOULD BE TURNED UP SLOPE TO CREATE TIE-BACKS FOR PONDING WATER.
- A FLAT-BOTTOM TRENCH APPROXIMATELY 6-INCHES WIDE AND 6-INCHES DEEP, OR A V-SHAPED TRENCH 8-INCHES DEEP SHOULD BE EXCAVATED. ON THE DOWNSLOPE SIDE OF THE TRENCH, DRIVE THE 2-INCH X 2-INCH WOOD POSTS AT LEAST 12-INCHES INTO THE GROUND, SPACING THEM NO FURTHER THAN 6- FEET APART. STEEL POSTS SHALL BE 1.33 LBS PER LINEAR FOOT.
- POSTS SHOULD BE INSTALLED, WITH 1- TO 2-INCHES OF THE POST PROTRUDING ABOVE THE TOP OF THE FABRIC AND NO MORE THAN 3- FEET OF THE POST SHOULD PROTRUDE ABOVE THE GROUND. THE MINIMUM FENCE HEIGHT (HEIGHT OF FILTER FABRIC ABOVE GRADE) SHALL BE 18-INCHES. THE MAXIMUM FENCE HEIGHT (HEIGHT OF FILTER FABRIC ABOVE GRADE) SHALL BE 24-INCHES.
- THE FILTER FABRIC SHOULD BE PURCHASED IN A CONTINUOUS ROLL AND CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHOULD BE WRAPPED TOGETHER ONLY AT A SUPPORT POST WITH BOTH ENDS SECURELY FASTENED TO THE POST, WITH A MINIMUM 6-INCH OVERLAP.

EROSION PREVENTION AND SEDIMENT CONTROL

GENERAL

- THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN (ESP) MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY UPSTREAM LAND ACTIVITY ON THE CONSTRUCTION SITE. BEST MANAGEMENT PRACTICES (BMPs) SHALL BE INSTALLED PER THE PLAN AND SPECIFICATIONS.
- THE PROJECT CONSTRUCTION SHALL BE PHASED AND SEQUENCED SO THAT THE DISTURBED AREA IS MINIMIZED. TEMPORARY OR PERMANENT SEED AND MULCH SHALL BE APPLIED PER SPECIFICATIONS TO DISTURBED AREAS AS THE PROJECT PROGRESSES.
- TEMPORARY STONE BAG DITCH CHECK DAMS SHALL BE PLACED IN DISTURBED ROADSIDE DITCHES AT THE DOWNSTREAM END OF DISTURBANCE BY THE END OF EACH WORKDAY.
- WHERE CONSTRUCTION OR LAND DISTURBING ACTIVITY WILL OR HAS TEMPORARILY CEASED ON ANY PORTION OF A SITE, TEMPORARY SITE STABILIZATION MEASURES SHALL BE REQUIRED AS SOON AS PRACTICABLE, BUT NOT LATER THAN 14 CALENDAR DAYS AFTER THE ACTIVITY HAS CEASED.

AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY TEMPORARY STABILIZATION
ANY DISTURBED AREA WITHIN 50 FEET OF A STREAM AND NOT AT FINAL GRADE	WITHIN TWO DAYS OF THE MOST RECENT DISTURBANCE IF THE AREA WILL REMAIN IDLE FOR MORE THAN 21 DAYS
FOR ALL CONSTRUCTION ACTIVITIES, ANY DISTURBED AREA THAT WILL BE DORMANT FOR MORE THAN 21 DAYS BUT LESS THAN ONE YEAR, AND NOT WITHIN 50 FEET OF A STREAM	WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE WITHIN THE AREA
DISTURBED AREAS THAT WILL BE IDLE OVER WINTER	PRIOR TO THE ONSET OF WINTER WEATHER TEMPORARY STABILIZATION MEASURES:

SPECIES	MINIMUM RATE ACCEPTED	WORK INTERVAL
ANNUAL RYE	3 LBS. PER 1,000 SQ. FT.	MARCH 1 TO OCTOBER 31
WINTER WHEAT OR RYE GRAIN	3 LBS. PER 1,000 SQ. FT.	NOVEMBER 1 TO FEBRUARY 28
CLEAN STRAW MULCH OR STRAW BLANKET	2 TONS PER ACRE APPLY OVER SEED	MARCH 1 TO OCTOBER 31
CLEAN STRAW MULCH OR STRAW BLANKET	2.5 TONS PER ACRE	NOVEMBER 1 TO FEBRUARY 28

PREPARE SEEDBED AND APPLY SEED UNIFORMLY WITH A CYCLONE SPREADERS OR DRILL. ROLL THE SEEDED AREA OR LIGHTLY DRAG. MULCH SHALL CONSIST OF SMALL GRAIN STRAW. MULCH IS TO BE SPREAD UNIFORMLY USING A BLOWER (PREFERRED) OR BY HAND SO THAT THE SOIL IS COVERED. ANCHOR THE MULCH WITH LIGHTWEIGHT PHOTO DEGRADABLE NETTING OR LIGHTLY CRIMP INTO THE SOIL. SEE KENTUCKY TRANSPORTATION CABINET STANDARD SPECIFICATIONS (SECTION 827) FOR ADDITIONAL INFORMATION ON SEED TYPES AND METHODS.

FINAL GRADING SHALL BE CONSISTENT WITH PRE CONSTRUCTION TOPOGRAPHY OR PLANNED FINAL GRADE. FINAL GRADING SHALL BE COMPLETED IN ANY GIVEN AREA AS SOON AS IT IS NO LONGER NEEDED FOR ACCESS OF EQUIPMENT AND MATERIALS. FINAL RESTORATION SEEDING, MULCHING, AND STABILIZATION MEASURES SHALL IMMEDIATELY FOLLOW FINAL GRADING.

AREAS SHALL RECEIVE PERMANENT STABILIZATION	ACCORDING TO THE FOLLOWING SCHEDULE:
ANY AREAS THAT WILL LIE DORMANT FOR ONE YEAR OR MORE	WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE
ANY AREAS WITH 50 FEET OF A STREAM AND AT FINAL GRADE	WITHIN TWO DAYS OF REACHING FINAL GRADE
ANY OTHER AREAS AT FINAL GRADE	WITHIN SEVEN DAYS OF REACHING FINAL GRADE WITHIN THAT AREA

FINAL RESTORATION WILL INCLUDE RESTORING TO PRE CONSTRUCTION CONTOURS (EXCEPT FOR AREA NOTED OTHERWISE IN THE PLANS OR SPECIFICATIONS), TOPSOIL APPLICATION, SEEDBED PREPARATION, FERTILIZER APPLICATION, PERMANENT SEEDING, TRACKING (SEE SHEET C-105), AND MULCHING.

- TEMPORARY STONE BAG CHECK DAMS ARE TO BE PLACED AS SHOWN ON PLANS IN DRAINAGE SWALES AFTER FINAL RESTORATION OCCURS. TEMPORARY STONE BAG CHECK DAMS ARE TO BE REMOVED ONCE VEGETATION IS ESTABLISHED.
- REFER TO THE LANDSCAPING SPECIFICATIONS FOR FINAL RESTORATION PERMANENT SEEDING.
- FINAL RESTORATION OF DRAINAGE SWALES 1 - 10 WILL REQUIRE TURF REINFORCEMENT MAT OR EROSION CONTROL BLANKET AS SHOWN ON THE DRAINAGE SWALE PROFILE SHEETS C-503 TO C-509 AND SPECIFICATION SECTION Q2270 PART 2.01B.
- ACTIONS MUST BE TAKEN TO MINIMIZE THE TRACKING OF MUD AND SOIL FROM CONSTRUCTION AREAS ONTO PUBLIC ROADWAYS. SOIL TRACKED ONTO THE ROADWAY SHALL BE REMOVED DAILY.
- SOIL STOCKPILES SHALL BE LOCATED AWAY FROM STREAMS, PONDS, SWELLS, AND CATCH BASINS. STOCKPILES SHALL BE SEEDED, MULCHED, AND ADEQUATELY CONTAINED THROUGH THE USE OF SILT FENCE.
- STAGING AND STORAGE AREAS SHALL BE LOCATED AWAY FROM STREAMS, PONDS, SWELLS, AND CATCH BASINS. RUNOFF FROM STAGING AND STORAGE AREAS SHALL BE PROTECTED THROUGH THE USE OF SILT FENCE OR OTHER ACCEPTABLE SILT CONTROL DEVICE. TEMPORARY GRAVEL CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT STAGING.
- SEDIMENT GROUNDWATER, STREAM WATER, OR DITCH WATER ENCOUNTERED DURING TRENCHING, BORING, OR OTHER EXCAVATION ACTIVITIES SHALL BE PUMPED TO A SEDIMENT TRAPPING DEVICE, SUCH AS SILT FENCE, VEGETATED OVERLAND FLOW, OR A MANUFACTURED SILT BAG, PRIOR TO BEING DISCHARGED INTO A STREAM, POND, SWELL, OR CATCH BASIN.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED AND DISPOSED OF WITHIN THIRTY DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY CONTROLS ARE NO LONGER NEEDED. TRAPPED SEDIMENT AND DISTURBED AREAS FROM REMOVAL OF THE CONTROLS SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION.
- THE EPCO CONTROLS AND BMPs SHOWN ON THE DRAWINGS ARE THE MINIMUM REQUIRED. THE CONTRACTOR'S ACCESS, STAGING AREAS, SEQUENCING, AND CONSTRUCTION METHODS MAY REQUIRE ADDITIONAL EPCO MEASURES NOT INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL PROVIDE ADDITIONAL CONTROLS AND REVISE THE BMPs AS NECESSARY TO MINIMIZE SEDIMENT FROM LEAVING THE CONSTRUCTION ZONE.
- CONTRACTOR IS RESPONSIBLE FOR PREPARING AND SUBMITTING THE NOTICE OF INTENT (NOI) TO THE KENTUCKY DIVISION OF WATER FOR COVERAGE UNDER THE KPDES GENERAL STORMWATER PERMIT.

INSPECTION

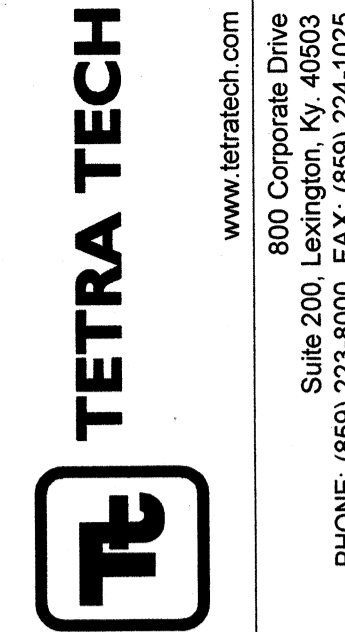
- THE CONTRACTOR SHALL INSPECT ALL DISTURBED AREAS OF THE SITE, MATERIAL STORAGE SITES, DISCHARGE LOCATIONS, AND EPCO CONTROL DEVICES (SUCH AS CONSTRUCTION ENTRANCES, DITCH CHECKS, SILT FENCE, AND OTHER CONTROLS INSTALLED) AT LEAST EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24-HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1/2 - INCHES OR MORE PRECIPITATION. CHECK FOR AREAS WHERE RUNOFF HAS ERODED A CHANNEL BENEATH THE DEVICE, OR WHERE THE DEVICE HAS BEEN OVERLAPPED AND/OR COLLAPSED.
- THE CONTRACTOR SHALL MAINTAIN INSPECTION RECORDS AND REPORTS OF COMPLETED MAINTENANCE.

MAINTENANCE

- IF THE EPCO CONTROL DEVICE BECOMES INEFFECTIVE DUE TO WEATHERING, DECOMPOSING, OR DAMAGE, REPLACE THE AFFECTED SECTION IMMEDIATELY.
- SEDIMENT MUST BE REMOVED WHEN IT REACHES APPROXIMATELY 1/3 THE HEIGHT OR CAPACITY OF THE SILT TRAPPING DEVICE, ESPECIALLY IF HEAVY RAINS ARE EXPECTED.

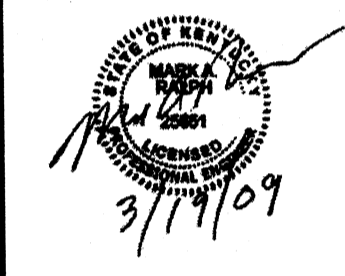
OTHER CONTROL MEASURES

- THE CONTRACTOR SHALL CONTROL WASTES, GARBAGE, DEBRIS, WASTEWATER, AND OTHER SUBSTANCES ON THE SITE IN SUCH A WAY THAT THEY SHALL NOT BE TRANSPORTED FROM THE SITE BY THE ACTION OF WINDS, STORM WATER RUNOFF, OR OTHER FORCES. PROPER DISPOSAL OR MANAGEMENT OF ALL WASTES AND UNUSED MATERIAL REQUIRED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SPILL PREVENTION AND CONTROL FOR PETROLEUM PRODUCTS AND HAZARDOUS MATERIALS STORED ON THE JOB SITE.



PROJECT RECORD

CONFORMED SET 5/09



DATE	DESCRIPTION

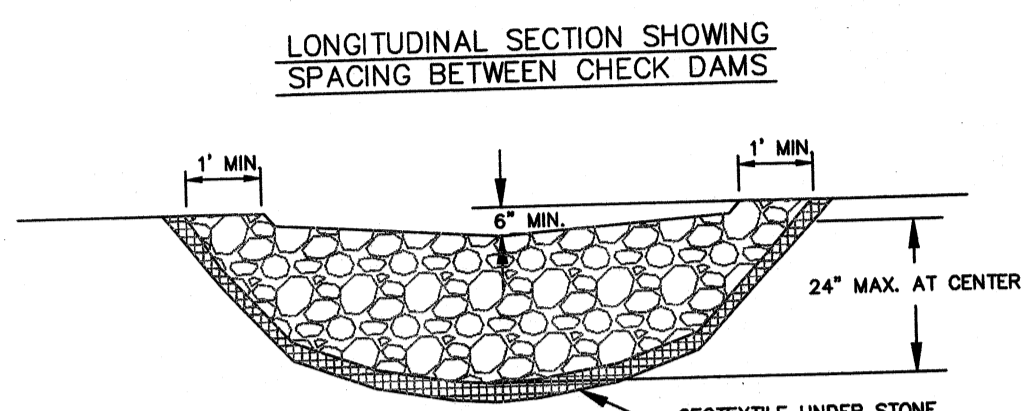
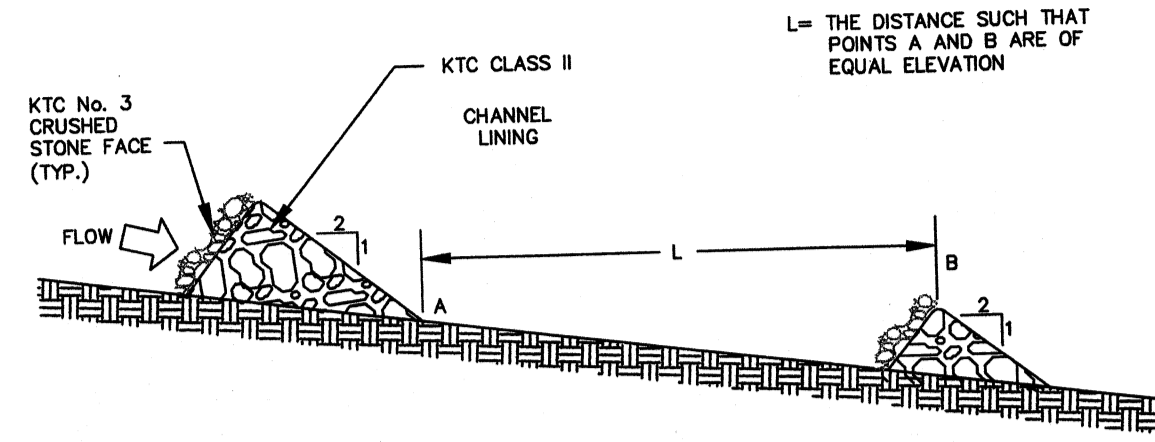
MARK

OHIO COUNTY WATER DISTRICT PROJECT NO. 120-07060
OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT
EROSION CONTROL DETAILS AND NOTES

Project No.: 120-07060
Designed By:
Drawn By:
Checked By:

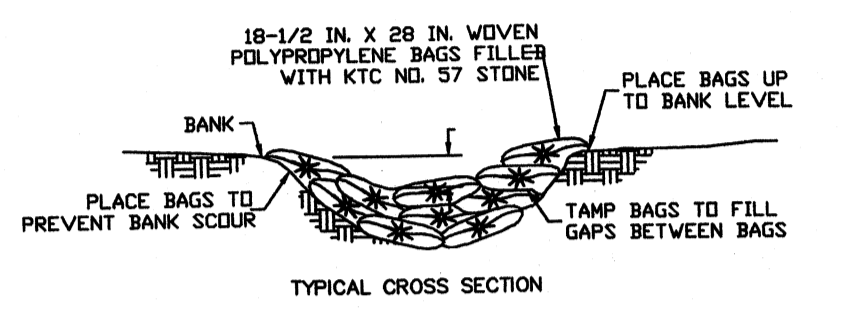
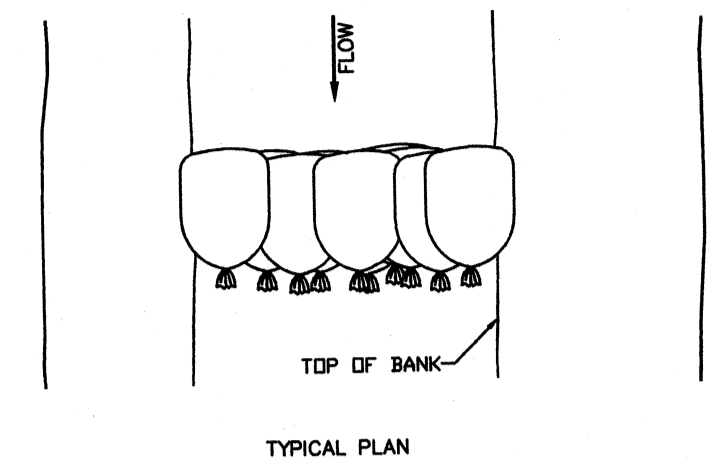
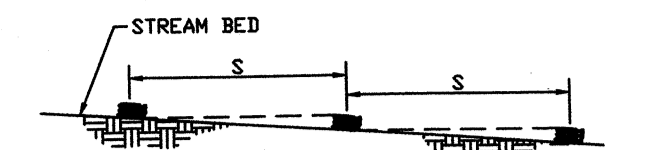
C-109

Wednesday, July 01, 2009 10:56:04 AM DRAWING: \\nroffis3\projects\120-07060 Ohio County\CONFORMED SET 5-09\CIVIL\07060 C-110 EC DETAILS.DWG LAYOUT: C-110 USER NAME: JEREMY M. FRONGILLO



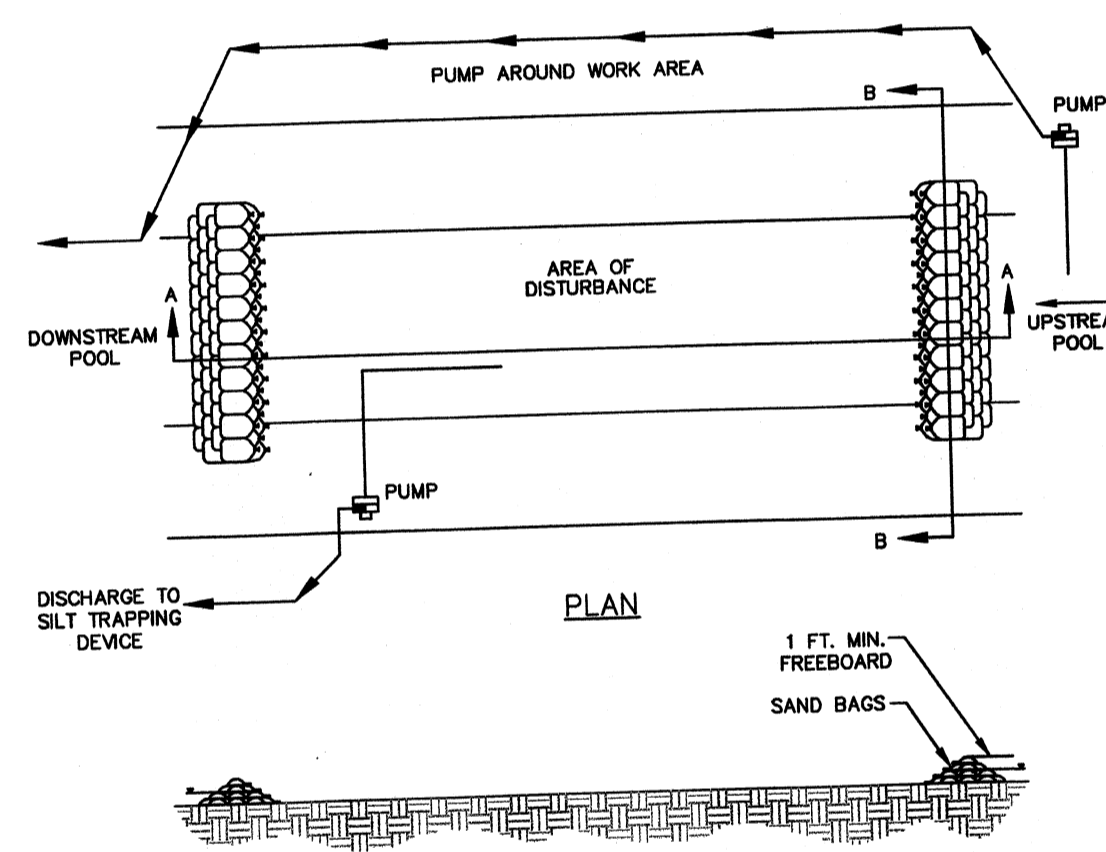
SECTION ACROSS CHANNEL
ROCK DITCH CHECK

- ROCK DITCH CHECK NOTES**
1. A GEOTEXTILE FABRIC SHALL BE INSTALLED OVER THE SOIL SURFACE WHERE THE ROCK DITCH CHECK IS TO BE PLACED.
 2. THE BODY OF THE ROCK DITCH CHECK IS TO BE COMPOSED OF KTC CLASS II CHANNEL LINING. THE UPSTREAM FACE OF THE ROCK DITCH CHECK SHALL BE COMPOSED OF KTC NO. 3 CRUSHED STONE.
 3. STONE SHOULD BE PLACED OVER THE CHANNEL BANKS TO PREVENT WATER FROM CUTTING AROUND THE DITCH CHECK.
 4. FINAL PLACING OF THE ROCK MUST BE BY HAND OR MECHANICAL PLACEMENT TO ACHIEVE COMPLETE COVERAGE OF THE DITCH OR SWALE AND TO ENSURE THAT THE CENTER OF THE CHECK IS LOWER THAN THE EDGES.
 5. ROCK CHECKS SHOULD BE LOCATED AT APPROXIMATE LOCATIONS AS SHOWN ON THE PLANS. IF MULTIPLE CHECKS ARE PLACED IN SERIES WITHIN A DITCH OR SWALE, THE CREST OF THE DOWNSTREAM CHECK SHOULD BE AT THE SAME ELEVATION AS THE TOE OF THE CHECK LOCATED IMMEDIATELY UPSTREAM.
 6. REMOVE CHECKS AS SOON AS THEY ARE NO LONGER REQUIRED AND RESTORE AND PERMANENTLY STABILIZE THE DISTURBED AREA. ALL STONE SHOULD BE REMOVED IF VEGETATION WILL BE USED FOR PERMANENT EROSION CONTROL MEASURES. THE DISTURBED AREA BENEATH THE DITCH CHECKS SHOULD BE SEEDED AND MULCHED IMMEDIATELY AFTER CHECK DAM REMOVAL.



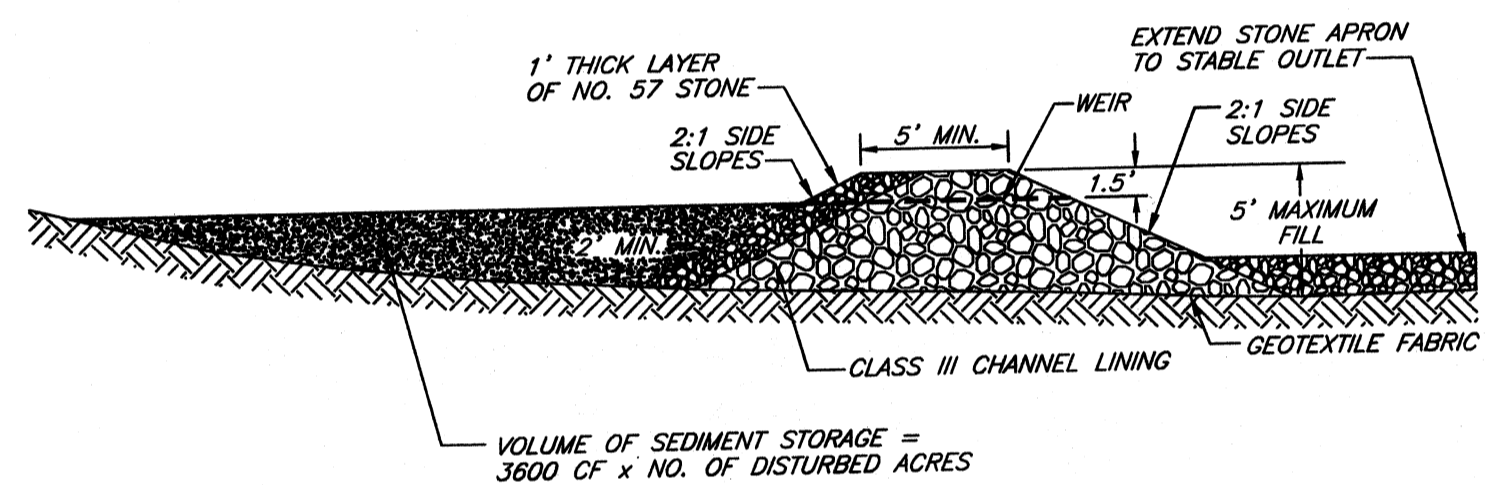
STONE BAG SILT/VELOCITY CHECK

- STONE BAG CHECK DAM NOTES**
1. STONE BAG CHECKS SHALL BE WOVEN POLYPROPYLENE BAGS WITH APPROXIMATE DIMENSIONS OF 18 1/2 INCHES BY 28 INCHES. THE BAGS SHALL BE FILLED WITH KTC NO. 37 STONE. TIE THE ENDS OF FILLED BAGS USING EITHER DRAW STRINGS OR WIRE TIES.
 2. STONE BAG CHECK DAMS SHALL SPAN THE BANKS OF THE DITCH OR SWALE.
 3. THE CENTERLINE OF THE DITCH SHALL BE THE LOW POINT OF THE CHECKS. PLACE BAGS AT THE BANKS TO A HEIGHT AT LEAST 6 INCHES ABOVE THE CENTER OF THE CHECK.
 4. SPACE STONE BAG DITCH CHECKS AT APPROXIMATE LOCATIONS AS SHOWN ON THE PLANS, OR SUCH THAT THE CREST OF THE DOWNSTREAM CHECK IS AT THE SAME ELEVATION AS THE TOE OF THE CHECK LOCATED IMMEDIATELY UPSTREAM.
 5. REINFORCE CHECKS WITH ADDITIONAL STONE BAGS AS REQUIRED TO MAINTAIN INTEGRITY. REMOVE AND REPLACE ANY DAMAGED BAGS AND DISPOSE OF THEM PROPERLY. DO NOT LEAVE DAMAGED OR EMPTY BAGS IN THE DITCH AT ANY TIME.
 6. REMOVE CHECKS AS SOON AS THEY ARE NO LONGER REQUIRED AND RESTORE AND PERMANENTLY STABILIZE THE DISTURBED AREA. THE DISTURBED AREA BENEATH THE DITCH CHECKS SHOULD BE SEEDED AND MULCHED IMMEDIATELY AFTER CHECK DAM REMOVAL.



PUMP AROUND FLOW DIVERSION

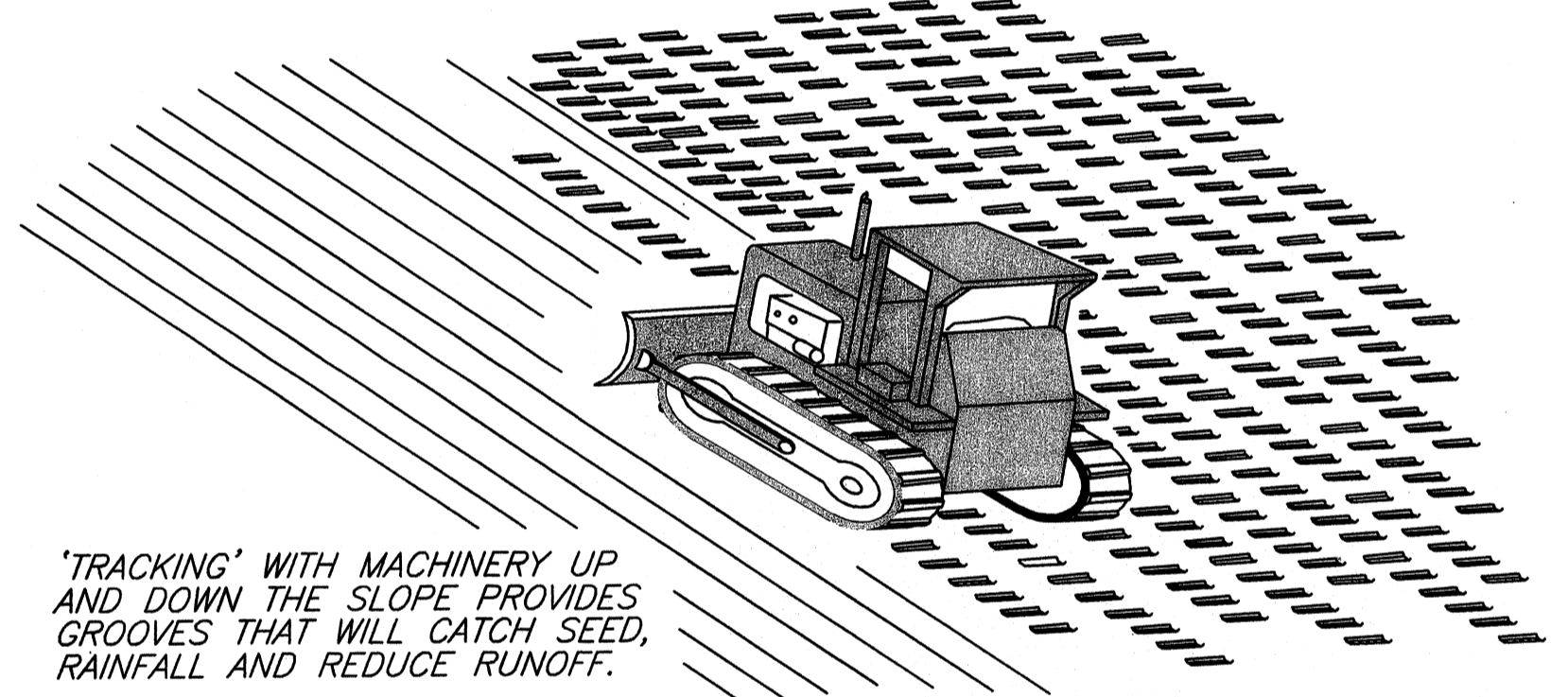
- PUMP AROUND FLOW DIVERSION NOTES**
1. USE PUMP AROUND DIVERSION WHEN CONSTRUCTION ACTIVITY IS WITHIN A FLOWING STREAM, CREEK, OR DITCH.
 2. PUMP AROUND DIVERSION LOCATIONS IDENTIFIED ON THE PLANS MAY NOT BE REQUIRED IF STREAM, CREEK OR DITCH CROSSING IS DRY AND NOT FLOWING.



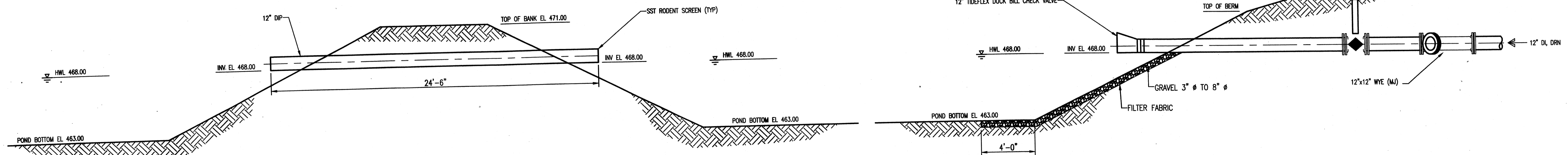
STONE SECTION

NOTE:
A SEDIMENT TRAP CAN BE USED FOR DISTURBED AREAS LESS THAN 5 ACRES.

SEDIMENT TRAP

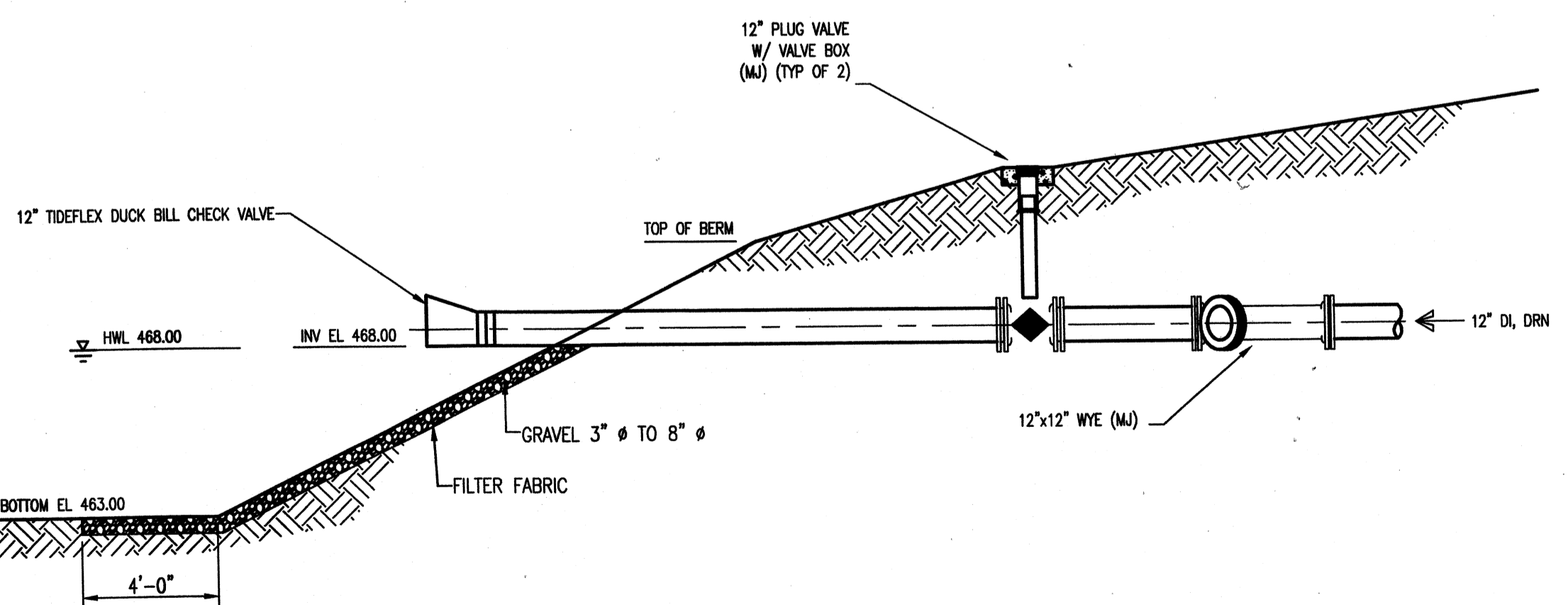


TRACKING



12" DIP LAGOON EQUALIZATION PIPE

SECTION A
SCALE: 1/4"=1'-0"



TYPICAL 12" DIP PLANT DRAIN

SECTION B
SCALE: 1/4"=1'-0"

TETRA TECH
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Suite 200, Lexington, Ky, 40503
PHONE: (859) 223-8000 FAX: (859) 224-1025

PROJECT RECORD

CONFORMED SET 5/09
3/7/09

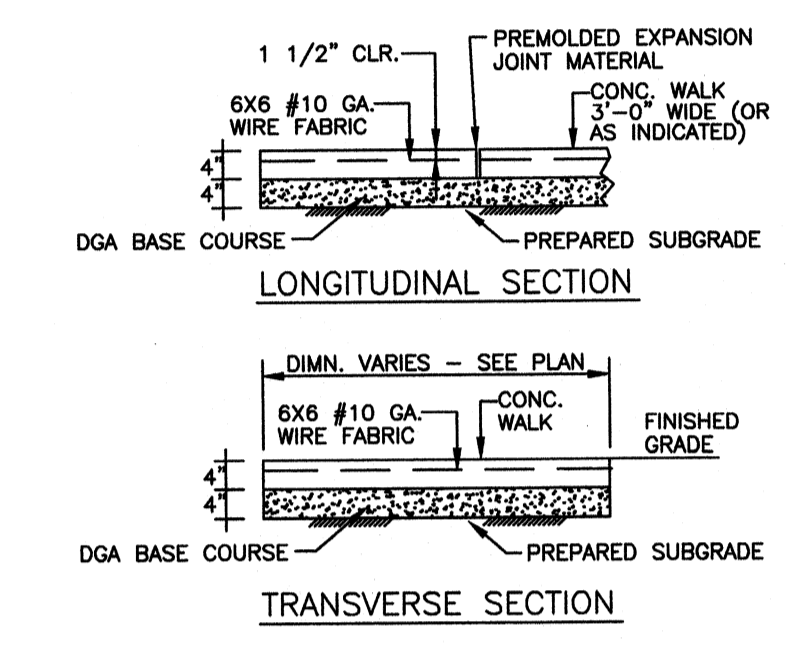
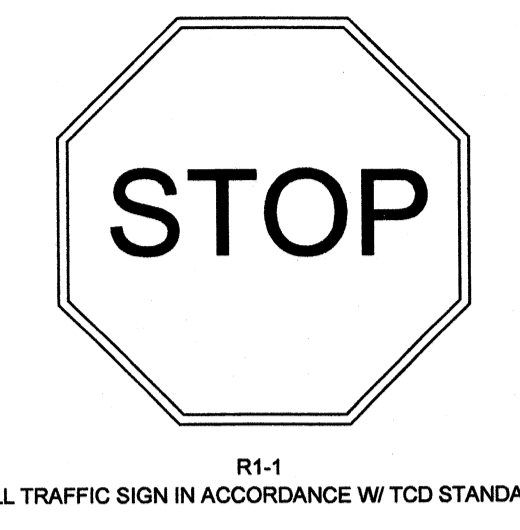
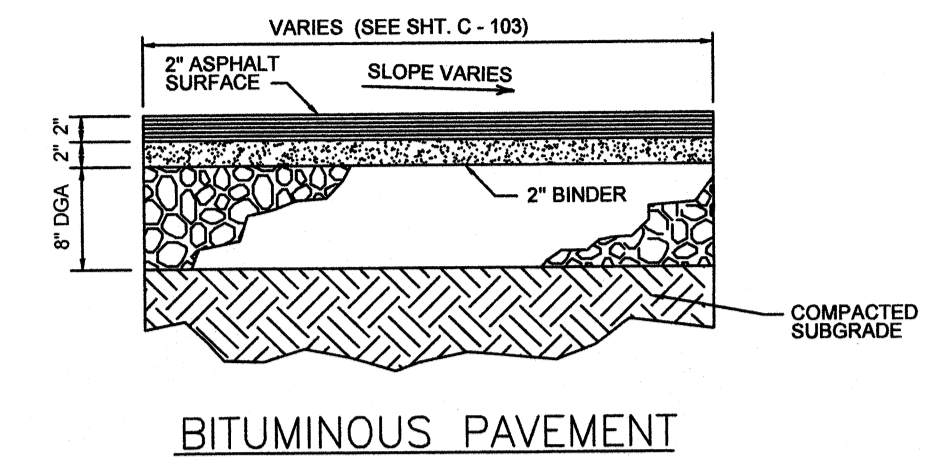
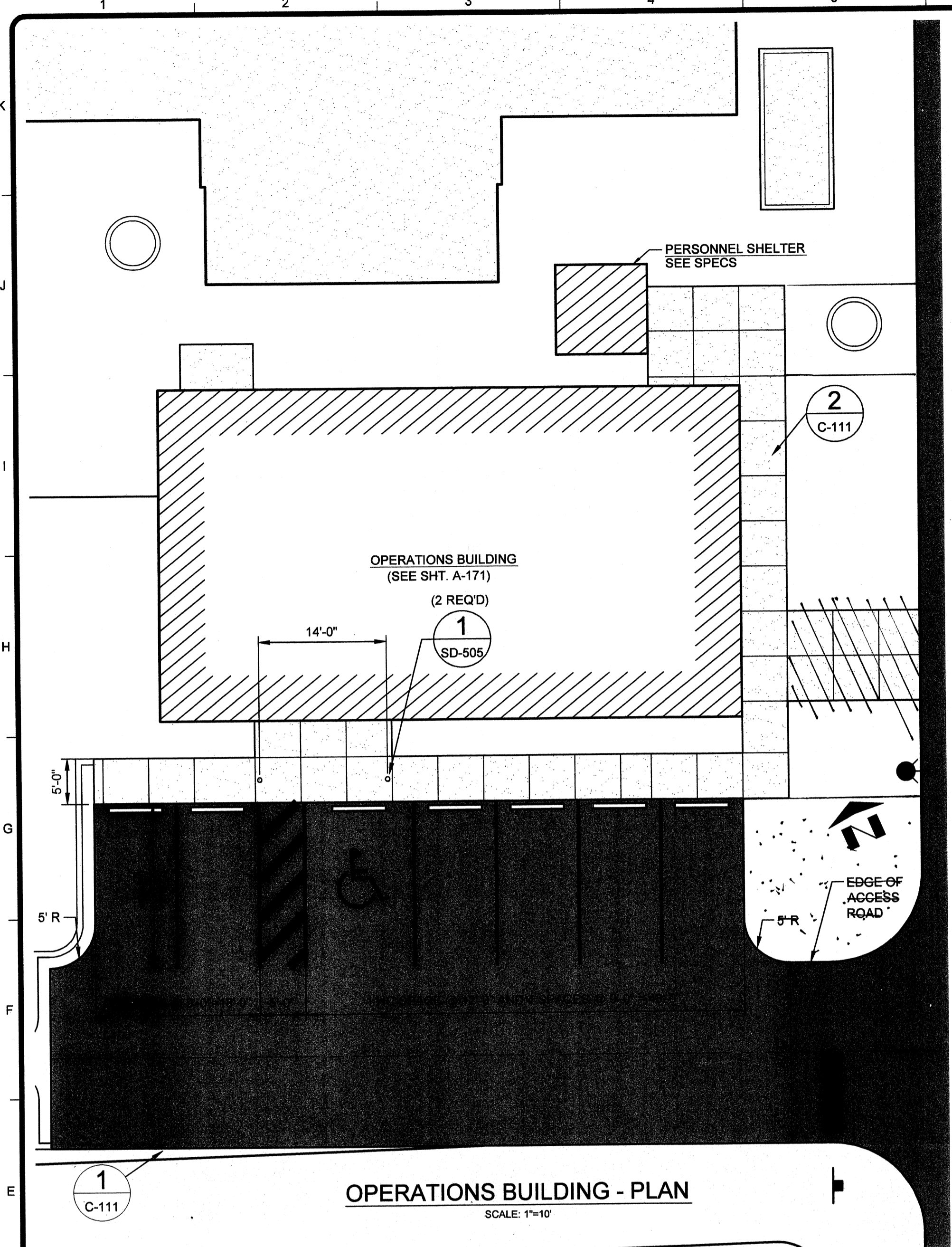
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

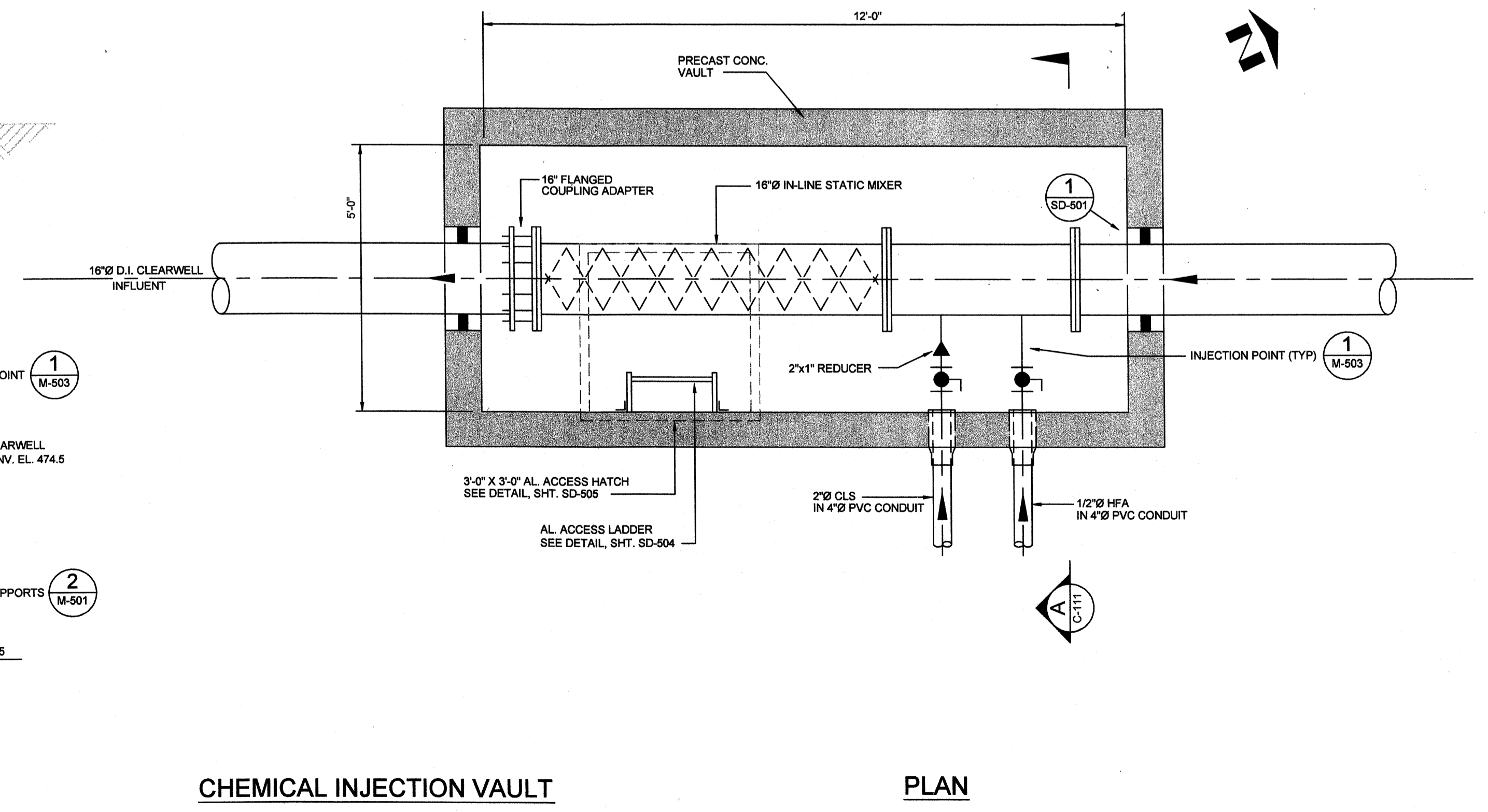
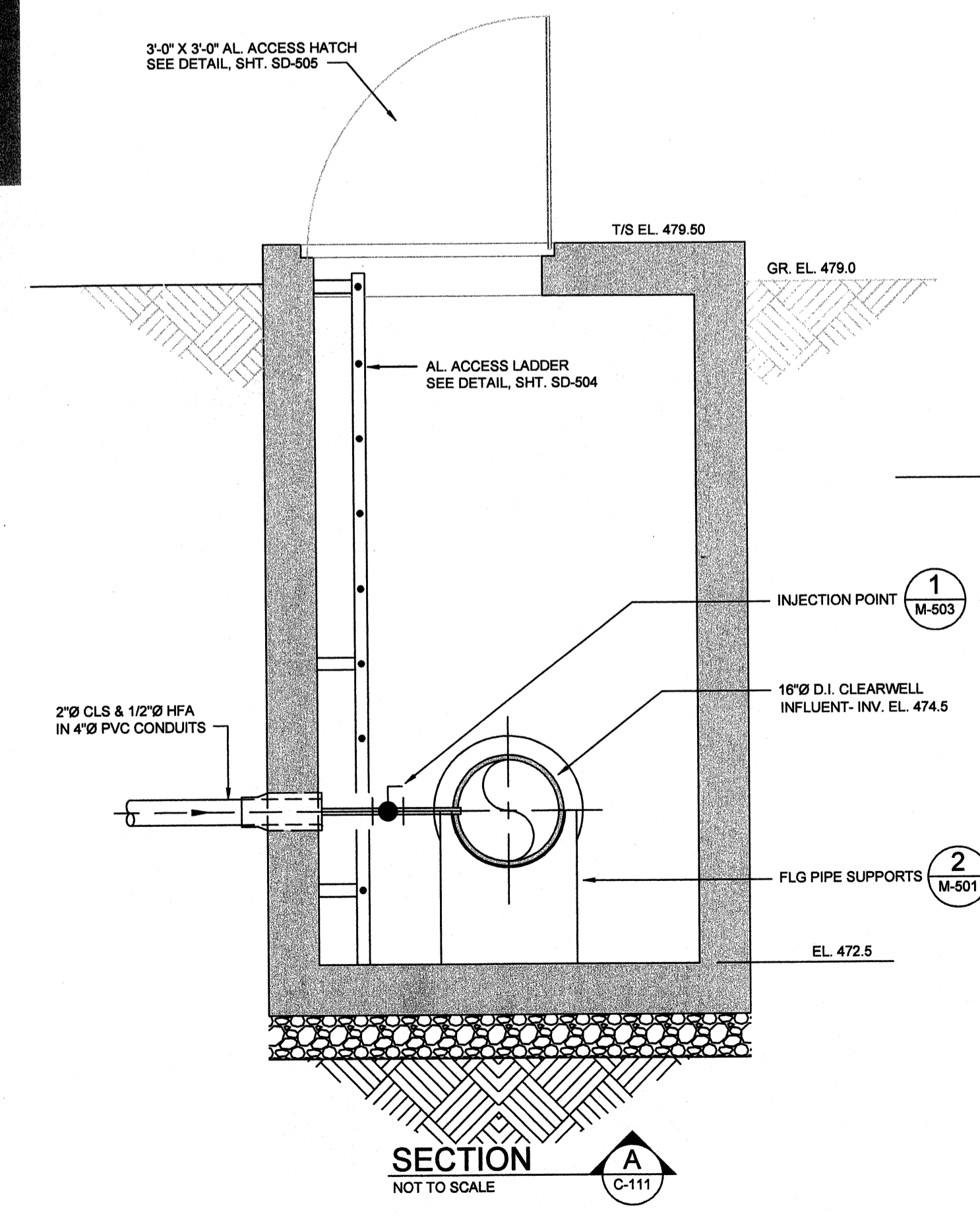
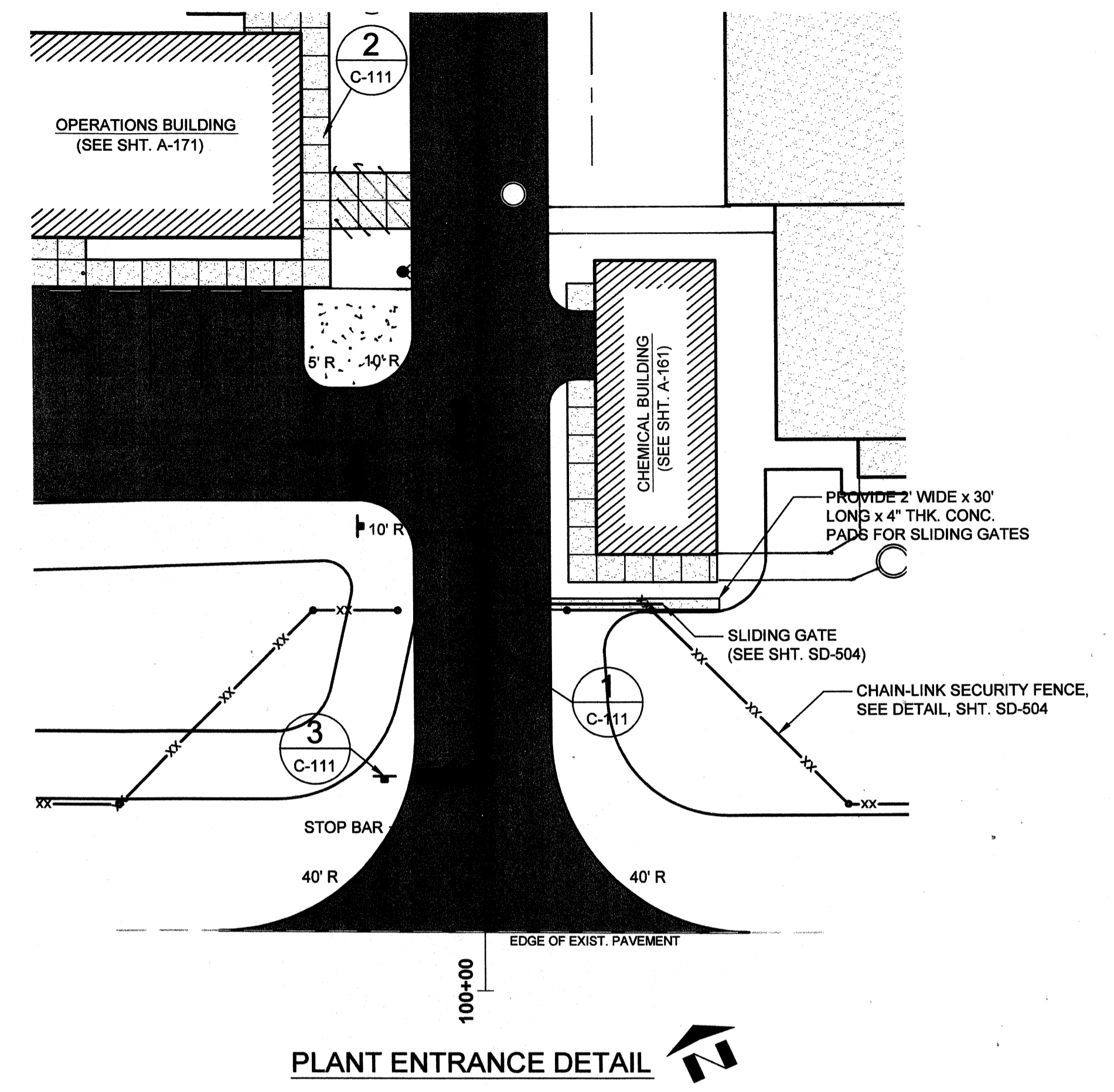
Project No.: 120-07060
Designed By:
Drawn By:
Checked By:

C-110

Monday, July 27, 2009 2:24:37 PM DRAWING: P:120-07060 Ohio County Redesign\ORLANDO\CONFORMED SET 5-09\CIVIL\07060 C-111 SITE LAYOUT DWG LAYOUT: C-111 USER NAME: JEREMY M. FRONGILLO

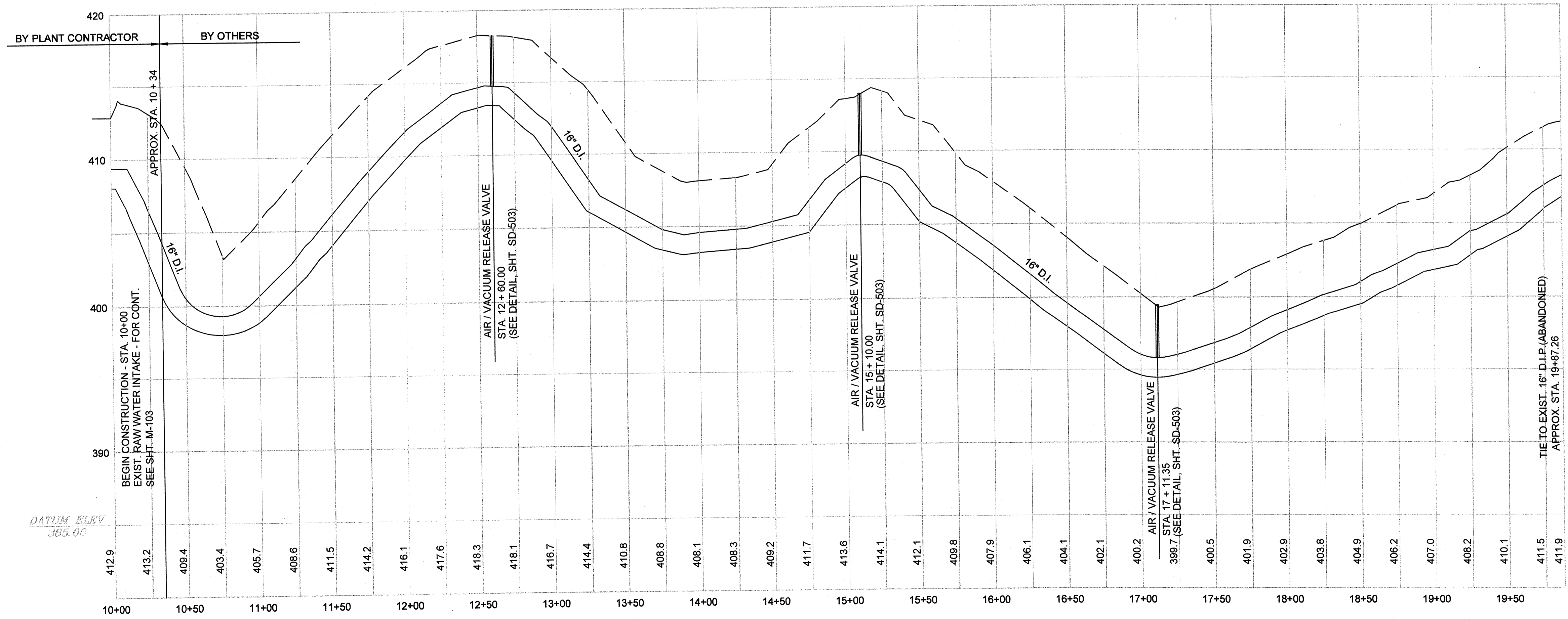
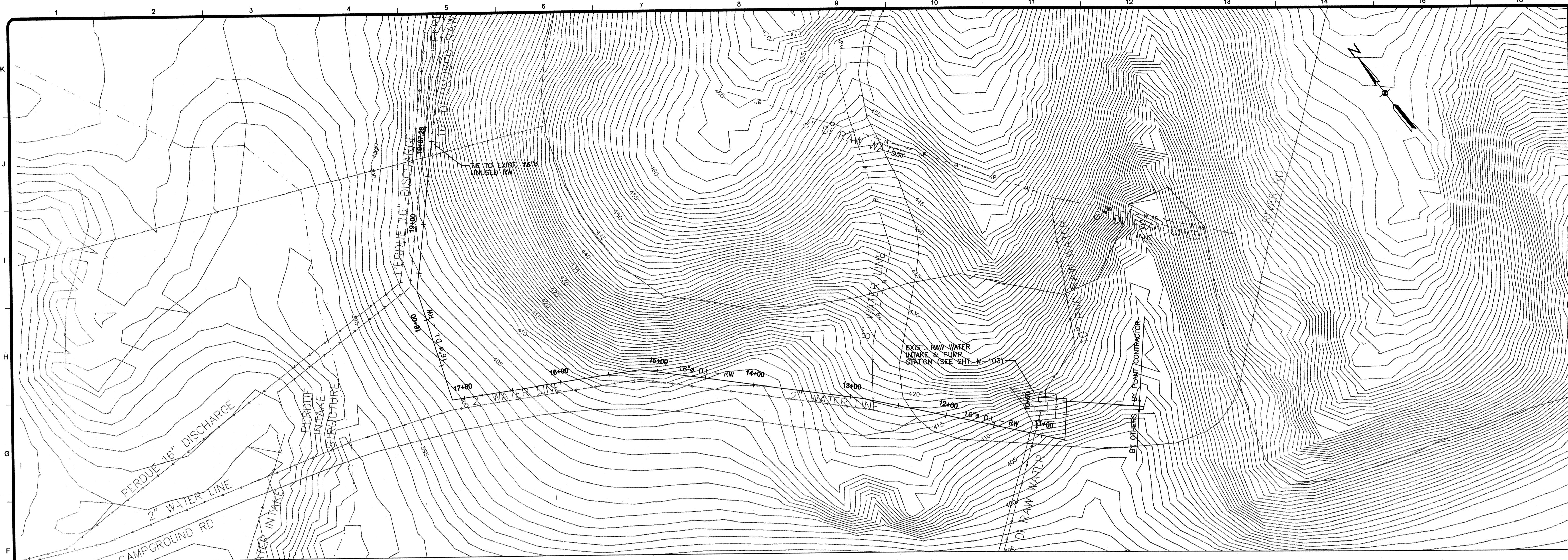


NOTES:
1. EXP. JTS. TO BE 24'-0" MAX. C-C
2. SCORE CONG. @ 4'-0" INTERVALS



BY	DATE	DESCRIPTION

Wednesday, July 01, 2009 10:42:36 AM DRAWING: \\larofis\projects\120-07060 Ohio County\CONFORMED SET 5-09\CIVIL\07060 C-105-108 & C112 P.P. DWG LAYOUT. C-112 USER NAME: JEREMY M. FRONGILLO



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PROJECT RECORD

CONFORMED SET 5/09

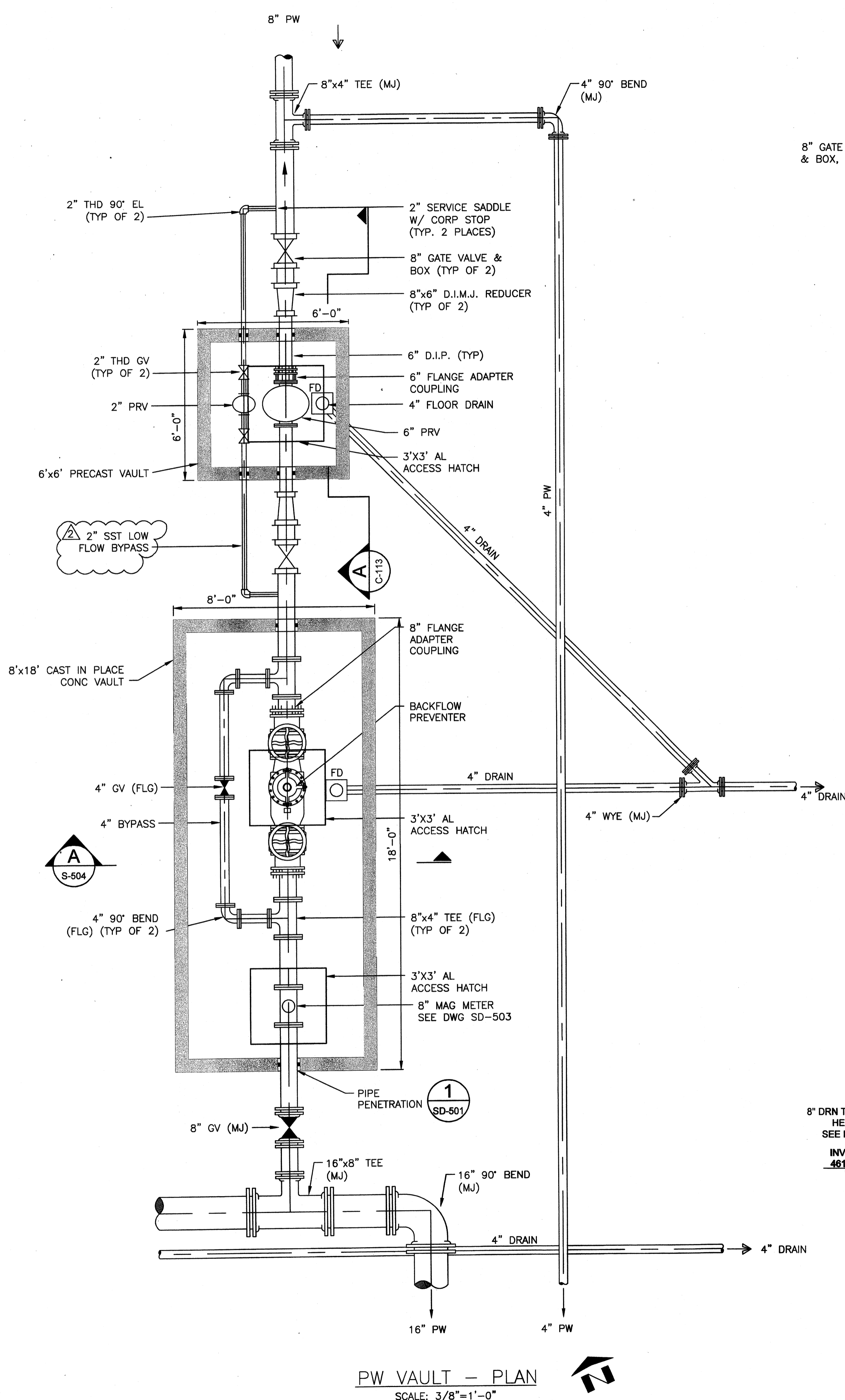
BY	MARK	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT
16" RAW WATER LINE

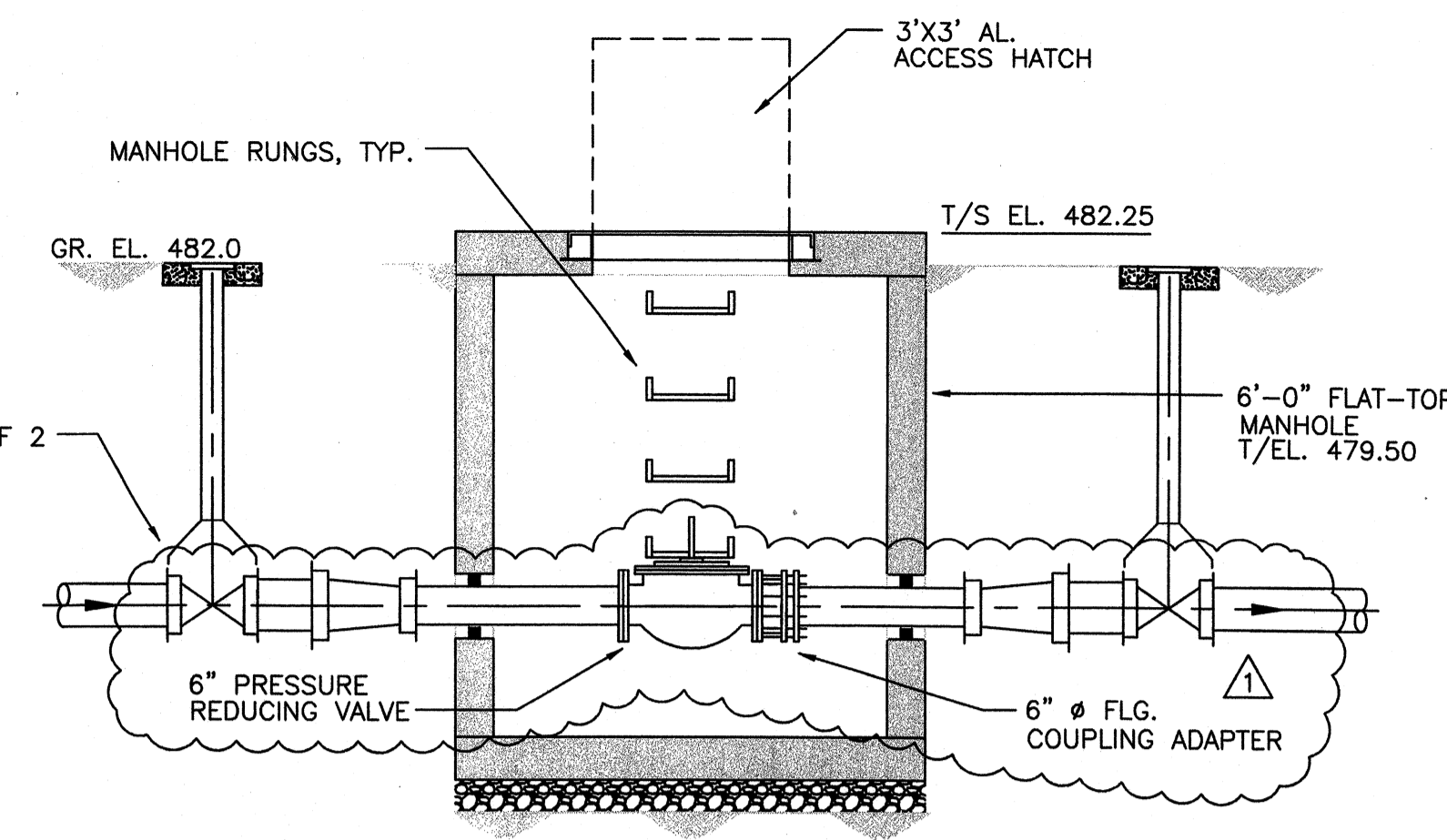
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 Designed By: GDP
 Drawn By: GDP
 Checked By:

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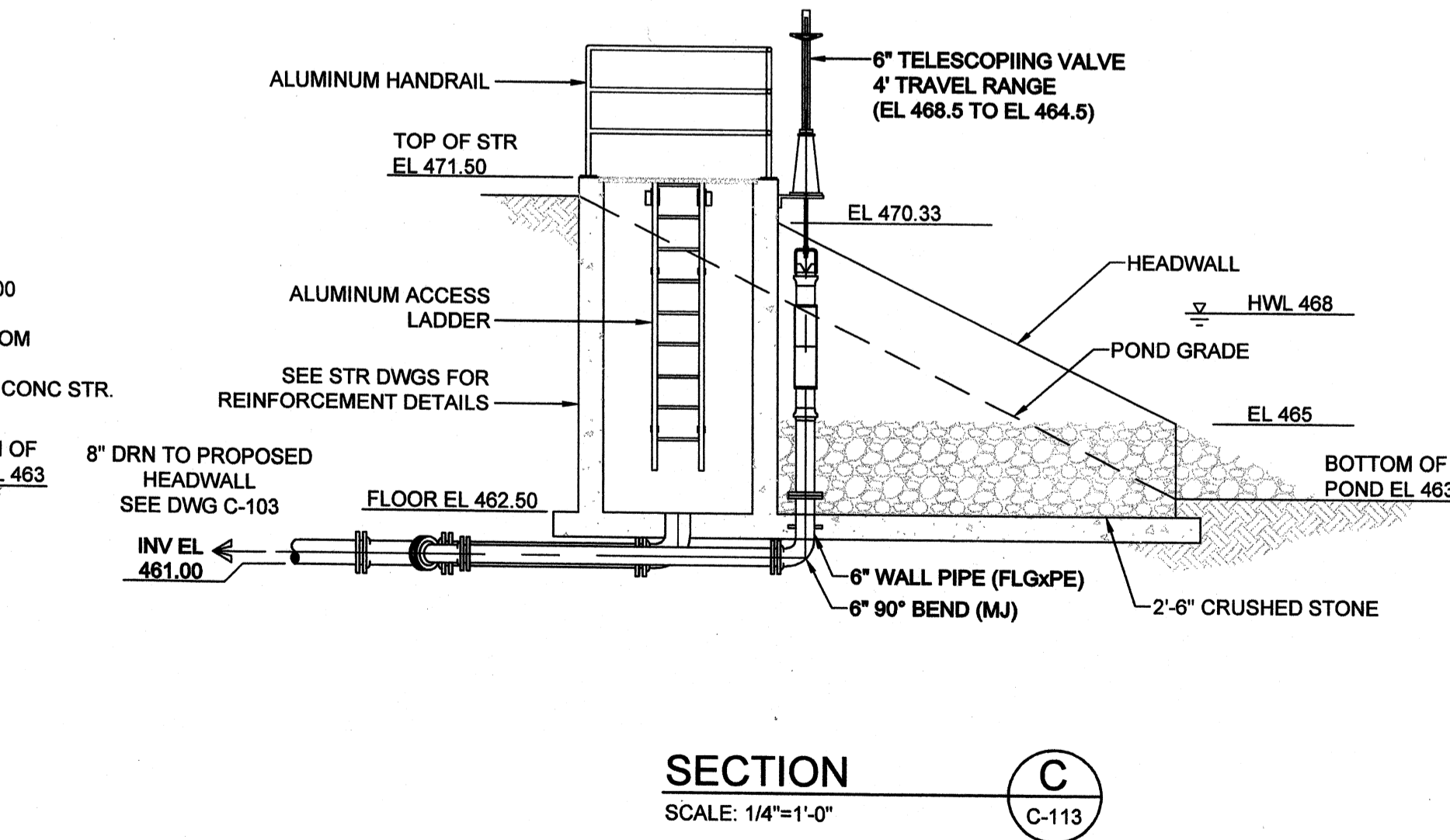
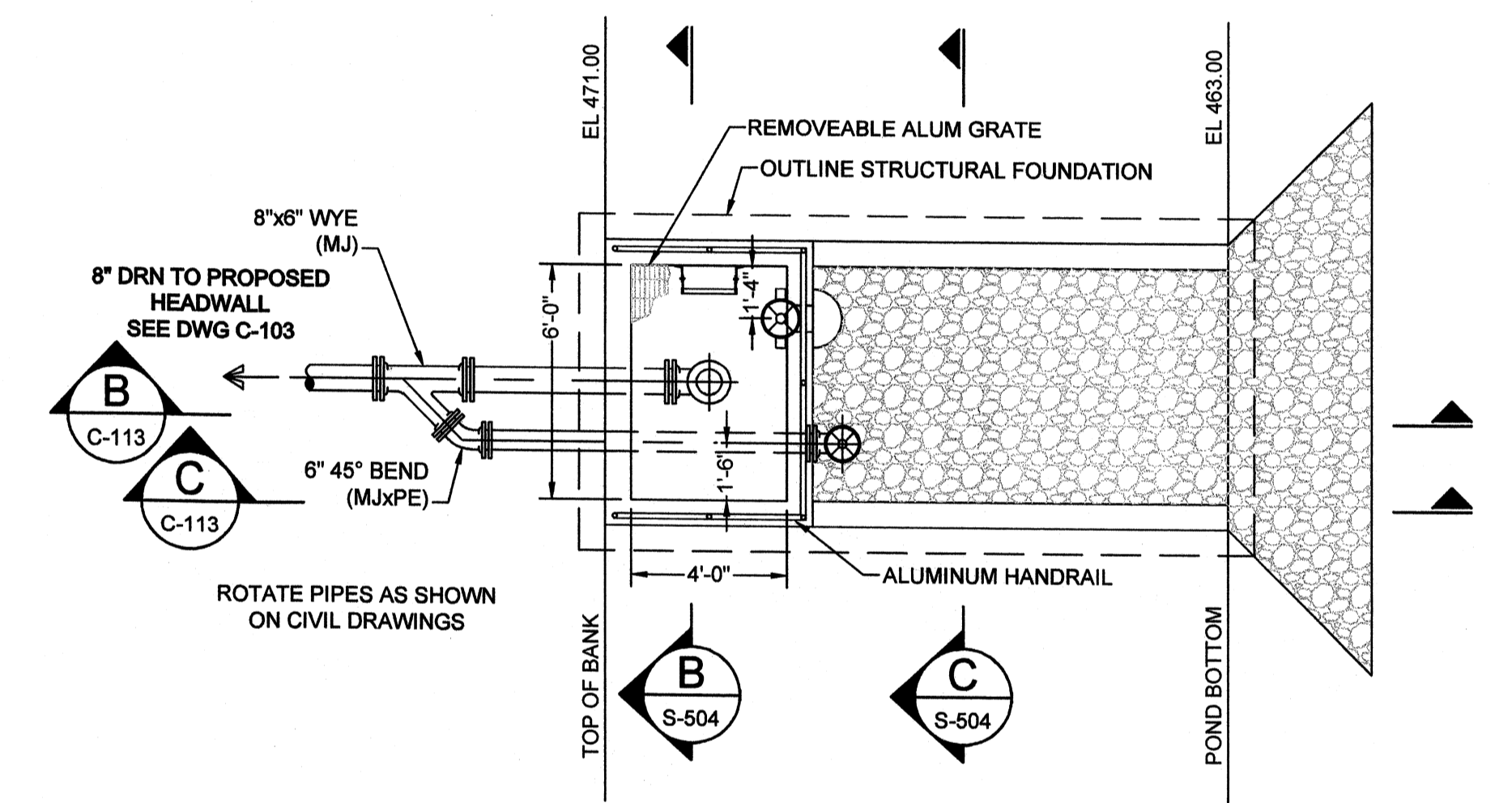
Thursday, July 16, 2009 11:23:31 PM DRAWING: \\arcorif3\projects\120-07060 Ohio County\CONFORMED SET 5-09\CIVIL\07060 C-113.DWG LAYOUT: C-113 USER NAME: JEREMY M. FRONIGILLO



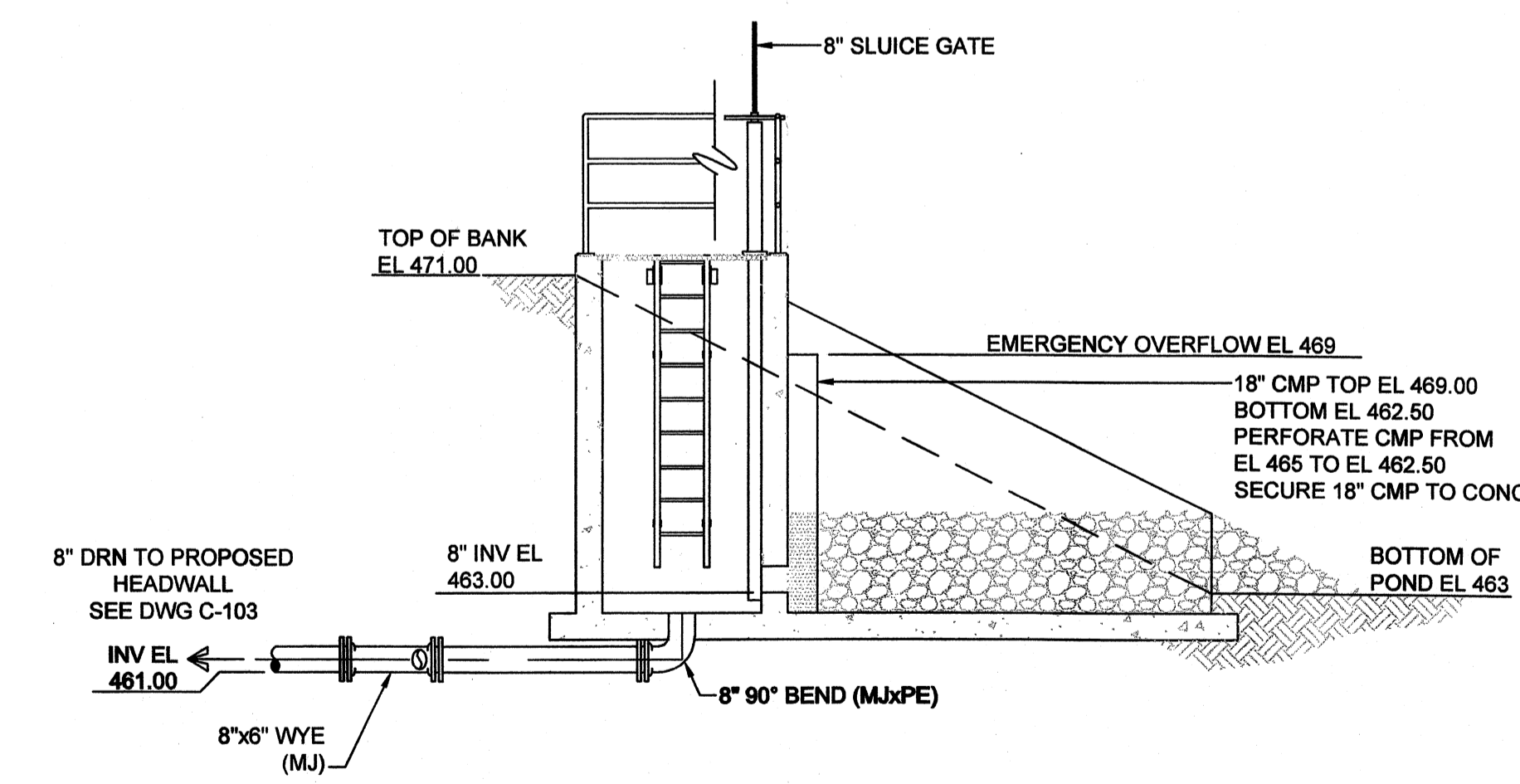
PW VAULT - PLAN
SCALE: 3/8"=1'-0"



SECTION A
SCALE: 3/8"=1'-0"



SECTION C
SCALE: 1/4"=1'-0"



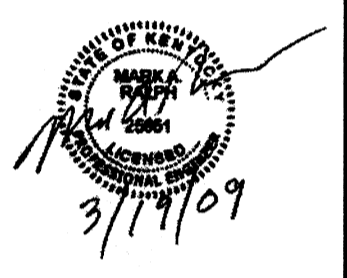
SECTION B
SCALE: 1/4"=1'-0"

DECANT STRUCTURE
SCALE: 1/4"=1'-0"



PROJECT RECORD

CONFORMED SET 5/09



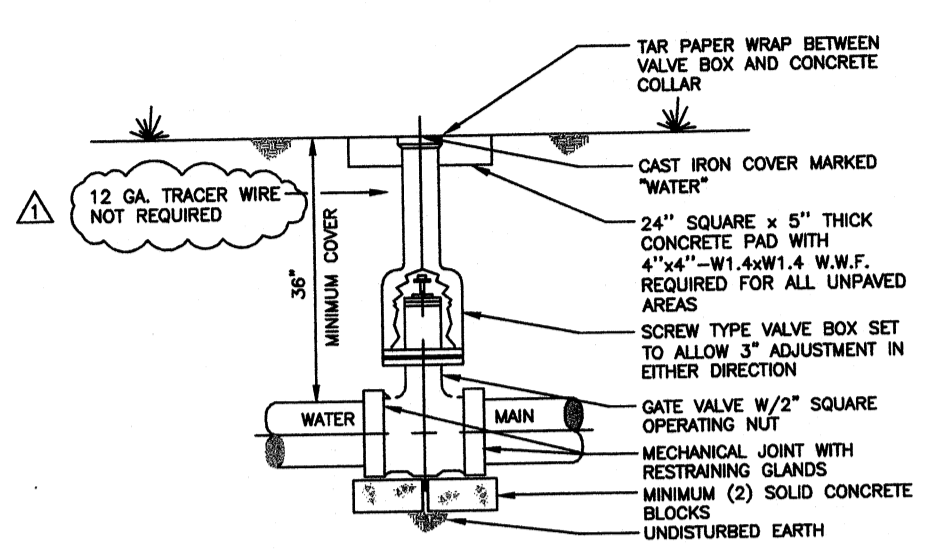
BY	DATE	DESCRIPTION
SCN	5/5/09	ADDENDUM 1
SCN	5/11/08	ADDENDUM 2

MARK	DATE	DESCRIPTION
A	5/5/09	ADDENDUM 1
B	5/11/08	ADDENDUM 2

Client: OHIO COUNTY WATER DISTRICT	Prof. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT	
Project No.:	120-07060
Designed By:	GDP
Drawn By:	GDP
Checked By:	

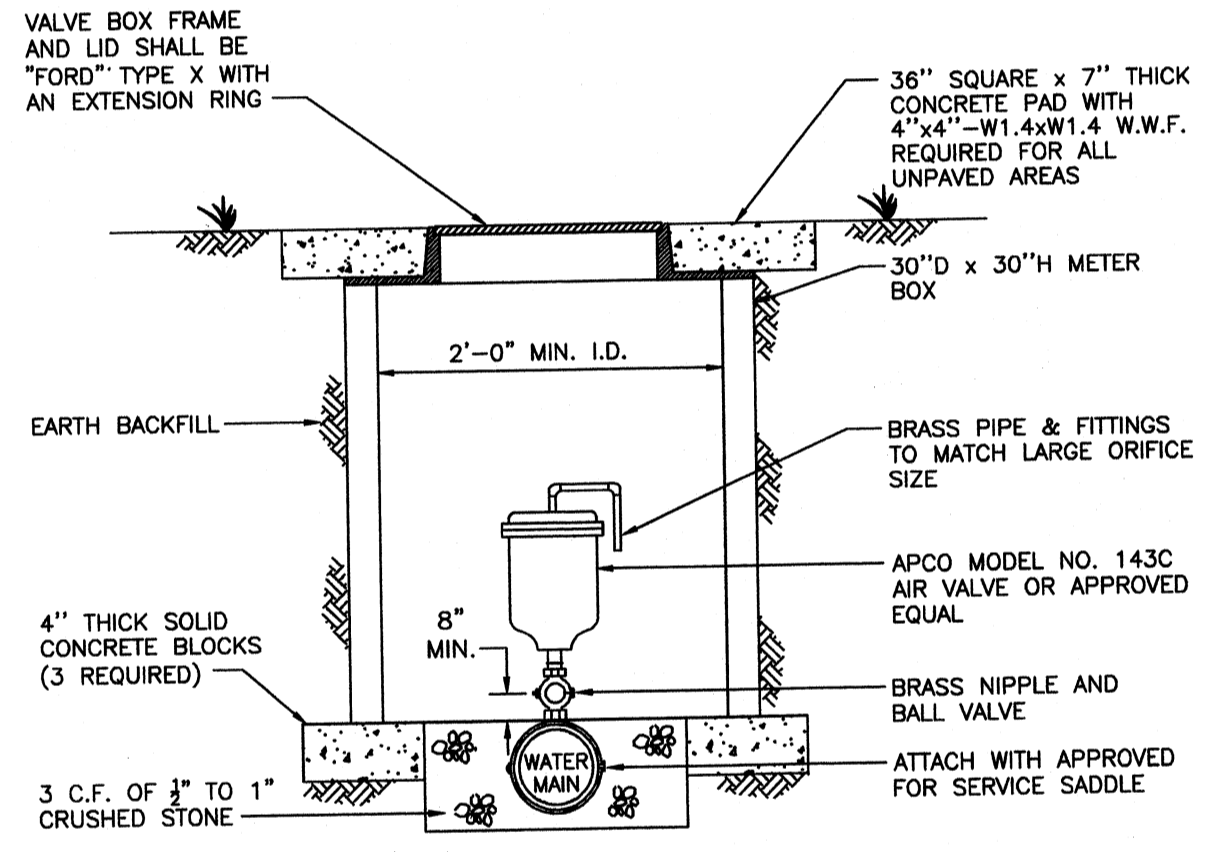
C-113

- NOTES:
1. SET MARKER POST AT VALVES.
 2. VALVES SHALL BE A MOELLER OR MAH UNLESS SHOWN OTHERWISE.
 3. VALVE STEM EXTENSIONS SHALL BE USED AS NEEDED TO BRING TOP OF OPERATING NUT TO WITHIN 36" OF THE SURFACE.
 4. ALL VALVES SHALL BE SECURED TO THE MAIN BY MECHANICAL JOINT RESTRAINING GLANDS AND SHALL BE SUPPORTED WITH CONCRETE.

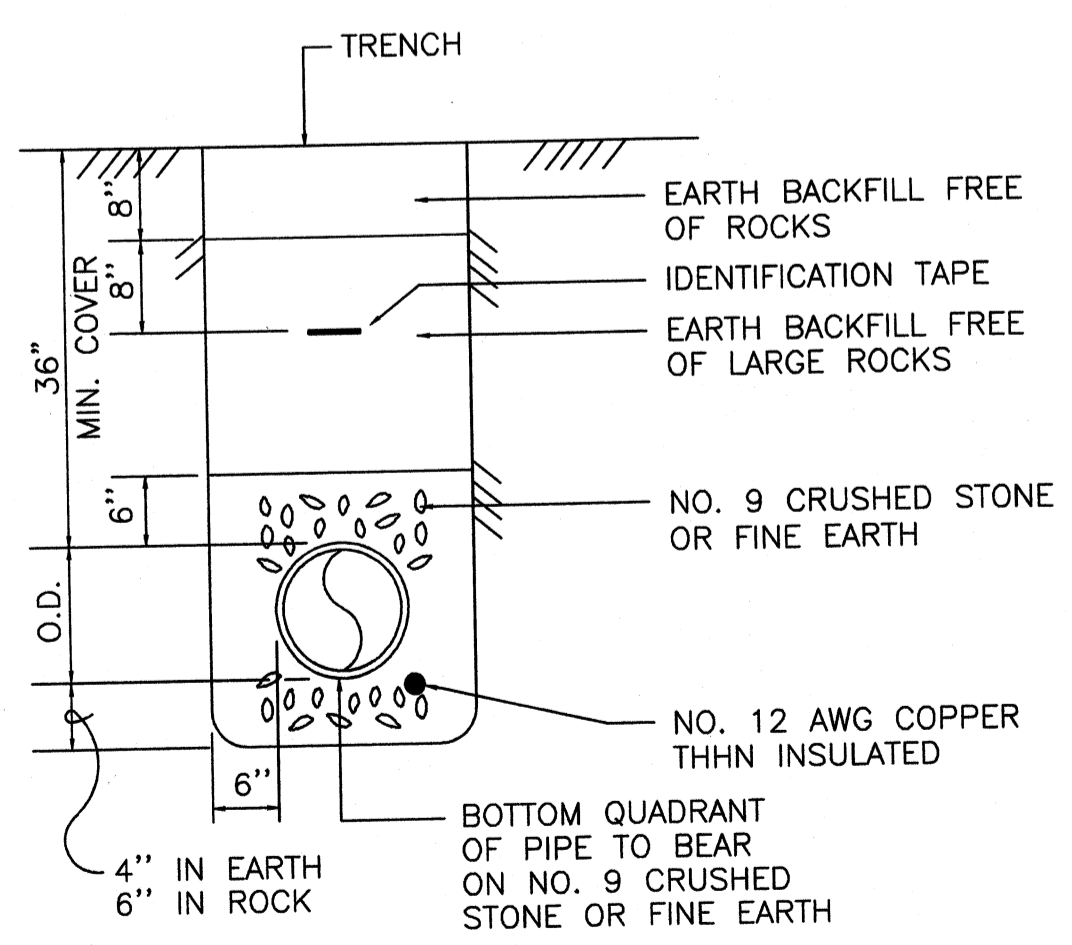


GATE VALVE AND PLUG VALVE INSTALLATION
NOT TO SCALE

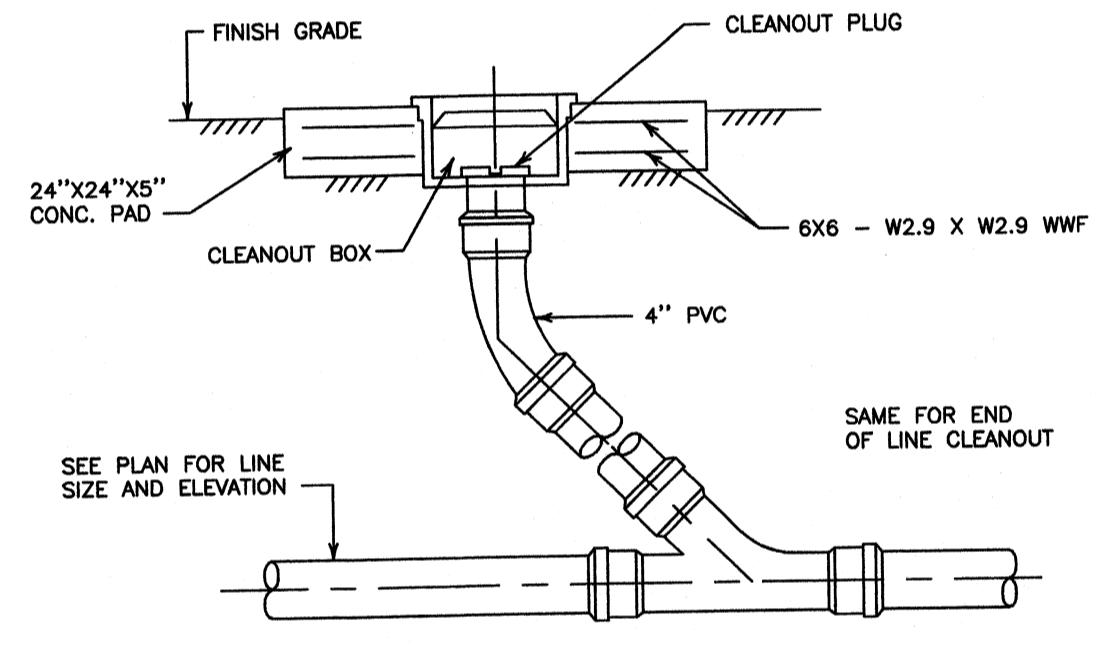
- NOTES:
1. COMBINATION AIR AND VACUUM RELEASE VALVES TO BE INSTALLED VERTICALLY OVER WATER MAIN.
 2. SIZES AS NOTED ON PLANS.
 3. SET MARKER POST AT VALVE.
 4. SET TOP OF METER BOX LEVEL WITH A PAVED SURFACE OR 1" ABOVE GROUND SURFACE.



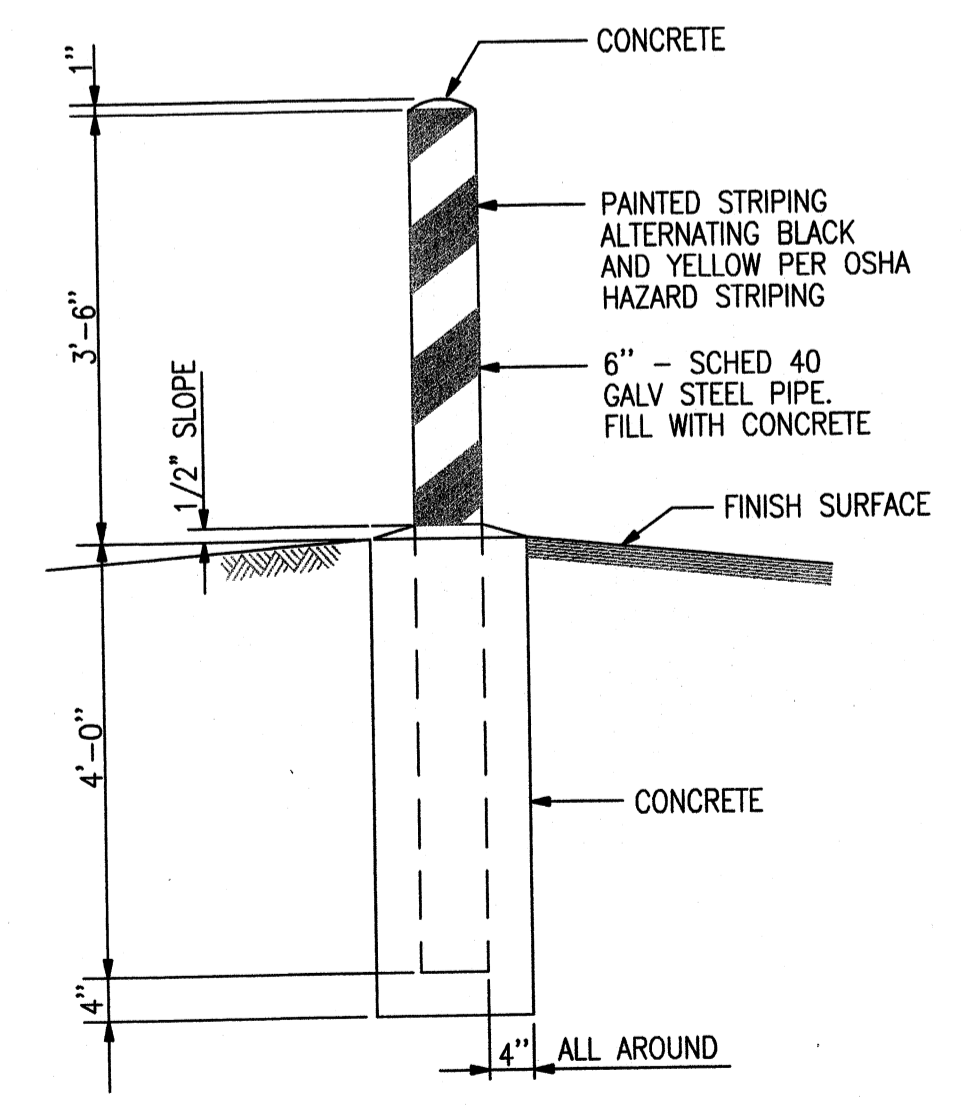
COMBINATION AIR AND VACUUM RELEASE VALVE
NOT TO SCALE



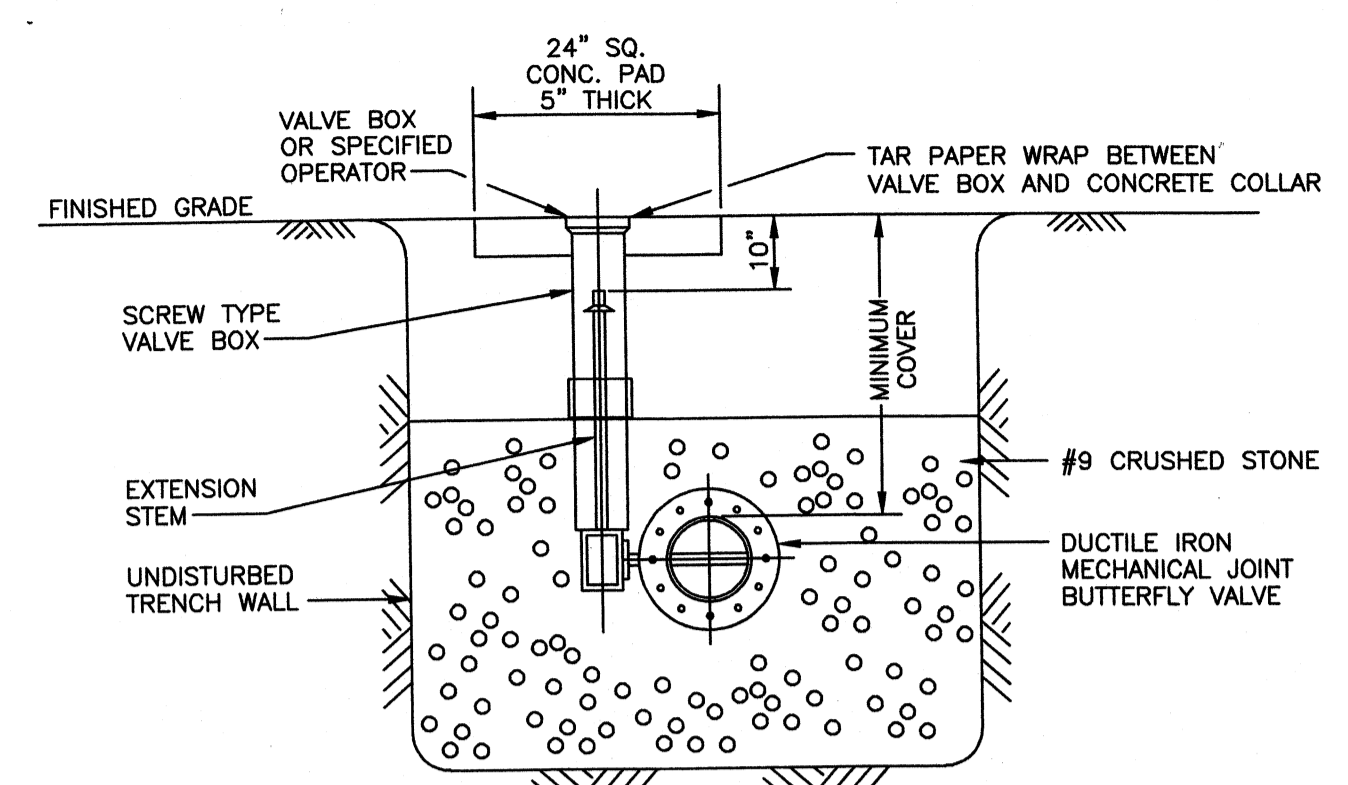
BEDDING AND BACKFILL
NOT TO SCALE



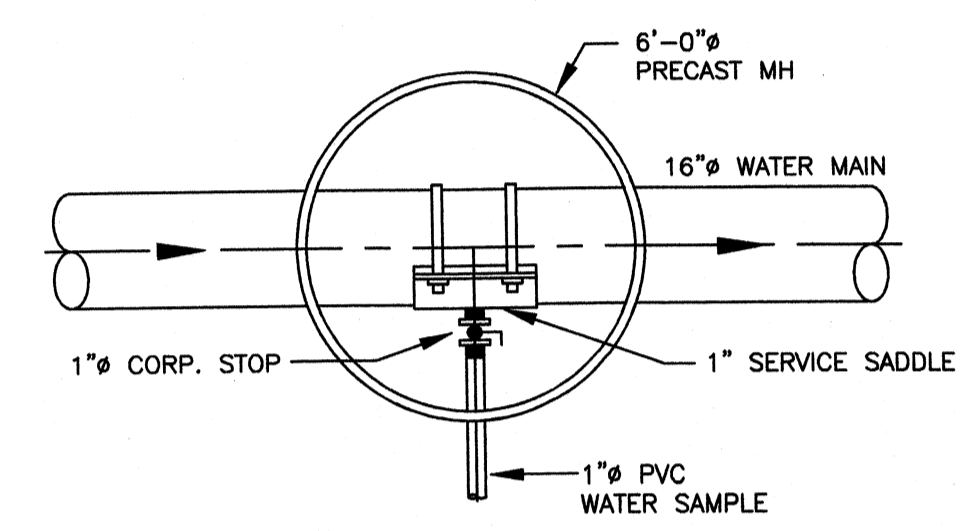
EXTERIOR CLEANOUT DETAIL
NOT TO SCALE



TYPICAL BOLLARD DETAIL
NOT TO SCALE

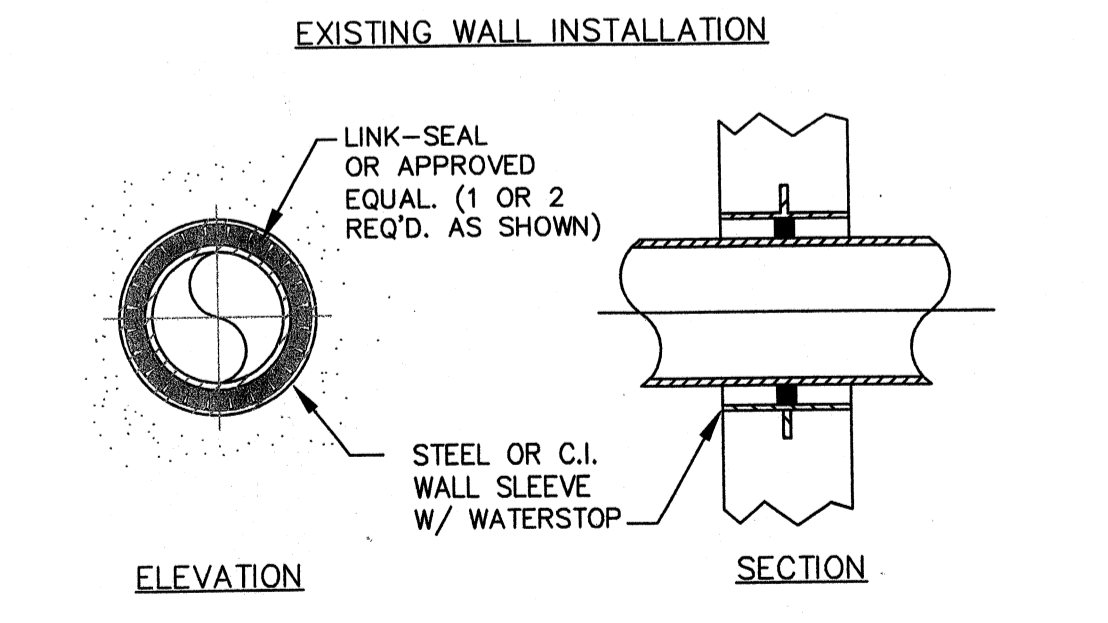
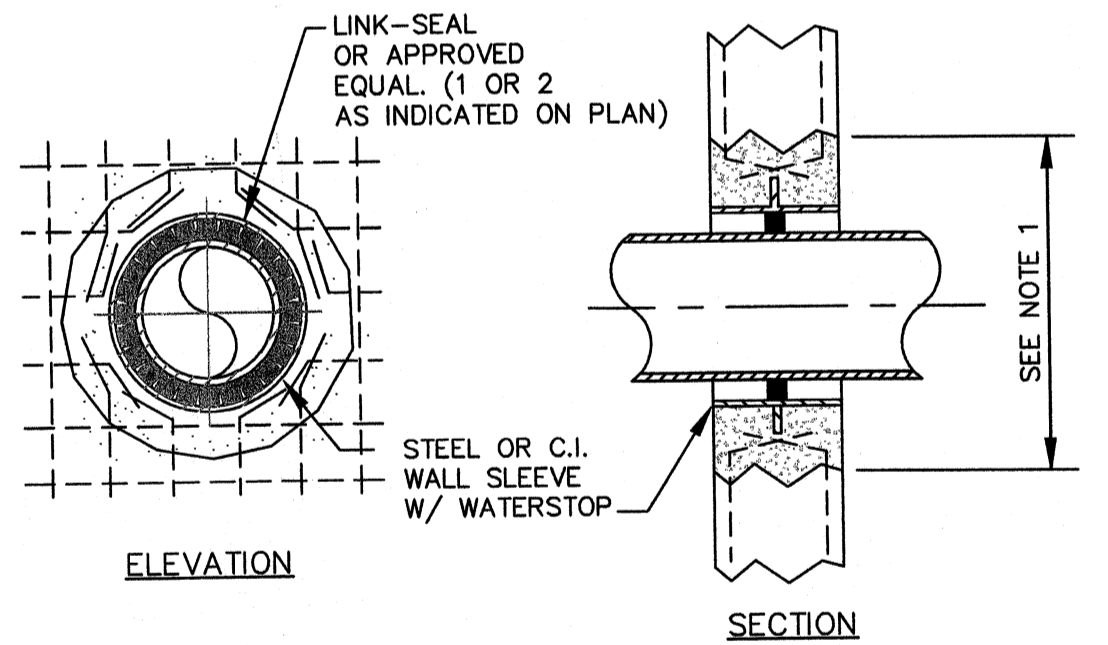


UNDERGROUND BUTTERFLY VALVE INSTALLATION
NOT TO SCALE



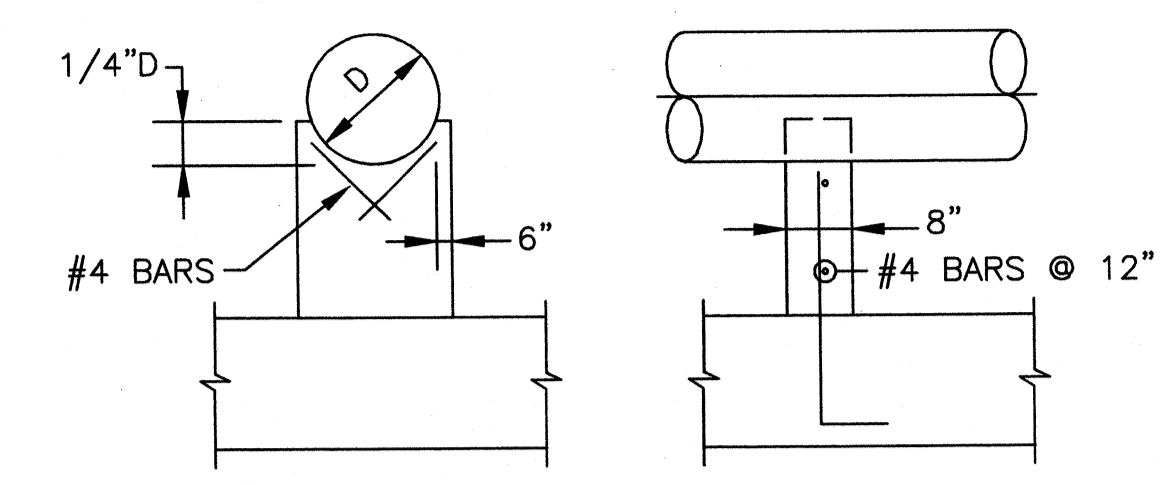
SAMPLE POINT INSTALLATION DETAIL
NOT TO SCALE

- NOTE 1:
- A. OVER-CUT HOLE IN MH WALL TO ACCOMMODATE NEW SLEEVE W/WATERSTOP (LEAVE REINF. INTACT).
 - B. CLEAN REINF. & BEND AS REQ'D.
 - C. COAT REINF. & CONC. W/AN EPOXY BONDING COMPOUND
 - D. INSTALL NEW SLEEVE, FILL VOID AND REFINISH WALL TO LIKE-NEW CONDITION

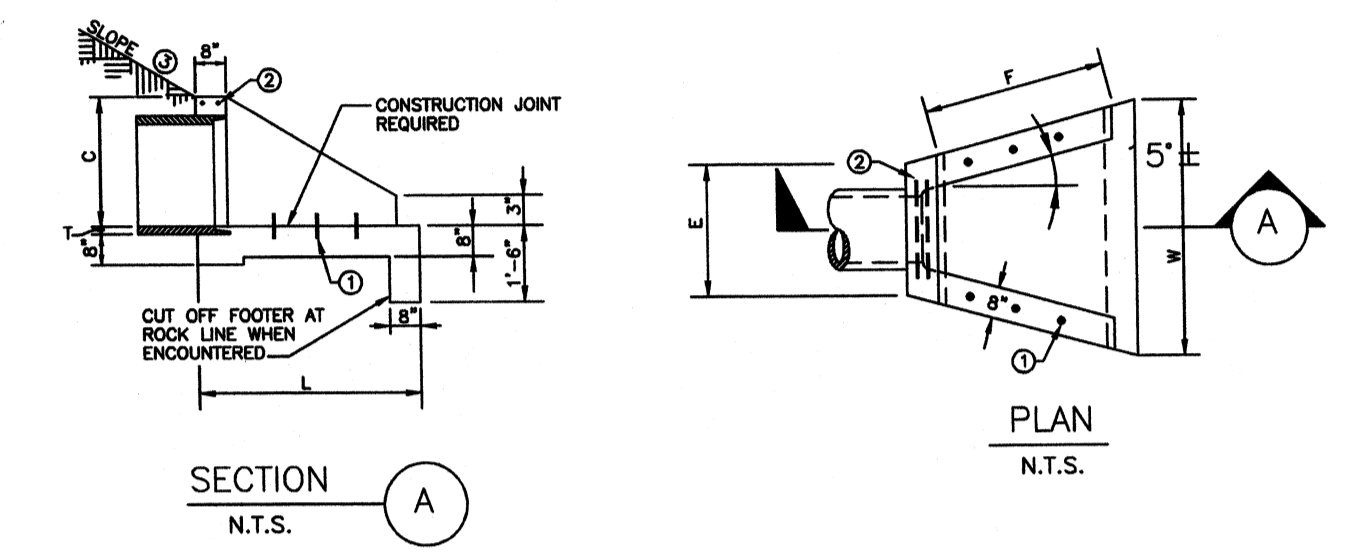


TYPICAL WALL PENETRATIONS
NOT TO SCALE

DETAIL 1
NOT TO SCALE



PIPE SUPPORT
NOT TO SCALE



PIPE		DIMENSIONS						CLASS AT CONC.	REINF. STEEL
DIA. OR EQUIV. DIA.	SHAPE	C	E	F	L	W	T	C.Y.	LBS.
12"	○	1'-9"	2'-6"	2'-3"	3'-6"	4'-0"	2"	0.58	7
18"	○	2'-0"	2'-9"	2'-9"	4'-0"	4'-9"	2 1/4"	0.75	-
18"	○	2'-3"	3'-0"	3'-6"	4'-6"	5'-3"	2 1/2"	0.83	8
21"	○	2'-6"	3'-3"	4'-0"	5'-0"	6'-0"	2 3/4"	1.14	-
24"	○	2'-9"	3'-6"	4'-6"	5'-6"	6'-6"	3"	1.35	-
27"	○	3'-0"	3'-9"	5'-0"	6'-0"	7'-0"	3 1/4"	1.57	9
30"	○	3'-3"	4'-0"	5'-6"	6'-6"	7'-6"	-	-	-

NOTES FOR SLOPED AND FLARED HEADWALLS

REINFORCING STEEL, MINIMUM GRADE 60, EVENLY SPACED.

① 6-#4X 1'-0" DOWEL BARS

② 2-#4X (E DIMENSION MINUS 4")

③ SLOPES SHALL BE WARPED TO FIT HEADWALL WHEN PIPE IS SKEWED AND/OR NORMAL SLOPE VARIES FROM 2:1.

VOLUME DISPLACED BY PIPE COMPUTED USING INSIDE DIAMETER OF PIPE.

WING ANGLES AND/OR DIMENSIONS MAY BE ALTERED DURING CONSTRUCTION TO ACCOMMODATE FLOW OF WATER.

APRON BETWEEN WINGS SHALL BE SLOPED IN DIRECTION OF FLOW EQUAL TO SLOPE OF PIPE. FRONT FACE OF HEADWALL SHALL REMAIN VERTICAL.

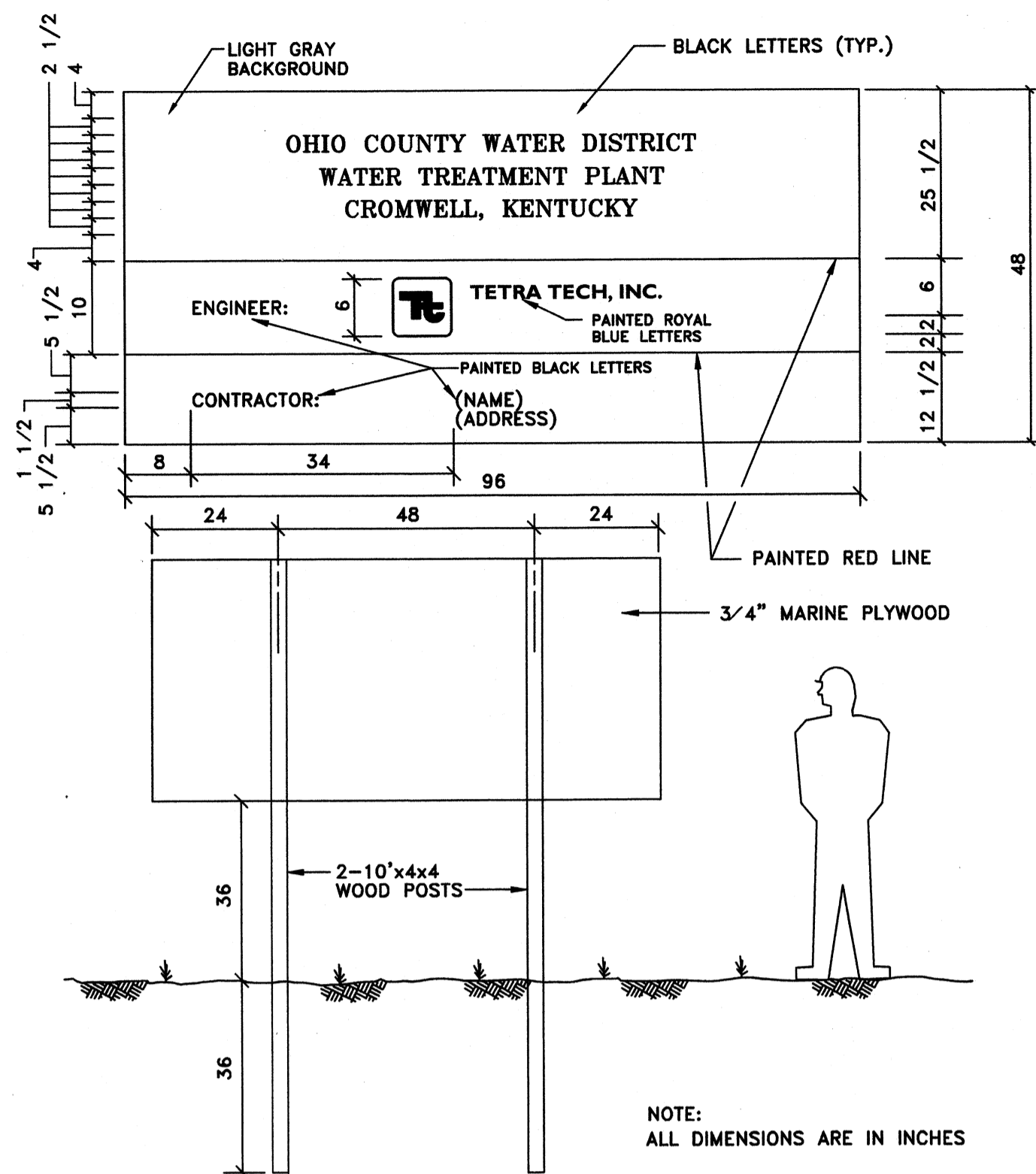
④ HEADWALLS ARE FOR CIRCULAR, 12"-27" EQUIVALENT PIPE SIZES.

SLOPED & FLARED HEADWALL DETAIL
NOT TO SCALE

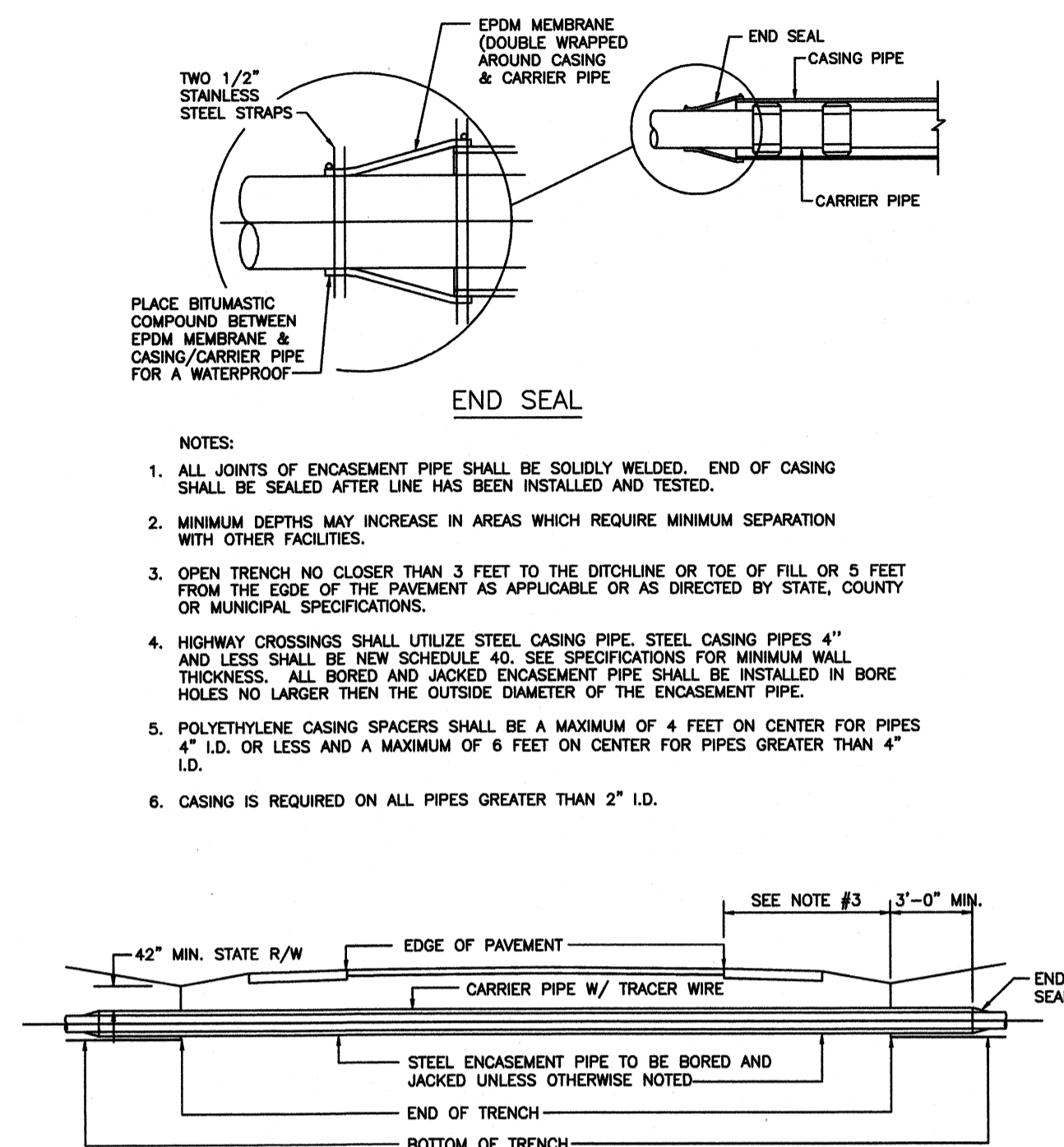


BY	TAC	DESCRIPTION	MARK	DATE
		ADDENDUM 1	A	5/5/09

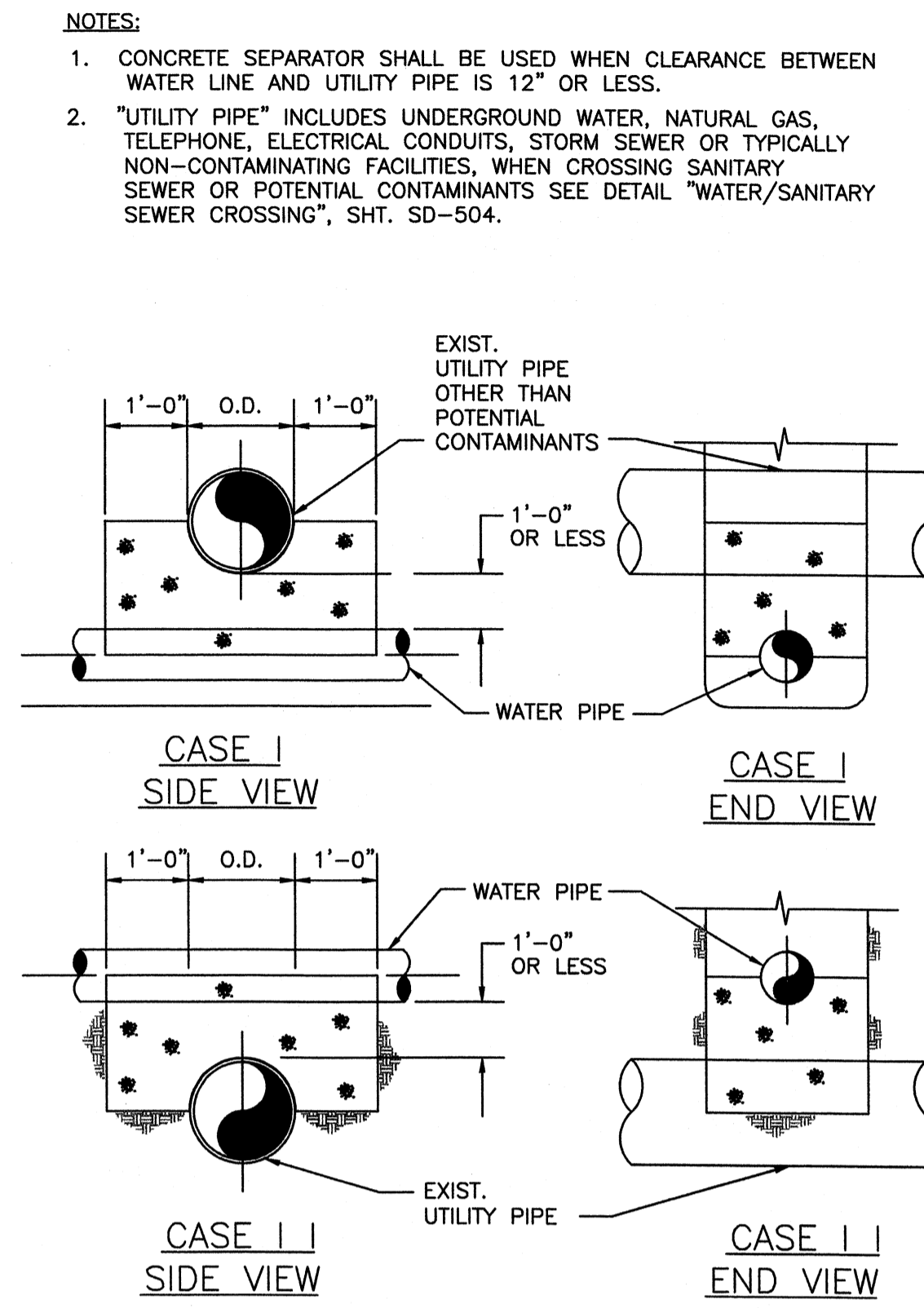
Wednesday, July 01, 2009 11:02:27 AM DRAWING: \\sroffice3\projects\120-07060 Ohio County\CONFORMED SET 5-09\CIVIL\X-07060 SD-501.DWG LAYOUT: SD-501 USER NAME: JEREMY M. FRONGILLO



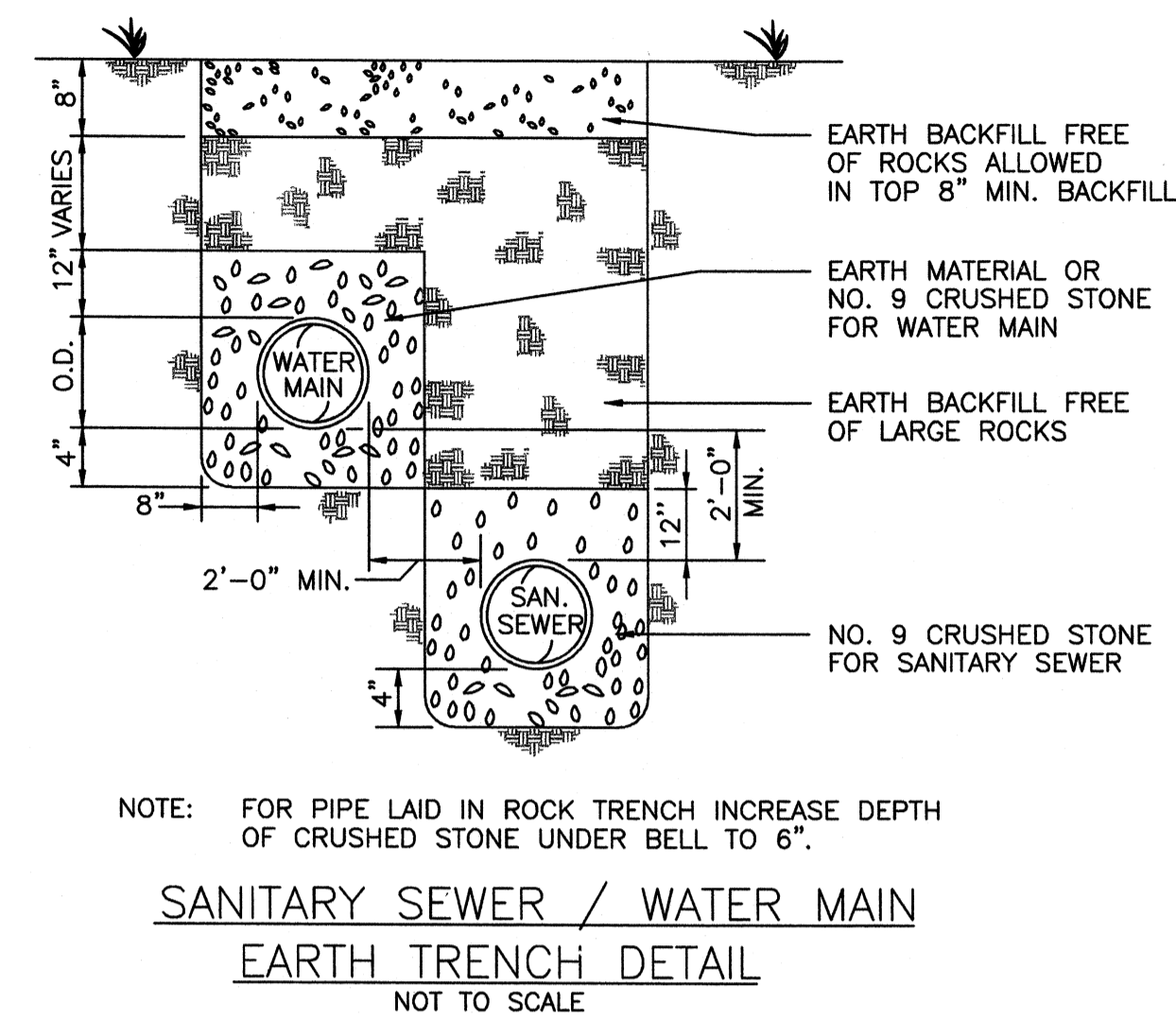
CONSTRUCTION SIGN DETAIL
NOT TO SCALE



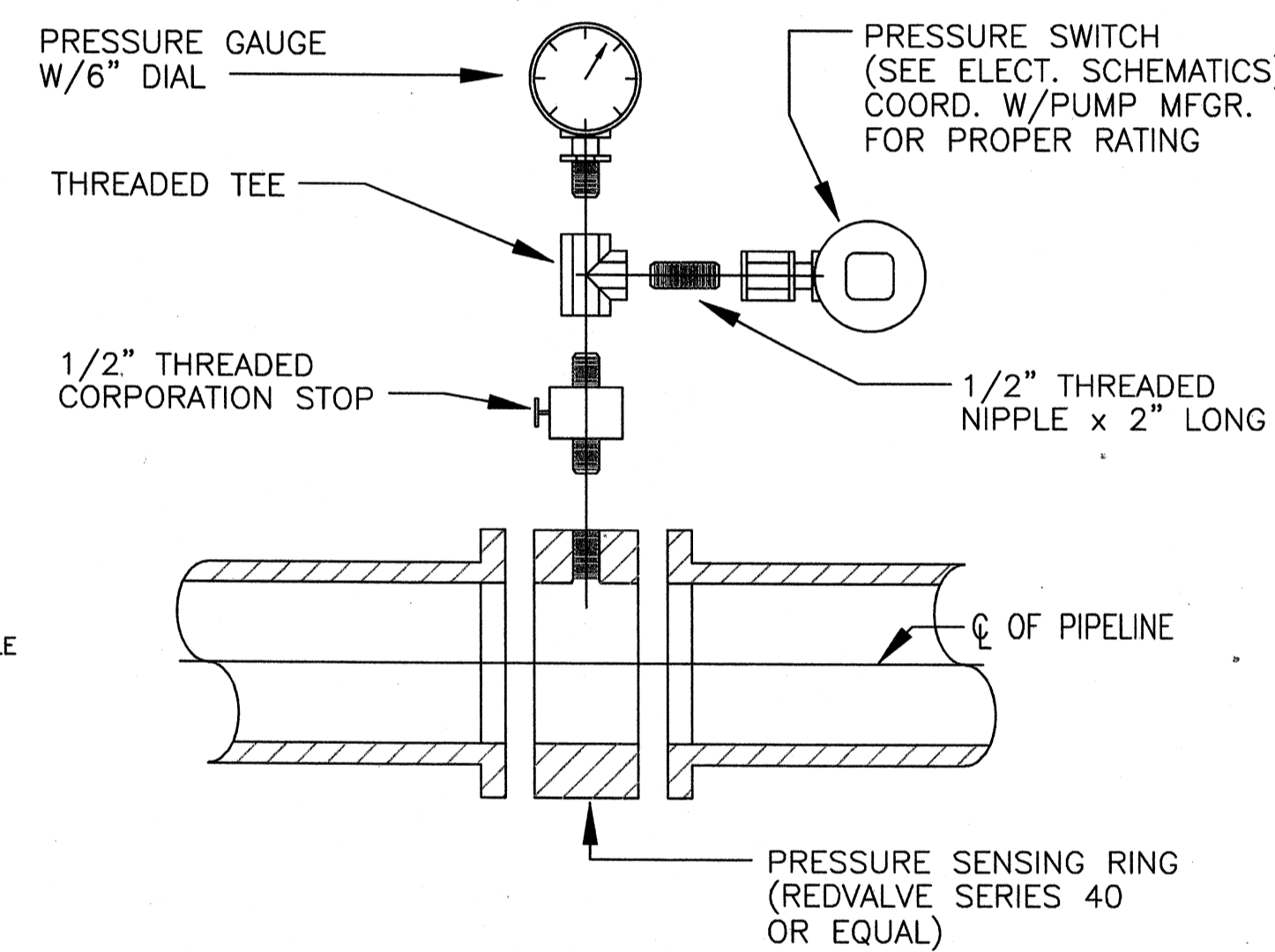
ENCASED ROAD CROSSING DETAIL
NOT TO SCALE



UTILITY CROSSING W/ CONCRETE SEPARATOR
NOT TO SCALE

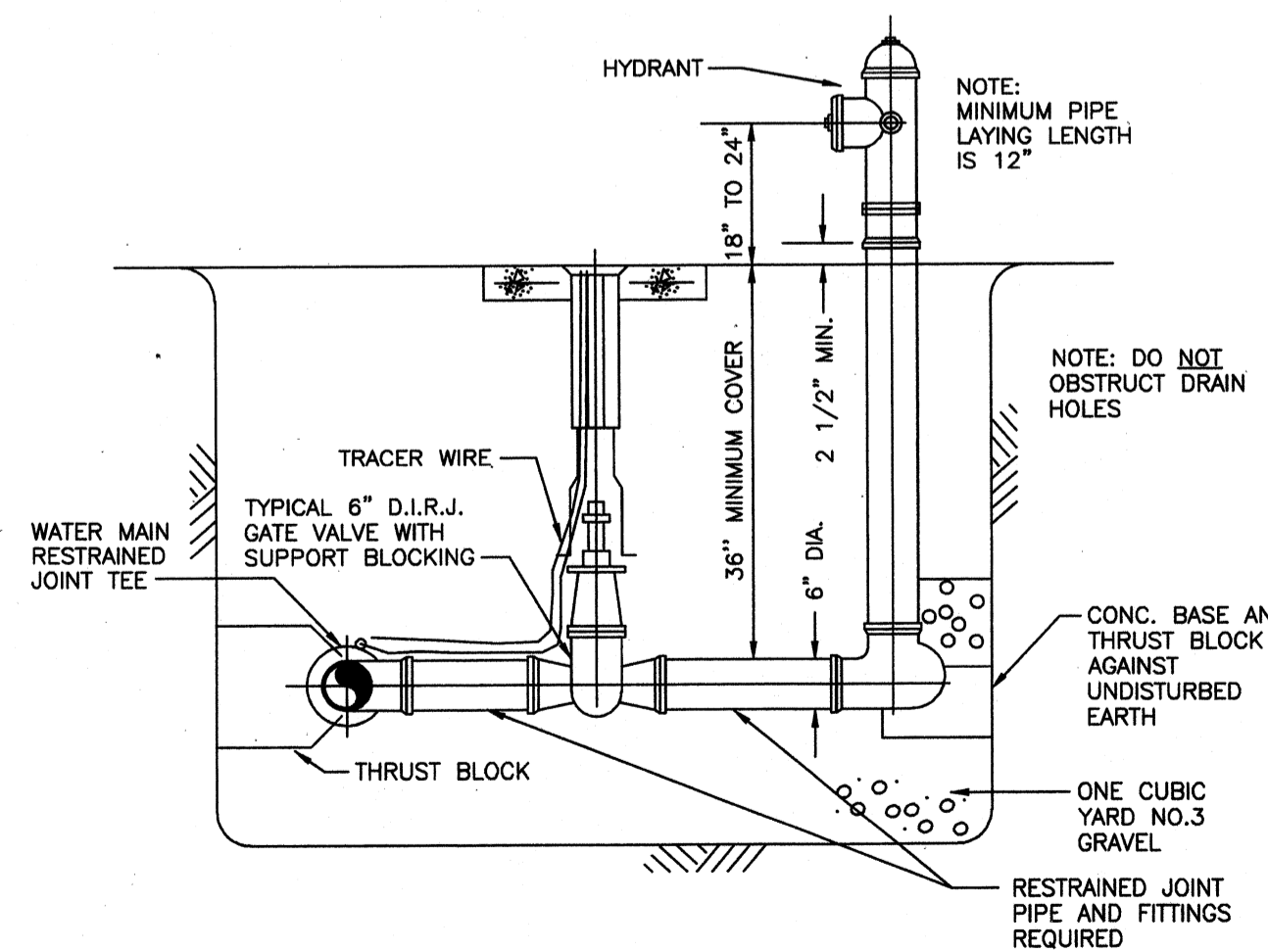


SANITARY SEWER / WATER MAIN EARTH TRENCH DETAIL
NOT TO SCALE

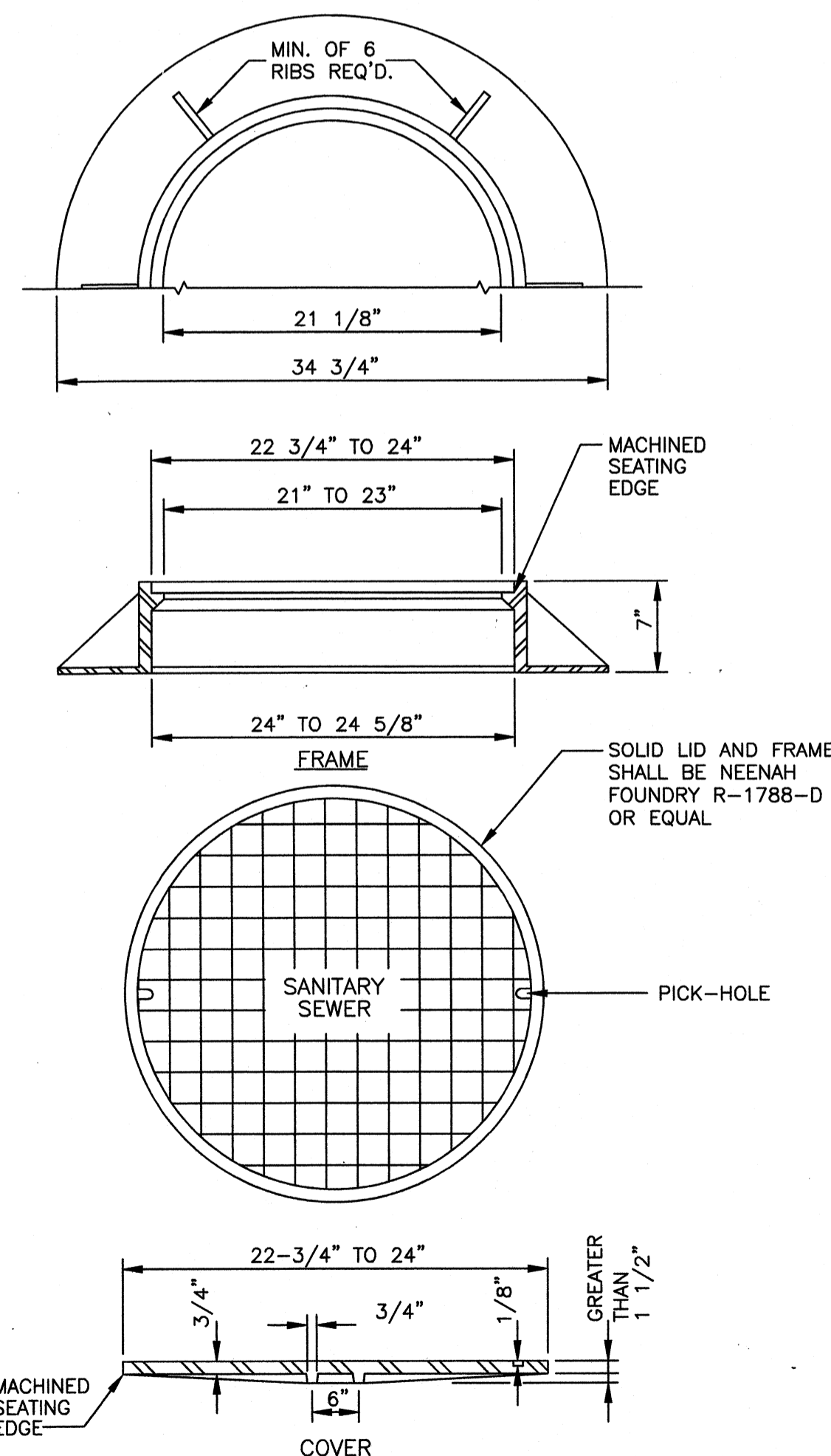


PRESSURE GAUGE W/ SENSOR
NOT TO SCALE

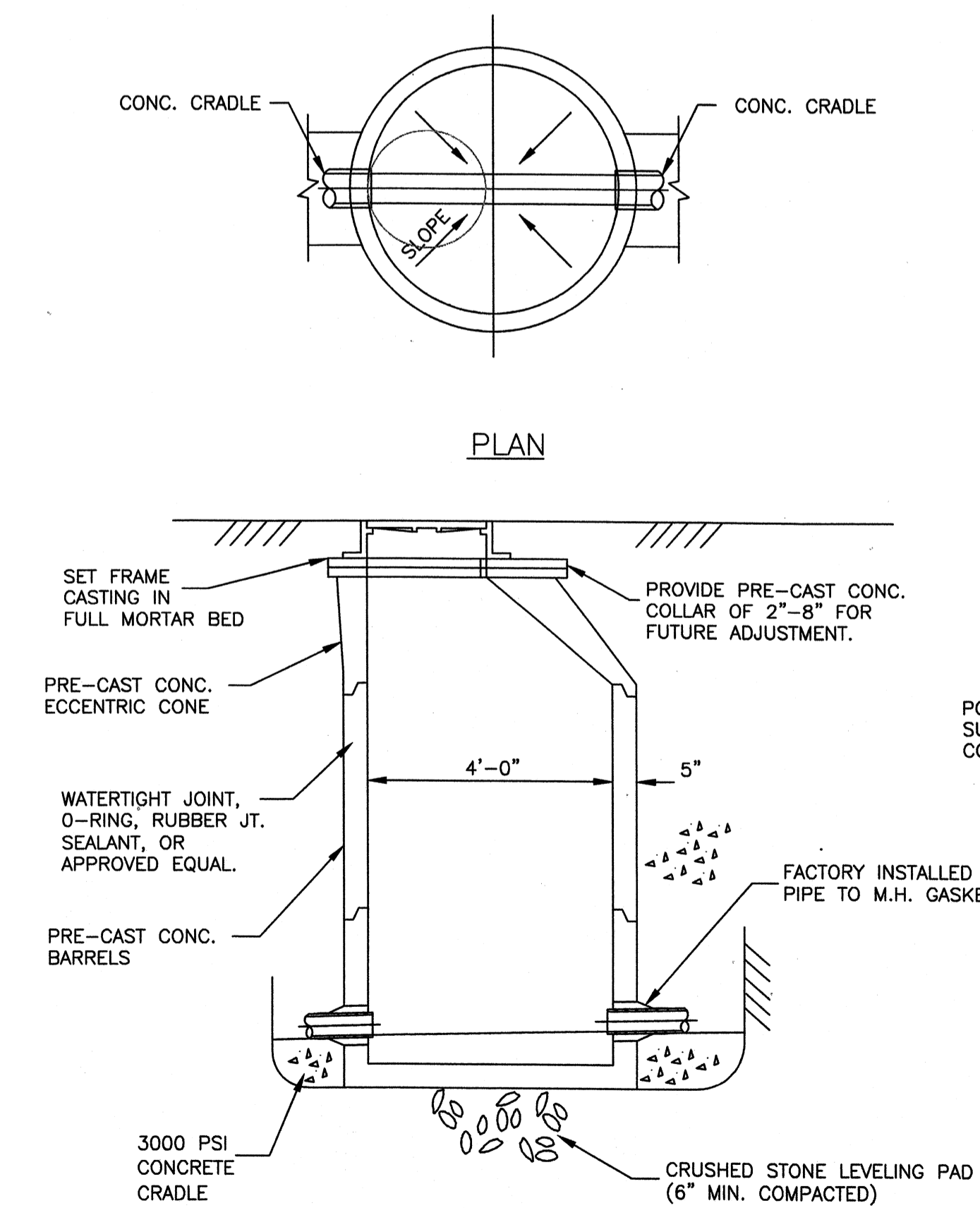
- NOTES:**
- FIRE HYDRANTS SHALL BE MUELLER OR EQUAL.
 - WHERE POSSIBLE, THE AUXILIARY VALVE SHALL BE ATTACHED DIRECTLY TO A FIRE HYDRANT ANCHORING TEE WITH DUCTILE IRON ROTATING GLAND, OTHERWISE, A STANDARD TEE AND A CONNECTING PIECE WITH INTEGRAL GLAND AND ROTATING GLAND SHALL BE PROVIDED TO SECURELY FASTEN THE VALVE TO THE MAIN.
 - HYDRANTS SHALL BE PLUMB IN ALL DIRECTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STRAIGHTENING ANY HYDRANT THAT HAS SHIFTED DURING SETTLING.
 - TRACER WIRE TO BE INSTALLED PER STANDARD DRAWINGS AND SPECIFICATIONS.
 - THRUST RESTRAINT BEHIND FIRE HYDRANT SHALL BE WITH CONCRETE BLOCKING ONLY.



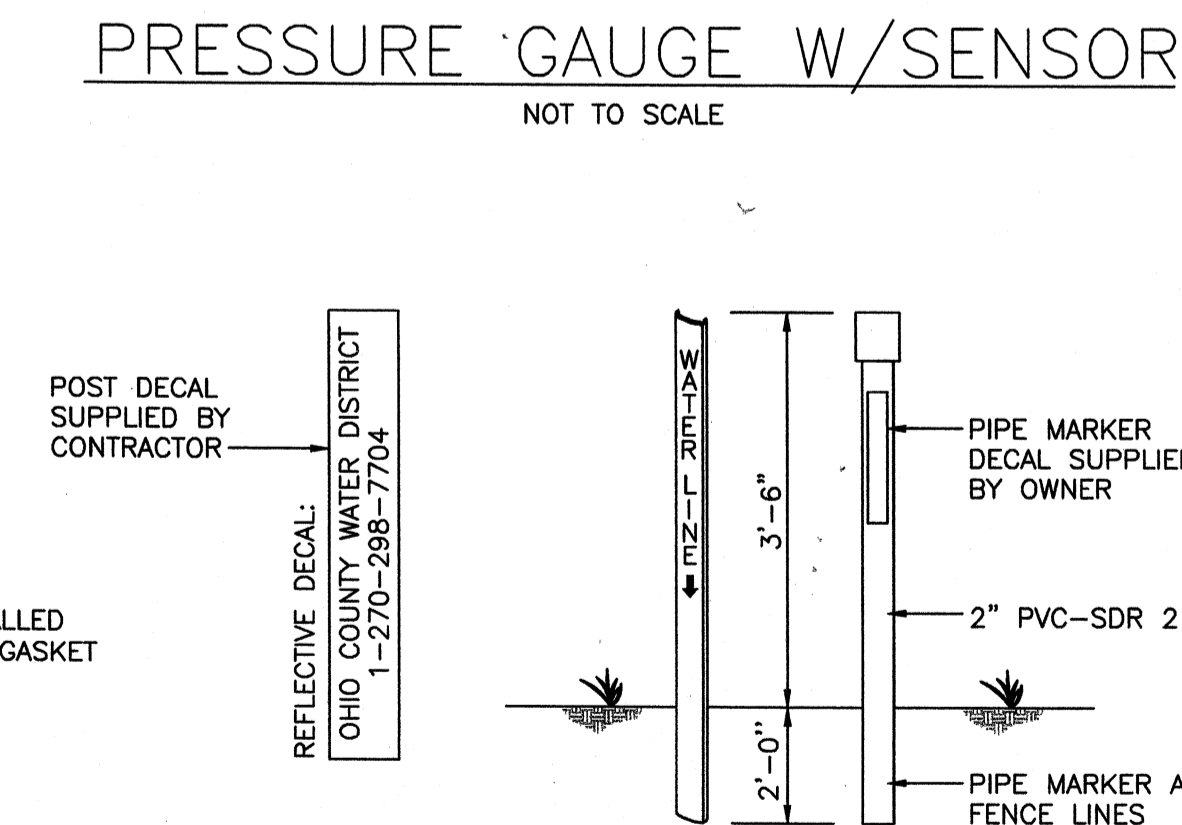
HYDRANT ASSEMBLY
NOT TO SCALE



MANHOLE FRAME & COVER
NOT TO SCALE



STANDARD MANHOLE DETAIL
NOT TO SCALE



MARKER PIPE & POST DETAIL
NOT TO SCALE

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800 Corporate Drive
Suite 200, Lexington, KY, 40503
PHONE: (859) 223-8000 FAX: (859) 224-1025

TETRA TECH

PROJECT RECORD

CONFORMED SET 5/09

3/17/09

BY	DATE	DESCRIPTION

STANDARD DETAILS

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc: CROMWELL, OHIO COUNTY, KY

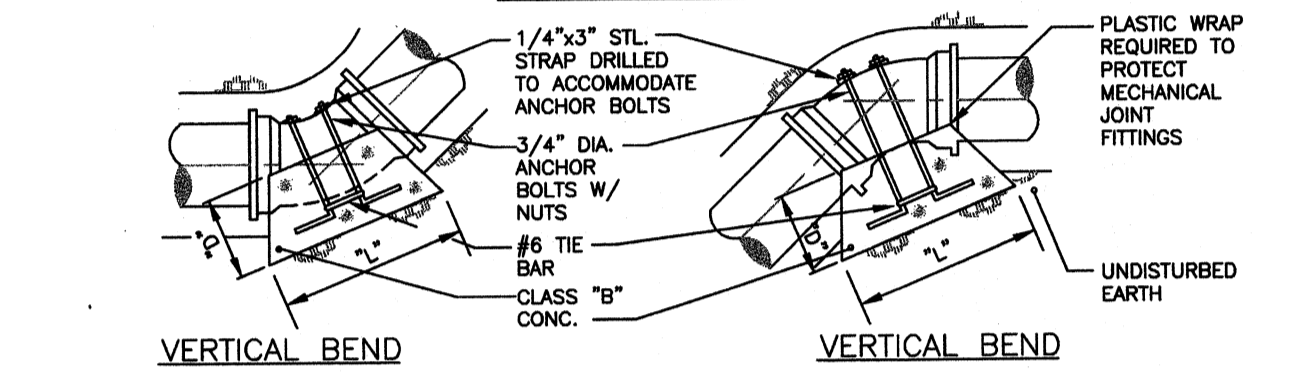
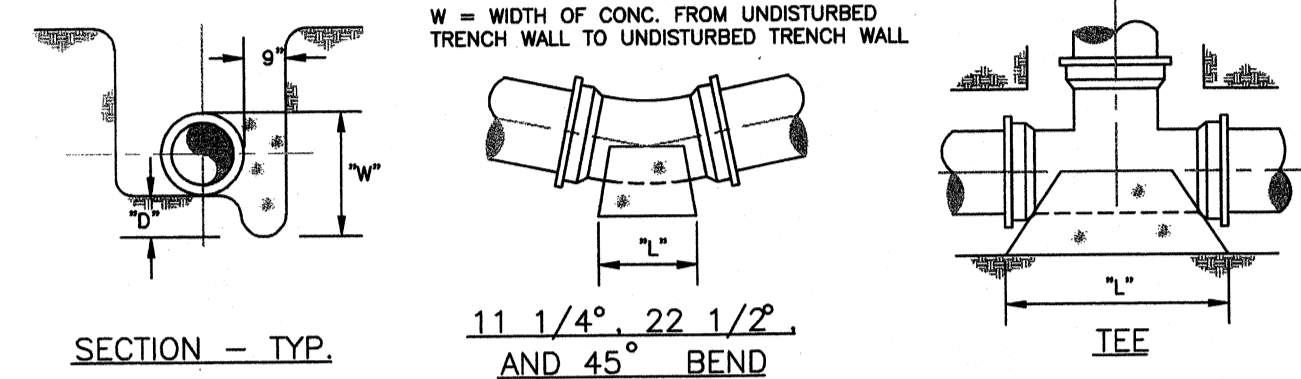
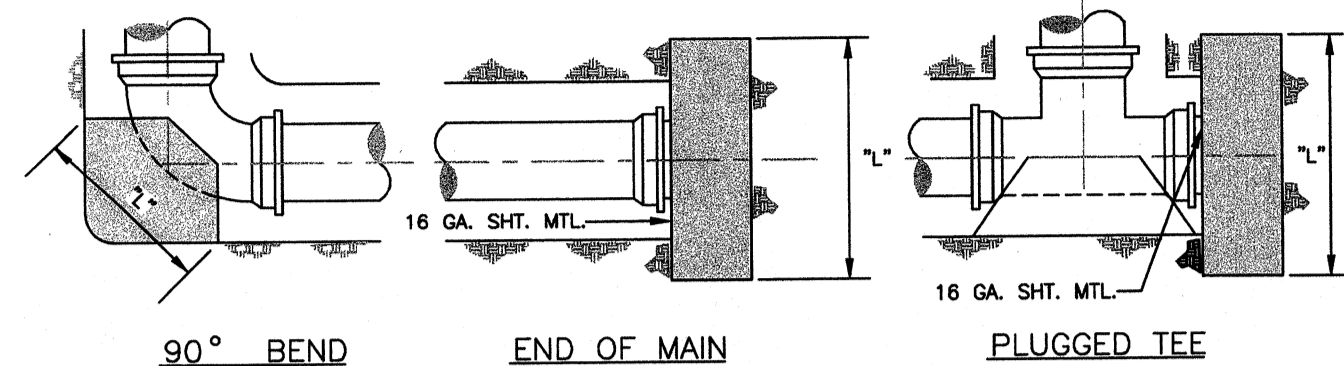
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

Project No.: 120-07060
Designed By: GDP
Drawn By: GDP
Checked By:

SD-502

Copyright: Tetra Tech

Wednesday, July 15, 2009 4:15:38 PM DRAWING: \net\offices\projects\120-07060 Ohio County\CONFORMED SET 5-09\CVLXLX-07060 SD-503 DWG LAYOUT: LAYOUT1 USER NAME: JEREMY M. FRONGILLO



THRUST BLOCK SCHEDULE											
PIPE SIZE	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"
1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1
3	1	1	1	1	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1	1	1	1
6	1	1	1	1	1	1	1	1	1	1	1
7	1	1	1	1	1	1	1	1	1	1	1
8	1	1	1	1	1	1	1	1	1	1	1
9	1	1	1	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	1	1	1	1
11	1	1	1	1	1	1	1	1	1	1	1
12	1	1	1	1	1	1	1	1	1	1	1
13	1	1	1	1	1	1	1	1	1	1	1
14	1	1	1	1	1	1	1	1	1	1	1
15	1	1	1	1	1	1	1	1	1	1	1
16	1	1	1	1	1	1	1	1	1	1	1
17	1	1	1	1	1	1	1	1	1	1	1
18	1	1	1	1	1	1	1	1	1	1	1
19	1	1	1	1	1	1	1	1	1	1	1
20	1	1	1	1	1	1	1	1	1	1	1

• TEE & END OF MAIN

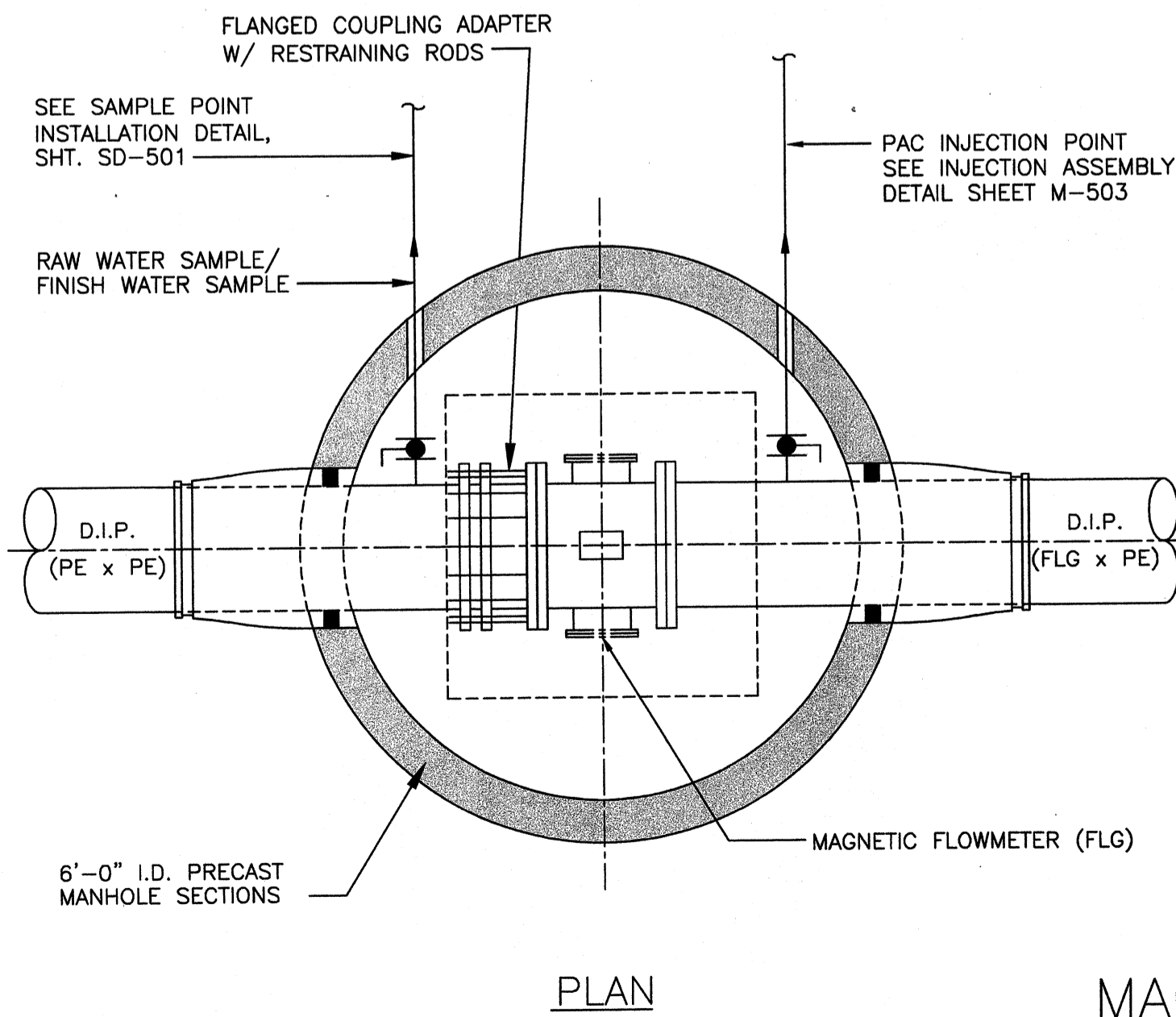
- NOTES:**
- SEE THRUST BLOCK SCHEDULE FOR DIMENSIONS OF BLOCKING.
 - BLOCKING SHALL BE BEAR AGAINST UNDISTURBED EARTH.
 - THRUST BLOCKS SHALL BE 2500 P.S.I. CONCRETE.
 - CONCRETE SHALL NOT OBSTRUCT FITTING CONNECTIONS.
 - TWO METHODS OF THRUST RESTRAINT SHALL BE PROVIDED FOR ALL FITTINGS. THESE SHALL BE BY MECHANICAL JOINT RESTRAINING CLAMP AND CONCRETE BLOCKING.
 - FITTINGS SHALL BE COVERED W/ PLASTIC PRIOR TO PLACEMENT OF CONCRETE.

WATER MAIN THRUST BLOCKS

NOT TO SCALE

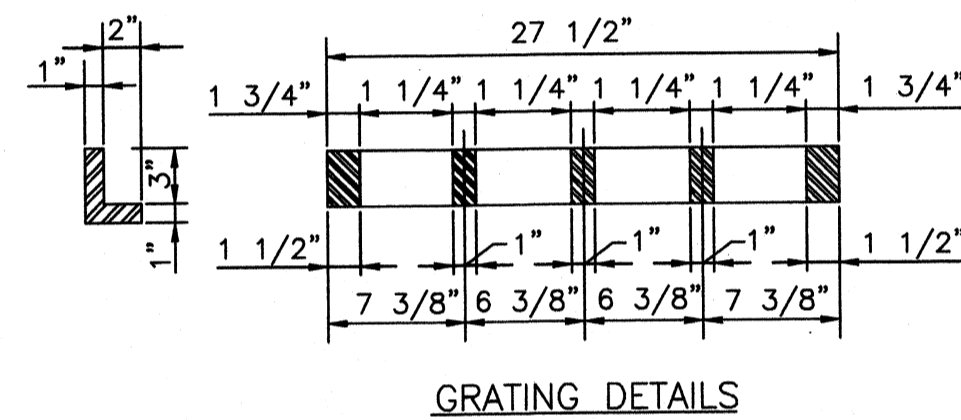
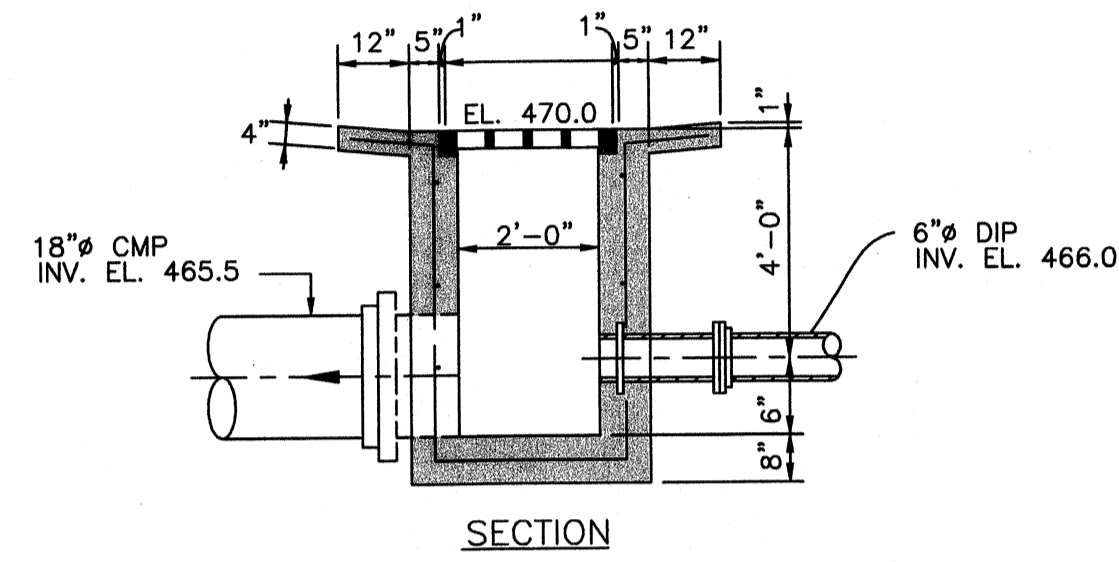
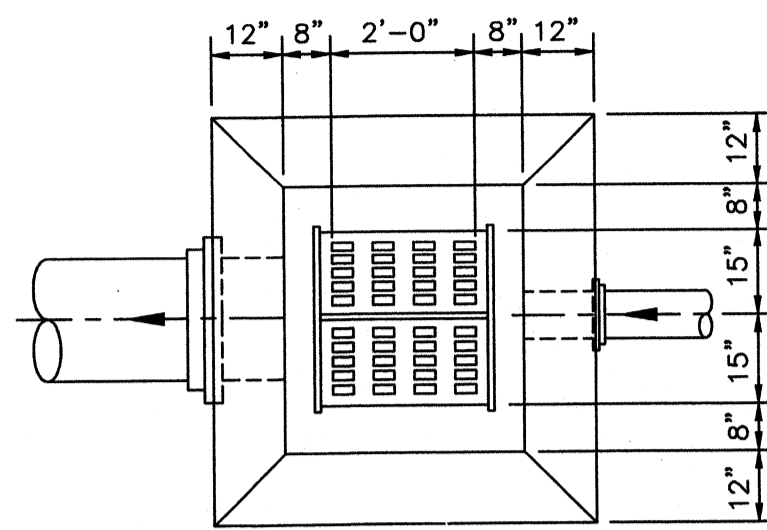
FLOWMETER VAULT NOTE:

CONTRACTOR SHALL COORDINATE SIZE, DEPTH OF PIPE AND VAULT AS WELL AS LOCATION OF VAULT KNOCK-OUTS WITH PROPOSED YARD PIPING INVERT ELEVATIONS, AND SHALL CONSTRUCT VAULT, METER AND ASSOCIATED PIPING IN ACCORDANCE WITH REQUIRED SIZE & DEPTH OF PROPOSED PIPING.



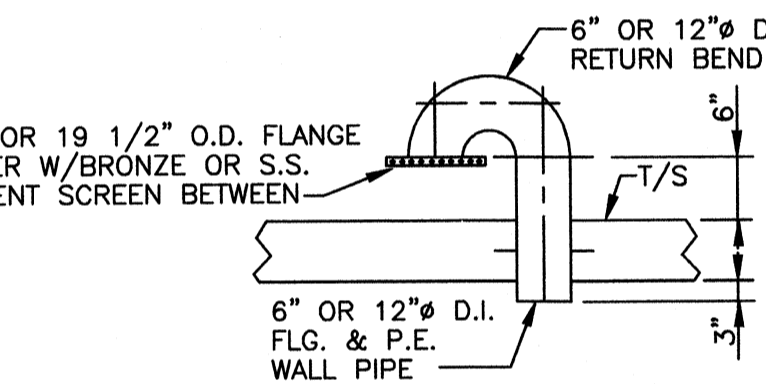
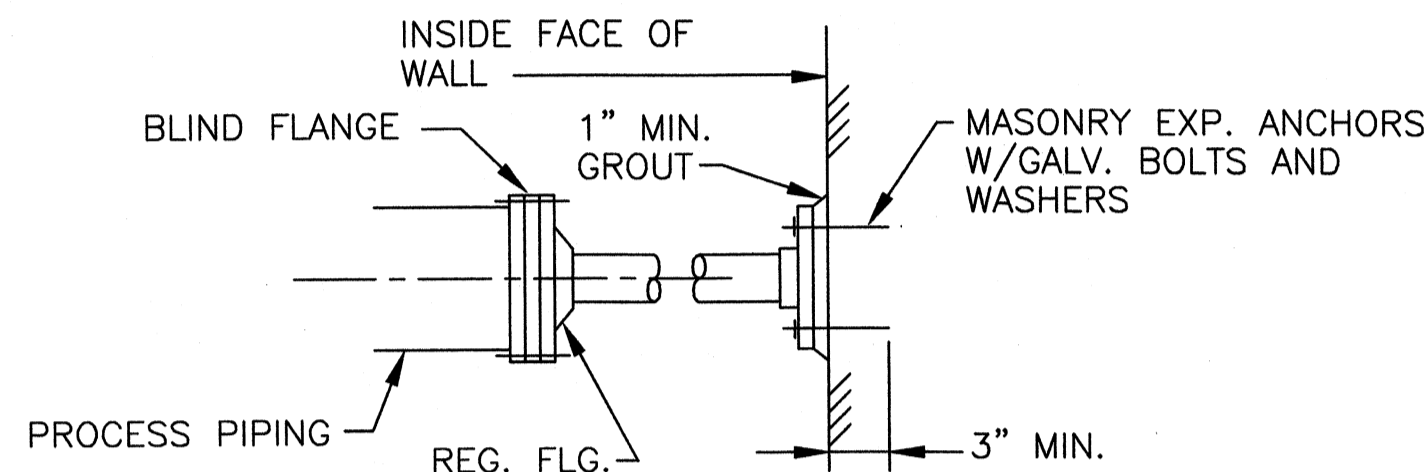
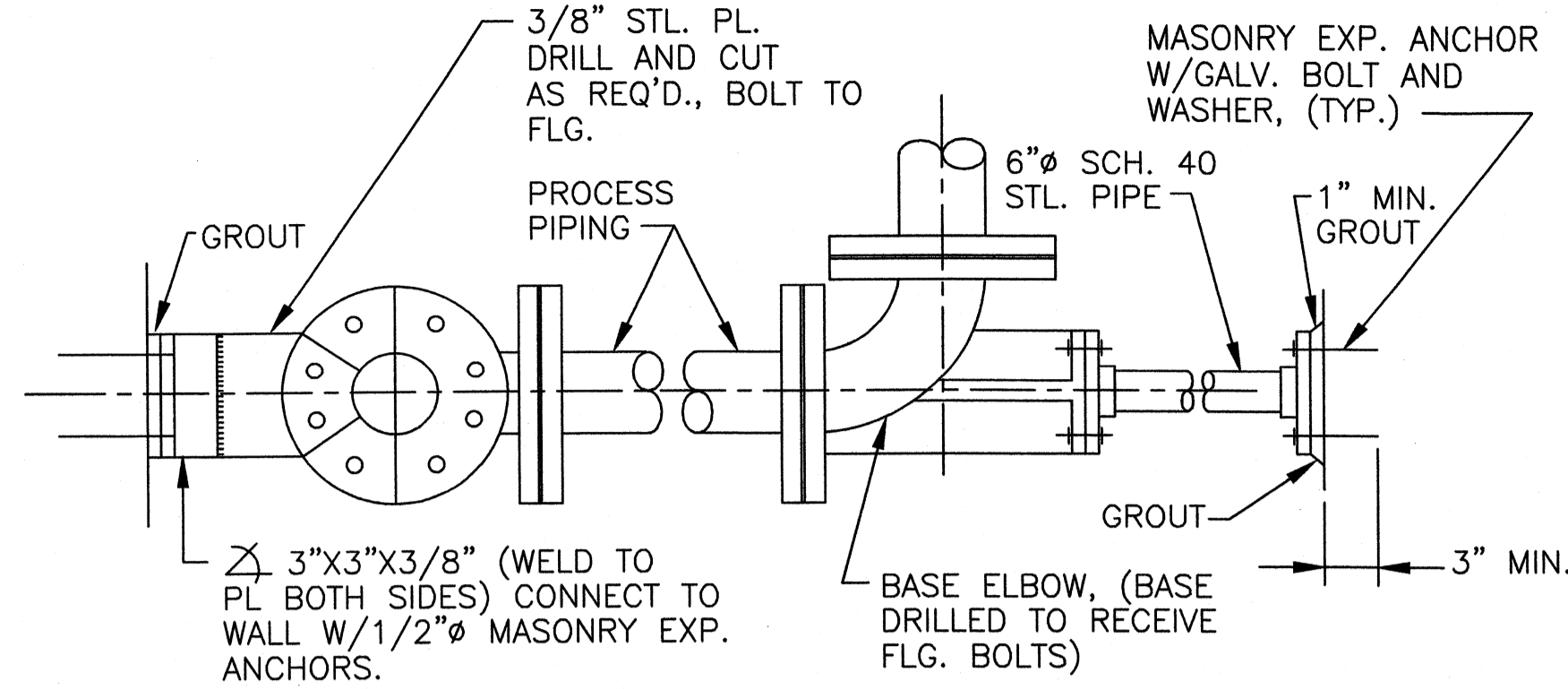
MAGNETIC FLOWMETER VAULT

NOT TO SCALE



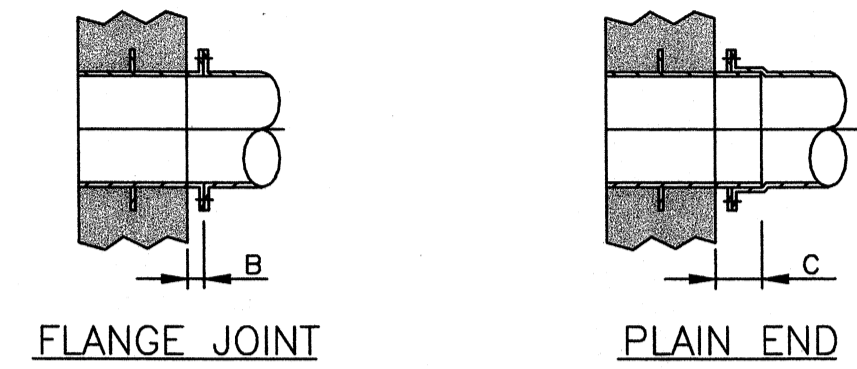
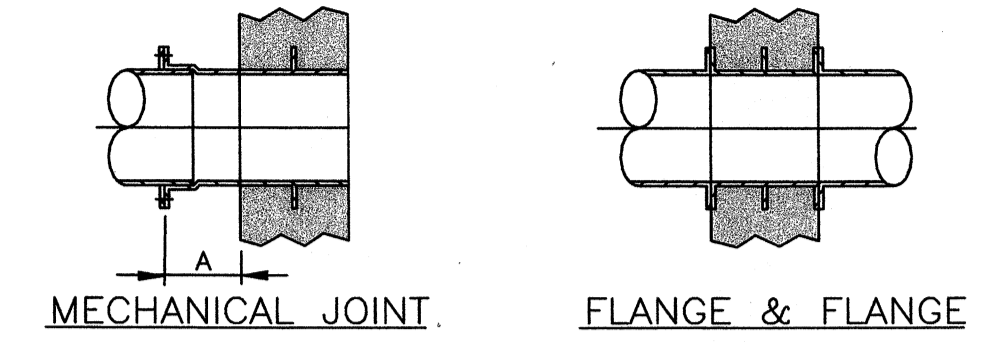
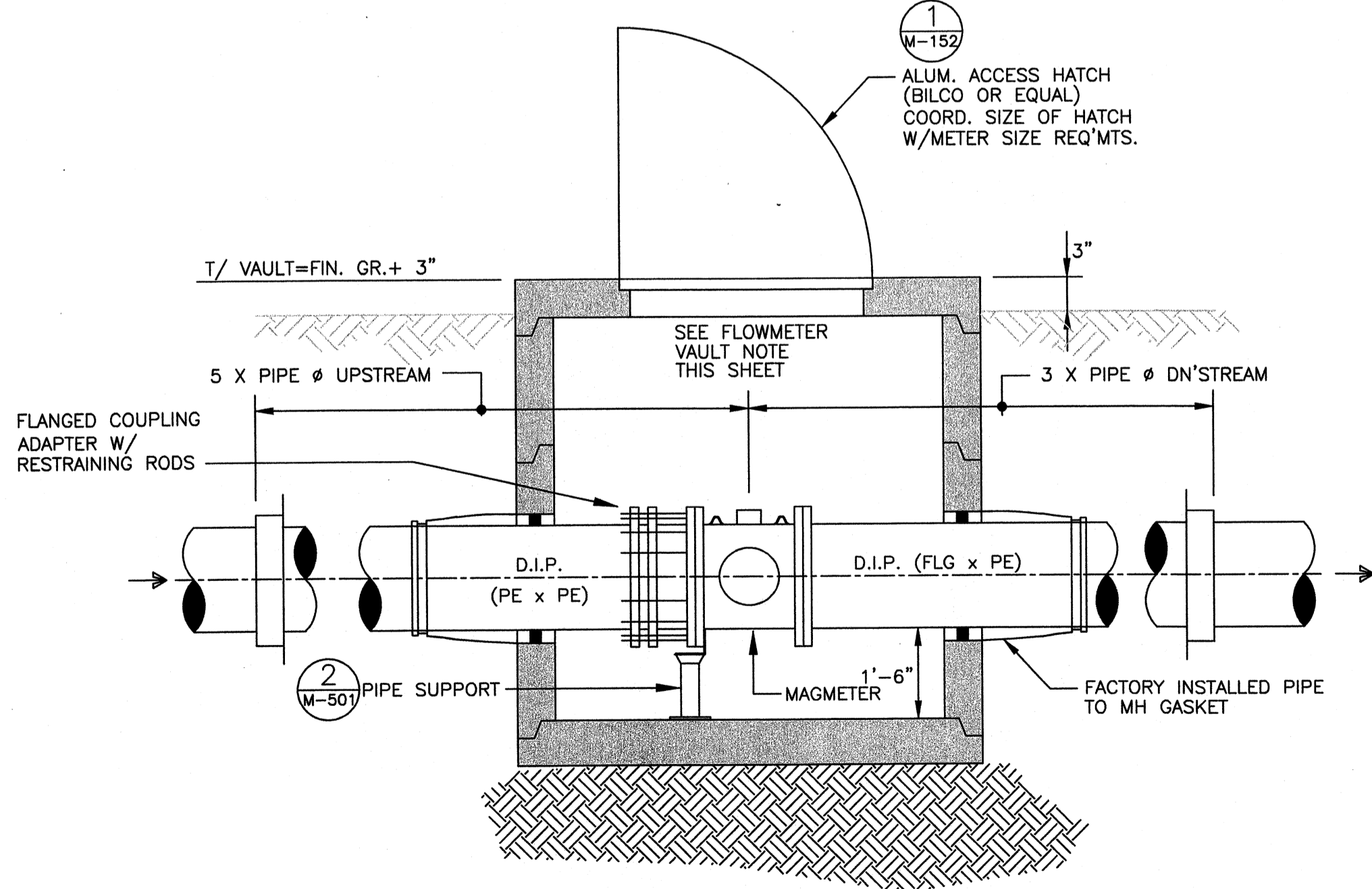
STANDARD CATCH BASIN

DETAIL 1 NOT TO SCALE SD-503



GRAVITY VENT DETAIL

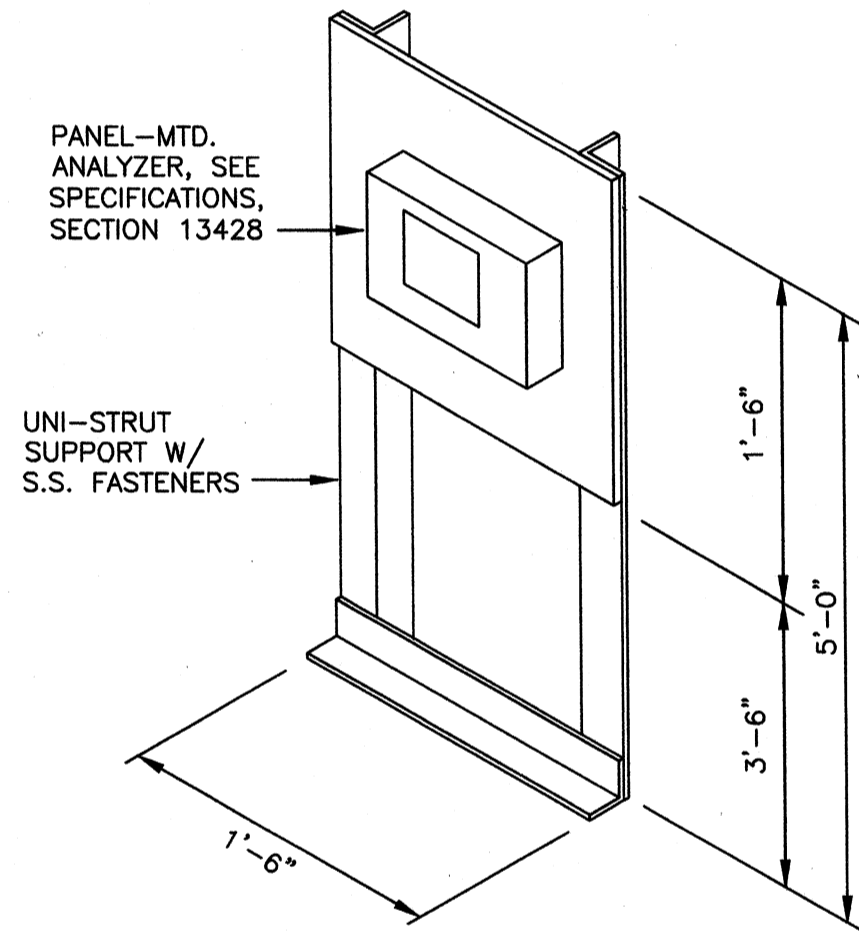
NOT TO SCALE



WALL PIPE DIMENSIONS (INCHES)												
PIPE SIZE	4	6	8	10	12	14	16	18	20	24	30	36
DIMENSION A	5-1/2	5-1/2	6	6	6 1/4	6 1/4	6 3/4	6 3/4	6 3/4	6 3/4	6 3/4	6 3/4
DIMENSION B	2 1/4	2 1/4	2 1/2	2 1/2	2 1/2	3	3	3	3	3	3	3
DIMENSION C	5 1/4	5 1/4	5 1/2	5 1/2	5 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2

STANDARD WALL PIPE DETAILS

NOT TO SCALE



ANALYZER SUPPORT DETAIL

NOT TO SCALE

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 800 Corporate Drive
 Suite 200, Lexington, Ky, 40503
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PROJECT RECORD

CONFORMED SET 5/09

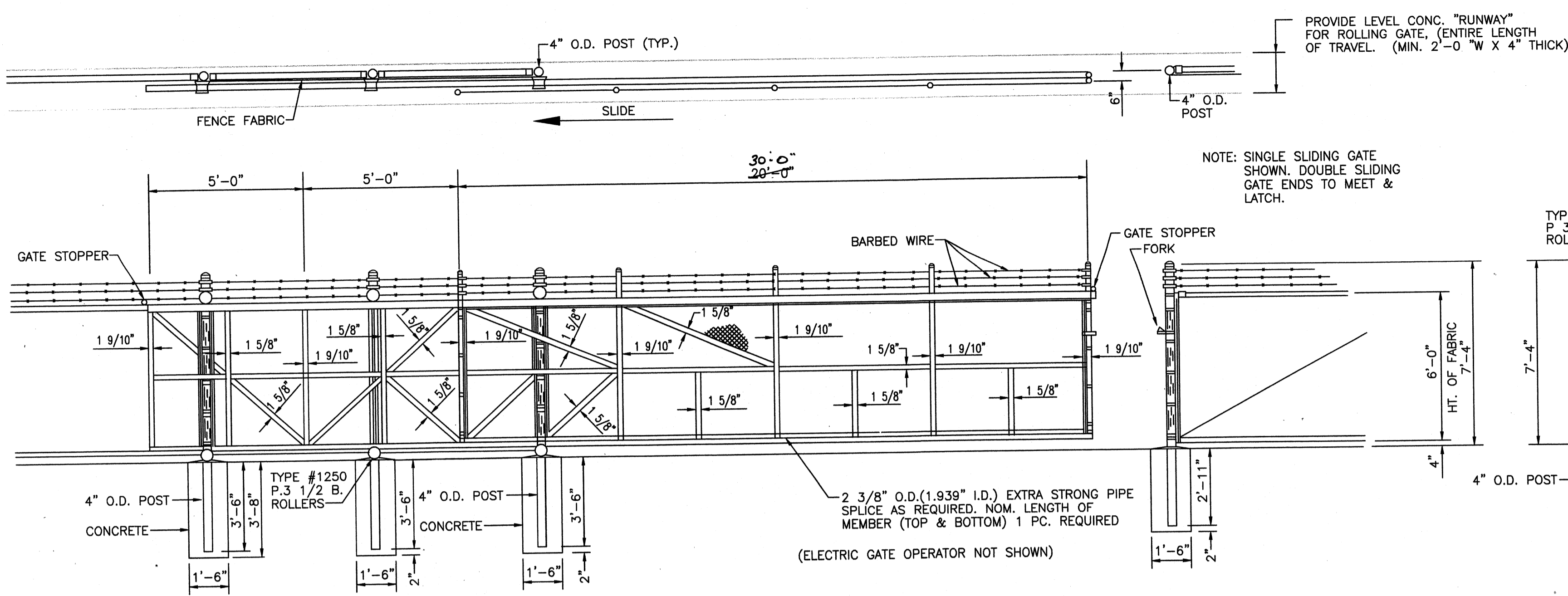


BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT
 PROJECT: OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT
 Mark: CROMWELL, OHIO COUNTY, KY
 Project No.: 120-07060
 Designed By: GDP
 Drawn By: GDP
 Checked By: GDP

SD-503

Wednesday, July 01, 2009 11:02:51 AM DRAWING: vicarhis3\projects\120-07060 Ohio County\CONFORMED SET 5-09\CIVIL\X-07060 SD-504 DWG LAYOUT: LAYOUT1 USER NAME: JEREMY M. FRONIGILLO

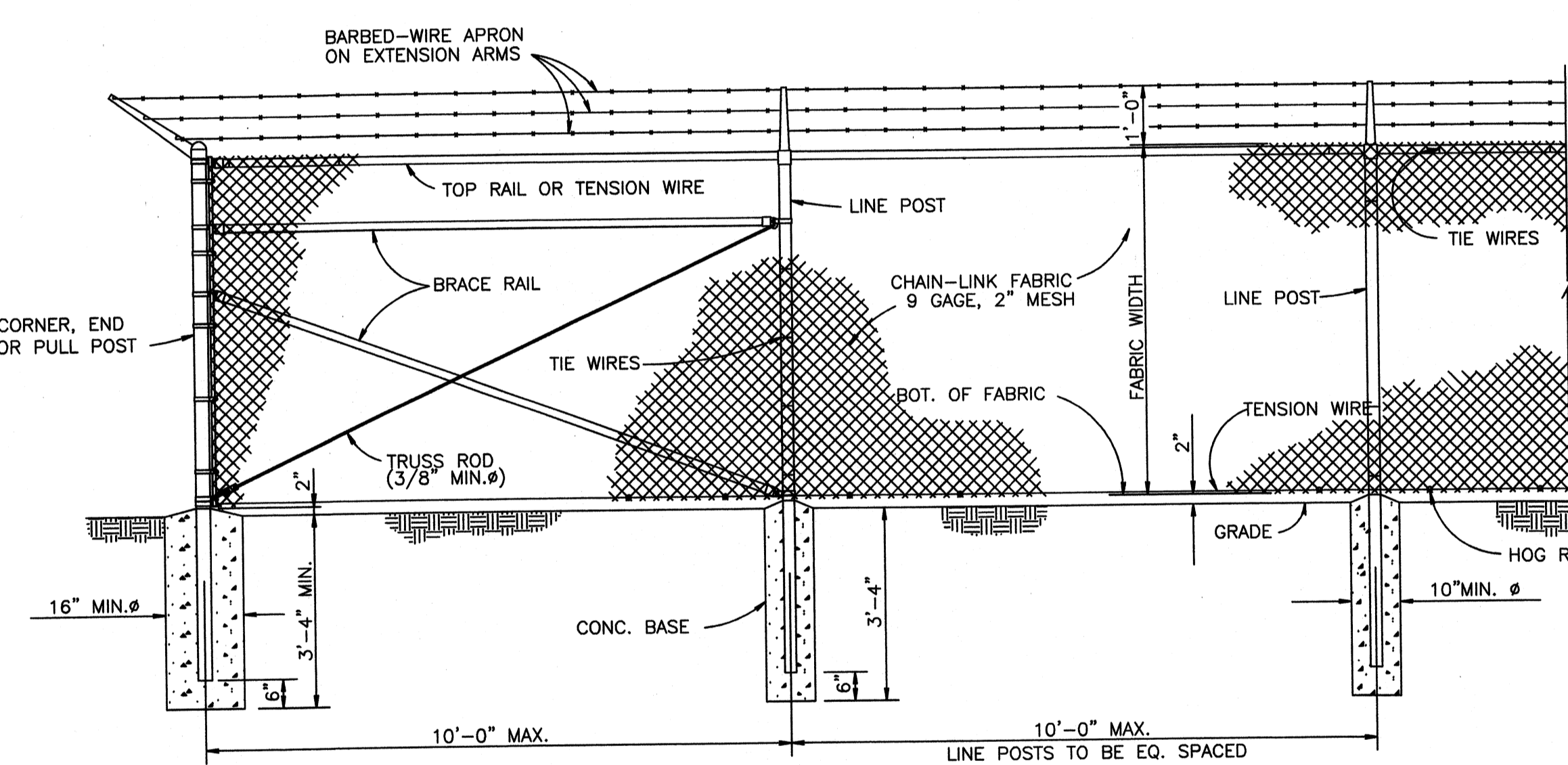
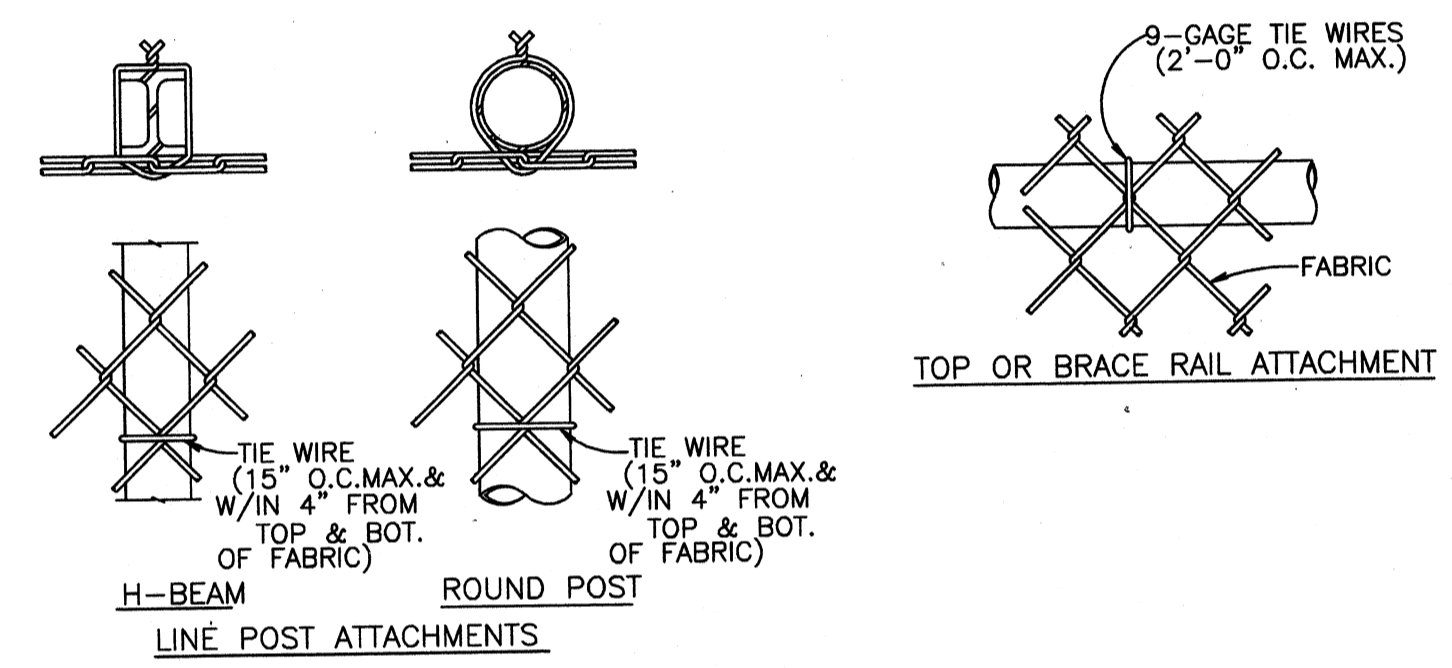


OUTSIDE ELEVATION SLIDING GATE DETAIL
N.T.S.

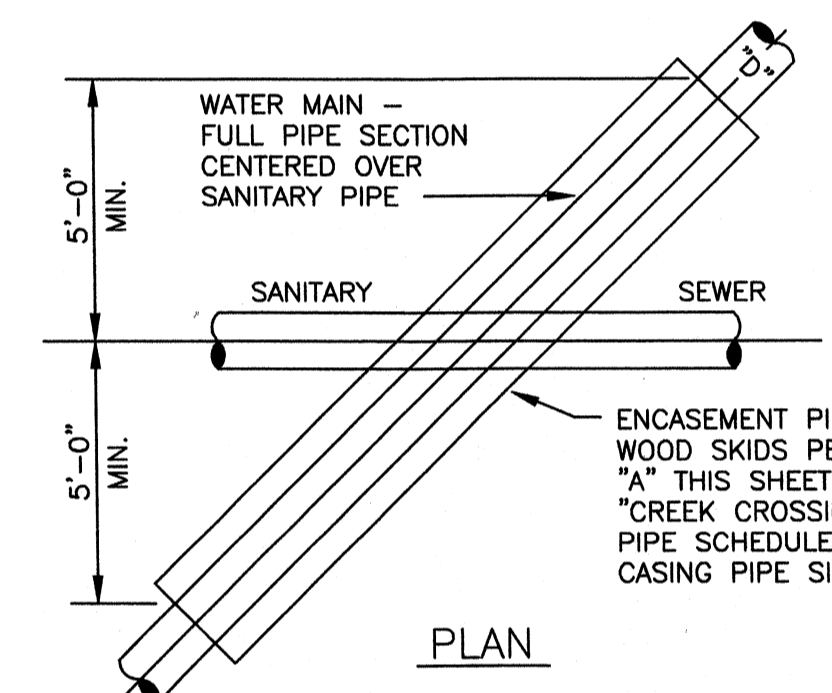
SECTION A-A
N.T.S.

ALUMINUM ACCESS LADDER "A"
NOT TO SCALE

ALUMINUM ACCESS LADDER "B"
NOT TO SCALE



OUTSIDE ELEVATION
N.T.S.



WATER/SANITARY SEWER CROSSING - ENCASEMENT
NOT TO SCALE

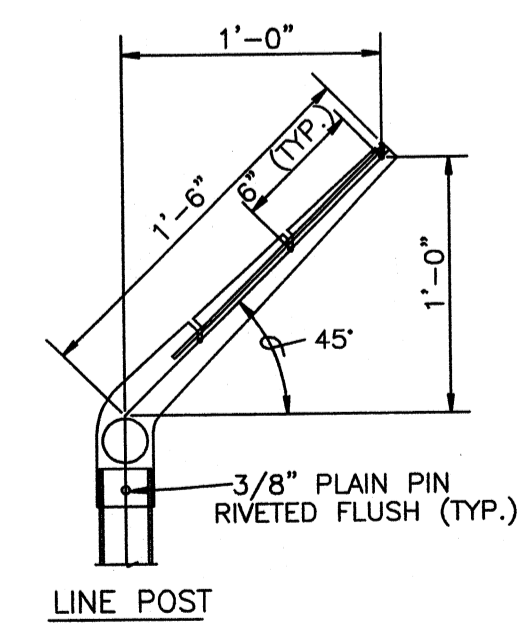
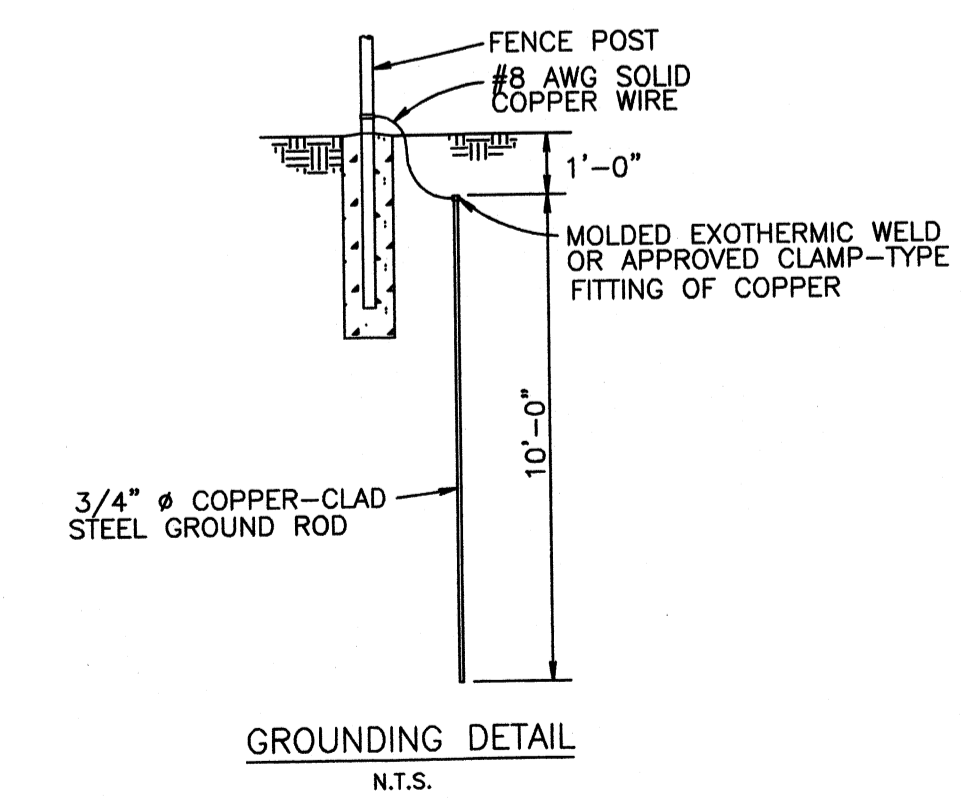
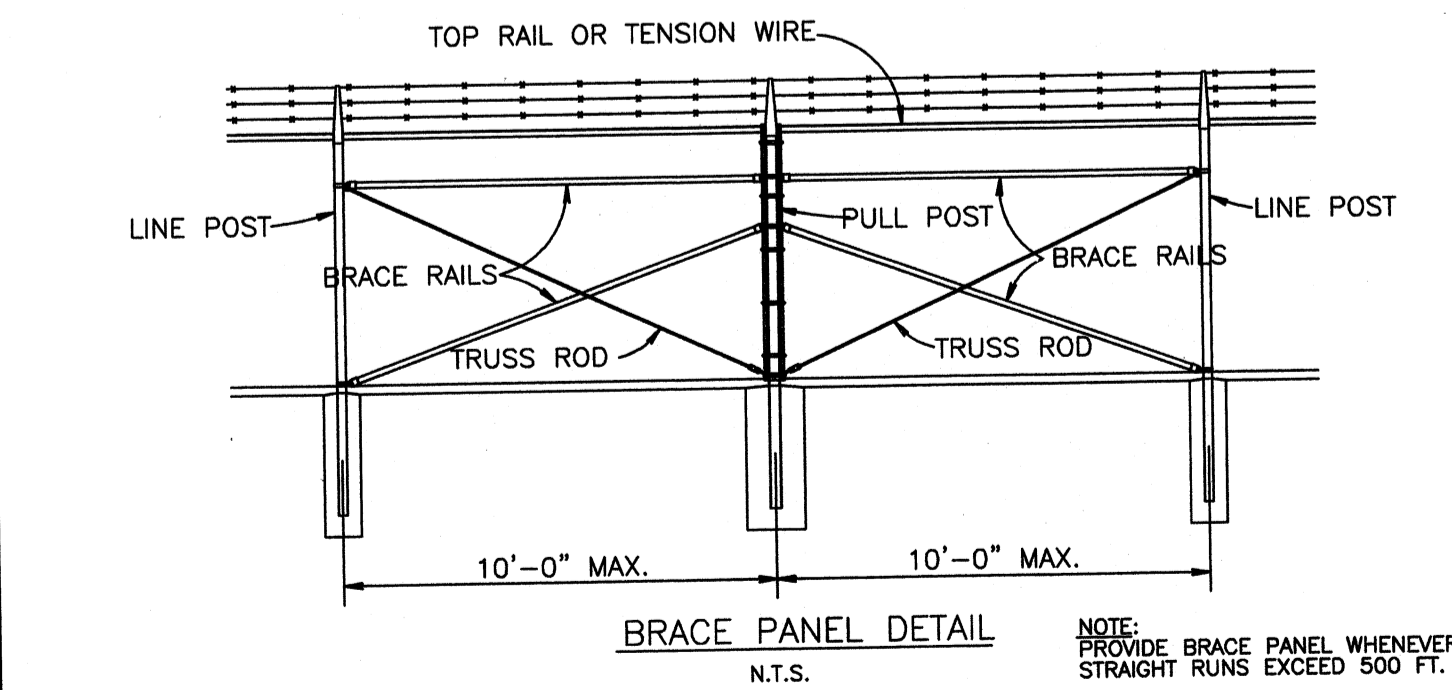
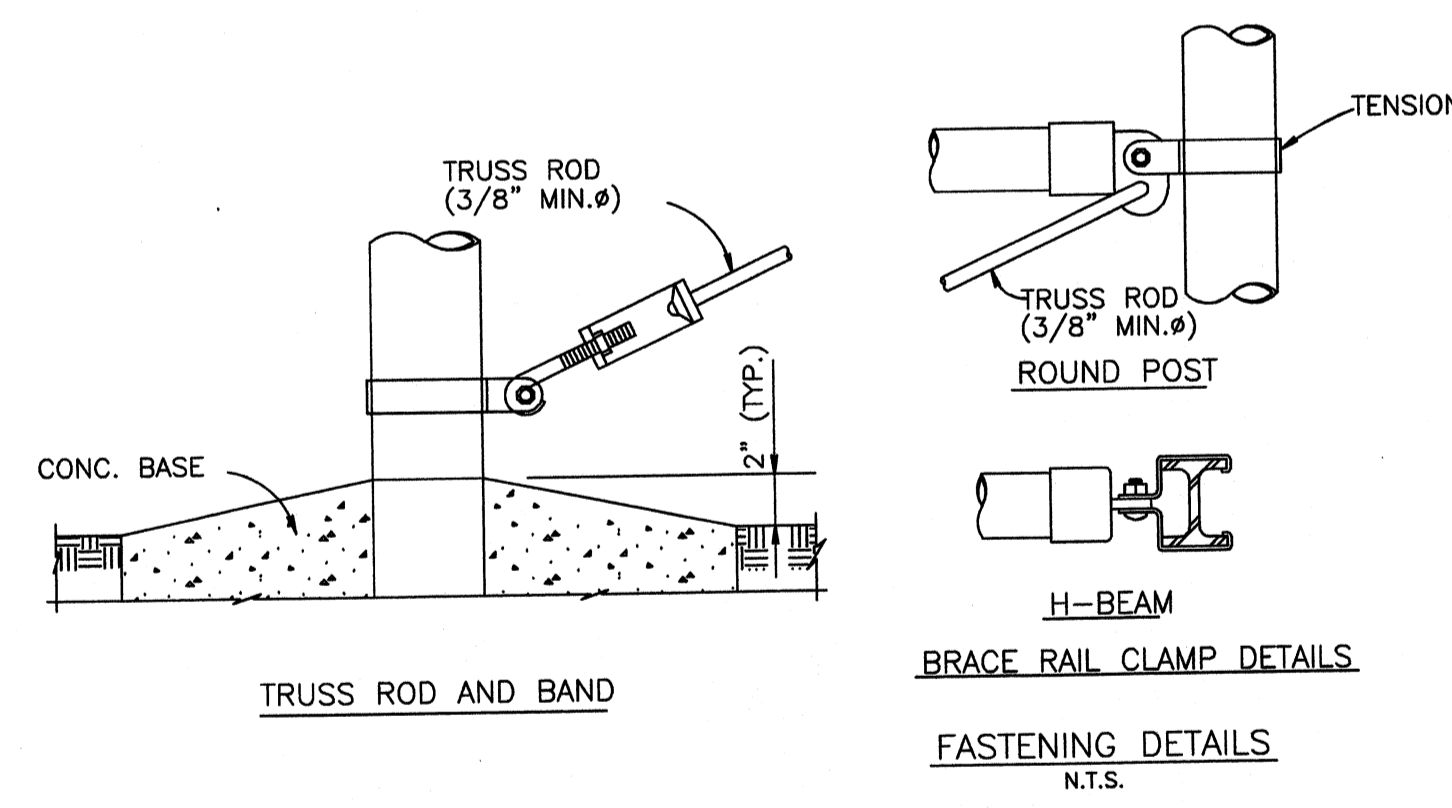
WATER MAIN - FULL PIPE SECTION TO BE CENTERED OVER SANITARY PIPE TO ACHIEVE MAXIMUM JOINT DISPLACEMENT

ENCASEMENT PIPE WITH WOOD SKIDS PER DETAIL "A" THIS SHEET

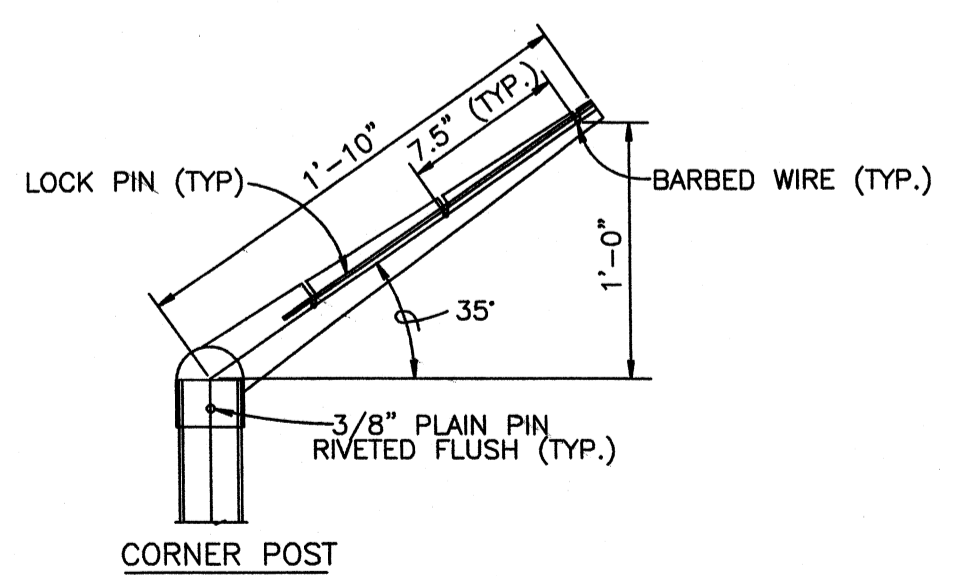
ENCASEMENT PIPE WITH WOOD SKIDS PER DETAIL "A" THIS SHEET

ENCASEMENT PIPE WITH WOOD SKIDS PER DETAIL "A" THIS SHEET

WATER FACILITIES LESS THAN 2'-0" VERTICAL OR 10'-0" HORIZONTAL SEPARATION REQUIRE ENCASEMENT PIPE



EXTENSION ARM DETAILS
N.T.S.



USE AND SECTION	STEEL POST SCHEDULE		
	MINIMUM OUTSIDE DIMENSIONS (NOMINAL)		
	FABRIC LESS THAN 72"	FABRIC 72" TO 96"	FABRIC OVER 96"
CORNER, END & PULL POSTS			
TUBULAR - ROUND	2.375" O.D.	2.875" O.D.	4.00" O.D.
TUBULAR - SQUARE	2.00" SQ.	2.50" SQ.	3.00" SQ.
C-SECTION (ROLL-FORMED)	3.50" x 3.50"	3.50" x 3.50"	---
LINE POSTS			
TUBULAR - ROUND	1.90" O.D.	2.375" O.D.	2.875" O.D.
H-SECTION	2.25" x 1.70"	2.25" x 1.70"	2.25" x 1.70"
C-SECTION (ROLL-FORMED)	1.875" x 1.625"	2.25" x 1.70"	---
TOP, BOTTOM & BRACE RAILS			
TUBULAR - ROUND	1.66" O.D.		
TUBULAR - SQUARE	1.50" O.D.		
H-SECTION	1.625" x 1.50"		
C-SECTION (ROLL-FORMED)	1.625" x 1.25"		

- NOTES:**
- DETAILS SHOWN ARE TO CLARIFY REQUIREMENTS AND ARE NOT INTENDED TO LIMIT OTHER TYPES OF FENCE SECTIONS AND METHODS OF INSTALLATION.
 - WIRE TIES, RAILS, POSTS, AND BRACES SHALL BE CONSTRUCTED ON THE SECURE SIDE OF THE FENCE ALIGNMENT. CHAIN-LINK FABRIC SHALL BE PLACED ON THE OPPOSITE SIDE OF THE SECURE AREA.
 - UNLESS SPECIFICALLY SHOWN OR SPECIFIED, ALL FENCE SHALL HAVE APRON EXTENDED OUTWARD FROM THE AREA BEING PROTECTED.
 - C-SECTION POSTS SHALL BE INSTALLED SO THAT THE VOID INSIDE THE POST IS COMPLETELY FILLED WITH CONCRETE UP TO THE TOP OF THE FOUNDATION.
- FENCE LEGEND:**
- TR - FENCE WITH TOP RAIL AND TENSION WIRE AT BOTTOM
- TSR - FENCE WITH TOP AND BOTTOM RAILS
- TWB - TENSION WIRE TOP AND BOTTOM
- TWR - FENCE WITH TOP TENSION WIRE AND BOTTOM RAIL

CHAIN-LINK SECURITY FENCE DETAILS
NOT TO SCALE

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PROJECT RECORD

CONFORMED SET 5/09

3/17/09

BY	DESCRIPTION	MARK	DATE

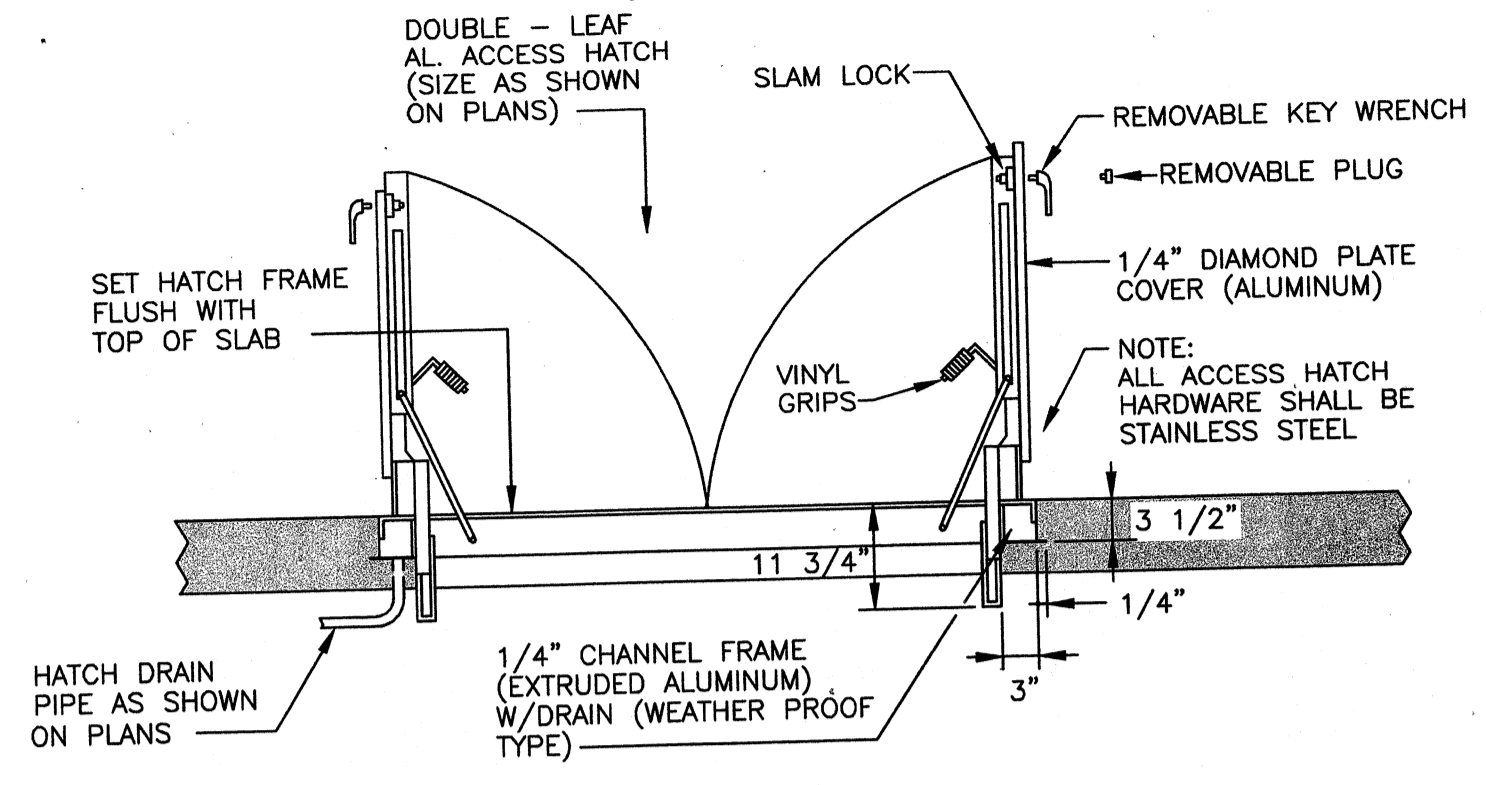
Client: OHIO COUNTY WATER DISTRICT
Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

Project No.: 120-07060
Designed By: GDP
Drawn By: GDP
Checked By:

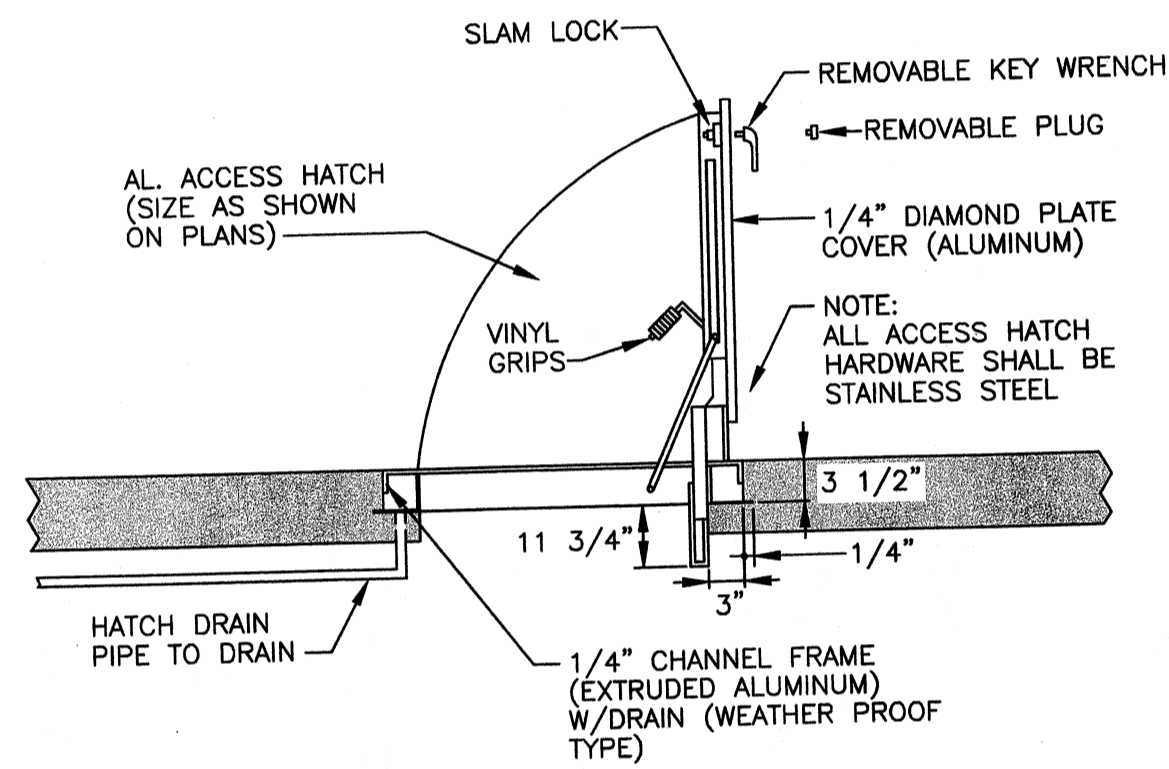
SD-504

Copyright: Tetra Tech

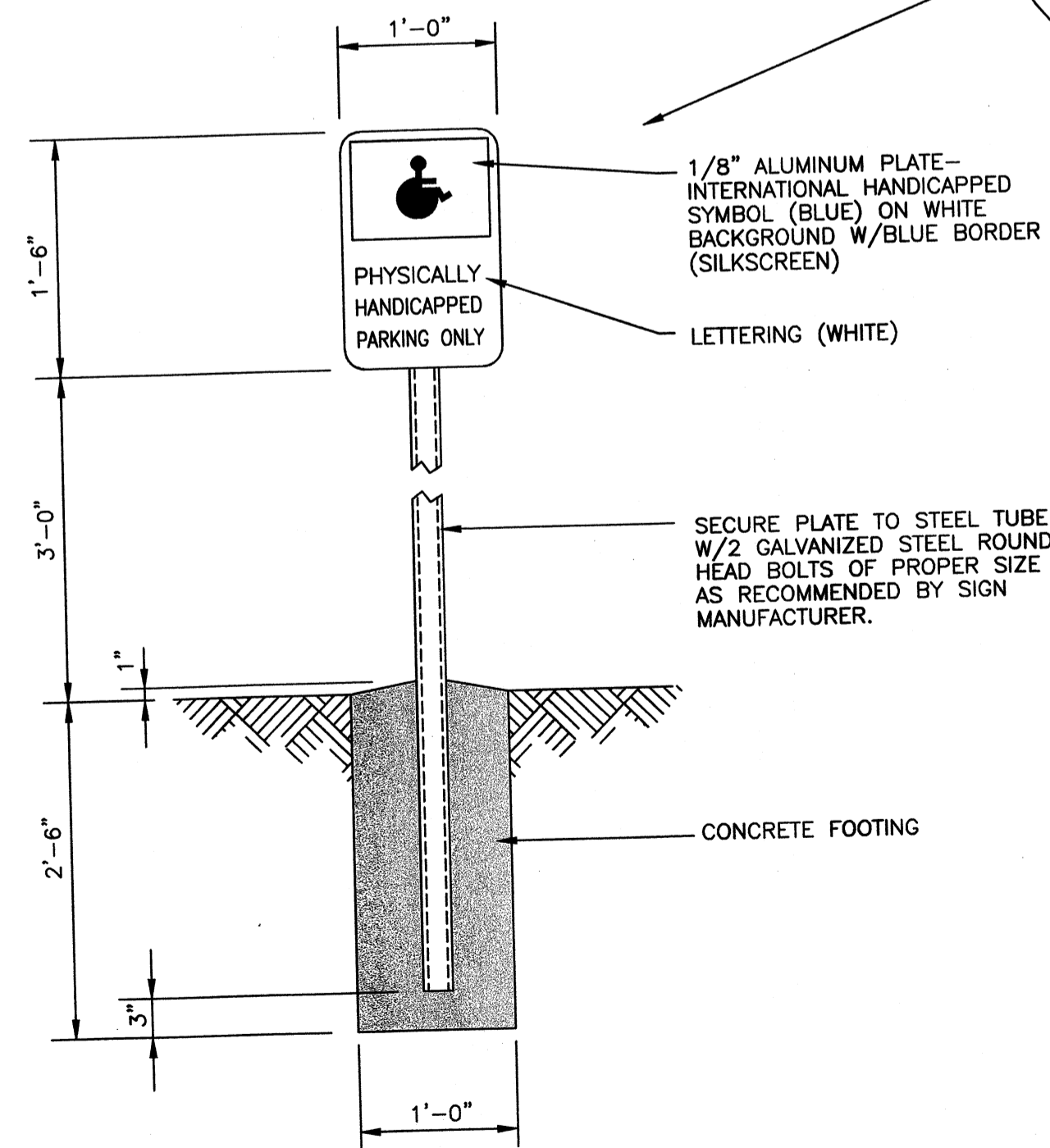
Wednesday, July 01, 2009 11:02:59 AM DRAWING: \\larafis\projects\120-07060 Ohio County\CONFORMED SET 5-09\CIVIL\X-07060 SD-505.DWG LAYOUT: LAYOUT1 USER NAME: JEREMY M. FRONGILLO



DOUBLE-LEAF ALUMINUM ACCESS HATCH
NOT TO SCALE



SINGLE-LEAF ALUMINUM ACCESS HATCH
NOT TO SCALE



HANDICAPPED PARKING SIGN

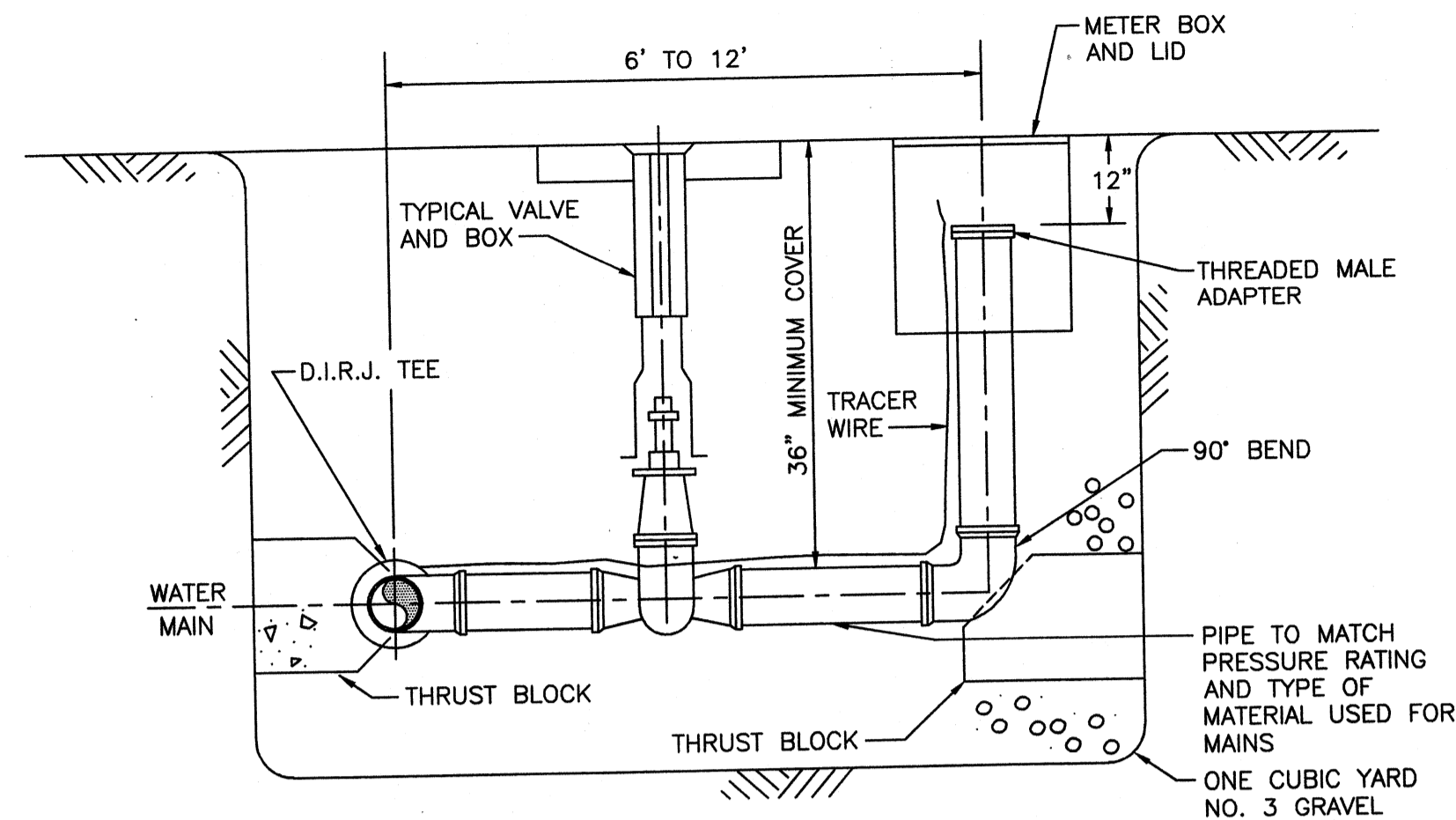
DETAIL 1
NOT TO SCALE SD-505



HANDICAP SYMBOL

NOTE:

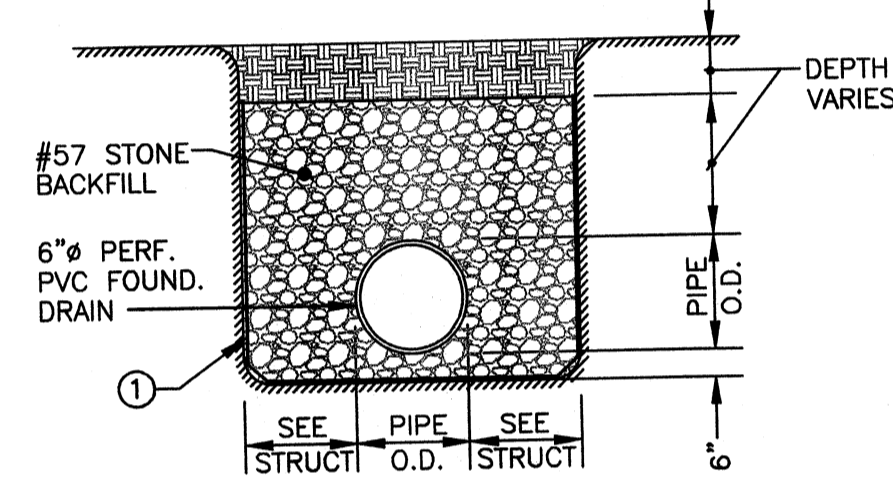
1. ALL FITTINGS AND VALVES SHALL HAVE MECHANICAL JOINT RESTRAINING GLANDS AND SHALL BE BLOCKED WITH CONCRETE.
2. SET MARKER POST AT VALVE.



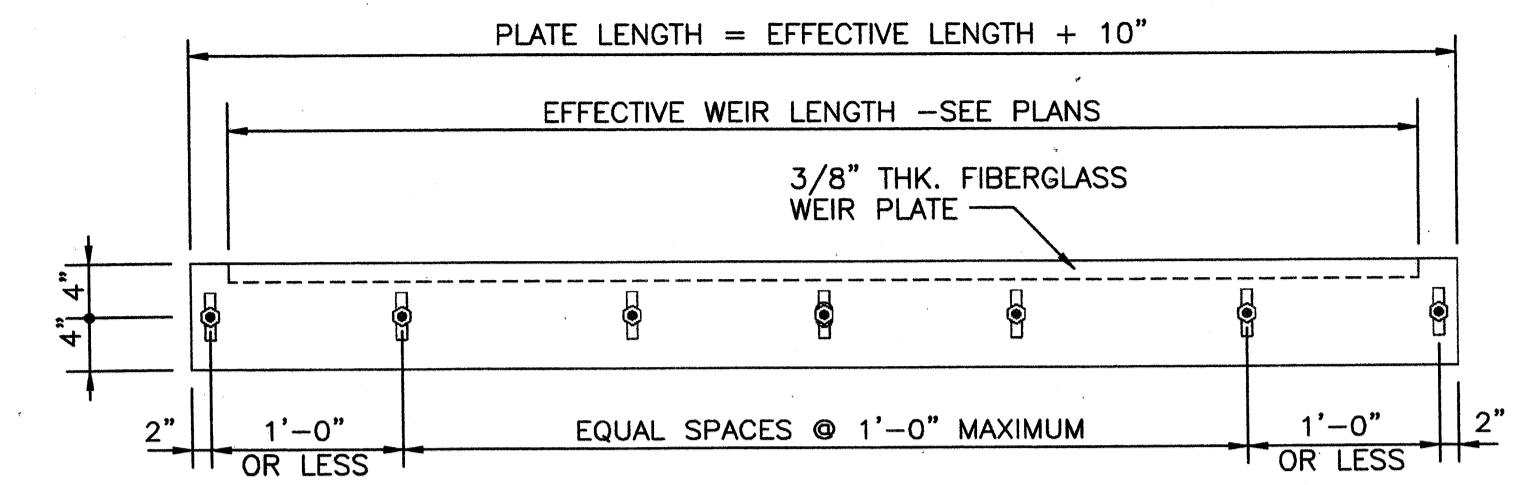
BLOWOFF/FLUSH VALVE ASSEMBLY
NOT TO SCALE

NOTE:

1. SURROUND TRENCH, (4 SIDES), W/8 OZ. NON-WOVEN GEO-TEXTILE FABRIC

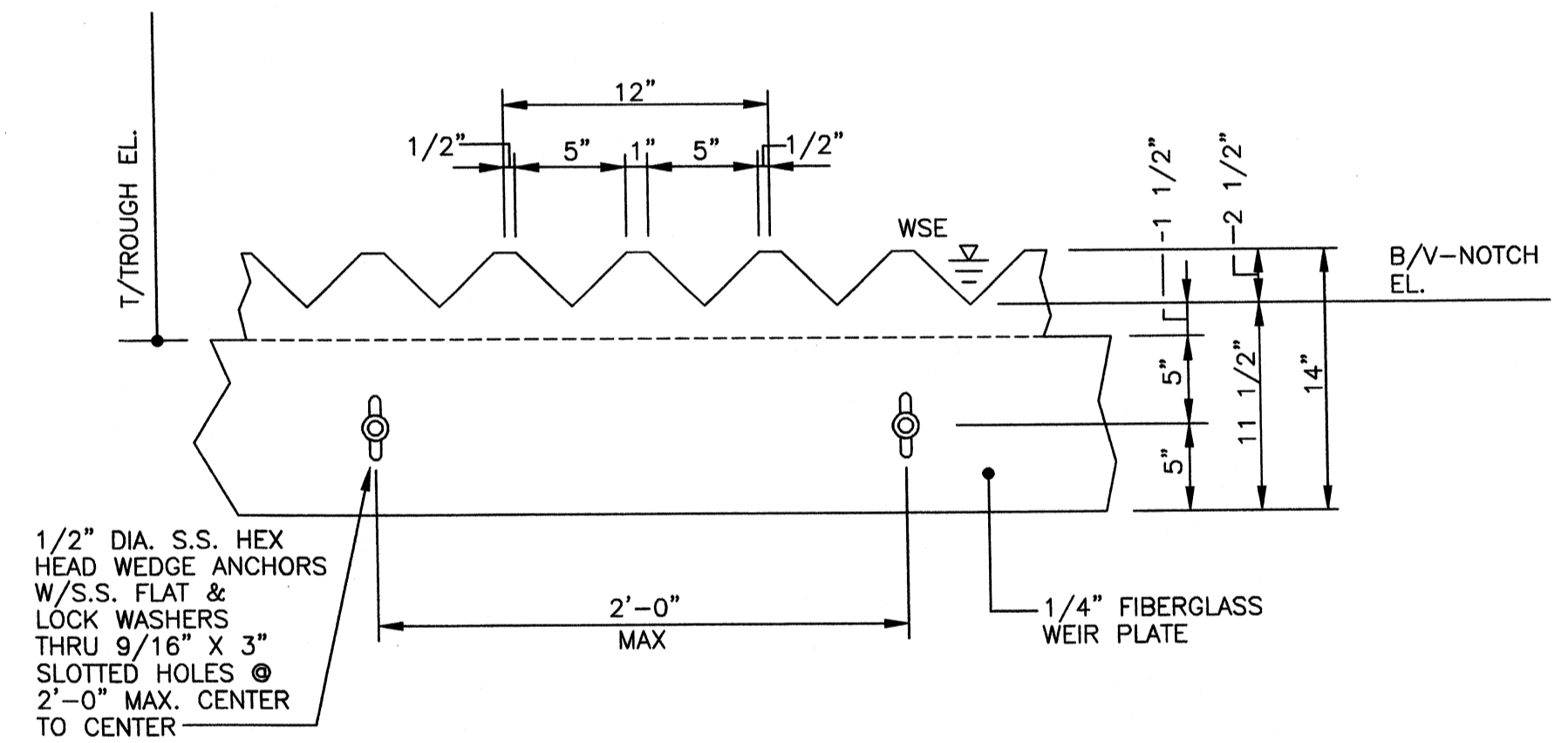


STRUCTURE FOUNDATION DRAIN
DETAIL 4
NOT TO SCALE SD-505



SHARP CRESTED WEIR DETAIL

DETAIL 5
NOT TO SCALE SD-505



V-NOTCH WEIR DETAIL

DETAIL 2
NOT TO SCALE SD-505

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PROJECT RECORD

CONFORMED SET 5/09



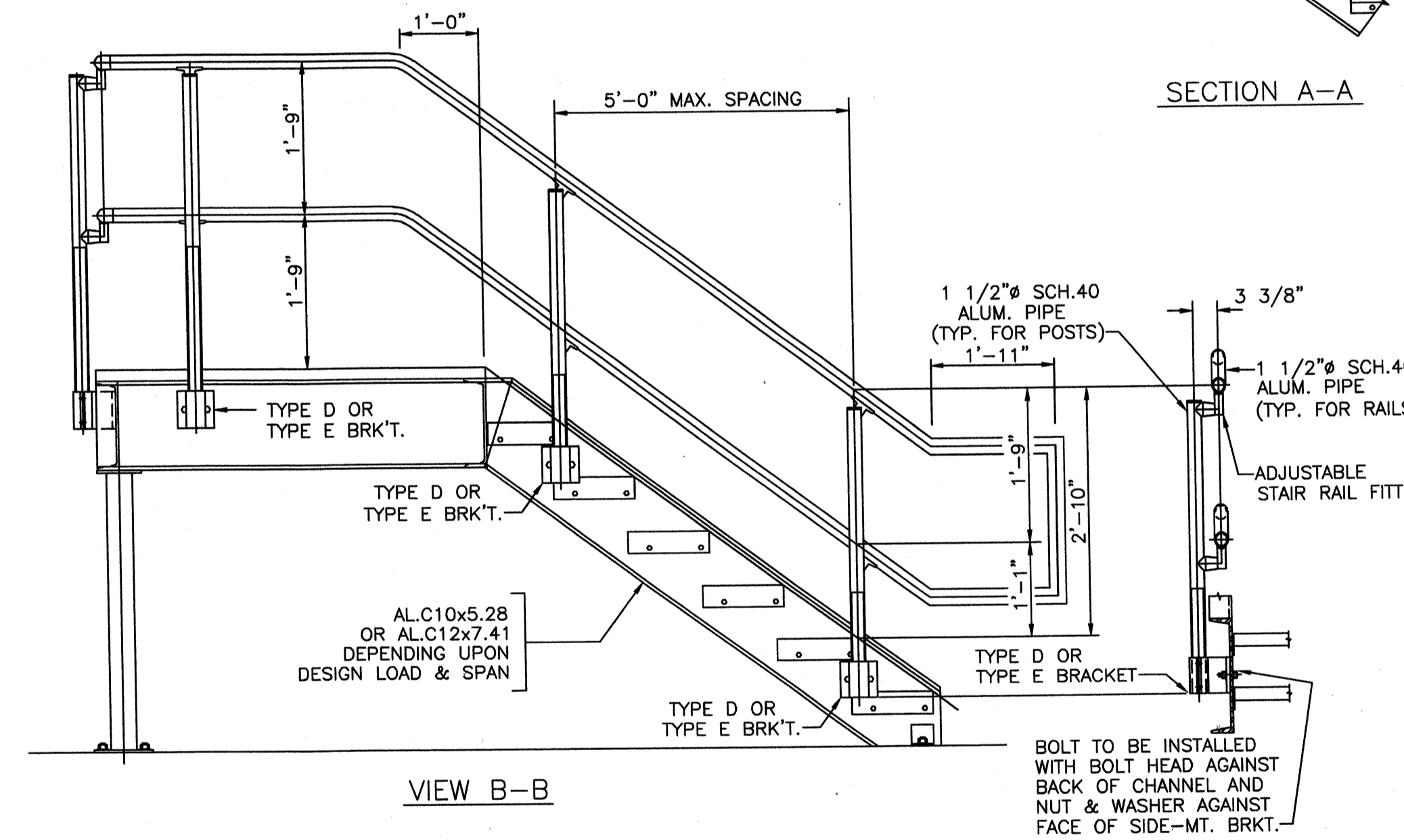
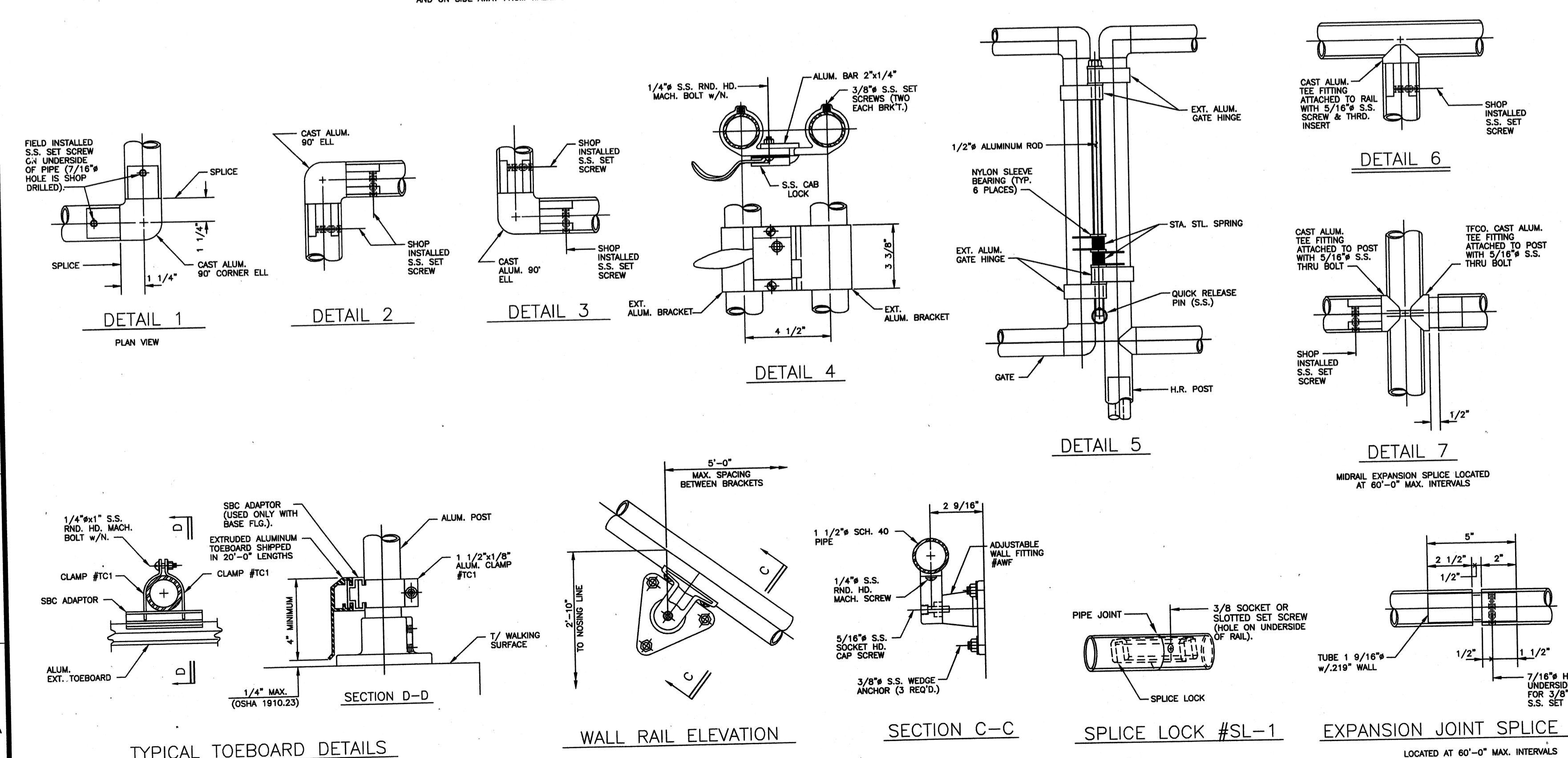
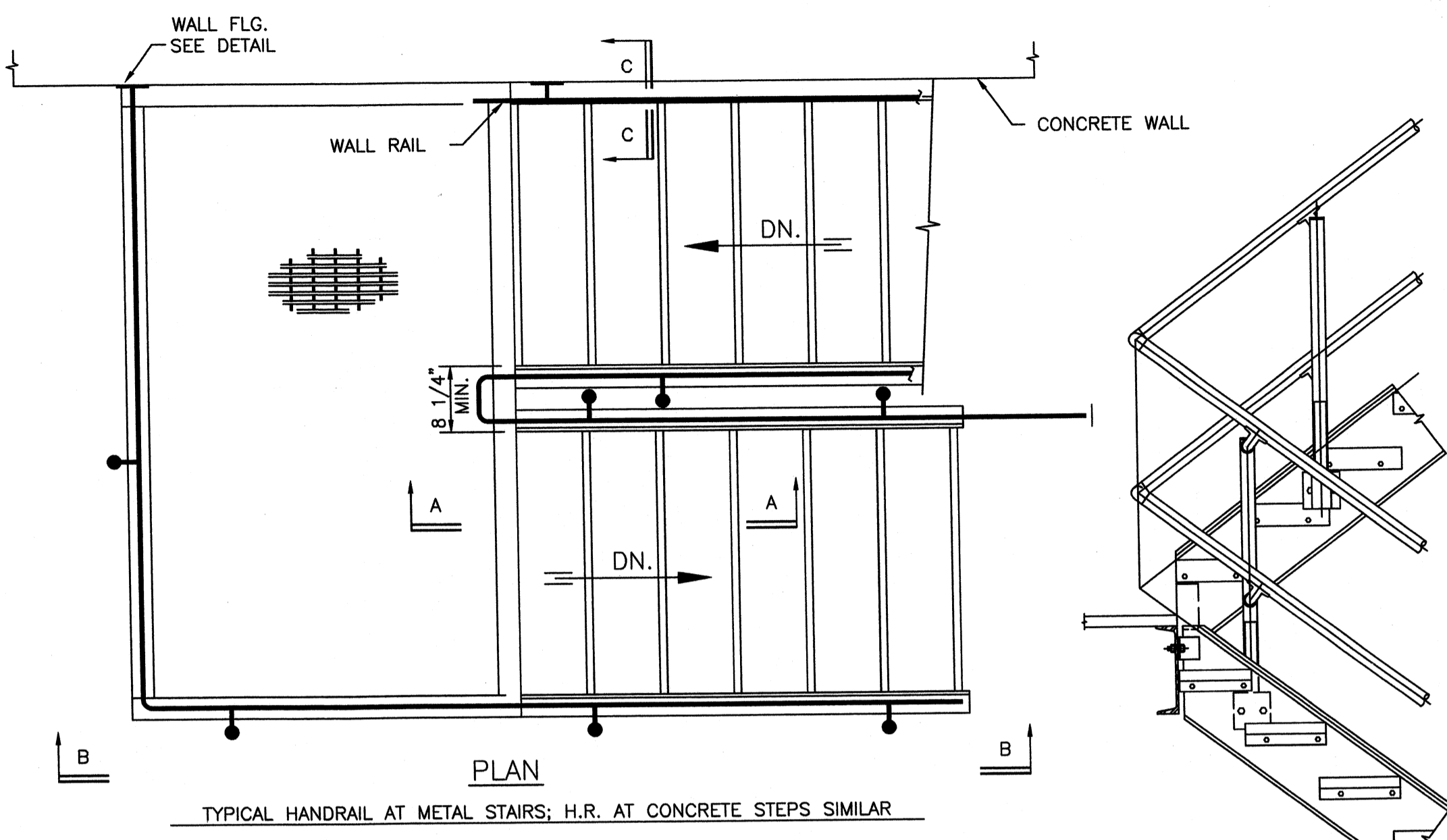
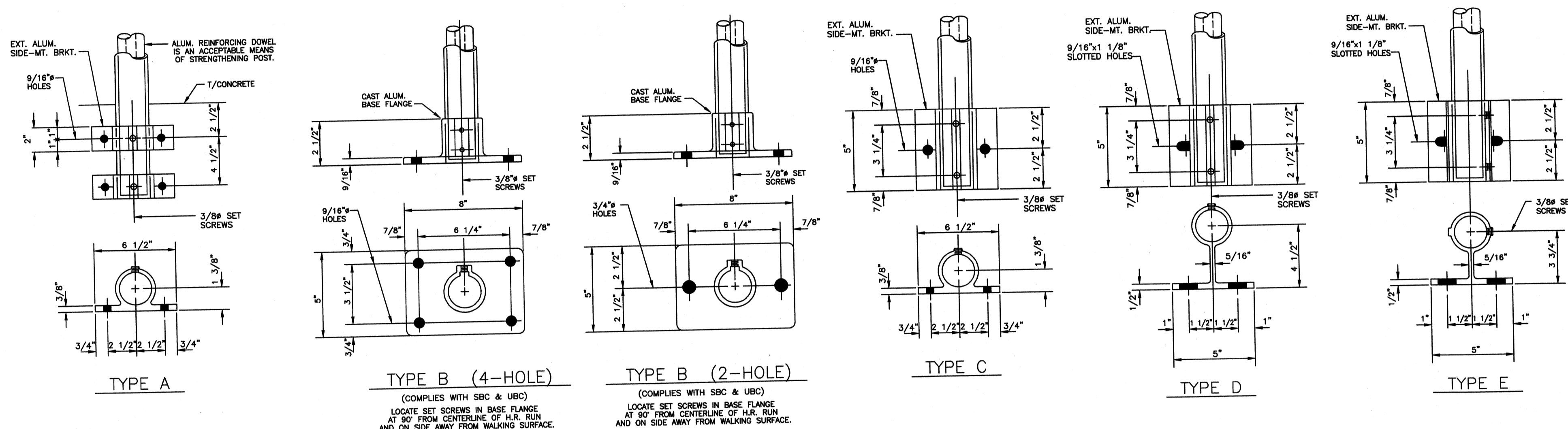
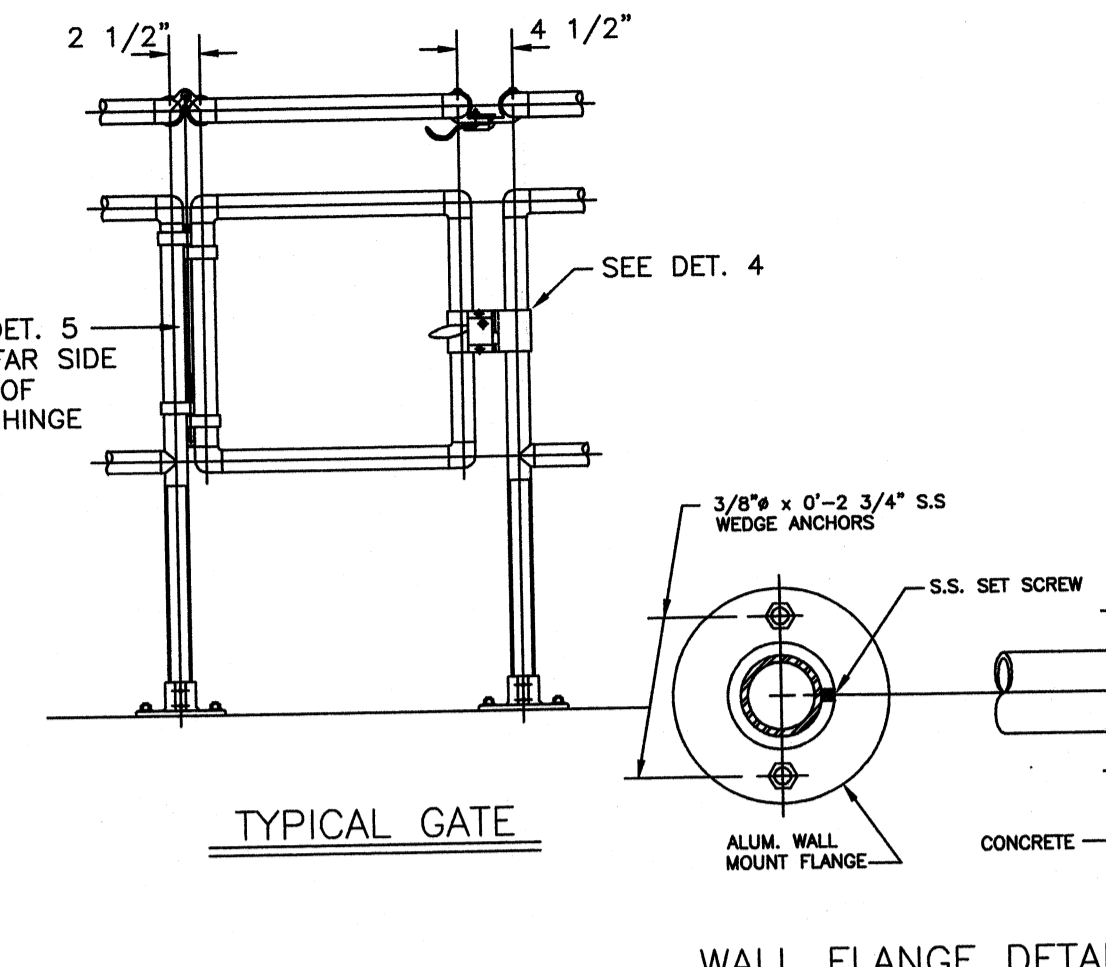
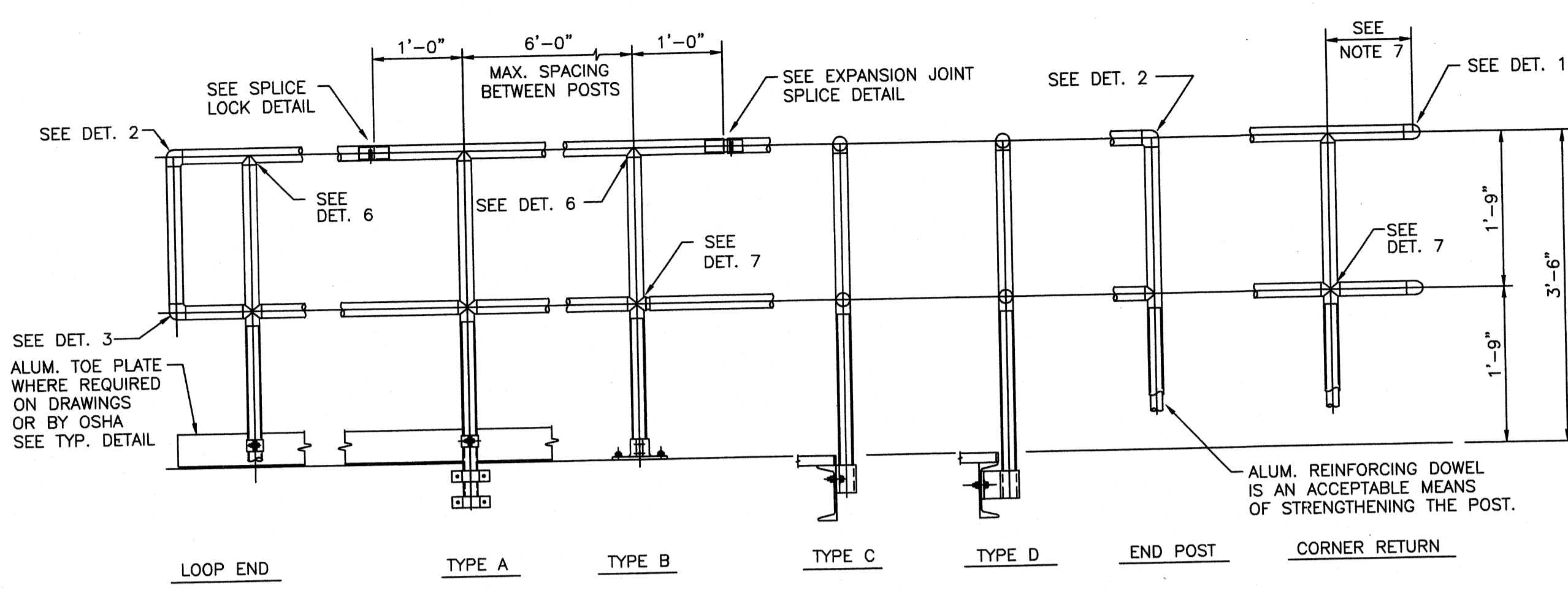
BY	DESCRIPTION	DATE	MARK

Client: OHIO COUNTY WATER DISTRICT
Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

Project No.: 120-07060
Designed By: GDP
Drawn By: GDP
Checked By:

SD-505

Copyright: Tetra Tech



- STANDARD BUILDING CODE AND 1990 BOCA DESIGN SPECIFICATIONS FOR FACTORY-INDUSTRIAL APPLICATIONS
1. Handrail shall be the product of a company normally engaged in the manufacture of pipe railing. Railing shall be shop assembled in lengths not to exceed 24 feet for field erection.
 2. Handrails, guardrails and stair rail systems shall be designed per the specifications.
 3. The manufacturer shall submit calculations to the Engineer for approval. Testing of base castings or base extrusions by an independent lab or manufacturer's lab (if manufacturer's lab meets the requirements of the Aluminum Association) will be an acceptable substitute for calculations. Calculations will be required for approval of all other design aspects.
 4. Post spacing shall be a maximum of 6'-0". Posts and railings shall be a minimum of 1-1/2" Schedule 40 aluminum pipe alloy 6063-T6, ASTM-B-429 or ASTM-B-221. The handrail manufacturer shall show that their posts are of adequate strength to meet the loading requirements. If the manufacturer's posts are not of adequate strength, the manufacturer may reduce the post spacing or add reinforcing dowels or may do both in order to meet loading requirements.
 5. The handrail shall be made of pipes joined together with component fittings. Samples of all components, bases, toe plate and pipe must be submitted for approval. Components that are pop-riveted or glued at the joints will not be acceptable. All components must be mechanically fastened with stainless steel hardware.
 6. Posts shall not interrupt the continuation of the top rail at any point along the railing, including corners and end terminations (OSHA 1910.23). The top surface of the top railing shall be smooth and shall not be interrupted by projecting fittings.
 7. The midrail at a corner return shall be able to withstand a 200# load without loosening, conforming to the handrail & guardrail system.
 8. Expansion bolts shall be spaced 10d apart and 5d edge distance for no reduction in pullout strength. A safety factor of 4 shall be used on expansion bolt pullout values published by the manufacturer. Expansion bolts shall be stainless steel type 303 wedge bolts and shall be furnished by the handrail manufacturer.
 9. Toe plate shall conform to OSHA standards. Toe plate shall be a minimum of 4" high and shall be an extrusion that attaches to the posts with clamps which will allow for expansion and contraction between posts. Toe plates shall be set 1/4" above the walking surface. Toe plates shall be provided on handrails as required by OSHA and/or as shown on drawings. Toe plates shall be shipped loose in stock lengths with pre-manufactured corners for field installation.
 10. Openings in the railing shall be guarded by a self-closing gate (OSHA 1910.23). Safety chains shall not be used unless specifically shown on the drawings.
 11. Finish shall be Aluminum Association M10-C22-A41 (215-R1). The pipe shall be plastic wrapped. The plastic wrap is to be removed after erection.
 12. Aluminum surfaces in contact with concrete, grout or dissimilar metals will be protected with a coat of bituminous paint, mylar isolators or other approved material.

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PROJECT RECORD

CONFORMED SET 5/09

BY	DATE	DESCRIPTION

OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

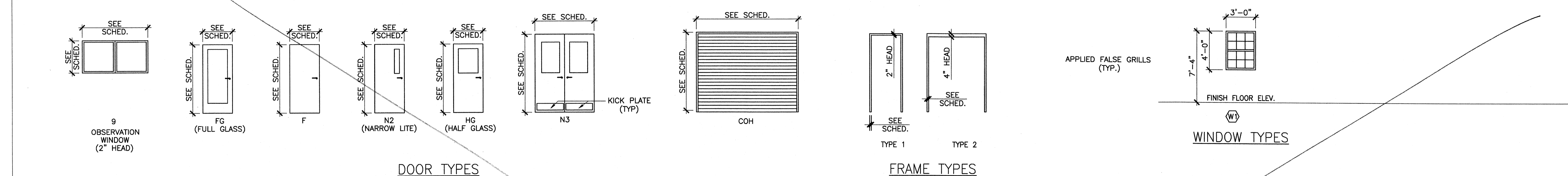
Project No.: 120-07060
Designed By: GDP
Drawn By: GDP
Checked By:

SD-506

Standard Details

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Wednesday, July 15, 2008 4:22:51 PM DRAWING: Verifier's\projects\120-07060 Ohio County\CONFORMED SET 5-09\ARCHITECTURAL\A-001 SCHEDULES.DWG LAYOUT: A-001 USER NAME: JEREMY M. FRONGILLO



DOOR AND FRAME SCHEDULE

Table with columns: MARK, LOCATION, ROOM NAME, STRUCTURAL, DOOR, GLASS, FRAME, and REMARKS. It lists specifications for various rooms including UF BLDGS (121), Chemical Feed Bldgs (161), and Operations Bldg (171).

- LEGEND: AL - ALUMINUM, COH - CEILING OVERHEAD, EXT - EXTERIOR, F - FLUSH (SEE ELEVATION), FG - FULL GLASS (SEE ELEVATION), FRP - FIBERGLASS REINFORCED PLASTIC, GST - GALVANIZED STEEL, HM - HOLLOW METAL, IS - INSULATED SAFETY, SAF - SAFETY.

REMARKS: 1. DELIVER EXTERIOR TRIM (EMERGENCY EXIT ONLY), 2. W/ WINDOW

FINISH SCHEDULE

Table with columns: NO., ROOM NAME, FLOOR SUB/FIN, BASE SUB/FIN, N. WALL SUB/FIN, E. WALL SUB/FIN, S. WALL SUB/FIN, W. WALL SUB/FIN, CEILING SUB/FIN, HGT., SPECIAL CONDITIONS, FLOOR, WALL, CLG., MISC.

NOTE 1: COAT ALL EXPOSED INTERIOR CONCRETE SURFACES BELOW FINISHED FLOOR ELEVATION PER SPECIFICATION 09900

- LEGEND: ACC - ACOUSTIC CERAMIC LAY-IN TILE, CAR - CARPET, CBB - CEMENT BACKER BOARD, CMC - CAST-IN-PLACE CONCRETE, CMT - CERAMIC MOSAIC TILE, CPT - CERAMIC PORCELAIN TILE, CTG - CERAMIC TILE GLAZED EXP - EXPOSED CONSTRUCTION, FAC - FACTORY, GYP - GYPSUM BOARD, GWB - GYPSUM WALL BOARD, HAR - HARDENER, NCM - NON-CURE, MDO - MDO FLY WOOD, MLP - METAL LINER PANEL, P-1 - LATEX PAINT, EGGSHELL FINISH, REFER TO SPEC 09900, P-2 - EPOXY PAINT, SEMIGLOSS FINISH, REFER TO SPEC 09900, P-3 - EPOXY PAINT, NON-SLIP FINISH, REFER TO SPEC 09900, SSMA - STEEL STUD MANUFACTURERS ASSOCIATION, VCT - VINYL COMPOSITE TILE, VBC - VINYL BASE COVER.

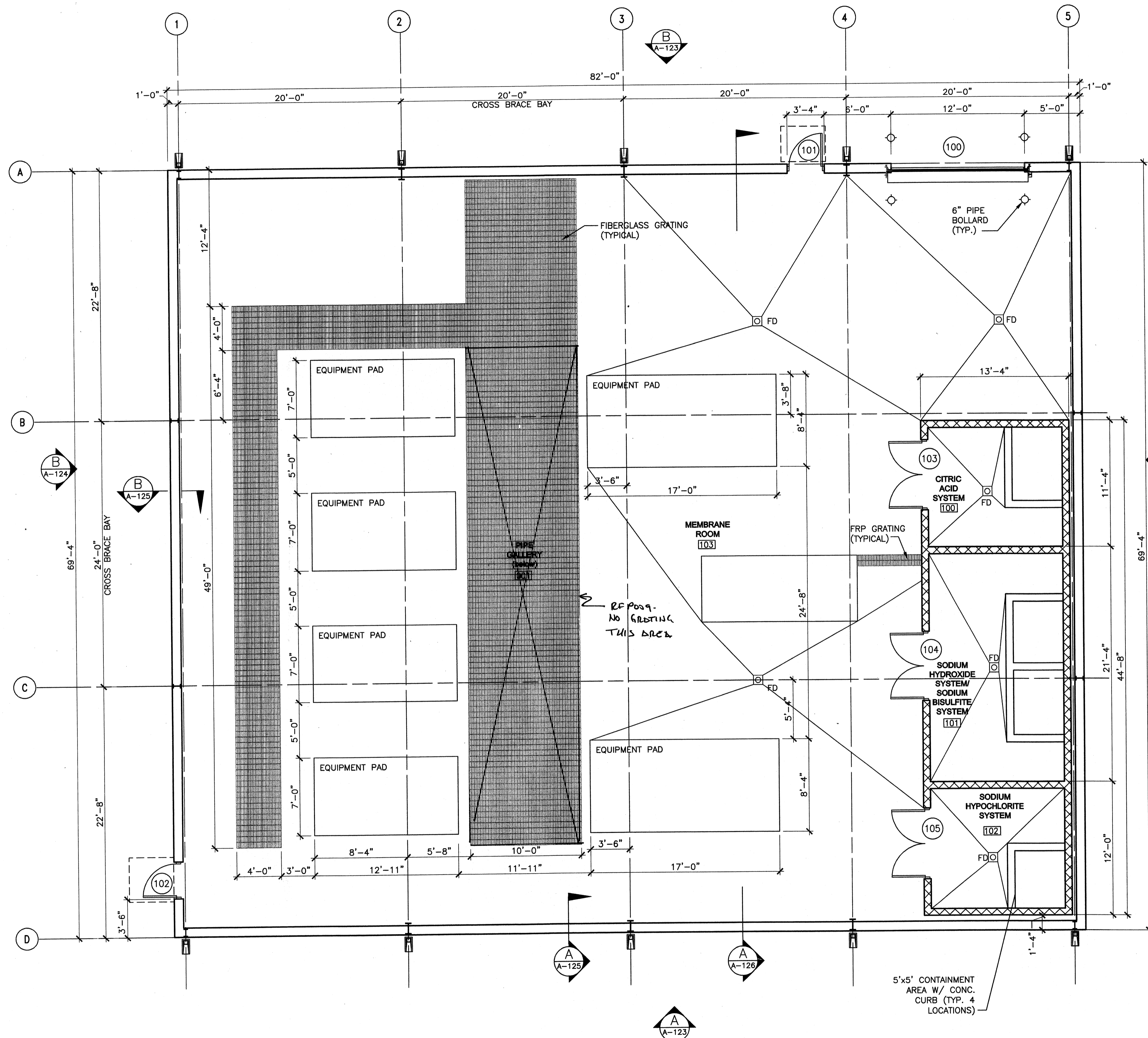
NOTE 1: COAT ALL EXPOSED INTERIOR CONCRETE SURFACES BELOW FINISHED FLOOR ELEVATION W/P-2

- ABBREVIATIONS: AFF - ABOVE FINISH FLOOR, BLDG - BUILDING, CFS - COLD FORM STEEL, CMU - CONCRETE MASONRY UNIT, DS - DOWNSPOUT, EL - ELEVATION, FRP - FIBERGLASS REINFORCED PLASTIC, FTG - FOOTING, HT - HEIGHT, MB - METAL BUILDING, MFR - MANUFACTURER, W - WITH.

REPLACED

Project Record section including Tetra Tech logo, project name 'OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT', project number '120-07060', and drawing title 'DOOR/FRAME AND FINISH SCHEDULES'. It also includes a professional seal for Matthew Petaja and a signature.

Tuesday, July 21, 2009 11:31:57 AM DRAWING: P:\120-07060 Ohio County Redesign\ORLANDO\CONFORMED SET 5-09\ARCHITECTURAL-A-121 ULTRAFILTRATION BUILDING FLOOR PLAN DWG LAYOUT: A-121 USER NAME: JUDY THOMPSON



UF BUILDING FLOOR PLAN
SCALE: 3/16"=1'-0"

BUILDING WP. ELEVATION 100'-0"
MATCHES SITE EL. 477.5'

KENTUCKY BUILDING CODE NOTES:
 BLDG USE GROUP: F1 (SECTION 306)
 TYPE OF CONSTRUCTION: IIB (TABLE 503)
 BUILDING SQUARE FOOTAGE
 TOTAL SQUARE FOOTAGE = 5,658
 CONTROL AREAS (AS PER SECTION 414.2, TABLES 307.7(1) & (2))
 1 hr SEPARATION WALLS FOR HAZARDOUS MATERIALS THAT ARE LESS THAN ALLOWABLE QUANTITIES PER CONTROL AREA
 HAZARDOUS CHEMICALS (TABLES 307.7(1)&(2))
 SODIUM HYDROXIDE - CORROSIVE, 130 GALS (ROOM 101) (<500 GALS - F1, TABLE 307.7(1))
 CONTROL AREA - 1 HR SEPARATION
 SODIUM HYPOCHLORITE - CORROSIVE, 130 GALS (ROOM 102) (<500 GALS - F1, TABLE 307.7(1))
 CONTROL AREA - 1 HR SEPARATION

NON-HAZARDOUS CHEMICALS
 SODIUM BISULFITE - IRRITANT, NON-HAZARDOUS (ROOM 101)
 CITRIC ACID - IRRITANT, NON-HAZARDOUS (ROOM 100)

LEGEND
 [Cross-hatched pattern] 8" CMU WALL T.O. WALL EL. 110'-0". SEE STRUCTURAL FOR REINFORCING REQUIREMENTS
 [Diamond symbol] GALVANIZED 6" PIPE BOLLARD, PAINTED SAFETY YELLOW
 [Grid pattern] FRP GRATING
 [Rectangular symbol] SPLASH BLOCK

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PROJECT RECORD

NO.	DATE	DESCRIPTION

CONFORMED SET 5/09
 STATE OF KENTUCKY
 MATTHEW PETAJA
 REGISTERED PROFESSIONAL ARCHITECT
 No. 10000

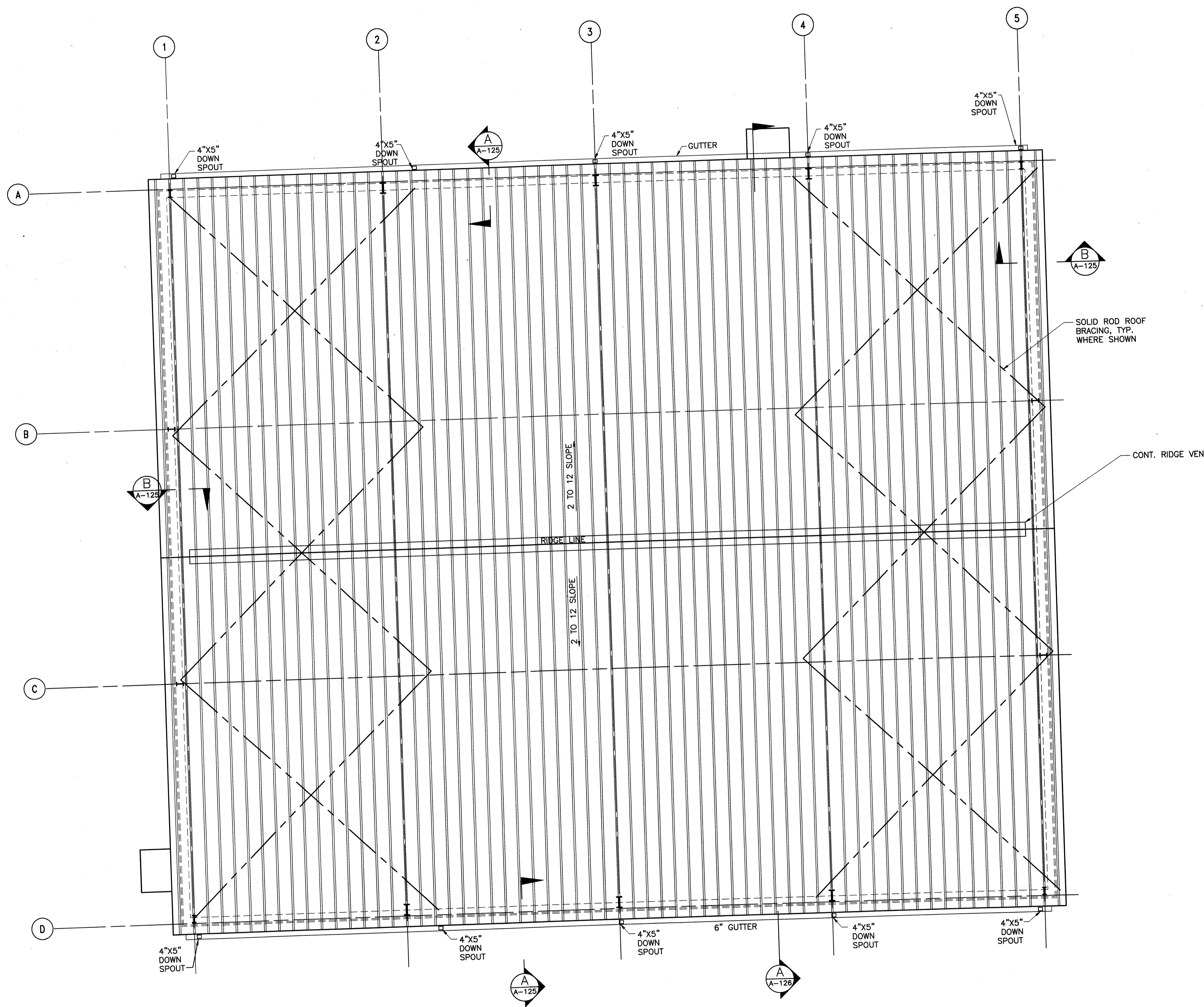
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT
 Project No.: 120-07060
 Ohio County Water District
 Water Treatment Plant
 ULTRAFILTRATION BUILDING
 FLOOR PLAN

Project No.: 120-07060
 Designed By: JQB
 Drawn By: JQB
 Checked By: MSP

A-121
 Sheet of 147
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Wednesday, July 01, 2009 1:25:48 PM DRAWING: \\norton\3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ARCHITECTURAL\A-122 ULTRAFILTRATION BUILDING ROOF PLAN .DWG LAYOUT: A-122 USER NAME: JEREMY M. FRONZILLO

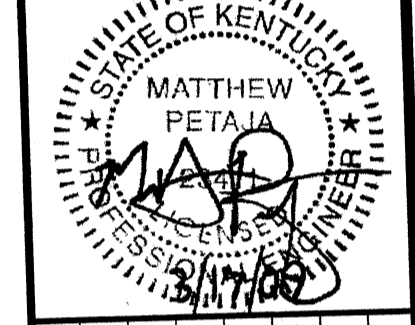


UF BUILDING ROOF PLAN
SCALE: 3/16"=1'-0"



PROJECT RECORD

CONFORMED SET 5/09



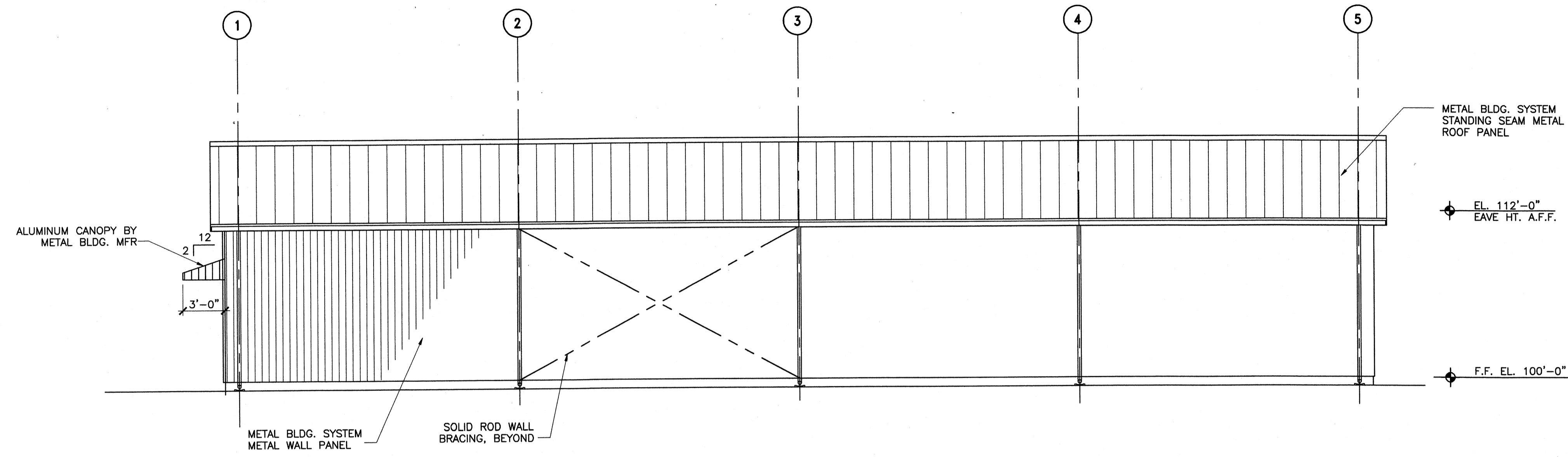
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
**ULTRAFILTRATION BUILDING
ROOF PLAN**

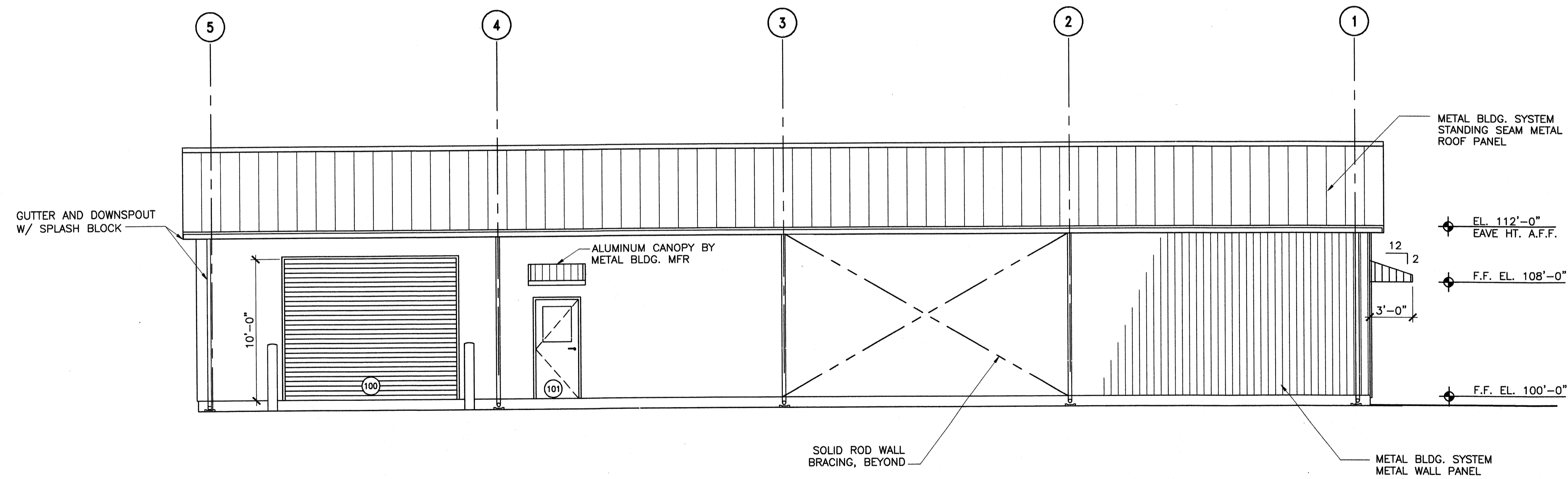
Project No.: 120-07060
Designed By: JCB
Drawn By: JCB
Checked By: MSP

A-122
Sheet of 147
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Wednesday, July 01, 2009 1:23:57 PM DRAWING: \\netof163\projects\120-07060 Ohio County\CONFORMED SET 5-09\ARCHITECTURAL\A-123 ULTRAFILTRATION BUILDING ELEVATION .DWG LAYOUT: A-123 USER NAME: JEREMY M. FRONSILO

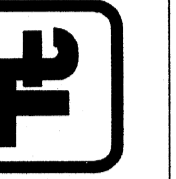


UF BLDG— ELEVATION (A)
SCALE: 3/16"=1'-0"



UF BLDG— ELEVATION (B)
SCALE: 3/16"=1'-0"

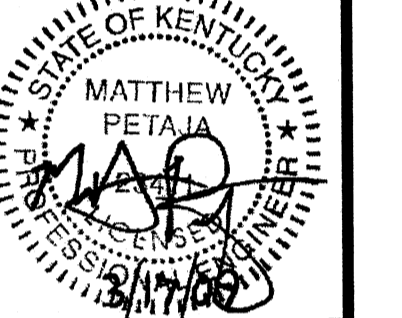
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CONFORMED SET 5/09



BY	DATE	DESCRIPTION

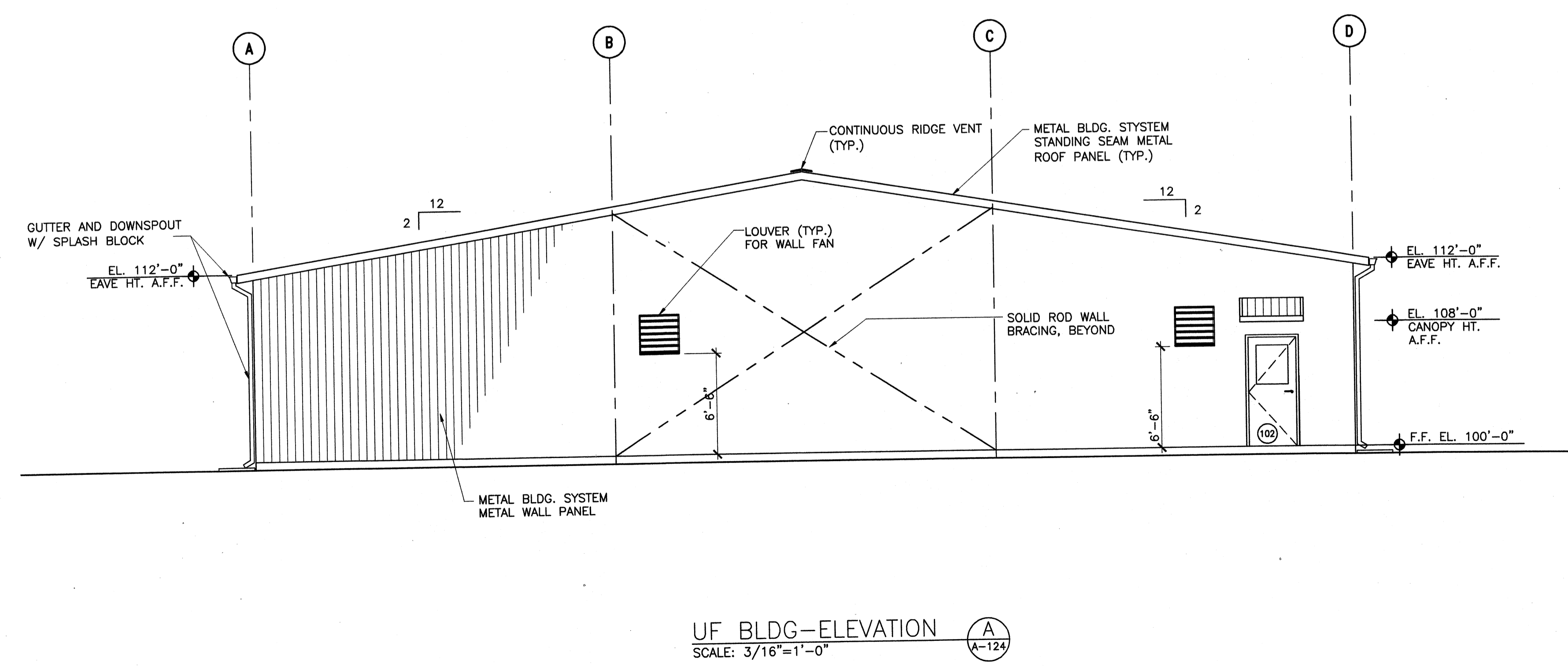
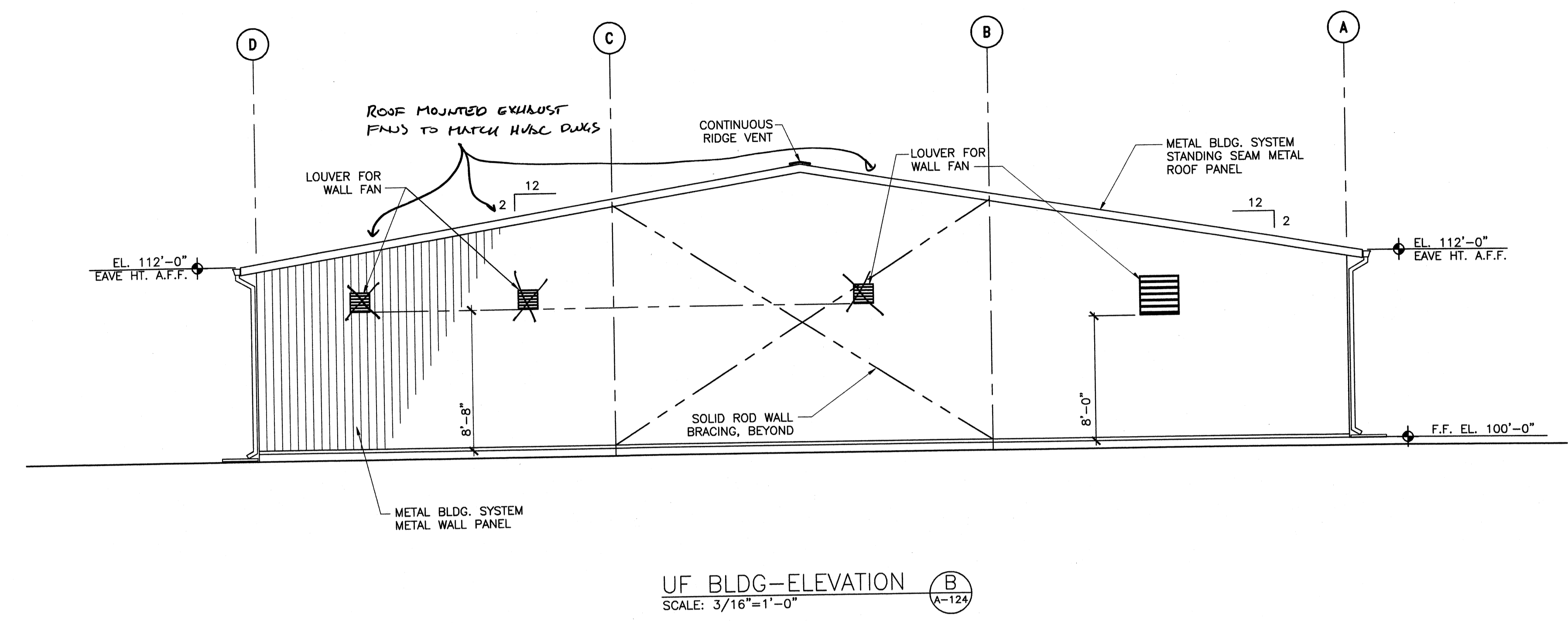
Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT
ULTRAFILTRATION BUILDING ELEVATIONS

Project No.: 120-07060
 Designed By: JQB
 Drawn By: JQB
 Checked By: MSP

A-123

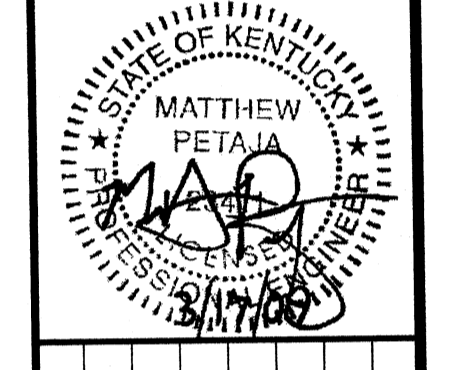
Sheet of 147
Copyright: Tetra Tech

Wednesday, July 15, 2009 4:23:33 PM DRAWING: \\veroff3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ARCHITECTURAL\A-124 ULTRAFILTRATION BUILDING ELEVATION.DWG LAYOUT: A-124 USER NAME: JEREMY M. FRONGILLO



PROJECT RECORD

CONFORMED SET 5/09



BY	DATE	DESCRIPTION

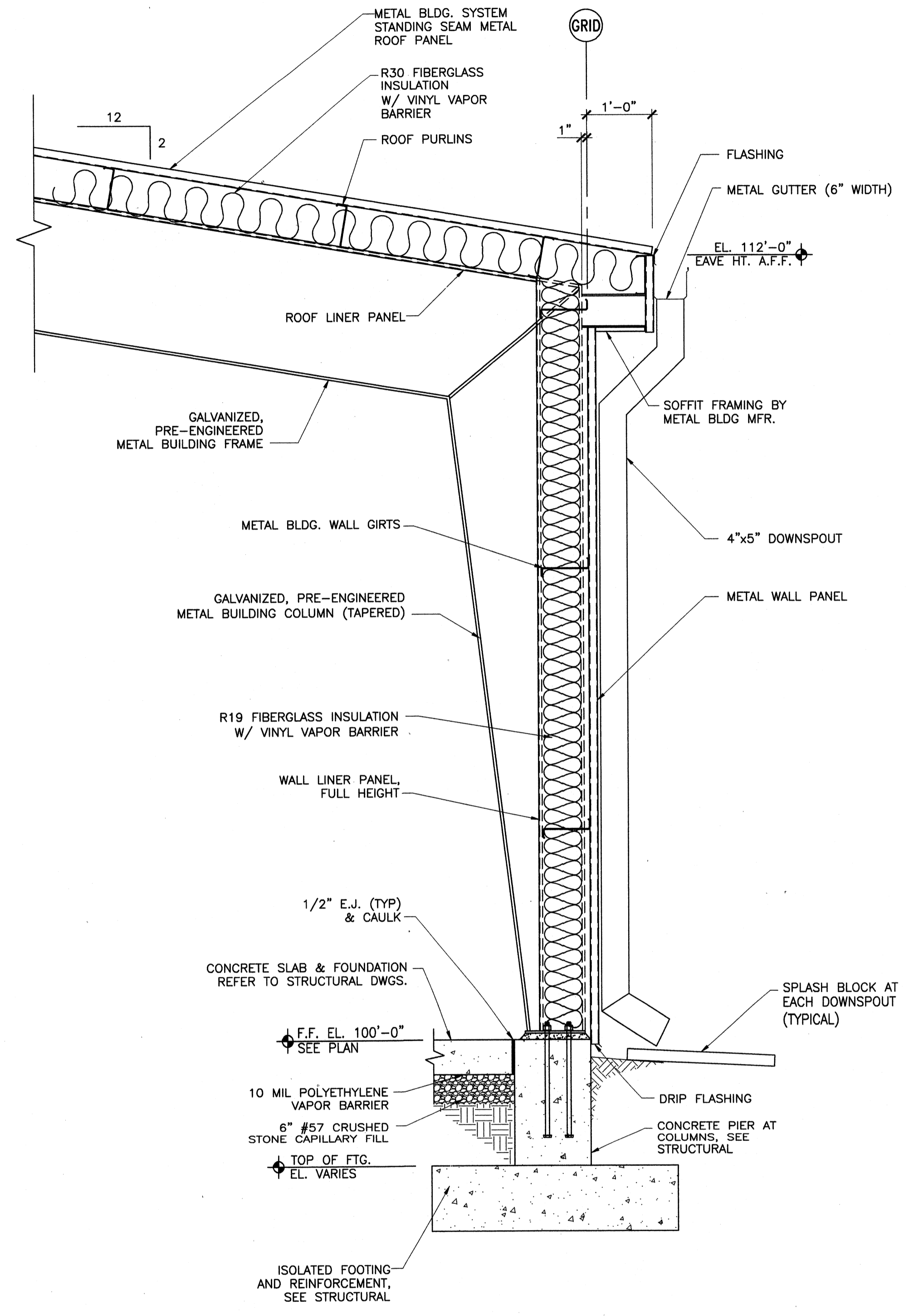
Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT

**ULTRAFILTRATION BUILDING
 ELEVATIONS**

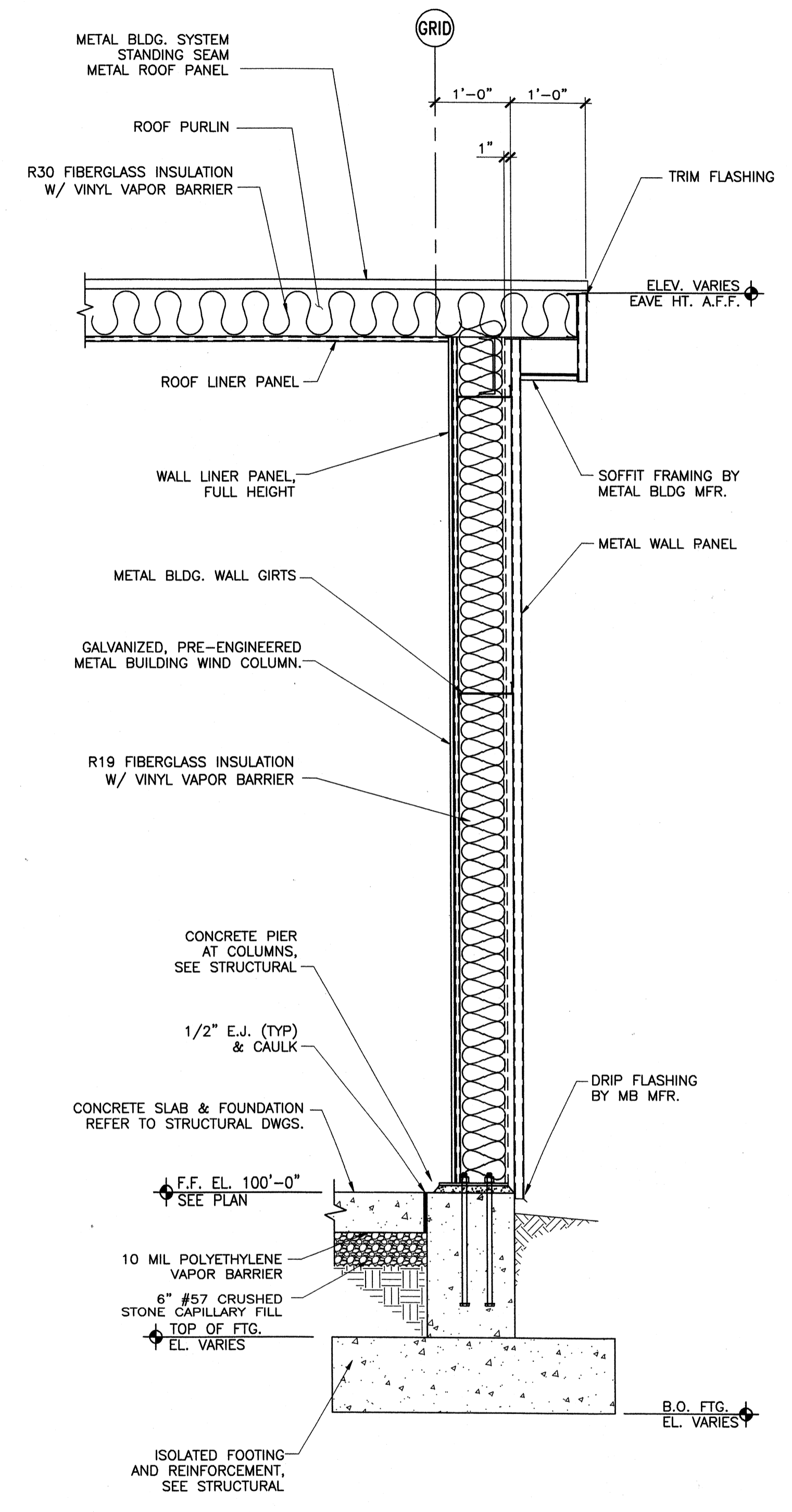
Project No.: 120-07060
 Designed By: JQB
 Drawn By: JQB
 Checked By: MSP

A-124
 Sheet of 147
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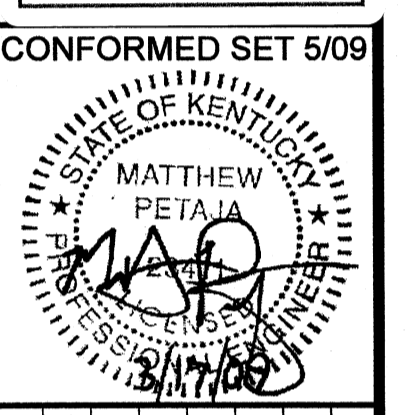
Wednesday, July 01, 2009 1:24:12 PM DRAWING: \\nroffis3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ARCHITECTURAL\A-125 ULTRAFILTRATION BUILDING WALL SECTIONS DWG LAYOUT - A-125 USER NAME: JEREMY M. FRONGILLO



SECTION A
 SCALE: 3/4"=1'-0" (A-125)
 UF BLDG. - WALL SECTION



SECTION B
 SCALE: 3/4"=1'-0" (A-125)
 UF BLDG. - WALL SECTION

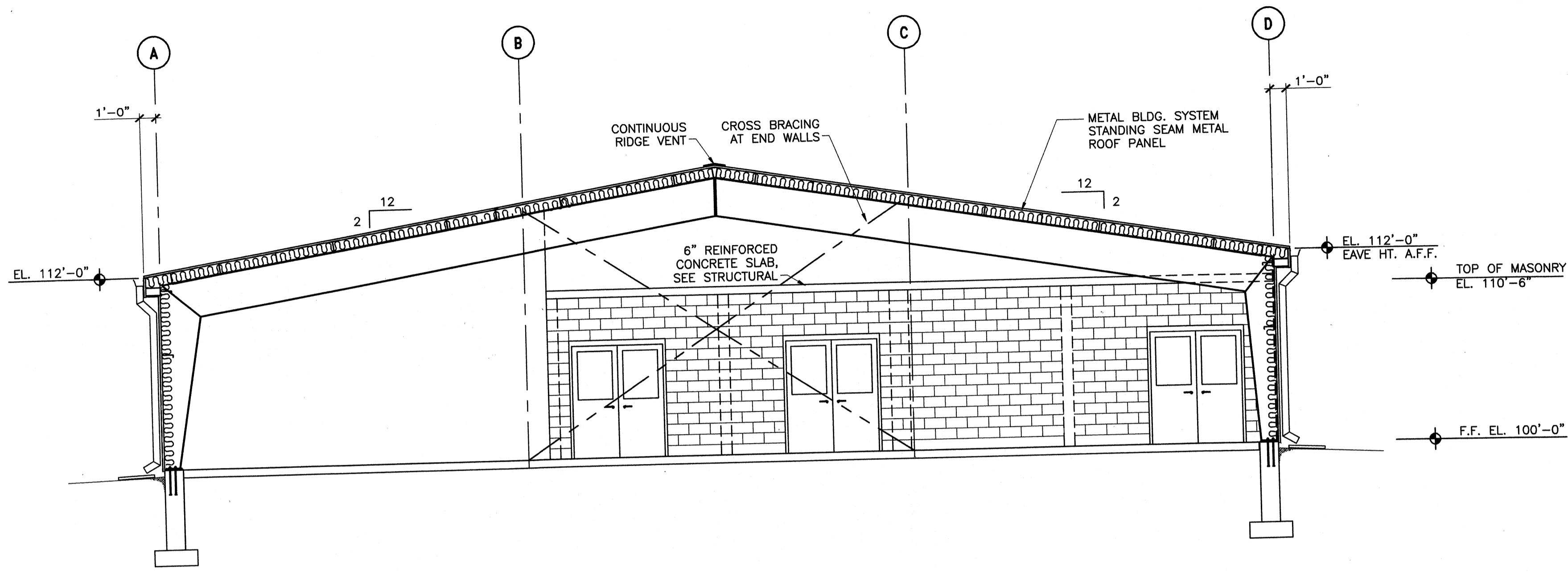


BY	DATE	DESCRIPTION

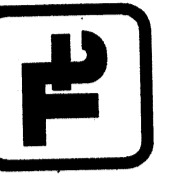
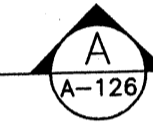
Client: OHIO COUNTY WATER DISTRICT | Proj. Loc: GROOMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT
ULTRAFILTRATION BUILDING WALL SECTIONS

Project No.: 120-07060
 Designed By: JQB
 Drawn By: JQB
 Checked By: MSP

Wednesday, July 01, 2009 1:24:19 PM DRAWING: \\veroffis\projects\120-07060 Ohio County\CONFORMED SET 5-09\ARCHITECTURAL\A-126 ULTRAFILTRATION BUILDING ELEVATION DWG LAYOUT: A-126 USER NAME: JEREMY M. FRONGILLO



UF BLDG-CROSS SECTION
SCALE: 3/16"=1'-0"

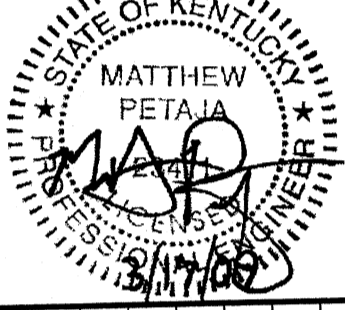


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PROJECT RECORD

CONFORMED SET 5/09



BY	MARK	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT
Project: OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT
Proj. Loc.: CROMWELL, OHIO COUNTY, KY

ULTRAFILTRATION BUILDING
BUILDING SECTION

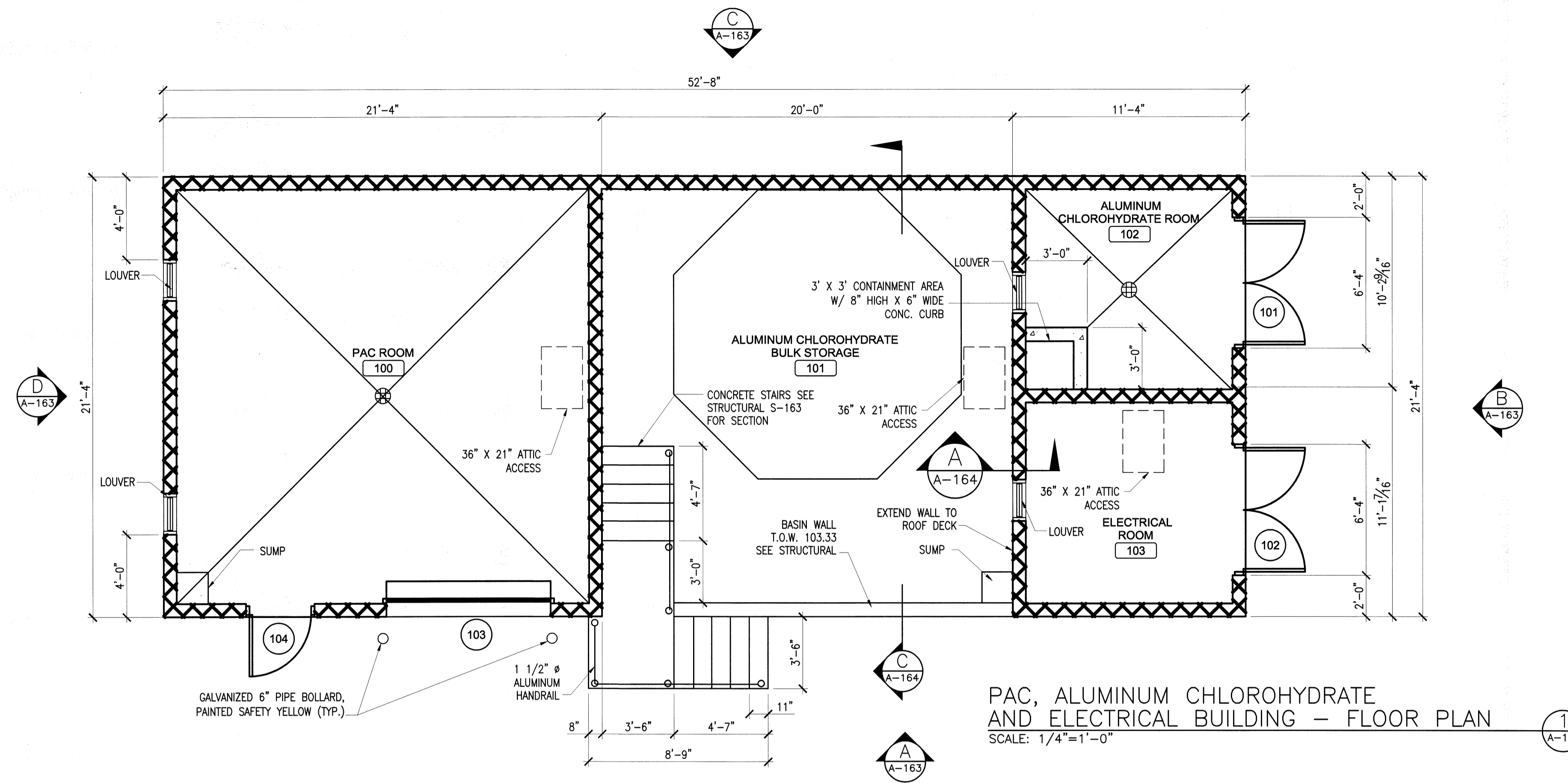
Project No.: 120-07060
Designed By: JQB
Drawn By: JQB
Checked By: MSP

A-126

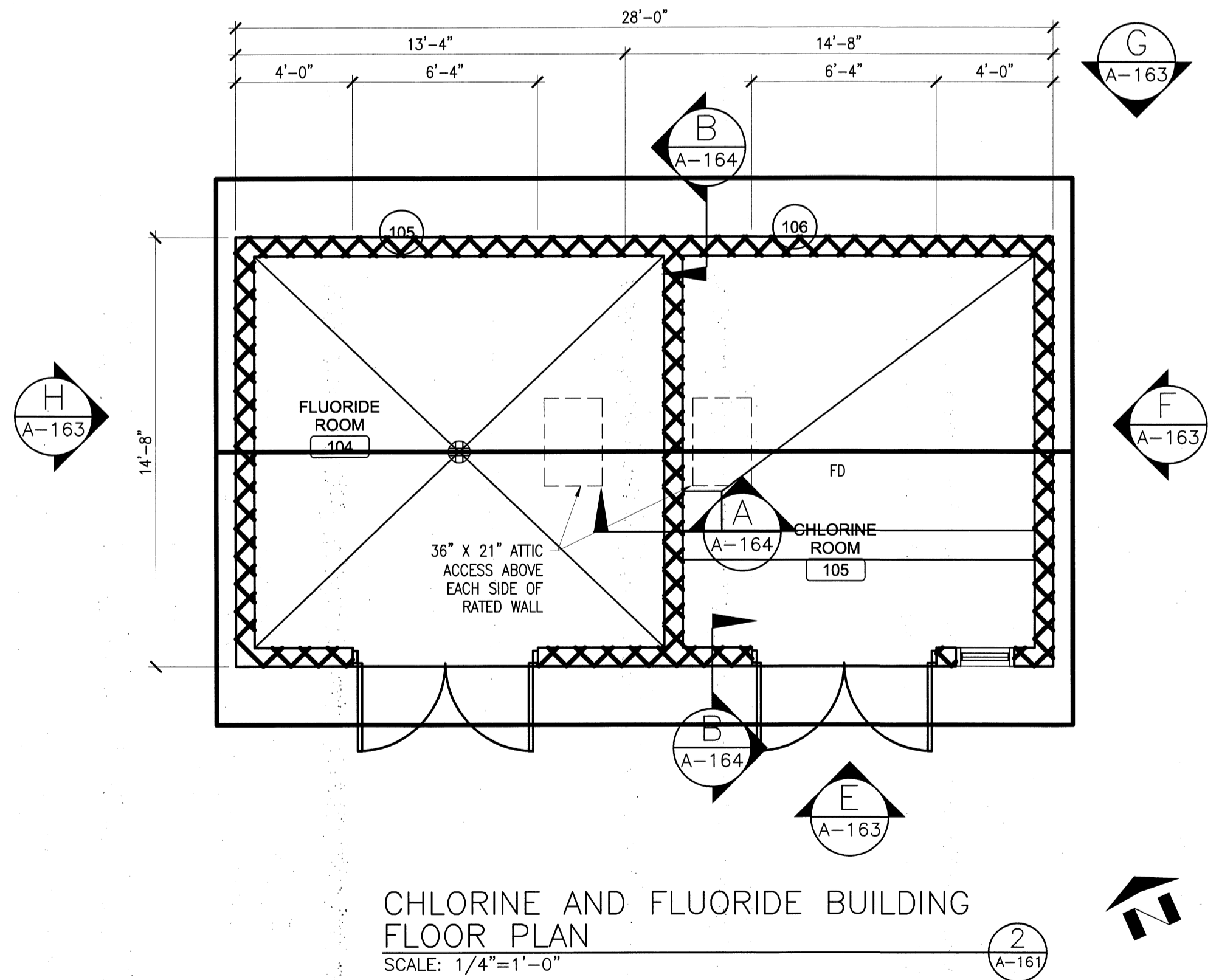
Sheet of 147

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Thursday, December 03, 2009 10:22:41 AM DRAWING: C:\chland\delonris\3\PROJECTS\120-07060 Ohio County Redesign\ORLANDO\CONFORMED SET 5-09\ARCHITECTURAL\A-161 PRETREATMENT CHEMICAL BUILDING FLOOR PLAN conformed 11-11-09 DWG LAYOUT: A-161 PAC ALUMINUM CHLOROHYDRATE USER NAME: PETALIA, MAT



PAC, ALUMINUM CHLOROHYDRATE AND ELECTRICAL BUILDING - FLOOR PLAN
SCALE: 1/4"=1'-0"



CHLORINE AND FLUORIDE BUILDING FLOOR PLAN
SCALE: 1/4"=1'-0"

KENTUCKY BUILDING CODE NOTES
PAC ALUMINUM CHLOROHYDRATE AND ELECTRICAL BUILDING

BUILDING USE GROUP: F1 (SECTION 306 PAR. 306.2)
TYPE OF CONSTRUCTION: VB (TABLE 503)
ALLOWABLE AREA 8,500 SF

BUILDING SQUARE FOOTAGE
F1 (100) PAC ROOM (POWERED ACTIVATED CARBON) = 457
F1 (101) ALUMINUM CHLOROHYDRATE BULK STORAGE = 414
F1 (102) ALUMINUM CHLOROHYDRATE ROOM = 126
F1 (103) ELECTRICAL ROOM = 126
TOTAL SQUARE FOOTAGE = 1,123

1,123 SF < 8,500 SF ALLOWABLE

NON-HAZARDOUS CHEMICALS
POWERED ACTIVATED CARBON - IRRITANT
(ROOM 100) NON-HAZARDOUS
ALUMINUM CHLOROHYDRATE - IRRITANT
(ROOM 101) BULK STOR. - NON-HAZARDOUS
ALUMINUM CHLOROHYDRATE - IRRITANT
(ROOM 102) NON-HAZARDOUS

KENTUCKY BUILDING CODE NOTES
CHLORINE AND FLUORIDE BUILDING
BLDG USE GROUP: F1 (SECTION 306 PAR. 306.2)(SECTION 307 TABLE 307.1)
TYPE OF CONSTRUCTION: VB (TABLE 503)

BUILDING SQUARE FOOTAGE
F1 (104) FLUORIDE ROOM = 195
F1 (105) CHLORINE ROOM = 215
TOTAL SQUARE FOOTAGE = 410

CONTROL AREAS (AS PER SECTION 414.2.2, TABLES 307.1 (1) & (2))
1 hr. SEPARATION WALLS FOR HAZARDOUS MATERIALS THAT ARE LESS THAN MAXIMUM ALLOWABLE QUANTITIES PER CONTROL AREA

HAZARDOUS CHEMICALS (TABLES 307.7(1)&(2))
HYDROFLUOROSILICIC ACID - CORROSIVE 470 GA
<500 GAL - STORAGE LIQUID GAL - F1 TABLE 307.7(2)

HYDROFLUOROSILICIC ACID - CORROSIVE, 450 GALS
(ROOM 104) (<500 GALS - F1, TABLE 307.7(1))

CHLORINE GAS - OXIDIZING GAS
(ROOM 105) 15CYL@150 LB. = 2250 LB
5.99LB/CF = 375.6 CF
(<1500CF - F1, TABLE 307.7(1))

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PROJECT RECORD

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MARK	DATE	DESCRIPTION
Δ	11/11/09	KY HBC REVIEW 10-06-09

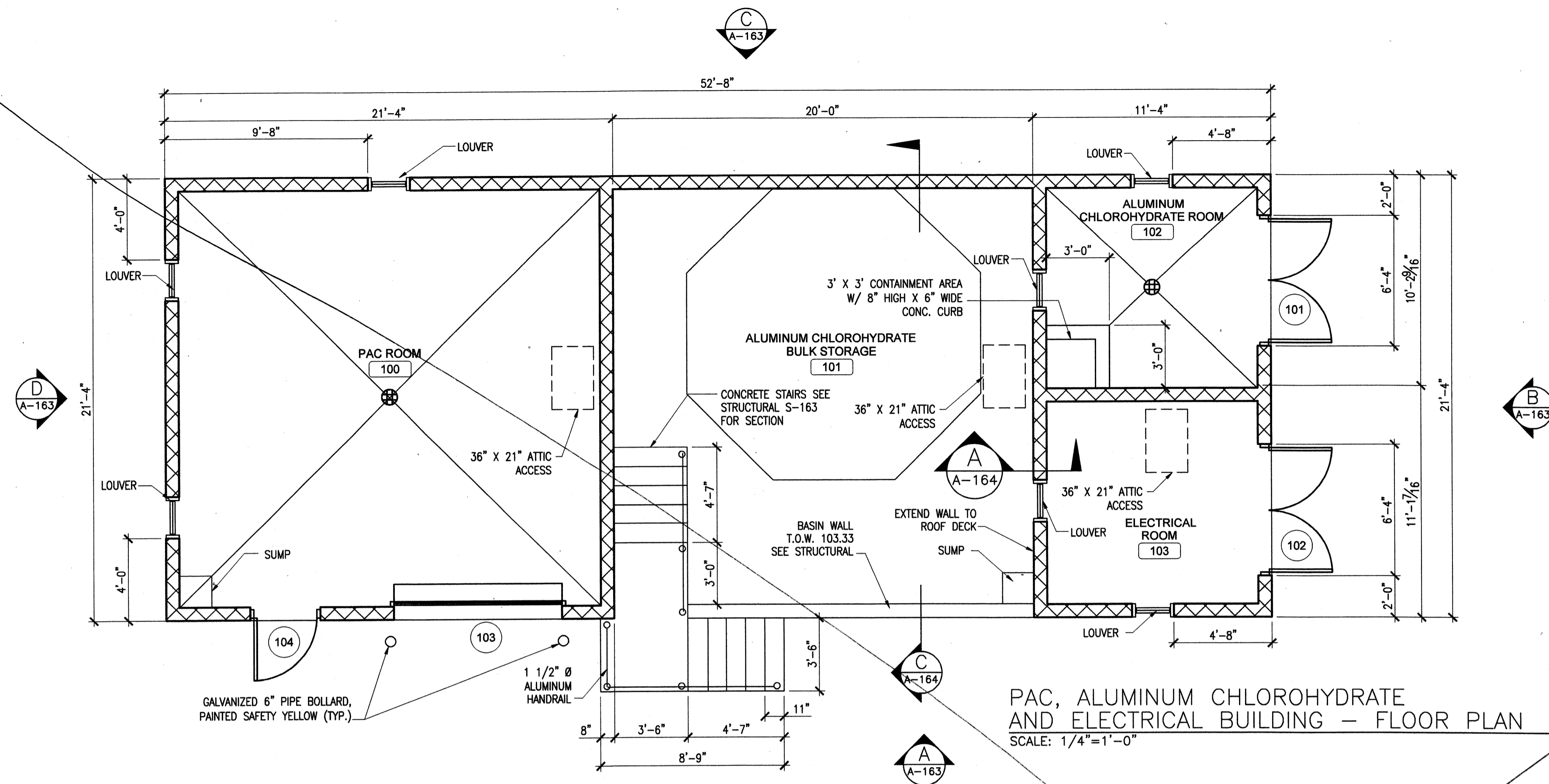
Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY

OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

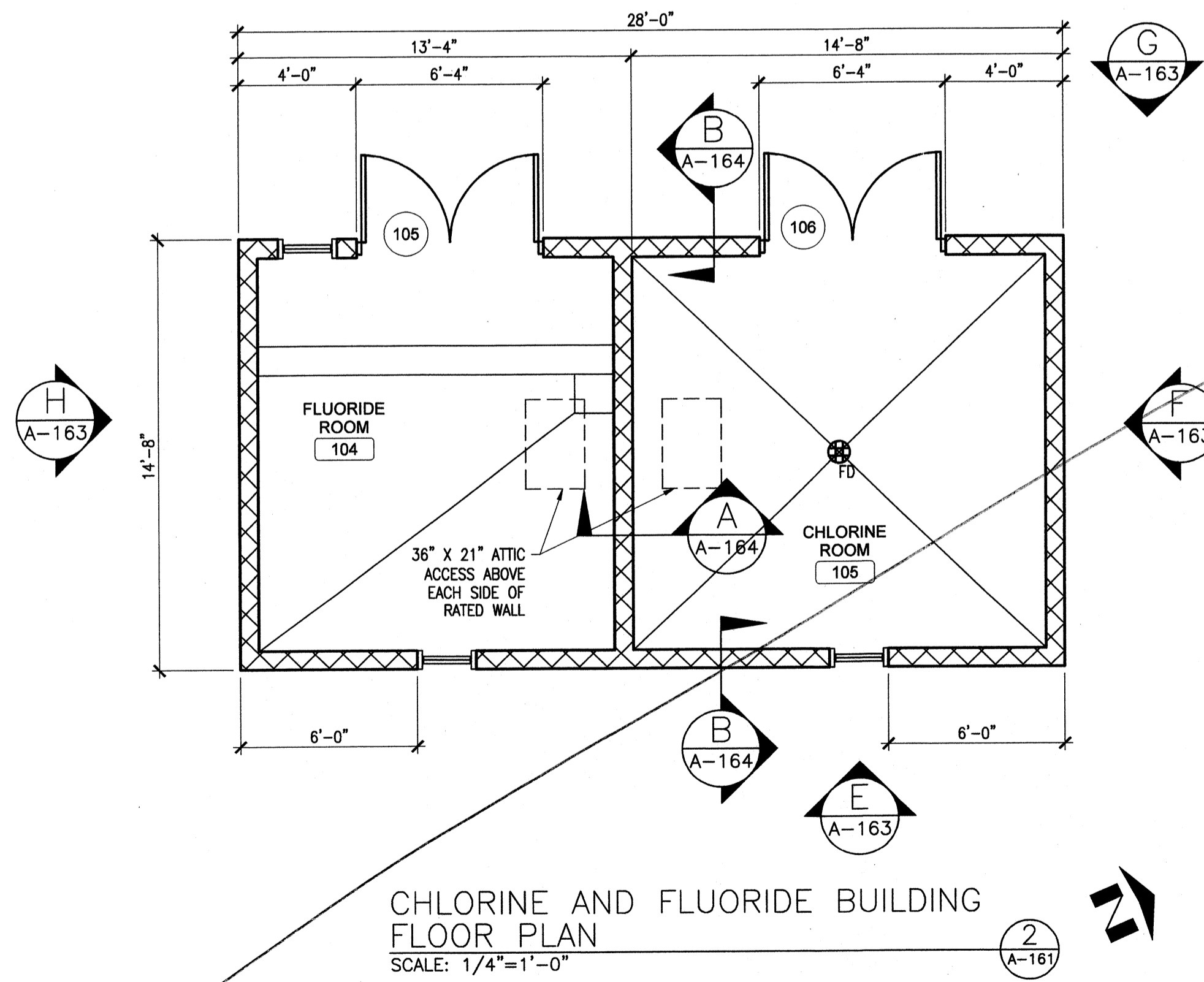
CHEMICAL BUILDING FLOOR PLAN

Project No.: 120-07060
Designed By: JQB
Drawn By: JQB
Checked By: MSP

A-161
Copyright: Tetra Tech



PAC, ALUMINUM CHLOROHYDRATE AND ELECTRICAL BUILDING - FLOOR PLAN
SCALE: 1/4"=1'-0"



CHLORINE AND FLUORIDE BUILDING FLOOR PLAN
SCALE: 1/4"=1'-0"

**KENTUCKY BUILDING CODE NOTES:
PAC ALUMINUM CHLOROHYDRATE AND ELECTRICAL BUILDING**

BUILDING USE GROUP: F1 (SECTION 306 PAR. 306.2)
TYPE OF CONSTRUCTION: VB (TABLE 503)
ALLOWABLE AREA 8,500 SF

BUILDING SQUARE FOOTAGE	
F1 (100) PAC ROOM (POWERED ACTIVATED CARBON)	= 457
F1 (101) ALUMINUM CHLOROHYDRATE BULK STORAGE	= 414
F1 (102) ALUMINUM CHLOROHYDRATE ROOM	= 126
F1 (103) ELECTRICAL ROOM	= 126
TOTAL SQUARE FOOTAGE	= 1,123

1,123 SF < 8,500 SF ALLOWABLE

NON-HAZARDOUS CHEMICALS

POWERED ACTIVATED CARBON - IRRITANT (ROOM 100) NON-HAZARDOUS	
ALUMINUM CHLOROHYDRATE - CORROSIVE, 55 GAL (ROOM 101) BULK STOR. - CORROSIVE, -- GAL (CANOPY, NOT LOCATED IN ENCLOSED BLDG. THEREFORE NOT APPLICABLE)	
(ROOM 102) ROOM (<500 GAL, TABLE 307.1(2))	

**KENTUCKY BUILDING CODE NOTES:
CHLORINE AND FLUORIDE BUILDING**

BLDG USE GROUP: F1/H3 (SECTION 306 PAR. 306.2)(SECTION 307 TABLE 307.1)
TYPE OF CONSTRUCTION: VB (TABLE 503)

BUILDING SQUARE FOOTAGE	
H3 (104) FLUORIDE ROOM	= 195
F1 (105) CHLORINE ROOM	= 215
TOTAL SQUARE FOOTAGE	= 410

FIRE RATED SEPARATION WALLS (TABLE 508.3.3)
F1/H3 - 2 hr

CONTROL AREAS (AS PER SECTION 414.2.2, TABLES 307.1 (1) & (2))
1 hr SEPARATION WALLS FOR HAZARDOUS MATERIALS THAT ARE LESS THAN MAXIMUM ALLOWABLE QUANTITIES PER CONTROL AREA

FIRE SUPPRESSED AREAS
H AREA AS PER SECTION 903.2.4
APPLIES TO ROOM 106 (H3)

HAZARDOUS CHEMICALS (TABLES 307.7(1)&(2))

HYDROFLUOROSILICIC ACID - OXIDIZER, 450 GALS (ROOM 104) (<500 GALS - F1, TABLE 307.7(1))	
CHLORINE GAS - OXIDIZING GAS (ROOM 105) 15CYL@150 LB. = 2250 LB 5.99LB/CF (<1500CF - F1, TABLE 307.7(1))	

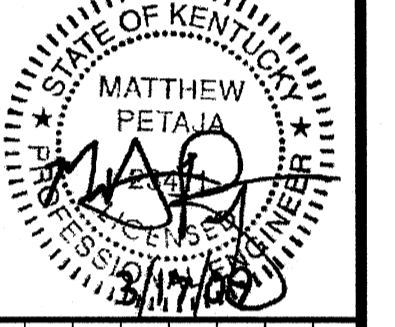
NON-HAZARDOUS CHEMICALS

POWERED ACTIVATED CARBON - IRRITANT (ROOM 104) NON-HAZARDOUS	
ALUMINUM CHLOROHYDRATE - CORROSIVE, 55 GAL (ROOM 101) ROOM (<500 GAL, TABLE 307.7(2))	
(ROOM 100) BULK STOR. - CORROSIVE, -- GAL (CANOPY, NOT LOCATED IN ENCLOSED BUILDING THEREFORE NOT APPLICABLE)	



PROJECT RECORD

CONFORMED SET 5/09



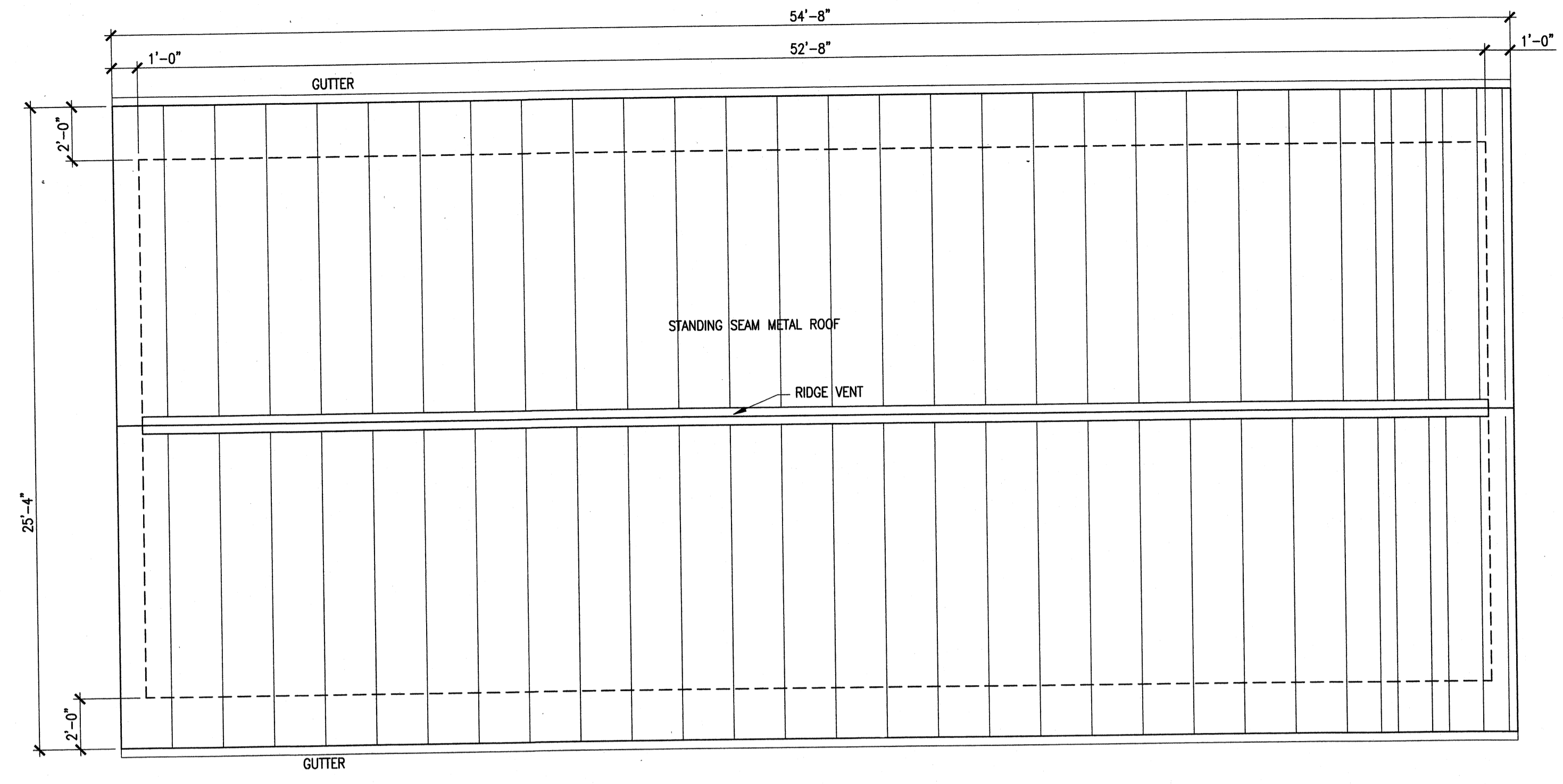
MARK	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT
CHEMICAL BUILDING FLOOR PLAN

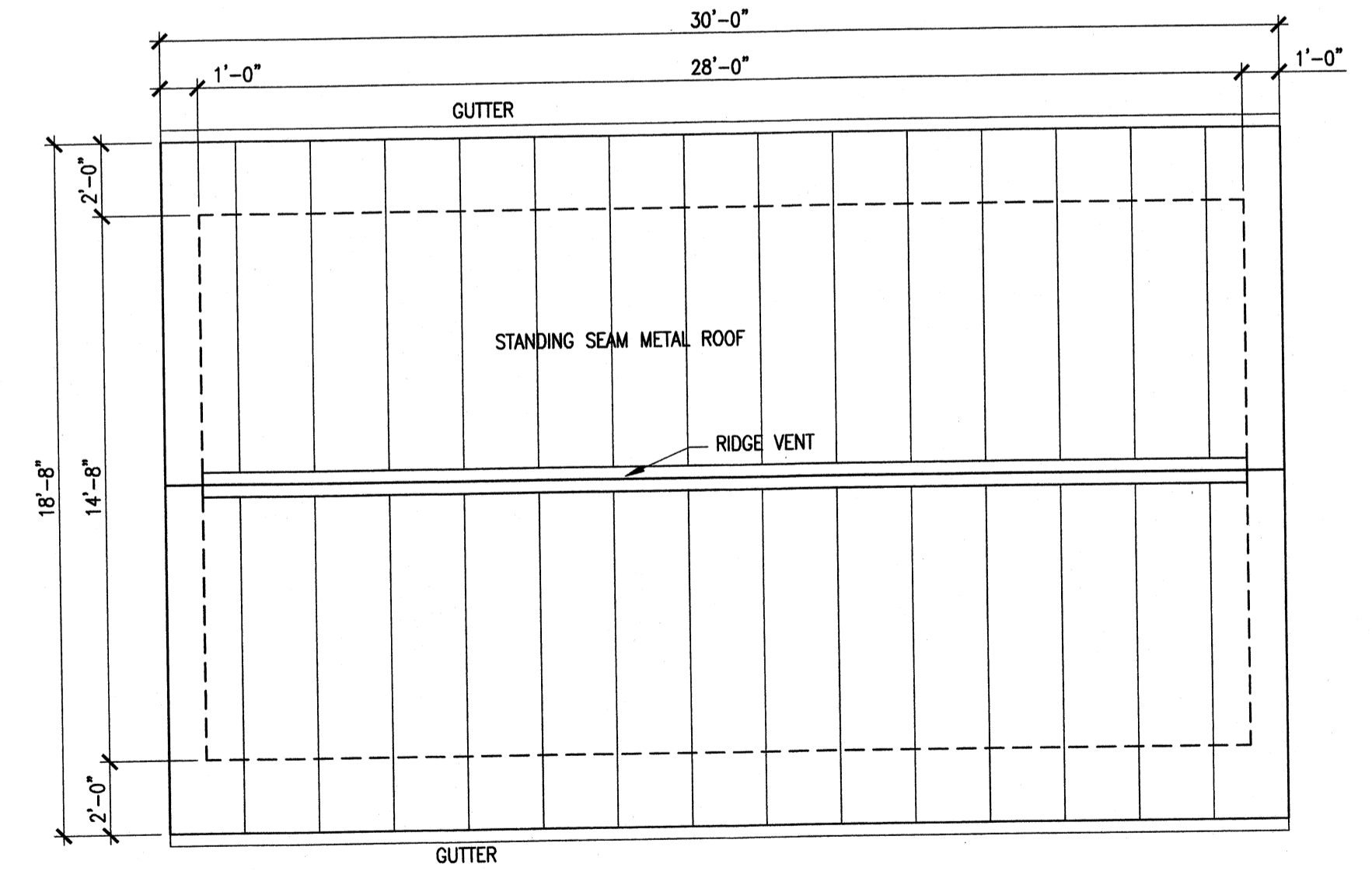
Project No.: 120-07060
 Designed By: JQB
 Drawn By: JQB
 Checked By: MSP

A-161

Wednesday, July 01, 2009 1:24:38 PM DRAWING: \\liferifs3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ARCHITECT\U\A-162 PRETREATMENT CHEMICAL BUILDING ROOF PLAN DWG LAYOUT: A-162 USER NAME: JEREMY M. FRONGILLO



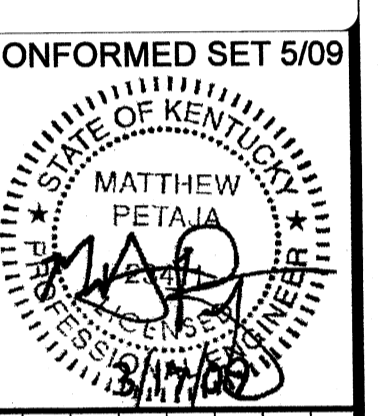
PAC, ALUMINUM CHLOROHRATE
AND ELECTRICAL BUILDING ROOF PLAN 1
SCALE: 1/4"=1'-0"



CHLORINE AND FLUORIDE
BUILDING ROOF PLAN 2
SCALE: 1/4"=1'-0"



PROJECT RECORD



CONFORMED SET 5/09

BY	MARK	DATE	DESCRIPTION

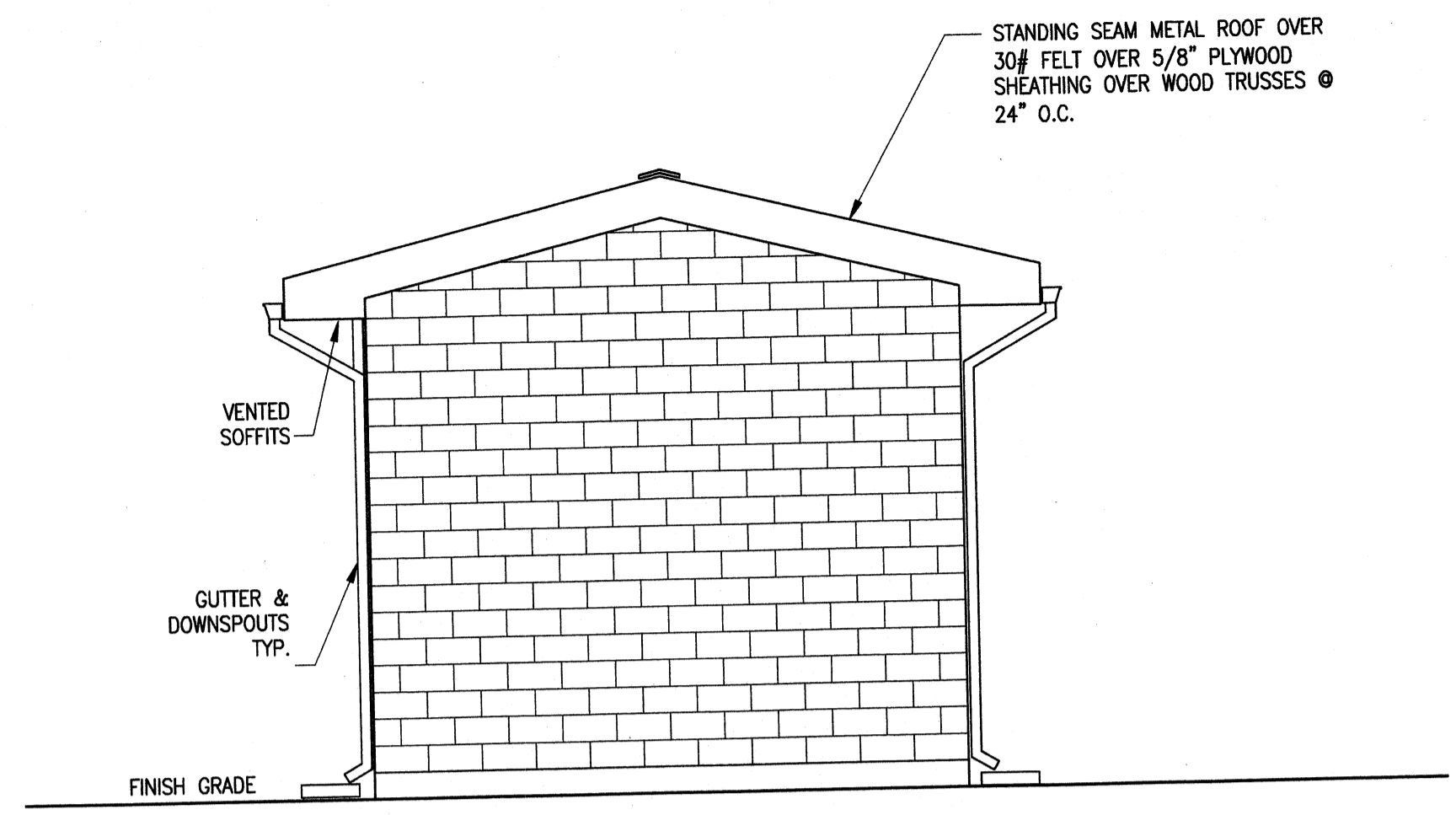
Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

**CHEMICAL BUILDING
ROOF PLAN**

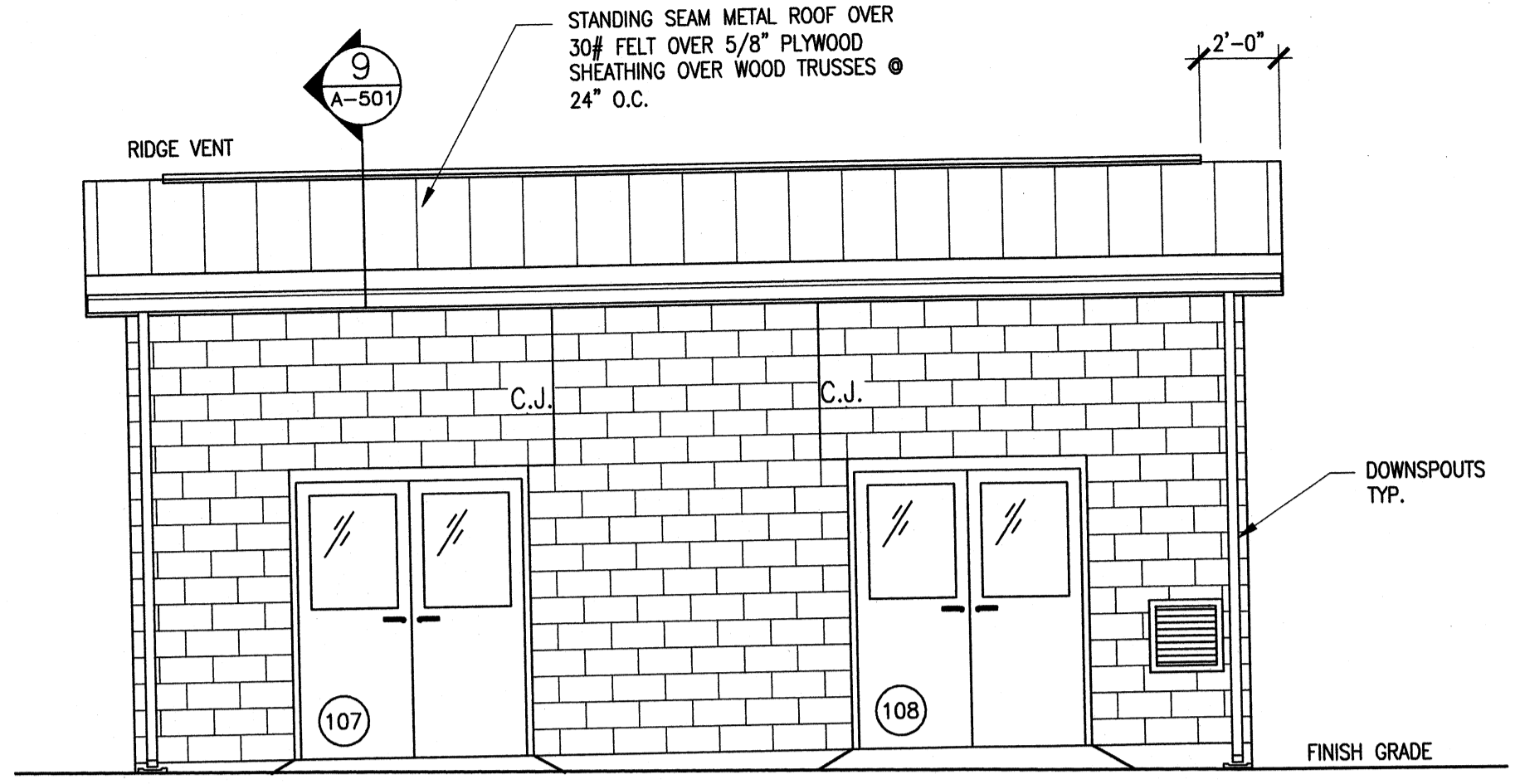
Project No.: 120-07060
Designed By: JQB
Drawn By: JQB
Checked By: MSP

A-162
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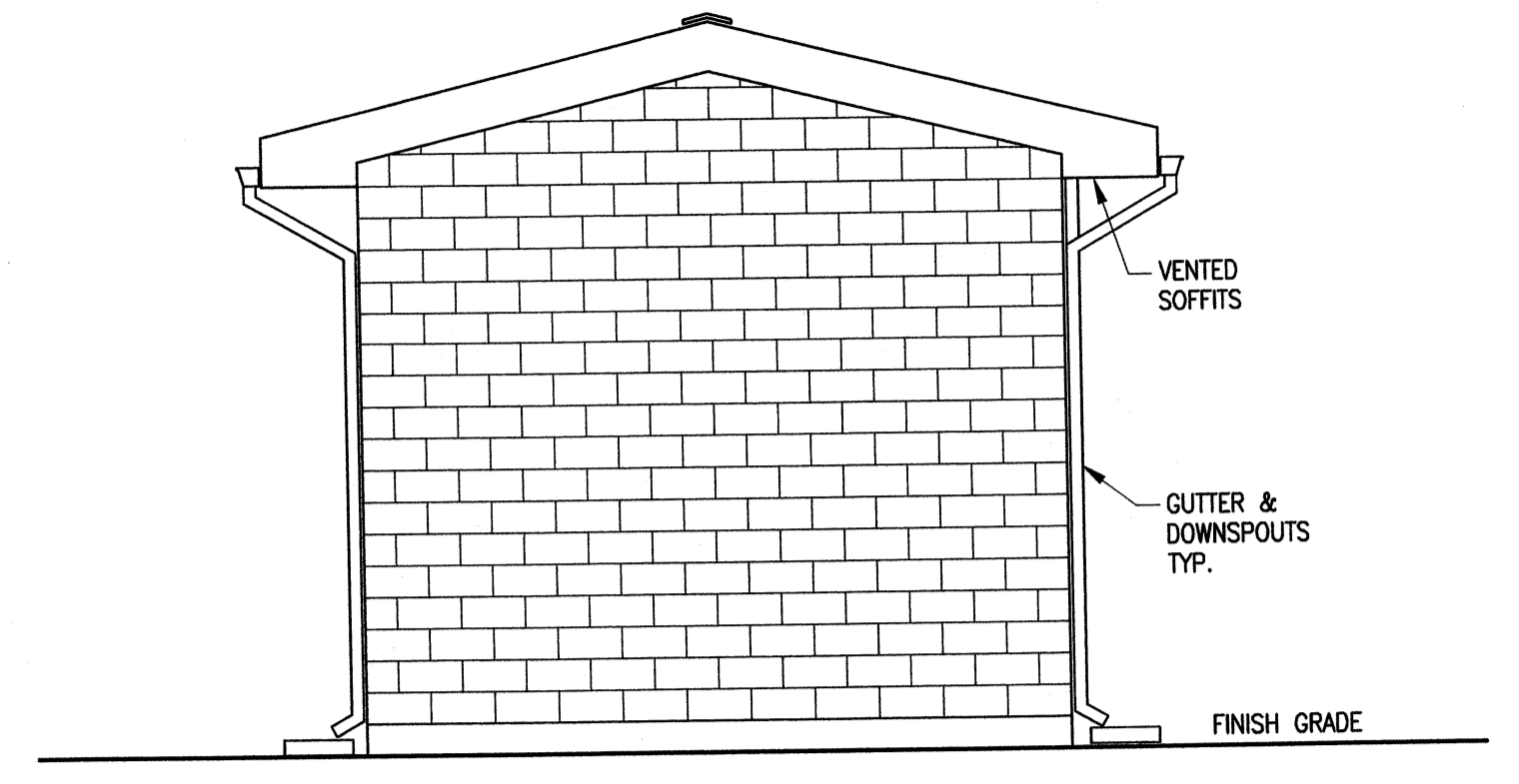
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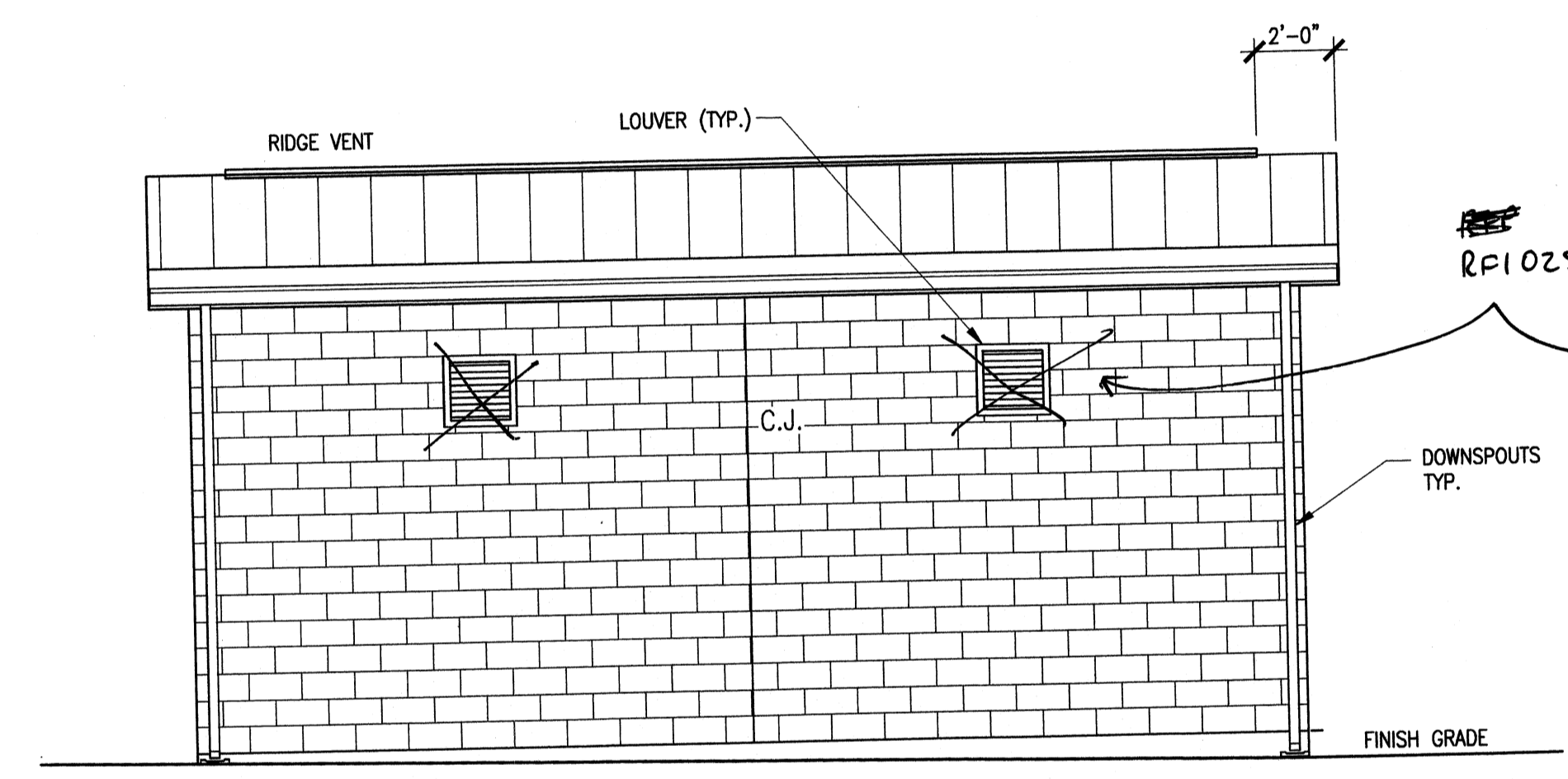
CHLORINE AND FLUORIDE BUILDING - EAST ELEVATION (F) A-163
SCALE: 1/4"=1'-0"



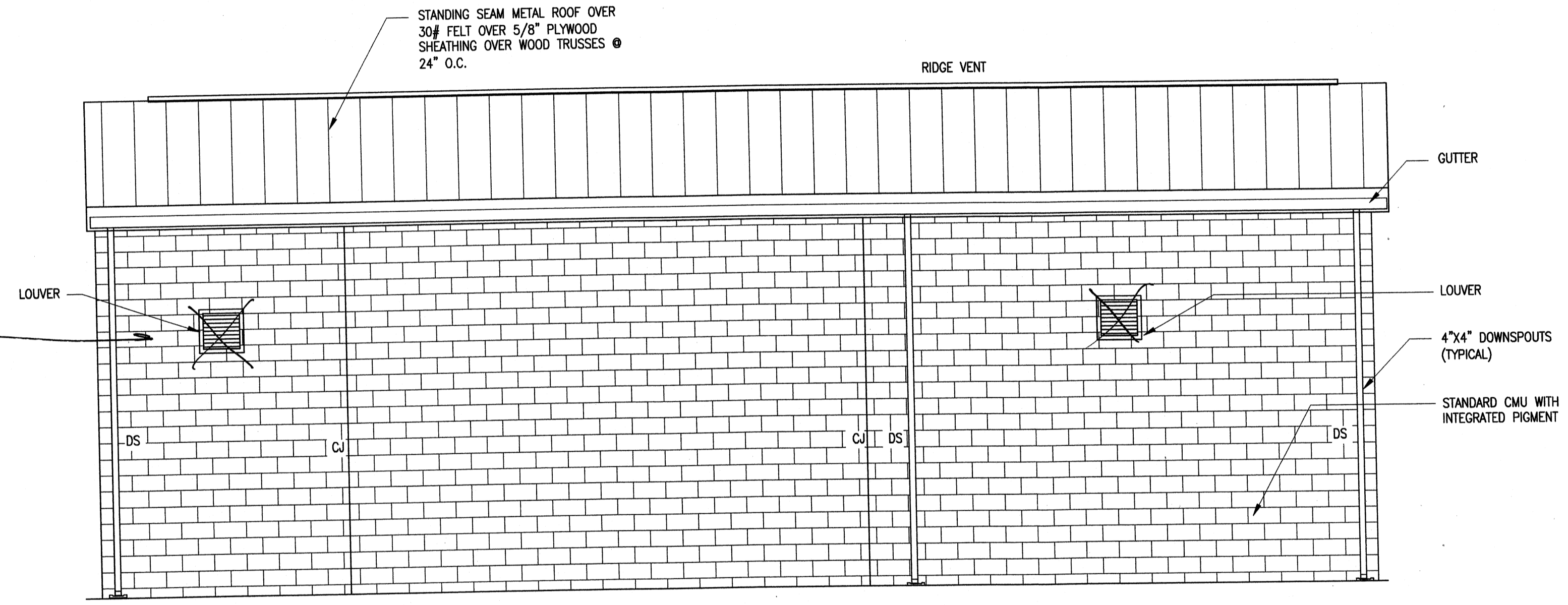
CHLORINE AND FLUORIDE BUILDING - NORTH ELEVATION (G) A-163
SCALE: 1/4"=1'-0"



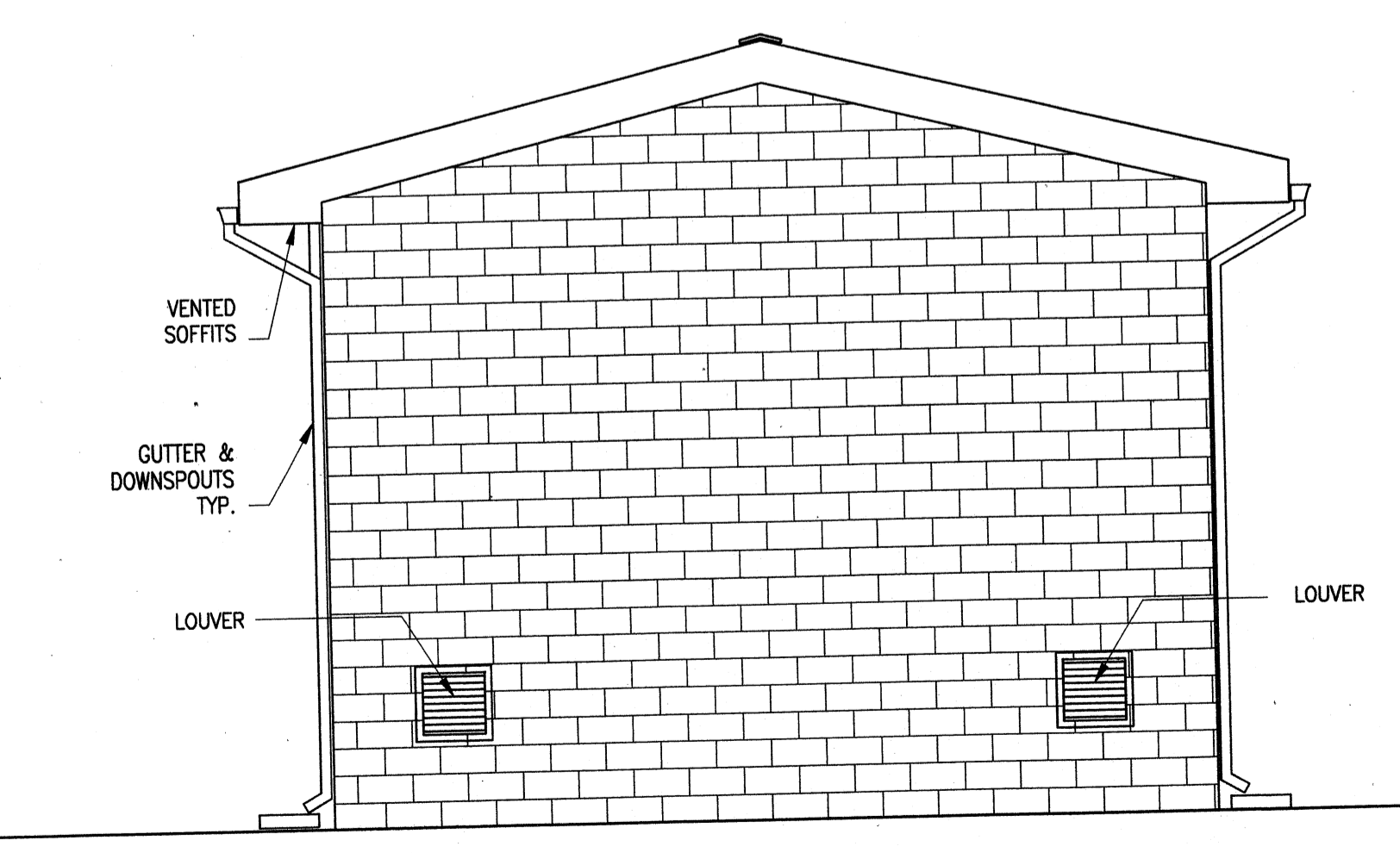
CHLORINE AND FLUORIDE BUILDING - WEST ELEVATION (H) A-163
SCALE: 1/4"=1'-0"



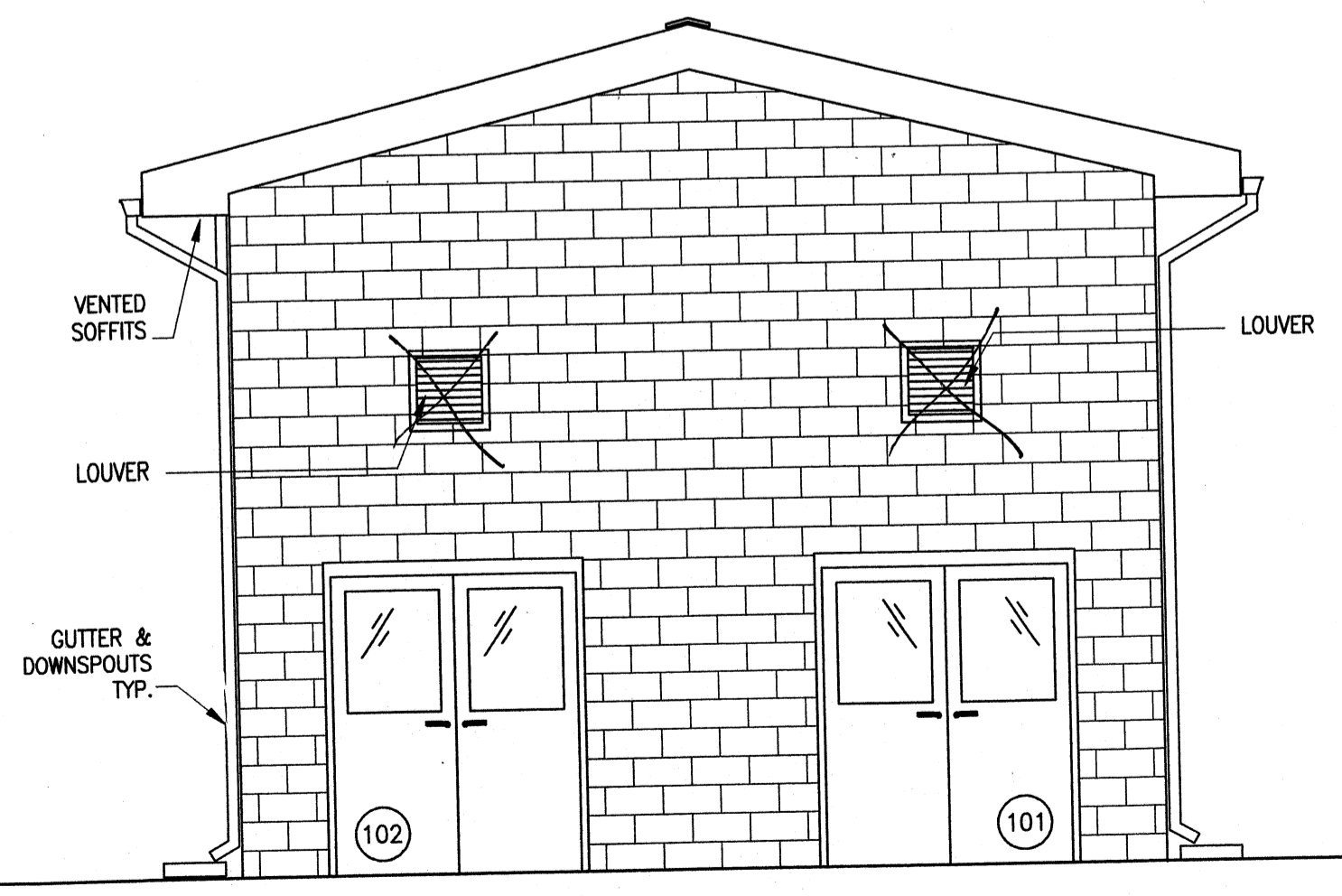
CHLORINE AND FLUORIDE BUILDING - SOUTH ELEVATION (E) A-163
SCALE: 1/4"=1'-0"



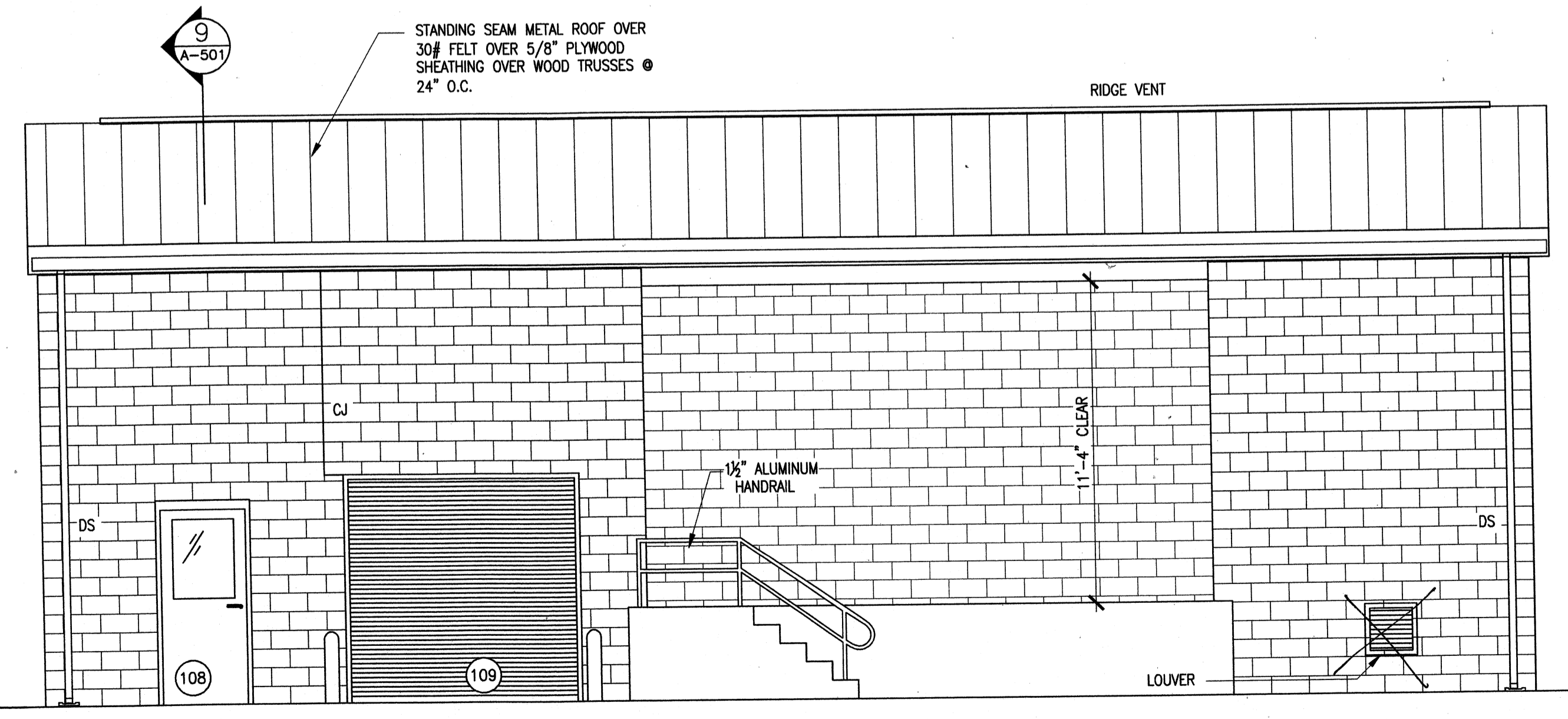
PAC, ALUMINUM CHLOROHYDRATE AND ELECTRICAL BUILDING - WEST ELEVATION (C) A-163
SCALE: 1/4"=1'-0"



PAC, ALUMINUM CHLOROHYDRATE AND ELECTRICAL BUILDING - SOUTH ELEVATION (D) A-163
SCALE: 1/4"=1'-0"



PAC, ALUMINUM CHLOROHYDRATE AND ELECTRICAL BUILDING - NORTH ELEVATION (B) A-163
SCALE: 1/4"=1'-0"

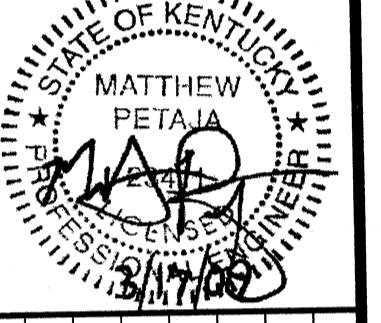


PAC, ALUMINUM CHLOROHYDRATE AND ELECTRICAL BUILDING - EAST ELEVATION (A) A-163
SCALE: 1/4"=1'-0"

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BY	DATE	DESCRIPTION

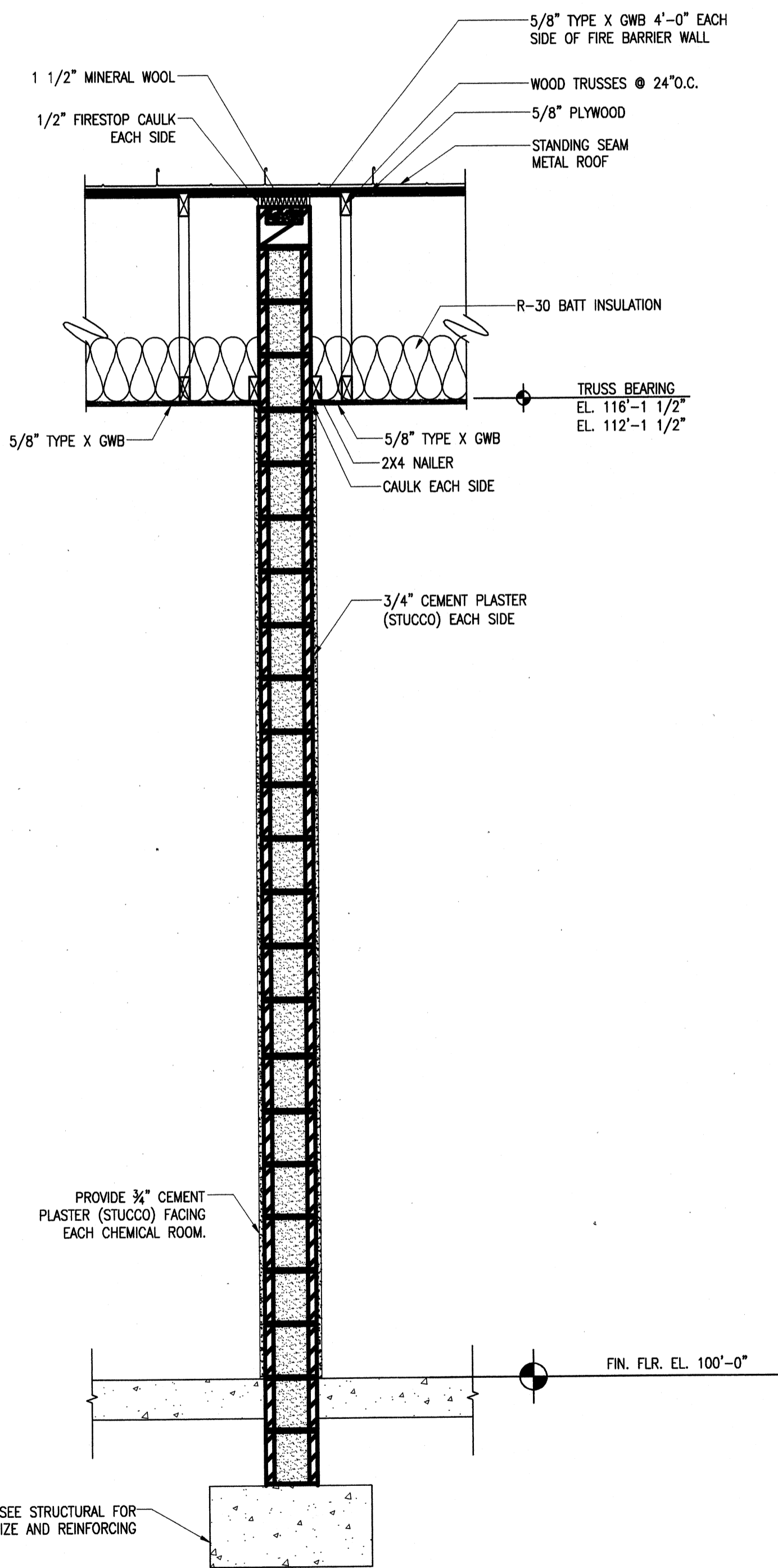
Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
CHEMICAL BUILDINGS ELEVATIONS

Project No.: 120-07060
Designed By:
Drawn By:
Checked By:

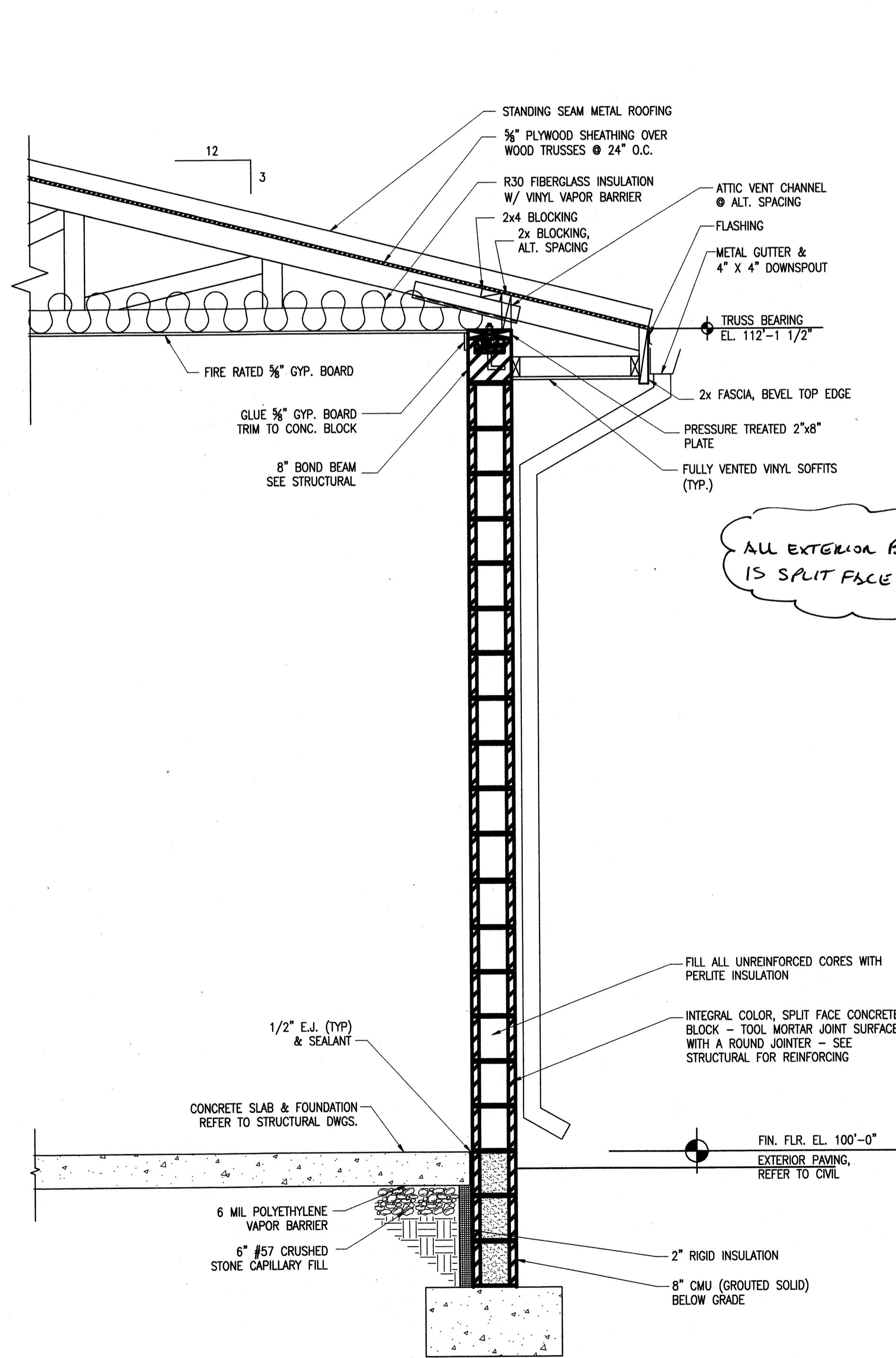
A-163

Copyright: Tetra Tech

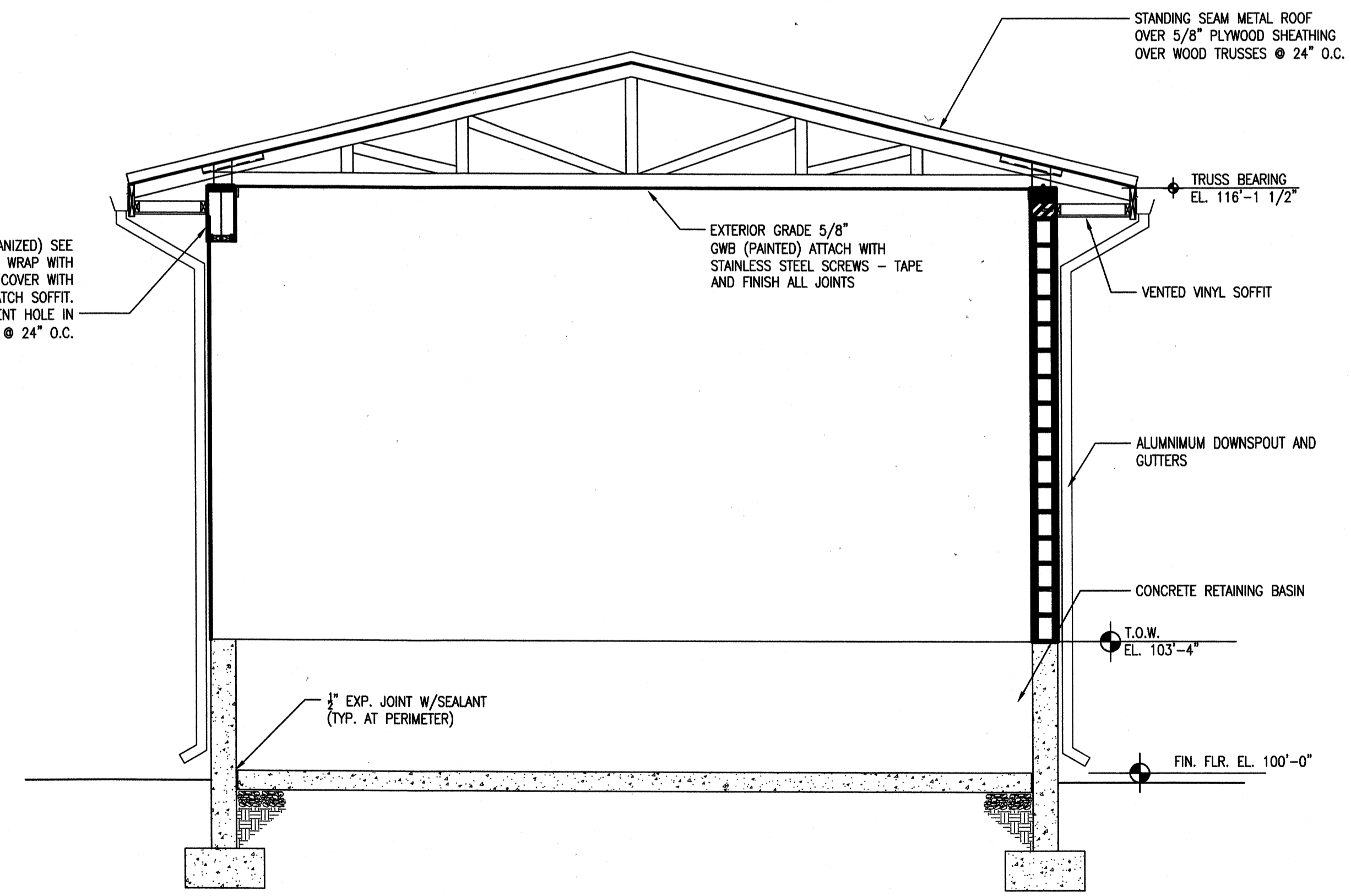
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CHLORINE AND FLUORIDE BUILDING
1 HOUR WALL SECTION
SCALE: 3/4"=1'-0"



CHLORINE AND FLUORIDE BUILDING
WALL SECTION
SCALE: 3/4"=1'-0"



PAC, ALUMINUM CHLOROHYDRATE
AND ELECTRICAL BUILDING SECTION
SCALE: 3/8"=1'-0"



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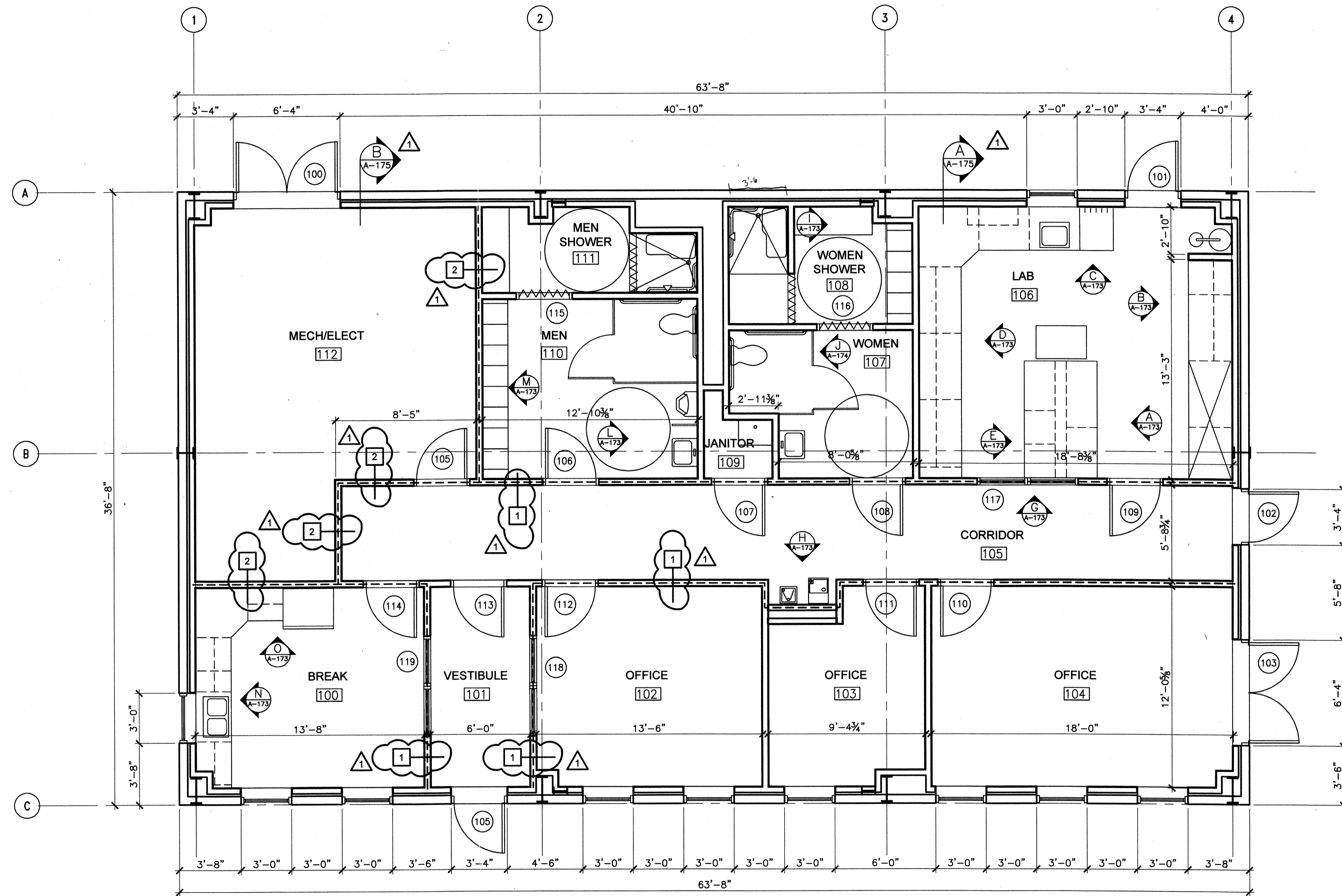
BY	DATE	DESCRIPTION
JMF	5/5/09	ADDENDUM 1

Client: OHIO COUNTY WATER DISTRICT
Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
CHEMICAL BUILDING
WALL SECTIONS

Project No.: 120-07060
Designed By: JOB
Drawn By: JOB
Checked By: MSP

A-164

Wednesday, July 15, 2009 5:15:04 PM DRAWING: \\server\fs3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ARCHITECTURAL\A-171 OP BUILDING FLOOR PLAN .DWG LAYOUT: A-171 USER NAME: JEREMY M. FRONGILLO



OPERATIONS BLDG. - PLAN
SCALE: 1/4"=1'-0"

KENTUCKY BUILDING CODE NOTES:

BLDG USE GROUP: B (SECTION 304)
BUILDING SQUARE FOOTAGE
TOTAL SQUARE FOOTAGE = 2,334
TYPE OF CONSTRUCTION: IIB (TABLE 503)

CORRIDOR OCCUPANT LOAD (TABLE 1004.1.1)

MECH/ELECT 322 SF/300SF = 2
LOCKER ROOMS (MEN, WOMEN, SHOW, LOCK) 423 SF/50 SF = 9
BUSINESS AREAS (LAB, OFFICES, CONTROL RM, VEST) 1,097 SF/100 SF=11
22

CORRIDOR - 1 HR RATED (TABLE 1017.1)

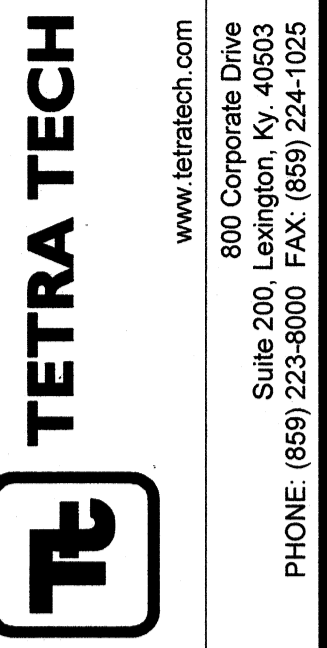
B OCCUPANCY > 30 OCCUPANT LOAD WITHOUT SPRINKLER SYSTEM FOR BUILDING LESS THAN 10,000 SF AS PER KENTUCKY BUILDING CODE 2007

SHEET NOTES:

- ALL DIMENSIONS ARE TO FACE OF METAL STUD OR GIRT LINE.
- PROVIDE CORNER GUARDS FOR ALL OUTSIDE PARTITION WALL CORNERS, UNO.
- REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

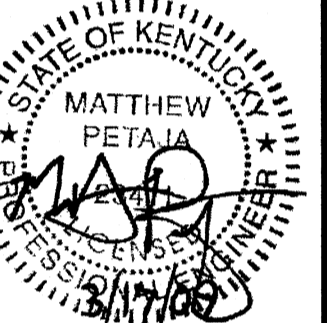
RPR PROVIDED REASED LAY OUT DRAWING OF OPERATIONS BLDG. BCI DOES NOT HAVE A COPY

- 1 1 HOUR RATED WALL CONSTRUCTION PER UL 465
- 2 1 HOUR RATED WALL CONSTRUCTION PER UL 465 EXTEND WALL TO ROOF DECK
- 1 HOUR RATED WALL CONSTRUCTION PER UL 465



PROJECT RECORD

CONFORMED SET 5/09



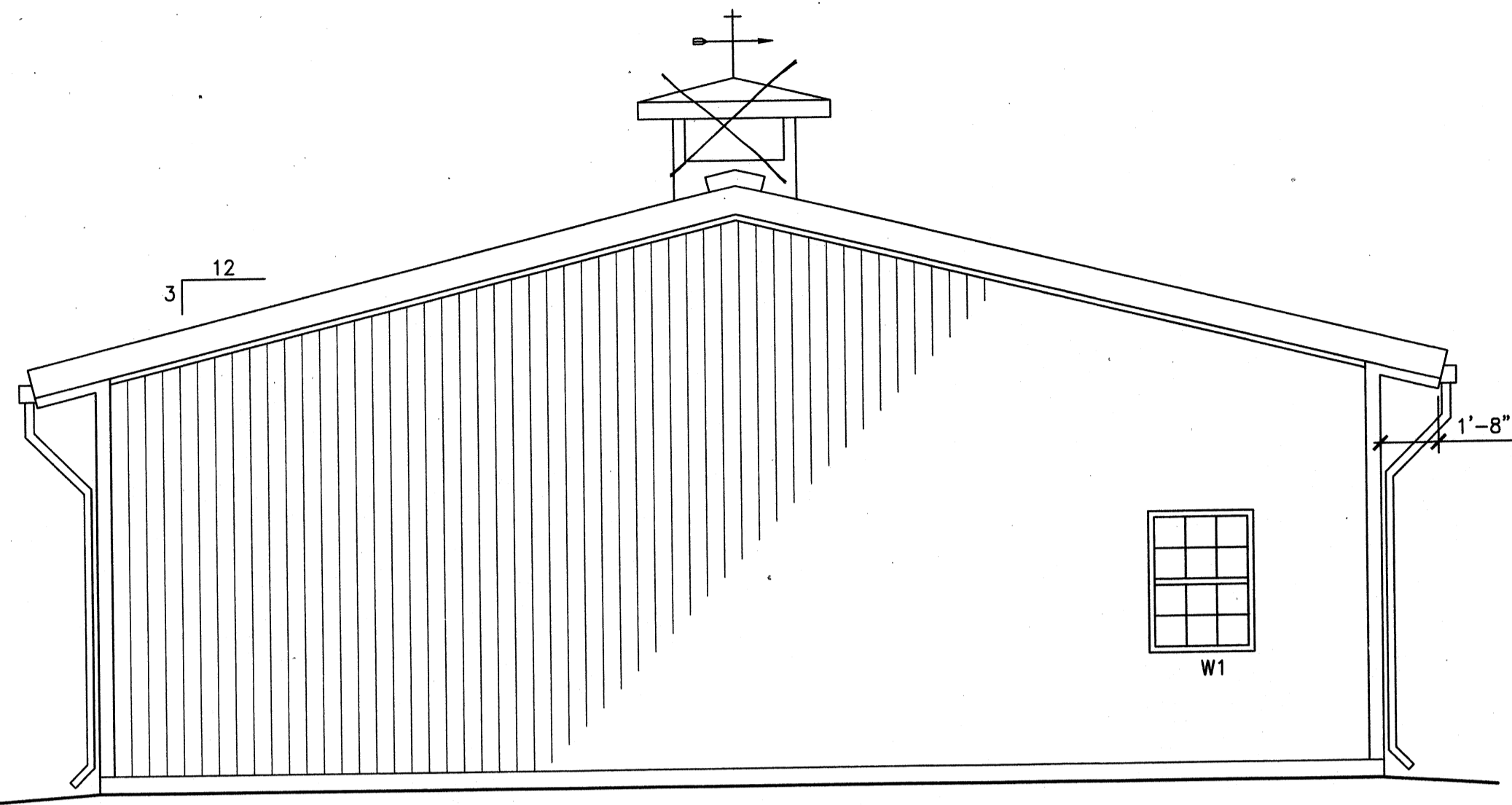
BY	JOB	MARK	DATE	DESCRIPTION
		▲	5/29/09	1 HOUR RATED FIRE WALL CONSTRUCTION

Client: OHIO COUNTY WATER DISTRICT
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
OPERATIONS BUILDING
FLOOR PLAN

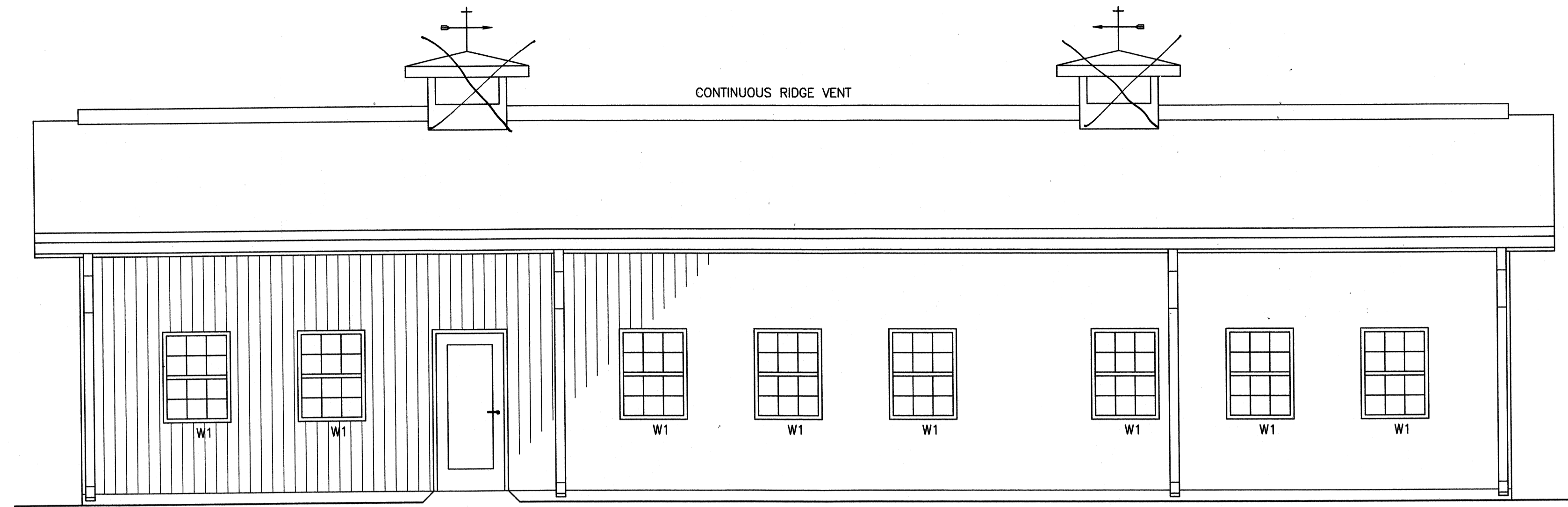
Project No.:	120-07060
Designed By:	JQB
Drawn By:	JQB
Checked By:	MSP

A-171
Sheet of 147

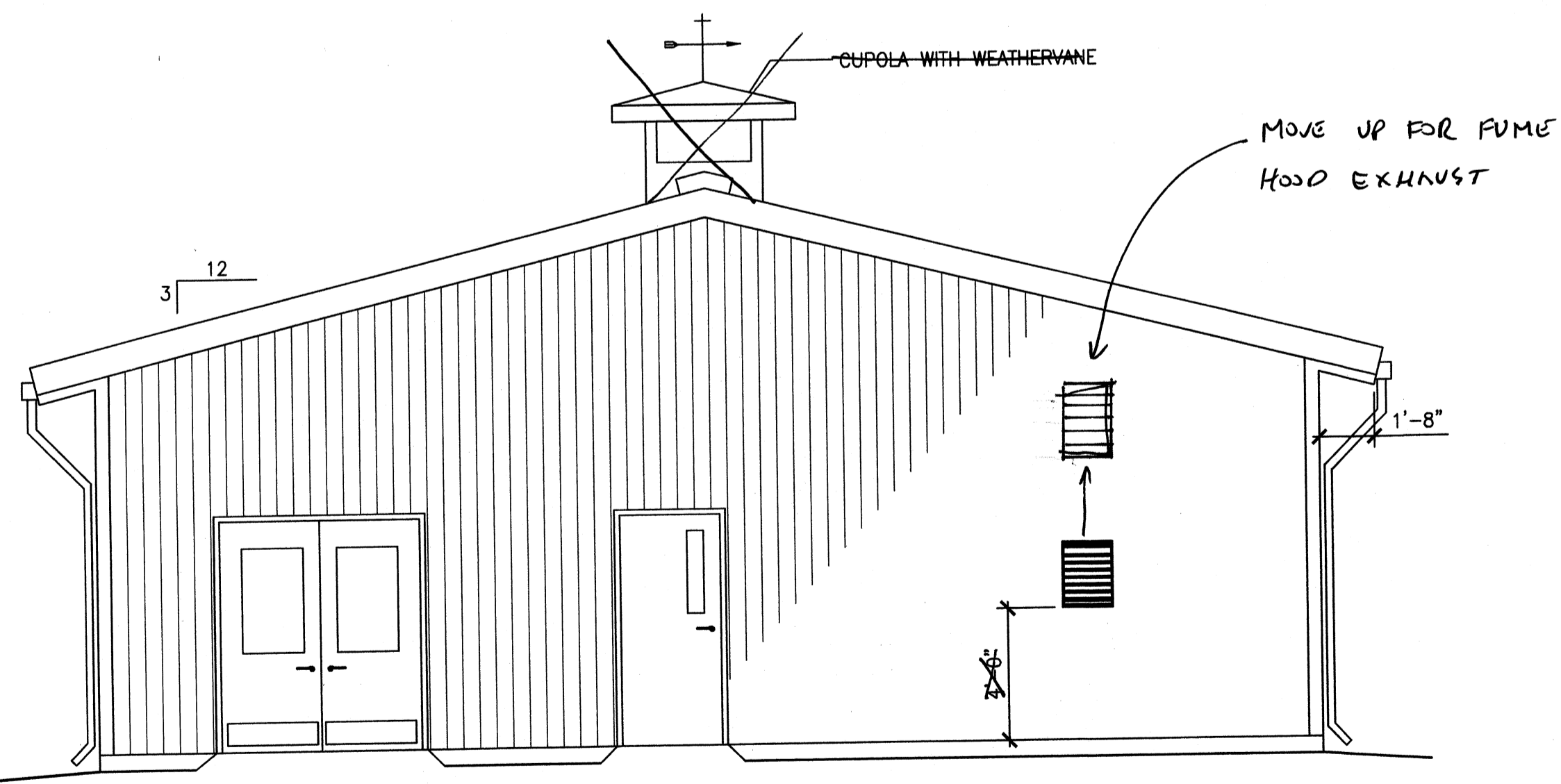
Wednesday, July 01, 2009 1:25:11 PM DRAWING: \\seroffs3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ARCHITECTURAL\A-172 OP BUILDING ELEVATIONS.DWG LAYOUT: A-172 USER NAME: JEREMY M. FRONGILLO



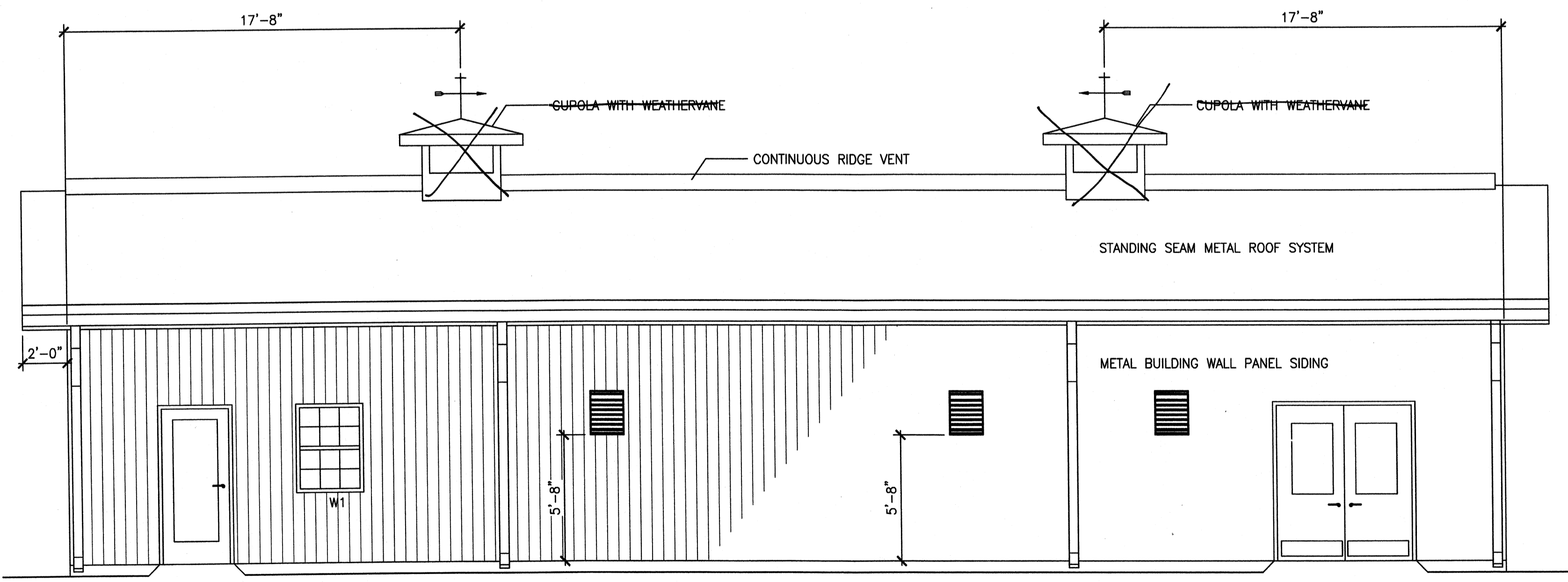
OPERATIONS BLDG. — WEST ELEVATION
SCALE: 1/4" = 1'-0"



OPERATIONS BLDG. — SOUTH ELEVATION
SCALE: 1/4" = 1'-0"

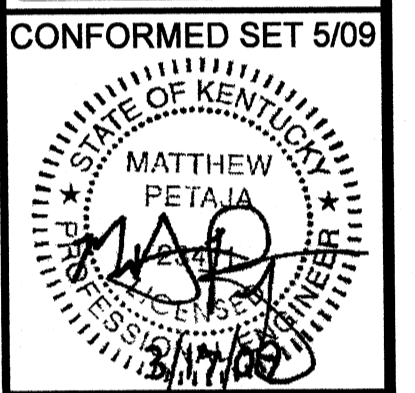


OPERATIONS BLDG. — EAST ELEVATION
SCALE: 1/4" = 1'-0"



OPERATIONS BLDG. — NORTH ELEVATION
SCALE: 1/4" = 1'-0"

PROJECT RECORD



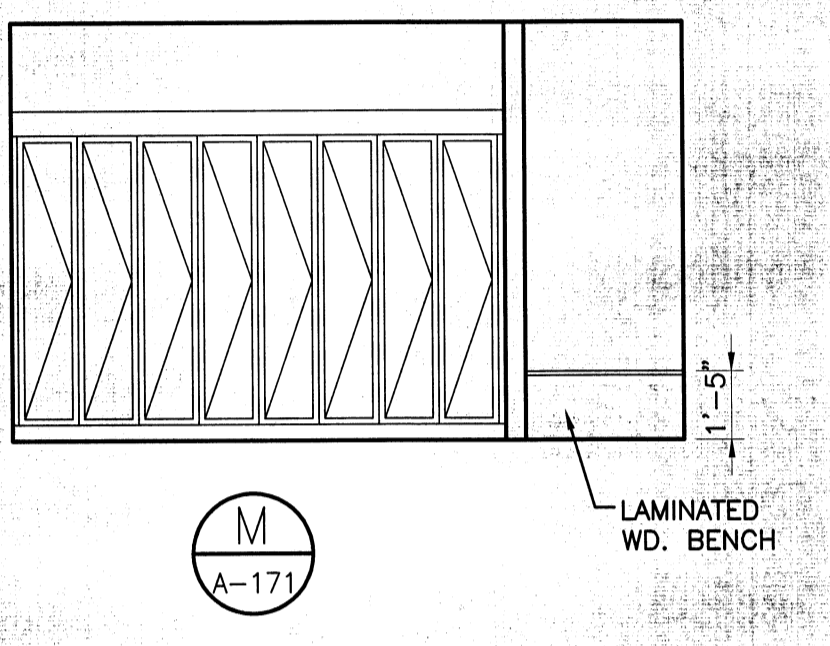
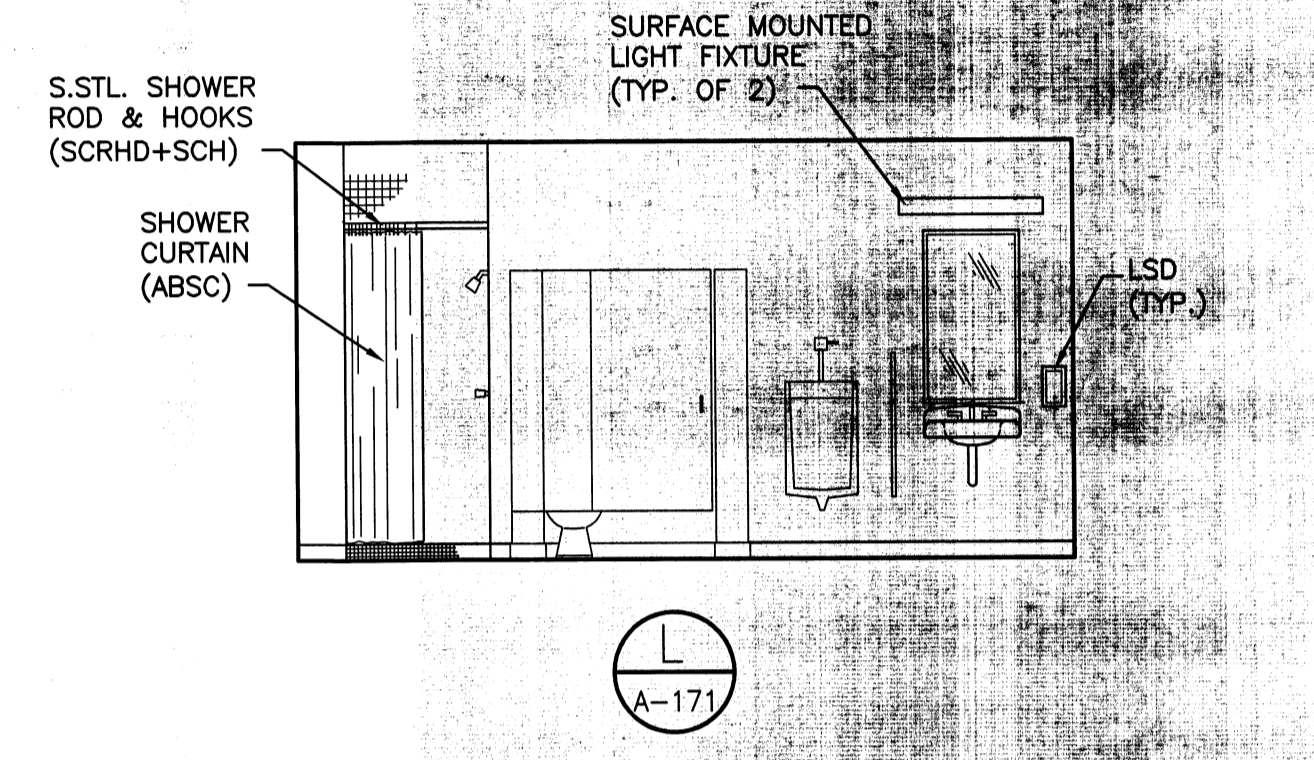
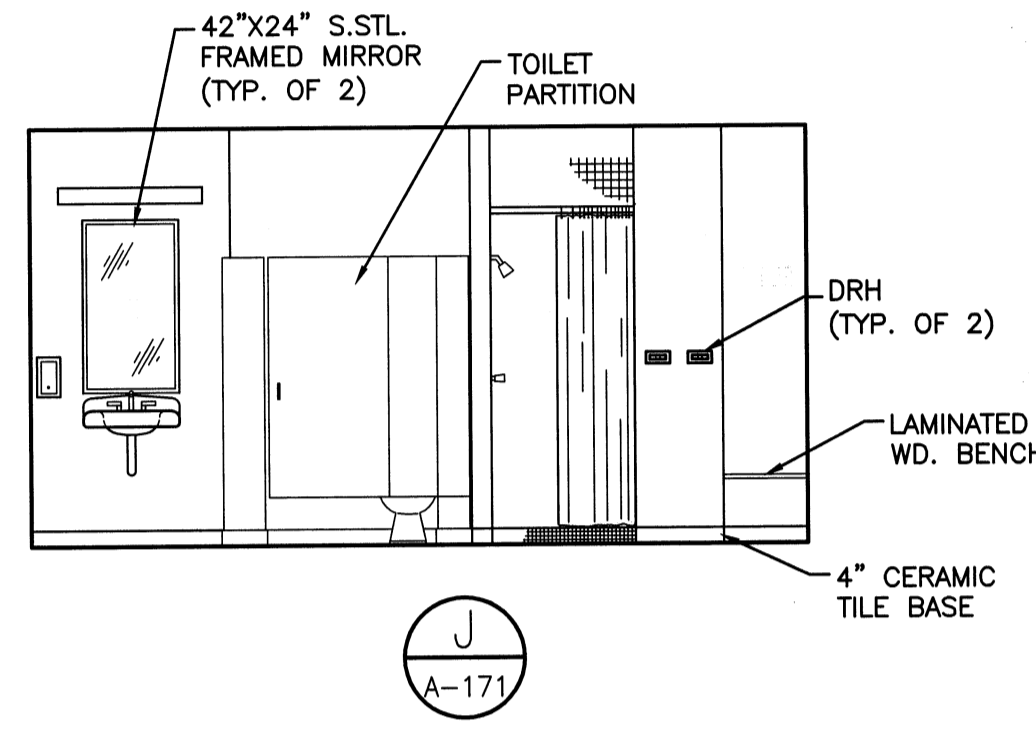
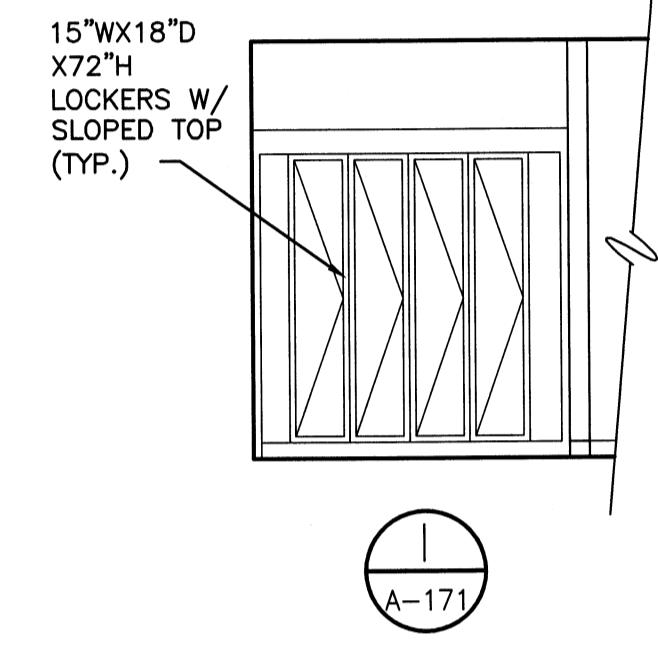
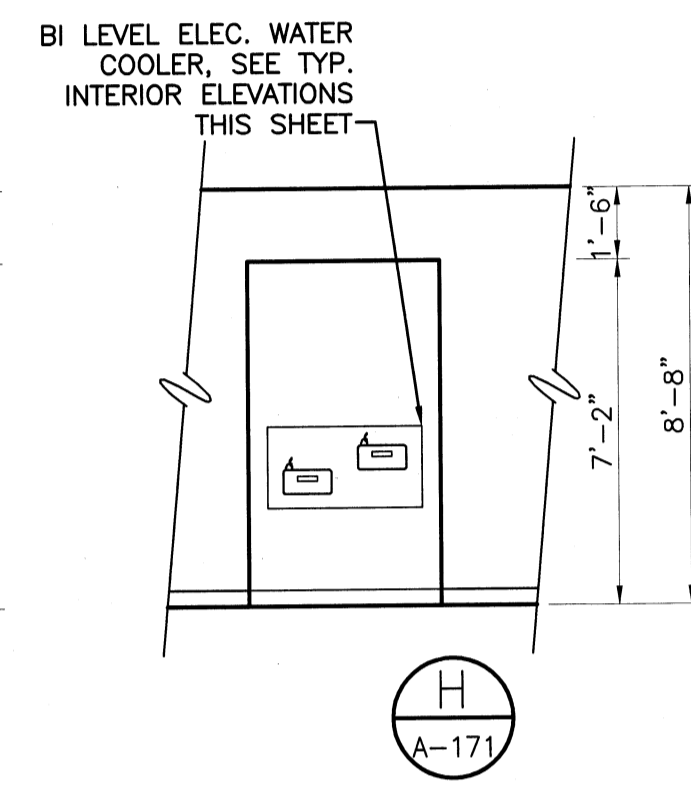
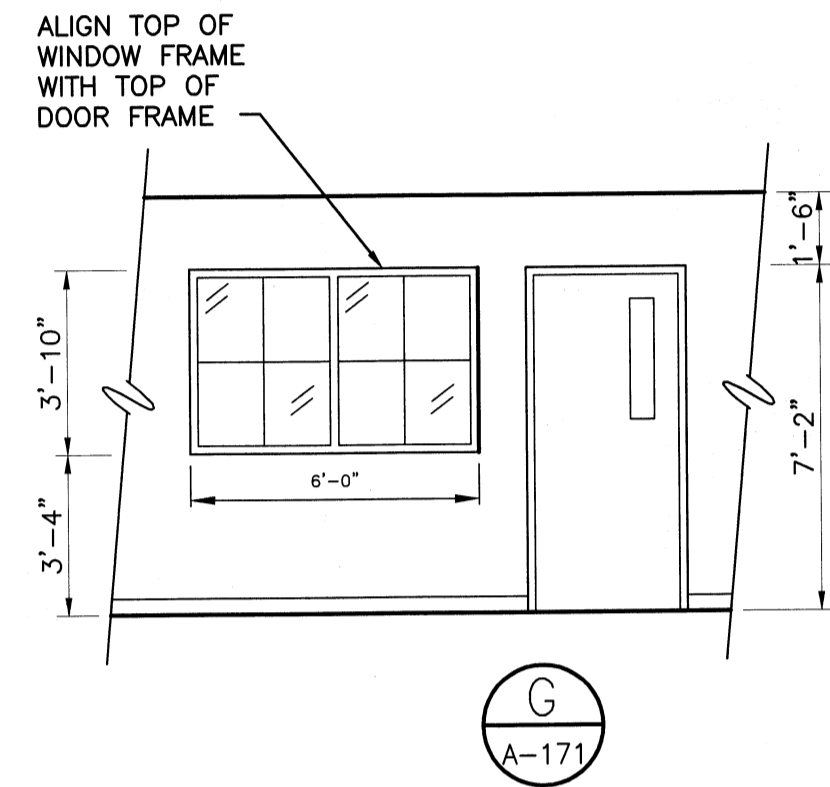
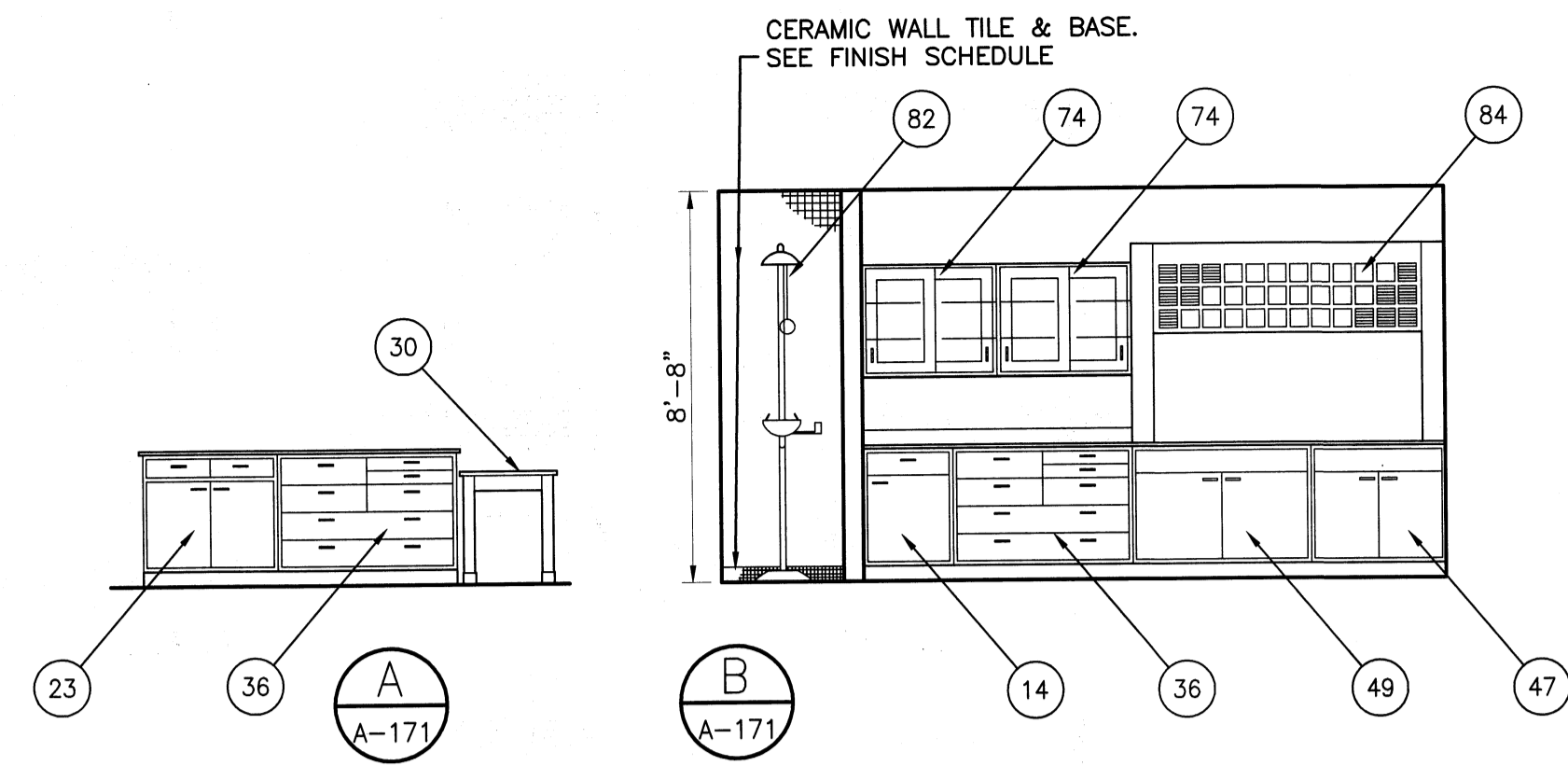
CONFORMED SET 5/09

BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
OPERATIONS BUILDING
ELEVATIONS

Project No.: 120-07060
Designed By: JOB
Drawn By: JOB
Checked By: MSP

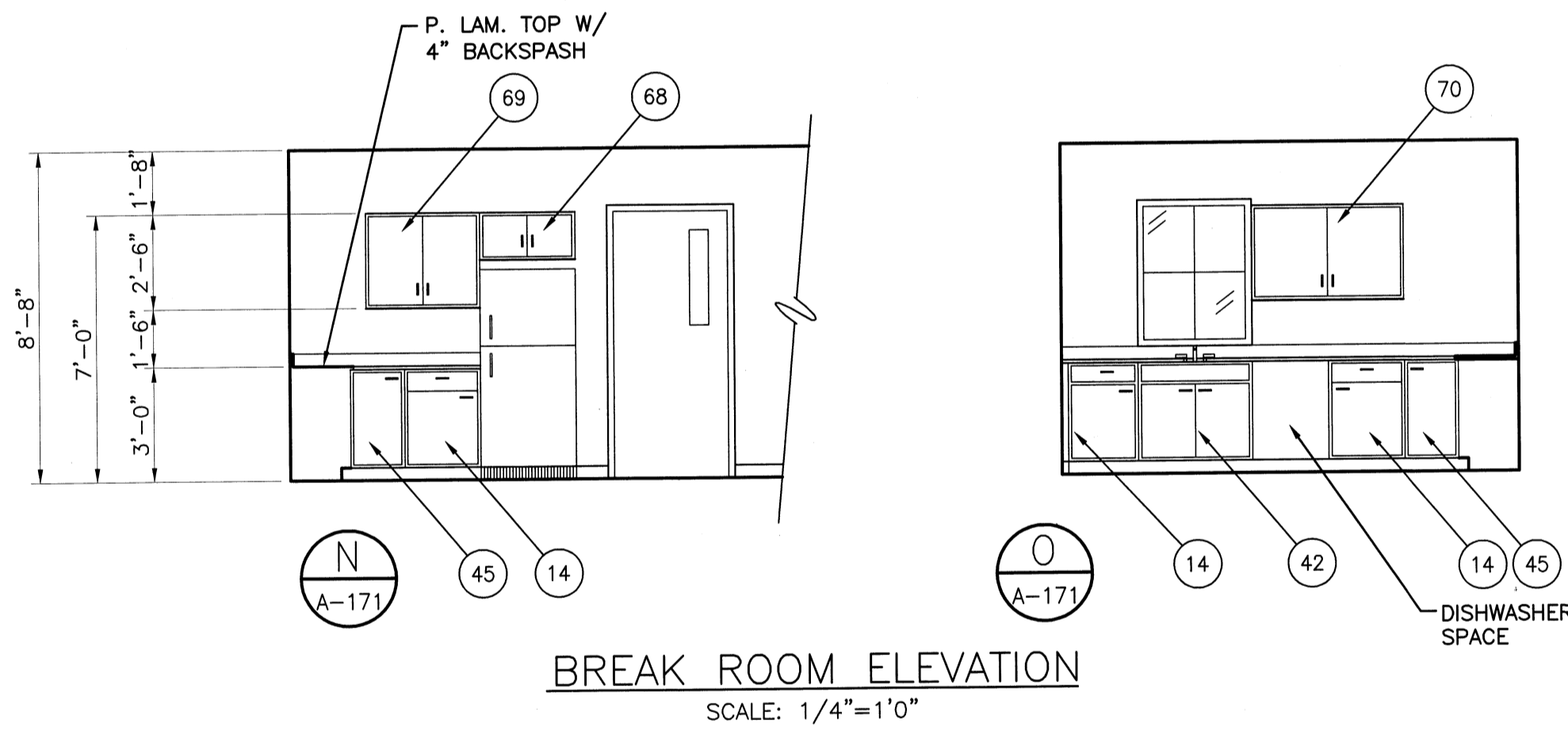
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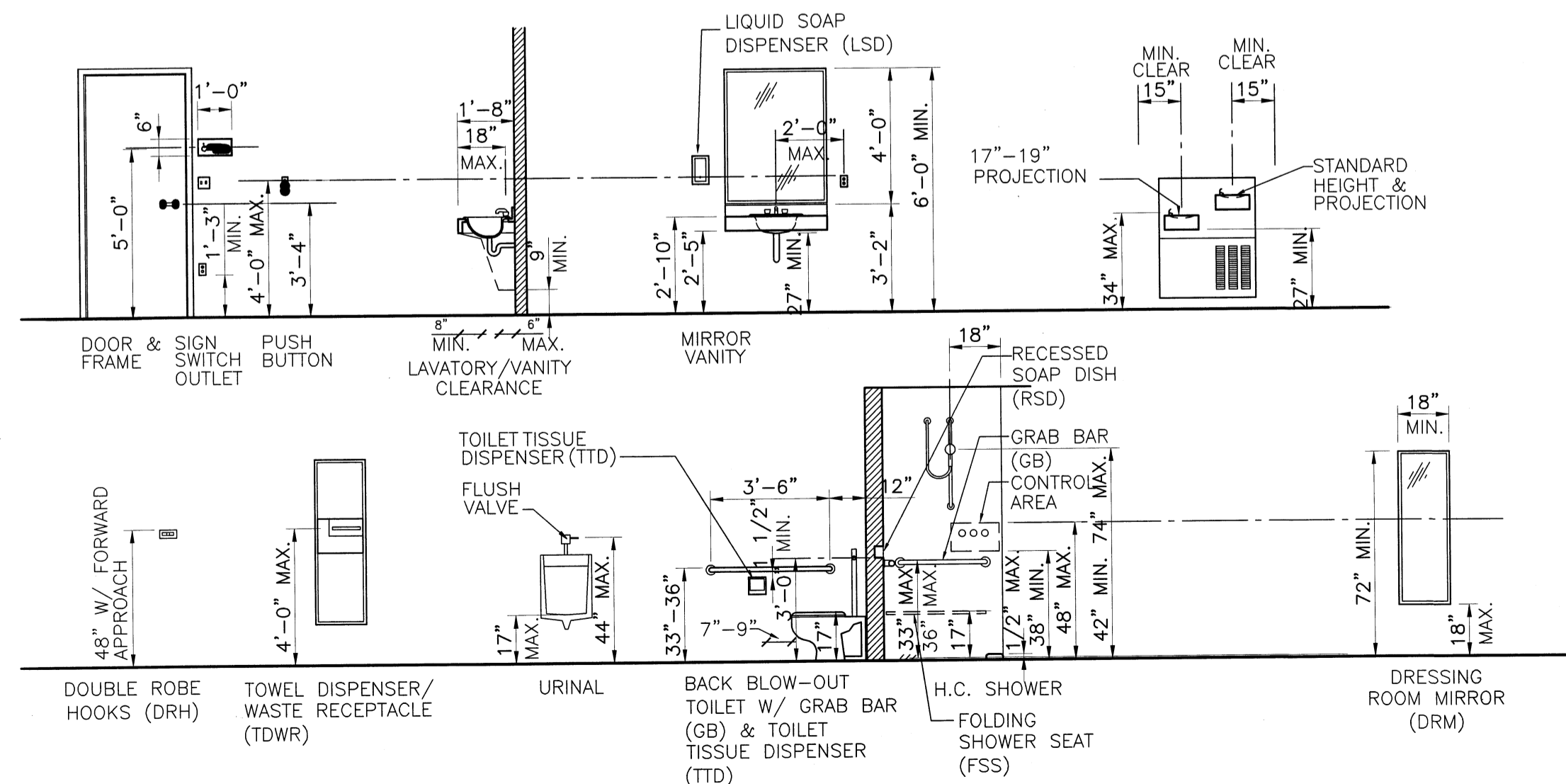
CORRIDOR ELEVATION
SCALE: 1/4"=1'-0"

**WOMENS SHOWER/
LOCKER ROOM ELEVATION**
SCALE: 1/4"=1'-0"

**MENS SHOWER/
LOCKER ROOM ELEVATION**
SCALE: 1/4"=1'-0"

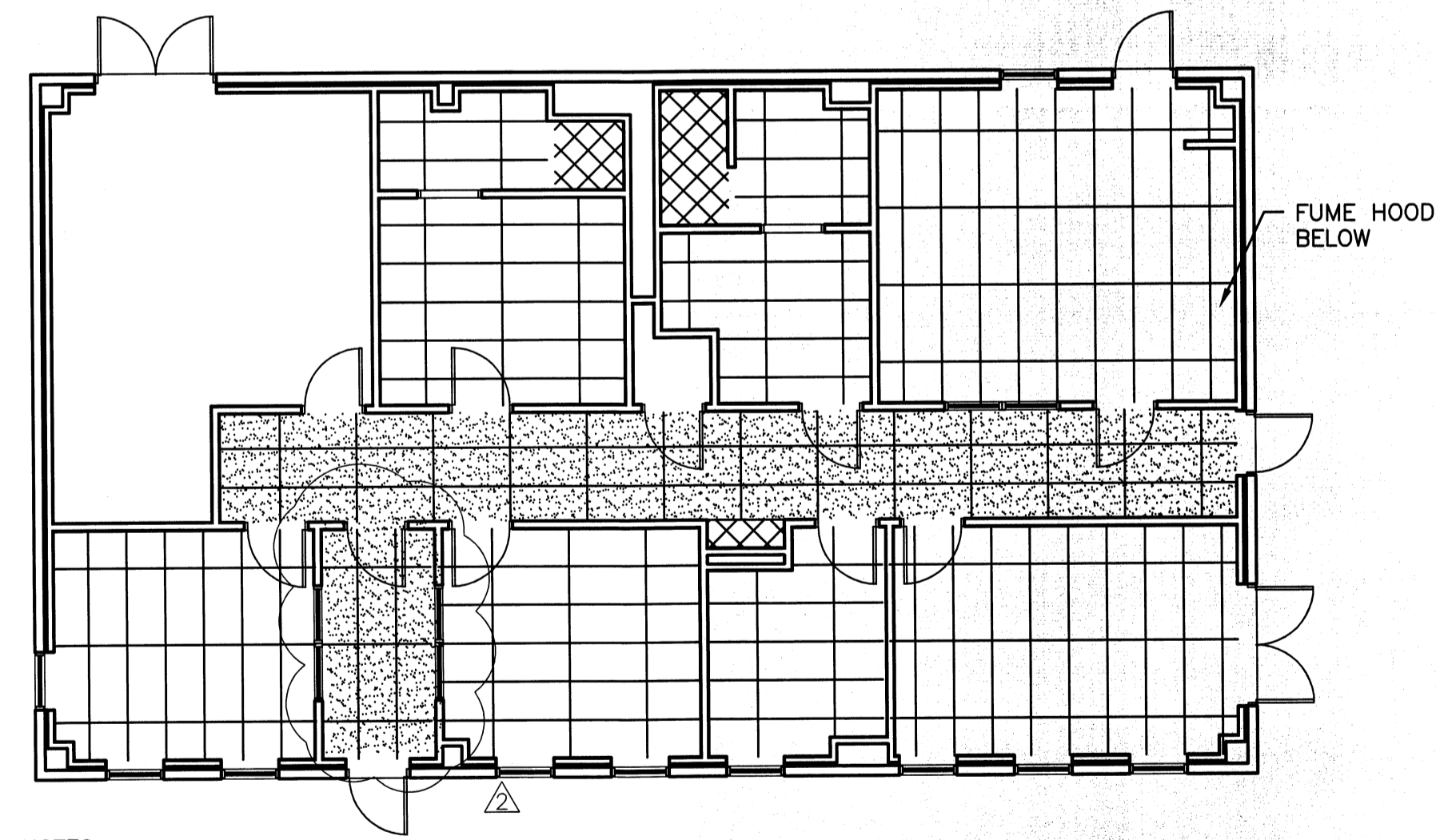


BREAK ROOM ELEVATION
SCALE: 1/4"=1'-0"



TYP. INTERIOR ELEVATIONS
SCALE: 1/4"=1'-0"

NOTES:
1. SEE TOILET ACCESSORIES SPEC FOR ABBREVIATIONS INDICATED.



REFLECTED CEILING PLAN
SCALE: 1/8"=1'-0"

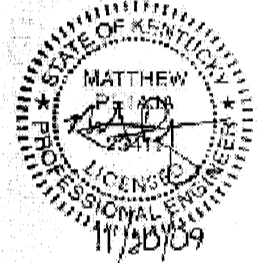
NOTES:
1. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING PLAN.
2. FINISH CEILING ELEVATION SHALL EQUAL 8'-8" ABOVE FINISH FLOOR, UNLESS NOTED OTHERWISE.
3. 1 HR RATED CEILING IN CORRIDOR ONLY.

LEGEND

- 1HR FIRE PARTITION (UL 465)
- LIGHT FIXTURE
- LIGHT FIXTURE
- 2X2 LIGHT FIXTURE
- 2x4 LAY-IN CEILING
- ⊗ MECH. SUPPLY
- ⊗ MECH. RETURN
- ▨ 1 HR RATED CEILING (UL U499), CEILING ELEV. = 10'-0" A.F.F.
- ⊗ 5/8" MOISTURE RESISTANT GYPSUM WALLBOARD

PROJECT RECORD

CONFORMED SET 5/09



MARK	DATE	DESCRIPTION
BY	JMF	
	5/5/09	ADDENDUM 1
	11/11/09	KY HBC REVIEW 10-06-09

Client: OHIO COUNTY WATER DISTRICT
 Proj. Loc.: CROWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT
**OPERATIONS BUILDING
 INTERIOR ELEVATIONS AND
 REFLECTED CEILING PLAN**

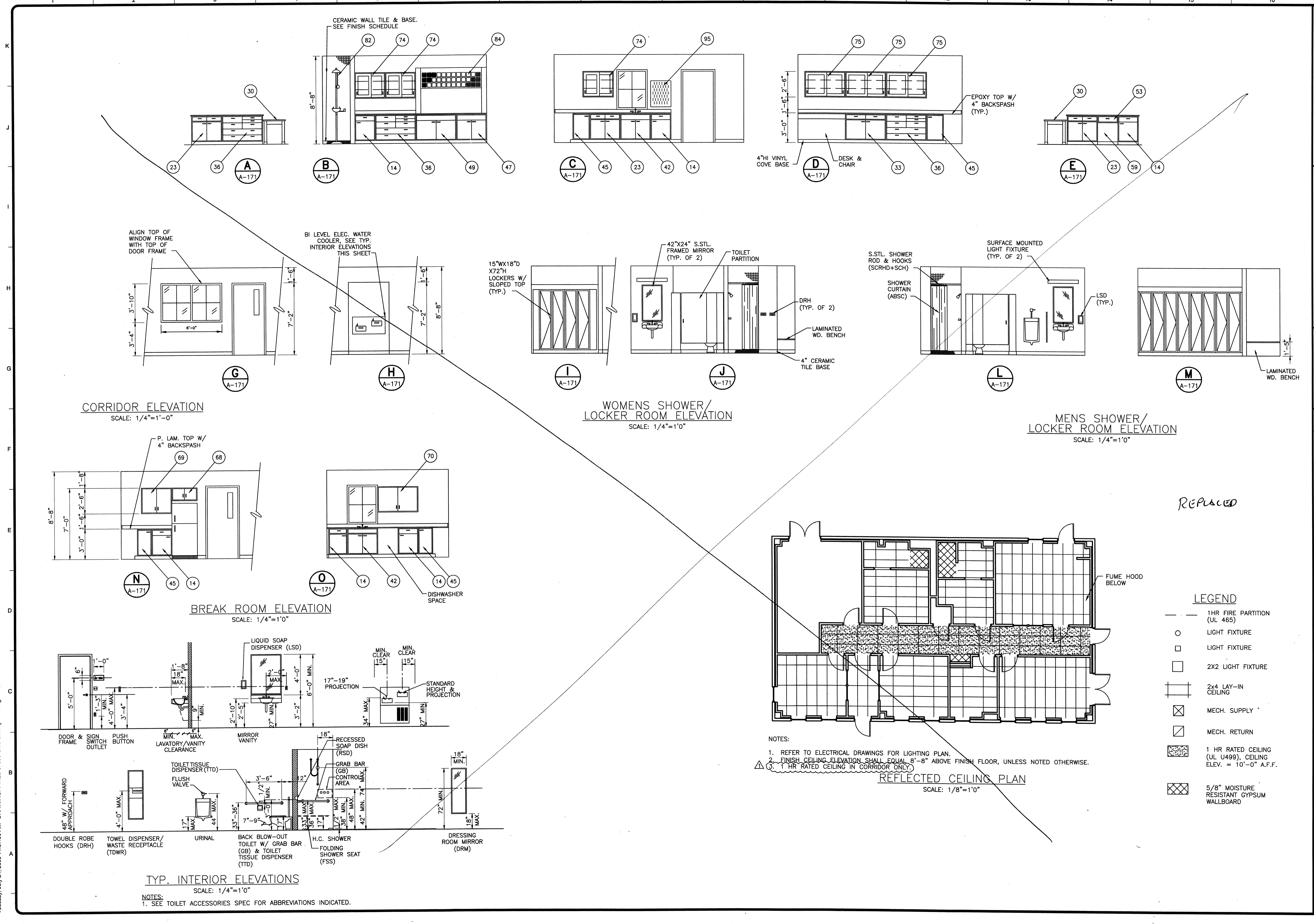
Project No.: 120-07060
 Designed By: JQB
 Drawn By: JQB
 Checked By: MSP

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 Suite 200, Lexington, KY, 40503
 PHONE: (609) 223-8000 FAX: (609) 224-1025

Tuesday, July 21, 2009 11:37:00 AM DRAWING: P:\120-07060 Ohio County Redesign\ORLANDO\CONFORMED SET 5-09\ARCHITECTURAL\A-173 OF BUILDING INT. ELEV. REF. CLG PLAN & ELEV. DWG. LAYOUT: A-173 USER NAME: JUDY THOMPSON



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800 Corporate Drive
Suite 200, Lexington, KY, 40503
PHONE: (609) 223-8000 FAX: (609) 224-1025

PROJECT RECORD

CONFORMED SET 5/09

BY: JMF

MARK	DATE	DESCRIPTION
Δ	5/5/09	ADDENDUM 1

Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: CROMWELL, OHIO COUNTY, KY

**OPERATIONS BUILDING
INTERIOR ELEVATIONS AND
REFLECTED CEILING PLAN**

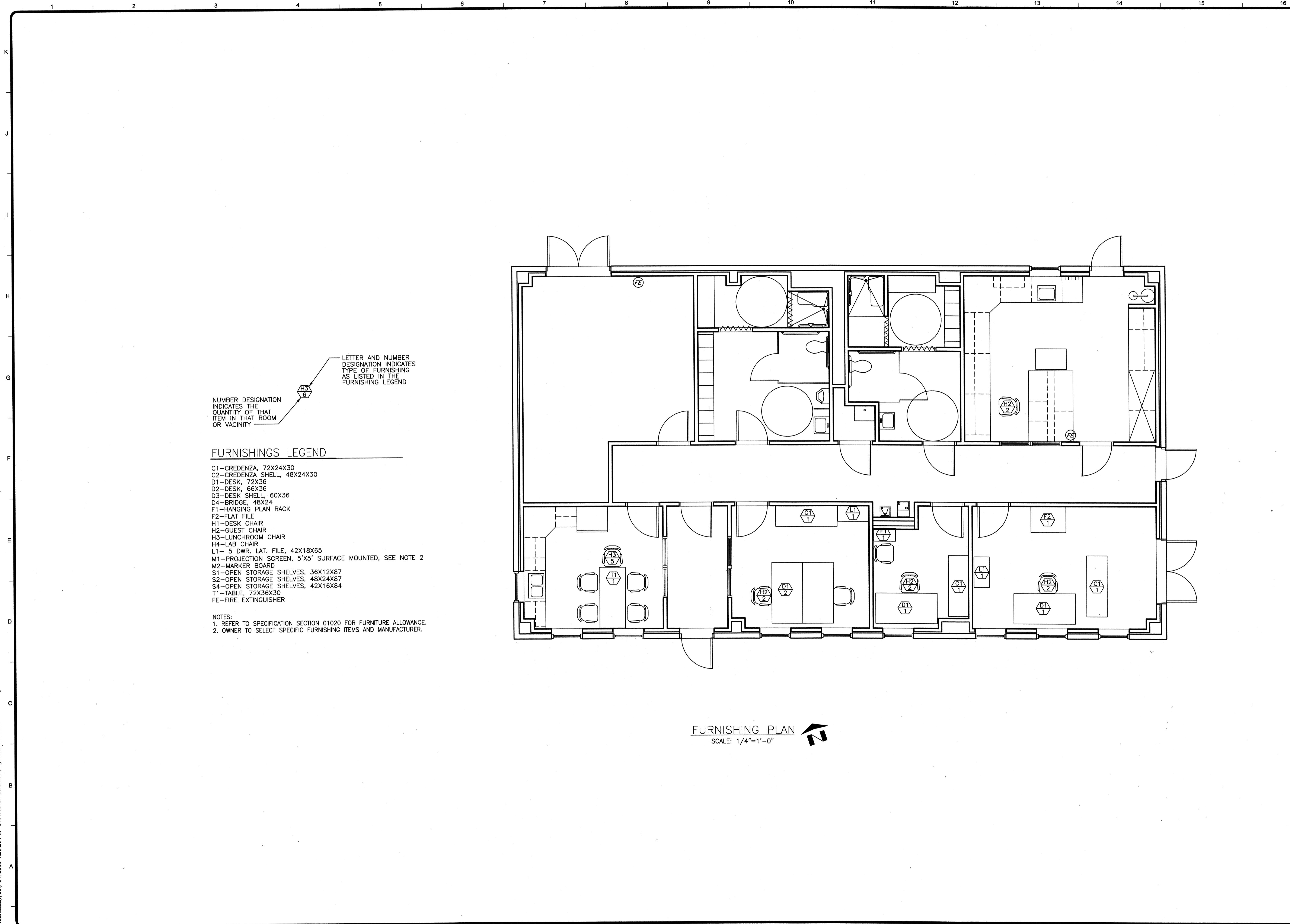
Project No.: 120-07060
Designed By: JQB
Drawn By: JQB
Checked By: MSP

A-173

Sheet of 147

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Wednesday, July 01, 2009 1:25:28 PM DRAWING: \\eroffis3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ARCHITECTURAL\A-174 OP BUILDING FURN PLAN -DWG LAYOUT; A-174 USER NAME: JEREMY M. FRONCILLO



LETTER AND NUMBER DESIGNATION INDICATES TYPE OF FURNISHING AS LISTED IN THE FURNISHING LEGEND

NUMBER DESIGNATION INDICATES THE QUANTITY OF THAT ITEM IN THAT ROOM OR VICINITY

FURNISHINGS LEGEND

- C1-CRENDENZA, 72X24X30
- C2-CRENDENZA SHELL, 48X24X30
- D1-DESK, 72X36
- D2-DESK, 66X36
- D3-DESK SHELL, 60X36
- D4-BRIDGE, 48X24
- F1-HANGING PLAN RACK
- F2-FLAT FILE
- H1-DESK CHAIR
- H2-GUEST CHAIR
- H3-LUNCHROOM CHAIR
- H4-LAB CHAIR
- L1- 5 DWR. LAT. FILE, 42X18X65
- M1-PROJECTION SCREEN, 5'X5' SURFACE MOUNTED, SEE NOTE 2
- M2-MARKER BOARD
- S1-OPEN STORAGE SHELVES, 36X12X87
- S2-OPEN STORAGE SHELVES, 48X24X87
- S4-OPEN STORAGE SHELVES, 42X16X84
- T1-TABLE, 72X36X30
- FE-FIRE EXTINGUISHER

NOTES:
1. REFER TO SPECIFICATION SECTION 01020 FOR FURNITURE ALLOWANCE.
2. OWNER TO SELECT SPECIFIC FURNISHING ITEMS AND MANUFACTURER.

FURNISHING PLAN
SCALE: 1/4"=1'-0"

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PROJECT RECORD

CONFORMED SET 5/09

BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY

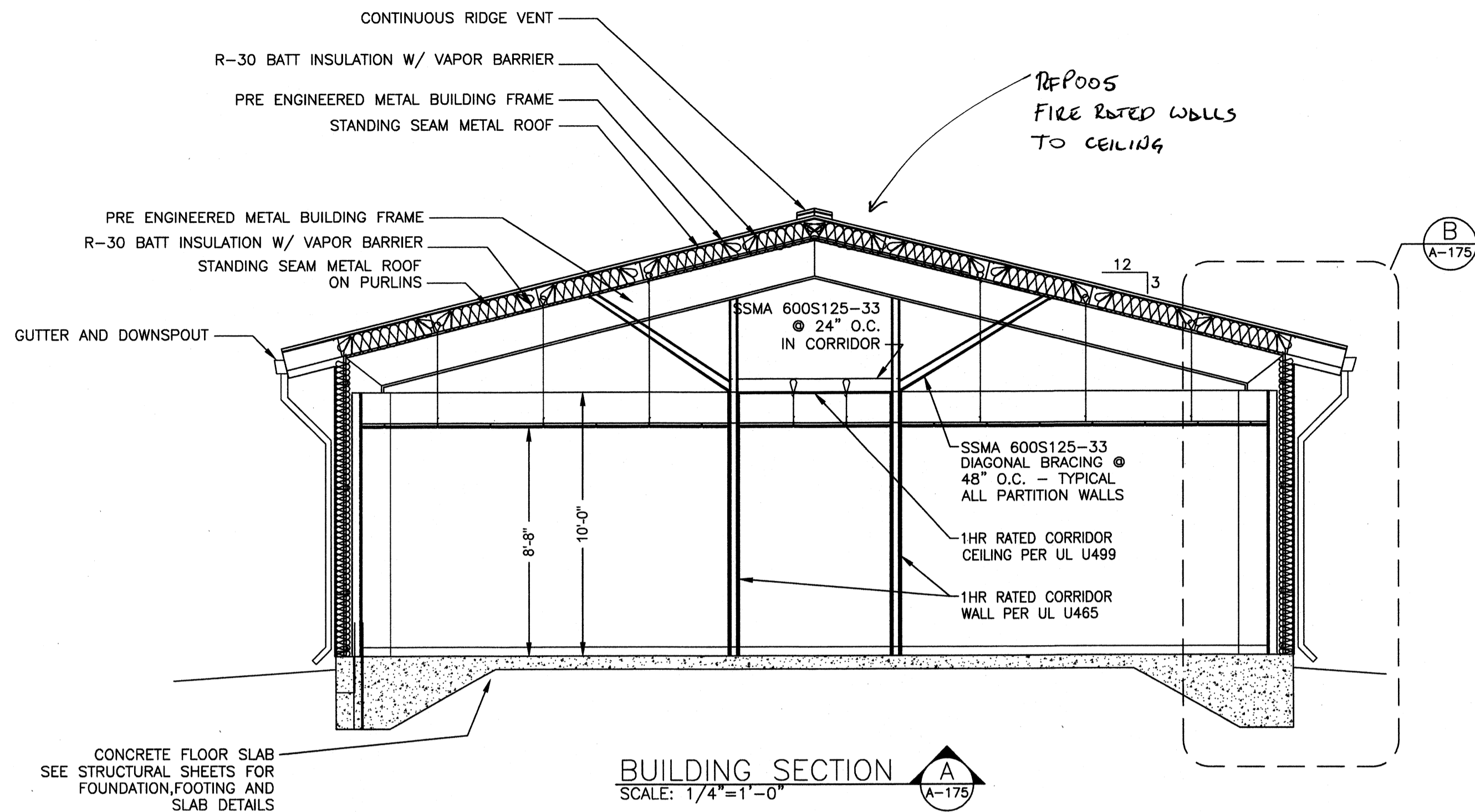
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

**OPERATIONS BUILDING
FURNITURE PLAN**

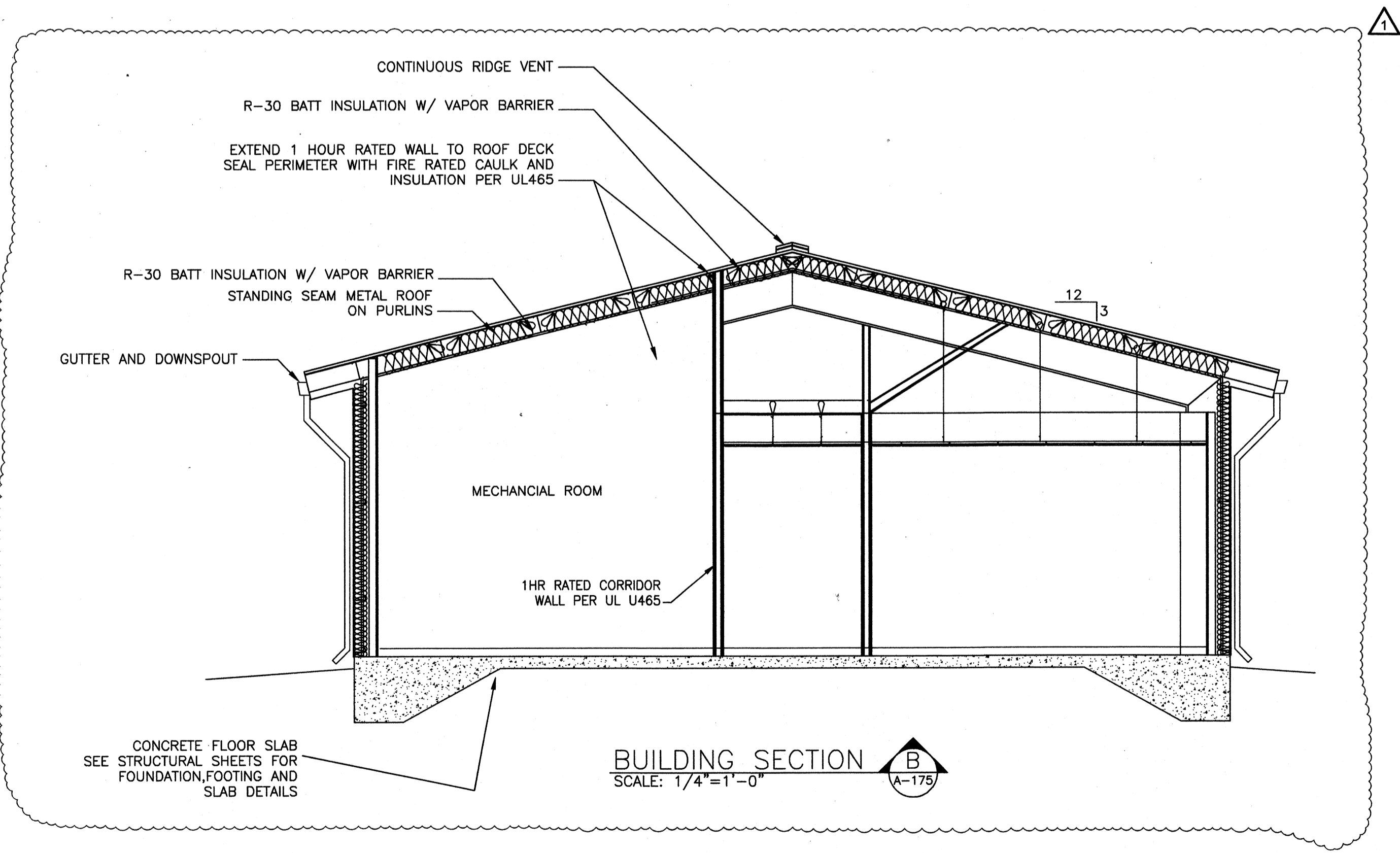
Project No.: 120-07060
Designed By: JOB
Drawn By: JOB
Checked By: MSP

A-174
Sheet of 147
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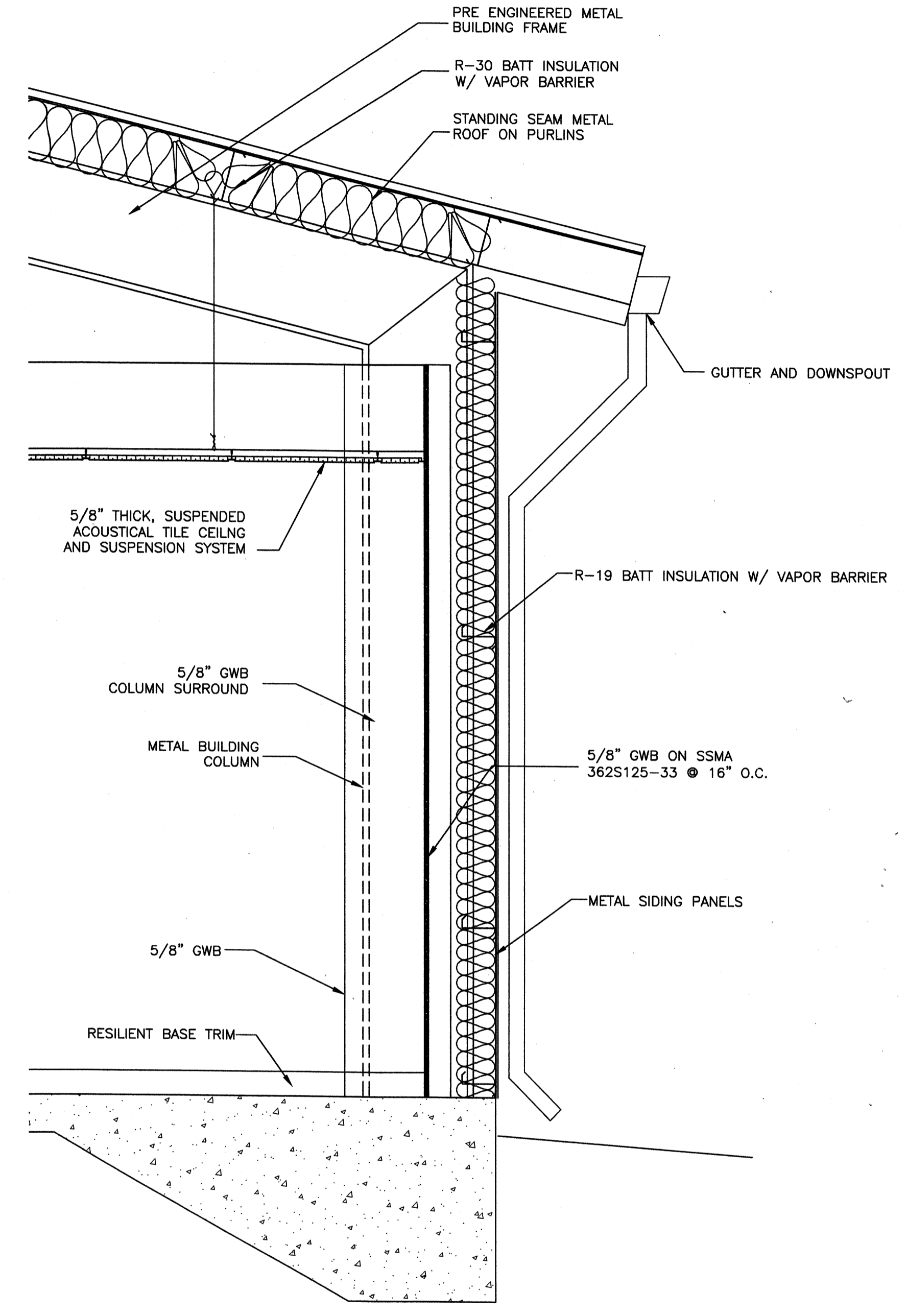
Wednesday, July 01, 2009 1:25:33 PM DRAWING: \\nrorifis3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ARCHITECTURAL\A-175 OF BUILDING WALL SECT. DWG LAYOUT: A-175 USER NAME: JEREMY M. FRONGILLO



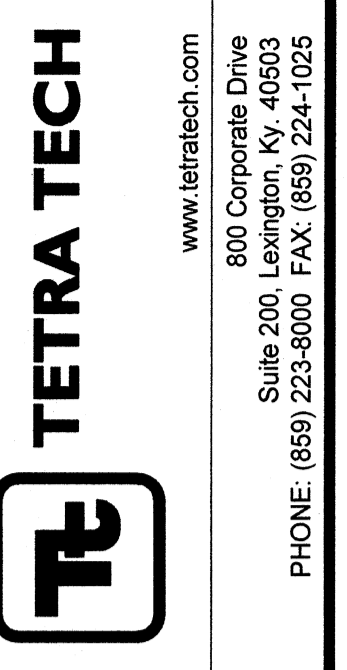
BUILDING SECTION A
SCALE: 1/4"=1'-0"



BUILDING SECTION B
SCALE: 1/4"=1'-0"



WALL SECTION B
SCALE: 3/4"=1'-0"



PROJECT RECORD

CONFORMED SET 5/09

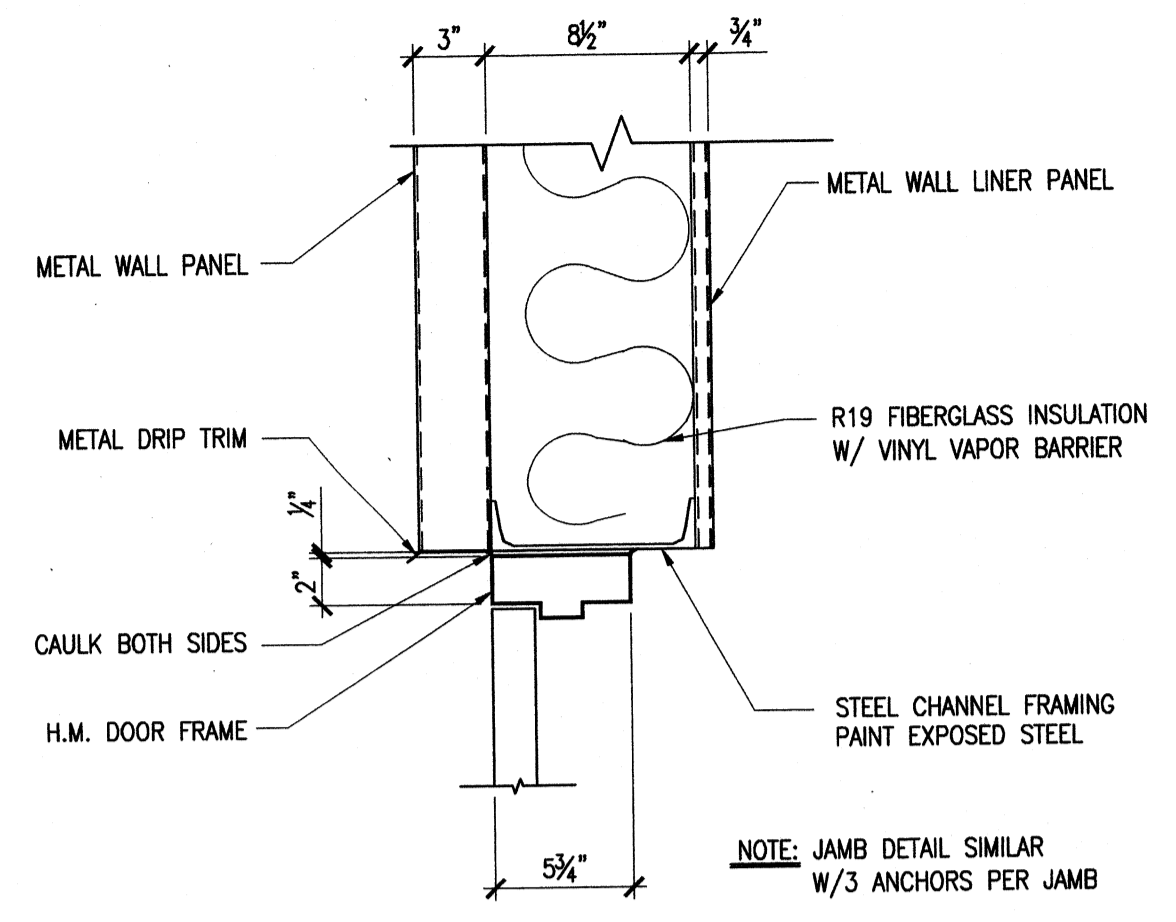


MARK	DATE	DESCRIPTION
△	5/29/09	1 HOUR RATED FIRE WALL CONSTRUCTION

Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 Project No.: 120-07060
 Designed By: JQB
 Drawn By: JQB
 Checked By: MSP

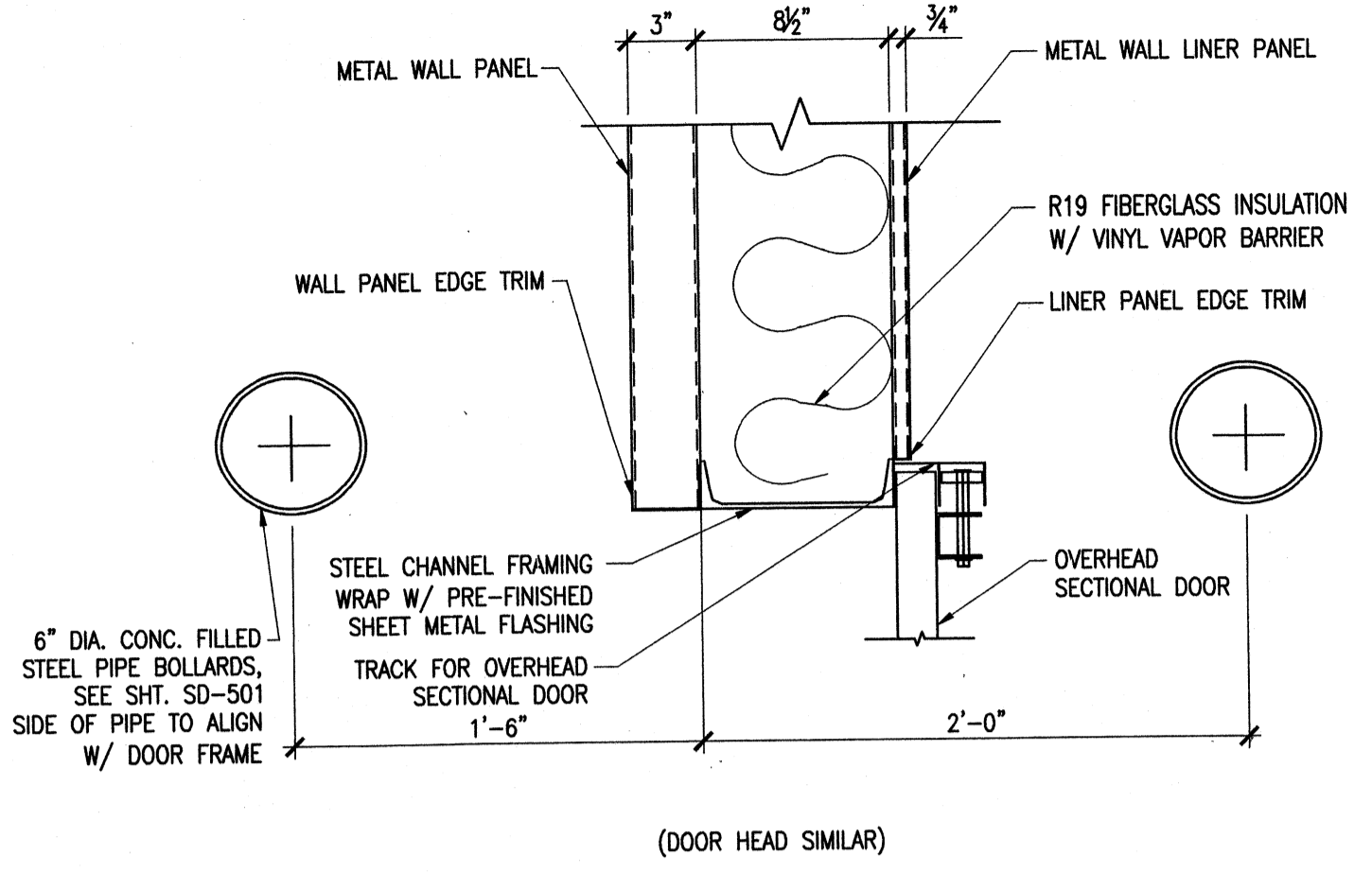
A-175

Wednesday, July 01, 2009 1:25:40 PM DRAWING: \net\63\projects\120-07060 Ohio County\CONFORMED SET 5-09\ARCHITECTURAL\A-501 STANDARD DETAILS .DWG LAYOUT: A-501 USER NAME: JEREMY M. FRONGILLO



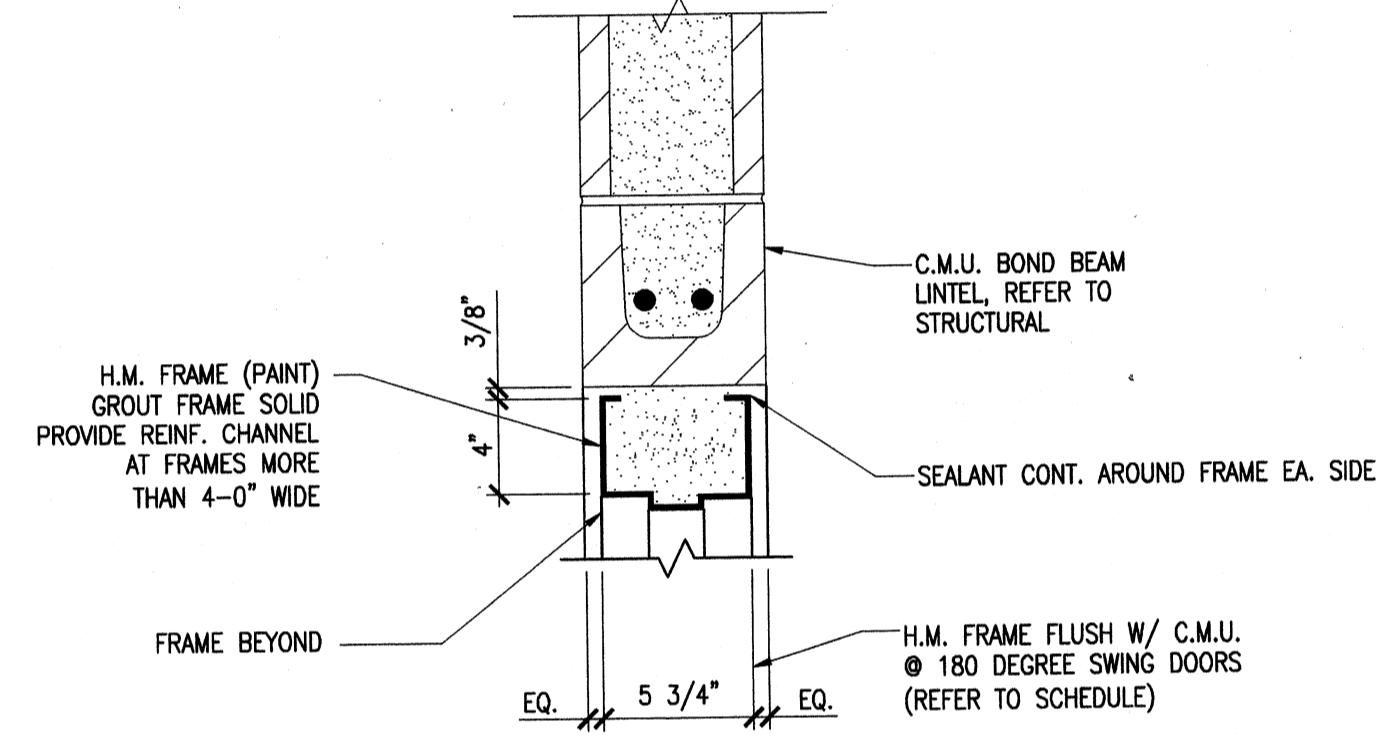
DETAIL 1
SCALE: 1 1/2"=1'-0"

DOOR HEADER



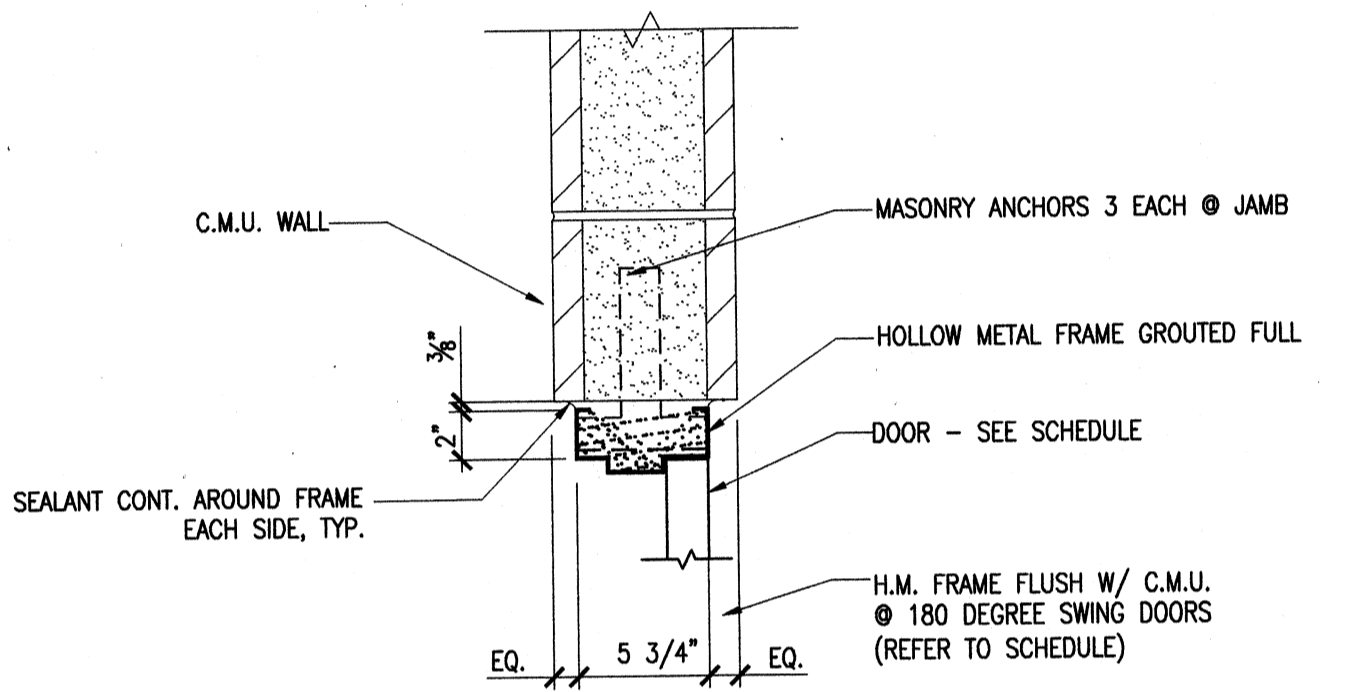
DETAIL 2
SCALE: 1 1/2"=1'-0"

OVERHEAD DOOR JAMB



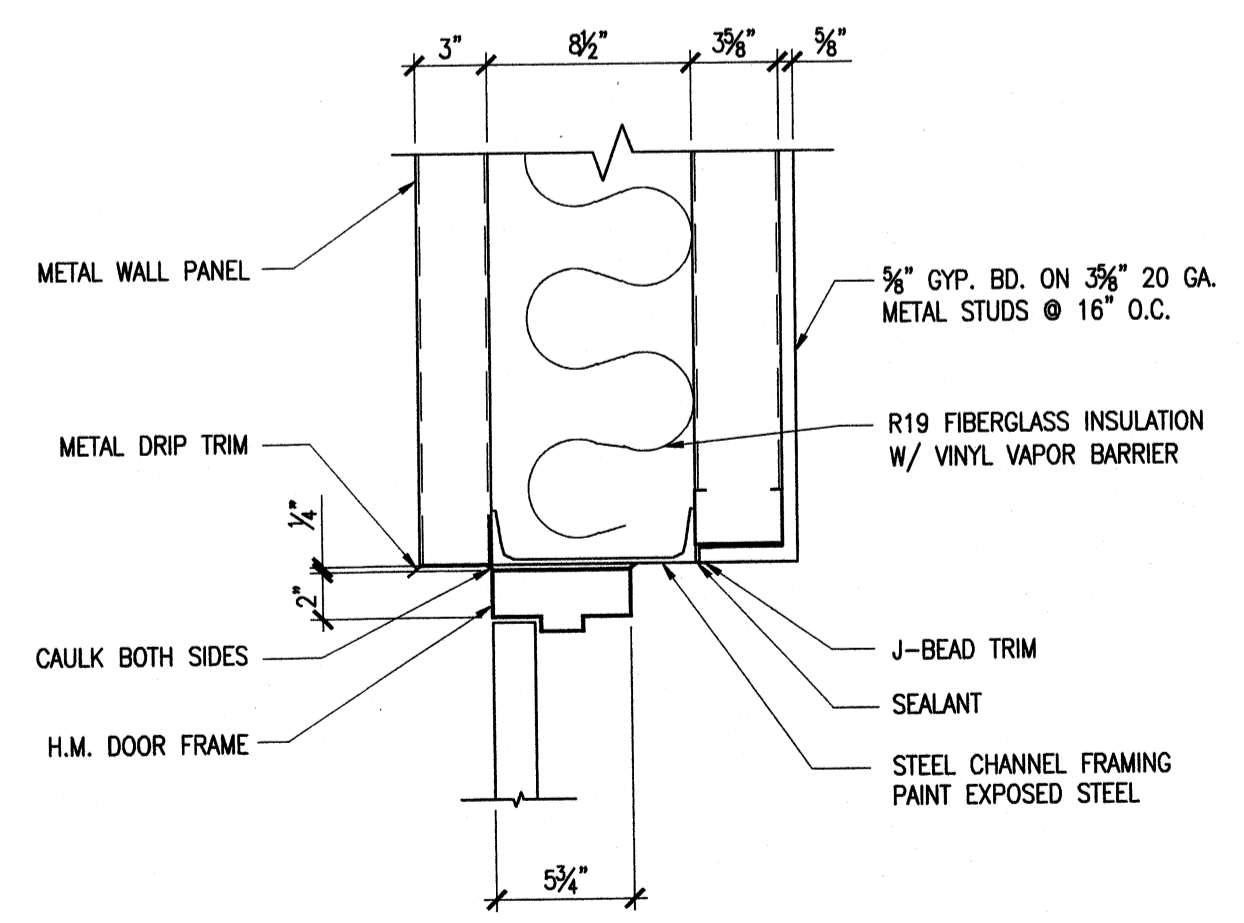
DETAIL 3
SCALE: 1 1/2"=1'-0"

DOOR HEADER CMU WALL



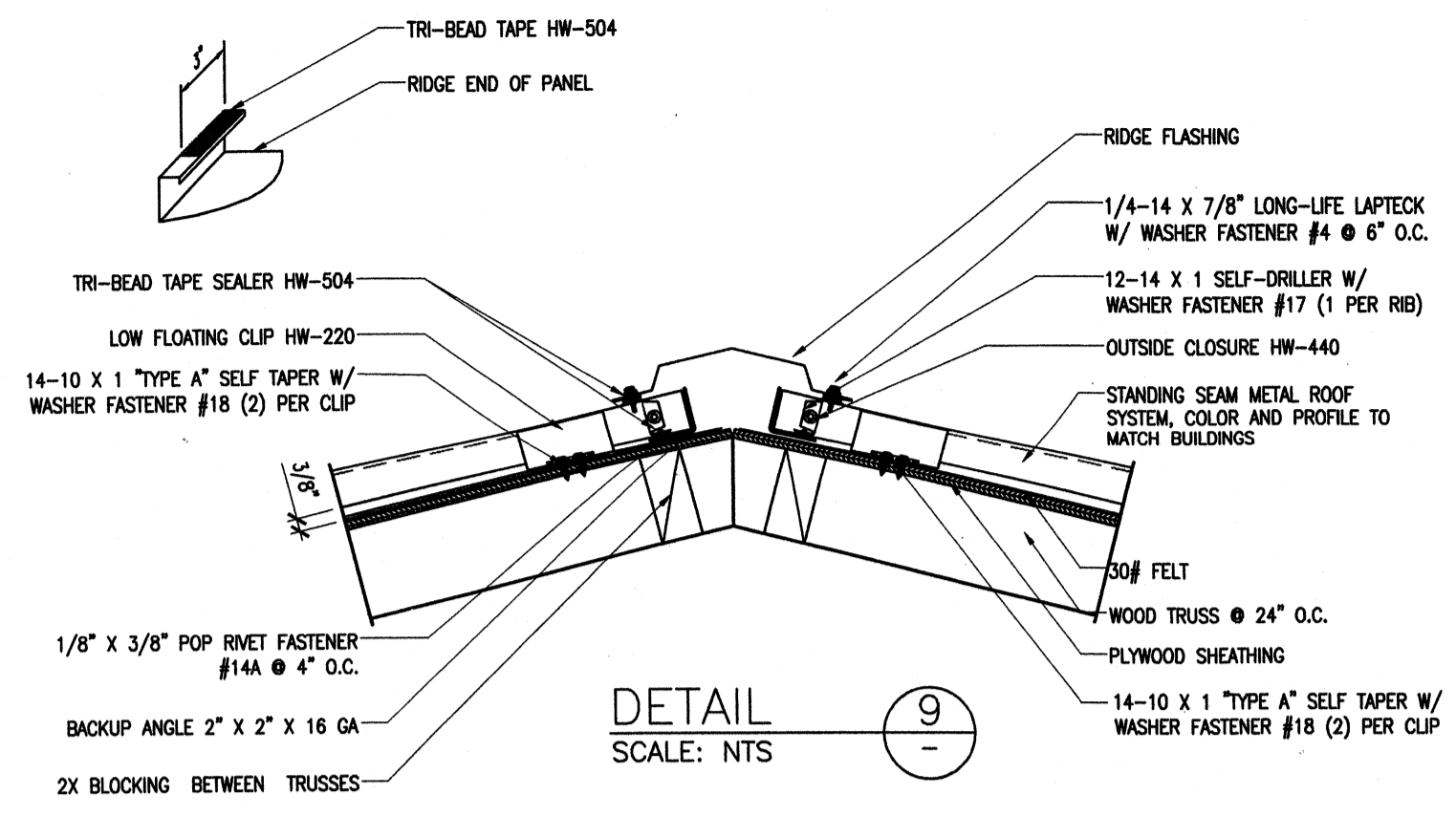
DETAIL 4
SCALE: 1 1/2"=1'-0"

DOOR JAMB CMU WALL



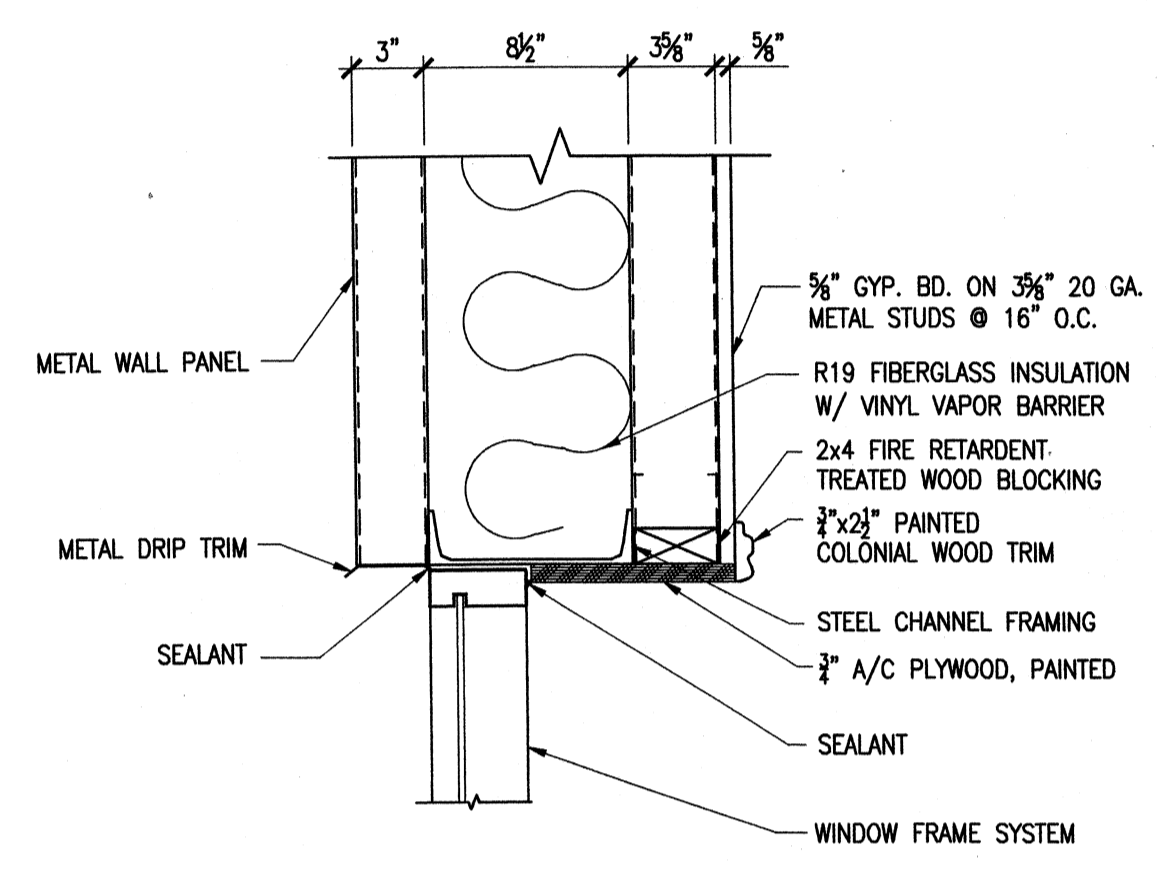
DETAIL 6
SCALE: 1 1/2"=1'-0"

DOOR FRAME

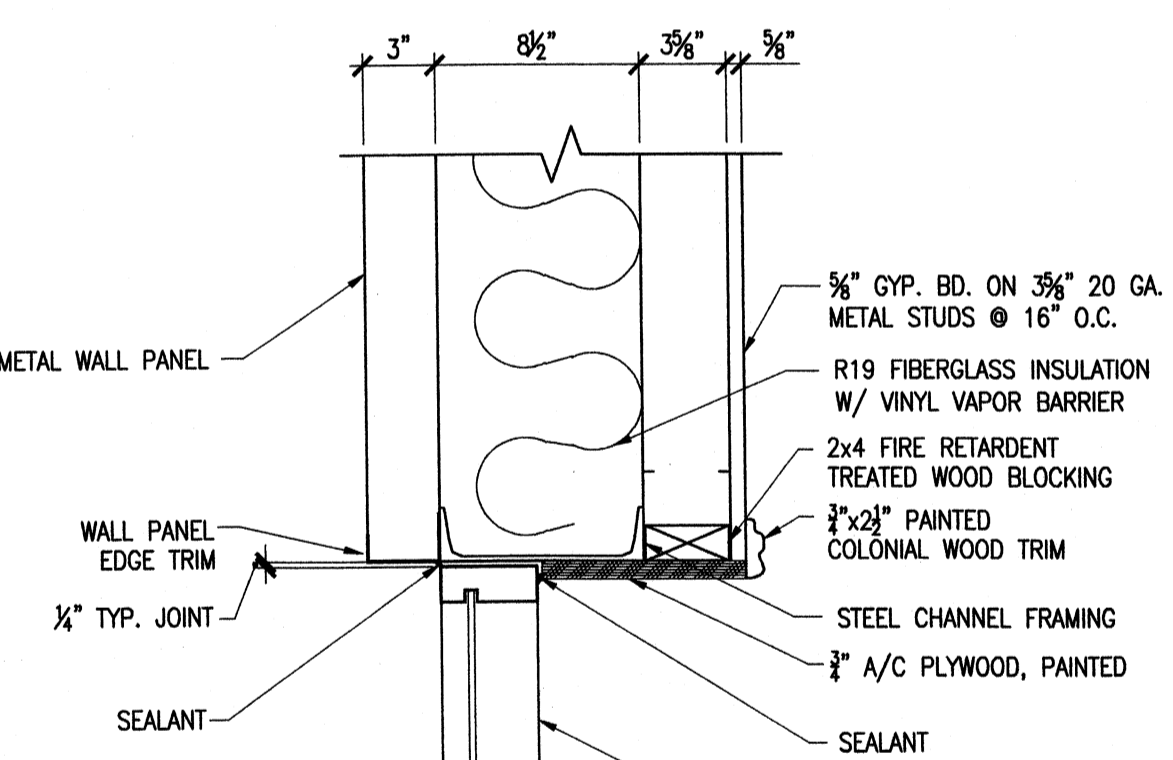


DETAIL 9
SCALE: NTS

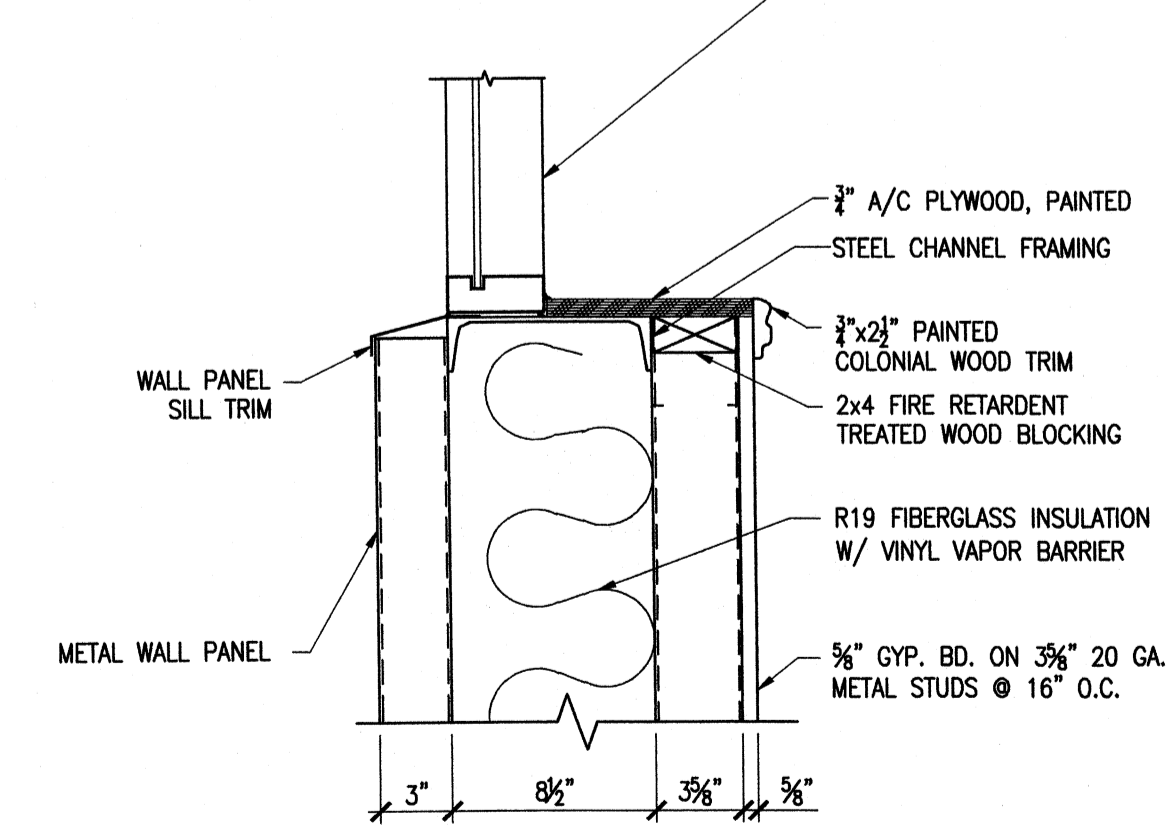
TYP. WINDOW SECTIONS



HEAD



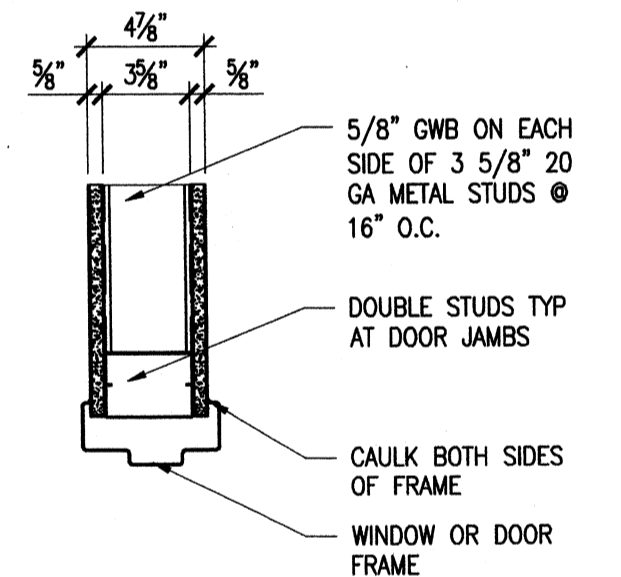
JAMB



SILL

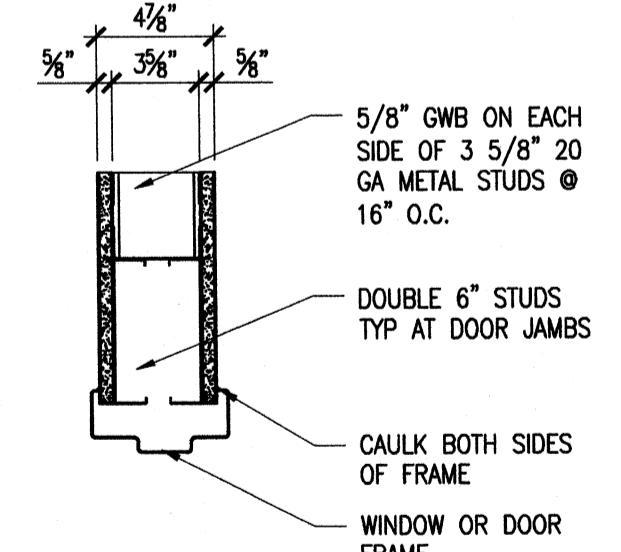
DETAIL 10
SCALE: 1 1/2"=1'-0"

TYP. WINDOW SECTIONS



JAMB DETAIL AT INTERIOR PARTITION WALLS

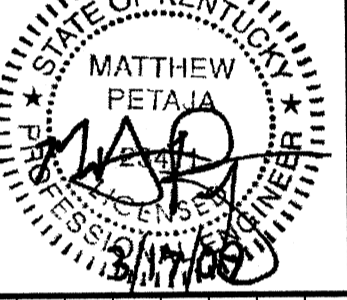
ALL NON-RATED PARTITION WALL CONSTRUCTION SHALL CONSIST OF 5/8" GWB ON EACH SIDE WITH 3 5/8" 20 GA METAL STUDS AT 16" O.C. WALL CAVITY SHALL BE FILLED WITH SOUND ATT. BAT INSULATION (R-13)



HEAD DETAIL AT INTERIOR PARTITION WALLS

ALL NON-RATED PARTITION WALL CONSTRUCTION SHALL CONSIST OF 5/8" GWB ON EACH SIDE WITH 3 5/8" 20 GA METAL STUDS AT 16" O.C. WALL CAVITY SHALL BE FILLED WITH SOUND ATT. BAT INSULATION (R-13)

DETAIL 10
SCALE: 1 1/2"=1'-0"



BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT
Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

Project No.: 120-07060
Designed By: JCB
Drawn By: JCB
Checked By: MSP

STRUCTURAL ALUMINUM

- A. COMPLY WITH THE FOLLOWING: ADM2005 "ALUMINUM DESIGN MANUAL"
- B. ALL PLATES AND ROLLED SHAPES ARE 6061-T6 ALUMINUM.
- C. PROVIDE MIN. (2) 3/4" DIA. STAINLESS STEEL BOLTS, WASHERS, AND NUTS FOR ALL CONNECTIONS, UNO.
- D. ALL WELDING SHALL CONFORM TO AWS D1.2 "STRUCTURAL WELDING CODE - ALUMINUM". SHOP DRAWINGS SHALL SHOW ALL SHOP AND ERECTION DETAILS INCLUDING CUTS, COPE CONNECTIONS, HOLES, THREADED FASTENERS, RIVETS, AND WELDS. GRIND ALL WELDS FOR SMOOTH TRANSITIONS.
- E. THE APPROVAL OF SHOP DRAWINGS WILL BE FOR SIZE AND ARRANGEMENT OF PRINCIPAL AND AUXILIARY MEMBERS AND STRENGTH OF CONNECTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DIMENSIONS SHOWN ON THE SHOP DRAWINGS.
- F. LAYOUT AND DESIGN FOR THE GUARDRAIL, HANDRAIL AND THEIR COMPONENTS SHALL ADHERE TO THE 2007 KBC.
- G. BURNING OF HOLES IN ALUMINUM IS NOT PERMITTED WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- H. COAT SURFACES OF ALUMINUM THAT WILL COME IN CONTACT WITH GROUT, CONCRETE, MASONRY, WOOD, OR DIS-SIMILAR METALS WITH THE FOLLOWING:
 - A) CAST ALUMINUM - HEAVY COAT OF BITUMINOUS PAINT.
 - B) EXTRUDED ALUMINUM - TWO COATS OF CLEAR LACQUER.

STRUCTURAL LUMBER AND TIMBER

A. ENGINEERED WOOD TRUSS

1. ENGINEERED WOOD TRUSS SYSTEMS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE NDS AND ANSI/TPI 1-2002. ALL TRUSSES SHALL BE DESIGNED FOR THE SUPERIMPOSED LOADS STATED IN THE DESIGN CRITERIA, IN ADDITION TO SPECIAL LOADING CONDITIONS WHERE SPECIFIED ON THE STRUCTURAL DRAWINGS.
2. PROVIDE TRUSS PLATES AND HOLD-DOWN ANCHORS FOR ALL WOOD TRUSSES IN ACCORDANCE WITH SPECIFICATIONS FOR PREFABRICATED WOOD TRUSSES AND SCHEDULE 9/5-502.
3. DESIGN LAYOUT, SPACING AND CONFIGURATION SHALL BE AS INDICATED ON THE STRUCTURAL DRAWINGS. ALTERNATE TRUSS-MANUFACTURER PROPOSED LAYOUTS ARE ONLY ACCEPTABLE AS A CHANGE ORDER WHICH WILL INCLUDE ENGINEERING CHARGES FOR REDESIGN OF EFFECTED BUILDING STRUCTURAL COMPONENTS BY THE ENGINEER OF RECORD.
4. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. SHOP DRAWINGS SHALL CLEARLY INDICATE ALL TRUSS TO TRUSS CONNECTIONS, CONNECTIONS AMONG TRUSS MEMBERS, AND ANY CONNECTORS RELATED TO ITEMS PROVIDED AS PART OF THE ENGINEERED TRUSS SYSTEM. SHOP DRAWINGS SHALL INCLUDE AN ERECTION PLAN WHICH IDENTIFIES ALL ROOF TRUSS COMPONENTS AND ALL TEMPORARY AND PERMANENT BRACING REQUIRED FOR TRUSS DESIGN. SHOP DRAWINGS SHALL BEAR THE ORIGINAL SIGNATURE AND SEAL OF A KENTUCKY REGISTERED PROFESSIONAL ENGINEER.
5. IN ADDITION TO PERMANENT BRACING DETAILS PROVIDED ON PLANS, ADDITIONAL BRACING SHALL BE INSTALLED IN ACCORDANCE WITH BUILDING COMPONENT SAFETY INFORMATION, BCSI-B3.
6. TRUSSES SHALL BE STORED ON SITE PER THE MANUFACTURER'S RECOMMENDATIONS TO PREVENT DEFORMATION. IMPROPER HANDLING OF THE TRUSSES MAY RESULT IN REMOVAL OF THE TRUSSES FROM THE JOB SITE.
7. INSTALLATION OF ALL TRUSSES SHALL BE DONE PER THE MANUFACTURER'S RECOMMENDATIONS IN ORDER TO MINIMIZE HORIZONTAL BENDING.
8. TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT, NOTCHED, DRILLED, OR ALTERED IN ANY WAY WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
9. DAMAGED TRUSSES SHALL BE DISCARDED OR REPAIRED BASED UPON SIGNED AND SEALED REPAIR DRAWINGS PROVIDED BY THE TRUSS MANUFACTURER.
10. PROVIDE SOLID 2x BLOCKING AT ALL VALLEY AND HIP CONDITIONS TO SUPPORT ROOF SHEATHING.

B. WOOD SHEATHING

1. PLYWOOD OR ORIENTED STRAND BOARD (OSB) SHALL BE A.P.A. RATED PANEL SHEATHING, DOC PS1 OR PS2, EXP. 1, UNLESS NOTED OTHERWISE. MAXIMUM SPAN SHALL BE NO GREATER THAN 2'-0", UNO. MINIMUM WIDTH OF SUPPORTING FRAMING SHALL BE NOMINAL 2x MEMBERS. REFER TO PLANS FOR THICKNESS AND LOCATIONS. ROOF DIAPHRAGMS AND SHEAR WALLS SHALL CONFORM TO THE PROVISIONS OF CHAPTER 23 OF THE KENTUCKY BUILDING CODE. ATTACHMENT OF PLYWOOD, INCLUDING BLOCKING REQUIREMENTS, SHALL CONFORM TO NAILING SCHEDULES WHERE INDICATED ON THE STRUCTURAL DRAWINGS.
2. PANELS SHALL BE INSTALLED WITH PANEL JOINTS CENTERED ON STUDS OR BLOCKING. PANEL SIZES SHALL NOT BE LESS THAN 4'-0"x8'-0" SHEETS EXCEPT AT EDGES WHERE MINIMUM DIMENSION OF 1'-0" IS PERMITTED IF FULLY BLOCKED OR NAILED.
3. SHEATHING FASTENERS SHALL NOT BE SPACED LESS THAN 3/8" FROM EDGES AND ENDS OF PANELS, STUDS, BLOCKING, AND TOP AND BOTTOM PLATES. FASTENERS SHALL BE DRIVEN SO THAT THEIR HEAD OR CROWN IS FLUSH WITH THE TOP SURFACE OF THE SHEATHING. IF MORE THAN 20 PERCENT OF THE FASTENERS AROUND THE PERIMETER OF PANELS ARE OVERDRIVEN BY OVER 1/8" OR IF ANY ARE OVERDRIVEN BY MORE THAN 1/8", ADDITIONAL FASTENERS SHALL BE INSTALLED ADJACENT TO THE ORIGINAL FASTENER. FOR EVERY TWO FASTENERS OVERDRIVEN, AN ADDITIONAL FASTENER SHALL BE INSTALLED.

PRE-ENGINEERED METAL BUILDING

- A. THE STRUCTURAL DRAWINGS FOR THIS PROJECT SPECIFY FOUNDATION REQUIREMENTS TO ACCOMMODATE A PRE-ENGINEERED METAL BUILDING. FOUNDATIONS HAVE BEEN DESIGNED FOR PINNED CONDITIONS, WITHOUT COLUMN BASE MOMENTS. THE CONTRACTOR SHALL SUBMIT THE DESIGN REACTIONS FROM THE METAL BUILDING MANUFACTURER TO CONFIRM THE FOUNDATION CAPACITY.
- B. ENGINEER IS NOT RESPONSIBLE FOR THE DESIGN OF ANY ASPECTS OF THIS BUILDING OTHER THAN ITS SLAB ON GRADE, CMU WALLS, AND FOOTINGS AS SHOWN. OTHER STRUCTURAL ELEMENTS INCLUDING ROOF FRAMING, WIND FRAMES AND BRACING, METAL BUILDING COLUMNS, ANCHOR BOLTS, AND METAL BUILDING COLUMN BASE PLATES ARE TO BE DESIGNED BY THE METAL BUILDING ENGINEER, REGISTERED IN THE STATE OF KENTUCKY. SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A KENTUCKY REGISTERED PROFESSIONAL ENGINEER. SHOP DRAWINGS SUBMITTALS SHALL INCLUDE DRAWINGS OF THE FRAMING MEMBERS WITH THE CONNECTIONS, THE ANCHOR BOLT PLAN AND REACTIONS.
- C. THE PRE-ENGINEERED METAL BUILDING SYSTEM SHALL BE DESIGNED AND DETAILED BY THE MANUFACTURER TO SUSTAIN THE LOADS SPECIFIED IN THE DESIGN CRITERIA. THE DESIGN SHALL BE IN ACCORDANCE WITH "AISC" AND "AISI" SPECIFICATIONS AND MBMA "METAL BUILDING SYSTEMS MANUAL" DESIGN PRACTICES, LATEST EDITIONS. THE MANUFACTURER SHALL BE REGULARLY ENGAGED IN METAL BUILDING DESIGN AND MANUFACTURING. CURRENT MBMA MEMBERS ARE APPROVED. OTHERS SHALL SUBMIT PRODUCT DATA FOR REVIEW.
- D. THE METAL BUILDING SHALL BE DESIGNED TO BE SELF-SUPPORTING, AND NOT RELY ON CMU OR TILT-UP CONCRETE WALL FOR GRAVITY OR LATERAL SUPPORT UNLESS SPECIFICALLY NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS. THE BUILDING FRAME SHALL BE DESIGNED SUCH THAT LATERAL DRIFT SHALL BE LIMITED TO H/200 FOR 10-YEAR WIND OCCURRENCE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

DEVELOPMENT / LAP SPLICE SCHEDULE

DEVELOPMENT / LAP SPLICE LENGTH IN CONCRETE (f'c = 4000 PSI)				
BAR SIZE	DEVELOPMENT LENGTH (IN)		LAP SPLICE LENGTH (IN)	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
3	14	12	18	16
4	19	15	24	19
5	23	18	30	23
6	28	22	36	28
7	33	25	42	33
8	37	29	48	37

DEVELOPMENT / LAP SPLICE LENGTH IN MASONRY		
BAR SIZE	DEVELOPMENT LENGTH (IN)	LAP SPLICE LENGTH (IN)
3	14	18
4	18	24
5	23	30
6	27	36
7	32	42
8	36	48

Wednesday, July 01, 2009 1:46:47 PM DRAWING: \\scc\disc\proj\seth120-07060 Ohio County\CONFORMED SET 5-09\STRUCTURALS-002 STRUCTURAL GENERAL NOTES DWG LAYOUT: S-002 USER NAME: JEREMY M. FRONIGILLO

TETRA TECH
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PHONE: (606) 223-8600 FAX: (606) 224-1929

PROJECT RECORD

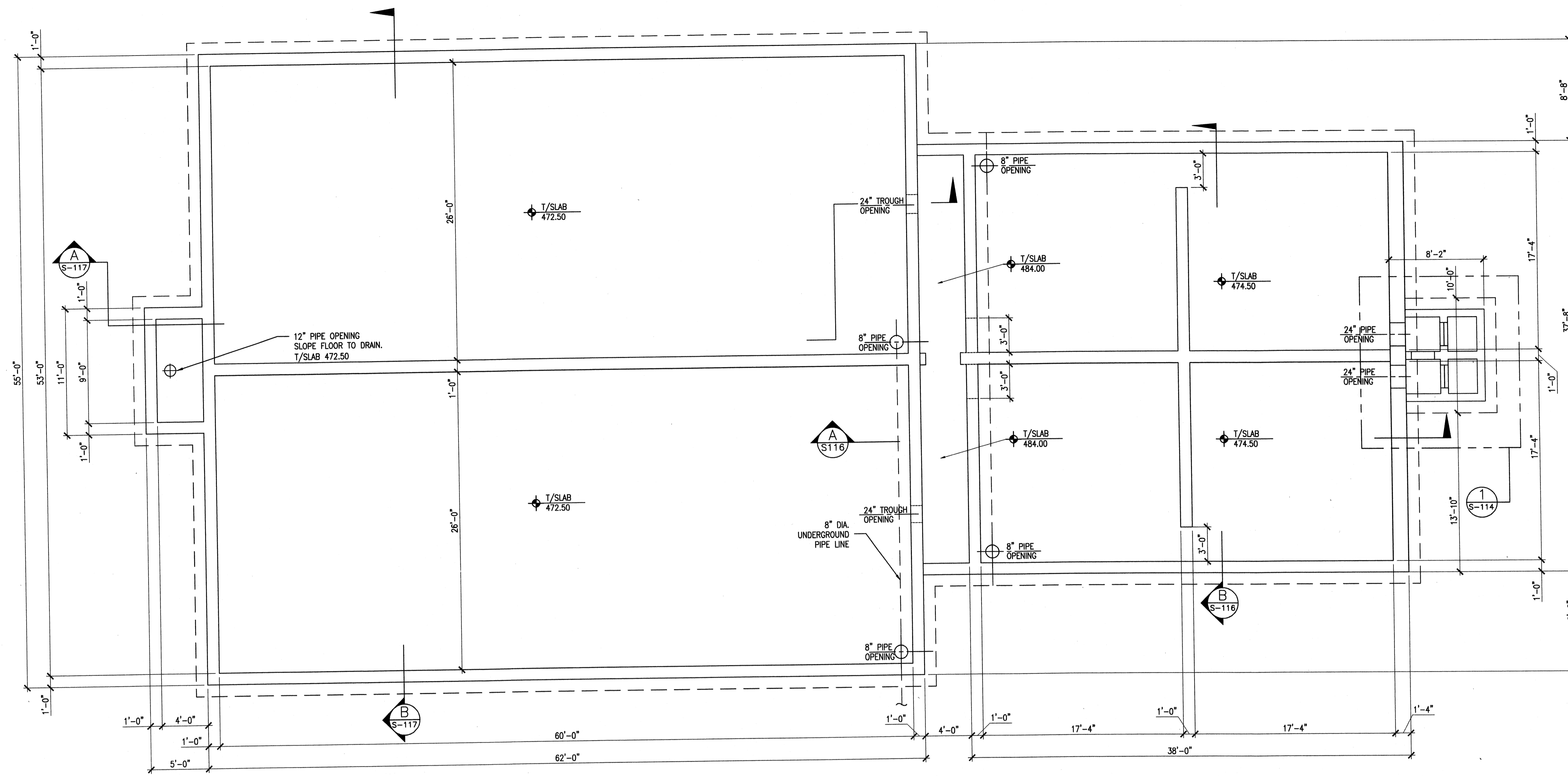
CONFORMED SET 5/09
STATE OF KENTUCKY
MATTHEW PETALA
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 12/31/2012

BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
GENERAL STRUCTURAL NOTES
Project No.: 120-07060
Designed By: BIGG
Drawn By: VLR
Checked By: MSP

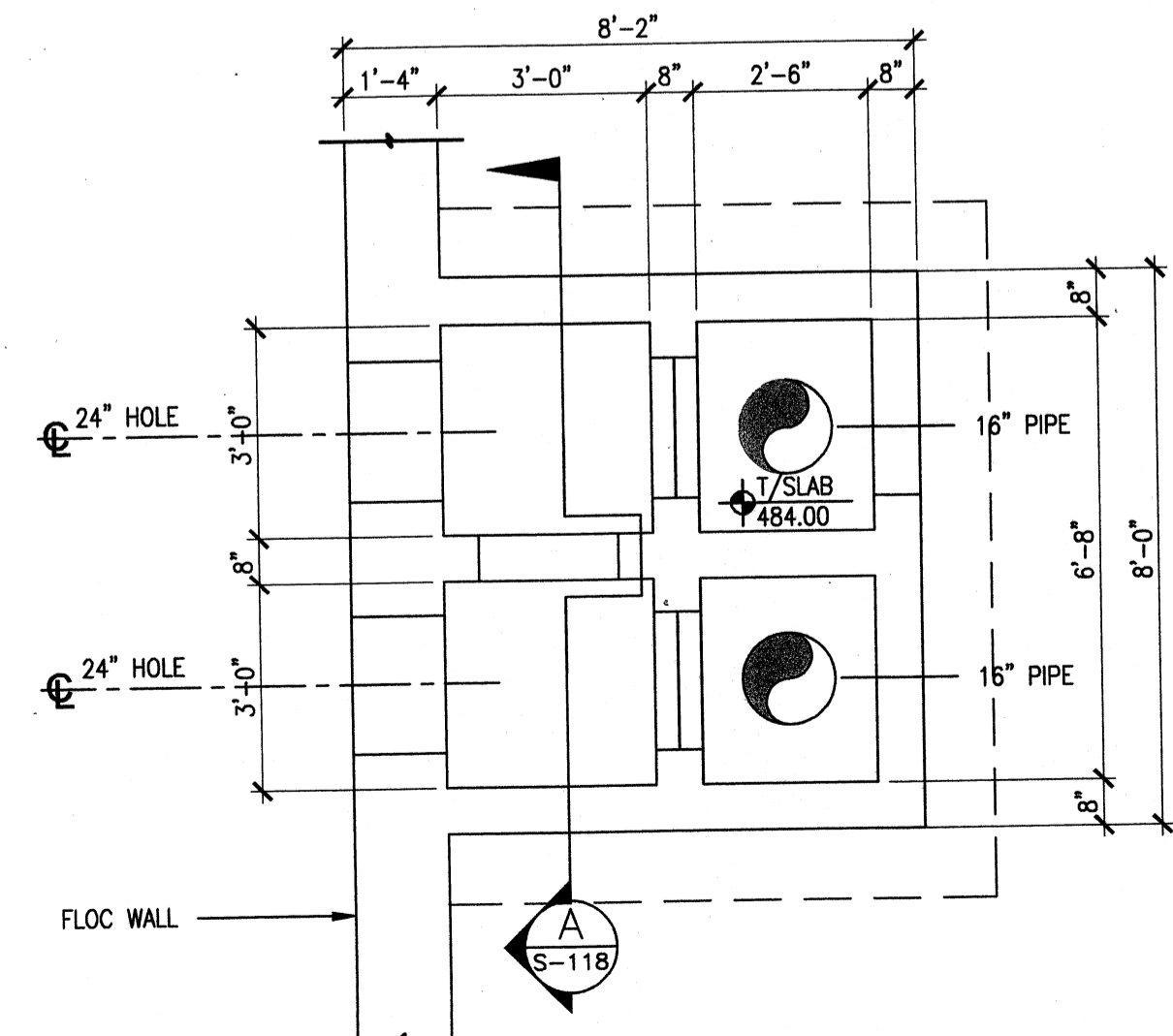
S-002

Wednesday, July 15, 2009 3:17:59 PM DRAWING: \\coriffis3\projects\120-07060 Ohio County\CONFORMED SET 5-09\STRUCTURAL\114 SEDIMENTATION BASIN FOUNDATION PLAN .DWG LAYOUT: S114 USER NAME: JEREMY M. FRONGILLO



SEDIMENTATION BASINS FOUNDATION PLAN
SCALE: 3/16" = 1'-0"

FLOCCULATION BASINS FOUNDATION PLAN
SCALE: 3/16" = 1'-0"



DETAIL 1
SCALE: 3/8" = 1'-0"
RAPID MIX BASIN FOUNDATION PLAN

- SHEET NOTES:**
1. TUBE SETTLER SUPPORTS SHALL BE PROVIDED BY MANUFACTURER AT CONCRETE SIDEWALLS WITH STAINLESS STEEL EPOXY BOLTS. DO NOT SUPPORT FROM WALKWAYS ABOVE.
 2. COMPLETE CONSTRUCTION ON ALL WALKWAYS BEFORE BACKFILLING OF SOIL AROUND TANK OR ADEQUATELY BRACE THE EXTERIOR WALLS UNTIL FINISHED WITH WALKWAY CONSTRUCTION. BRACING CALCULATIONS SHALL BEAR THE ORIGINAL SIGNATURE AND SEAL OF A KENTUCKY REGISTERED ENGINEER.
 3. SEE CIVIL AND MECHANICAL SHEETS FOR PIPELINE SIZES, LOCATIONS AND ELEVATIONS.
 4. DETAIL ALL REINFORCED CONCRETE BEAMS AND SLABS IN ACCORDANCE WITH DETAIL 8/S-502.
 5. TERMINATE ALL WALL REINFORCING WITH STD. HOOKS AT ALL FOUNDATIONS AND TOP SLAB INTERSECTIONS.
 6. ALL WALL AND SLAB PENETRATION SHALL FOLLOW 6/S-502.
 7. PROVIDE FLUID-APPLIED WATER PROOFING TO CONCRETE ON ALL ELEVATED SLABS AND BEAMS AND SURFACES EXPOSED TO EARTH. REFER TO SPEC 07140.
 8. ALL WATERSTOPS SHOWN SHALL BE HYDROPHILIC, U.N.O.
 9. SLAB AND WALL CONSTRUCTION JOINTS SHALL FOLLOW DETAIL 2/S-502.

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PROJECT RECORD

CONFORMED SET 5/09
STATE OF KENTUCKY
MATTHEW PETA JA
REGISTERED PROFESSIONAL ENGINEER
No. 10749

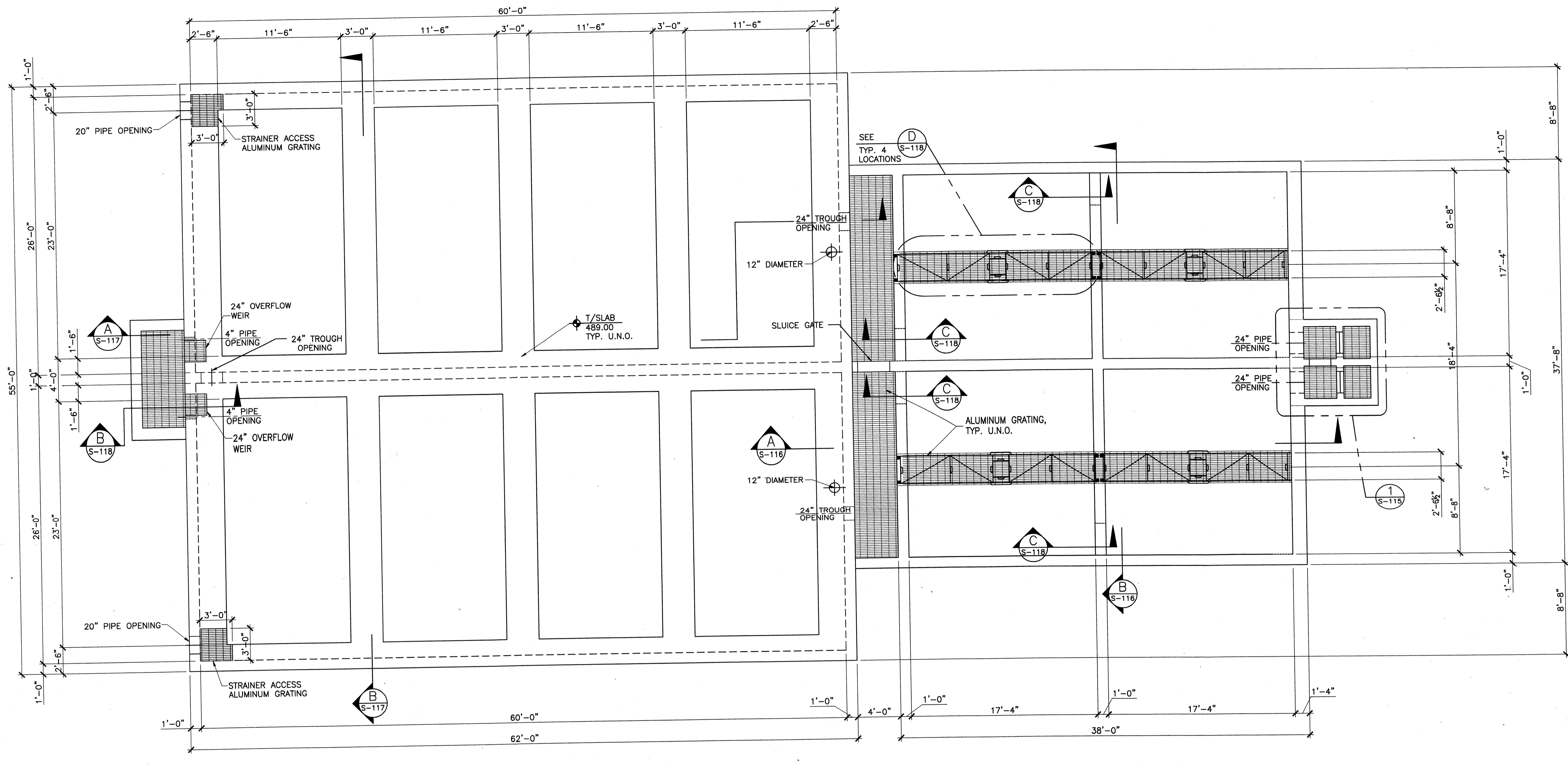
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
SEDIMENTATION BASIN FOUNDATION PLAN

Project No.:	120-07060
Designed By:	BIGG
Drawn By:	VLR
Checked By:	MSP

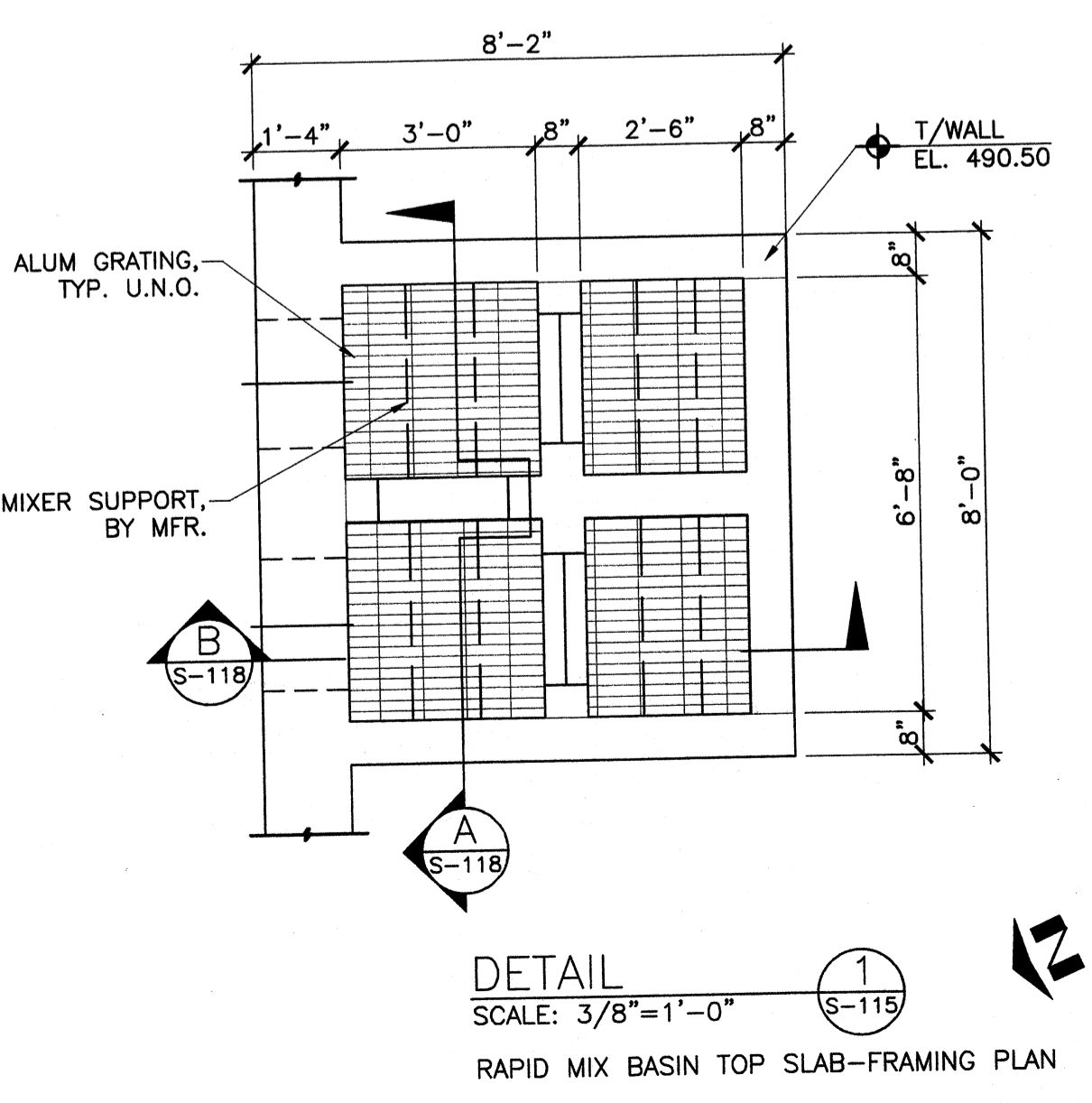
S-114
Copyright: Tetra Tech

Tuesday, July 28, 2009 10:43:06 AM DRAWING: P:\120-07060 Ohio County Redesign\ORLANDO\CONFORMED SET 5-09\STRUCTURAL\115 SEDIMENTATION BASIN TOP SLAB PLAN.DWG LAYOUT: S-115 USER NAME: JEREMY M. FRONGILLO



SEDIMENTATION BASIN TOP SLAB-FRAMING PLAN
SCALE: 3/16"=1'0"

FLOCCULATION BASINS TOP SLAB-FRAMING PLAN
SCALE: 3/16"=1'0"



DETAIL 1
SCALE: 3/8"=1'0"
RAPID MIX BASIN TOP SLAB-FRAMING PLAN

- SHEET NOTES:**
- REBAND ALL ALUMINUM GRATING CUT IN FIELD WITH WELDED CONNECTION.
 - COMPLETE CONSTRUCTION ON ALL TOP SLAB BEFORE BACKFILLING OF SOIL AROUND TANK OR ADEQUATELY BRACE THE EXTERIOR WALLS UNTIL FINISHED WITH TOP SLAB CONSTRUCTION. BRACING CALCULATIONS SHALL BEAR THE ORIGINAL SIGNATURE AND SEAL OF A KENTUCKY REGISTERED ENGINEER.
 - ALL WATERSTOPS SHOWN SHALL BE HYDROPHILIC, UNO.
 - SLAB AND WALL CONSTRUCTION JOINTS SHALL FOLLOW DETAIL 2/S-502.
 - CONTRACTOR SHALL SUBMIT POUR SEQUENCE SHOP DRAWING.
 - REFER TO MECHANICAL FOR GROUT PLACEMENT AND DETAIL 4/S-502.
 - SEE CIVIL AND MECHANICAL SHEETS FOR PIPELINE SIZES, LOCATIONS AND ELEVATIONS.
 - DETAIL ALL REINFORCED CONCRETE BEAMS AND SLABS IN ACCORDANCE WITH DETAIL 8/S-502.
 - TERMINATE ALL WALL REINFORCING W/STD. HOOKS AT ALL FOUNDATION AND TOP SLABS.
 - ALL WALL AND SLAB PENETRATION SHALL FOLLOW 8/S-502.

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PROJECT RECORD

CONFORMED SET 5/09

STATE OF KENTUCKY
MATTHEW PETAJA
REGISTERED PROFESSIONAL ENGINEER
No. 12716

BY	DESCRIPTION	DATE	MARK

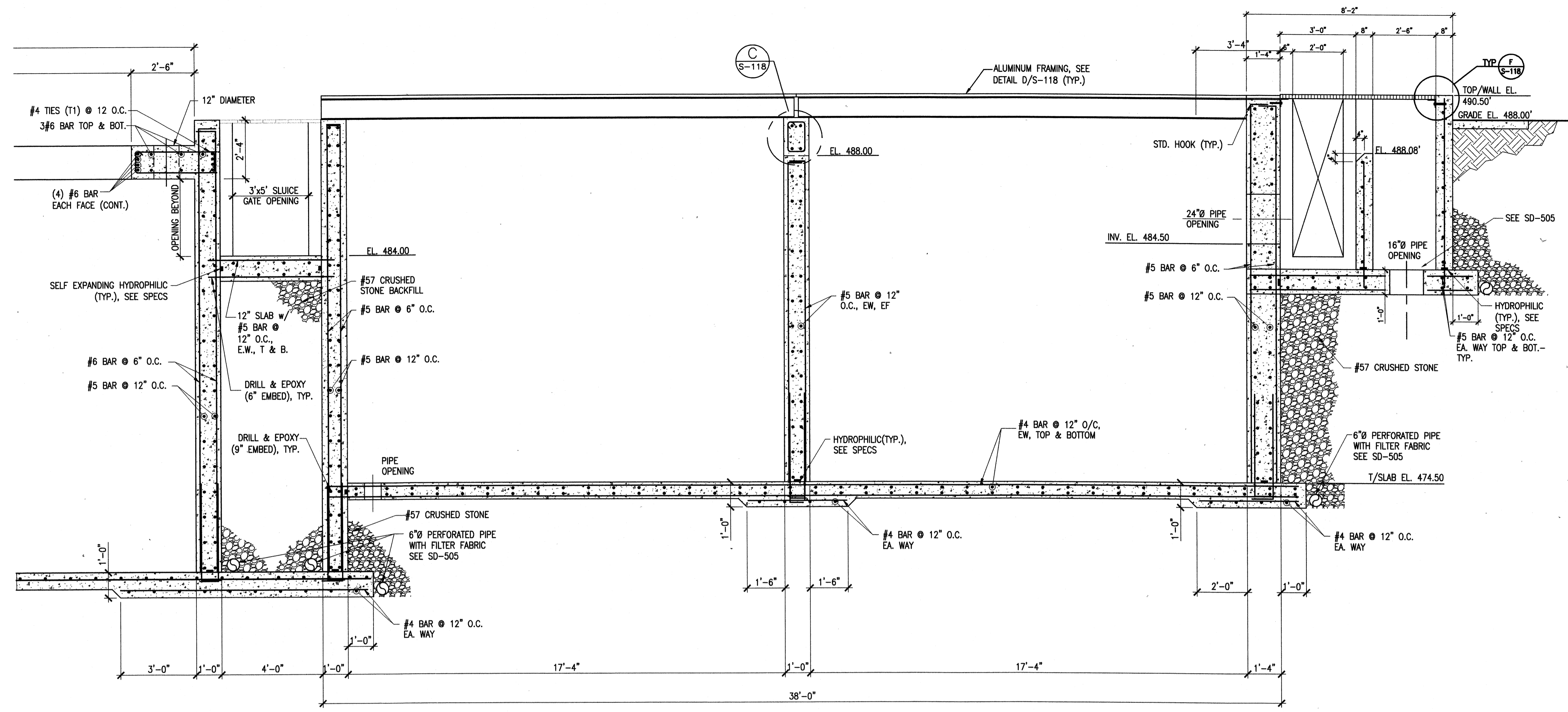
Client: OHIO COUNTY WATER DISTRICT
Ohio County Water District
Water Treatment Plant

Project No.: 120-07060
Designed By: BIGG
Drawn By: VLR
Checked By: MSP

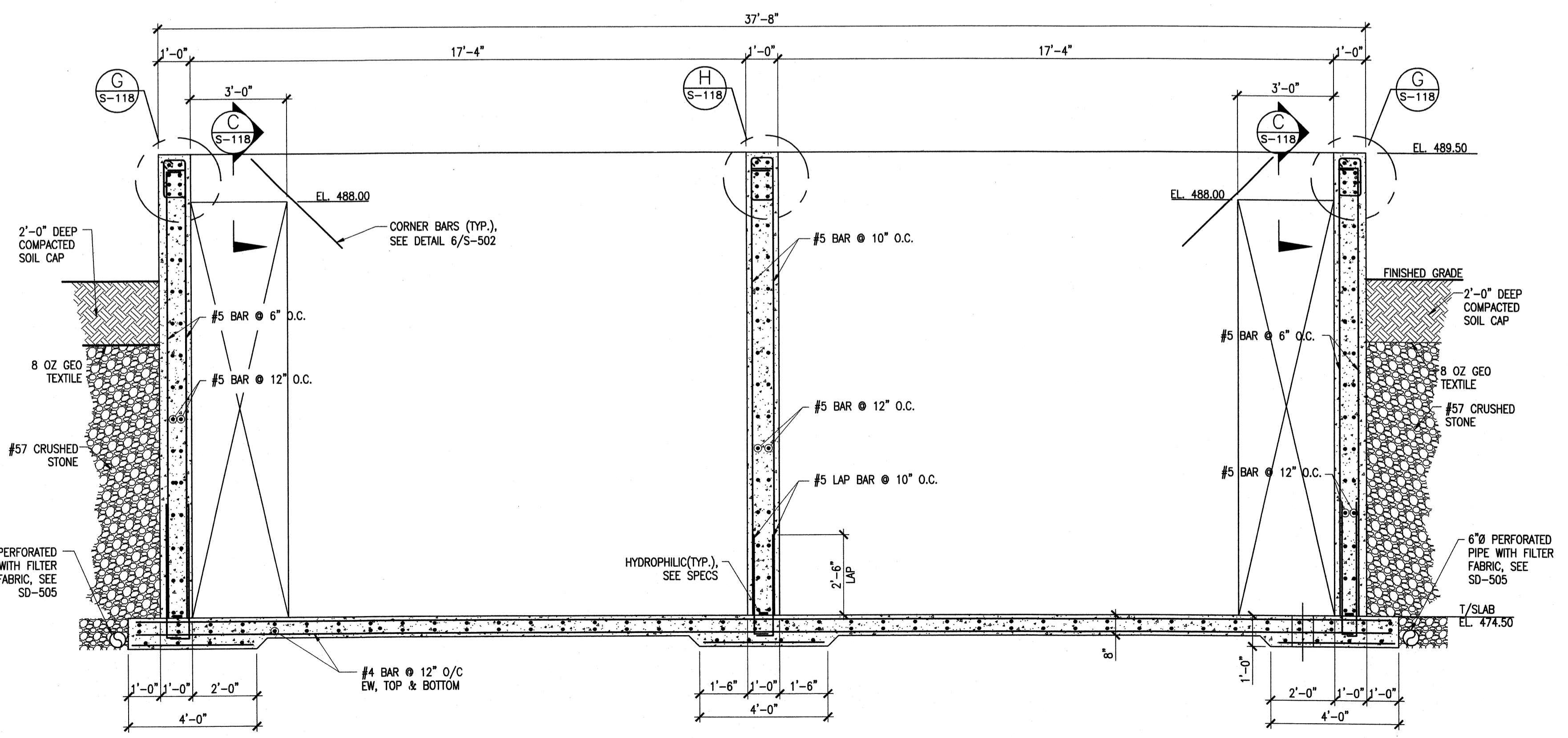
S-115
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Thursday, July 16, 2009 2:26:48 PM DRAWING: \\netofr3\projects\120-07060 Ohio County\CONFORMED SET 5-09\STRUCTURAL\S-116 to 118 SEDIMENTATION BASIN SECTIONS DWG LAYOUT: S-116 USER NAME: JEREMY M. FRONIGILLO

SHEET NOTES:
1. SEE CIVIL AND MECHANICAL SHEETS FOR PIPELINE SIZES, LOCATIONS AND ELEVATIONS.



SECTION A
SCALE: 3/8"=1'-0"



SECTION B
SCALE: 3/8"=1'-0"

TETRA TECH
www.tetratech.com
800 Corporate Drive
Suite 200, Lexington, Ky, 40503
PHONE (609) 223-8000 FAX: (609) 224-1025

PROJECT RECORD

CONFORMED SET 5/09
STATE OF KENTUCKY
MATTHEW PETAJA
Professional Engineer
No. 11776

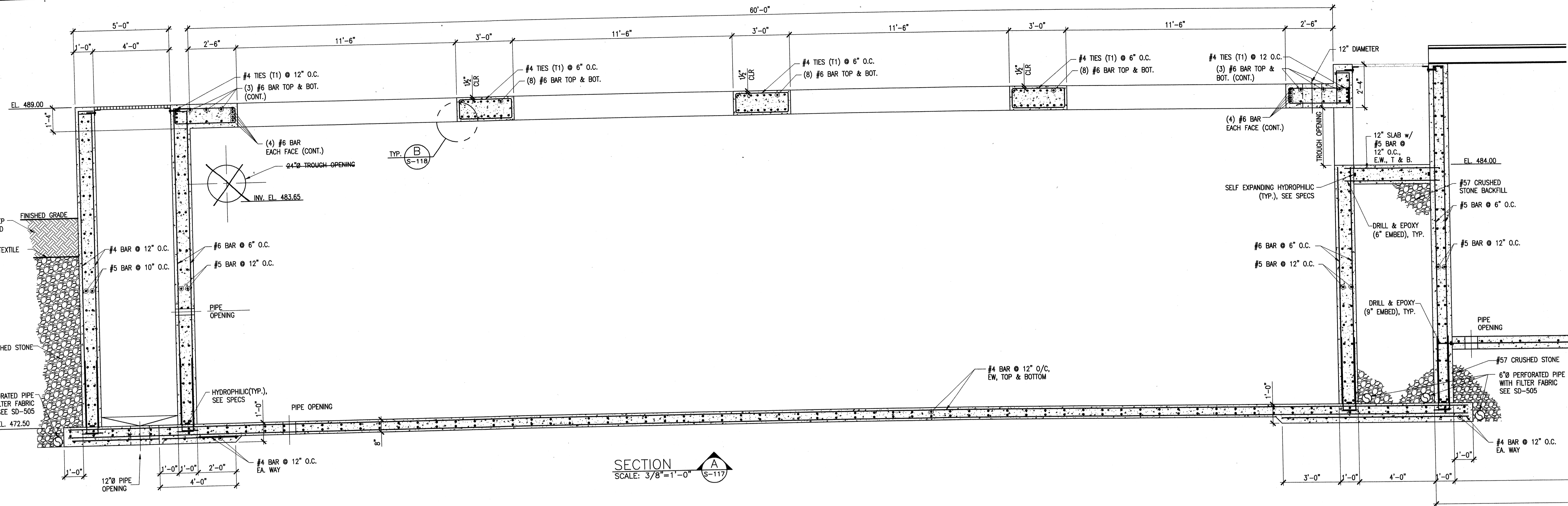
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
SEDIMENTATION BASIN
SECTIONS

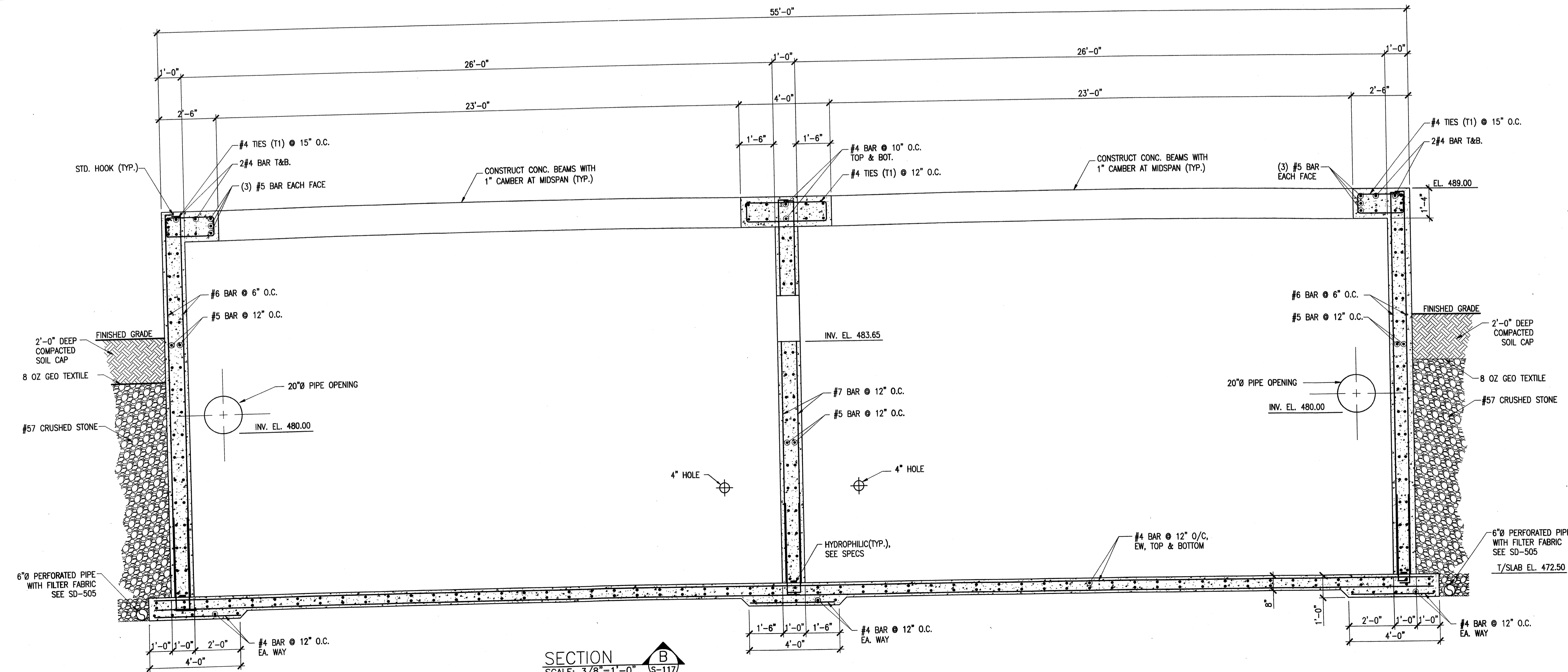
Project No.: 120-07060
Designed By: BIGG
Drawn By: VLR
Checked By: MSP

S-116

Tuesday, July 28, 2009 10:47:45 AM DRAWING: P:\120-07060 Ohio County Redesign\ORLANDO\CONFORMED SET 5-09\STRUCTURAL\118 to 118 SEDIMENTATION BASIN SECTIONS.DWG LAYOUT S-117 USER NAME: JEREMY M. FRONIGILLO

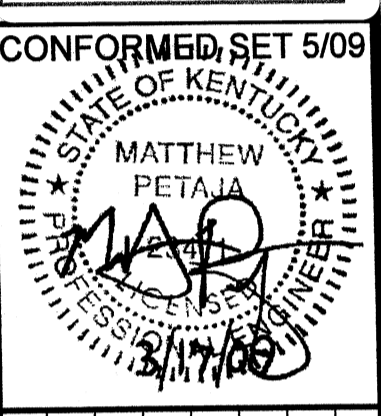


SECTION A-A
SCALE: 3/8"=1'-0"



SECTION B-B
SCALE: 3/8"=1'-0"

- SHEET NOTES:
1. SEE CIVIL AND MECHANICAL SHEETS FOR PIPELINE SIZES, LOCATIONS AND ELEVATIONS.



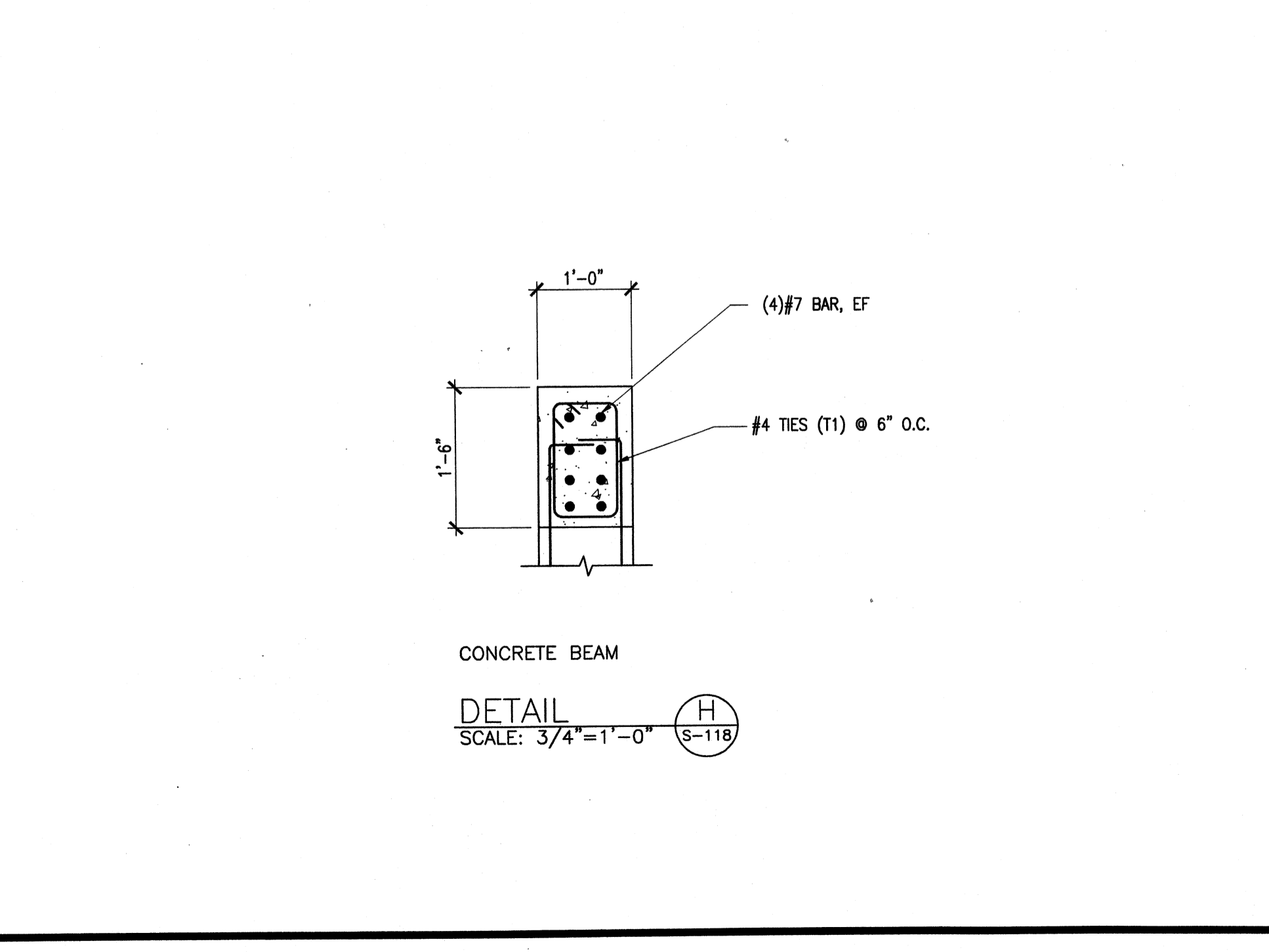
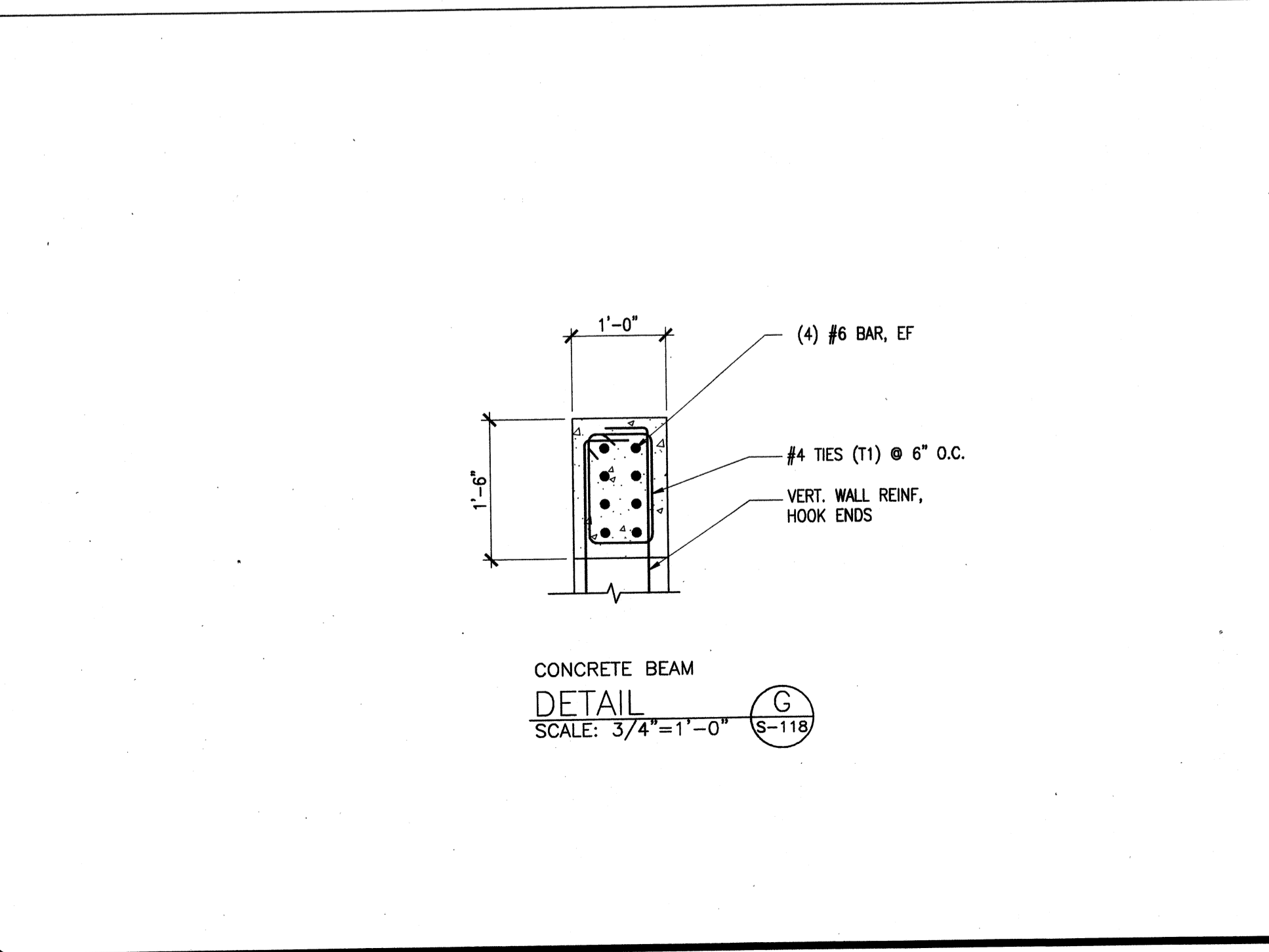
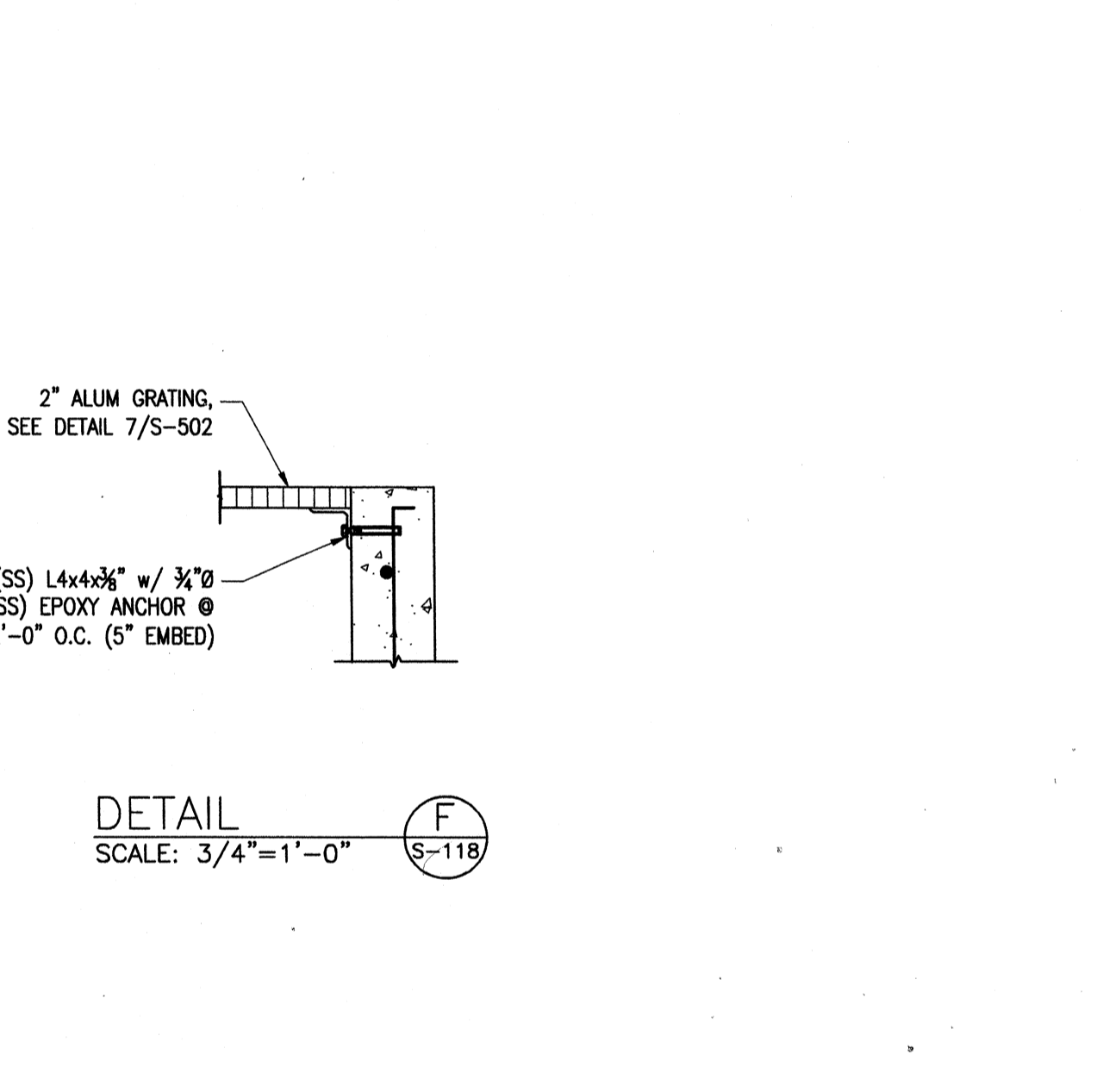
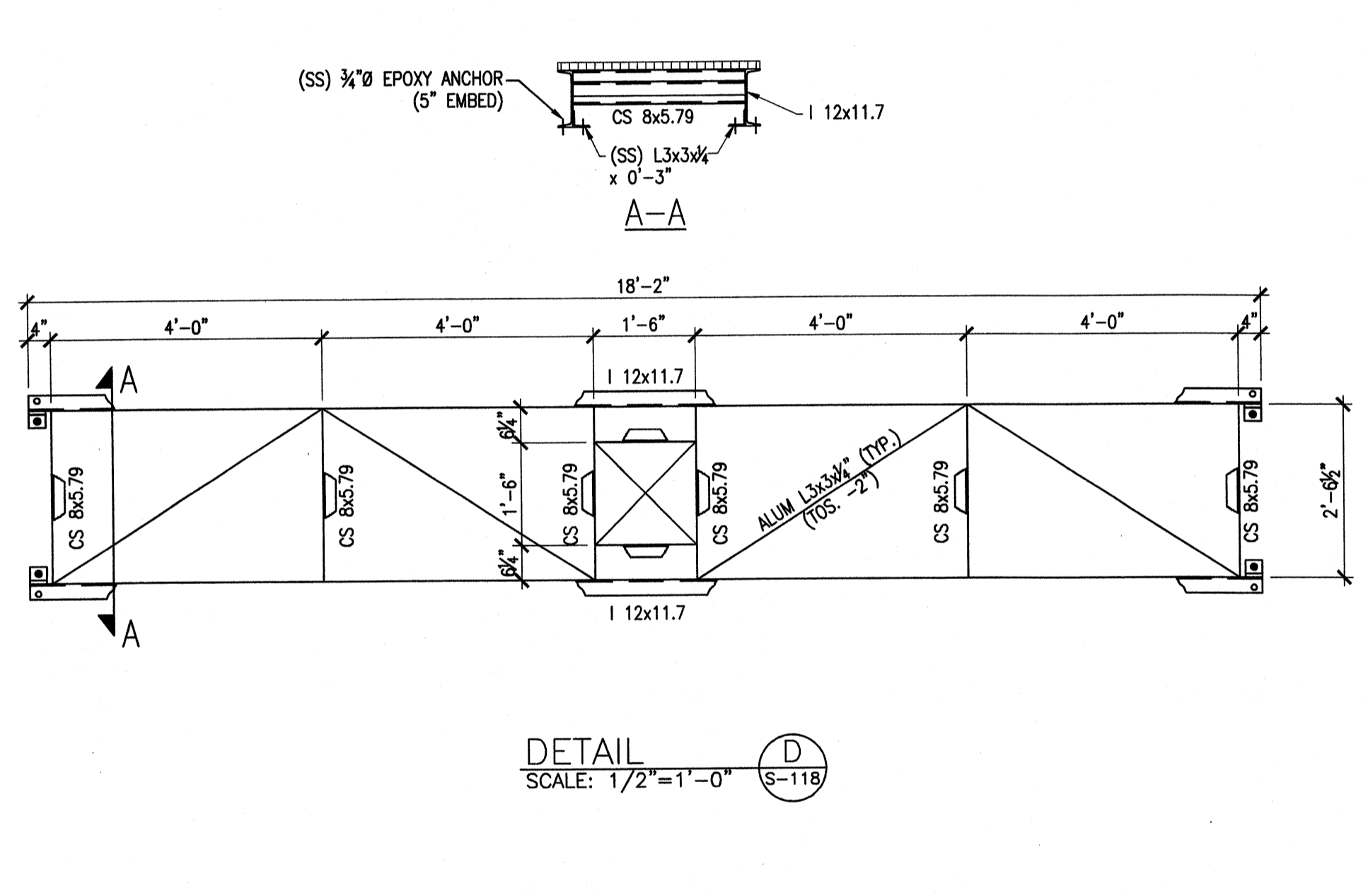
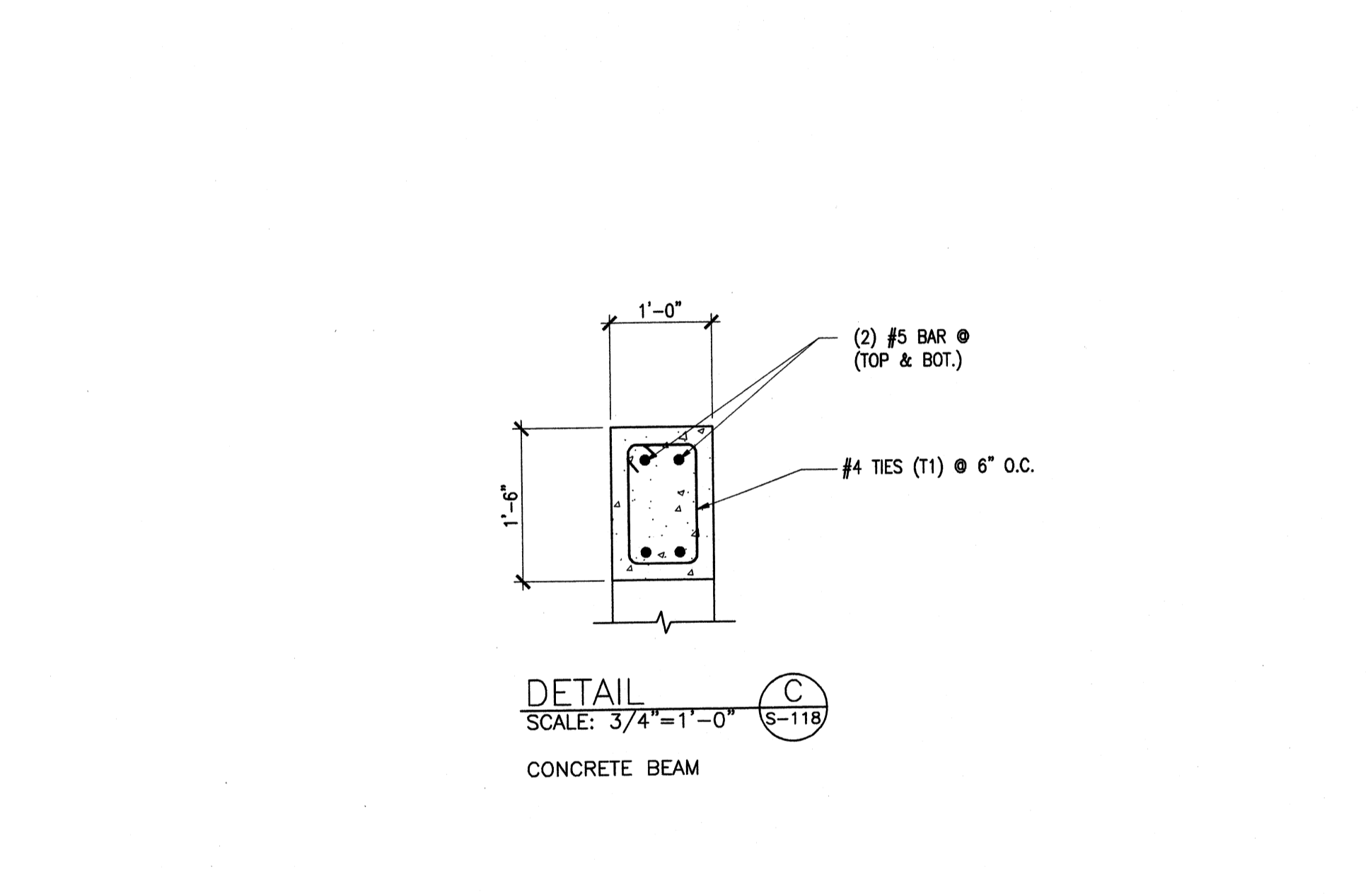
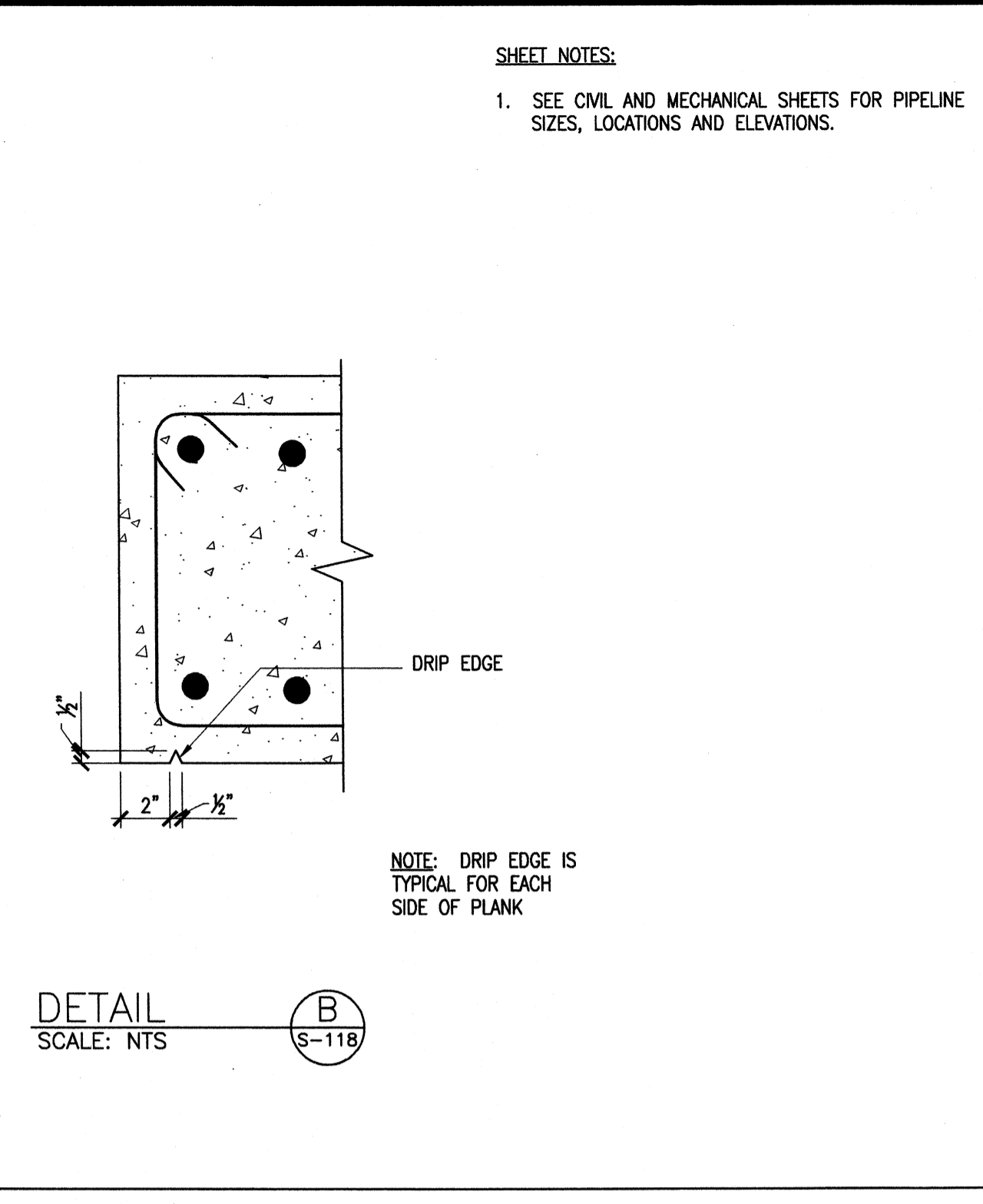
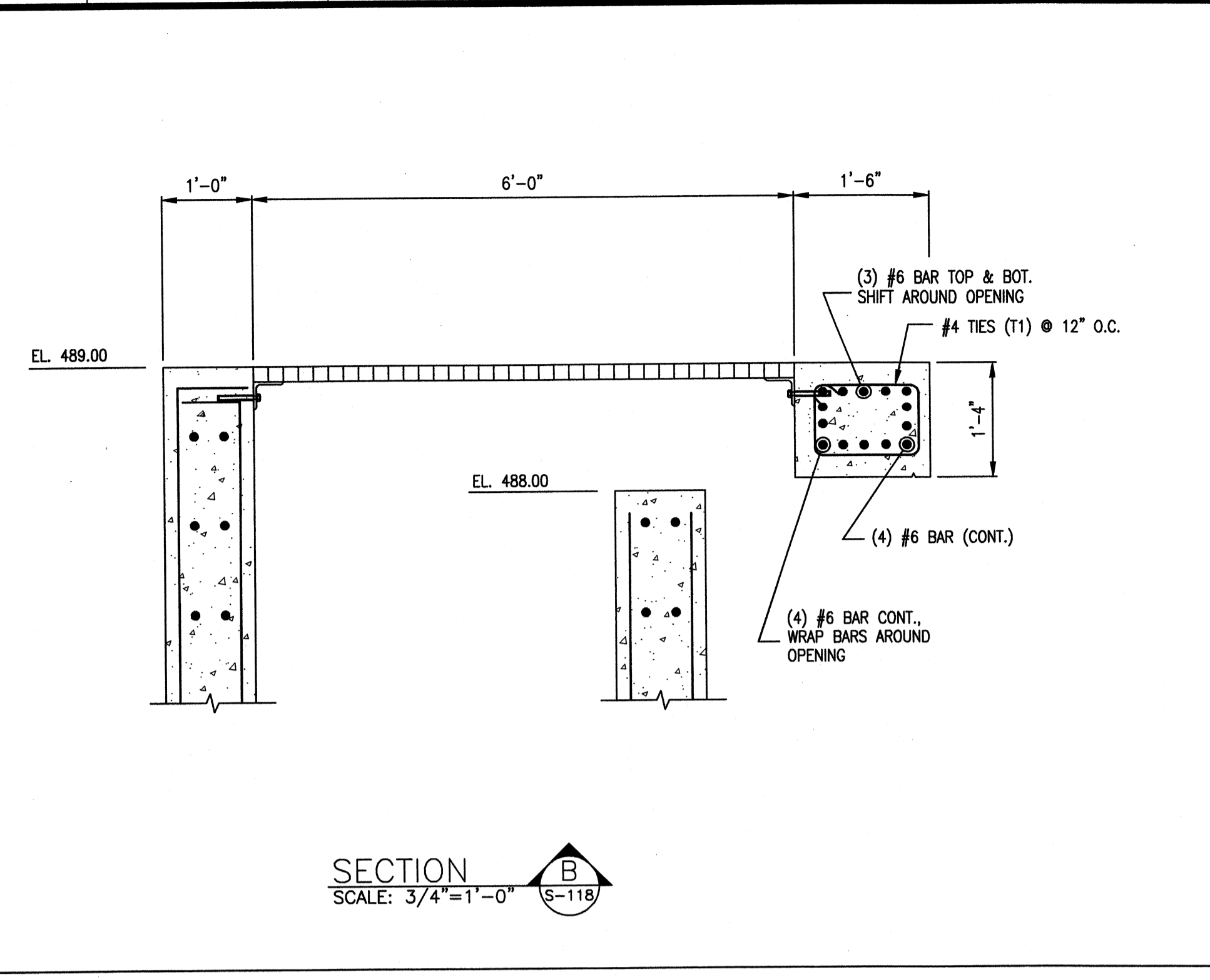
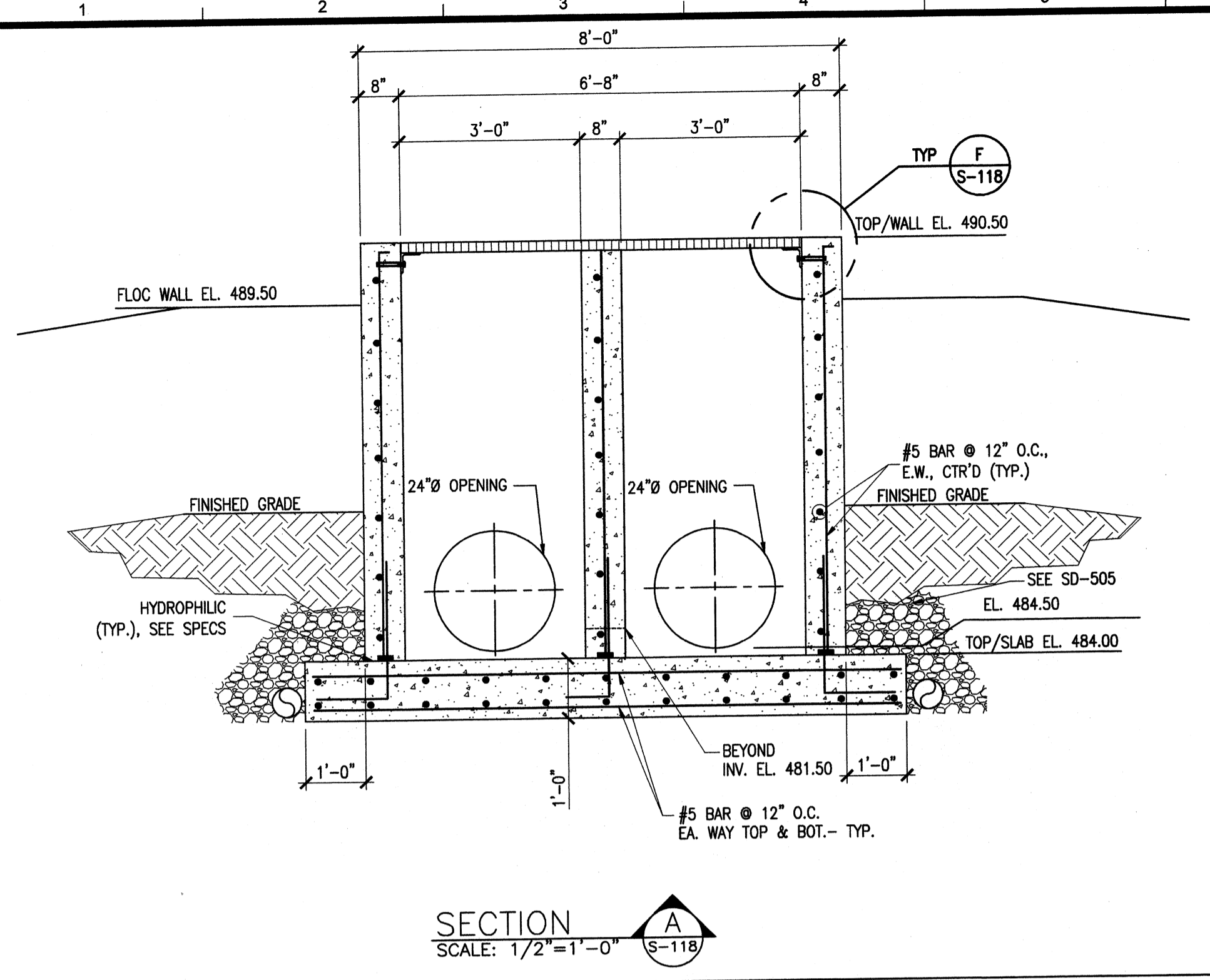
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT
 Ohio County Water District
 Water Treatment Plant
 SEDIMENTATION BASIN SECTIONS

Project No.: 120-07060
 Designed By: BIGG
 Drawn By: VLR
 Checked By: MSP

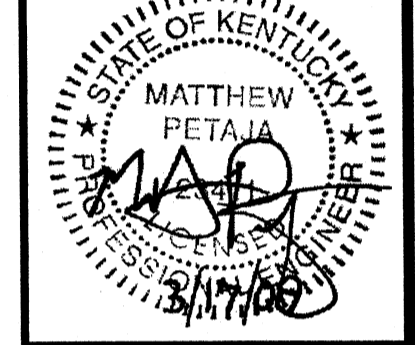
S-117
 Copyright: Tetra Tech

Thursday, July 16, 2009 2:26:52 PM DRAWING: \\corif33\projects\120-07060 Ohio County\CONFORMED SET 5-09\STRUCTURAL\IS-118 to 118 SEDIMENTATION BASIN SECTIONS .DWG LAYOUT: S-118 USER NAME: JEREMY M. FRONSILLO



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800 Corporate Drive
Suite 200, Leipsville, PA 15110
PHONE: (859) 223-8000 FAX: (859) 224-1025

PROJECT RECORD



BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

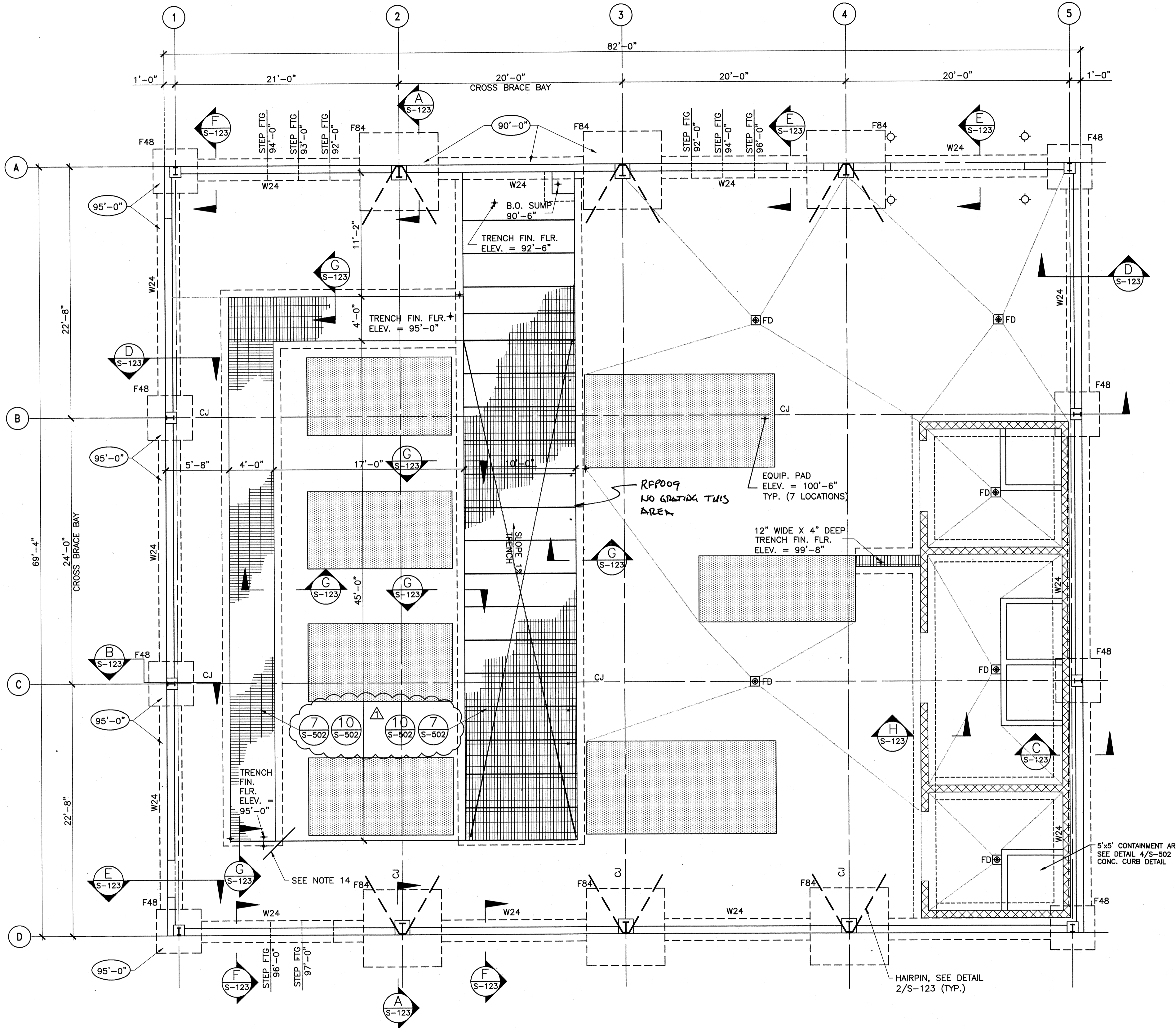
SEDIMENTATION BASIN SECTIONS

Project No.: 120-07060
Designed By: BGG
Drawn By: VLR
Checked By: MSP

S-118

Copyright: Tetra Tech

Wednesday, July 01, 2009 1:47:28 PM DRAWING: \\netorfs3\projects\120-07060 Ohio County\CONFORMED SET 5-09\STRUCTURALS\121 ULTRAFILTRATION BUILDING FOUNDATION PLAN .DWG LAYOUT: S-121 USER NAME: JEREMY M. FRONGILLO



UF BUILDING FOUNDATION PLAN
SCALE: 3/16"=1'-0"

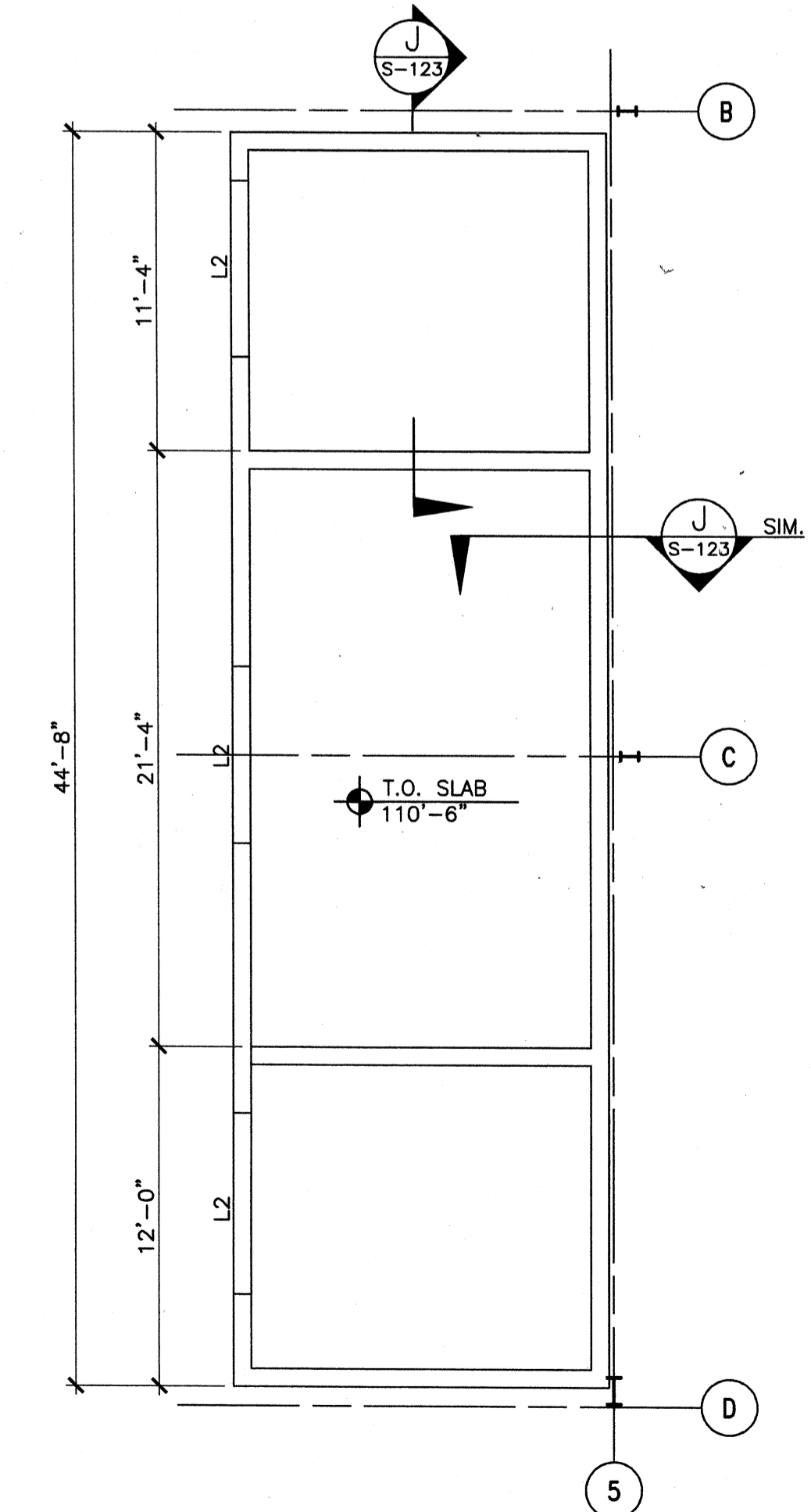
COLUMN FOOTING SCHEDULE					
MARK	SIZE	THICKNESS	REINFORCEMENT FOR ONE FOOTING		REMARKS
			TRANSVERSE	LONGITUDINAL	
F48	4'-0"x4'-0"	12"	(4)#5x3'-6" BOT.	(4)#5x3'-6" BOT.	NONE
F84	7'-0"x7'-0"	16"	(9)#6x6'-6" BOT.	(9)#6x6'-6" BOT.	NONE

WALL FOOTING SCHEDULE					
MARK	SIZE	THICKNESS	REINFORCEMENT FOR ONE FOOTING		REMARKS
			TRANSVERSE	LONGITUDINAL	
W24	2'-0" CONT.	12"	#4x2'-0" @ 12" BOT.	(2)#5 CONT. BOT.	NONE

NOTE: LONGITUDINAL REINFORCING SHALL BE PLACED AS OUTER MOST LAYER, U.N.O.

- LEGEND:
- ⊙ 6" PIPE BOLLARD
 - ▣ 8" CMU WALLS: REINFORCE W/ #5@40" O/C
 - ▨ 6" CONCRETE EQUIPMENT PAD. SEE DETAIL 1/S-503.
 - ▧ FRP FLOOR GRATING, SEE PLAN.

- FOUNDATION NOTES:
- STRUCTURAL ELEVATIONS ARE BASED ON A TOP OF SLAB OF 100'-0" AT NON-SLOPED AREAS, EQUAL TO SITE EL. 477.50', U.N.O.
 - SEE SHEET S-001 FOR GENERAL NOTES AND FOUNDATION DESIGN CRITERIA.
 - VERIFY ALL DIMENSIONS, ELEVATIONS AND SLAB FINISHES WITH ARCHITECTURAL DRAWINGS BEFORE BEGINNING CONSTRUCTION. SEE ARCHITECTURAL FOR SLOPES, DEPRESSIONS, DROPS AND DRAIN LOCATIONS IN SLAB.
 - TOP OF FOOTING SHALL BE AT 98'-0" UNLESS NOTED OTHERWISE ON PLAN (X-X').
 - CENTERLINE OF COLUMNS AND WALLS SHALL COINCIDE WITH THE CENTERLINE OF FOUNDATIONS, UNLESS NOTED OTHERWISE.
 - INTERIOR SLAB ON GRADE SHALL BE A MINIMUM 6" CONCRETE SLAB WITH ONE LAYER OF #4 BARS @ 12" O/C, MID-DEPTH, UNLESS NOTED OTHERWISE. SEE CIVIL FOR EXTERIOR PAVING.
 - CJ - DENOTES CRACK CONTROL JOINTS. SEE DETAIL 2/S-501 FOR TYPICAL JOINT DETAILS.
 - FD - DENOTES FLOOR DRAIN. SEE DETAIL 11/S-501.
 - SLAB ON GRADE SHALL BE CAST ON A 10 MIL. VAPOR BARRIER OVER COMPACTED SUBGRADE. SEE SPECS FOR COMPACTION REQUIREMENTS.
 - F# AND W# DENOTE FOOTING SIZES. SEE FOOTING SCHEDULE THIS SHEET.
 - L# - DENOTES MASONRY LINTEL. SEE DETAIL 8/S-501 FOR MASONRY LINTELS SCHEDULE.
 - REFER TO DETAIL 1/S-501 FOR STEP FOOTING CONSTRUCTION.
 - ADD 2'-4"x4'-0" MID-DEPTH AT RE-ENTRANT CORNERS, FLOOR SLAB AND PIPE GALLERY SLAB.

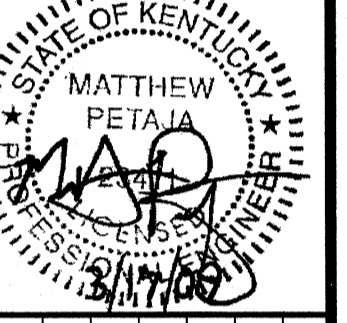


UF BUILDING PARTIAL SLAB PLAN
SCALE: 3/16"=1'-0"



PROJECT RECORD

CONFORMED SET 5/09



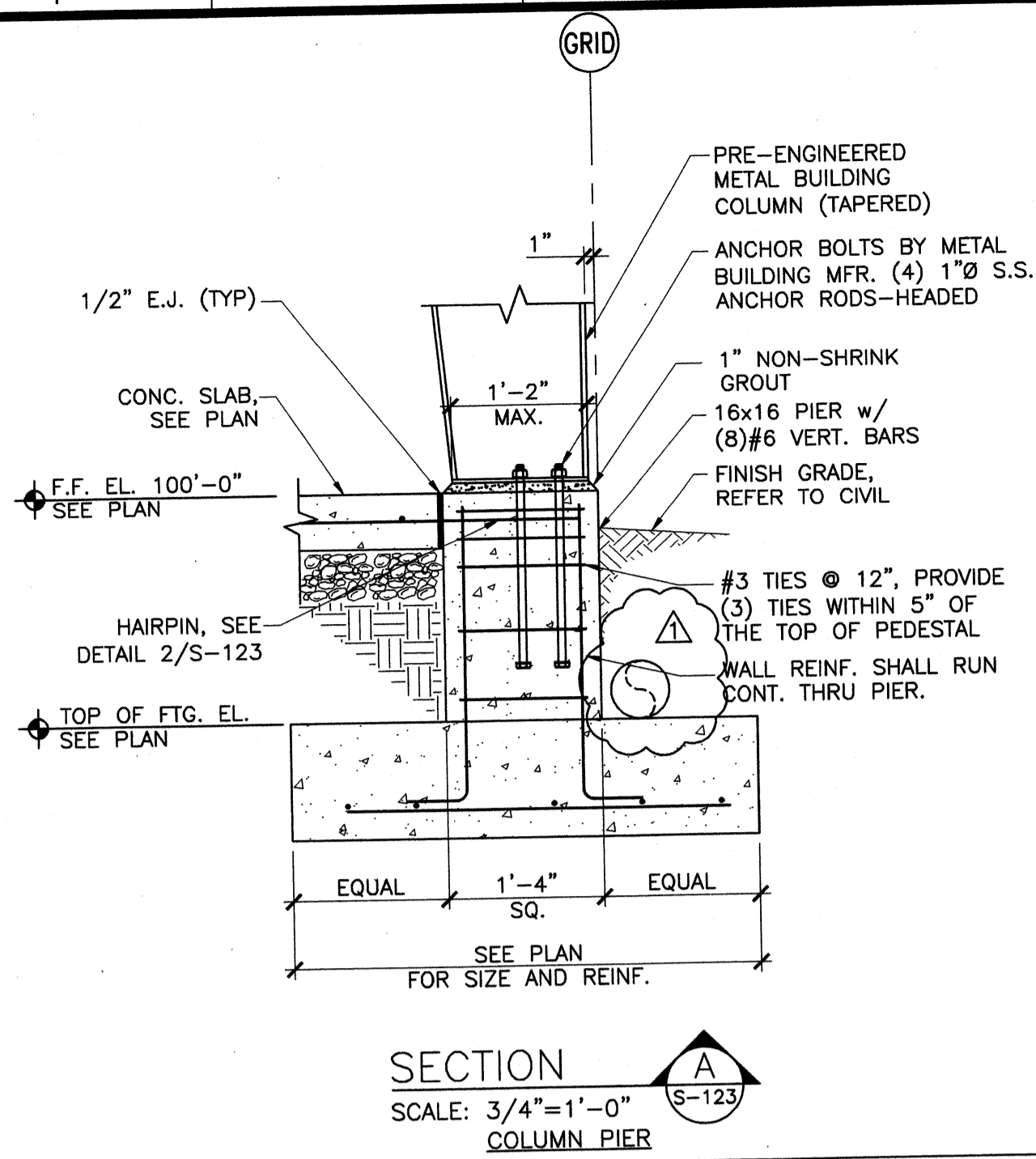
BY	DATE	DESCRIPTION
JAT	5/5/09	ADDENDUM 1

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

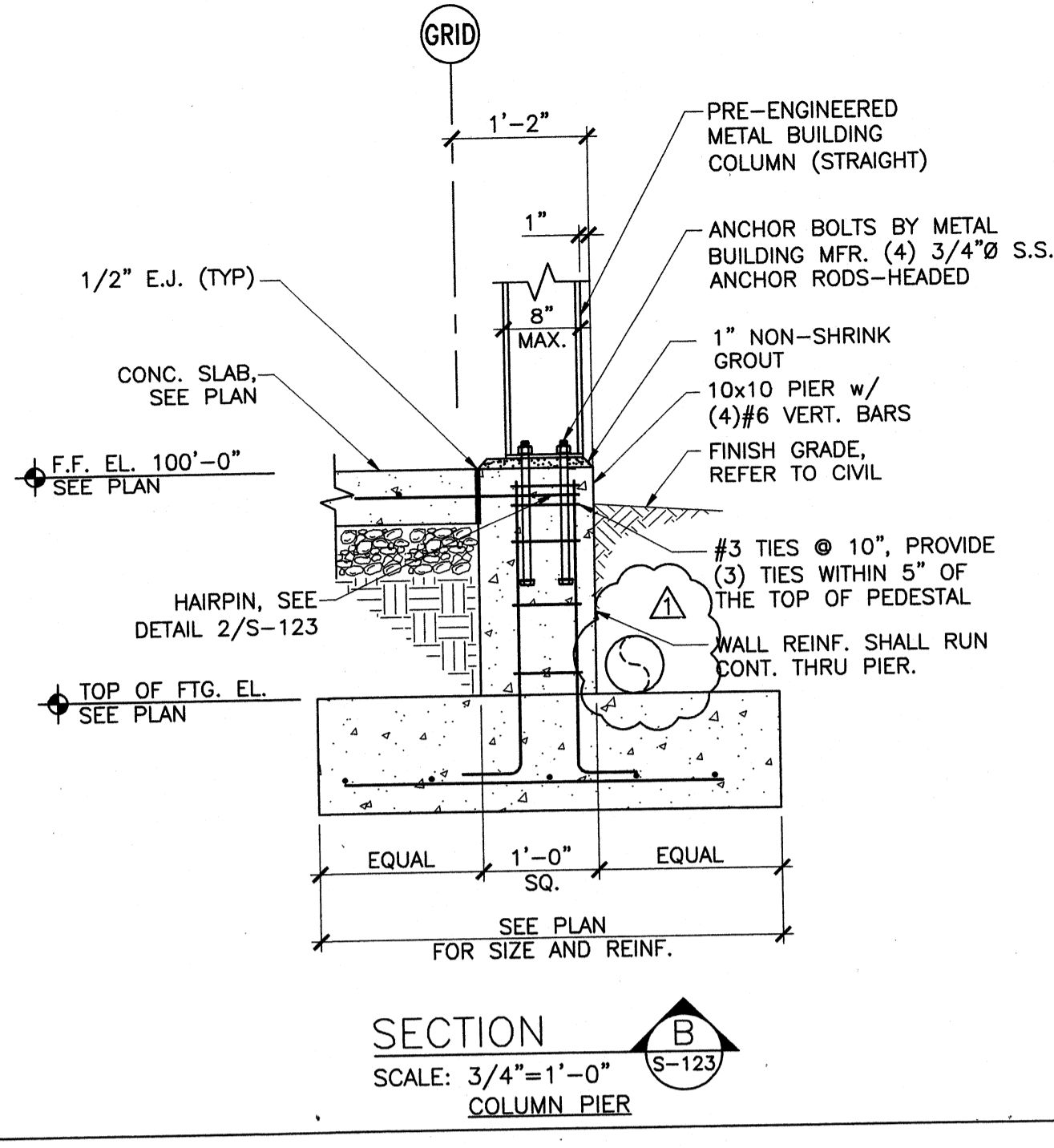
Project No.: 120-07060
Designed By: BIGG
Drawn By: VLR
Checked By: MSP

S-121

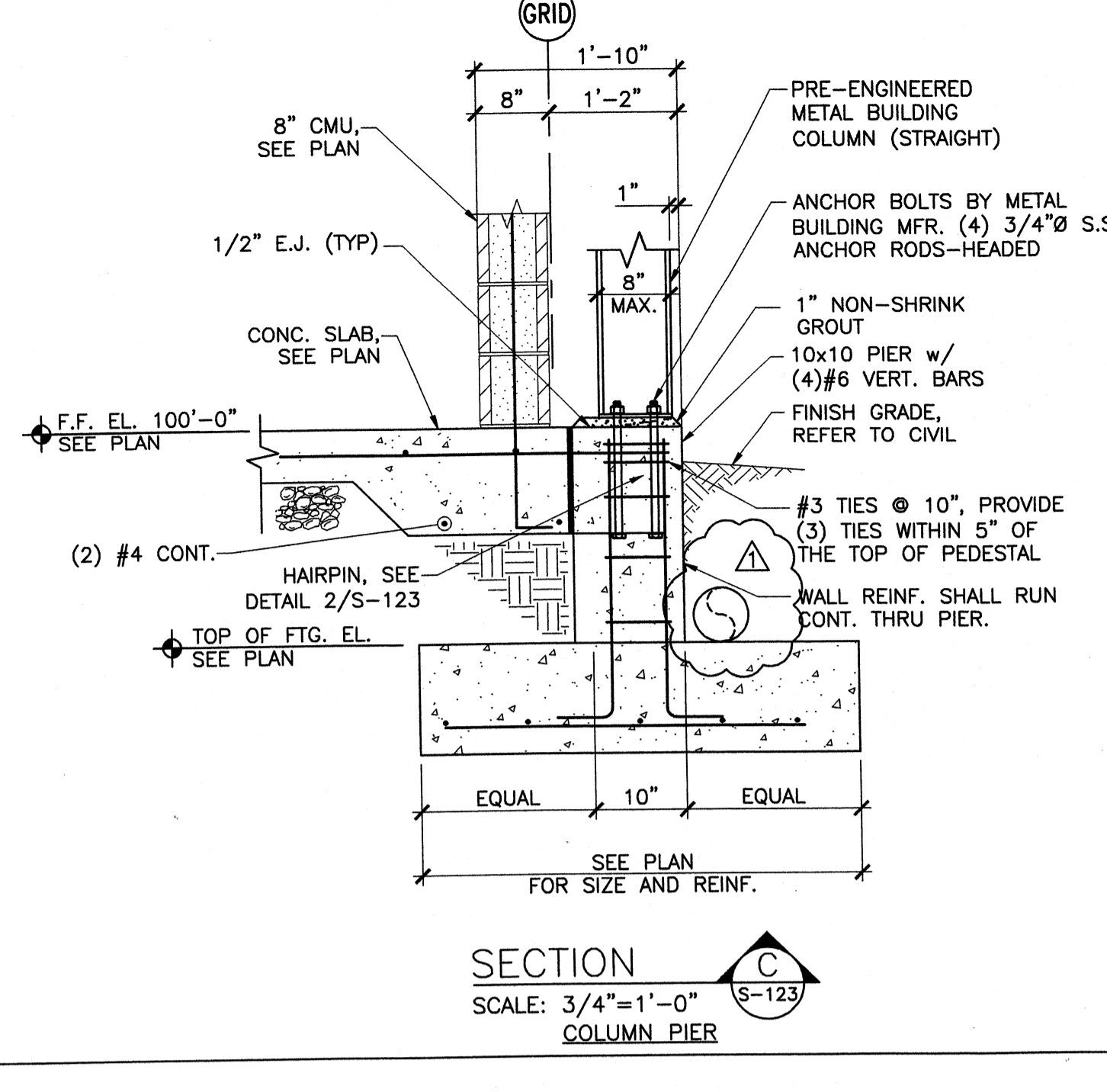
Wednesday, July 01, 2009 1:47:37 PM DRAWING: \\herofiles\projects\120-07060 Ohio County\CONFORMED SET 5-09\STRUCTURAL\123 ULTRAFILTRATION BUILDING SECTIONS - DWG LAYOUT: S-123 USER NAME: JEREMY M. FRONIGILLO



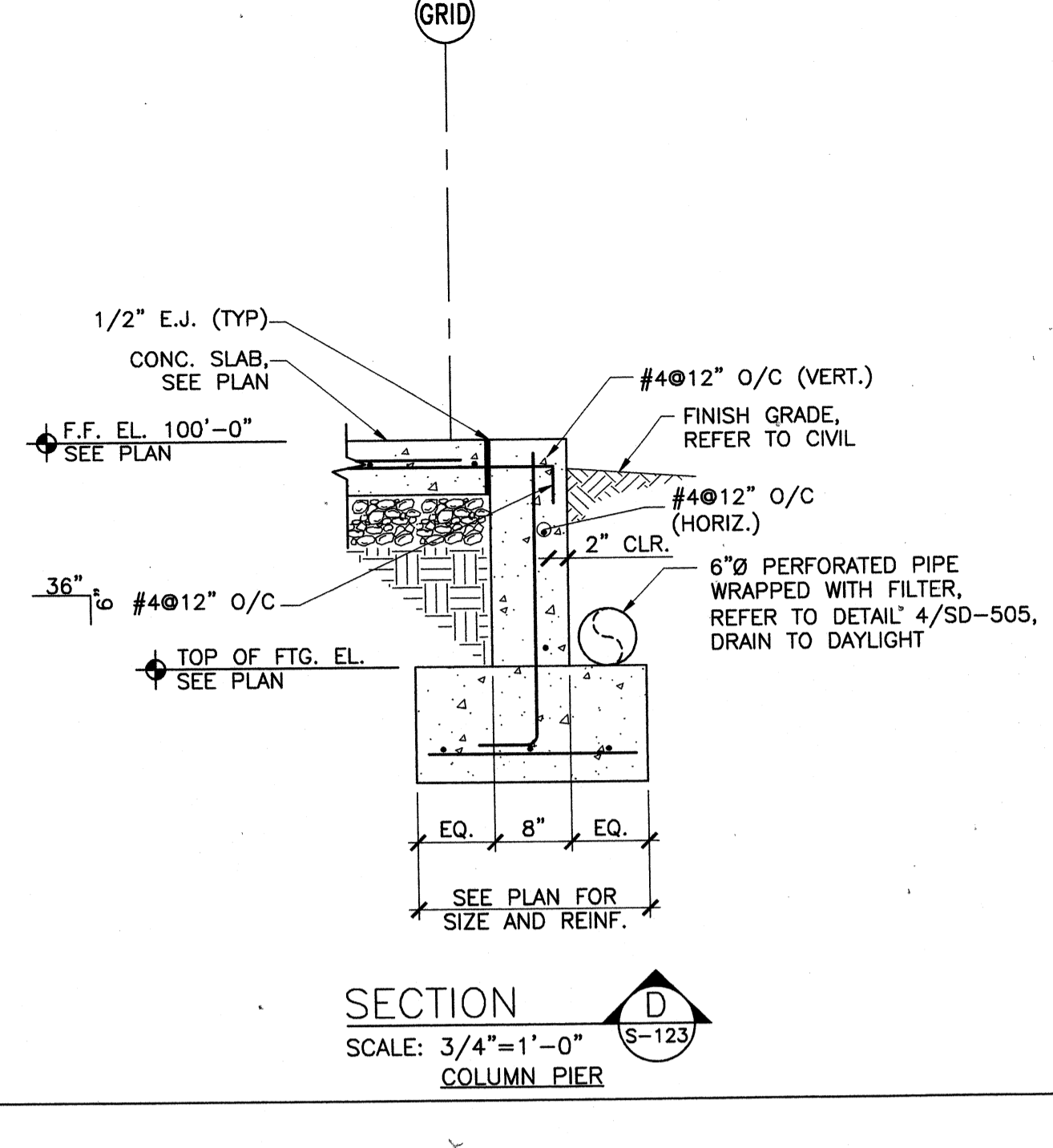
SECTION A
SCALE: 3/4"=1'-0"
COLUMN PIER



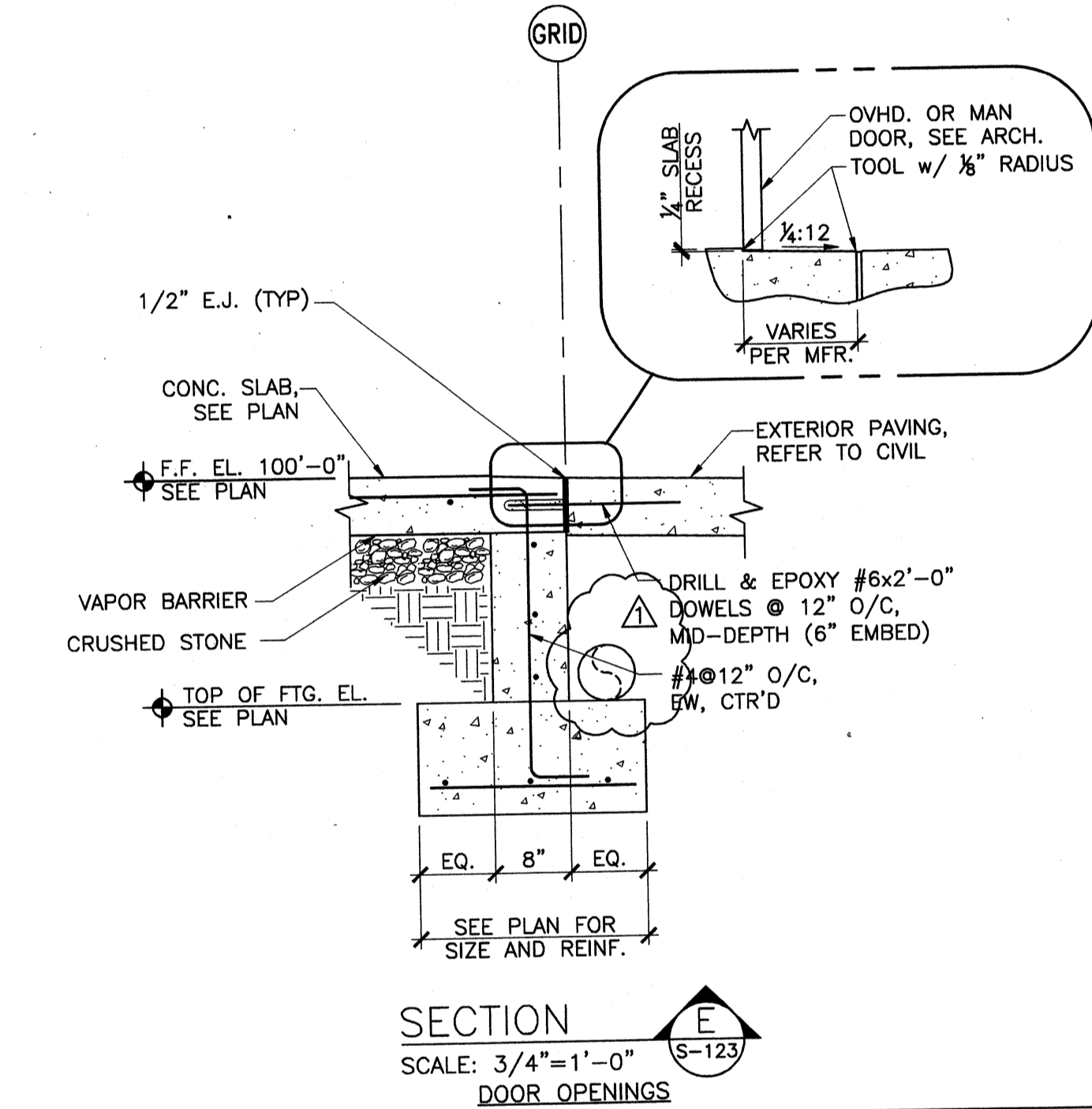
SECTION B
SCALE: 3/4"=1'-0"
COLUMN PIER



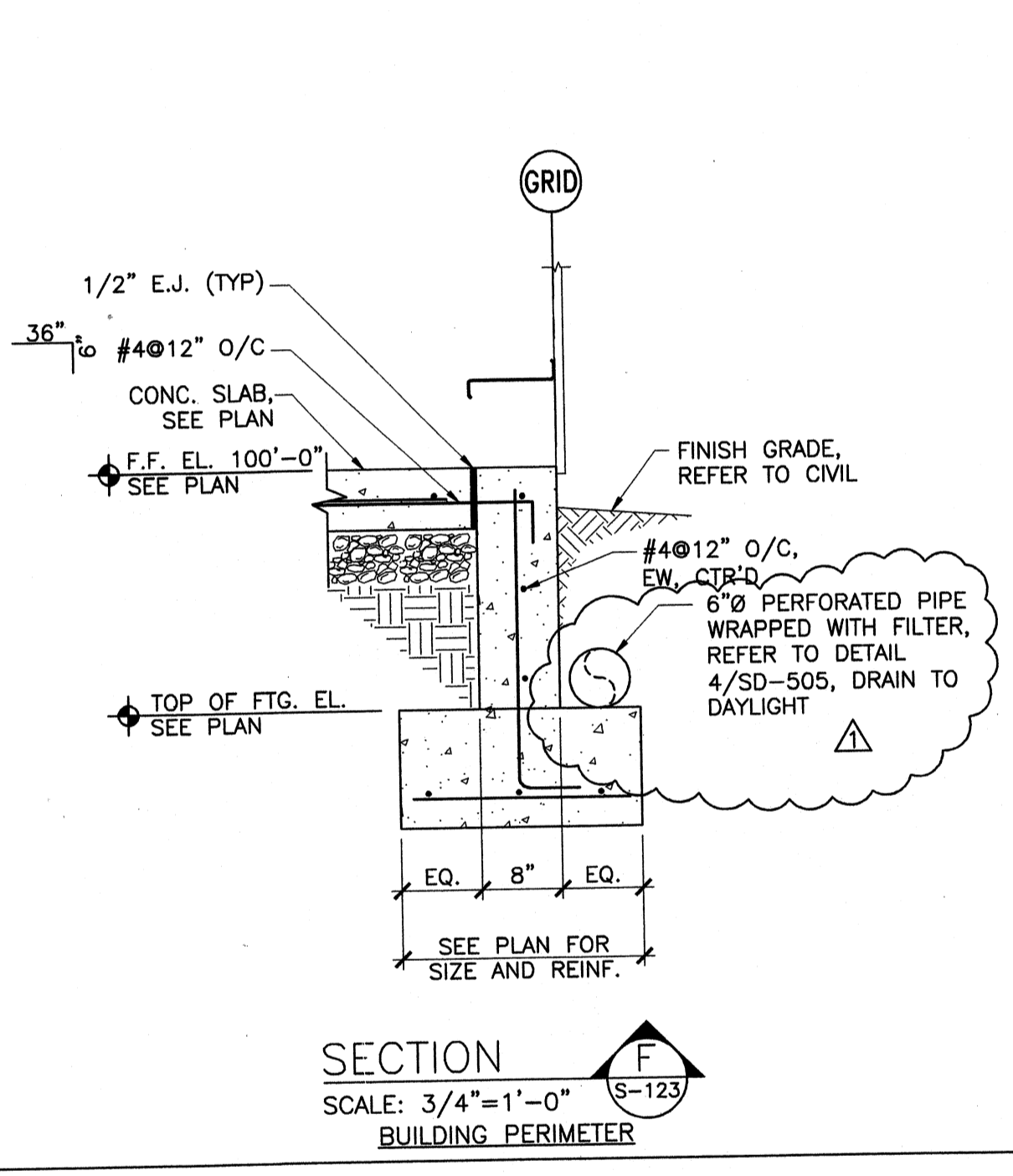
SECTION C
SCALE: 3/4"=1'-0"
COLUMN PIER



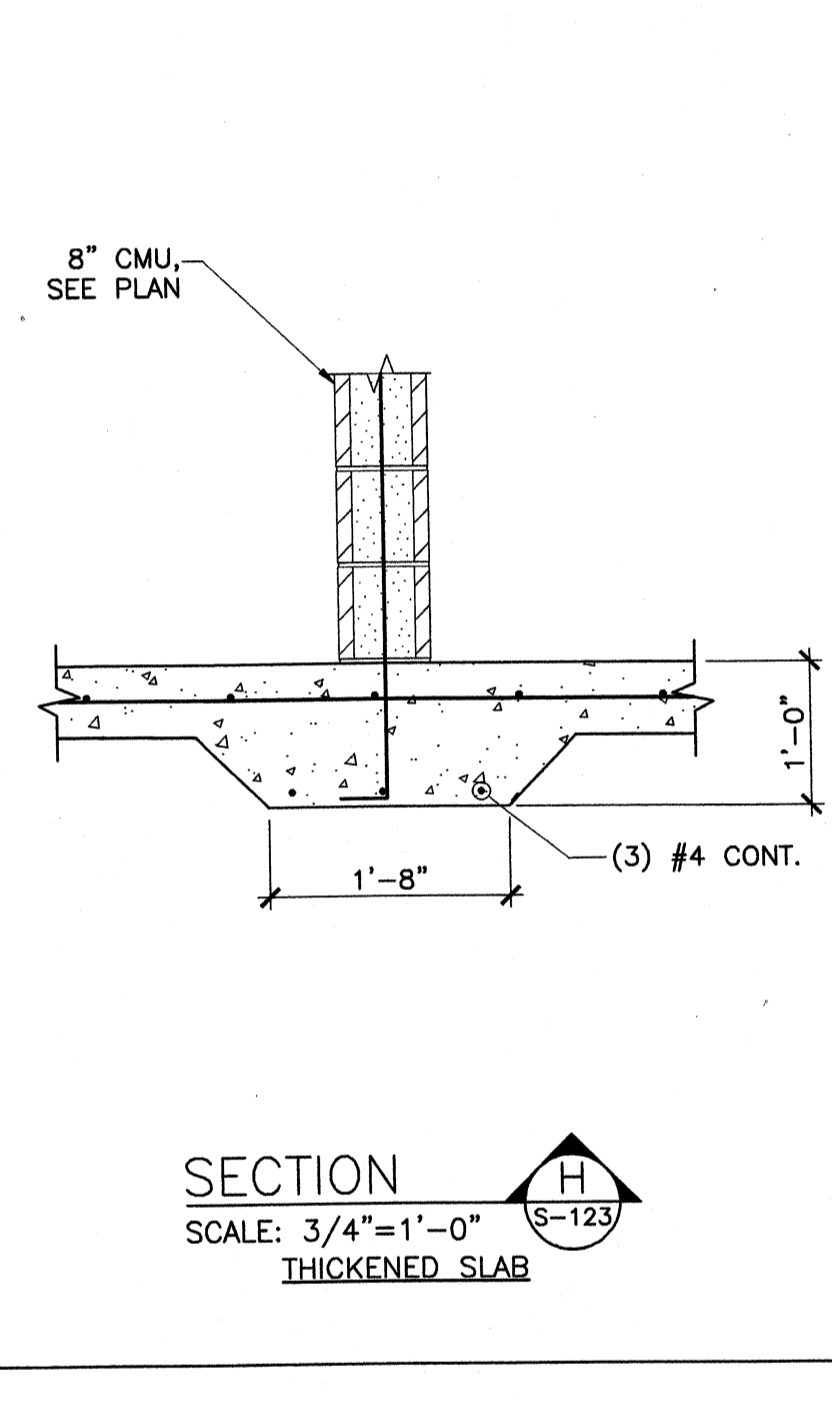
SECTION D
SCALE: 3/4"=1'-0"
COLUMN PIER



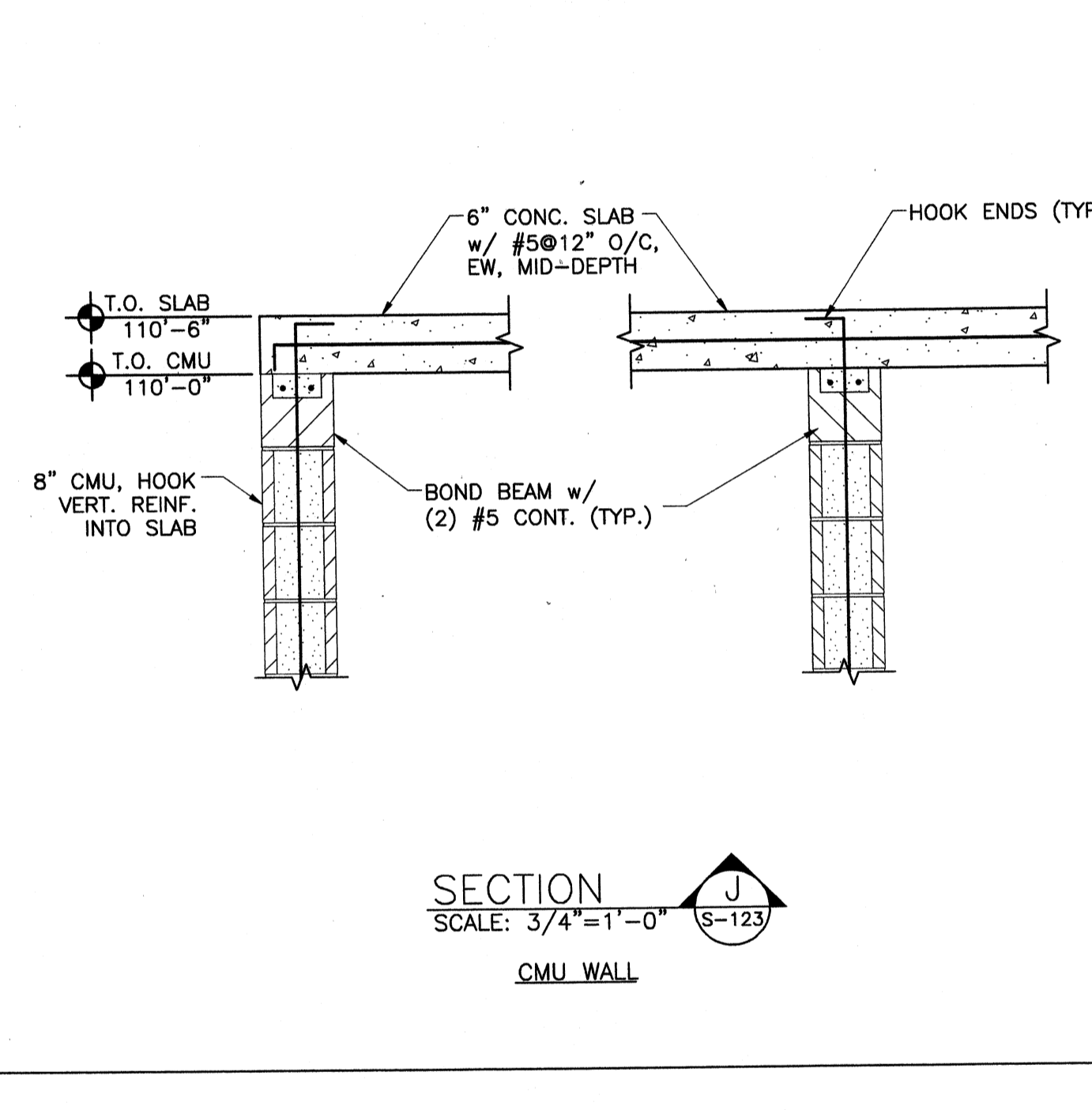
SECTION E
SCALE: 3/4"=1'-0"
DOOR OPENINGS



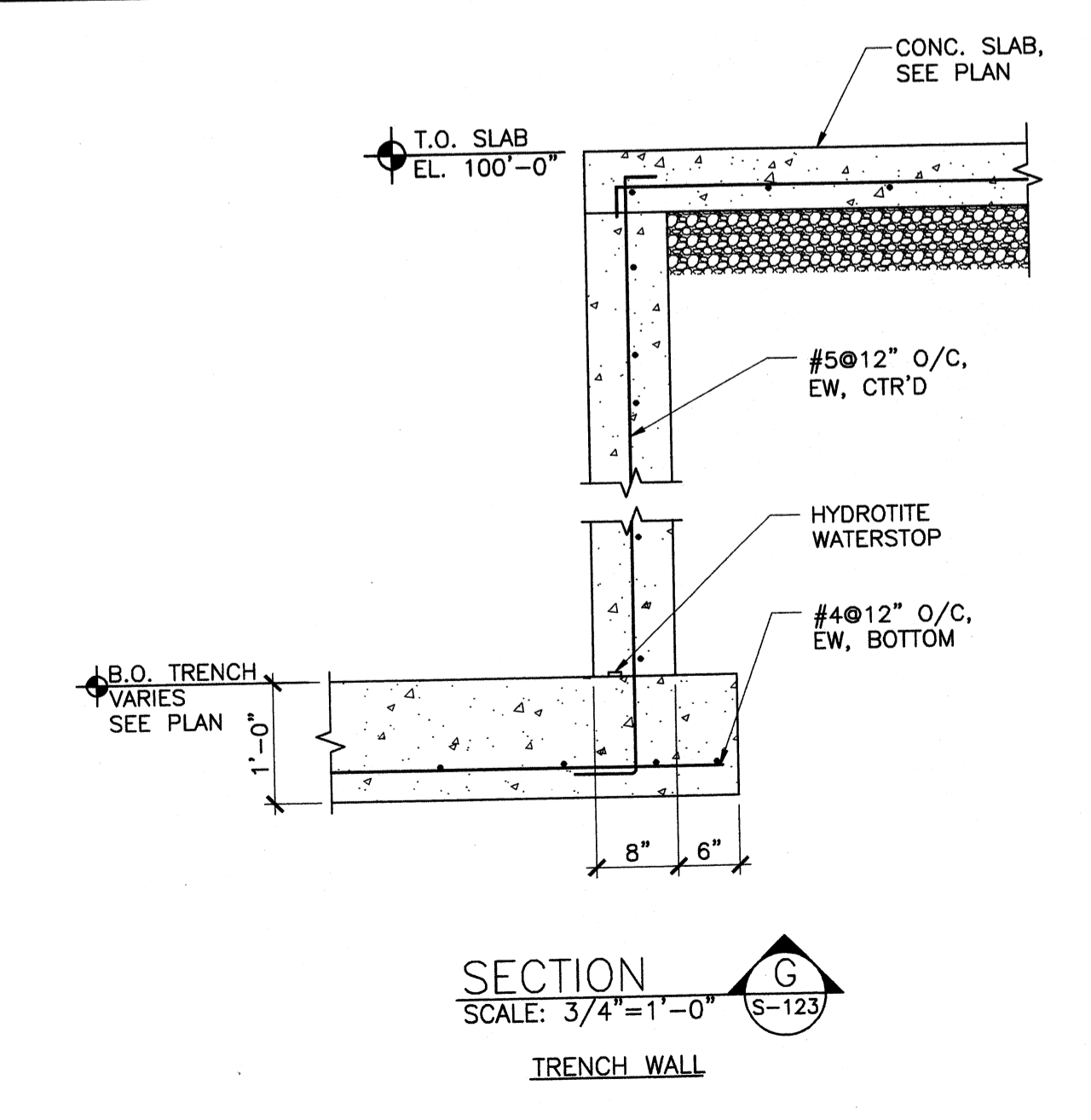
SECTION F
SCALE: 3/4"=1'-0"
BUILDING PERIMETER



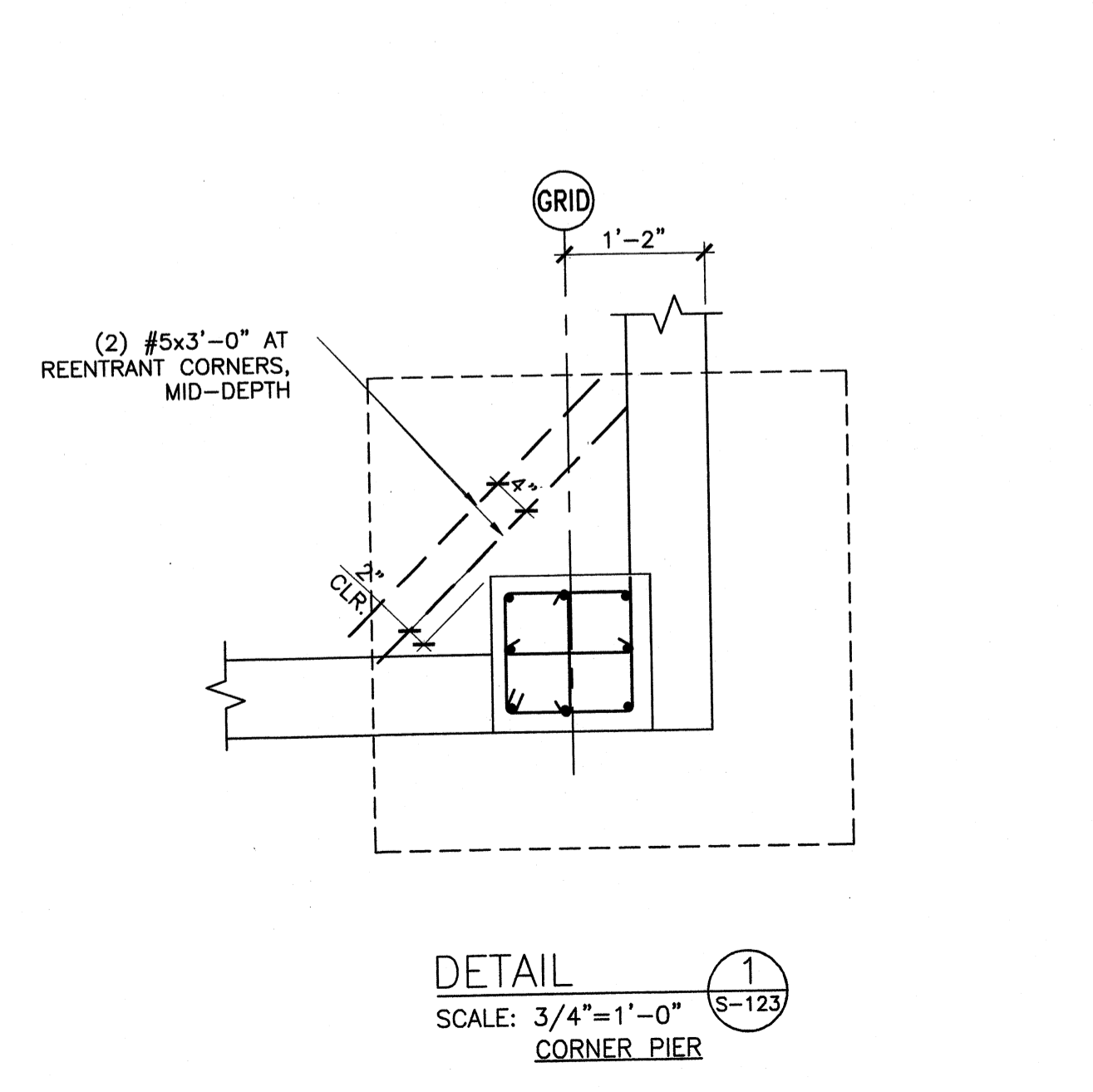
SECTION H
SCALE: 3/4"=1'-0"
THICKENED SLAB



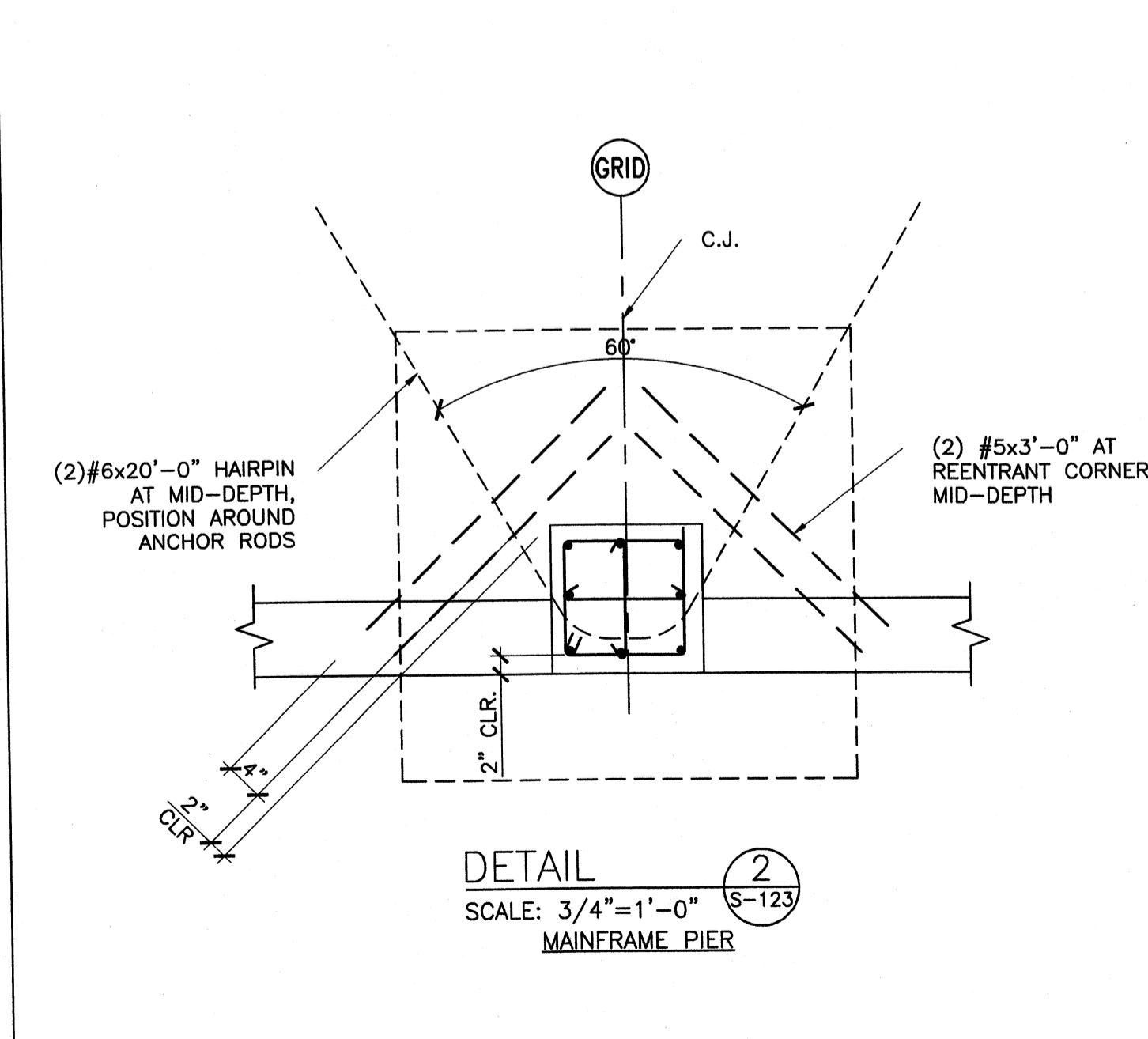
SECTION J
SCALE: 3/4"=1'-0"
CMU WALL



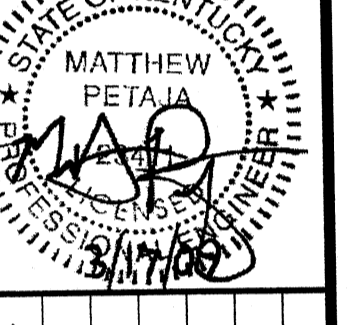
SECTION G
SCALE: 3/4"=1'-0"
TRENCH WALL



DETAIL 1
SCALE: 3/4"=1'-0"
CORNER PIER



DETAIL 2
SCALE: 3/4"=1'-0"
MAINFRAME PIER

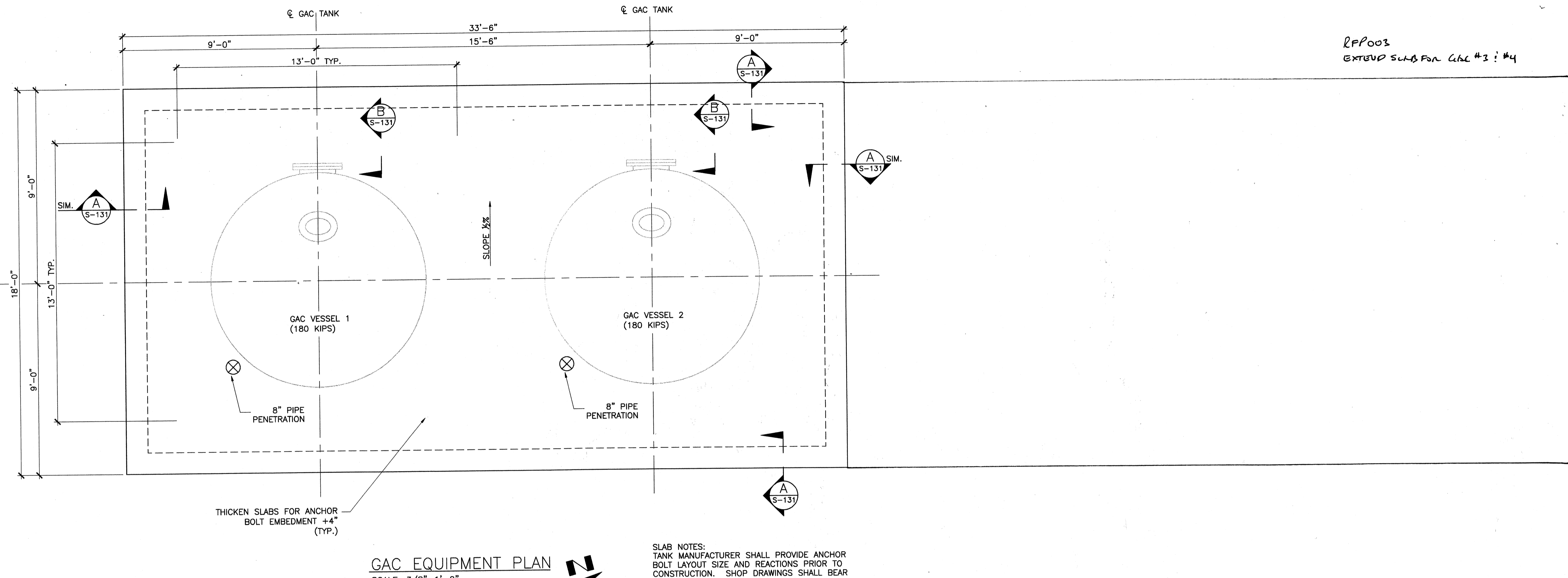


MARK	DATE	DESCRIPTION
A	5/5/09	ADDENDUM 1
JAT		

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

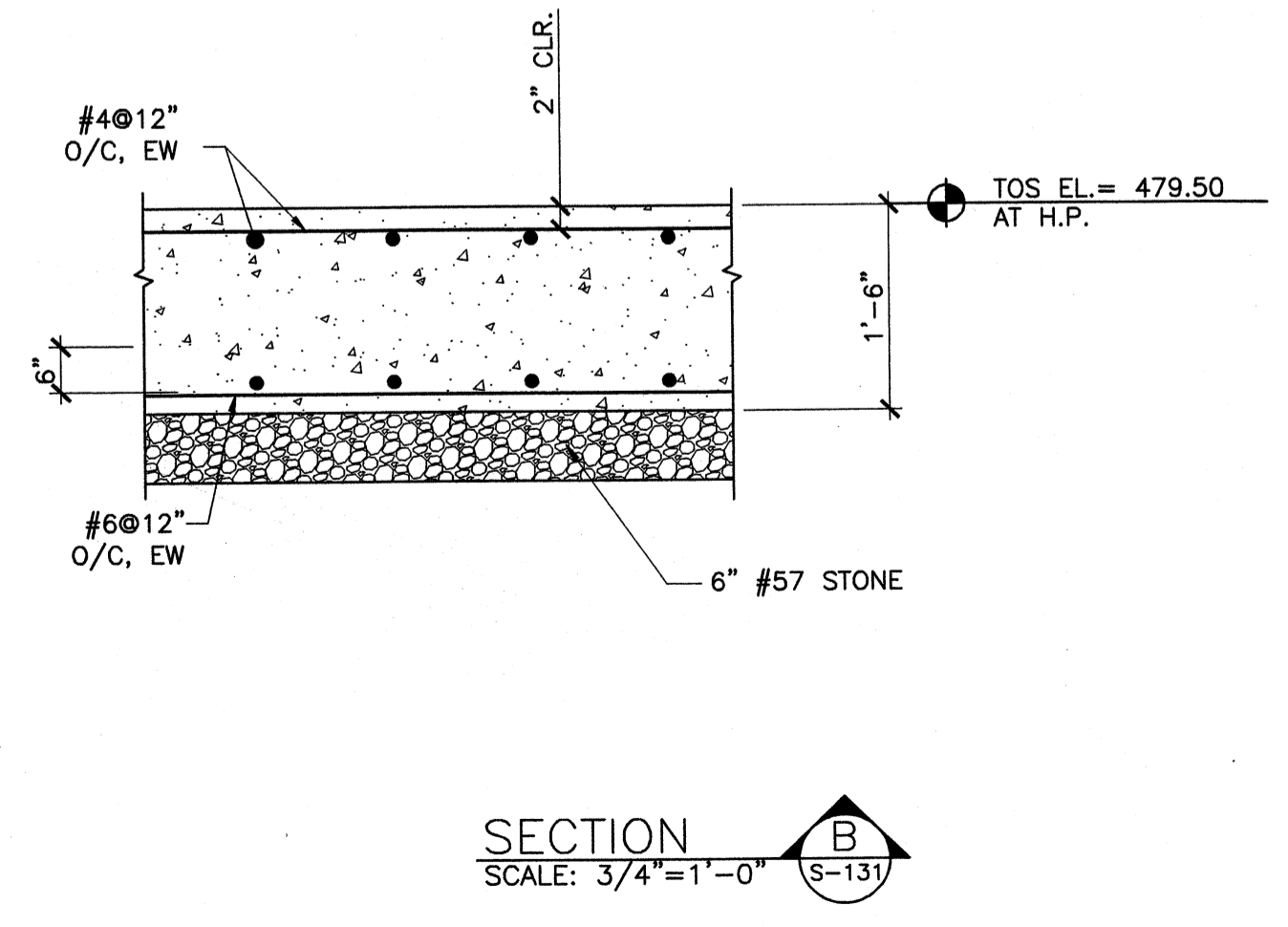
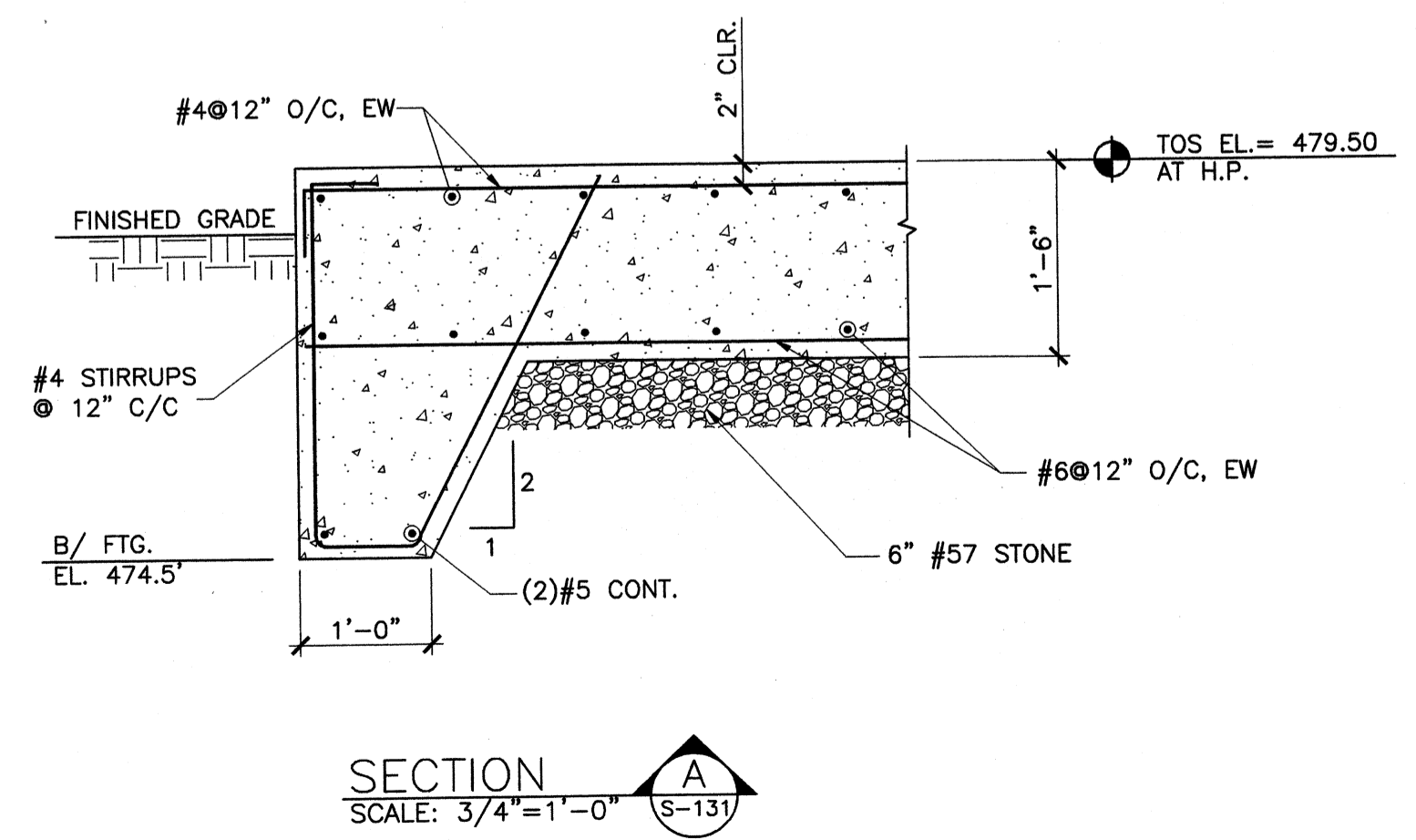
Project No.: 120-07060
Designed By: BIGG
Drawn By: VLR
Checked By: MSP

Wednesday, July 15, 2009 4:28:17 PM DRAWING: \\liferif3\projects\120-07060 Ohio County\CONFORMED SET 5-09\STRUCTURAL\S-131 GAC EQUIPMENT SLAB .DWG LAYOUT: S-131 USER NAME: JEREMY M. FRONGILLO

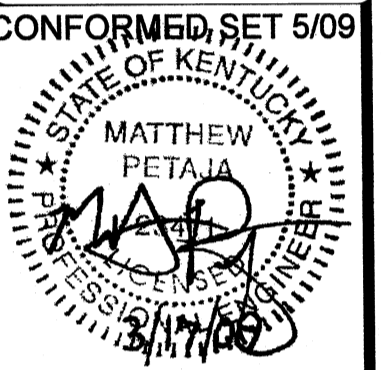


RFP003
EXTEND SLAB FOR C/L #3: #4

SLAB NOTES:
TANK MANUFACTURER SHALL PROVIDE ANCHOR BOLT LAYOUT SIZE AND REACTIONS PRIOR TO CONSTRUCTION. SHOP DRAWINGS SHALL BEAR THE ORIGINAL SIGNATURE AND SEAL OF A KENTUCKY REGISTERED ENGINEER.



PROJECT RECORD

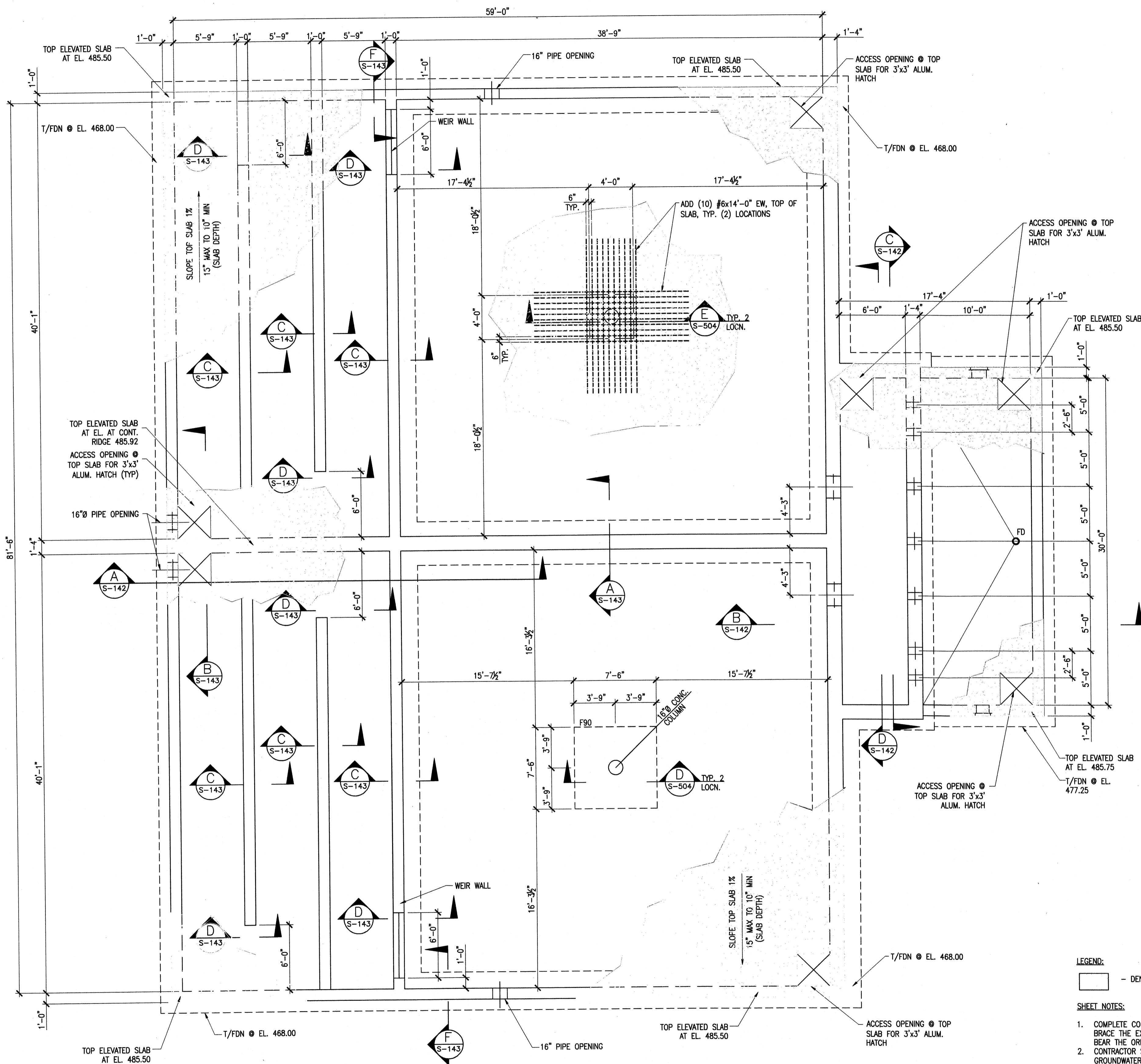


BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
GAC EQUIPMENT - SLAB PLAN
Project No.: 120-07060
Designed By: BIGG
Drawn By: VLR
Checked By: MSP

S-131

Wednesday, July 01, 2009 1:47:53 PM DRAWING: \\netoff63\projects\120-07060 Ohio County\CONFORMED SET 5-09\STRUCTURALS\141 CLEARWELL PLANS DWG LAYOUT: S-141 USER NAME: JEREMY M. FRONGILLO



CLEARWELL - SLAB AND FDN PLAN
SCALE: 3/16"=1'-0"

LEGEND:
 - DENOTES TOP OF ELEVATED SLAB.

- SHEET NOTES:**
1. COMPLETE CONSTRUCTION ON ALL TOP SLAB BEFORE BACKFILLING OF SOIL AROUND TANK OR ADEQUATELY BRACE THE EXTERIOR WALLS UNTIL FINISHED WITH TOP SLAB CONSTRUCTION. BRACING CALCULATIONS SHALL BEAR THE ORIGINAL SIGNATURE AND SEAL OF A KENTUCKY REGISTERED ENGINEER.
 2. CONTRACTOR SHALL IMPLEMENT DEWATERING PRIOR TO EXCAVATIONS FOR THE SEDIMENTATION BASIN. GROUNDWATER SHALL BE MAINTAINED AT LEAST THREE FEET BELOW THE BOTTOM OF THE EXCAVATION. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, INSTALLATION, MAINTENANCE, OPERATION AND PERMITTING OF THE DEWATERING WELL POINT SYSTEM.
 3. ALL WATERTOPS SHOWN SHALL BE HYDROPHILIC, UNO.
 4. SLAB AND WALL CONSTRUCTION JOINTS SHALL FOLLOW DETAIL 2/S-502.
 5. CONTRACTOR SHALL SUBMIT POUR SEQUENCE SHOP DRAWING.
 6. REFER TO MECHANICAL FOR GROUT PLACEMENT AND DETAIL 4/S-502.
 7. SEE CIVIL AND MECHANICAL SHEETS FOR PIPELINE SIZES, LOCATIONS AND ELEVATIONS.
 8. DETAIL ALL REINFORCED CONCRETE BEAMS AND SLABS IN ACCORDANCE WITH DETAIL 8/S-502.
 9. TERMINATE ALL WALL REINFORCING W/STD. HOOKS AT ALL FOUNDATION AND TOP SLABS.
 10. ALL WALL AND SLAB PENETRATION SHALL FOLLOW 8/S-502.
 11. TOP ELEVATED CONCRETE SLAB SHALL BE 10" THICK (MIN.) SLAB REINFORCED WITH #5 @ 6" O/C, BOTTOM AND #6 @ 6" O/C TOP, TYPICAL U.N.O.

TETRA TECH

www.tetratech.com
 800 Corporate Drive
 Suite 200, Lexington, Ky, 40503
 PHONE: (609) 223-8000 FAX: (859) 224-1025

PROJECT RECORD

CONFORMED SET 5/09

BY: _____ DATE: _____

MARK: _____ DESCRIPTION: _____

OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT

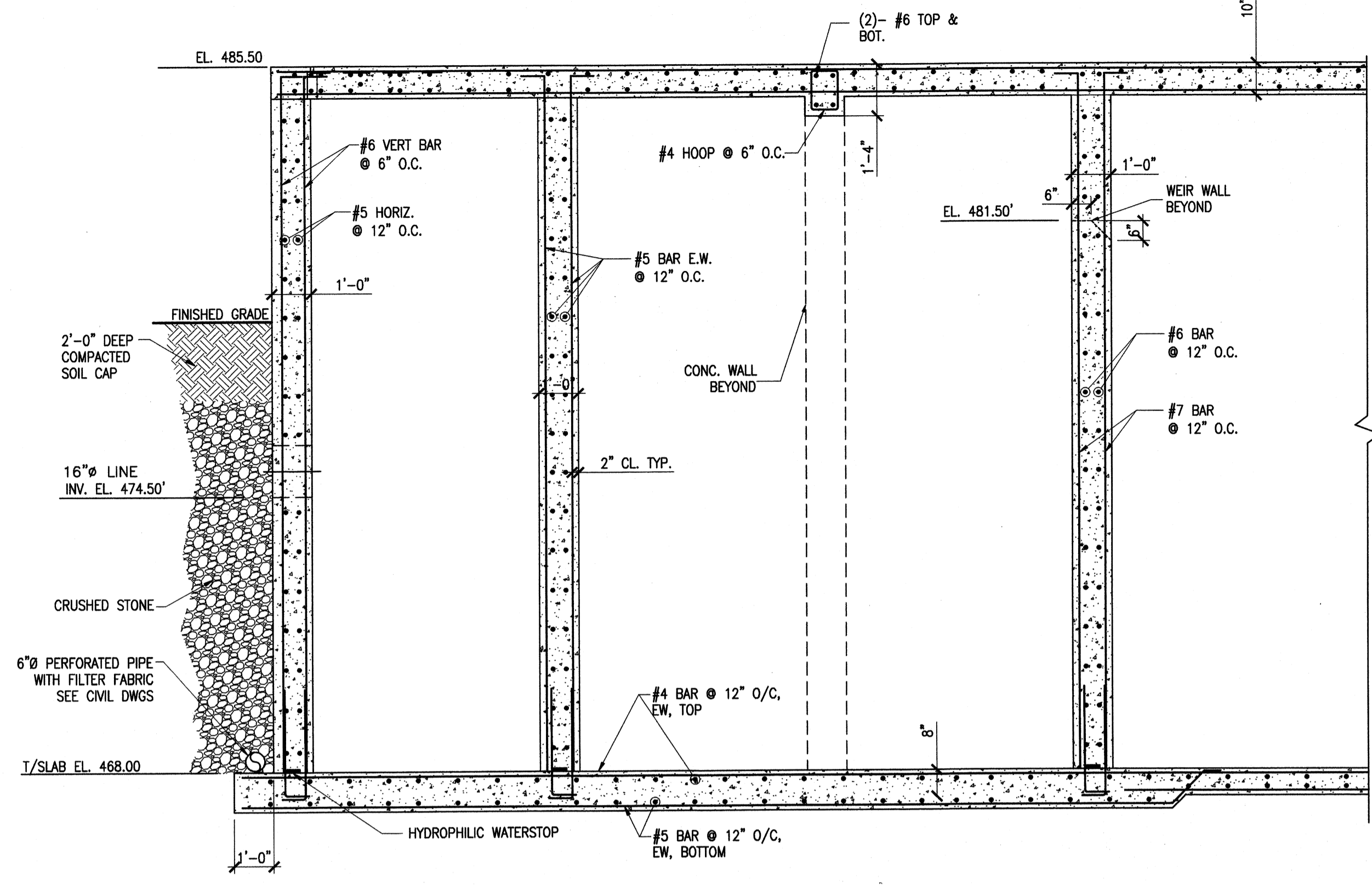
**CLEARWELL
 SLAB AND FOUNDATION PLAN**

Project No.:	120-07060
Designed By:	MSP
Drawn By:	VLR
Checked By:	MSP

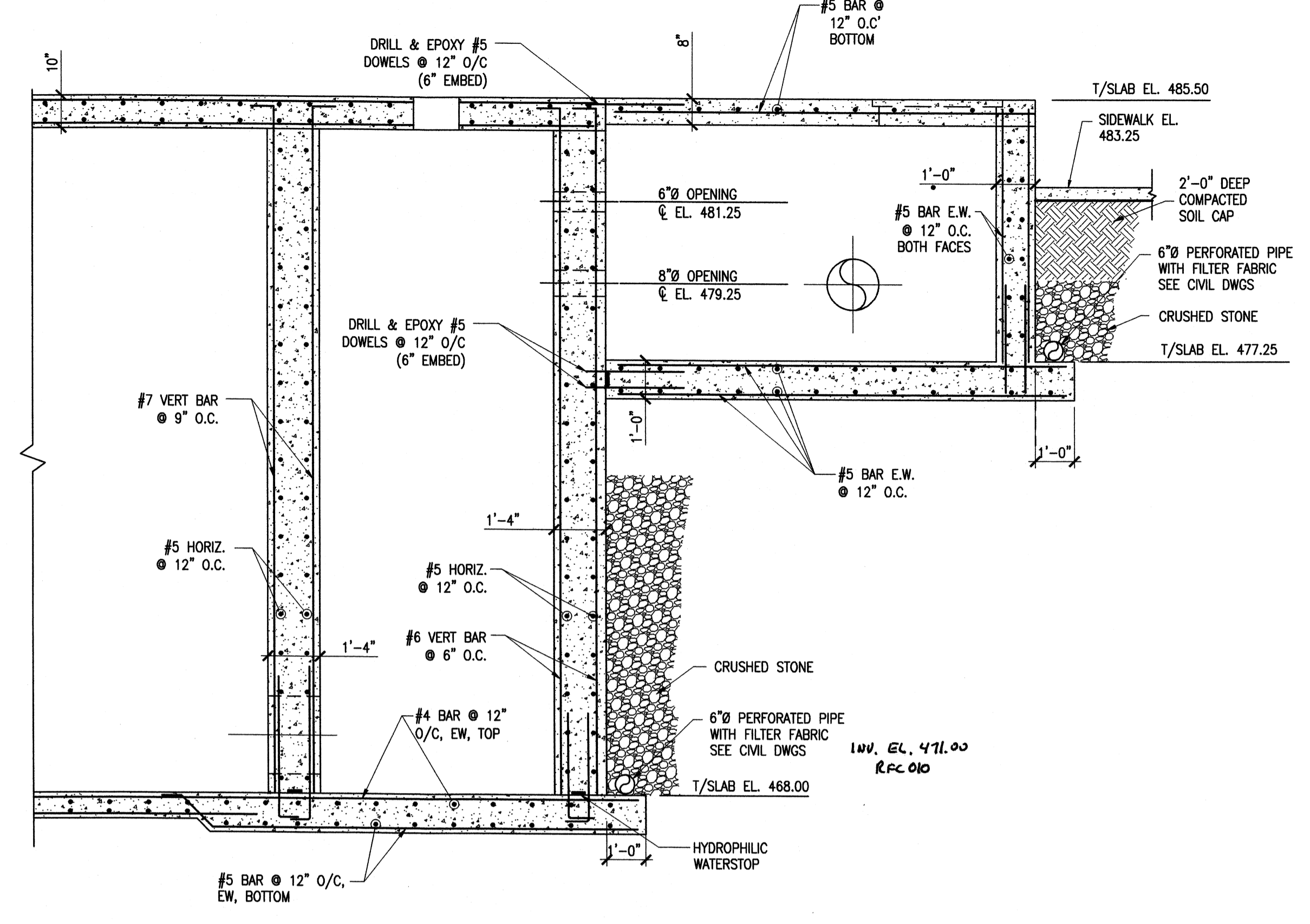
S-141

Copyright: Tetra Tech

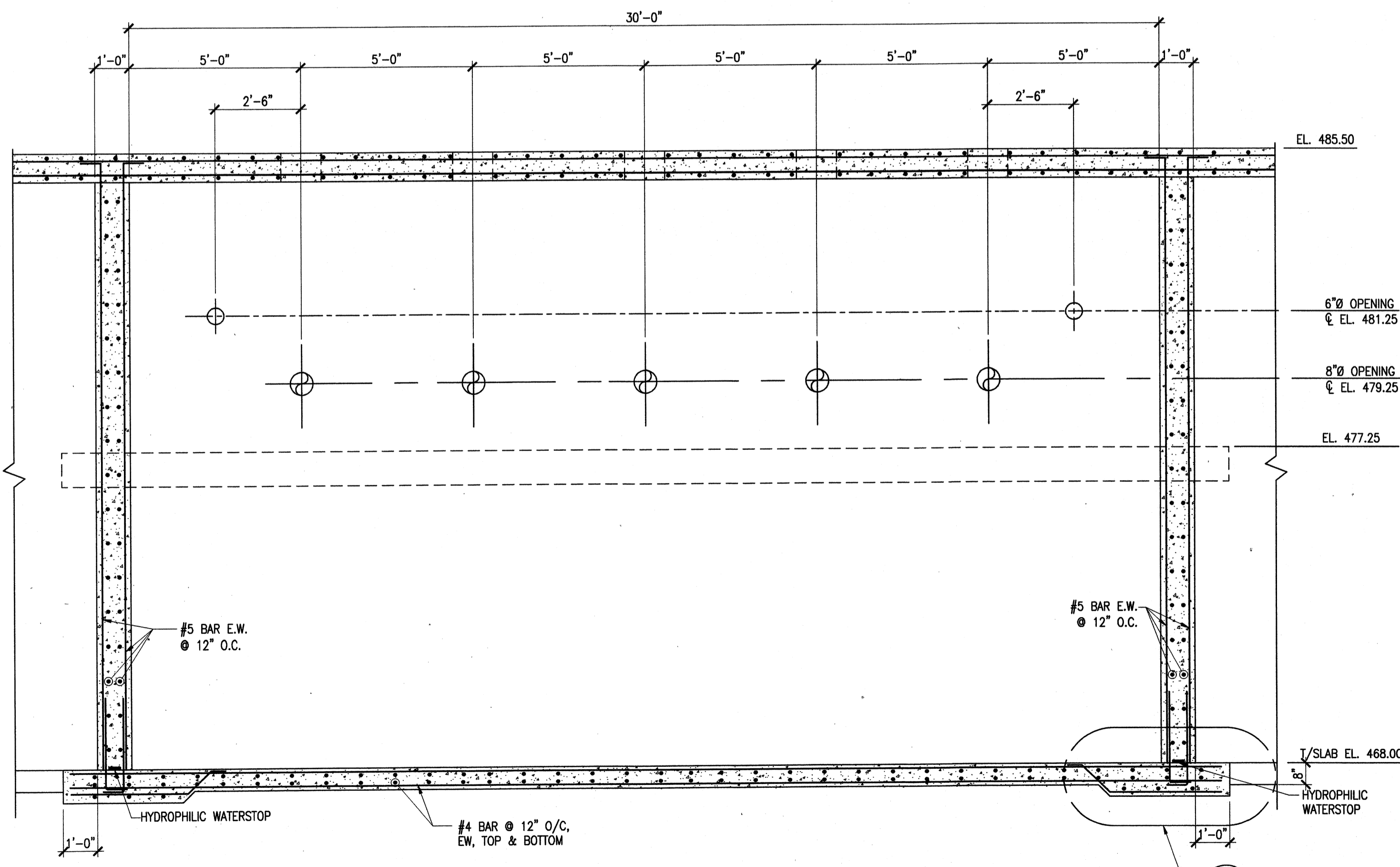
Wednesday, July 01, 2009 1:48:01 PM DRAWING: \\nroffice3\projects\120-07060 Ohio County\CONFORMED SET 5-09\STRUCTURAL\142 CLEARWELL SECTIONS.DWG LAYOUT: S-142 USER NAME: JEREMY M. FRONGILLO



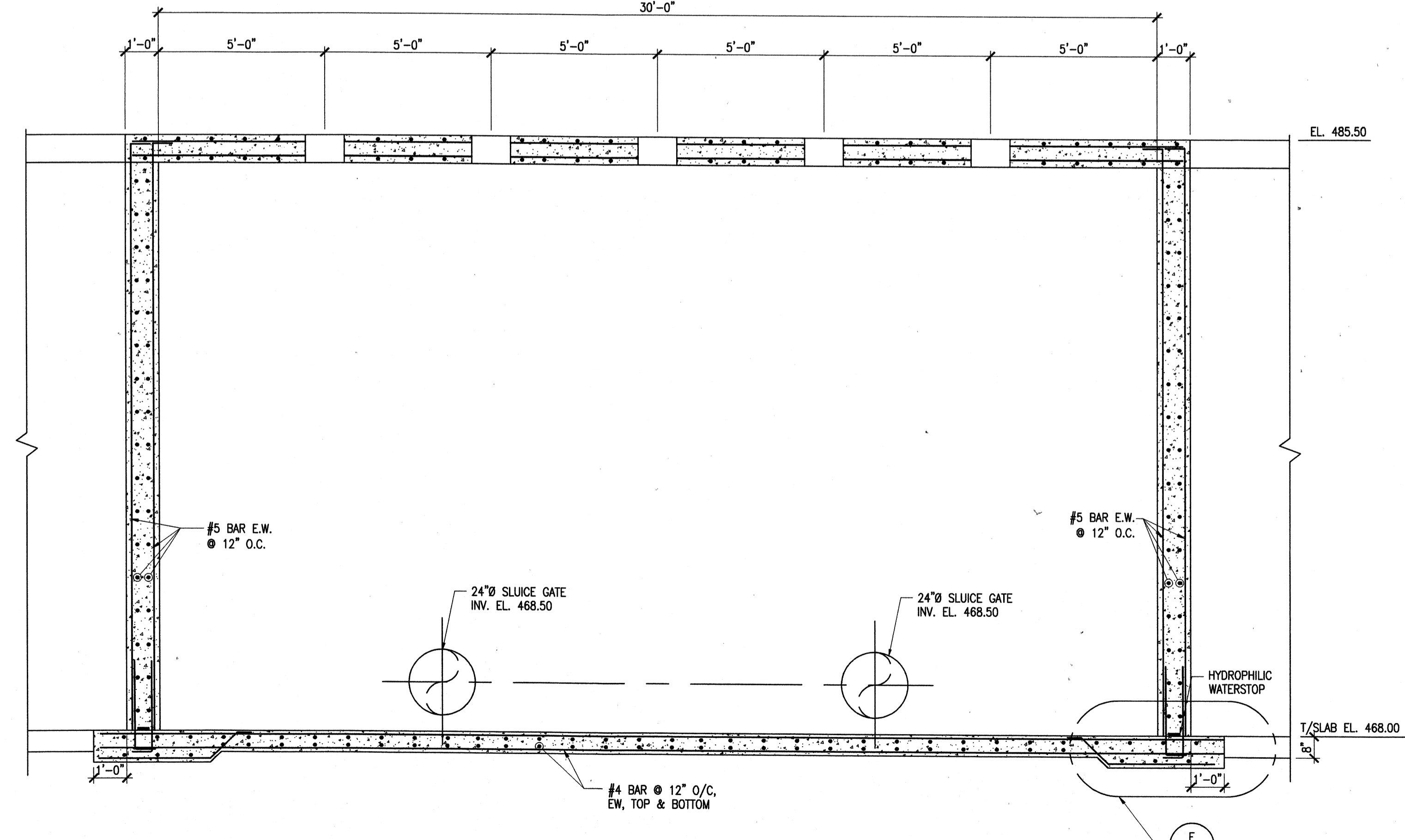
SECTION A
SCALE: 3/8"=1'-0" S-142



SECTION B
SCALE: 3/8"=1'-0" S-142



SECTION C
SCALE: 3/8"=1'-0" S-142
NOTE: INSTALL TOP SLAB PRIOR TO BACK FILL



SECTION D
SCALE: 3/8"=1'-0" S-142
NOTE: INSTALL TOP SLAB PRIOR TO BACK FILL

TETRA TECH
www.tetratech.com
800 Corporate Drive
Suite 200, Lexington, Ky, 40503
PHONE: (606) 223-8000 FAX: (606) 224-1025

PROJECT RECORD

CONFORMED SET 5/09
STATE OF KENTUCKY
MATTHEW PETALIA
REGISTERED PROFESSIONAL ENGINEER
3/17/08

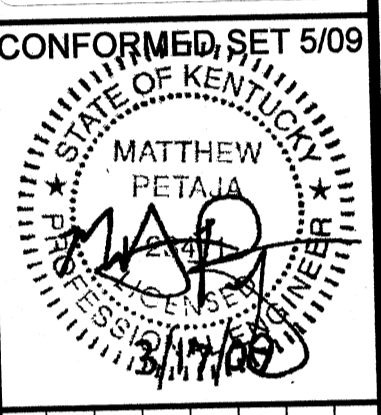
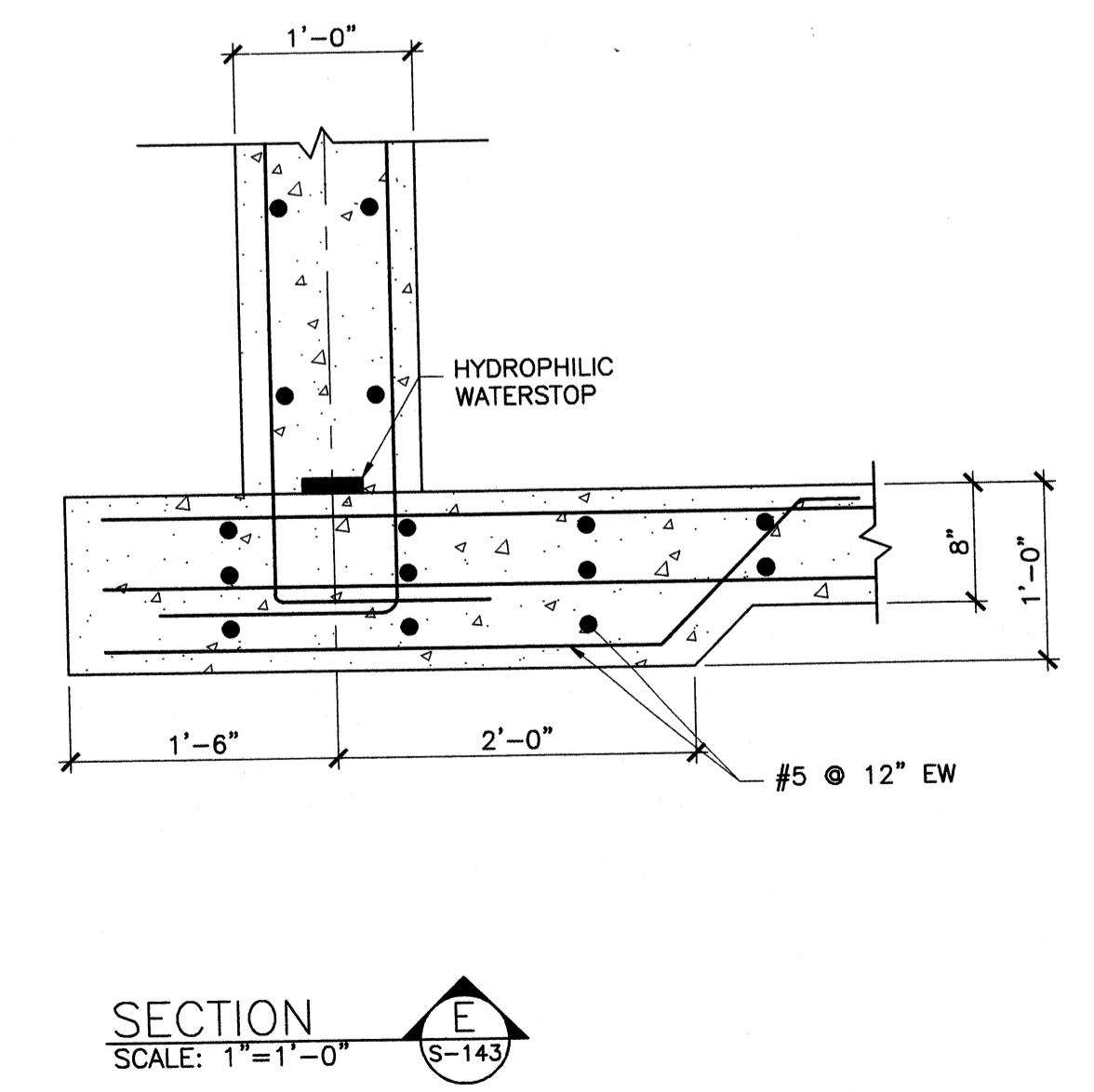
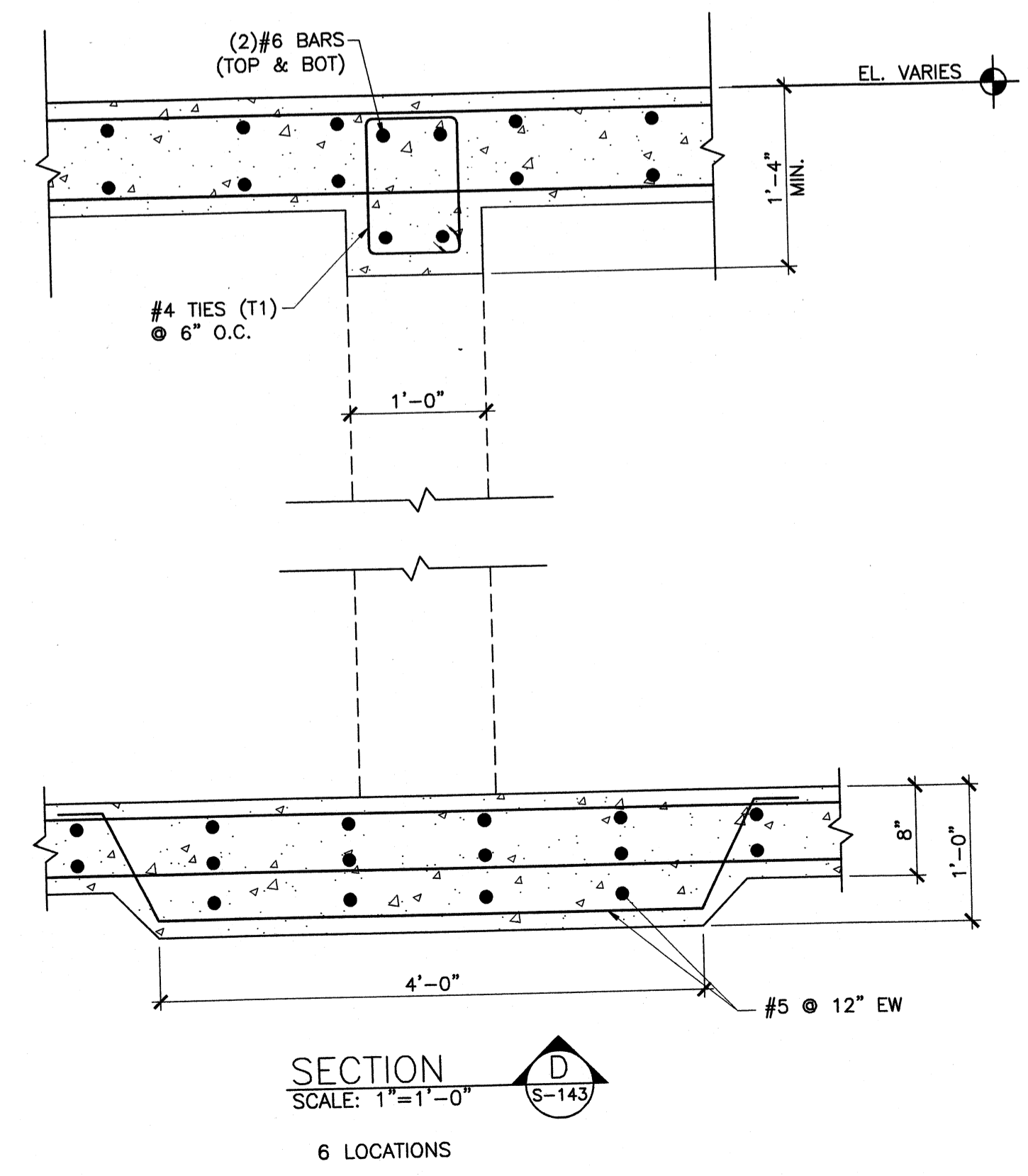
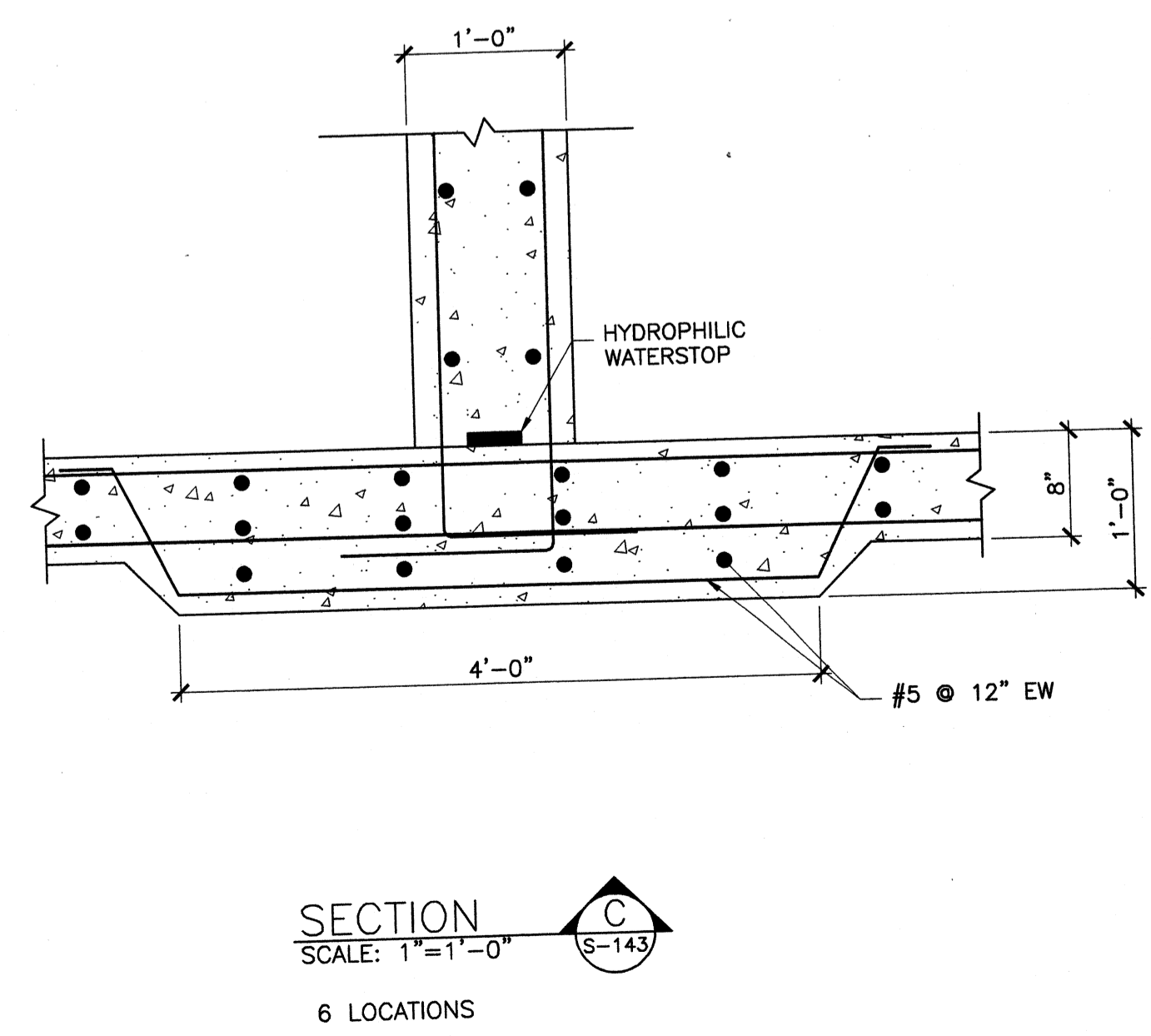
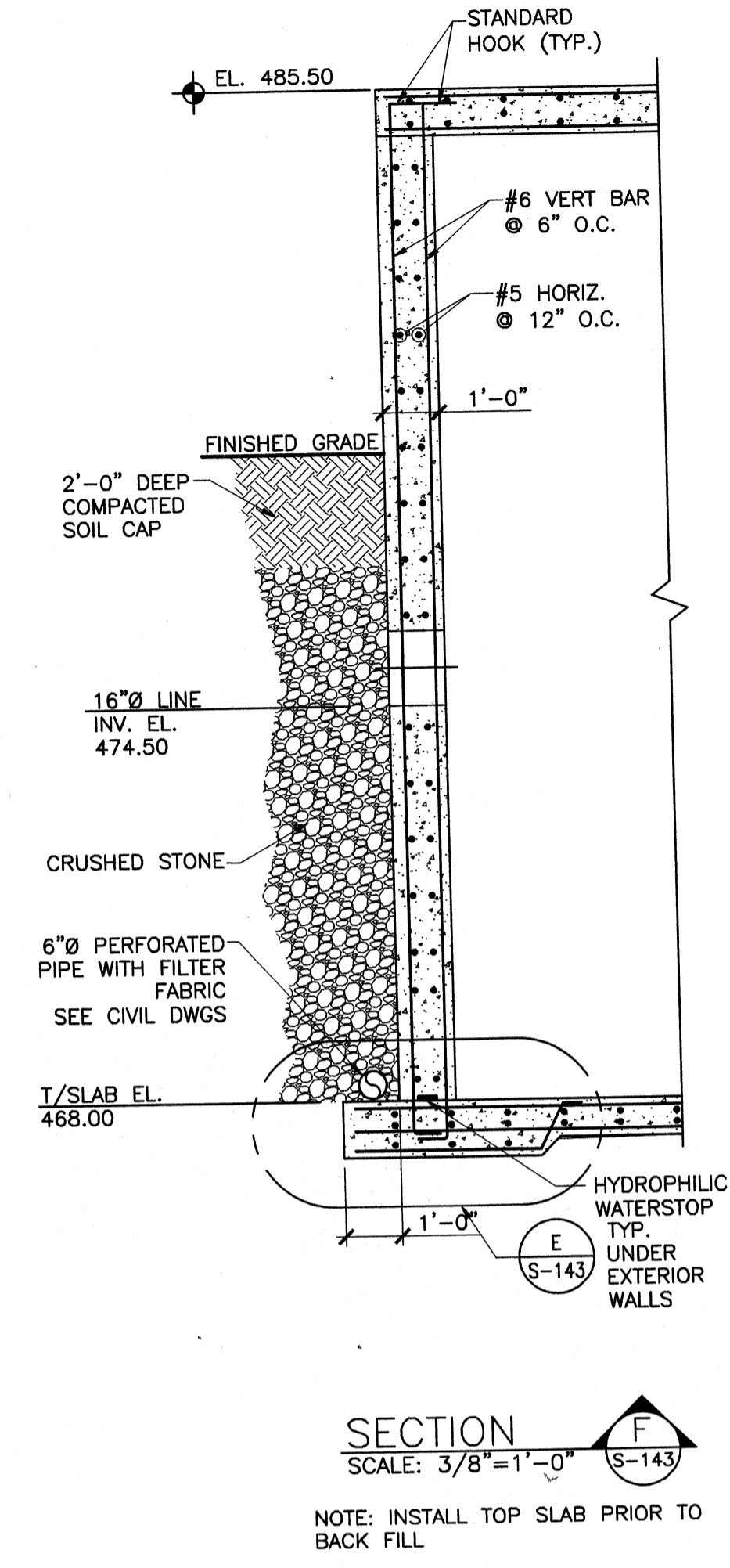
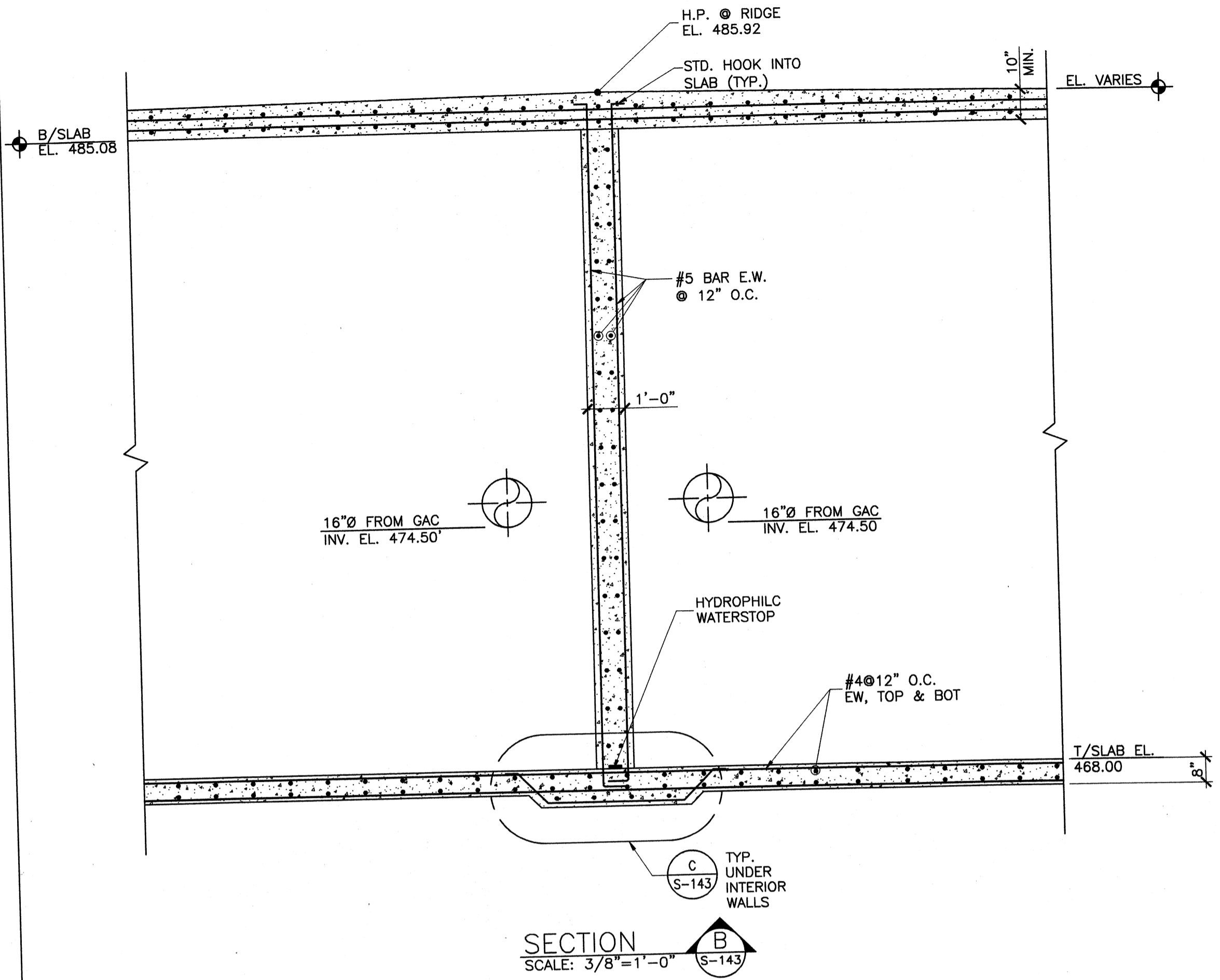
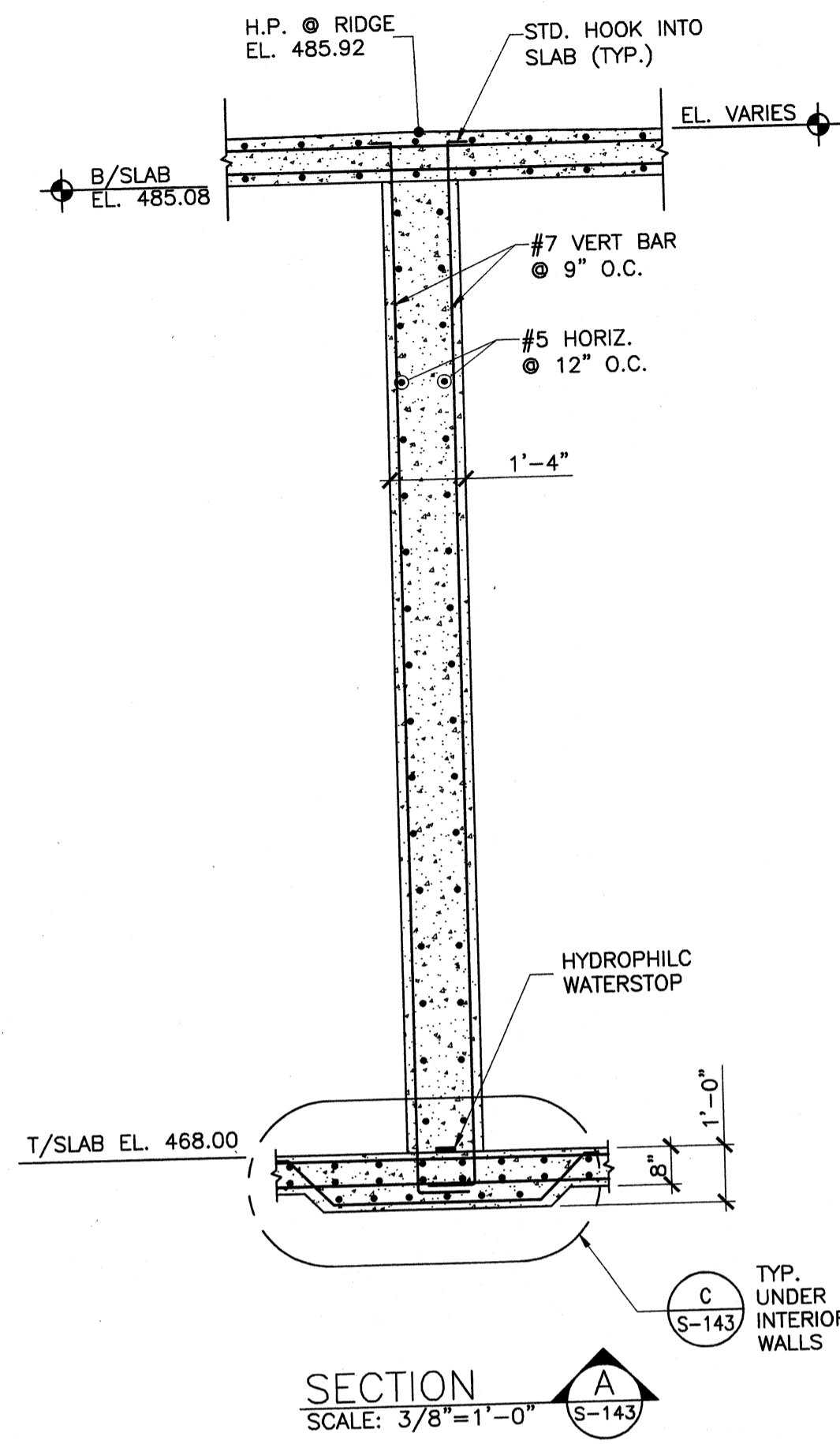
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

Project No.: 120-07060
Designed By: BIGG
Drawn By: VLR
Checked By: MSP

S-142

Wednesday, July 01, 2009 1:48:08 PM DRAWING: \\viro\ifs3\projects\120-07060 Ohio County\CONFORMED SET 5-09\STRUCTURAL\S-143 CLEARWELL SECTIONS DWG LAYOUT S-143 USER NAME: JEREMY M. FRONIGLIO



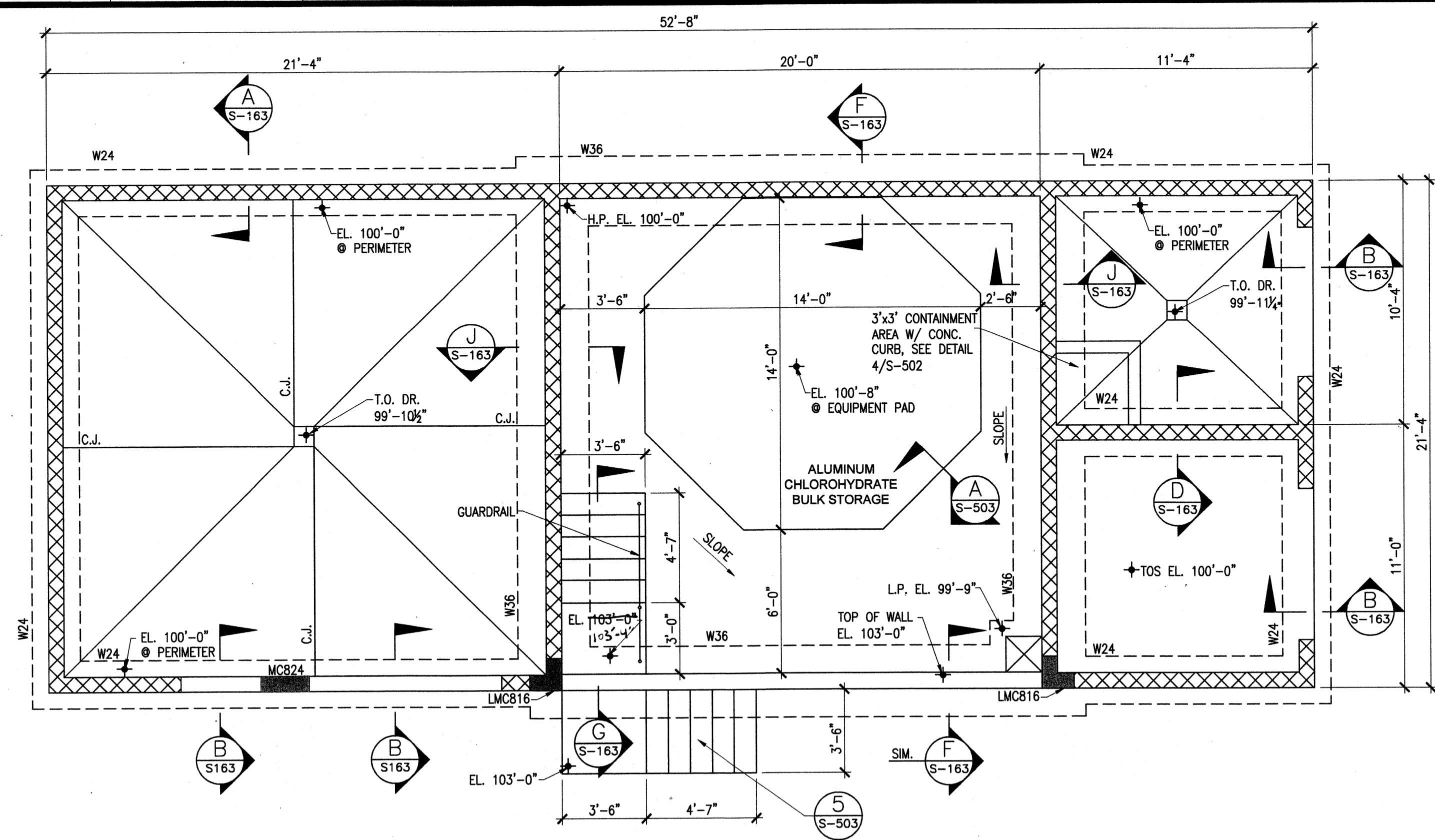
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT
 Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT

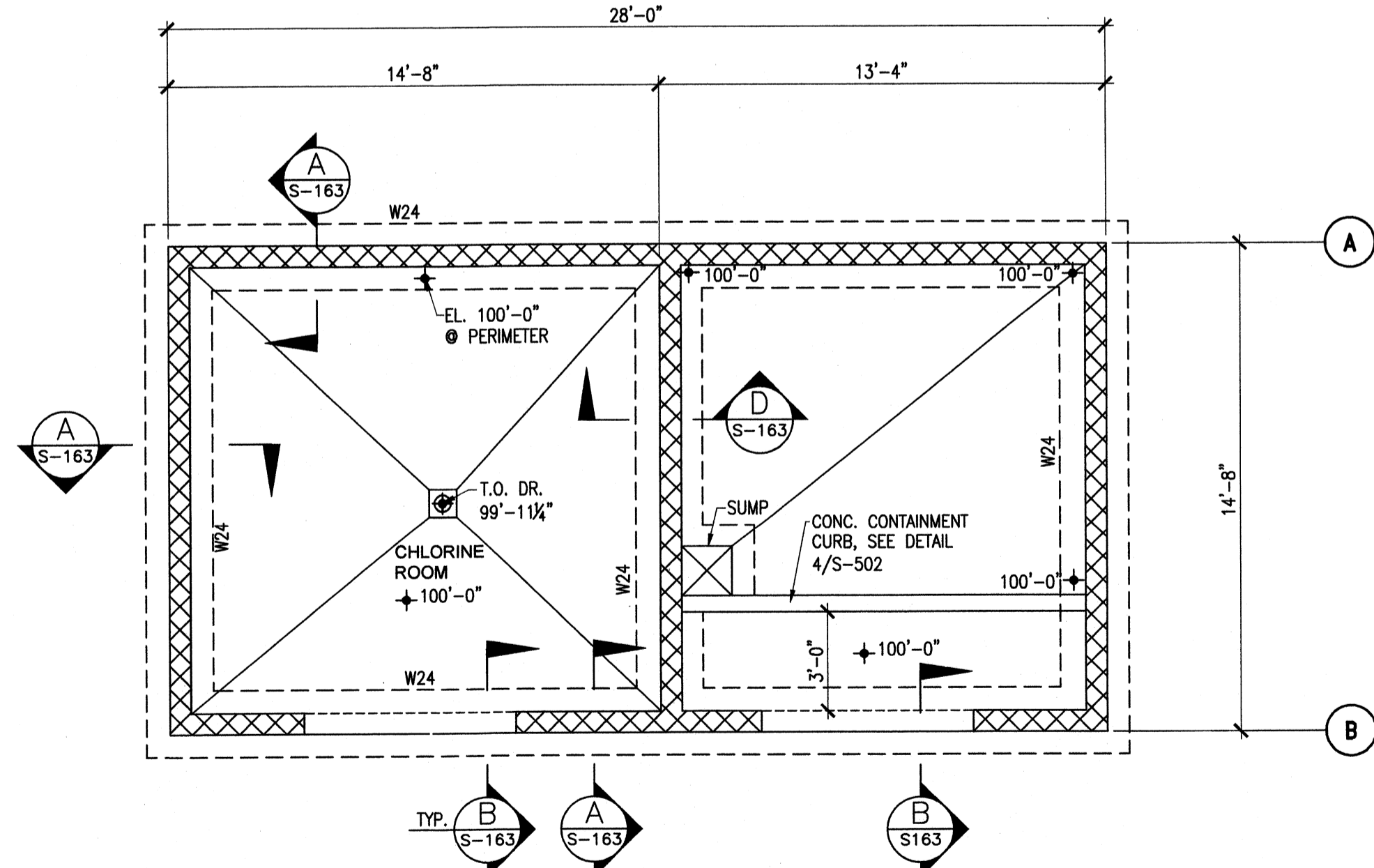
Project No.: 120-07060
 Designed By: BIGG
 Drawn By: VLR
 Checked By: MSP

S-143

Wednesday, July 15, 2009 4:28:39 PM DRAWING: \ncorffs3\projects\120-07060 Ohio County\CONFORMED SET 5-09\STRUCTURAL\161 PRETREATMENT CHEMICAL BUILDING FOUNDATION PLAN DWG LAYOUT: S-161 USER NAME: JEREMY M. FRONGILLO



PAC, ALUMINUM CHLOROHRATE AND ELECTRICAL BUILDING PLAN
SCALE: 1/4"=1'-0" A S-161



CHLORINE AND FLUORIDE BLDG PLAN B S-161

WALL FOOTING SCHEDULE					
MARK	SIZE	THICKNESS	REINFORCEMENT FOR ONE FOOTING		REMARKS
			TRANSVERSE	LONGITUDINAL	
W24	2'-0" CONT.	12"	#4x1'-6" @ 12" BOT.	(3)#4 CONT. BOT.	NONE
W36	3'-0" CONT.	12"	#4x2'-6" @ 12" BOT.	(4)#4 CONT. BOT.	NONE

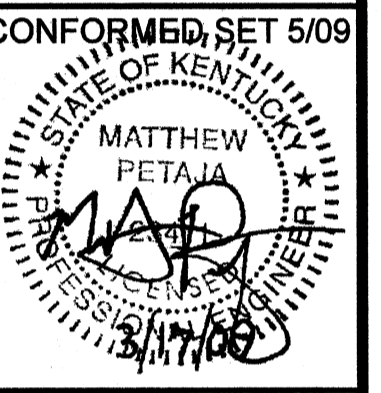
NOTE: LONGITUDINAL REINFORCING SHALL BE PLACED AS OUTER MOST LAYER, U.N.O.

CMU LEGEND
XXXXXX 8" LOAD BEARING CMU WALLS REINFORCE W/ #5@32" O.C.

- FOUNDATION PLAN NOTES:
- REFER TO S-001 FOR GENERAL NOTES AND FOUNDATION DESIGN CRITERIA.
 - STRUCTURAL ELEVATIONS ARE BASED ON A TOP OF SLAB ELEVATION OF 100'-0" EQUAL TO 485.50' FOR THE PAC, ALUM. CHLOROHRATE AND ELEC. BUILDING AND EQUAL TO 479.50' FOR THE CHLORINE AND FLORIDE BUILDING.
 - VERIFY ALL DIMENSIONS, ELEVATIONS AND SLAB FINISHES WITH ARCHITECTURAL DRAWINGS BEFORE BEGINNING CONSTRUCTION. SEE ARCHITECTURAL FOR SLOPES, DEPRESSIONS, DROPS AND DRAIN LOCATIONS IN SLAB.
 - TOP OF FOOTING SHALL BE 98'-0" U.N.O.
 - INTERIOR SLAB ON GRADE SHALL BE A MINIMUM 6" CONCRETE SLAB WITH ONE LAYER OF #4 BARS @ 12" O/C, MID-DEPTH, UNLESS NOTED OTHERWISE. SEE CIVIL FOR EXTERIOR PAVING.
 - W# DENOTE FOOTING SIZES, REFERENCE FOOTING SCHEDULE
 - ADD MASONRY COLUMNS WHERE NOTED ON PLAN IN ACCORDANCE WITH DETAIL 4/S503
 - PROVIDE DOWELS TO MATCH SIZE AND SPACING OF VERTICAL REINFORCING IN MASONRY WALLS.
 - ALL FOOTINGS ARE CENTERED ON COLUMNS OR WALLS UNLESS NOTED.
 - COORDINATE ALL BLOCK LEDGE HEIGHTS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
 - PROVIDE CONTROL JOINTS IN MASONRY WALLS AS SPECIFIED IN ACCORDANCE WITH DETAIL 5/S501.
 - REFER TO DETAIL 1/S-501 FOR STEP FOOTING CONSTRUCTION.



PROJECT RECORD



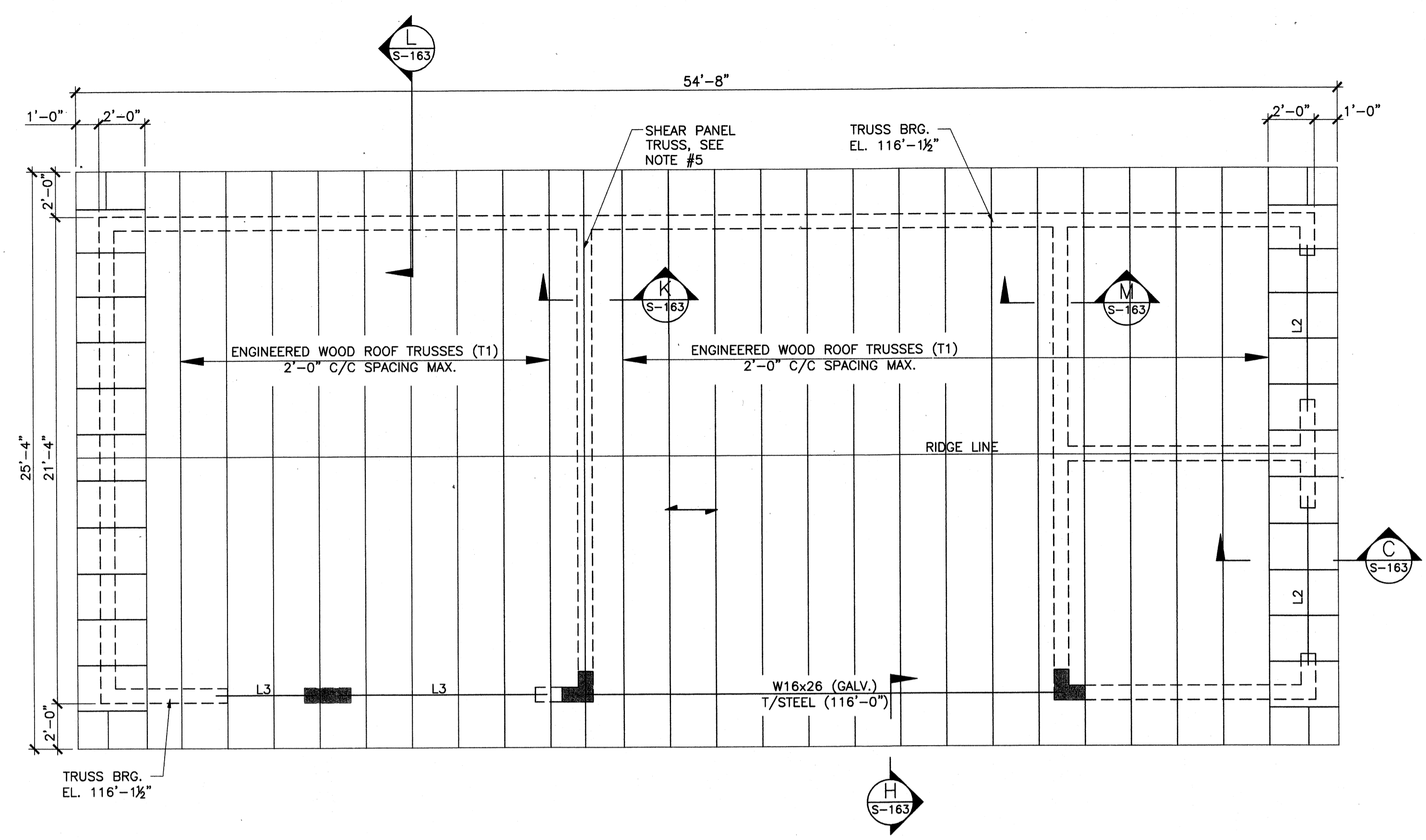
BY	DESCRIPTION	MARK	DATE

Client: OHIO COUNTY WATER DISTRICT
 Ohio County Water District
 WATER TREATMENT PLANT

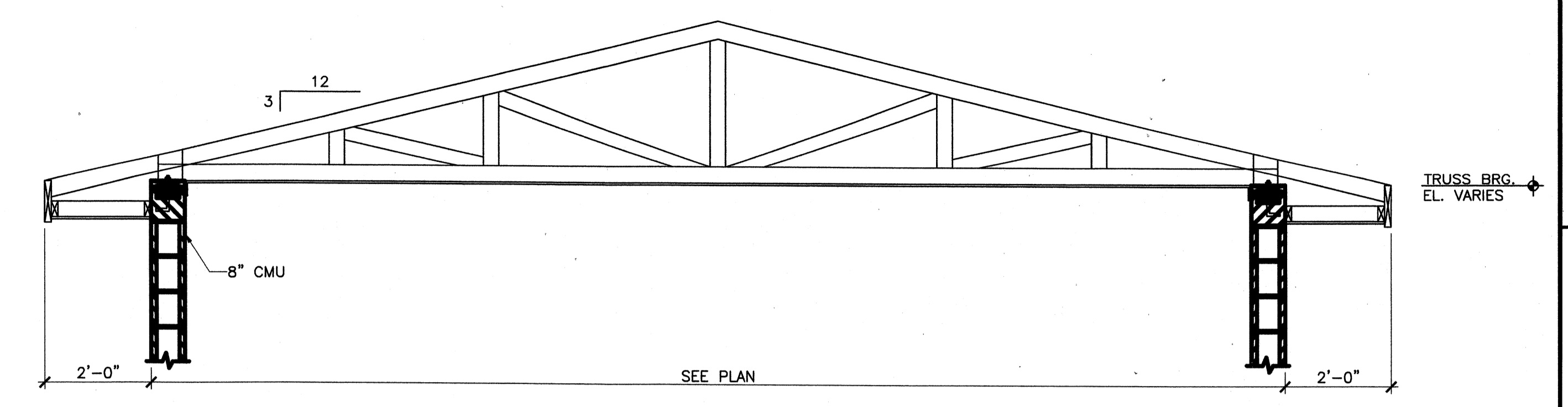
Project No.: 120-07060
 Designed By: BIGG
 Drawn By: VLR
 Checked By: MSP

S-161

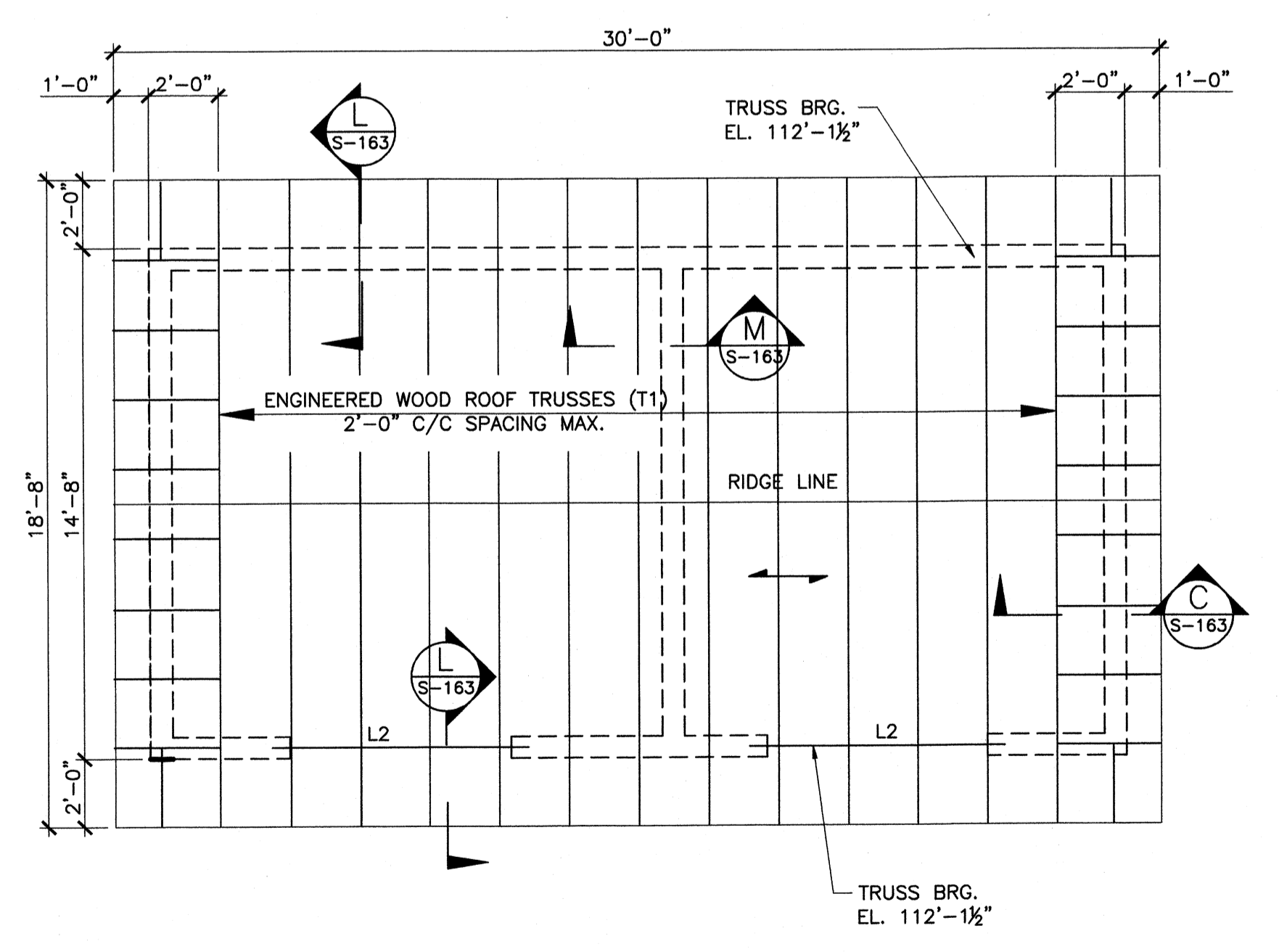
Wednesday, July 01, 2009 1:48:21 PM DRAWING: \\nortas\projects\120-07060 Ohio County\CONFORMED SET 5-08\STRUCTURAL\120-07060 PRETREATMENT CHEMICAL BUILDING ROOF FRAMING PLAN DWG LAYOUT: S-162 USER NAME: JEREMY M. FRONGILLO



PAC, ALUMINUM CHLOROHYDRATE AND ELECTRICAL BLDG ROOF PLAN
SCALE: 1/4"=1'-0"



T1 TRUSS PROFILE
SCALE: 1/2" = 1'-0"



CHLORINE AND FLUORIDE BLDG ROOF PLAN
SCALE: 1/4"=1'-0"

- ROOF FRAMING PLAN NOTES:**
- REFER TO S-001 FOR GENERAL NOTES AND FOUNDATION DESIGN CRITERIA.
 - STRUCTURAL ELEVATIONS ARE BASED ON A TOP OF SLAB ELEVATION OF 100'-0" EQUAL TO 479.5' FOR THE PAC, ALUM CHLORHYDRATE AND ELEC. BUILDING AND EQUAL TO 485.5' FOR THE CHLORINE AND FLORIDE BUILDING.
 - ROOF SYSTEM SHALL CONSIST OF 1 1/2" APA RATED, STRUCTURAL PLYWOOD SHEATHING OVER ENGINEERED WOOD TRUSSES AT 2'-0" O/C MAXIMUM SPACING. FASTEN STRUCTURAL ROOF SHEATHING WITH 10d NAILS 6" O/C ALONG PANEL EDGES, RIDGES, VALLEYS, COLLECTORS, DRAG STRUTS AND SHEAR PANEL TRUSSES AND 12" O/C AT INTERIOR SUPPORTS (FIELD NAILING). ROOF SHEATHING SHALL BE INSTALLED AS UNBLOCKED. SEE DETAIL 6/S-503 FOR WALL AND ROOF SHEATHING REQUIREMENTS.
 - TRUSS MANUFACTURER SHALL DESIGN SHEAR PANEL TRUSS FOR 150 PLF AXIAL SERVICE LOAD ALONG TOP OF TRUSS TO BE TRANSFERRED THRU THE BOTTOM CHORD. BOTTOM CHORD CONNECTION PROVIDED BY MANUFACTURER. BRACE TOP OF WALL WITH 2x4 BOTTOM CHORD TRUSS BRACING AT 4'-0" O/C.
 - REFER TO SCHEDULE 9/S-502 FOR TRUSS HOLD-DOWN CONNECTION REQUIREMENTS.
 - L# - DENOTES MASONRY LINTEL. SEE DETAIL 8/S-501 FOR MASONRY LINTELS SCHEDULE.
- LEGEND:**
 DENOTES ROOF SHEATHING SPAN DIRECTION.

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PROJECT RECORD

CONFORMED SET 5/09

STATE OF KENTUCKY
 MATTHEW PETAJA
 PROFESSIONAL ENGINEER
 3/17/09

BY	DATE	DESCRIPTION

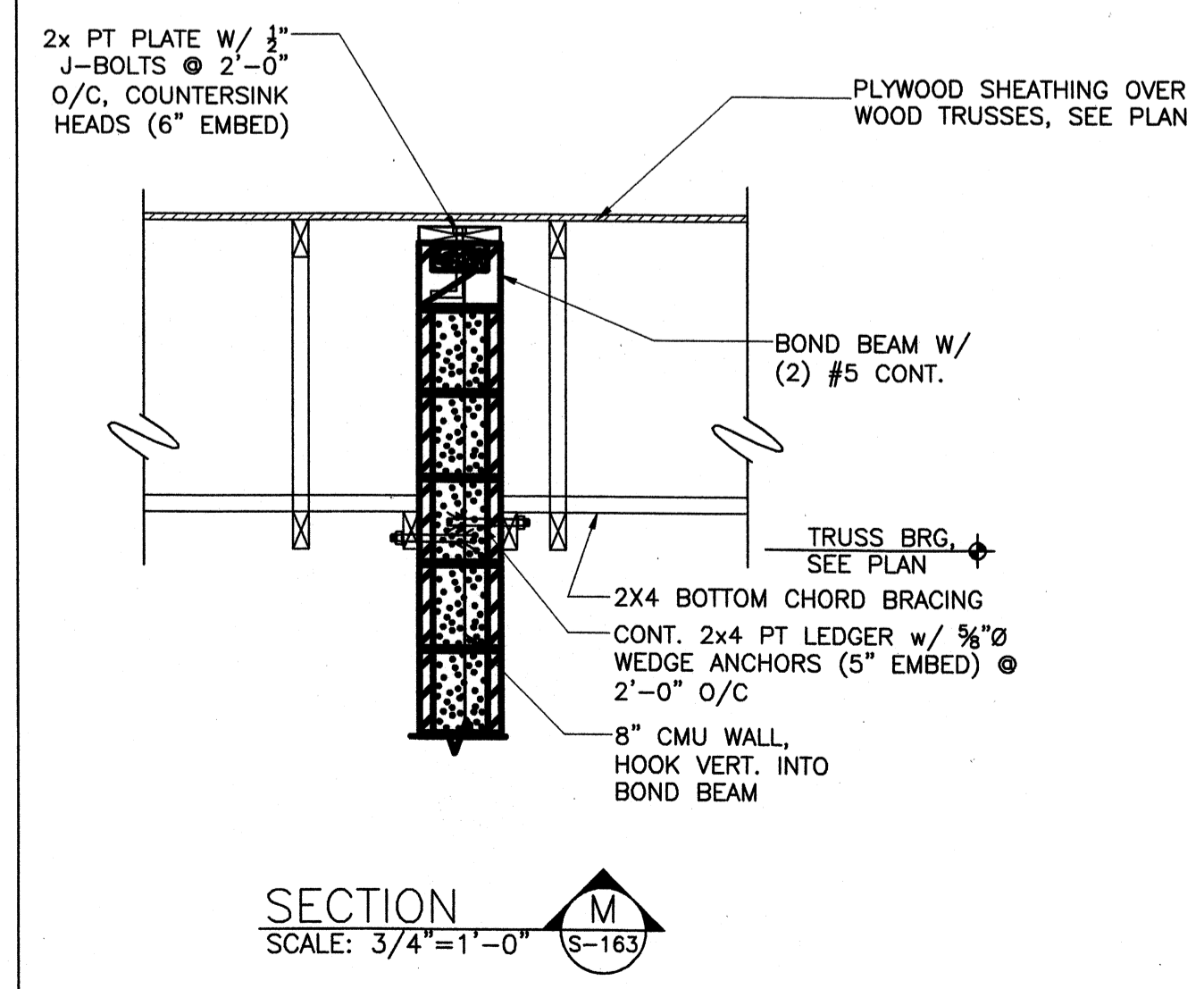
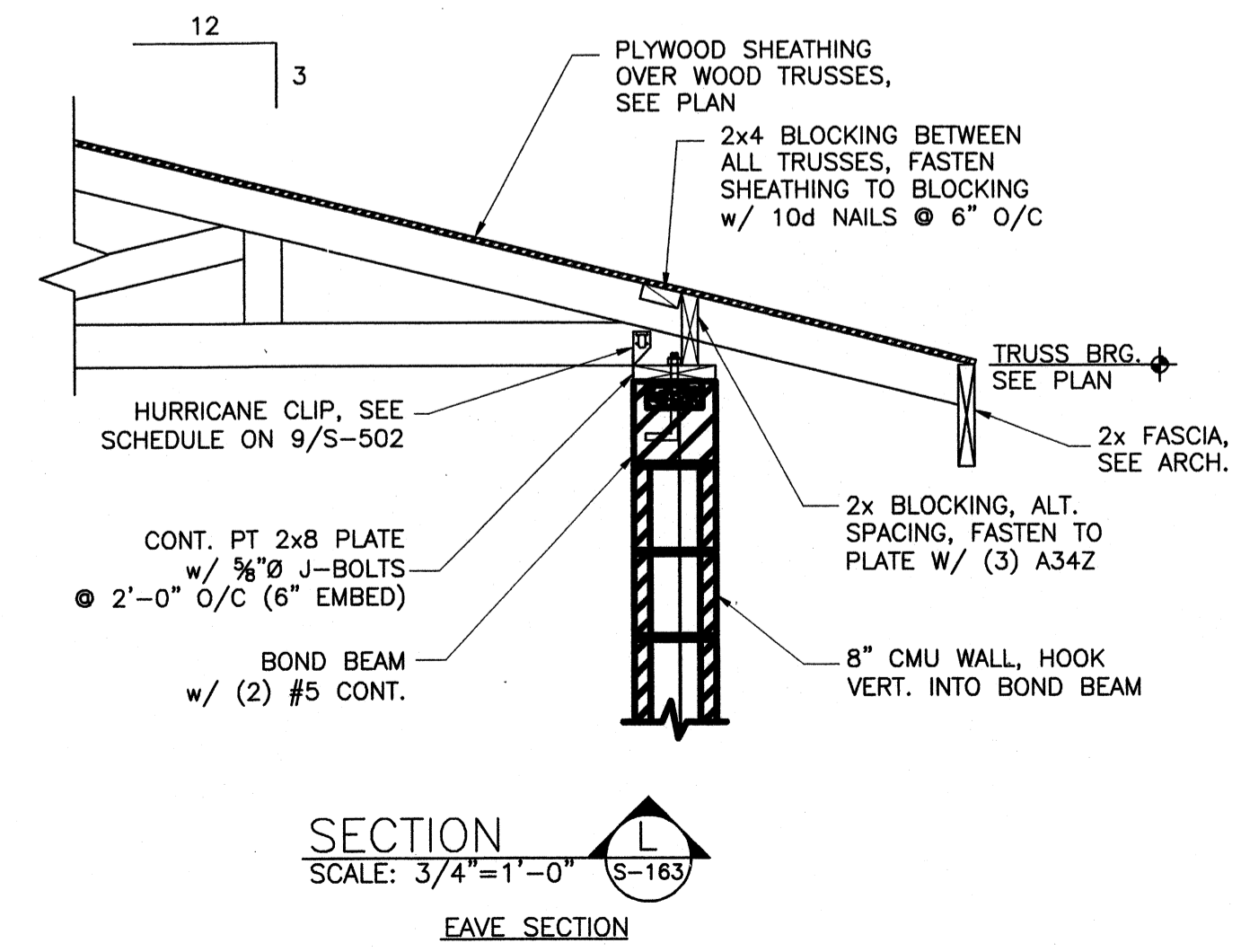
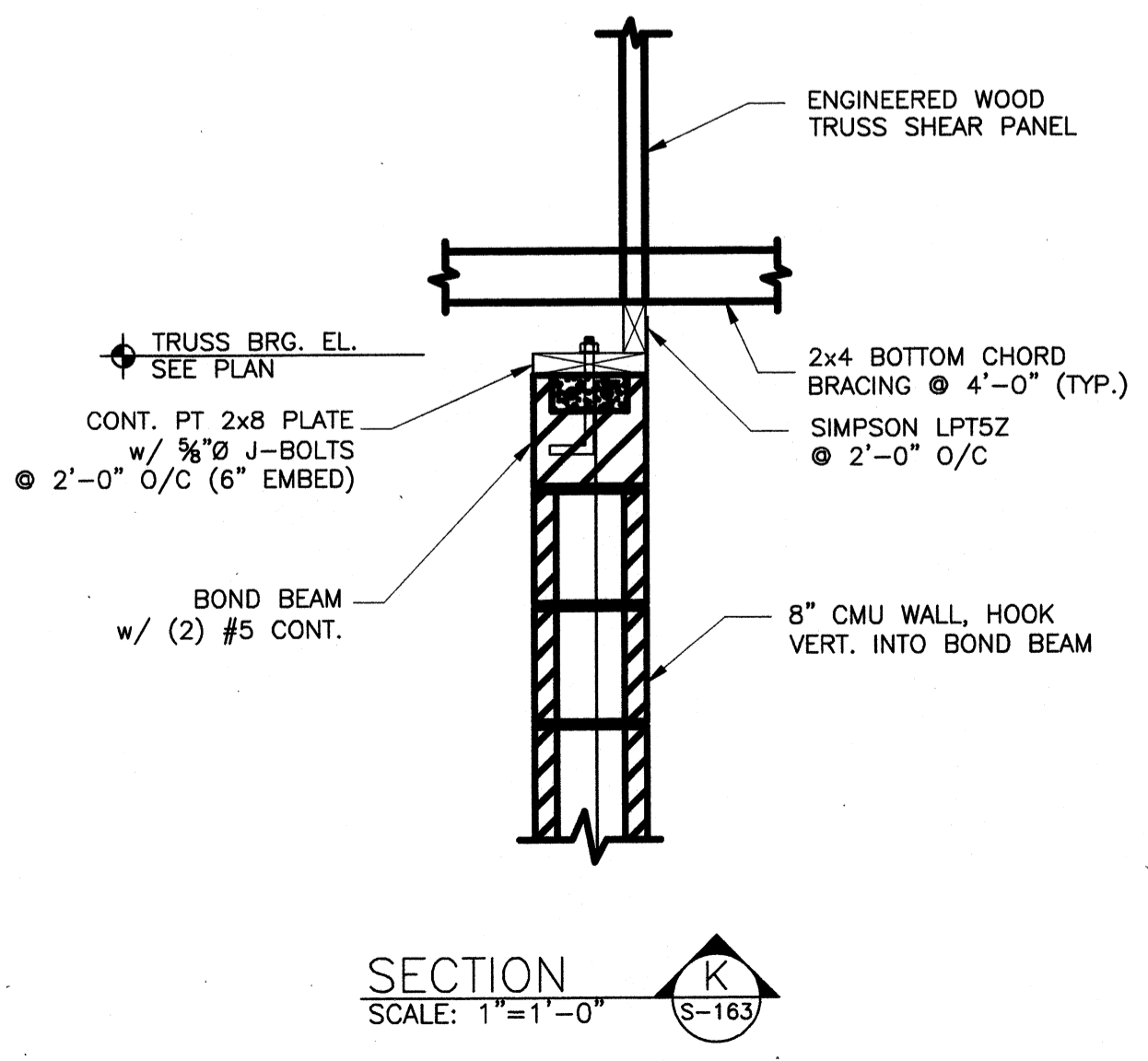
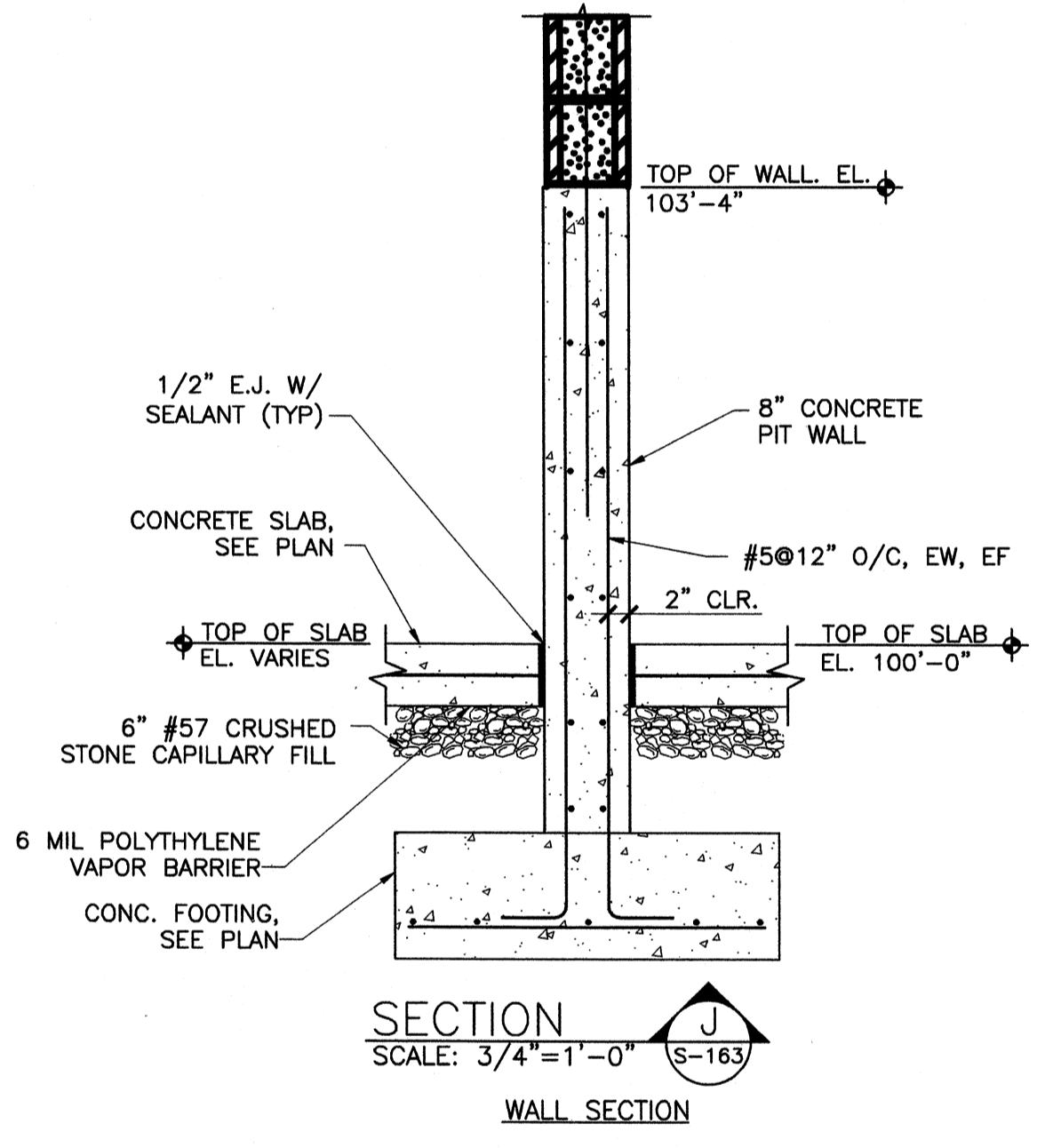
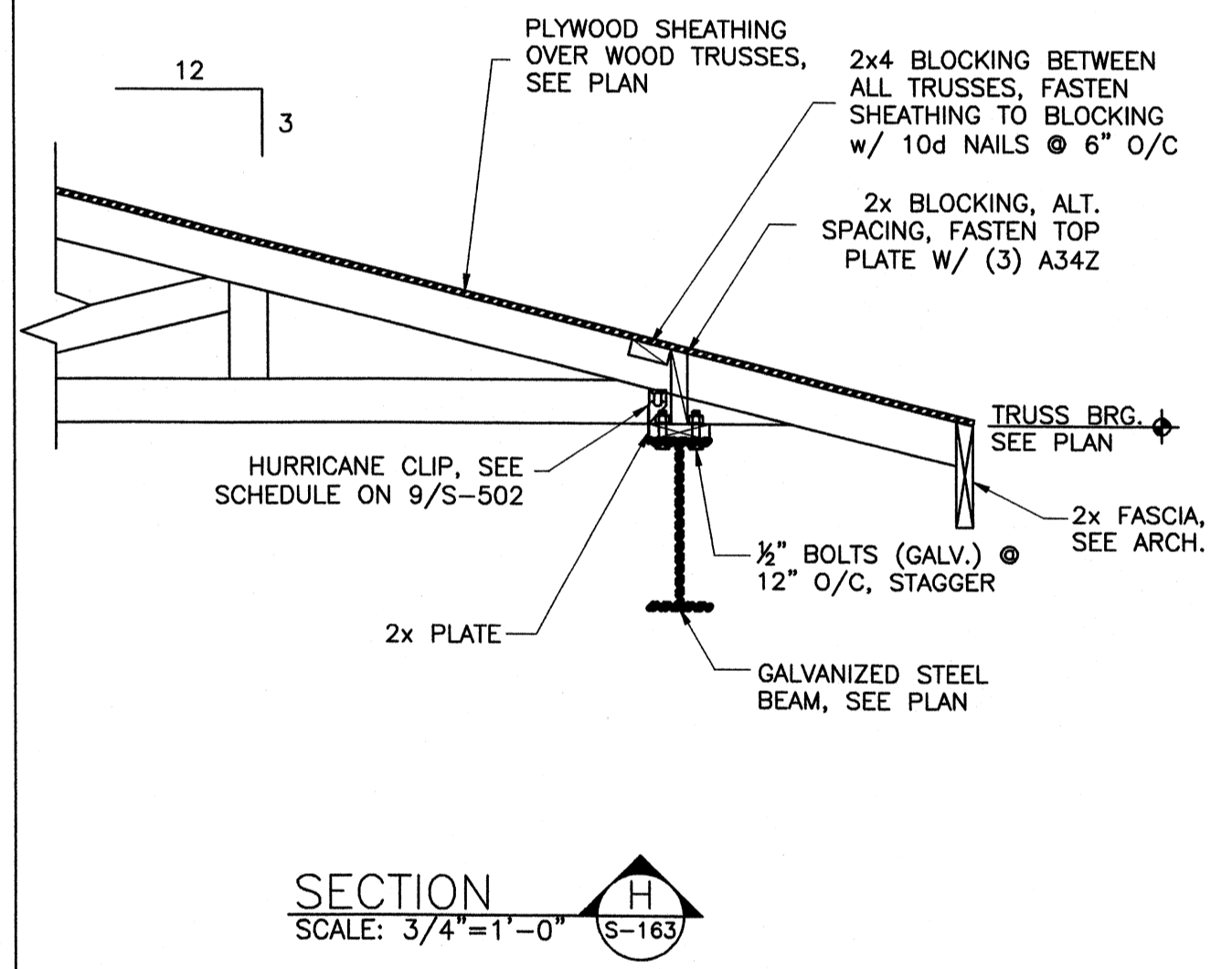
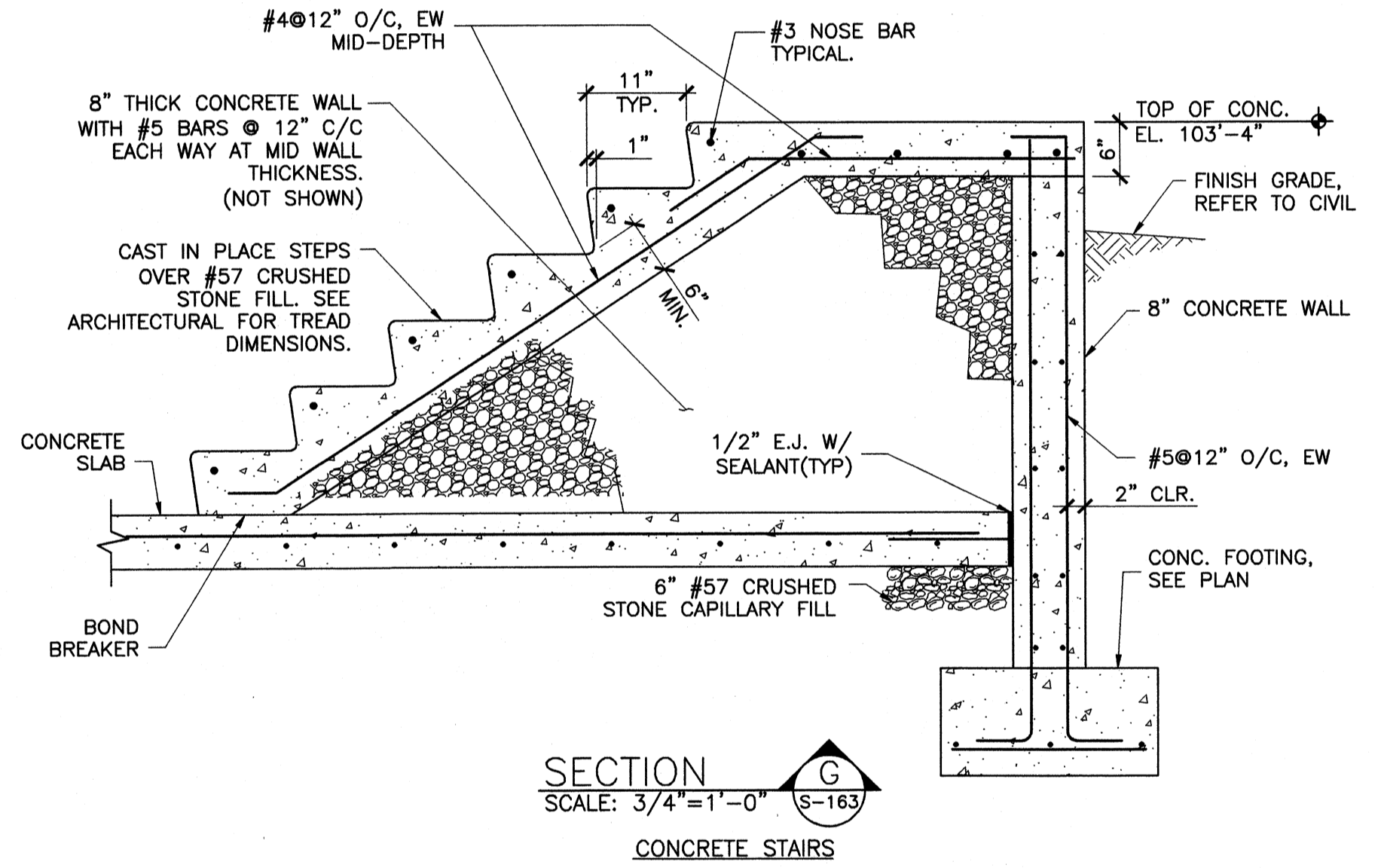
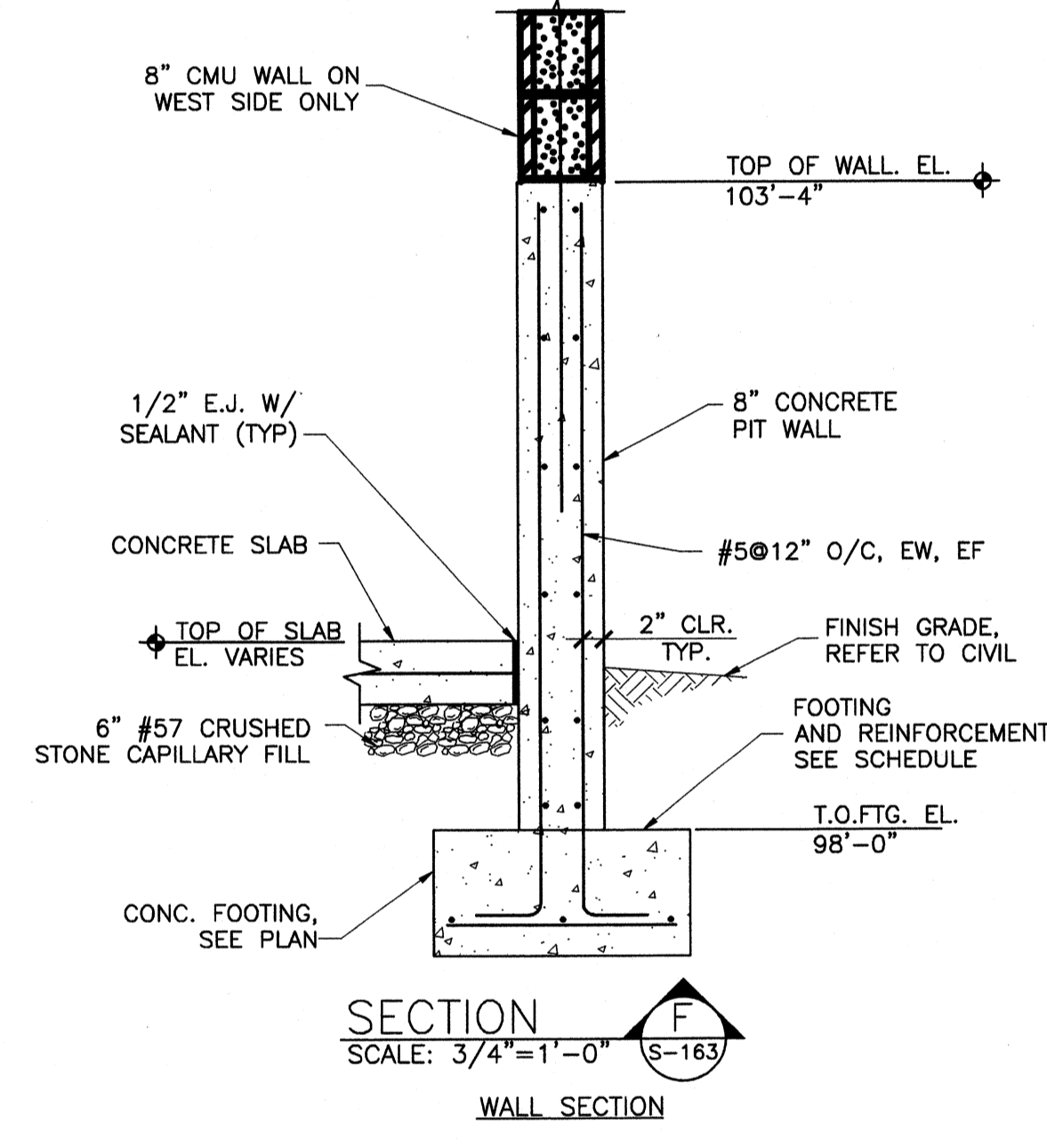
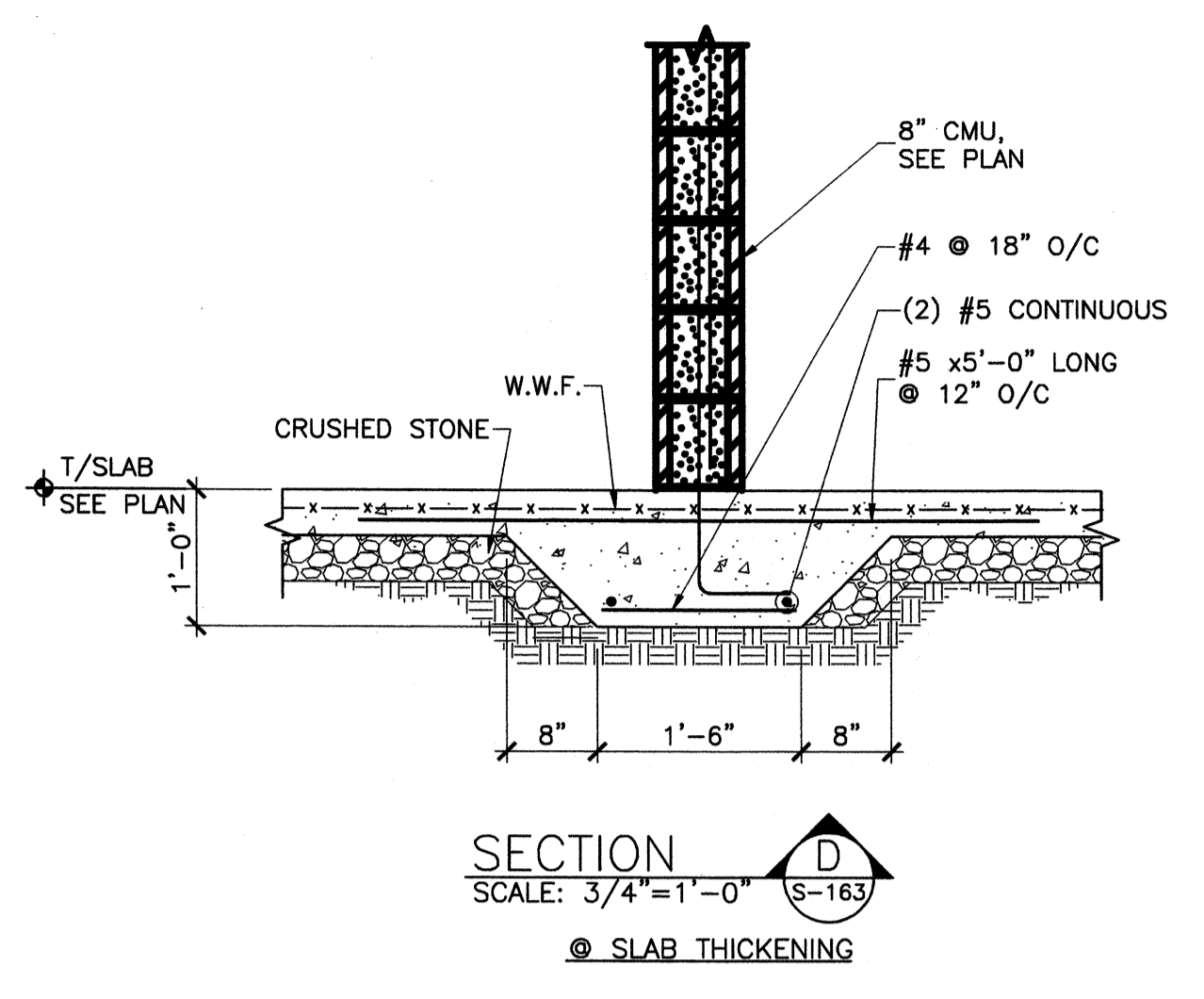
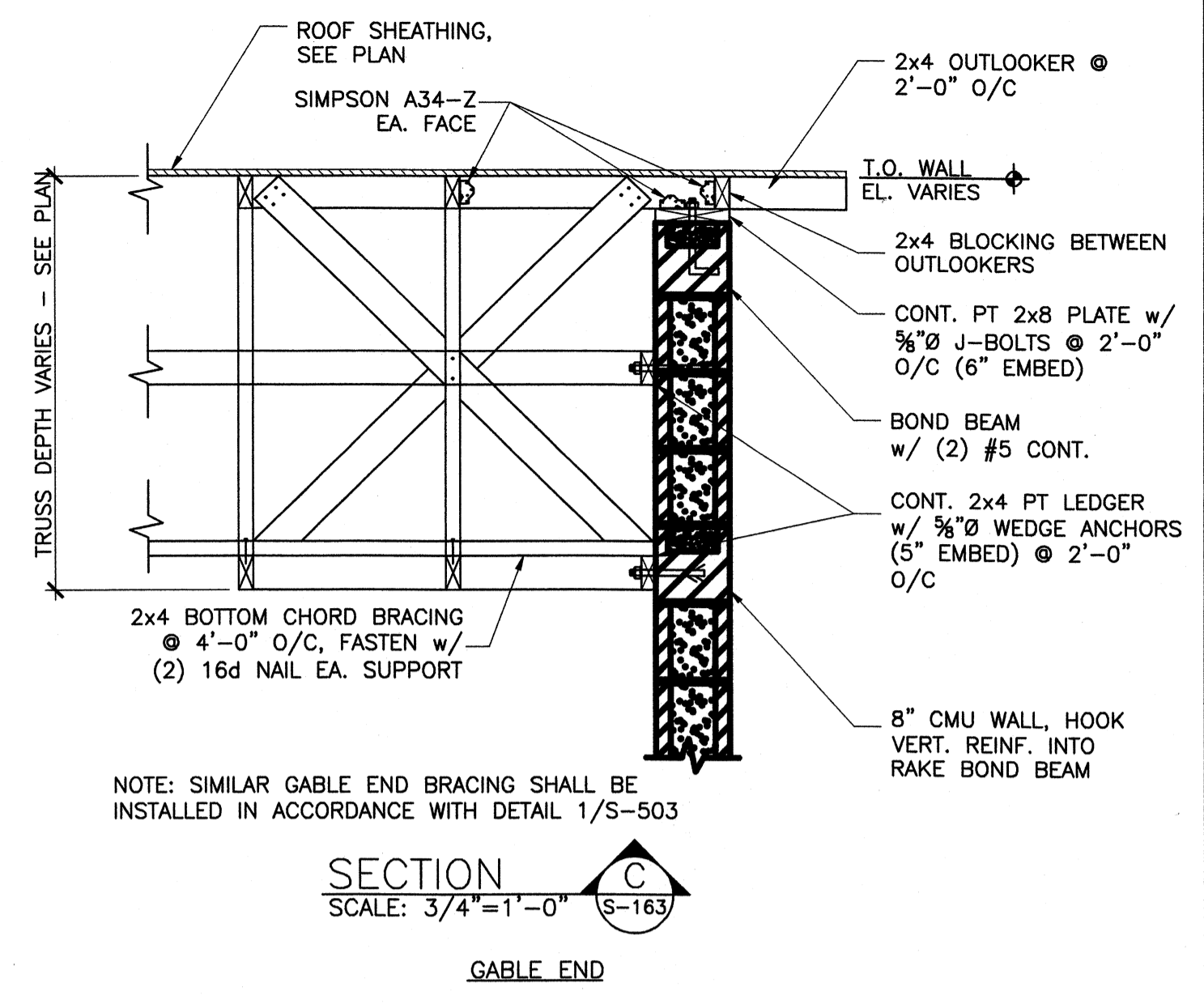
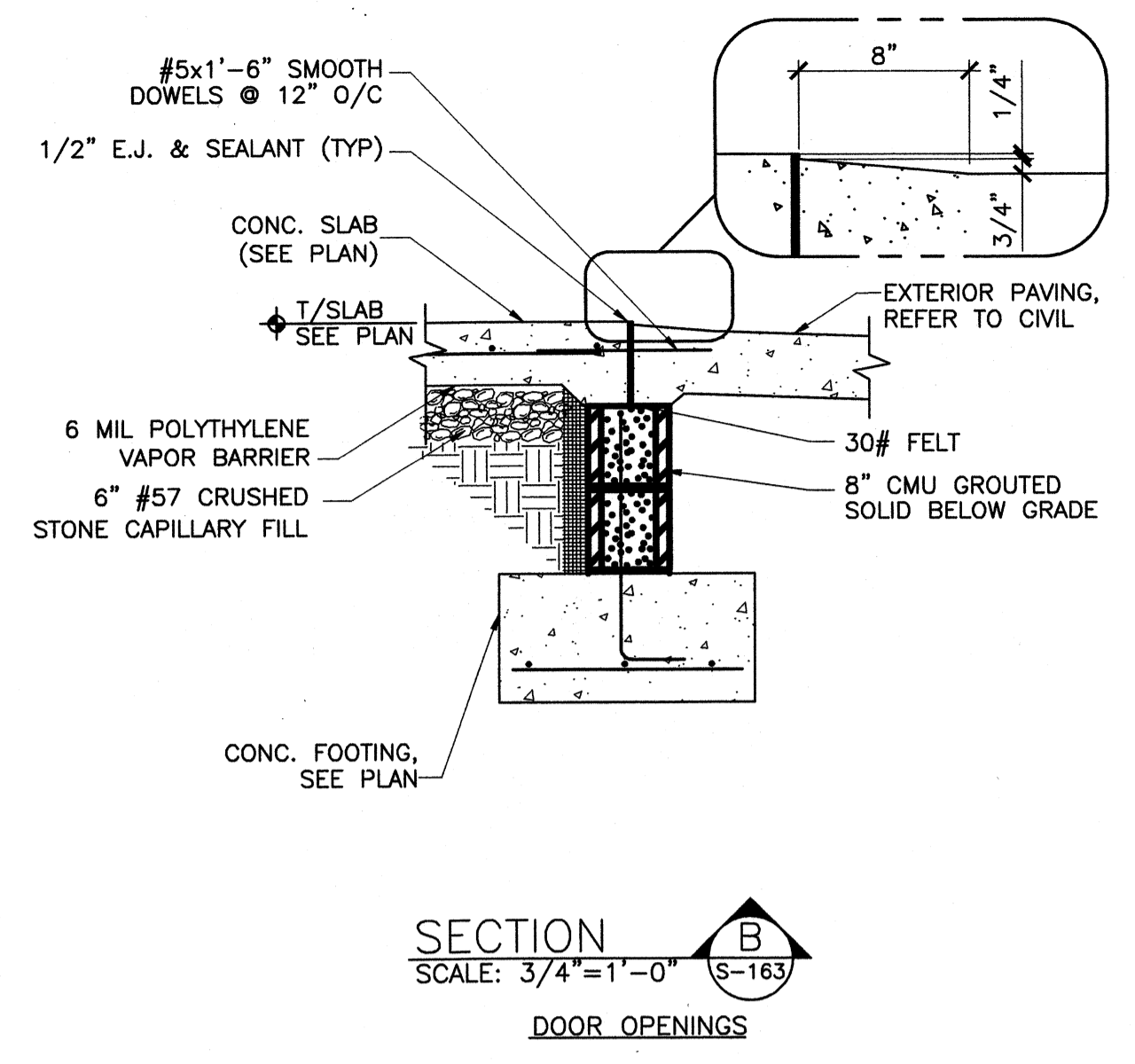
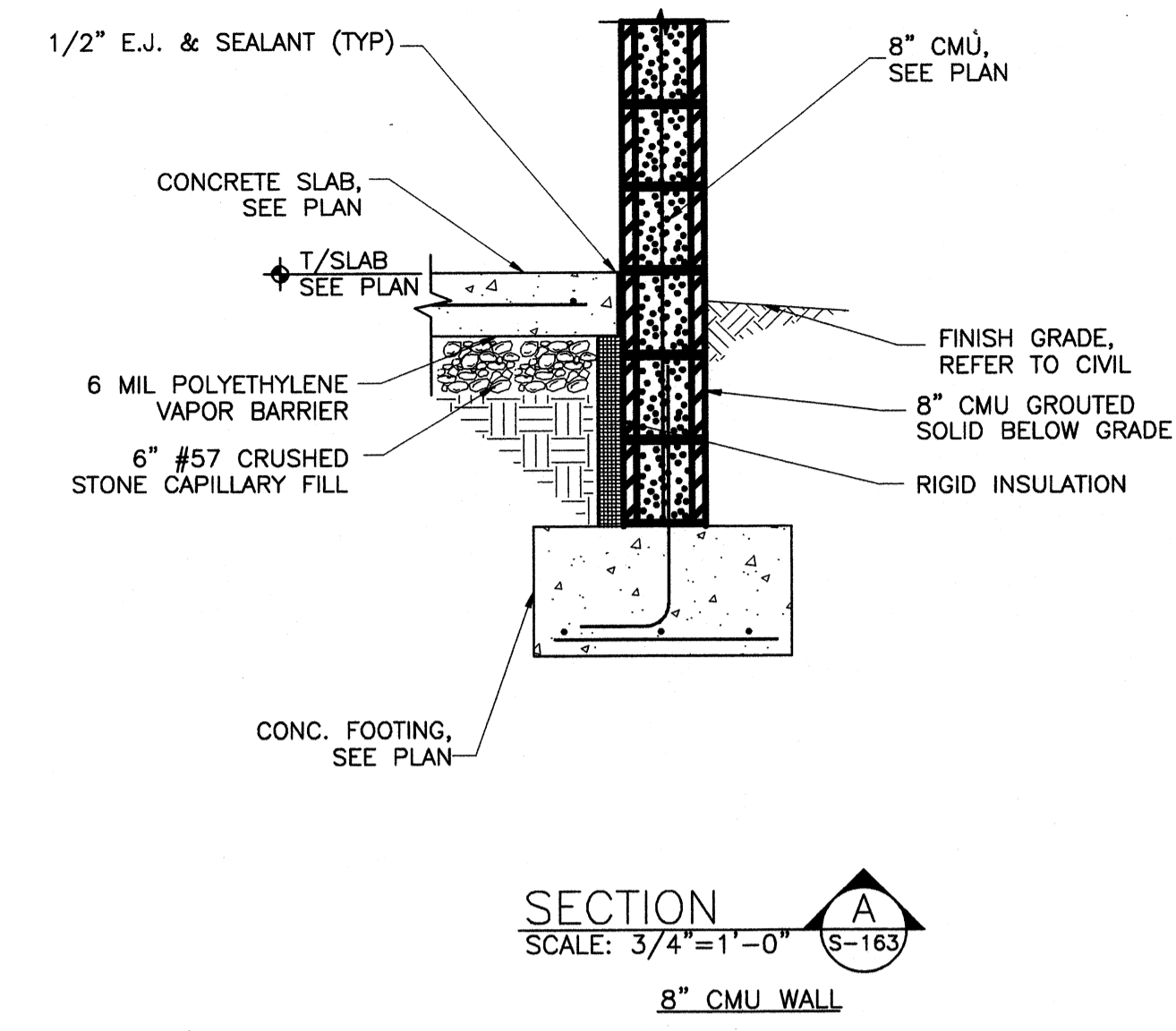
Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT

CHEMICAL BUILDING ROOF FRAMING PLAN

Project No.: 120-07060
 Designed By: BIGG
 Drawn By: VLR
 Checked By: MSP

S-162
Copyright: Tetra Tech

Wednesday, July 01, 2009 1:48:27 PM DRAWING: \\nrcr\proj\projects\120-07060 Ohio County\CONFORMED SET 5-09\STRUCTURAL\S-163 PRETREATMENT CHEMICAL BUILDING SECTIONS DWG LAYOUT, S-163 USER NAME: JEREMY M. FRONIGILLO



TETRA TECH
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800 Corporate Drive
Suite 500, Lexington, Ky. 40503
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PROJECT RECORD

CONFORMED SET 5/09
STATE OF KENTUCKY
MATTHEW PETAJA
REGISTERED PROFESSIONAL ENGINEER
No. 10300
Exp. 12/31/10

MARK	DATE	DESCRIPTION

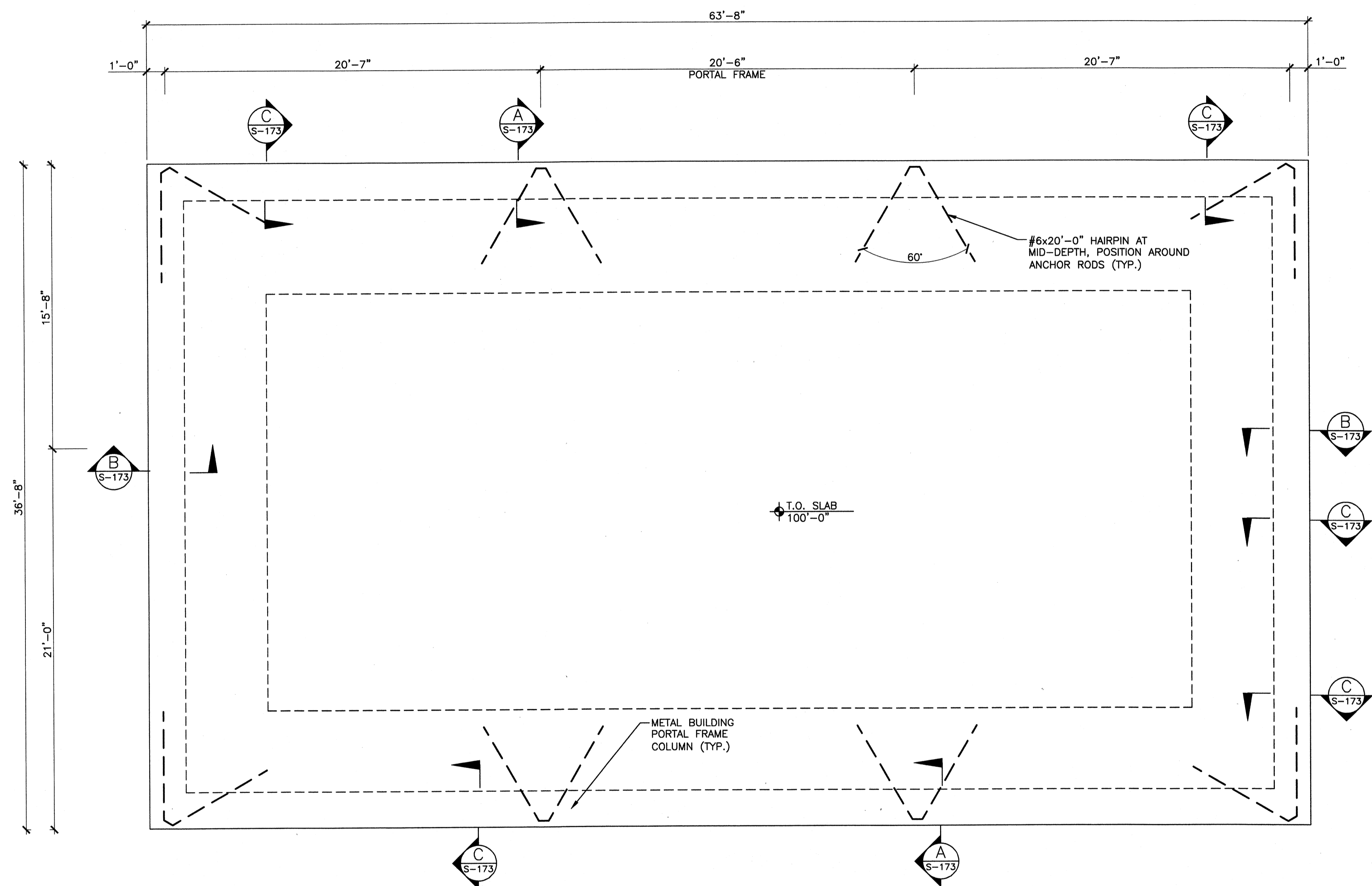
Client: OHIO COUNTY WATER DISTRICT | Prof. Loc.: CROMMELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT
CHEMICAL BUILDING SECTIONS

Project No.: 120-07060
Designed By: BIGG
Drawn By: VLR
Checked By: MSP

S-163

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Wednesday, July 01, 2009 1:52:49 PM DRAWING: \\netofit3\projects\120-07060 Ohio County\CONFORMED SET 5-08\STRUCTURAL\171 OPERATIONS BUILDING FOUNDATION PLAN .DWG LAYOUT: S-171 USER NAME: JEREMY M. FRONIGILLO



OPERATIONS BLDG. — FOUNDATION PLAN
SCALE: 1/4"=1'-0"



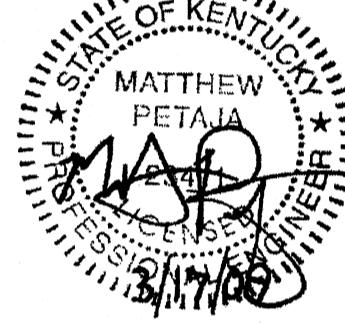
FOUNDATION NOTES:

1. STRUCTURAL ELEVATIONS ARE BASED ON A TOP OF SLAB ELEVATION OF 100'-0". EQUAL TO SITE EL. 485.50'
2. SEE SHEET S-001 FOR GENERAL NOTES AND FOUNDATION DESIGN CRITERIA.
3. VERIFY ALL DIMENSIONS, ELEVATIONS AND SLAB FINISHES WITH ARCHITECTURAL DRAWINGS BEFORE BEGINNING CONSTRUCTION. SEE ARCHITECTURAL FOR SLOPES, DEPRESSIONS, DROPS AND DRAIN LOCATIONS IN SLAB.
4. CENTERLINE OF COLUMNS AND WALLS SHALL COINCIDE WITH THE CENTERLINE OF FOUNDATIONS, UNLESS NOTED OTHERWISE.
5. INTERIOR SLAB ON GRADE SHALL BE A MINIMUM 6" CONCRETE SLAB WITH ONE LAYER OF #4 BARS @ 12" O/C, MID-DEPTH, UNLESS NOTED OTHERWISE. SEE CIVIL FOR EXTERIOR PAVING.
6. CJ - DENOTES CRACK CONTROL JOINTS. SEE DETAIL 2/S-501 FOR TYPICAL JOINT DETAILS.
7. FD - DENOTES FLOOR DRAIN. SEE DETAIL 11/S-501.
8. SLAB ON GRADE SHALL BE CAST ON A VAPOR BARRIER OVER COMPACTED SUBGRADE. SEE SPECS FOR COMPACTION REQUIREMENTS.
9. PORTAL COLUMN DEPTH SHALL BE LIMITED TO 12'.

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PROJECT RECORD

CONFORMED SET 5/09



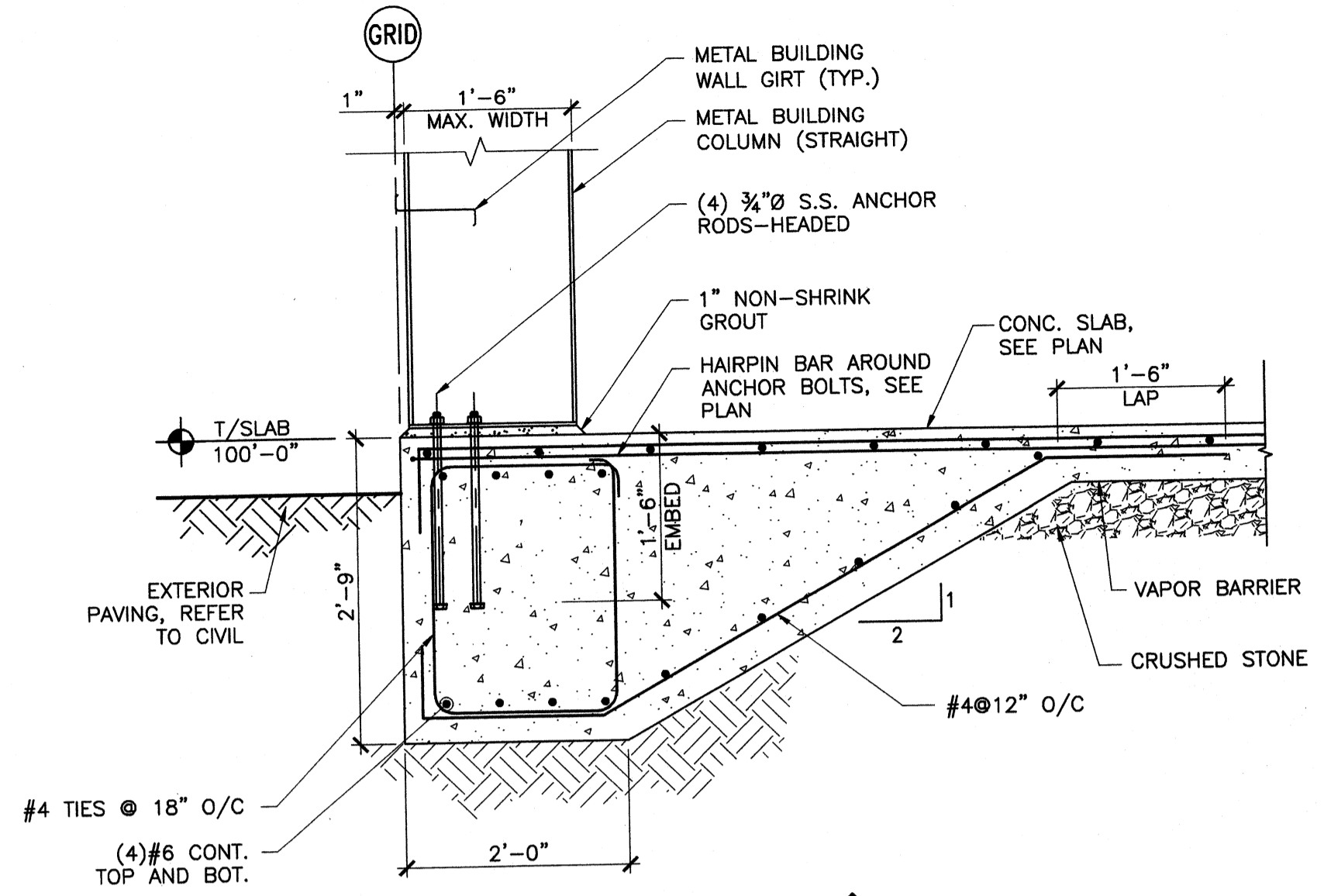
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
OPERATIONS BUILDING
FOUNDATION PLAN

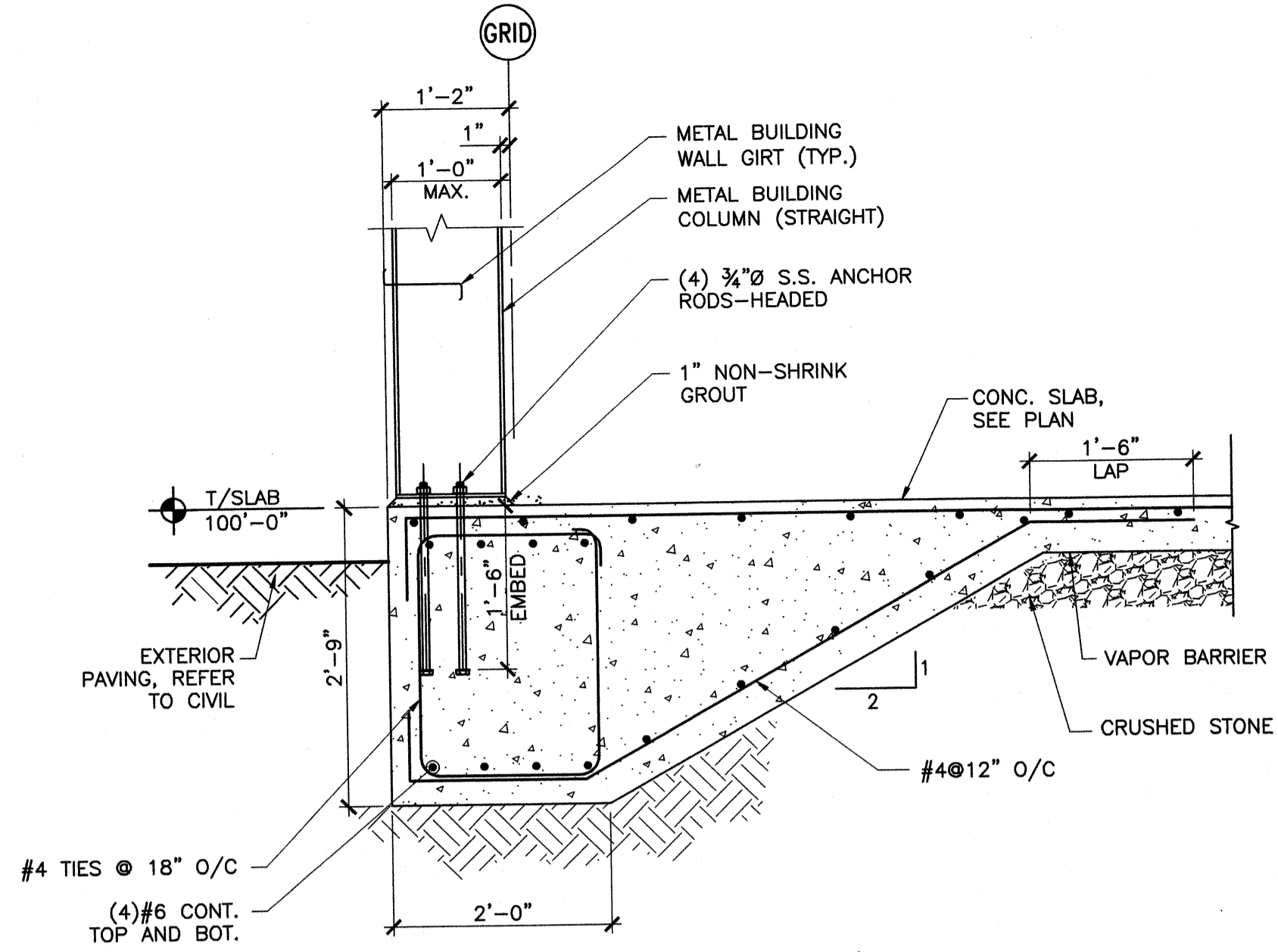
Project No.: 120-07060
Designed By: BIGG
Drawn By: VLR
Checked By: MSP

S-171

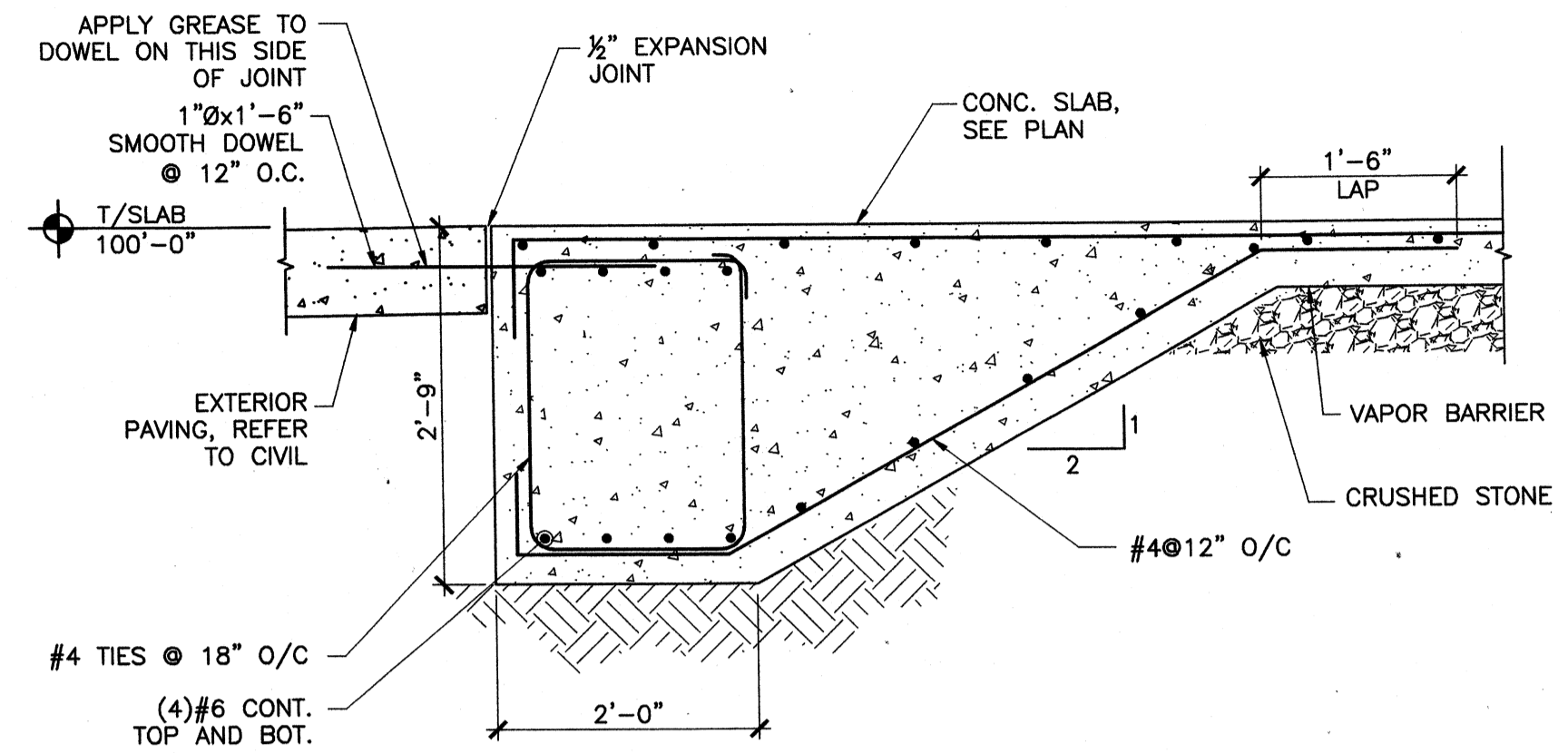
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SECTION A
SCALE: 3/4"=1'-0" (S-173)
AT BLDG COLUMN

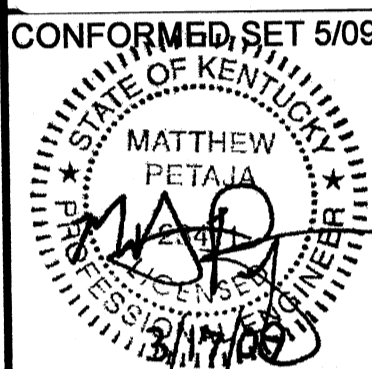


SECTION B
SCALE: 3/4"=1'-0" (S-173)
AT BLDG WIND COLUMN



SECTION C
SCALE: 3/4"=1'-0" (S-173)
AT DOOR OPENING

PROJECT RECORD



BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMMELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

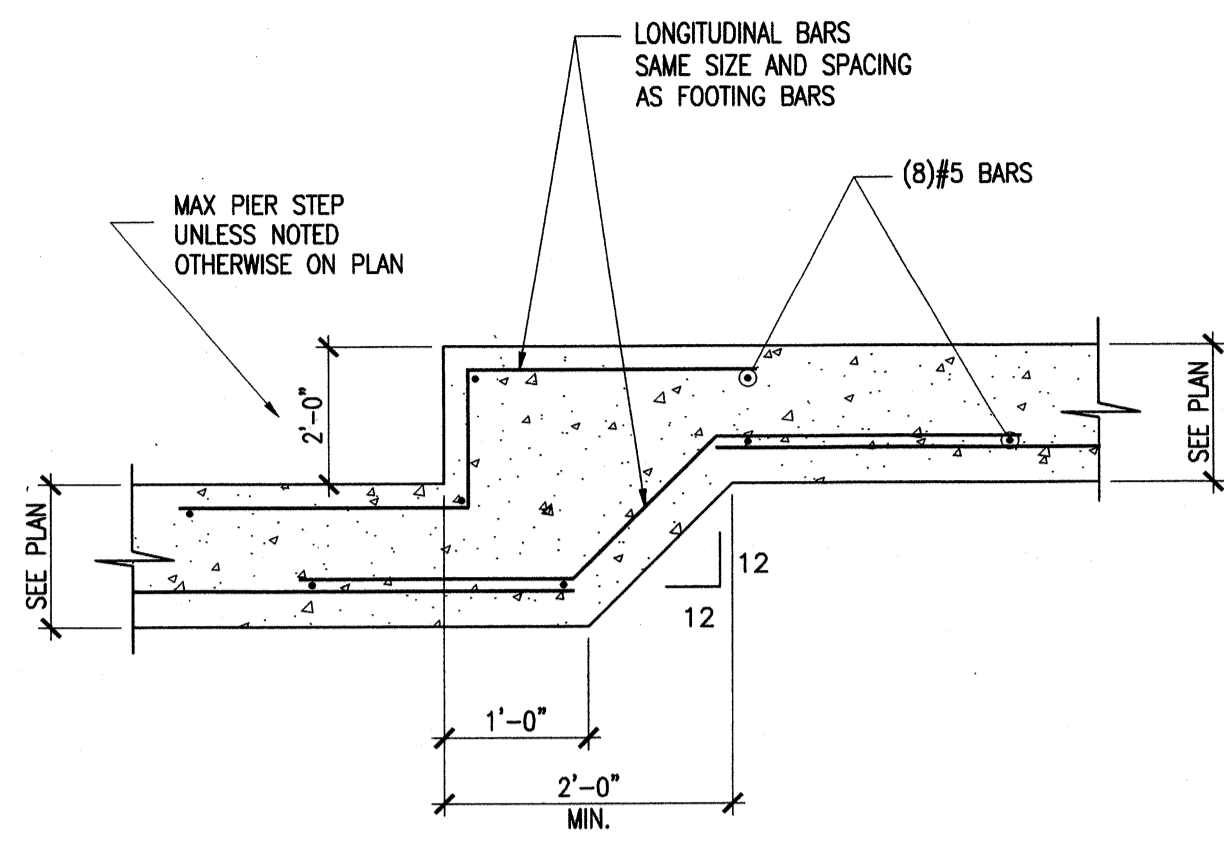
Project No.: 120-07060
Designed By: BIGG
Drawn By: VLR
Checked By: MSP

S-173

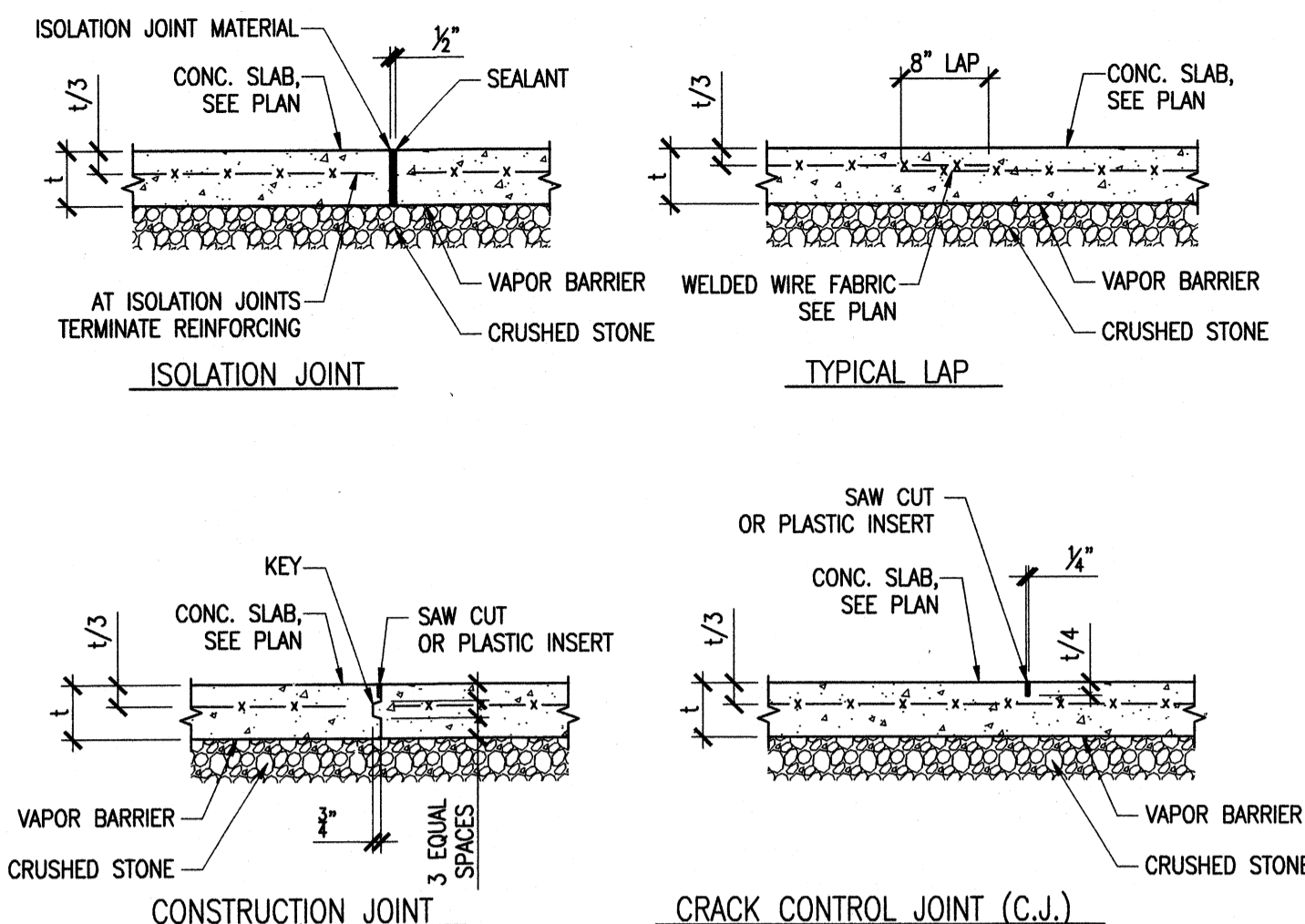
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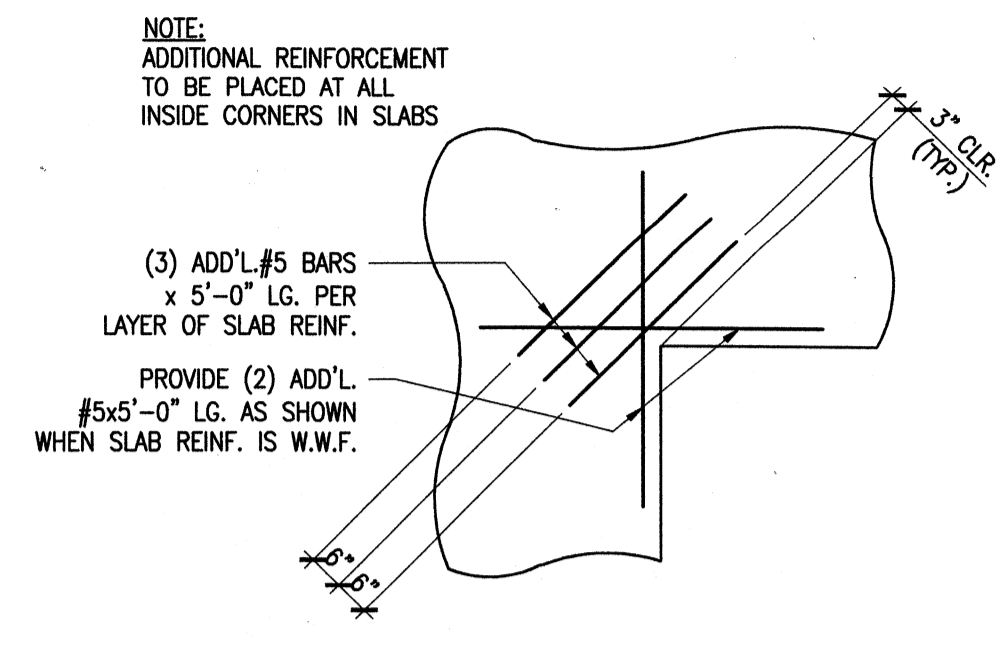
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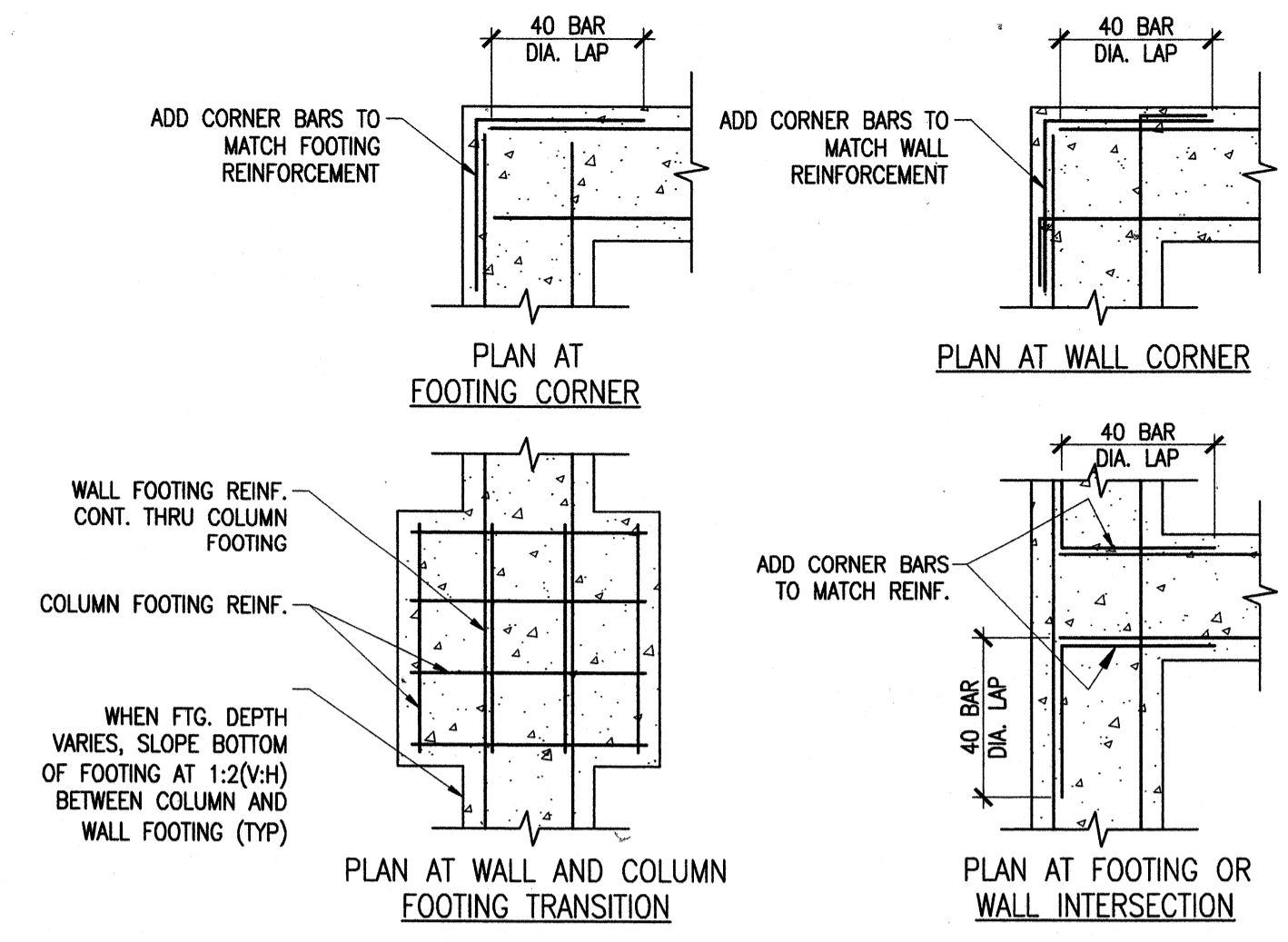
DETAIL 1
SCALE: 3/4"=1'-0" (S-501)
STEPPED FOOTING



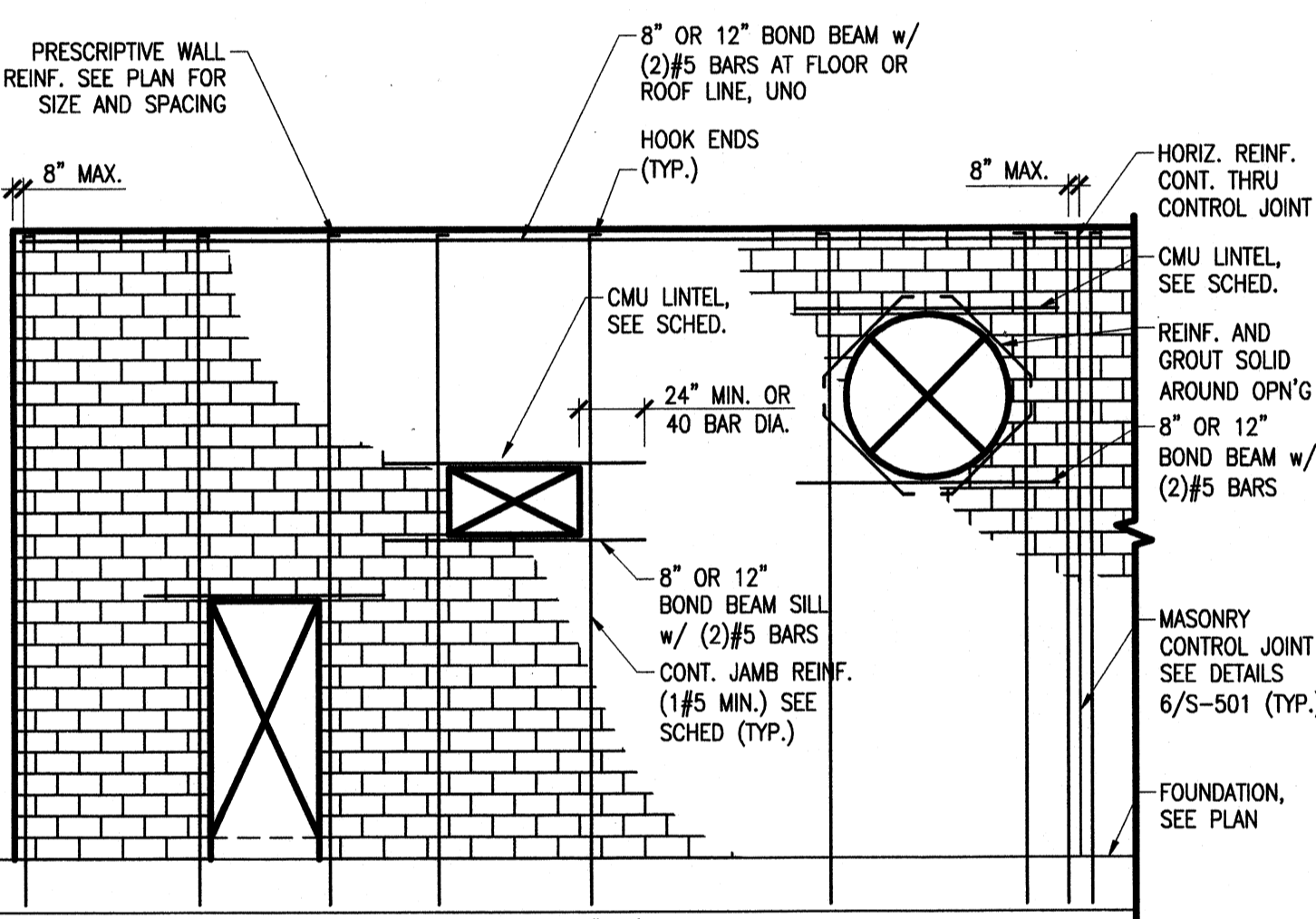
DETAIL 2
SCALE: 3/4"=1'-0" (S-501)
TYP. SLAB JOINTS



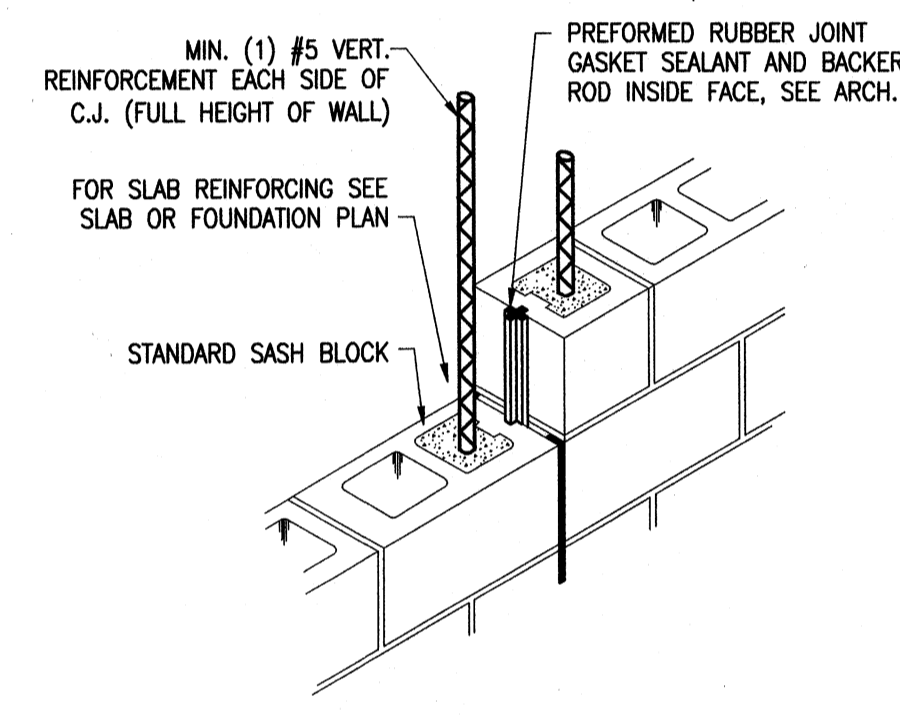
DETAIL 3
SCALE: 3/8"=1'-0" (S-501)
REINF. RE-ENTRANT SLAB CORNER



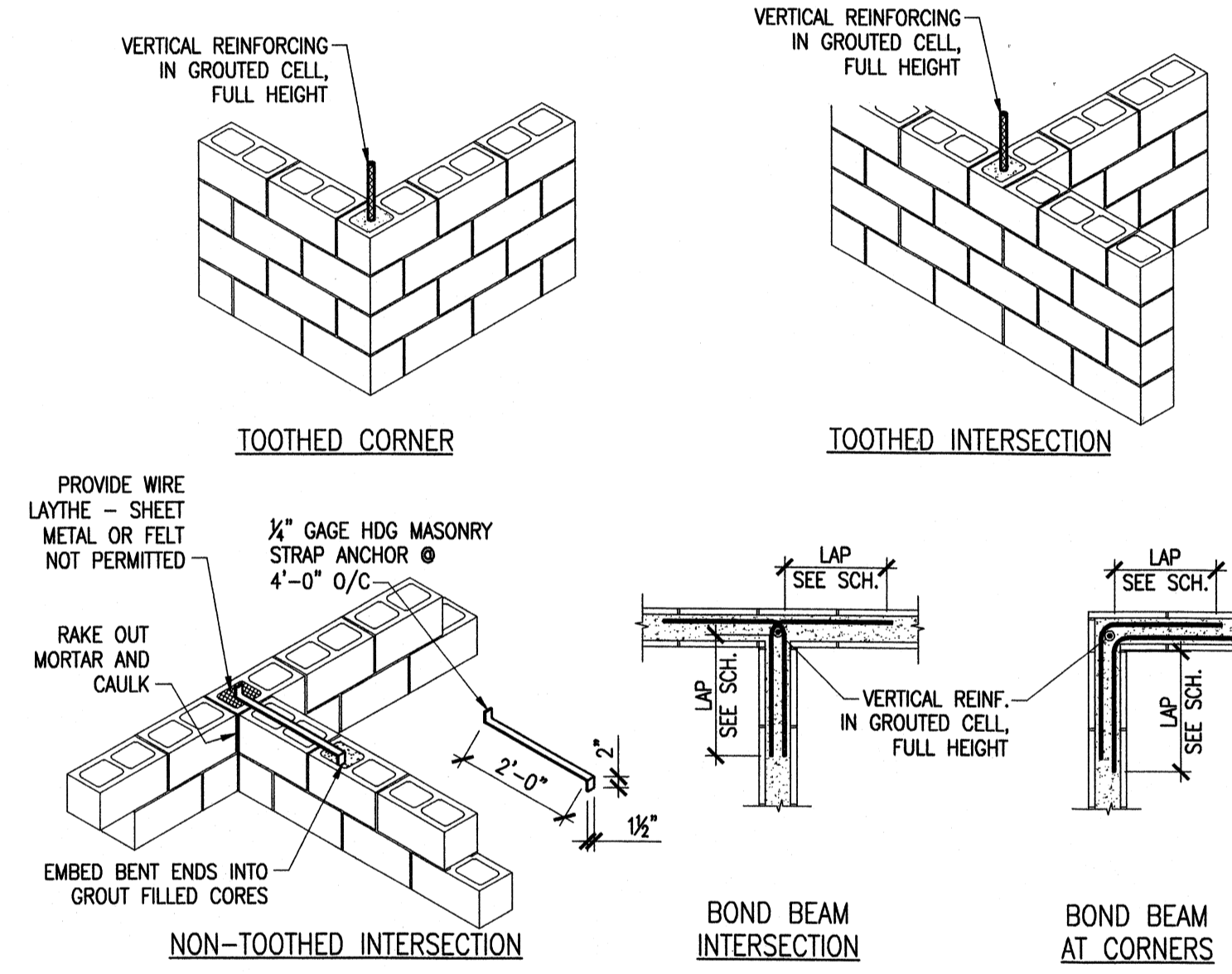
DETAIL 4
SCALE: 3/4"=1'-0" (S-501)
TYP. CONC. INTERSECTIONS



DETAIL 5
SCALE: 3/16"=1'-0" (S-501)
TYP. CMU WALL REINF.



DETAIL 6
SCALE: 3/4"=1'-0" (S-501)
MASONRY CONTROL JOINT

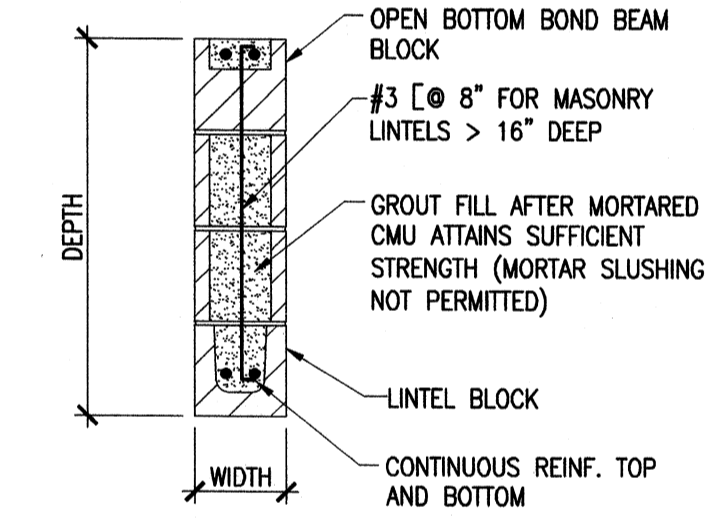


DETAIL 7
SCALE: 3/4"=1'-0" (S-501)
TYP. MASONRY INTERSECTIONS

MASONRY LINTEL SCHEDULE

MARK	SIZE (WxD)	REINFORCEMENT	MAX SPAN
L1	8x8	(2) #5 BOT.	≤ 4'-0"
L2	8x16	(2) #5 T & B	≤ 6'-4"
L3	8x24	(2) #6 T & B	≤ 8'-4"
L4	8x32	(2) #6 T & B	≤ 10'-0"

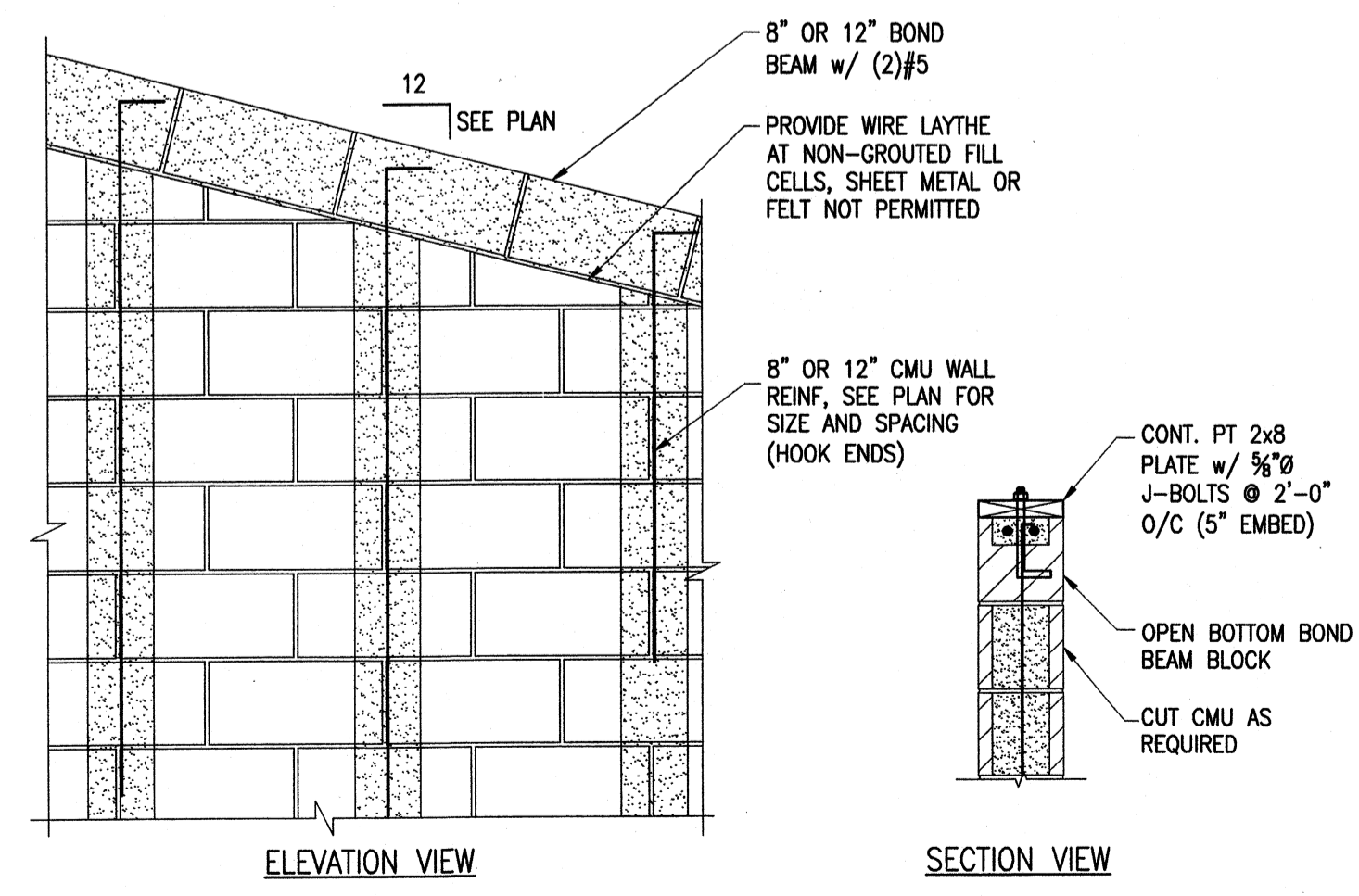
- NOTES:**
1. LINTEL MUST BE SHORED UNTIL MORTAR AND GROUT ATTAIN DESIGN STRENGTH.
 2. SPECIAL INSPECTOR MUST VERIFY PROPER REINFORCEMENT PLACEMENT PRIOR TO GROUTING, AND VERIFY PROPER GROUT PLACEMENT.
 3. MASONRY LINTELS SHALL HAVE A MINIMUM BEARING OF 8" MASONRY LINTELS AT LOAD-BEARING WALLS ARE LOCATED ON PLAN.
 4. SHEAR TIES SHALL HOOK AROUND TOP AND BOTTOM REINF.
 5. LINTEL REINFORCING SHALL EXTEND OUTSIDE THE OPENING FORTY (40) BAR DIAMETERS, EACH DIRECTION OR PROVIDE STANDARD HOOK TO TERMINATE ENDS.
 6. NON-LOAD BEARING PARTITION WALL OPENINGS OR OPENINGS NOT SHOWN ON PLAN SHALL FOLLOW THE MINIMUM REINFORCING AND SPAN REQUIREMENTS PER SCHEDULE.



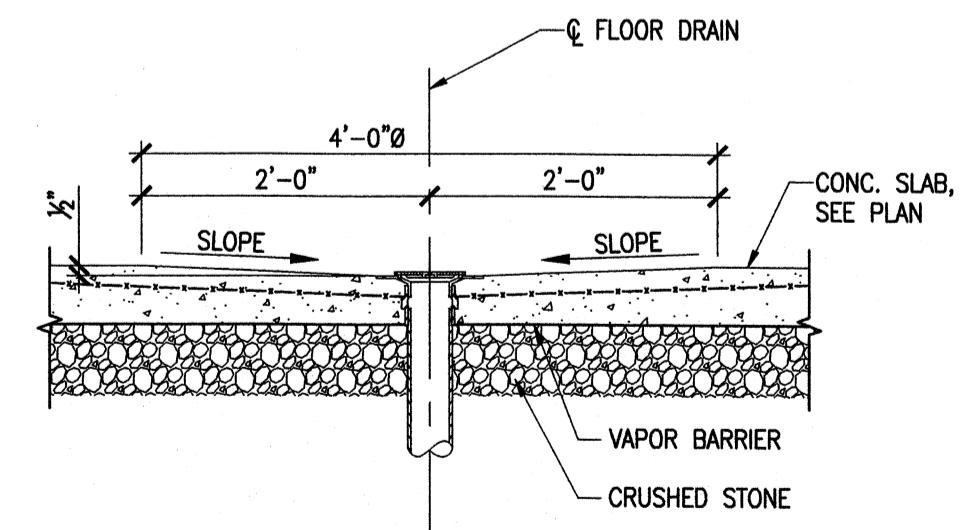
DETAIL 8
SCALE: 3/4"=1'-0" (S-501)
MASONRY LINTELS

NOT USED

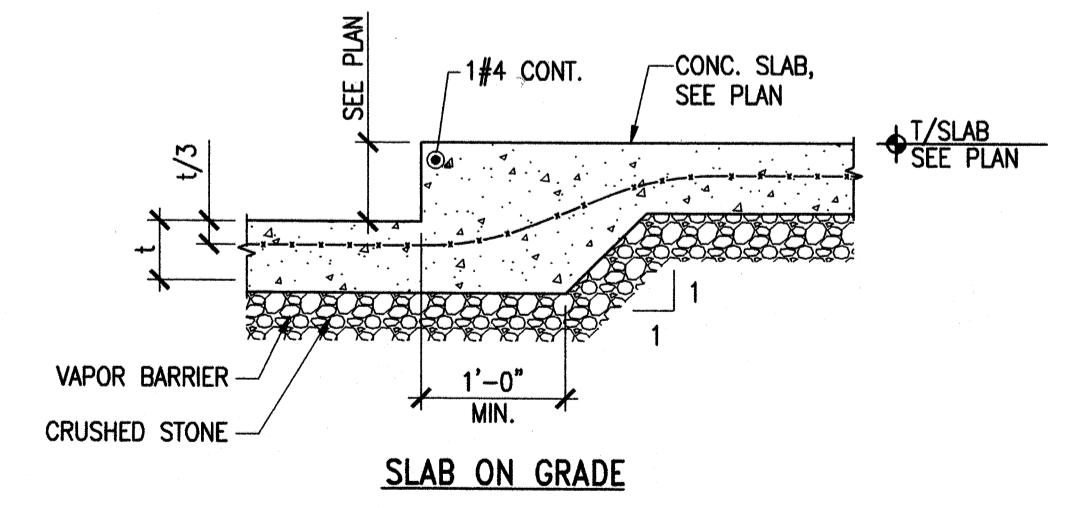
DETAIL 9
SCALE: NONE (S-501)



DETAIL 10
SCALE: 3/4"=1'-0" (S-501)
CMU AT GABLE ENDS



DETAIL 11
SCALE: 3/8"=1'-0" (S-501)
TYP. FLOOR DRAIN



DETAIL 12
SCALE: 3/4"=1'-0" (S-501)
TYP. SLAB STEP

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PROJECT RECORD

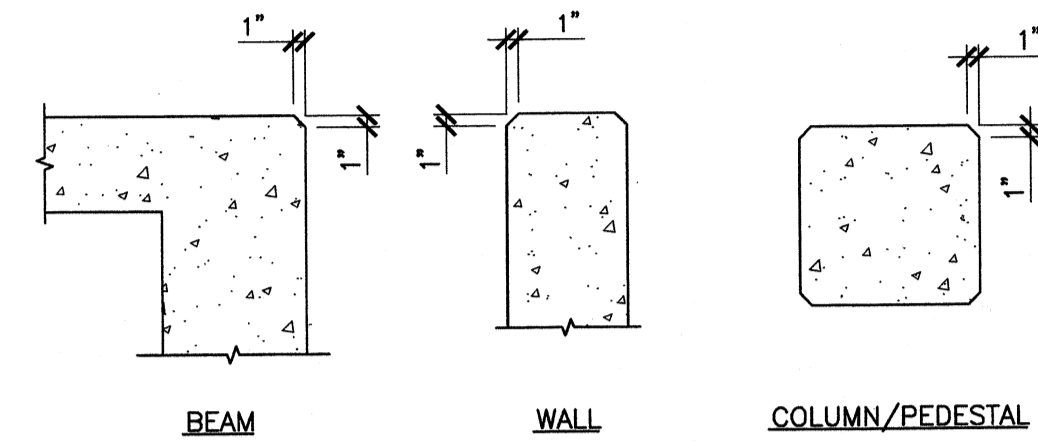
CONFORMED SET 5/09
STATE OF KENTUCKY
MATTHEW PETAJA
REGISTERED PROFESSIONAL ENGINEER
No. 13576
EXPIRES 12/31/16

MARK	DATE	DESCRIPTION	BY

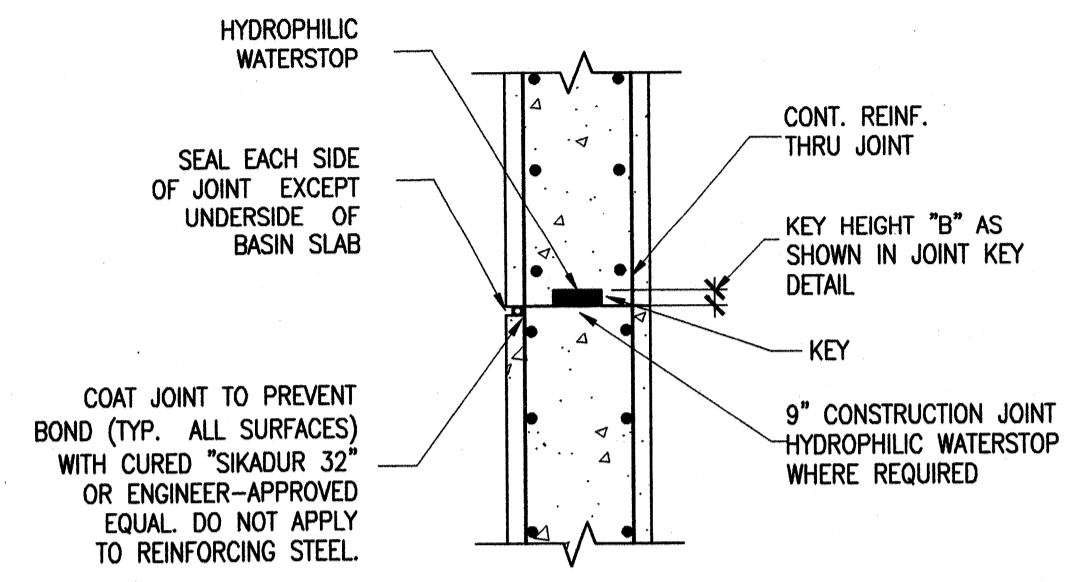
Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

Project No.: 120-07060
Designed By: BIGG
Drawn By: VLR
Checked By: MSP

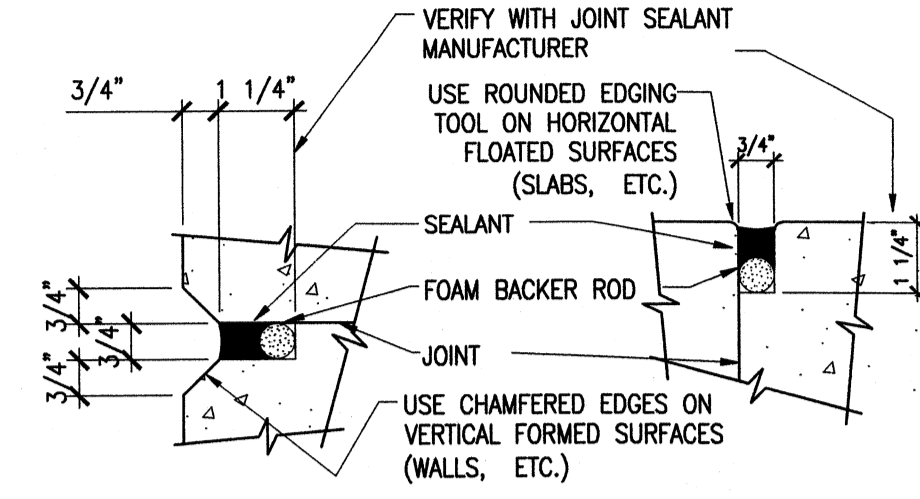
S-501



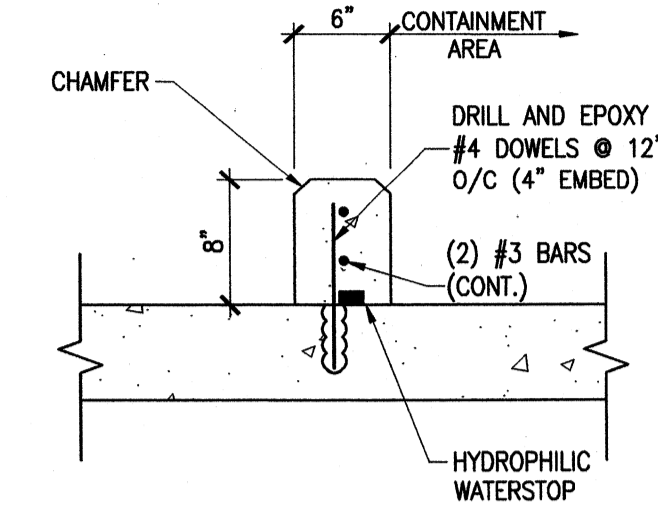
DETAIL 1
N.T.S. S-502
TYP. CONC. CHAMFER



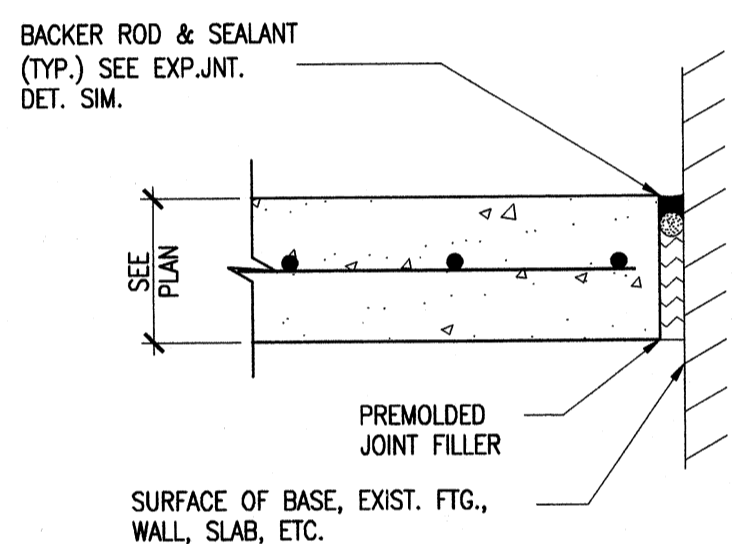
DETAIL 2
SCALE: N.T.S. S-502
SLAB AND WALL CONSTRUCTION JOINT



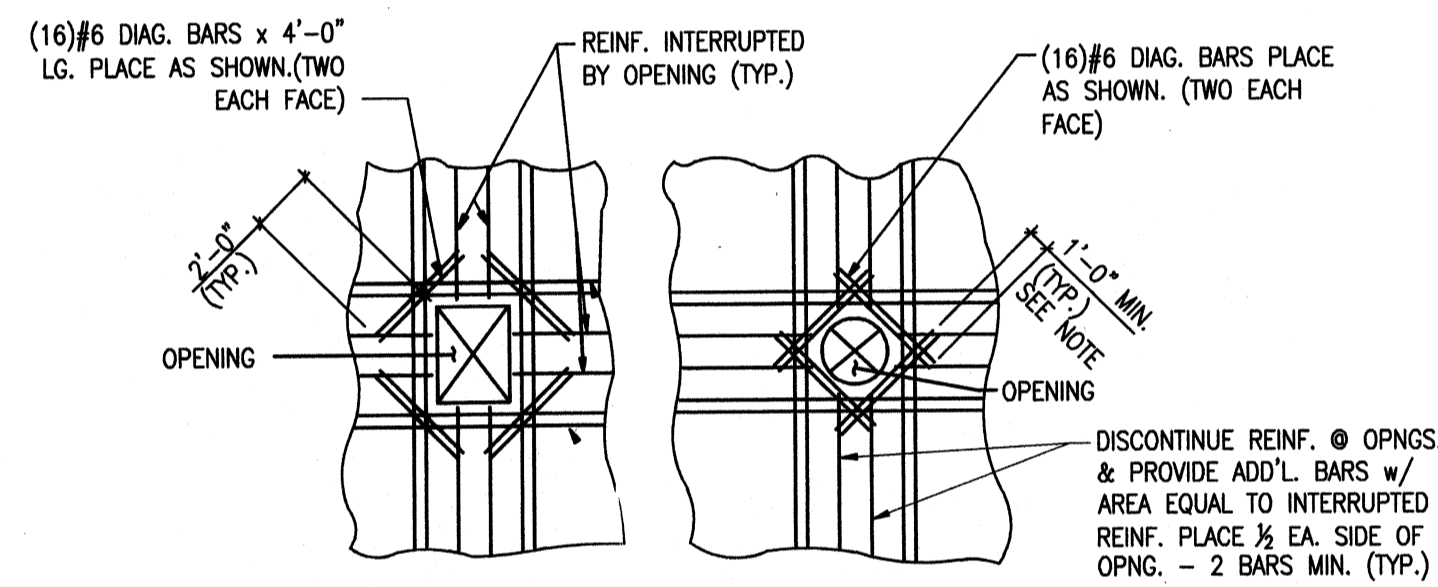
DETAIL 3
SCALE: 1"=1'-0" S-502
CONTROL JOINT SEALANT



DETAIL 4
SCALE: 1"=1'-0" S-502
CONTAINMENT CURB



DETAIL 5
SCALE: N.T.S. S-502
SLAB TO WALL ISOLATION JOINT

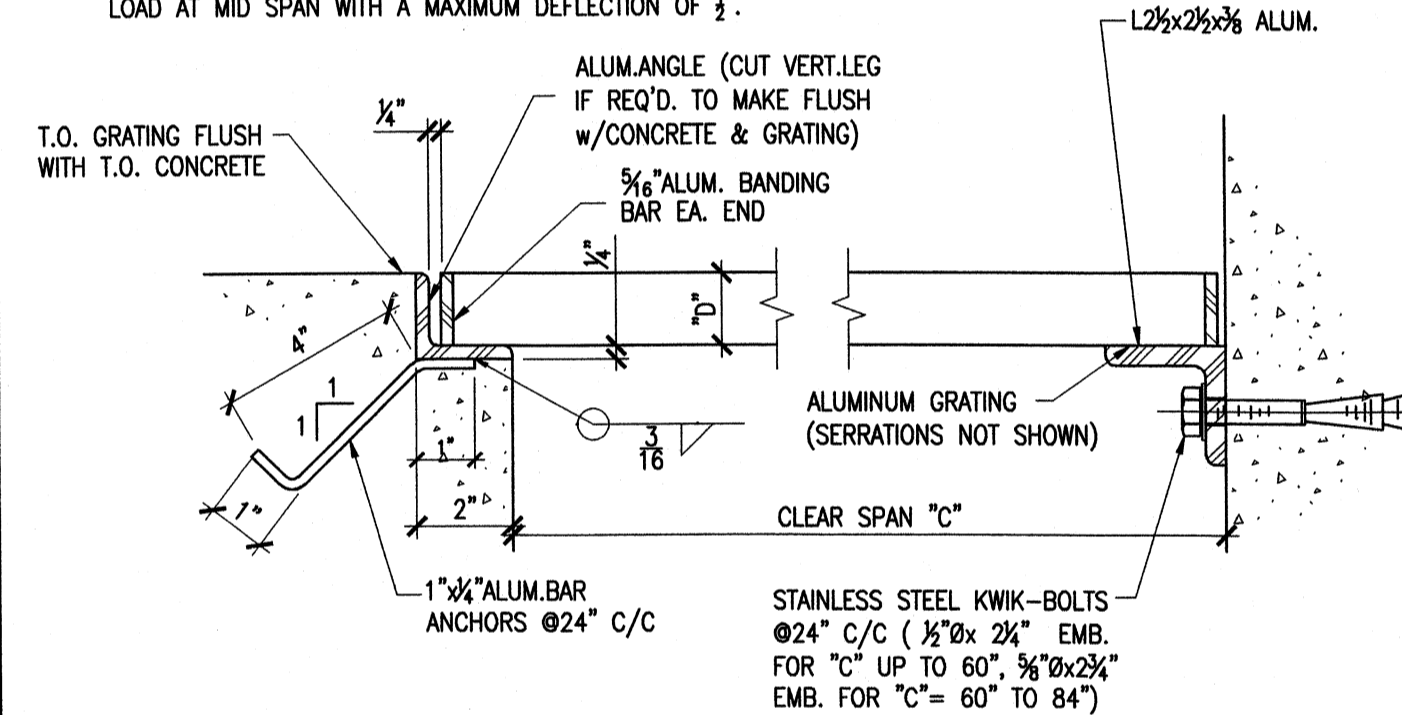


- NOTES:
- CONTRACTOR SHALL COORDINATE OPENING LOCATIONS AND DIMENSIONS WITH ARCHITECTURAL AND MEP DRAWINGS.
 - OMIT ADDED REINFORCING AT OPENINGS OF 12" OR LESS AND REROUTE REINFORCING ADJACENT TO OPENING.
 - OPENING SHALL BE SHOWN ON SHOP DRAWINGS AND REINFORCED ACCORDINGLY.
 - CENTER CORNER AND EDGE BARS ON OPENING. TERMINATE ENDS WITH STANDARD HOOKS AS REQUIRED.
 - WHERE REQ'D. LAPS ARE NOT POSSIBLE DUE TO PRESENCE OF ADJACENT HOLES OR CORNERS, PROVIDE STANDARD END HOOK
 - HOOK ENDS AT ALL INTERRUPTED BARS ADJACENT TO OPENINGS GREATER THAN 12" WHERE BARS CANNOT EXTEND PAST THE OPENING FOR THE DISTANCE INDICATED.

DETAIL 6
SCALE: 3/4"=1'-0" S-502
REINF. STEEL OPENINGS

ALUMINUM GRATING CHART					
CLEAR SPAN "C"	UP TO 48"	48"-60"	60"-72"	72"-78"	78"-84"
BEARING BAR DEPTH "D"	1 1/2"	1 3/4"	2"	2 1/2"	2 3/4"

1. CONTINUOUS GRATINGS OVER CHANNELS OF VARYING WIDTH SHALL HAVE UNIFORM BEARING BAR DEPTH "D" BASED ON LARGEST CLEAR SPAN "C"
 2. GRATING SHALL BE DESIGNED FOR 150 PSF LIVE LOAD OR A 2000 LB CONCENTRATED LOAD AT MID SPAN WITH A MAXIMUM DEFLECTION OF 1/8"

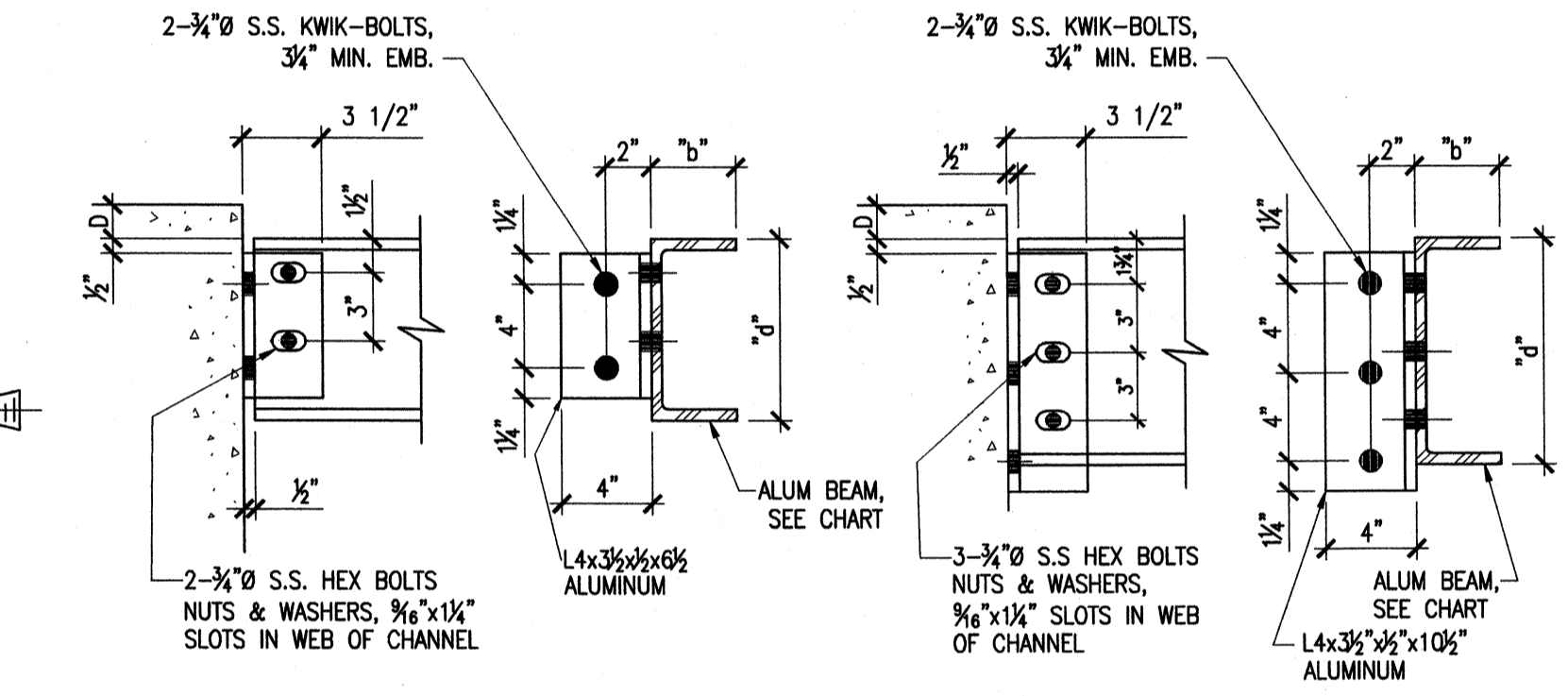


EMBEDDED SUPPORT SURFACE-MOUNTED SUPPORT

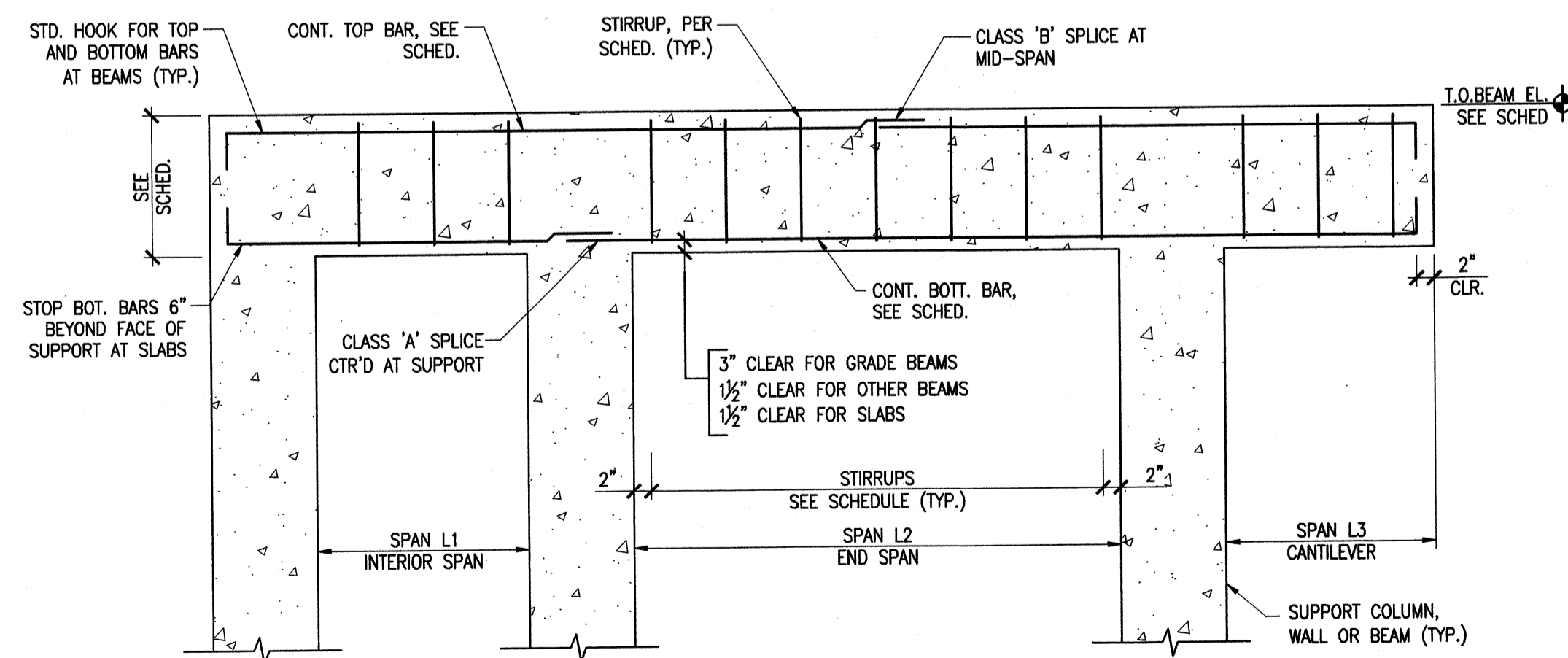
DETAIL 7
N.T.S. S-502
ALUM. GRATING & SUPPORTS

GRATING SUPPORT BEAM CHART					
BEAM SPAN (FEET)	6	8	10	12	14
BEAM SIZE *	C6x3.25	C8x3.75	C10x4.25	C12x5.0	C12x5.0
WEIGHT (LB./FT.)	4.030	5.789	8.360	11.822	11.822
END CONNECTION TYPE	1	1	2	2	2

* BEAMS ARE ALUMINUM ASSOCIATION STANDARD CHANNELS SIZES SHOWN ARE DEPTH d x FLANGE WIDTH b



GRATING SUPPORT BEAM CONNECTION - TYPE 1 GRATING SUPPORT BEAM CONNECTION - TYPE 2



TYPICAL REINFORCING PLACEMENT DIAGRAM FOR BEAMS AND ONE-WAY SLABS

DETAIL 8
SCALE: 3/4"=1'-0" S-502
CONCRETE BEAM SCHEDULE

TRUSS TIEDOWN SCHEDULE (FOR USE WITH TRUSSES BEARING ON PRESSURE TREATED, SINGLE 2x PLATE)

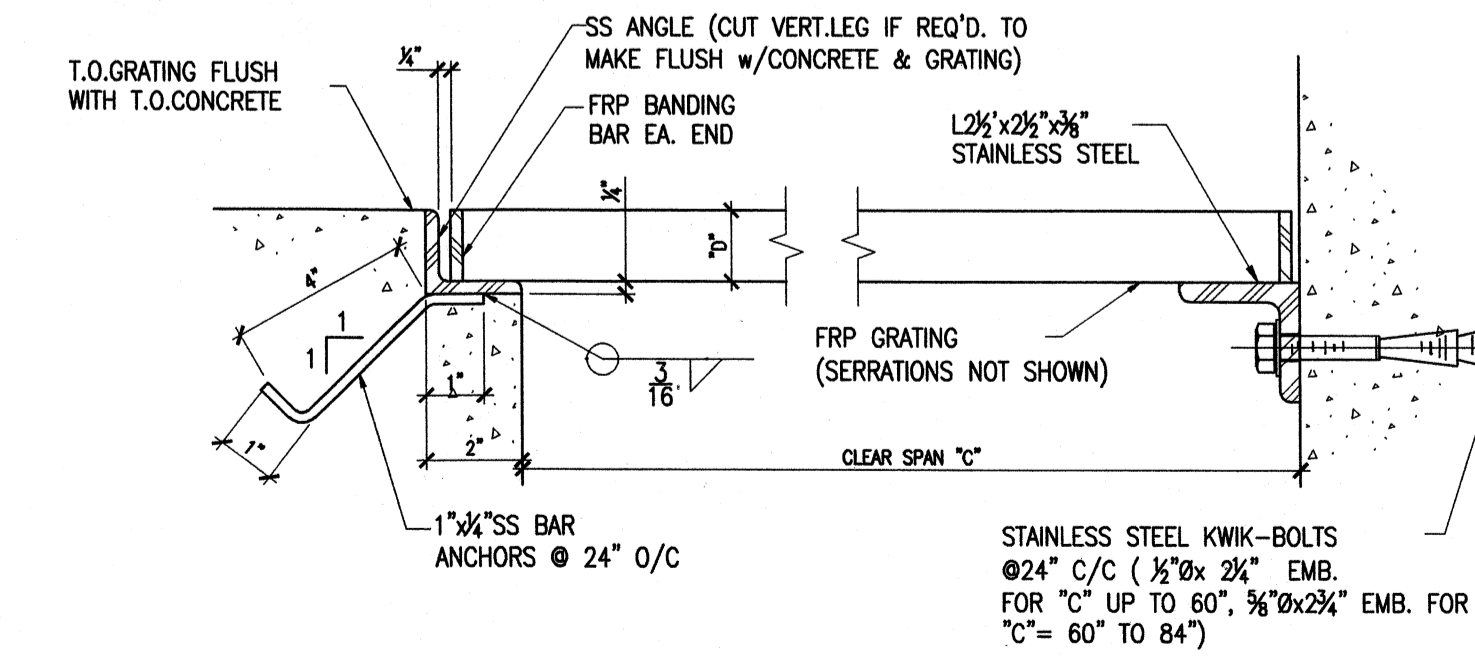
LOCATION	FASTENER
TYPICAL ROOF TRUSS	(1) H3S.S. (0 TO 20' SPAN) (2) H3S.S. (20' TO 50' SPANS)-INSTALL DIAGONALLY ACROSS FROM EA. OTHER

- NOTES:
1. ALL CONNECTORS LISTED SHALL BE SIMPSON STRONG-TIE OR EQUAL.

SCHEDULE 9
SCALE: 3/4"=1'-0" S-502
CONCRETE BEAM SCHEDULE

FRP GRATING CHART					
CLEAR SPAN "C"	UP TO 48"	48"-60"	60"-72"	72"-78"	78"-84"
BEARING BAR DEPTH "D"	1 1/2"	1 3/4"	2"	2 1/2"	2 3/4"

1. CONTINUOUS GRATINGS OVER CHANNELS OF VARYING WIDTH SHALL HAVE UNIFORM BEARING BAR DEPTH "D" BASED ON LARGEST CLEAR SPAN "C"
 2. GRATING SHALL BE DESIGNED FOR 150 PSF LIVE LOAD OR A 2000 LB CONCENTRATED LOAD AT MID SPAN WITH A MAXIMUM DEFLECTION OF 1/8"
 3. REFER TO GRATING SUPPORT BEAM CHART.

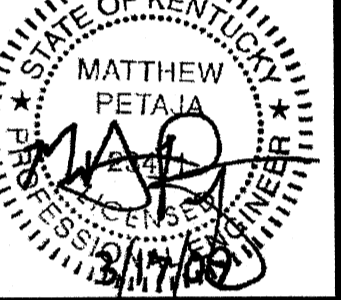


EMBEDDED SUPPORT SURFACE-MOUNTED SUPPORT

DETAIL 10
SCALE: 3/4"=1'-0" S-502
GRATING CHART

Wednesday, July 01, 2009 1:48:50 PM DRAWING: \\ncorfas\projects\120-07060 Ohio County\CONFORMED SET 5-09\STRUCTURAL\S-502 STRUCTURAL STANDARD DETAILS.DWG LAYOUT: S-502 USER NAME: JEREMY M. FRONGILLO

CONFORMED SET 5/09



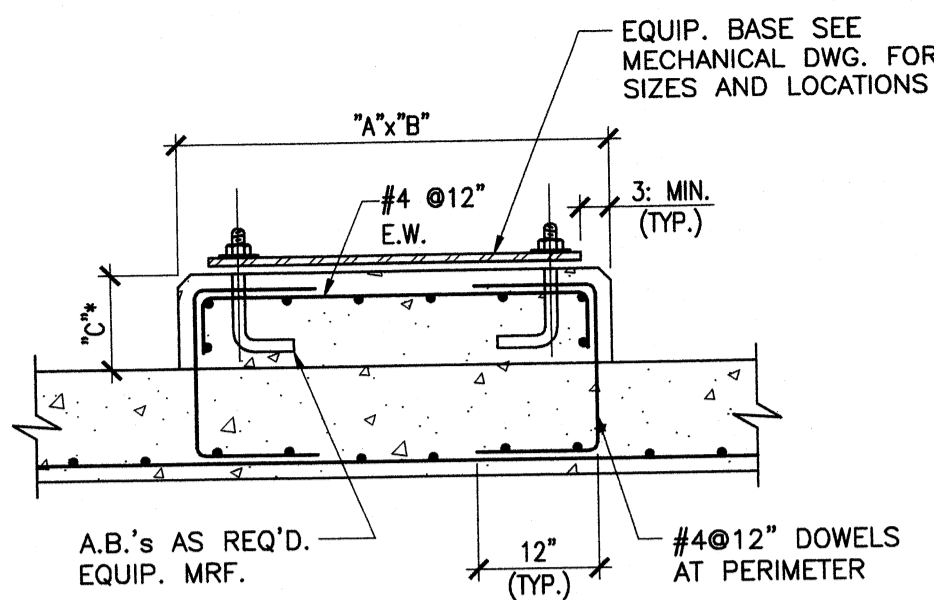
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT
 Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT

Project No.: 120-07060
 Designed By: BIGG
 Drawn By: VLR
 Checked By: MSP

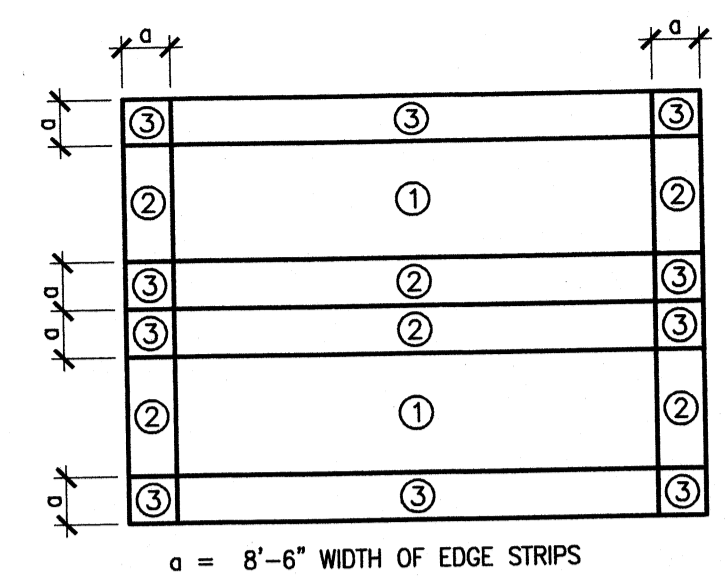
S-502

Wednesday, July 01, 2009 1:46:56 PM DRAWING: \\sercifs3\projects\120-07060 Ohio County\CONFORMED SET 5-09\STRUCTURALS-503 STRUCTURAL STANDARD DETAILS DWG LAYOUT: S-503 USER NAME: JEREMY M. FRONIGILLO



NOTE:
"A", "B" & "C" DIMS. AS REQ'D. TO SUIT EQUIP. ("C" = 6" TYP., U.N.O.)

DETAIL 1
SCALE: 1"=1'-0"
EQUIPMENT PAD

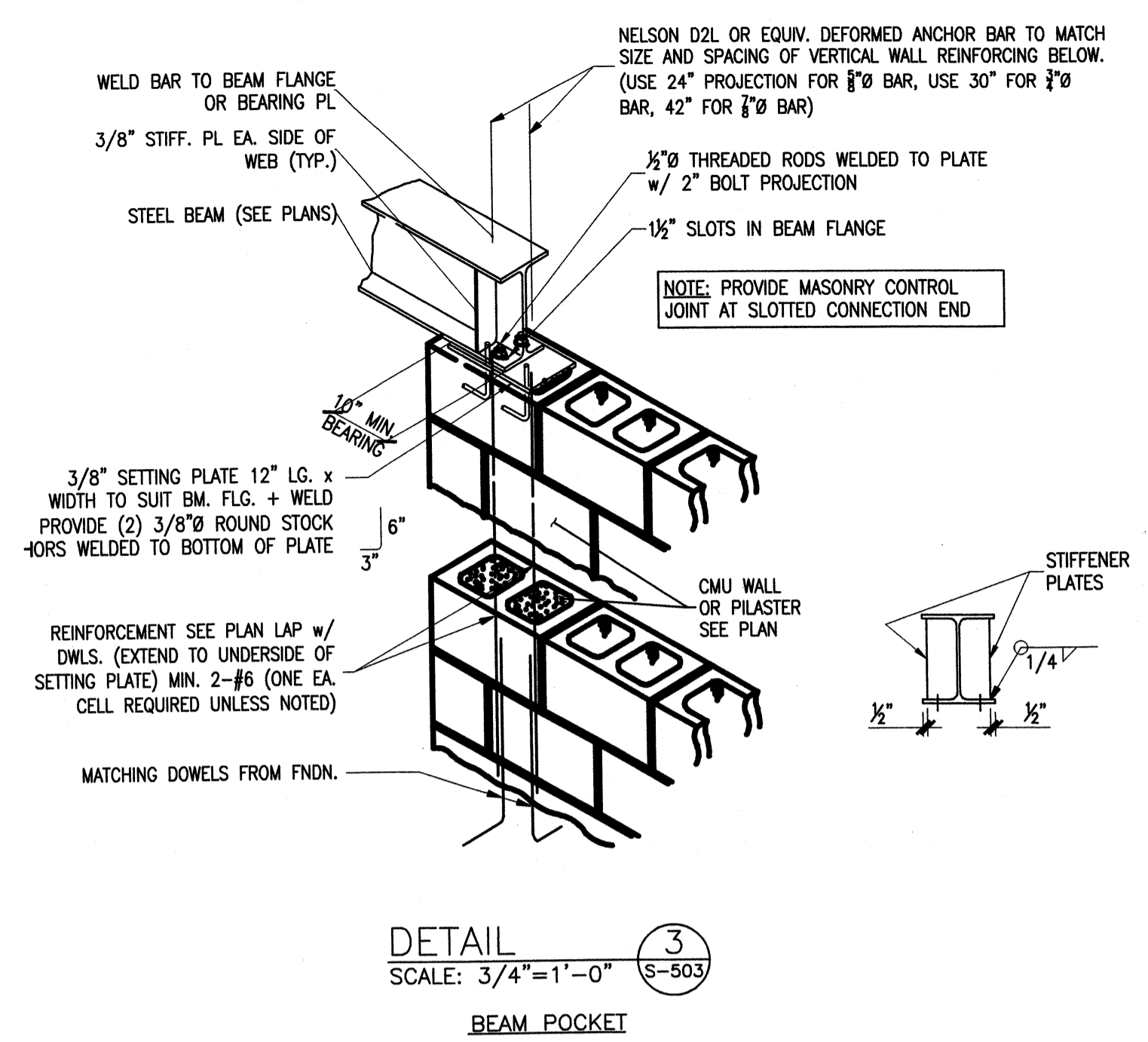


- NOTES:
1. THE EFFECTIVE WIND AREA FOR COMPONENT AND CLADDING MEMBERS IS THE SPAN LENGTH MULTIPLIED BY AN EFFECTIVE WIDTH THAT NEED NOT BE LESS THAN ONE-THIRD THE SPAN LENGTH. FOR CLADDING FASTENERS, THE EFFECTIVE AREA IS THE AREA TRIBUTARY TO AN INDIVIDUAL FASTENER.
 2. LINEAR INTERPOLATION SHALL BE MADE BETWEEN EFFECTIVE AREAS AS SCHEDULED.

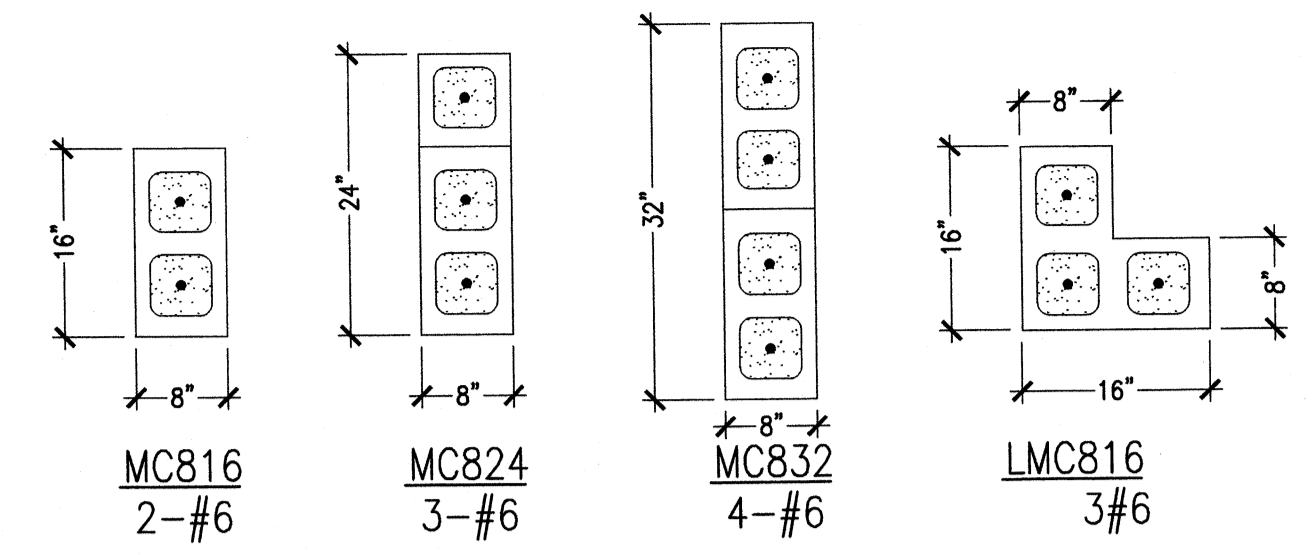
TYPICAL GABLE ROOF COMPONENT AND CLADDING GROSS WIND PRESSURES

EFFECTIVE WIND AREA	PRESSURES (PSF)		
	10 FT. ²	50 FT. ²	100 FT. ²
ZONE 1 (NEGATIVE)	21	18	19
ZONE 2 (NEGATIVE)	36	30	27
ZONE 3 (NEGATIVE)	54	45	42
ZONE 2 OVERHANG (NEGATIVE)	42	42	42
ZONE 3 OVERHANG (NEGATIVE)	71	55	42
POSITIVE PRESSURE (ALL ZONES)	13	10	10

DETAIL 2
SCALE: 3/4"=1'-0"
WIND UPLIFT

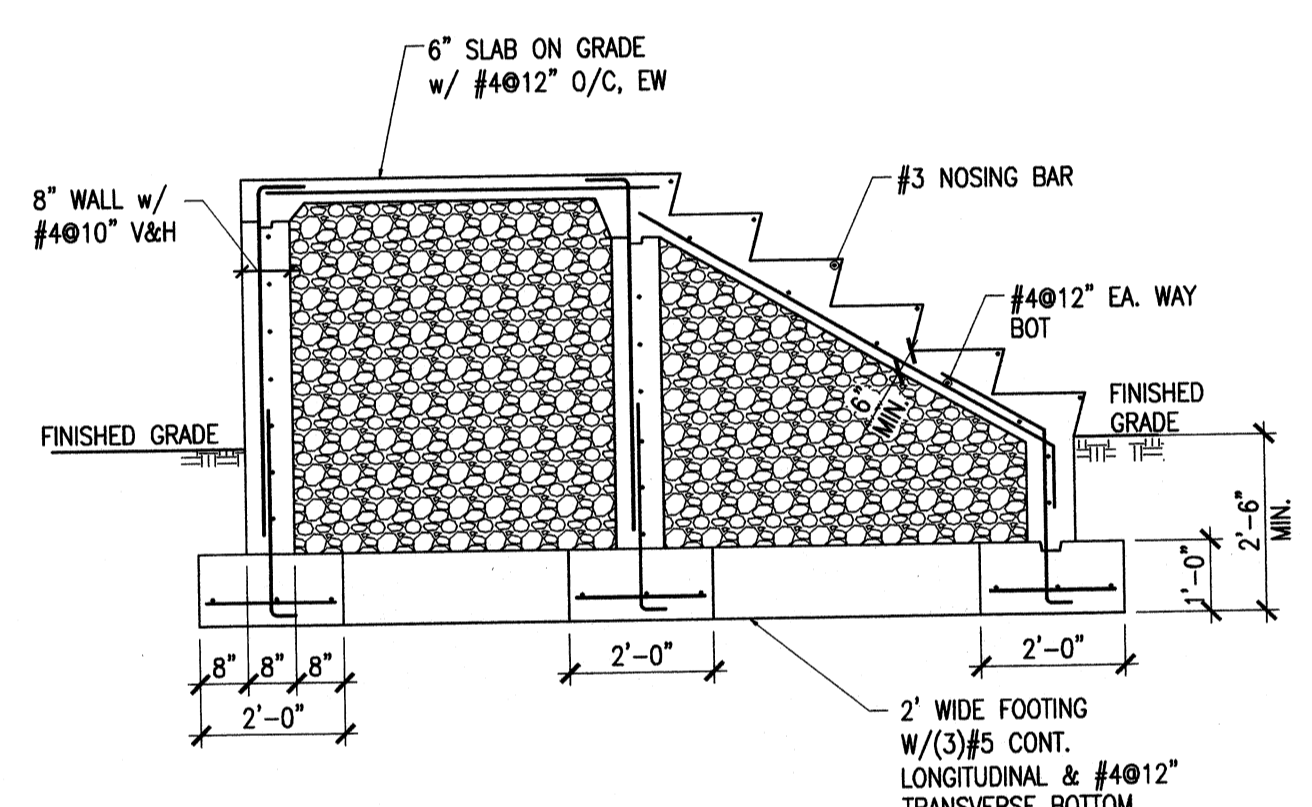


DETAIL 3
SCALE: 3/4"=1'-0"
BEAM POCKET

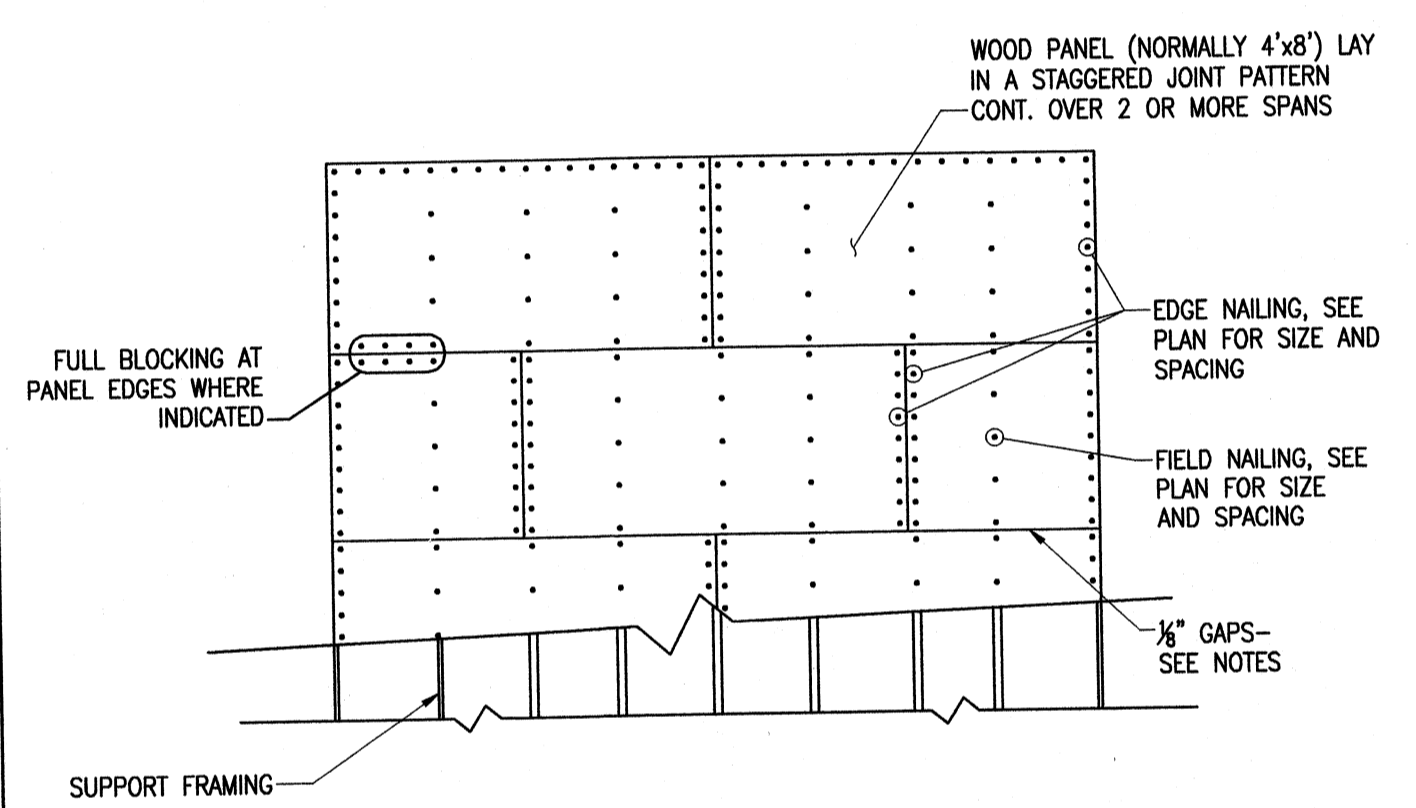


- NOTES:
1. DOWELS FROM FOOTINGS SHALL MATCH VERTICALS, TYPICAL. PROVIDE TENSION LAP SPLICE.
 2. CONCRETE MASONRY STRENGTH: $f_m = 1500$ psi U.N.O.
 3. PROVIDE HORIZONTAL JOINT REINFORCEMENT @ 8" O.C. VERTICALLY, TYPICAL AT ALL MASONRY COLUMNS.
 4. ALL MASONRY COLUMNS TO BE RUNNING BOND. (INTERLOCKING BLOCK CONFIGURATION IN COLUMN)
 5. NOTE: MC COLUMNS SHOWN ON UPPER FLOOR PLANS ARE TO EXTEND DOWN TO FOUNDATION AT GROUND LEVEL.

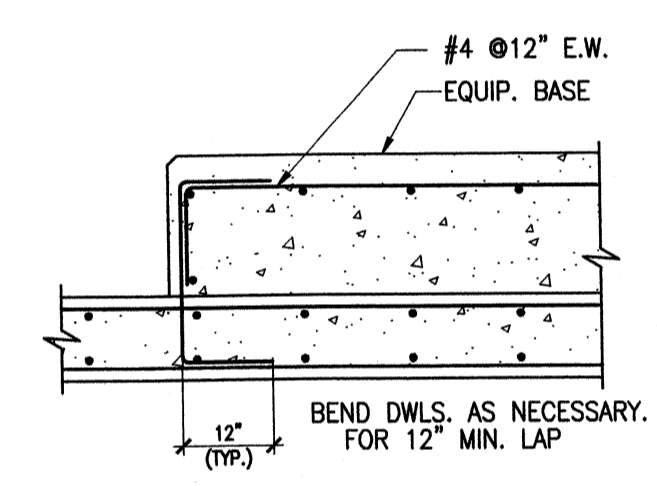
DETAIL 4
SCALE: 3/4"=1'-0"
TYP. MASONRY COLUMNS



DETAIL 5
SCALE: 3/8"=1'-0"
TYP. CONCRETE STAIRS



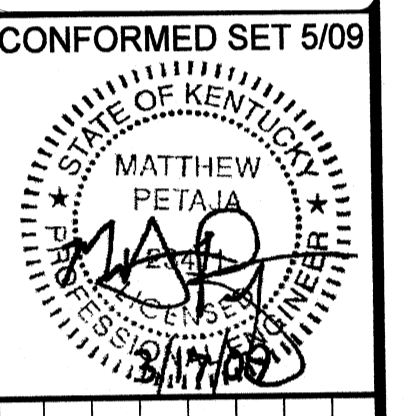
DETAIL 6
SCALE: NONE
ROOF DIAPHRAGM



SECTION A
SCALE: 3/4"=1'-0"
EQUIPMENT PAD
SEE MECH. DWGS FOR SIZE AND LOCATION

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Suite 200, Lexington, KY 40503
PHONE: (859) 223-8000 FAX: (859) 224-1025

PROJECT RECORD



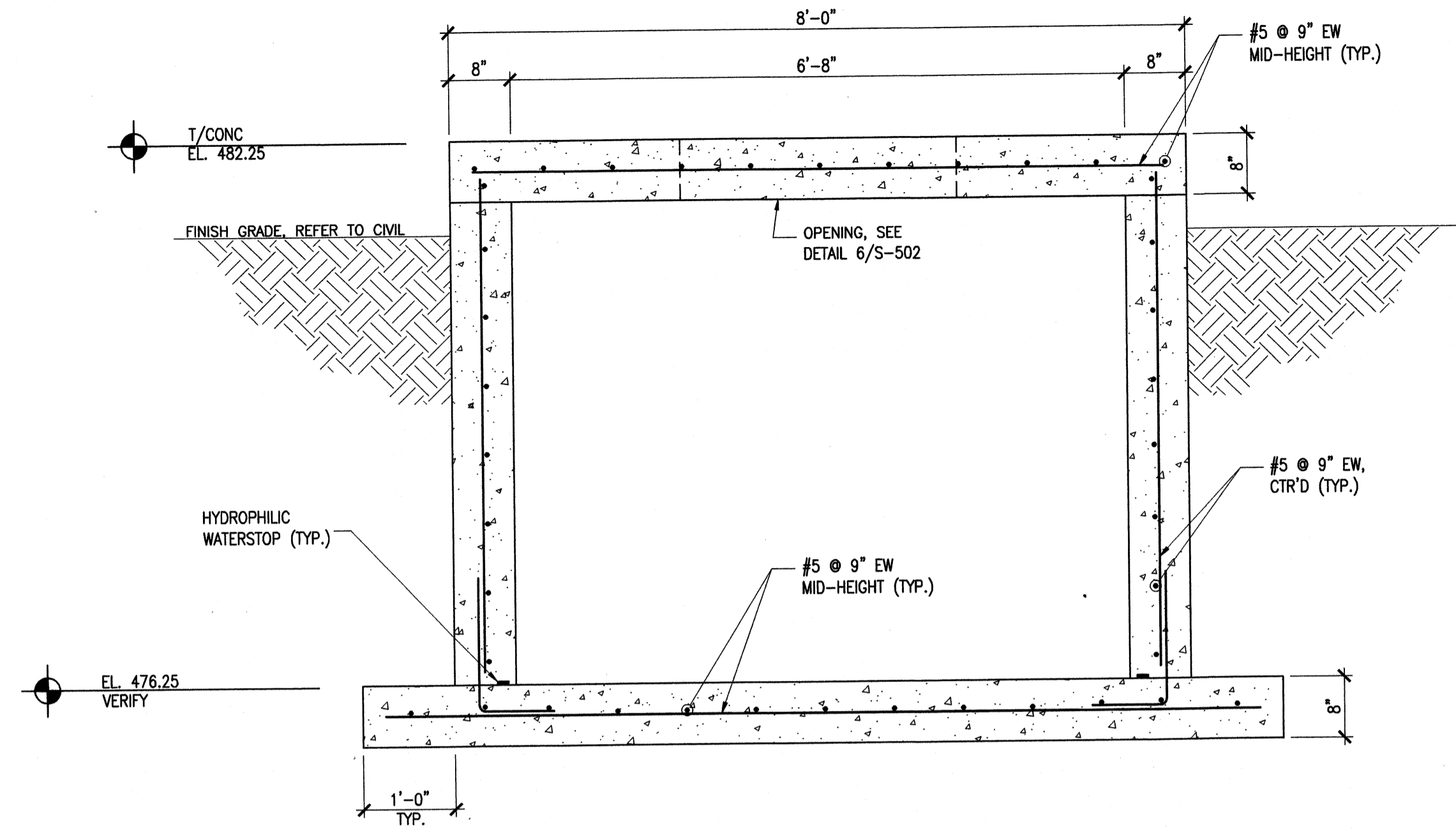
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT.

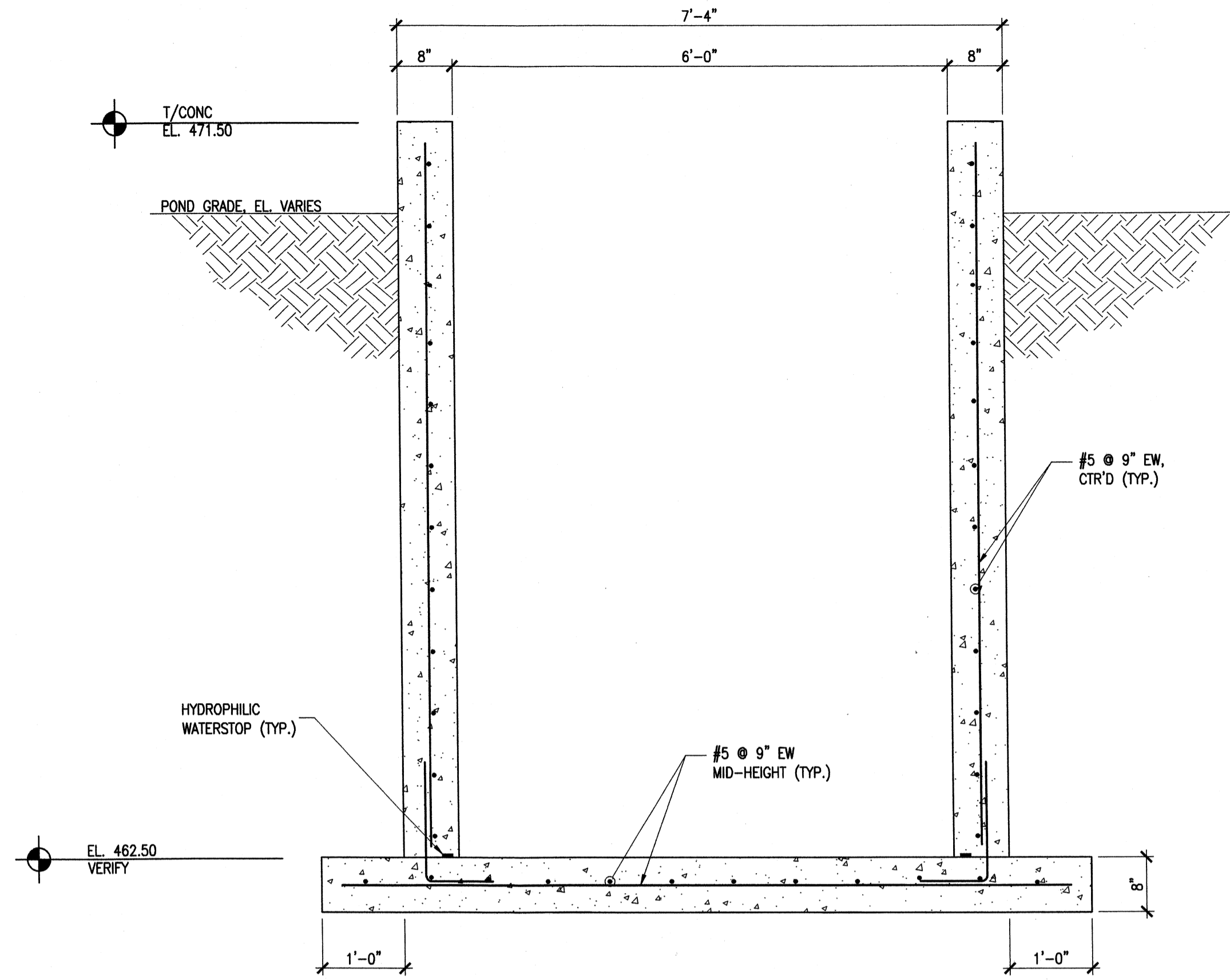
Project No.: 120-07060
Designed By: BIGGS
Drawn By: VLR
Checked By: MSP

S-503
Copyright: Tetra Tech

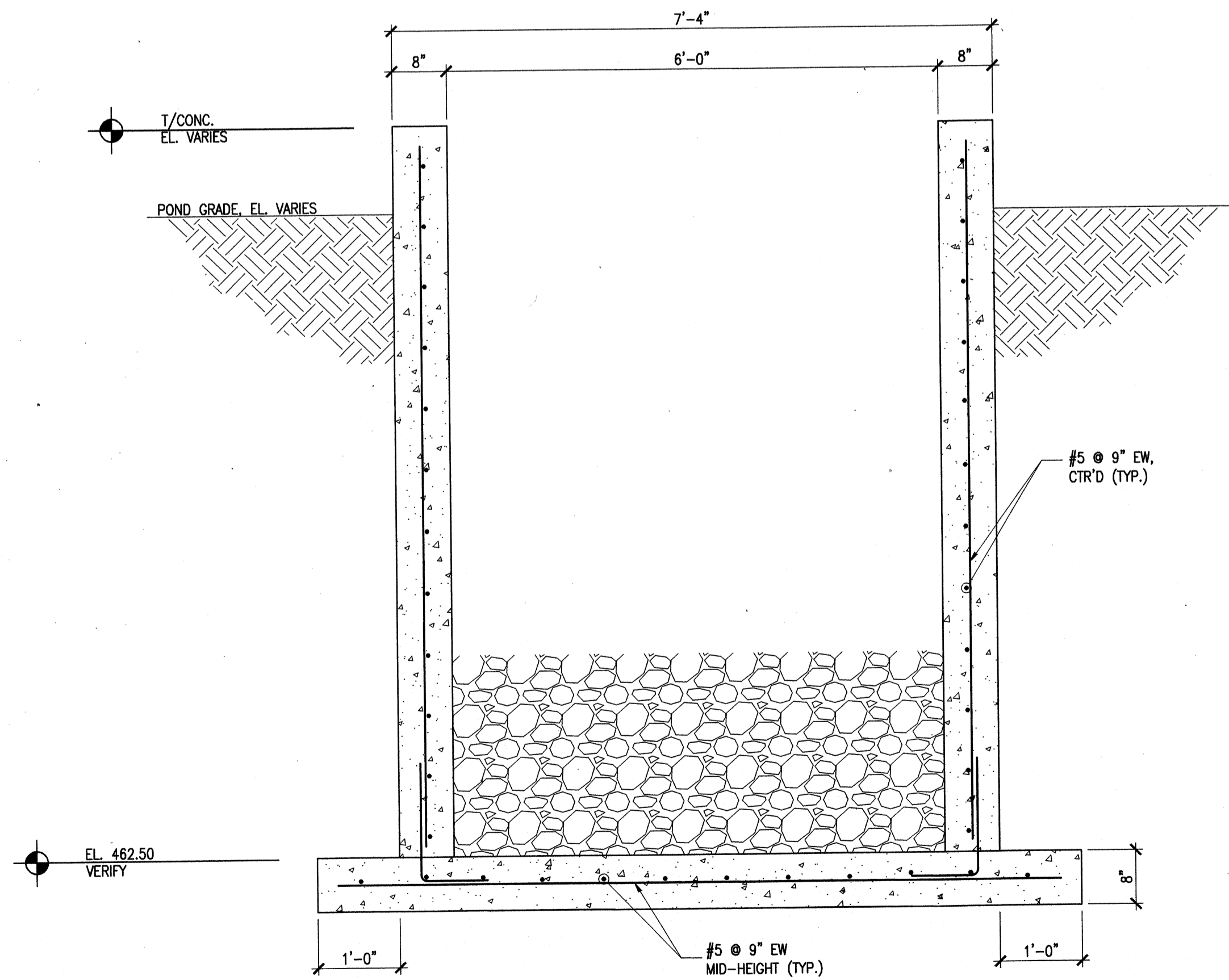
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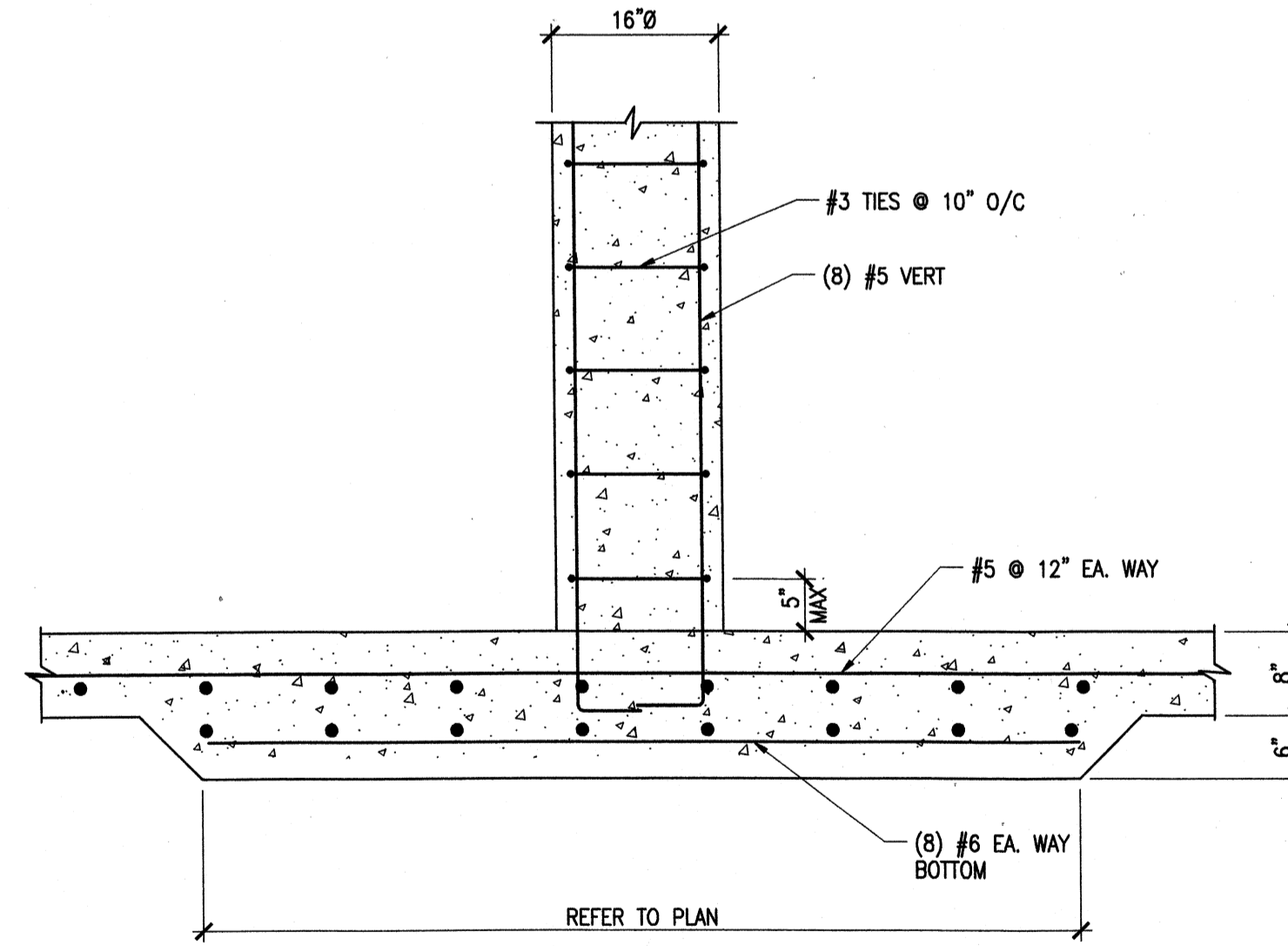
SECTION A
SCALE: 3/4"=1'-0" S-504



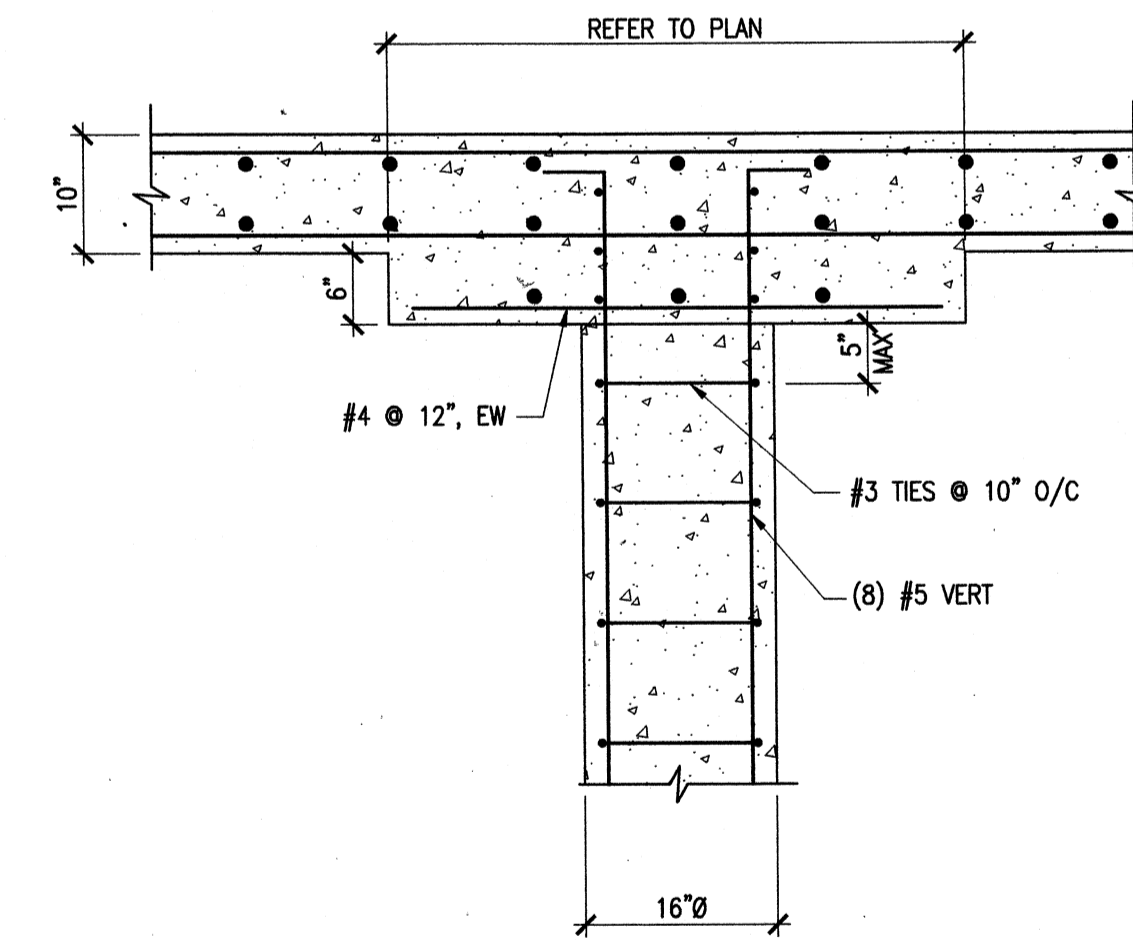
SECTION B
SCALE: 3/4"=1'-0" S-504



SECTION C
SCALE: 3/4"=1'-0" S-504



SECTION D
SCALE: 3/4"=1'-0" S-504



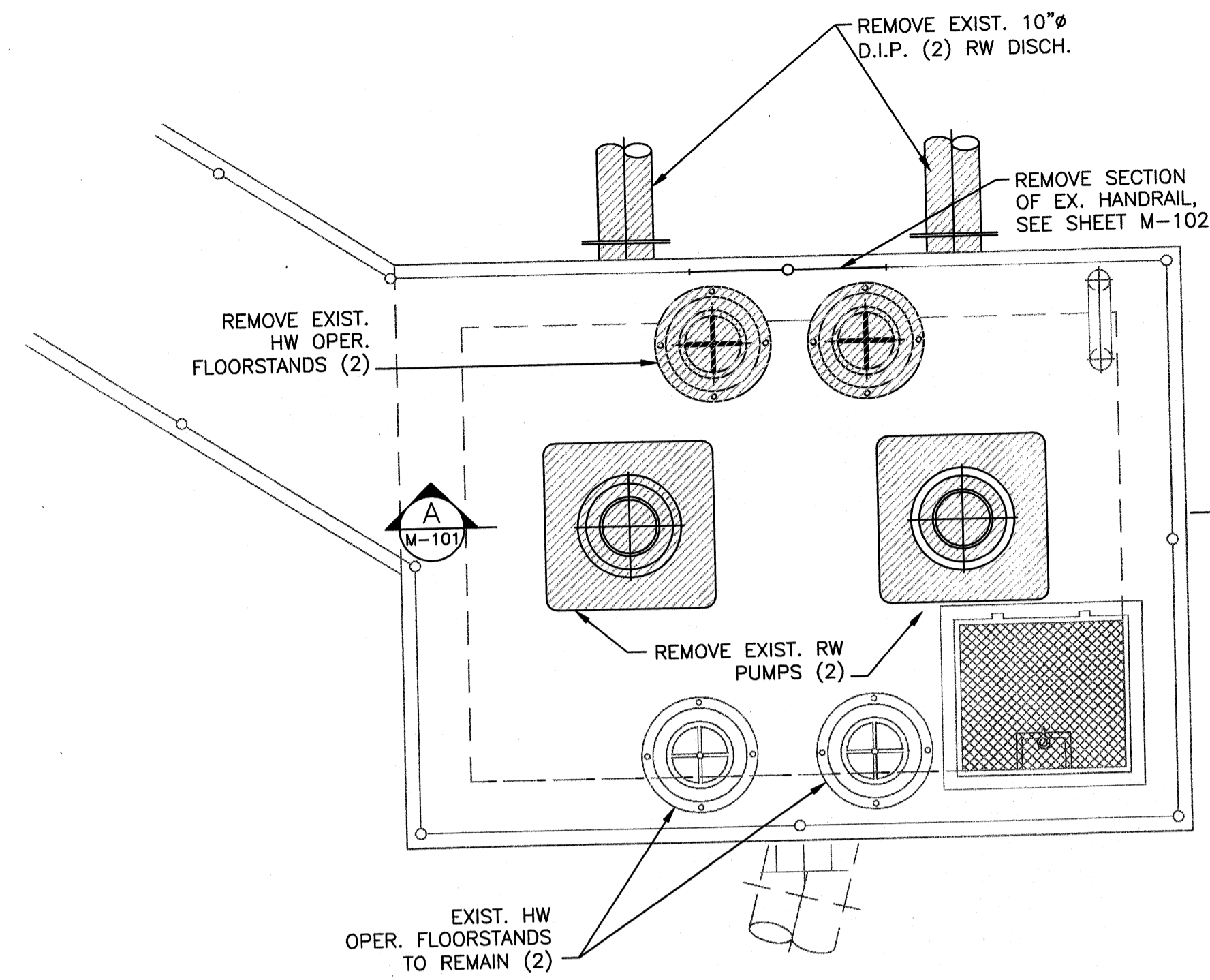
SECTION E
SCALE: 3/4"=1'-0" S-504



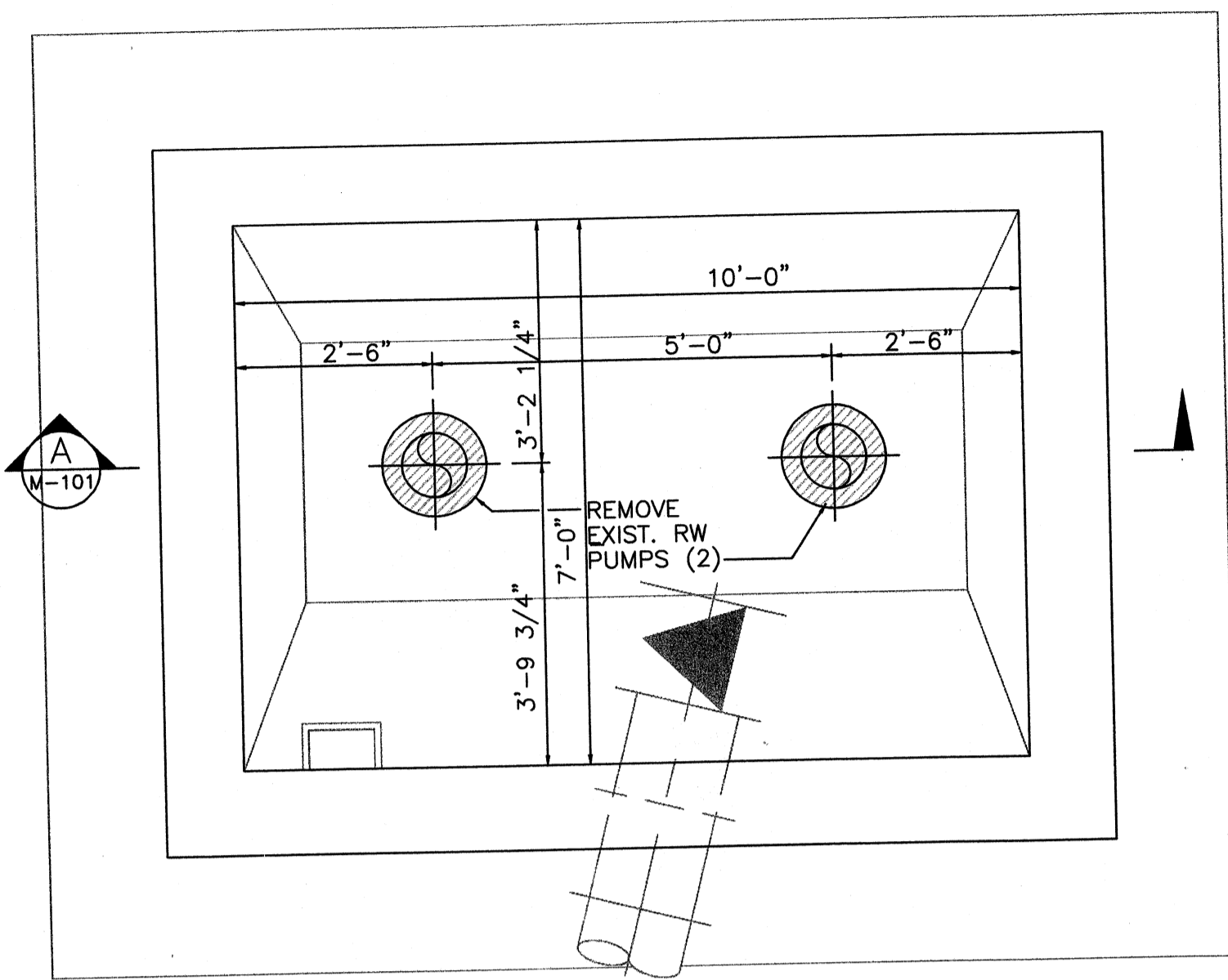
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT
Project: OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT
Project No.: 120-07060
Designed By: BIGG
Drawn By: VLR
Checked By: MSP

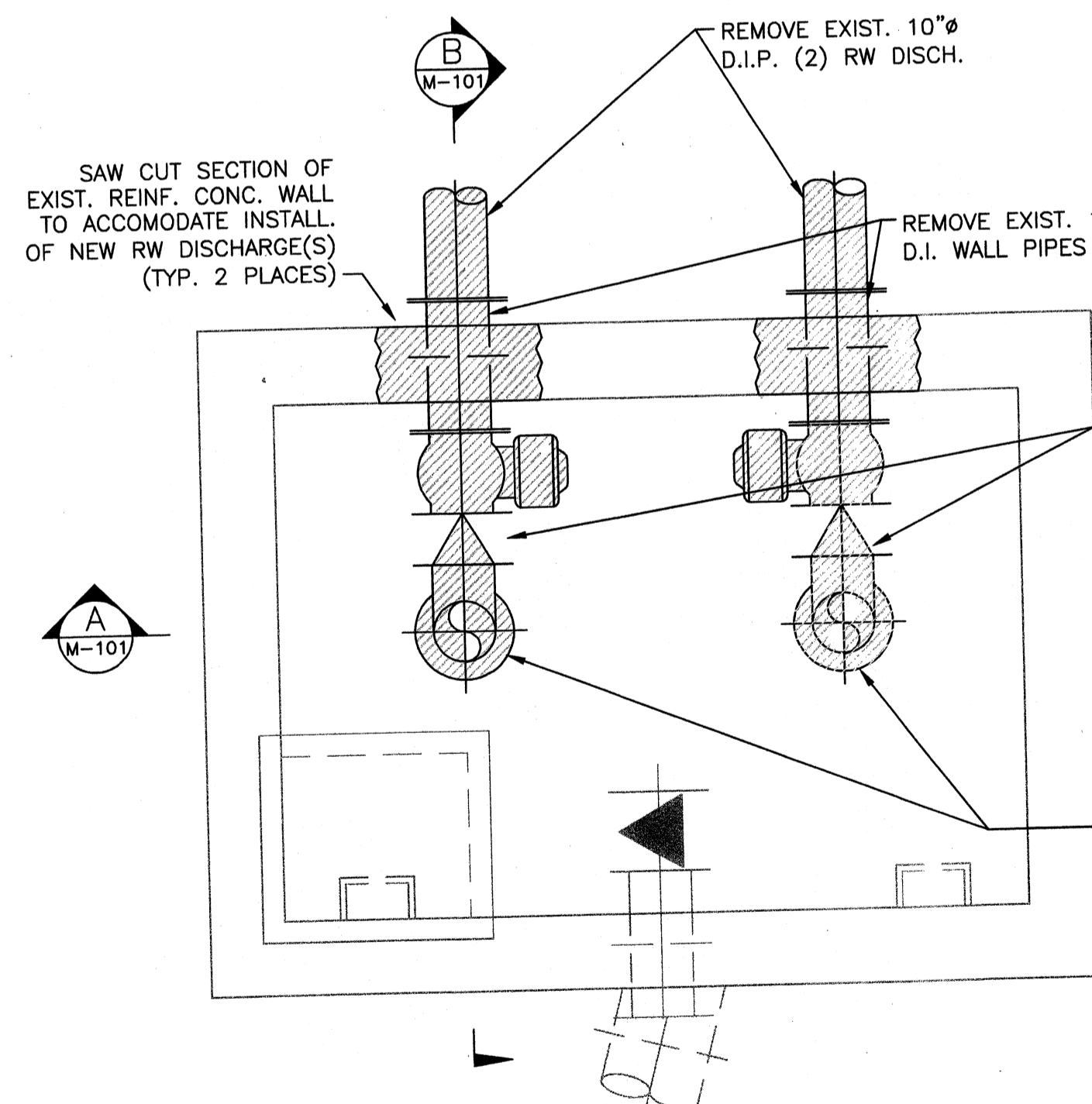
STRUCTURAL STANDARD DETAILS



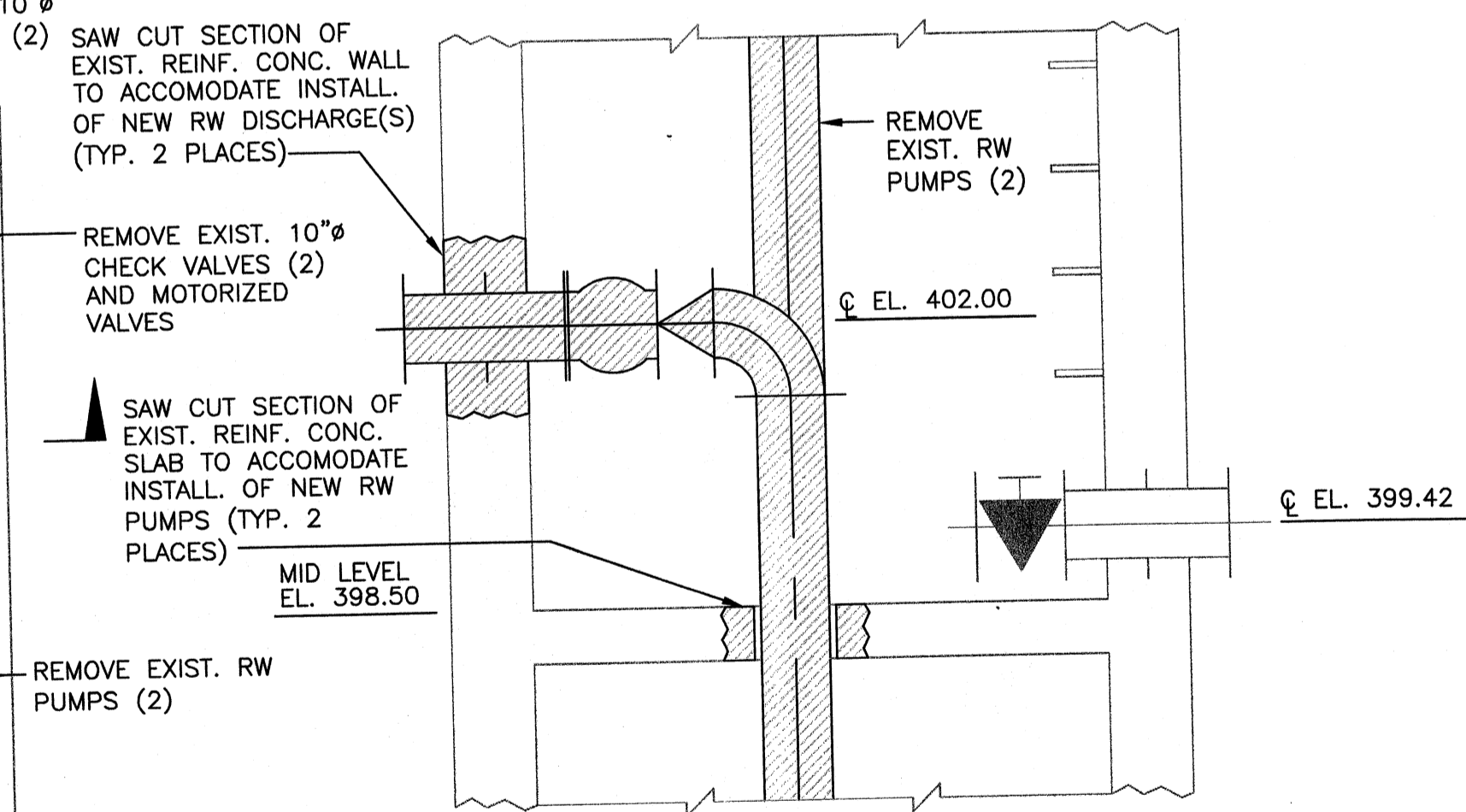
UPPER LEVEL PLAN
SCALE: 1/2"=1'-0"



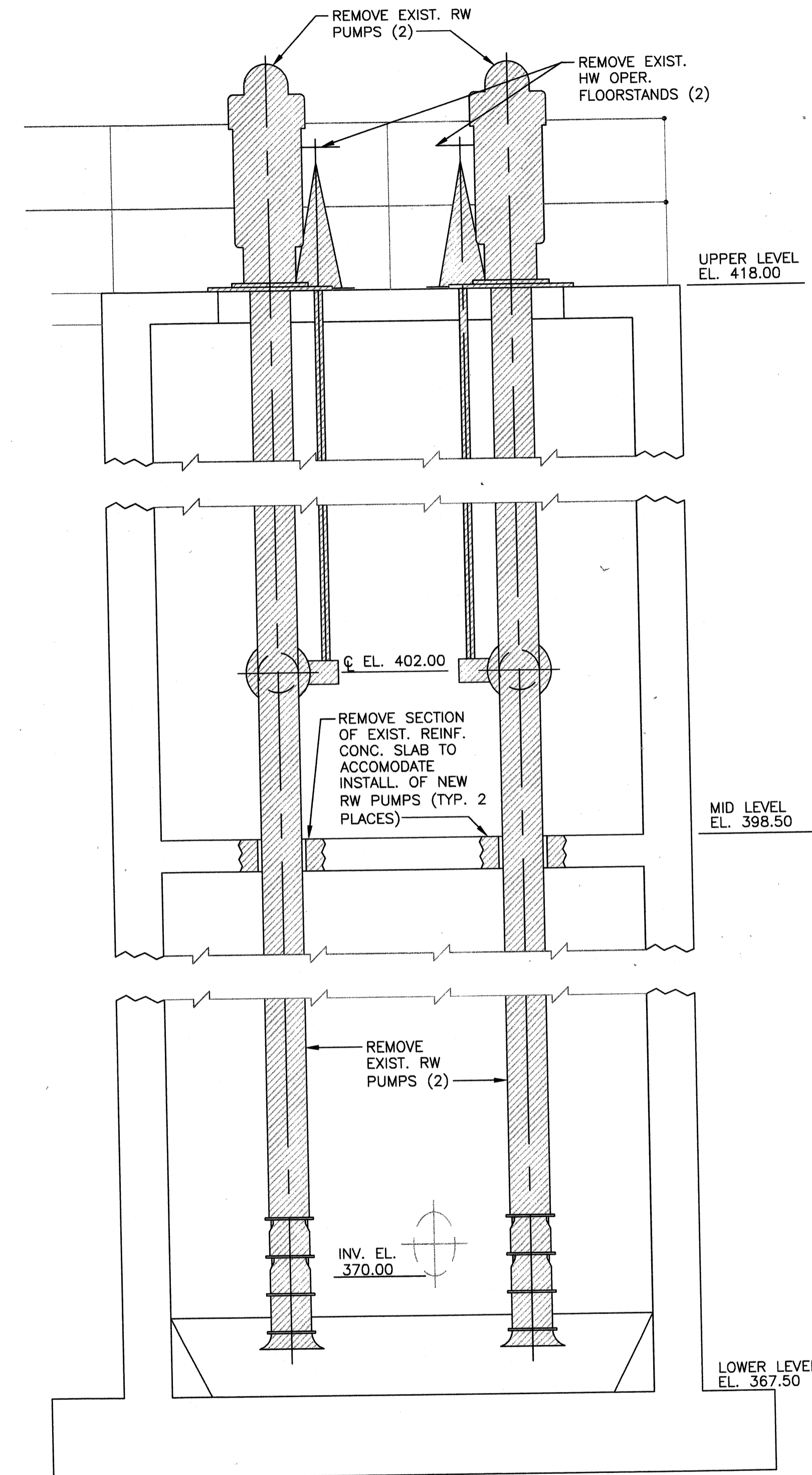
LOWER LEVEL PLAN
SCALE: 1/2"=1'-0"



MID LEVEL PLAN
SCALE: 1/2"=1'-0"

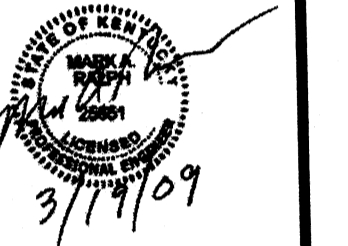


SECTION B-M-101
SCALE: 1/2"=1'-0"



SECTION A-M-101
SCALE: 1/2"=1'-0"

Tuesday, July 21, 2009 11:23:58 AM DRAWING: P:1120-07080 Ohio County Redesign/IRLAND/CONFORMED SET 5-09/PROCESS/07080 M-101 to M-102 RW INTAKE PLAN & SECTIONS .DWG LAYOUT: M-101 USER NAME: JEREMY M. FRONIGILLO



BY	DATE	DESCRIPTION

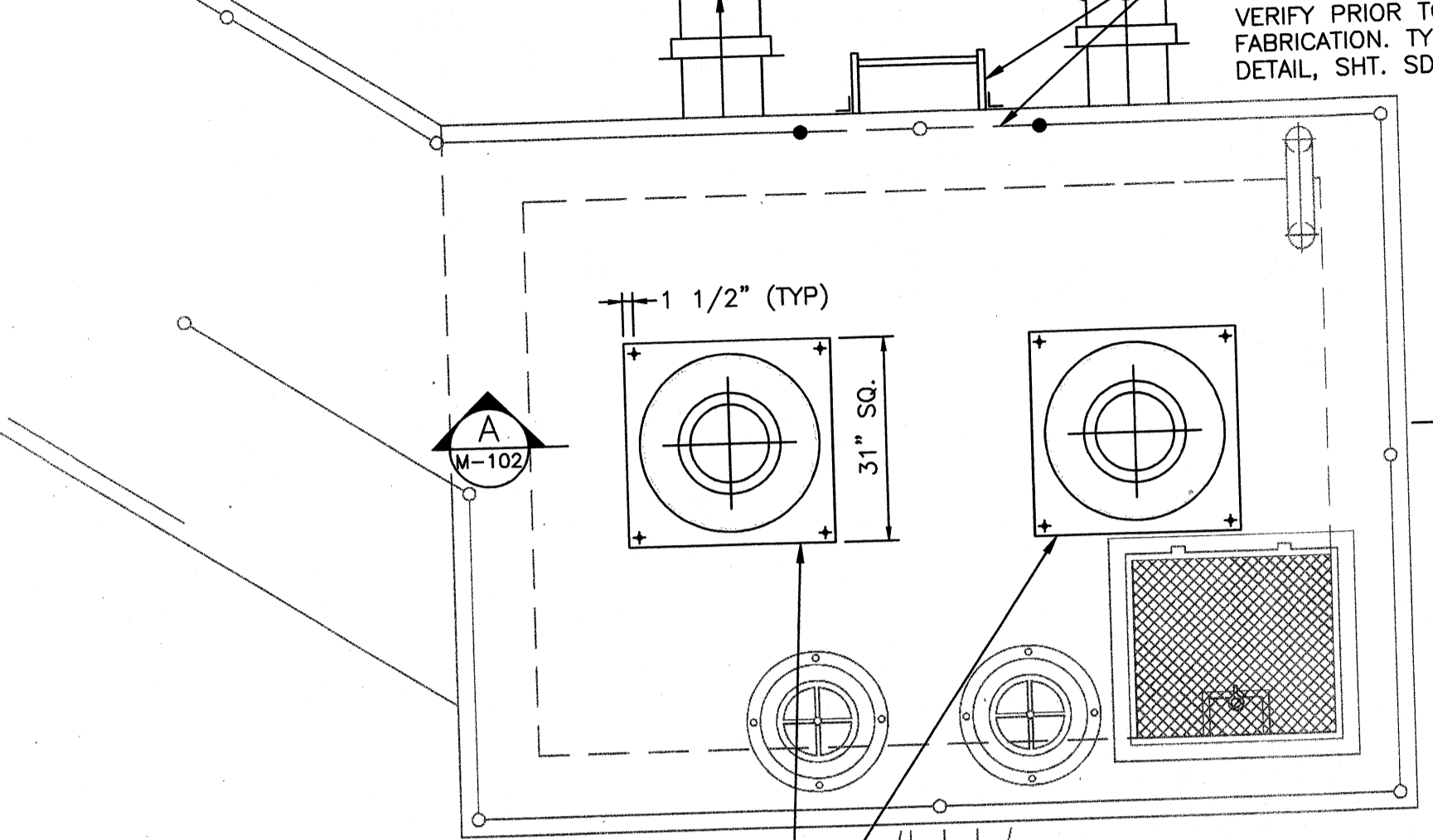
Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
**RAW WATER PUMP STATION
DEMOLITION PLANS & SECTIONS**

Project No.: 120-07080
Designed By: GDP
Drawn By: GDP
Checked By: GDP

M-101

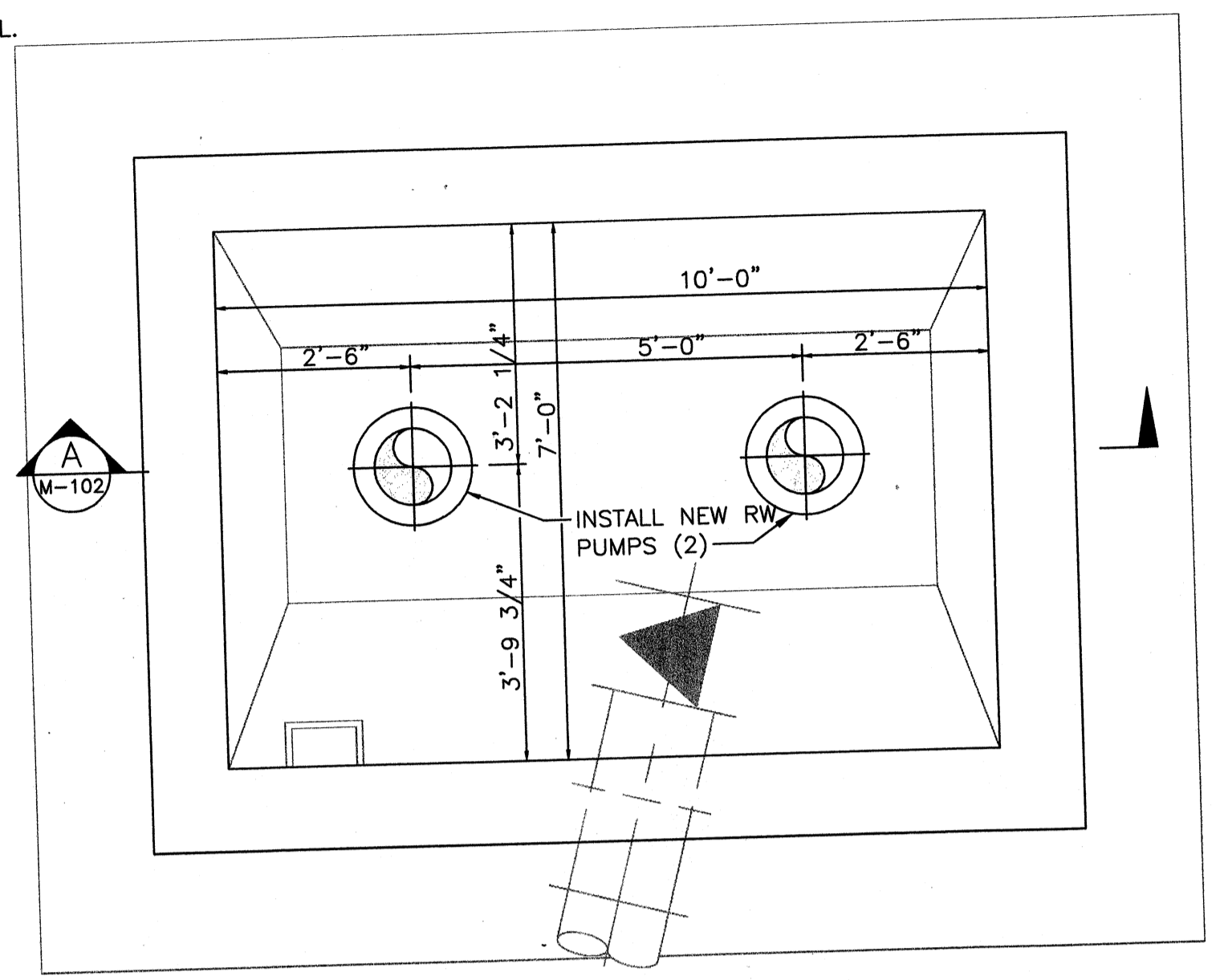
Tuesday, July 21, 2009 11:25:11 AM DRAWING: P:\120-07060 Ohio County Redesign\ORLANDO\CONFORMED SET 5-09\PROCESS\07060 M-101 to M-102 RW INTAKE PLAN & SECTIONS .DWG LAYOUT: M-102 USER NAME: JEREMY M. FRONGILLO

NOTE: REMOVE DEBRIS AND THOROUGHLY CLEAN INTAKE STRUCTURE PRIOR TO INSTALLING EQUIPMENT.

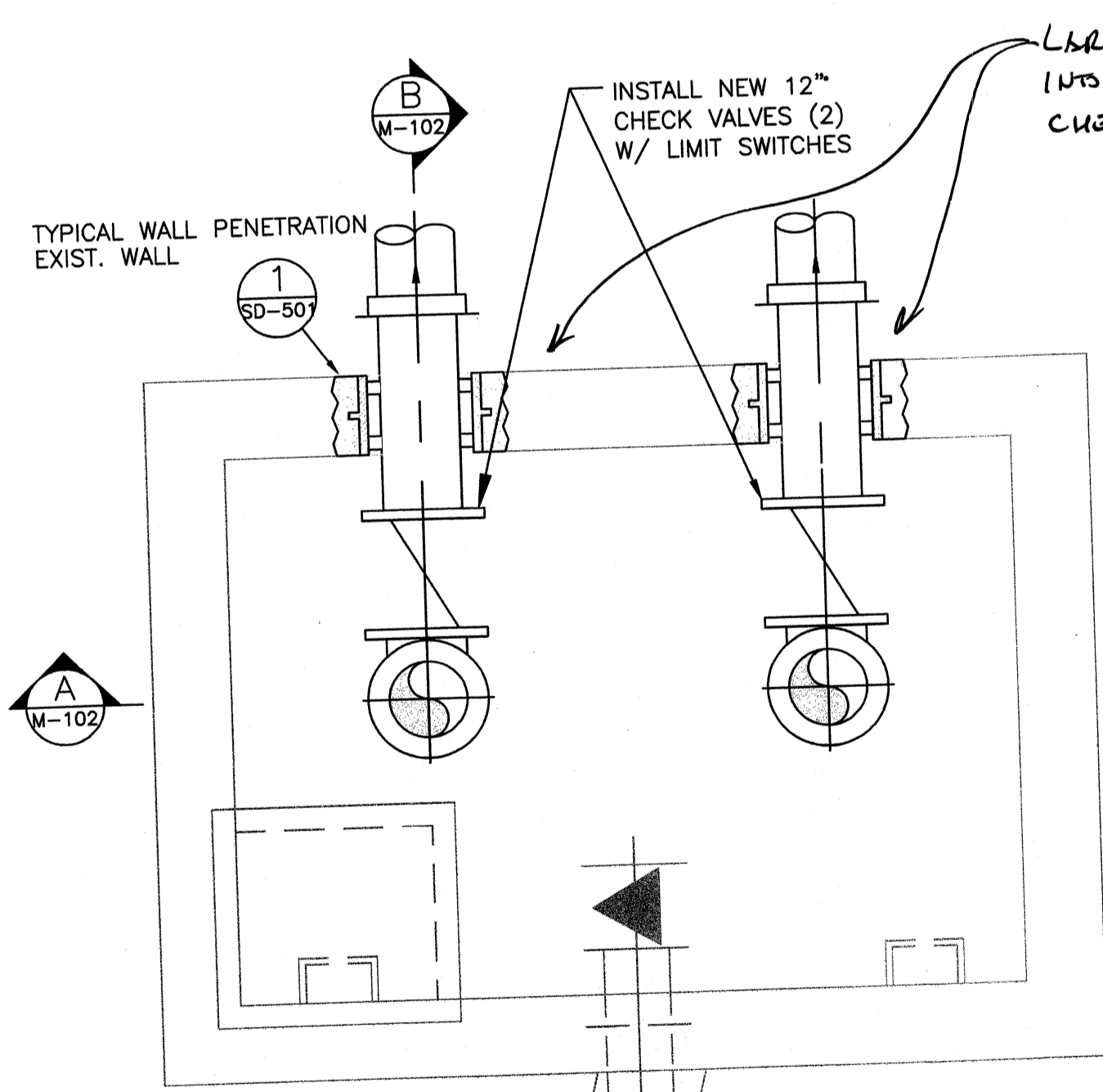


INSTALL NEW RW PUMPS (2) AND AIR/VACUUM VALVES (2). MOUNT VALVES ON MOTOR STANDS WITH 2-INCH NPT PIPE CONNECTION

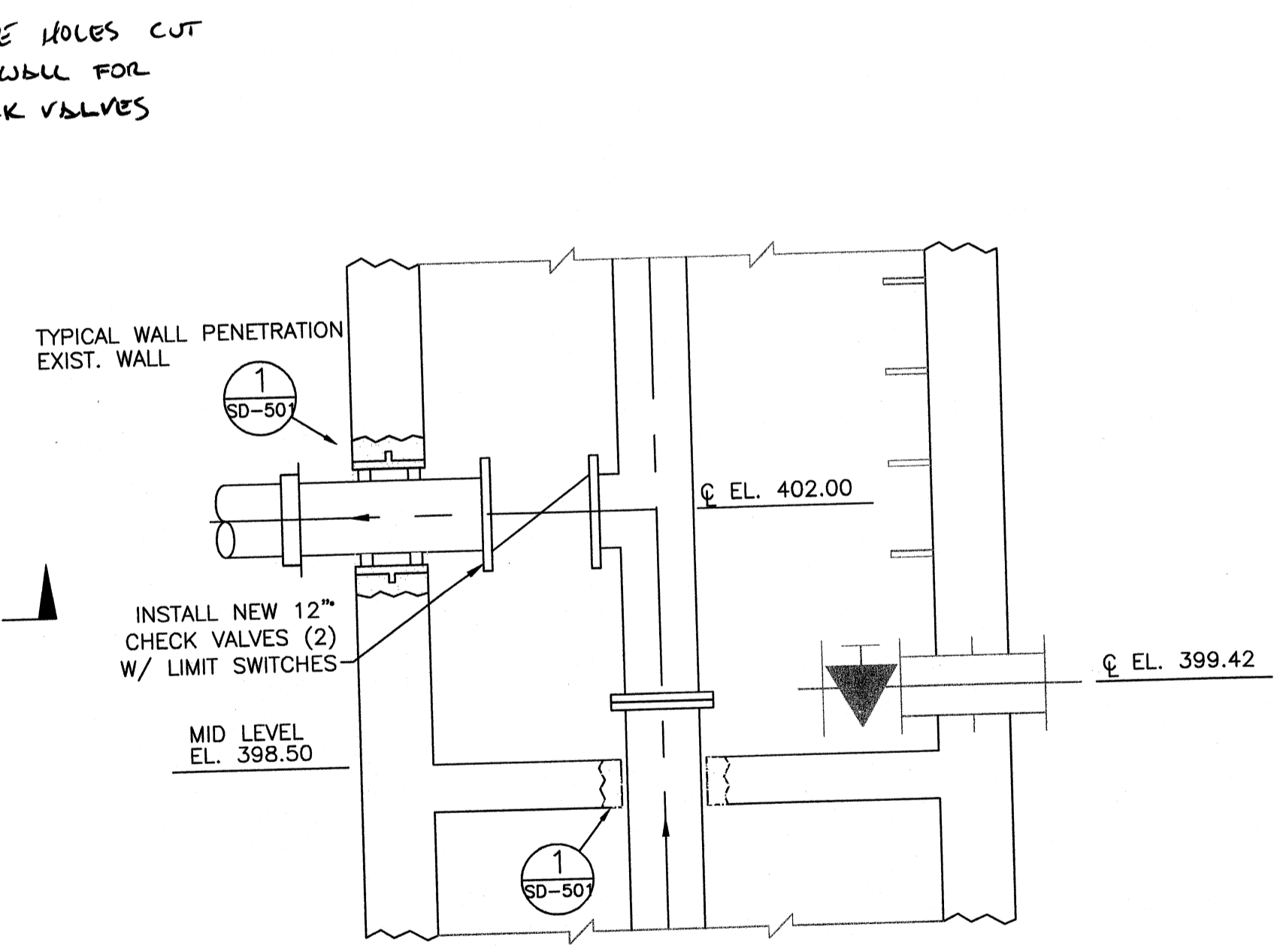
UPPER LEVEL PLAN
SCALE: 1/2"=1'-0"



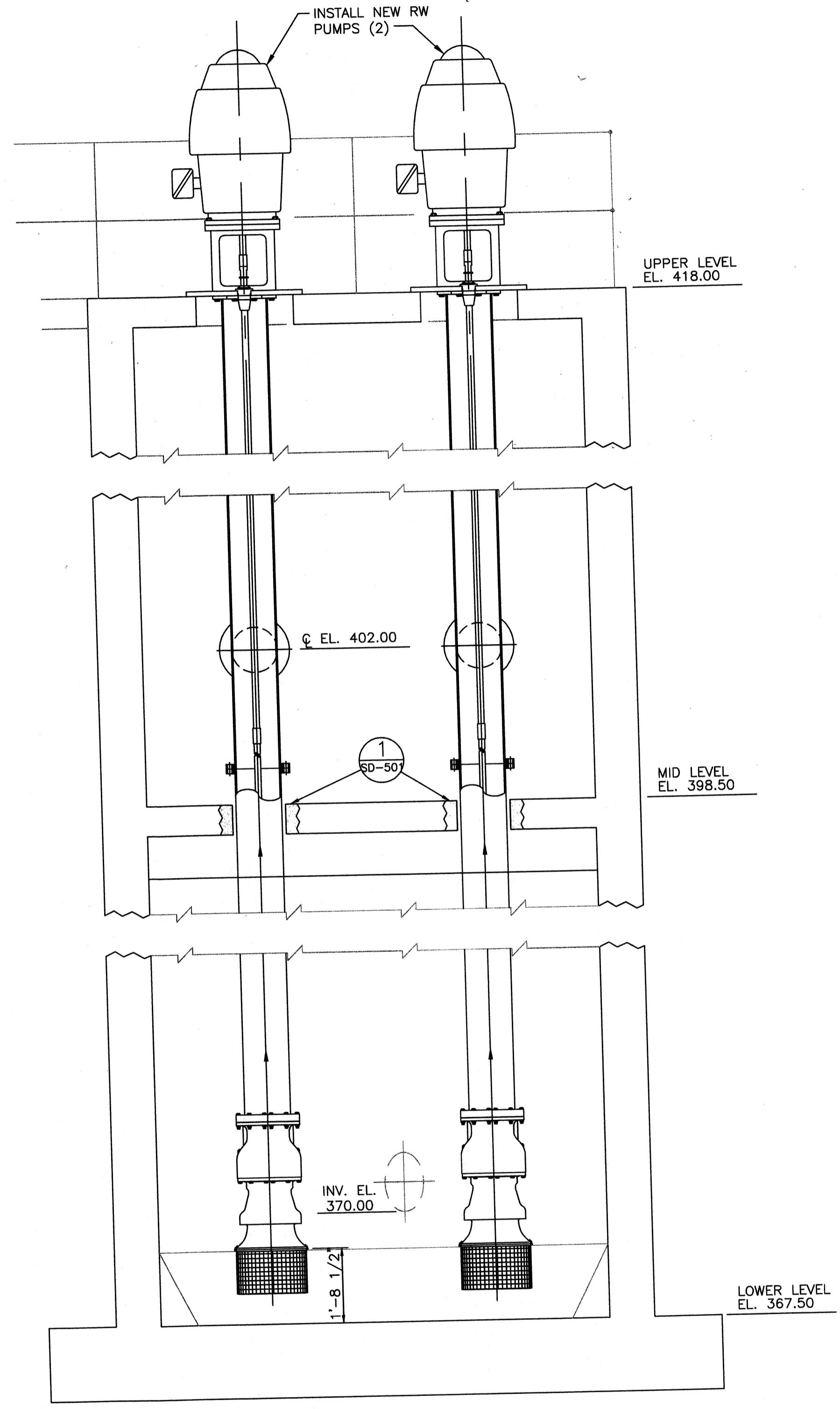
LOWER LEVEL PLAN
SCALE: 1/2"=1'-0"



MID LEVEL PLAN
SCALE: 1/2"=1'-0"



SECTION
SCALE: 1/2"=1'-0"



SECTION
SCALE: 1/2"=1'-0"



PROJECT RECORD

CONFORMED SET 5/09

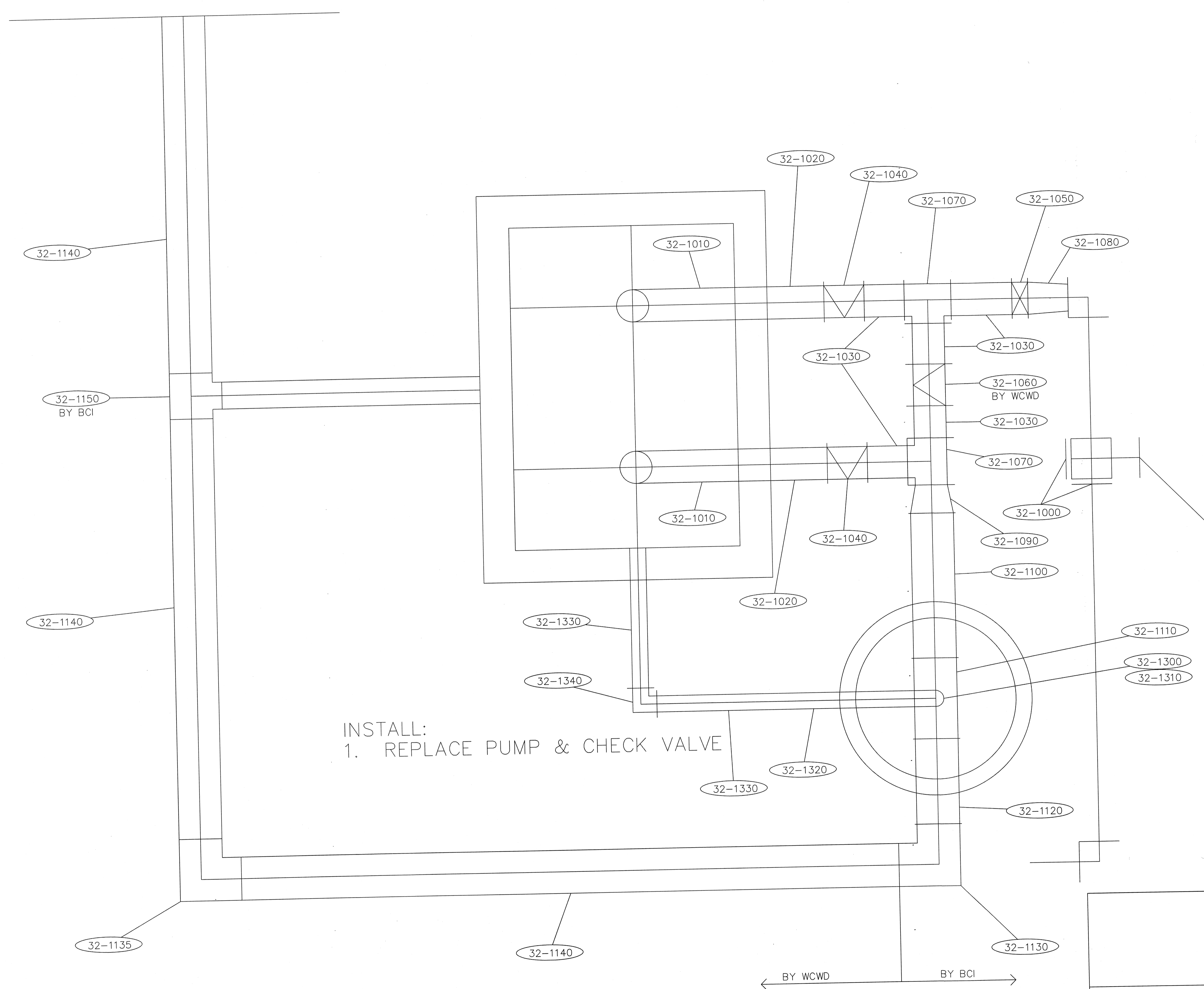


BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: GROMMELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT

Project No.: 120-07060
 Designed By: GDP
 Drawn By: GDP
 Checked By: GDP

M-102



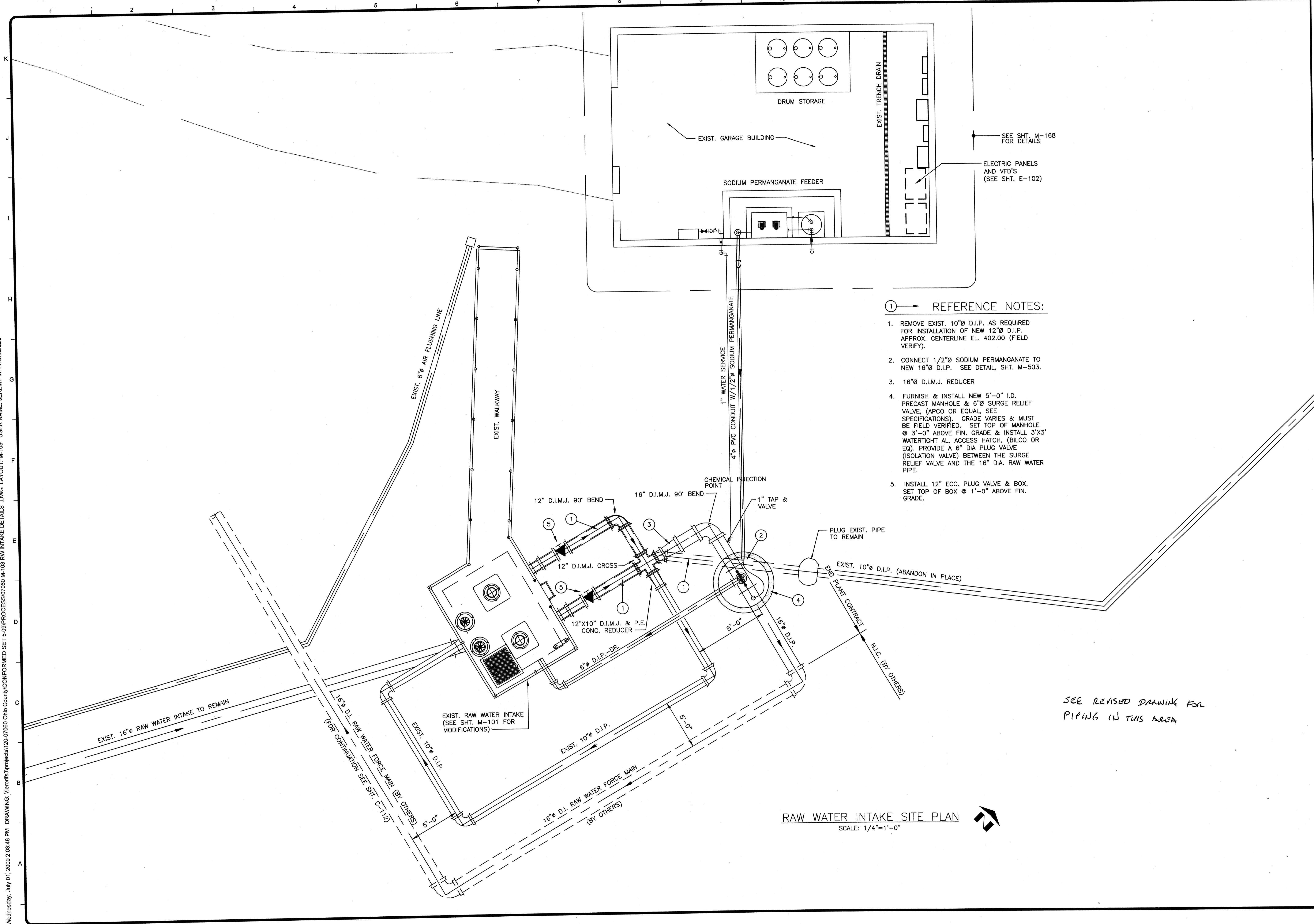
INSTALL:
 1. REPLACE PUMP & CHECK VALVE

PROJECT RECORD

OHIO COUNTY WATER
 TREATMENT PLANT

RWI PIPING
 PHASE 4

SIZE	FSCM NO.	Date	REV
		08-18-2010	
SCALE	1/4" = 1' SCALE		SHEET



REFERENCE NOTES:

1. REMOVE EXIST. 10"Ø D.I.P. AS REQUIRED FOR INSTALLATION OF NEW 12"Ø D.I.P. APPROX. CENTERLINE EL. 402.00 (FIELD VERIFY).
2. CONNECT 1/2"Ø SODIUM PERMANGANATE TO NEW 16"Ø D.I.P. SEE DETAIL, SHT. M-503.
3. 16"Ø D.I.M.J. REDUCER
4. FURNISH & INSTALL NEW 5'-0" I.D. PREGAST MANHOLE & 6"Ø SURGE RELIEF VALVE, (APCO OR EQUAL, SEE SPECIFICATIONS). GRADE VARIES & MUST BE FIELD VERIFIED. SET TOP OF MANHOLE @ 3'-0" ABOVE FIN. GRADE & INSTALL 3'X3' WATERTIGHT AL. ACCESS HATCH, (BILCO OR EQ). PROVIDE A 6" DIA PLUG VALVE (ISOLATION VALVE) BETWEEN THE SURGE RELIEF VALVE AND THE 16" DIA. RAW WATER PIPE.
5. INSTALL 12" ECC. PLUG VALVE & BOX. SET TOP OF BOX @ 1'-0" ABOVE FIN. GRADE.

SEE REVISED DRAWING FOR PIPING IN THIS AREA

RAW WATER INTAKE SITE PLAN
SCALE: 1/4"=1'-0"



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PROJECT RECORD

CONFORMED SET 5/09

MARK	DATE	DESCRIPTION	BY

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc: CROMWELL, OHIO COUNTY, KY

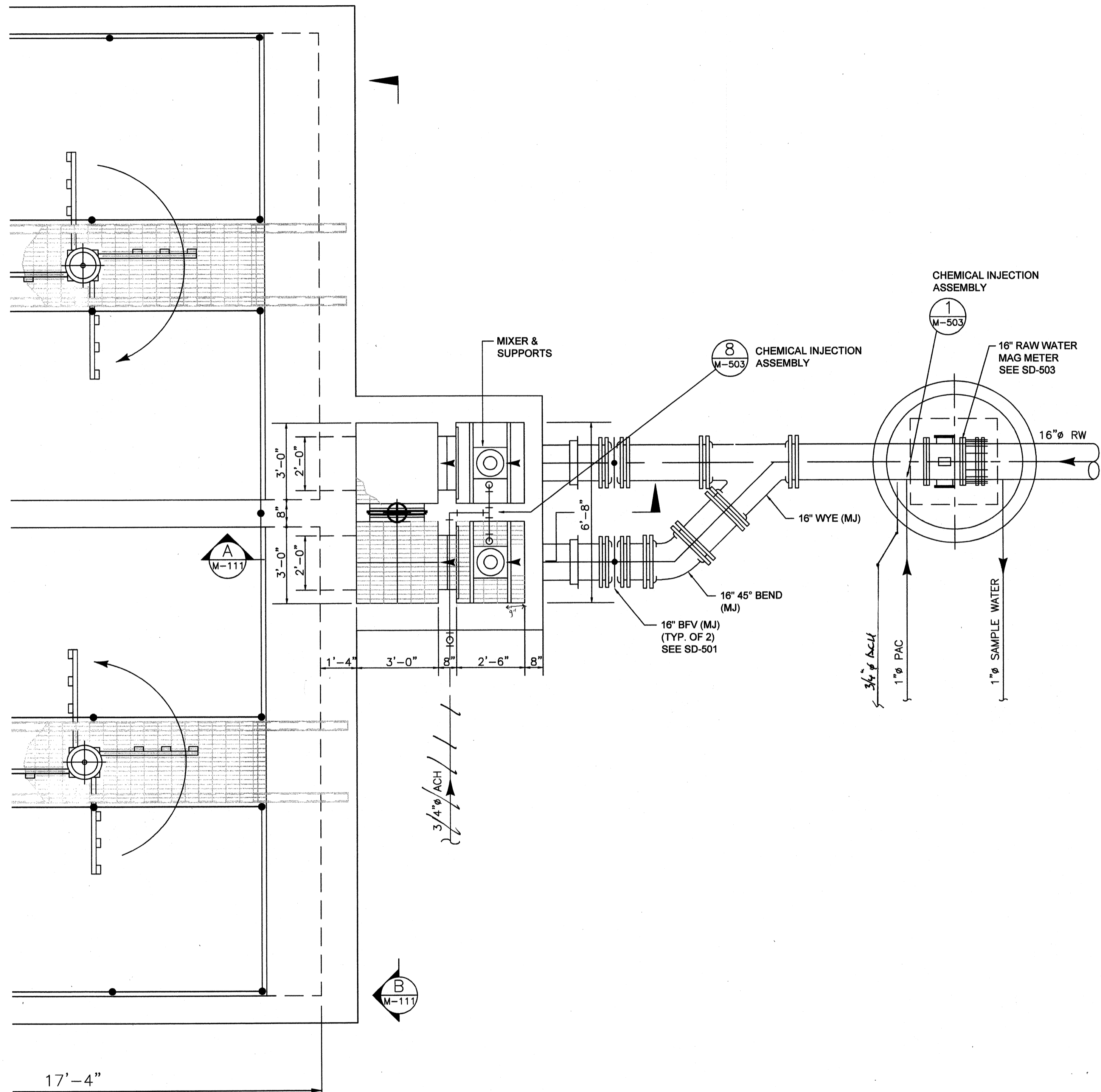
MARK	DATE	DESCRIPTION	BY

OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

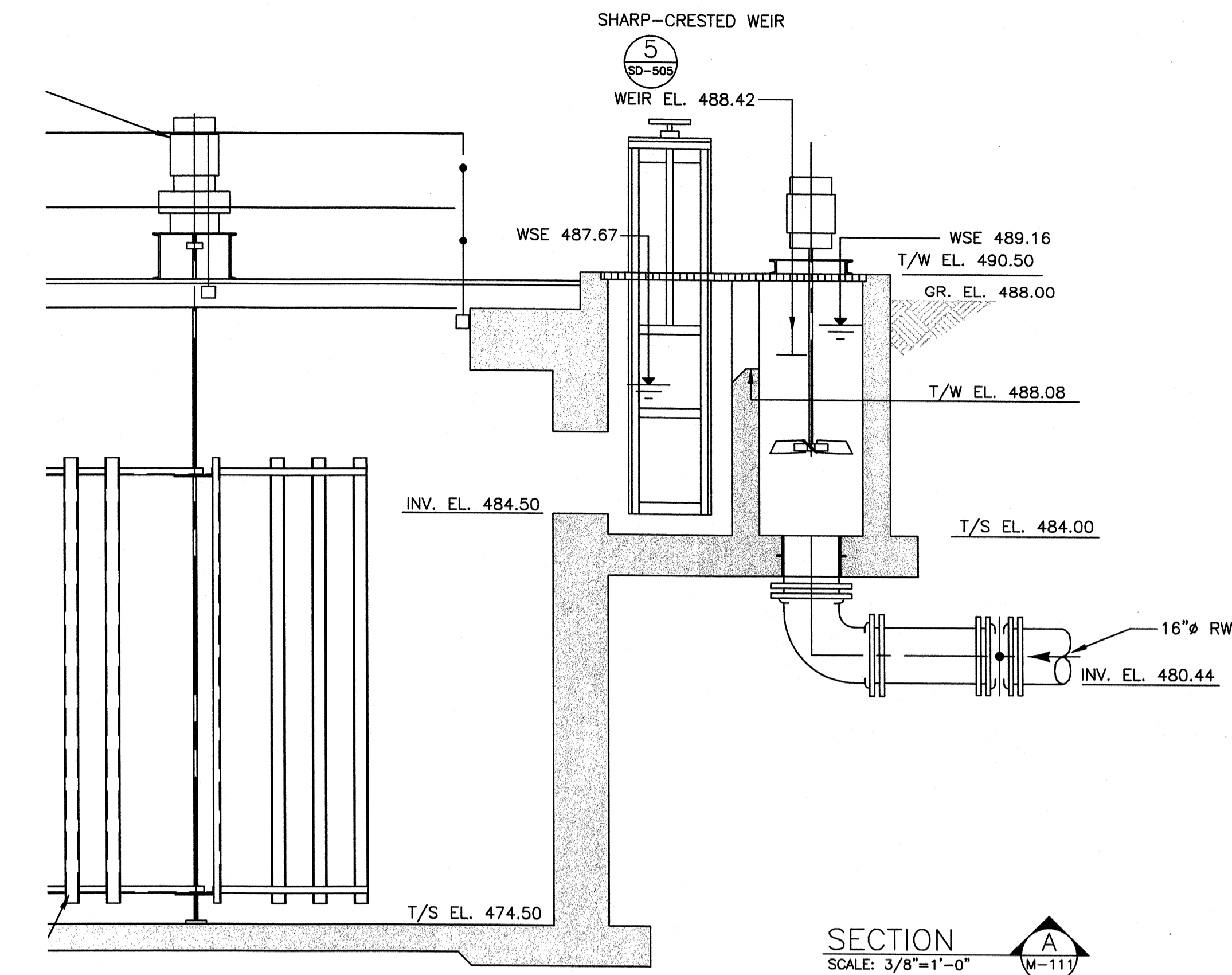
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Designed By:	GDP
Drawn By:	GDP
Checked By:	

M-103

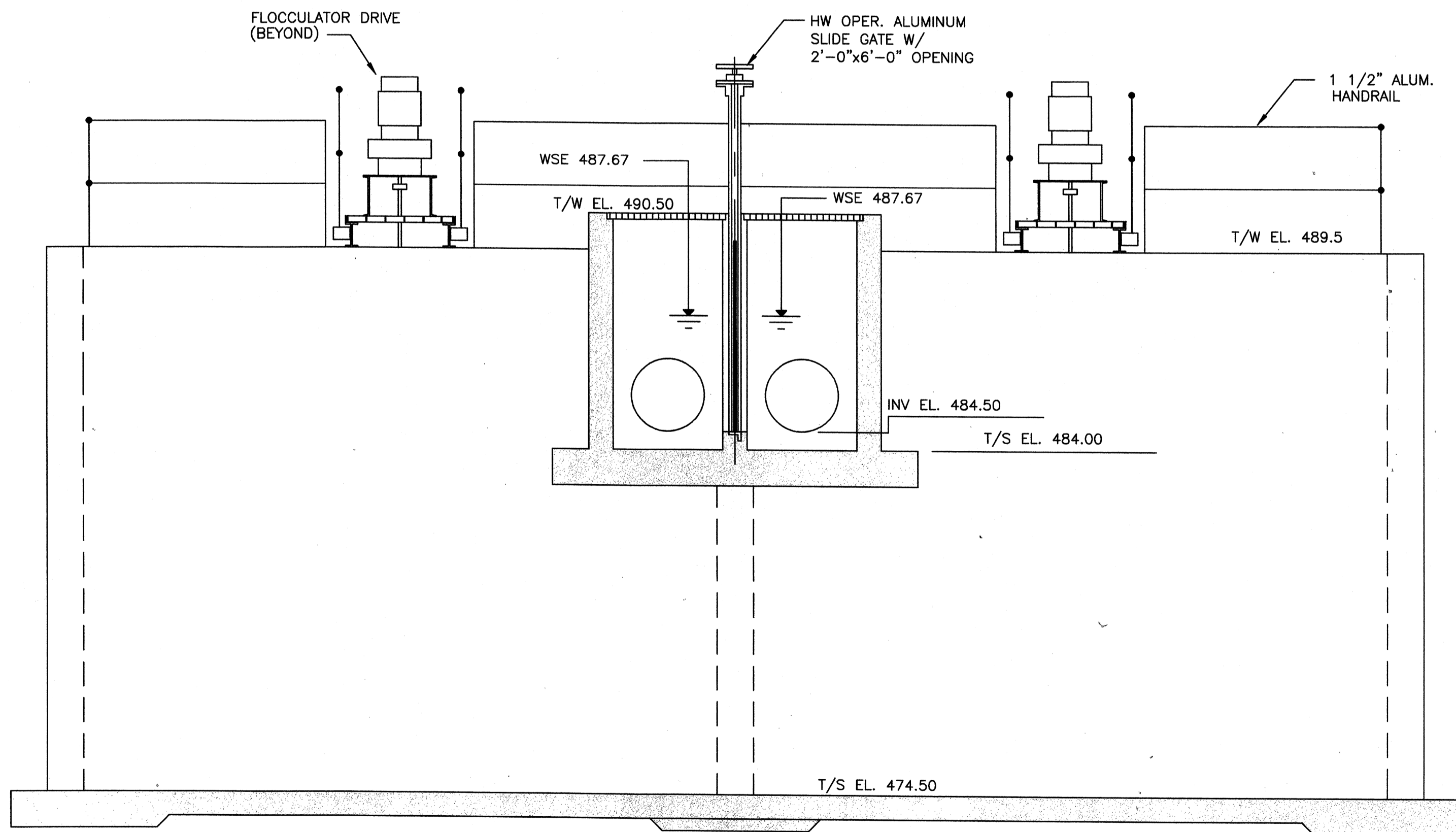
Tuesday, July 21, 2009 9:01:05 AM DRAWING: P:\120-07060 Ohio County Redesign\ORLANDO\CONFORMED SET 5-09\PROCESS\07060 M-111 THRU M-115 .DWG LAYOUT: M-111 USER NAME: JUDY THOMPSON



RAPID MIX BASIN - PLAN
SCALE: 3/8"=1'-0"



SECTION A
SCALE: 3/8"=1'-0"



SECTION B
SCALE: 3/8"=1'-0"

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PROJECT RECORD

CONFORMED SET 5/09



BY

MARK DATE DESCRIPTION

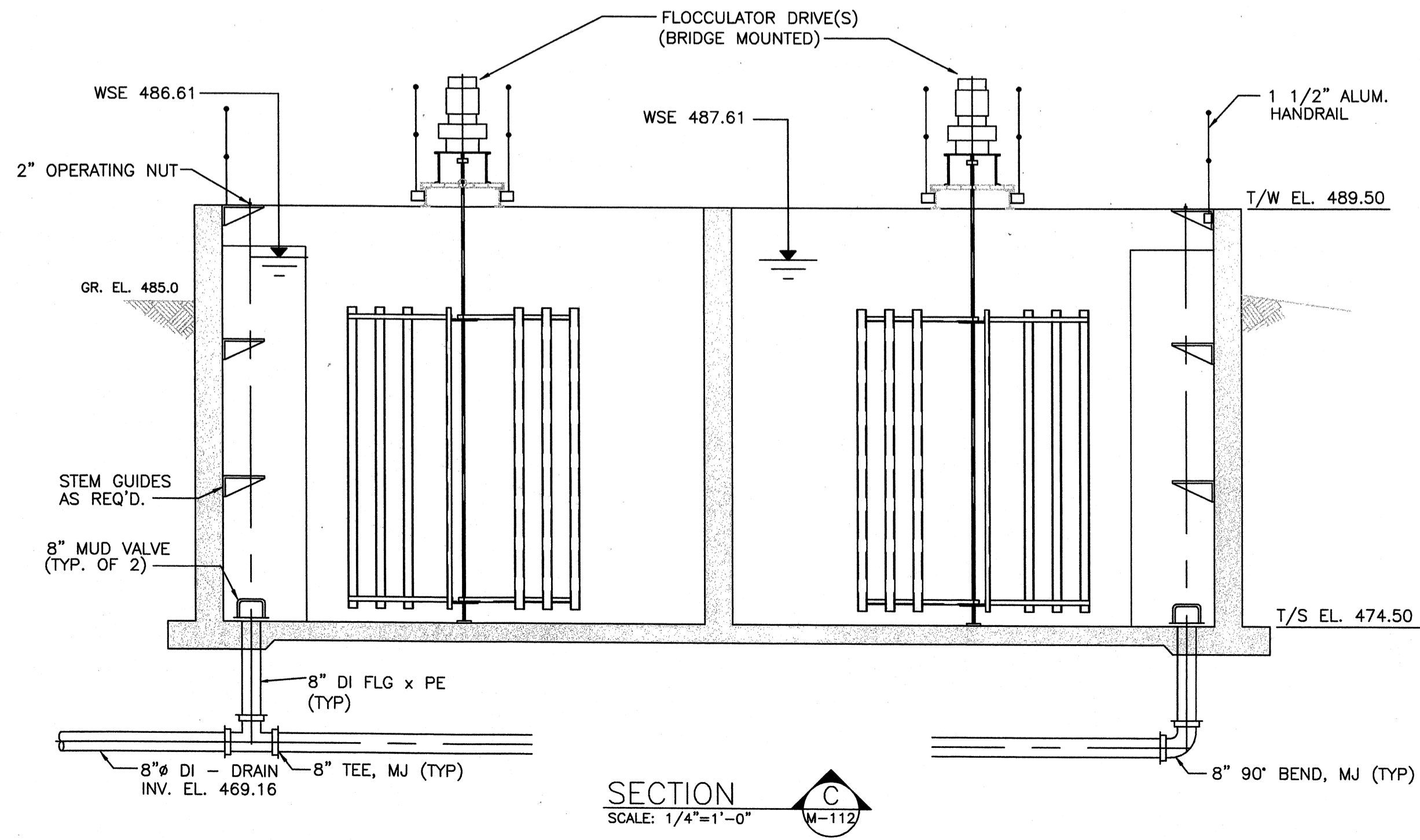
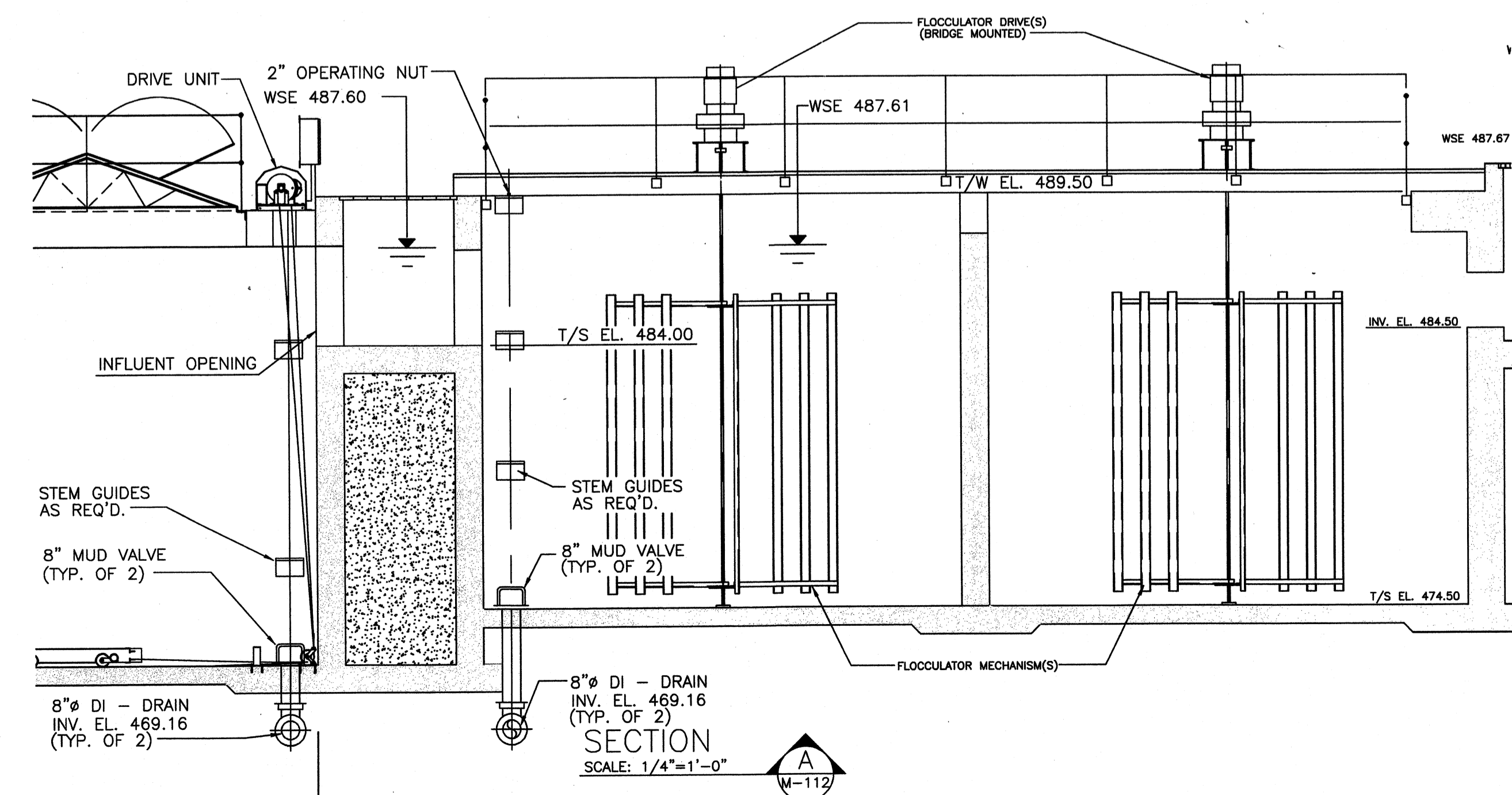
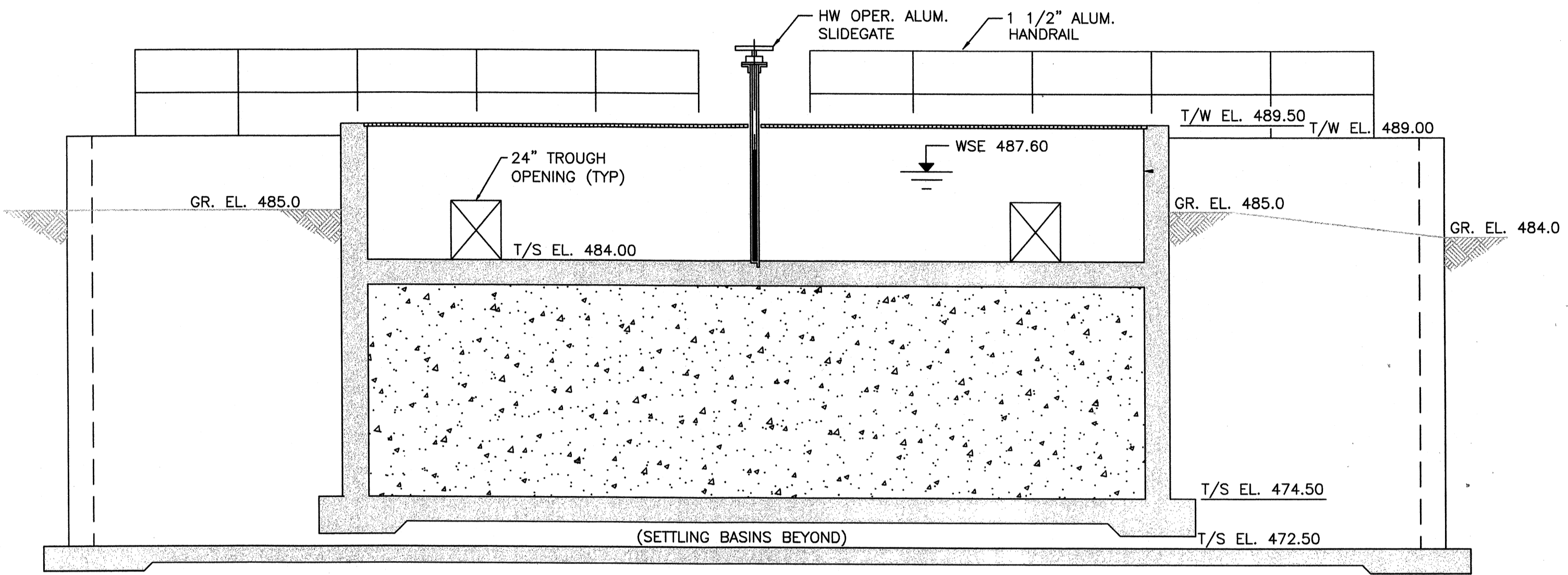
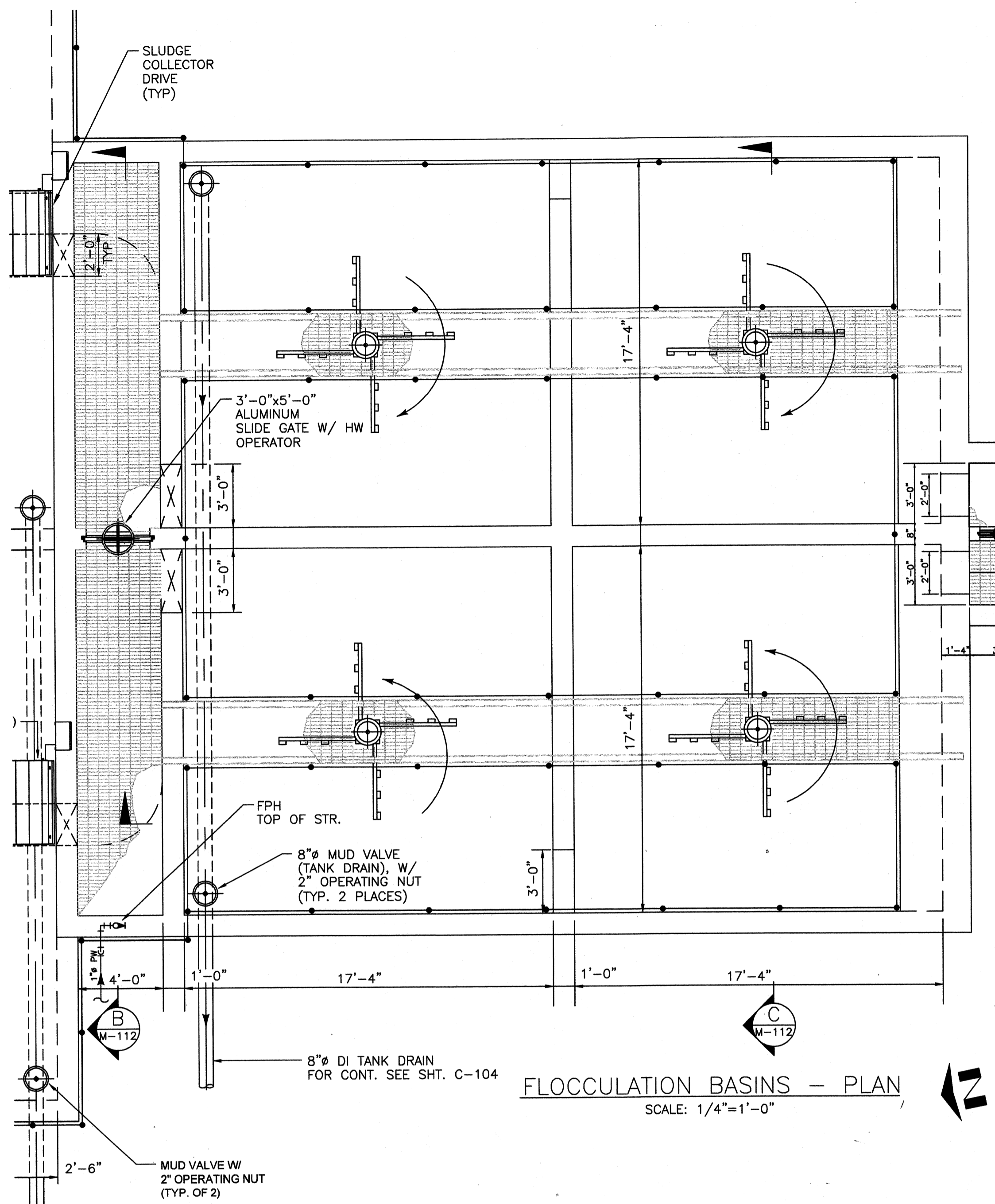
Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: CROMWELL, OHIO COUNTY, KY

Project No.: 120-07060
Designed By: GDP
Drawn By: GDP
Checked By:

M-111

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Tuesday, July 21, 2009 8:55:44 AM DRAWING: P:120-07060 Ohio County Redesign\ORLANDO\CONFORMED SET 5-09\PROCESS\07060 M-111 THRU M-115 .DWG LAYOUT: M-112 USER NAME: JUDY THOMPSON



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PROJECT RECORD

CONFORMED SET 5/09
3/19/09

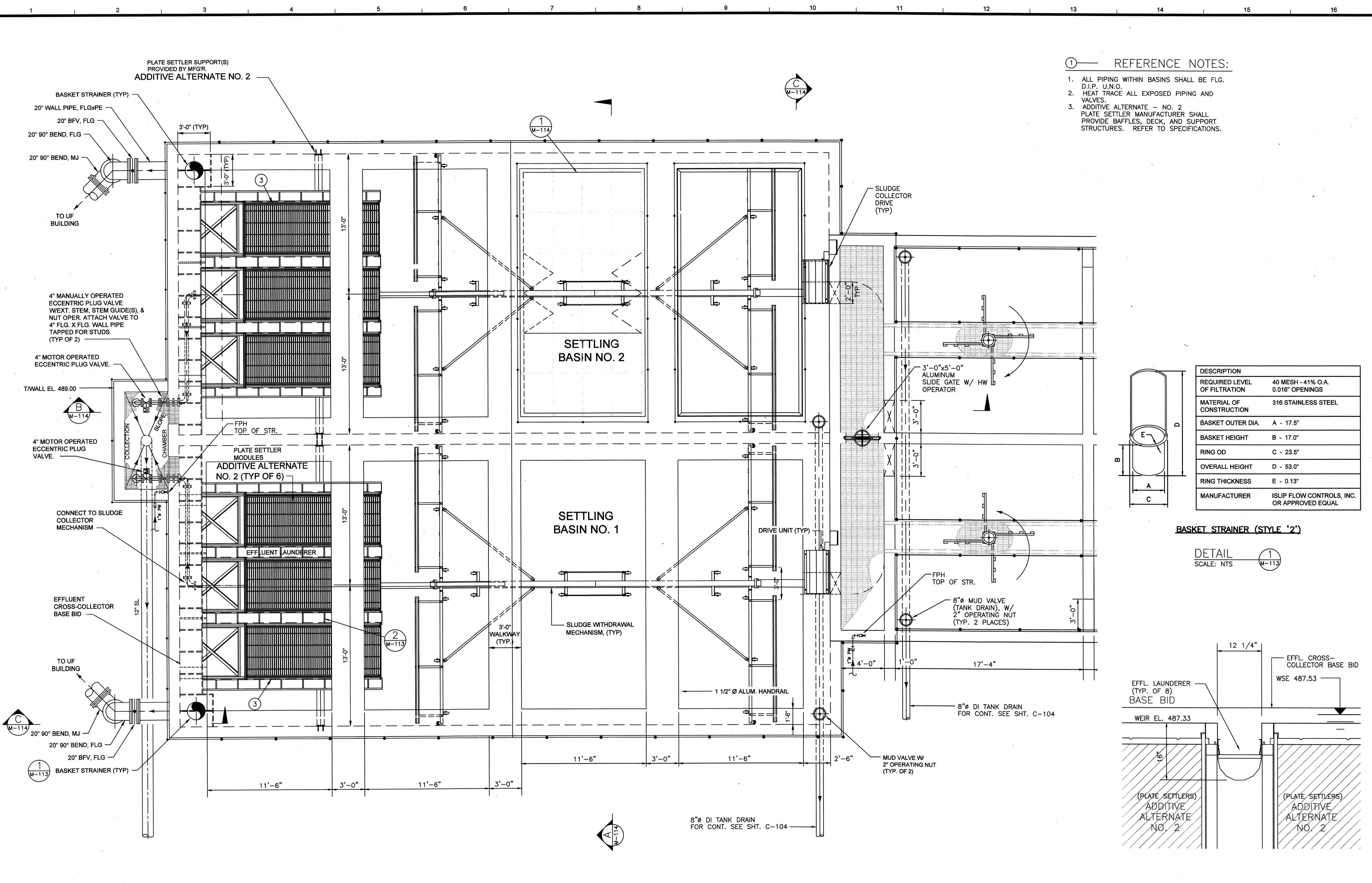
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT
Pkg. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

Project No.: 120-07060
Designed By: GDP
Drawn By: GDP
Checked By:

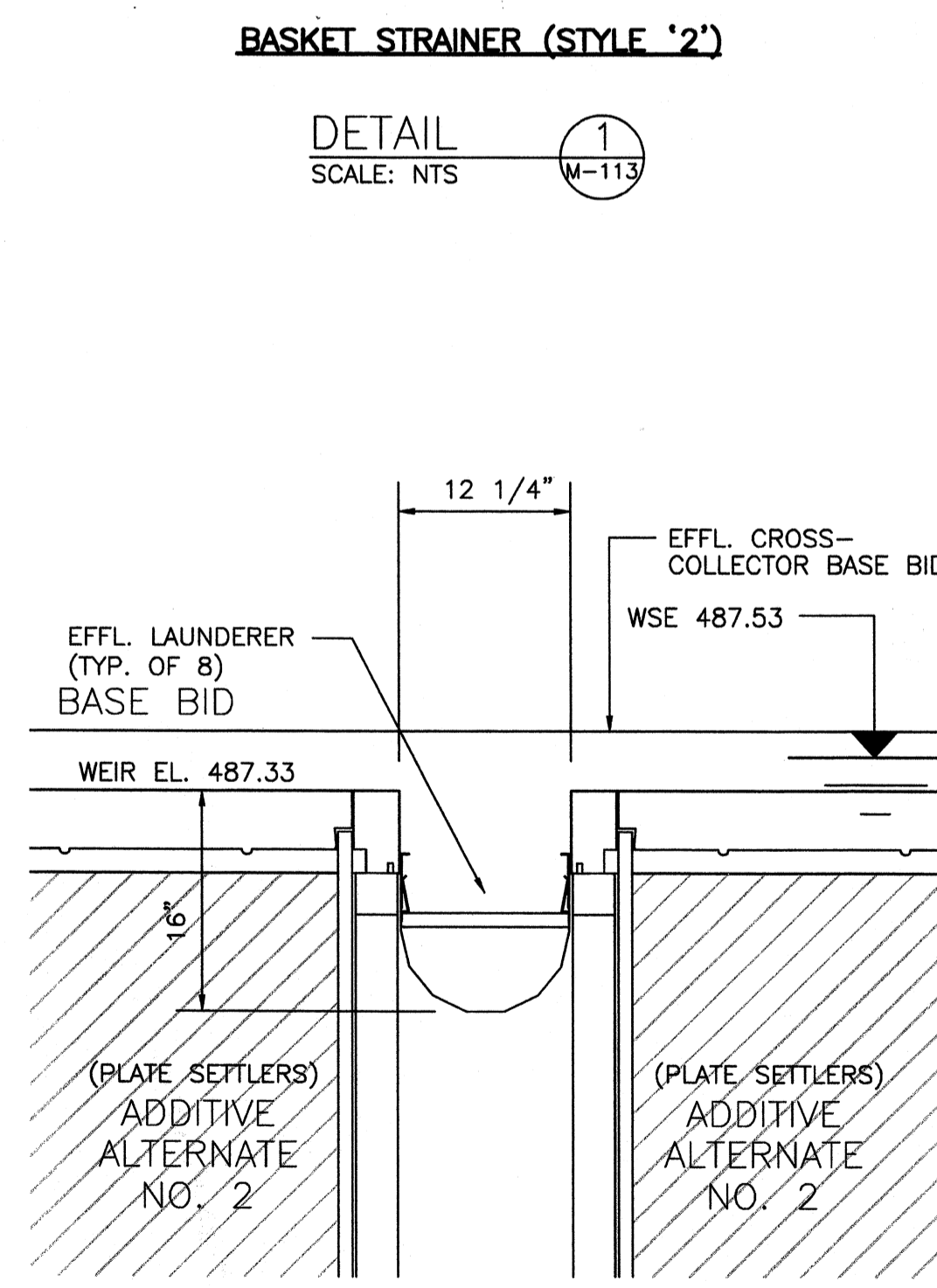
M-112
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Monday, July 27, 2009 4:41:22 PM DRAWING: P:\120-07060 Ohio County Redesign\ORLANDO\CONFORMED SET 5-09\PROCESS\07060 M-111 THRU M-115 DWG LAYOUT: M-113 USER NAME: JEREMY M. FRONCIGLIO



- ① REFERENCE NOTES:
1. ALL PIPING WITHIN BASINS SHALL BE FLG. D.I.P. U.N.O.
 2. HEAT TRACE ALL EXPOSED PIPING AND VALVES.
 3. ADDITIVE ALTERNATE - NO. 2 PLATE SETTLER MANUFACTURER SHALL PROVIDE BAFFLES, DECK, AND SUPPORT STRUCTURES. REFER TO SPECIFICATIONS.

DESCRIPTION	VALUES
REQUIRED LEVEL OF FILTRATION	40 MESH - 41% O.A. 0.016" OPENINGS
MATERIAL OF CONSTRUCTION	316 STAINLESS STEEL
BASKET OUTER DIA.	A - 17.5"
BASKET HEIGHT	B - 17.0"
RING OD	C - 23.5"
OVERALL HEIGHT	D - 53.0"
RING THICKNESS	E - 0.13"
MANUFACTURER	ISLIP FLOW CONTROLS, INC. OR APPROVED EQUAL

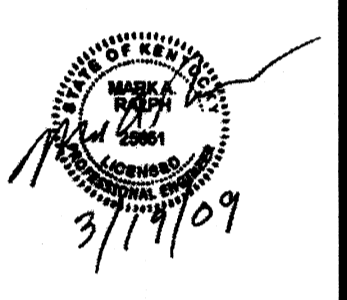


SEDIMENTATION BASINS - PLAN
SCALE: 1/4"=1'-0"



PROJECT RECORD

CONFORMED SET 5/09



BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT
 Ohio County Water District
 WATER TREATMENT PLANT

Prof. Loc.: GRIMMELL, OHIO COUNTY, KY

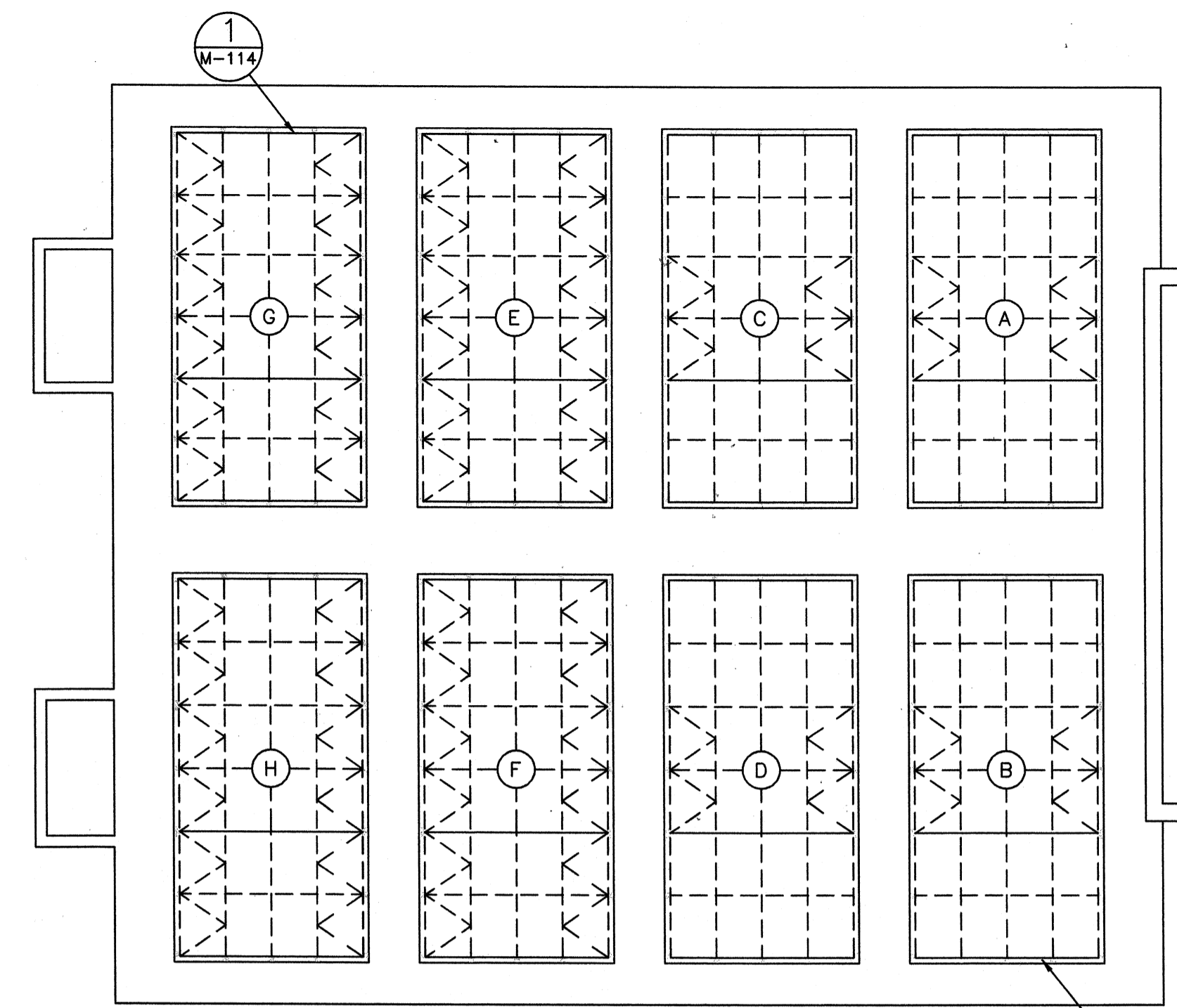
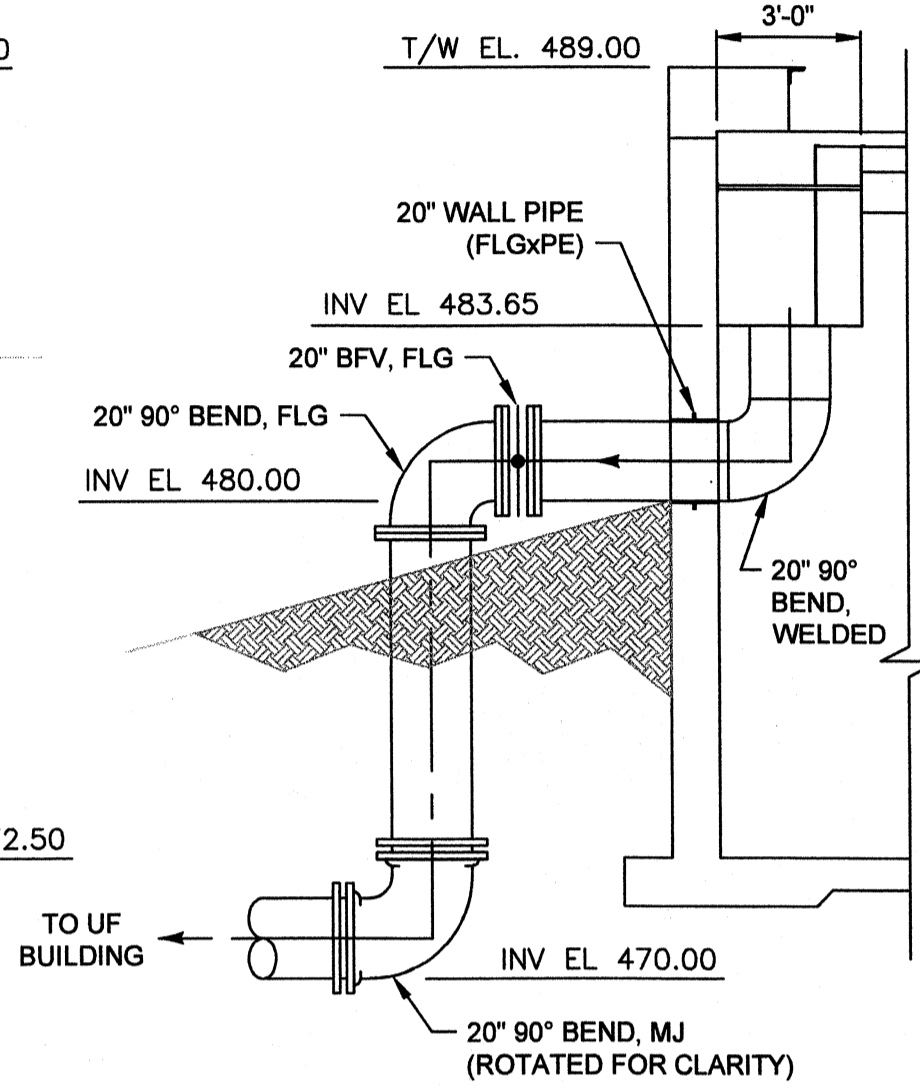
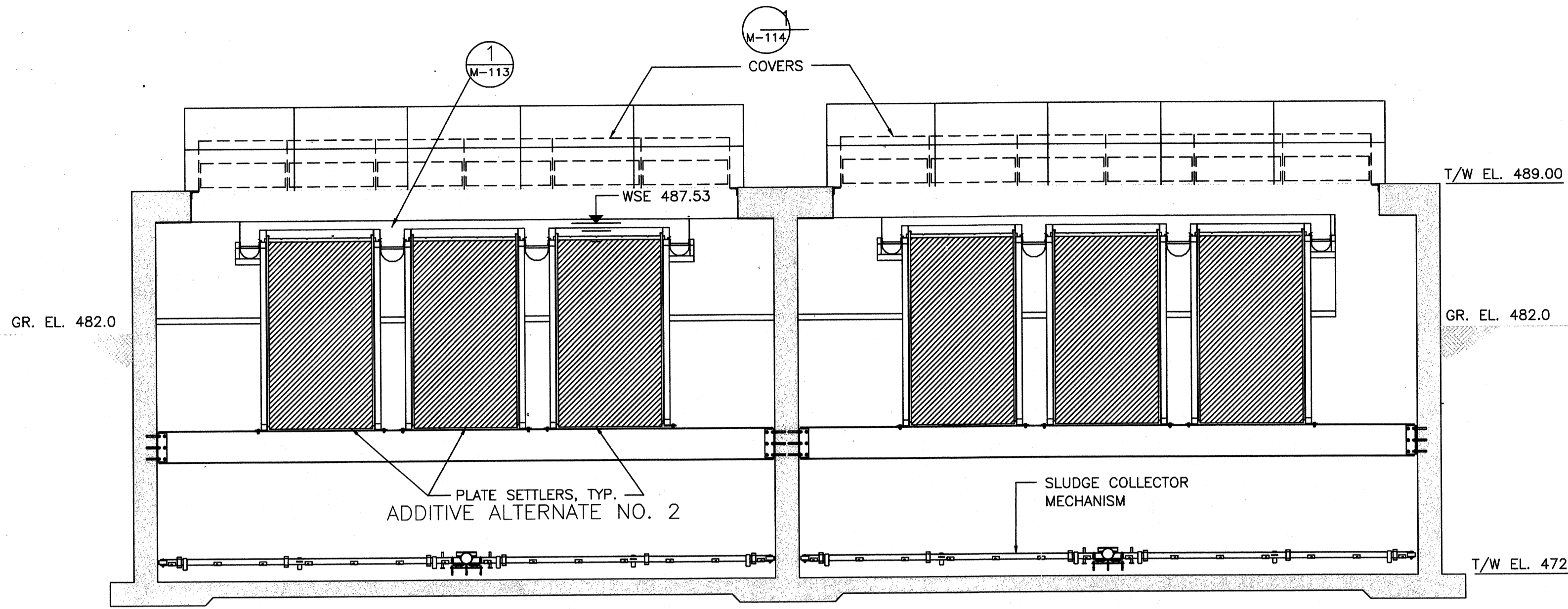
Project No.: 120-07060
 Designed By: GDP
 Drawn By: GDP
 Checked By:

SEDIMENTATION BASINS
 PLAN

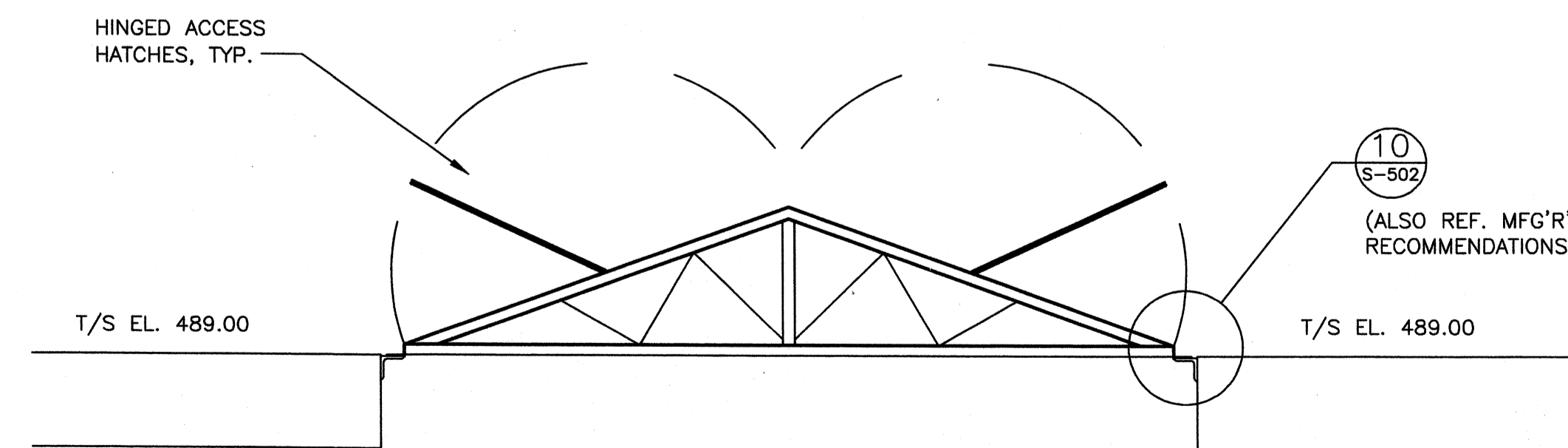
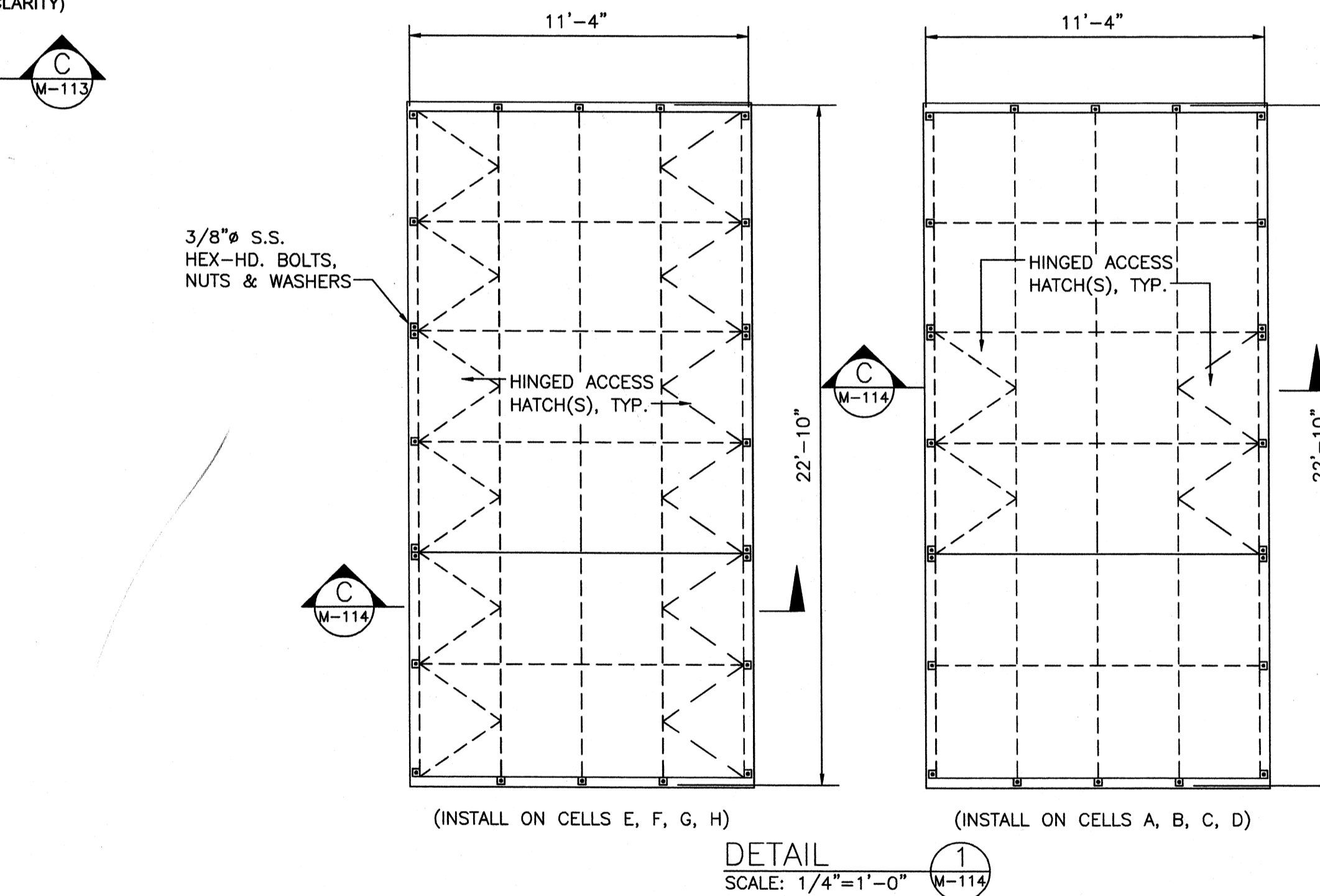
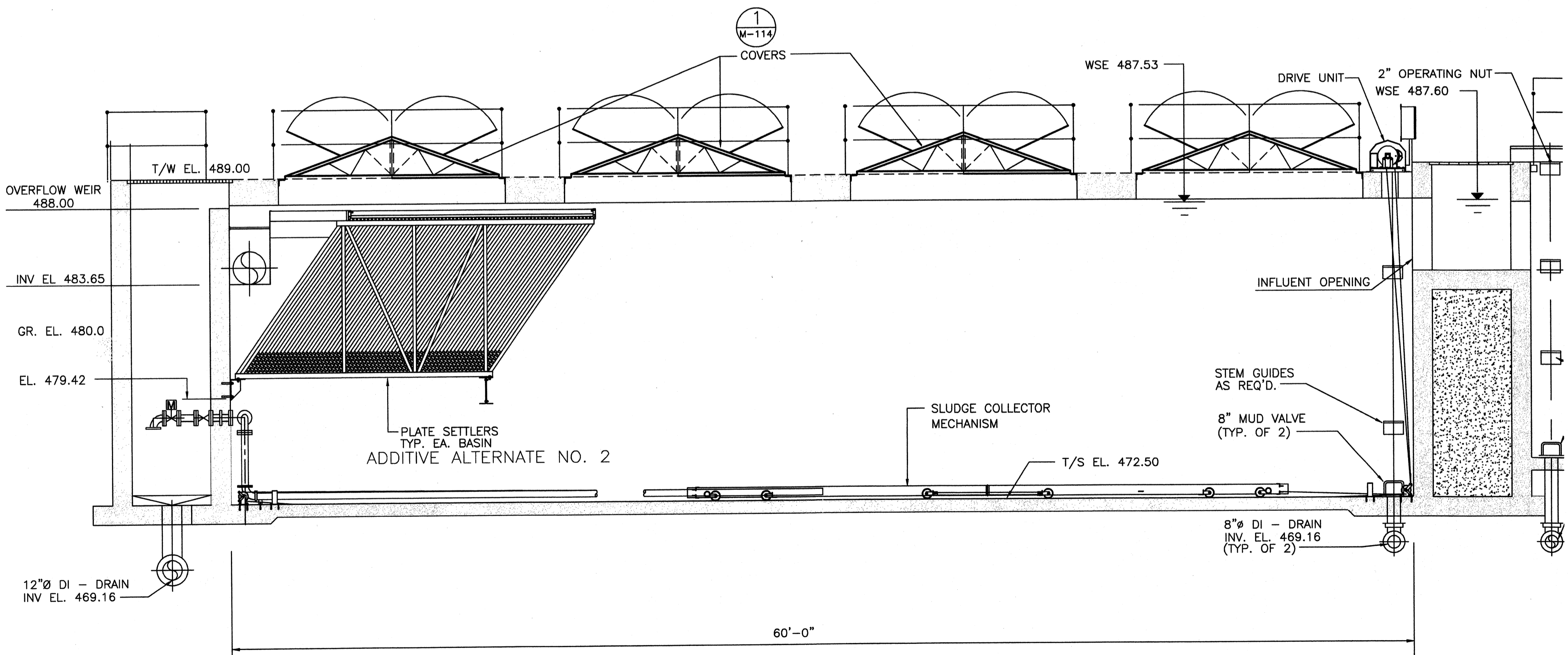
M-113

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Monday, July 27, 2009 4:41:26 PM DRAWING: P:\120-07080 Ohio County Redesign\ORLANDO\CONFORMED SET 5-08\PROCESS\07080 M-111 THRU M-115 DWG LAYOUT: M-114 USER NAME: JEREMY M. FRONIGLIO



COVERS SHALL BE AS MANUFACTURED BY ENVIRONETICS, INC., LOCKPORT, IL., OR APPROVED EQUAL (SEE SPECIFICATIONS FOR MORE DETAILED DESCRIPTION)

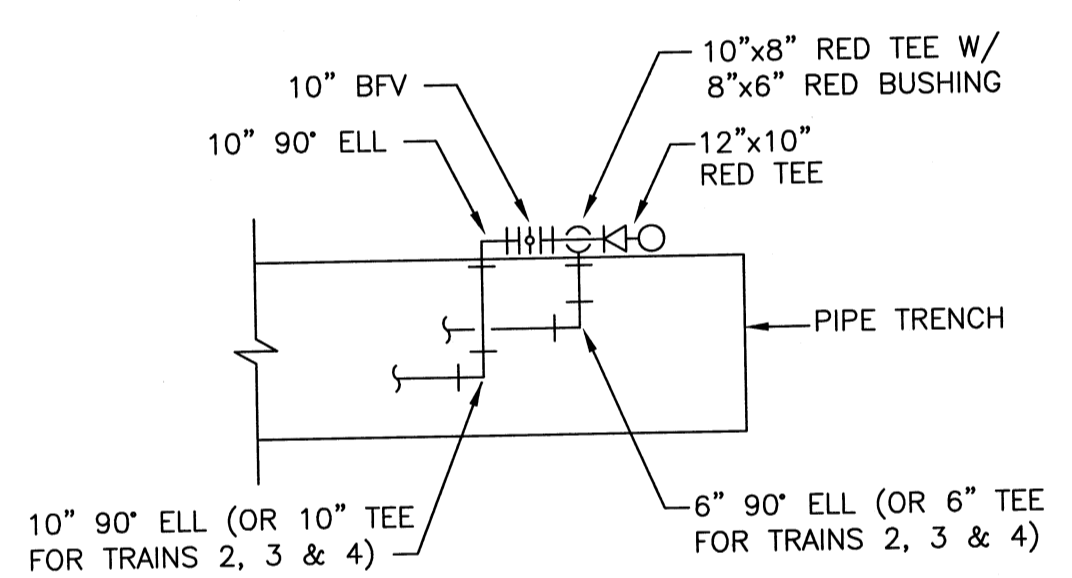


BY	DATE	DESCRIPTION

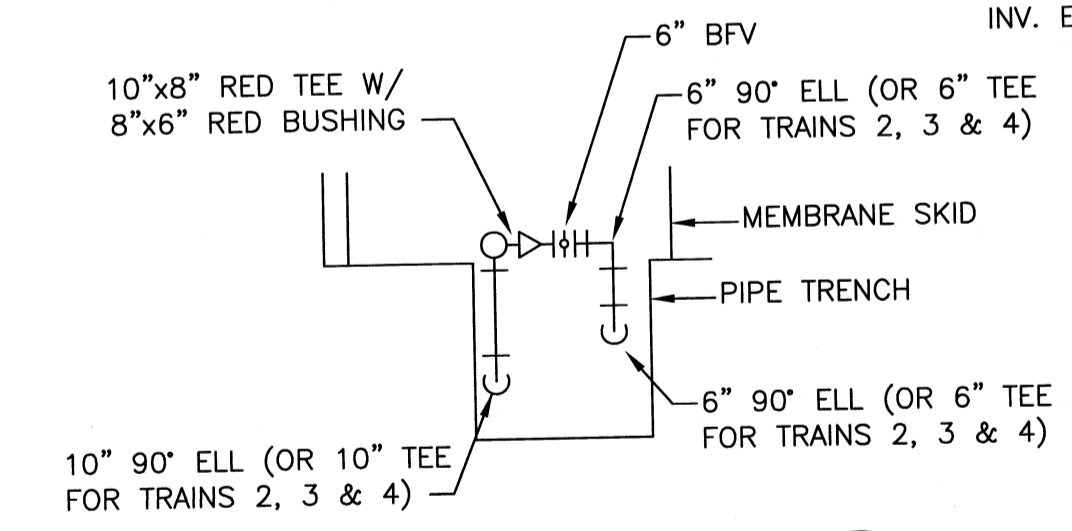
Project No.:	120-07080
Designed By:	GDP
Drawn By:	GDP
Checked By:	

1 REFERENCE NOTES:

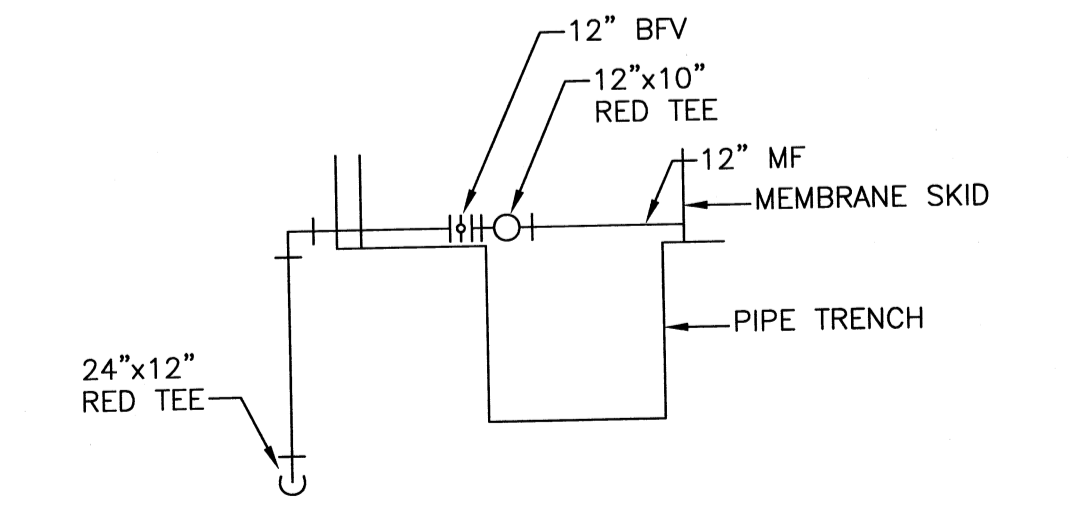
1. EMERGENCY SHOWER & EYEWASH. PROVIDE 1/2" PSW DROP. TEMPER WATER W/ INSTANTANEOUS WATER HEATER.
2. 1" PSW W/GATE VALVE DOWN TO HOSE REEL. PROVIDE 50 L.F. HOSE. TYP. 2 PLACES.
3. SUMP PUMP W/2" DISCHARGE. PROVIDE GATE VALVE & DOUBLE-CHECKS IN VERTICAL RISE.
4. CHEMICAL FEED SKID(S), TYP. OF 4.
5. 6" C.I.P. RECIRCULATION
6. 6" C.I.P. DRAIN & FILL
7. 12" DR-2 (ABOVE), 12" MF (BELOW)
8. 8" PERM-1
9. 6" C.I.P. FEED
10. 6" C.I.P. RETURN
11. 10" DR-2 (ABOVE), 2" DR-2 (BELOW)
12. 6" C.I.P. YO WASTE
13. CONTRACTOR SHALL PROVIDE EXPANSION COUPLINGS W/ 316SS CONTROL RODS.
14. CONTRACTOR SHALL PROVIDE BOLTS AND NUTS TO CONNECT EQUIPMENT.



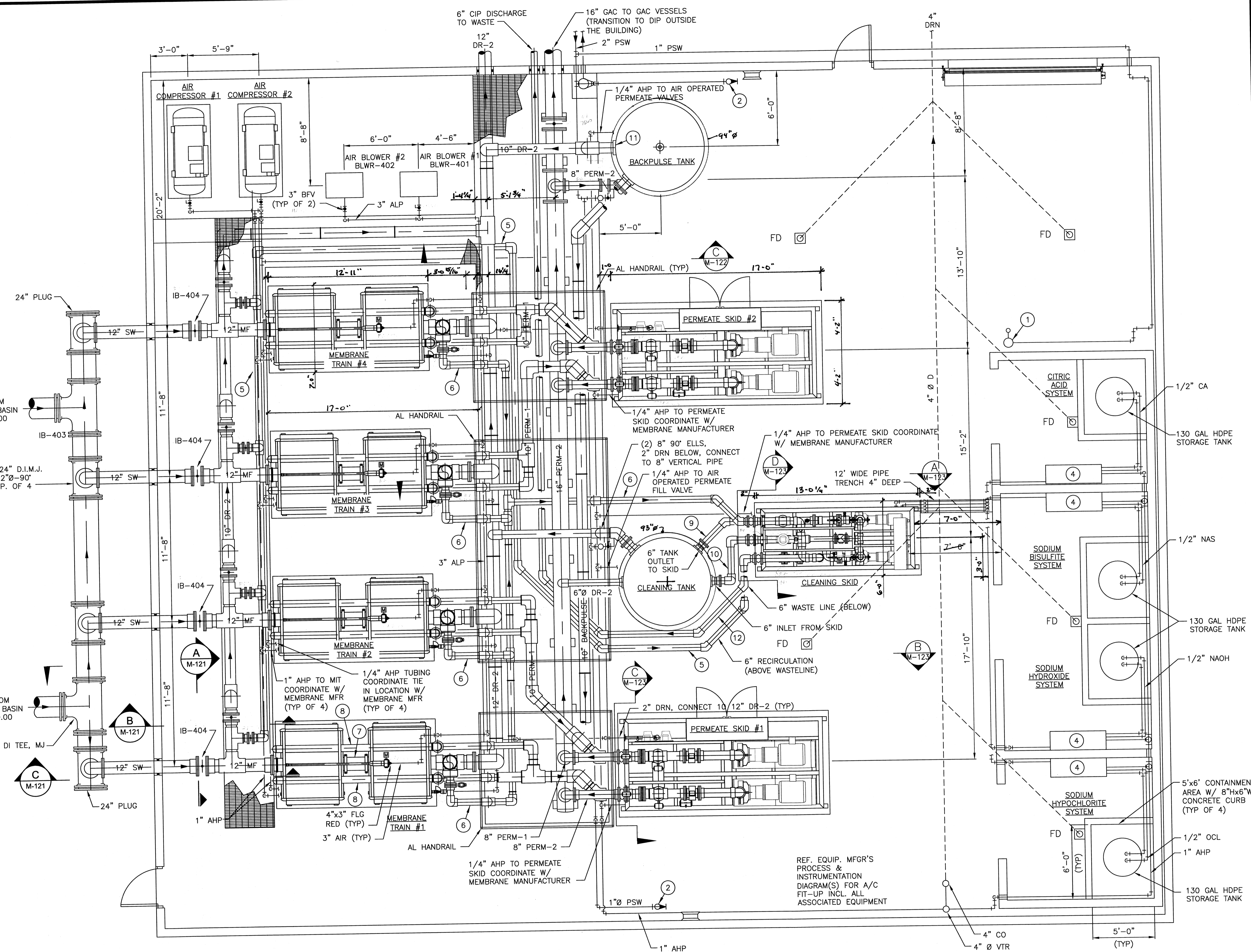
SECTION SCHEMATIC A
SCALE: NTS
M-121



SECTION SCHEMATIC B
SCALE: NTS
M-121



SECTION SCHEMATIC C
SCALE: NTS
M-121



MEMBRANE EQUIPMENT PLAN
SCALE: 1/4" = 1'-0"

SEE REUSE DRAWING FOR LAYOUT

TETRA TECH
www.tetra-tech.com
800 Corporate Drive
Suite 200, Lexington, KY, 40503
PHONE: (859) 223-8000 FAX: (859) 224-1025

PROJECT RECORD

CONFORMED SET 5/09
3/17/09

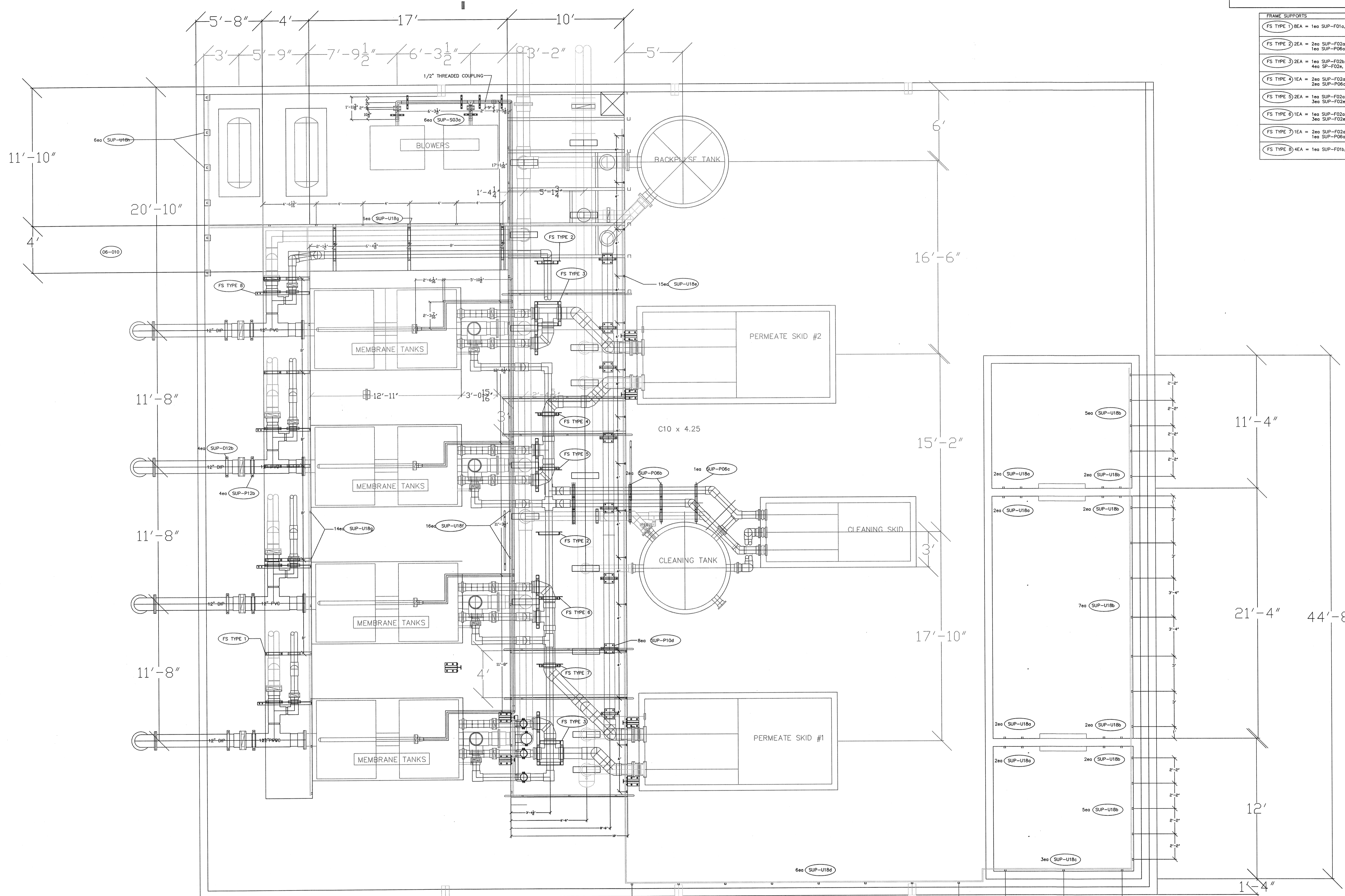
BY	TAC	DATE	DESCRIPTION
		5/11/09	ADDENDUM 2

MEMBRANE EQUIPMENT PLAN
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
Proj. Loc.: CROWMELL, OHIO COUNTY, KY

Project No.:	120-07060
Designed By:	JCB
Drawn By:	
Checked By:	

M-121

4/5/2010 12:24:48 PM - P:\120-07060\OHIO COUNTY REDESIGN\ORLANDO\PROCESS\07060 M-121.DWG - NEUMEYER, SCOTT

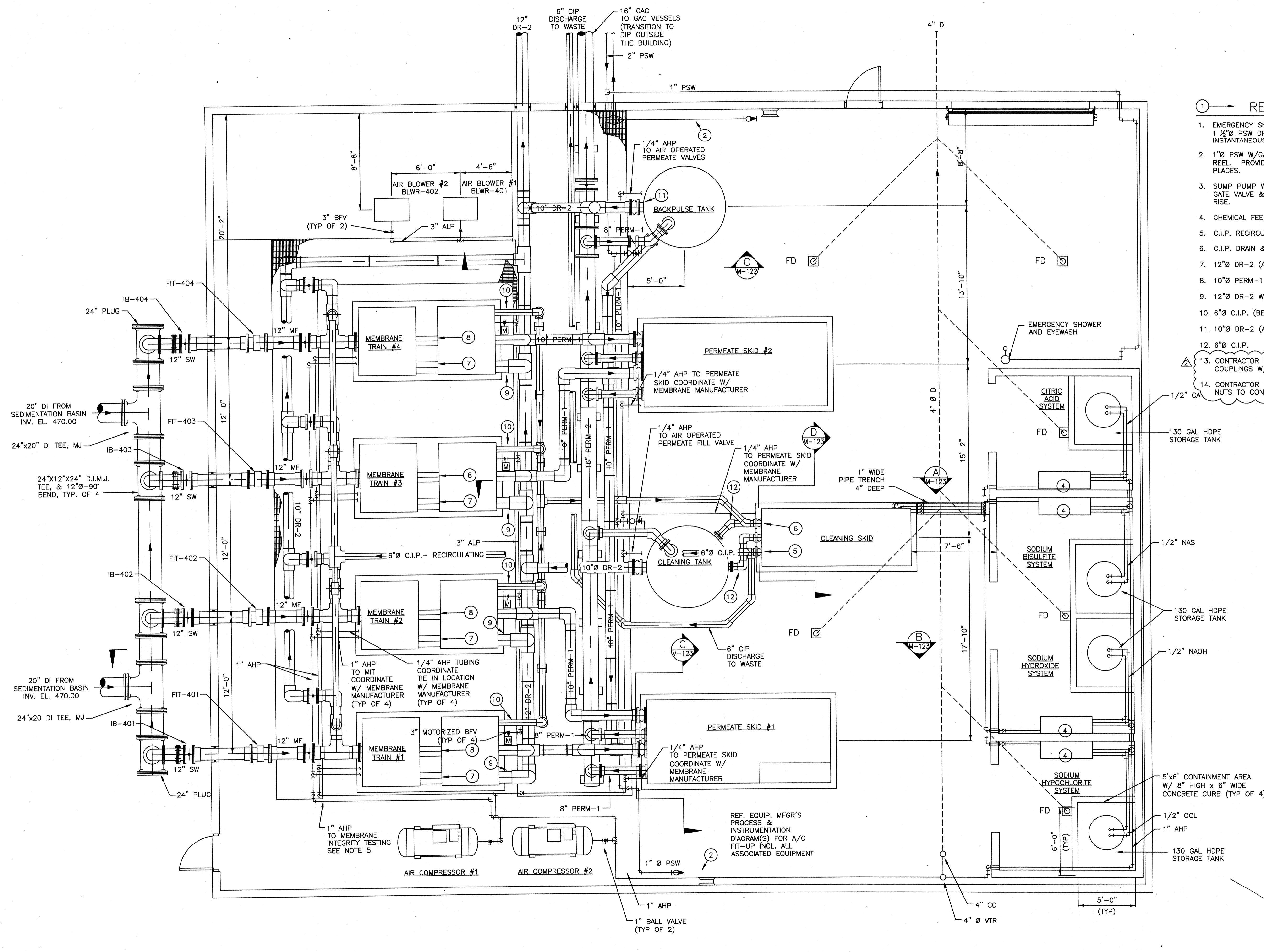


FRAME SUPPORTS	
FS TYPE 1	1ea SUP-F01a, 1ea SUP-P06a, 1ea SUP-P10a
FS TYPE 2	2ea SUP-F02a, 2ea SUP-F02b, 2ea SUP-F02c, 1ea SUP-P06a
FS TYPE 3	1ea SUP-F02b, 1ea SUP-F02c, 4ea SUP-F02d, 4ea SUP-F02e, 1ea SUP-P06a, 3ea SUP-P10b
FS TYPE 4	2ea SUP-F02a, 3ea SUP-F02b, 2ea SUP-F02c, 2ea SUP-F02d, 2ea SUP-P06a, 1ea SUP-P10b
FS TYPE 5	1ea SUP-F02a, 1ea SUP-F02b, 3ea SUP-F02c, 3ea SUP-F02d, 2ea SUP-P06a, 1ea SUP-P10b
FS TYPE 6	1ea SUP-F02a, 1ea SUP-F02b, 3ea SUP-F02c, 3ea SUP-F02d, 1ea SUP-P06a, 1ea SUP-P10b
FS TYPE 7	1ea SUP-F02a, 2ea SUP-F02b, 2ea SUP-F02c, 2ea SUP-F02d, 1ea SUP-P06a, 1ea SUP-P10b
FS TYPE 8	4ea SUP-F01b, 1ea SUP-P06d, 1ea SUP-P10c

PROJECT RECORD

REV 08-23-2011	DHID COUNTY WATER TREATMENT PLANT		
REV 12-06-2010			
REV 10-13-2010	UF BUILDING PIPING		
REV 09-30-2010			
REV 09-27-2010	SIZE	FSCM NO.	Date 09-10-2010
REV 09-24-2010	SCALE	IND SCALE	SHEET 01

Tuesday, July 21, 2009 9:44:31 AM DRAWING: P:\120-07080 Ohio County Redesign\ORLANDO\CONFORMED SET 5-09\PROCESS\07080 M-121.DWG LAYOUT: M-121 USER NAME: JUDY THOMPSON



- ① REFERENCE NOTES:
- EMERGENCY SHOWER & EYEWASH. PROVIDE 1 1/2\"/>
 - 1\"/>
 - SUMP PUMP W/2\"/>
 - CHEMICAL FEED SKID(S), TYP. OF 4.
 - C.I.P. RECIRCULATION
 - C.I.P. DRAIN & FILL
 - 12\"/>
 - 10\"/>
 - 12\"/>
 - 6\"/>
 - 10\"/>
 - 6\"/>
 - CONTRACTOR SHALL PROVIDE EXPANSION COUPLINGS W/ 316SS CONTROL RODS.
 - CONTRACTOR SHALL PROVIDE BOLTS AND NUTS TO CONNECT EQUIPMENT.

MEMBRANE EQUIPMENT PLAN
SCALE: 1/4" = 1'-0"

PROJECT RECORD

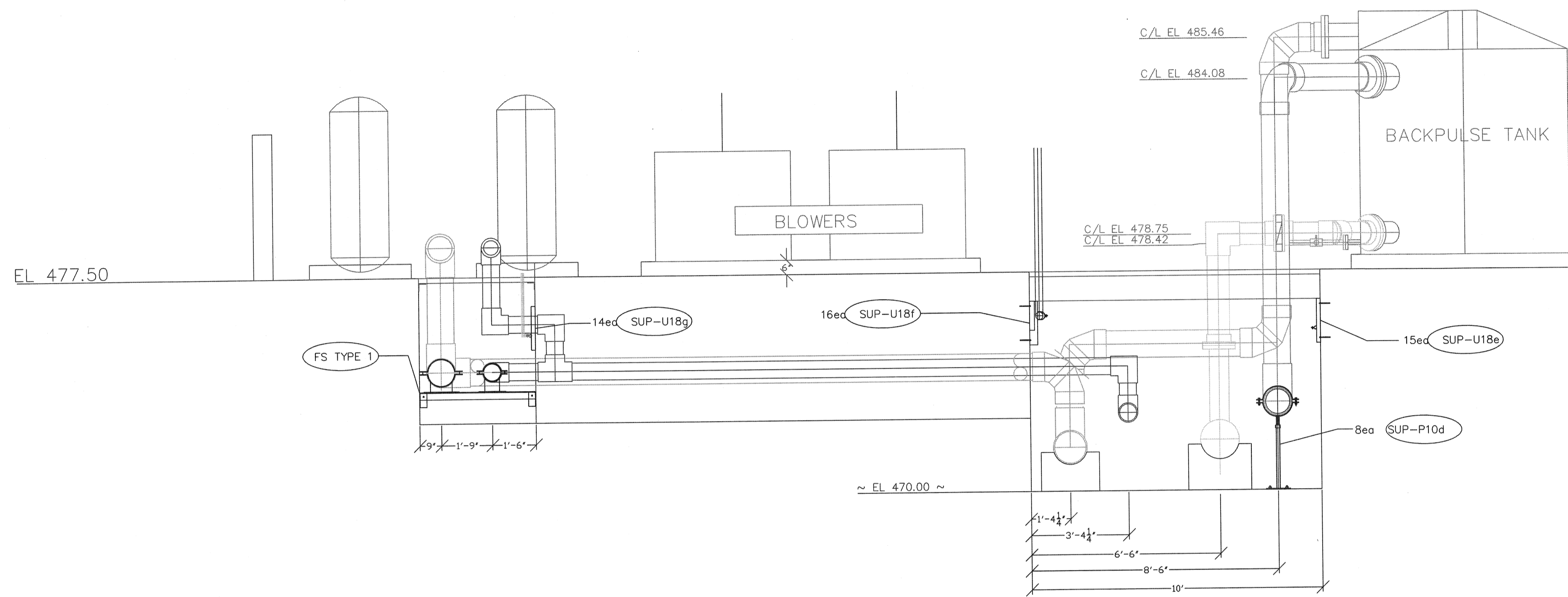
NO.	DATE	DESCRIPTION

CONFORMED SET 5/09
3/17/09

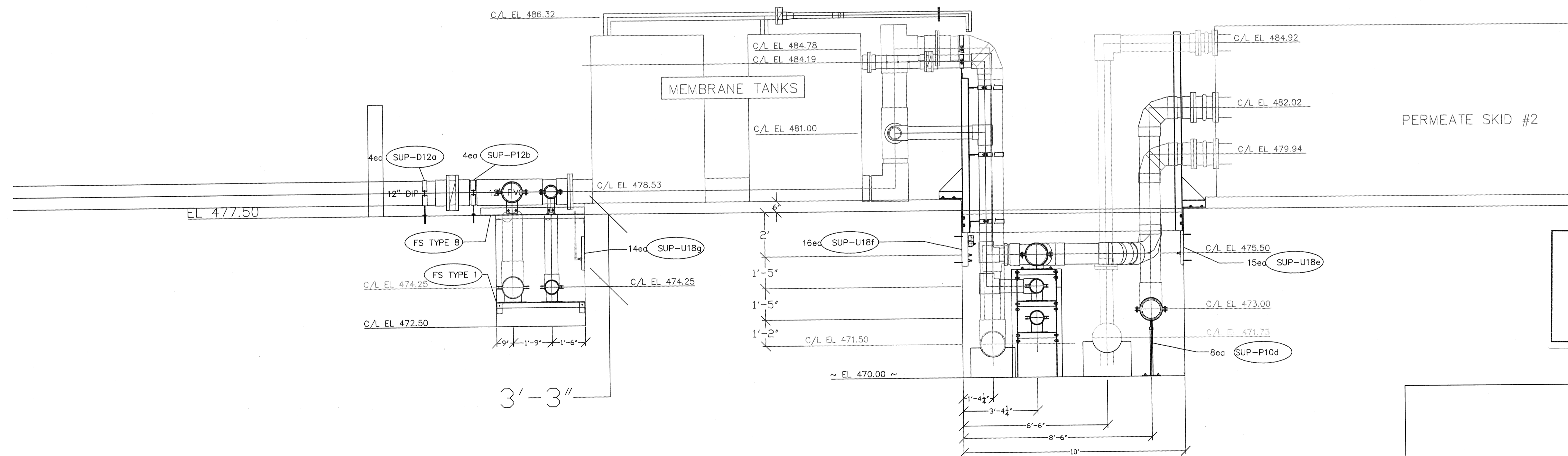
BY	TAC
DATE	5/11/09
MARK	ADDENDUM 2

Client: OHIO COUNTY WATER DISTRICT
Project: CROWMELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
**UF BUILDING
EQUIPMENT PLAN**

Project No.:	120-07080
Designed By:	JCB
Drawn By:	
Checked By:	



SECTION A

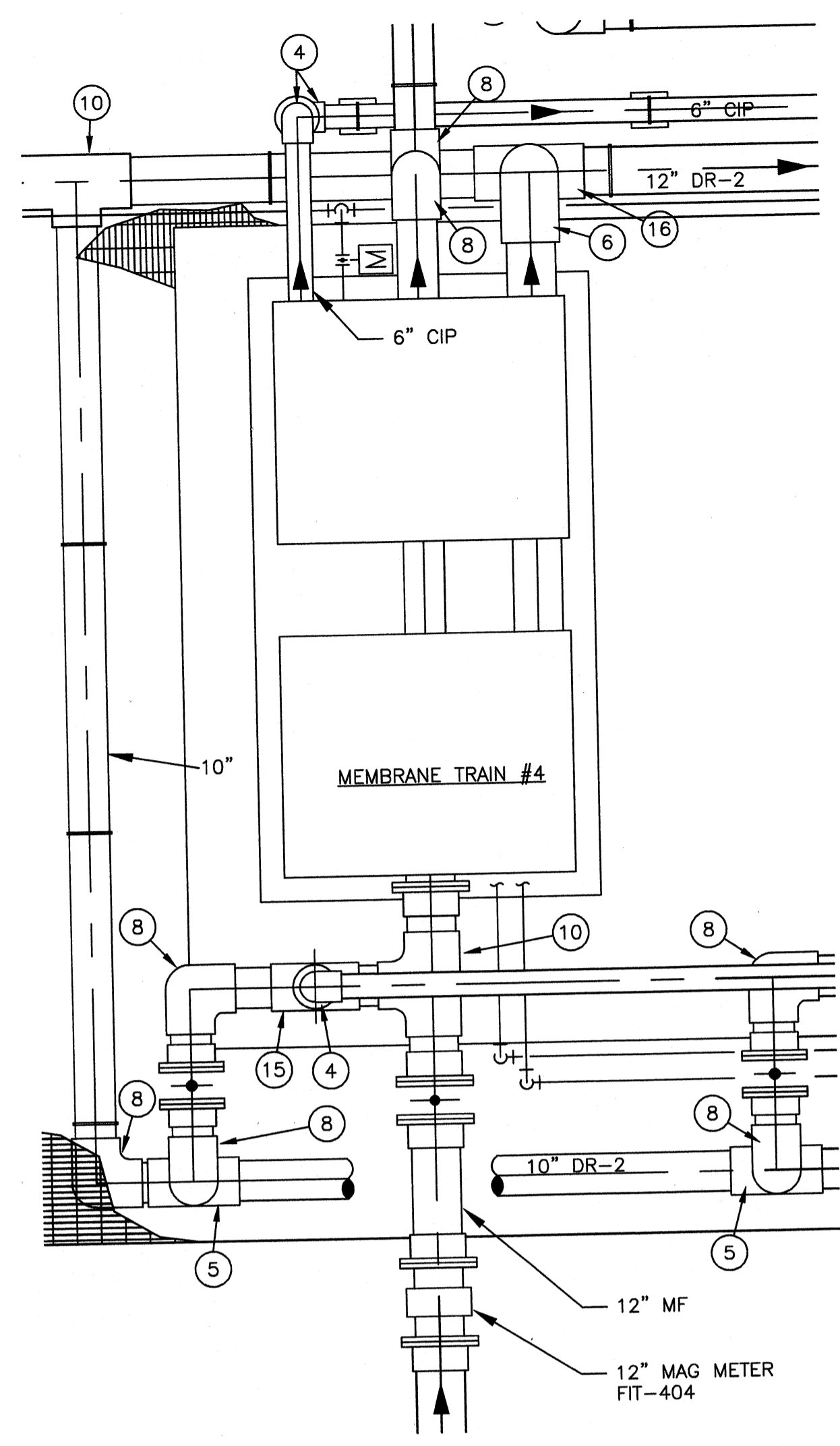


SECTION AT CIP TANK/SKID

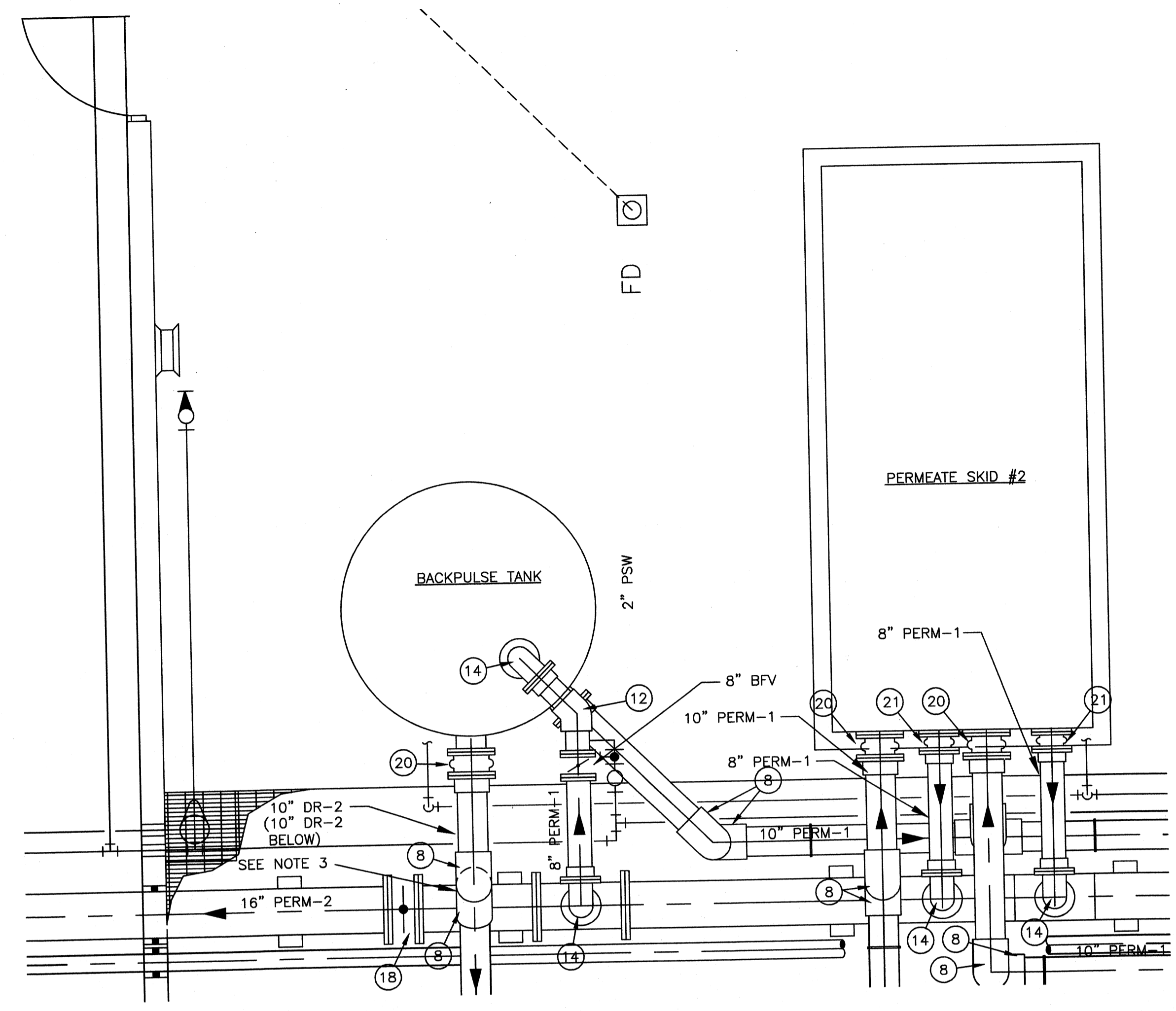
PROJECT RECORD

OHIO COUNTY WATER TREATMENT PLANT			
MEMBRANE / PIPE SECTION			
REV 10-13-2010	SIZE	FSCM NO.	Date
REV 09-27-2010			
REV 09-24-2010	SCALE	IND SCALE	SHEET 10

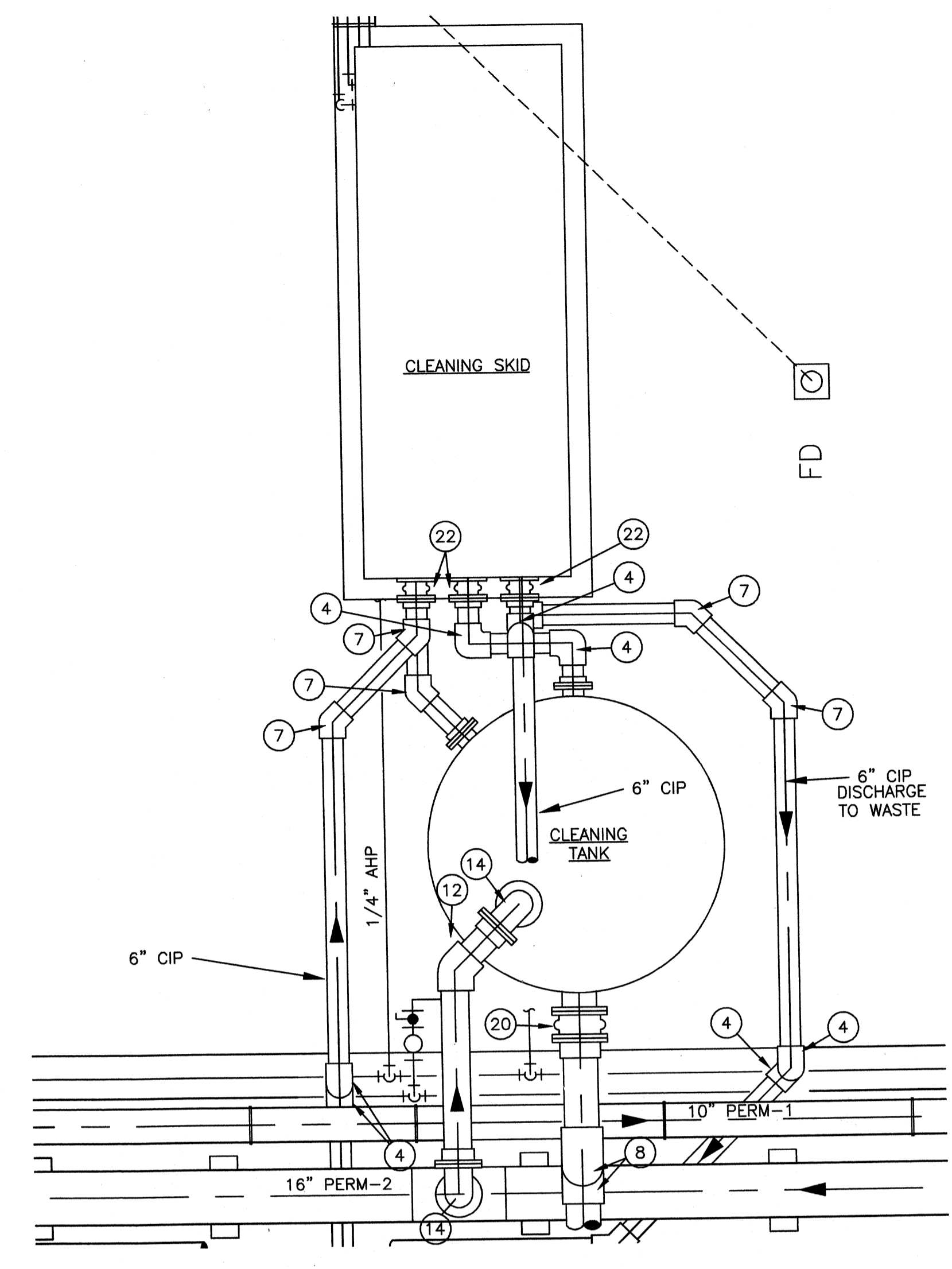
Wednesday, July 15, 2009 4:35:32 PM DRAWING: \\verofifs3\projects\120-07080 Ohio County\CONFORMED SET 5-09\PROCESS\07080 M-122.DWG LAYOUT: M-122 USER NAME: JEREMY M. FRONIGILLO



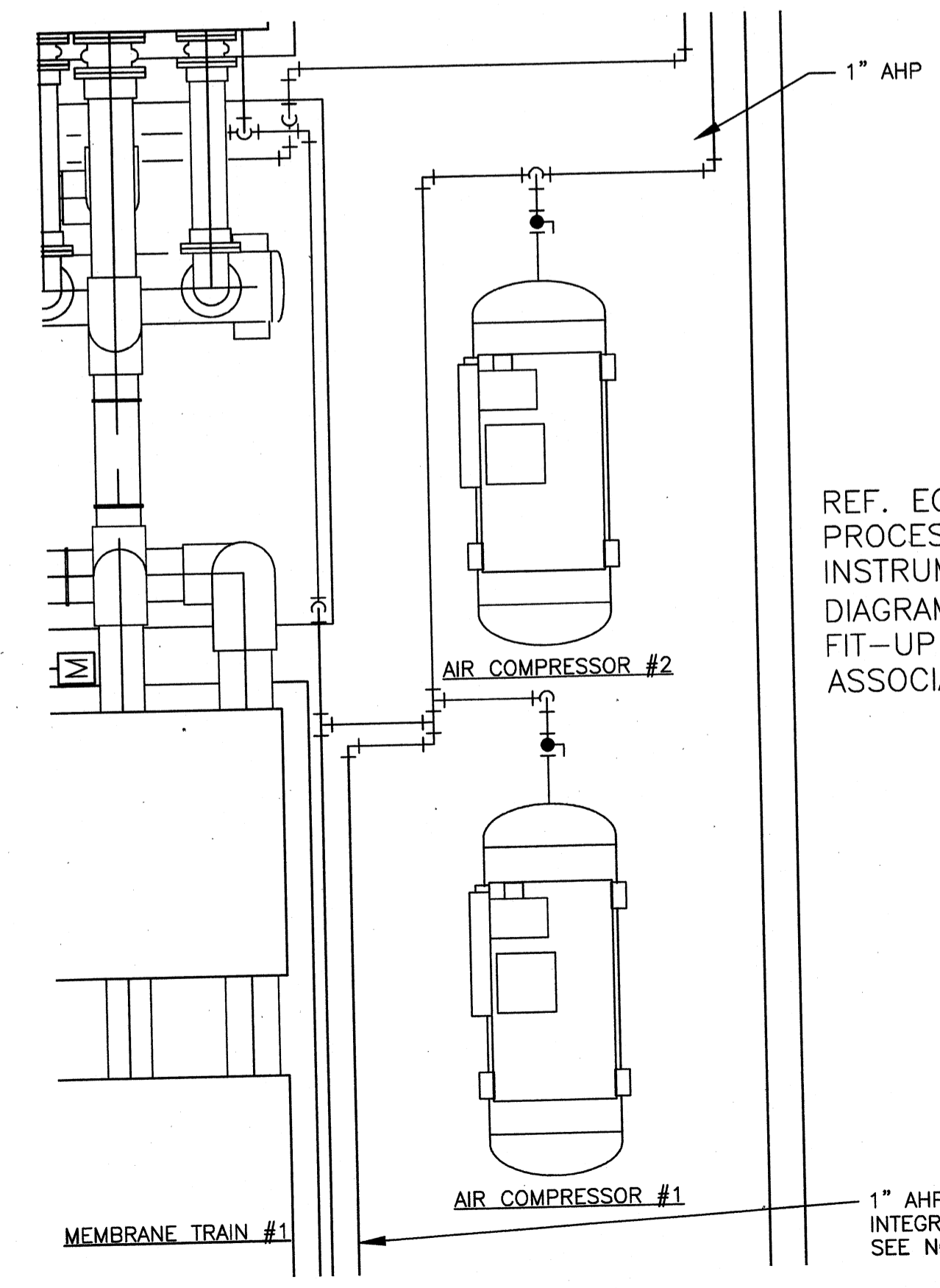
MEMBRANE TRAIN #4 ENLARGED PLAN
SCALE: 3/8" = 1'-0"



BACKPULSE TANK & PERMEATE SKID #2 ENLARGED PLAN
SCALE: 3/8" = 1'-0"



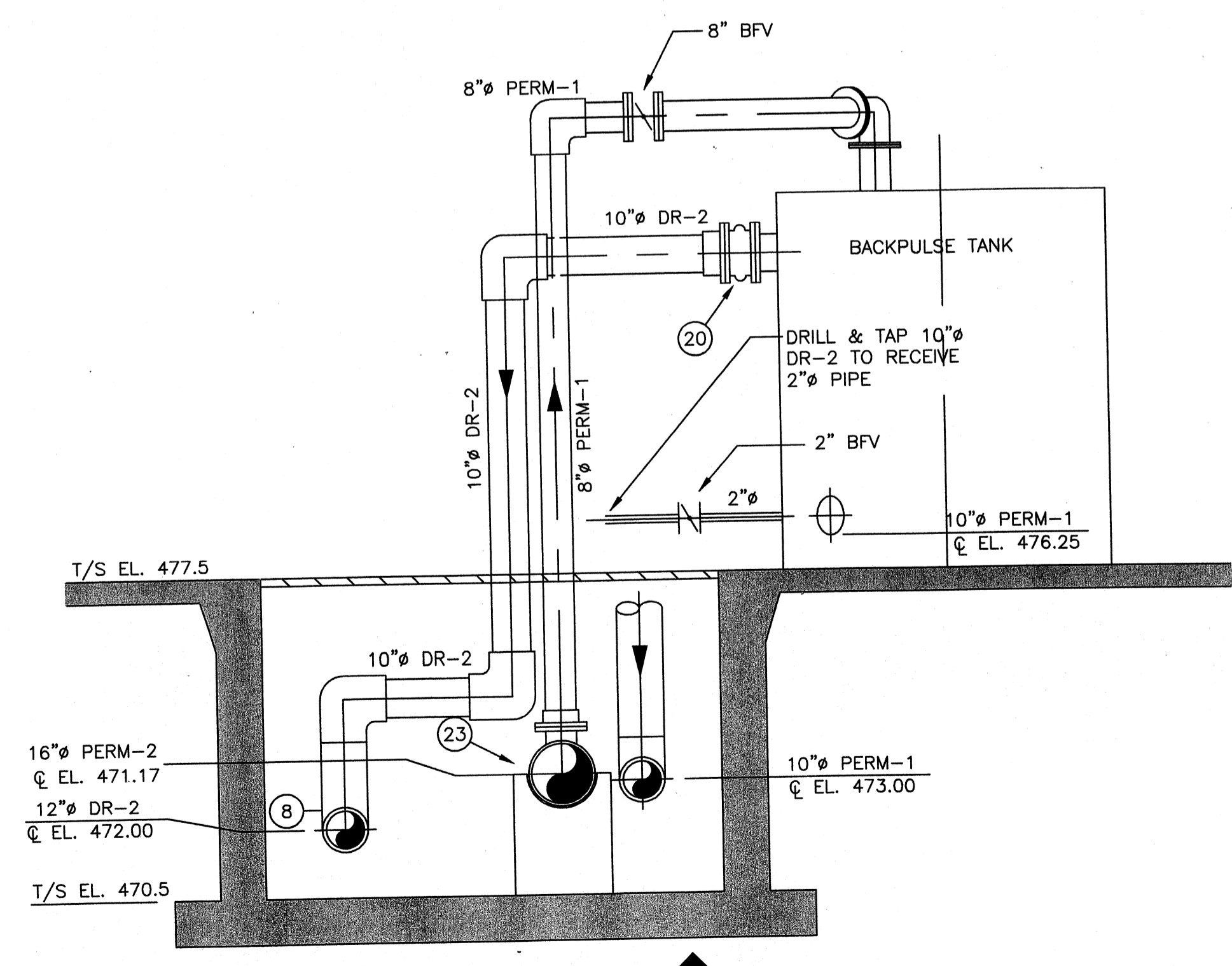
CLEANING SYSTEM ENLARGED PLAN
SCALE: 3/8" = 1'-0"



AIR COMPRESSOR ENLARGED PLAN
SCALE: 3/8" = 1'-0"

REF. EQUIP. MFGR'S
PROCESS &
INSTRUMENTATION
DIAGRAM(S) FOR A/C
FIT-UP INCL. ALL
ASSOCIATED EQUIPMENT

1" AHPTO MEMBRANE
INTEGRITY TESTING
SEE NOTE 5



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

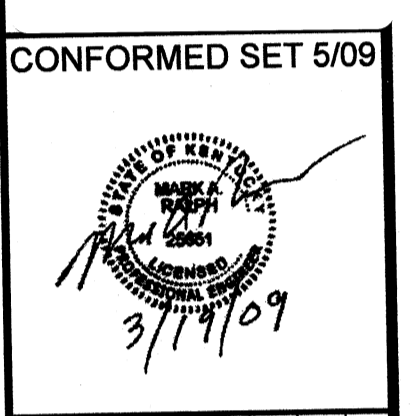
NOTES:

1. NOT ALL REQUIRED VALVES AND INSTRUMENTS ARE SHOWN, SEE SPECIFICATION SECTION 11300 FOR MEMBRANE SYSTEM REQUIREMENTS.
2. NOT ALL PIPE SUPPORTS ARE SHOWN FOR CLARITY. PIPING SUPPORTS SHALL BE INSTALLED AS SPECIFIED IN THE SPECIFICATIONS.
3. BAND GRATING WHERE PIPE PENETRATES GRATING.
4. 8-INCH AIR OPERATED BUTTERFLY VALVE ON BACKPULSE TANK FILL PIPING (VERTICAL RUN).
5. AIR COMPRESSOR MANIFOLDED DISCHARGE SHALL INCLUDE A REFRIGERATED AIR DRYER AND A PRIMARY COALESCING FILTER (0.3 MICRONS). THE AIR PIPING FOR THE MEMBRANE INTEGRITY TESTING SHALL INCLUDE A SECONDARY COALESCING FILTER (0.01 MICRONS) AND ACTIVATED CARBON FILTER. BOTH AIR LINES SHALL BE EQUIPPED WITH PRESSURE REGULATING VALVES.

LEGEND

1. 16" TEE (MJ)
2. 12" 90° BEND (FLG)
3. 12" COUPLING ADAPTOR (FLG)
4. 6" 90° BEND (SOC)
5. 10" TEE (SOC)
6. 12" 90° BEND (SOC)
7. 6" 45° BEND (SOC)
8. 10" 90° BEND (SOC)
9. 8" 90° BEND (SOC)
10. 12" x 10" TEE (SOC)
11. 6" TEE (SOC)
12. 8" 45° BEND (SOC)
13. 10" 45° BEND (SOC)
14. 8" 90° BEND (FLG)
15. 10" x 6" TEE (SOC)
16. 12" TEE (SOC)
17. 12" x 10" REDUCER (SOC)
18. 16" BUTTERFLY VALVE
19. 12" EXPANSION JOINT
20. 10" EXPANSION JOINT
21. 8" EXPANSION JOINT
22. 6" EXPANSION JOINT
23. 16"x8"x16" TEE

SEE REVISED
DRAWING FOR LAYOUT

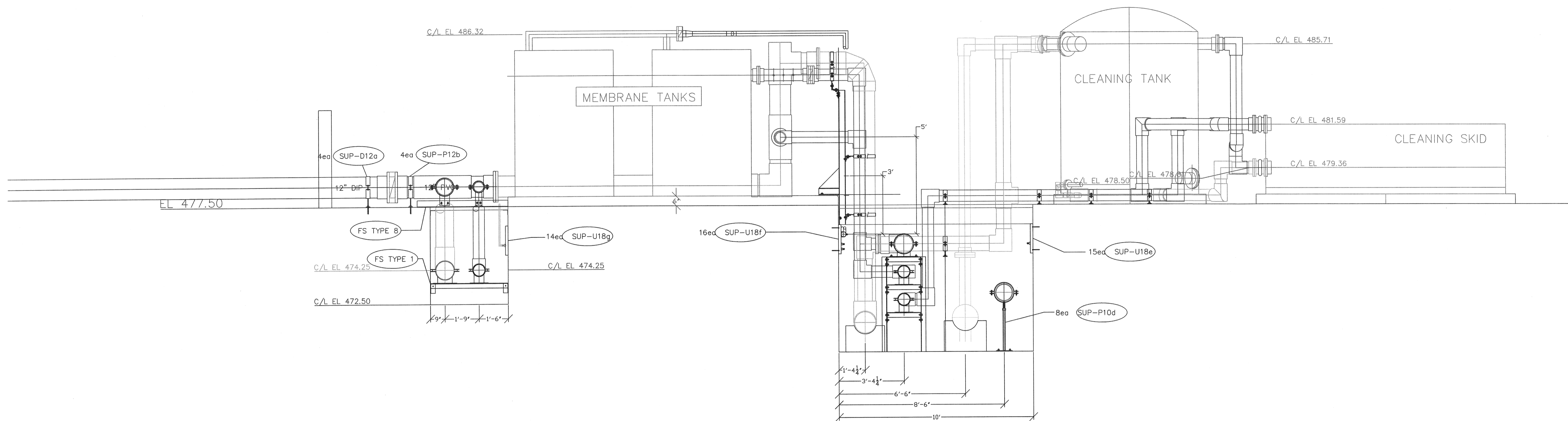


BY	DATE	DESCRIPTION

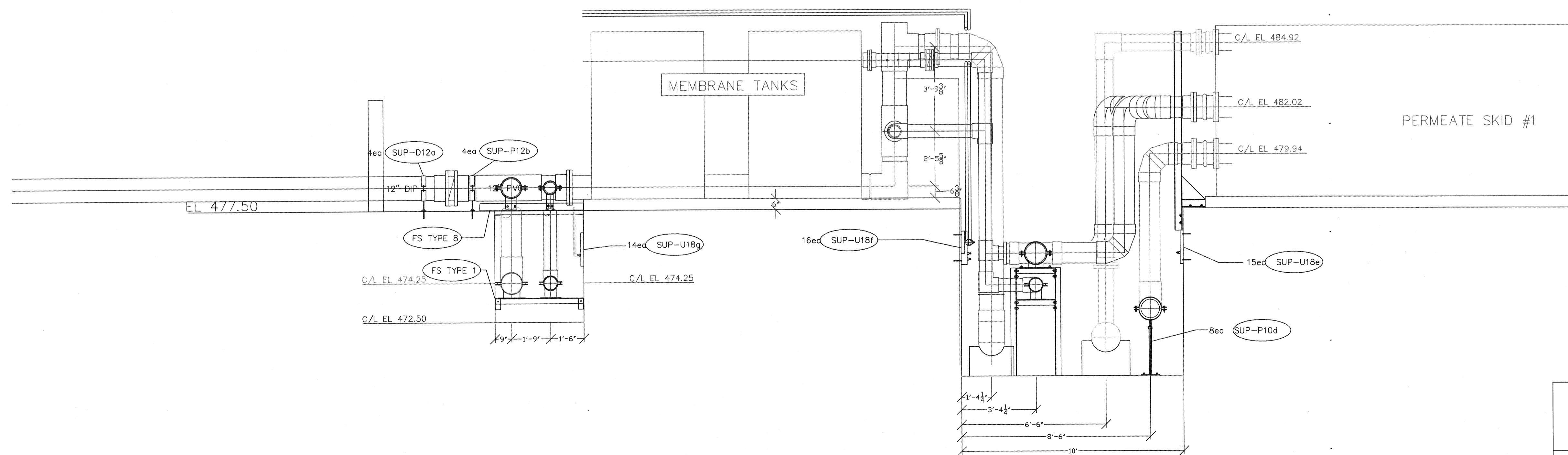
Client: OHIO COUNTY WATER DISTRICT
Project Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
**MEMBRANE EQUIPMENT
ENLARGED PLANS**

Project No.: 120-07080
Designed By: JCB
Drawn By:
Checked By:

M-122



SECTION AT CIP TANK/SKID

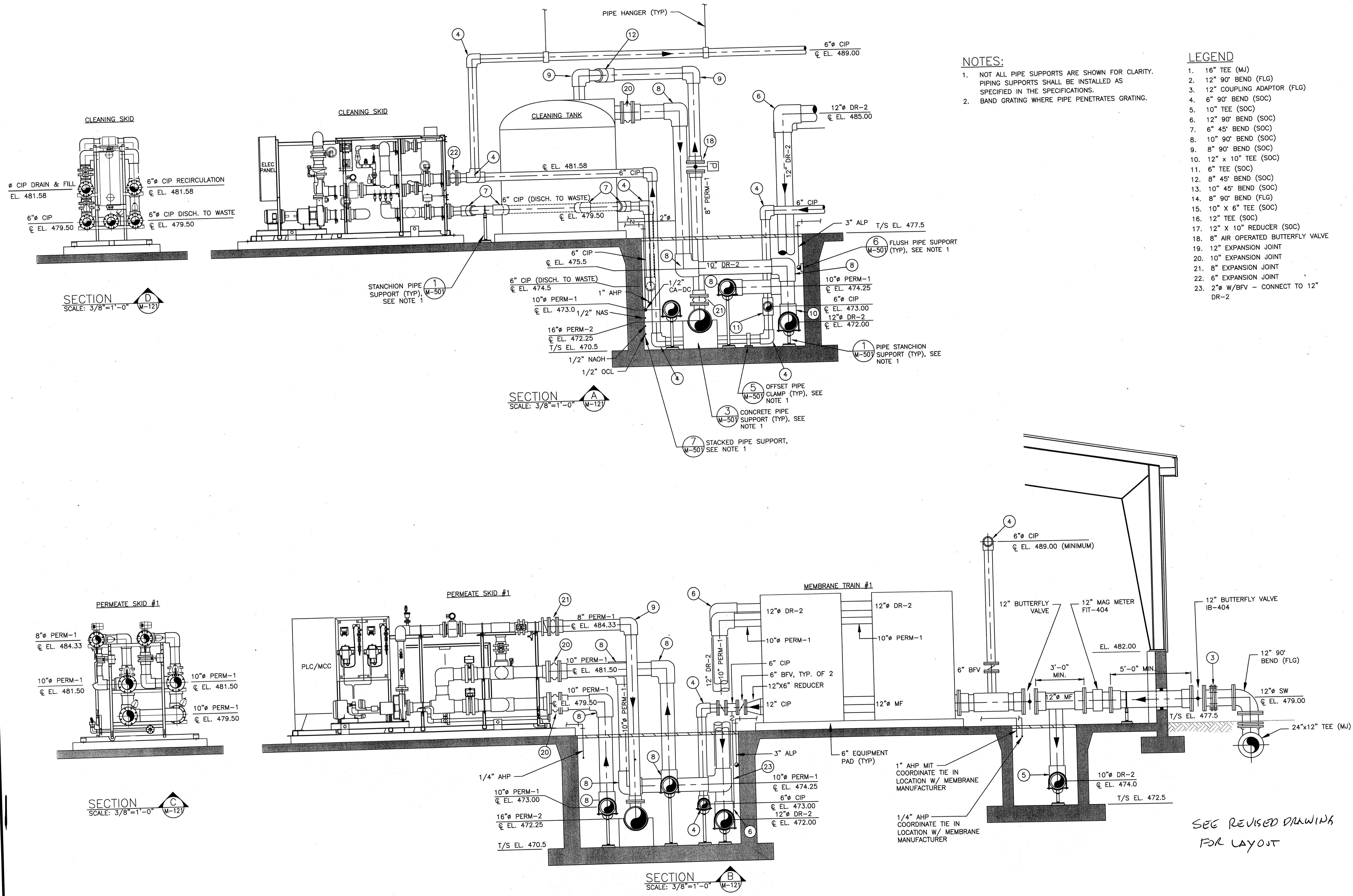


SECTION AT MEMBRANE TANK TO PERM SKID #2

PROJECT RECORD

		DHID COUNTY WATER TREATMENT PLANT		
		MEMBRANE / PIPE SECTION		
REV 12-06-2010	SIZE	FSCM NO.	Date	REV
REV 10-13-2010				
REV 09-27-2010				
REV 09-24-2010	SCALE	IND SCALE		SHEET 11

Wednesday, July 15, 2009 4:35:34 PM DRAWING: U:\projects\3projects\120-07060 Ohio County\CONFORMED SET 5-09\PROCESS07060 M-123 DWG LAYOUT: D-123 USER NAME: JEREMY M. FRONGILLO

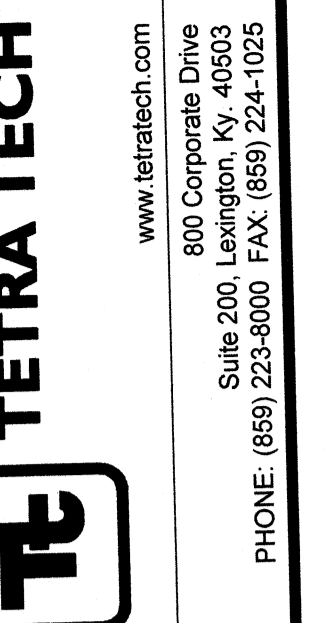


NOTES:

- NOT ALL PIPE SUPPORTS ARE SHOWN FOR CLARITY. PIPING SUPPORTS SHALL BE INSTALLED AS SPECIFIED IN THE SPECIFICATIONS.
- BAND GRATING WHERE PIPE PENETRATES GRATING.

LEGEND

- 16" TEE (MJ)
- 12" 90° BEND (FLG)
- 12" COUPLING ADAPTOR (FLG)
- 6" 90° BEND (SOC)
- 10" TEE (SOC)
- 12" 90° BEND (SOC)
- 6" 45° BEND (SOC)
- 10" 90° BEND (SOC)
- 8" 90° BEND (SOC)
- 12" x 10" TEE (SOC)
- 6" TEE (SOC)
- 8" 45° BEND (SOC)
- 10" 45° BEND (SOC)
- 8" 90° BEND (FLG)
- 10" x 6" TEE (SOC)
- 12" TEE (SOC)
- 12" x 10" REDUCER (SOC)
- 8" AIR OPERATED BUTTERFLY VALVE
- 12" EXPANSION JOINT
- 10" EXPANSION JOINT
- 8" EXPANSION JOINT
- 6" EXPANSION JOINT
- 2" W/BFV - CONNECT TO 12" DR-2



PROJECT RECORD

CONFORMED SET 5/09



BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT
 Project: OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT
 Proje. Loc: CROMWELL, OHIO COUNTY, KY
MEMBRANE EQUIPMENT - SECTIONS

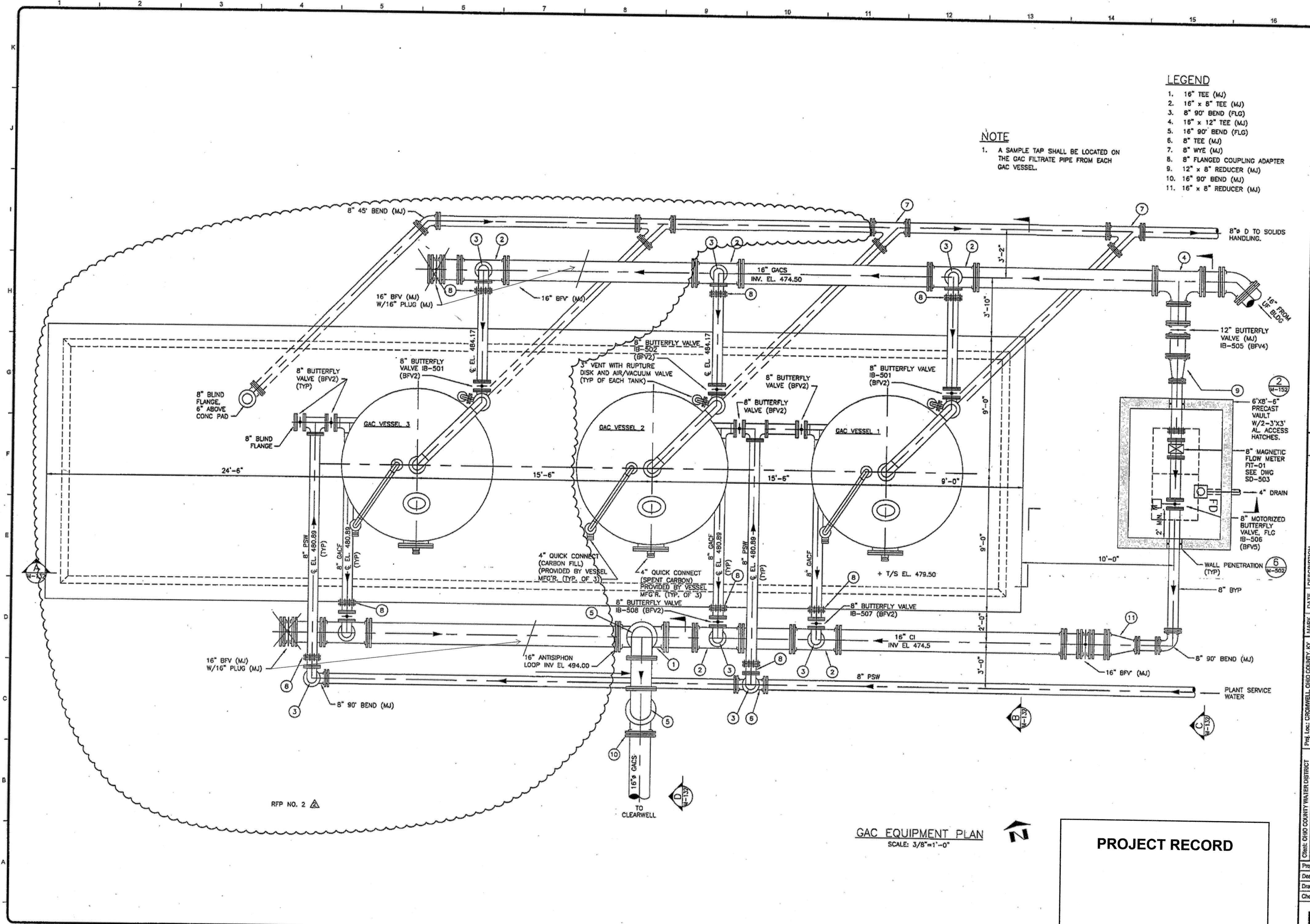
Project No.: 120-07060
 Designed By: JCB
 Drawn By:
 Checked By:

M-123

Copyright: Tetra Tech

SEE REVISED DRAWINGS FOR LAYOUT

Thursday, October 29, 2009 2:16:05 PM DRAWING: F:\180-07060 Ohio County Reclamation AND CONFORMED SET 6-06\PROJECTS\180-M-131.DWG LAYOUT: M-131 USER NAME: SCOTT G. HELMEYER

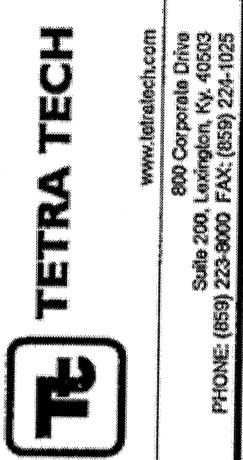


- LEGEND**
- 1. 16" TEE (MJ)
 - 2. 16" x 8" TEE (MJ)
 - 3. 8" 90° BEND (FLG)
 - 4. 18" x 12" TEE (MJ)
 - 5. 16" 90° BEND (FLG)
 - 6. 8" TEE (MJ)
 - 7. 8" WYE (MJ)
 - 8. 8" FLANGED COUPLING ADAPTER
 - 9. 12" x 8" REDUCER (MJ)
 - 10. 16" 90° BEND (MJ)
 - 11. 16" x 8" REDUCER (MJ)

NOTE
 1. A SAMPLE TAP SHALL BE LOCATED ON THE GAC FILTRATE PIPE FROM EACH GAC VESSEL.

GAC EQUIPMENT PLAN
 SCALE: 3/8"=1'-0"

PROJECT RECORD



RECORD DRAWING

CONFORMED SET 6/09

DATE	DESCRIPTION	BY
10/29	REVISED	

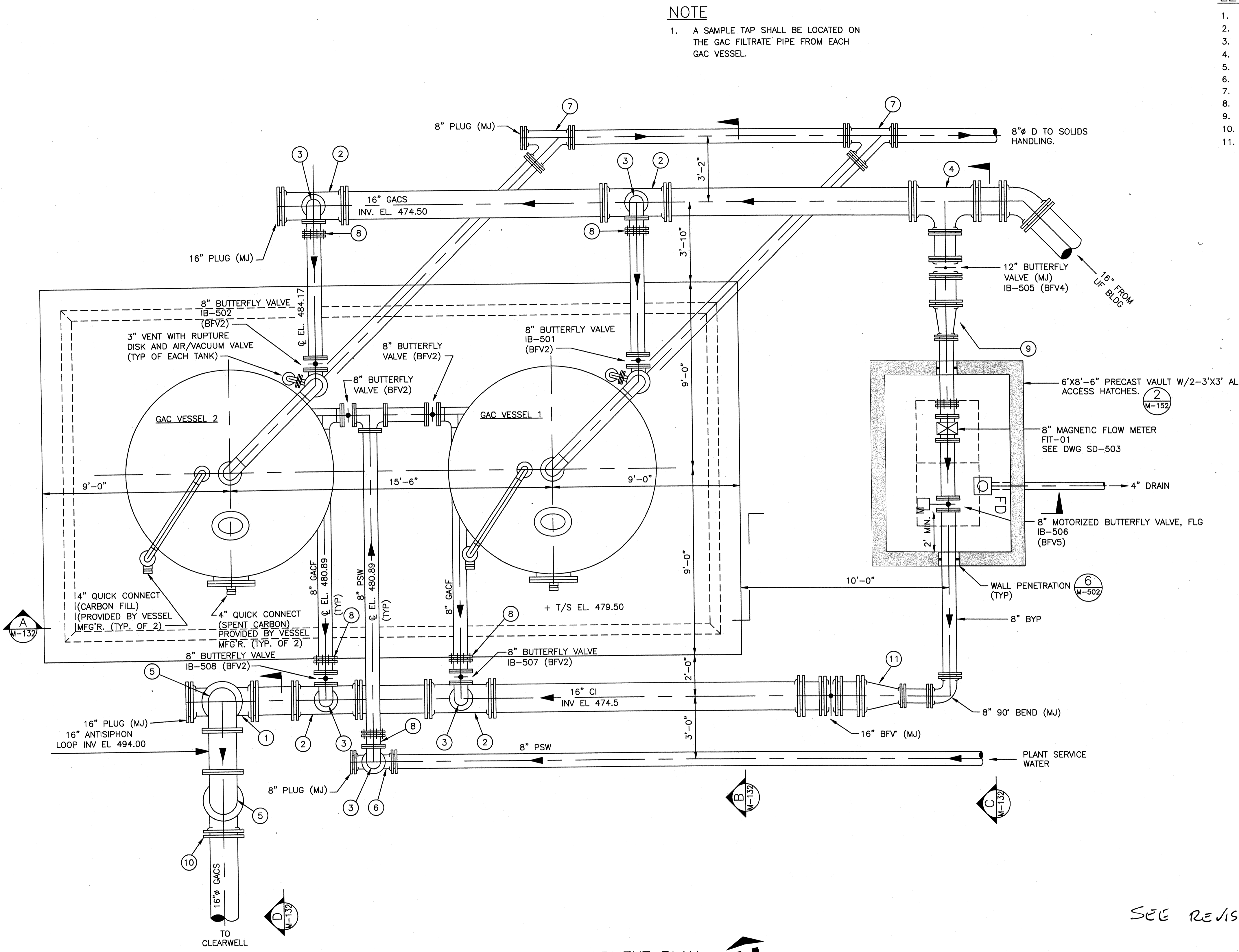
Client: OHIO COUNTY WATER DISTRICT Proj. Loc: CINCINNATI OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT

GAC EQUIPMENT - PLAN

Project No: 180-07060
 Designed By: J. BUNDY
 Drawn By:
 Checked By:

M-131

Wednesday, July 15, 2009 4:35:36 PM DRAWING: \\c:\projects\120-07060 Ohio County\CONFORMED SET 5-09\PROCESS\07060 M-131.DWG LAYOUT: M-131 USER NAME: JEREMY M. FRONGILLO



NOTE
 1. A SAMPLE TAP SHALL BE LOCATED ON THE GAC FILTRATE PIPE FROM EACH GAC VESSEL.


- LEGEND**
- 1. 16" TEE (MJ)
 - 2. 16" x 8" TEE (MJ)
 - 3. 8" 90° BEND (FLG)
 - 4. 16" x 12" TEE (MJ)
 - 5. 16" 90° BEND (FLG)
 - 6. 8" TEE (MJ)
 - 7. 8" WYE (MJ)
 - 8. 8" FLANGED COUPLING ADAPTER
 - 9. 12" x 8" REDUCER (MJ)
 - 10. 16" 90° BEND (MJ)
 - 11. 16" x 8" REDUCER (MJ)

GAC EQUIPMENT PLAN
 SCALE: 3/8"=1'-0"

SEE REVISED DRAWINGS

www.tetrattech.com


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 Suite 900, Lexington, KY 40502
 PHONE: (859) 225-8000 FAX: (859) 224-1025



TETRA TECH

PROJECT RECORD

CONFORMED SET 5/09



3/11/09

BY	DATE	MARK	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY

OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT

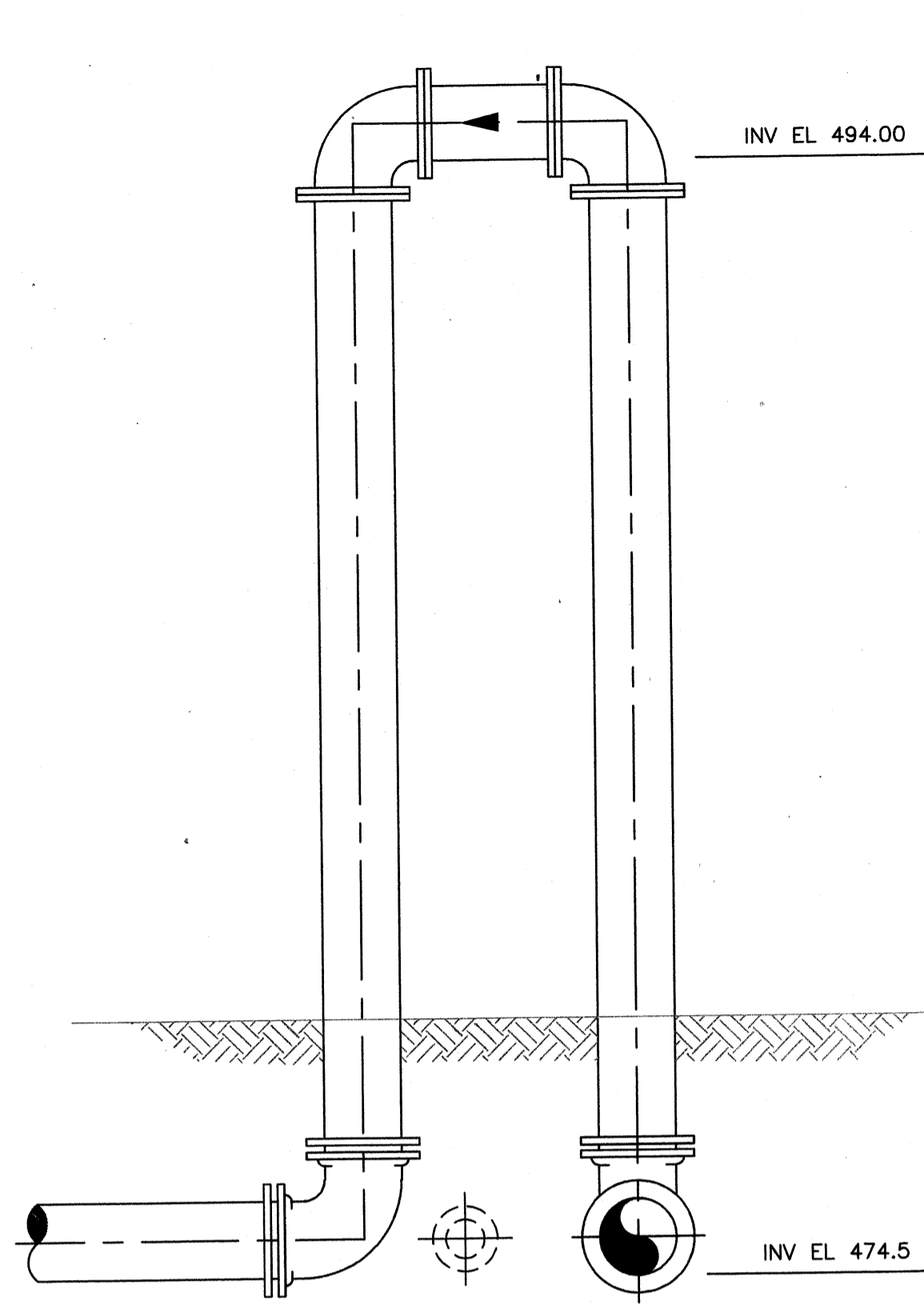
GAC EQUIPMENT - PLAN

Project No.:	120-07060
Designed By:	J. BUNDY
Drawn By:	
Checked By:	

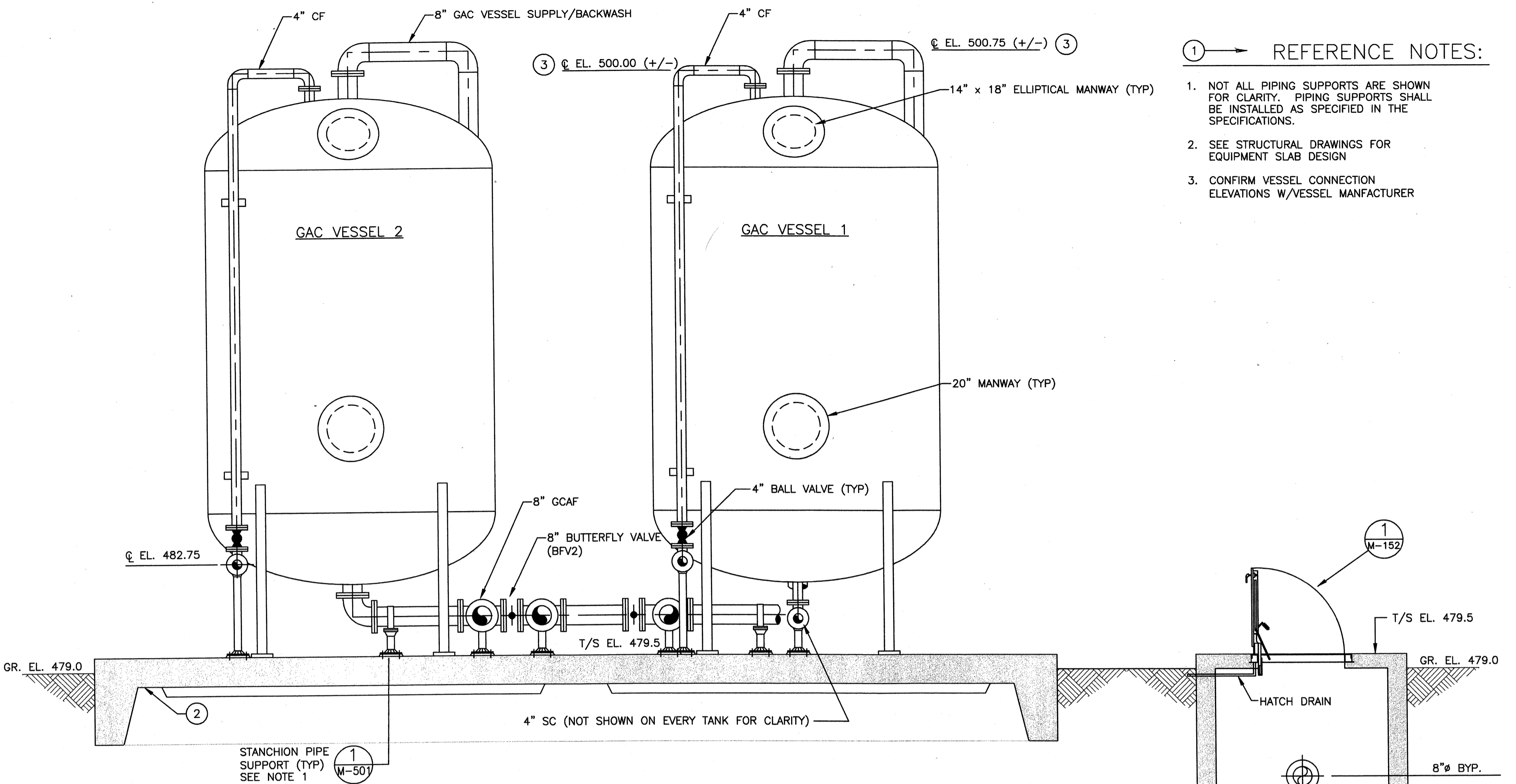
M-131

Copyright: Tetra Tech

Wednesday, July 01, 2009 2:05:57 PM DRAWING: \\netoffice\projects\120-07060 Ohio County\CONFORMED SET 5-09\PROCESS\07060 M-132 DWG LAYOUT: D-132 USER NAME: JEREMY M. FRONIGILLO

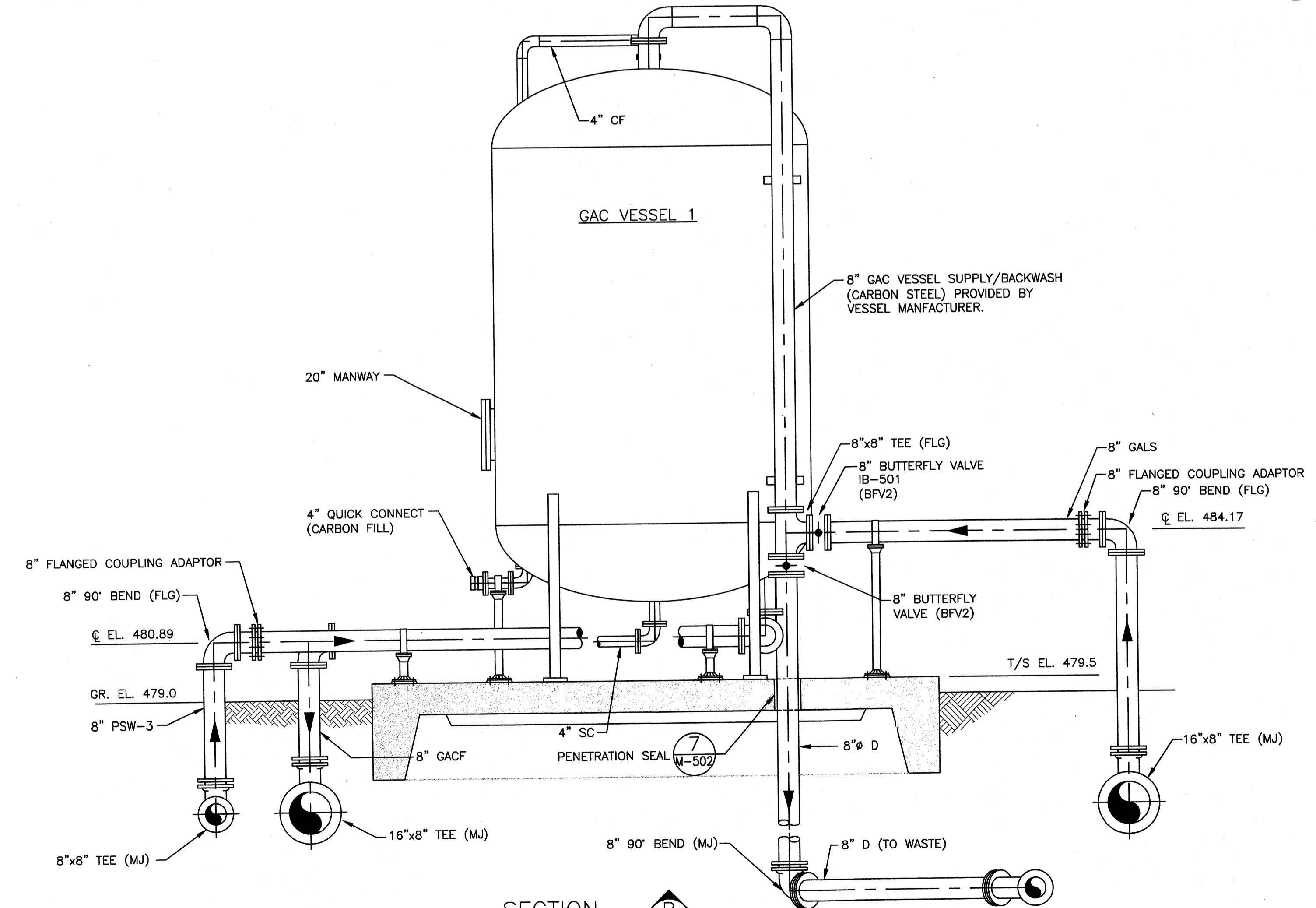


SECTION D
SCALE: 3/8"=1'-0"
W-131

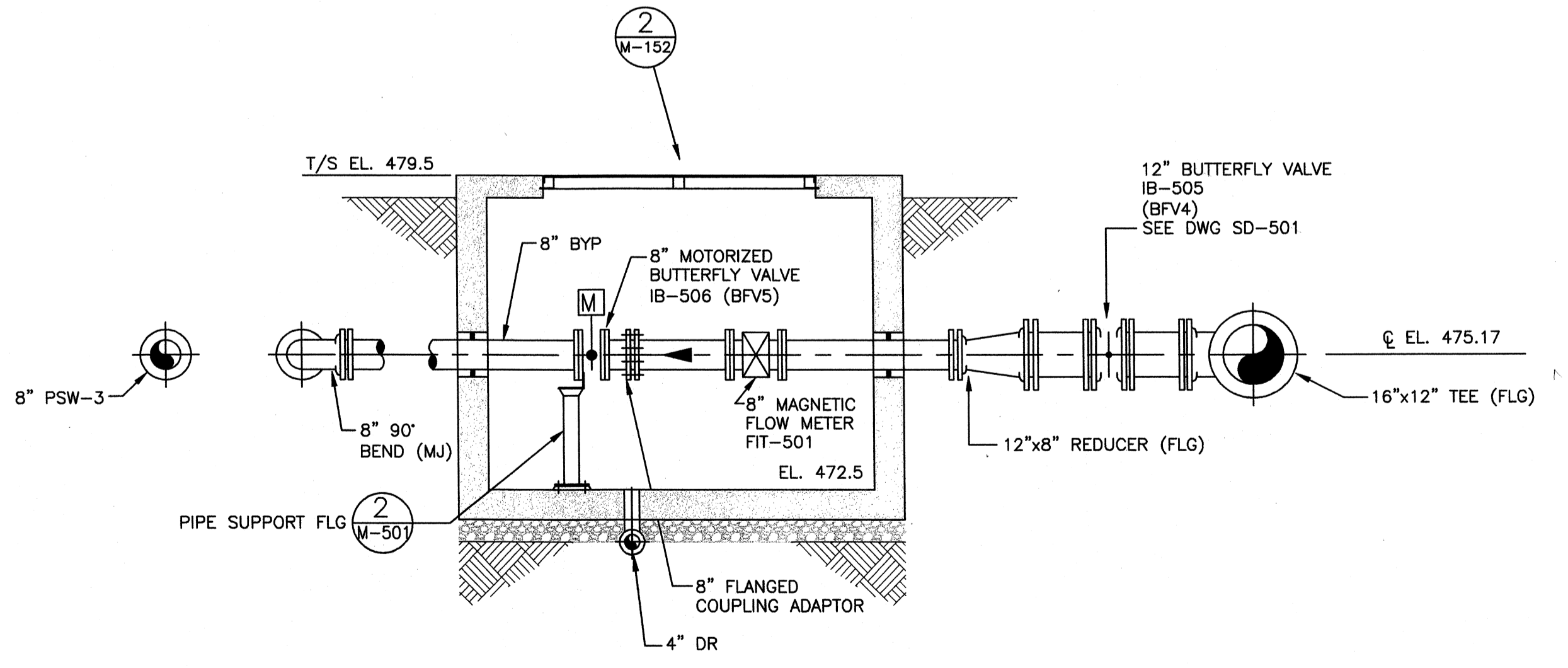


- REFERENCE NOTES:**
1. NOT ALL PIPING SUPPORTS ARE SHOWN FOR CLARITY. PIPING SUPPORTS SHALL BE INSTALLED AS SPECIFIED IN THE SPECIFICATIONS.
 2. SEE STRUCTURAL DRAWINGS FOR EQUIPMENT SLAB DESIGN
 3. CONFIRM VESSEL CONNECTION ELEVATIONS W/VESSEL MANUFACTURER

SECTION A
SCALE: 3/8"=1'-0"
W-131



SECTION B
SCALE: 3/8"=1'-0"
W-131



SECTION C
SCALE: 3/8"=1'-0"
W-131

TETRA TECH

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800 Corporate Drive
Suite 200, Lexington, KY 40503
PHONE: (859) 223-8000 FAX: (859) 224-1025

PROJECT RECORD

CONFORMED SET 5/09



BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

GAC EQUIPMENT - SECTIONS

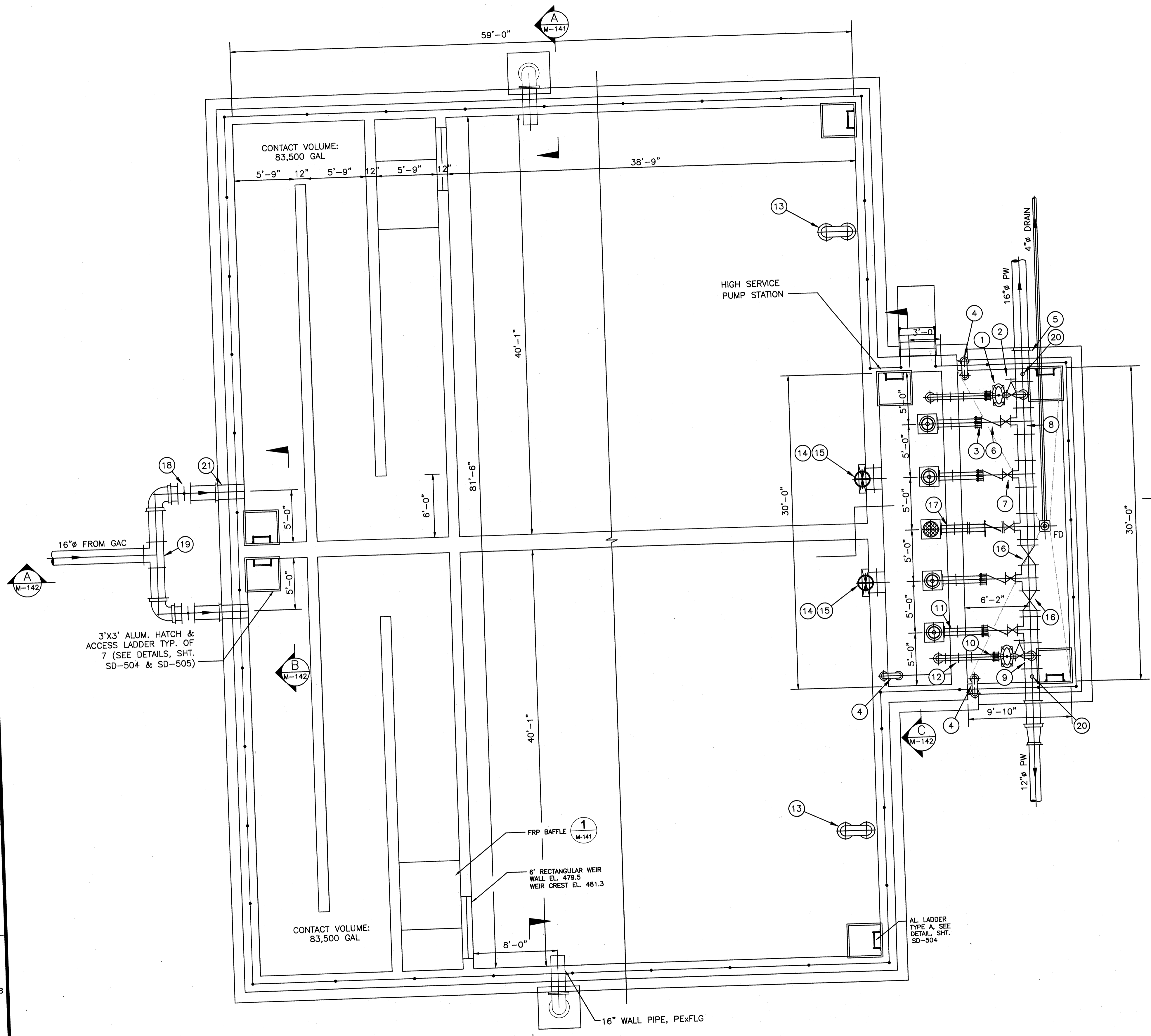
Project No.: 120-07060
Designed By: JCB
Drawn By:
Checked By:

M-132

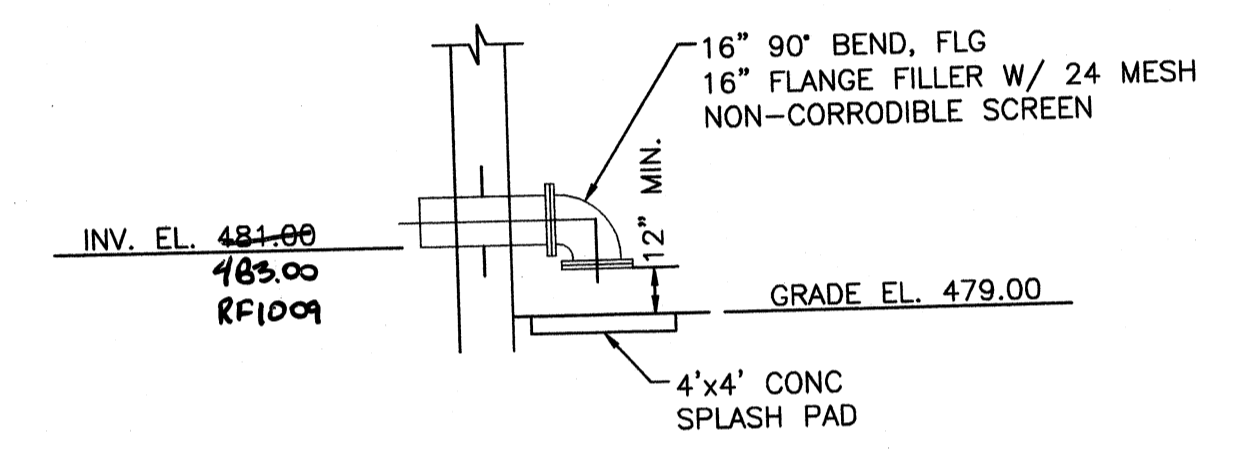
Tuesday, July 28, 2009 1:42:49 PM DRAWING: P:\120-07060 Ohio County Redesign\ORLANDO\CONFORMED SET 5-09\PROCESS\07060 M-141 to M-142 CLEARWELL DWG LAYOUT M-141 USER NAME: JEREMY M. FRONGILLO

REFERENCE NOTES:
BASE BID

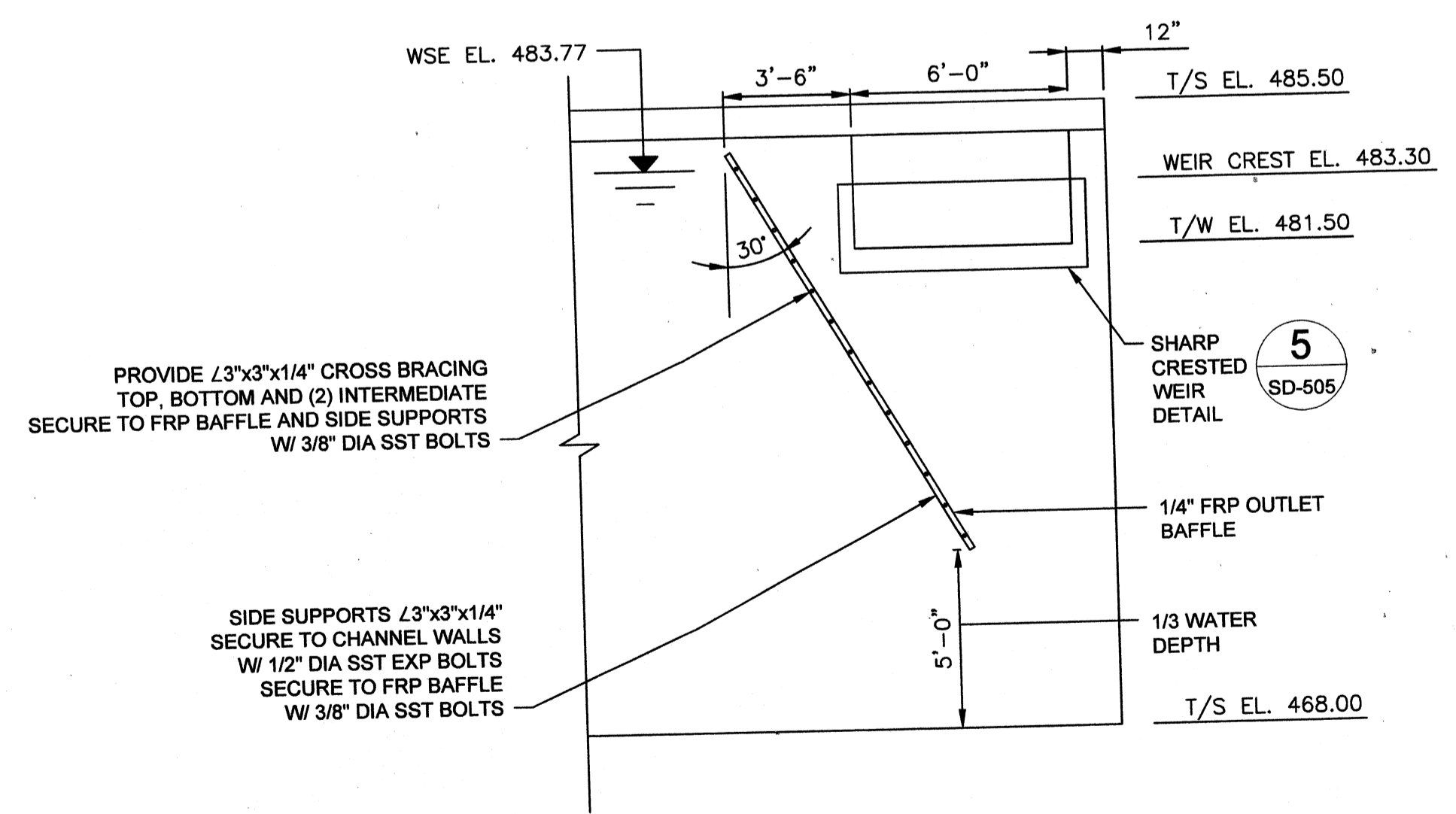
1. 6" SURGE RELIEF VALVE, SEE SPECIFICATIONS
2. 6" HW OPER. GATE VALVE, (N.O.)
3. 8" FLG. CPLNG. ADAPTER, TYP. OF 4
4. 8" GRAVITY VENT, TYP. OF 3, SEE DETAIL, SHT. SD-503
5. 16"Ø D.I. FLG. & P.E. WALL PIPE, TYP. OF 4
6. 8" CHECK VALVE, TYP. OF 5
7. 8" GATE VALVE, TYP. OF 5
8. 16"x8"x16" D.I. FLG. TEE, TYP. OF 5
9. 16"x6"x16" D.I. FLG. TEE, TYP. OF 2
10. 8" FLG. CPLNG. ADAPTER, TYP. OF 2
11. 8"Ø FLG. & P.E. DI PIPE, TYP. OF 5
12. 6"Ø FLG. & FLG. DI PIPE, TYP. OF 2
13. 12"Ø GRAVITY VENT, TYP. OF 2, SEE DETAIL, SHT. SD-503
14. 24"Ø SLUICE GATE W/HW OP. FLOORSTAND, TYP. 2 PLACES.
15. 24"Ø FLG. & PE WALL PIPE, TYP. 2 PLACES
16. 16" BUTTERFLY VALVE, TYP. OF 2
17. 8"Ø FLG. & FLG. DI PIPE W/ 8"Ø BLIND FLANGE INSTALLED IN VALVE VAULT
18. 16"Ø BUTTERFLY VALVE, TYP. OF 2
19. 16"x16"x16" D.I. TEE
20. ARV, SEE DWG M-502
21. 16" WALL PIPE, PE



CLEARWELL - PLAN
SCALE: 3/16"=1'-0"



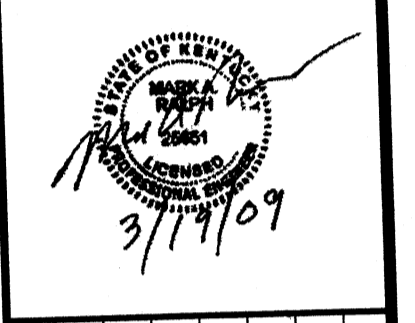
CLEARWELL OVERFLOW SECTION
SCALE: 3/16"=1'-0"



FRP BAFFLE DETAIL
SCALE: 1/4"=1'-0"

PROJECT RECORD

CONFORMED SET 5/09



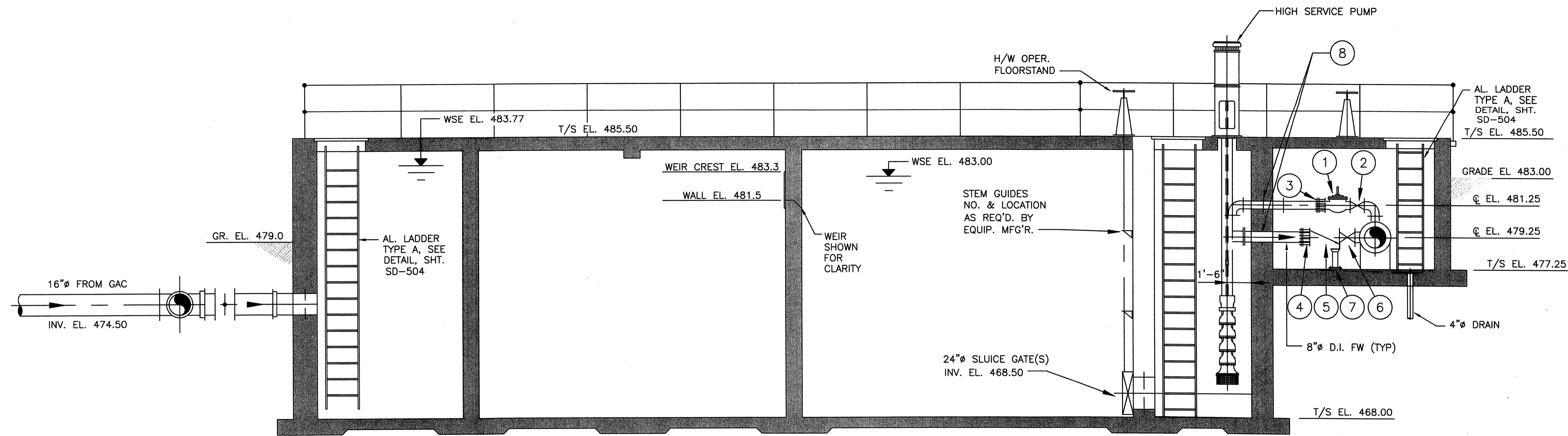
MARK	DATE	DESCRIPTION
A	5/5/09	ADDENDUM 1

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

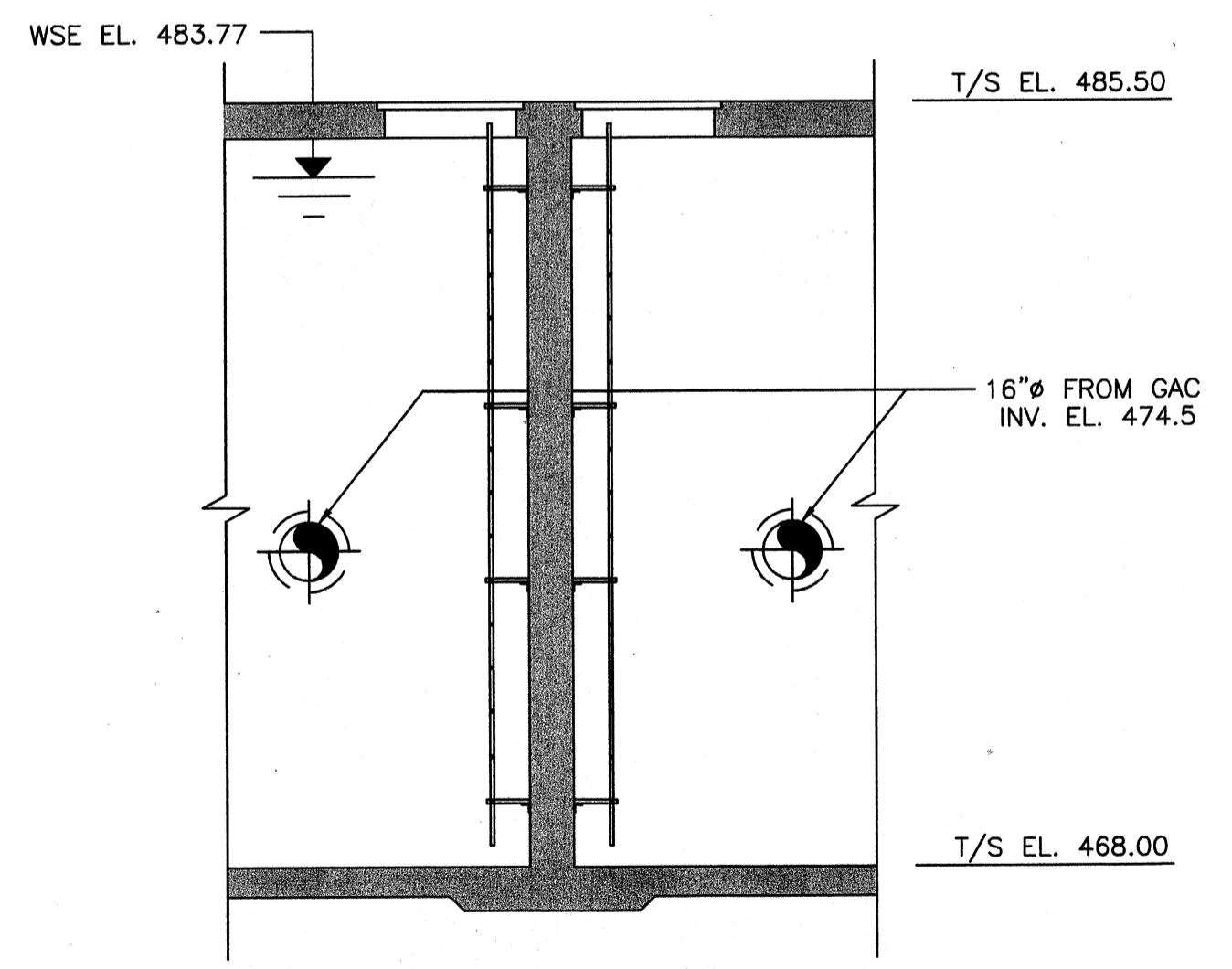
Project No.: 120-07060
Designed By: GDP
Drawn By: GDP
Checked By:

M-141

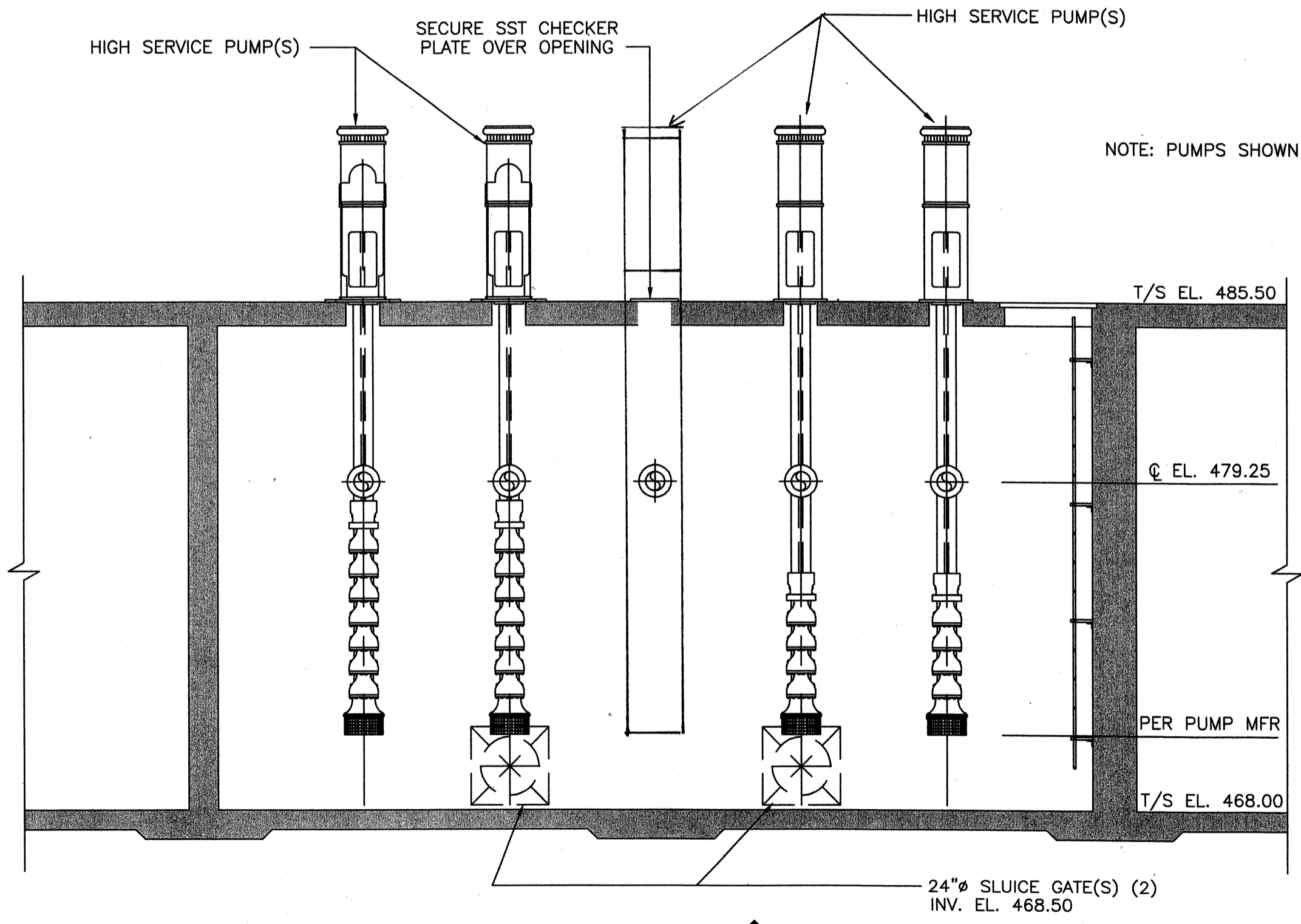
Wednesday, July 15, 2009 4:35:39 PM DRAWING: \\nroffes\projects\120-07060 Ohio County\CONFORMED SET 5-09\PROCESS\07060 M-141 to M-142 CLEARWELL .DWG LAYOUT: M-142 USER NAME: JEREMY M. FRONGILLO



SECTION A
SCALE: 1/4"=1'-0" (M-141)



SECTION B
SCALE: 1/4"=1'-0" (M-141)



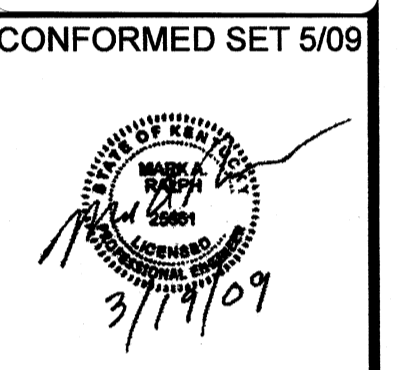
SECTION C
SCALE: 1/4"=1'-0" (M-141)

- 1 REFERENCE NOTES:
1. 6" SURGE RELIEF VALVE, SEE SPECIFICATIONS
 2. 6" HW OPER. GATE VALVE, (N.O.)
 3. 6" FLG. CPLNG. ADAPTER, TYP. OF 2
 4. 8" FLG. CPLNG. ADAPTER, TYP. OF 4
 5. 8" CHECK VALVE, TYP. OF 4
 6. 8" GATE VALVE, TYP. OF 5
 7. FLG PIPE SUPPORT, SEE DTL 2, DWG M-501
 8. PIPE PENETRATION, SEE DTL 6, DWG M-502

* SEE STRUCTURAL DWGS FOR STRUCTURAL DETAILS

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PROJECT RECORD



CONFORMED SET 5/09

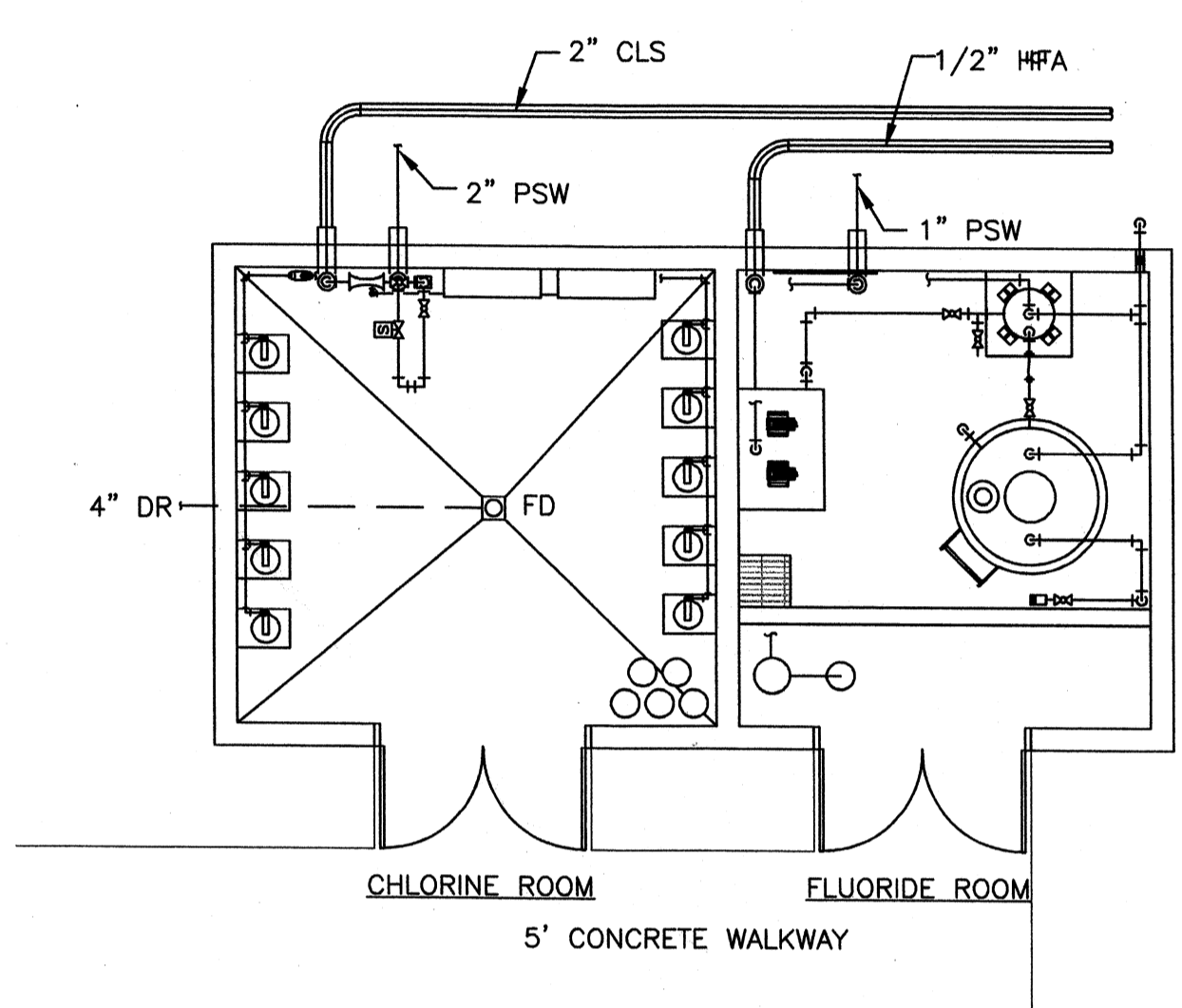
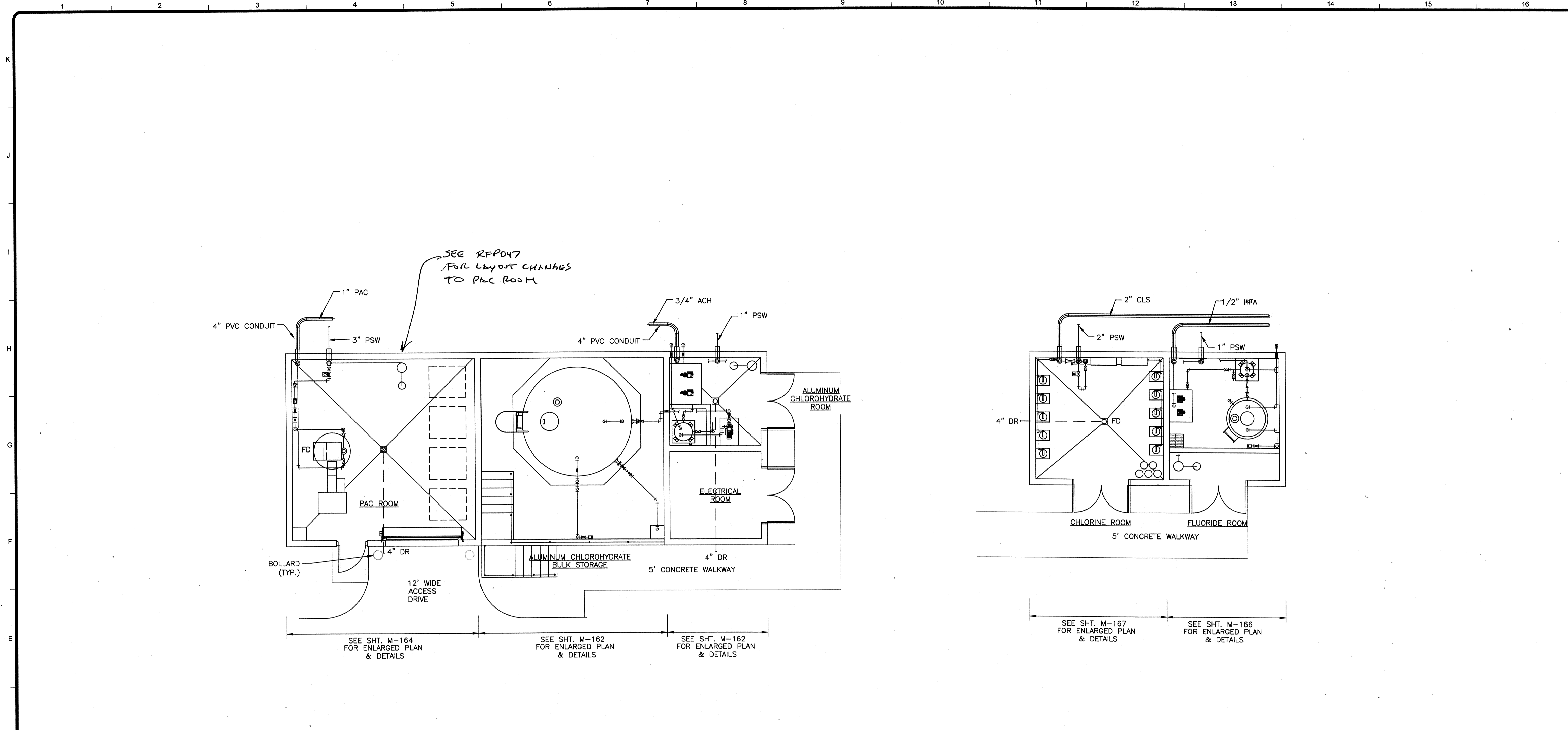
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT

Project No.: 120-07060
Designed By: GDP
Drawn By: GDP
Checked By:

M-142

Wednesday, July 01, 2009 2:14:50 PM DRAWING: \\server\projects\120-07060 Ohio County\CONFORMED SET 5-09\PROCESS\07060 M-161.DWG LAYOUT: M-161 USER NAME: JEREMY M. FRONGILLO



CHEMICAL BUILDINGS PLANS
SCALE: 3/16"=1'-0"

CHEMICAL FEED GENERAL NOTES

1. CHEMICAL FEED PIPING SHALL BE AS SPECIFIED IN SECTION 15090 FOR EACH SPECIFIC CHEMICAL.
2. PIPE LOADS SHALL NOT BE TRANSMITTED TO TANKS, FEEDERS OR OTHER FEED EQUIPMENT.
3. ALL TRANSFER PUMP DISCHARGES TO DAY TANKS SHALL BE BROUGHT UP TO AN ELEVATION HIGHER THAN THE TOP OF THE BULK TANK.
4. INSTALL ALL VENT PIPES ON THE BACK SIDE OF THE BUILDING.
5. MAINTAIN POSITIVE DOWNWARD SLOPE FROM VENT TO SOURCE TANK.
6. ALL VENTS SHALL HAVE A TURN-DOWN TO PREVENT ACCUMULATION OF MOISTURE AND BE PROVIDED WITH CHEMICAL RESISTANT INSECT/RODENT SCREENS.

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PROJECT RECORD

CONFORMED SET 5/09
3/11/09

BY	DESCRIPTION	DATE	MARK

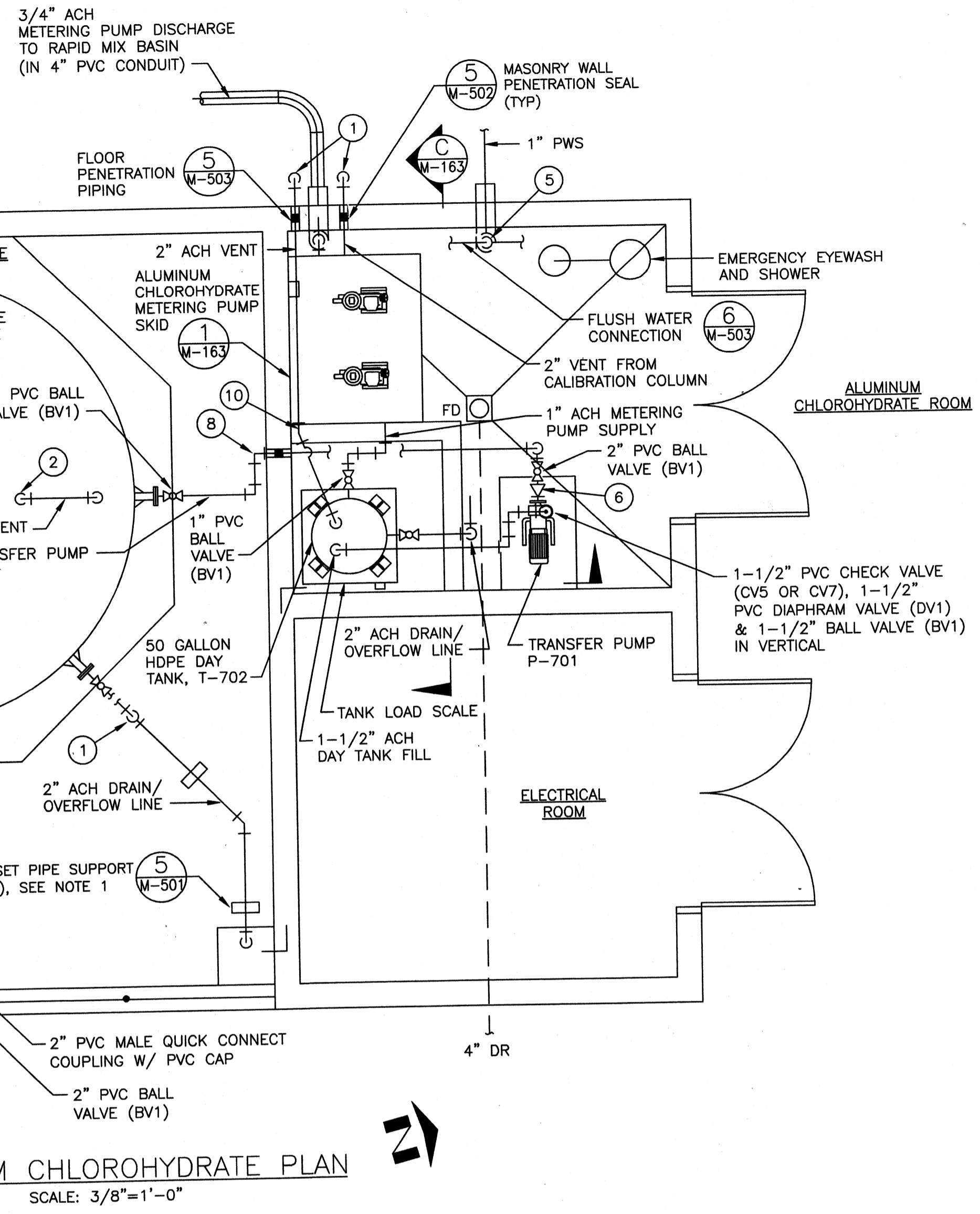
Client: OHIO COUNTY WATER DISTRICT
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
CHEMICAL BUILDINGS PLANS

Project No.: 120-07060
Designed By: JCB
Drawn By:
Checked By:

M-161

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Wednesday, July 01, 2009 2:15:07 PM DRAWING: \\ncr\projects\projects\120-07060 Ohio County\CONFORMED SET 5-09\PROCESS\07060 M-162 .DWG LAYOUT: M-162 USER NAME: JEREMY M. FRONIGILLO



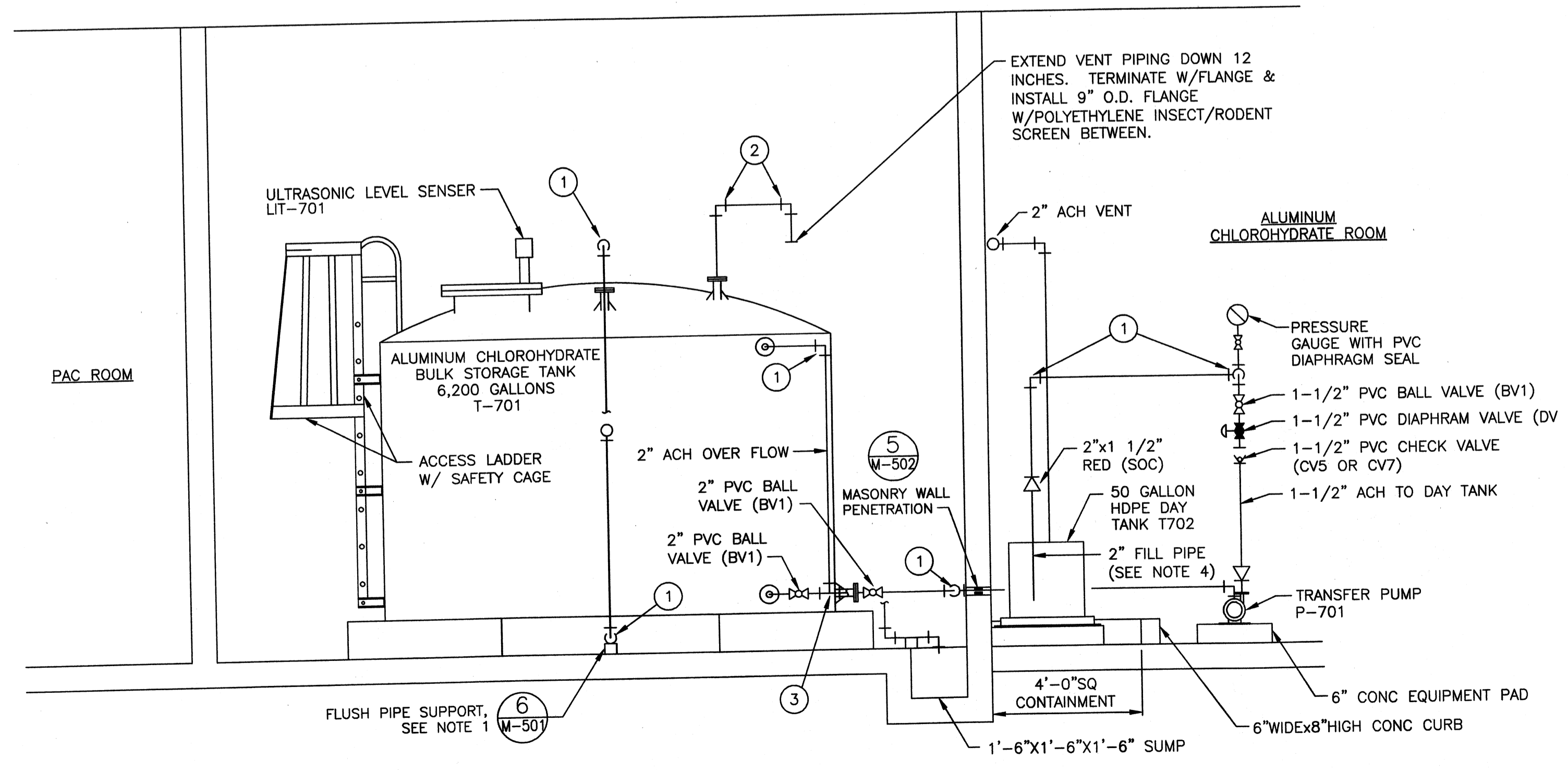
ALUMINUM CHLOROHRATE PLAN
SCALE: 3/8"=1'-0"

NOTES:

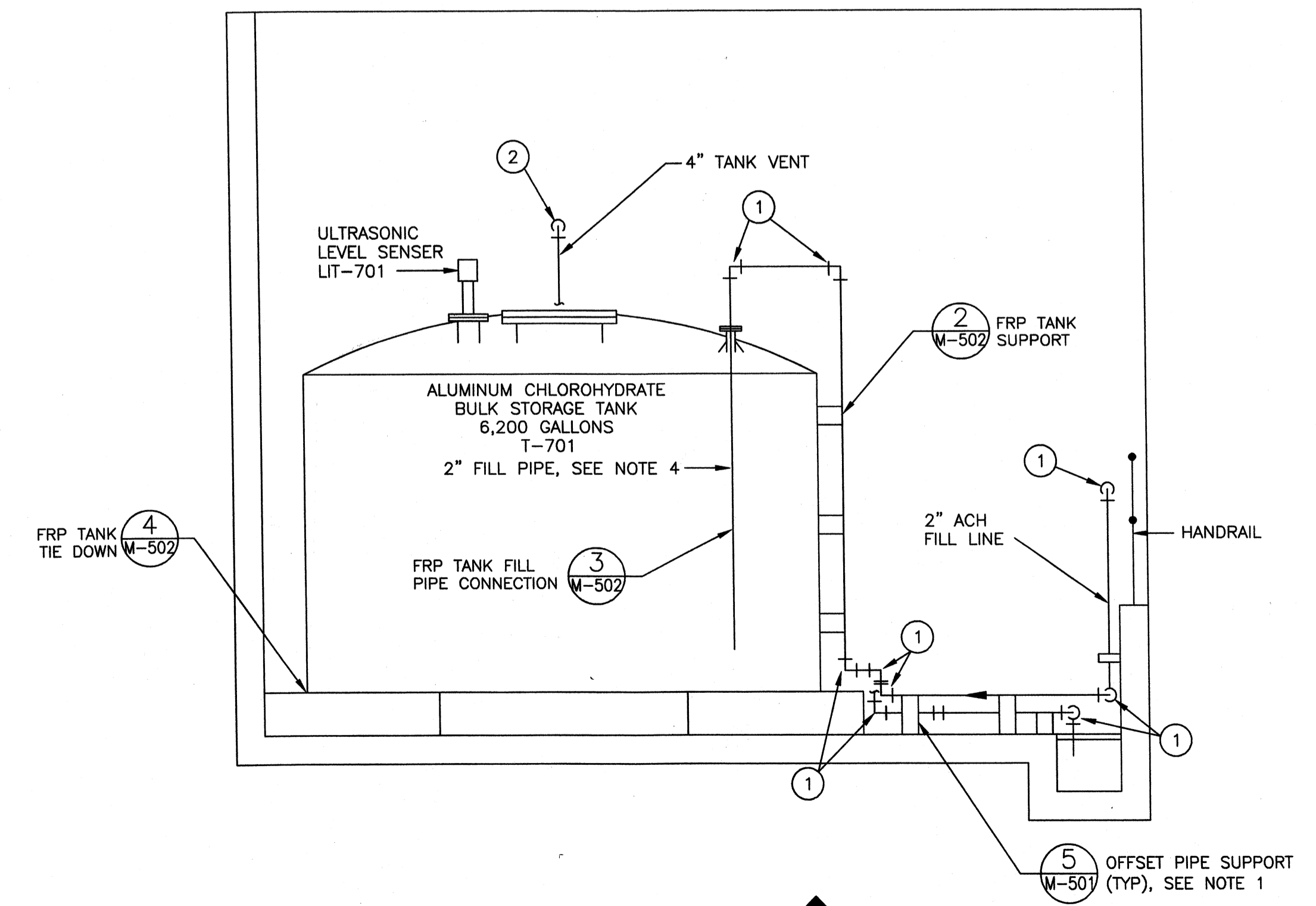
1. NOT ALL PIPING SUPPORTS ARE SHOWN FOR CLARITY. PIPING SUPPORTS SHALL BE INSTALLED AS SPECIFIED IN THE SPECIFICATIONS.
2. FLOORS SHALL BE SLOPED TOWARDS TRENCHES AND SUMPS AS REQUIRED.
3. BAND GRATING WHERE PIPE PENETRATES GRATING.
4. DRILL (3) 3/8" HOLES IN TANK FILL PIPE INSIDE TANK ABOVE THE OVERFLOW LEVEL TO SERVE AS A VACUUM BREAK. EXTEND FILL PIPE TO WITHIN 1 FOOT OF THE TANK FLOOR.

LEGEND

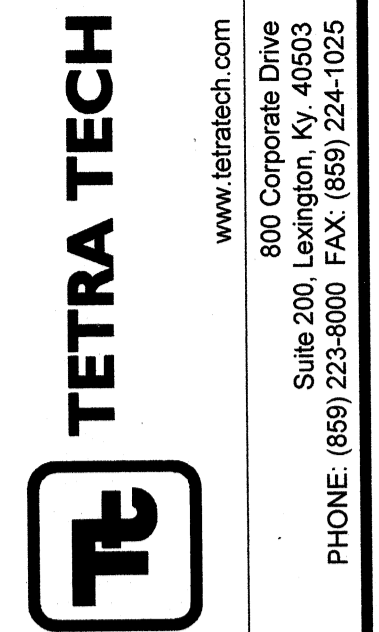
1. 2" 90° BEND (SOC)
2. 4" 90° BEND
3. 2" TEE (SOC)
4. 2"x1" REDUCER (SOC)
5. 1" 90° BEND (SOC)
6. 2" X Y" REDUCER (SOC), Y TO MATCH TRANSFER PUMP SUCTION
7. 1-1/2" TEE (SOC)
8. 1-1/2" 90° BEND (SOC)
9. 1-1/2" X Y" REDUCER (SOC), Y TO MATCH TRANSFER PUMP DISCHARGE
10. 2" 22-1/2° BEND (SOC)



SECTION A-A
SCALE: 3/8"=1'-0"



SECTION B-B
SCALE: 3/8"=1'-0"



PROJECT RECORD

CONFORMED SET 5/09

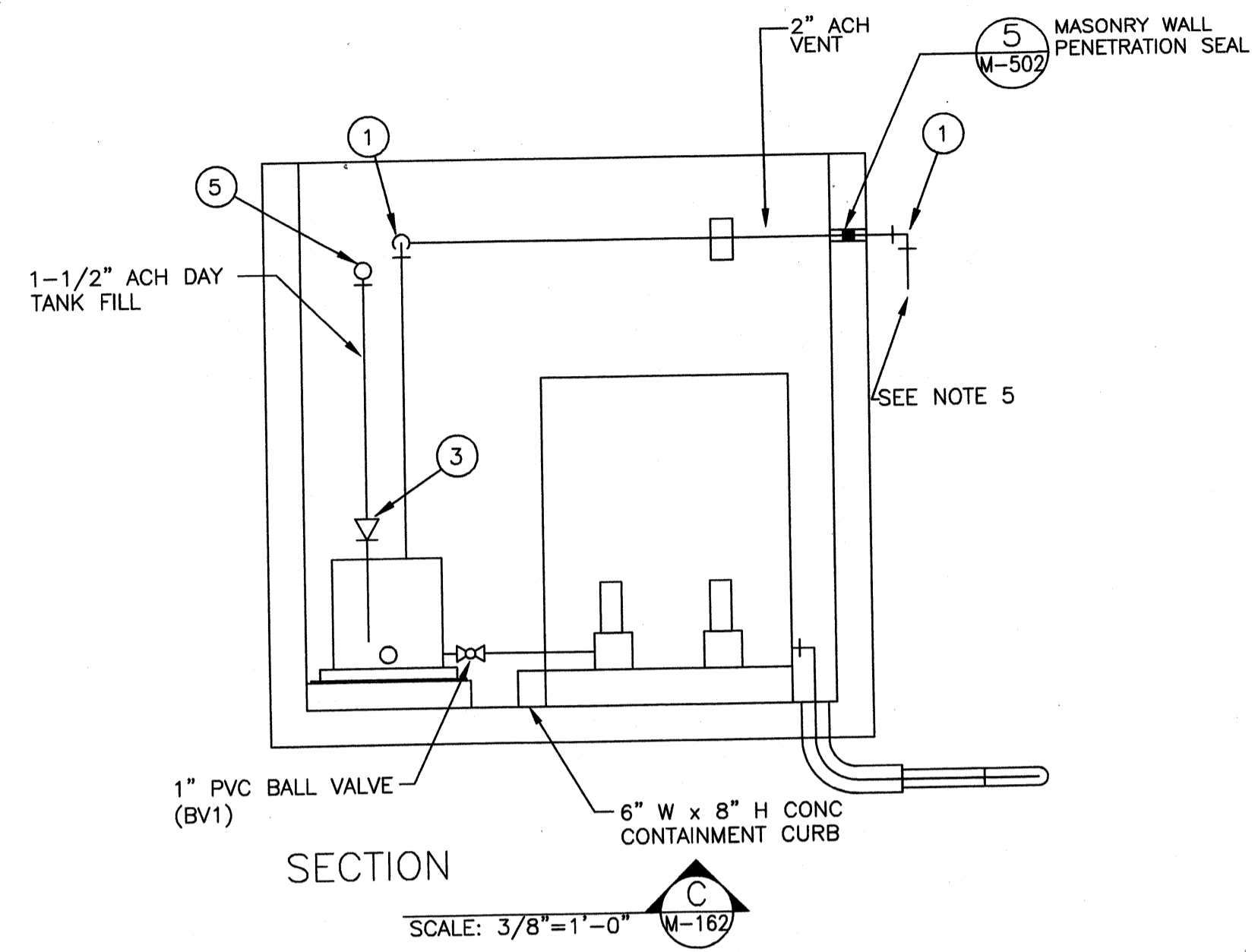


BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT
 Project: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT
**ALUMINUM CHLOROHRATE
 FEED SYSTEM ENLARGED PLAN**
 Project No.: 120-07060
 Designed By:
 Drawn By:
 Checked By: JCB

M-162

Wednesday, July 01, 2009 2:15:22 PM DRAWING: \\laraffis\projects\120-07060 Ohio County\CONFORMED SET 5-09\PROCESS\07060 M-163 DWG LAYOUT: M-163 USER NAME: JEREMY M. FRONGILLO

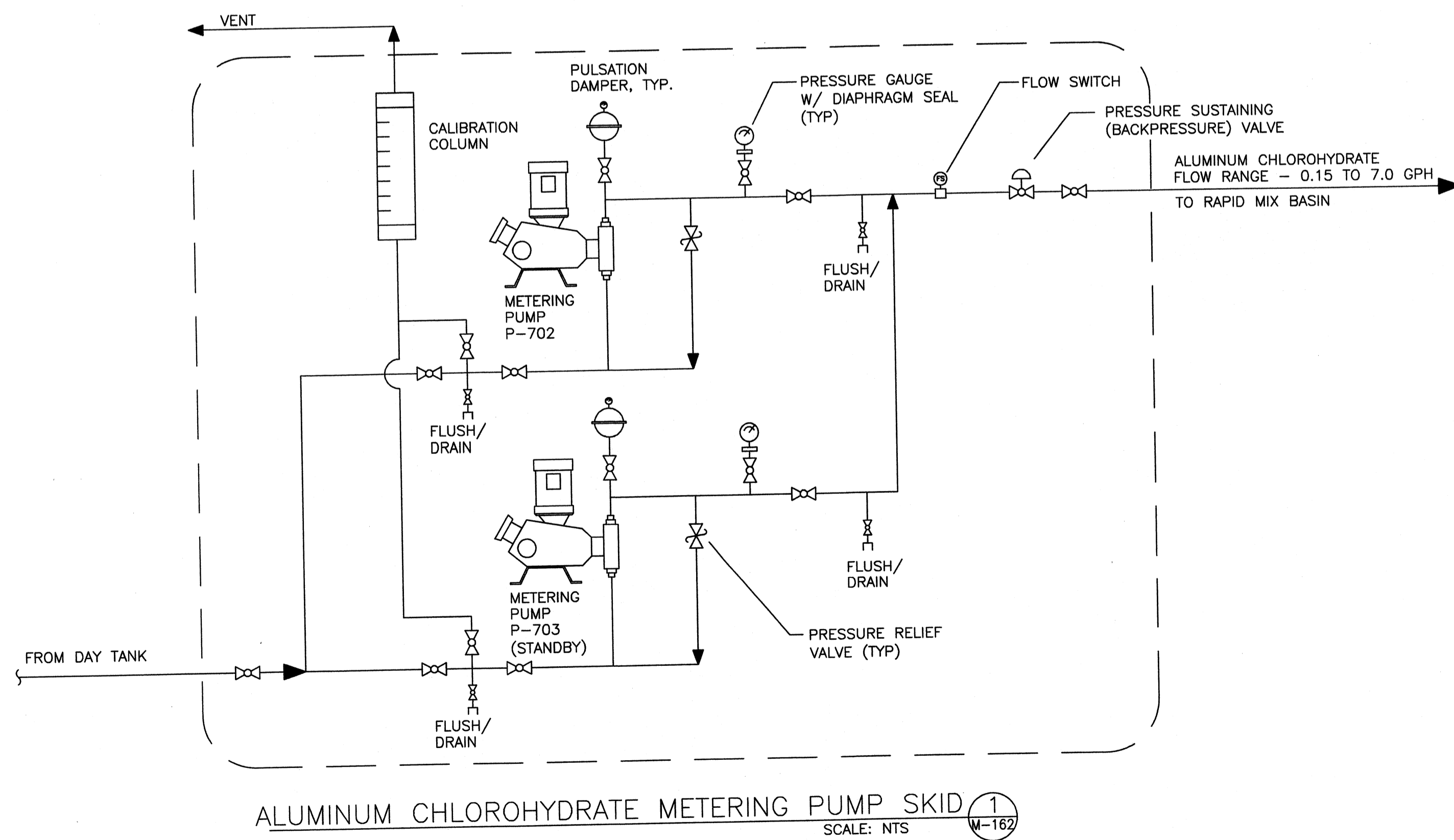


LEGEND

1. 2" 90° BEND (SOC)
2. 1" 90° BEND (SOC)
3. 2" X 1 1/2" REDUCER (SOC)
4. 2" X 1" REDUCER (SOC)
5. 1-1/2" 90° BEND (SOC)
6. 2" X Y" REDUCER (SOC), Y TO MATCH TRANSFER PUMP SUCTION
7. 1-1/2" X Y" REDUCER (SOC), Y TO MATCH TRANSFER PUMP DISCHARGE
8. 1-1/2" TEE (SOC)

NOTES:

1. NOT ALL PIPING SUPPORTS ARE SHOWN FOR CLARITY. PIPING SUPPORTS SHALL BE INSTALLED AS SPECIFIED IN THE SPECIFICATIONS.
2. FLOORS SHALL BE SLOPED TOWARDS TRENCHES AND SUMPS AS REQUIRED.
3. BAND GRATING WHERE PIPE PENETRATES GRATING.
4. DRILL (3) 3/8" HOLES IN TANK FILL PIPE INSIDE TANK ABOVE THE OVERFLOW LEVEL TO SERVE AS A VACUUM BREAK. EXTEND FILL PIPE TO WITHIN 6 INCHES OF THE TANK FLOOR.
5. TURN VENT PIPING 90 DEGREES DOWN AND EXTEND PIPING DOWN 12 INCHES. COVER END OF VENT PIPE WITH POLYETHYLENE BUG SCREEN AND FASTEN SCREEN WITH PLASTIC CABLE TIES, TYPICAL OF TWO VENT LINES.



ALUMINUM CHLOROHYDRATE METERING PUMP SKID 1
SCALE: NTS

PROJECT RECORD

CONFORMED SET 5/09

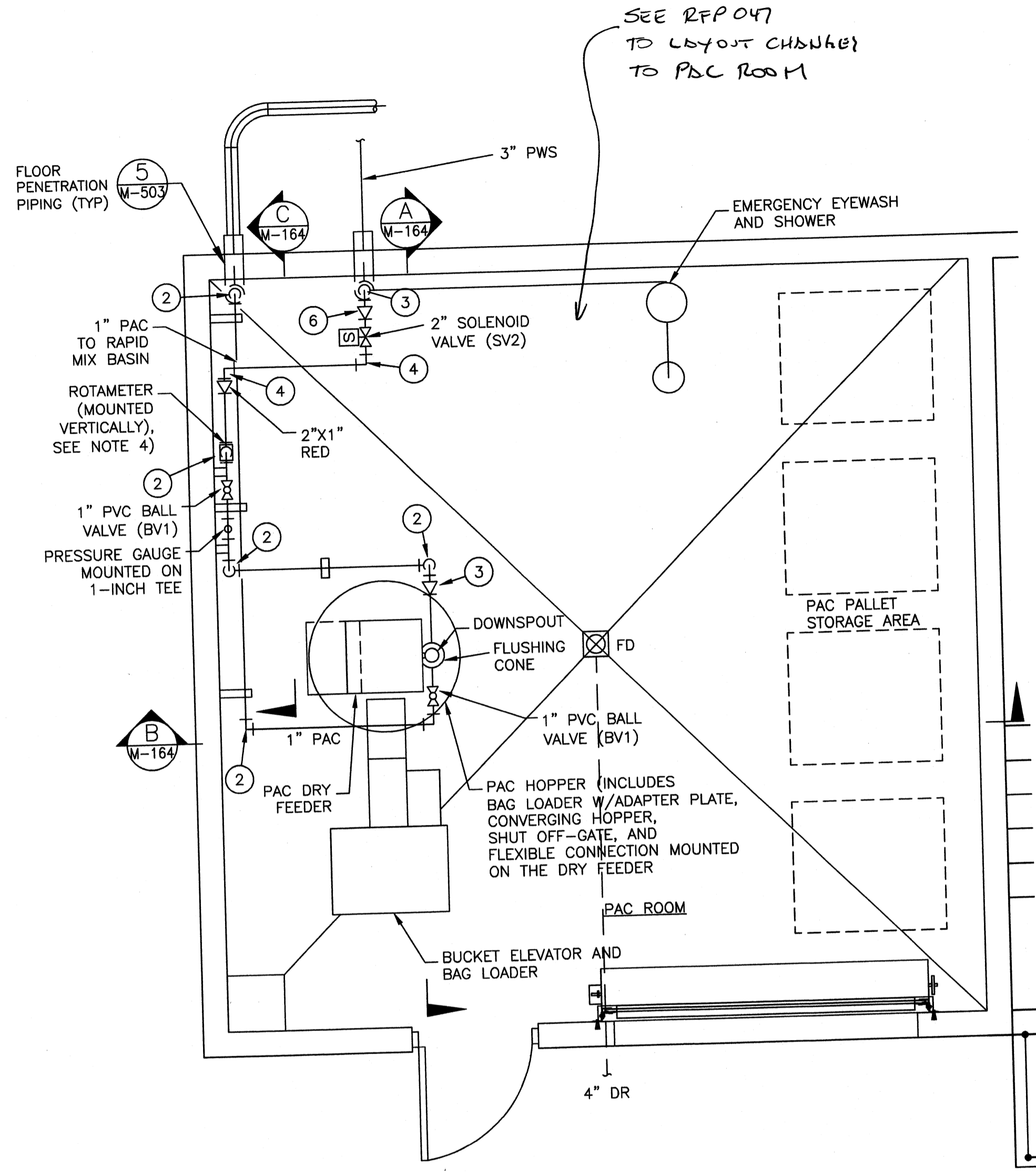


BY	DESCRIPTION	DATE	MARK

Client: OHIO COUNTY WATER DISTRICT
 Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT
**ALUMINUM CHLOROHYDRATE
 FEED SYSTEMS SECTIONS**

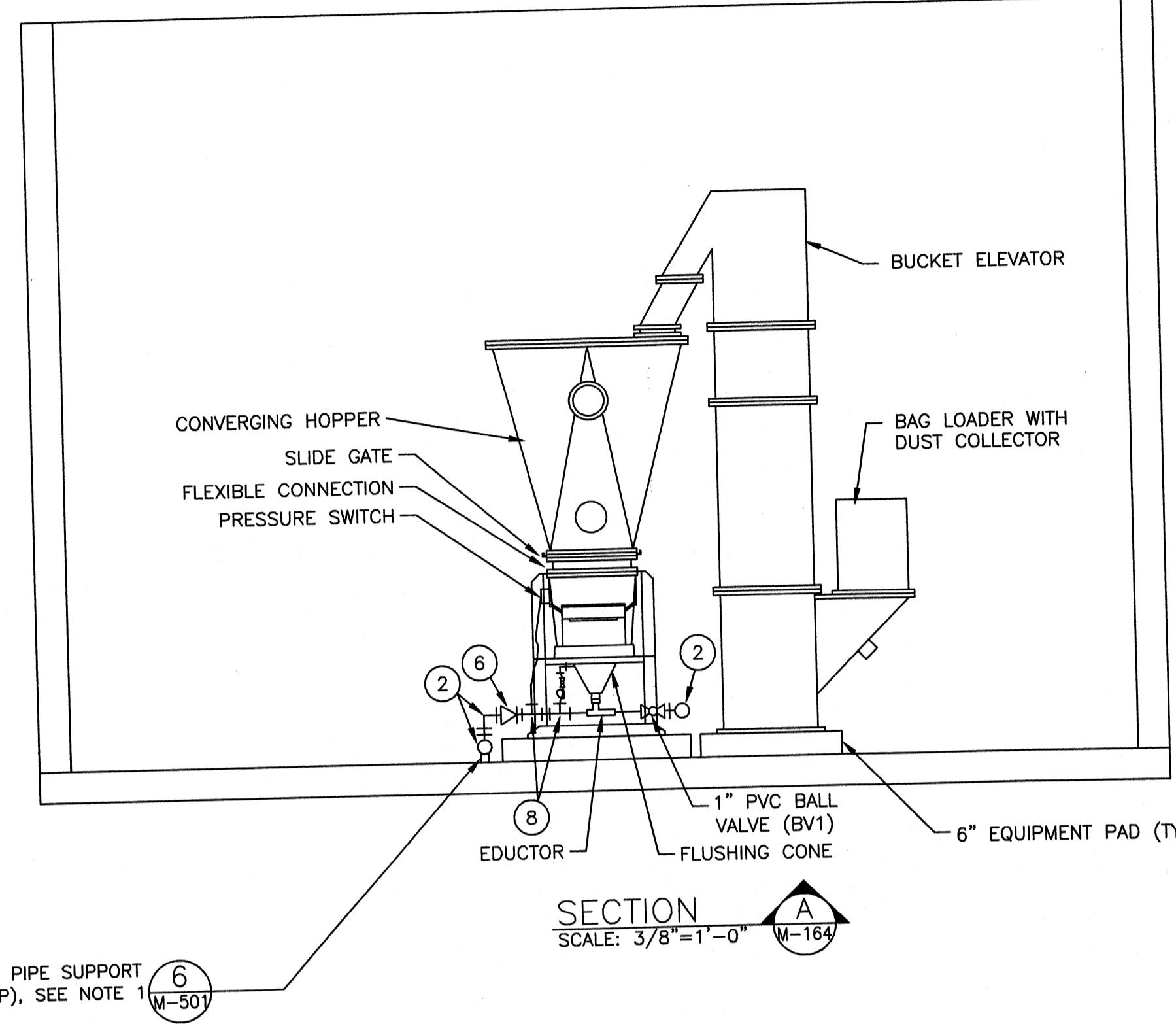
Project No.: 120-07060
 Designed By: JCB
 Drawn By:
 Checked By:

M-163

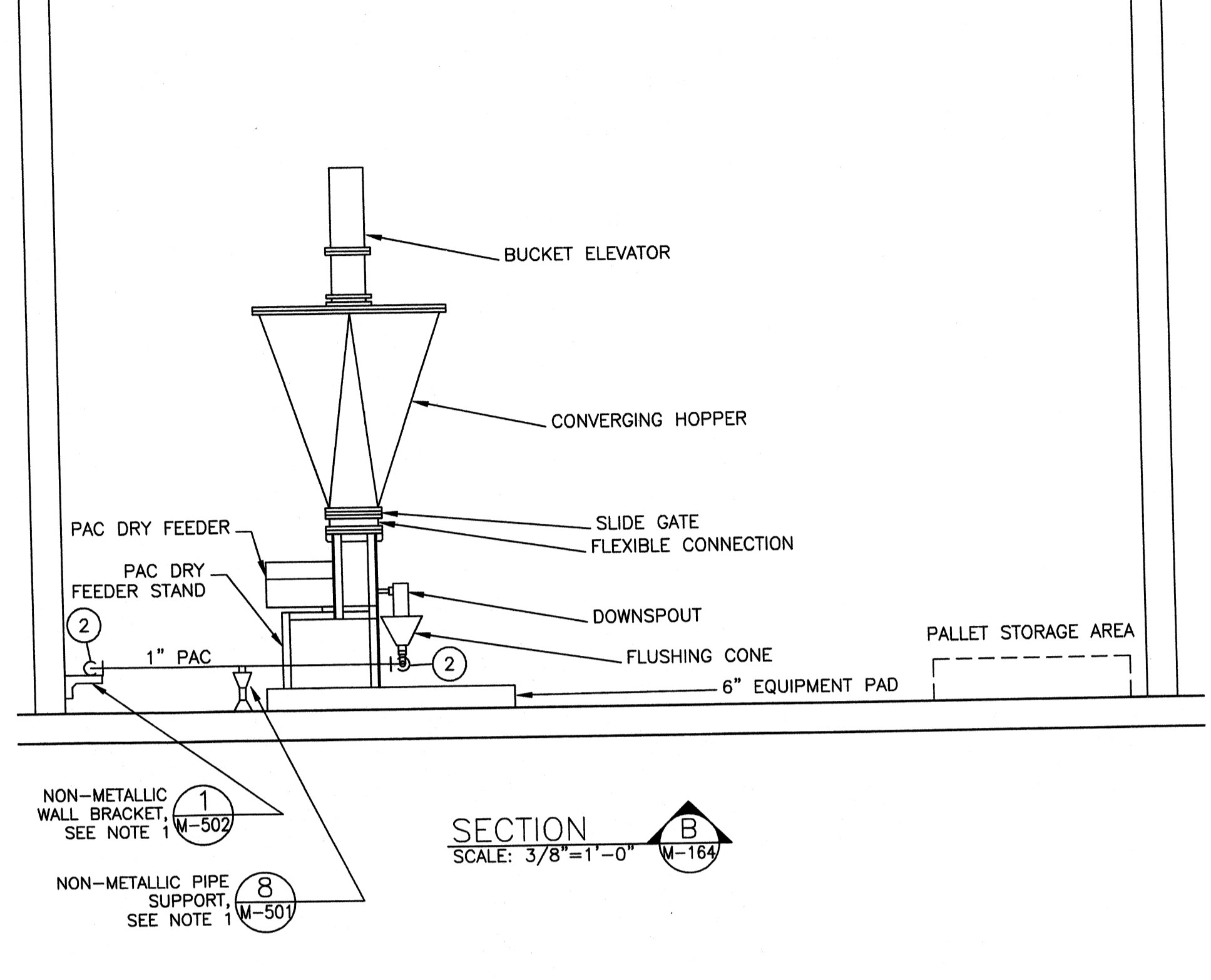


POWDERED ACTIVATED CARBON PLAN
SCALE: 3/8"=1'-0"

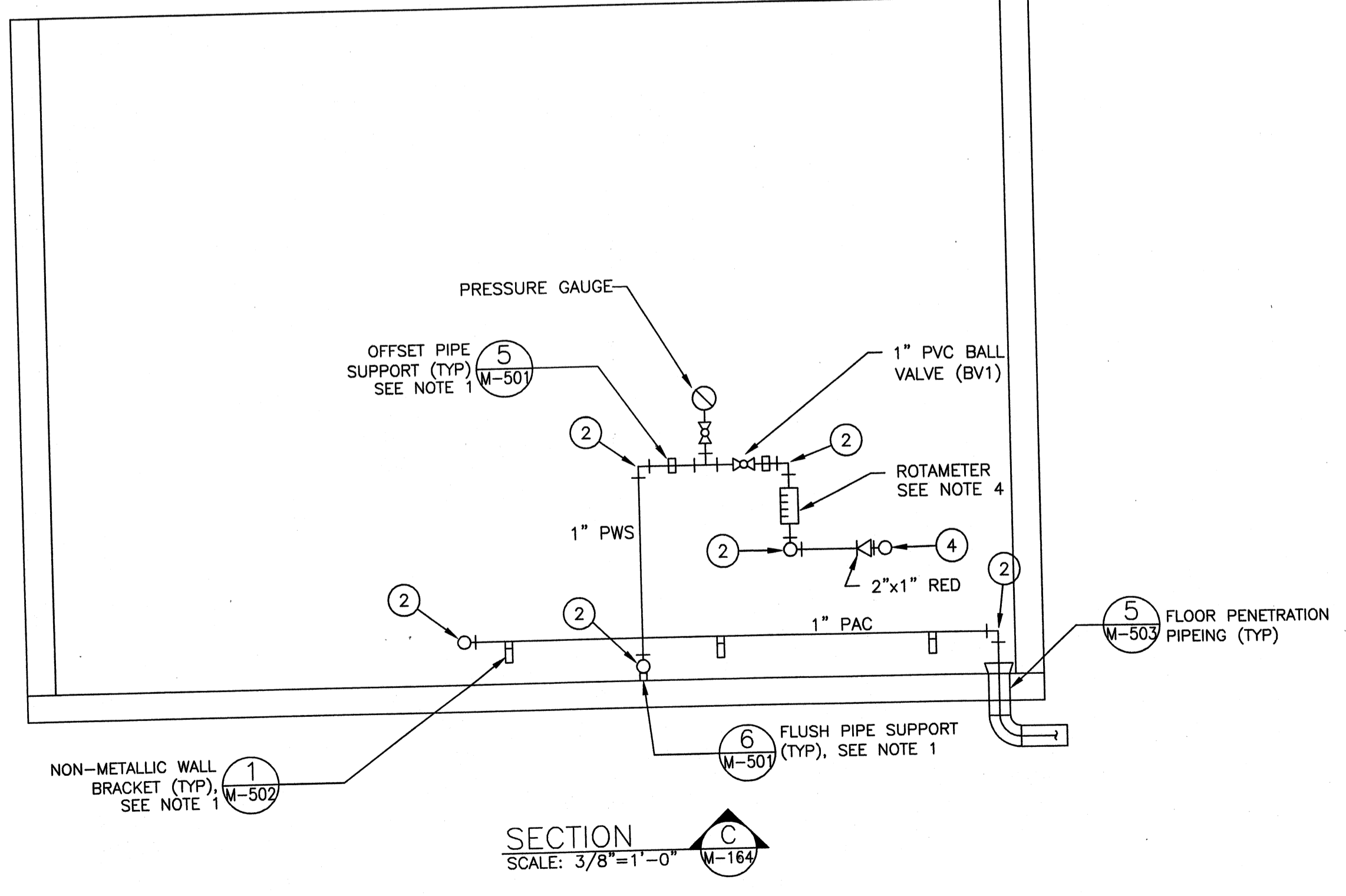
SEE REPORT
TO LAYOUT CHANGES
TO PAC ROOM



SECTION A
SCALE: 3/8"=1'-0"



SECTION B
SCALE: 3/8"=1'-0"



SECTION C
SCALE: 3/8"=1'-0"

NOTES:

1. NOT ALL PIPING SUPPORTS ARE SHOWN FOR CLARITY. PIPING SUPPORTS SHALL BE INSTALLED AS SPECIFIED IN THE SPECIFICATIONS.
2. FLOORS SHALL BE SLOPED TOWARDS DRAINS AS REQUIRED.
3. REDUCE AS NECESSARY TO MATCH PUMP SUCTION.
4. ROTAMETER SHALL BE 10" GLASS TUBE WITH 1" CONNECTIONS AND SUITABLE FOR WATER SERVICE. ROTAMETER SHALL BE OF 316 STAINLESS STEEL CONSTRUCTION WITH A CAPACITY UP TO 25 GPM. THE ROTAMETER SCALE SHALL READ IN GPM. ROTAMETER SHALL BE US FILTER VAREA-METER, OR APPROVED EQUAL.

LEGEND

1. 1" TEE (SOC)
2. 1" 90° BEND (SOC)
3. 1" x 1/2" REDUCER (SOC)
4. 2" 90° BEND (SOC)
5. 1-1/2" TEE (SOC)
6. 3" x 2" REDUCER (SOC)
7. 1-1/2" 90° BEND (SOC)
8. 1/2" TEE (SOC)
9. 3" 90° BEND (SOC)

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PROJECT RECORD

CONFORMED SET 5/09
3/19/09

BY	DATE	DESCRIPTION

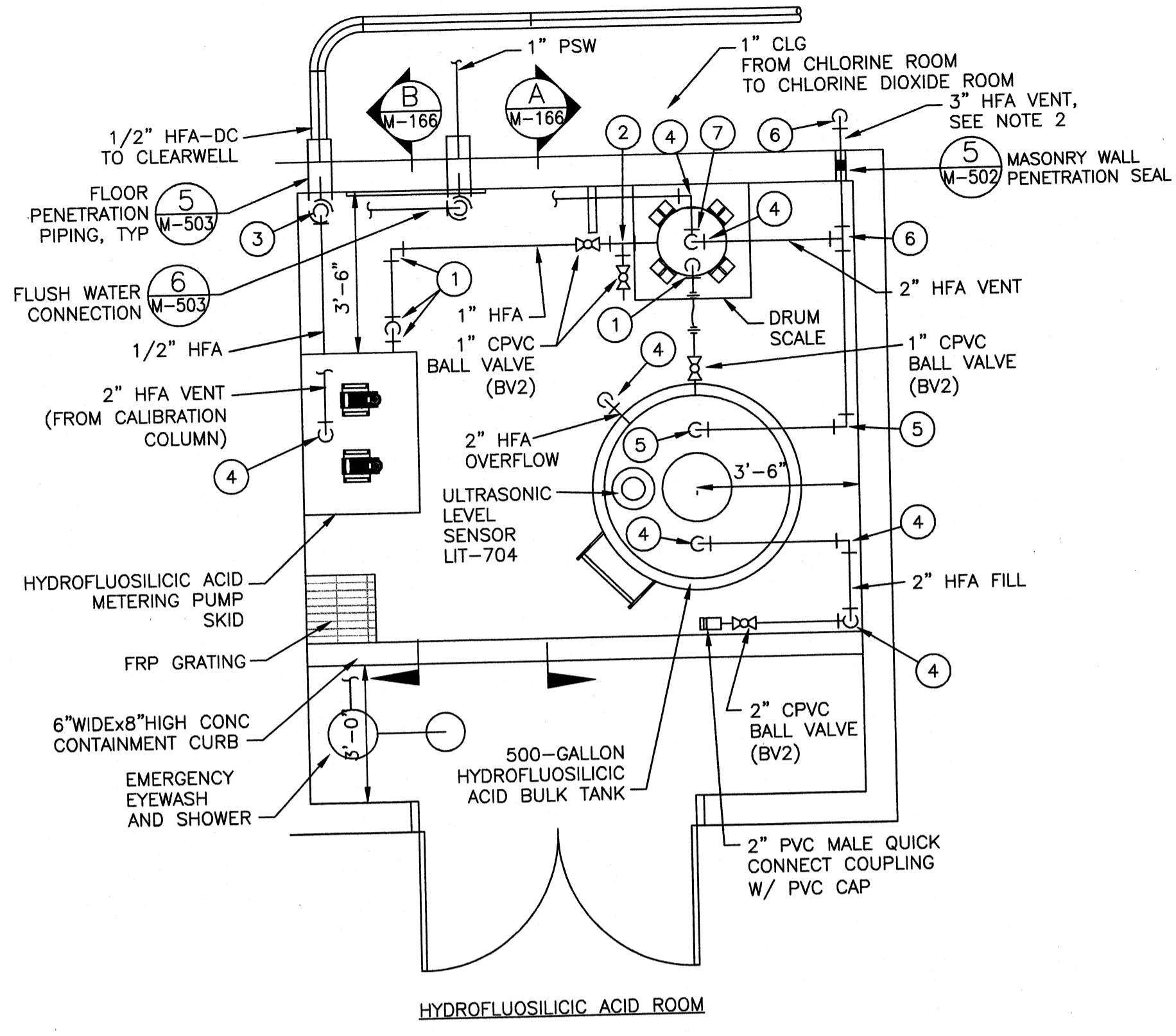
Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

**POWDERED ACTIVATED CARBON
FEED SYSTEM ENLARGED PLAN
AND SECTIONS**

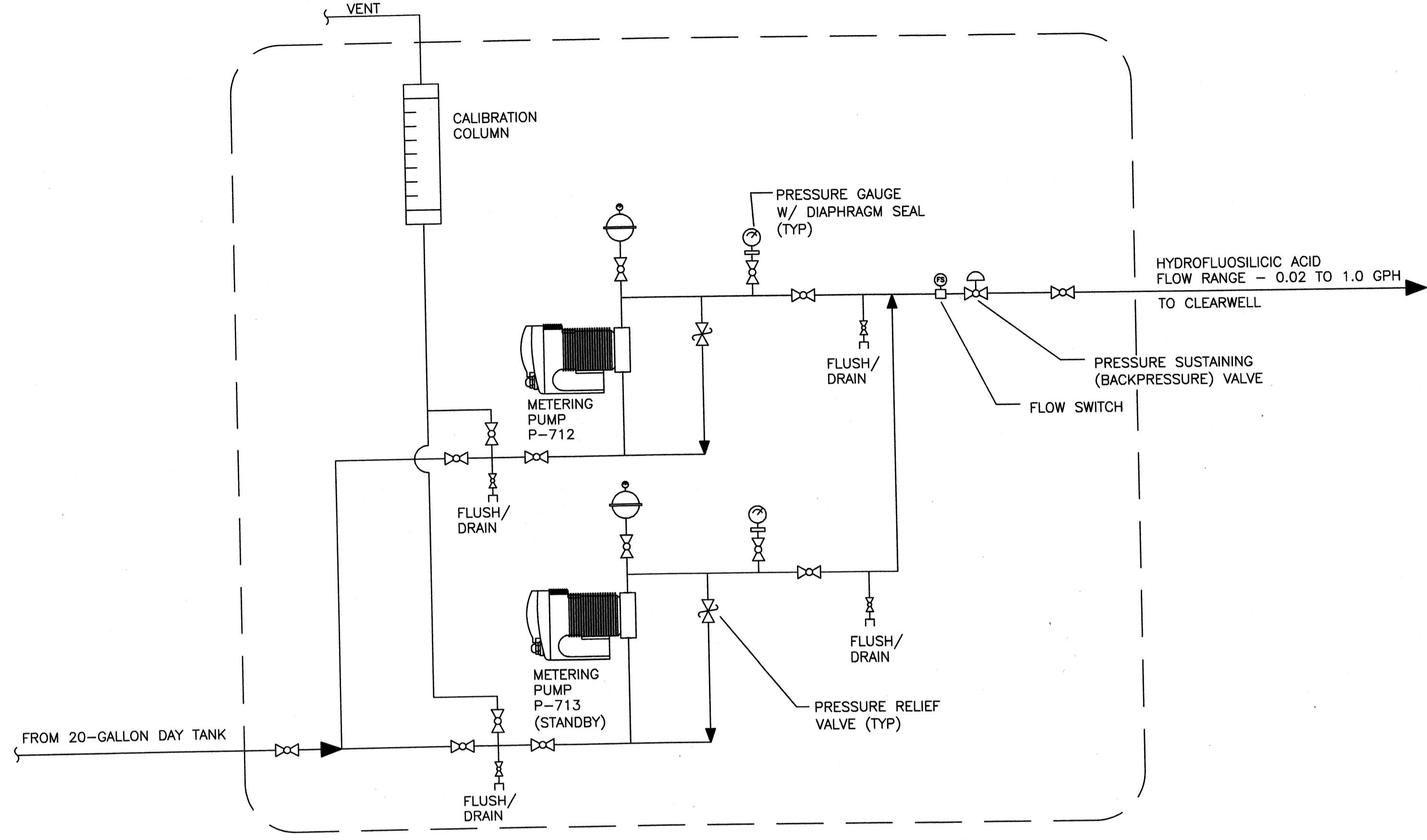
Project No.: 120-07060
Designed By: JCB
Drawn By:
Checked By:

M-164
Copyright: Tetra Tech

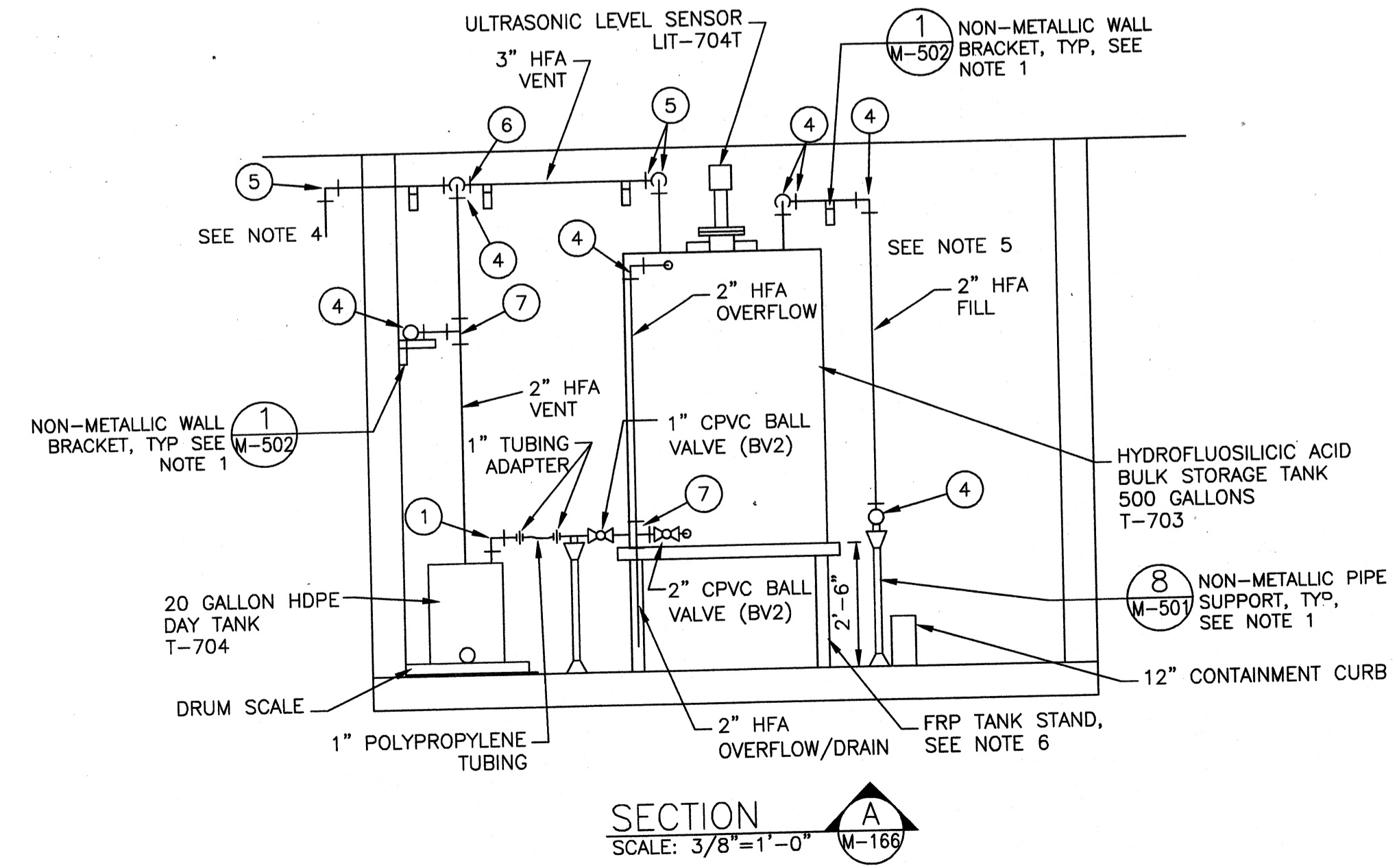
Wednesday, July 01, 2009 2:15:55 PM DRAWING: \\arc01s3\projects\120-07060 Ohio County\CONFORMED SET 5-09\PROCESS\07060 M-166.DWG LAYOUT: M-166 USER NAME: JEREMY M. FRONGILLO



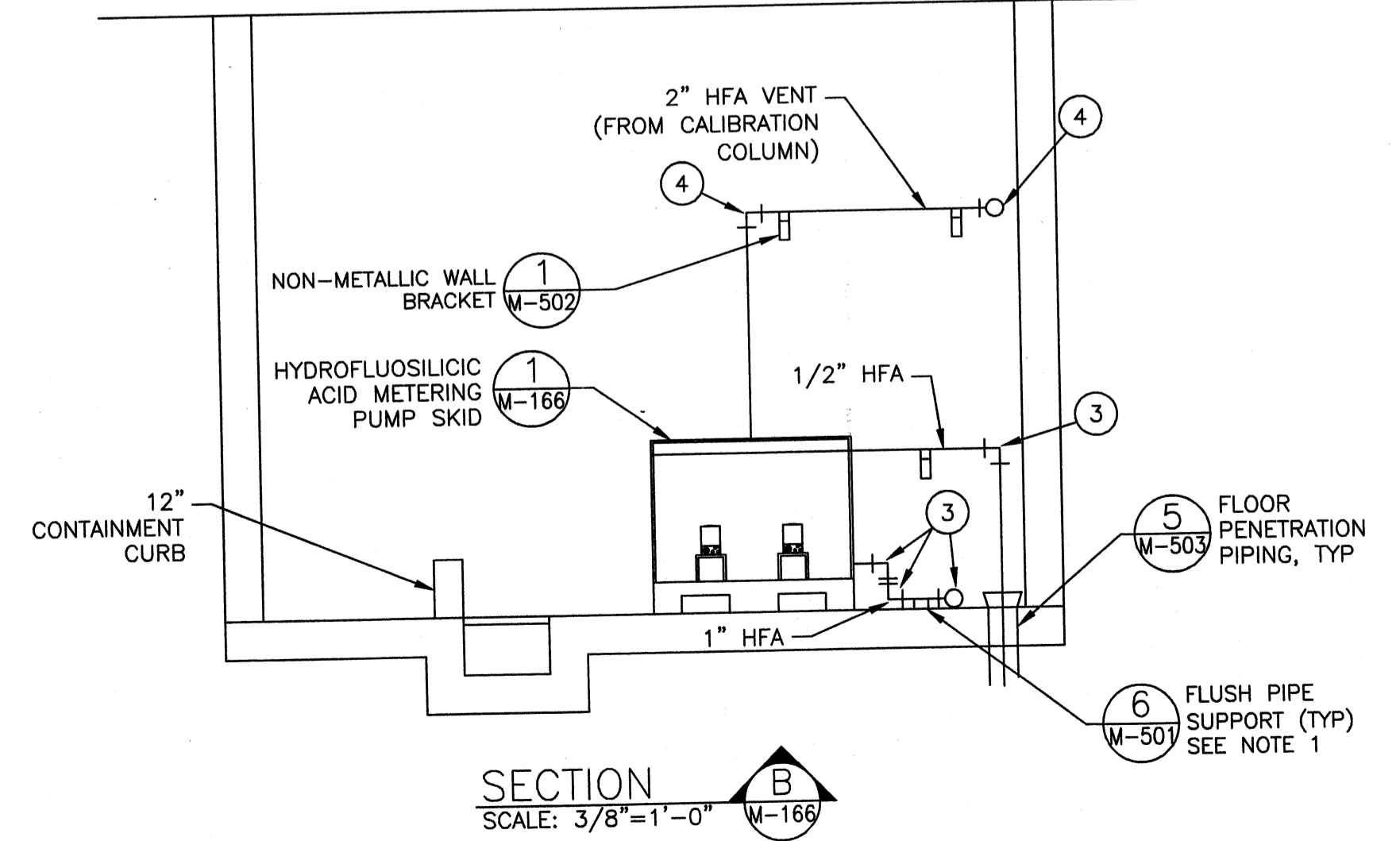
HYDROFLUOSILICIC ACID PLAN
SCALE: 3/8"=1'-0"



HYDROFLUOSILICIC ACID METERING PUMP SKID
SCALE: NTS



SECTION A-A
SCALE: 3/8"=1'-0"



SECTION B-B
SCALE: 3/8"=1'-0"

NOTES:

- NOT ALL PIPING SUPPORTS ARE SHOWN FOR CLARITY. PIPING SUPPORTS SHALL BE INSTALLED AS SPECIFIED IN THE SPECIFICATIONS.
- FLOORS SHALL BE SLOPED TOWARDS TRENCHES AND SUMPS AS REQUIRED.
- BAND GRATING WHERE PIPE PENETRATES GRATING.
- TURN VENT PIPING 90° DOWN AND EXTEND PIPING DOWN 12 INCHES. COVER END OF VENT PIPE WITH POLYETHYLENE BUG SCREEN AND FASTEN SCREEN WITH PLASTIC CABLE TIES.
- DRILL (3) 3/8" HOLES IN TANK FILL PIPE INSIDE TANK ABOVE THE OVERFLOW LEVEL TO SERVE AS A VACUUM BREAK. EXTEND FILL PIPE TO WITHIN 6 INCHES OF THE TANK FLOOR.
- BULK STORAGE TANK STAND SHALL BE CONSTRUCTED OF FRP STRUCTURED SHAPES AND TITANIUM HARDWARE AND HAVE THE DIMENSION SHOWN IN THE DRAWING. THE FRP TANK STAND SHALL BE CAPABLE OF SUPPORTING THE ENTIRE WEIGHT OF THE BULK STORAGE TANK FILLED WITH CHEMICAL.

LEGEND

- 1" 90° BEND (SOC)
- 1" TEE (SOC)
- 1/2" 90° BEND (SOC)
- 2" 90° BEND (SOC)
- 3" 90° BEND (SOC)
- 3" x 2" TEE (SOC)
- 2" TEE (SOC)

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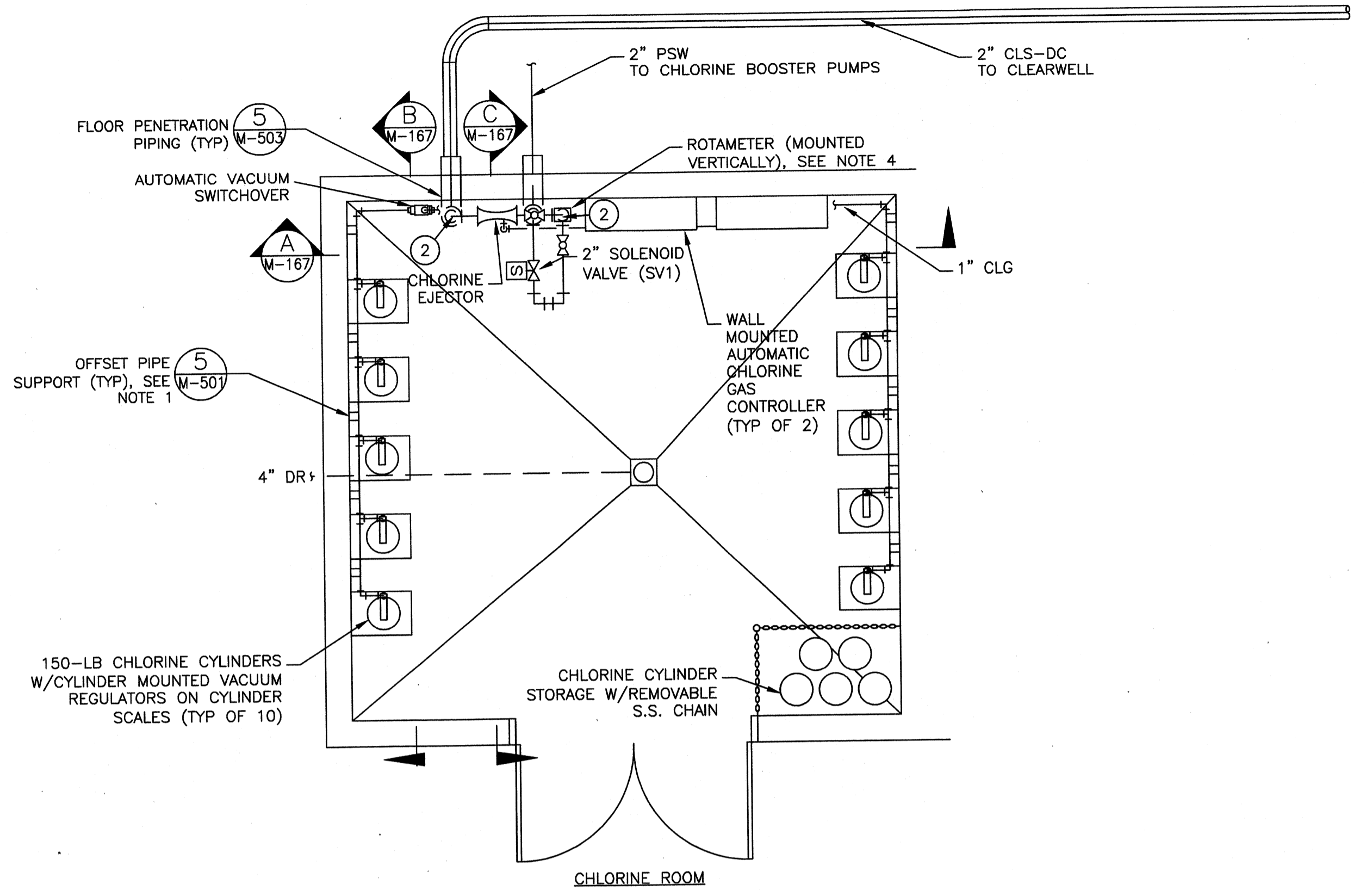
PROJECT RECORD

CONFORMED SET 5/09
3/19/09

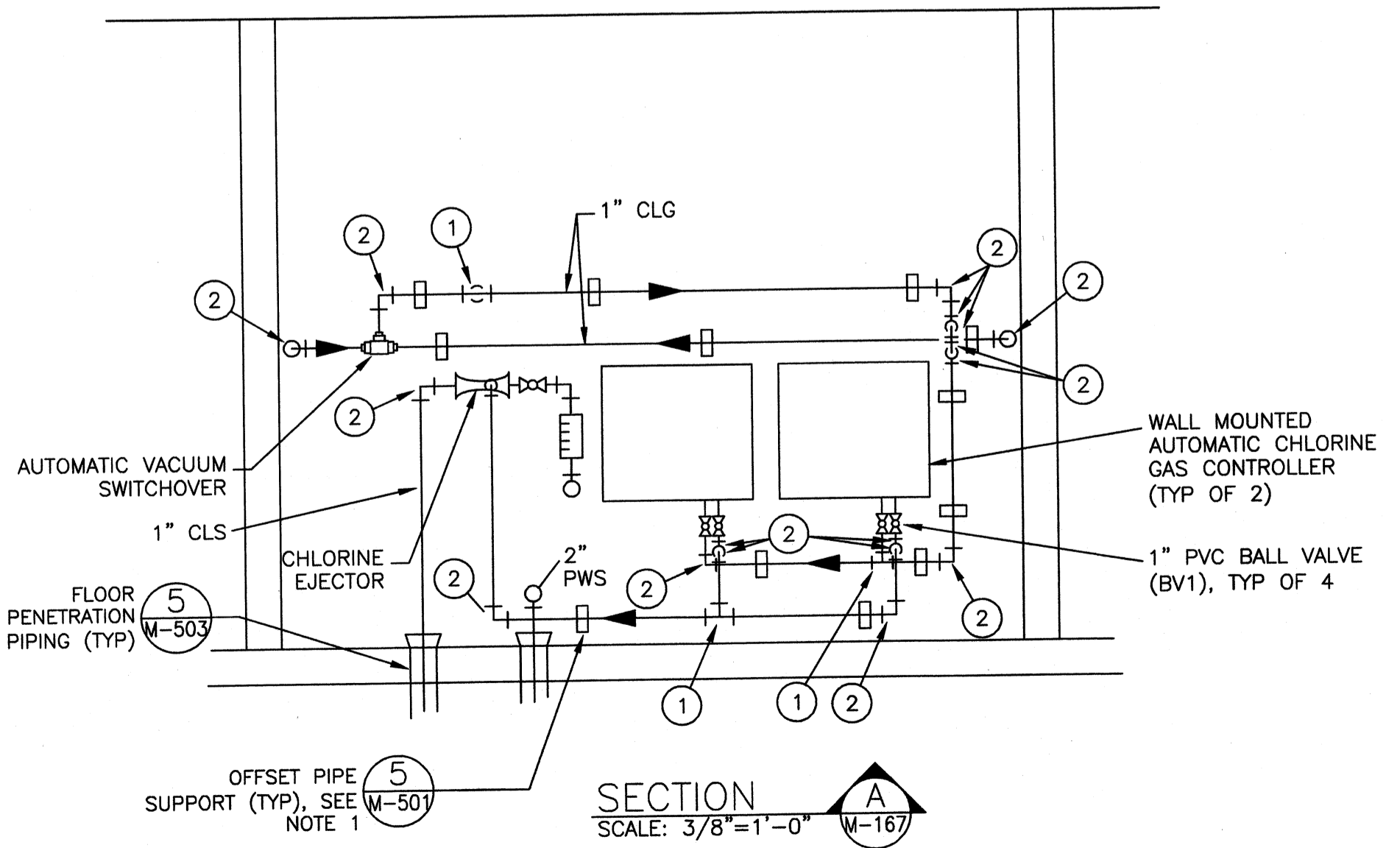
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROWMELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
**HYDROFLUOSILICIC ACID
FEED SYSTEM ENLARGED PLAN
AND SECTIONS**
Project No.: 120-07060
Designed By: JCB
Drawn By:
Checked By:
M-166

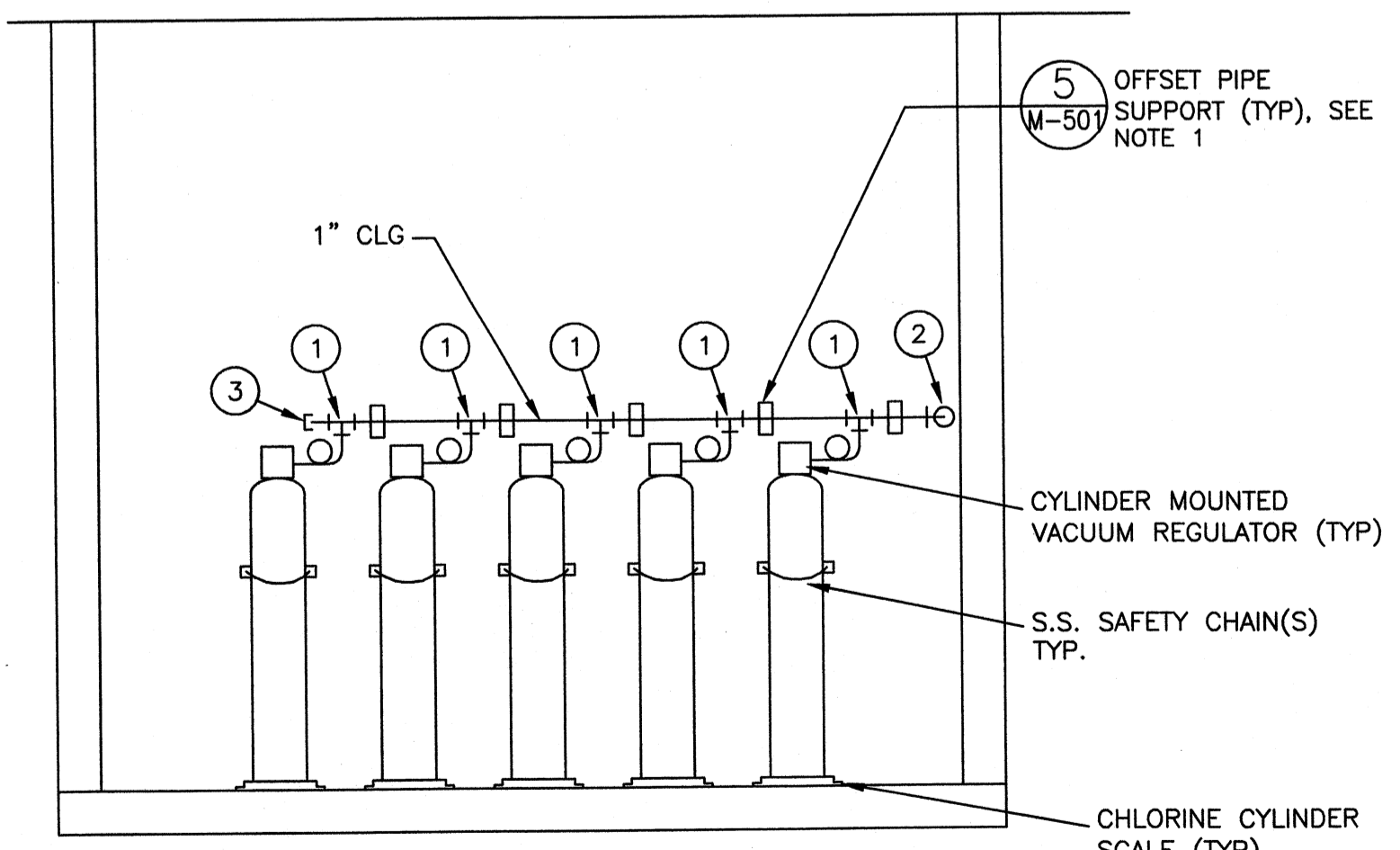
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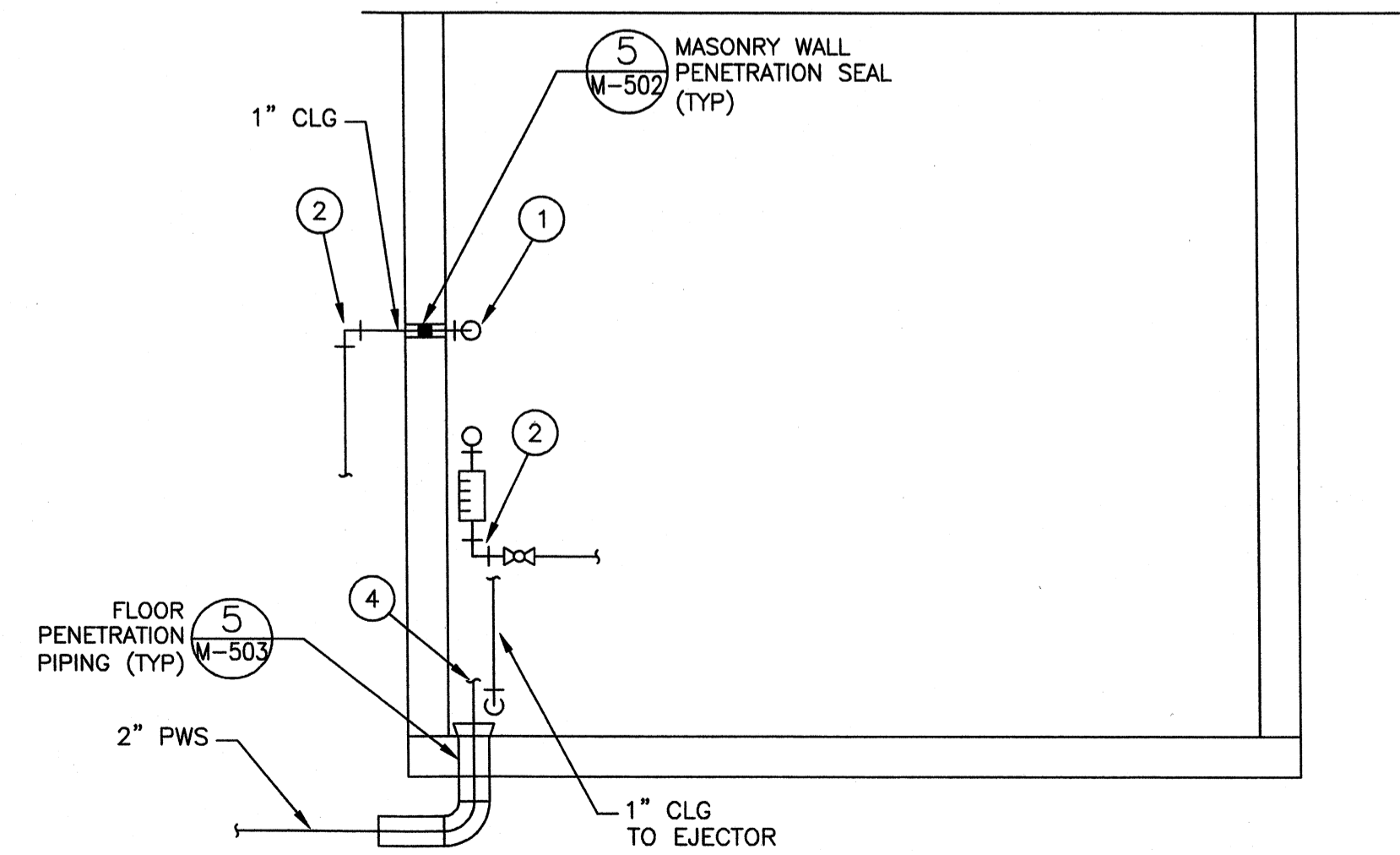
CHLORINE PLAN
SCALE: 3/8"=1'-0"



SECTION A
SCALE: 3/8"=1'-0"



SECTION B
SCALE: 3/8"=1'-0"



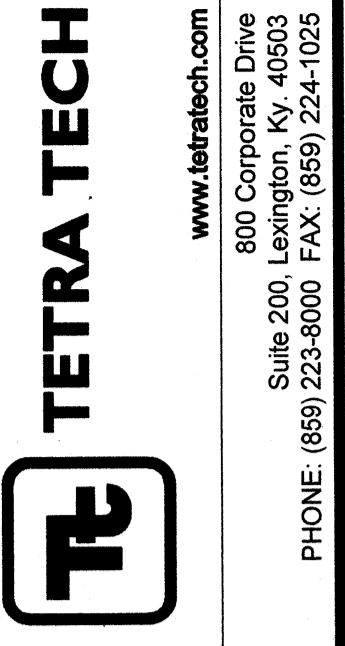
SECTION C
SCALE: 3/8"=1'-0"

NOTES:

- 1. NOT ALL PIPING SUPPORTS ARE SHOWN FOR CLARITY. PIPING SUPPORTS SHALL BE INSTALLED AS SPECIFIED IN THE SPECIFICATIONS.
- 2. FLOORS SHALL BE SLOPED TOWARDS DRAINS AS REQUIRED.
- 3. REDUCE AS NECESSARY TO MATCH PUMP SUCTION.
- 4. ROTAMETER SHALL BE 10" GLASS TUBE WITH 1" CONNECTIONS AND SUITABLE FOR WATER SERVICE. ROTAMETER SHALL BE OF 316 STAINLESS STEEL CONSTRUCTION WITH A CAPACITY UP TO 25 GPM. THE ROTAMETER SCALE SHALL READ IN GPM. ROTAMETER SHALL BE US FILTER VAREA-METER, OR APPROVED EQUAL.

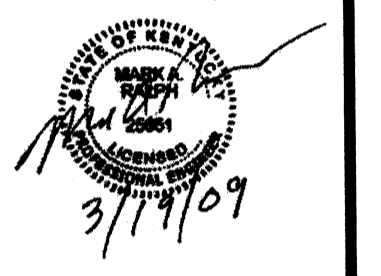
LEGEND

- 1. 1" TEE (SOC)
- 2. 1" 90° BEND (SOC)
- 3. 1" CAP (SOC)
- 4. 2" 90° BEND (SOC)
- 5. 2" X 1-1/2" TEE (SOC)
- 6. 2" X 1-1/2" REDUCER (SOC)
- 7. 1-1/2" 90° BEND (SOC)



PROJECT RECORD

CONFORMED SET 5/09



BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT
**CHLORINE FEED SYSTEM
 ENLARGED PLAN & SECTIONS**

Project No.: 120-07080
 Designed By: JCB
 Drawn By:
 Checked By:

M-167

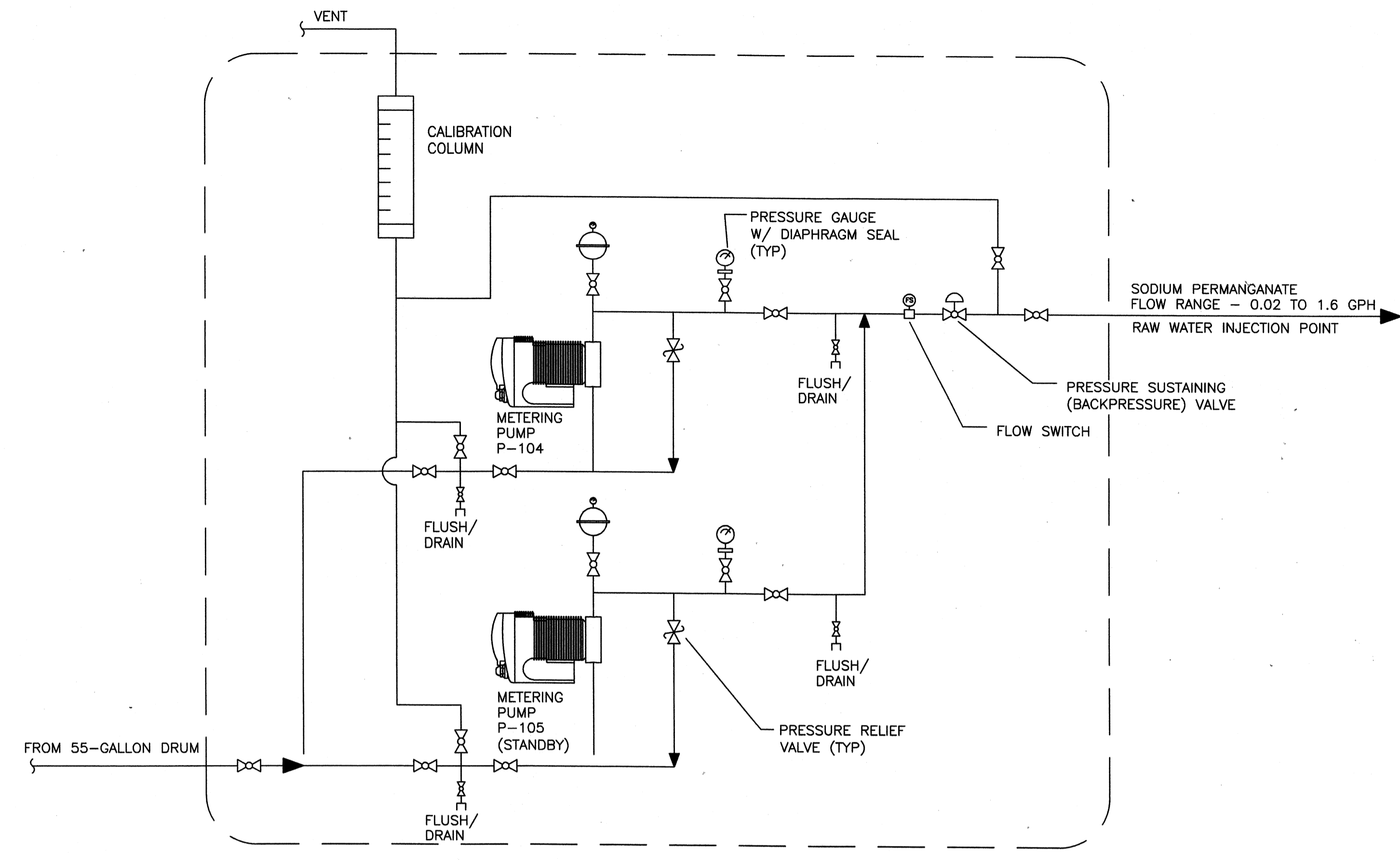
Wednesday, July 01, 2009 2:08:19 PM DRAWING: (s:\projects\120-07060 Ohio County\CONFORMED SET 5-09\PROCESS\120-07060 M-168.DWG LAYOUT: M-168 USER NAME: JEREMY M. FRONGILLO

NOTES:

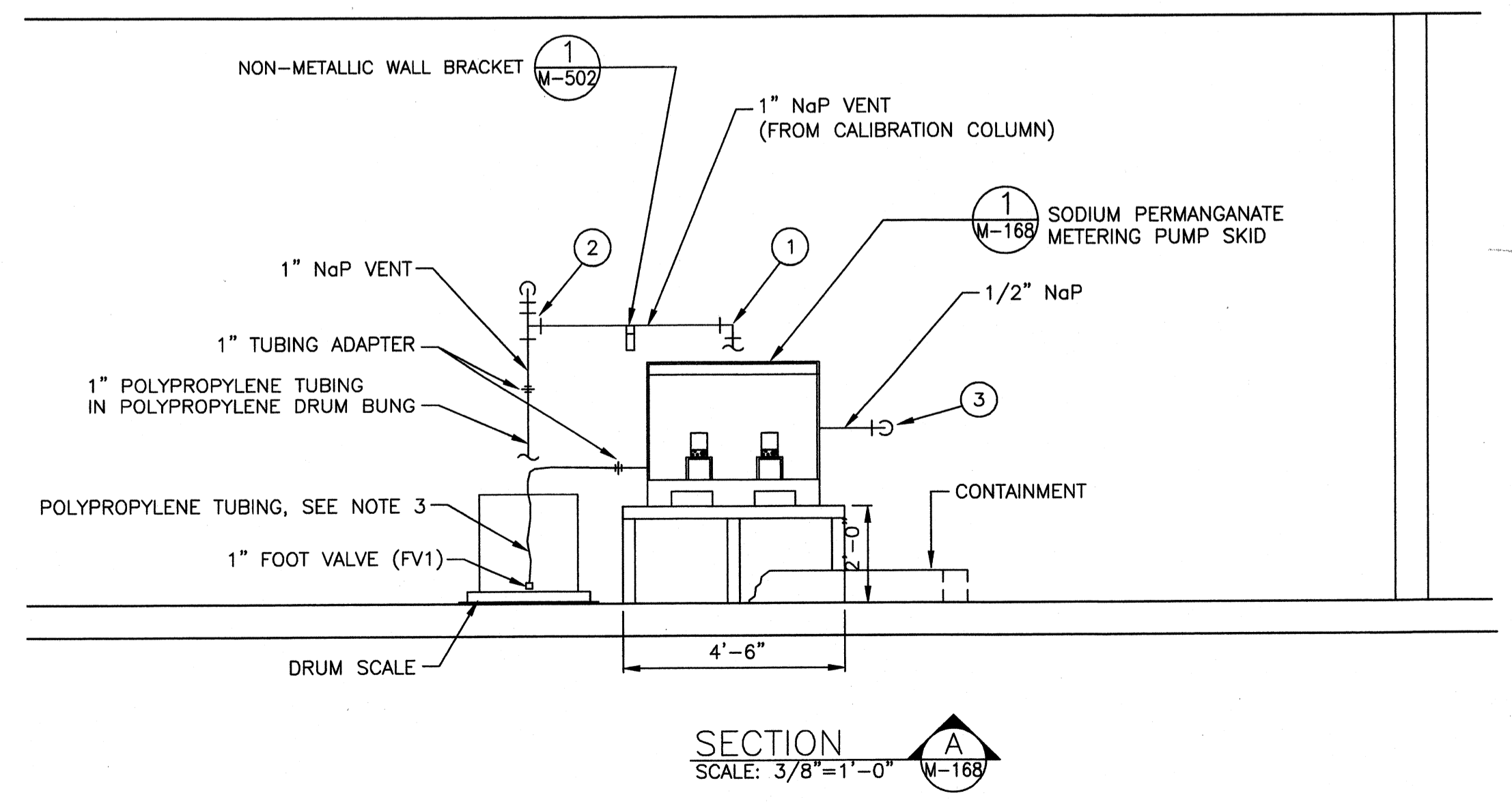
- TURN VENT PIPING 90° DOWN AND EXTEND PIPING DOWN 12 INCHES. COVER END OF VENT PIPE WITH POLYETHYLENE BUG SCREEN AND FASTEN SCREEN WITH PLASTIC CABLE TIES.
- METERING PUMP TABLE SHALL BE CONSTRUCTED OF FRP STRUCTURED SHAPES AND 316 SS HARDWARE AND HAVE THE DIMENSION SHOWN IN THE DRAWING. THE TABLE LEGS SHALL BE CONSTRUCTED OF 3" X 3" X 1/4" SQUARE TUBES. THE TABLE SURFACE SHALL BE A MINIMUM OF 3/8" THICK FLAT SHEET, AND 1/4" STRUCTURAL SHAPES SHALL BE USED FOR BRACING, ASSEMBLY, AND SUPPORT. THE FRP TABLE SHALL BE CAPABLE OF SUPPORTING THE ENTIRE WEIGHT OF THE METERING PUMP SKID.
- THE SODIUM PERMANGANATE SUPPLY LINE SHALL BE OF POLYPROPYLENE TUBING, EQUIPPED WITH A FOOT VALVE. THE POLYPROPYLENE TUBING SHALL BE FITTED WITH A POLYPROPYLENE DRUM BUNG TO PROVIDE A TIGHT SEAL ON THE SUPPLY LINE. TRANSITION TO SCH 80 PVC OUTSIDE OF THE DRUM STORAGE. TUBING ON VENT AND SUPPLY LINE SHALL PROVIDE ENOUGH FLEXIBILITY TO TRANSFER TUBING AND BUNG WHEN SWITCHING OUT DRUMS.
- PROVIDE A POLYETHYLENE DRUM CONTAINMENT PALLET CAPABLE OF HOLDING UP TO 8 55-GALLON DRUMS. DRUM PALLET SHALL PROVIDE CONTAINMENT FOR A MINIMUM OF 66 GALLONS IN A CHAMBER BELOW SUPPORT GRATING. THE DRUM PALLET SHALL BE EQUIPPED WITH A REMOVABLE RAMP TO ASSIST IN THE LOADING AND UNLOADING OF DRUMS.
- PIPE WALL PENETRATIONS SHALL INCLUDE AN OPENING IN THE EXISTING METAL BUILDING WITH AN ANNULAR SPACE OF APPROXIMATELY 1" AROUND THE PIPE. FILL THE ANNULAR SPACE WITH INSULATING FOAM. OUTSIDE OF THE WALL PENETRATION SHALL BE COVERED WITH AN ESCUTCHEON OF SUFFICIENT SIZE TO COVER THE OPENING.

LEGEND

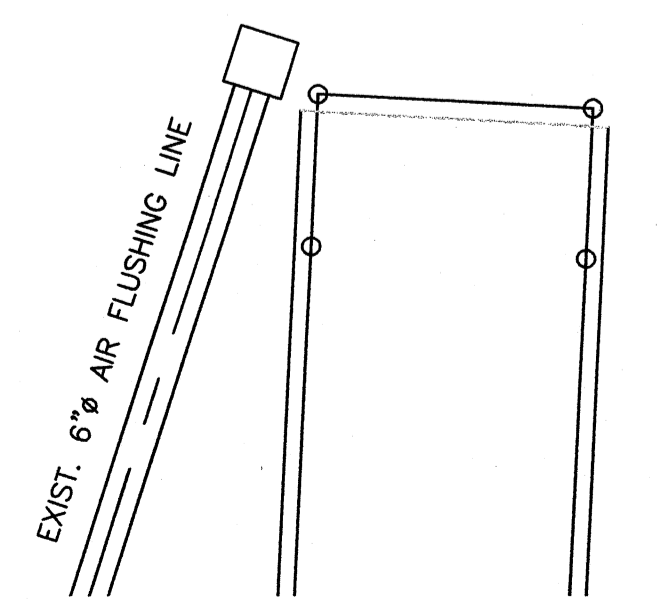
- 1" 90° BEND (SOC)
- 1" TEE (SOC)
- 1/2" 90° BEND (SOC)



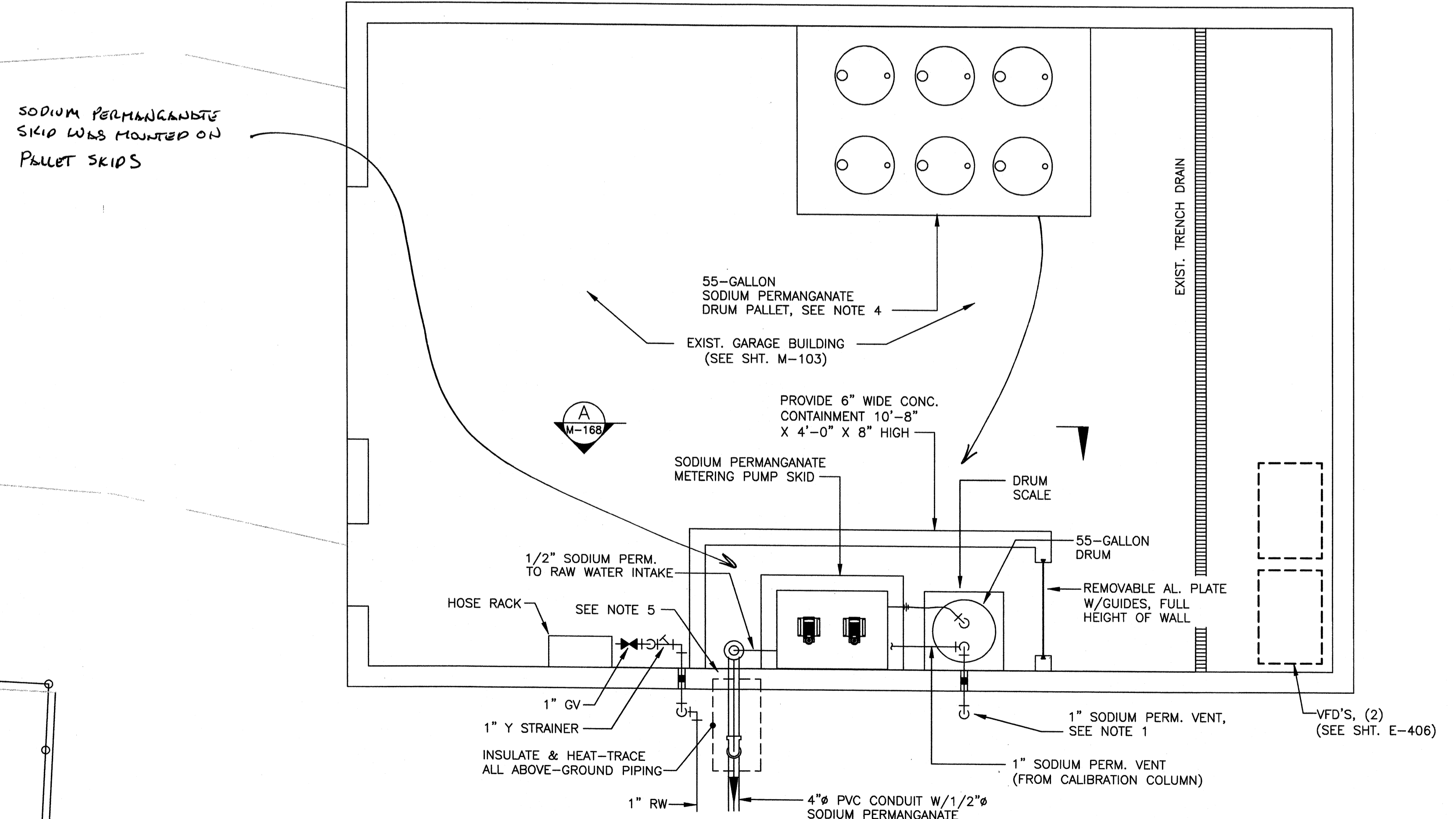
SODIUM PERMANGANATE METERING PUMP SKID M-168
SCALE: NTS



SECTION SCALE: 3/8"=1'-0" M-168



EXIST. 6" AIR FLUSHING LINE



EXIST. STORAGE BUILDING - PLAN SCALE: 3/8"=1'-0" M-169

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Suite 200, Lexington, KY 40503
PHONE: (859) 223-8000 FAX: (859) 224-1025

PROJECT RECORD

CONFORMED SET 5/09

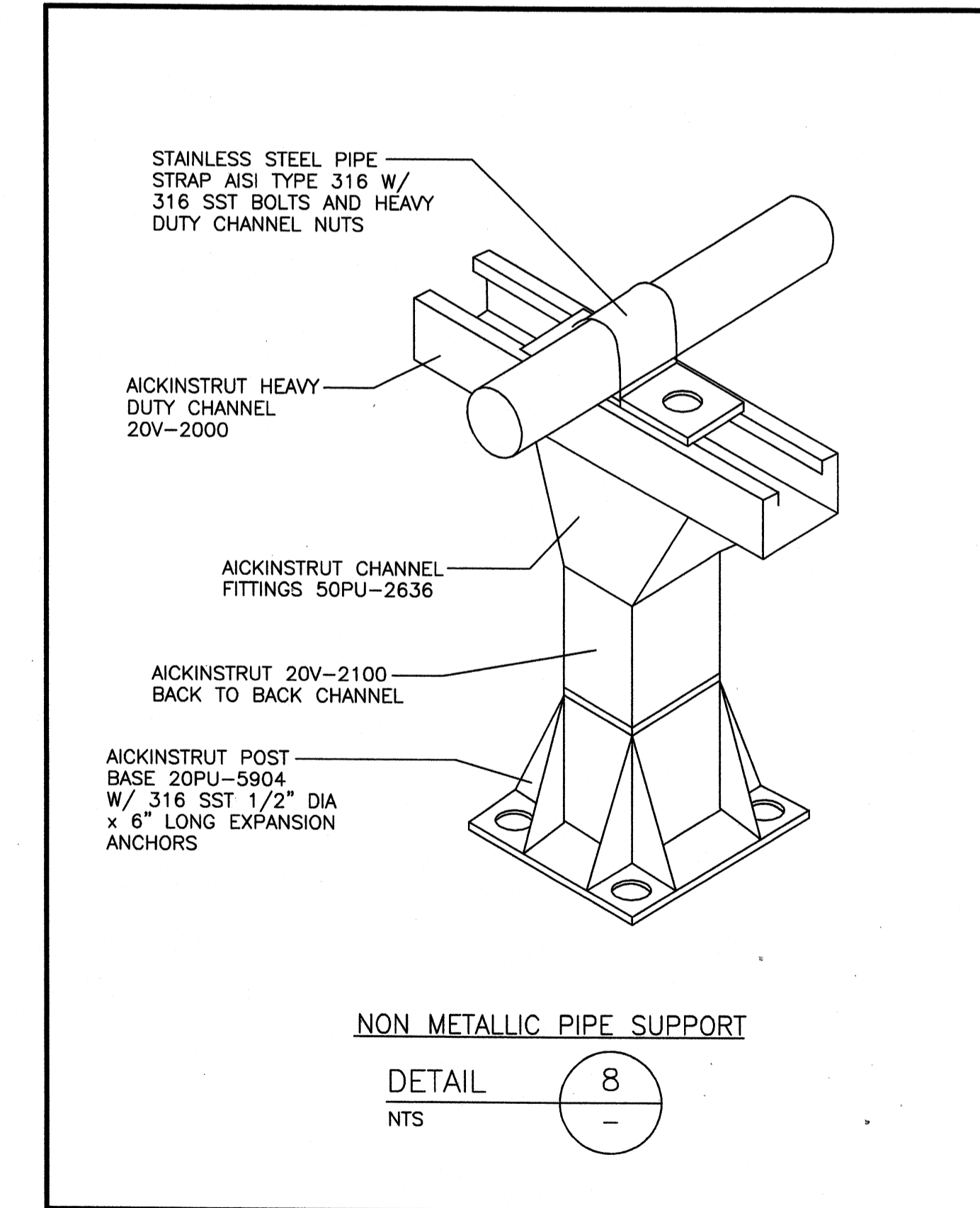
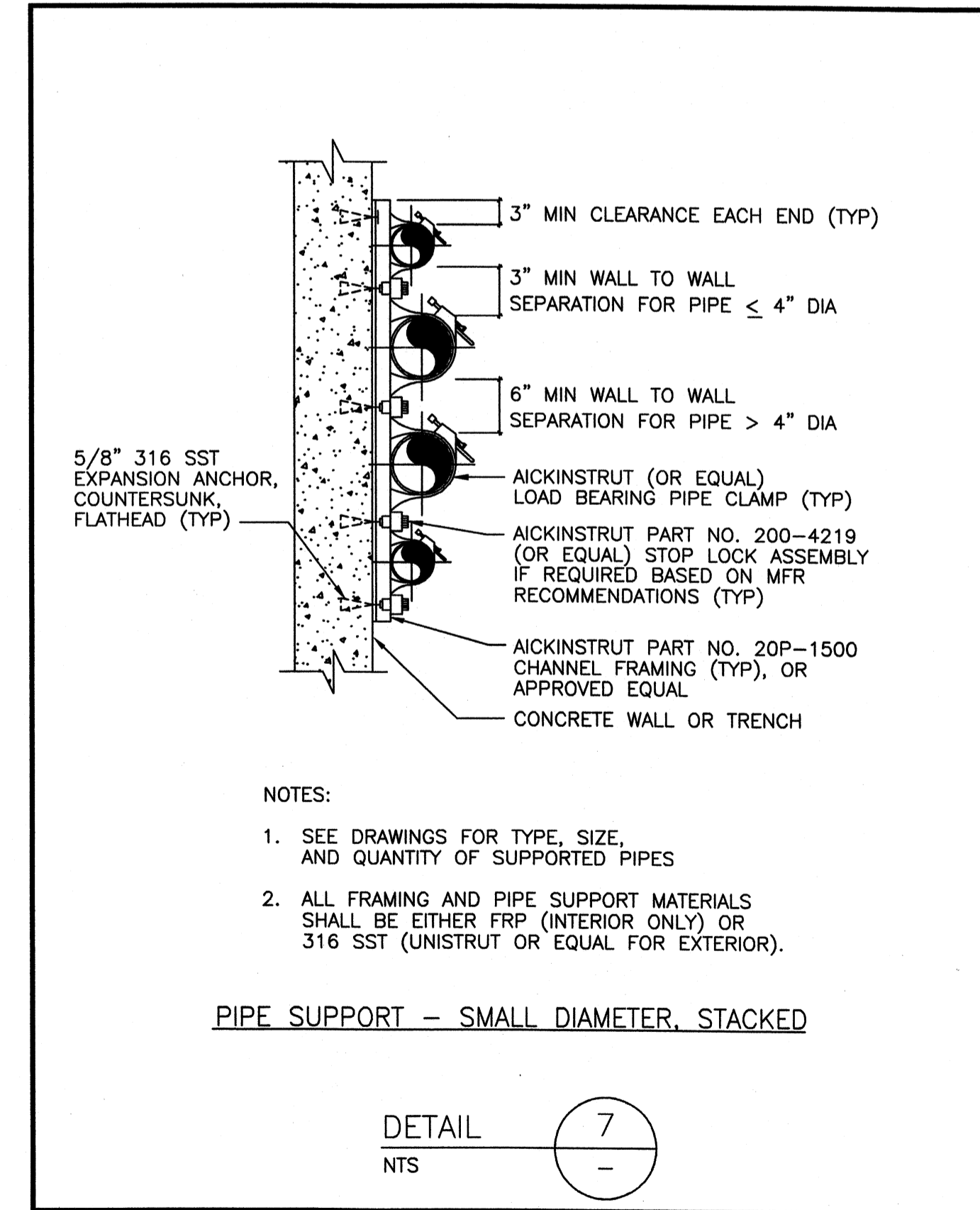
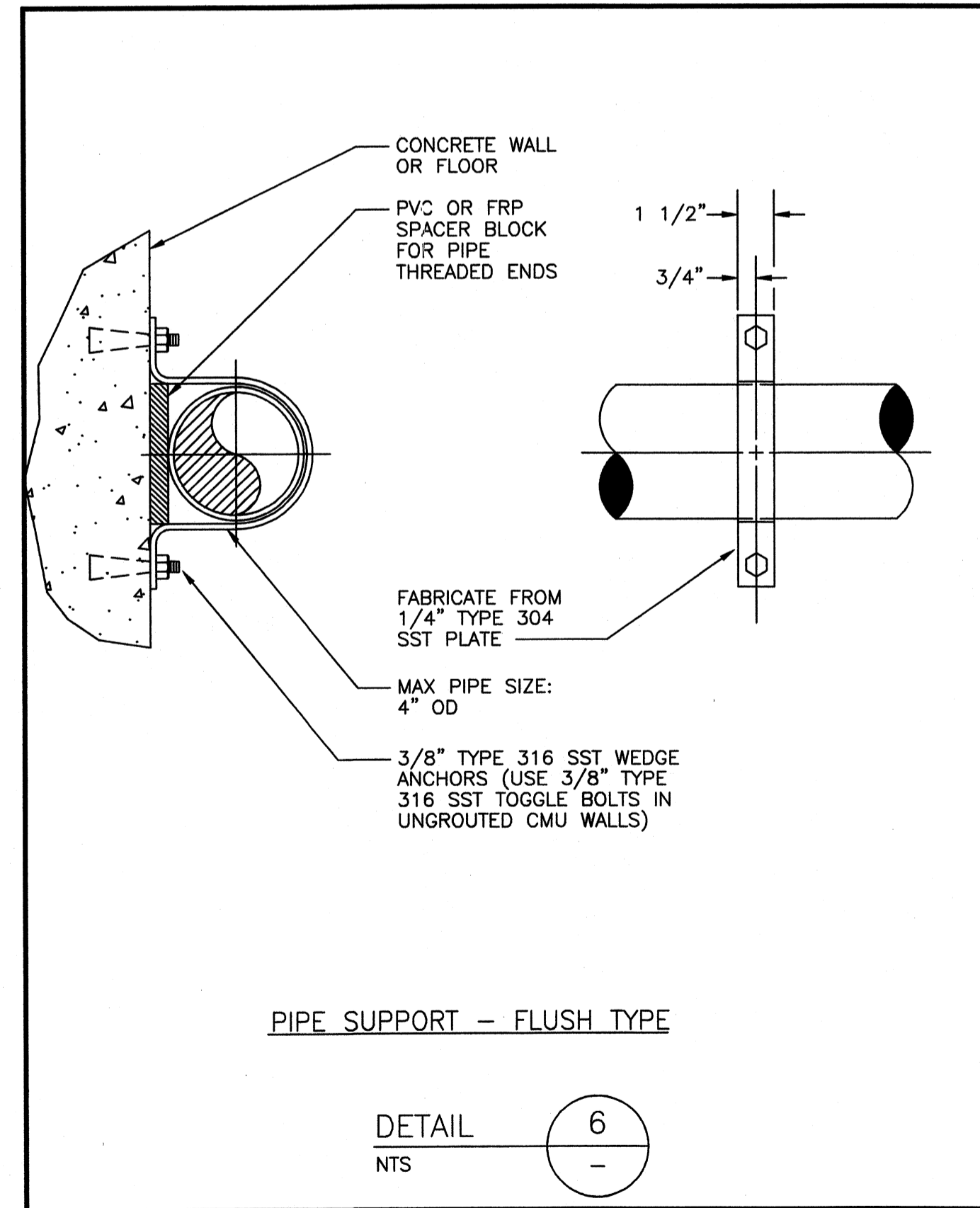
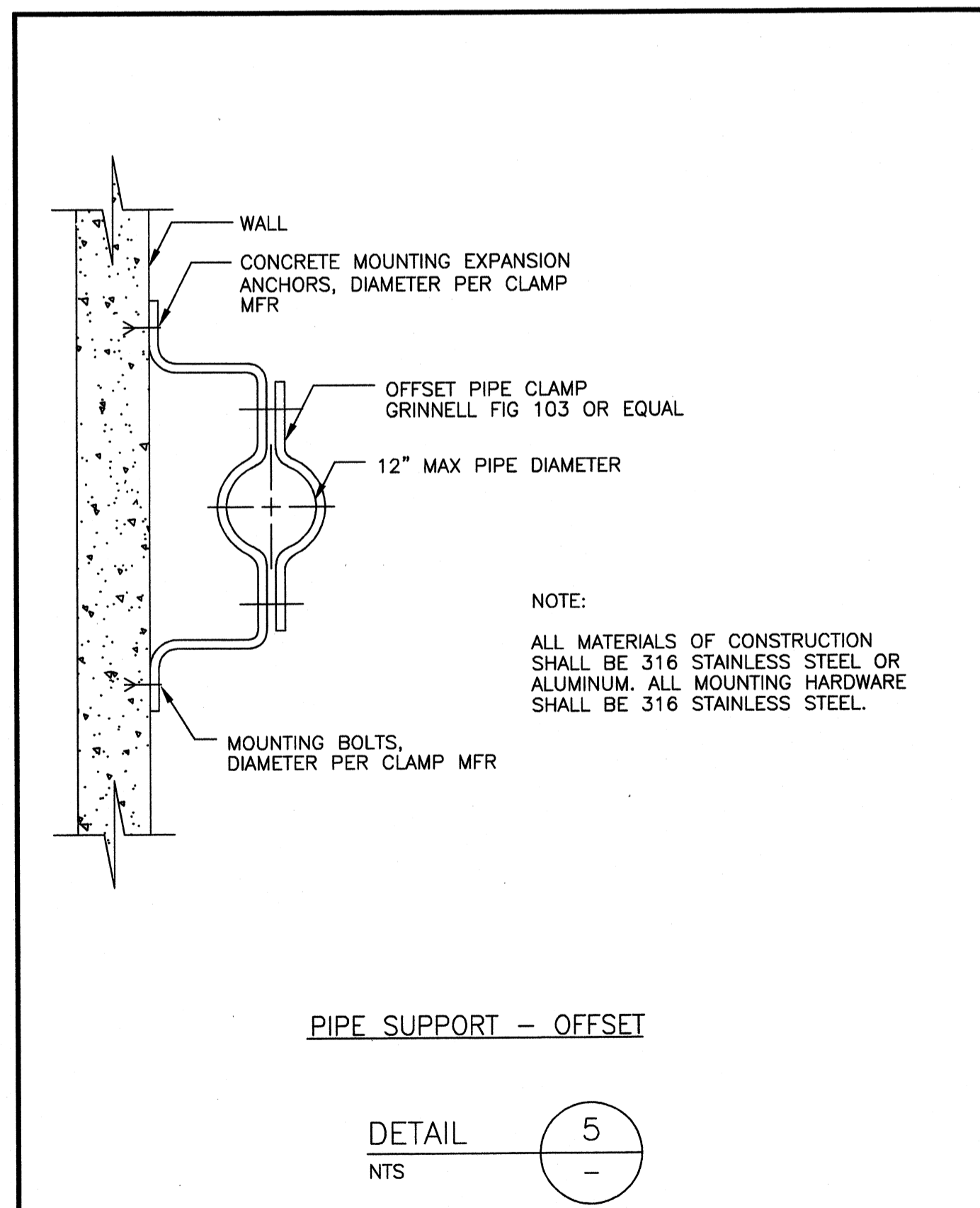
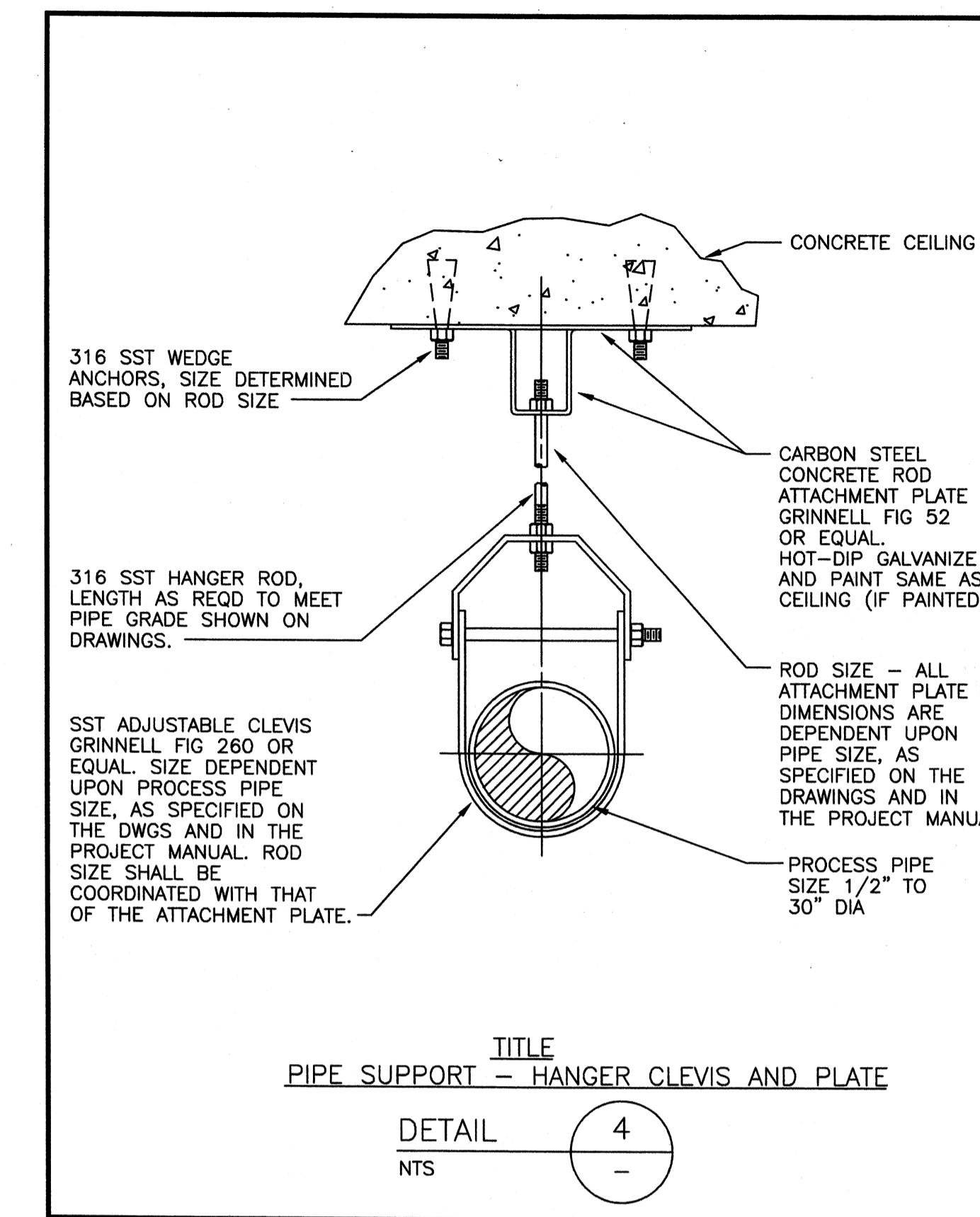
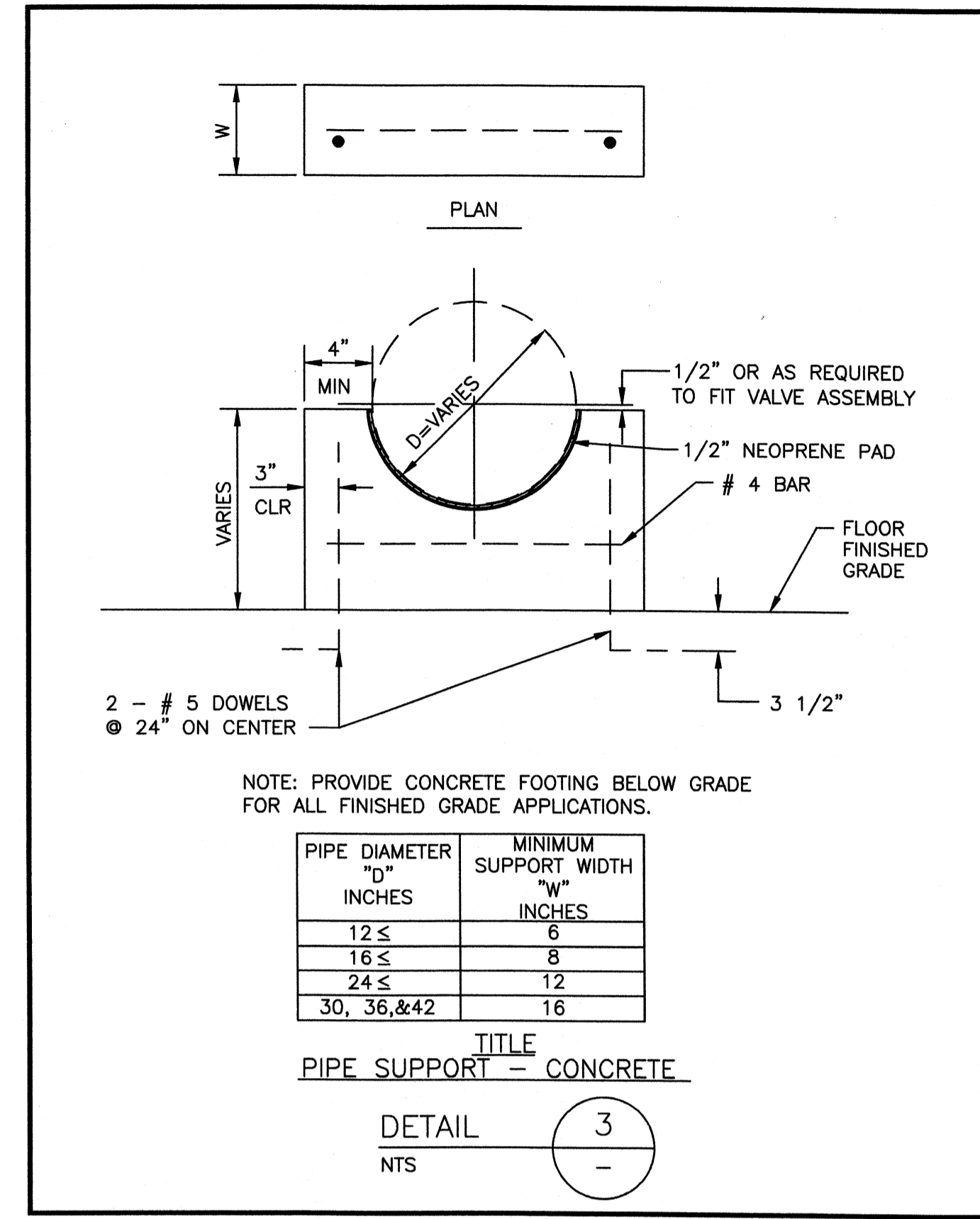
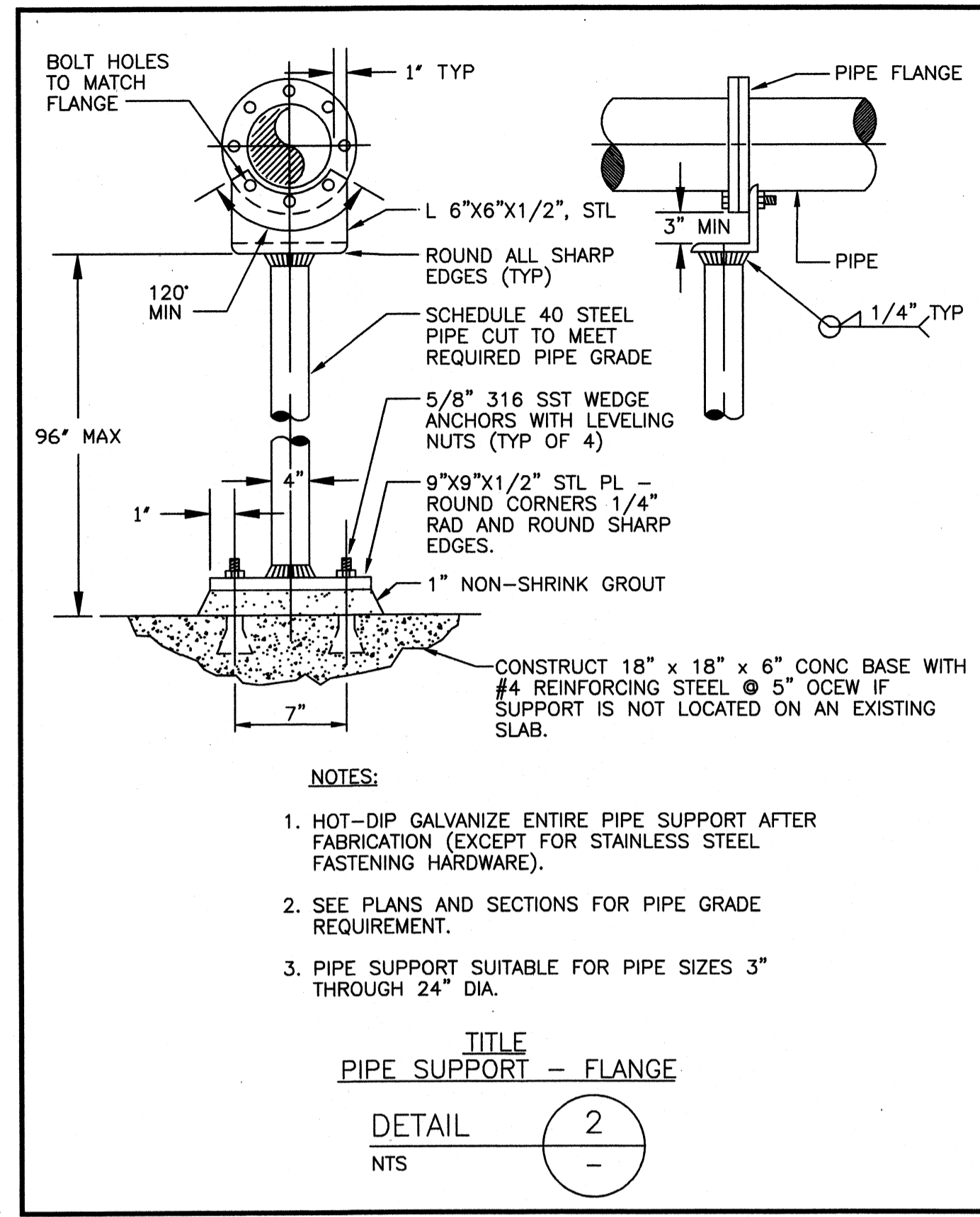
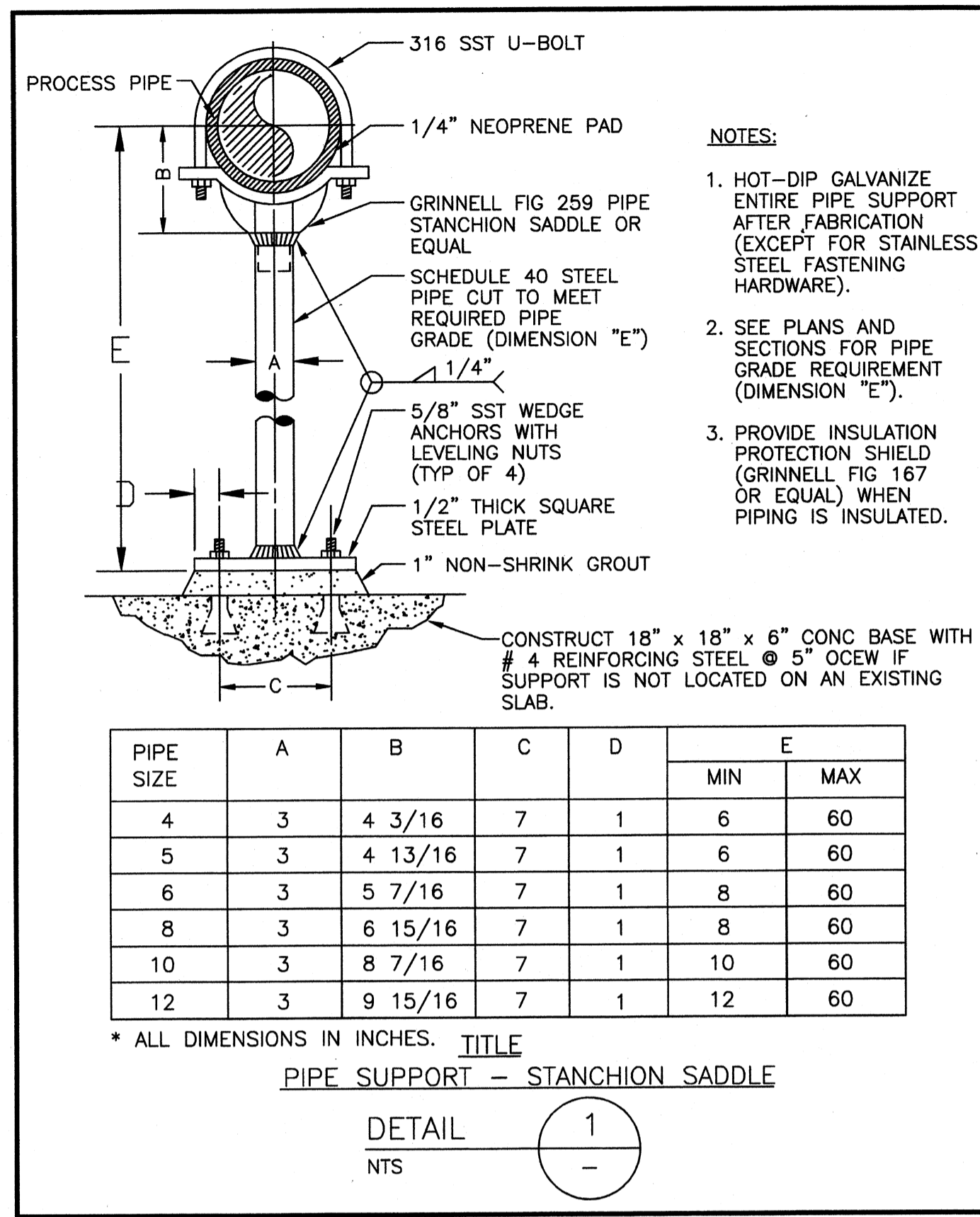
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT
OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT
Proj. Loc.: CROMWELL, OHIO COUNTY, KY
SODIUM PERMANGANATE FEED SYSTEM ENLARGED PLAN AND SECTIONS

Project No.:	120-07060
Designed By:	JCB, GDP
Drawn By:	
Checked By:	

M-168

Wednesday, July 01, 2009 2:08:35 PM DRAWING: \\netof0163\projects\120-07060 Ohio County\CONFORMED SET 5-09\PROCESS\07060 M-501 DWG LAYOUT M-501 USER NAME: JEREMY M. FRONGILLO



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PROJECT RECORD

Client: OHIO COUNTY WATER DISTRICT
Ohio County Water District
Water Treatment Plant

CONFORMED SET 5/09

3/17/09

Prof. Loc: GROOMWELL, OHIO COUNTY, KY

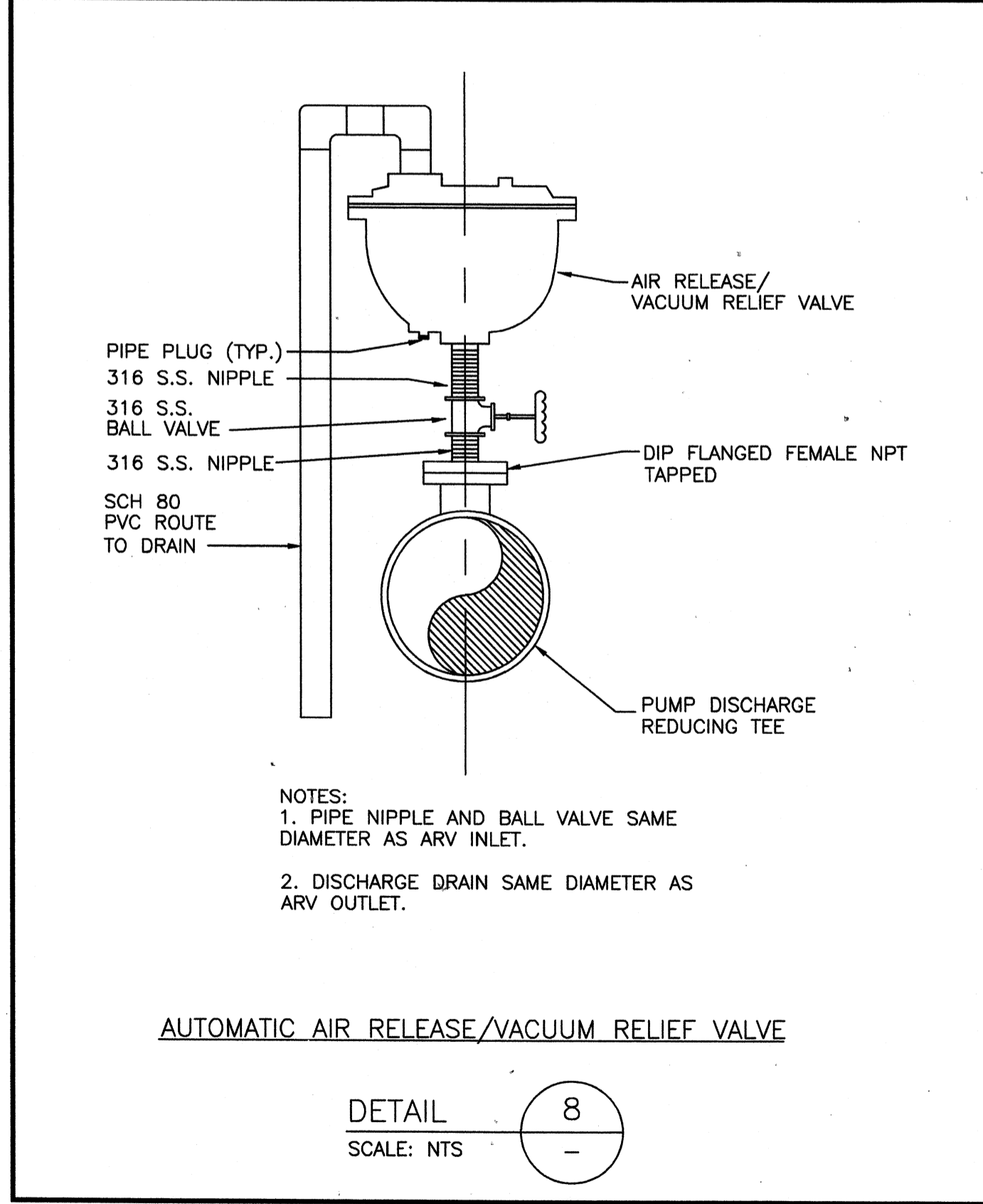
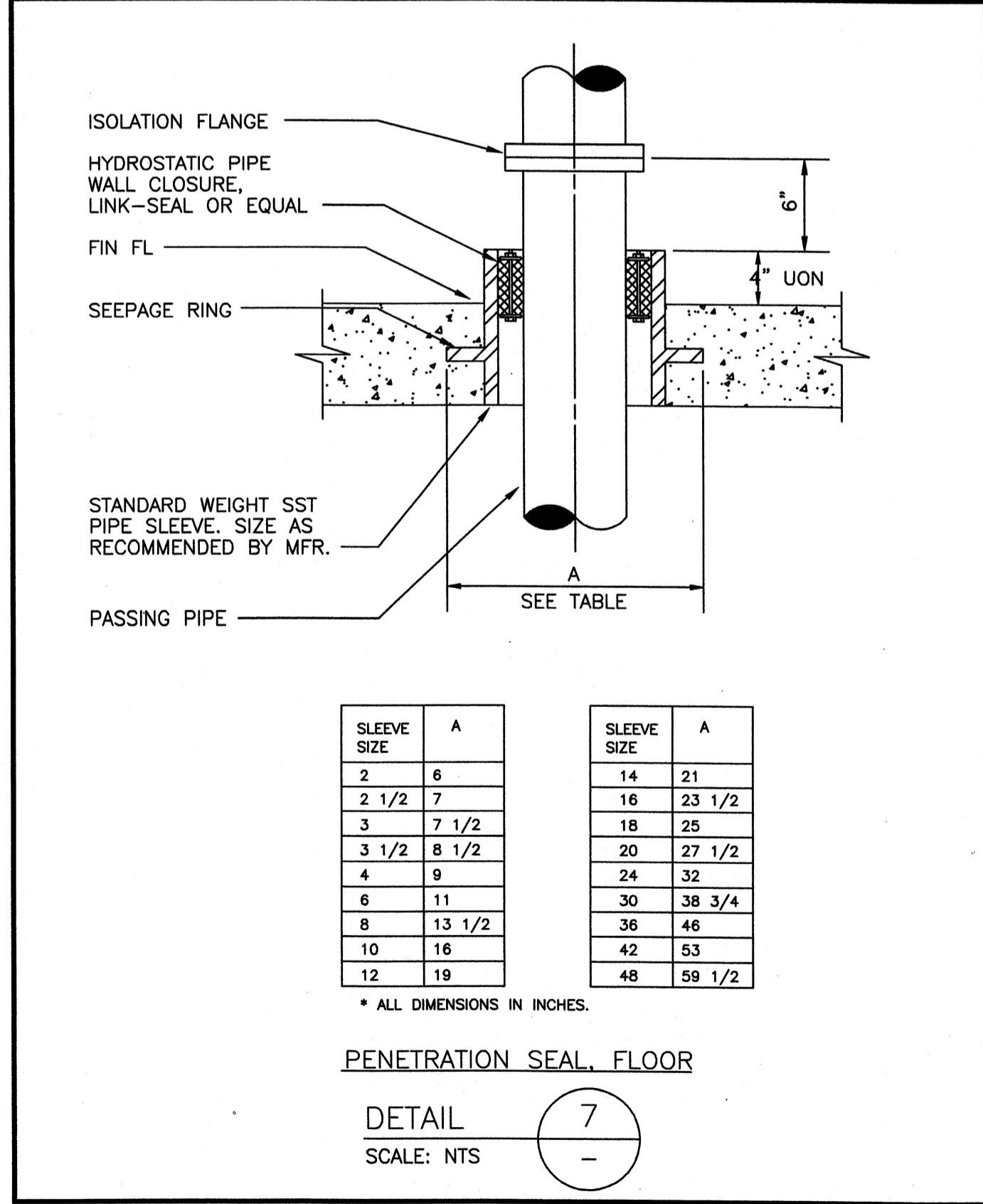
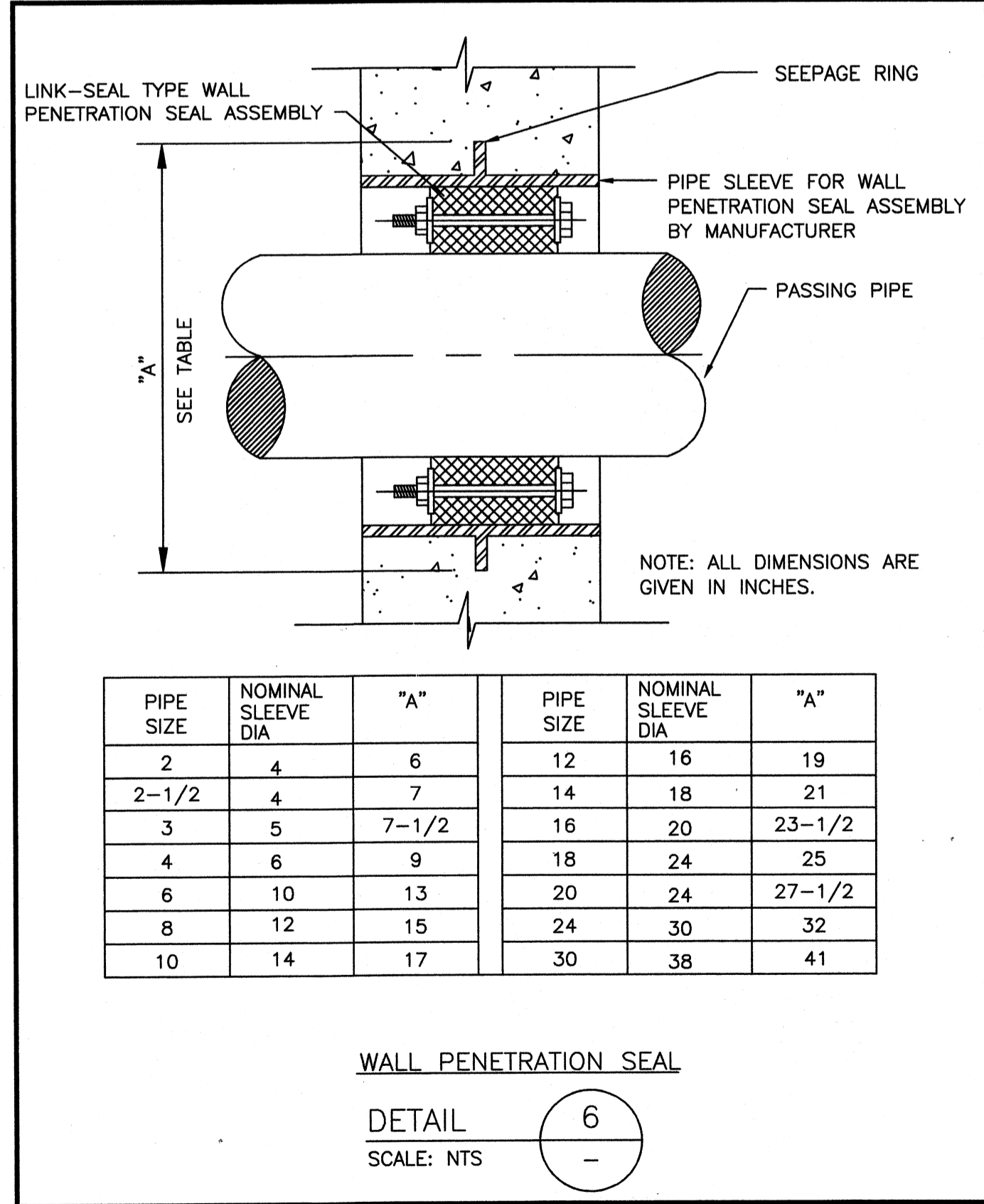
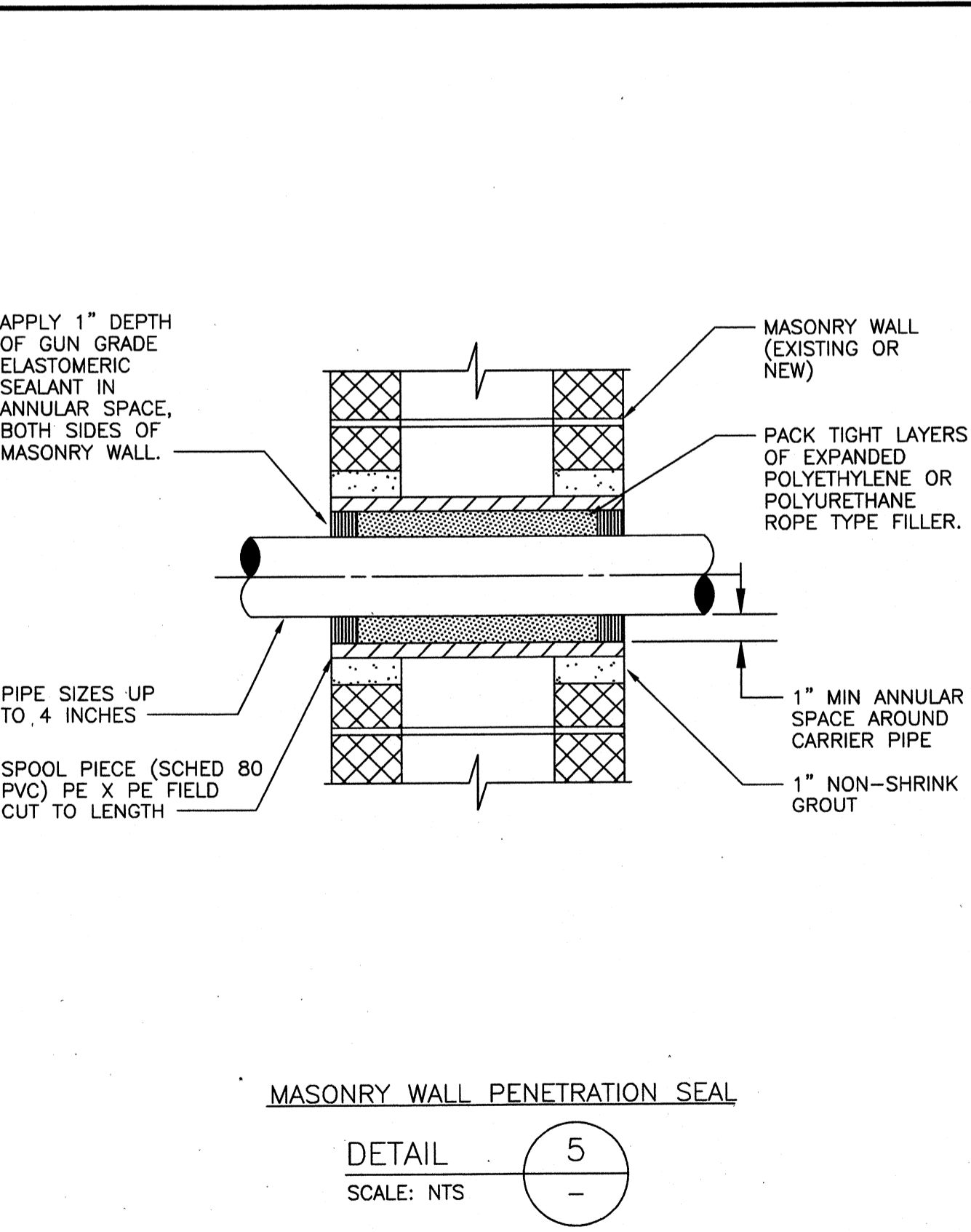
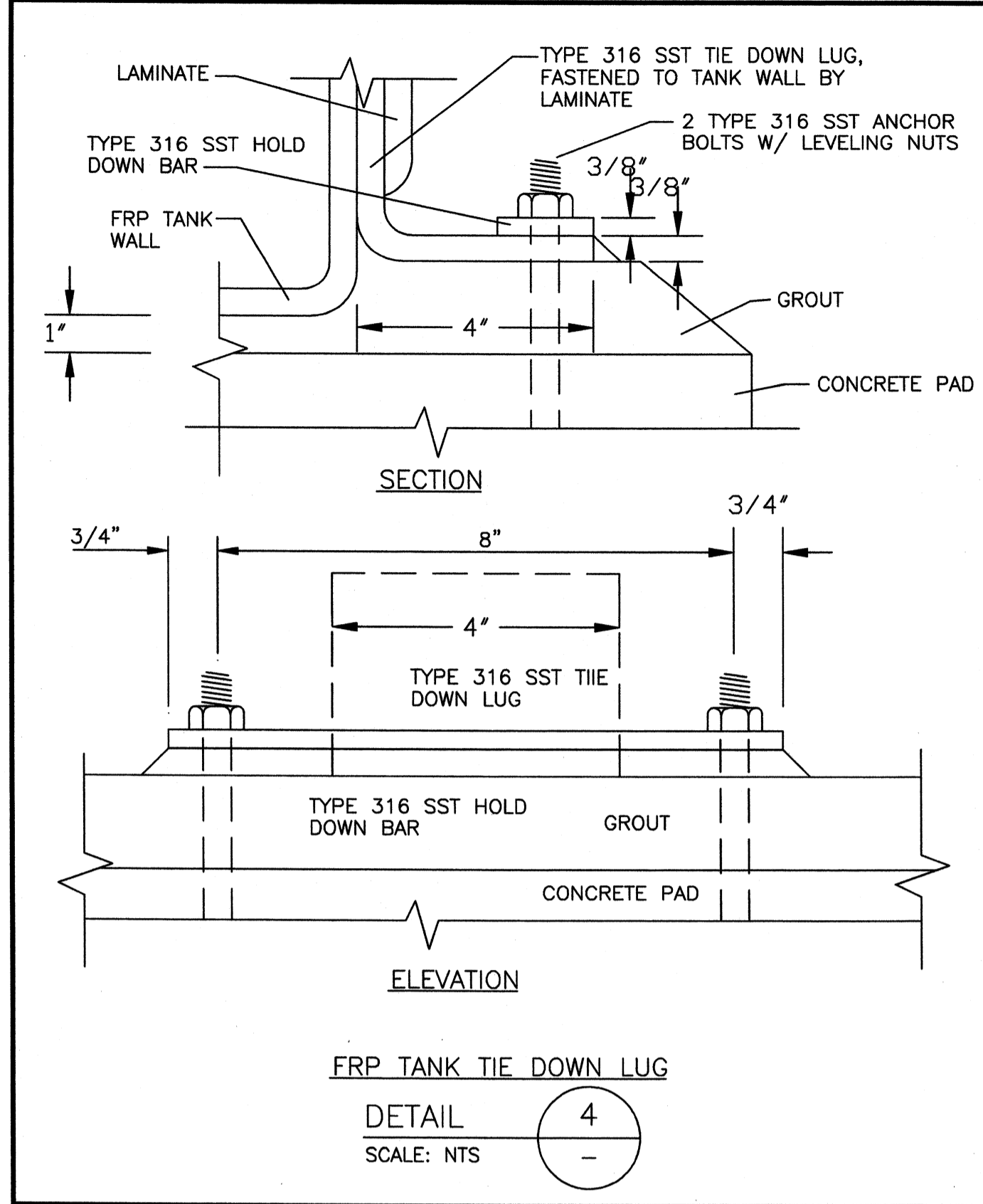
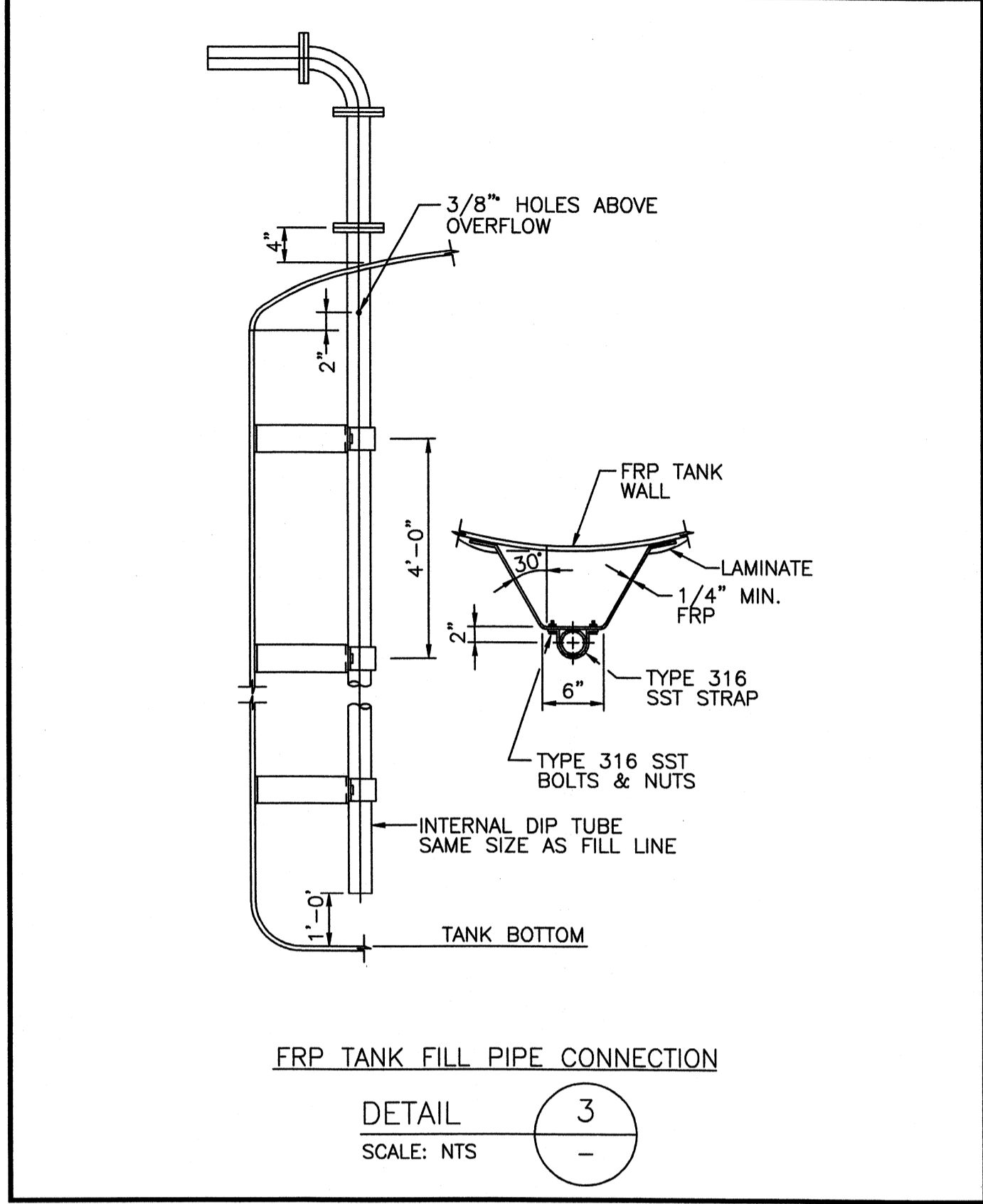
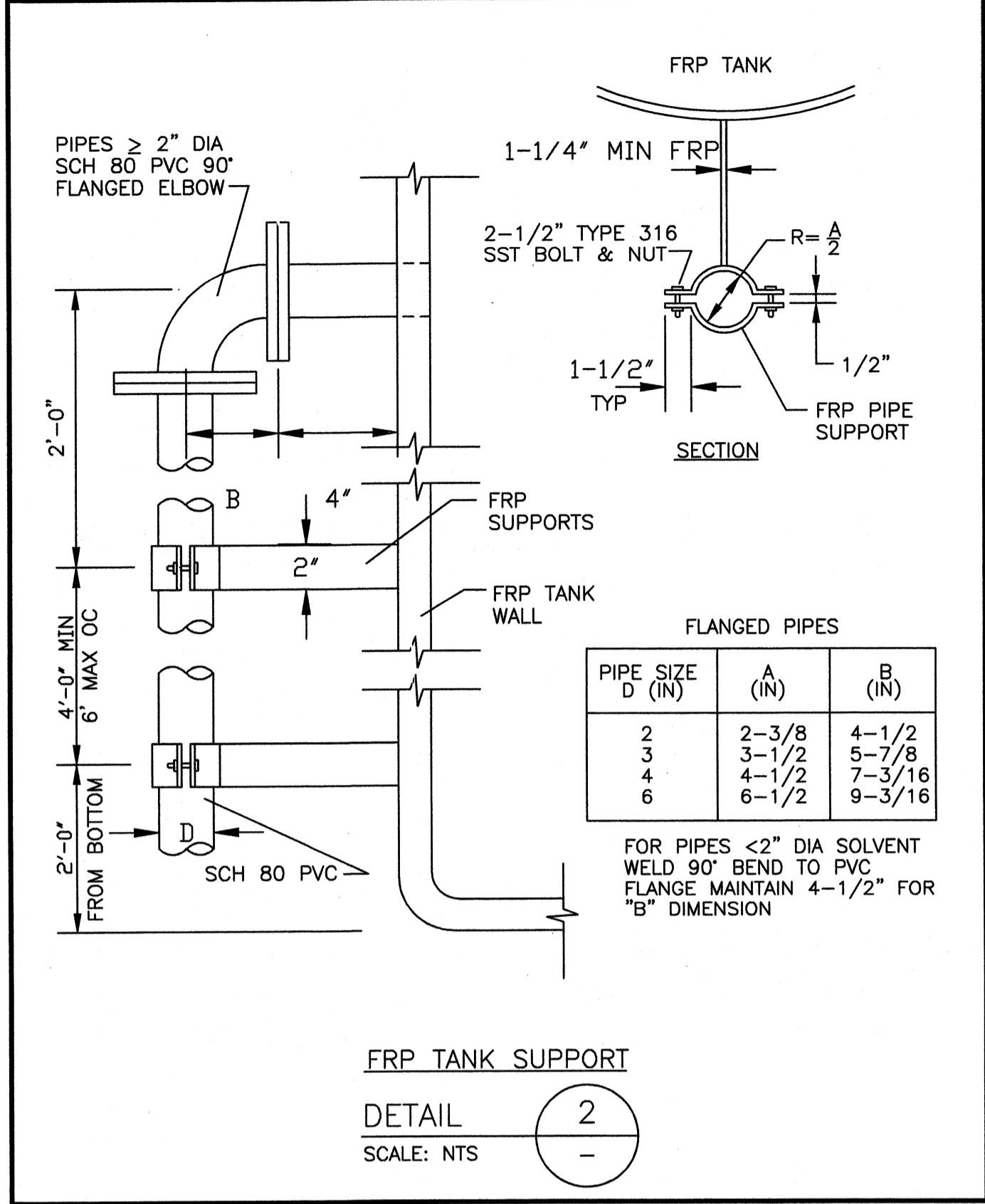
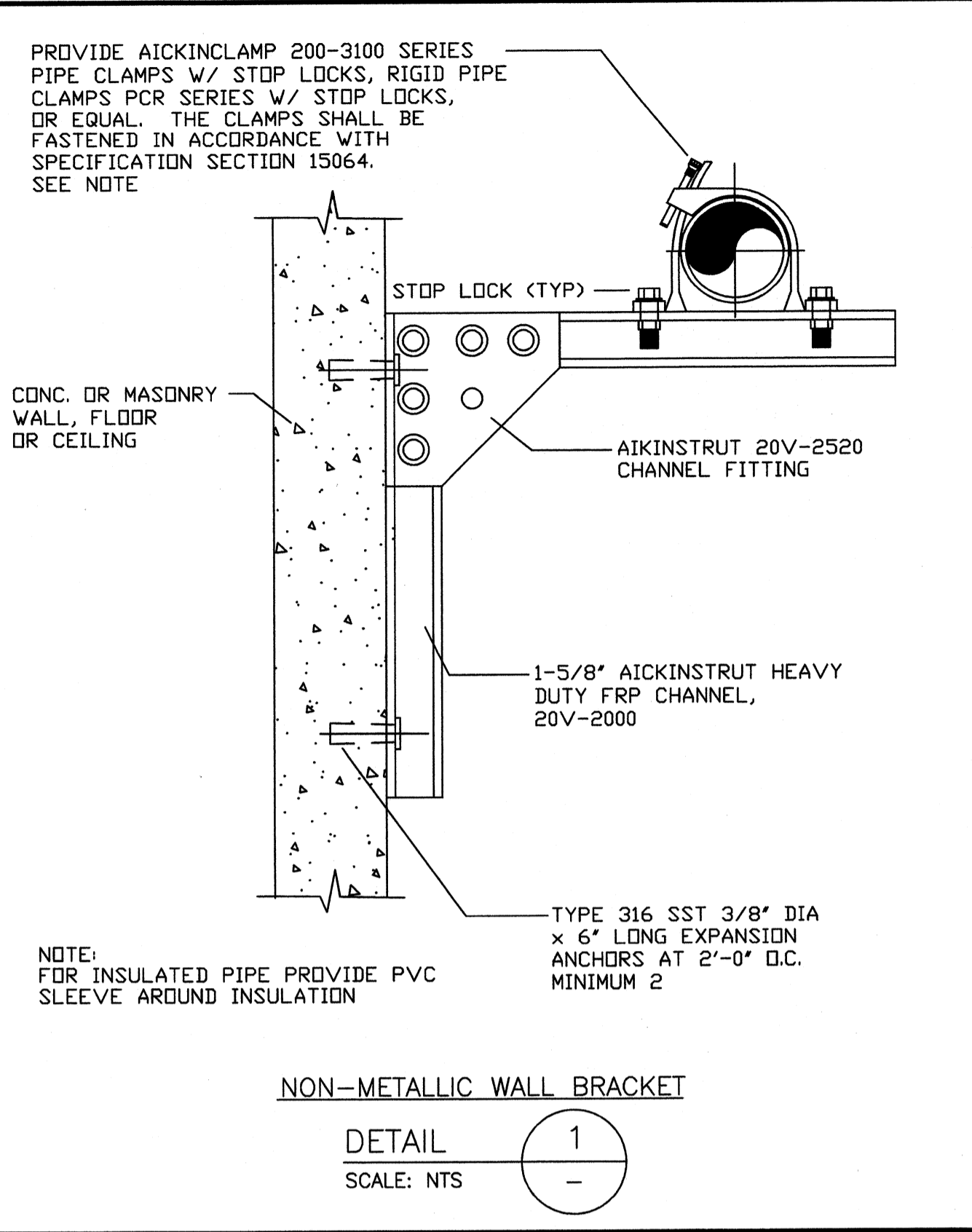
PROCESS DETAILS

Project No.: 120-07060
Designed By:
Drawn By: JB
Checked By:

M-501

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Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY | MARK | DATE | DESCRIPTION

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PROJECT RECORD

CONFORMED SET 5/09

Ohio County Water District

PROJECT NO.: 120-07060

DESIGNED BY:

DRAWN BY: JB

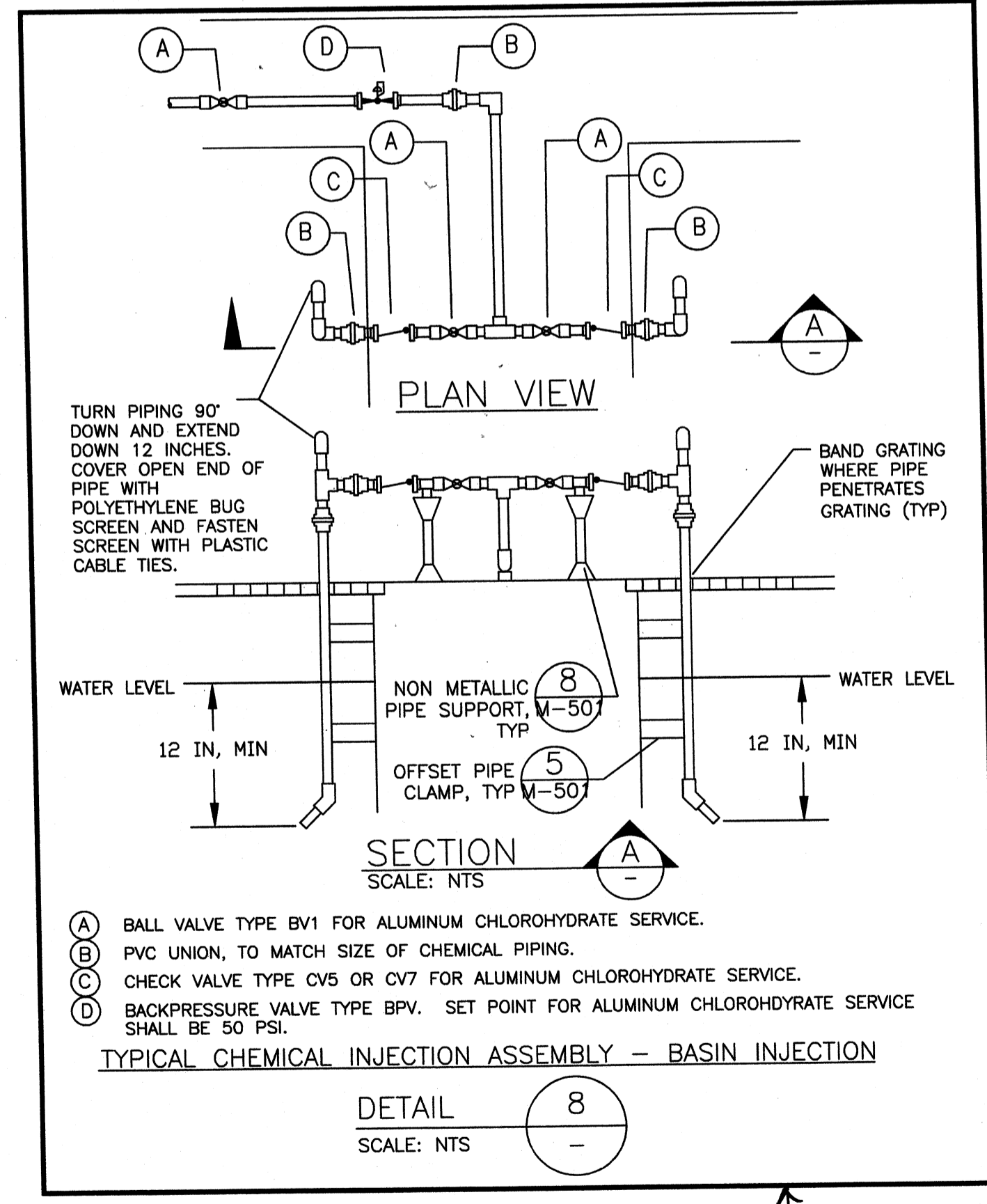
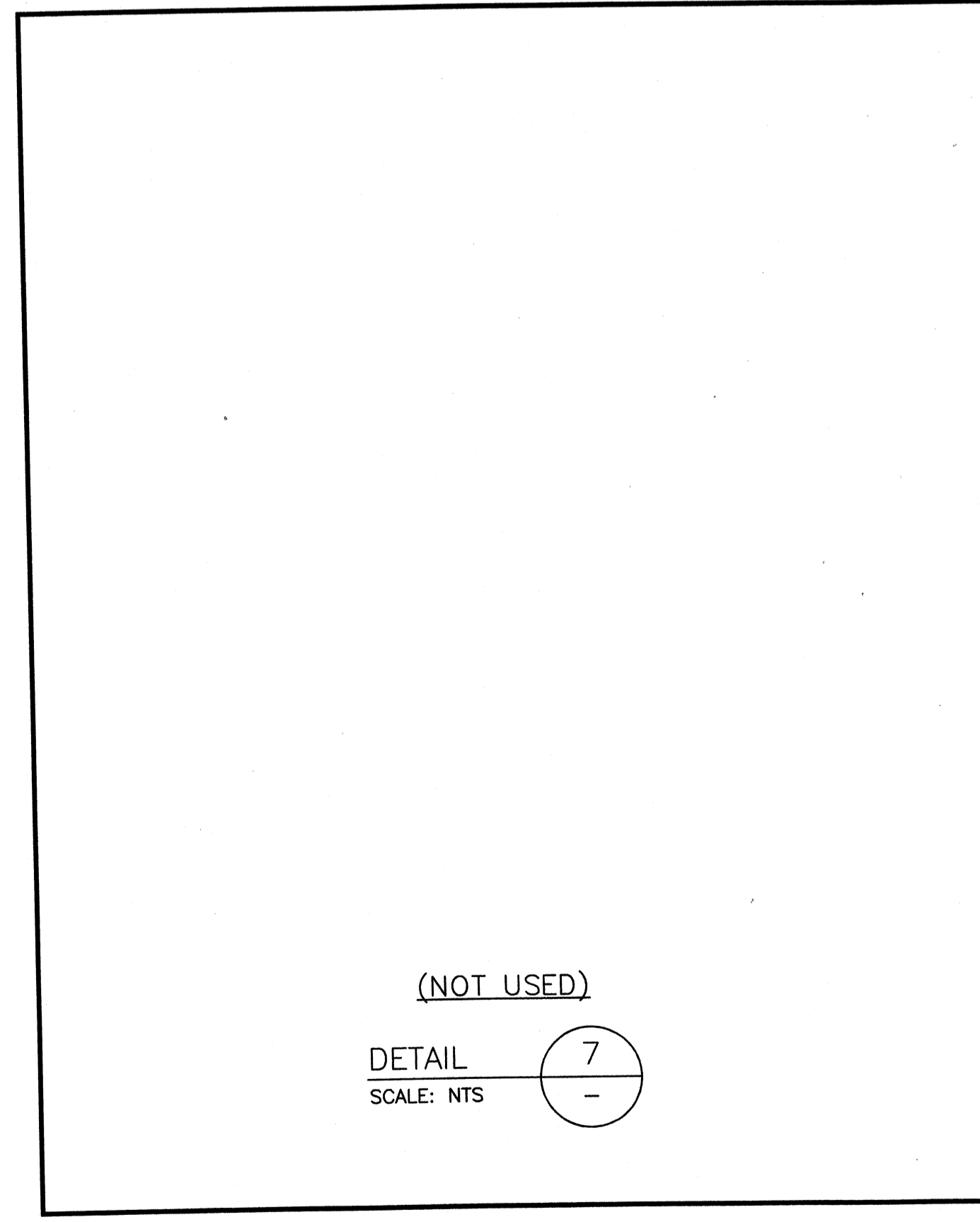
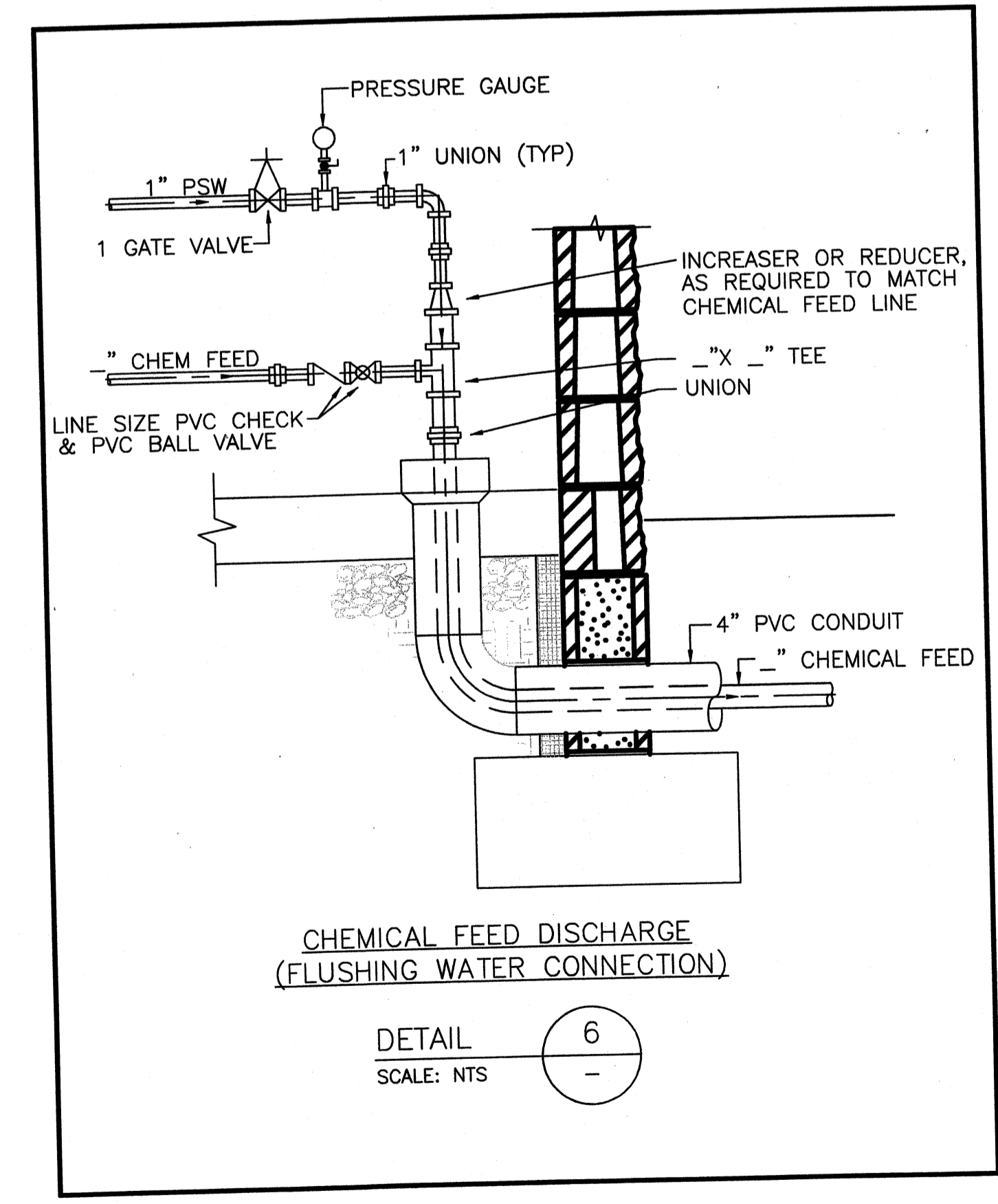
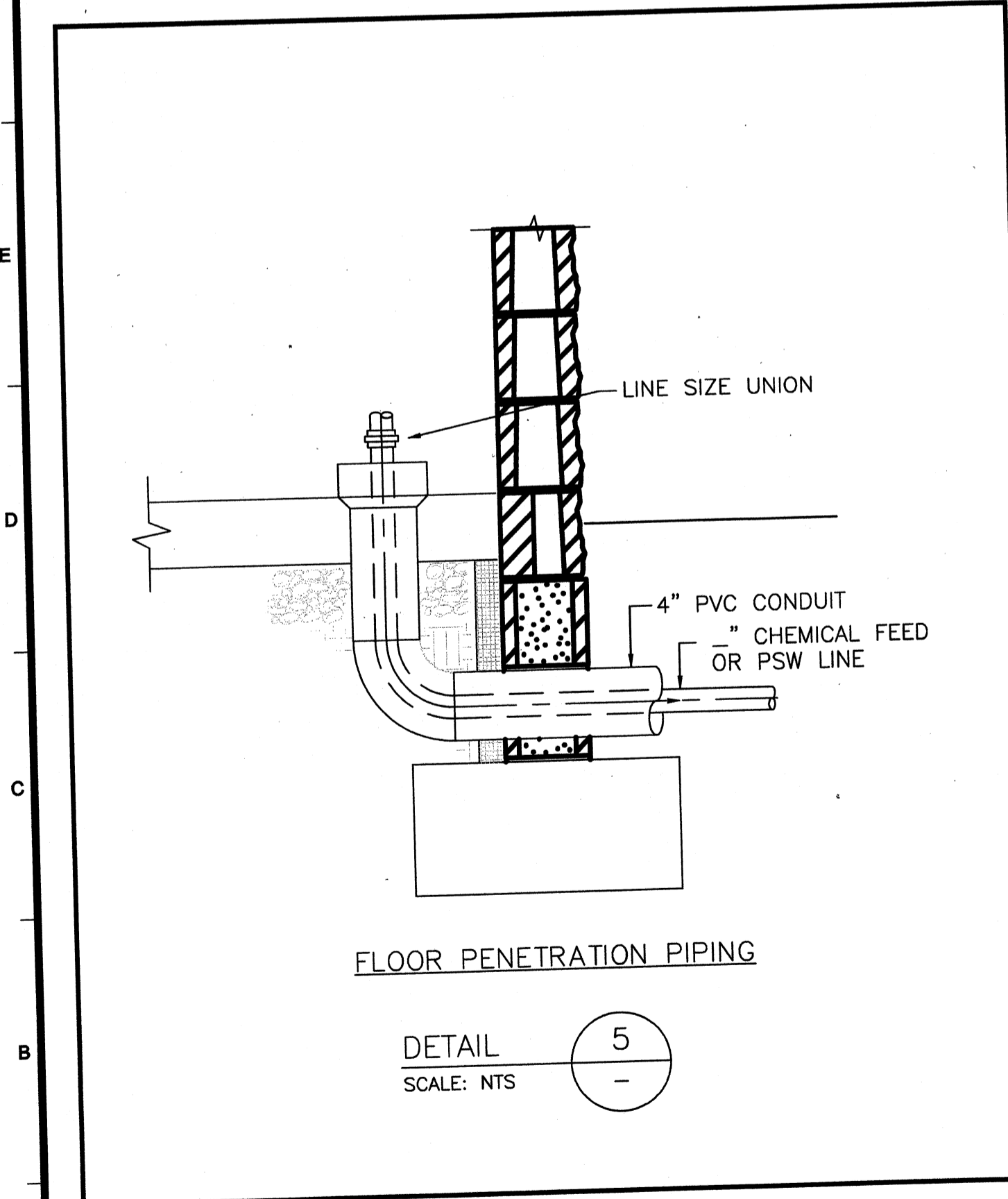
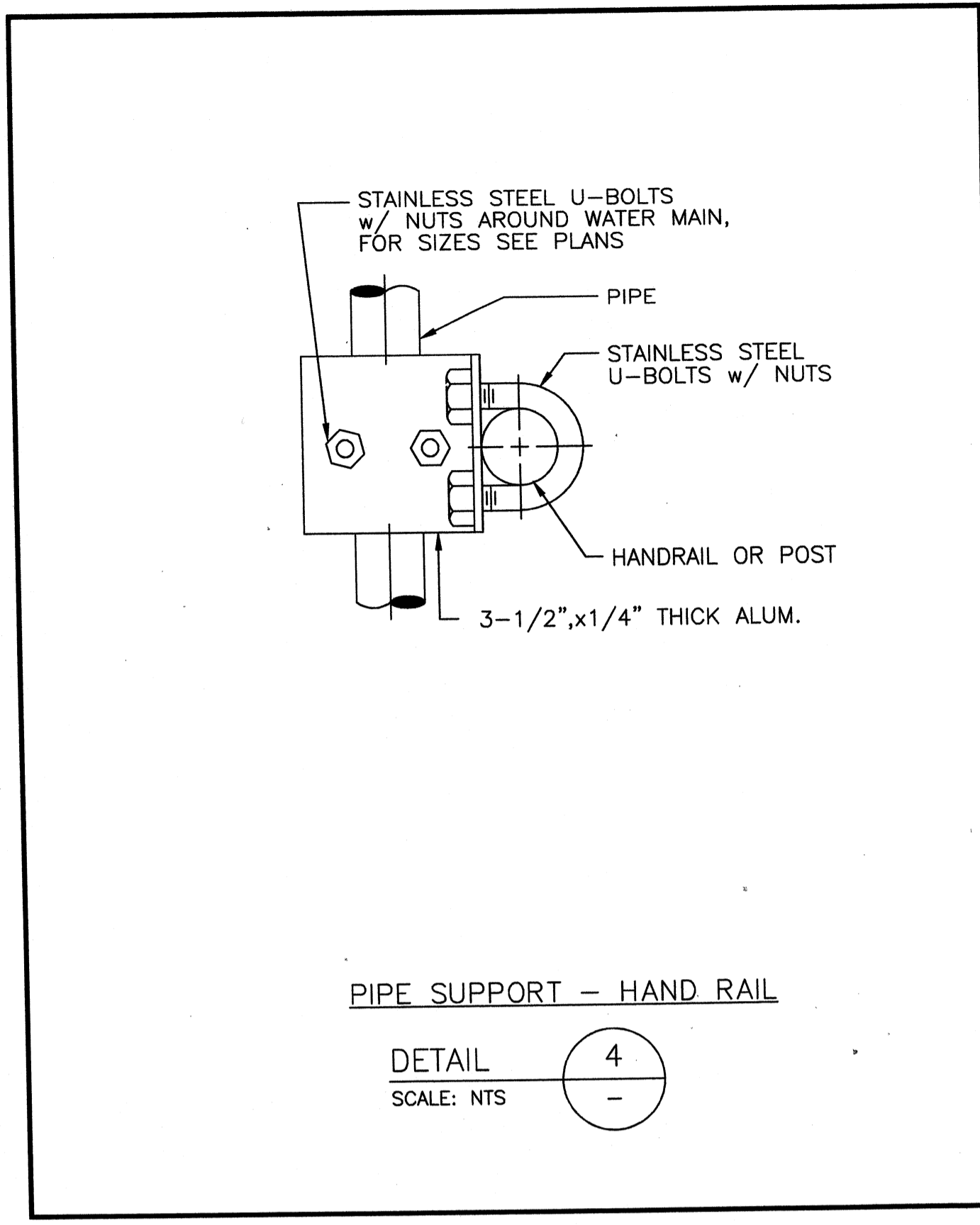
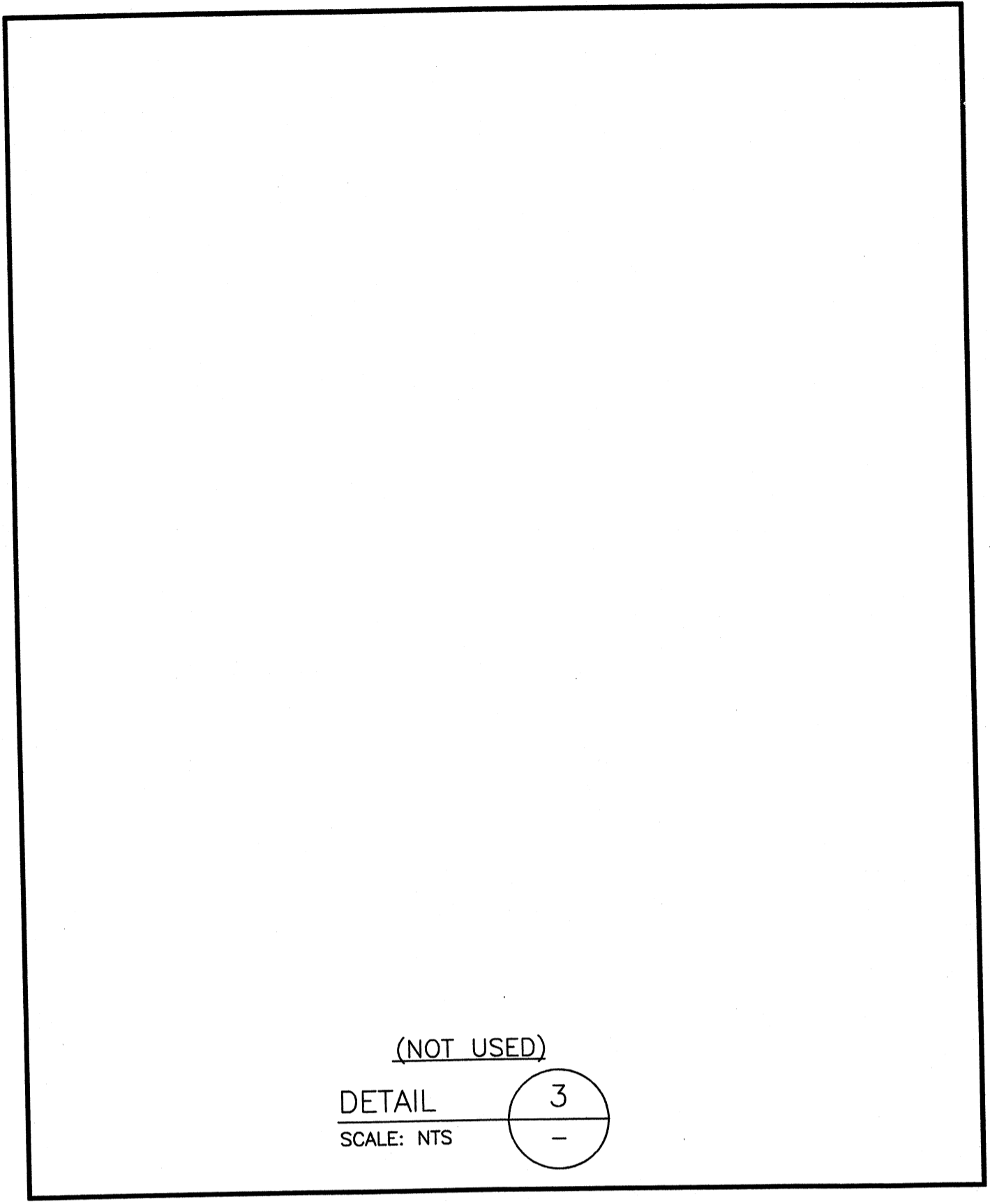
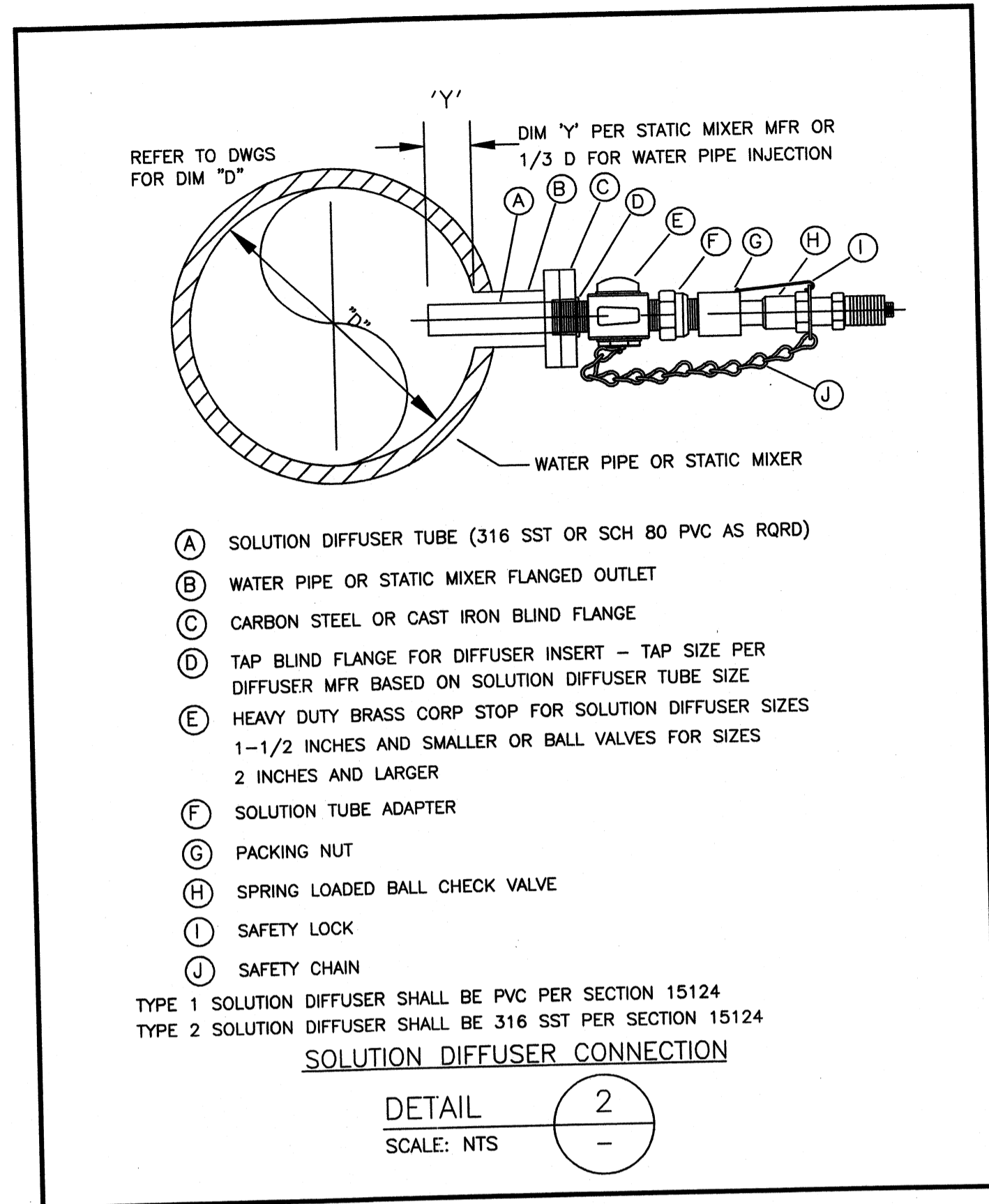
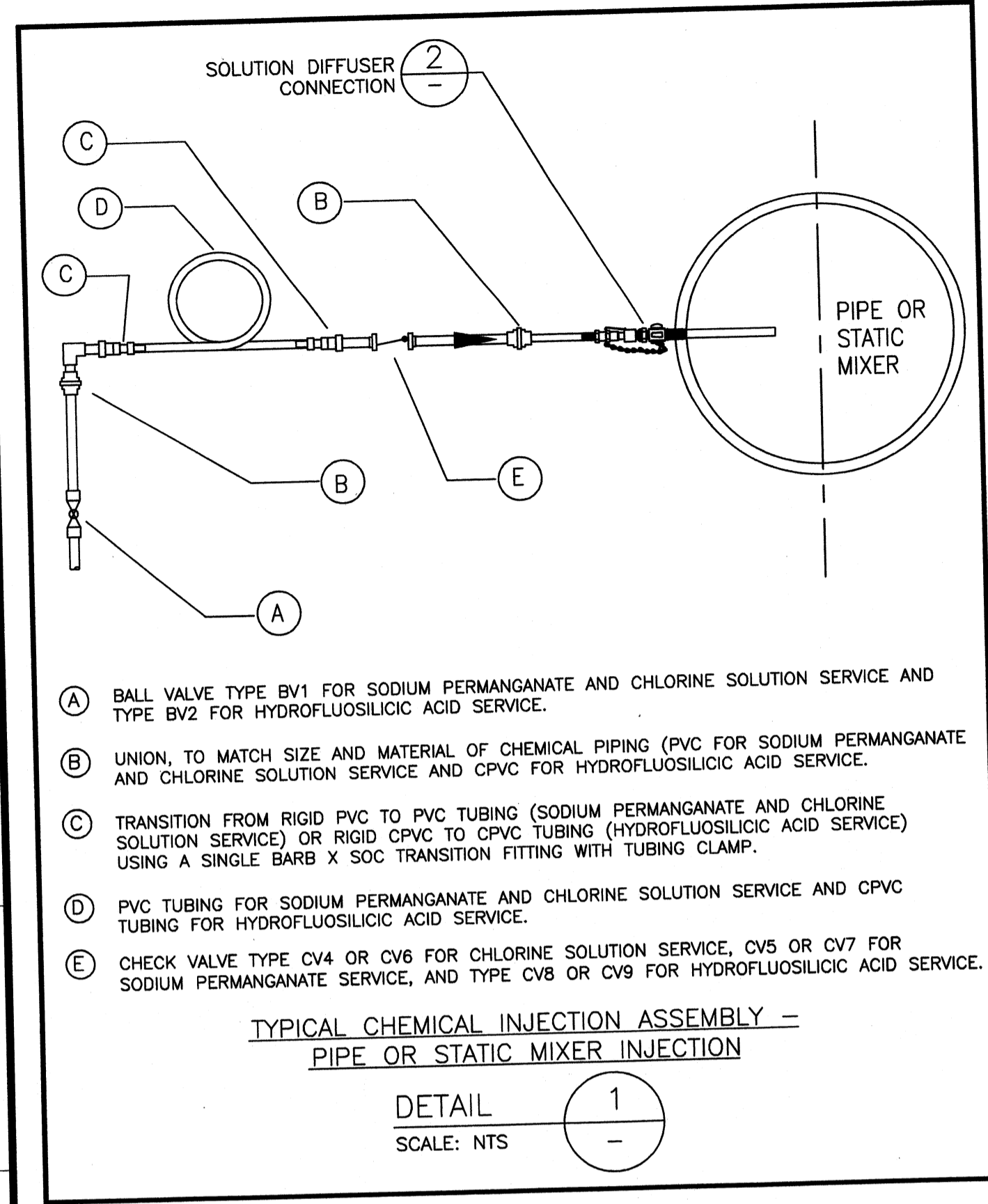
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PROCESS DETAILS

M-502

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ALUMCLOROHYDRATE FEE POINT WAS MOVED INSIDE INFLUENT FLOW METER VALVE

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PROJECT RECORD	
CONFORMED SET 5/09	
<p>3/19/09</p>	
BY	DATE
MARK	DESCRIPTION

PROCESS DETAILS

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY

OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT

Project No.: 120-07060
 Designed By: _____
 Drawn By: JB
 Checked By: _____

M-503

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Wednesday, July 01, 2009 2:52:06 PM DRAWING: \net\office3\projects\120-07060 Ohio County\CONFORMED SET 5-09MECHANICAL\H-100 HEATING & VENTILATING LEGEND .DWG LAYOUT: H-100 HEATING & VENTILATING LEGEND USER NAME: JEREMY M. FRONIGILLO

GRAPHIC SYMBOLS FOR PIPING AND EQUIPMENT ITEMS

	VENT TO ROOF
	PIPE ANCHOR
	EXPANSION JOINT
	EXPANSION COMPENSATOR
	FLEXIBLE CONNECTOR
	FLOW ELEMENT
	PIPE GUIDE
	YARD HYDRANT (SEE DETAIL)
	PRESSURE REDUCING STATION (SEE DETAIL)
	PUMP SEALING WATER CONNECTION (SEE DETAIL)
	SAMPLE FUNNEL (SEE DETAIL)
	AIR SET ASSEMBLY (SEE DETAIL)
	AIR TO VALVE OPERATOR (SEE DETAIL) (THROTTLING SERVICE)
	AIR TO VALVE OPERATOR (SEE DETAIL) (OPEN SHUT SERVICE)
	IN LINE STATIC MIXER
	PULSATION DAMPENERS W/PRESSURE GAUGE (SINGLE DIAPHRAGM)
	CHEMICAL SEAL W/PRESS GAUGE
	EDUCTOR
	INJECTOR
	TRAP (STEAM OR AIR MOISTURE)
	QUICK DISCONNECT (AIR) (3/4")
	ELBOW UP
	ELBOW DOWN
	TEE UP
	TEE DOWN
	REDUCER-CENTRIC
	REDUCER-ECCENTRIC
	WYE STRAINER
	BASKET STRAINER
	UNION
	METER (TOTALIZING)
	ROTAMETER
	STEEL WALL SLEEVE
	EMERGENCY SHOWER AND EYEWASH
	PIPING (BELOW SLAB)
	FLOOR DRAIN
	FLOOR DRAIN W/SEDIMENT BUCKET
	FLOOR SINK
	PUMP BASE DRAIN
	EQUIPMENT DRAIN
	CLEANOUT-FLOOR
	CLEANOUT-HORIZONTAL
	ROOF DRAIN
	PIPE TO DRAIN
	CENTRIFUGAL PUMP
	IN-LINE PUMP
	INSTRUMENT AIR PNEUMATIC SIGNAL
	ELECTRIC
	INSTRUMENT CAPILLARY TUBING
	BACKFLOW PREVENTER
	CONNECTION TO EXISTING

GRAPHIC SYMBOLS FOR INSTRUMENTATION

	PANEL MOUNTED INSTRUMENT (INSIDE)
	PANEL MOUNTED INSTRUMENT (FACE)
	LOCALLY MOUNTED INSTRUMENT
	FLOW ELEMENT
	FLOW INDICATOR
	LEVEL ELEMENT
	LOW WATER CUT-OFF
	PRESSURE INDICATOR
	PRESSURE SWITCH
	TEMPERATURE INDICATOR
	TEMPERATURE INDICATOR CONTROLLER
	TEMPERATURE TRANSMITTER

GRAPHIC SYMBOLS FOR VALVES

	TRIPLE DUTY VALVE
	GATE VALVE
	GLOBE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	PLUG VALVE / CORPORATION COCK
	BALANCING VALVE
	PET COCK
	CHECK VALVE
	PLUG VALVE - GAS
	STOP AND CHECK VALVE
	PINCH OR DIAPHRAGM VALVE
	AUTO-FLOW CONTROL VALVE
	ANGLE OR NEEDLE VALVE
	PRESSURE RELIEF VALVE
	THREE WAY VALVE
	TEMPERING VALVE
	SOLENOID OPERATED VALVE
	PRESSURE REGULATING VALVE (SELF CONTAINED)
	MOTORIZED CONTROL VALVE (OPEN-SHUT, THROTTLING)
	PNEUMATIC OPERATED CONTROL VALVE (OPEN-SHUT, THROTTLING)
	BACKPRESSURE VALVE
	HOSE BIBB (3/4")
	FLUSHING HOSE BIBB (1-1/2")
	SILL COCK (3/4")
	FLUSHING CONNECTION (ON PIPE) 1-1/2"
	ANTISIPHON VALVE

GRAPHIC SYMBOLS FOR HEATING, VENTILATION, & AIR CONDITIONING

	UNIT HEATER (DOWNBLAST)
	UNIT HEATER (HORIZONTAL)
	THERMOSTAT
	POWER OR GRAVITY ROOF VENTILATOR-EXHAUST (FLOOR PLAN BELOW ROOF)
	POWER OR GRAVITY ROOF VENTILATOR-INTAKE (FLOOR PLAN BELOW ROOF)
	POWER OR GRAVITY ROOF VENTILATOR-(ROOF PLAN)
	DUCT SECTION (EXHAUST OR RETURN)
	DUCT SECTION (SUPPLY)
	INCLINED DROP IN RESPECT TO AIR FLOW, TOP FLAT
	INCLINED RISE IN RESPECT TO AIR FLOW, BOTTOM FLAT
	SPLITTER DAMPER
	TURNING VANES
	AIR EXTRACTOR
	ACOUSTICAL LINING
	FLEXIBLE CONNECTION
	FLEXIBLE CONNECTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR REGISTER
	RETURN OR EXHAUST AIR REGISTER
	AUTOMATIC AIR DAMPER MOTOR OPERATED
	DAMPER AS SPECIFIED
	VOLUME DAMPER
	FIRE STOP (DAMPER) VERTICAL INSTALLATION IN PLAN
	HEAT STOP HORIZONTAL INSTALLATION IN PLAN
	FIRE STOP (DAMPER) HORIZONTAL INSTALLATION IN SECTION
	CENTRIFUGAL FAN
	IN LINE FAN
	WALL EXHAUST FAN W/DAMPER
	LOUVERS AND SCREEN
	LOUVERS & SCREEN WITH DAMPER

GRAPHIC SYMBOLS FOR TEMPERATURE CONTROL

	TEMPERATURE INDICATOR
	DAMPER OPERATOR
	TEMPERATURE TRANSMITTER
	FIRESTAT
	FREEZESTAT
	E.P. RELAY
	TEMPERATURE CONTROLLER
	RELAY
	CONTROLLER
	SMOKE DETECTOR
	PANEL MOUNTED DEVICES
	NIGHT THERMOSTAT

HVAC ABBREVIATIONS

ACC	AIR COOLED CONDENSING UNIT
AD	AUTOMATIC DAMPER
B	BOILER
P	PUMP
CA	COMBUSTION AIR
CC	CABINET CONVECTOR
CE	CEILING EXHAUSTER
CEF	CENTRIFUGAL FAN
CF	CABINET FAN
CRD	CORROSION RESISTANT DUCT
CWF	CENTRIFUGAL WALL FAN
EA	EXHAUST AIR
EAG	EXHAUST AIR GRILLE
EAR	EXHAUST AIR REGISTER
EH	ELECTRIC HUMIDIFIER
EUH	ELECTRIC UNIT HEATER
FF	FORCE FLOW CONVECTOR
FT	FIN TUBE
GUH	GAS UNIT HEATER
HR	HEAT RECOVERY UNIT
HRC	HEAT RECOVERY COIL
HV	HEATING AND VENTILATING UNIT
HVAC	HEATING VENTILATING AND AIR CONDITIONING UNIT
IF	IN-LINE FAN
OA	OUTSIDE AIR
RA	RETURN AIR
RAG	RETURN AIR GRILLE
RAR	RETURN AIR REGISTER
RF	ROOF FAN
RV	ROOF VENTILATOR
SA	SUPPLY AIR
SAD	SUPPLY AIR DIFFUSER
SAR	SUPPLY AIR REGISTER
SF	SUPPLY FAN
SUH	STEAM UNIT HEATER
TCC	TEMPERATURE CONTROL CONTRACTOR
TCP	TEMPERATURE CONTROL PANEL
UH	UNIT HEATER
VAV	VARIABLE AIR VOLUME UNIT
WCC	WATER COOLED CONDENSING UNIT
WF	WALL FAN

GENERAL NOTES:

- 1.) A SUFFICIENT NUMBER OF UNIONS SHALL BE PROVIDED AND INSTALLED AT EACH PIECE OF EQUIPMENT TO FACILITATE REMOVAL OF EQUIPMENT WITHOUT HAVING TO CUT PIPE.
- 2.) PIPE SIZES SHOULD BE THE SAME SIZE OR LARGER THAN THE OPENING ON THE EQUIPMENT THEY ARE CONNECTED TO.
- 3.) PRESSURE TAPS SHALL BE LOCATED ON THE TOP OF PROCESS PIPE LINES.
- 4.) SAMPLE AND CHEMICAL TAPS SHALL BE LOCATED ON THE SIDE OF PROCESS PIPE LINES.
- 5.) DRAIN TAPS SHALL BE LOCATED ON THE BOTTOM OF PROCESS PIPE LINES.
- 6.) MINIMUM CLEARANCE BETWEEN PIPES INCLUDING INSULATION SHALL BE 3".
- 7.) SIGNAL AIR LINES SHALL BE ATTACHED TO AIR OPERATED DEVICES WITH FLEXIBLE PLASTIC TUBING.
- 8.) ALL INSTRUMENTATION SYMBOLS ARE I.S.A. STANDARDS.
- 9.) FLOOR DRAINS TO BE PLACED 1" BELOW FINISH FLOOR ELEVATION.
- 10.) SHUT-OFF VALVES TO BE FURNISHED AT ALL EQUIPMENT LOCATIONS AND WHERE PIPING ENTERS OR LEAVES STRUCTURES.
- 11.) ALL SINKS (INCLUDING LAB CUP SINKS) SHALL HAVE STOP COCKS UNDER COUNTER TOP.
- 12.) ALL PLUMBING IN FINISHED AREAS SHALL RUN BEHIND CABINET WORK OR IN MASONRY WALLS.
- 13.) ALL ROTAMETERS SHALL BE INSTALLED 5'-0" ABOVE FINISH FLOOR TO CENTER OF METER AND VALVES.
- 14.) LIGHTER WEIGHT LINES SHOW EXISTING OR NON-MECHANICAL WORK, DARKER LINES SHOW NEW MECHANICAL WORK.
- 15.) DENOTES EQUIPMENT, PIPE & DUCT AREAS OF DEMOLITION.
- 16.) UNIT HEATERS TO BE INSTALLED 8'-0" A.F.F. UNLESS NOTED OTHERWISE.
- 17.) ALL UNUSED PORTIONS OF LOUVERS FOR MECHANICAL EQUIPMENT OPENINGS SHALL BE BLOCKED-OFF USING INSULATED SHEET METAL PANELS UNLESS OTHERWISE INDICATED.

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PROJECT RECORD

CONFORMED SET 5/09

BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

Project No.: 120-07060
Designed By:
Drawn By:
Checked By:

H-100
Sheet of 147
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HVAC UNIT (ELECTRIC HTG, DX COOLING)													
MARK	LOCATION	SUPPLY FAN			HEATING SECTION			COOLING COIL			VOLTS	MODEL NO.	REMARKS
		CFM	ESP	HP	MBH INPUT	MBH OUTPUT	ELECT. KW	ID FAN MOTOR	MBH TOTAL	MBH (SENS)			
HVAC-1	OPERATIONS BLDG ZONE #1	2000	.80	0.75 KW	67.8	10	N/A	53.3	50.0	80	230	TRANE W/ 2TEH3F60B1000	W/ FACTORY INSTALLED HEATING COIL
HVAC-2	OPERATIONS BLDG ZONE #2	1600	.80	0.37 KW	42.5	7.68	N/A	42.1	39.0	80	240	TRANE W/ 2TEC3F48B1000	W/ FACTORY INSTALLED HEATING COIL
HVAC-3	OPERATIONS BLDG ZONE #3	2000	.80	0.75 KW	67.8	10	N/A	53.3	50.0	80	230	TRANE W/ 2TEH3F60B1000	W/ FACTORY INSTALLED HEATING COIL

REMOTE AIR COOLED CONDENSING UNIT (ACC)								
MARK	TONS	KILOWATTS	AMBIENT TEMP.	SUCTION TEMP.	VOLTS	MODEL NO.	SEER	REMARKS
ACC-1	5	17.7	93.4	80	208	TRANE 2TWA3060A3000	13.8	R-22 REFRIGERANT
ACC-2	4	14.1	93.4	80	208	TRANE 2TWA3048M4000	14.5	R-22 REFRIGERANT
ACC-3	5	17.7	93.4	80	208	TRANE 2TWA3060A3000	13.8	R-22 REFRIGERANT

ELECTRIC UNIT HEATERS (EUH)										
MARK	LOCATION	CFM	RPM	HP	MBH		VOLTS	PHASE	MODEL NO.	REMARKS
					KW					
EUH-1,2,3,4	UF BUILDING	910	1530	1/20	51.2	15.0	480	3	QMARK MUH-15-4	W/ UNIVERSAL WALL, FAN GUARD, INTERNAL THERMOSTAT
EUH-5,7	UF BUILDING	405		6.0A	17.0	5.0	480	3	QMARK W500483C1LS	CORROSION RESISTANT SEE NOTE 1
5A,5C,5D	CHEMICAL FEED BUILDING	405		6.0A	17.0	5.0	480	3	QMARK W500483C1LS	CORROSION RESISTANT SEE NOTE 1
EUH-6	UF BUILDING	910	1530	1/20	51.2	15.0	480	3	QMARK MUH-15-4	CORROSION RESISTANT SEE NOTE 1
EUH-6A,6B	CHEMICAL FEED BUILDING	1450	1530	1/4	51.2	15.0	480	3	QMARK X15004831BT	CORROSION RESISTANT, EXPLOSION PROOF SEE NOTE 1
EUH-7A	CHEMICAL FEED BUILDING	1180		12.0A	34.1	10.0	480	3	QMARK W1000483C1LS	CORROSION RESISTANT SEE NOTE 1

NOTES:
 1. SUPPLY WITH UNIVERSAL WALL/CEILING MOUNTING BRACKET, FAN GUARD, AND INTERNAL THERMOSTAT.

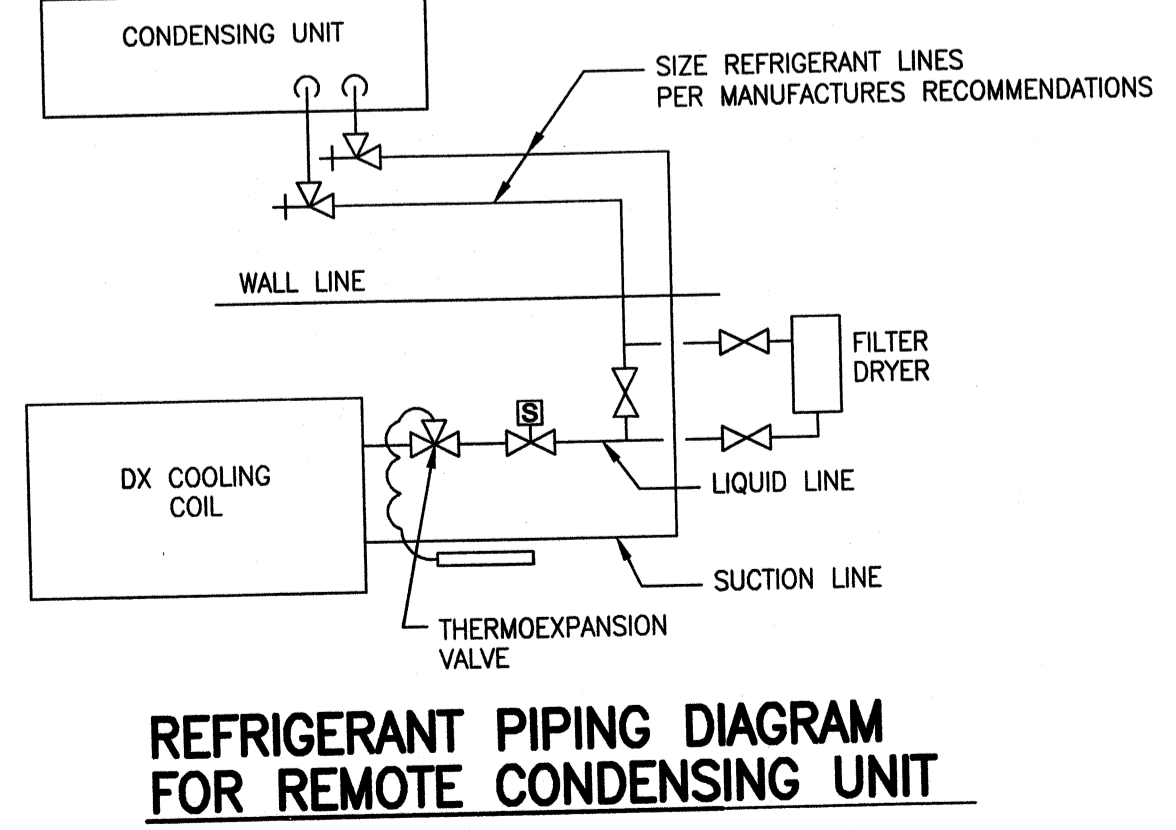
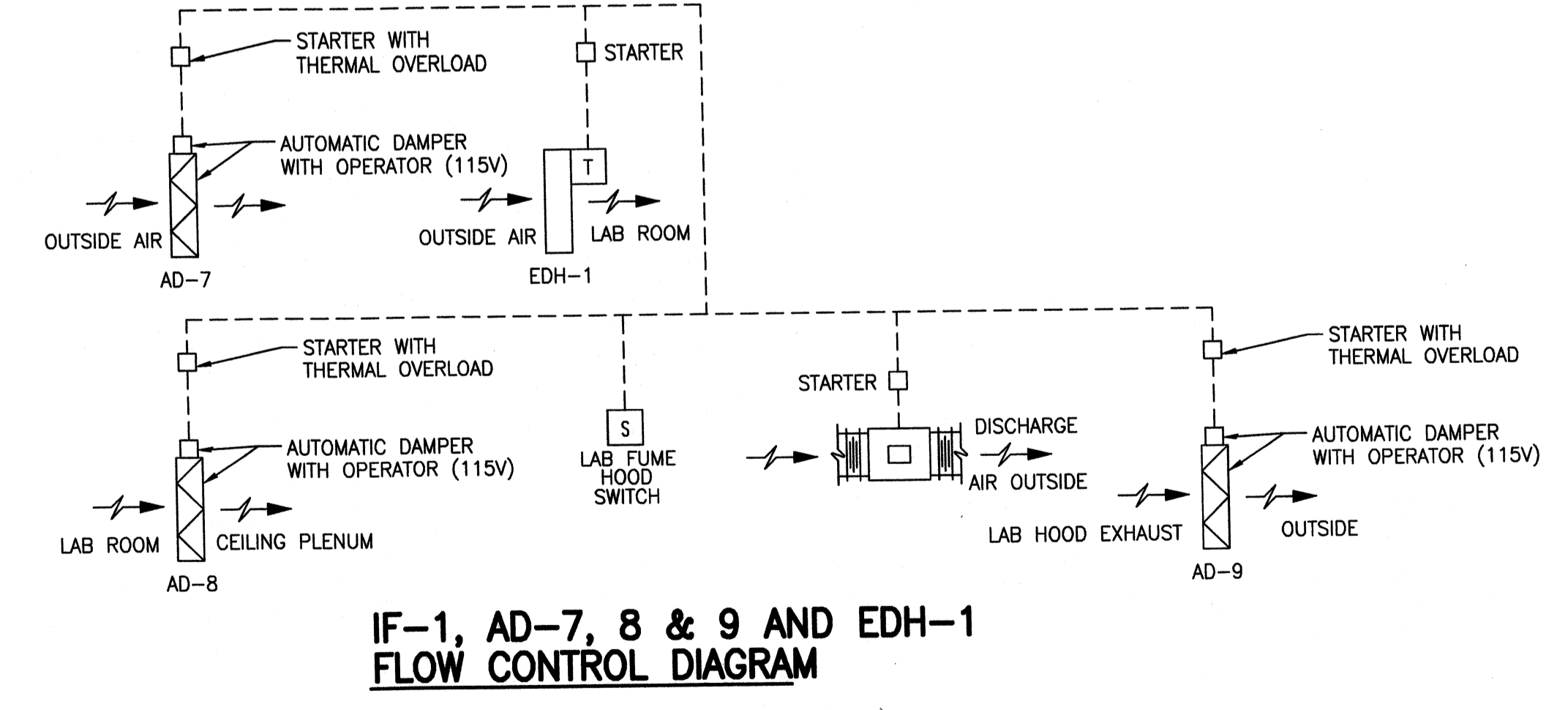
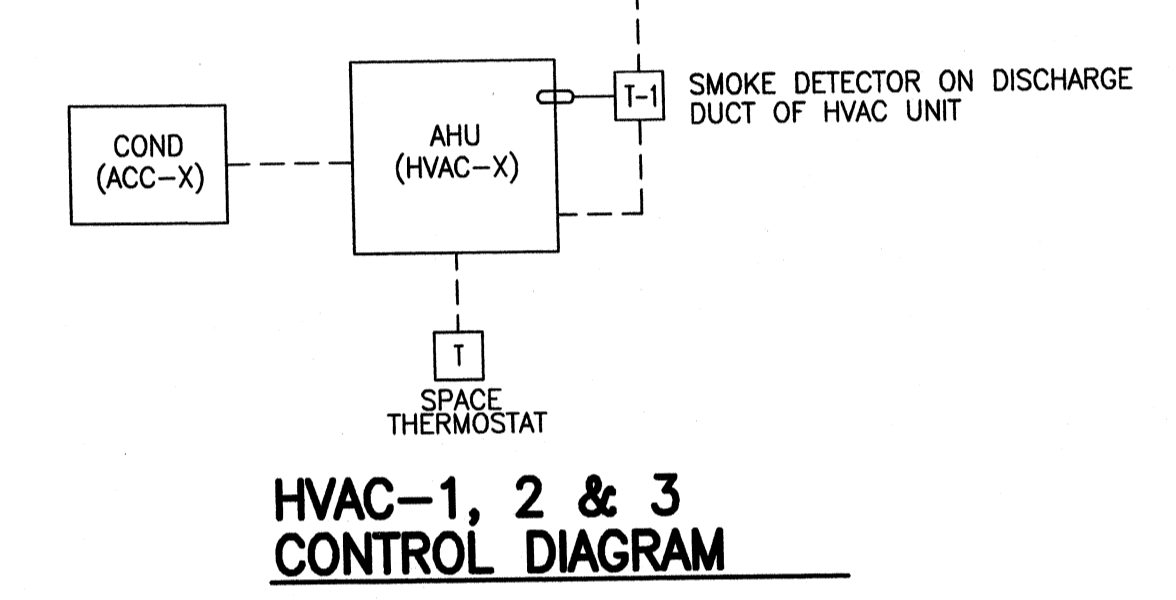
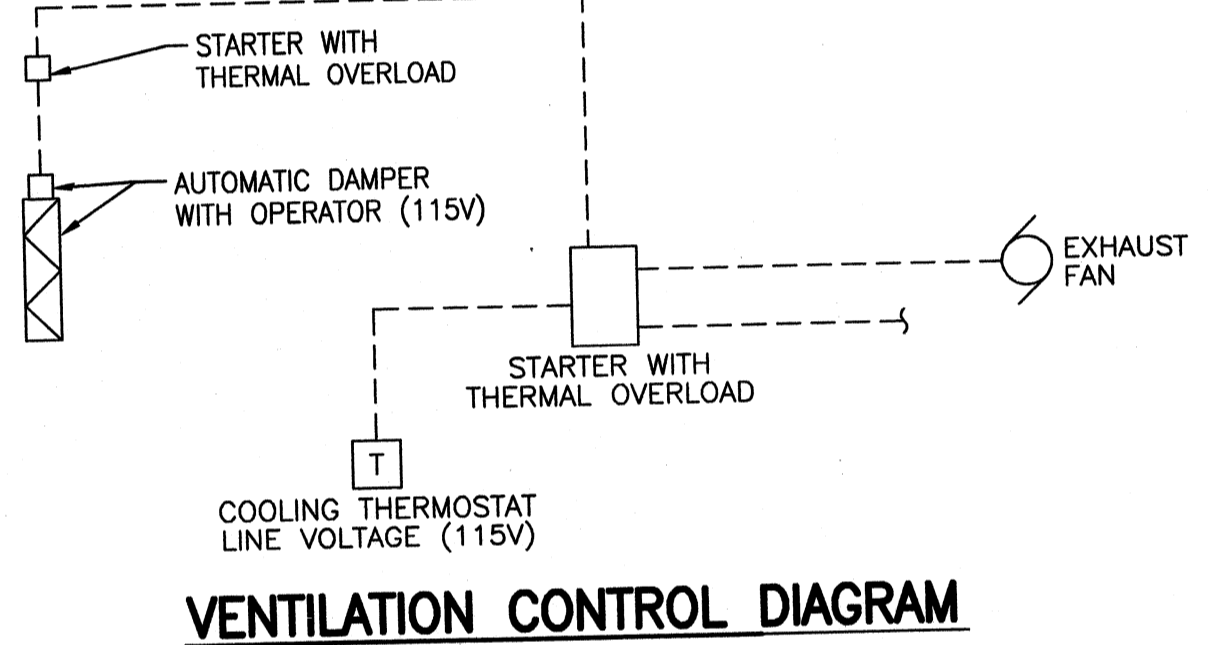
EXHAUST FANS (WF, CF & IF)											
MARK	LOCATION	CFM	SP	MOTOR HP	VOLTS		ROUGH OPENING	MODEL NO.	REMARKS		
					PHASE						
PF-1	UF BUILDING	2027	0.50	1/2	460	3	25.88" x 25.88"	GRENECK SBE-1H20-5	FURNISH ALL FANS WITH DISCONNECT SWITCHES		
WF-SA,5C,5F	CHEMICAL FEED BLDG & UF BUILDING	195	0.125	1/4	115	1	14.5" x 14.5"	GRENECK CUBE-098-4	INTERLOCK W/ AD-26A, 26B PROVIDE BACK DRAFT DAMPER		
WF-5D	CHEMICAL FEED BUILDING	322	0.125	1/4	115	1	14.5" x 14.5"	GRENECK CUBE-098-4	CORROSION RESISTANT INTERLOCK W/ AD-5A, 5C, 5F/BACK DRAFT DAMPER		
WF-6A	CHEMICAL FEED BLDG & UF BUILDING	1206	0.125	1/4	115	1	14.5" x 14.5"	GRENECK CUBE-101-4	CORROSION RESISTANT INTERLOCK W/ AD-6A1, 6A2/BACK DRAFT DAMPER		
WF-6B	UF BUILDING	390	0.125	1/4	115	1	14.5" x 14.5"	GRENECK CUBE-098-4	CORROSION RESISTANT INTERLOCK W/ AD-5D/BACK DRAFT DAMPER		
WF-7A	CHEMICAL FEED BUILDING	374	0.25	1/4	115	1	14.5" x 14.5"	GRENECK CUBE-098-4	CORROSION RESISTANT, EXPLOSION PROOF INTERLOCK W/ AD-7A/BACK DRAFT DAMPER		
WF-7B	UF BUILDING	240	0.125	1/4	115	1	14.5" x 14.5"	GRENECK CUBE-098-4	CORROSION RESISTANT INTERLOCK W/ AD-7B/BACK DRAFT DAMPER		
CF-1	OPERATIONS BUILDING	364	0.25	139W	115	1	8" x 8"	GRENECK CSP-A410	INTERLOCK W/ MENS AND WOMENS LIGHT SWITCH / BACK DRAFT DAMPER		
IF-1	OPERATIONS BUILDING	855	0.50	3/4	115	1	11.88" x 11.88"	GRENECK BSD-80-7	INTERLOCK W/ AD-7, 8 & 9 SEE VENTILATION CONTROL DIAGRAM		

AUTOMATIC DAMPER SCHEDULE (AD & BD)							
MARK	QUANTITY	LOCATION	CAPACITY CFM	NOMINAL SIZE (W x H)	DESCRIPTION	OPERATOR P-E (VOLTS)	REMARKS
AD-26A,26B	2	UF BUILDING	1426	30" x 30"	INTAKE AIR	E (440V)	INTERLOCK WITH PF-1
AD-5A,5C	2	CHEMICAL FEED BUILDING	195	18" x 18"	INTAKE AIR	E (115V)	INTERLOCK WITH WF-5A,5C CORROSION RESISTANT
AD-5D	1	CHEMICAL FEED BUILDING	322	18" x 18"	INTAKE AIR	E (115V)	INTERLOCK WITH WF-5D CORROSION RESISTANT
AD-5F	1	UF BUILDING	195	18" x 18"	INTAKE AIR	E (115V)	INTERLOCK WITH WF-5F CORROSION RESISTANT
AD-6A1,6A2	2	CHEMICAL FEED BUILDING	603	24" x 30"	INTAKE AIR	E (115V)	INTERLOCK WITH WF-6A CORROSION RESISTANT, EXPLOSION PROOF
AD-6B	1	UF BUILDING	390	24" x 24"	INTAKE AIR	E (115V)	INTERLOCK WITH WF-6B CORROSION RESISTANT
AD-7A	1	CHEMICAL FEED BUILDING	374	12" x 30"	ROOF MOUNTED INTAKE AIR	E (115V)	INTERLOCK WITH WF-7A CORROSION RESISTANT GREENHECK MODEL: FGI 14x14
AD-7B	1	UF BUILDING	240	12" x 30"	INTAKE AIR	E (115V)	INTERLOCK WITH WF-7B CORROSION RESISTANT
AD-7	1	OPERATIONS BUILDING LAB	690	24" x 30"	RETURN AIR	E (115V)	INTERLOCK WITH LAB HOOD EXHAUST FAN AD-7 TO CLOSE WHEN IF-1 IS RUNNING
AD-8	1	OPERATIONS BUILDING LAB	855	24" x 36"	OUTSIDE AIR	E (115V)	INTERLOCK WITH LAB HOOD EXHAUST FAN AD-8 TO OPEN WHEN IF-1 IS RUNNING
AD-9	1	OPERATIONS BUILDING LAB	855	24" x 36"	EXHAUST AIR	E (115V)	INTERLOCK WITH LAB HOOD EXHAUST FAN AD-9 TO OPEN WHEN IF-1 IS RUNNING
BD-1	1	OPERATIONS BUILDING MECHANICAL ROOM	350	18" x 24"	OUTSIDE AIR	N/A	BACK DRAFT DAMPER
BD-2	1	OPERATIONS BUILDING TOILET ROOMS	350	18" x 24"	EXHAUST AIR	N/A	BACK DRAFT DAMPER

NOTES:
 1. DAMPERS SHALL BE GREENHECK MODEL #HCD-120 OR APPROVED EQUAL, UNLESS OTHERWISE NOTED.

ELECTRIC DUCT HEATERS (EDH)											
MARK	LOCATION	CFM	KW TOTAL		NO. OF STAGES	VOLTS	PHASE	CONTROL VOLTAGE	FRAME TYPE	SIZE (L x W)	REMARKS
			MBH								
EDH-1	OPERATIONS BUILDING LAB ROOM	855	17	58.00	1	208	1	24V	100-M043 HAF	12' x 18"	BRASCH/DC RESISTIVE OUT T100-M043, MODULATING

GRILLE, REGISTER AND DIFFUSER SCHEDULE					
MARK	LOCATION	CFM RANGE	NECK	STYLE	REMARKS
CD	OPERATIONS BUILDING	100-500	SEE PLANS	SUPPLY DIFFUSER	TITUS MODEL #TDC W/ ADJUSTABLE VANES
RR	OPERATIONS BUILDING	100-500	SEE PLANS	RETURN AIR GRILLE	TITUS MODEL #50F
ER	OPERATIONS BUILDING	50-200	SEE PLANS	EXHAUST GRILLE	TITUS MODEL #50F

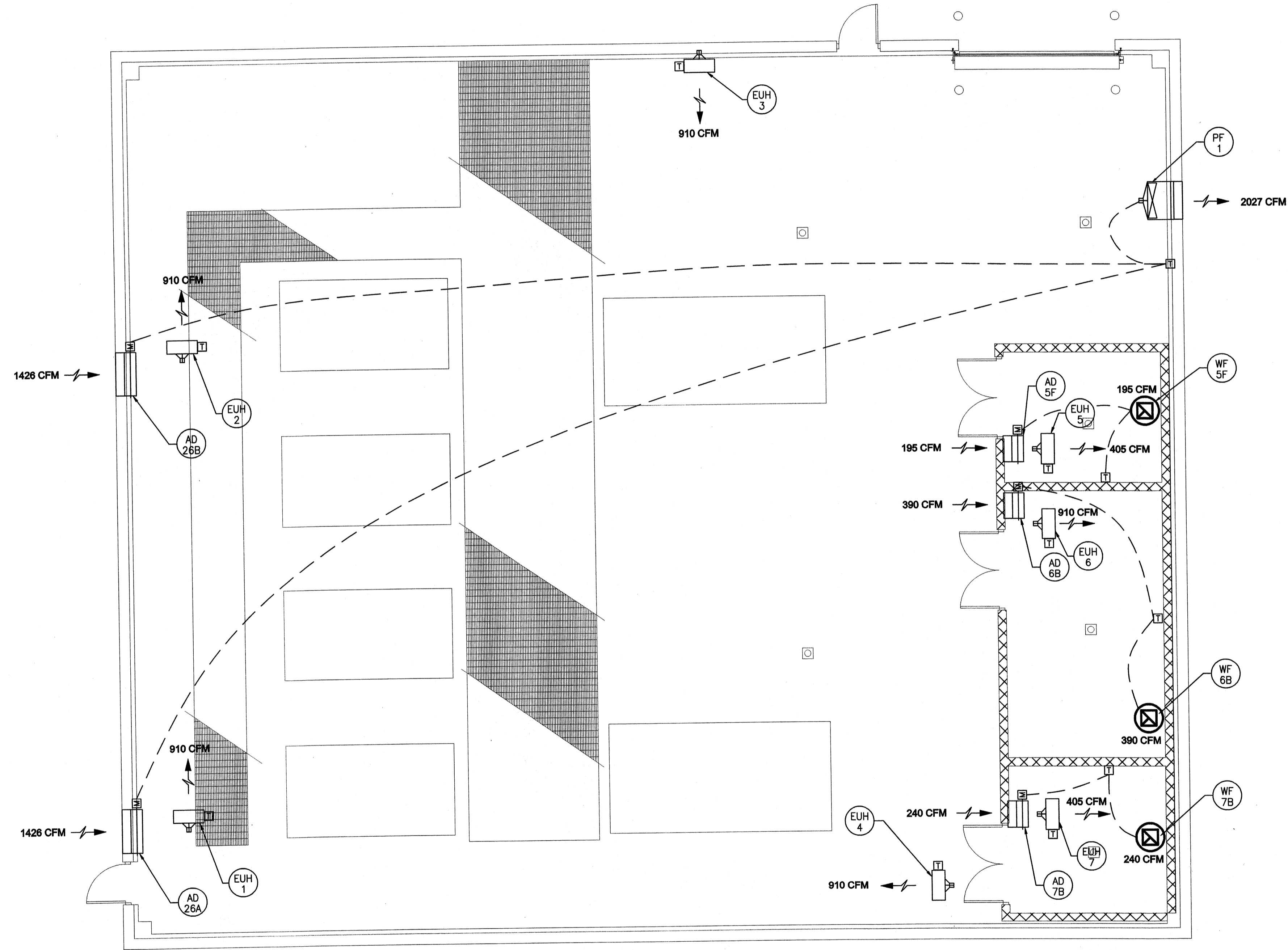


NOTE: ALL EQUIPMENT PROVIDED FOR THE CHEMICAL BLDG AND UF BUILDING CHEMICAL ROOMS SHALL BE CORROSION RESISTANT OR EPOXY COATED AS SPECIFIED WITH A COATING RESISTANT TO HYDROGEN SULFIDES AND/OR SODIUM BISULFITE.

MARK	DATE	DESCRIPTION

Project No.: 120-07060
 Designed By:
 Drawn By:
 Checked By:

Wednesday, July 01, 2009 2:52:40 PM DRAWING: \\ierofis3\projects\120-07060 Ohio County\CONFORMED SET 5-09\MECHANICAL\H-121 UF BUILDING - HEATING & VENTILATING - DWG LAYOUT: H-121 UF BUILDING - HEATING & VENTILATING USER NAME: JEREMY M. FRONGILLO



FLOOR PLAN
SCALE: 1/4"=1'-0"

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PROJECT RECORD

CONFORMED SET 5/09

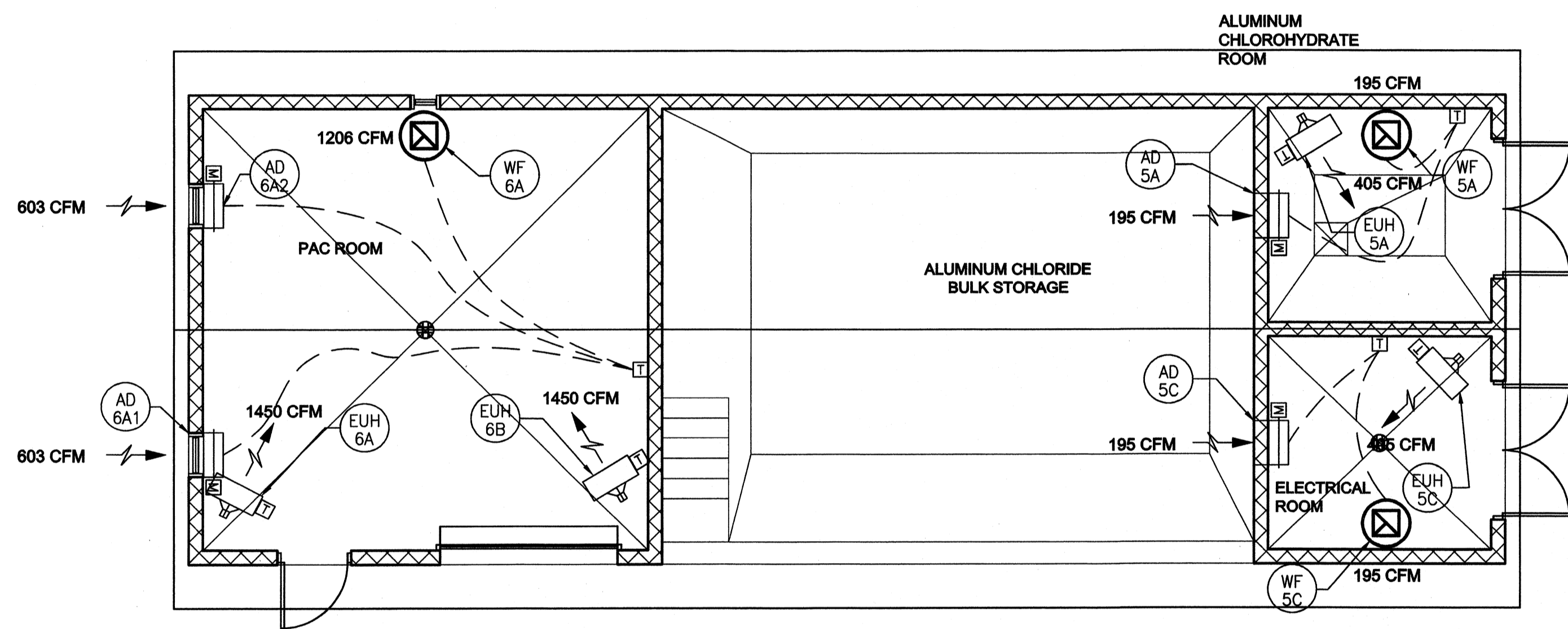
BY	DESCRIPTION	DATE	MARK

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

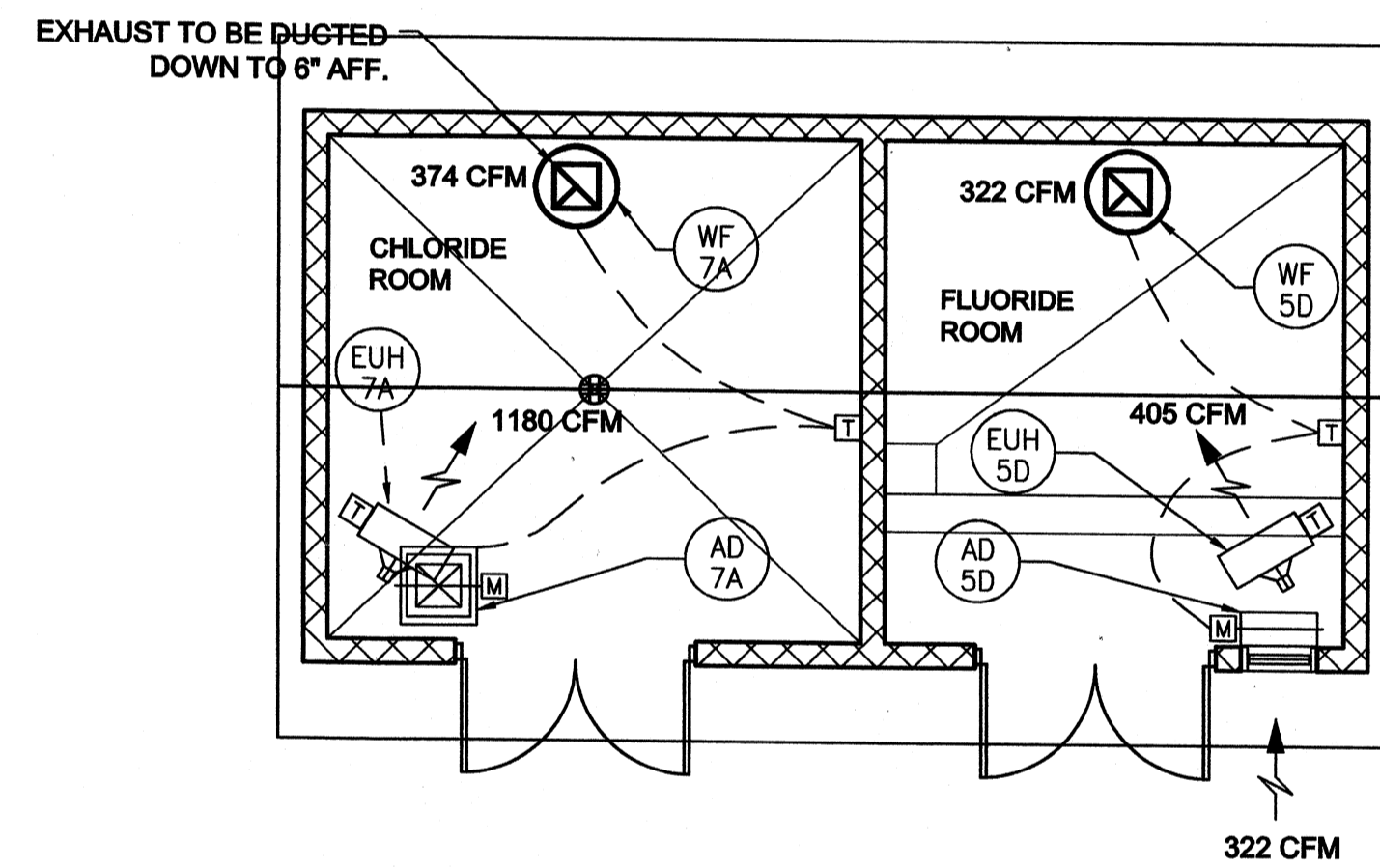
Project No.: 120-07060
Designed By:
Drawn By:
Checked By:

H-121
Sheet of 147
Copyright: Tetra Tech

Wednesday, July 01, 2009 2:52:57 PM DRAWING: \\server\projects\120-07060\Ohio County\CONFORMED SET 5-09\MECHANICAL\H-161\CHEMICAL FEED BUILDING - HEATING & VENTILATING - DWG LAYOUT: H-161 CHEMICAL FEED BUILDING - HEATING & VENTILATING USER NAME: JEREMY M. FRONGILLO



PAC FLOOR PLAN
SCALE: 3/16"=1'-0"



CHLORINE/FLUORIDE FLOOR PLAN
SCALE: 3/16"=1'-0"



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PROJECT RECORD

CONFORMED SET 5/09



BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Prof. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

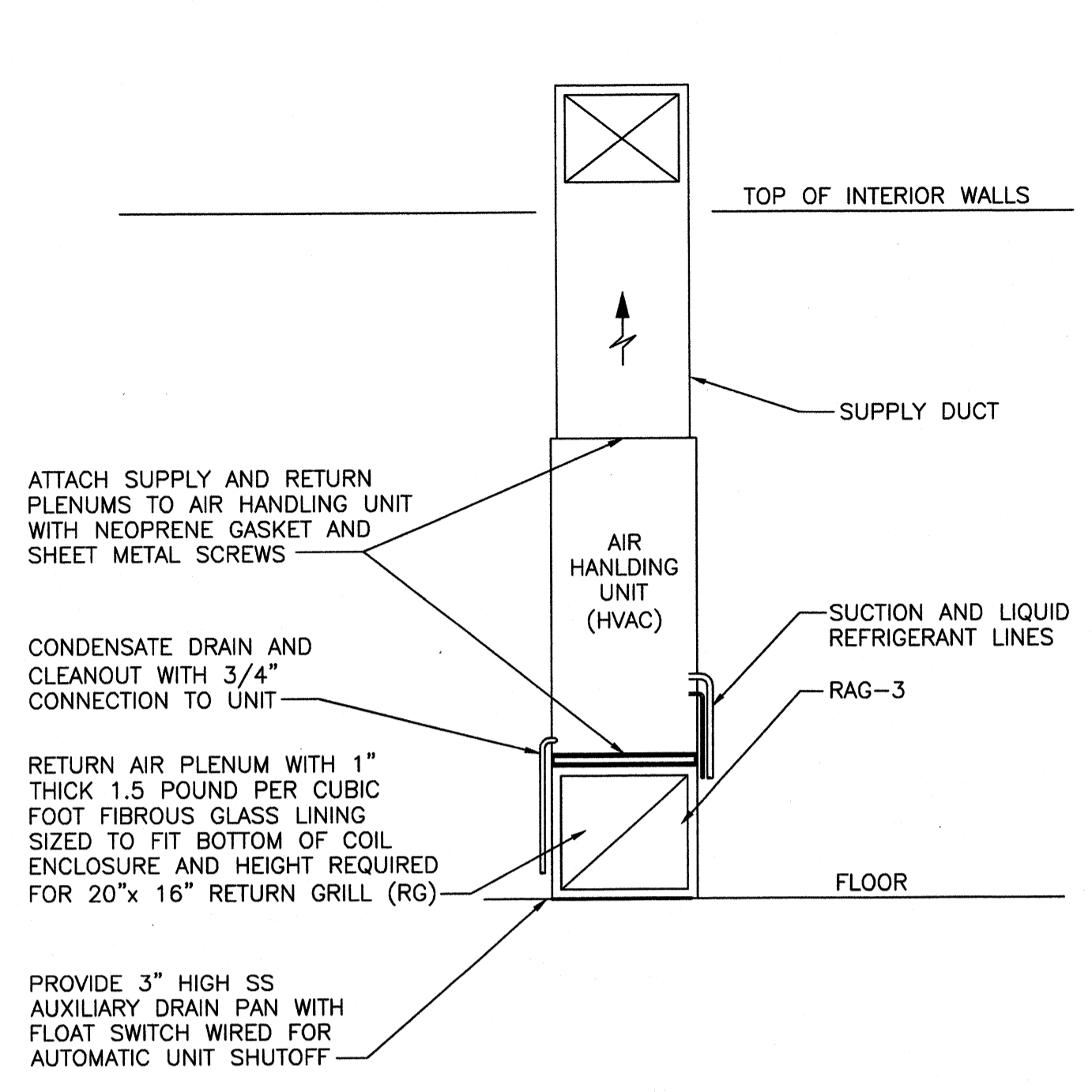
Project No.: 120-07060
Designed By:
Drawn By:
Checked By:

H-161
Sheet of 147

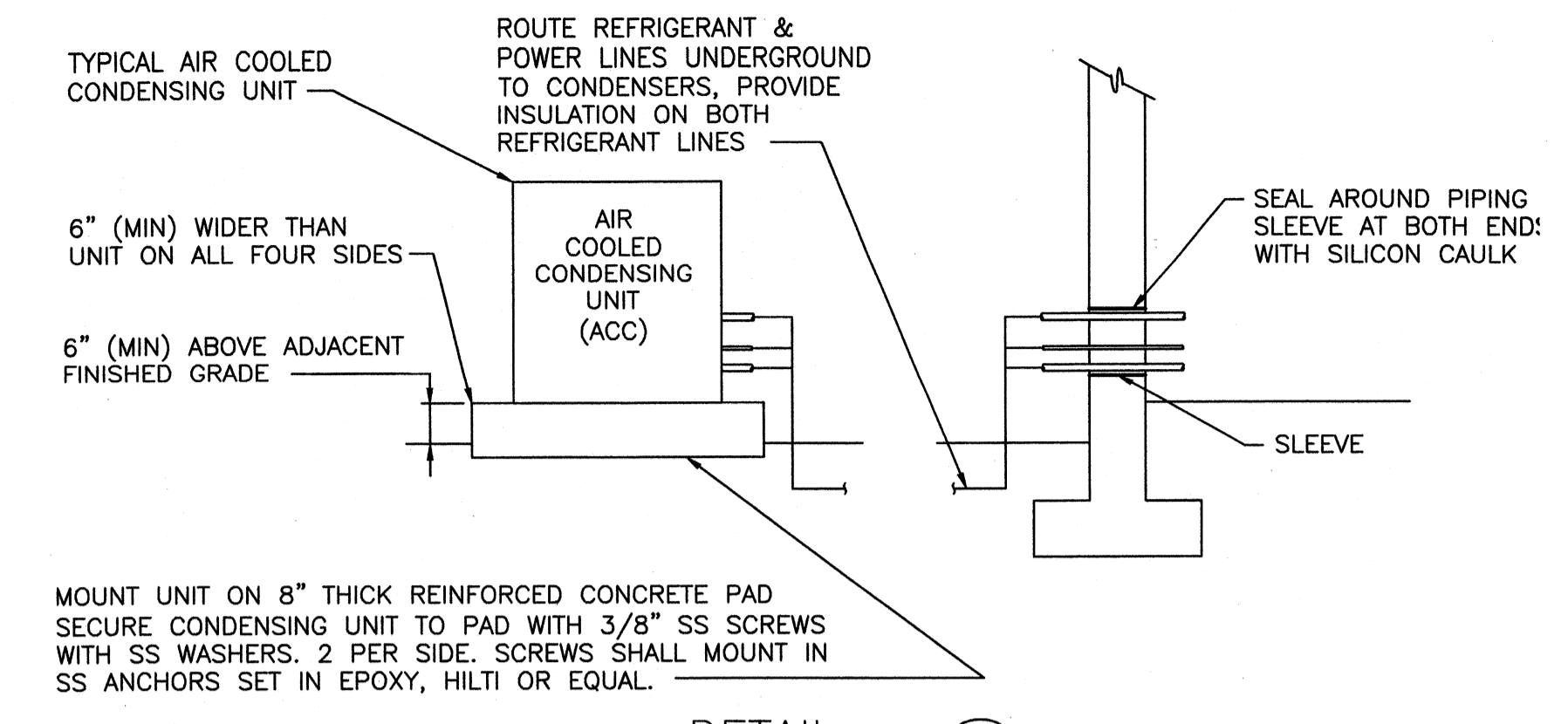
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CHEMICAL FEED BUILDING
HEATING & VENTILATING

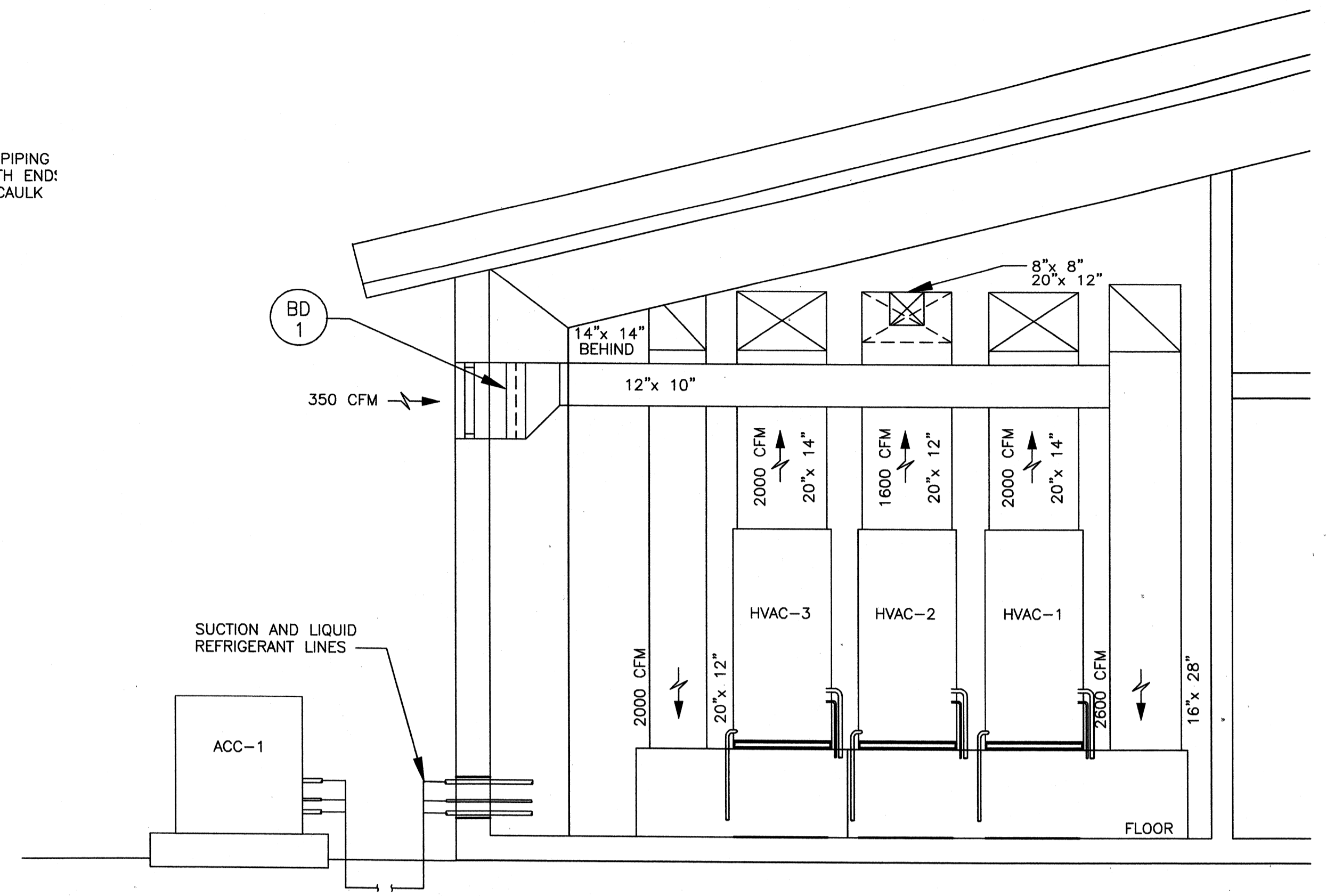
Wednesday, July 01, 2009 2:53:30 PM DRAWING: \nlarofit\projects\120-07060 Ohio County\CONFORMED SET 5-09MECHANICAL\H-171 OPERATIONS BUILDING - HEATING & VENTILATING - DWG LAYOUT: H-171 OPERATIONS BUILDING - HEATING & VENTILATING USER NAME: JEREMY M. FRONGILLO



DETAIL 2 SCALE: NONE H171

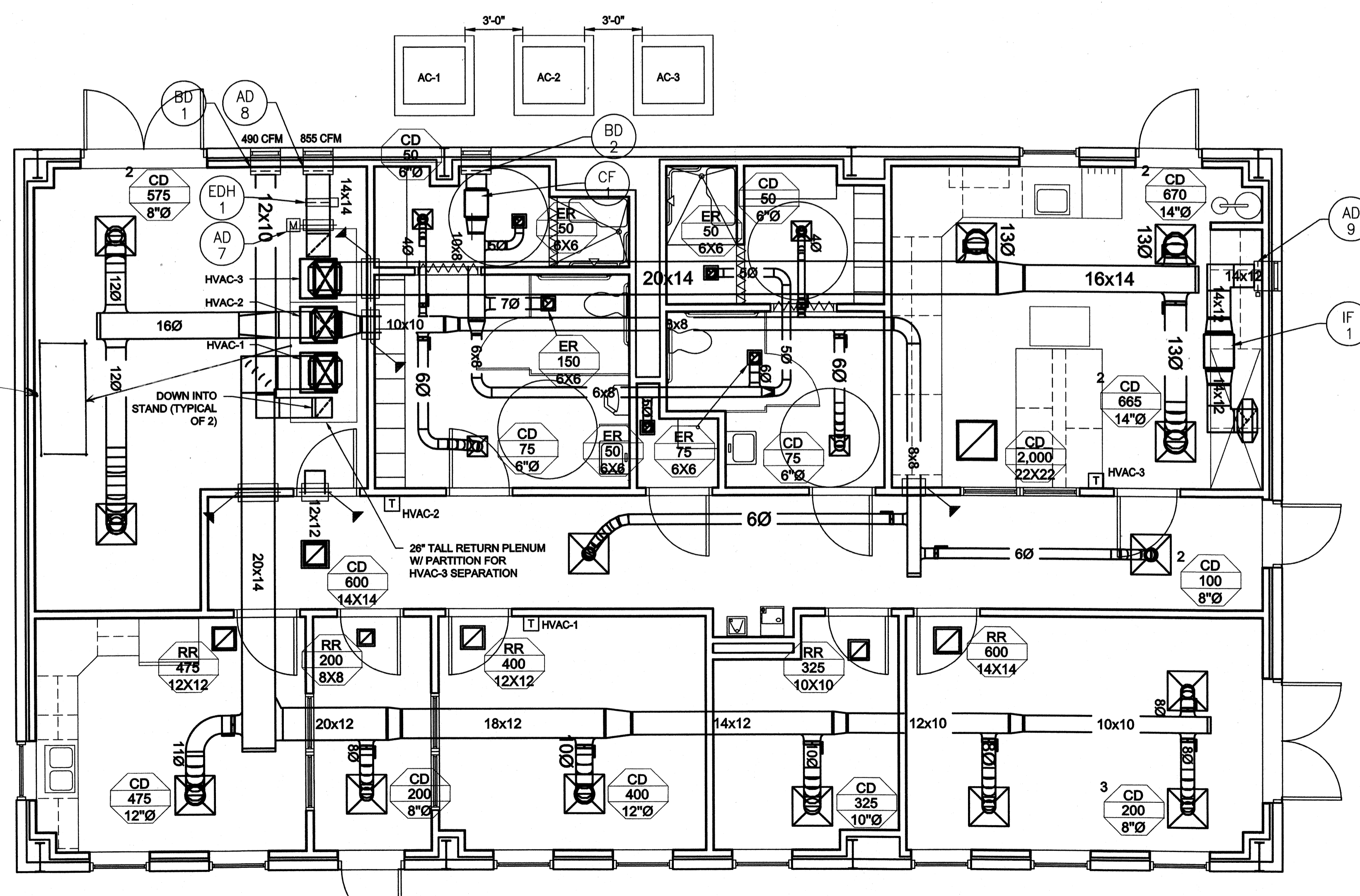


DETAIL 1 SCALE: NONE H171



SECTION A SCALE: NONE H171

Two HVAC units moved to this location



FLOOR PLAN SCALE: 1/4"=1'-0"

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PROJECT RECORD

CONFORMED SET 5/09

BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: GROOMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
**OPERATIONS BUILDING
HEATING & VENTILATING**

Project No.:	120-07060
Designed By:	
Drawn By:	
Checked By:	

H-171
Sheet of 147
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PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	MODEL	CONNECTIONS				NOTES
				CW	HW	WASTE	VENT	
P1	WATER CLOSET, WALL HUNG, FLUSH VALVE, H.C.	AMERICAN STANDARD	3351.128	1"	-	4"	2"	W/ SLOAN EXPOSED ROYAL FLUSH VALVE # 111, ANSI/AMSE 112.19.2
P2	LAVATORY, WALL HUNG, H.C.	AMERICAN STANDARD	0321.075	1/2"	1/2"	1-1/2"	1-1/2"	PROVIDE WALL MOUNTING BRACKET & UNDERSINK THERMOSTATIC MIXING VALVE, ELKAY FAUCET #LK422L4
P3	URINAL, WALL HUNG, H.C.	AMERICAN STANDARD	6590.125	3/4"	-	2"	1-1/2"	W/ SLOAN EXPOSED ROYAL FLUSHMETER VALVE #186, ANSI/AMSE 112.19.2
P4	KITCHEN SINK, STAINLESS STEEL	ELKAY	LR2022	1/2"	1/2"	1-1/2"	1-1/2"	W/ ELKAY FAUCET # LK406GN04L2
P5	SHOWER, H.C.	AMERICAN STANDARD	CERAMIX T000.501	3/4"	3/4"	2"	1-1/2"	W/ ANTI SCALD PRESSURE BALANCE SHOWER SET POLISHED CHROME FINISH
P6	ELECTRIC WATER COOLER, H.C.	ELKAY	EZSTL8C	1/2"	-	1-1/2"	1-1/2"	BARRIER FREE
P7	SERVICE SINK	FIAT	MSB-2424	1/2"	1/2"	3"	1-1/2"	W/ FIAT SERVICE SINK FAUCET #830-AA
P8	KITCHEN SINK, STAINLESS STEEL	ELKAY	LR3319	1/2"	1/2"	1-1/2"	1-1/2"	W/ ELKAY FAUCET # LK406GN04L2
ES-1	EMERGENCY SHOWER & EYE WASH	HAWS	8330	1-1/2"	1-1/2"	1-1/2"	1-1/2"	W/ ALARM KIT #9001 FOR EACH SHOWER
ES-2	EMERGENCY SHOWER & EYE WASH	HAWS	8336	1-1/2"	1-1/2"	1-1/2"	1-1/2"	W/ ALARM KIT #9001 FOR EACH SHOWER, CORROSION RESISTANT
FD1	3" FLOOR DRAIN	JAY R. SMITH	2005	1/2"	-	3"	1-1/2"	W/ TRAP PRIMER CONNECTION
FD2	4" FLOOR DRAIN	JAY R. SMITH	2005	1/2"	-	3"	2"	W/ TRAP PRIMER CONNECTION
TP-	TRAP PRIMER	PRECISION PLUMBING PRODUCTS	PR-500	1/2"	-	-	-	USE REQUIRED DISTRIBUTION UNIT FOR MULTIPLE FLOOR DRAINS.
FPH	FREEZE PROOF WALL HYDRANT WITH AVB	WATTS	HY-330	3/4"	-	-	-	FROST PROOF AUTOMATIC DRAINING WALL HYDRANT
HB1	HOSE BIBB W/ AVB	WATTS	HY-430	3/4"	-	-	-	BRONZE ANGLE CILLCOCK
HB2	HOSE BIBB W/ AVB	WATTS	HY-420	3/4"	-	-	-	FROST PROOF AUTOMATIC DRAINING WALL HYDRANT
AC-1	OIL FREE SINGLE STAGE, LAB AIR COMPRESSOR	SPEEDAIRE	1VW40	-	-	-	-	OIL-LESS, 4 GALLON TANK, DUAL SEAL TANK DRAIN PRESSURE SWITCH, ASME SAFETY VALVE, 1/4" CONNECTION

NOTES:
H.C. DENOTES HANDICAPPED.

WATER HEATER SCHEDULE

MARK	AREA SERVED AND APPROXIMATE LOCATION	MINIMUM STORAGE CAPACITY (GAL.)	MINIMUM RECOVERY (GPH)	DISCHARGE TEMP. °F	TEMP. RISE °F	ELECTRICAL			NATURAL GAS			MANUFACTURER / MODEL
						TOTAL KW	VOLTS/ PHASE	NUMBER OF ELEMENTS	CFH	PRESSURE IN W.C.	FLUE SIZE	
EW-1	EMERGENCY SHOWER & EYE WASH	N/A	N/A	90°	55°	10.0	200/3	N/A	-	-	-	EEMAX-EX720742-EFD
EW-1	MECHANICAL ROOM	40	74	120°	55°	18.0	208/3	3	-	-	-	BRADFORD WHITE 40A-18-3

RAPOR Delete
RAPOR Change

EXPANSION TANK SCHEDULE

MARK	SERVICE	MANUFACTURER / MODEL	SYSTEM VOLUME (GALLONS)	TANK VOLUME (GALLONS)	MAXIMUM PRESSURE (PSIG)	LOCATION	REMARKS
ET-1	DOMESTIC HOT WATER	AMTROL /			60		ASME-STAMPED, DIAPHRAGM TYPE, 40 PSIG PRECHARGED

PLUMBING SYMBOLS

SYMBOL	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
BFF	BELOW FINISHED FLOOR
TYP	TYPICAL
VTR	VENT THROUGH ROOF
TP	TRAP PRIMER
VENT	SANITARY VENT
○	ELBOW UP, DOWN
○	TEE UP, DOWN
⊗	SHUT OFF VALVE
AIR	COMPRESSED AIR LINE
- - -	COLD WATER
- - -	HOT WATER
SAN	SANITARY WASTE
FCO	CLEANOUT - FLOOR / WALL
YCO	CLEANOUT - YARD / ABOVE CEILING
DYCO	CLEANOUT - DOUBLE YARD
FD-1	FLOOR DRAIN WITH DESIGNATION, P-TRAP & TRAP PRIMER CONN.
IMVB	ICEMAKER VALVE BOX
P1	PLUMBING FIXTURE DESIGNATION
HB	HOSE BIBB
TP-1	TRAP PRIMER WITH DESIGNATION
M	GAS METER

GENERAL PLUMBING NOTES:

- ALL EQUIPMENT AND PIPING SHALL BE INSTALLED IN COMPLIANCE WITH THE INTERNATIONAL PLUMBING CODE AND KENTUCKY BUILDING AND PLUMBING CODE.
- ALL INTERIOR FLOOR DRAINS AND OPEN RECEPTACLES WITH TRAPS SHALL BE PROTECTED BY A TRAP PRIMER (SEE SPECIFICATIONS AND PLANS FOR LOCATION AND TYPE.) PROVIDE 1/2" SLOPED LINE TO FLOOR DRAIN. SEE DETAILS ON SHEET P301.
- WATER LINES SHALL NOT BE ROUTED ABOVE ANY ELECTRICAL ROOM OR ELECTRICAL PANELS OR TELEPHONE ROOMS.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH OTHER CRAFTS TO MINIMIZE SPATIAL CONFLICTS.
- ALL PIPING ENTERING AND LEAVING STRUCTURES BELOW GRADE, THROUGH FOUNDATION, BELOW FOOTINGS OR FIRE WALLS SHALL BE SLEEVED AND PACKED AS REQUIRED BY LOCAL AUTHORITIES AND PER A UL RATED ASSEMBLY. ALL SLEEVES ARE NOT INDICATED ON DRAWINGS.
- INSTALL BOTTOM OF ALL EXTERIOR WALL HYDRANTS AT 24" ABOVE FINISH GRADE ELEVATION. PROVIDE ACCESS PANELS WITH SQUARE HINGED, LOCKING DOORS FOR ALL VALVES, SHOCK ABSORBERS AND TRAP PRIMERS CONCEALED. TILED WALLS SHALL BE 18-8 STAINLESS STEEL WITH NO. 4 SATIN FINISH SMITH #47624767 OR APPROVED EQUAL. GYPSUM BOARD OR BLOCK WALLS SHALL BE PRIMED AND PAINTED TO MATCH SMITH #47604765 OR APPROVED EQUAL.
- CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND DIMENSIONS BEFORE CONSTRUCTION BEGINS, INCLUDING SEWER INV. ELEV. CONTACT CONTRACTING OFFICER SHOULD DISCREPANCIES OCCUR.

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PROJECT RECORD

BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY

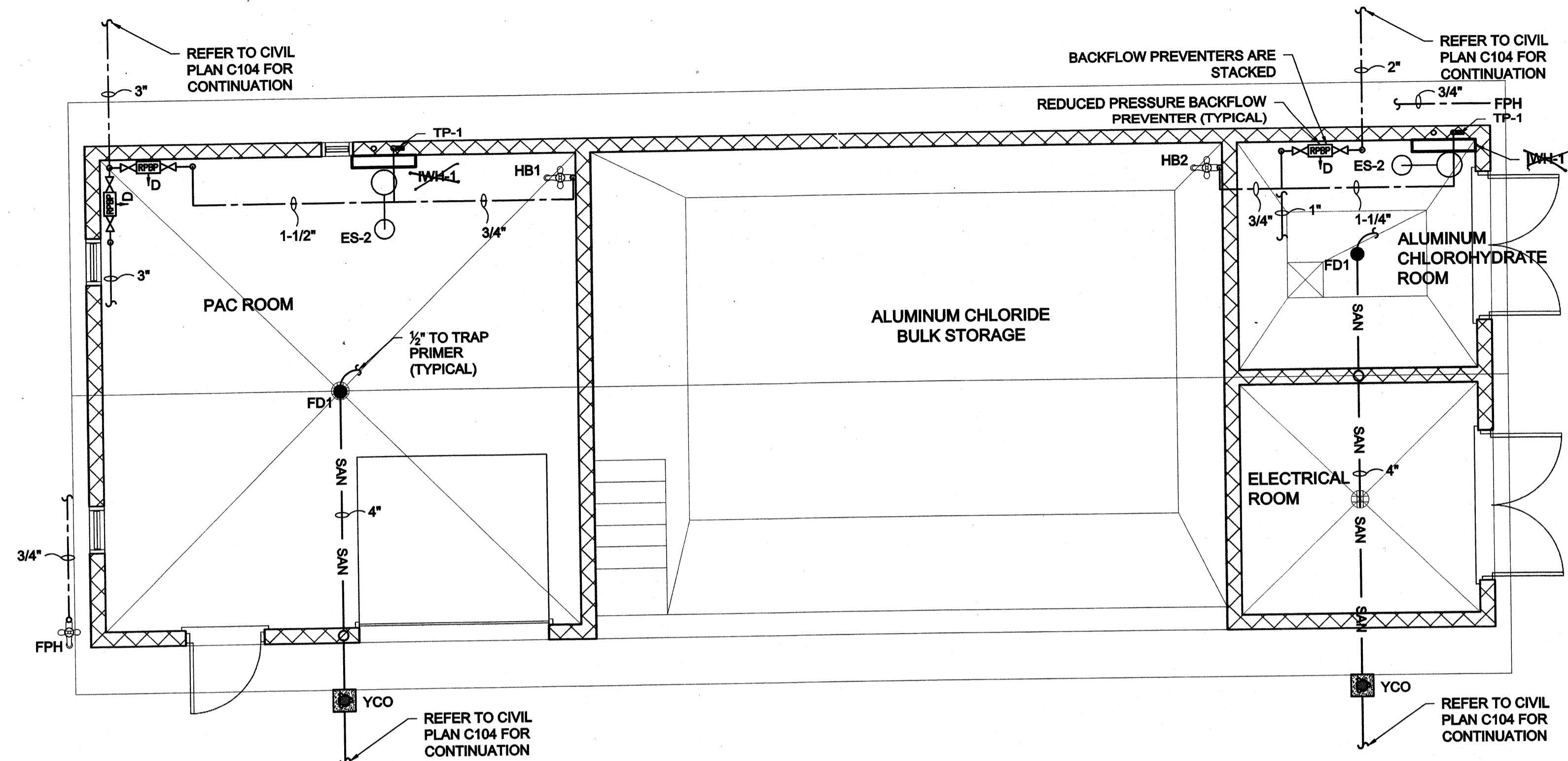
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

PLUMBING LEGEND, NOTES, AND SCHEDULE

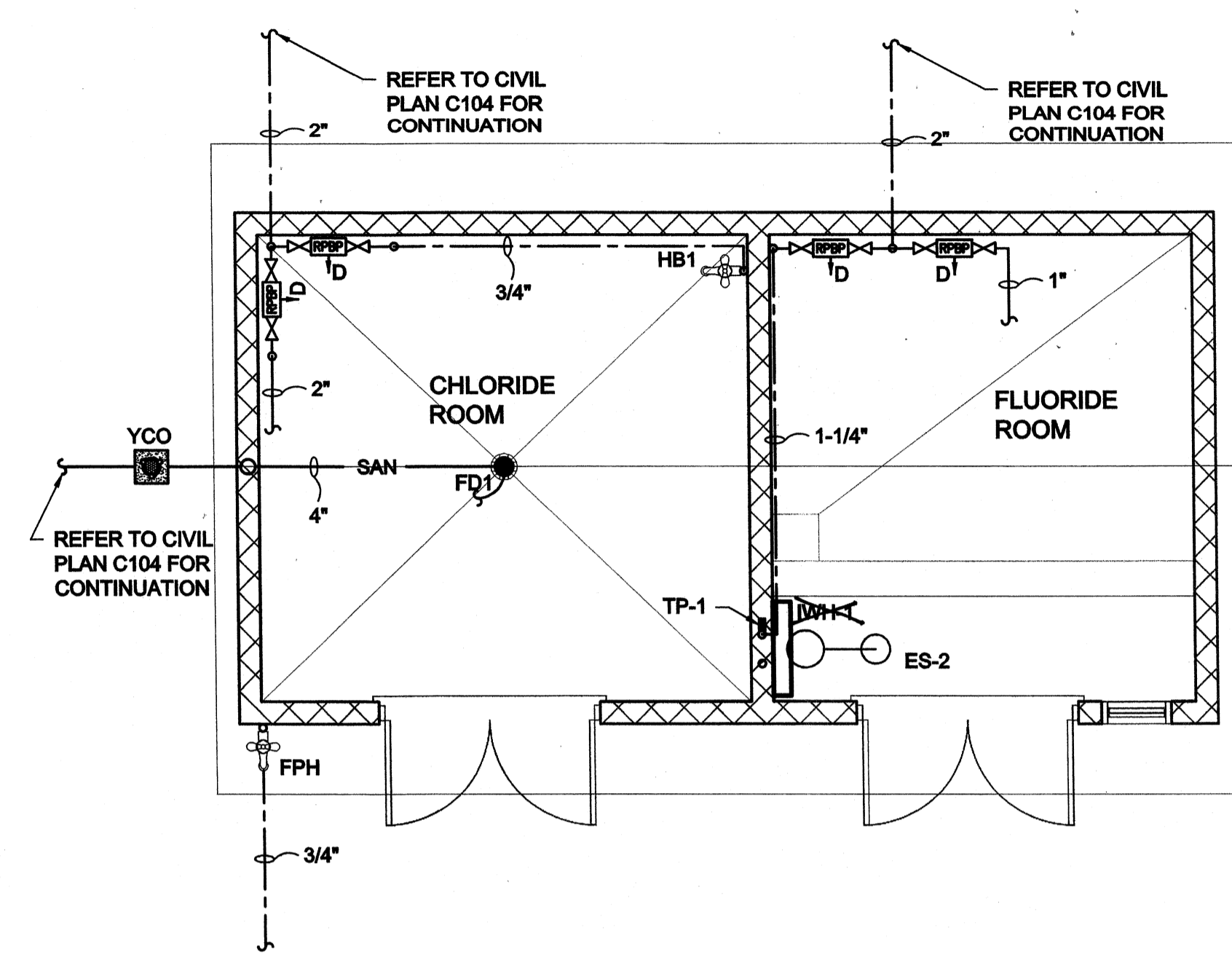
Project No.: 120-07060
Designed By: JWM
Drawn By: JWM
Checked By: DSB

P-001

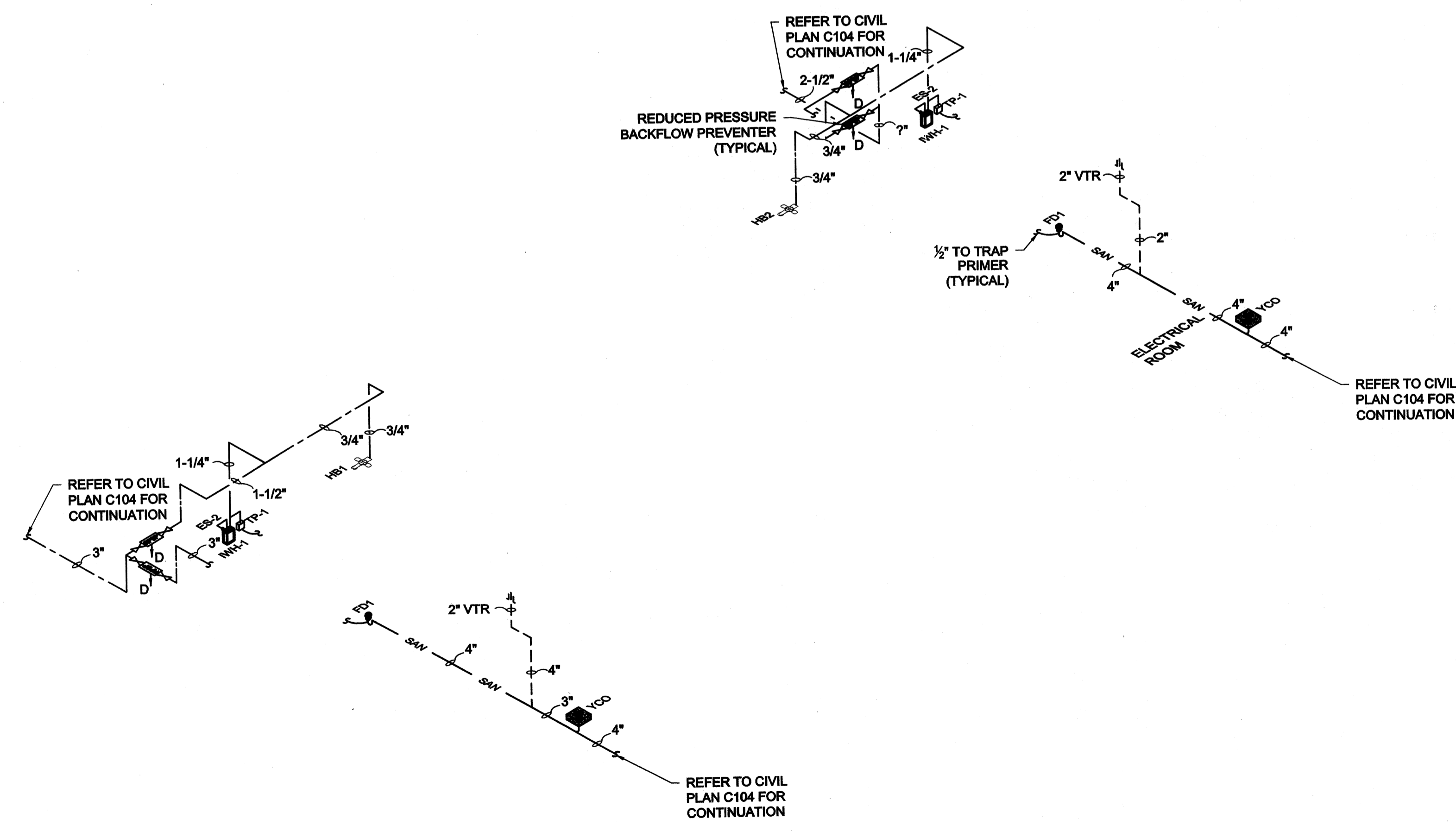
Sheet of 147
Copyright: Tetra Tech



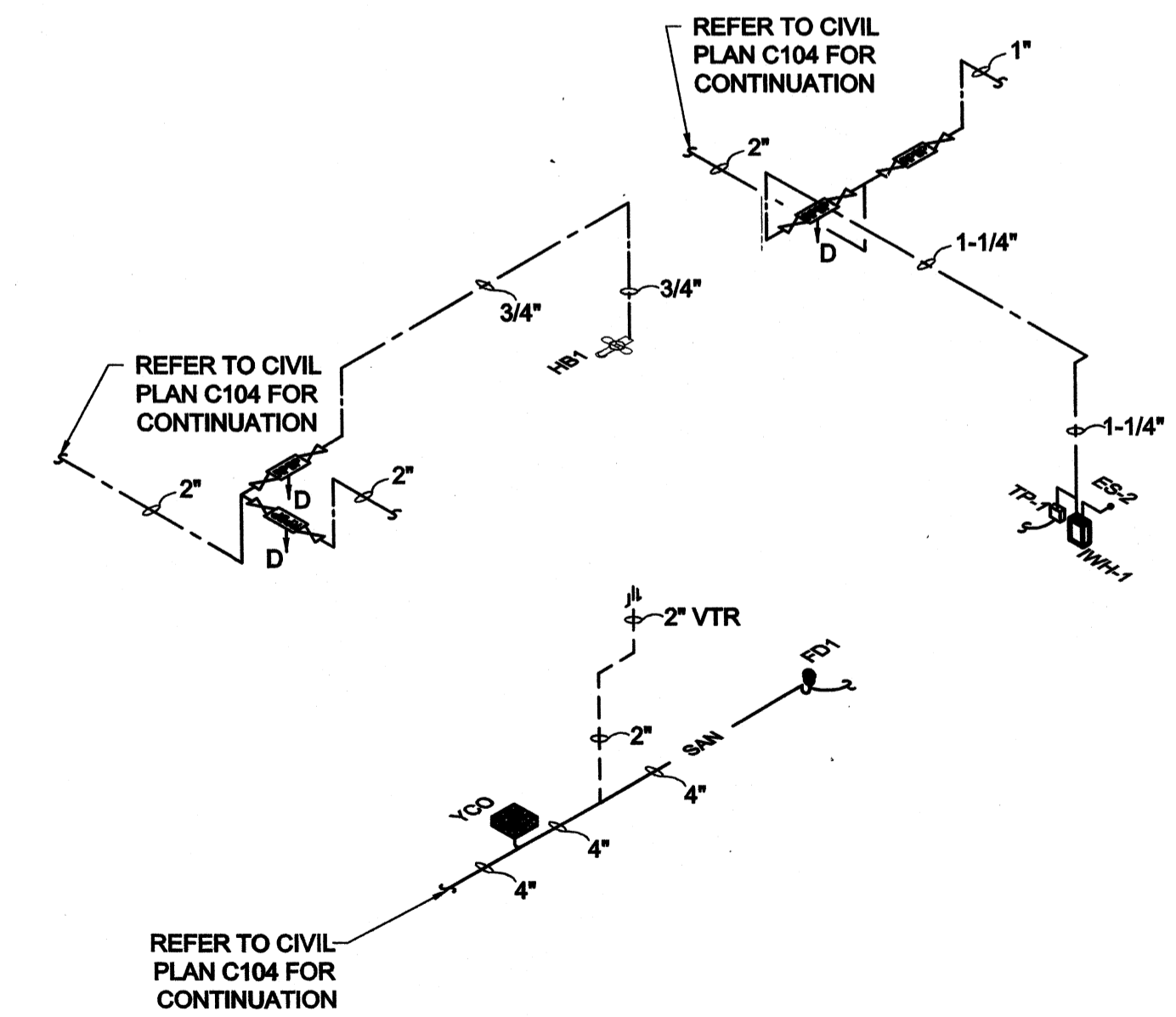
CHEMICAL BUILDING PLUMBING PLAN
SCALE: 1/4"=1'-0"



CHEMICAL BUILDING PLUMBING PLAN
SCALE: 1/4"=1'-0"



CHEMICAL BUILDING RISER DIAGRAMS



CHEMICAL BUILDING RISER DIAGRAMS

Wednesday, July 15, 2009 4:31:08 PM DRAWING: \\arcnfs3\projects\120-07060 Ohio County\CONFORMED SET 5-09\PLUMBING\120-07060 DWG LAYOUT: P-161 USER NAME: JEREMY M. FRONGILLO

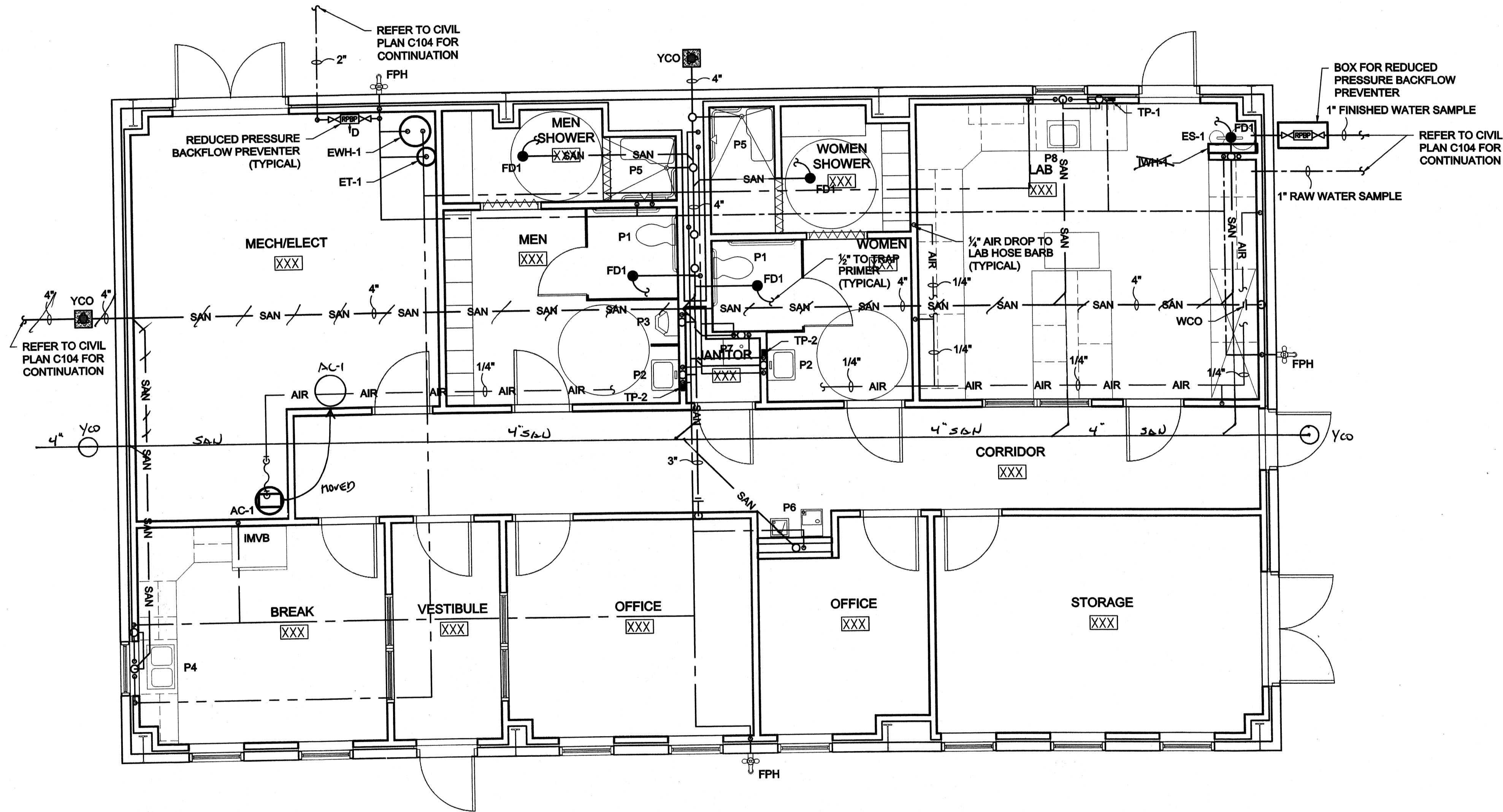
PROJECT RECORD

BY	DATE	DESCRIPTION

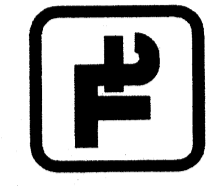
Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT
**CHEMICAL FEED BUILDING
 PLUMBING PLAN AND RISER DIAGRAM**

Project No.:	120-07060
Designed By:	JWM
Drawn By:	JWM
Checked By:	DSB

Wednesday, July 01, 2009 4:42:22 PM DRAWING: \\liferiffs3\projects\120-07060 Ohio County\CONFORMED SET 5-09\PLUMBING\P-171.DWG LAYOUT: P-171 USER NAME: JEREMY M. FRONGILLO



OPERATIONS BUILDING PLUMBING PLAN
SCALE: 1/4"=1'-0"



PROJECT RECORD

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc: CROMWELL, OHIO COUNTY, KY | MARK | DATE | DESCRIPTION

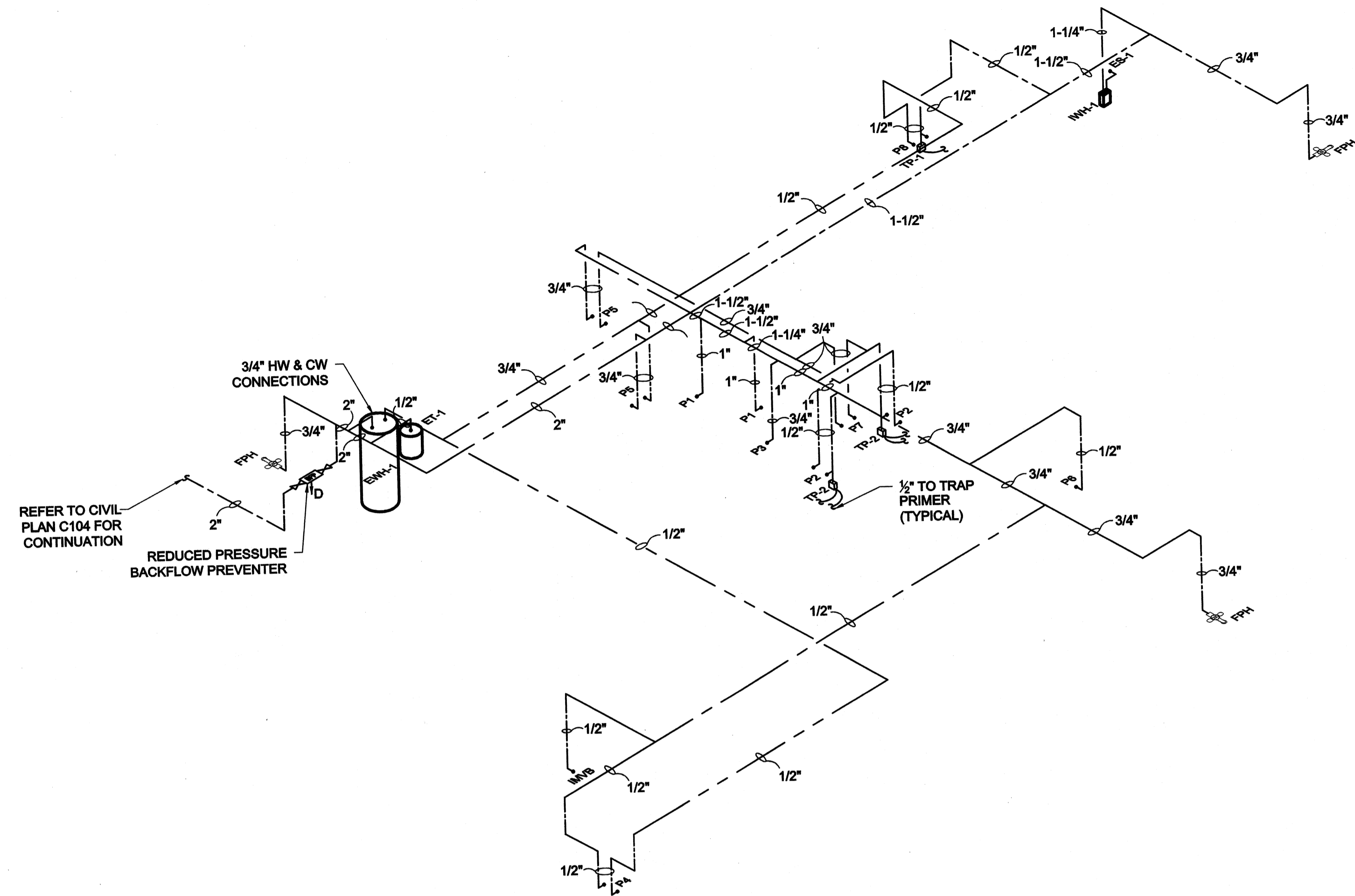
Project No.: 120-07060
Designed By: JWM
Drawn By: JWM
Checked By: DSB

P-171
Sheet of 147

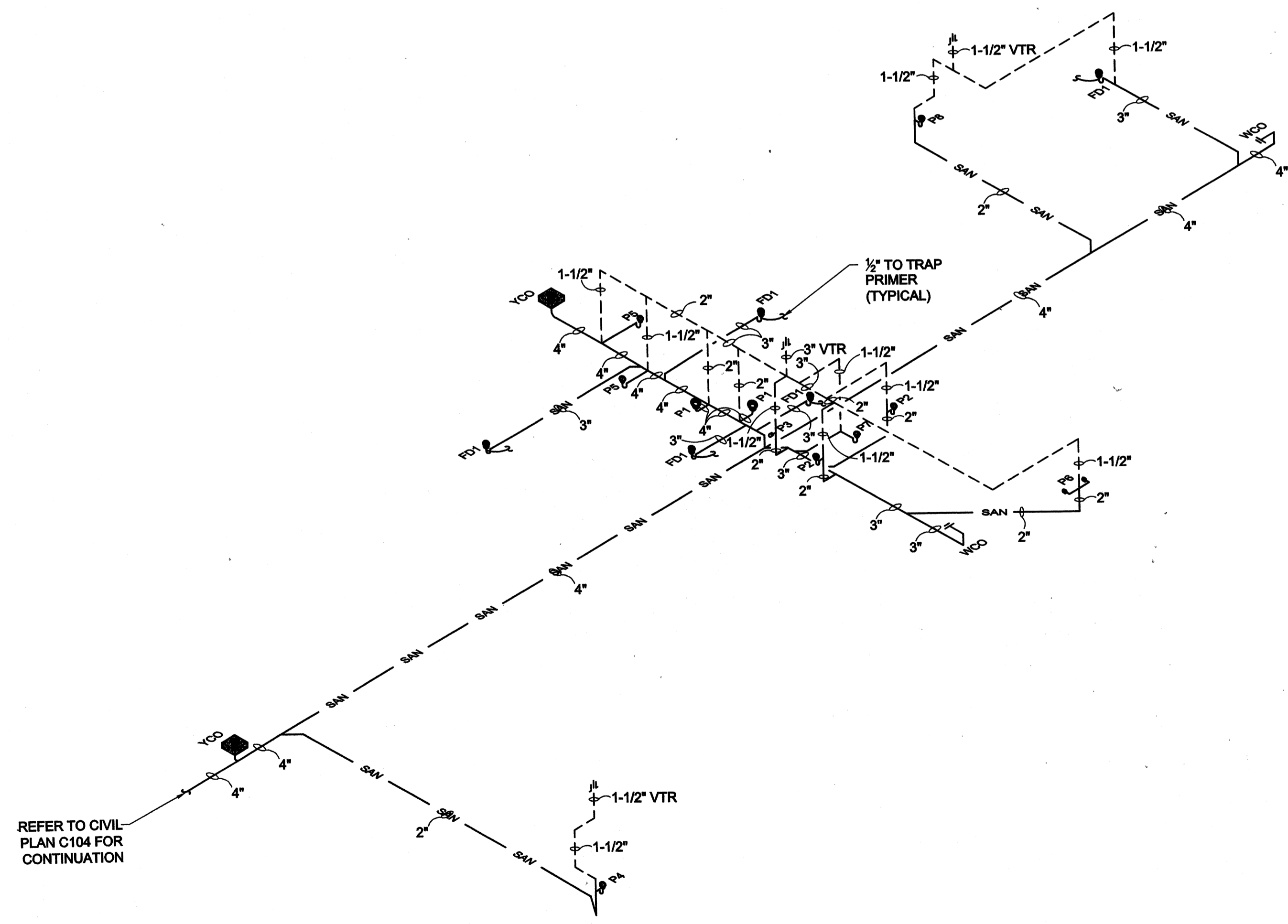
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OPERATIONS BUILDING DOMESTIC WATER RISER DIAGRAM



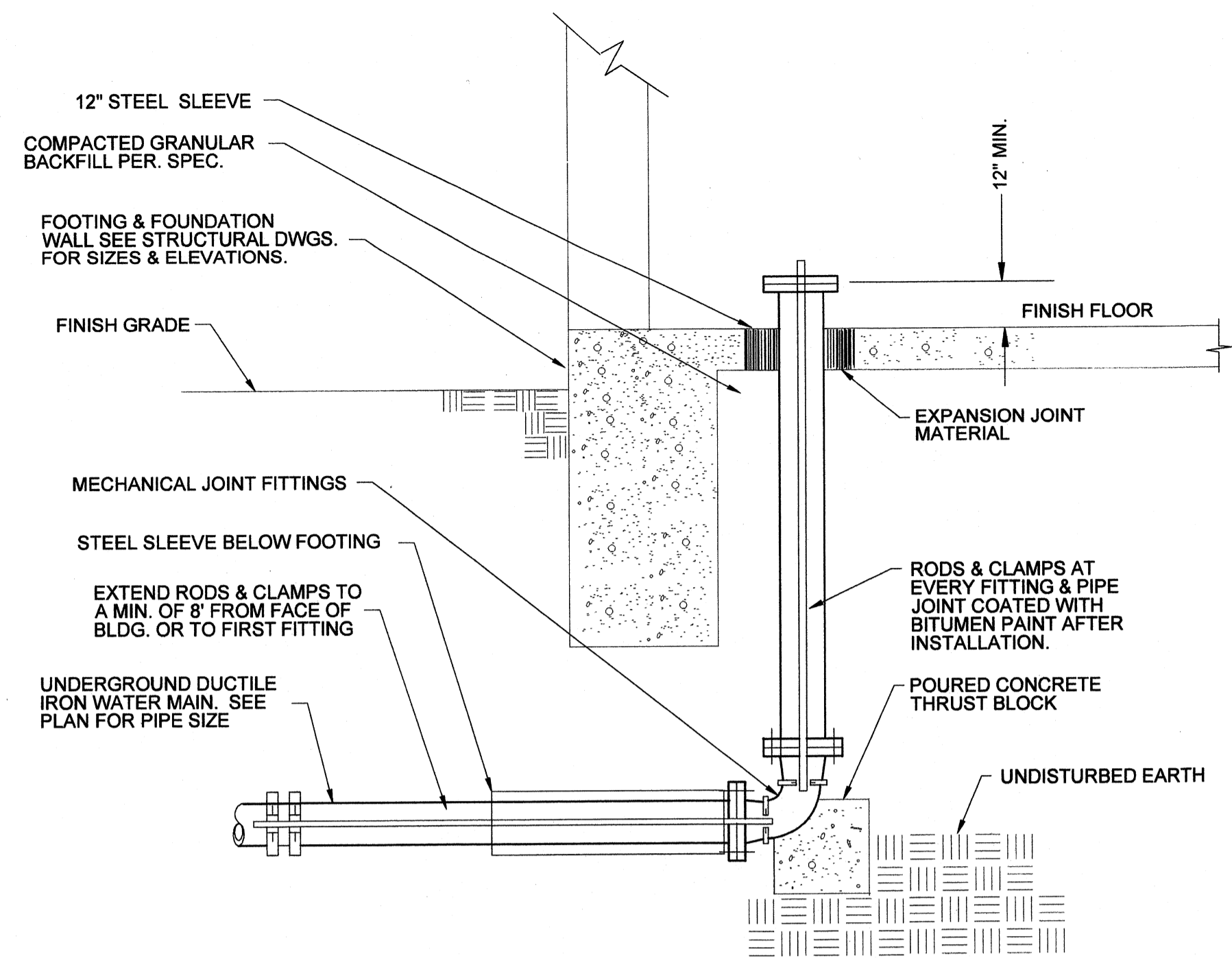
OPERATIONS BUILDING SANITARY SEWER RISER DIAGRAM

PROJECT RECORD

BY	DATE	DESCRIPTION

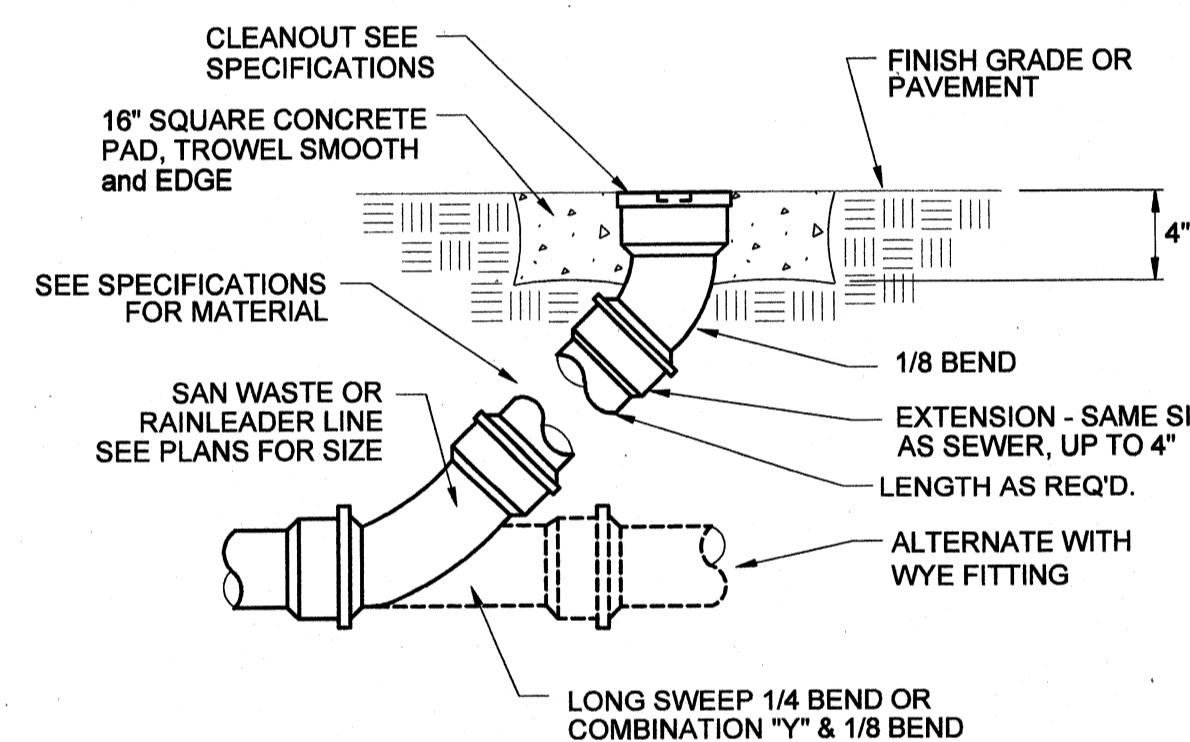
OPERATIONS BUILDING PLUMBING RISER DIAGRAMS

Client: OHIO COUNTY WATER DISTRICT	Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT	
Project No.:	120-07060
Designed By:	JWM
Drawn By:	JWM
Checked By:	DSB



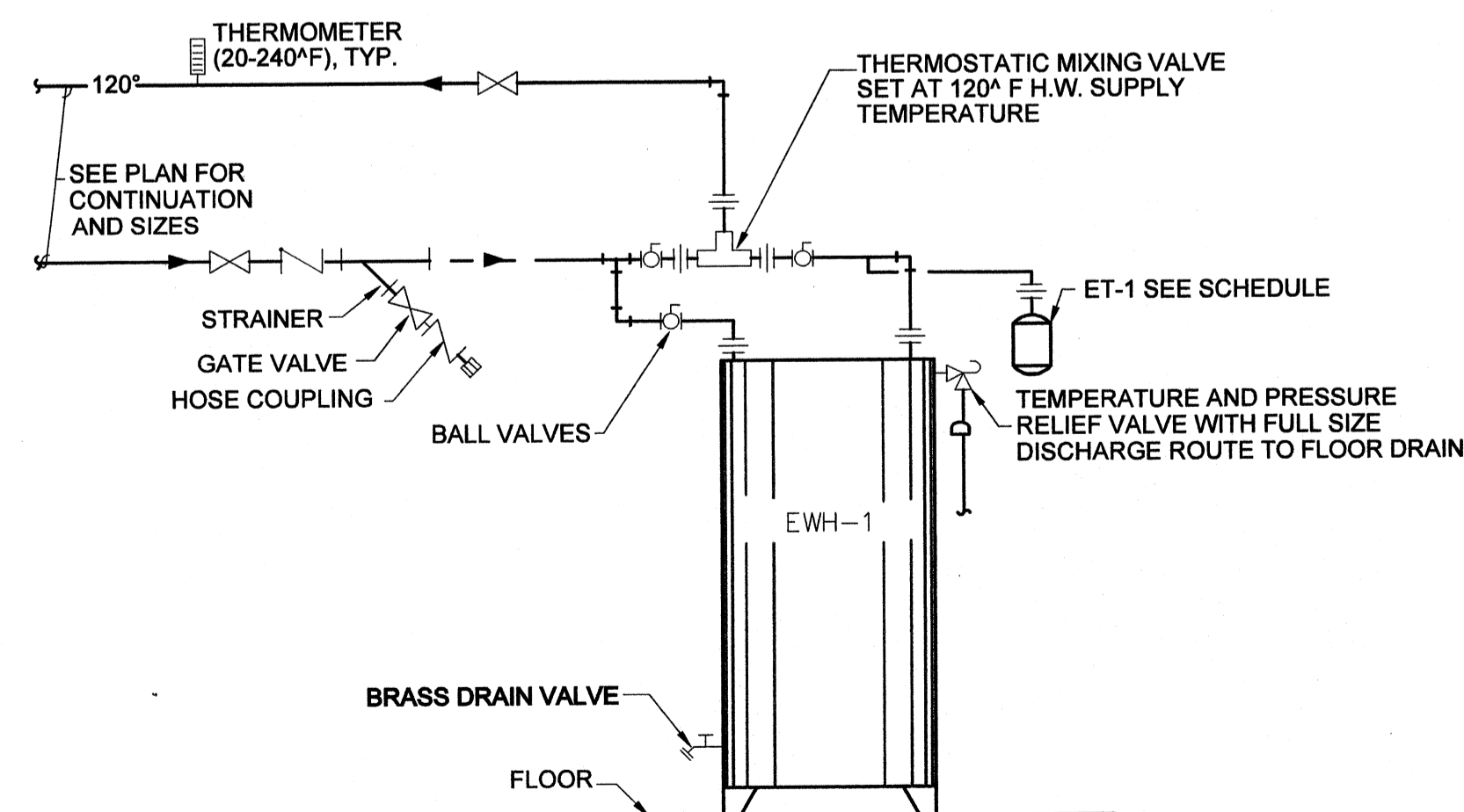
WATER SERVICE ENTRANCE

SCALE NONE



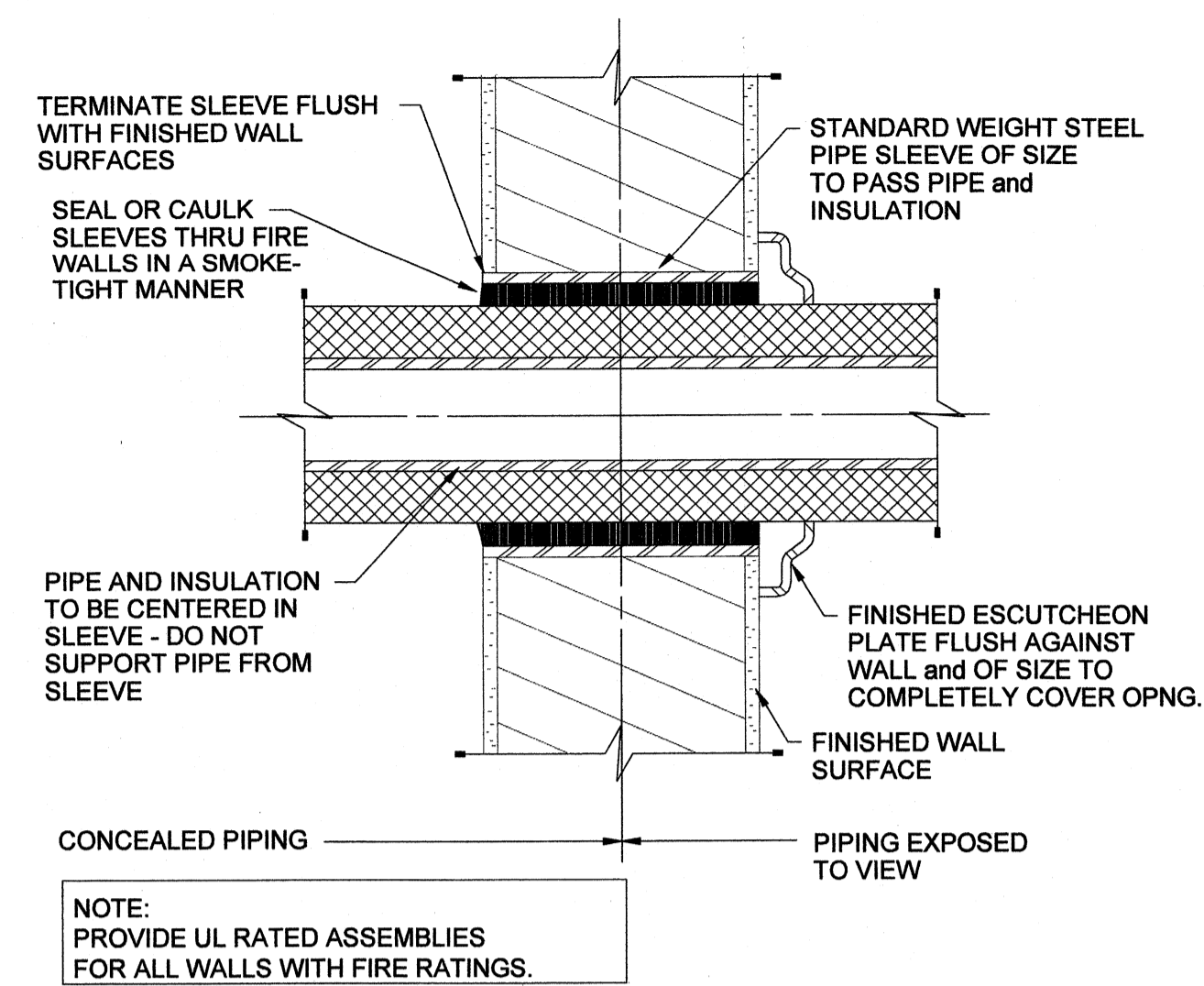
YARD CLEANOUT DETAIL

SCALE NONE



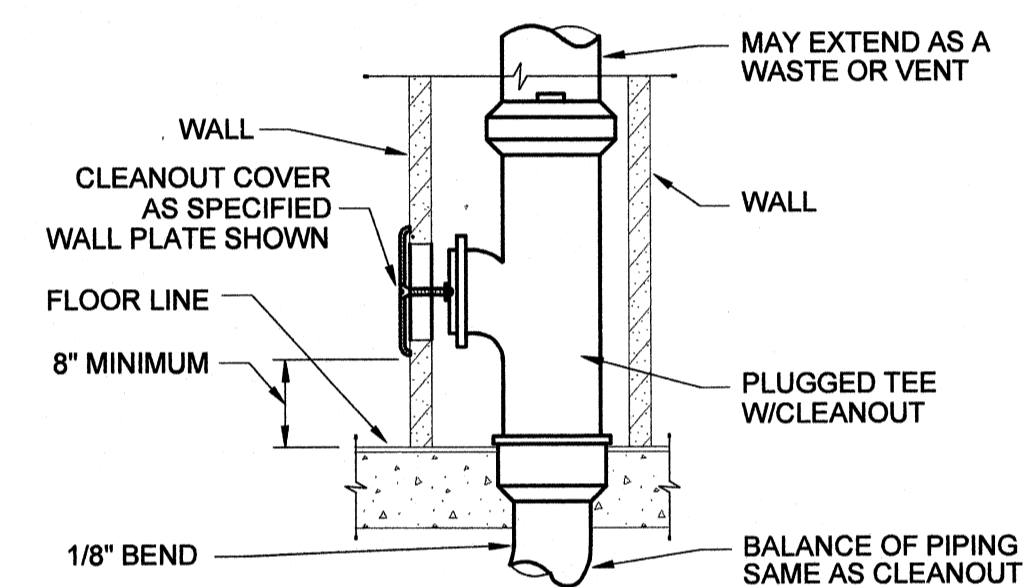
GAS WATER HEATER DETAIL

SCALE NONE



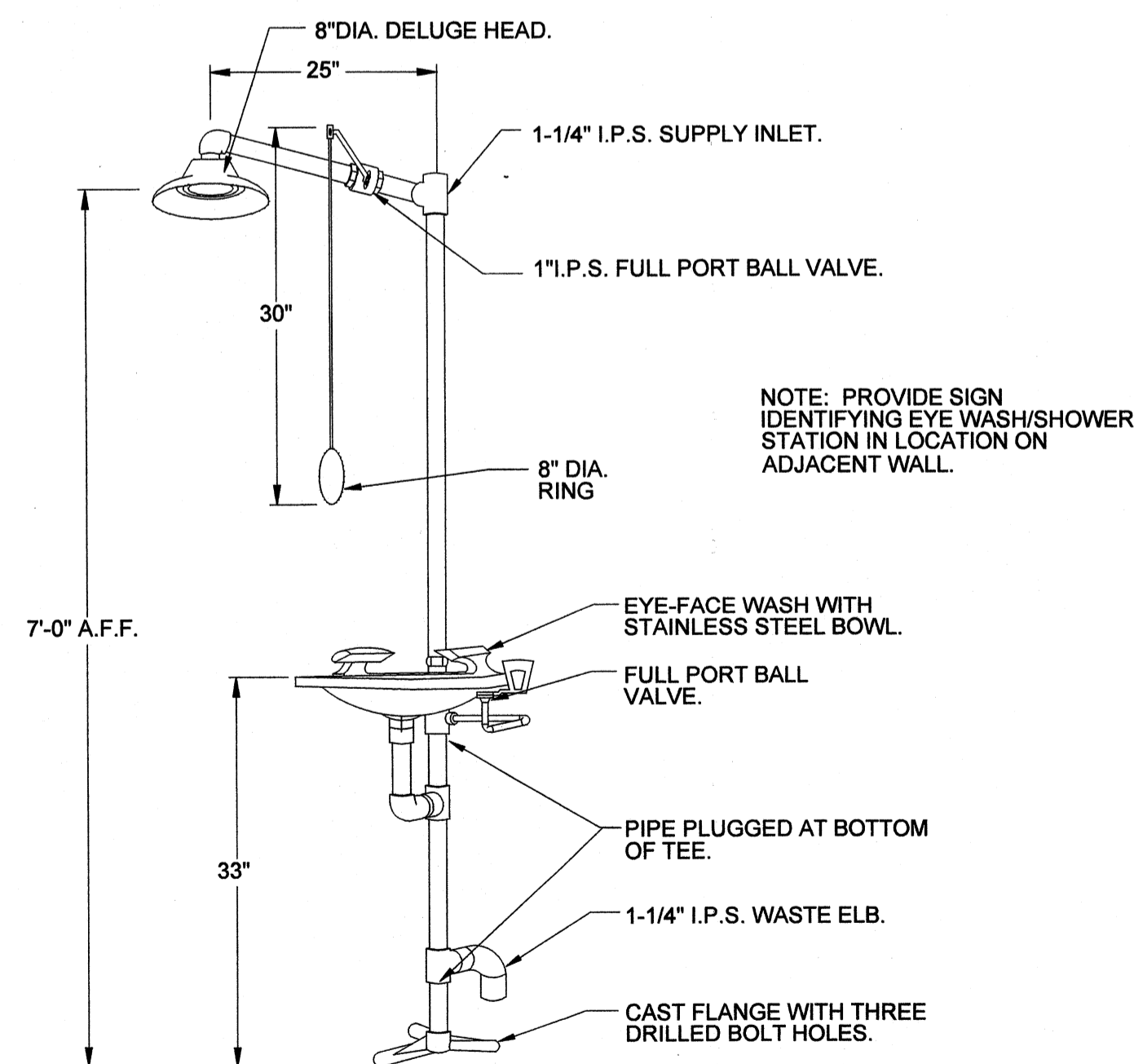
PIPE SLEEVES THUR INTERIOR WALLS

SCALE NONE



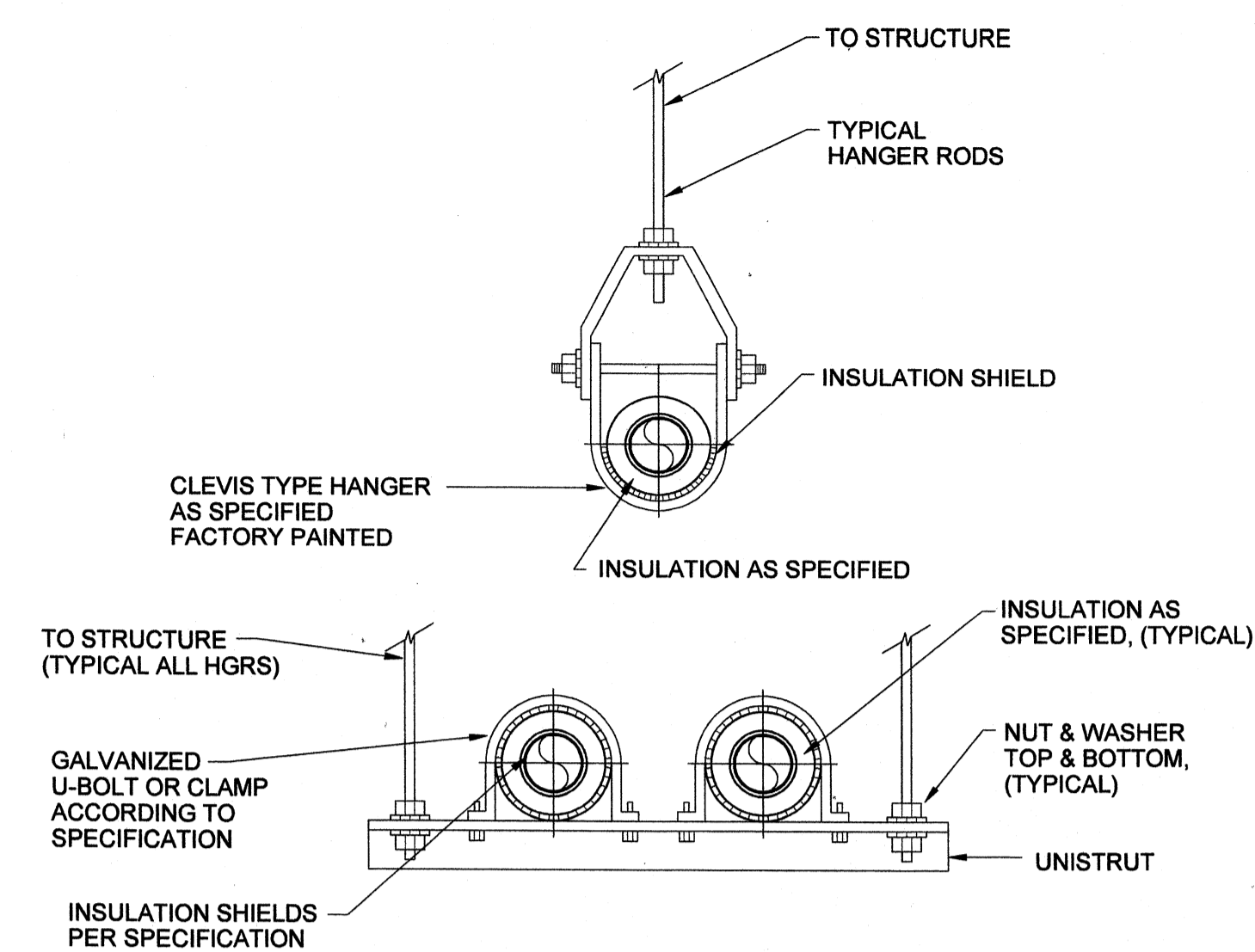
WALL CLEANOUT DETAIL

SCALE NONE



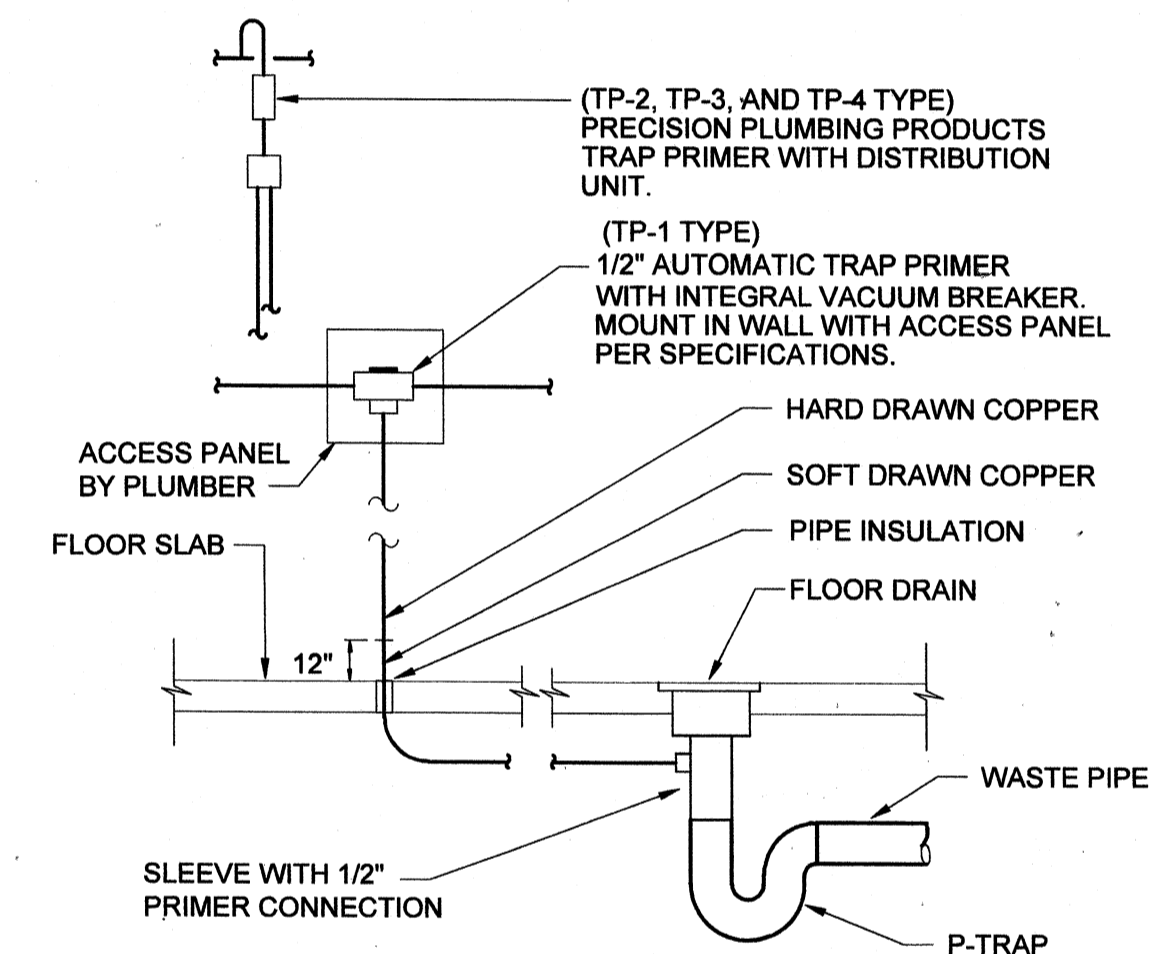
EMERGENCY EYE WASH/SHOWER DETAIL

SCALE NONE



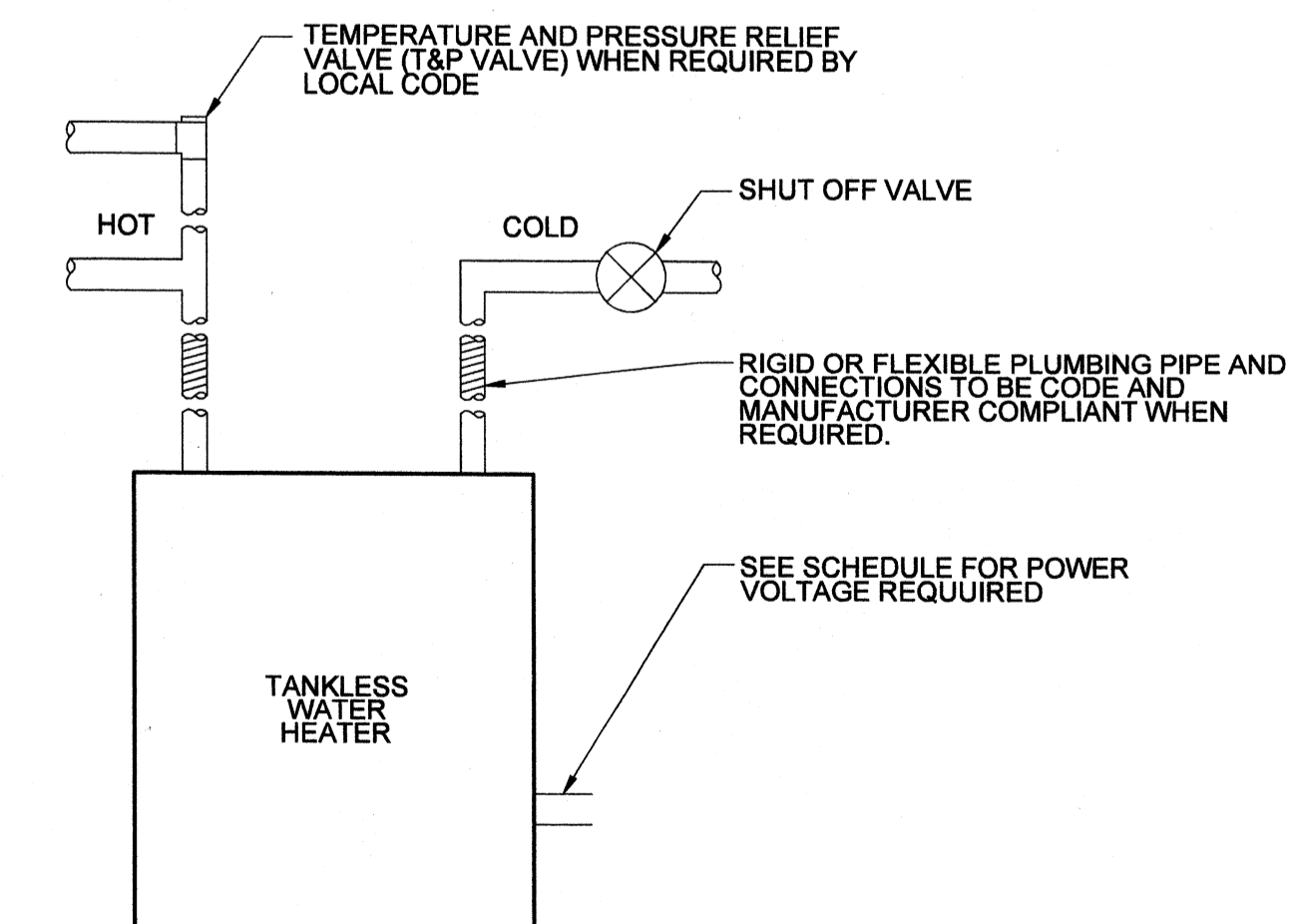
PIPE HANGERS - CLEVIS/TRAPEZE

SCALE NONE



FLOOR DRAIN TRAP PRIMER DETAIL

SCALE NONE



INSTANTANEOUS WATER HEATER

SCALE NONE

NOTES:
- WATER HEATER MUST BE INSTALLED TO CONFORM WITH CURRENT NATIONAL ELECTRIC CODE, AND ANY APPLICABLE LOCAL PLUMBING, ELECTRICAL, HEATING AND AIR CONDITIONING CODES.
- FOLLOW MANUFACTURER INSTALLATION INSTRUCTIONS

TETRA TECH
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PROJECT RECORD

STATE OF KENTUCKY
Professional Engineer
24131

BY	DATE	DESCRIPTION

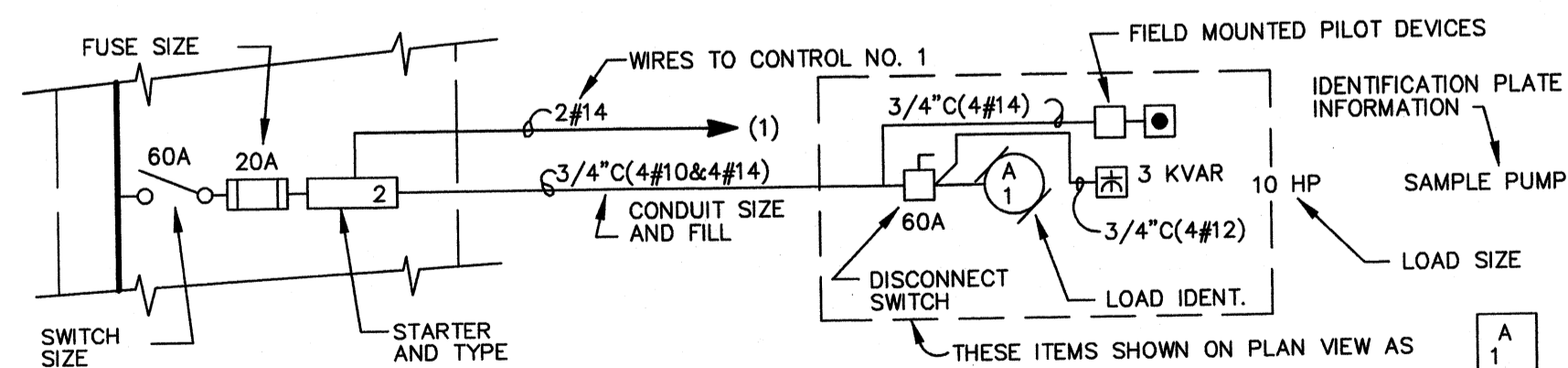
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
PLUMBING DETAILS

Project No.: 120-07060
Designed By: JWM
Drawn By: JWM
Checked By: DSB

P-501
Sheet of 147

Wednesday, July 01, 2009 4:42:59 PM DRAWING: \nroffis\projects\120-07060 Ohio County\CONFORMED SET 5-09\PLUMBING\501.DWG LAYOUT: P-501 USER NAME: JEREMY M. FRONGILLO

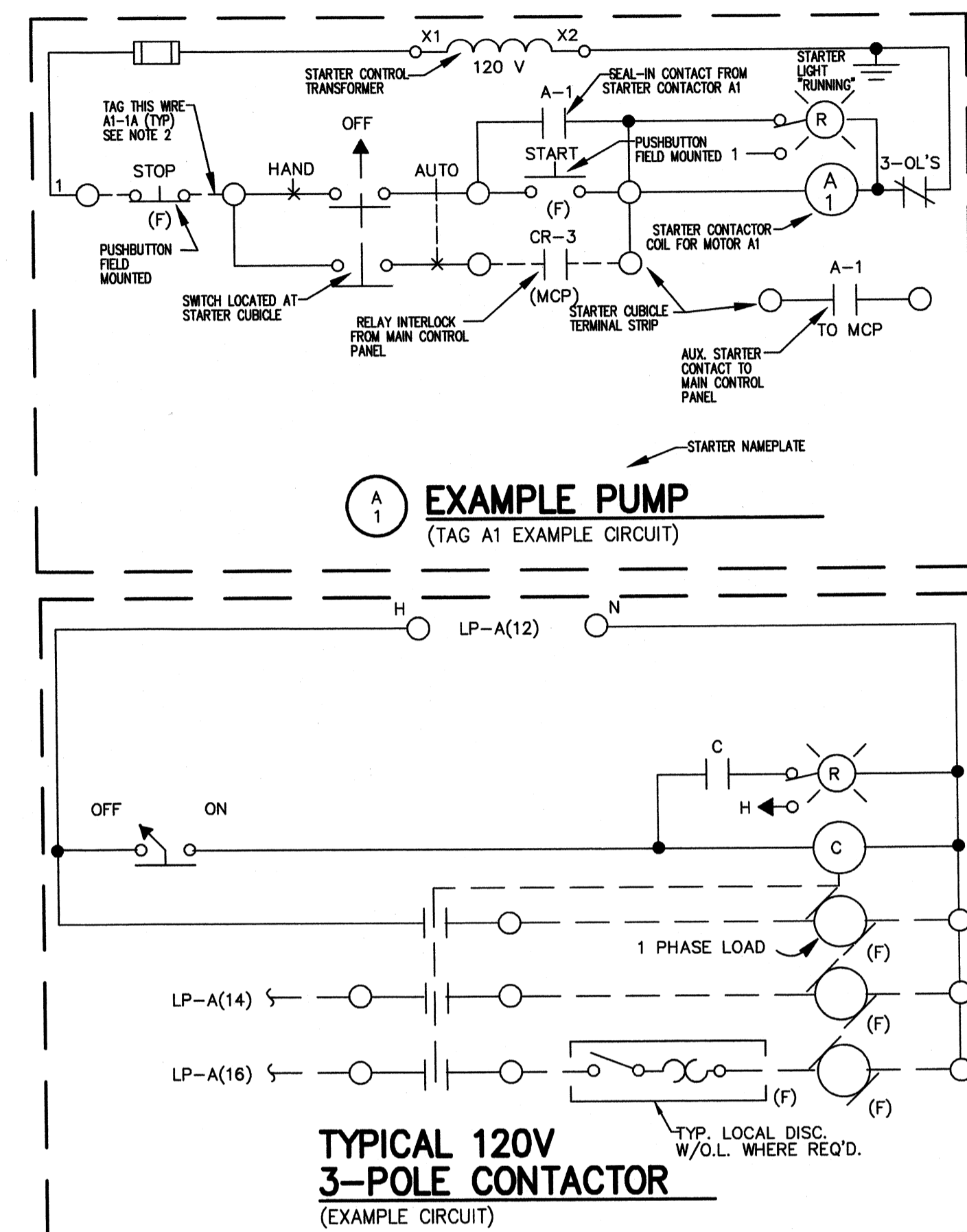
BACKGROUND PLAN AND ONE LINE SYMBOLS			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
[Symbol]	CONTROL SWITCH (SEL. OR P.B.) SEE CIRCUITS FOR SPECIFIC TYPE	[Symbol]	LOW VOLTAGE DISCONNECT SWITCH
[Symbol]	TEMPERATURE - HUMIDISTAT SWITCH (SUBSCRIPT = NO. OF STAGES)	[Symbol]	LOW VOLTAGE FUSE (BELOW 600V)
[Symbol]	LIMIT - PRESSURE - VACUUM SWITCH	[Symbol]	ALL STARTERS SHALL BE FULL VOLTAGE NON-REVERSING UNLESS OTHERWISE INDICATED (FVR) FULL VOLTAGE REVERSING (RV) REDUCED VOLTAGE (25,2W) TWO SPEED, TWO WINDING
[Symbol]	ELECTRICAL OR MECHANICAL ALTERNATOR (SEE WIRING)	[Symbol]	600V, 3 POLE MOLDED CASE CIRCUIT BREAKER, FRAME & RATING AS SHOWN
[Symbol]	OVERLOAD SWITCH OR DEVICE	[Symbol]	SINGLE PHASE, FRACTIONAL HP MOTOR TO LOCATION INDICATED (SEE GEN. NOTE 4)
[Symbol]	TERMINAL BOX	[Symbol]	THREE PHASE LOAD WITH IDENTIFICATION
[Symbol]	SOLENOID VALVE	[Symbol]	HIGH VOLTAGE FUSE (ABOVE 600 V)
[Symbol]	PHOTOCELL LINE VOLTAGE	[Symbol]	TAG NO. (BALLOON) FOR DEVICE INDICATED
[Symbol]	ITEM NO. INTERCOM EQUIPMENT	[Symbol]	FOR POWER (SEE GEN. NOTE 4) 3/4" C/2" C/1/8" SHLD. CONDUIT AND WIRE RUN FROM DEVICE INDICATED TO LOCATION INDICATED
[Symbol]	INTERCOMMUNICATION SYSTEM AMPLIFIER - WALL STATION - LINE BALANCE	[Symbol]	CAPACITOR, 3 PHASE, SIZE AS INDICATED
[Symbol]	INTERCOMMUNICATION DESK SET	[Symbol]	DISCONNECT SWITCH (F) = CIRCUIT BREAKER
[Symbol]	INTERCOM. SPEAKER (SURFACE MTD.)	[Symbol]	MAGNETIC STARTER (BACKGROUND DRAWINGS ONLY)
[Symbol]	INTERCOM. SPEAKER (CEILING LAY-IN)	[Symbol]	COMBINATION MAGNETIC STARTER FUSED (UNLESS NOTED (CIRCUIT BREAKER)
[Symbol]	TELEPHONE OUTLET OR JUNCTION BOX	[Symbol]	COMBINATION LIGHTING CONTACTOR WITH HAND-OFF-AUTO SWITCH
[Symbol]	WELDING RECEPTACLE - NEMA L9-50R 600V, 2P, 3W, SIMPLEX	[Symbol]	MANUAL STARTER (R) = REVERSING
[Symbol]	INTERCOM HANDSET - SURFACE MOUNTED WITH REMOTE SPEAKER AMPLIFIER	[Symbol]	CONTROL PANEL
[Symbol]	INTERCOM VOLUME CONTROL	[Symbol]	TEMPERATURE CONTROL PANEL
[Symbol]	INTERCOM SPEAKER - SURFACE MOUNTED	[Symbol]	UNIT HEATER, 1/8 HORSEPOWER
[Symbol]	INTERCOM HANDSET - FLUSH MOUNTED WITH REMOTE SPEAKER AMPLIFIER	[Symbol]	600 VOLT FEEDER BUS DUCT (AMPERAGE AS INDICATED)
[Symbol]	AS NOTED (LIGHTING PANEL, CONTROL PANEL, DISTRIBUTION LIGHT ETC.) WALL MOUNTED	[Symbol]	LIGHTNING ARRESTOR
[Symbol]	JUNCTION BOX	[Symbol]	LOW VOLTAGE HOME RUNS 120/208 V 120/240 V (SEE GEN. NOTE 4)
[Symbol]	HEATER	[Symbol]	NEMA 4 WATERTIGHT
[Symbol]	TRANSFORMER	[Symbol]	NEMA 4X WATERTIGHT AND CORROSION PROOF
[Symbol]	CONDUIT WITH CONDUIT SEAL FITTING	[Symbol]	NEMA 7 EXPLOSION PROOF - CLASS I, DIVISION I, GROUP D
[Symbol]	CONDUIT EXPOSED	[Symbol]	NEMA 9 EXPLOSION PROOF - CLASS II, DIVISION 1
[Symbol]	CONDUIT CONCEALED	[Symbol]	KEYLOCK
[Symbol]	DIRECT BURIED CONDUIT	[Symbol]	SMOKE DETECTOR
[Symbol]	DIRECT BURIED CABLE	[Symbol]	EXIT LIGHT
[Symbol]	OVERHEAD LINE	[Symbol]	FLUORESCENT LUMINAIRE
[Symbol]	UNDERGROUND DUCT BANK	[Symbol]	INCANDESCENT LUMINAIRE
[Symbol]	CONCRETE ENCASED DUCT BANK, WITH CABLE LOCATIONS AND SPARE DUCTS AS INDICATED ON DRAWINGS	[Symbol]	HIGH INTENSITY DISCHARGE LIGHT
[Symbol]	CABLE REEL	[Symbol]	EMERGENCY BATTERY PACK



M.C.C. LEGEND EXAMPLE

CONTROL CIRCUIT & PILOT DEVICE LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
[Symbol]	PRESS. ACTUATED SWITCH	[Symbol]	SELECTOR SWITCH OPERATOR WITH FUNCTION SHOWN
[Symbol]	FLOW ACTUATED SWITCH	[Symbol]	MOMENTARY PUSHBUTTON OPERATOR-NORMALLY OPEN
[Symbol]	TEMP. ACTUATED SWITCH	[Symbol]	MOMENTARY PUSHBUTTON OPERATOR-NORMALLY CLOSED
[Symbol]	LIMIT SWITCH-NORMALLY OPEN	[Symbol]	PUSHBUTTON OPERATOR WITH MUSHROOM HEAD
[Symbol]	LIMIT SWITCH-NORMALLY CLOSED	[Symbol]	FIELD LOCATED STOP BUTTON
[Symbol]	LIMIT SWITCH-NORMALLY CLOSED-HELD OPEN	[Symbol]	MAINTAINED PUSH-PULL OPERATOR
[Symbol]	LIMIT SWITCH-NORMALLY OPEN-HELD CLOSED	[Symbol]	MAINTAINED STOP-START PUSHBUTTON OPERATOR
[Symbol]	LATCHING CABLE SWITCH	[Symbol]	SOLENOID OR CLUTCH
[Symbol]	TIME-DELAY FUSE	[Symbol]	PUSH-TO-TEST INDICATING LIGHT
[Symbol]	CONTROL RELAY COIL	[Symbol]	MAINTAINED STOP-MOMENTARY START PUSHBUTTON (JOG)
[Symbol]	CONTROL RELAY CONTACT-NORMALLY OPEN	[Symbol]	ZERO SPEED OR ANTI-PLUGGING SWITCH
[Symbol]	CONTROL RELAY CONTACT-NORMALLY CLOSED	[Symbol]	LOCAL TERMINALS WITH EXTERNAL WIRING
[Symbol]	TWO COIL LATCHING RELAY	[Symbol]	ELAPSED TIME INDICATOR
[Symbol]	TIMING RELAY COIL	[Symbol]	TIMING RELAY INSTANTANEOUS CONTACTS
[Symbol]	TIMED CLOSED CONTACT ON ENERGIZATION		
[Symbol]	TIMED OPEN CONTACT ON ENERGIZATION		
[Symbol]	TIMED OPEN CONTACT ON DE-ENERGIZATION		
[Symbol]	TIMED CLOSED CONTACT ON DE-ENERGIZATION		
[Symbol]	120 VAC TRANSFORMER		

WIRING DEVICE SCHEDULE		
SYMBOL	DESCRIPTION	NEMA TYPE
[Symbol]	125V, 2P, SIMPLEX, CLOCK HANGER	1-15 R
[Symbol]	125V, 2P, SIMPLEX, 3W	5-20 R
[Symbol]	125V, 2P, DUPLEX, 3W	5-20 R
[Symbol]	125/250V, 3P, SIMPLEX, 3W, RANGE TYPE	10-50 R
[Symbol]	20A, 120/277 V SWITCH	SPST
[Symbol]	20A, 120/277 V SWITCH	2PDT
[Symbol]	20A, 120/277 V SWITCH	3 WAY
[Symbol]	20A, 120/277 V SWITCH	4 WAY
[Symbol]	20A, 120/277 V DIMMER SWITCH	
[Symbol]	250V, 2P, SIMPLEX, 3W, 50A	6-50R
[Symbol]	125V, 2P, MULTI-RECEPTACLE	5-15R
[Symbol]	250V, 2P, SIMPLEX, 3W, 20A	6-20R
[Symbol]	600V, 2P, 3W, SIMPLEX WELDING	L9-50R
[Symbol]	208V, 3P, SIMPLEX, 4W, LOCKING	L14-20R
[Symbol]	277V, 2P, DUPLEX, 3W	7-15R



- GENERAL NOTES:
- ELECTRICAL MATERIALS AND EQUIPMENT ITEMS SHOWN IN LIGHT LINE WEIGHTS ON THE DRAWINGS ARE EXISTING ITEMS TO REMAIN. ELECTRICAL MATERIALS AND EQUIPMENT ITEMS SHOWN IN HEAVY LINE WEIGHTS ARE NEW THIS CONTRACT.
 - ITEMS SHOWN CROSSHATCHED ON THE DRAWINGS ARE EXISTING ITEMS TO BE REMOVED.
 - FOR ITEMS INDICATED AS "FIELD LOCATE" CHECK DRAWINGS OF OTHER TRADES (IN PARTICULAR PIPING AND STRUCTURAL) FOR INTERFERENCE AND FOR LOCATIONS OF MOUNTING FLANGES, CONNECTION POINTS, ETC.
 - INSTALL A SINGLE CONDUCTOR INSULATED (RHW, THHN, OR XHHW) COPPER GROUND WIRE IN EACH CONDUIT, SIZE AS SHOWN ON DRAWINGS OR AS A MINIMUM PER THE NATIONAL ELECTRICAL CODE. THIS GROUND WIRE SHALL BE CONNECTED AT EACH END TO THE EQUIPMENT GROUND. CONDUIT SHALL BE 3/4" MIN.
 - THE FOLLOWING COMPONENT IDENTIFICATION SHALL BE USED AS APPROPRIATE:
 - (F) FIELD MOUNTED, NOT AT STARTER OR OTHER CONTROL PANELS.
 - (S) STARTER PANEL MOUNTED.
 - (MCP) AT MAIN CONTROL PANEL.
 - (1) AT CONTROL PANEL NO. 1
 - (2) AT CONTROL PANEL NO. 2
 - (TCP) AT TEMPERATURE CONTROL PANEL.
 - WIRE NUMBERS (1, 3 & 5) ETC. SHALL BE PREFIXED WITH STARTER TAG NUMBERS. THE WIRE NUMBER AFTER THE PREFIX MAY BE THE MANUFACTURER'S WIRE NUMBERING SYSTEM. WIRE MARKERS MAY BE USED AT EACH WIRE TERMINATION POINT.

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PROJECT RECORD

CONFORMED SET 5/09

BY: _____ DATE: _____

Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT

ELECTRICAL LEGEND

Project No.: 120-07060
Designed By: WAP/FWY
Drawn By: FWY
Checked By: LDC

E-001

Copyright: Tetra Tech

Thursday, July 02, 2009 2:00:42 PM DRAWING: \\netof83\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-001 LEGEND.DWG LAYOUT: E-001 USER NAME: JEREMY M. FRONIGILLO

Thursday, July 02, 2009 2:01:13 PM DRAWING: \net\ofis\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-002 LEGEND DWG LAYOUT E-002 USER NAME: JEREMY M. FRONGILLO

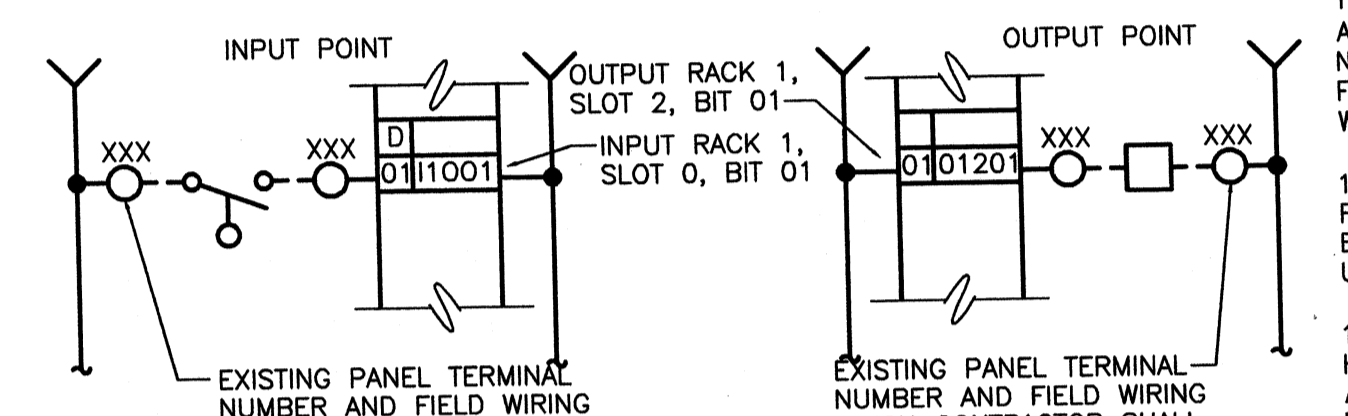
GRAPHIC SYMBOL FOR INSTRUMENTATION ITEMS	
	DEVICE MOUNTED ON PANEL
	BOARD OR PANEL MOUNTED DEVICE-- DEVICE MOUNTED INSIDE PANEL
	FIELD OR LOCALLY MOUNTED DEVICE
	PROGRAMMED FUNCTION NOT NORMALLY ACCESSIBLE TO OPERATOR
	PROGRAMMED FUNCTION ACCESSIBLE THROUGH OPERATOR'S INTERFACE DEVICE
	COMPUTER SYSTEM INPUT OR OUTPUT POINT
	INTERLOCKING
	EXCLUSIVE OR
	ALTERNATOR
	OR
	AND
	MOTOR STARTER
	PURGE
	COMPLEX LOGIC
	COMPUTER LOGIC SYSTEM
	TERMINAL OR TRANSITION POINT
	FLOAT SWITCH
	PARSHALL FLUME
	MIXER
	SEAL
	OFF PAGE CONNECTOR
	PROCESS MACHINERY MOTOR
	VENTURI OR INSERT FLOW TUBE
	IN-LINE FLOW ELEMENT (PROPELLER TYPE)
	IN-LINE FLOW ELEMENT (MAGNETIC TYPE)
	IN-LINE FLOW ELEMENT (ULTRA SONIC)
	FLOW ORIFICE
	TURBIDIMETER
	ROTAMETER
	PUMP
	BLOWER
	GENERAL USE DISCONNECTING SWITCH
	TIMED CLOSED CONTACT ON ENERGIZATION
	TIMED OPEN CONTACT ON ENERGIZATION
	TIMED OPEN CONTACT ON DE-ENERGIZATION
	TIMED CLOSED CONTACT ON DE-ENERGIZATION
	FLOAT ACTUATED SWITCH--NO
	FLOAT ACTUATED SWITCH--NC
	PRESSURE ACTUATED SWITCH--NC
	PRESSURE ACTUATED SWITCH--NO
	FLOW ACTUATED SWITCH--NO
	FLOW ACTUATED SWITCH--NC
	TEMPERATURE SWITCH--NO
	TEMPERATURE SWITCH--NC
	LIMIT SWITCH -- NORMALLY OPEN
	LIMIT SWITCH -- NORMALLY OPEN -- HELD CLOSED
	LIMIT SWITCH -- NORMALLY CLOSED -- HELD OPEN
	LIMIT SWITCH -- NORMALLY CLOSED
	CONTROL RELAY CONTACT--NORMALLY OPEN
	CONTROL RELAY CONTACT--NORMALLY CLOSED
	LIGHTNING ARRESTOR
	ELAPSED TIME INDICATOR
	TIMING RELAY COIL
	TIMED RELAY COIL (OFF--DELAY)
	INDICATING LIGHT
	PUSH--TO--TEST INDICATING LIGHT
	BATTERY
	SECONDARY TRANSFORMER
	VARIABLE RESISTOR
	RESISTOR
	MOLDED CASE CIRCUIT BREAKER
	SPEED SWITCH
	MOMENTARY PUSHBUTTON OPERATOR-- NORMALLY CLOSED
	MOMENTARY PUSHBUTTON OPERATOR-- NORMALLY OPEN
	SELECTOR SWITCH--NORMALLY OPEN
	PUSHBUTTON OPERATOR WITH MUSHROOM HEAD
	SOLENOID OR CLUTCH
	THERMAL OVERLOAD
	A-C SURGE PROTECTOR
	HORN
	FIELD LOCATED
	TERMINAL POINT
	TERMINAL POINT ARROW
	LOW VOLTAGE FUSE
	CIRCUIT BREAKER WITH STAB CONNECTION
	CONTROL POWER TRANSFORMER
	TWO COIL LATCHING RELAY
	RECEPTACLE
	SELECTOR SWITCH OPERATOR WITH FUNCTION SHOWN
	MAINTAINED PUSH--PULL OPERATOR
	MAINTAINED STOP--START PUSHBUTTON OPERATOR
	DIODE RECTIFIER OR D-C SURGE PROTECTOR
	COMPUTER COMMUNICATIONS RECEPT.

GRAPHIC SYMBOLS FOR VALVES	
	STROKE OR POSITION ACTUATOR CYLINDER (OPEN--SHUT)
	STROKE OR POSITION ACTUATOR CYLINDER (THROTTLING)
	PNEUMATIC DIAPHRAGM OR POSITIONER (OPEN--SHUT)
	PNEUMATIC DIAPHRAGM OR POSITIONER (THROTTLING)
	MOTOR OPERATED (THROTTLING)
	MOTOR OPERATED (OPEN--SHUT)
	SLIDE--STOP GATE
	SLUICE GATE
	AIR SET ASSEMBLY
	BALL VALVE
	GLOBE VALVE
	GATE VALVE OR KNIFE GATE
	CHECK VALVE
	PLUG VALVE
	BUTTERFLY VALVE, DAMPER OR LOUVER
	TWO--WAY SOLENOID VALVE OPERATOR
	ELECTRONICALLY CONTROLLED CHECK VALVE
	TWO--WAY SOLENOID VALVE OPERATOR--DETENTED
	THREE--WAY SOLENOID VALVE OPERATOR
	FOUR--WAY SOLENOID VALVE OPERATOR (M-MANIFOLD STYLE)

ABBREVIATIONS	
R	RESET
T	TRIP
AS	AIR SUPPLY
DO	DISSOLVED OXYGEN
GS	GAS SUPPLY
HS	HYDRAULIC SUPPLY
NS	NITROGEN SUPPLY
ORP	OXYGEN REDUCTION POTENTIAL
SS	STEAM SUPPLY
SP	SET POINT
WS	WATER SUPPLY
PV	PROCESS VARIABLE
F.O.	FAIL OPEN
F.C.	FAIL CLOSE
P	PROPORTIONAL CONTROL
I	INTEGRAL OR RESET CONTROL
D	DERIVATIVE OR RATE CONTROL
V	VELOCITY ALGORITHM
1-O	ON--OFF CONTROL
SQ	SQUARE ROOT EXTRACTOR
E	ADD OR TOTALIZE
A	SUBTRACT OR DIFFERENCE
H	HIGHEST MEASURED VARIABLE
L	LOWEST MEASURED VARIABLE
C	CONVERT ONE TO ANOTHER
X, +	MULTIPLY, DIVIDE
e	BIAS OR REVERSING
f(x)	CHARACTERIZE -- (EQUATION / D/%/ETC.)

INSTRUMENTATION LINE SYMBOLS	
	ELECTRICAL SIGNAL
	AIR LINE
	HYDRAULIC SIGNAL
	ELECTROMAGNETIC OR SONIC SIGNAL
	SOFTWARE SIGNAL
	CONNECTION TO PROCESS, OR MECHANICAL LINK
	PLC FIBEROPTIC COMMUNICATION
	ETHERNET FIBEROPTIC COMMUNICATION
	ETHERNET COMMUNICATION (CAT--5 CABLING)

I.S.A. STANDARD LETTER FUNCTIONS		
SYMBOL	FIRST LETTER	SUCCEEDING LETTERS
A	ANALYSIS , ANALOG	ALARM
B	BURNER , FLAME	BATCH
C	CONDUCTIVITY , COMMAND	CONTROL (FEEDBACK TYPE)
D	DENSITY , SPECIFIC GRAVITY	
E	VOLTAGE	PRIMARY ELEMENT
F	FLOW RATE	RATIO
G	GAGING	GLASS
H	HAND , MANUAL	HIGH
I	CURRENT	INDICATE
J	POWER	SCAN
K	TIME , TIME SCHEDULE	CONTROL (NO FEEDBACK)
L	LEVEL , LIGHT	LOW
M	MOISTURE , HUMIDITY	MIDDLE , MODULATE
N		
O	OVERLOAD	ORIFICE
P	PRESSURE , VACUUM	POINT
Q	QUANTITY	TOTALIZE , INTEGRATE
R	RADIOACTIVITY	RECORD , PRINT , RECEIVE
S	SPEED , FREQUENCY , SOLENOID	SWITCH
T	TEMPERATURE , TURBIDITY	TRANSMIT , TRANSFORM
U	MULTIVARIABLE	MULTIFUNCTION
V	VIBRATION , VISCOSITY	VALVE , DAMPER , LOUVER
W	WEIGHT , FORCE	
X		RELAY , COMPUTE
Y		DRIVE , ACTUATE
Z	POSITION	



- NOTES:
- THE DRAWINGS SHOW EXISTING WIRES, TERMINAL AND CABLE NUMBERS AS REQUIRED TO PROPERLY INTERFACE WITH EXISTING EQUIPMENT. CONTRACTOR SHALL VERIFY WIRE AND CABLE NUMBERS AND SUPPLY SIGNAL CONDITIONING/ INTERPOSING RELAYS AS REQUIRED TO PROPERLY INTERFACE WITH EXISTING EQUIPMENT. CONTRACTOR SHALL VERIFY SIGNAL CONDITIONING AND INTERPOSING RELAYS AS NEEDED.
 - NEW WORK IS SHOWN IN BOLD.
 - PROVIDE SURGE SUPPRESSION NETWORKS ACROSS RELAYS, SOLENOIDS, CONTACTORS, STARTERS, ETC., AS RECOMMENDED BY PLC MANUFACTURER.
 - NO WIRES SHALL BE TERMINATED TO TERMINAL STRIPS, OR OTHER EQUIPMENT WITHOUT FIRST VERIFYING SIGNAL TYPE. DAMAGES RESULTING IN LACK OF VERIFICATION SHALL BE BORNE BY THE CONTRACTOR. CONTRACTOR SHALL COORDINATE SIGNAL TYPE AND VOLTAGE WITH I/O CARDS SHOWN.
 - CONTROL PANELS SHALL HAVE DOOR HANDLES WITH LOCKS. LOCKS SHALL BE KEYED ALIKE AS COORDINATED WITH OWNER.
 - POINTS ON CARDS SHOWN TO BE USED, AND SHOWN AS SPARE SHALL BE WIRED TO TERMINAL STRIPS. TYPICAL FOR NEW AND EXISTING CONTROL PANELS.
 - SCALES/RANGES NOT SHOWN ON P & ID'S SHALL BE OBTAINED FROM THE ENGINEER DURING THE SHOP DRAWING REVIEW PROCESS.
 - SIGNALS SHOWN ON P & ID'S AND I/O CARDS COMPRISE I/O WIRING REQUIRED FOR THE INSTALLATION OF THE NEW CONTROL SYSTEM. REFER TO ELECTRICAL SITE PLAN/BACKGROUND DRAWINGS FOR ADDITIONAL INFORMATION.
 - WITHIN CONTROL PANELS, NAMEPLATES SHALL BE PROVIDED TO INDICATE DIFFERENT VOLTAGE LEVELS WITHIN PANELS. ALSO, A NAME TAG (YELLOW BACKGROUND, RED LETTERING) SHALL BE LOCATED ON THE FRONT OF EVERY PANEL INDICATING THAT WHEN MAIN PANEL IS DISCONNECTED 120V IS STILL PRESENT FROM FIELD DEVICES (YELLOW WIRING/ISOLATED INPUT CARDS.)
 - CONTROL PANELS ARE TO BE PROVIDED WITH THERMOSTATICALLY CONTROLLED AIR CONDITIONERS WHERE SHOWN WITH CARBON FILTERS, ADEQUATELY SIZED FOR PROPER PANEL COOLING. PROVIDE 30' OF PLASTIC DRAIN LINE TUBING (TYP.) AIR CONDITIONERS TO BE THE PRODUCT OF M/LEAN GENESIS SERIES (PROVIDE STEP DOWN TRANSFORMER AND SECONDARY CIRCUIT BREAKER PROTECTION AS REQUIRED TO SUIT VOLTAGE REQUIREMENTS OF AIR CONDITIONER.)
 - PAINT CONTROL PANELS; COLOR AS DIRECTED BY OWNER/ENGINEER. SUBMIT COLOR SELECTION CHART DURING SHOP DRAWING REVIEW PROCESS.
 - PHENOLIC TAGS ON FACE OF CONTROL PANELS TO HAVE WHITE BACKGROUND AND BLACK LETTERING (EXCEPT WARNING TAGS; YELLOW BACKGROUND RED LETTERING).
 - SIGNALS SHOWN ON P & ID'S AND I/O CARDS COMPRISE WIRING AND FIELD DEVICES REQUIRED FOR THE CONTROL SYSTEM. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
 - FIBEROPTIC CABLE INSTALLATION AND TERMINATIONS SHALL BE PERFORMED BY A QUALIFIED ORGANIZATION WHICH SPECIALIZES IN THIS TYPE OF WORK. ONCE INSTALLED, FO CABLE SHALL BE TESTED AS OUTLINED IN THE SPECIFICATIONS BY A QUALIFIED TESTING ORGANIZATION.
 - ETHERNET AND PLC FIBEROPTIC CABLE SHALL NOT BE SPLICED BETWEEN PANELS.

- REFER TO ELECTRICAL WIRING DIAGRAMS FOR ADDITIONAL INFORMATION ON ISOLATED I/O. A COMMON NEUTRAL MAY BE USED FOR SEVERAL ISOLATED INPUTS FROM THE SAME STARTER. PROVIDE NEUTRAL JUMPER WIRES WITHIN THE PANEL AS REQUIRED.
- TERMINAL BLOCKS TO BE 12" MINIMUM ABOVE FLOOR. STACKED STYLE TERMINAL BLOCKS SHALL NOT BE PERMITTED. HIGH DENSITY TERMINAL BLOCKS MAY BE USED.
- BELDEN 9463 I/O CABLE WHERE TERMINATED SHALL HAVE ITS ENDS HEAT SHRUNKEN WITH BLACK TUBING, AND THE DRAIN WIRE SHALL BE COVERED WITH GREEN INSULATION.
- PROVIDE SAFETY COVERS ON ALL 480V MOLDED CASE MAIN CIRCUIT BREAKERS TO INSULATE THE INCOMING CONDUCTORS AND LOAD SIDE CONDUCTORS FROM CONTACT. (TYP. FOR ALL CONTROL PANELS)
- WHERE EXISTING CONTROL WIRES AND SHIELDED CABLES ARE SHOWN TO BE RE-USED, THEY SHALL BE RETAGGED WITH PLC I/O ADDRESS IN NEW PANEL, AND OUT IN FIELD AT THE INSTRUMENTS.
- UPS SELECTED TO BE COMPATIBLE WITH SOLA MCR TRANSFORMERS. (TYP)
- THE FIELD DEVICES SHOWN ON THE P&ID'S, I/O CARD DRAWINGS, ELECTRICAL BACKGROUNDS, AND DETAIL SHEETS MAKE UP THE FIELD DEVICE EQUIPMENT REQUIREMENTS. NOT ALL FIELD DEVICES REQUIRED ARE SHOWN ON THE P&ID'S.

CONTROL PANEL LEGEND	TAG
ADMINISTRATION CONTROL PANEL	ABP
RAW WATER INTAKE CONTROL PANEL	RWB
ULTRA FILTRATION CONTROL PANEL	UFBP
GRANULATED ACTIVATED CARBON AREA PANEL	GACP
CHEMICAL CONTROL PANEL	CC-MP
MOTOR CONTROL CENTER CONTROL PANEL	MCC-MP
SCADA	SCADAP
SCADA RACK	SRACK
VARIABLE FREQUENCY DRIVE FOR P-101	VF01
VARIABLE FREQUENCY DRIVE FOR P-102	VF02
CHEMICAL DISPENSING PUMP FOR SODIUM PERMANGANATE	CDP1
CHEMICAL DISPENSING PUMP FOR ALUMINUM CHLOROHYDRATE	CDP2
PAC	PACH
PAC HOPPER FLOW CONTROL	CP3
CHEMICAL DISPENSING PUMP FOR PAC	CDP4
VERTICAL PADDLE FLOCCULATOR FOR TRAIN 1, A	VPF1
VERTICAL PADDLE FLOCCULATOR FOR TRAIN 1, B	VPF2
VERTICAL PADDLE FLOCCULATOR FOR TRAIN 2, A	VPF3
VERTICAL PADDLE FLOCCULATOR FOR TRAIN 2, B	VPF4
CHEMICAL DISPENSING PUMP FOR CHLORINE DIOXIDE	CDP4
SLUDGE SUCKER FOR BASIN A AND B	SS1
ULTRA-FILTRATION PERMEATE 1	UF-P1
ULTRA-FILTRATION PERMEATE 2	UF-P2
ULTRA-FILTRATION CLEAN IN PLACE 1	UF-CIP1
CHEMICAL DISPENSING PUMP FOR CHLORINE	CDP5
CHEMICAL DISPENSING PUMP FOR HYDROFLUOSILICIC ACID	CDP5
VARIABLE FREQUENCY DRIVE FOR P-601	VF04
VARIABLE FREQUENCY DRIVE FOR P-602	VF05
VARIABLE FREQUENCY DRIVE FOR P-603	VF06
VARIABLE FREQUENCY DRIVE FOR P-604	VF07
VARIABLE FREQUENCY DRIVE FOR P-605	VF08
GAS DISPLAY PANEL FOR AI-701	GDP1
CHLORINE DIOXIDE GENERATOR	GDP1
GAS DISPLAY PANEL FOR AI-702	GDP2

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PROJECT RECORD

CONFORMED SET 5/09

NO.	DATE	DESCRIPTION

INSTRUMENTATION LEGEND

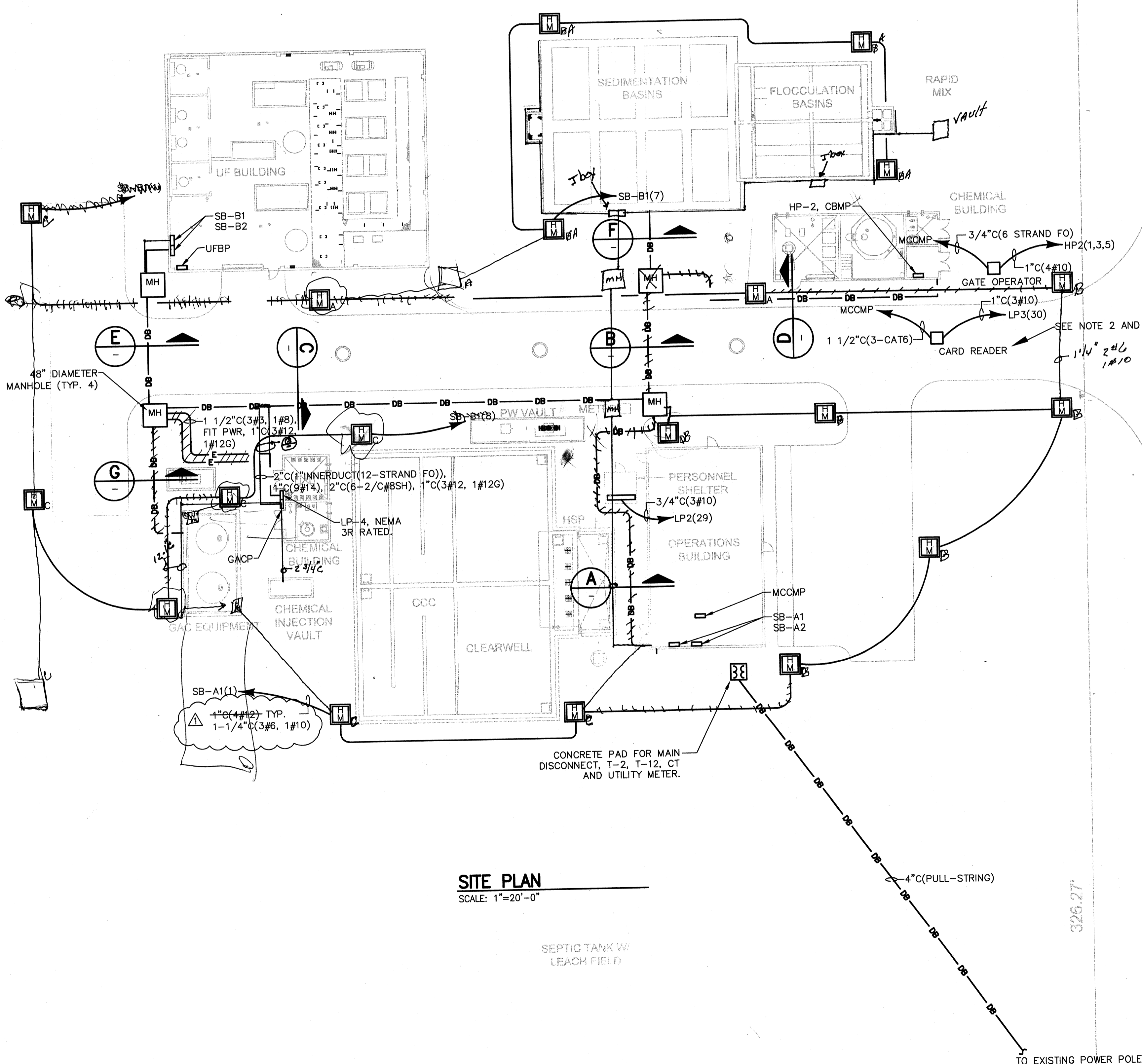
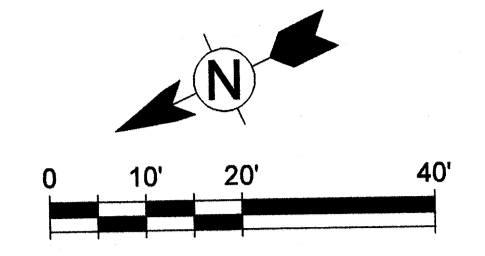
Client: OHIO COUNTY WATER DISTRICT Proj. Loc: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

Project No.: 120-07060
Designed By: WAP/CSW
Drawn By: CSW
Checked By: LDC

E-002

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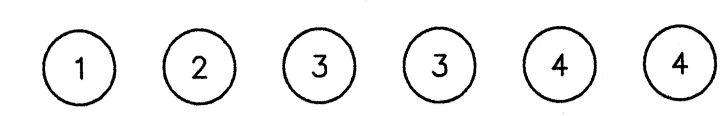
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SITE PLAN
SCALE: 1"=20'-0"

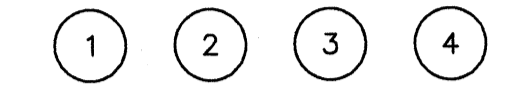
SEPTIC TANK W/
LEACH FIELD

TO EXISTING POWER POLE, SEE NOTE 4



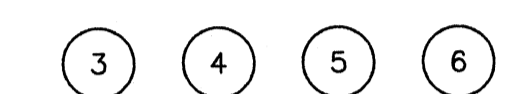
SECTION A
SCALE: NTS

- 2" C(1" INNERDUCT(12-STRAND FO)) (CHEMICAL BLDG)
- 3" C(1 1/2" INNERDUCT(24-STRAND FO)) (UF BLDG)
- 2-4" C(3#350KCMIL, 1#1) (SB-B1)
- 2-4" C(3#350KCMIL, 1#1) (SB-B2)
- 4" C(PULL-STRING)
- 4" C(3#250KCMIL, 1#4) (HP-2)
- 2" C(PULL-STRING)



SECTION B
SCALE: NTS

- 2" C(1" INNERDUCT(12-STRAND FO)) (CHEMICAL BLDG)
- 4" C(3#250KCMIL, 1#4) (HP-2)
- 4" C(PULL-STRING)
- 2" C(PULL-STRING)



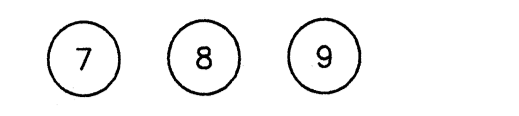
SECTION C
SCALE: NTS

- 2-4" C(3#350KCMIL, 1#1) (SB-B1)
- 2-4" C(3#350KCMIL, 1#1) (SB-B2)
- 4" C(PULL-STRING)
- 3" C(1 1/2" INNERDUCT(24-STRAND FO)) (UF BLDG)
- 4" C(PULL-STRING)
- 2" C(PULL-STRING)



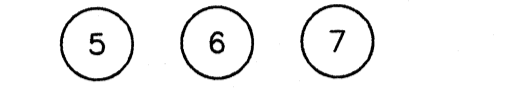
SECTION D
SCALE: NTS

- 2" C(1" INNERDUCT(12-STRAND FO)) (CHEMICAL BLDG)
- 4" C(3#250KCMIL, 1#4) (HP-2)
- 2" C(24#10) (RECEPTS: VPF-1,2,3,4, MXR-201,202, ST#1, ST#2)
- 2" C(9#8) (FIT-201, SS-1, SS-2)
- 2" C(FIBER) (VPF-1,2,3,4, SS-1, SS-2, ST#1, ST#2)
- 1" C(16#14) (MXR-201, MXR-202)
- 1" C(FIBER) (FIT-201)
- 4" C(PULL-STRING)
- 2" C(PULL-STRING)
- 1" C(4#10) (HEAT TRACING)



SECTION E
SCALE: NTS

- 3" C(1 1/2" INNERDUCT(24-STRAND FO)) (UF BLDG)
- 2-4" C(3#350KCMIL, 1#1) (SB-B1)
- 2-4" C(3#350KCMIL, 1#1) (SB-B2)
- 4" C(PULL-STRING)
- 2" C(PULL-STRING)
- 1 1/2" C(3#3, 1#8) (LP-4)
- 1" C(3#10) (IB-506)
- 2" C(1" INNERDUCT(12-STRAND FO)) (GACP)
- 1" C(6#10) (GAC HEAT TANKS)
- POWER FEED TO GACP



SECTION F
SCALE: NTS

- 4" C(PULL-STRING)
- 2" C(24#10) (RECEPTS: VPF-1,2,3,4, MXR-201,202, ST#1, ST#2)
- 2" C(9#8) (FIT-201, SS-1, SS-2)
- 2" C(FIBER) (VPF-1,2,3,4, SS-1, SS-2, ST#1, ST#2)
- 1" C(16#14) (MXR-201, MXR-202)
- 1" C(FIBER) (FIT-201)
- 2" C(PULL-STRING)
- 1" C(4#10) (HEAT TRACING)



SECTION G
SCALE: NTS

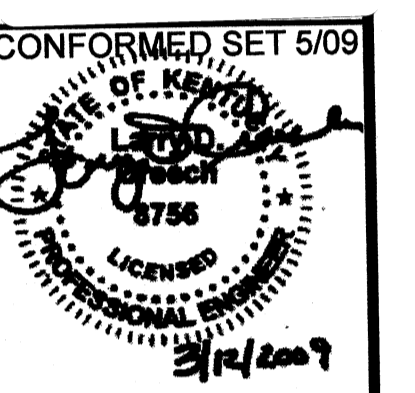
- 1" C(3#10) (VALVE IB-506)
- 1" C(6#10) (GAC HEAT TANKS)
- 1" C(9#14) (GAC HEAT TANKS)
- FIT POWER
- 1" C(3#12, 1#12G) (PDIT WIRE)

NOTES:

- PROVIDE GROUND MAT AROUND EACH BUILDING AND BOND EACH GROUND MAT TOGETHER. GROUND MAT SHALL BE BONDED TO THE ANTENNA TOWER. SEE GROUND MAT DETAIL ON SHEET E-501 FOR ADDITIONAL REQUIREMENTS.
- THERE IS ONE (1) CARD READER AND ONE (1) GATE OPERATOR, WITH ROLLING GATE LOCATED ADJACENT TO THE ENTRANCE. PROVIDE WIRE AND CONDUITS, AS SHOWN ON THE DRAWINGS, FOR SLIDING GATE.
- THE GATE OPERATOR SHALL BE SUITABLY SIZED FOR THE GATE AT THIS FACILITY WITH AUTOMATIC LIMIT ADJUSTMENTS, AUTO-CLOSE TIMER, SECURE ENCLOSURE, KEYED RELEASE CAPABILITIES, AND PROVIDED WITH A HEATER KIT. THE GATE OPERATOR SHALL BE DOORING 9100 OR EQUAL. THE SYSTEM SHALL ALSO INCLUDE A CALLING AUTHORIZED PERSONNEL IN THE OPERATIONS BUILDING. EXIT THROUGH THE GATES MAY BE EITHER LOCK CONTROLLED OR BY PUSH BUTTON. PROVIDE NECESSARY ENCLOSURES, CHAINS, WIRING, CABLES, CONDUITS, AND ANY OTHER ACCESSORIES NECESSARY FOR A FULLY OPERATIONAL AND FUNCTIONAL SYSTEM. ENCLOSURES SHALL BE PROPERLY SECURED AND RATED FOR OUTDOOR USE. MOTOR SHALL BE MINIMUM 1/2 HP, 115 VAC, 60HZ.
- COORDINATE EXACT LOCATION OF UTILITY POWER DROP WITH UTILITY COMPANY (~1000LF).
- COORDINATE EXACT LOCATION OF TELECOMMUNICATIONS TIE-IN WITH AT&T (~1000LF).

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PROJECT RECORD

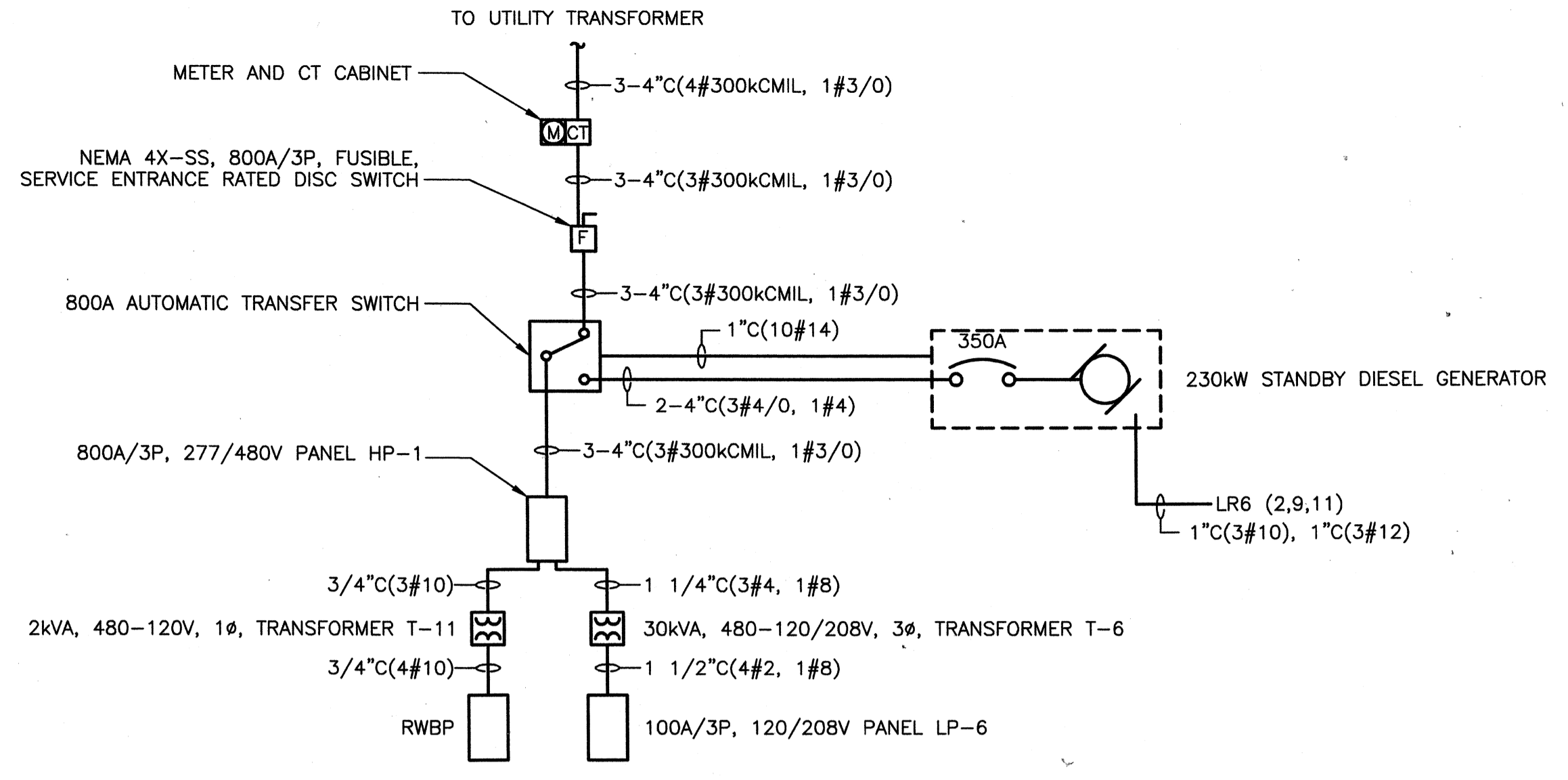
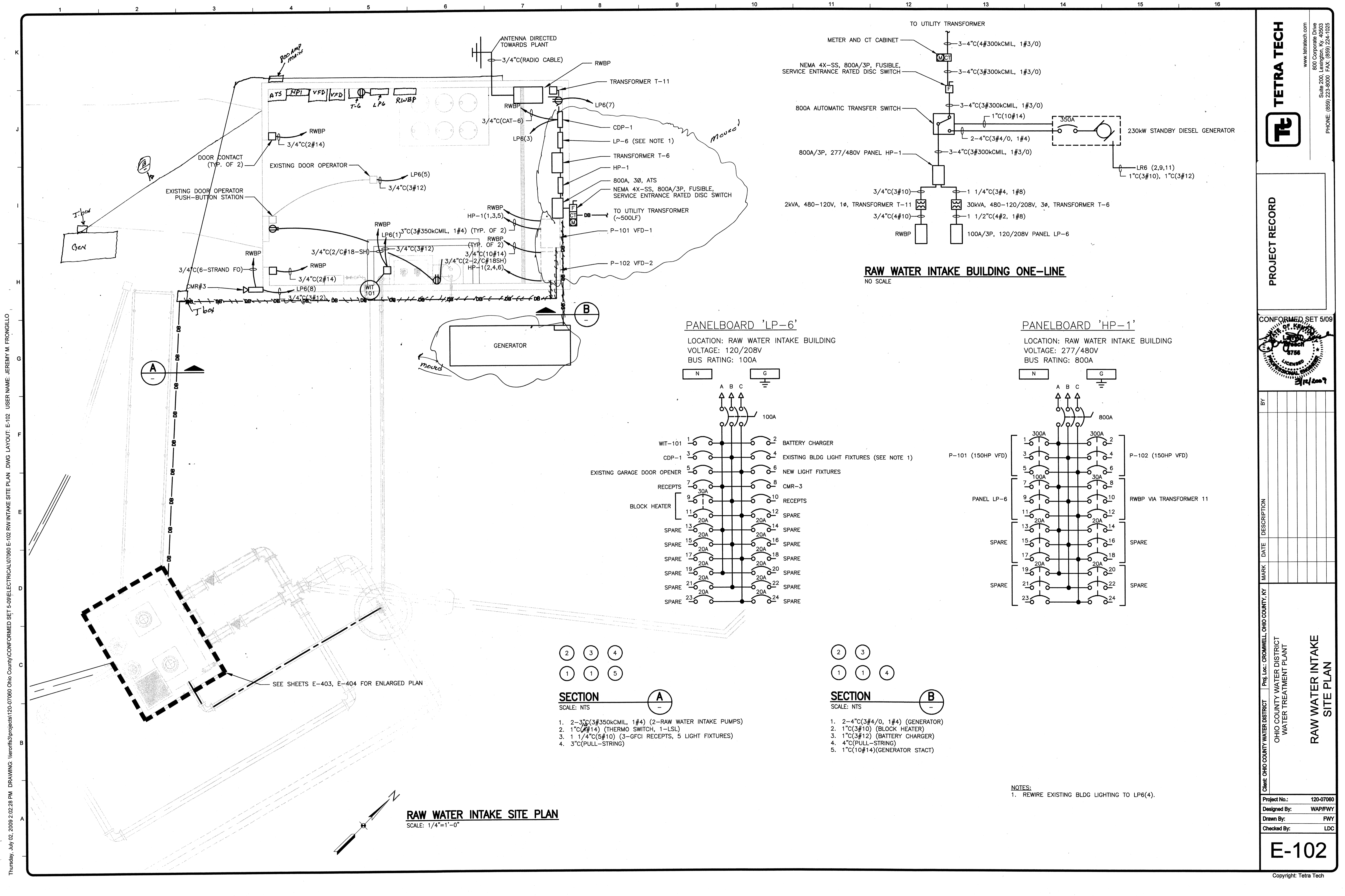


MARK	DATE	DESCRIPTION
Δ	5/5/09	ADDENDUM 1

Client: OHIO COUNTY WATER DISTRICT
Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

Project No.: 120-07060
Designed By: WAP/FWY
Drawn By: FWY
Checked By: LDC

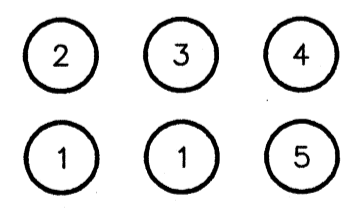
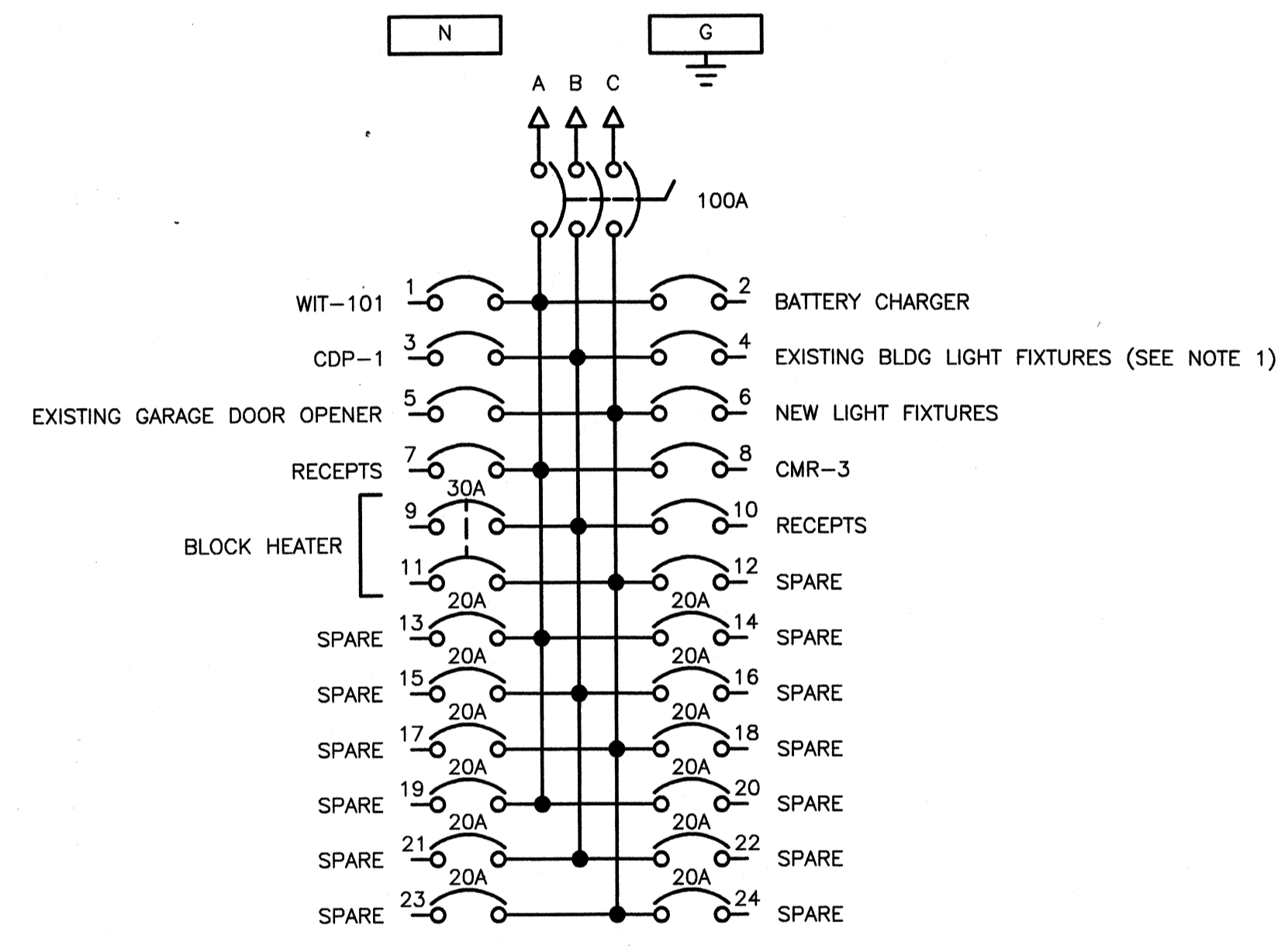
E-101



RAW WATER INTAKE BUILDING ONE-LINE
NO SCALE

PANELBOARD 'LP-6'

LOCATION: RAW WATER INTAKE BUILDING
VOLTAGE: 120/208V
BUS RATING: 100A

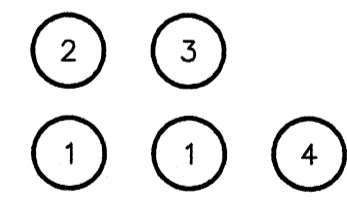
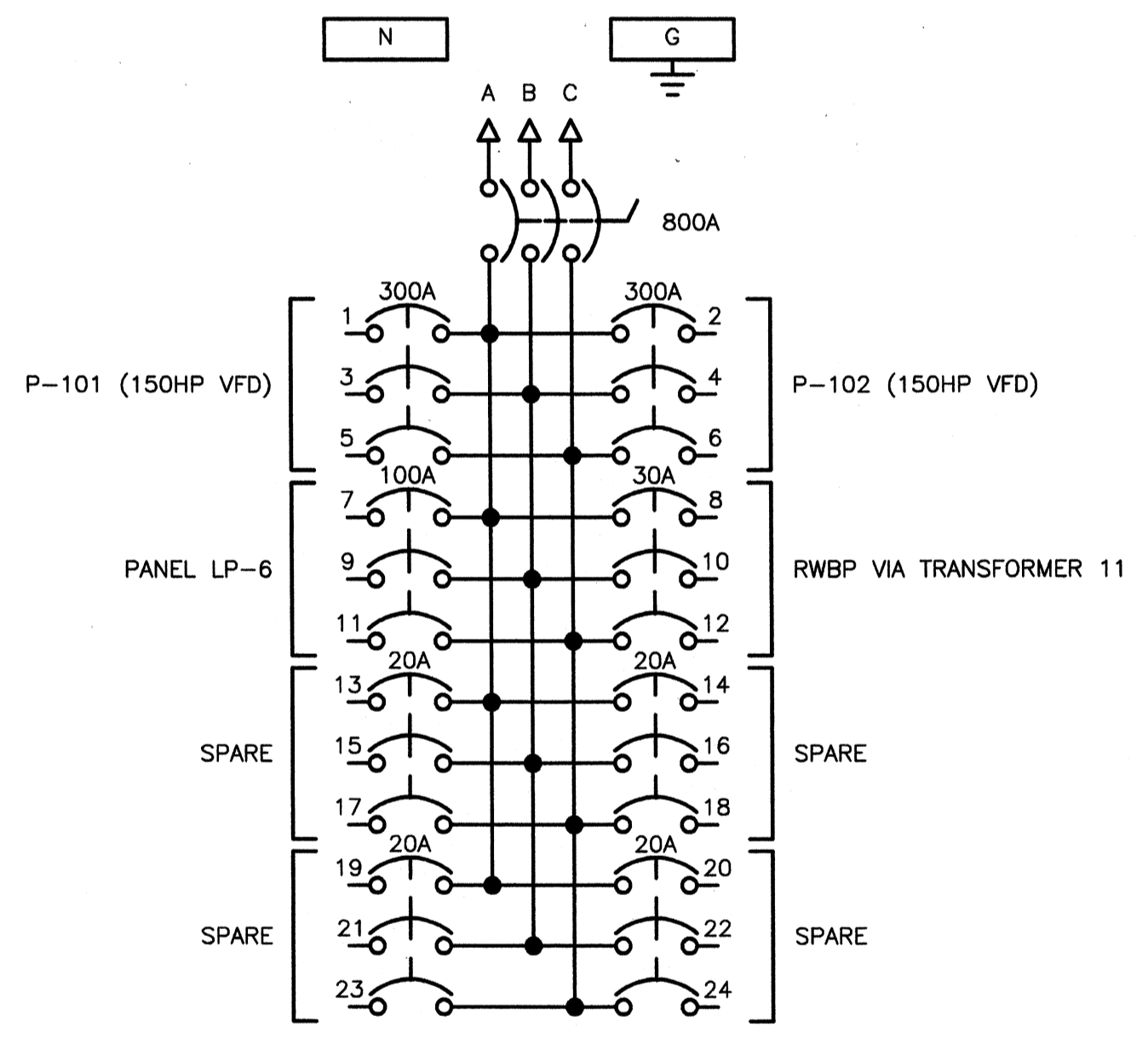


SECTION A-A
SCALE: NTS

- 2-3" C(3#350kCMIL, 1#4) (2-RAW WATER INTAKE PUMPS)
- 1" C(3#14) (THERMO SWITCH, 1-LSL)
- 1 1/4" C(5#10) (3-GFCI RECEPITS, 5 LIGHT FIXTURES)
- 3" C(PULL-STRING)

PANELBOARD 'HP-1'

LOCATION: RAW WATER INTAKE BUILDING
VOLTAGE: 277/480V
BUS RATING: 800A



SECTION B-B
SCALE: NTS

- 2-4" C(3#4/0, 1#4) (GENERATOR)
- 1" C(3#10) (BLOCK HEATER)
- 1" C(3#12) (BATTERY CHARGER)
- 4" C(PULL-STRING)
- 1" C(10#14) (GENERATOR STACT)

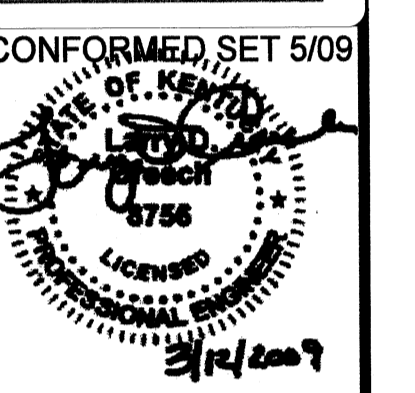
RAW WATER INTAKE SITE PLAN
SCALE: 1/4"=1'-0"

NOTES:
1. REWIRE EXISTING BLDG LIGHTING TO LP6(4).

Thursday, July 02, 2009 5:02:28 PM DRAWING: \\netrafiles\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-102 RW INTAKE SITE PLAN .DWG LAYOUT: E-102 USER NAME: JEREMY M. FRONGILLO

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PROJECT RECORD



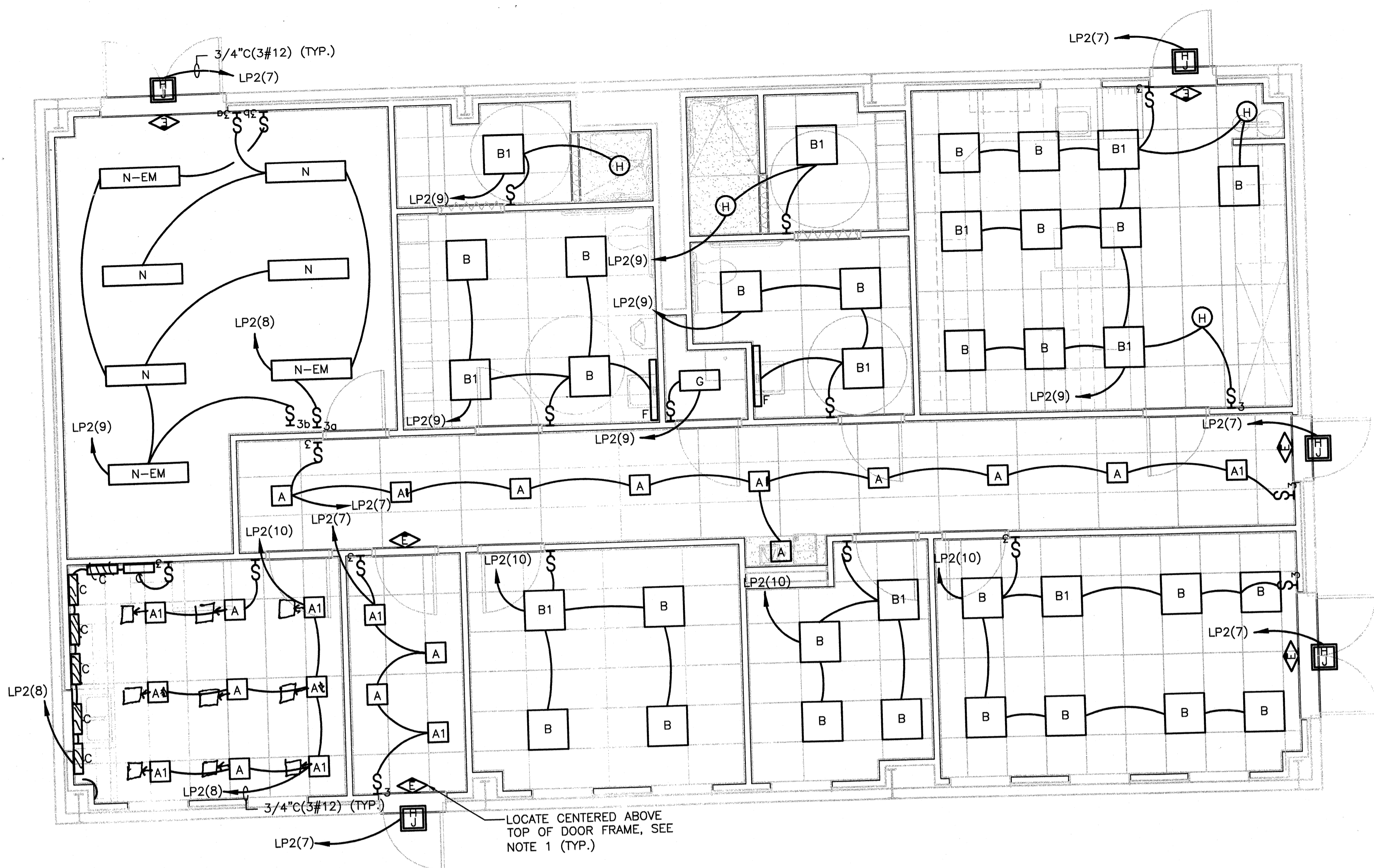
BY	DESCRIPTION	DATE	MARK

Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: CROMMELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
**RAW WATER INTAKE
SITE PLAN**

Project No.: 120-07060
Designed By: WAPI/FWY
Drawn By: FWY
Checked By: LDC

E-102

Thursday, July 02, 2009 2:03:21 PM DRAWING: \\netofcs\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-401 OPERATIONS BUILDING-LIGHTING DWG LAYOUT E-401 USER NAME: JEREMY M. FRONGILLO

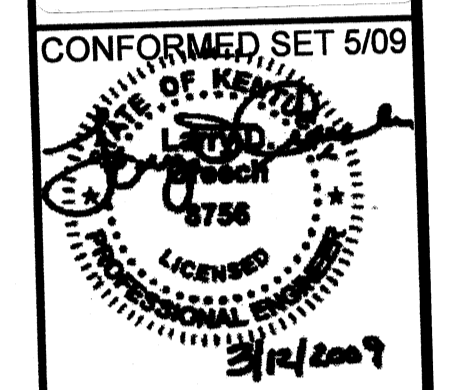


OPERATIONS BUILDING LIGHTING PLAN
SCALE: 1/4"=1'-0"

NOTES:
1. CONNECT EXIT FIXTURES TO UNSWITCHED SIDE OF NEAREST CIRCUIT.



PROJECT RECORD



BY	DATE	DESCRIPTION

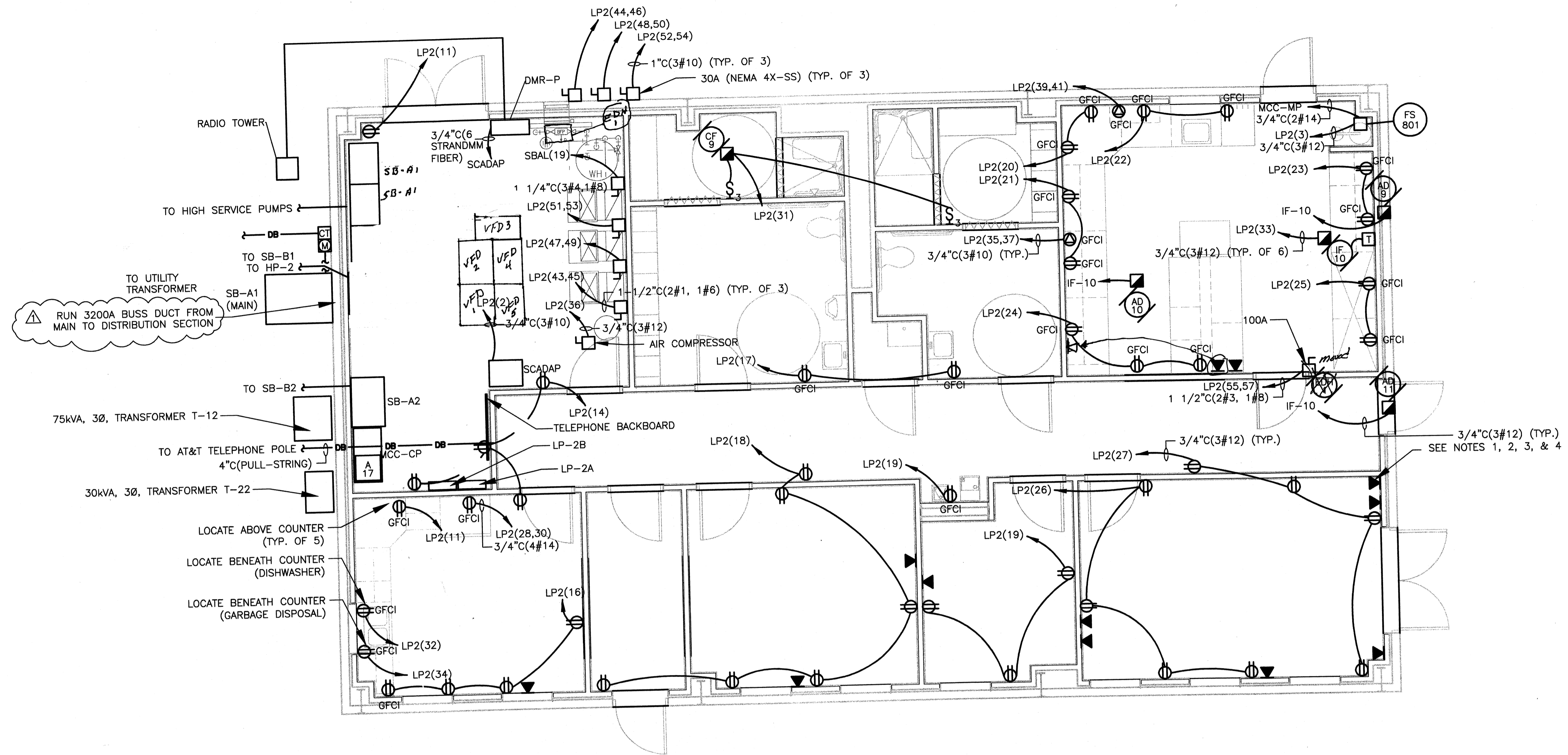
Client: OHIO COUNTY WATER DISTRICT
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
Project Loc.: CROMWELL, OHIO COUNTY, KY

Project No.: 120-07060
Designed By: WAP/FWY
Drawn By: FWY
Checked By: LDC

E-401

Copyright: Tetra Tech

Thursday, July 16, 2009 9:35:00 AM DRAWING: \\araffis3\projects\120-07060 Ohio County\CONFORMED SET, 5-09\ELECTRICAL\07060 E-402 OPERATIONS BUILDING-POWER. DWG LAYOUT: E-402 USER NAME: JEREMY M. FRONGILLO.



OPERATIONS BUILDING POWER PLAN
SCALE: 1/4"=1'-0"

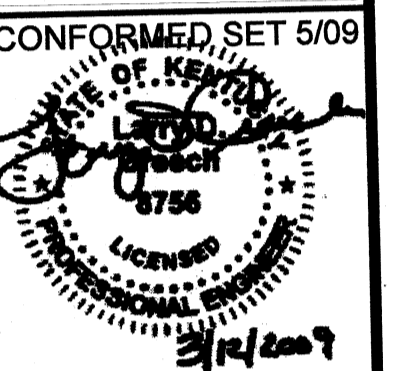
LEGEND
 = 3 NETWORK, 1 PHONE

- NOTES:
 1. RUN NETWORK CABLES FROM WALL OUTLET TO PATCH PANEL IN SCADAP.
 2. NETWORK CABLE SHALL BY TYPE CAT-6
 3. RUN PHONE CABLES FROM WALL OUTLET TO TELEPHONE BACKBOARD. INSTALL AND TERMINATE ON 110 STYLE BLOCKS
 4. SIZE PHONE/NETWORK CONDUIT PER NEC

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PROJECT RECORD



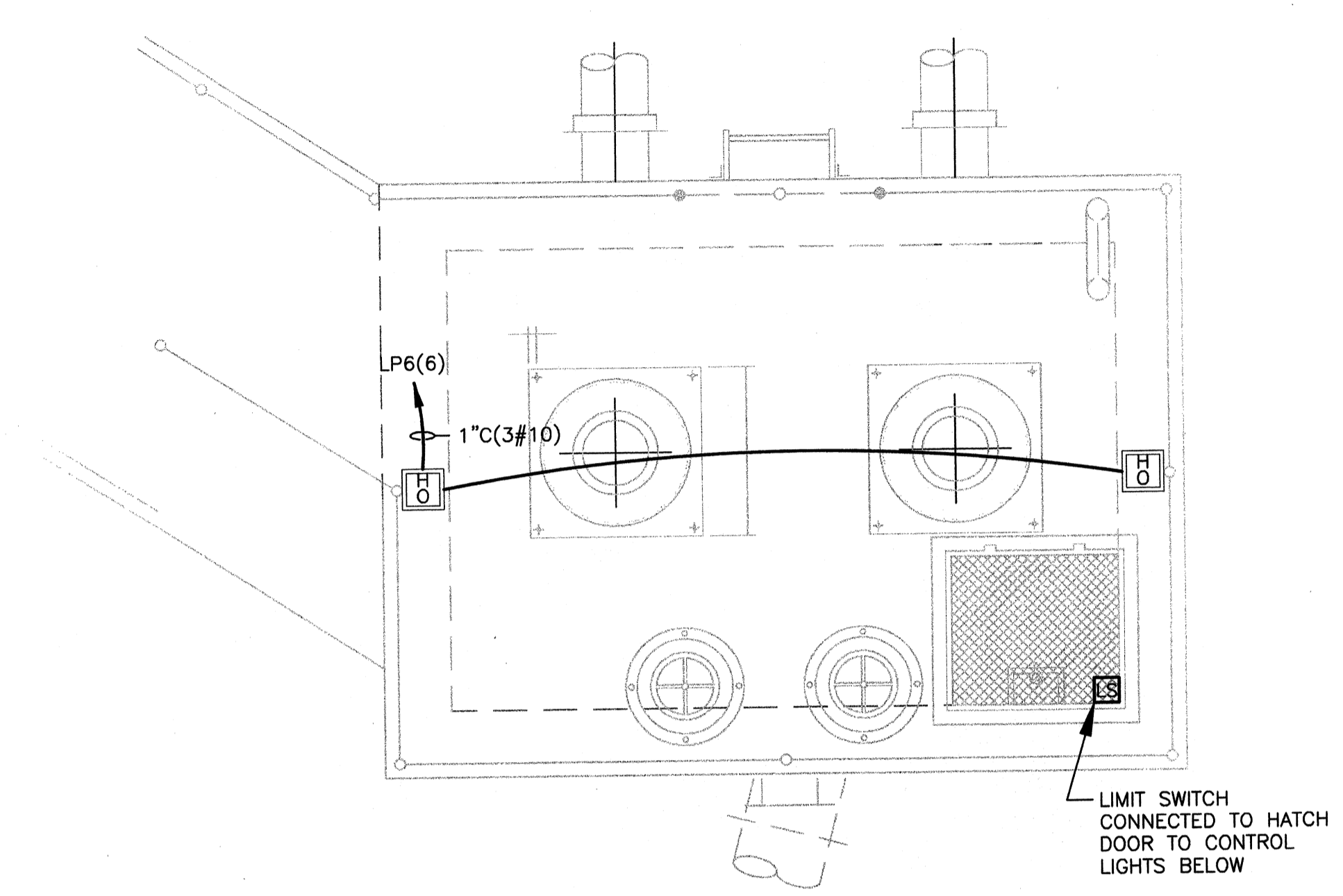
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT
 Prof. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT
**OPERATIONS BUILDING
 POWER**

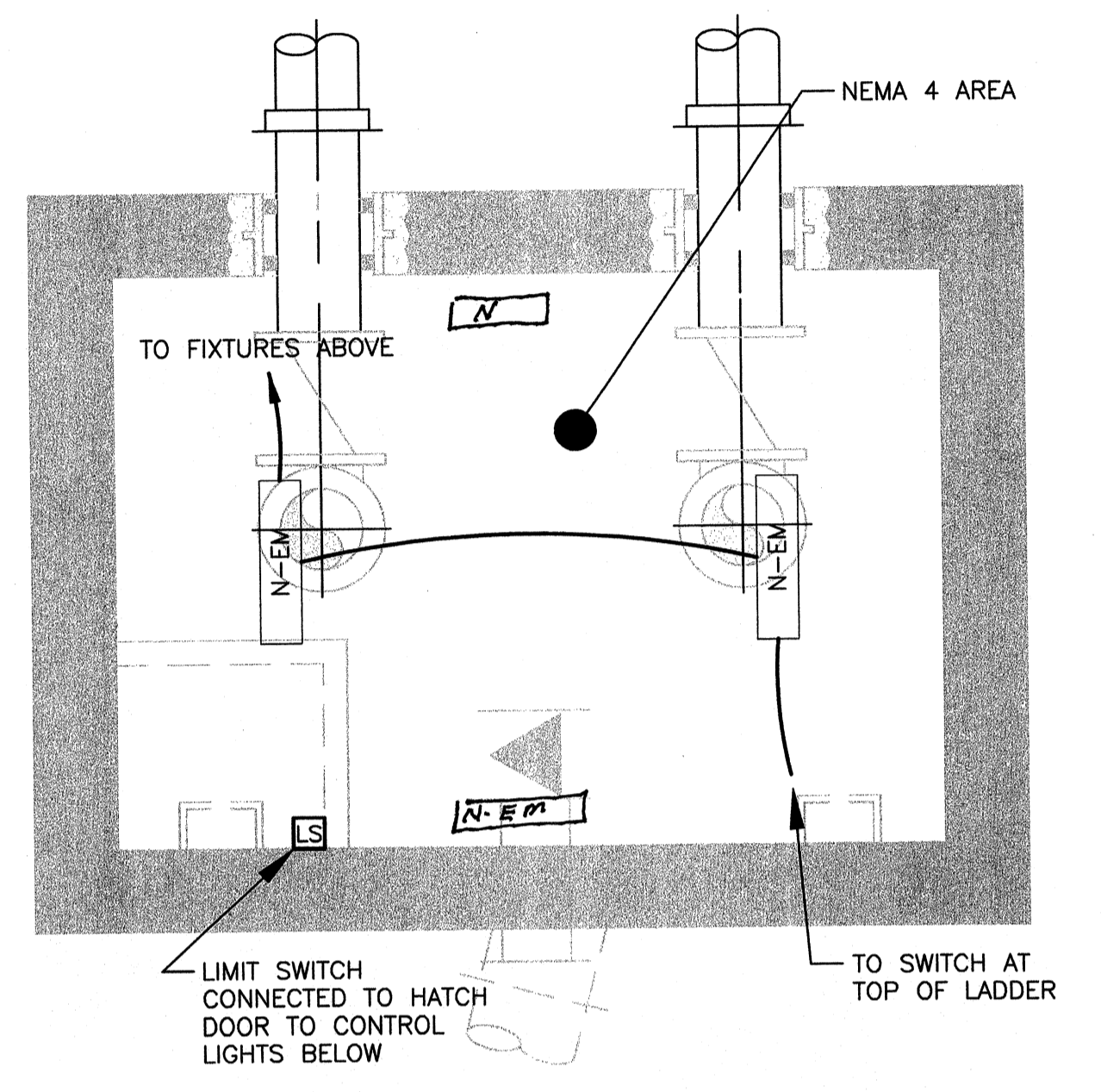
Project No.: 120-07060
 Designed By: WAP/FWY
 Drawn By: FWY
 Checked By: LDC

E-402

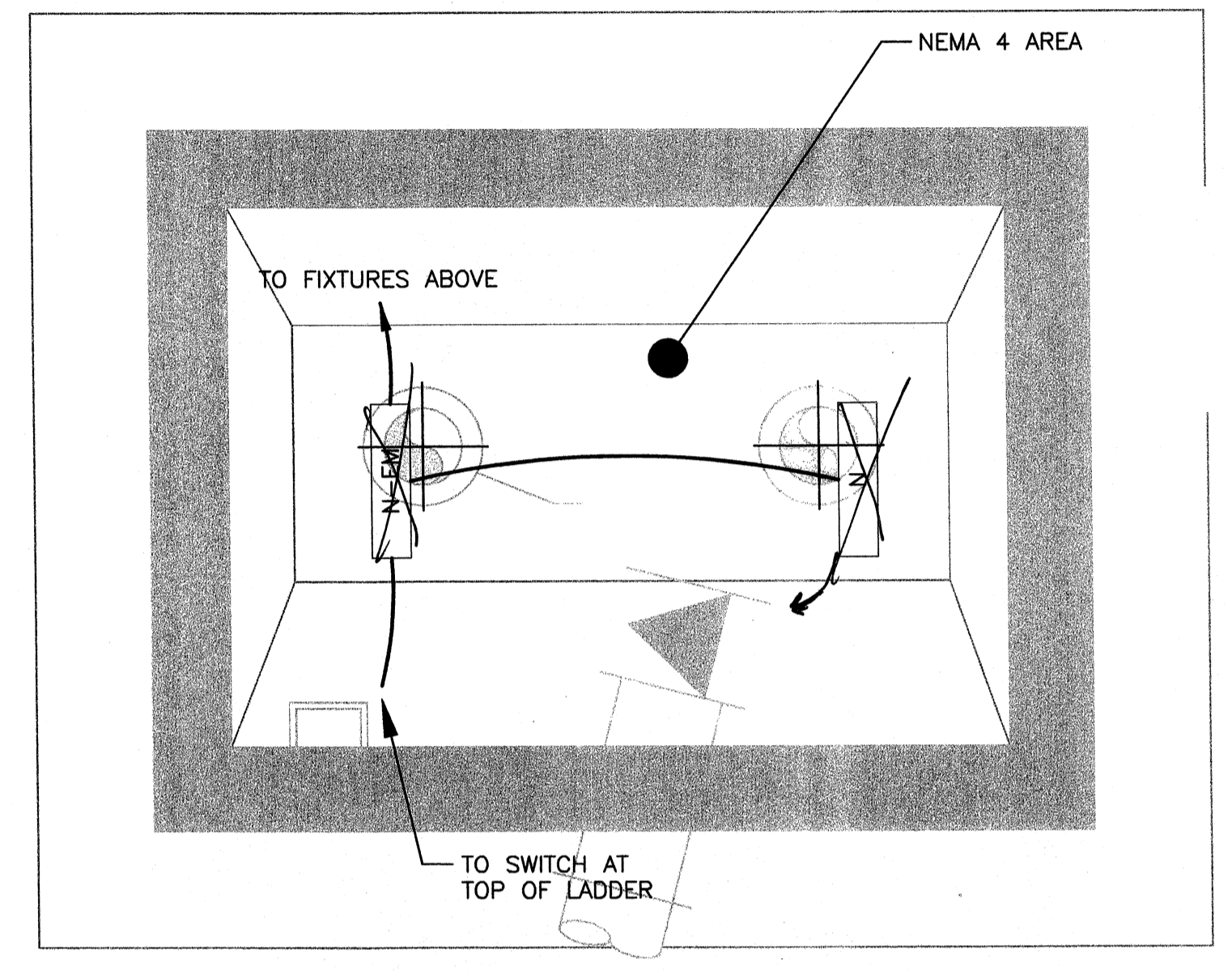
Thursday, July 16, 2009 9:36:02 AM DRAWING: \\eriff3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-403 RW INTAKE PS-LIGHTING .DWG LAYOUT: E-403 USER NAME: JEREMY M. FRONZILLO



UPPER LEVEL PLAN



MID LEVEL PLAN



LOWER LEVEL PLAN

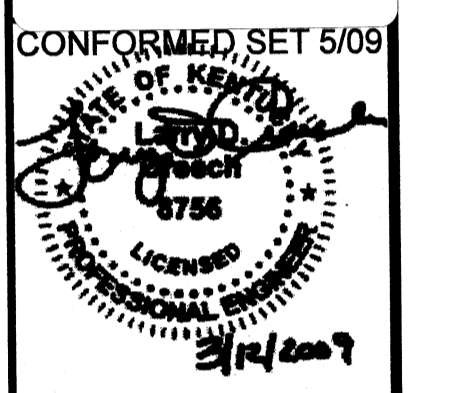
Moved To Top of Mid level

RAW WATER INTAKE PUMP STATION LIGHTING PLAN
SCALE: 1/2"=1'-0"

NOTES:
1. REMOVE EXISTING LIGHT FIXTURES AT PUMP STATION AND ASSOCIATED WIRING BACK TO SOURCE.

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PROJECT RECORD



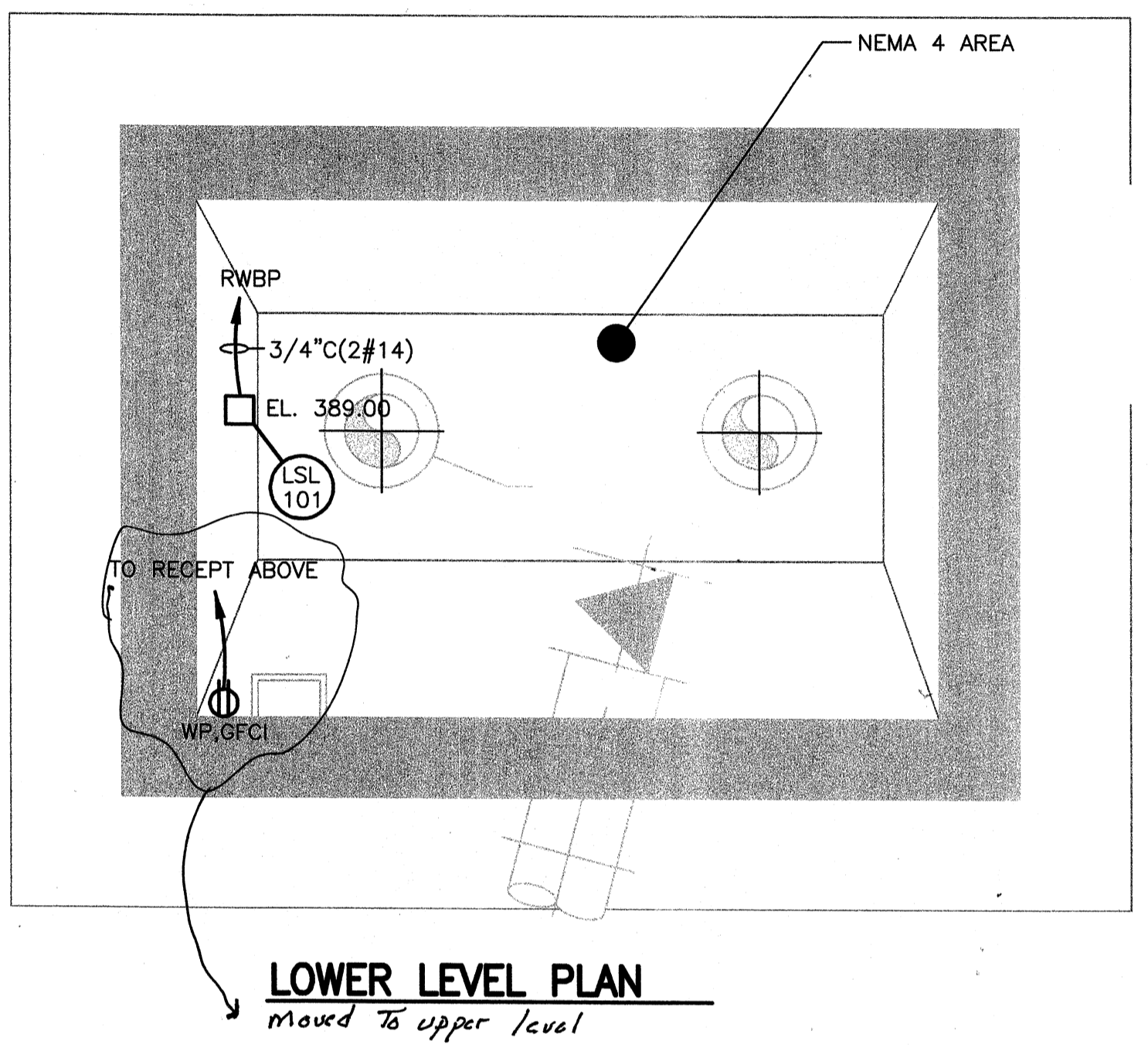
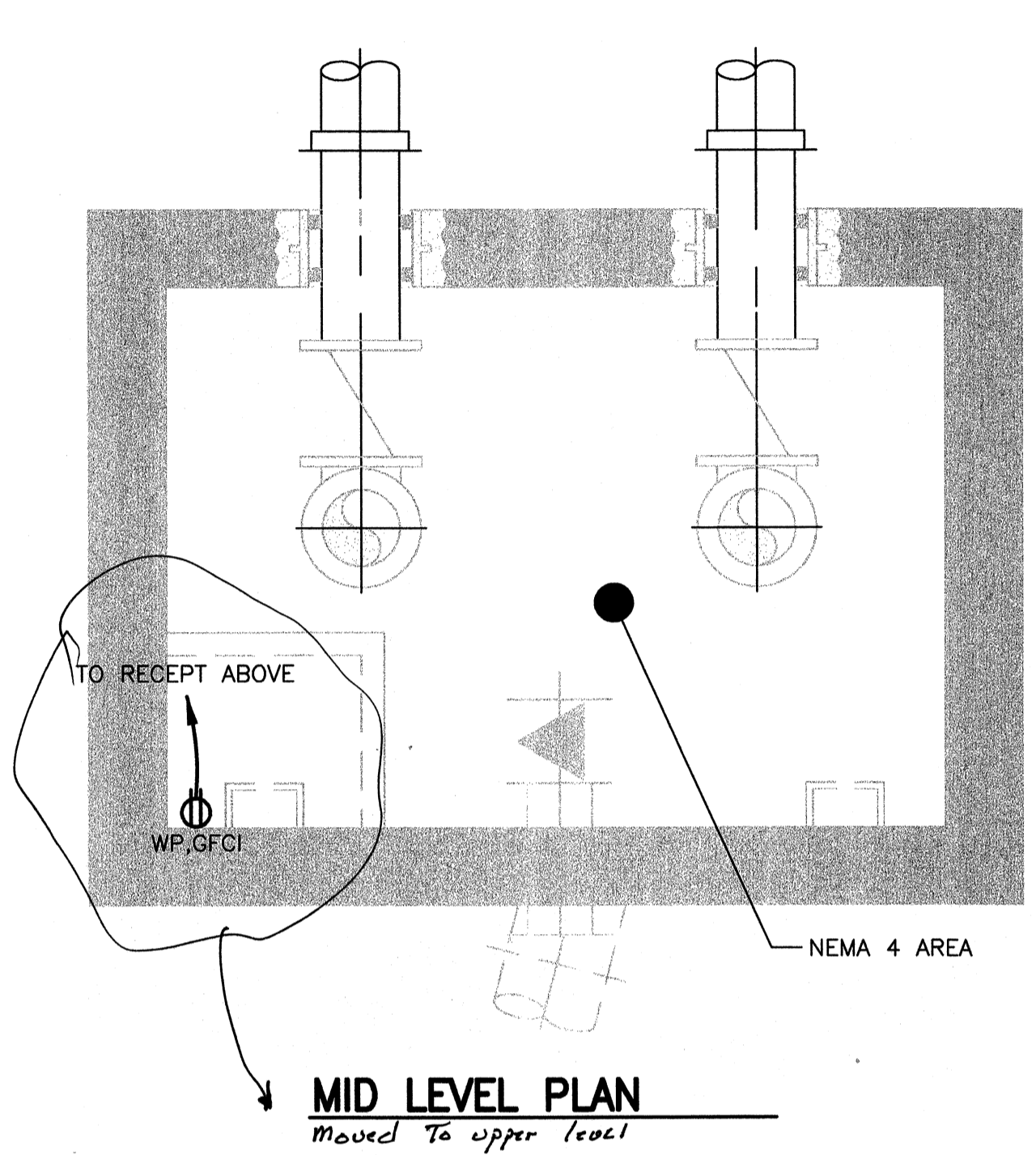
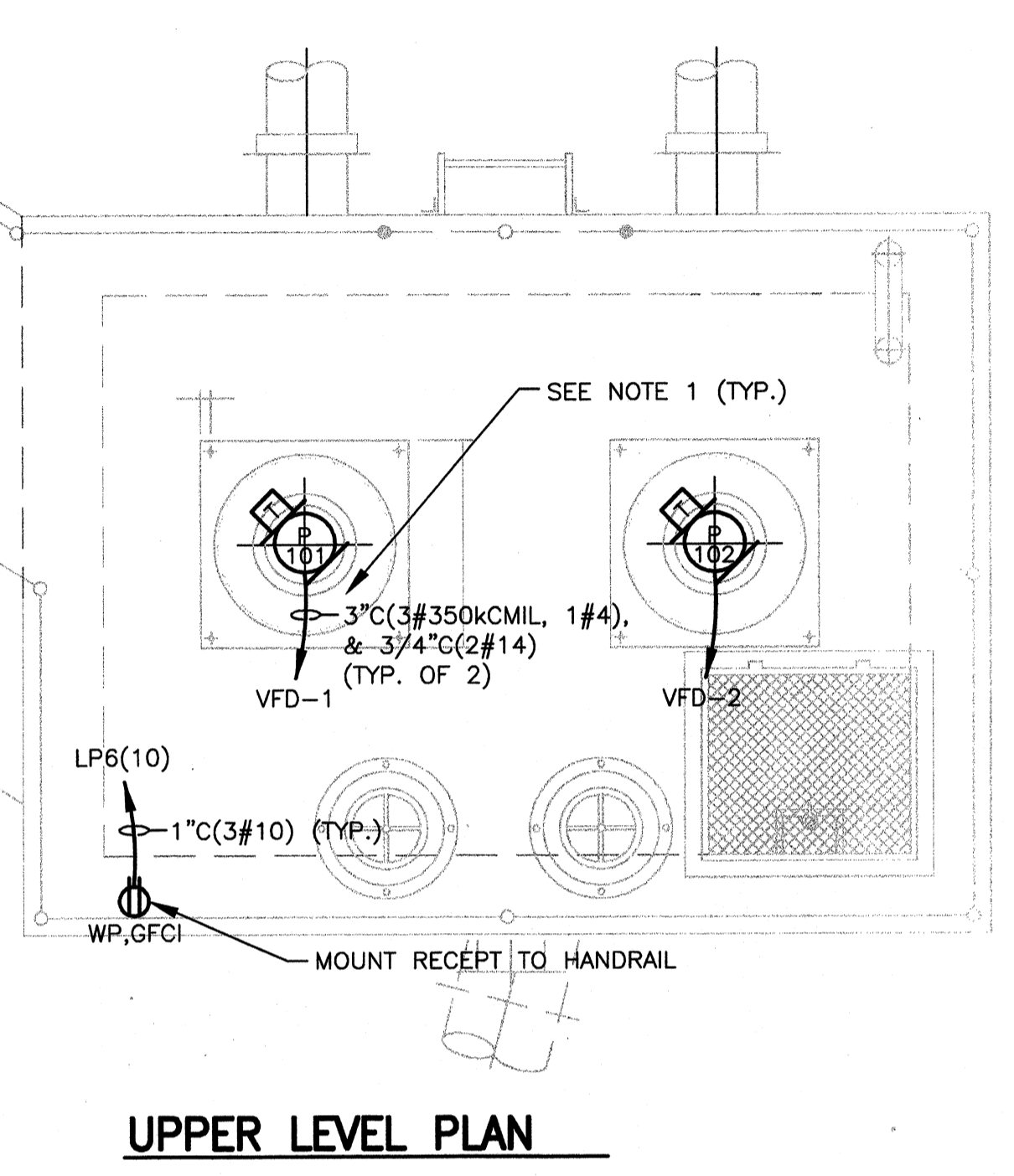
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: CROMMELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
RAW WATER INTAKE PUMP STATION LIGHTING

Project No.: 120-07060
Designed By: WAP/FWY
Drawn By: FWY
Checked By: LDC

E-403

Thursday, July 16, 2009 9:37:01 AM DRAWING: \\netof63\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-404 RW INTAKE PS-POWER .DWG LAYOUT: W-404 USER NAME: JEREMY M. FRONIGILLO



RAW WATER INTAKE PUMP STATION POWER PLAN
SCALE: 1/2"=1'-0"

NOTES:
1. PROVIDE VFD RATED SHIELDED POWER CABLE FOR VFD TO PUMP POWER.



PROJECT RECORD

CONFORMED SET 5/09

BY	DATE	DESCRIPTION

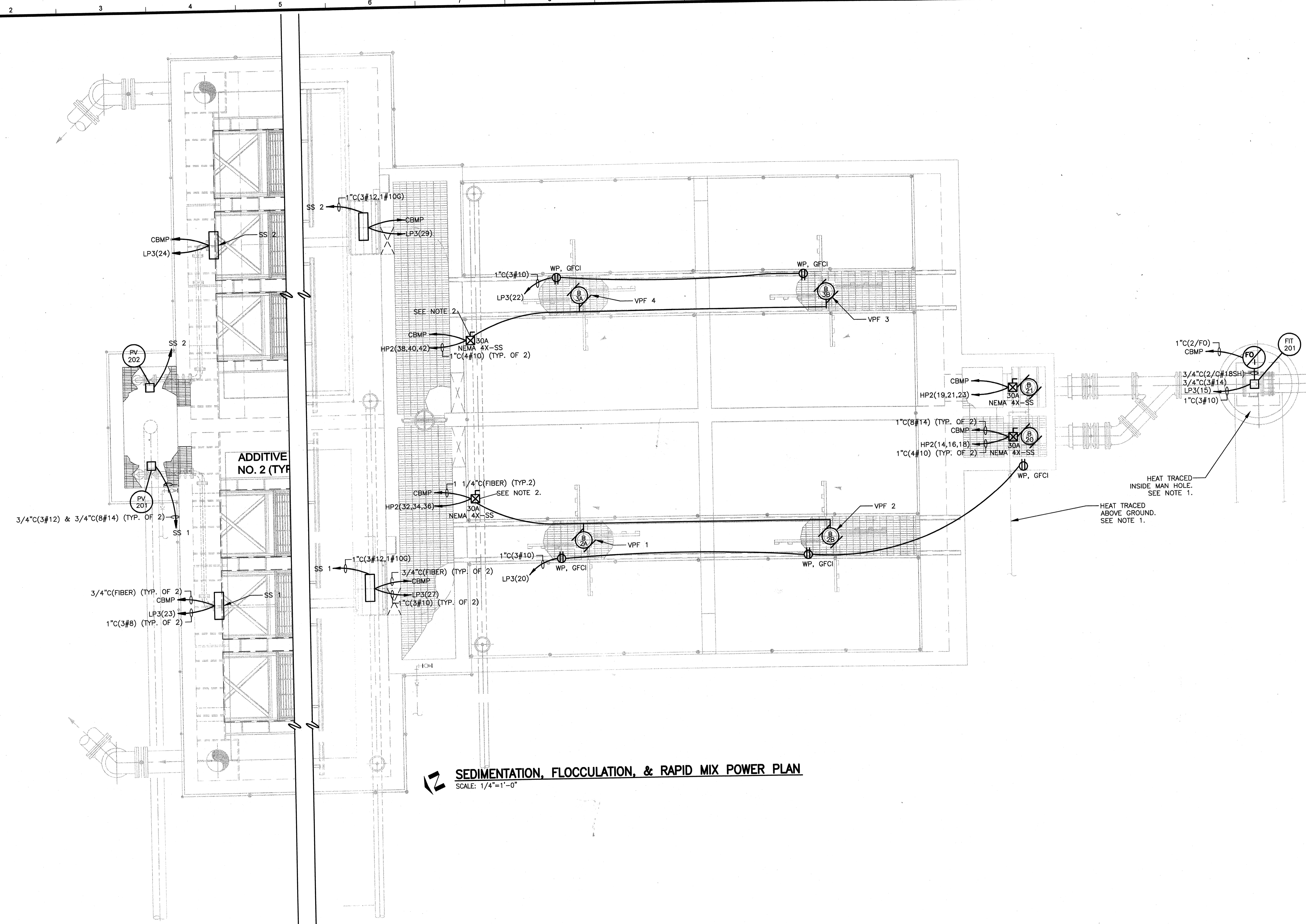
Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

**RAW WATER INTAKE PUMP STATION
POWER**

Project No.: 120-07060
Designed By: WAP/FWY
Drawn By: FWY
Checked By: LDC

E-404

Monday, July 27, 2009 4:34:03 PM DRAWING: P:\120-07080 Ohio County Redesign\ORLANDO\CONFORMED SET 5-09\ELECTRICAL\07080 E-405 FLOCCULATION & SEDIMENTATION POWER .DWG LAYOUT: E-405 USER NAME: JEREMY M. FRONGILLO



SEDIMENTATION, FLOCCULATION, & RAPID MIX POWER PLAN
SCALE: 1/4"=1'-0"

NOTES:
1. PROVIDE HEAT TRACING, VERIFY SIZE AND ROUTE WITH PROCESS DRAWINGS AND CONNECT TO LP3(31).
2. MANUFACTURE SUPPLIED DISCONNECT AND FUSES.

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PROJECT RECORD

CONFORMED SET 5/09
Professional Engineer Seal for Jeremy M. Frongillo, No. 9756, State of Kentucky.

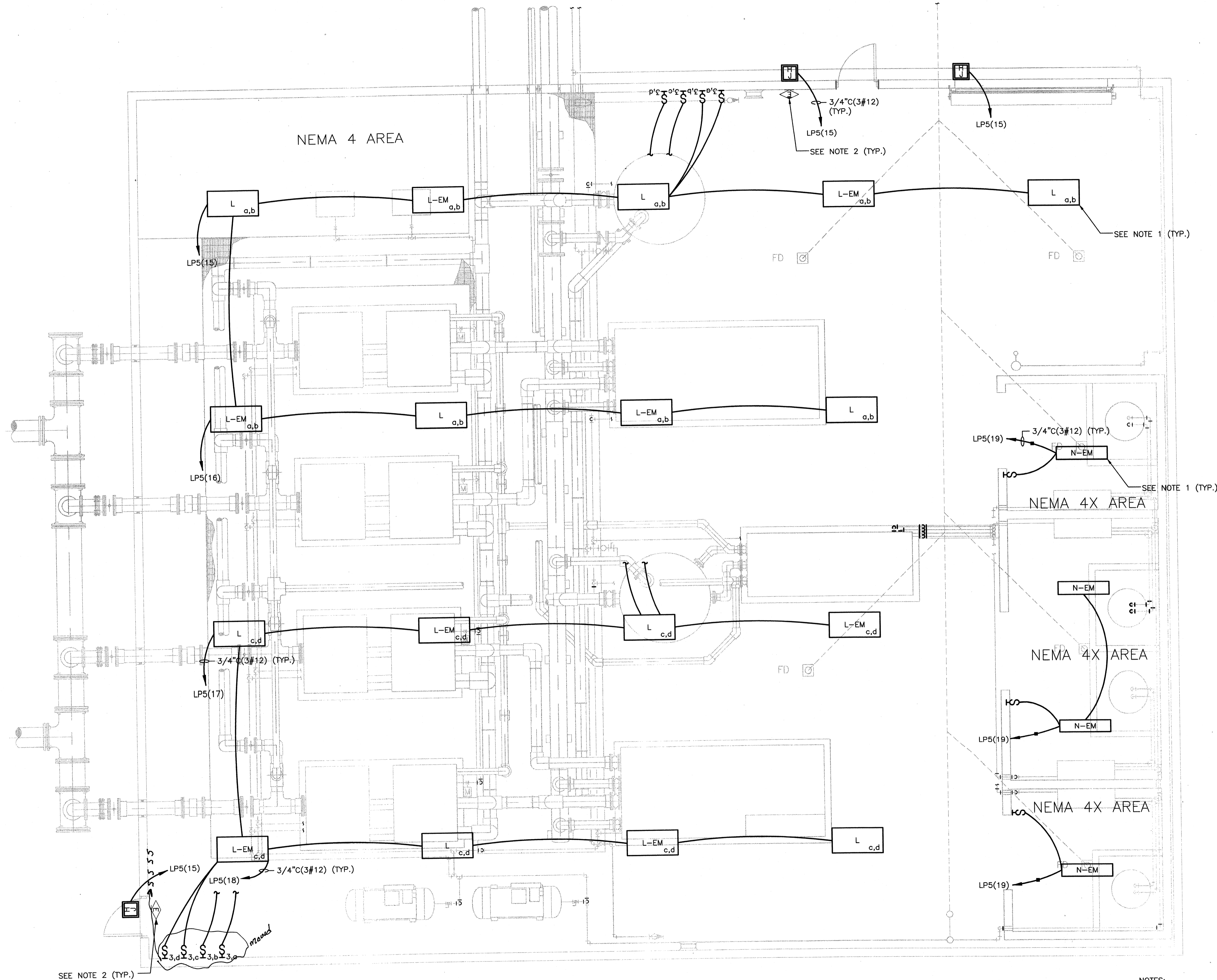
BY	DESCRIPTION	DATE	MARK

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
**FLOCCULATION & SEDIMENTATION
BASIN - POWER**

Project No.:	120-07080
Designed By:	WAP/FWY
Drawn By:	FWY
Checked By:	LDC

E-405
Copyright: Tetra Tech

Thursday, July 16, 2009 9:40:19 AM DRAWING: \\arc01\projects\120-07080 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07080 E-406 UF BUILDING LIGHTING DWG LAYOUT: E-406 USER NAME: JEREMY M. FRONGILLO



SEE NOTE 2 (TYP.)

NOTES:
 1. MOUNT FIXTURES AT 11' AFF.
 2. CONNECT EXIT FIXTURES TO UNSWITCHED SIDE OF NEAREST CIRCUIT.

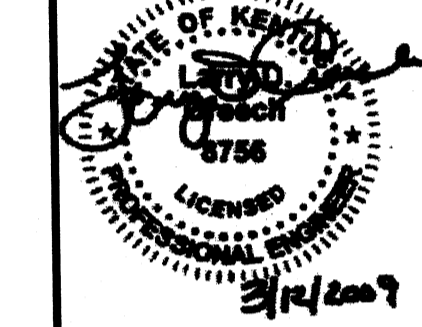
UF BUILDING LIGHTING PLAN
 SCALE: 1/4"=1'-0"



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PROJECT RECORD

CONFORMED SET 5/09



BY	DATE	DESCRIPTION

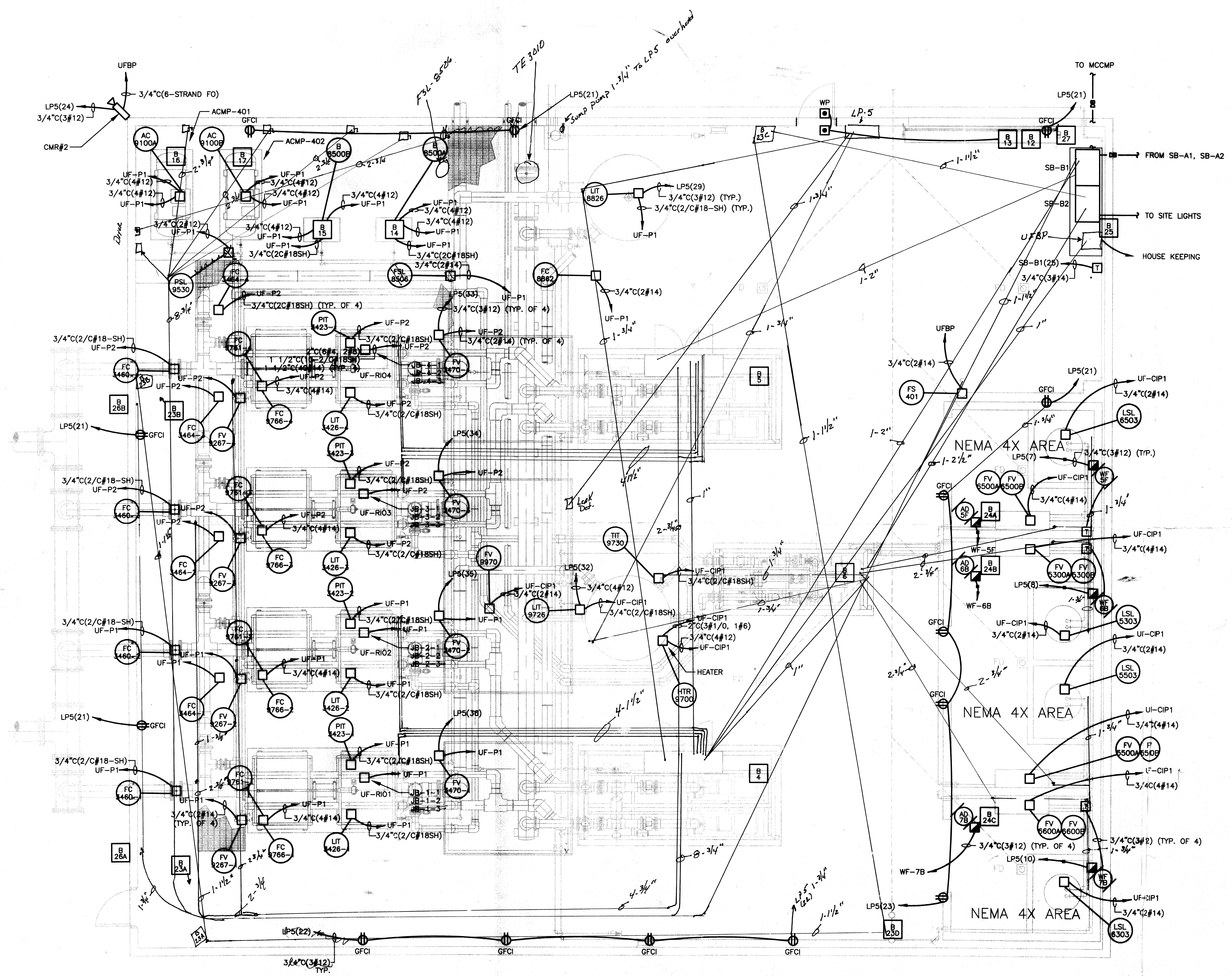
Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT

Project No.: 120-07080
 Designed By: WAP/FWY
 Drawn By: FWY
 Checked By: LDC

E-406

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Tuesday, April 06, 2010 12:21:07 PM DRAWING: C:\Documents and Settings\tim.calzaretta\Local Settings\Temporary Internet Files\OLK\IAE-407A UF BUILDING POWER WITH GE.EOPM.DWG LAYOUT: E-407_GE.EOP. USER NAME: CALZARETTA, TIMOTHY



UF BUILDING POWER PLAN
SCALE: 1/4"=1'-0"

NOTE:
1. CONTRACTOR SHALL BE RESPONSIBLE FOR MISCELLANEOUS INSTRUMENTATION CONDUIT/WIRING FOR UF EQUIPMENT.

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PROJECT RECORD

CONFORMED SET 5/09

BY	DATE	DESCRIPTION
WAP	4/14/10	REVISION 2

Client: OHIO COUNTY WATER DISTRICT
Proj. Loc.: CROMWELL, OHIO COUNTY, KY

**OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT**

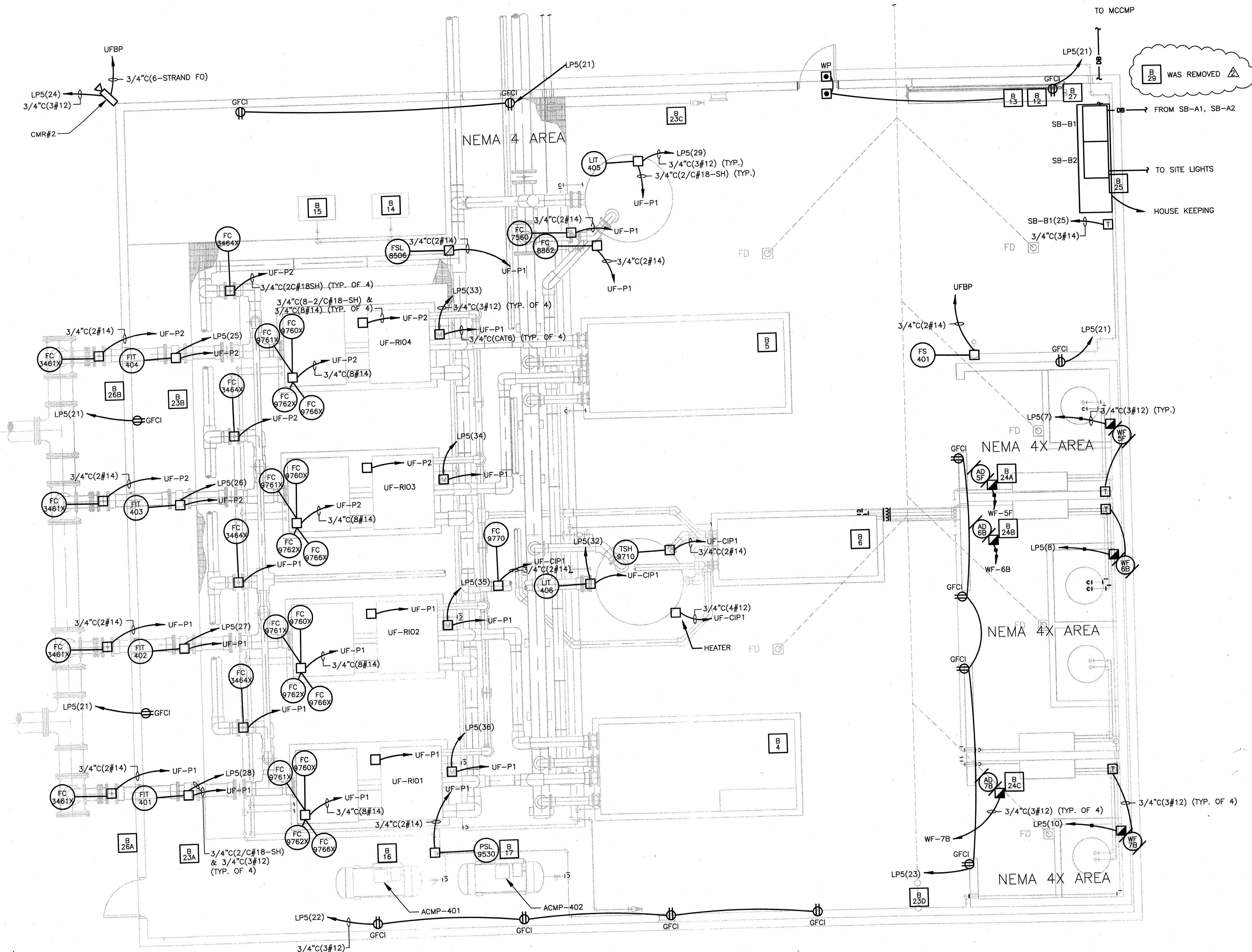
**UF BUILDING
POWER**

Project No.: 120-07080
Designed By: WAP/FWY
Drawn By: FWY
Checked By: LDC

E-407

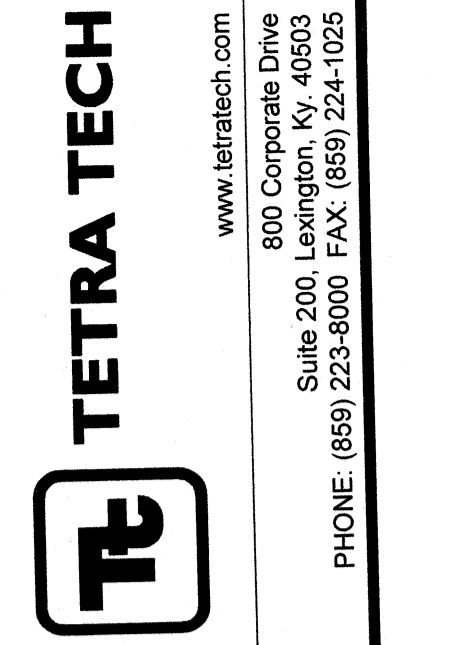
Copyright: Tetra Tech

Thursday, July 16, 2009 9:40:51 AM DRAWING: \\erofis3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-407 UF BUILDING-POWER DWG LAYOUT: E-407 USER NAME: JEREMY M. FRONGILLO

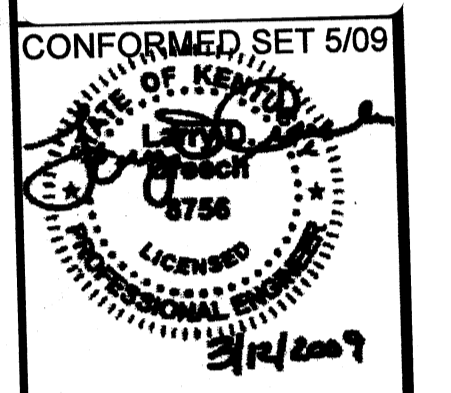


UF BUILDING POWER PLAN
SCALE: 1/4"=1'-0"

NOTE:
1. CONTRACTOR SHALL BE RESPONSIBLE FOR MISCELLANEOUS INSTRUMENTATION CONDUIT/WIRING FOR UF EQUIPMENT.



PROJECT RECORD



BY	DATE	DESCRIPTION
JAT	5/11/06	ADDENDUM 2

Client: OHIO COUNTY WATER DISTRICT
Prof. Loc: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

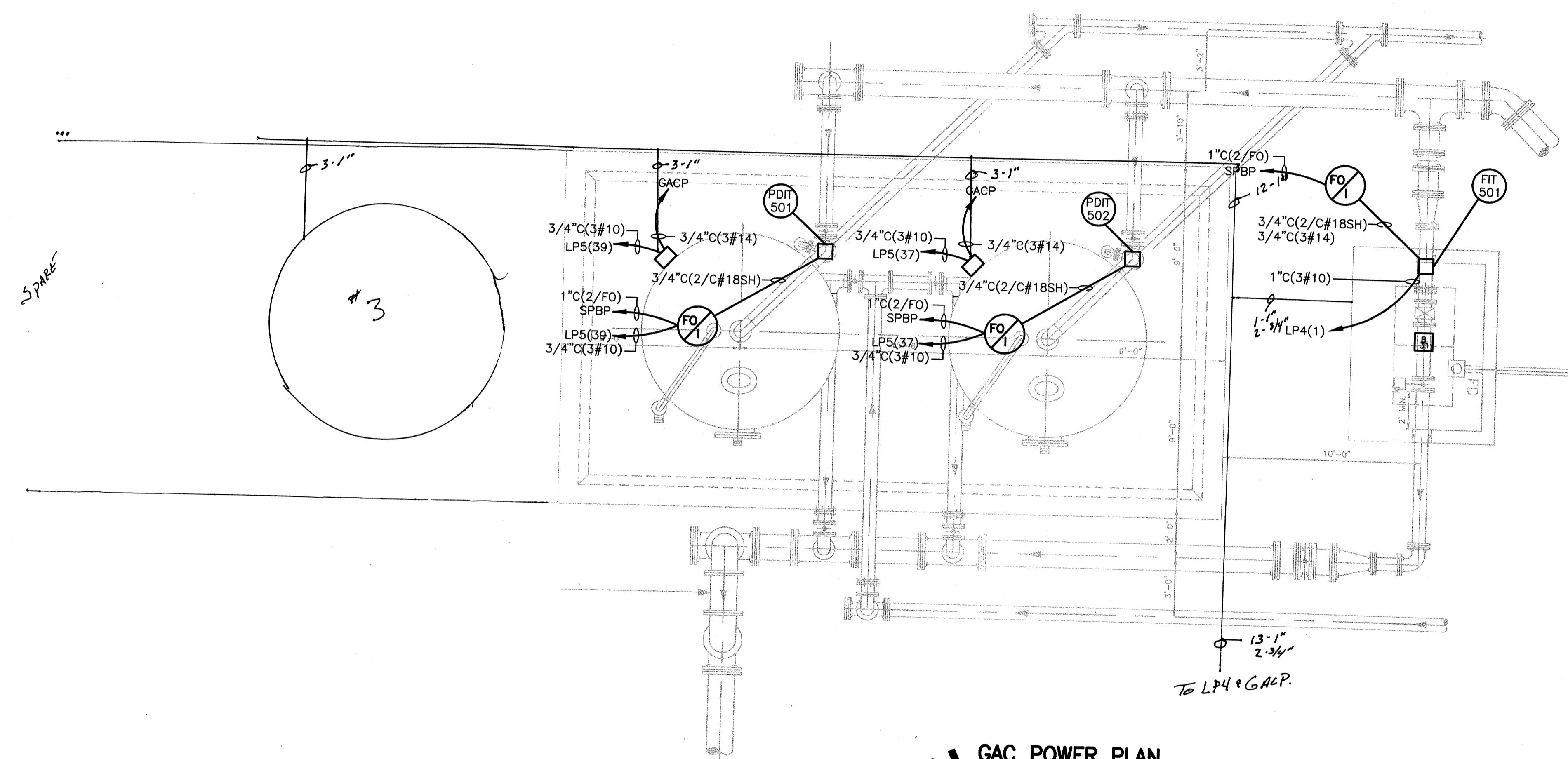
Project No.: 120-07060
Designed By: WAP/FWY
Drawn By: FWY
Checked By: LDC

E-407

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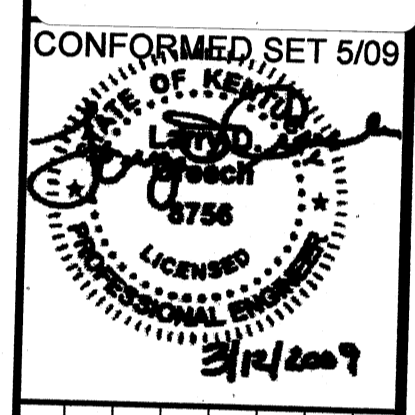
Wednesday, July 15, 2009 3:44:09 PM DRAWING: \\ncrcrfs3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-408 GAC EQUIPMENT DWG LAYOUT: E-408 USER NAME: JEREMY M. FRONGILLO



GAC POWER PLAN
SCALE: 1/4"=1'-0"



PROJECT RECORD



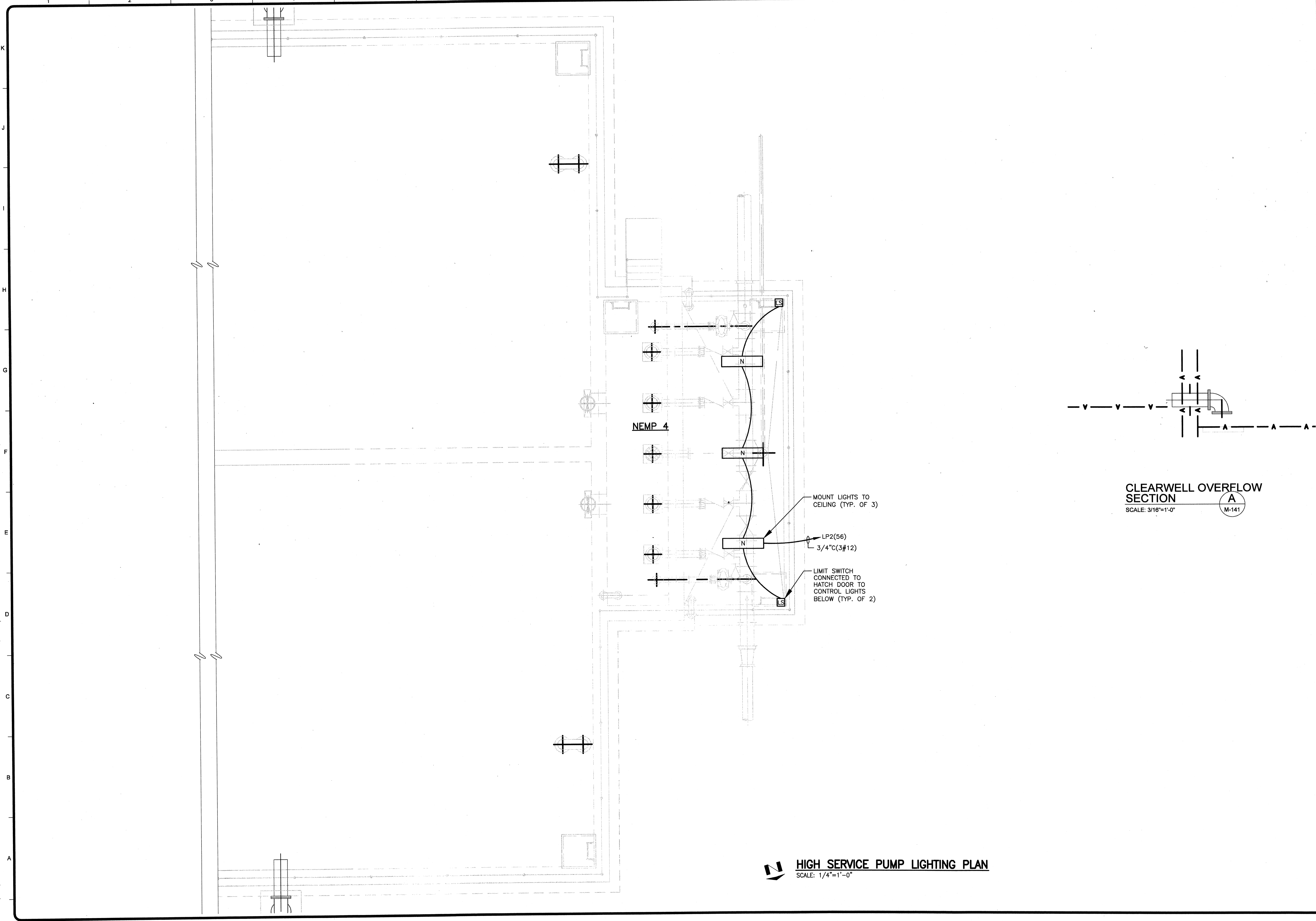
BY	DESCRIPTION	DATE	MARK

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT
**GAC EQUIPMENT
 POWER**

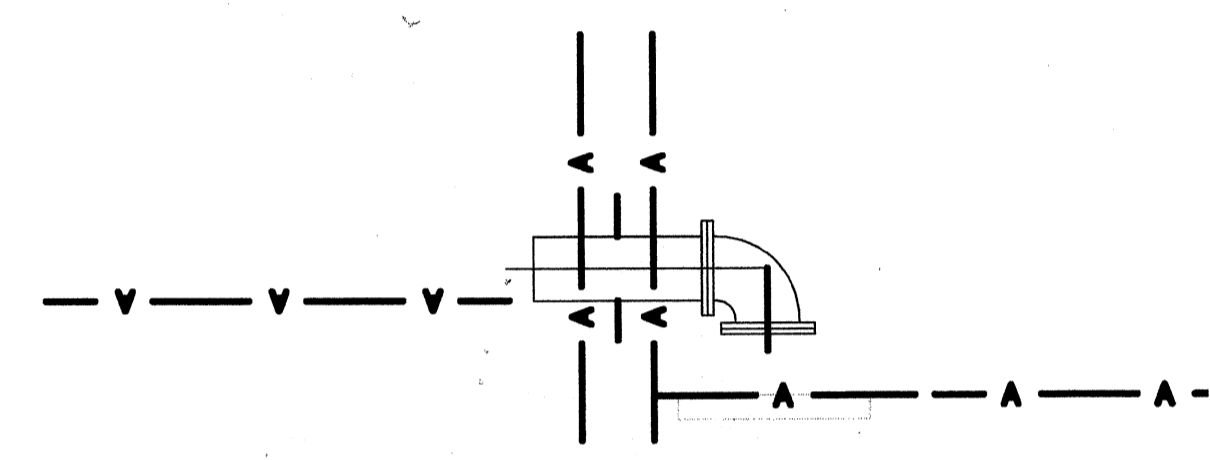
Project No.: 120-07060
 Designed By: WAP/FWY
 Drawn By: FWY
 Checked By: LDC

E-408

Thursday, July 02, 2009 2:12:31 PM DRAWING: \\nroffis3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-409 HIGH SERVICE PUMP LIGHTING .DWG LAYOUT: E-409 USER NAME: JEREMY M. FRONGILLO



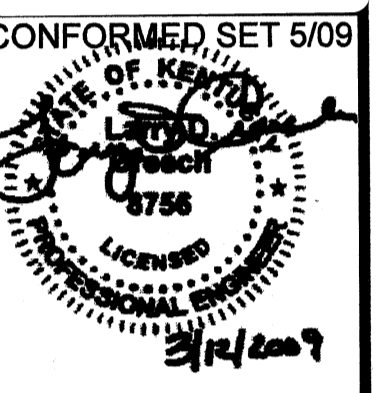
HIGH SERVICE PUMP LIGHTING PLAN
SCALE: 1/4"=1'-0"



CLEARWELL OVERFLOW SECTION
SCALE: 3/16"=1'-0"
A
M-141



PROJECT RECORD



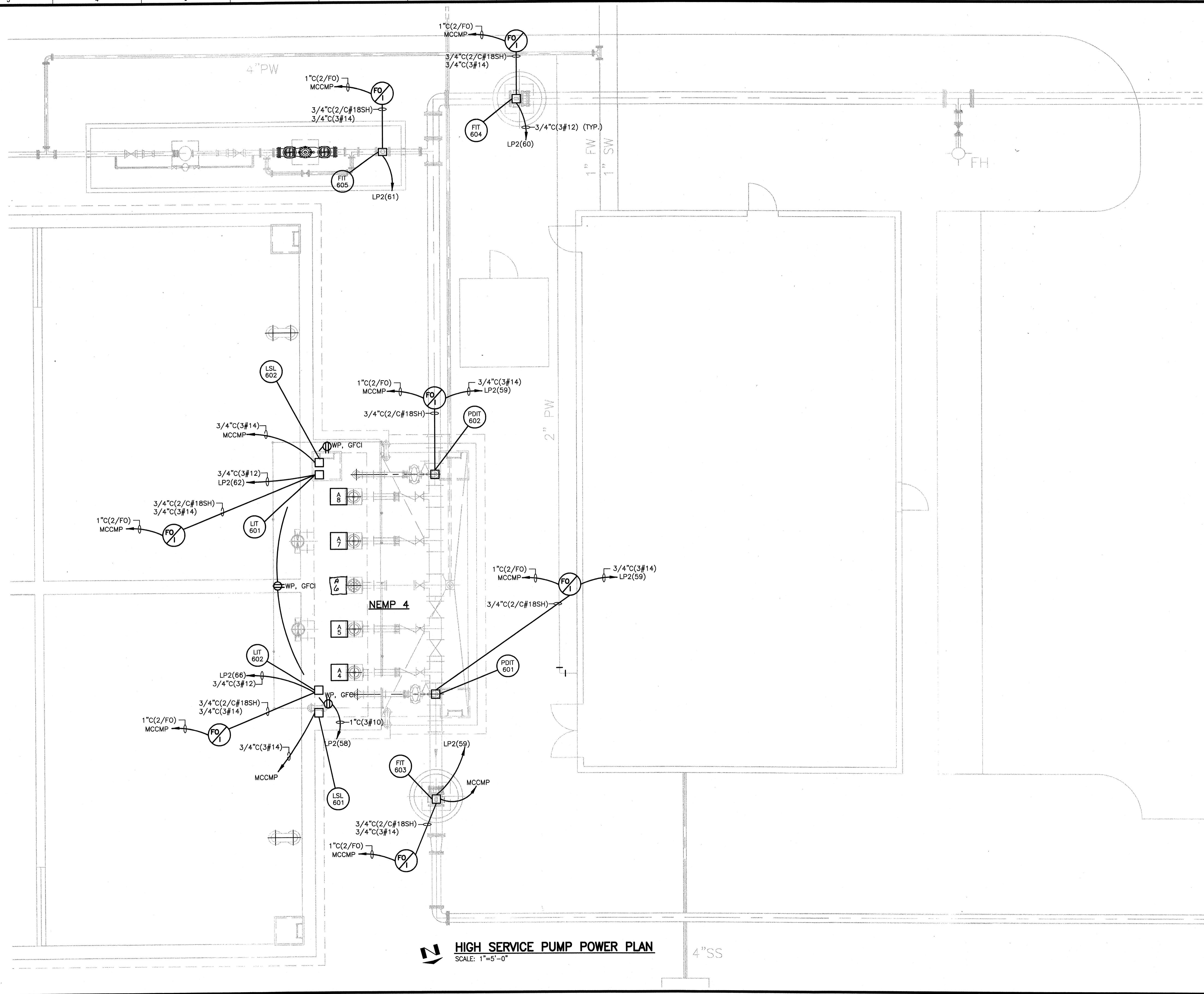
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Prof. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

Project No.: 120-07060
Designed By: WAP/FWY
Drawn By: FWY
Checked By: LDC

E-409

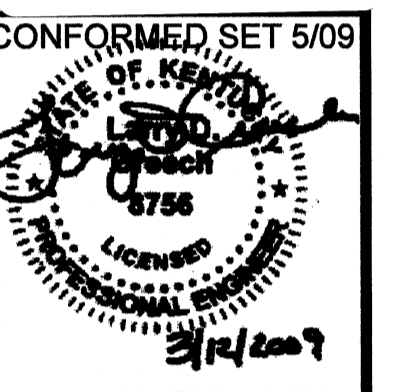
Thursday, July 16, 2009 9:41:59 AM DRAWING: \\narciss\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-410 HIGH SERVICE PUMP POWER .DWG LAYOUT: E-410 USER NAME: JEREMY M. FRONIGILLO



HIGH SERVICE PUMP POWER PLAN
SCALE: 1"=5'-0"

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PROJECT RECORD



BY	DATE	DESCRIPTION

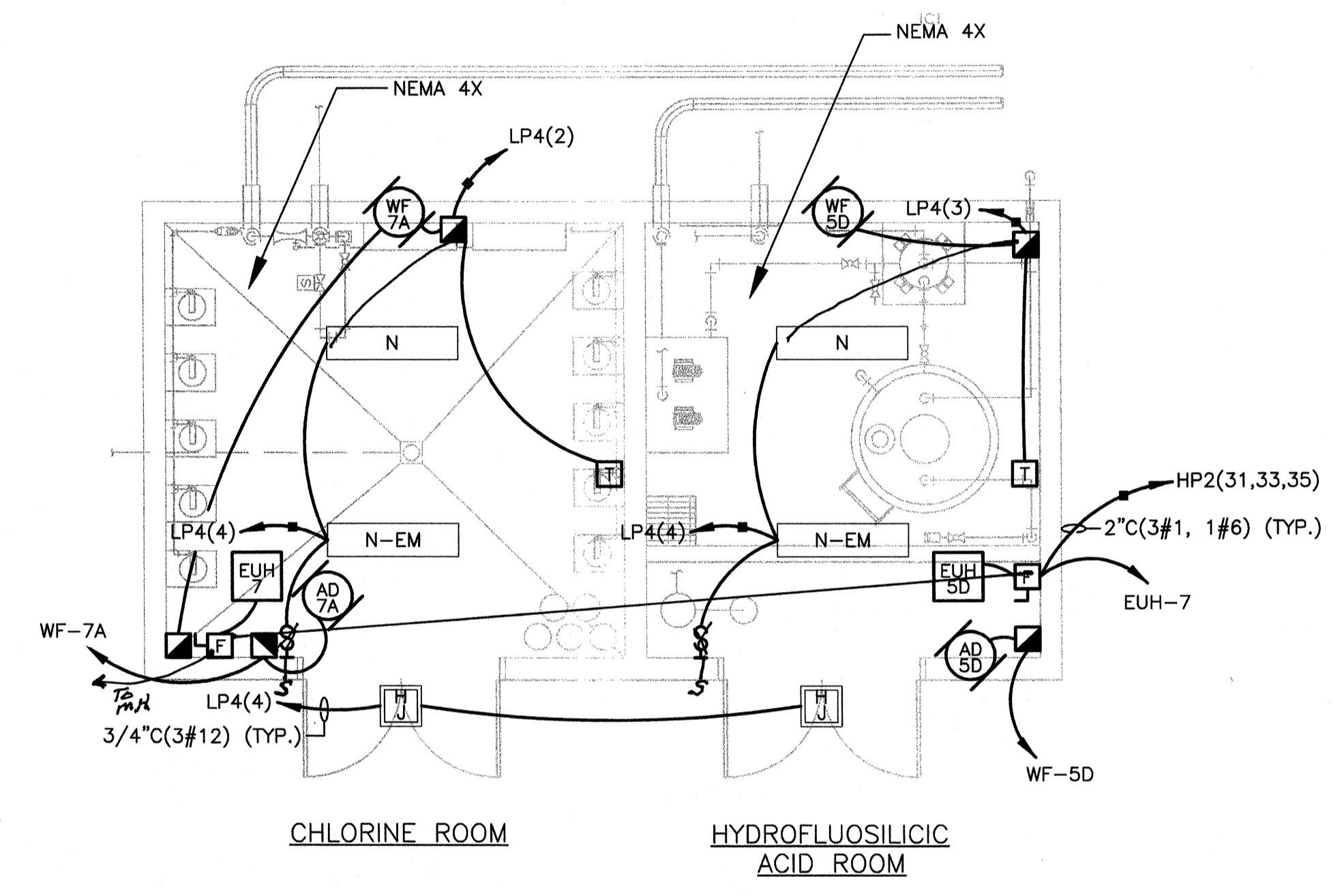
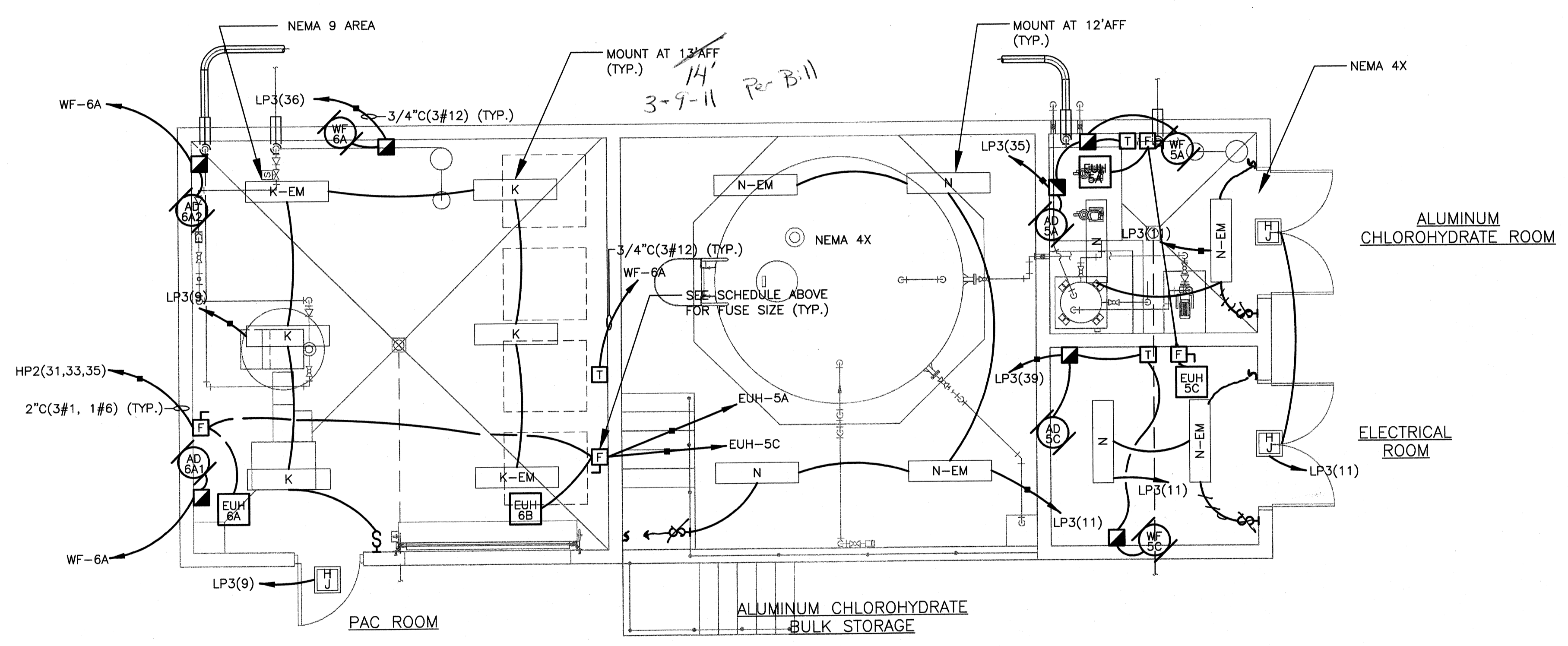
Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
HIGH SERVICE PUMP POWER

Project No.: 120-07060
Designed By: WAP/FWY
Drawn By: FWY
Checked By: LDC

E-410

Thursday, July 16, 2009 9:42:36 AM DRAWING: \\saris\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-411 CHEMICAL BUILDING LIGHTING - DWG LAYOUT: E-411 USER NAME: JEREMY M. FRONGILLO

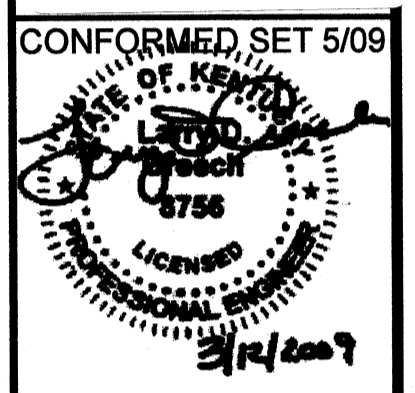
EUH	FUSE SIZE
EUH-5A, 5C, 5D	10AF
EUH-6A, 6B	20AF
EUH-7	15AF



CHEMICAL BUILDING LIGHTING PLAN
SCALE: 1/4"=1'-0"

TETRA TECH
www.tetratech.com
800 Corporate Drive
Suite 200, Lexington, KY 40503
PHONE: (859) 223-8000 FAX: (859) 224-1025

PROJECT RECORD



CONFORMED SET 5/09

BY	DESCRIPTION	DATE	MARK

Client: OHIO COUNTY WATER DISTRICT - Proj. Loc.: CROMMELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

Project No.: 120-07060
Designed By: WAP/FWY
Drawn By: FWY
Checked By: LDC

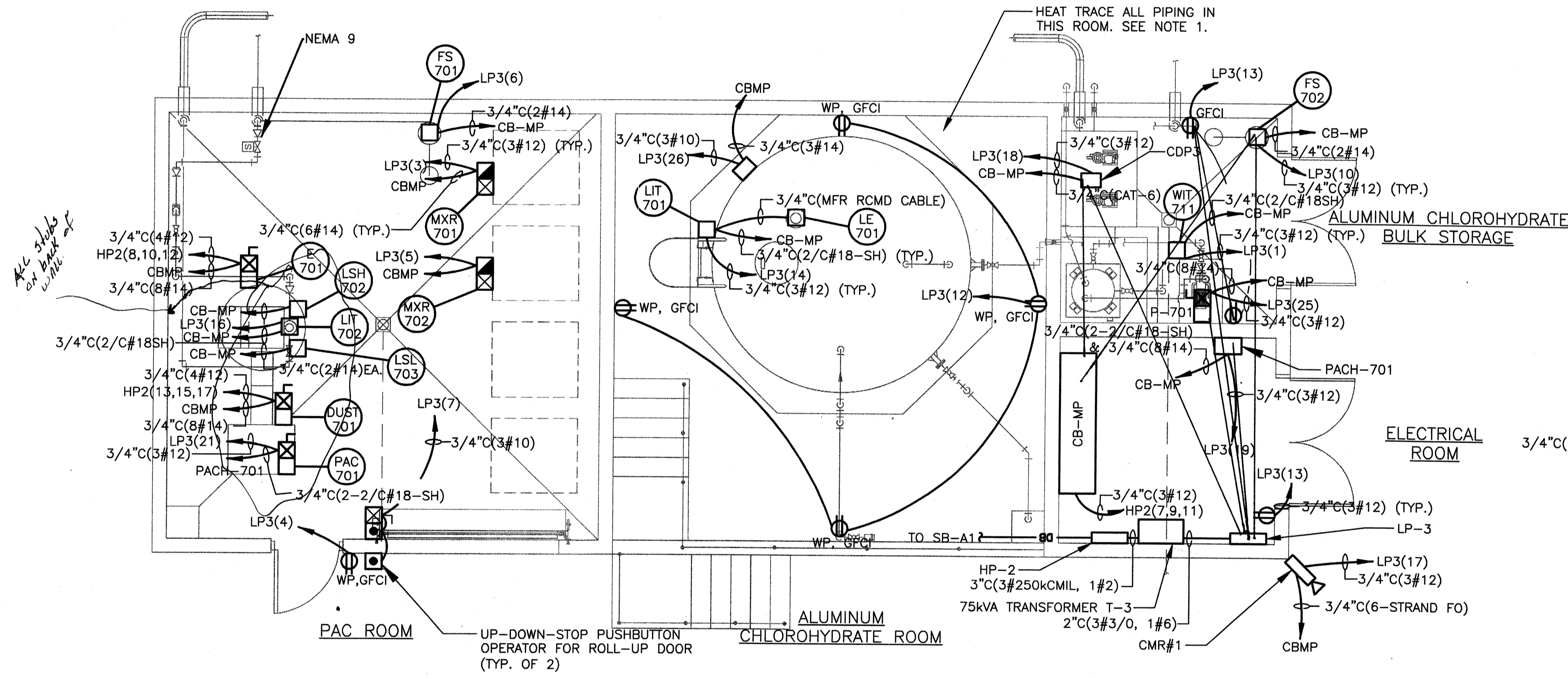
E-411

NOTES:
1. SEE SHEET E-412 FOR ROOM DESIGNATIONS AND CLASSIFICATIONS REGARDING ELECTRICAL EQUIPMENT PERMITTED WITHIN EACH ROOM.

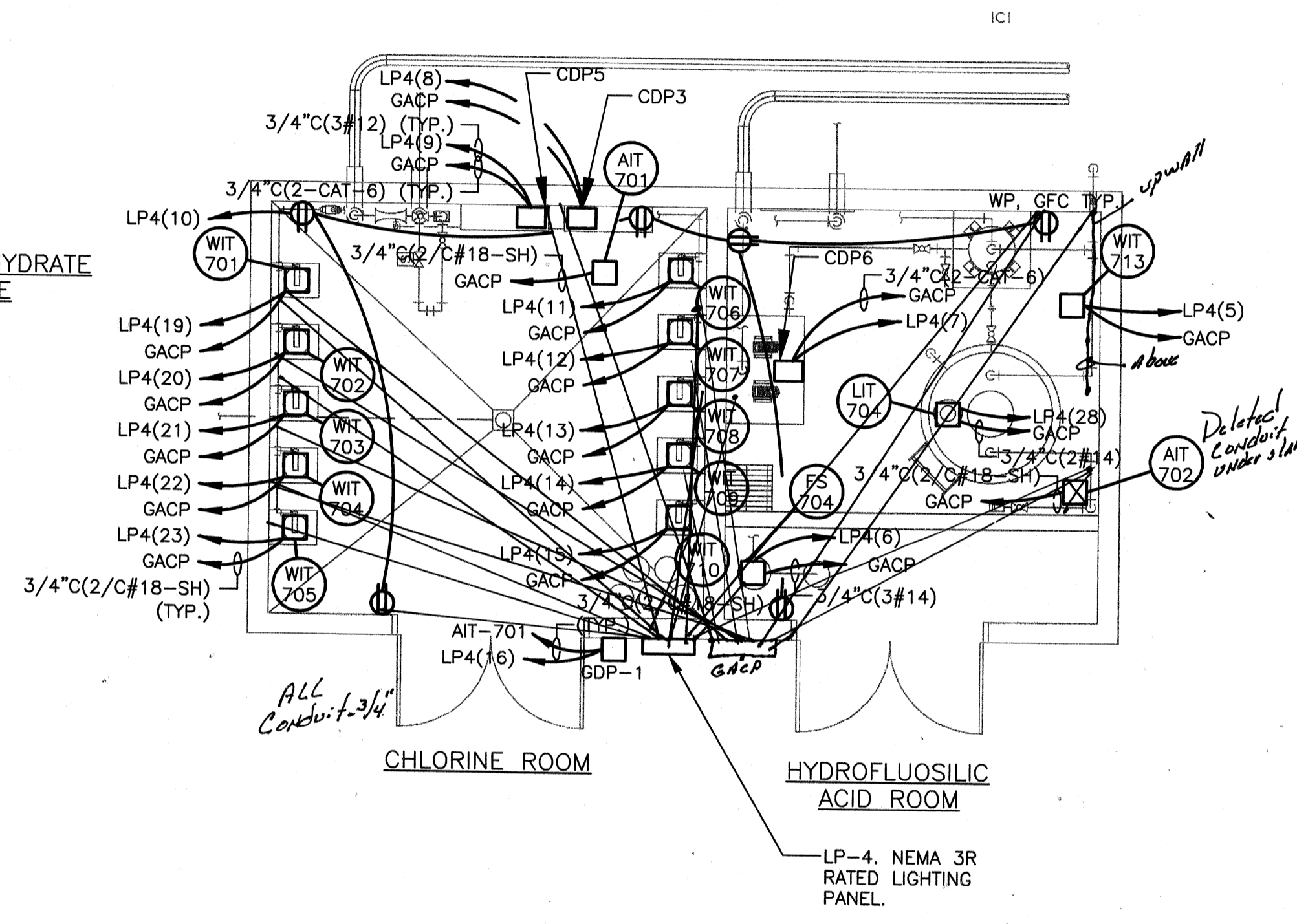
Thursday, July 16, 2009 9:43:07 AM DRAWING: \net\ariffs\projects\120-07080 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07080 E-412 CHEMICAL BUILDING-POWER DWG LAYOUT: E-412 USER NAME: JEREMY M. FRONCILLIO

ROOM(S)	CLASSIFICATION
ELECTRICAL ROOM	INTERIOR (NEMA 12)
ALUMINUM CHLOROHYDRATE BULK STORAGE, ALUMINUM CHLOROHYDRATE ROOM, CHLORINE ROOM, & HYDROFLUOSILIC ACID ROOM.	CORROSIVE (NEMA 4X-PVC)
PAC ROOM	CLASS 2, DIVISION 1 EXPLOSION AREA (NEMA 9)

NOTE: PROVIDE SEAL-OFFS FOR CONDUITS ENTERING/EXITING NEMA 4X & NEMA 9 AREAS



CHEMICAL ALUMINUM BUILDING POWER PLAN
SCALE: 1/4"=1'-0"



CHEMICAL CHLORINE BUILDING POWER PLAN
SCALE: 1/4"=1'-0"

NOTES:
1. PROVIDE HEAT TRACING, VERIFY SIZE AND ROUTE WITH PROCESS DRAWINGS AND CONNECT TO LP3(33).

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PROJECT RECORD

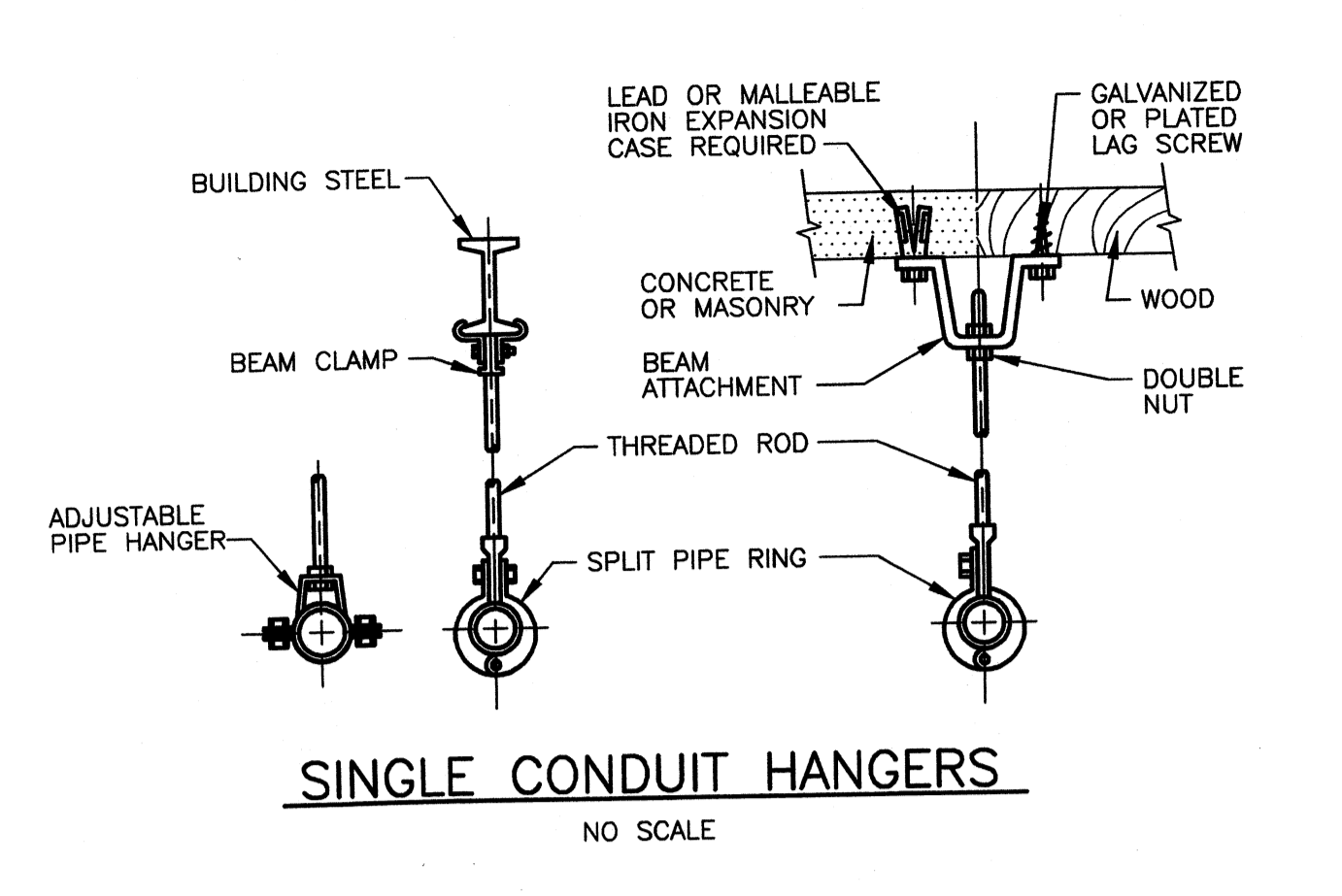
CONFORMED SET 5/09

BY	JAT	MARK	DATE	DESCRIPTION
		▲	5/5/08	ADDENDUM 1

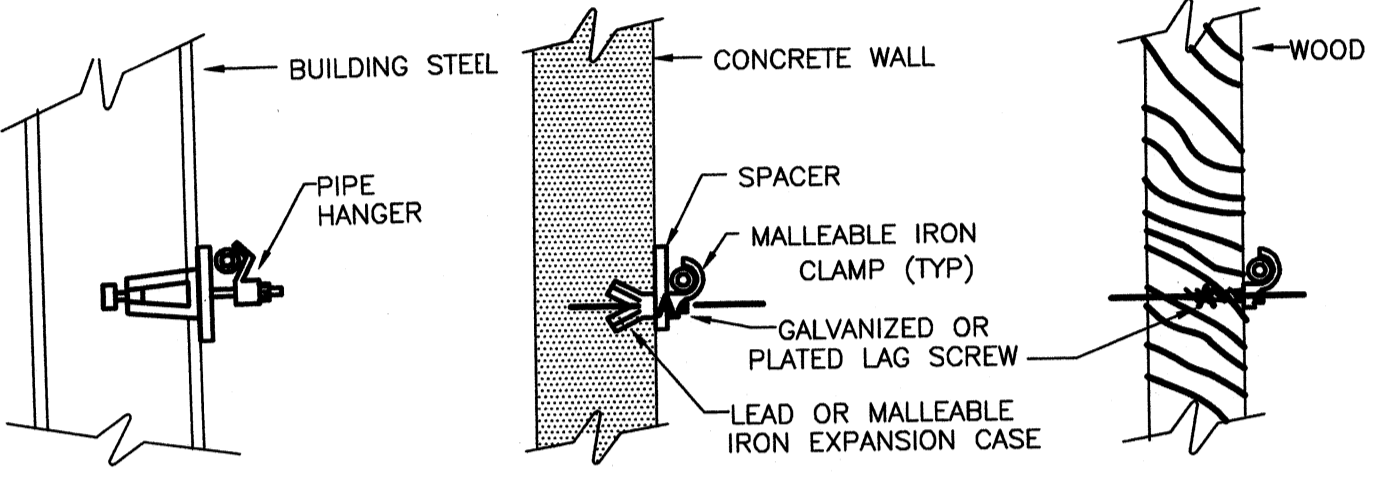
Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT
CHEMICAL BUILDING POWER
Project No.: 120-07080
Designed By: WAP/FWY
Drawn By: FWY
Checked By: LDC

E-412

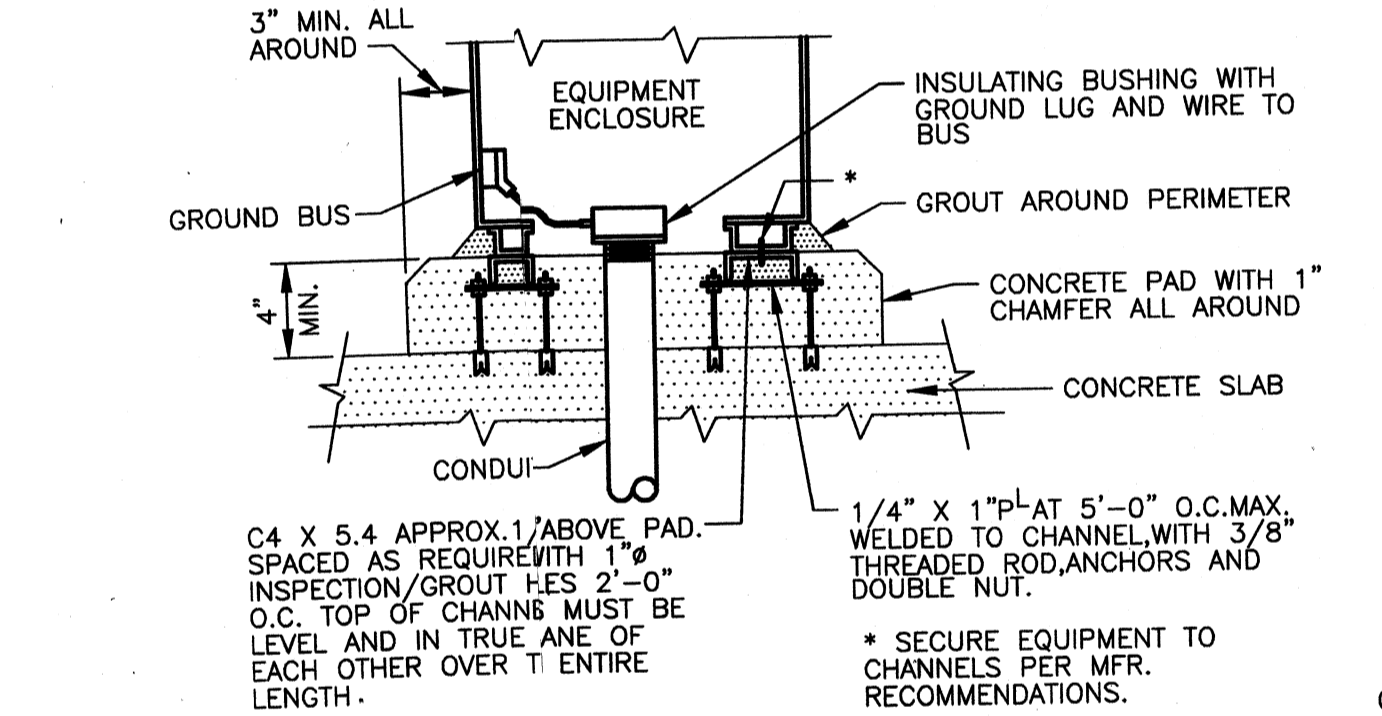
Thursday, July 02, 2009 2:15:35 PM DRAWING: \\erofis3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-501 DETAILS.DWG LAYOUT: E-501 USER NAME: JEREMY M. FRONGILLO



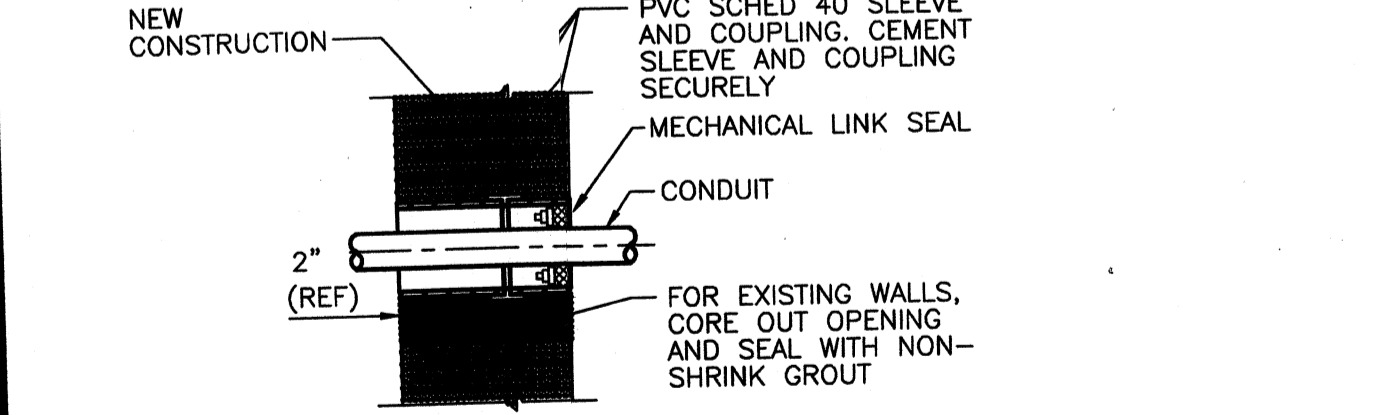
SINGLE CONDUIT HANGERS
NO SCALE



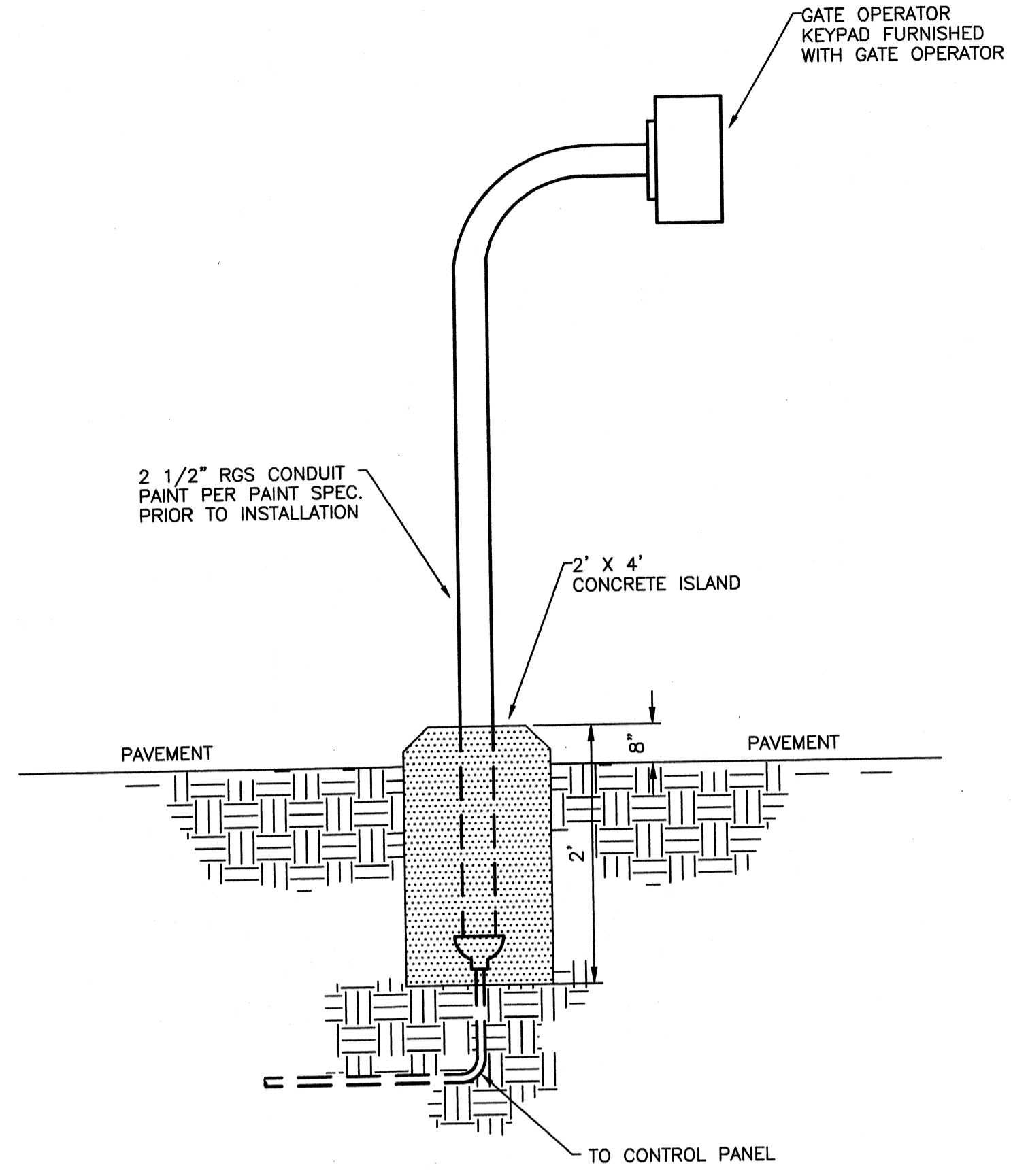
VERTICAL AND HORIZONTAL CONDUIT RACKS AND HANGERS
NO SCALE



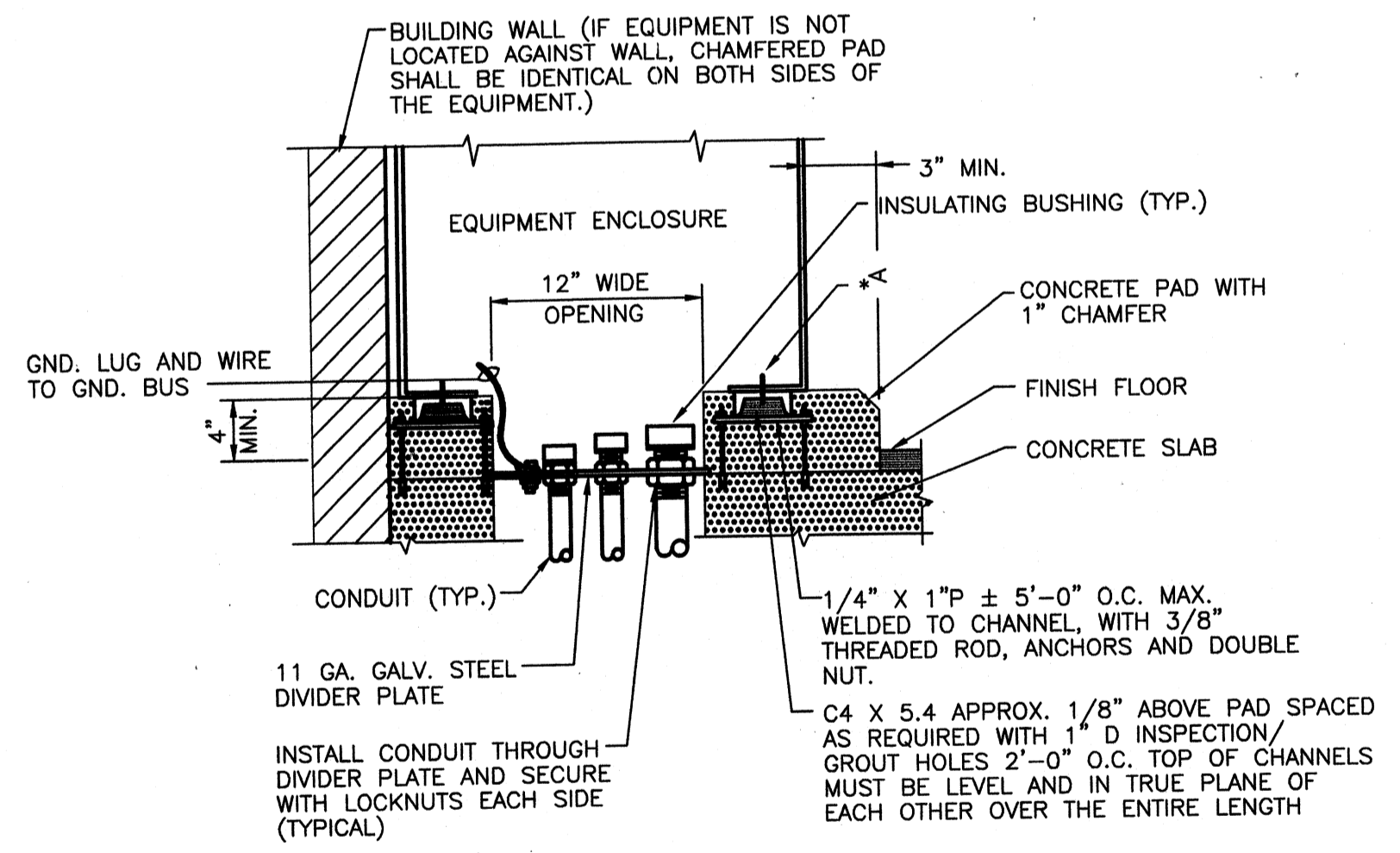
OUTDOOR PAD MOUNTED EQUIPMENT DETAIL
NO SCALE



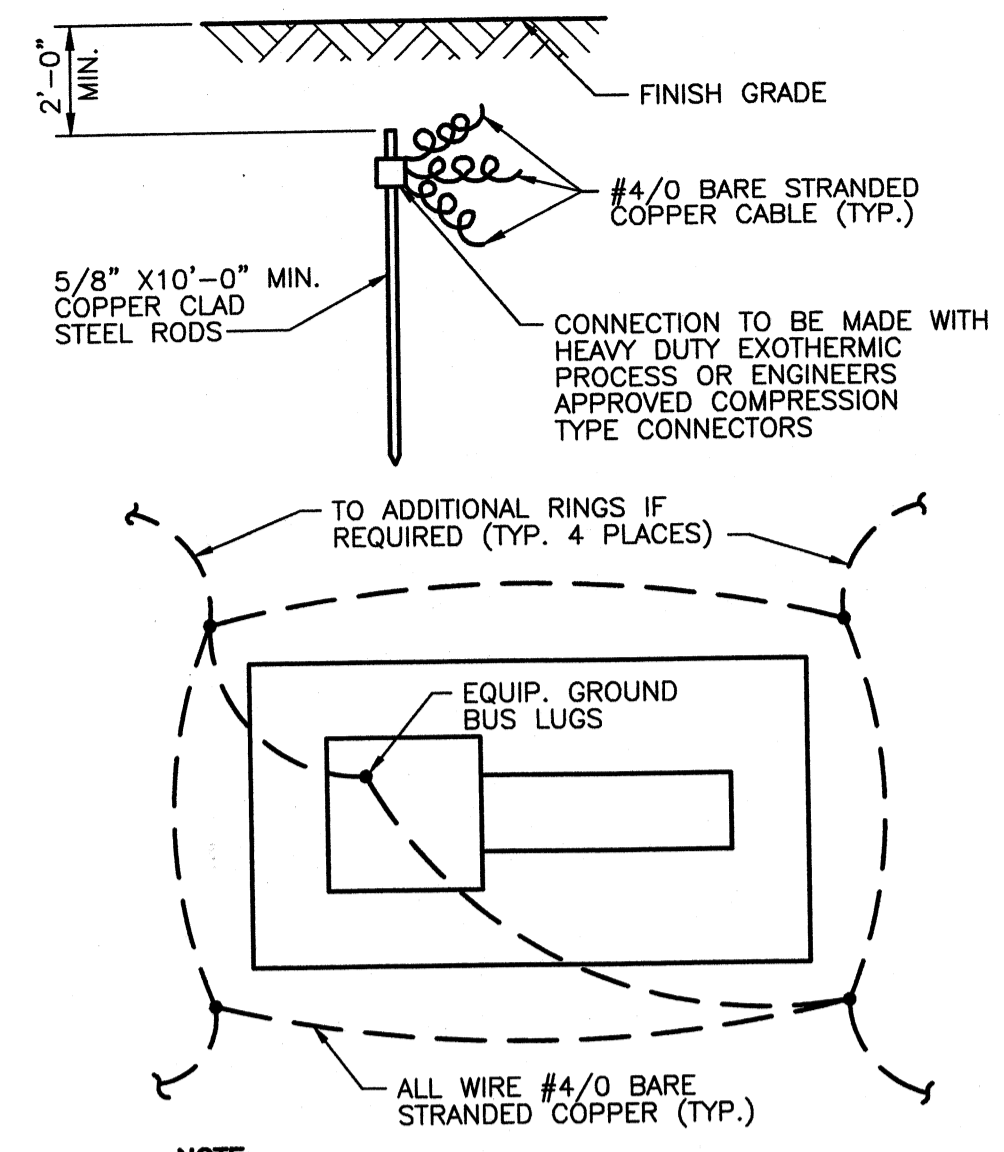
EXTERIOR WALL CONDUIT SLEEVE DETAIL
DO NOT USE BELGRADE
NO SCALE



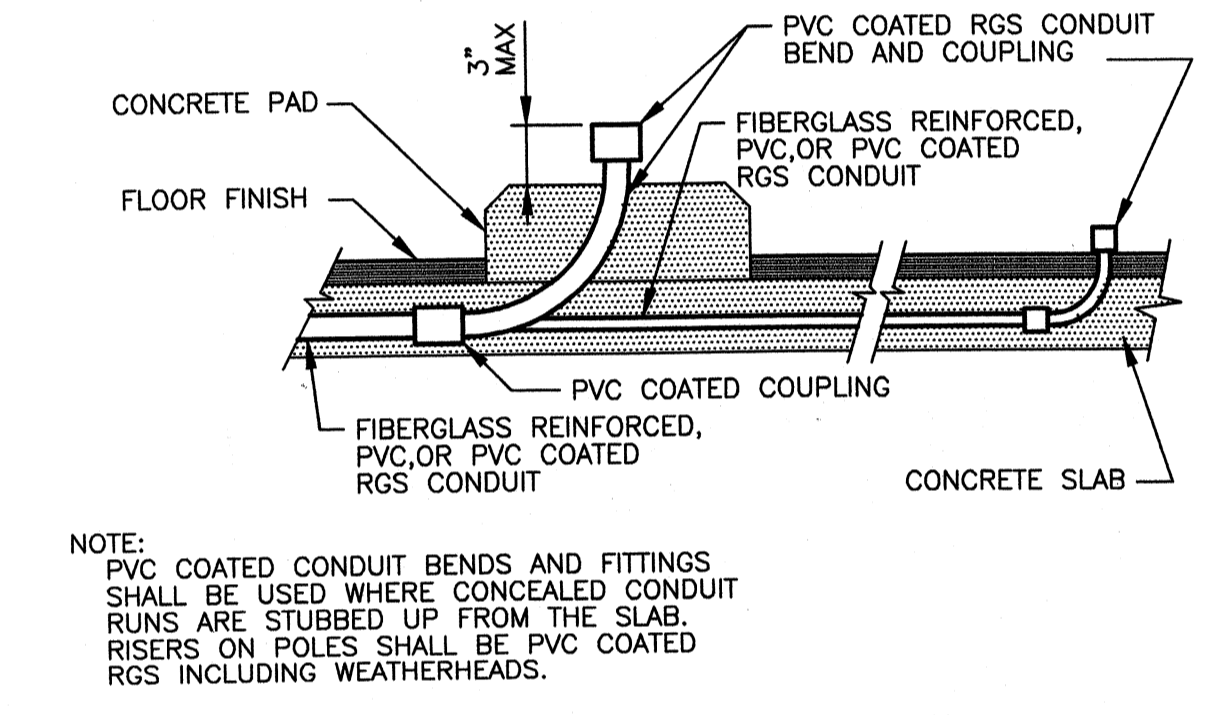
GATE OPERATOR KEYPAD DETAIL
NO SCALE



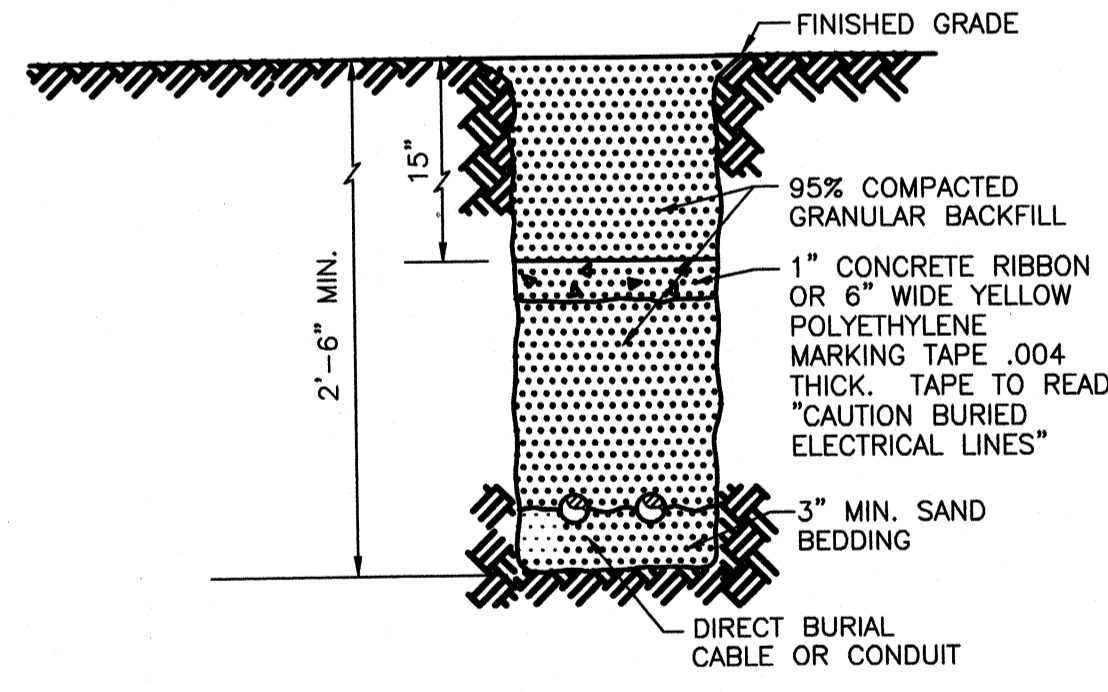
INTERIOR PAD MOUNTED EQUIPMENT DETAIL
NO SCALE



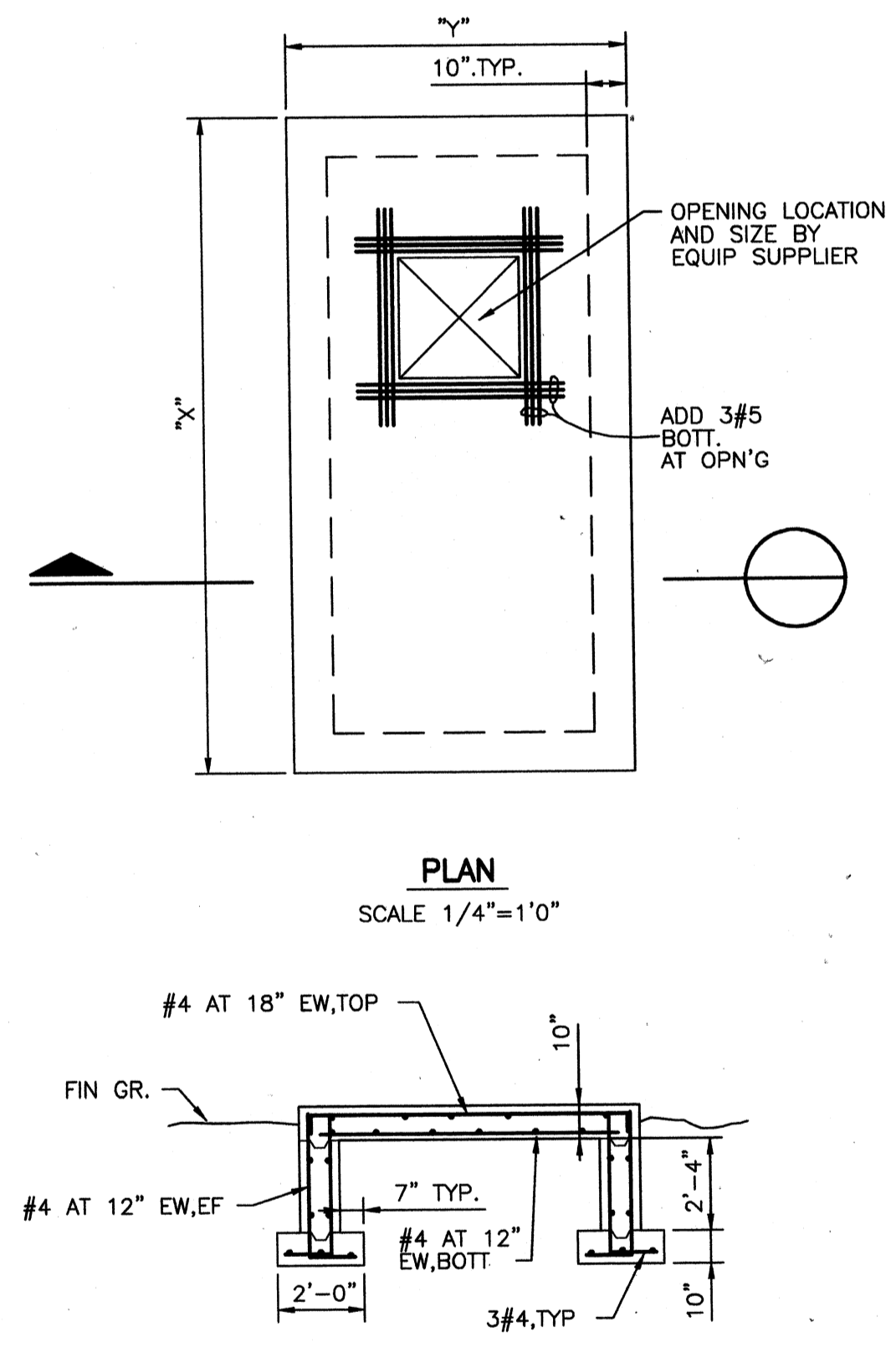
GROUND MAT DETAIL
NO SCALE



CONDUIT STUB-UP DETAIL
NO SCALE



TRENCHING DETAIL
NO SCALE

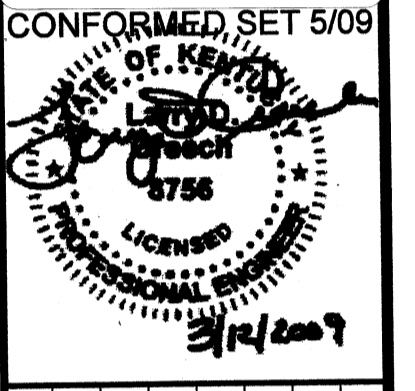


GENERATOR/TRANSFORMER PAD
SCALE 1/4"=1'0"

* SECURE EQUIPMENT TO CHANNELS PER MFR. RECOMMENDATIONS

TETRA TECH
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Suite 200, Leaning, NY 14103
PHONE: (858) 223-3000 FAX: (858) 223-1023

PROJECT RECORD



BY	DATE	DESCRIPTION

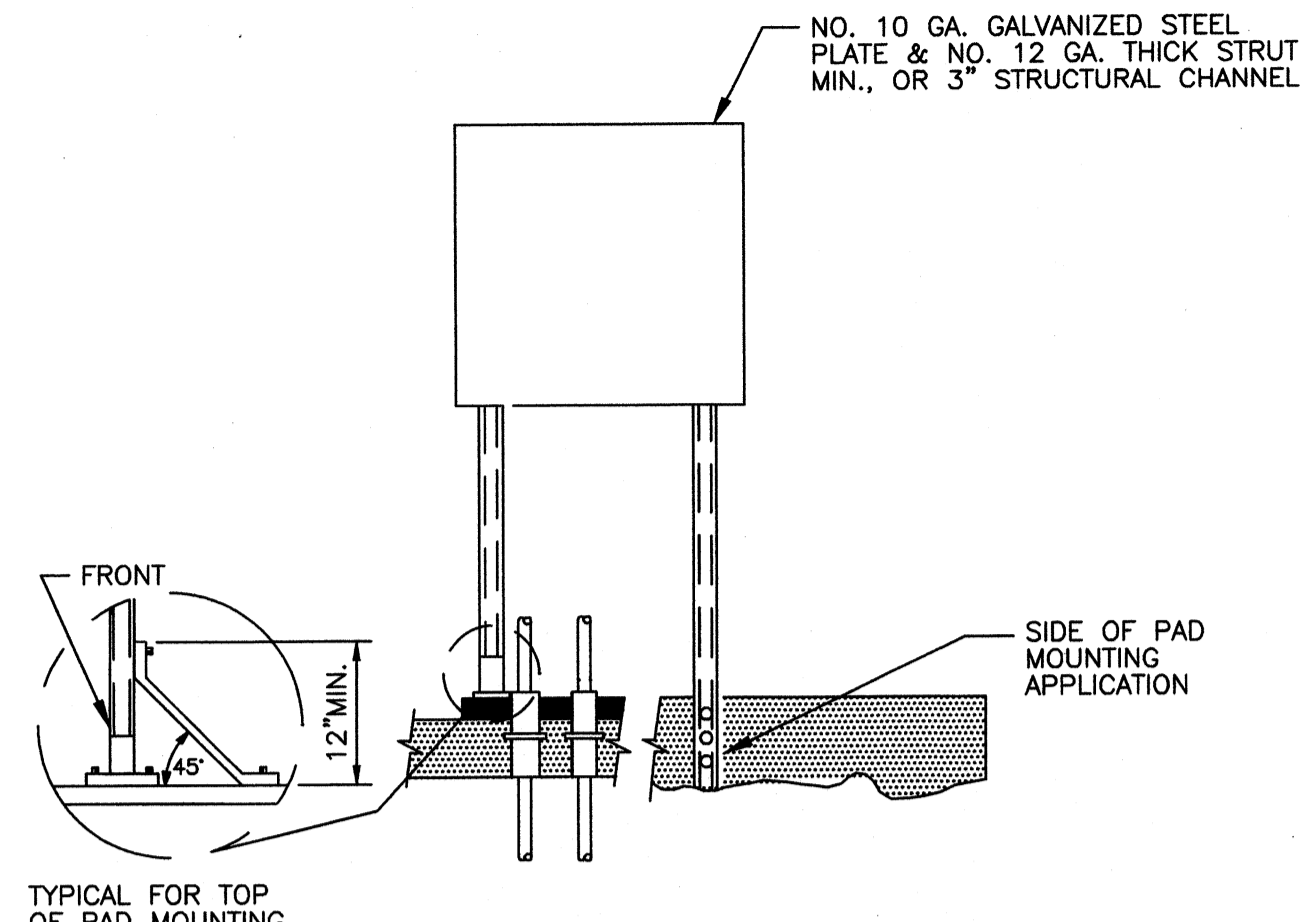
Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

Project No.: 120-07060
Designed By: WAP/FWY
Drawn By: FWY
Checked By: LDC

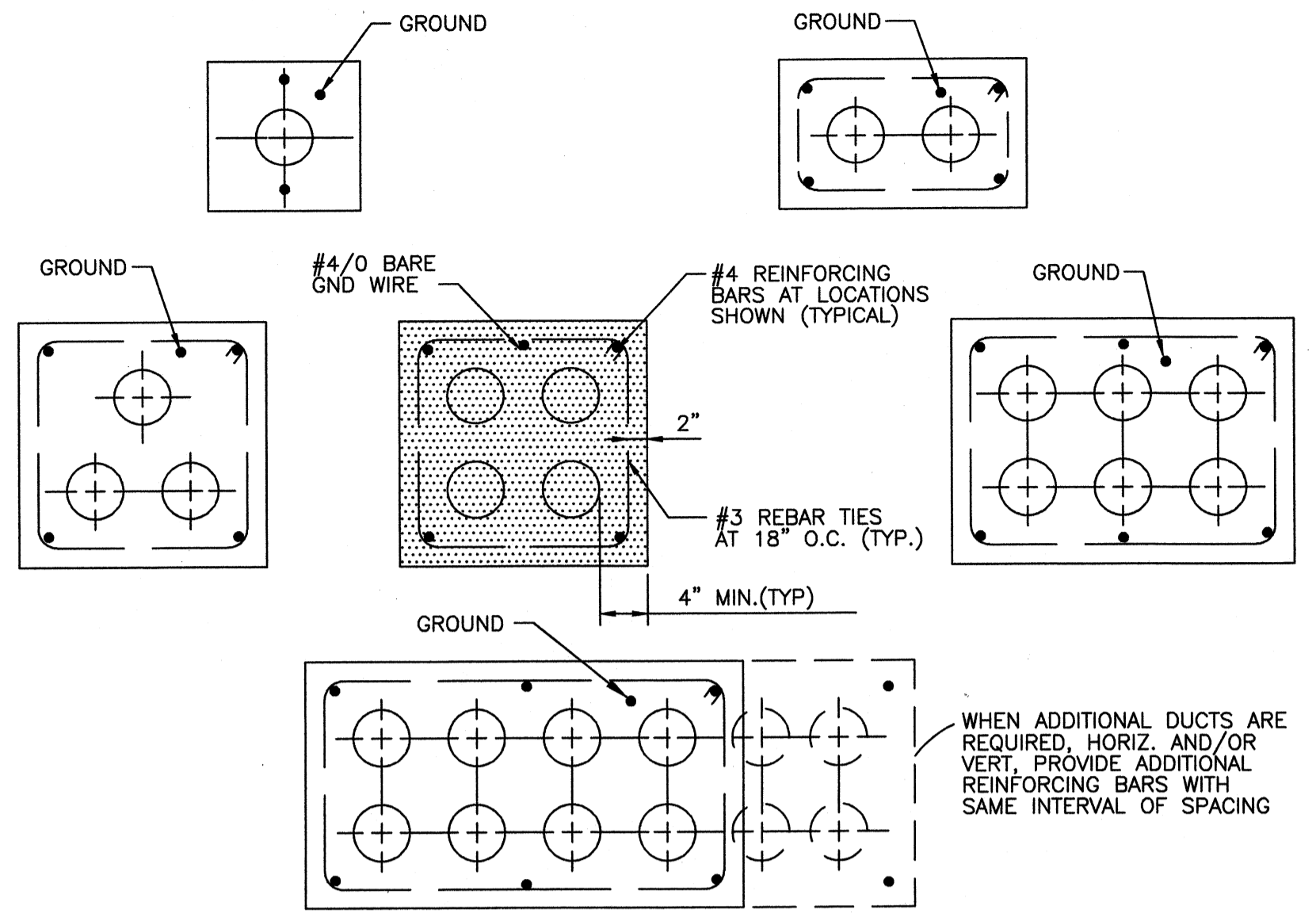
E-501

Copyright: Tetra Tech

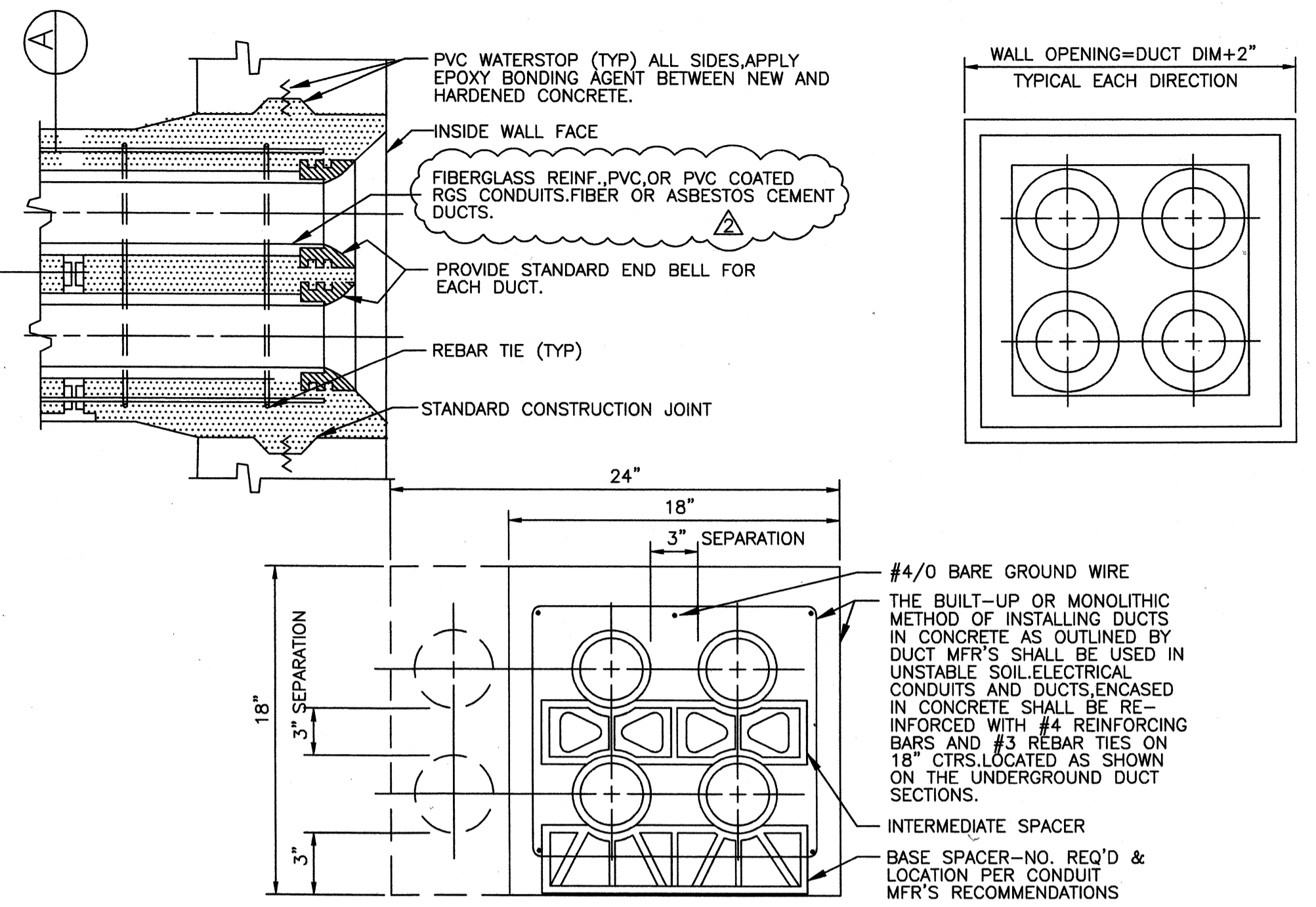
Wednesday, July 15, 2008 3:48:53 PM DRAWING: \\viorif\3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-502 DETAILS DWG LAYOUT: E-502 USER NAME: JEREMY M. FRONIGILLO



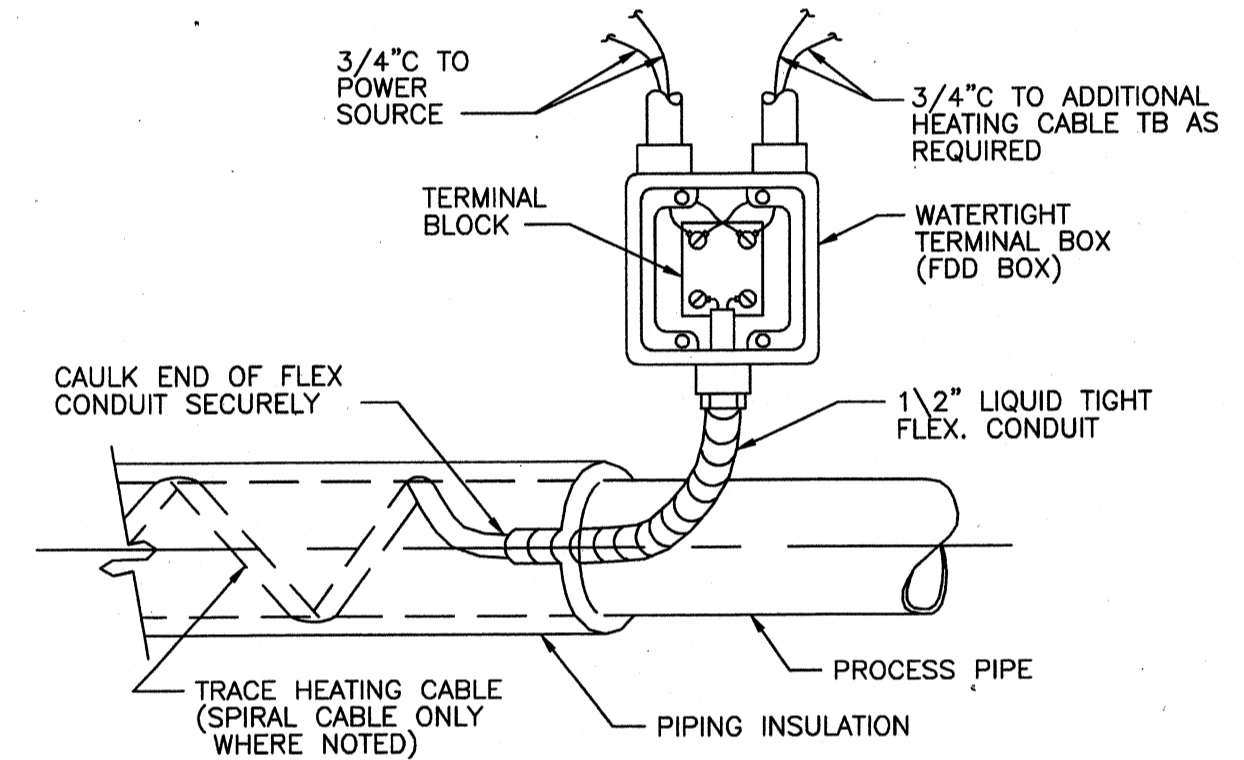
RACK MOUNTED EQUIPMENT DETAIL
NO SCALE



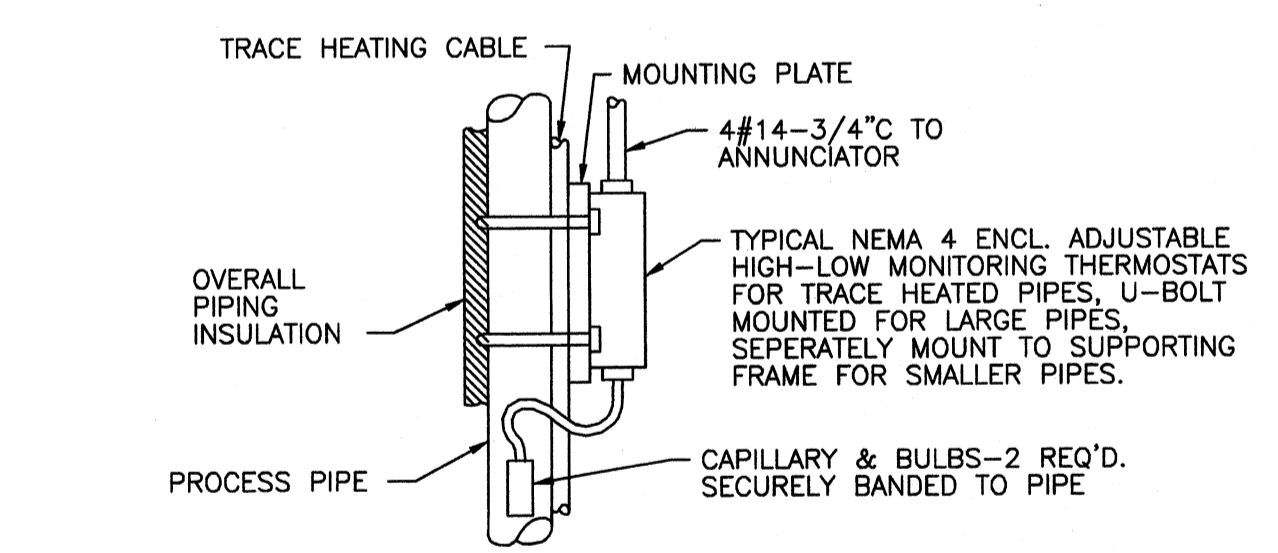
UNDERGROUND DUCT SECTIONS
NO SCALE



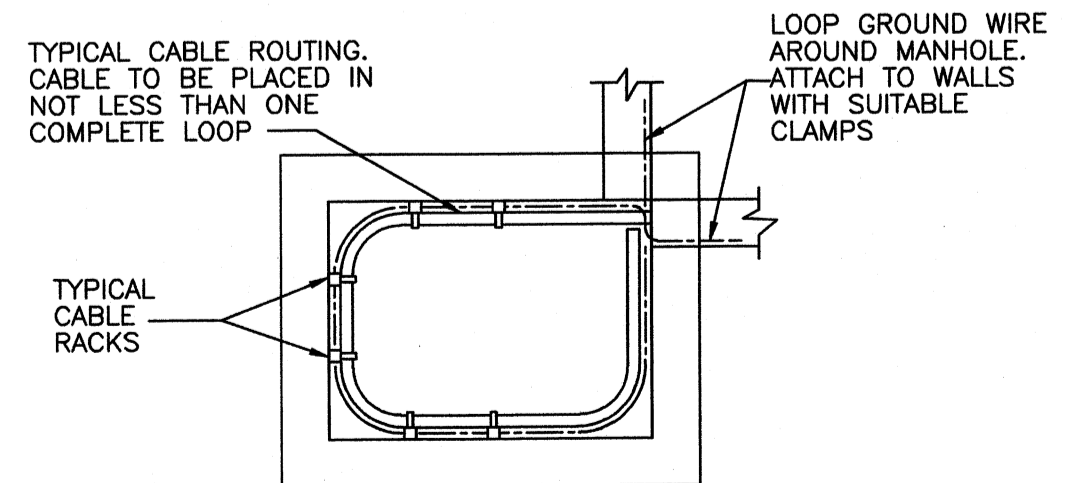
DUCT DETAILS
NO SCALE



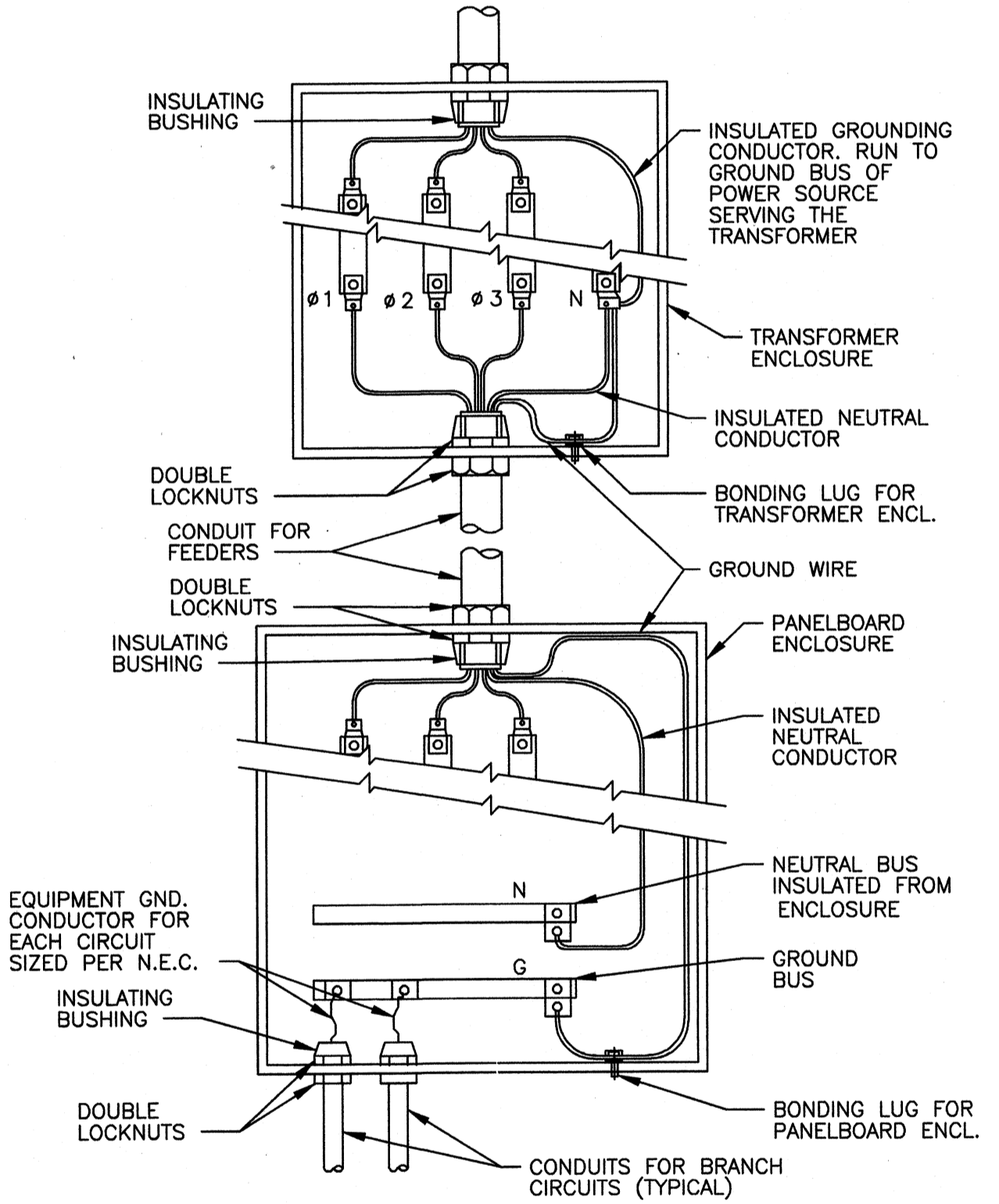
TYPICAL INSTALLATION DETAIL FOR TRACE HEATING CABLE
NO SCALE



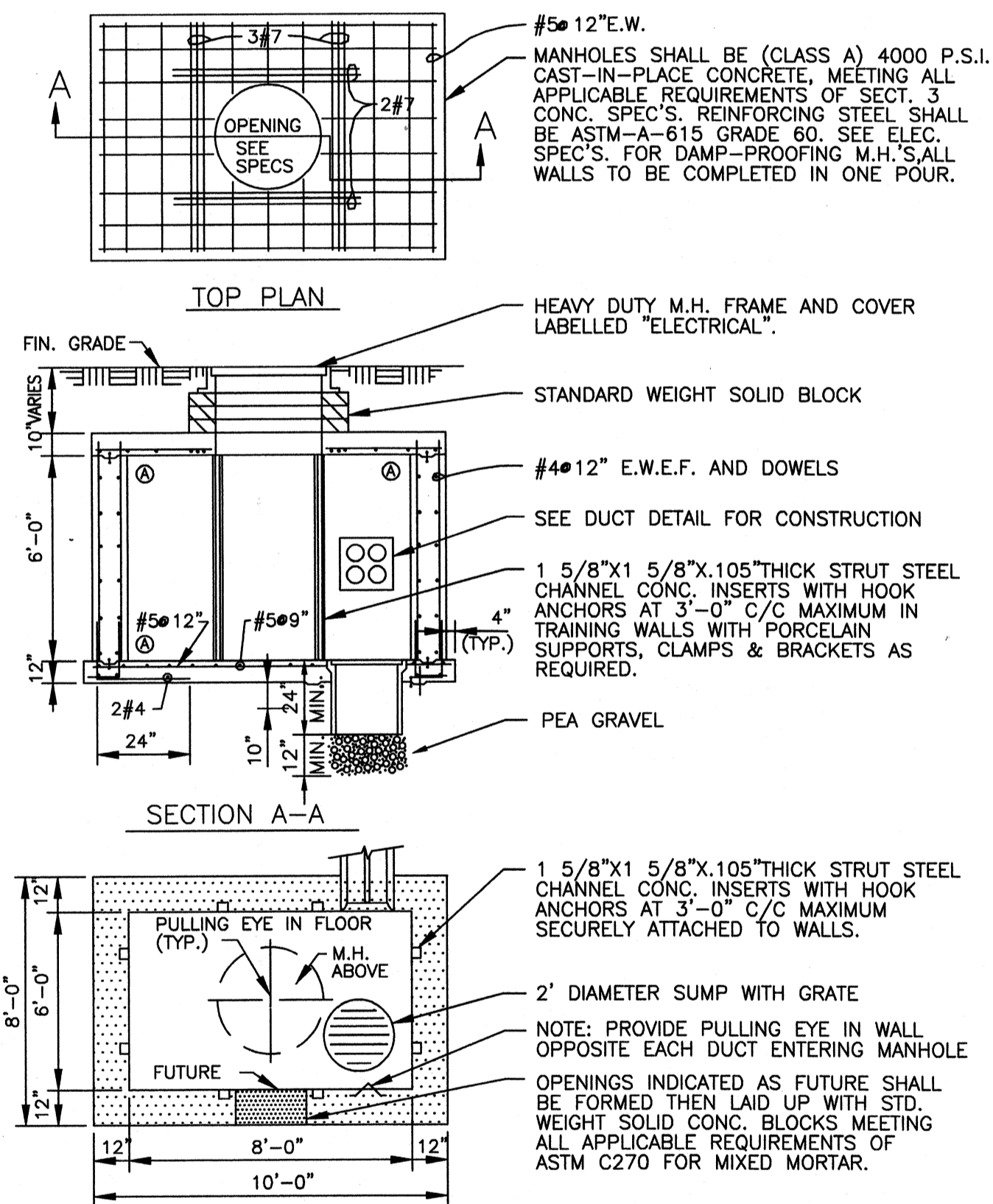
TYPICAL INSTALLATION DETAIL FOR MOUNTING THERMOSTATS AT PROCESS PIPE
NO SCALE



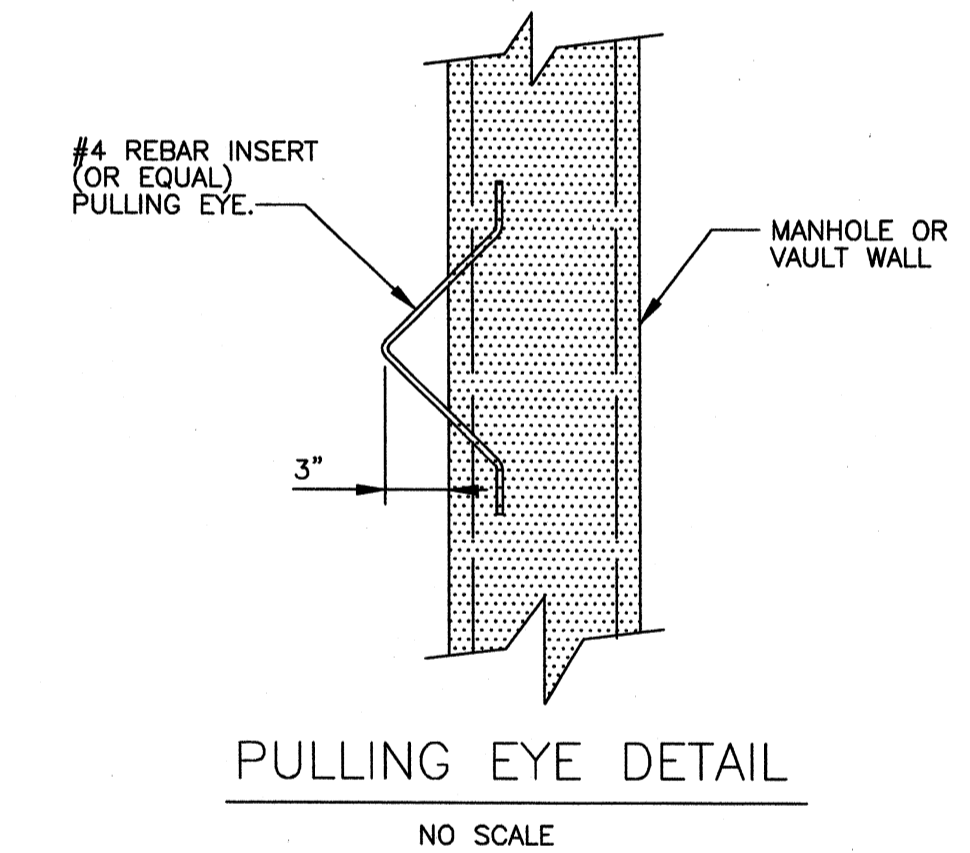
CABLE ROUTING DETAIL
NO SCALE



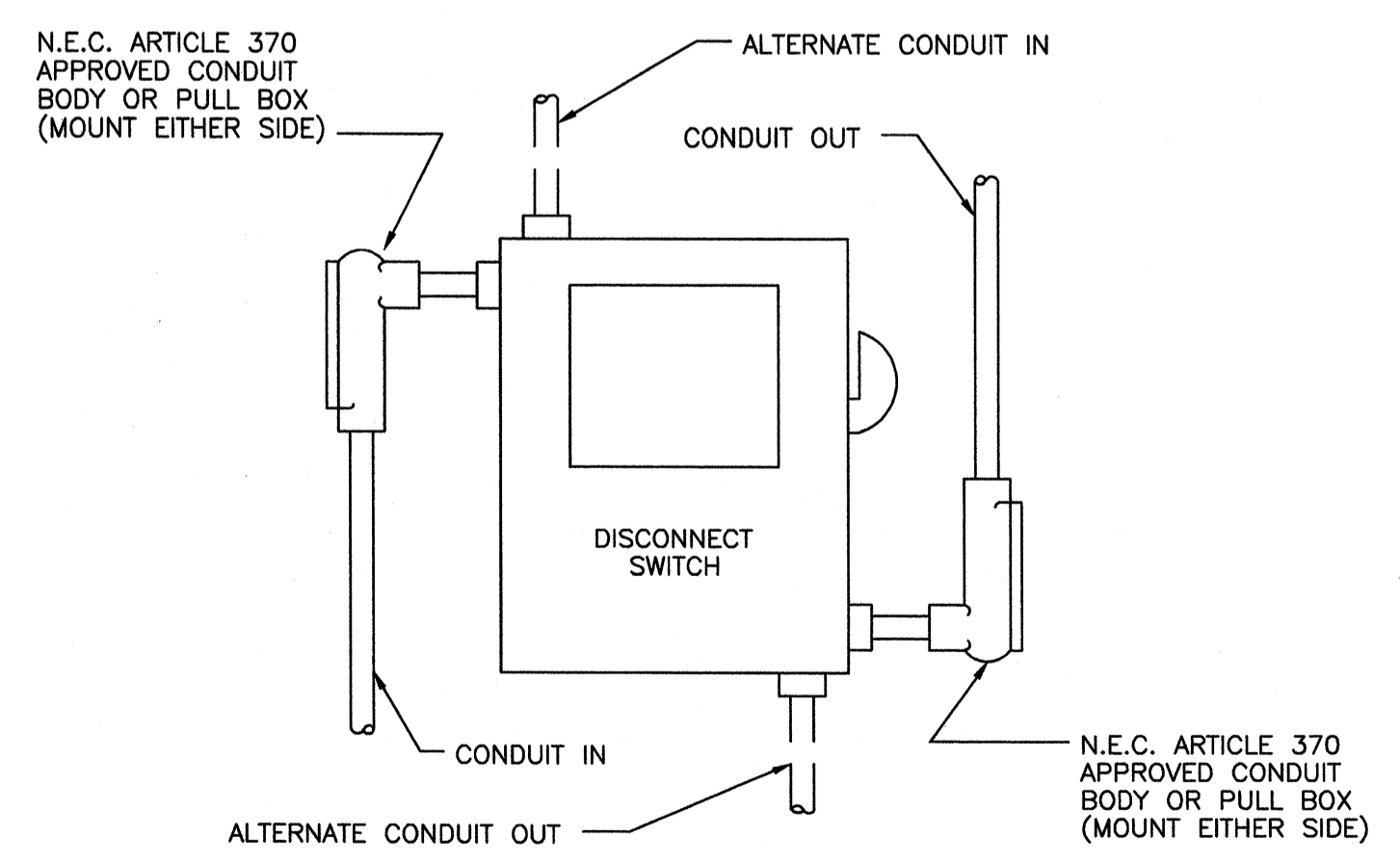
CONDUIT GROUNDING DETAILS FOR TRANSFORMERS, DISTRIBUTION PANELS, AND WALL MOUNTED ENCLOSURES
NO SCALE



TYPICAL SINGLE MANHOLE DETAILS
LOW WATER TABLE APPLICATION
NO SCALE



PULLING EYE DETAIL
NO SCALE



SERVICE ENTRANCE & DISCONNECT SWITCHES
FOR NO. 4 WIRE & LARGER
NO SCALE

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PROJECT RECORD

CONFORMED SET 5/09

BY	DATE	DESCRIPTION
JAT	5/11/08	ADDENDUM 2

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY

OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT

DETAILS

Project No.: 120-07060

Designed By: WAP/FWY

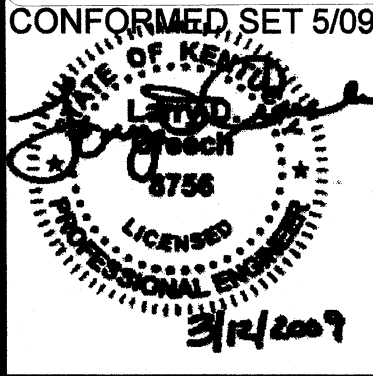
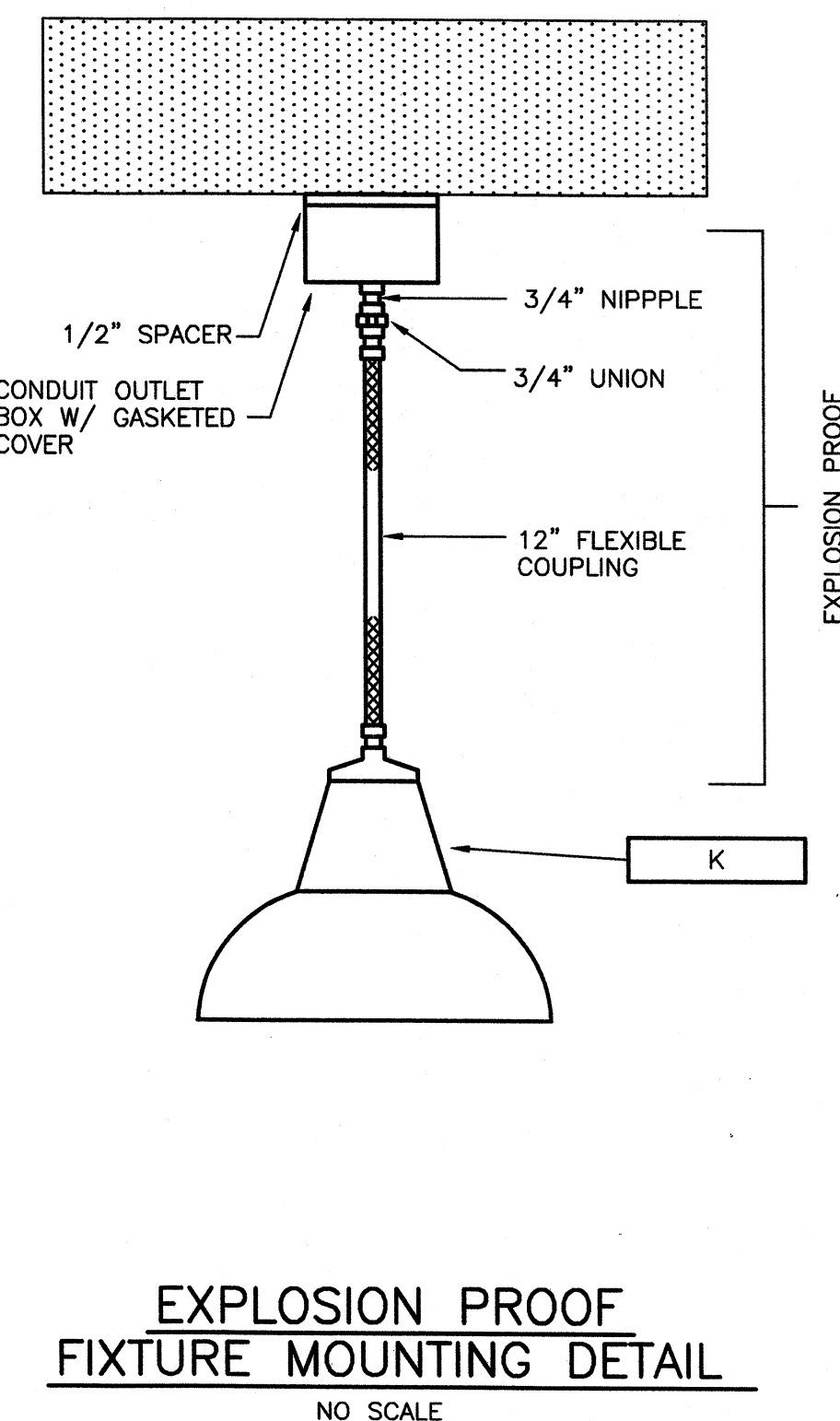
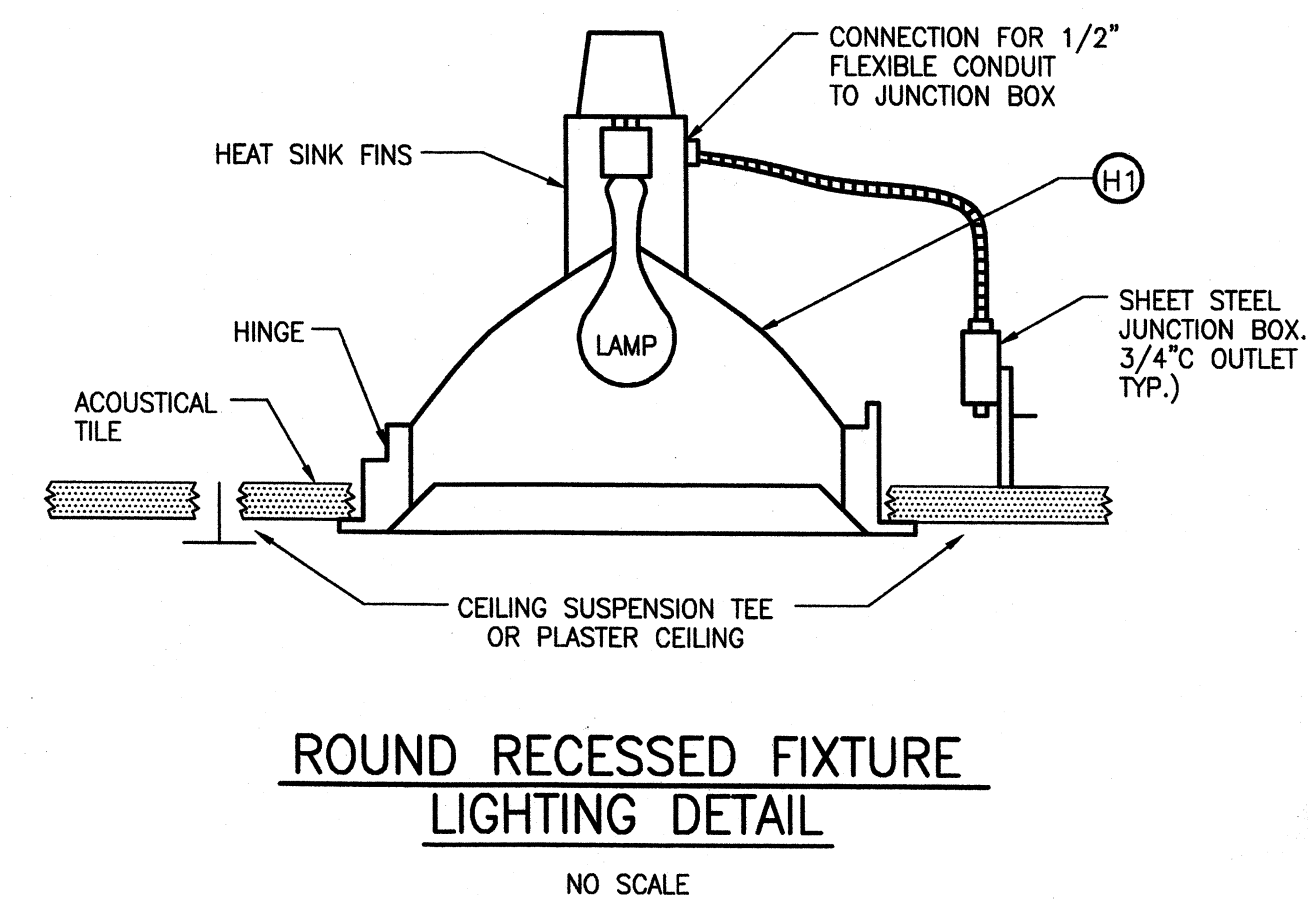
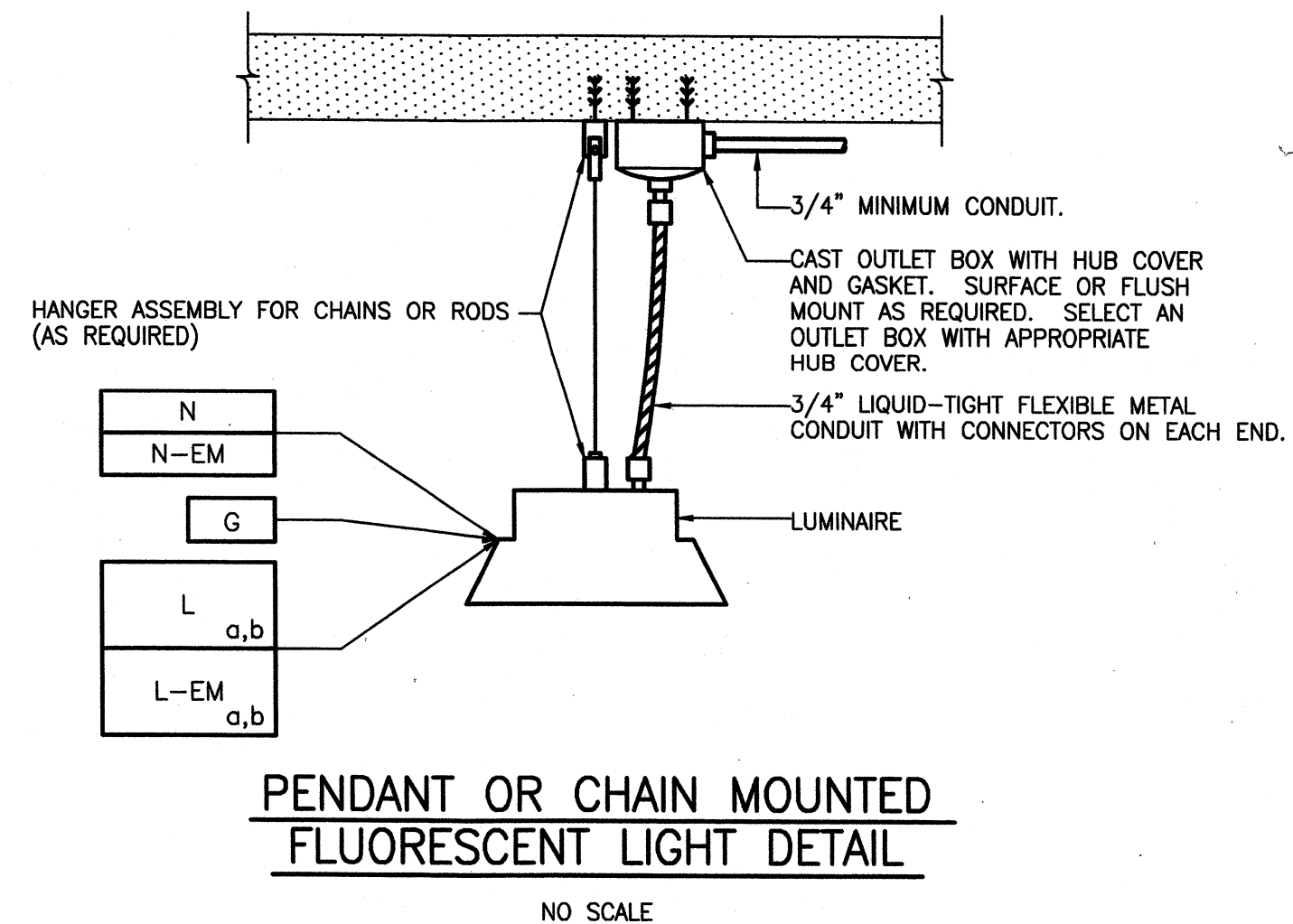
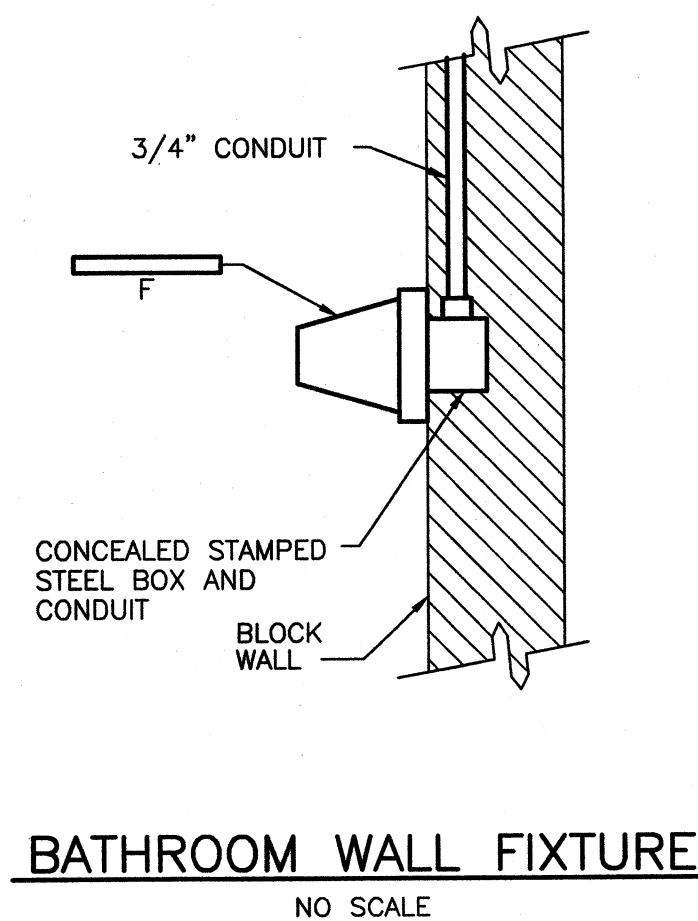
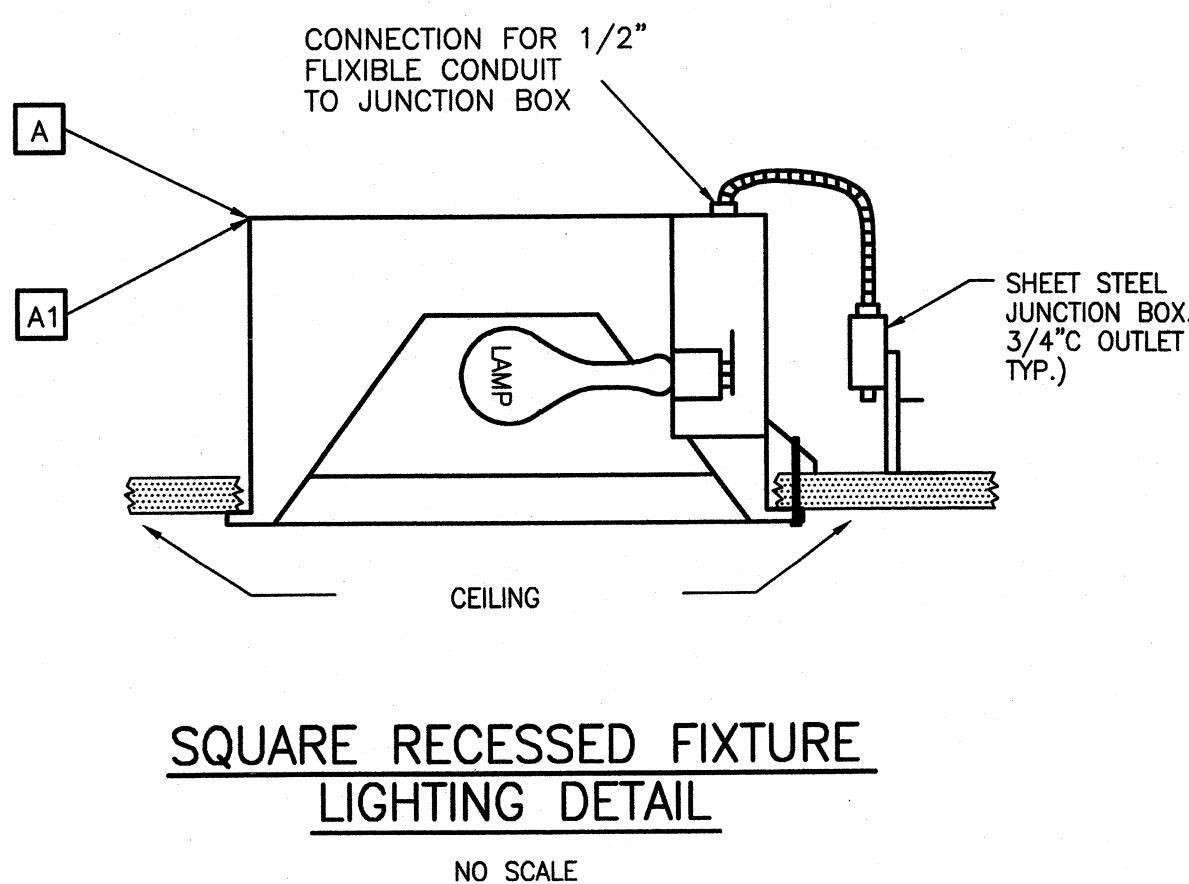
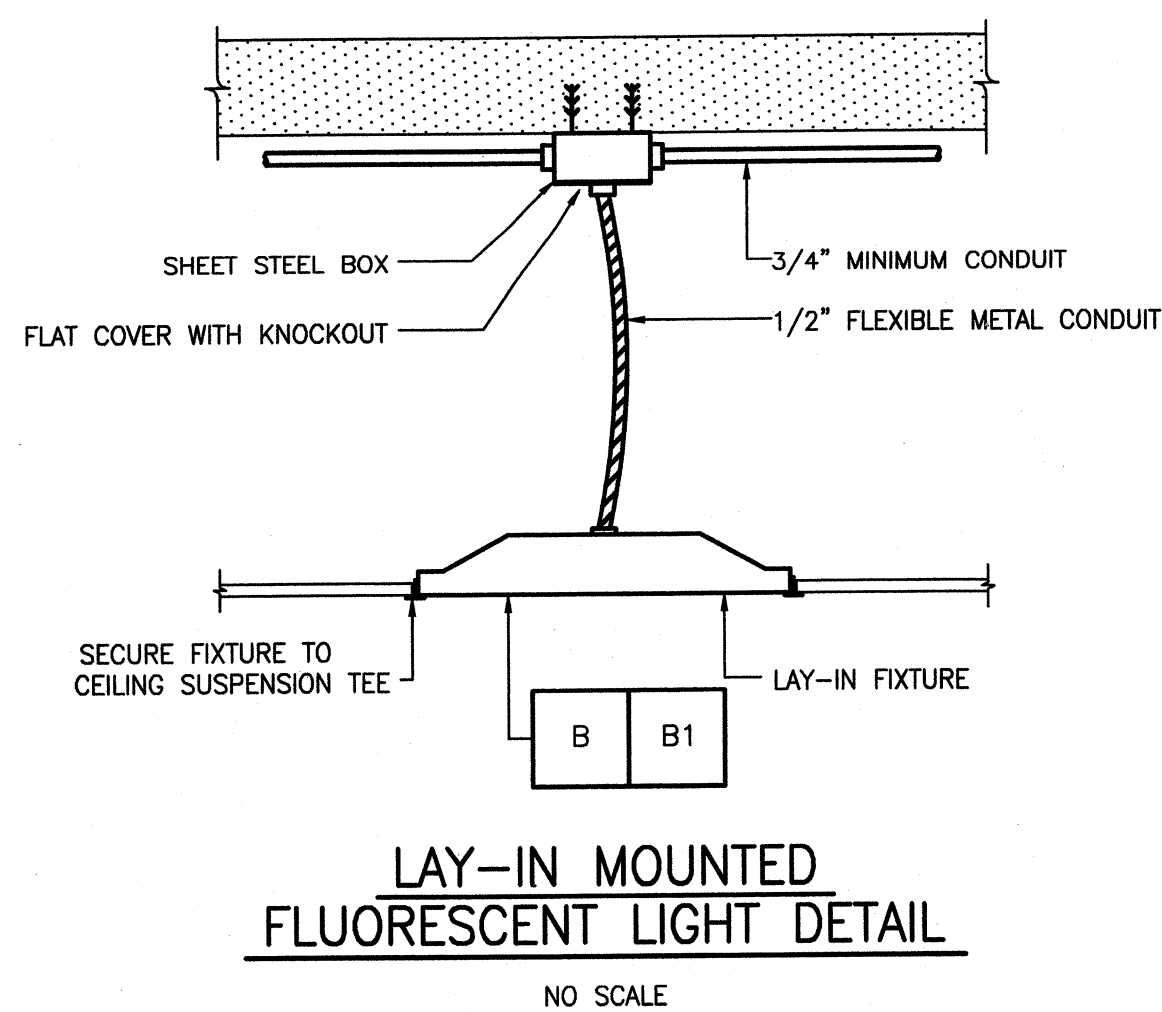
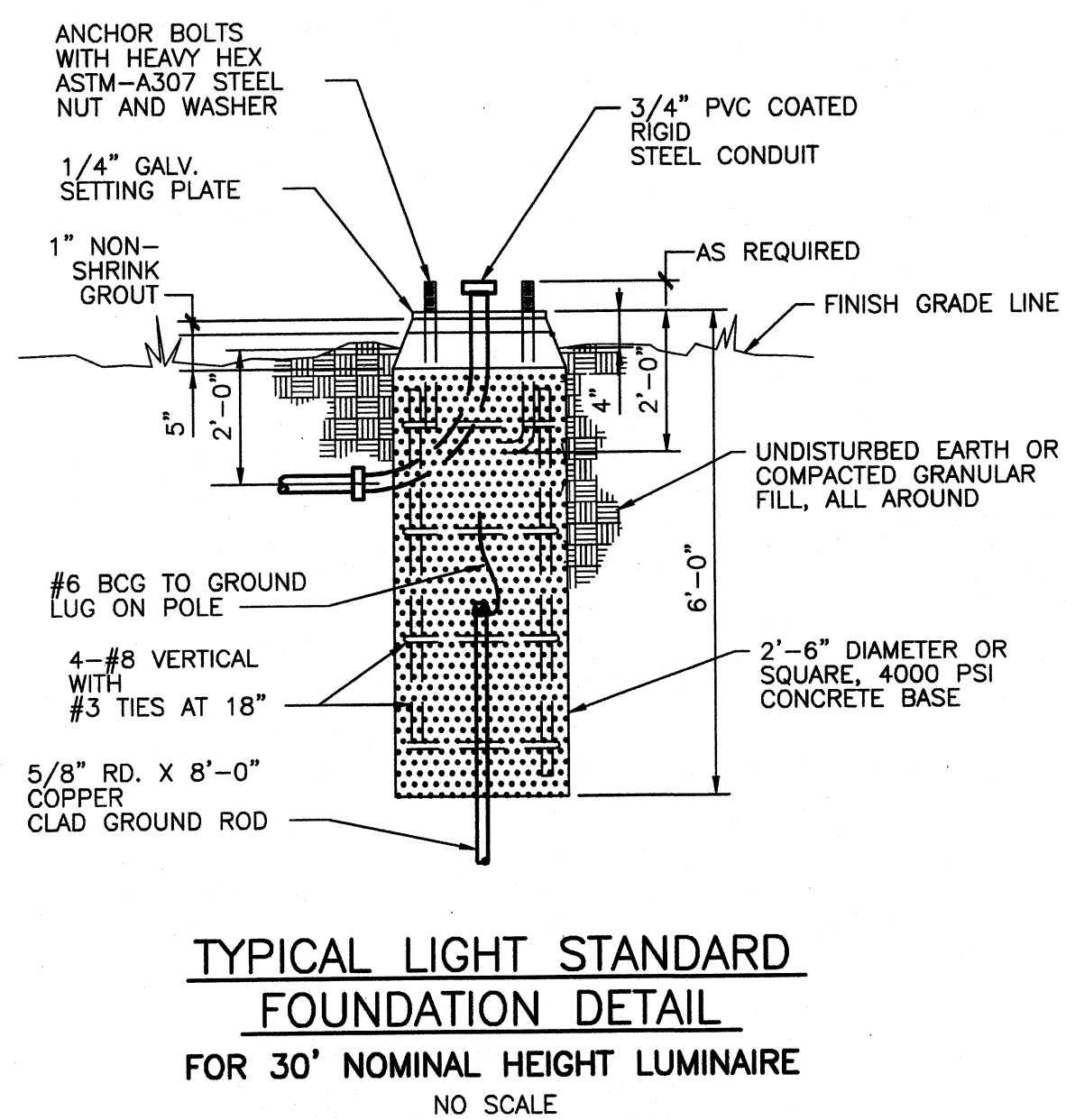
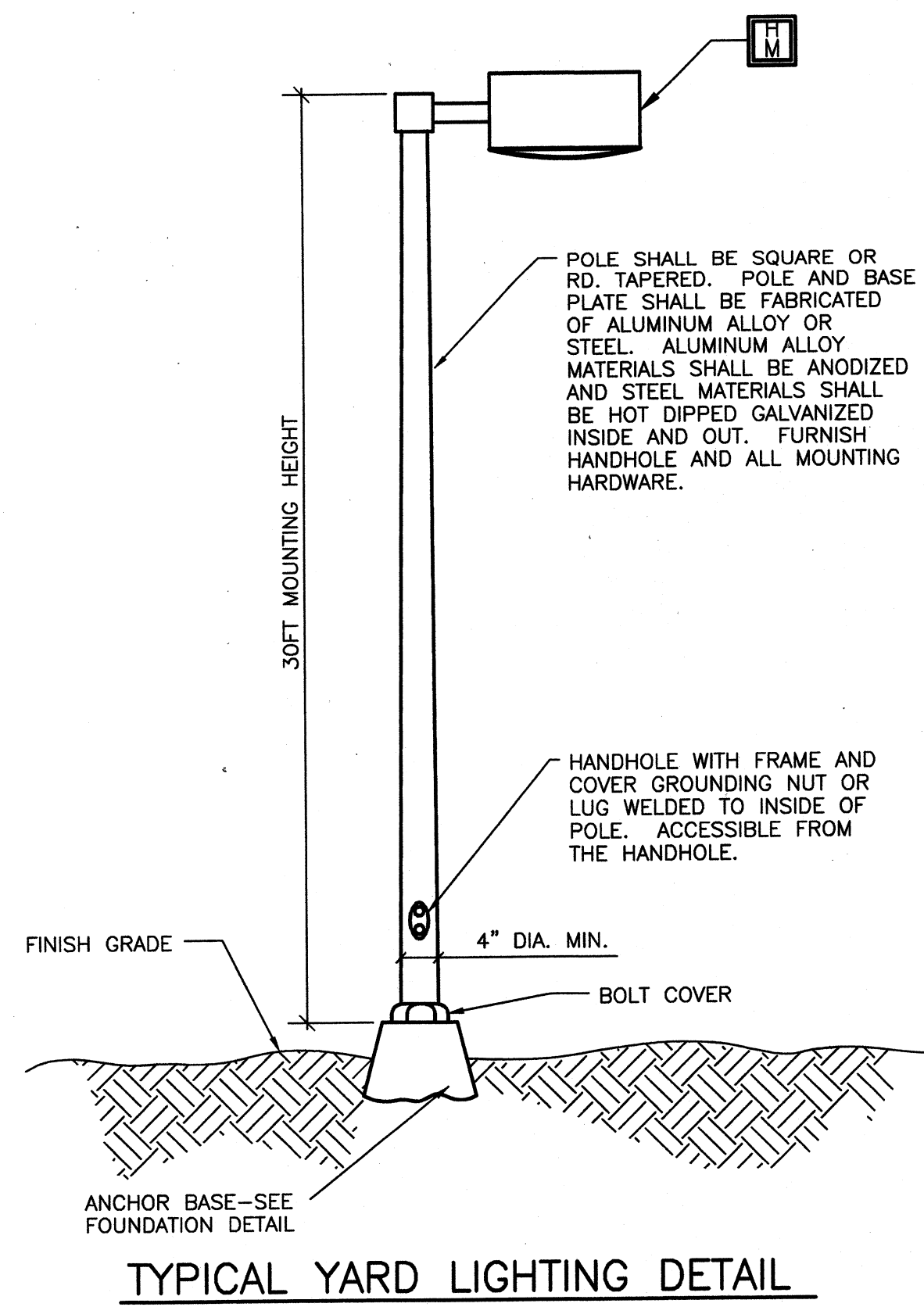
Drawn By: FWY

Checked By: LDC

E-502

Copyright: Tetra Tech

Thursday, July 02, 2009 2:16:39 PM DRAWING: \\arcsofts3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-503 DETAILS DWG LAYOUT: E-503 USER NAME: JEREMY M. FRONGILLO



BY	DATE	DESCRIPTION

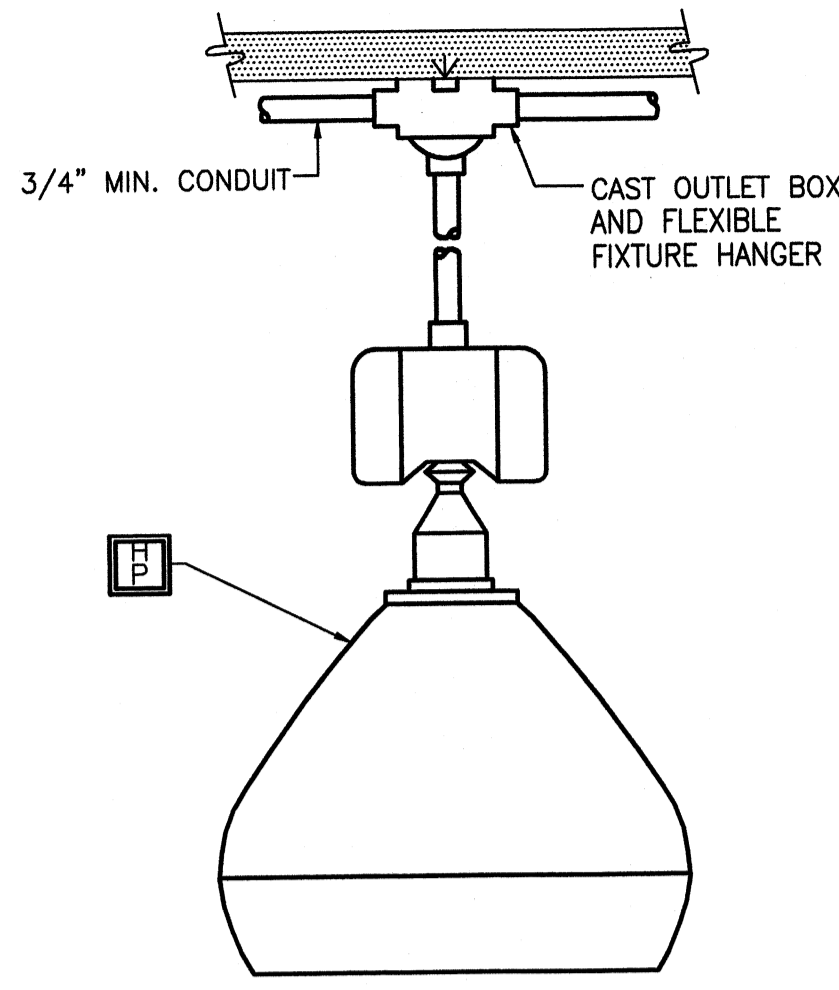
Client: OHIO COUNTY WATER DISTRICT
Ohio County Water District
Water Treatment Plant
Proj. Loc.: CROMWELL, OHIO COUNTY, KY

Project No.: 120-07060
Designed By: WAP/FWY
Drawn By: FWY
Checked By: LDC

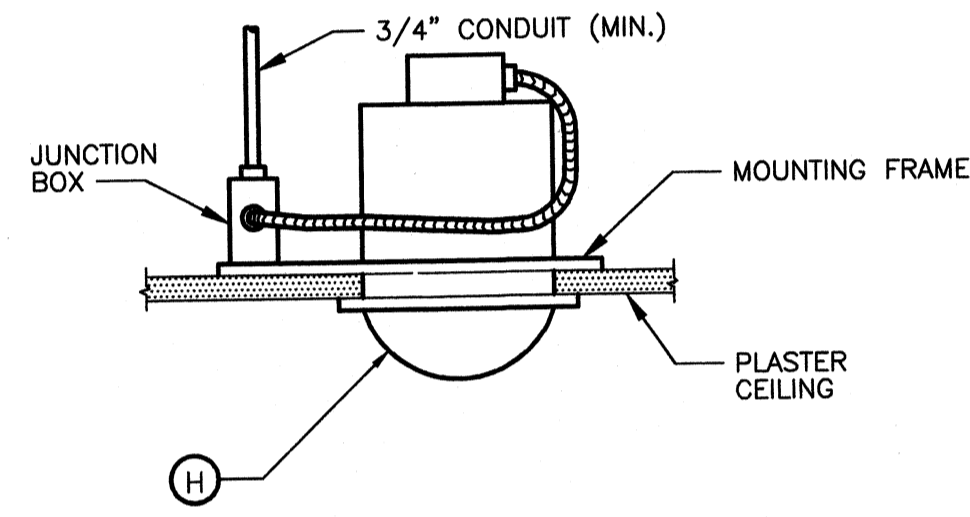
Thursday, July 02, 2009 2:17:16 PM DRAWING: \\eroffis3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-504 DETAILS DWG LAYOUT E-504 USER NAME: JEREMY M. FRONGILLO

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

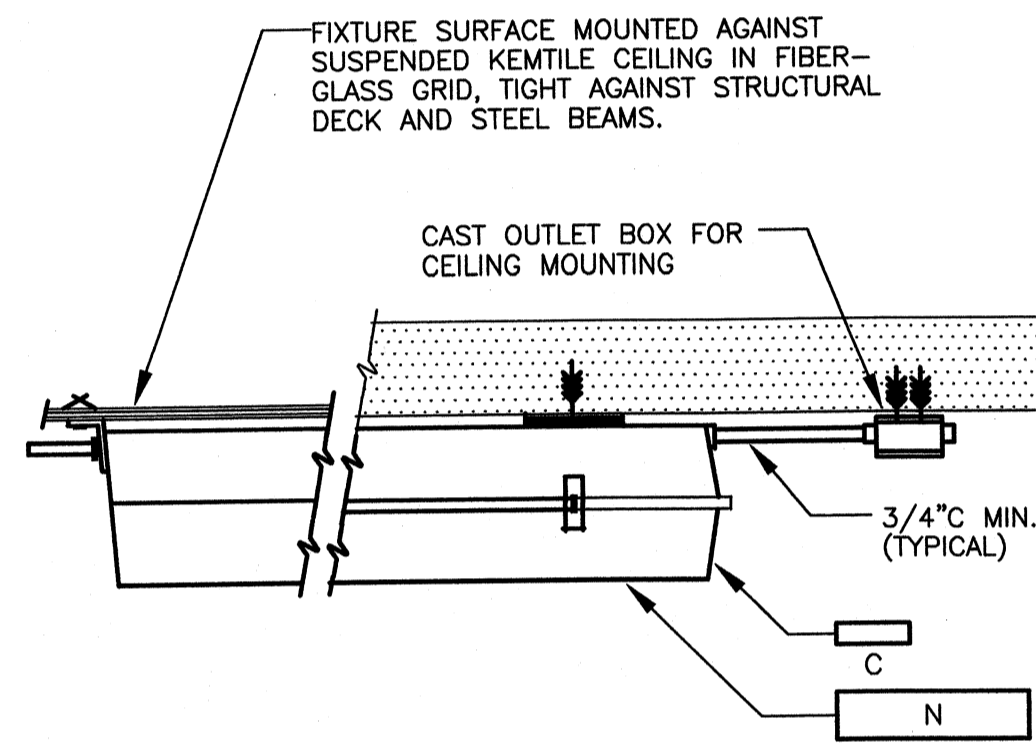
K J I H G F E D C B A



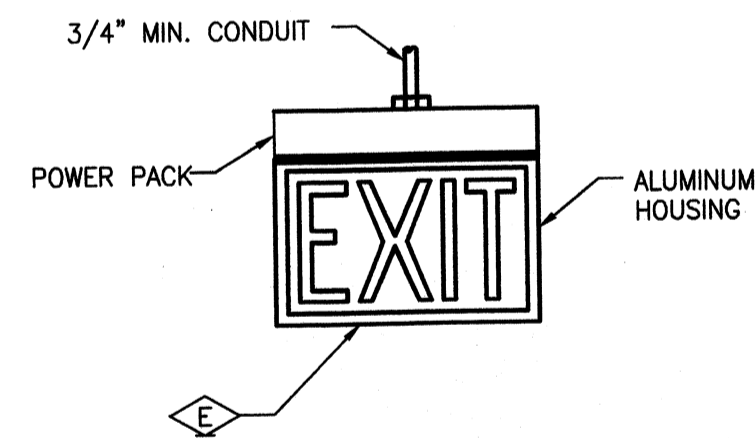
LOW BAY
MOUNTING DETAIL
 NO SCALE



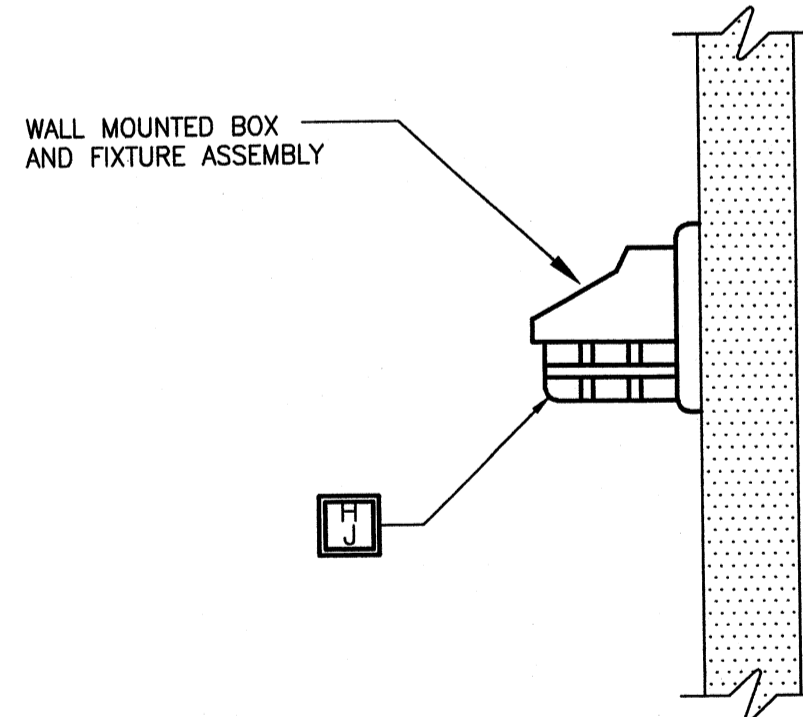
SHOWER LIGHT MOUNTING DETAIL
 NO SCALE



FLUORESCENT LIGHTING FIXTURE
CEILING SURFACE MOUNTING
 NO SCALE



EXIT SIGN
SIDE, BACK, CEILING OR PENDANT
MOUNTING DETAIL
 NO SCALE



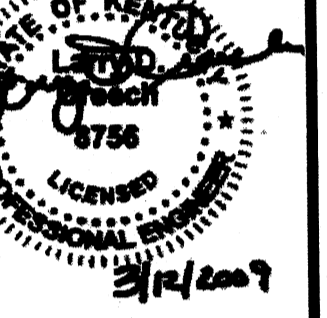
VAPORTIGHT OR WEATHERPROOF
FIXTURE
WALL MOUNTING DETAIL
 NO SCALE



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PROJECT RECORD

CONFORMED SET 5/09

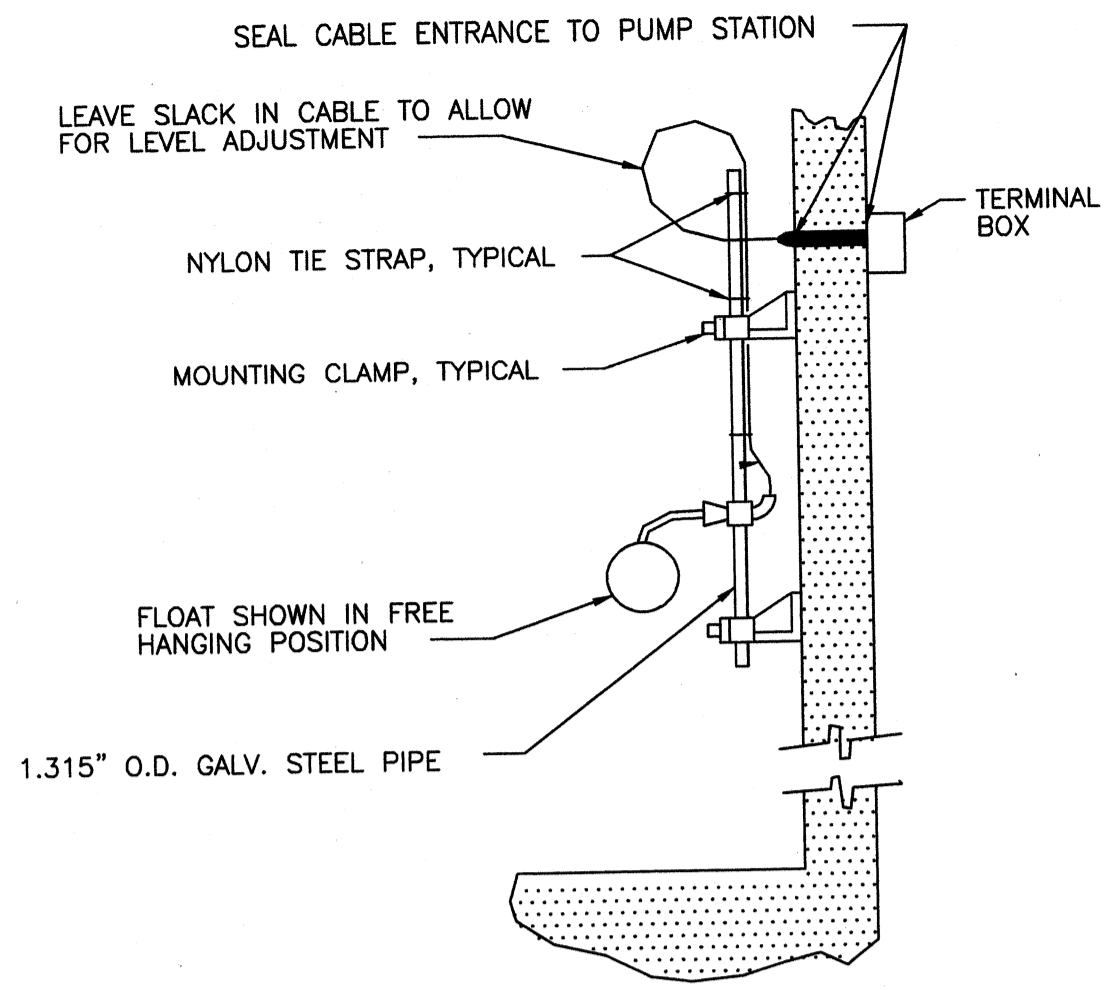


BY	DESCRIPTION	DATE	MARK

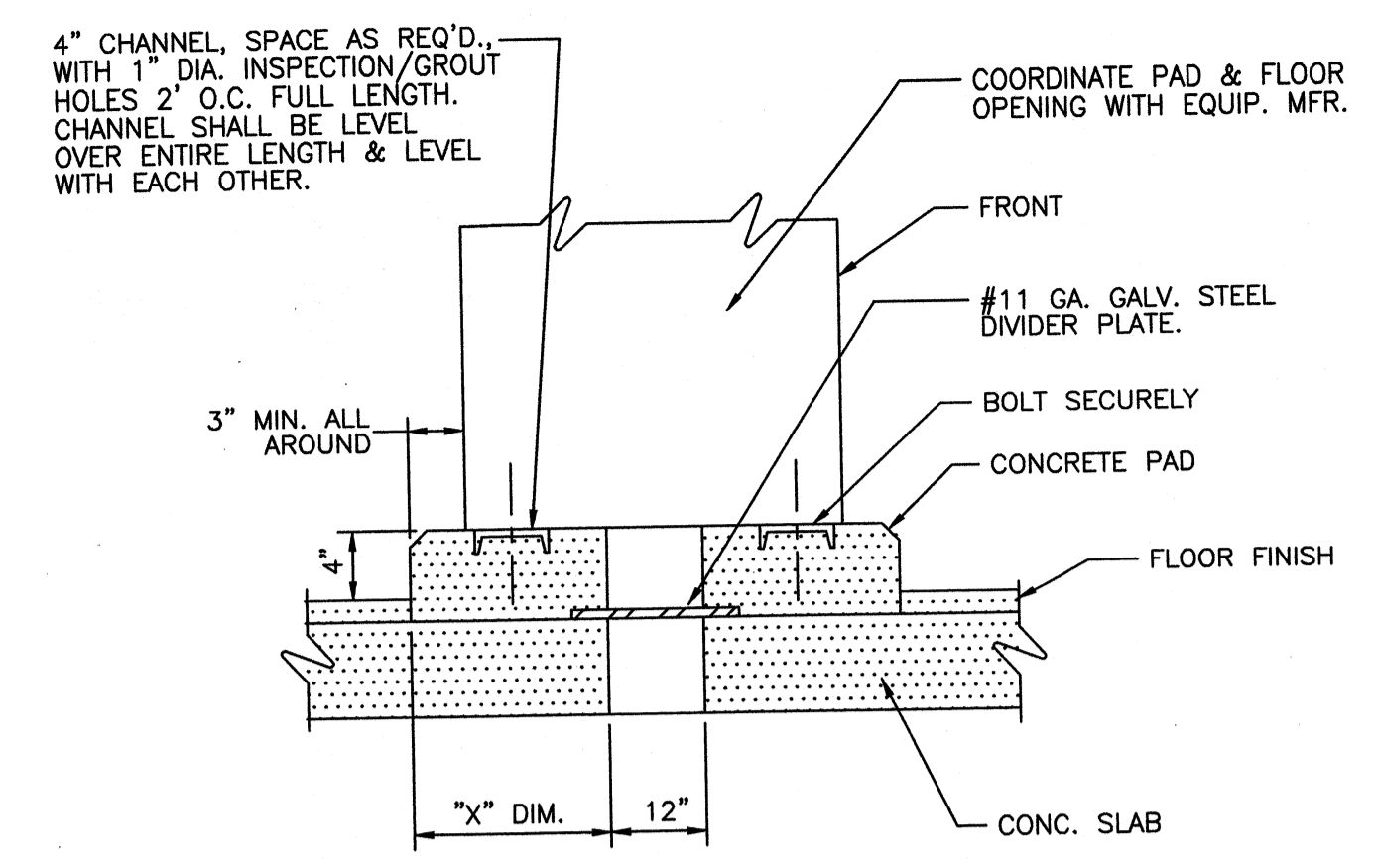
Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT

Project No.: 120-07060
 Designed By: WAP/FWY
 Drawn By: FWY
 Checked By: LDC

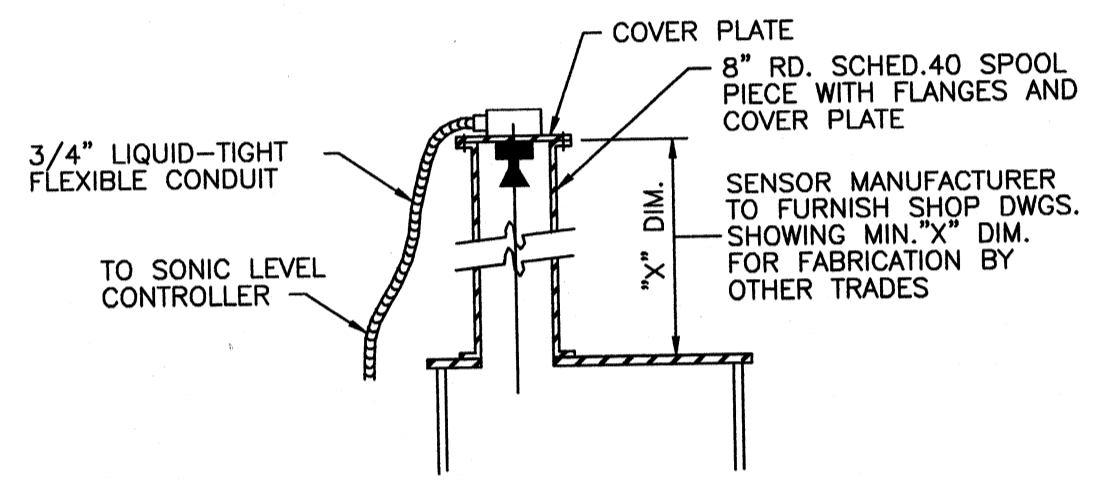
E-504



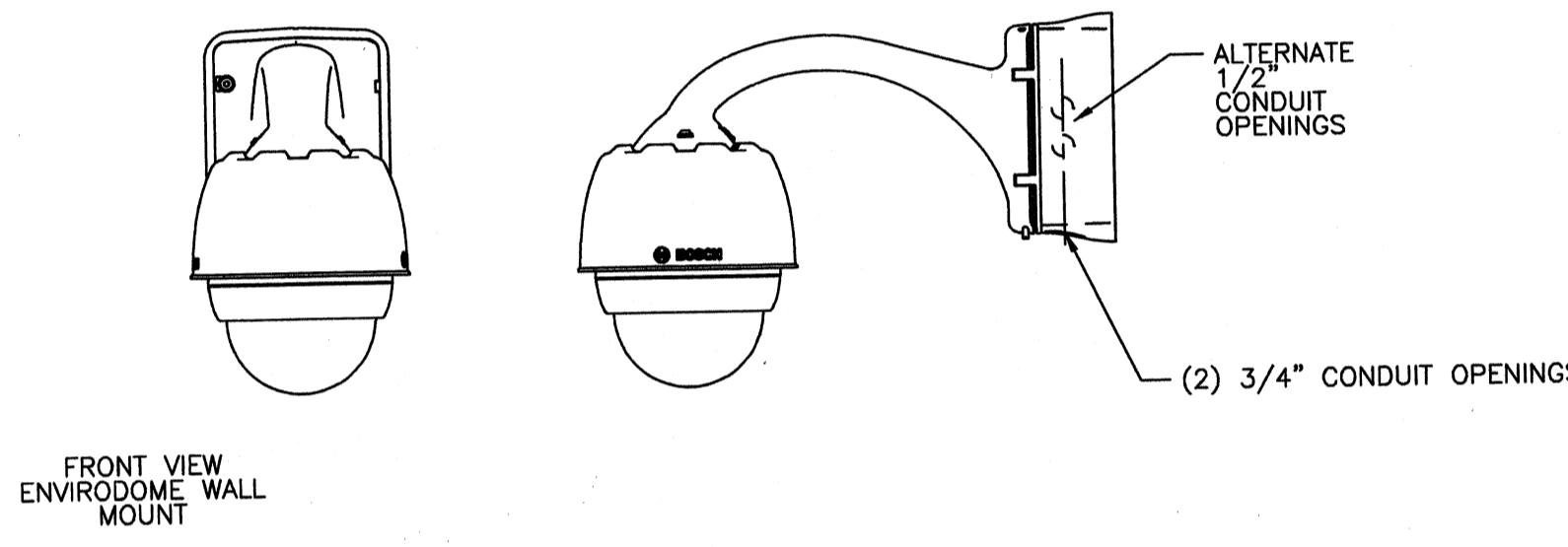
CORD TYPE-SINGLE FLOAT SWITCH
NO SCALE
LSL 101
LSL 601
LSL 602



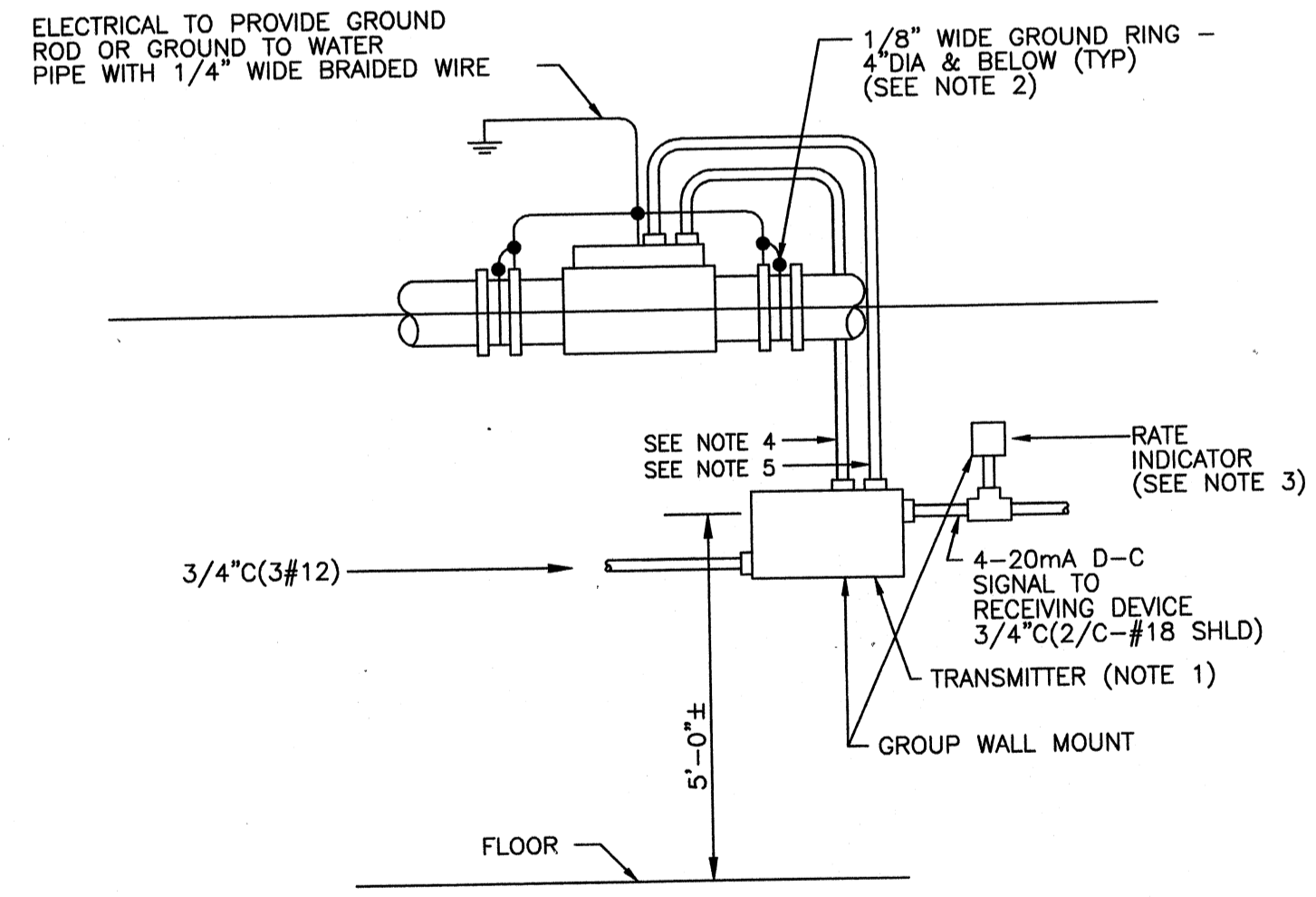
CONTROL PANEL MOUNTING DETAIL
FOR FREE STANDING PANELS AND CONSOLES
NO SCALE
CB MP
MCC MF



SONIC LEVEL SENSOR-TANK TYPE
NO SCALE
LIT 405
LIT 406
LIT 701
LIT 702

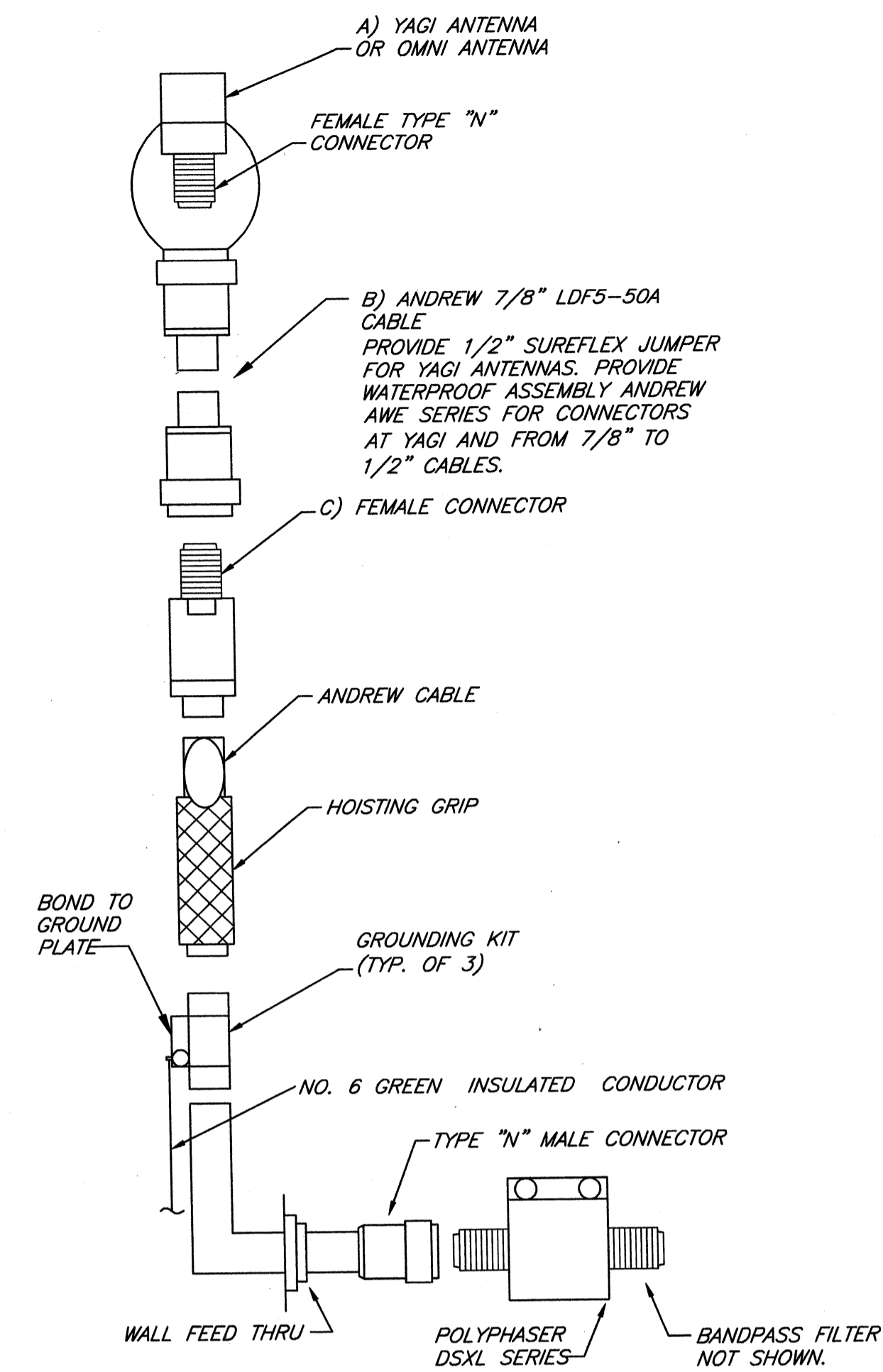


CAMERA MOUNTING
NO SCALE
CMR 1
CMR 2
CMR 3

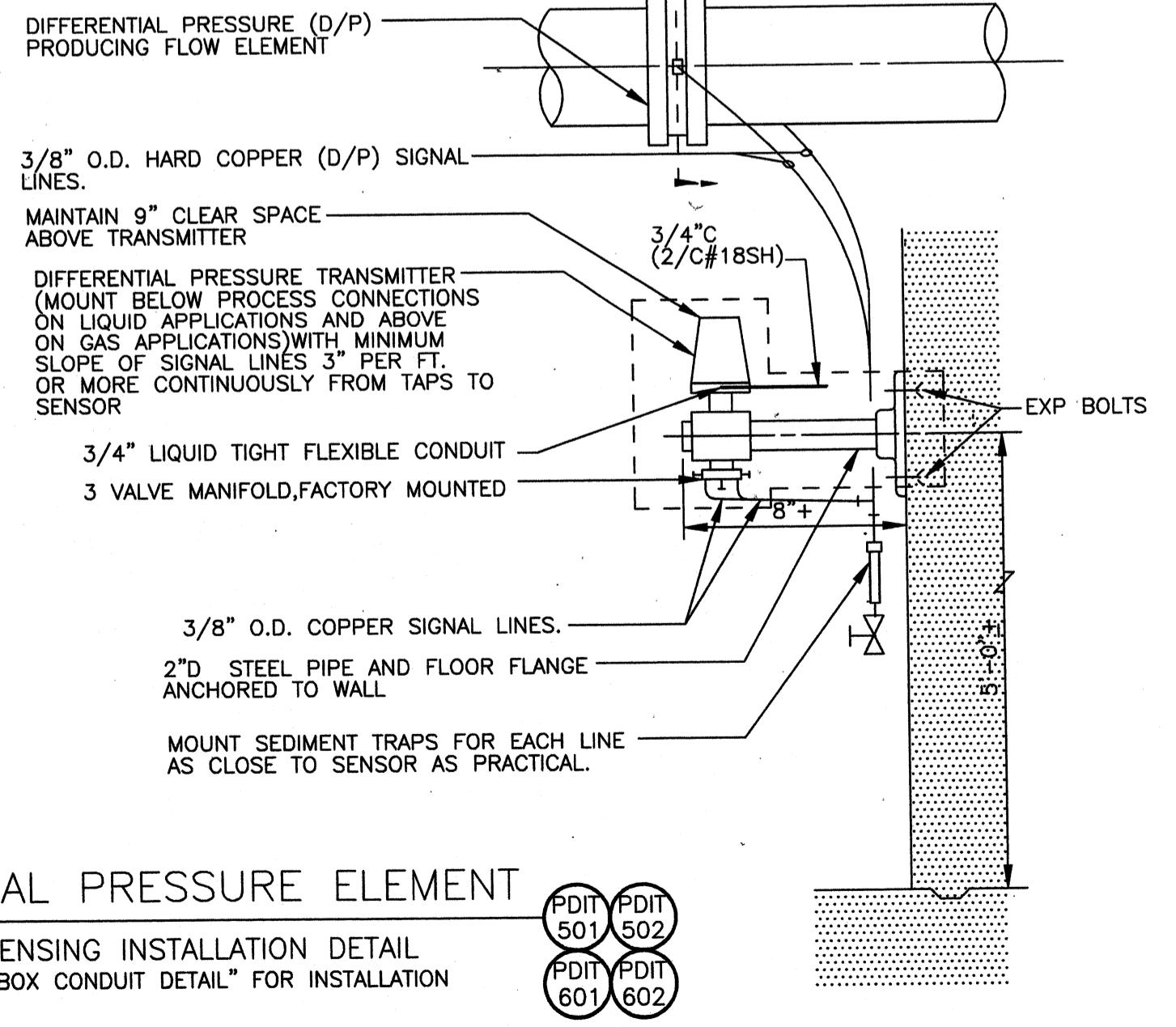
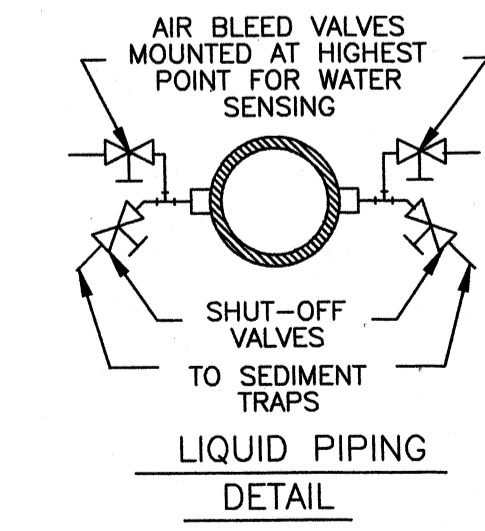
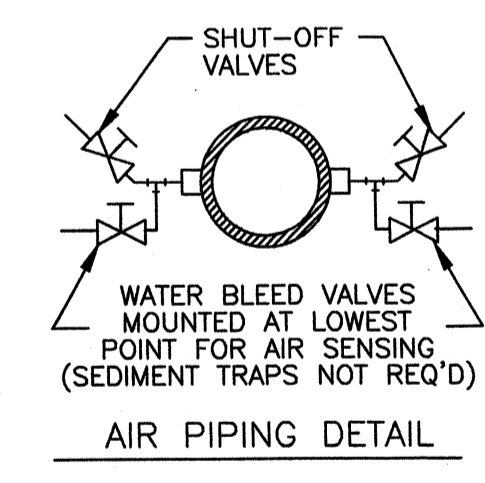


- NOTES:
1. LOCATION FOR TRANSMITTERS NOT INTEGRALLY MOUNTED ON THE FLOW METER.
 2. GROUND MAGMETER AS INSTRUCTED BY THE VENDOR.
 3. INSTALL SEPARATELY MOUNTED INDICATOR. NOT REQUIRED ON INDICATING WALL MOUNTED TRANSMITTERS.
 4. POWER WIRING, 3/4" C(4#12) OR AS SUPPLIED BY MANUFACTURER.
 5. SIGNAL WIRING, 3/4" C(6/C-#18SHLD.) OR AS SUPPLIED BY MANUFACTURER.

MAGNETIC FLOW METER INSTALLATION
SEE "DEVICE BOX CONDUIT DETAIL" FOR INSTALLATION
NO SCALE
FIT 201
FIT 501
FIT 603
FIT 604
FIT 605
FIT 401
FIT 402
FIT 403
FIT 404



RADIO CABLE DETAIL (TYP.)
SCALE: NONE
(TYP. ALL WELLS)



DIFFERENTIAL PRESSURE ELEMENT
LIQUID SENSING INSTALLATION DETAIL
SEE "DEVICE BOX CONDUIT DETAIL" FOR INSTALLATION
PDI 501
PDI 502
PDI 601
PDI 602

Wednesday, July 15, 2008 3:47:26 PM DRAWING: \\erofits3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-505 DETAILS-1.DWG LAYOUT: E-505 USER NAME: JEREMY M. FRONIGILLO

TETRA TECH
www.tetratech.com
800 Corporate Drive
Suite 200, Lexington, Ky, 40503
PHONE: (859) 223-8000 FAX: (859) 224-1025

PROJECT RECORD

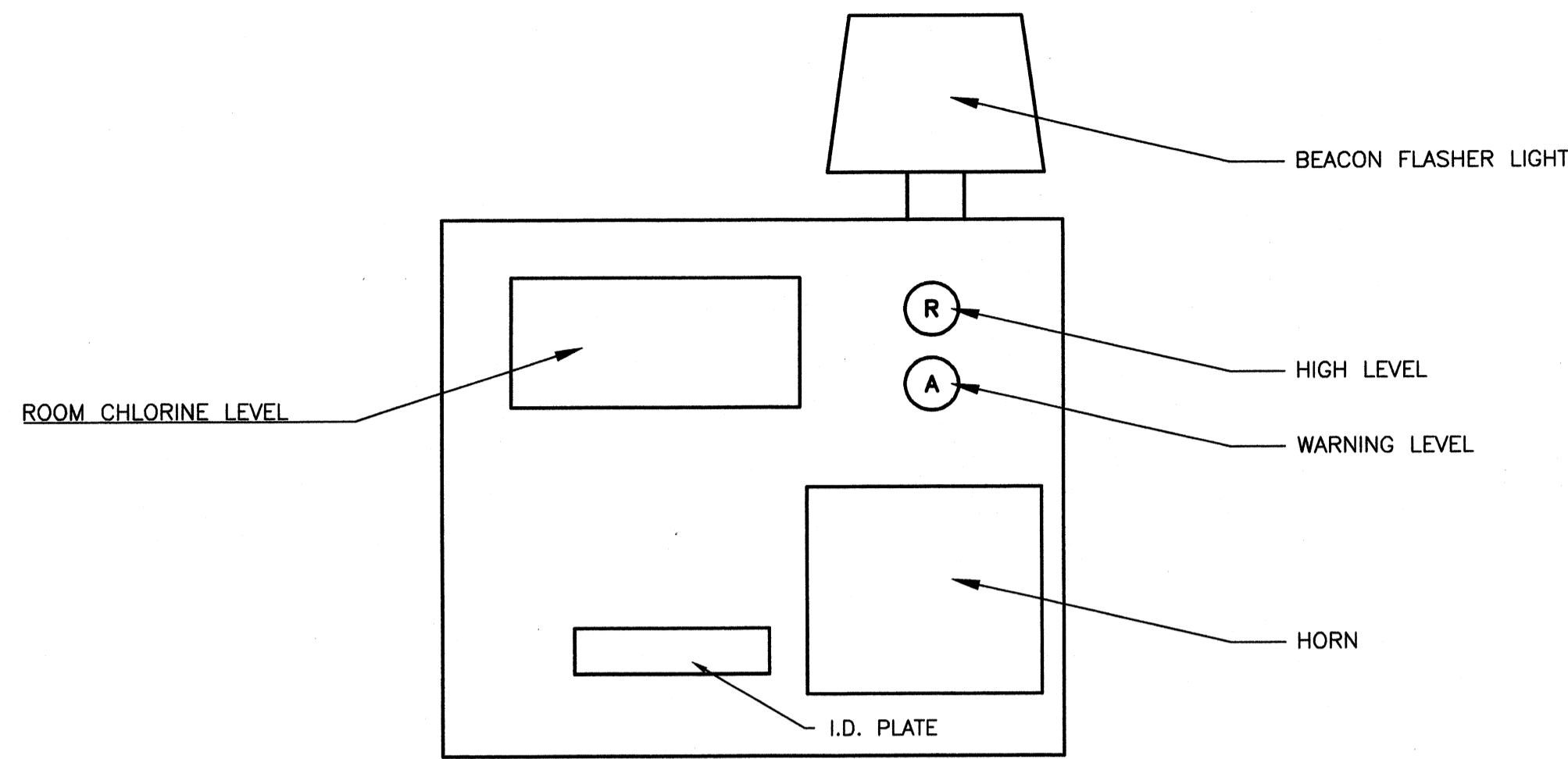
CONFORMED SET 5/09
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc: CROWMELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT
DETAILS

Project No.: 120-07060
Designed By: WAP/CSW
Drawn By: CSW
Checked By: LDC

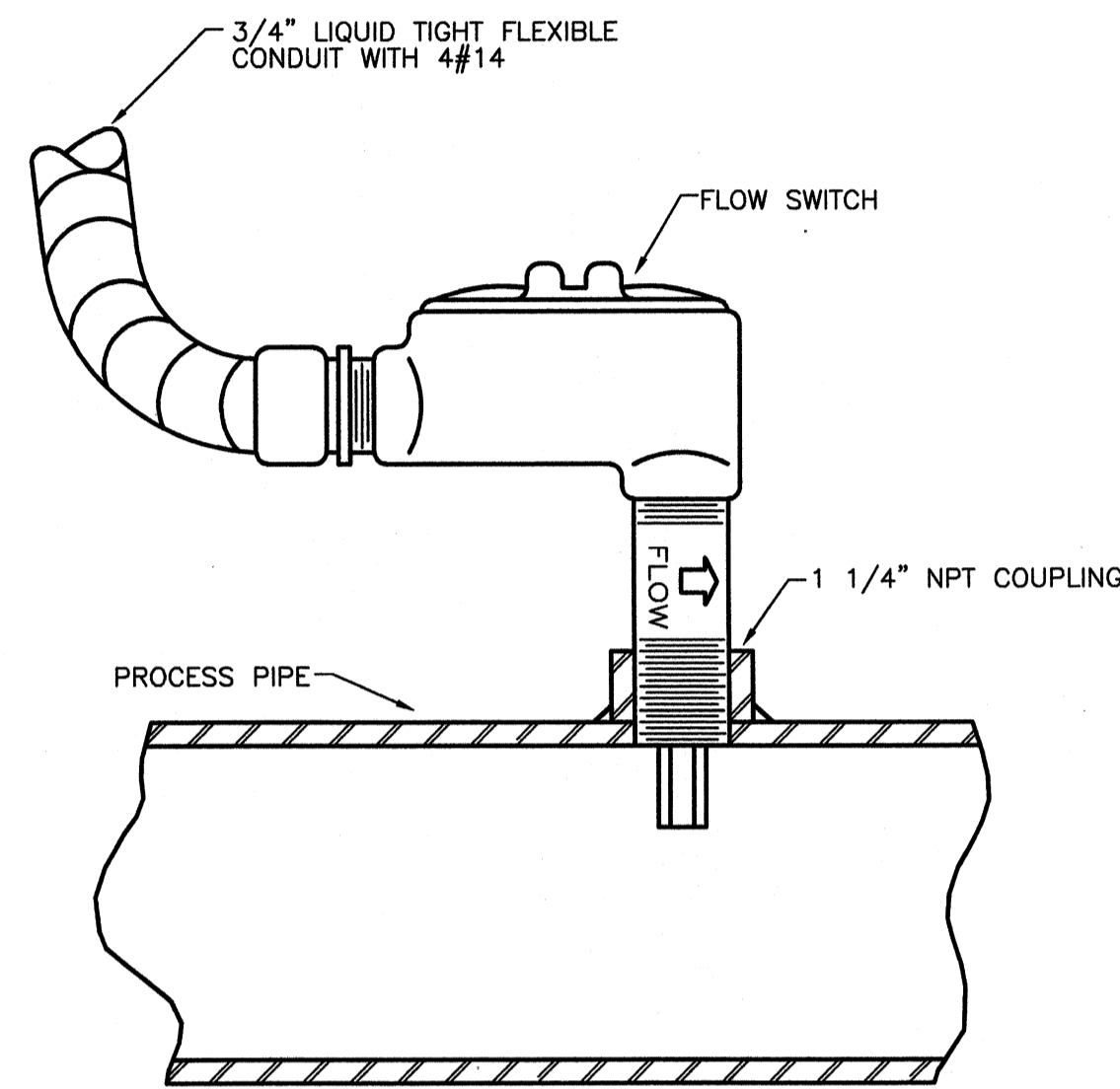
E-505
Copyright: Tetra Tech



GAS DISPLAY PANEL

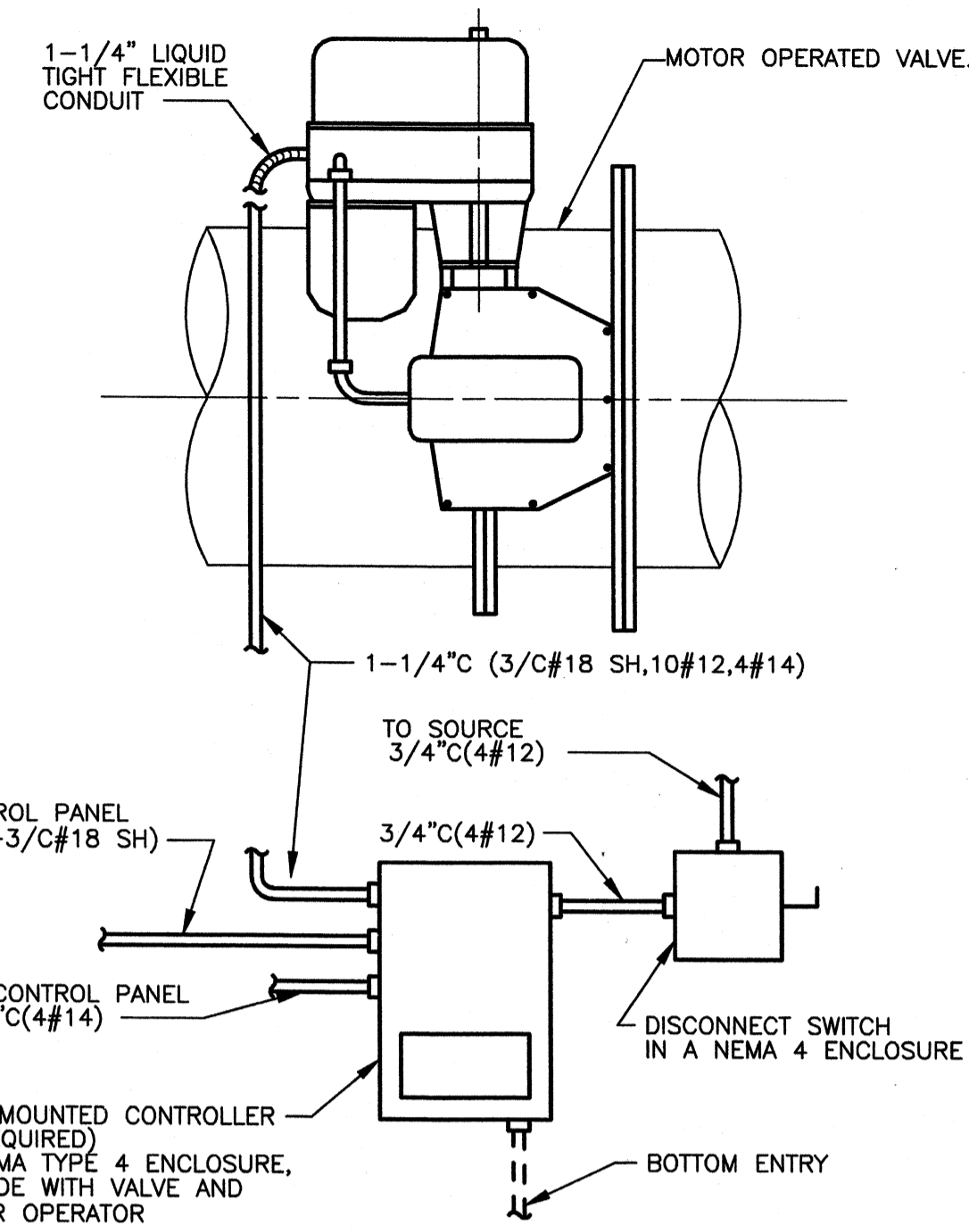
NO SCALE (GDP 1)

- NOTES:
1. GAS DISPLAY PANEL (GDP) SHALL CONNECT TO A REMOTE ANALYZING INDICATING TRANSMITTER.
 2. GDP WILL DISPLAY CURRENT ROOM CHLORINE CONCENTRATIONS.
 3. GDP WILL INDICATE WARNING AND HIGH LEVEL CONDITIONS.
 4. GDP WILL SOUND HORN AN FLASH LIGHT DURING HIGH LEVEL CONDITIONS, UNTIL MANUALLY RESET.



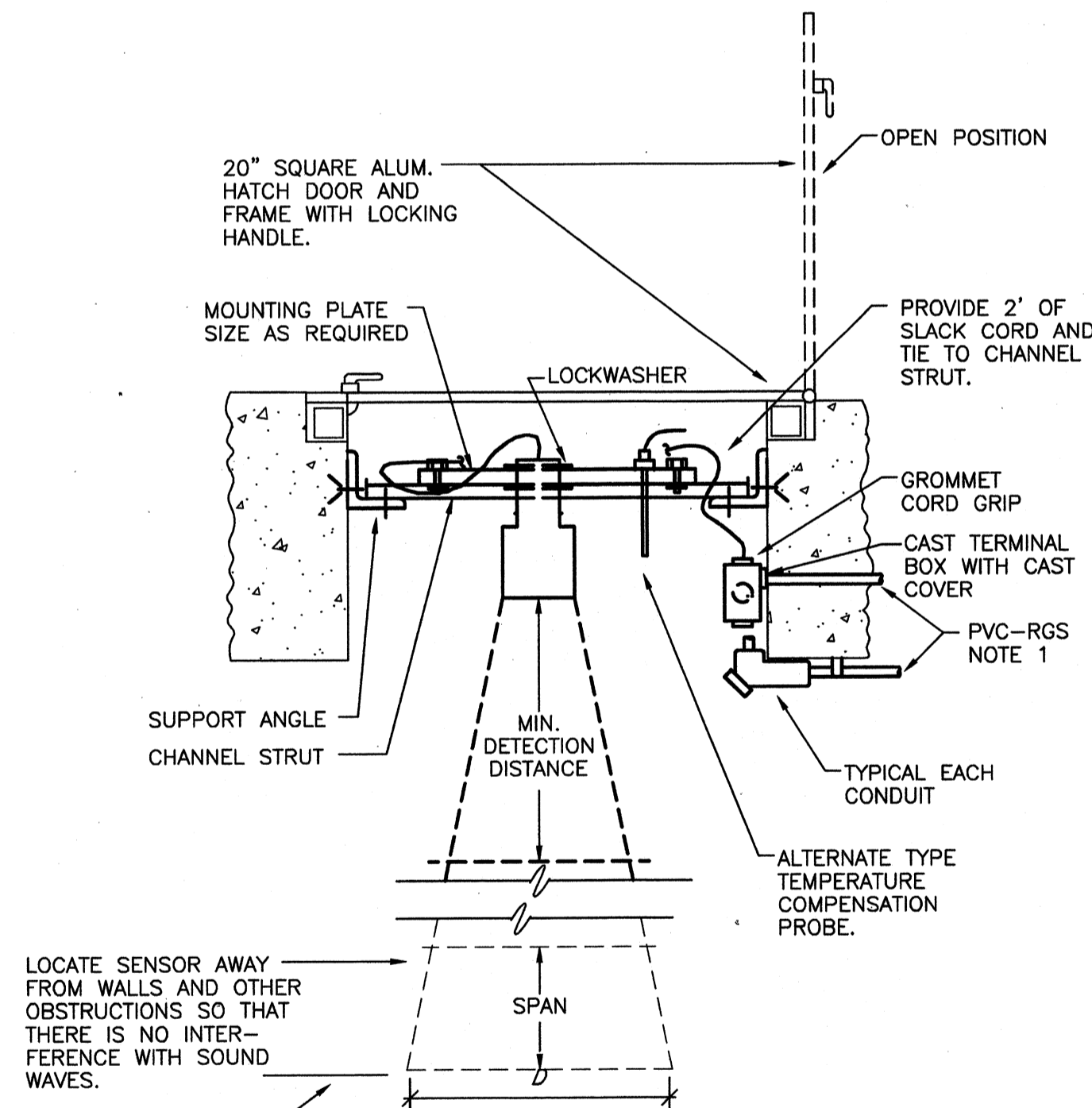
LIQUID FLOW SWITCH DETAIL

NO SCALE (FS 401, FS 701, FS 702, FS 704, FS 801)



MOTOR OPERATED VALVE THROTTLING SERVICE

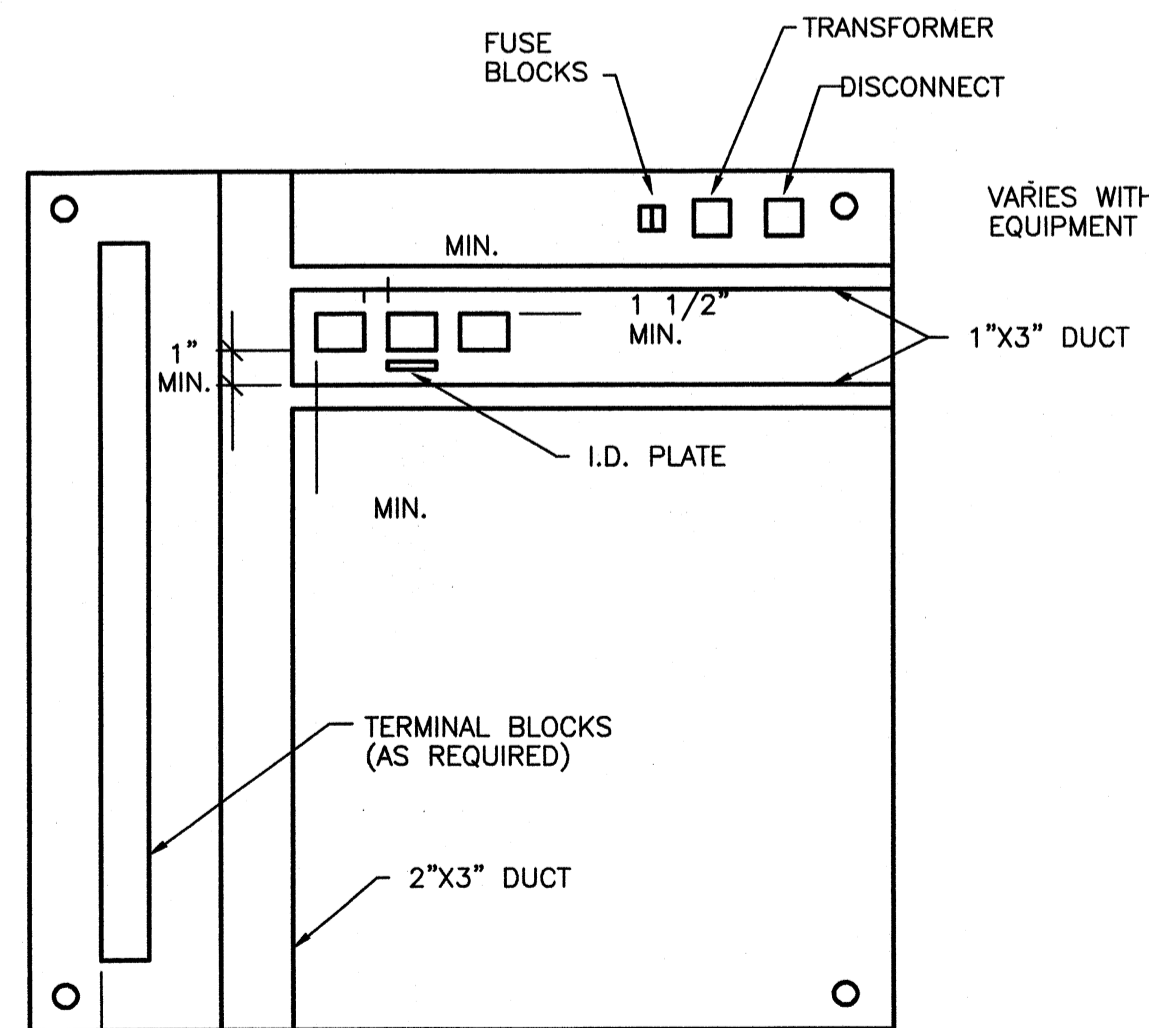
NO SCALE (IB 506)



SONIC LEVEL SENSOR

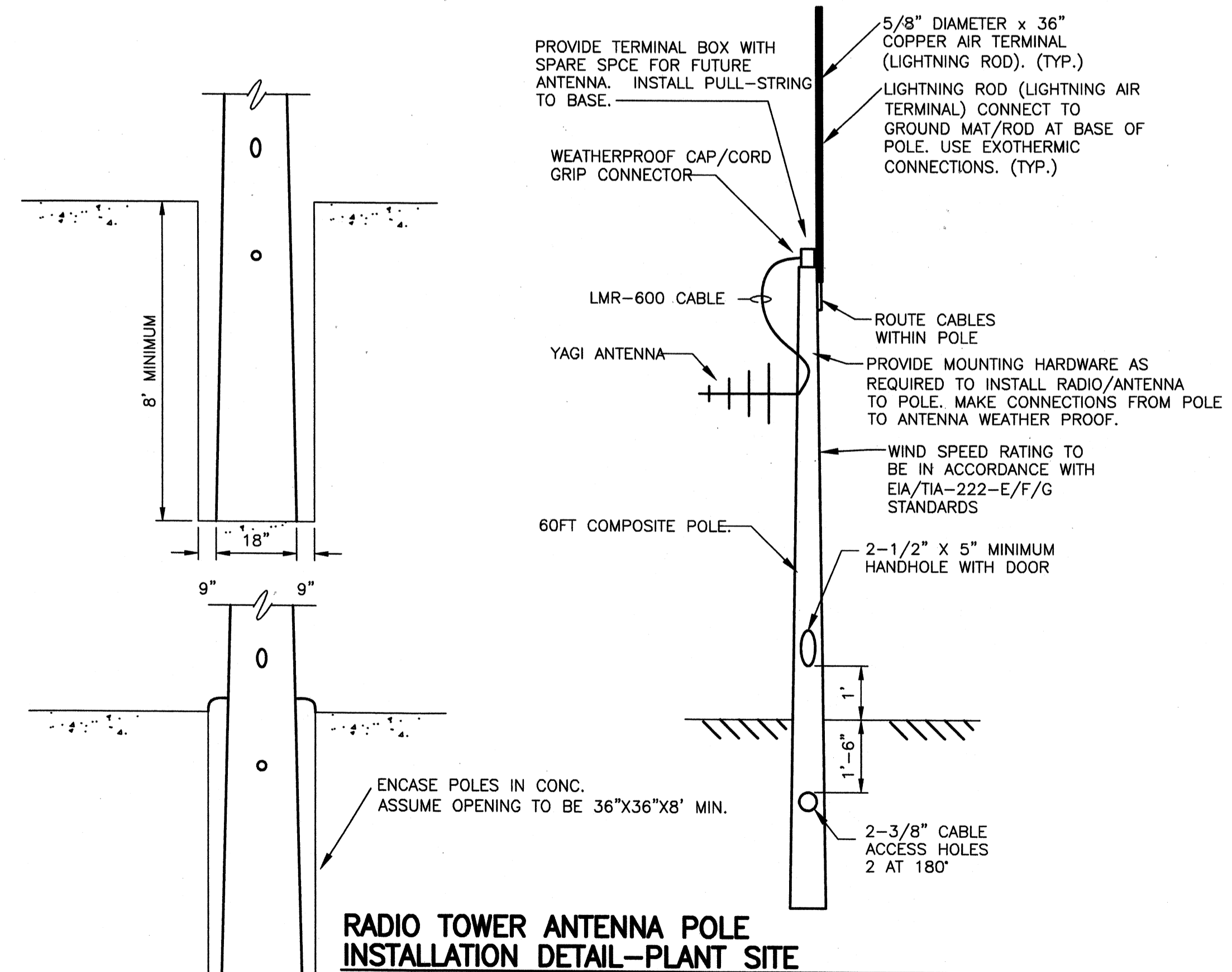
NO SCALE (LIT 601, LIT 602)

- NOTE:
1. PROVIDE ONE CONDUIT ENTRANCE ABOVE, IN, OR BELOW CONCRETE AS SHOWN ON THE BACKGROUND DRAWINGS. (MANUFACTURED SUPPLIED CABLE). PROVIDE CONDUIT SEALS AS REQUIRED FOR NEMA 7 AREAS.
 2. ALL STEEL SHALL BE COATED WITH EPOXY BASE PAINT. ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL.
 3. PROVIDE TRANSDUCER WITH A BEAM ANGLE LESS THAN OR EQUAL TO 6.0°.



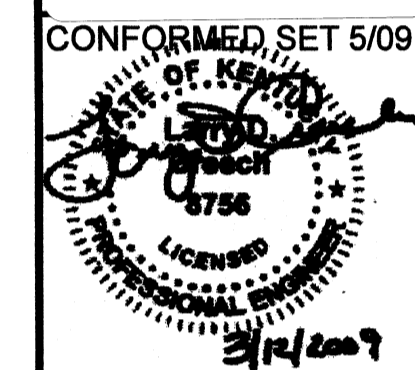
SUBPLATE DETAIL

NO SCALE



RADIO TOWER ANTENNA POLE INSTALLATION DETAIL-PLANT SITE

60 FT POLE HEIGHT



BY	DATE	DESCRIPTION

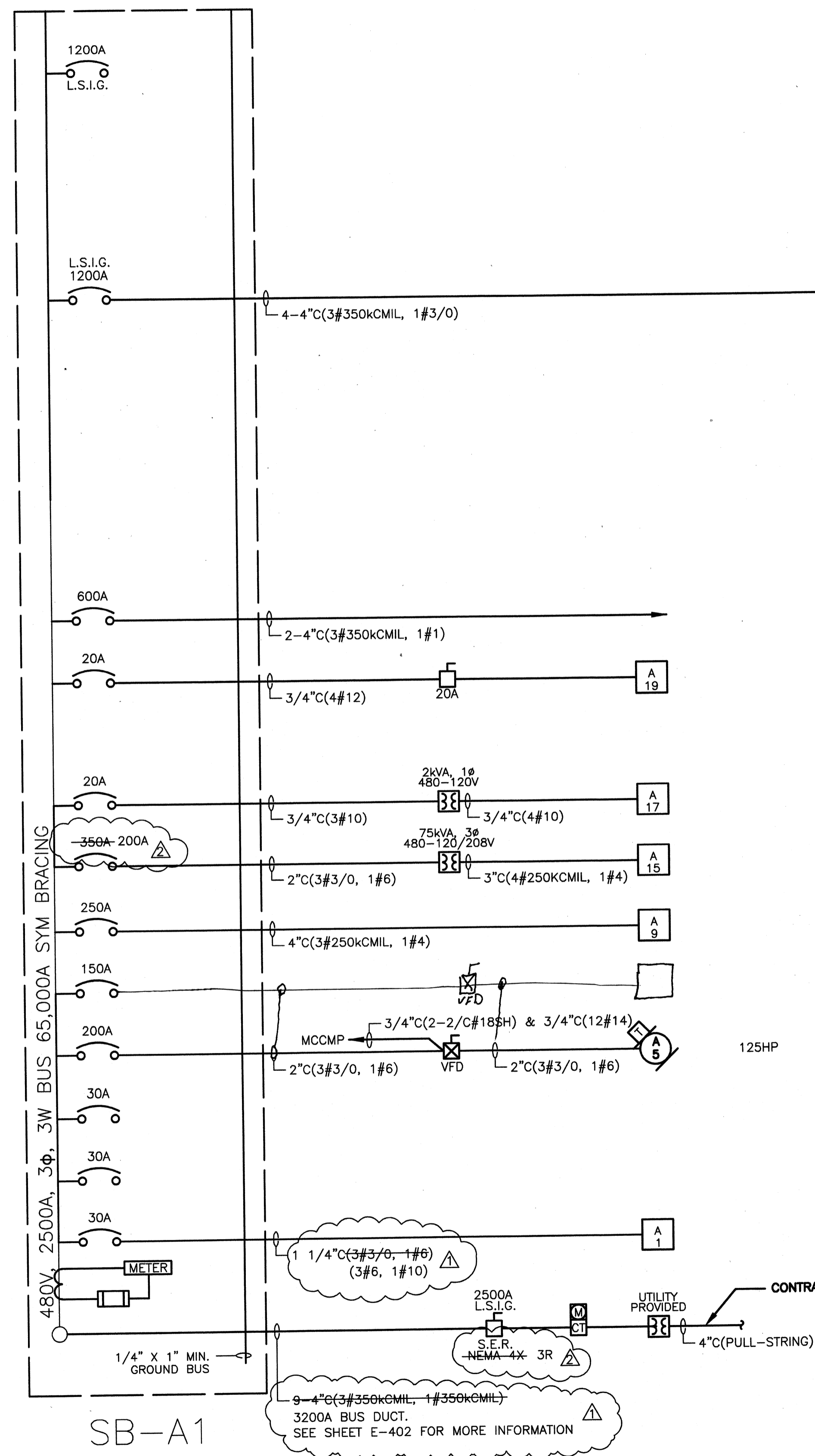
Client: OHIO COUNTY WATER DISTRICT
Project: OHIO COUNTY WATER DISTRICT
Project No.: 120-07060
Designed By: WAP/CSW
Drawn By: CSW
Checked By: LDC

OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

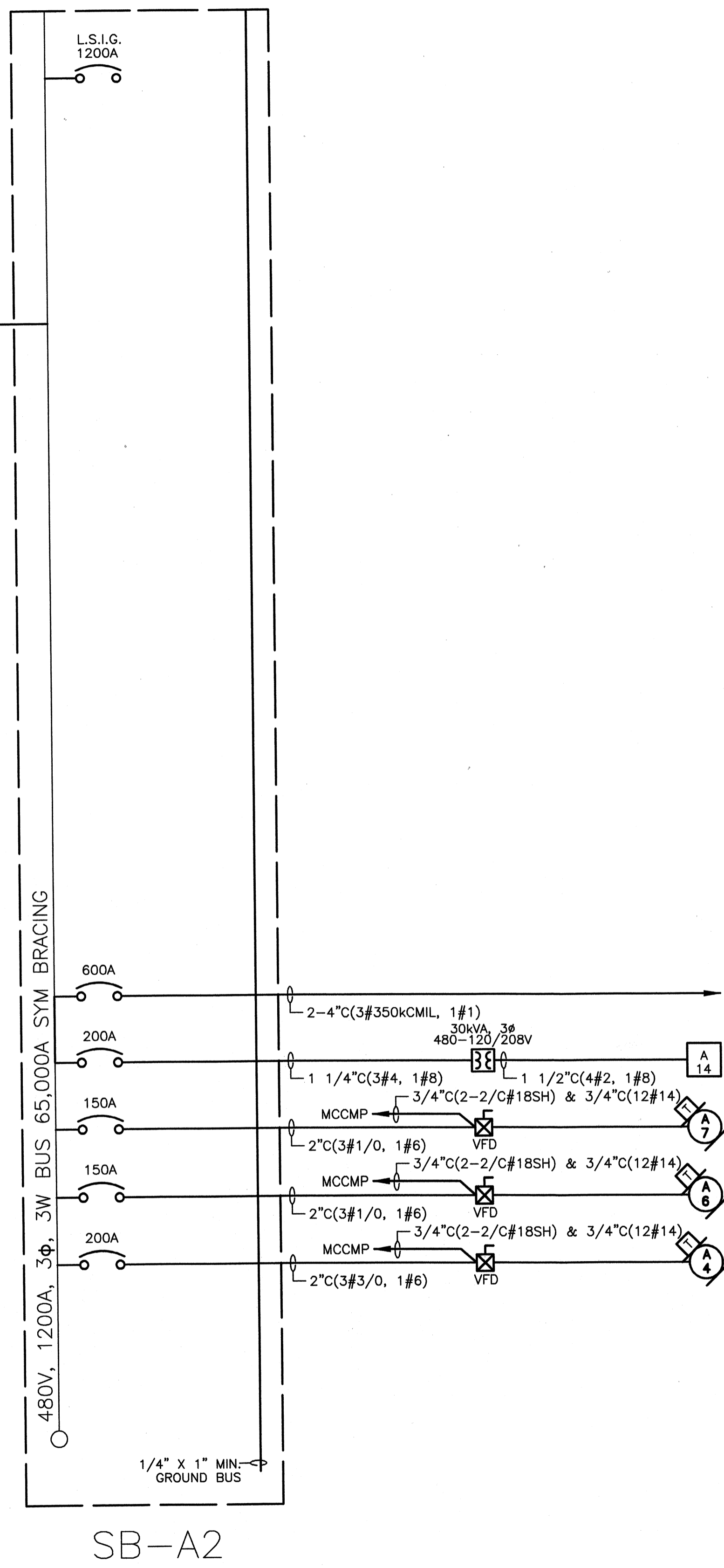
E-506

Thursday, July 02, 2009 2:18:20 PM DRAWING: \\netofis3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-506 DETAILS-2 DWG LAYOUT E-506 USER NAME: JEREMY M. FRONIGILLO

Wednesday, July 15, 2009 3:47:56 PM DRAWING: \\liveriff3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-601 ONE-LINE MCC-A.DWG LAYOUT: E-601 USER NAME: JEREMY M. FRONGILLO



- SPARE
- SB-B1 (UF BLDG)
- WATER HEATER EWH-1 (OPS BLDG)
- PANEL MCCMP (VIA TRANSFORMER T-7) (MCC)
- LP-2 SECTION B (VIA 75KVA TRANSFORMER T-12)
- PANEL HP-2 (CHEM BLDG)
- SPARE P-605 H.S.P.
- 125HP P-602 HIGH SERVICE PUMP
- SPARE
- SPARE
- SITE LIGHT (D)



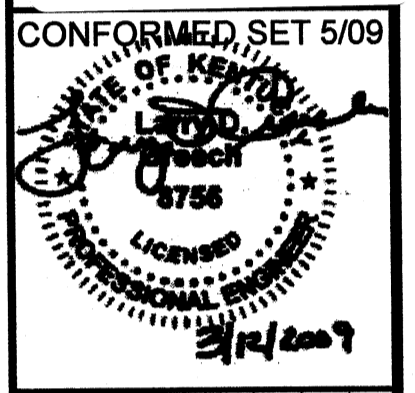
- SPARE
- SB-B2 (UF BLDG)
- LP-2 SECTION A (VIA 30KVA TRANSFORMER T-2)
- 100HP P-604 HIGH SERVICE PUMP
- 100HP P-603 HIGH SERVICE PUMP
- 125HP P-601 HIGH SERVICE PUMP

NOTE: ALL "SB" DISTRIBUTION PANELS SHALL BE SWITCHBOARD TYPE DISTRIBUTION PANELS. SEE SPECIFICATION 16435 - SWITCHBOARD FOR ADDITIONAL DETAILS

SB-A1 & SB-A2 OPERATIONS BUILDING (UTILITY)
NO SCALE

TETRA TECH
www.tetratech.com
800 Corporate Drive
Suite 200, Lexington, Ky, 40503
PHONE: (859) 223-8000 FAX: (859) 224-1025

PROJECT RECORD



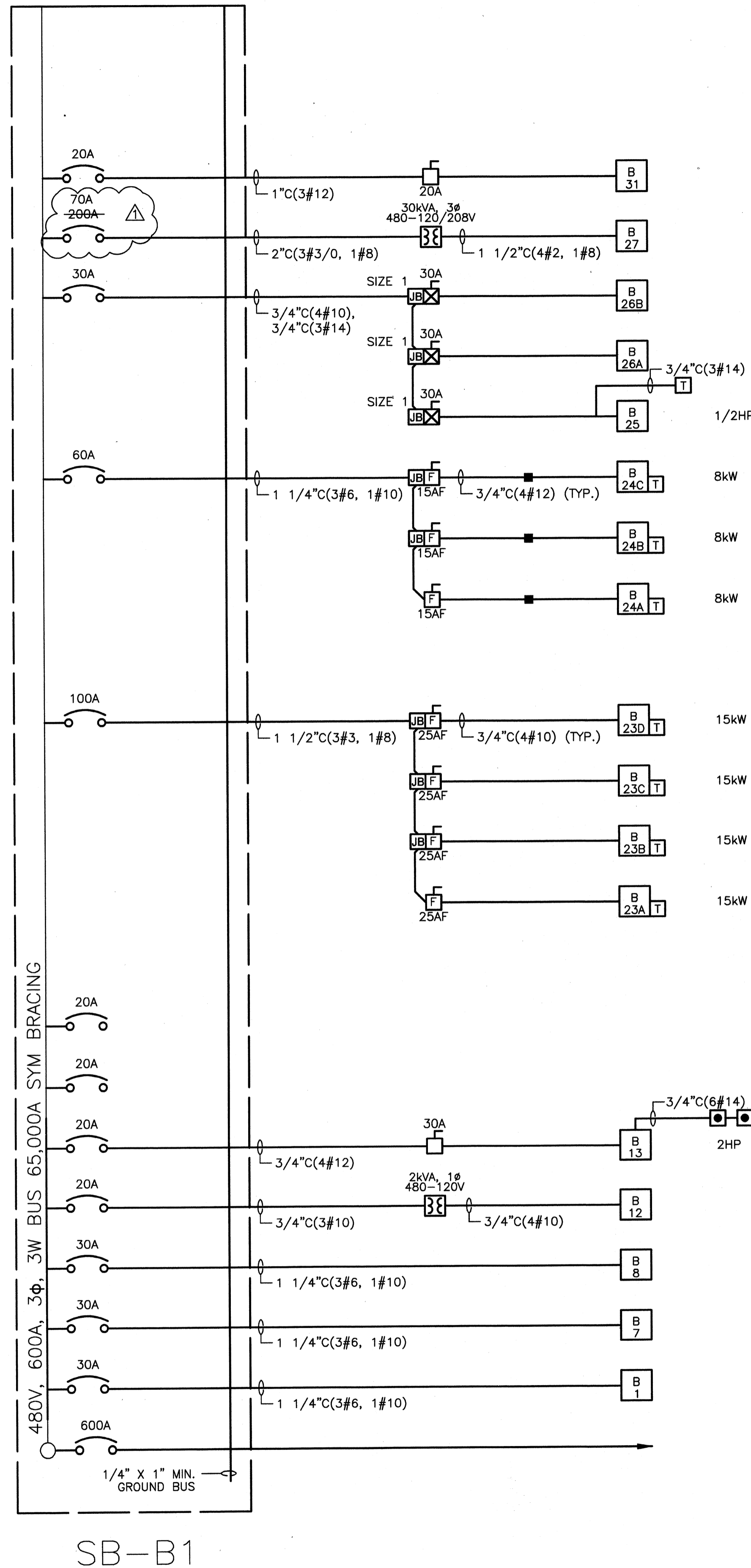
BY	DATE	DESCRIPTION
JAT	5/5/09	ADDENDUM 1
JAT	5/11/09	ADDENDUM 2

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT

Project No.:	120-07060
Designed By:	WAP/FWY
Drawn By:	FWY
Checked By:	LDC

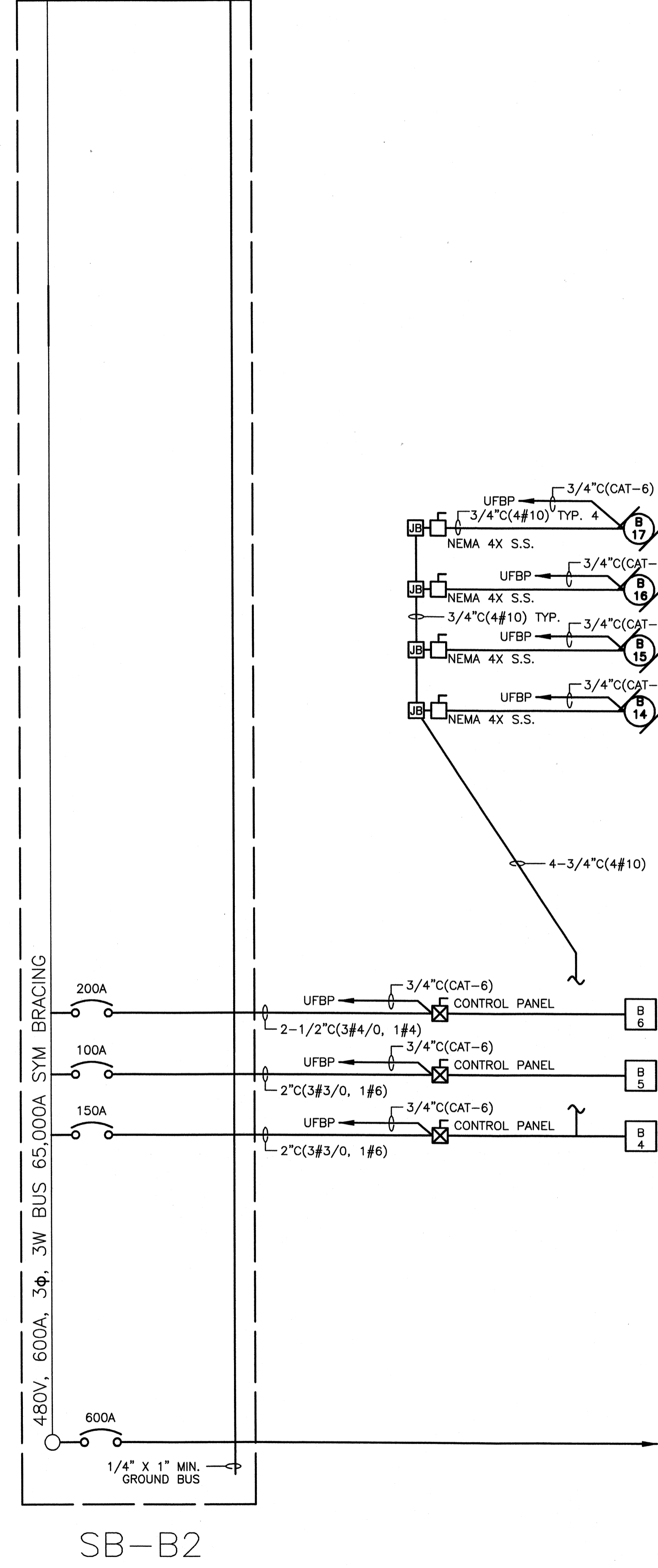
E-601

Wednesday, July 15, 2009 3:48:26 PM DRAWING: \\netfiles3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-602 ONE-LINE MCC-B .DWG LAYOUT: E-602 USER NAME: JEREMY M. FRONIGILLO



- IB-506, (GAC BYPASS VALVE)
- PANEL LP-5 (VIA TRANSFORMER T-5) (UF BLDG)
- AD-26B
- AD-26A
- PF-1 WALL FAN
- 1/2HP
- 8kW EUH-7
- 8kW EUH-6
- 8kW EUH-5
- 15kW EUH-4
- 15kW EUH-3
- 15kW EUH-2
- 15kW EUH-1
- SPARE
- SPARE
- OHD-401 ROLL-UP DOOR
- UFBP (VIA TRANSFORMER T-10) (UF BLDG)
- SITE LIGHT (C)
- SITE LIGHT (B)
- SITE LIGHT (A)
- FROM SB-A1 (UTILITY)

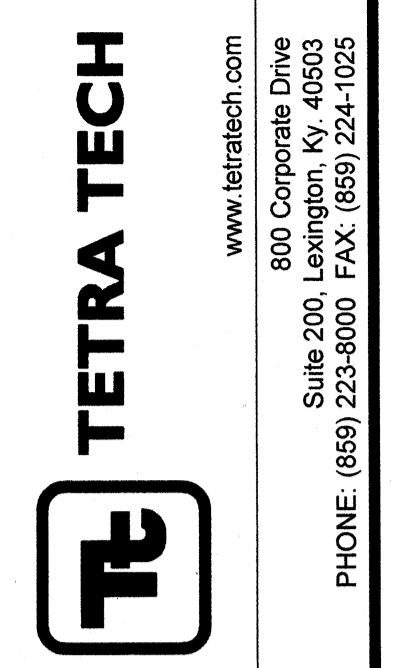
SB-B1



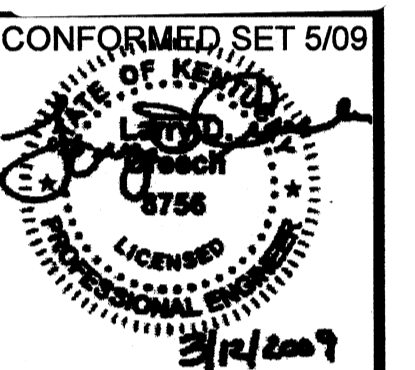
- 7-1/2HP ACMP-402 AIR COMPRESSOR 2
- 7-1/2HP ACMP-401 AIR COMPRESSOR 1
- 7-1/2HP BLWR-402 AIR BLOWER 2
- 7-1/2HP BLWR-401 AIR BLOWER 1
- UF-CIP1 ULTRA-FILTRATION CLEAN-IN-PLACE
- UF-P2 ULTRA-FILTRATION PERMEATE 2
- UF-P1 ULTRA-FILTRATION PERMEATE 1
- FROM SB-A2

SB-B2

SB-B1 & SB-B2 UF BUILDING (UTILITY)
NO SCALE



PROJECT RECORD



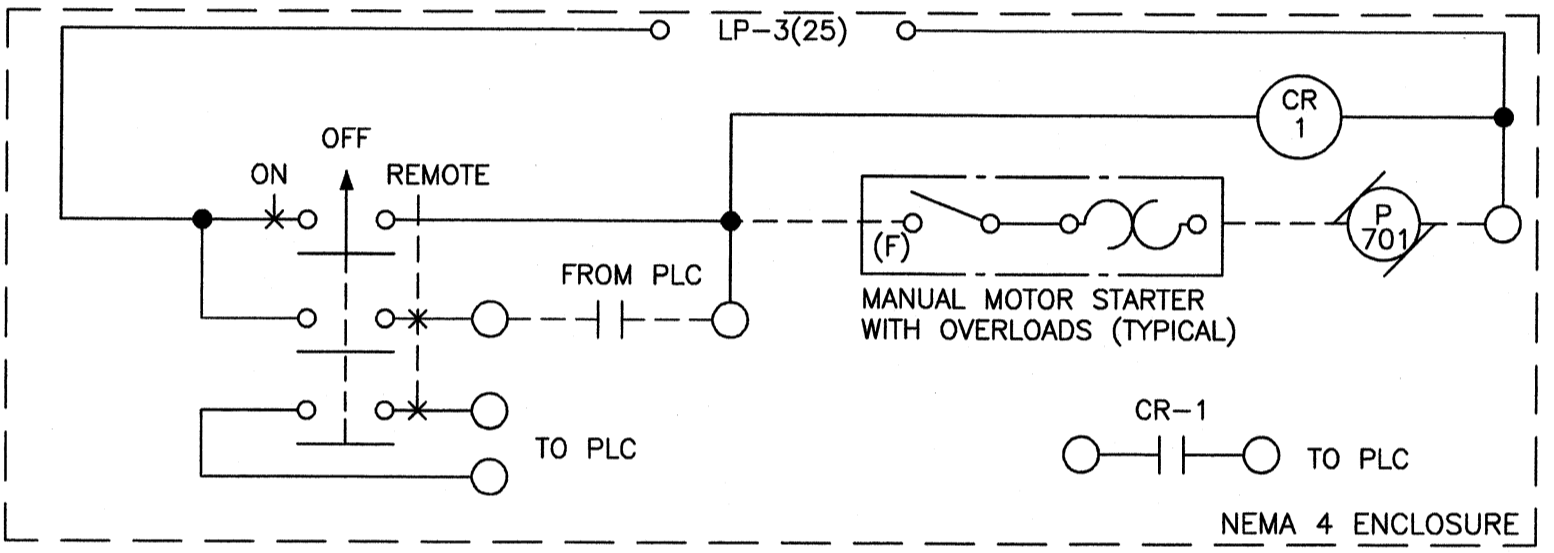
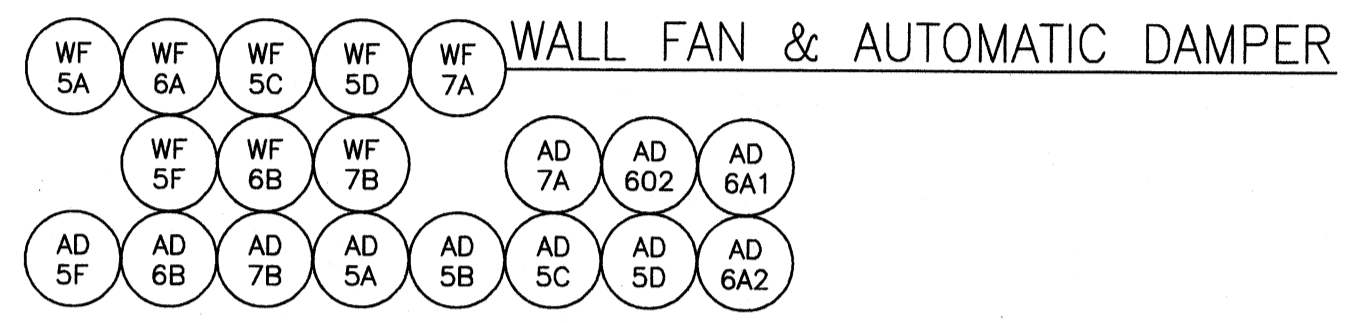
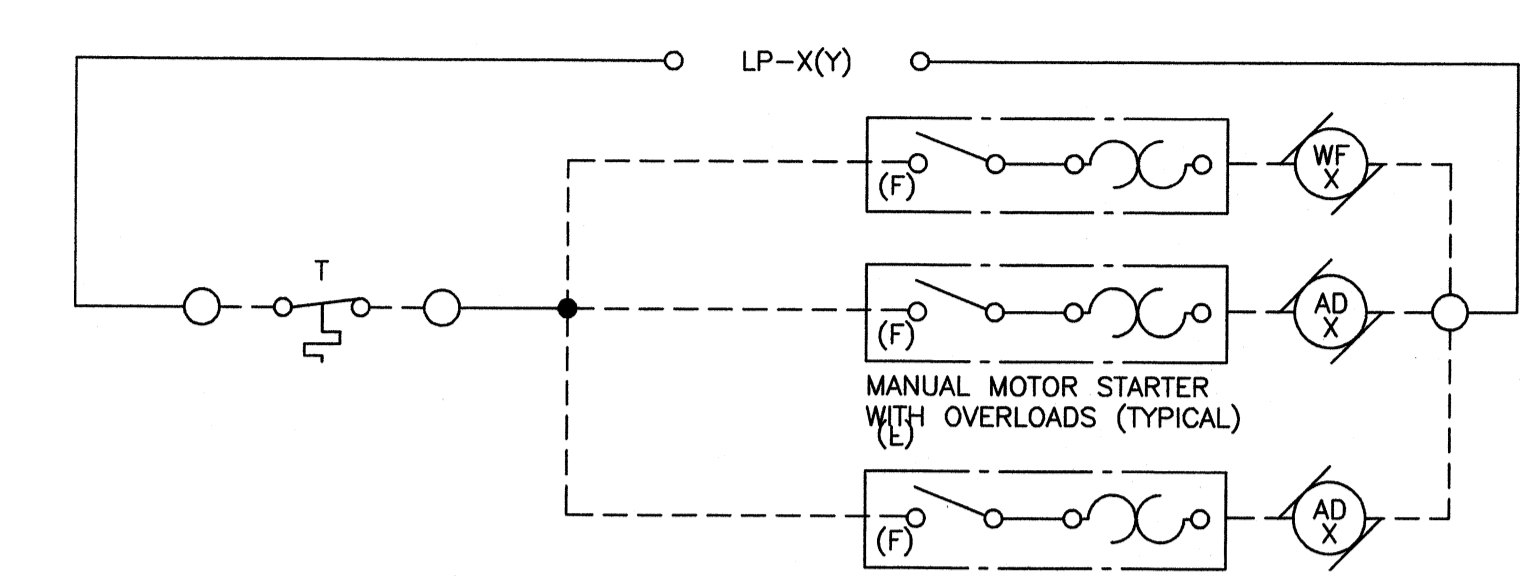
BY	DATE	DESCRIPTION
JAT	5/5/09	ADDENDUM 1

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT
ONE-LINE SB-B

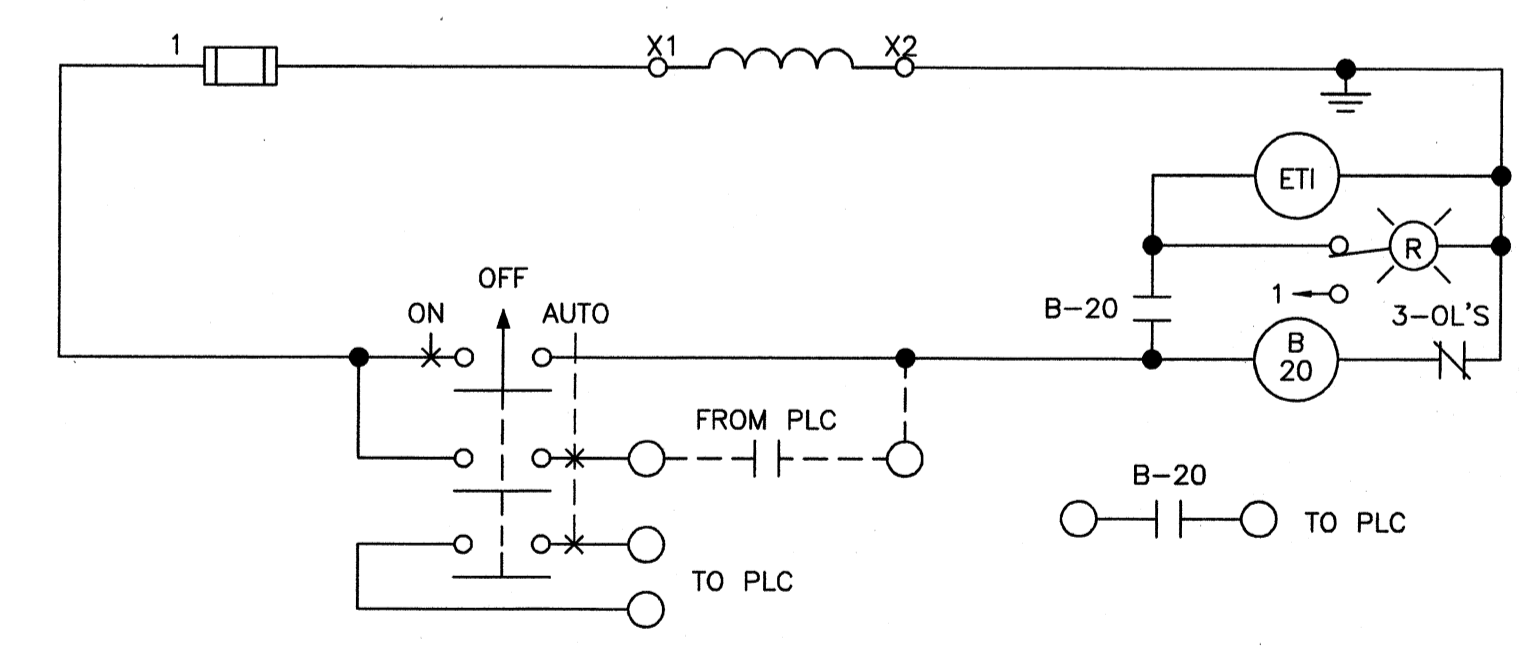
Project No.: 120-07060
 Designed By: WAP/FWY
 Drawn By: FWY
 Checked By: LDC

E-602

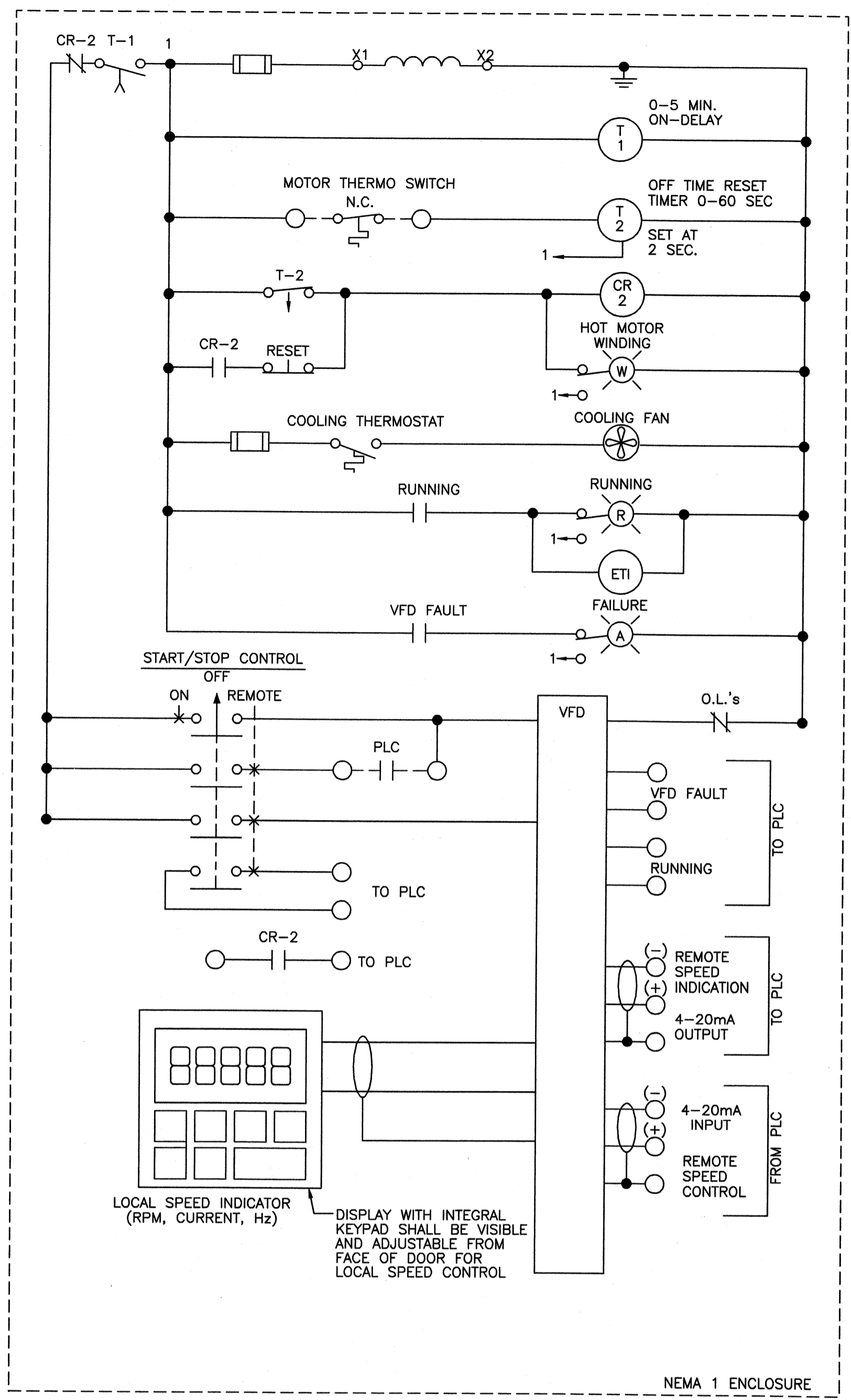
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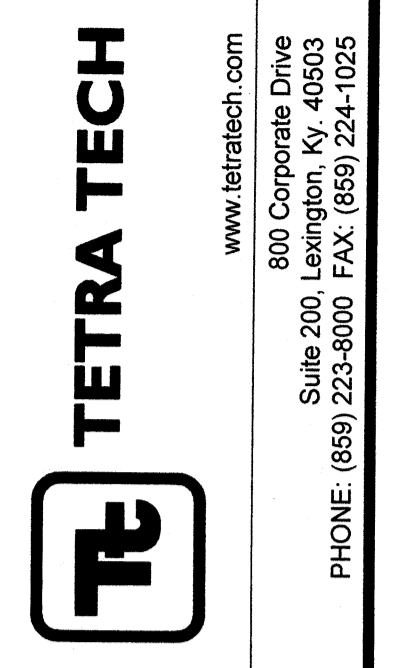
PUMP P-701



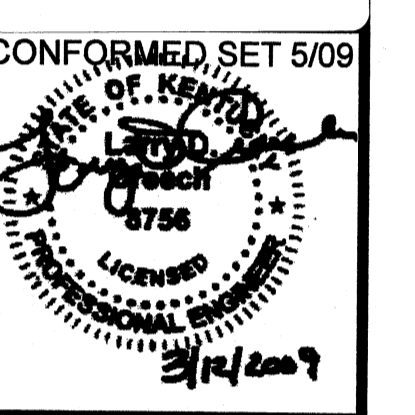
MIXER 201, 202



HIGH SERVICE & INTAKE PUMPS



PROJECT RECORD



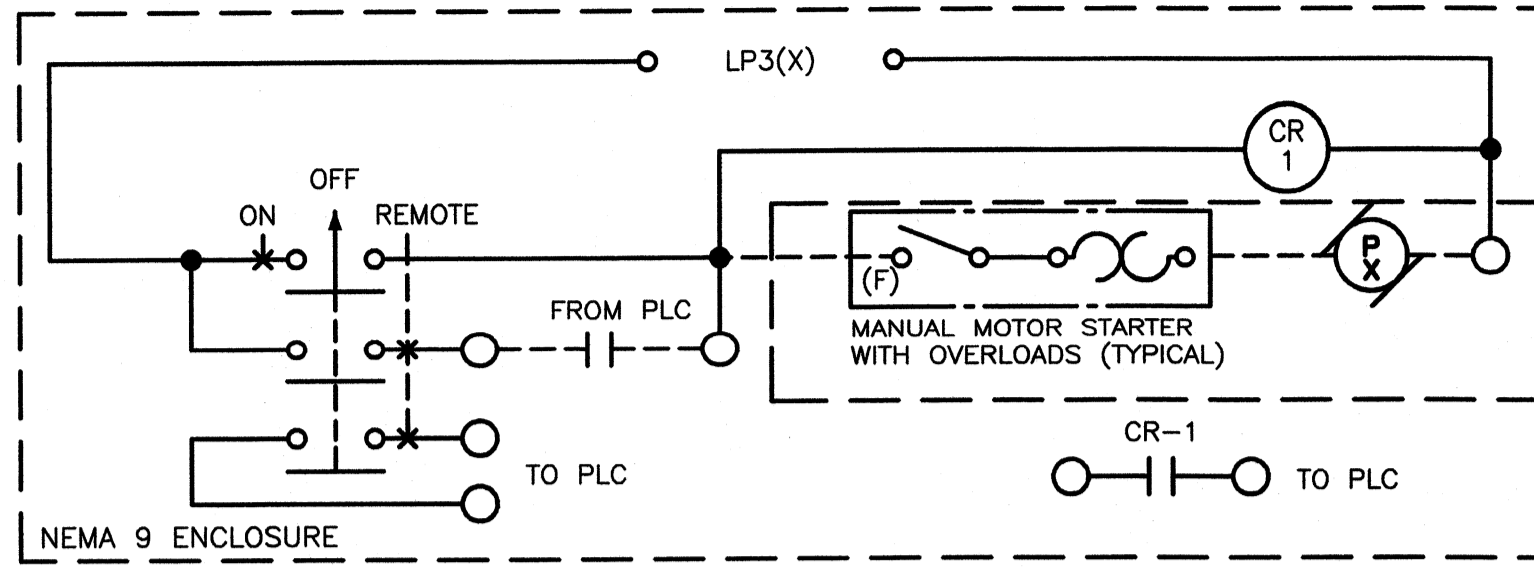
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT
WIRING DIAGRAMS

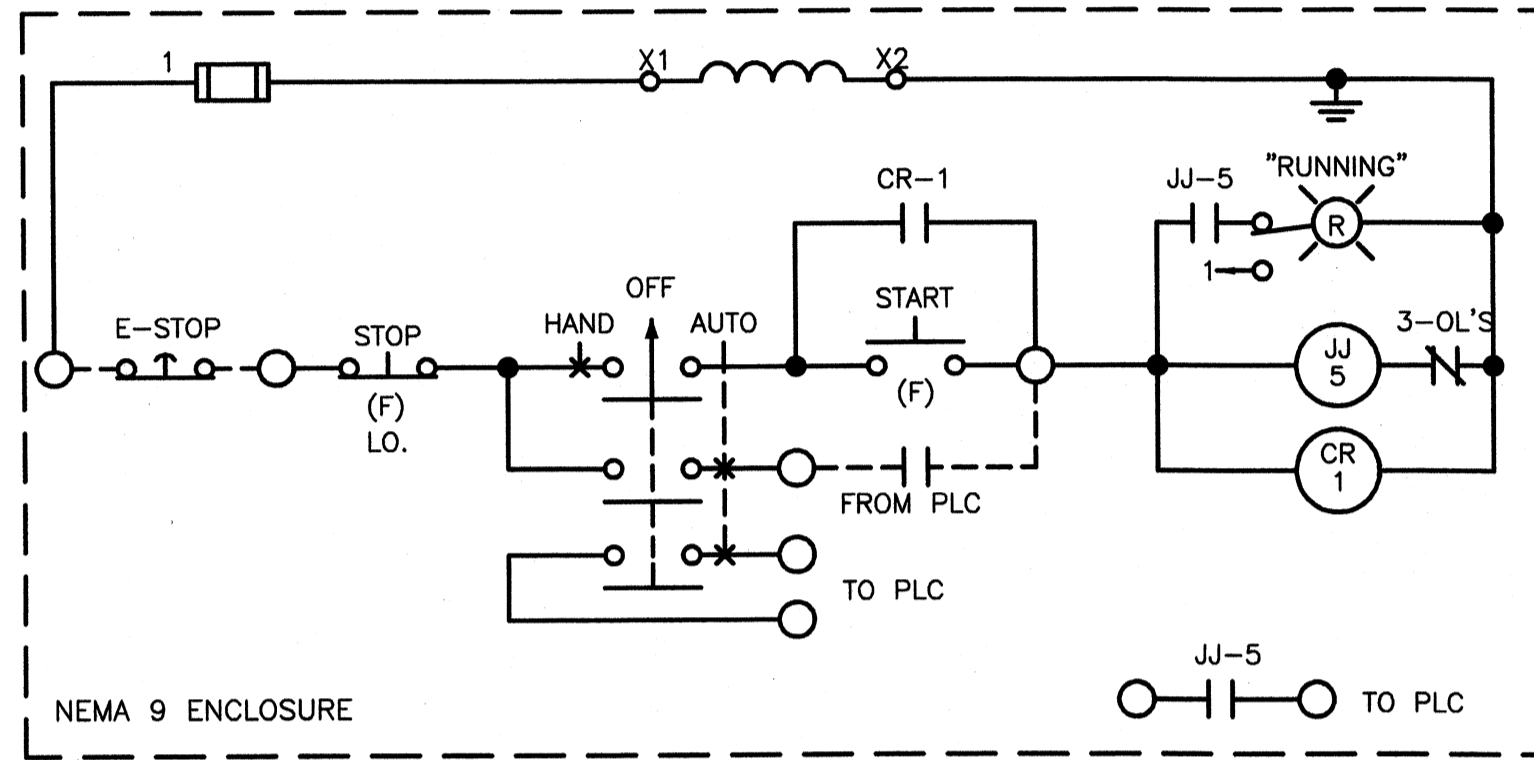
Project No.:	120-07060
Designed By:	WAP/FWY
Drawn By:	FWY
Checked By:	LDC

E-603

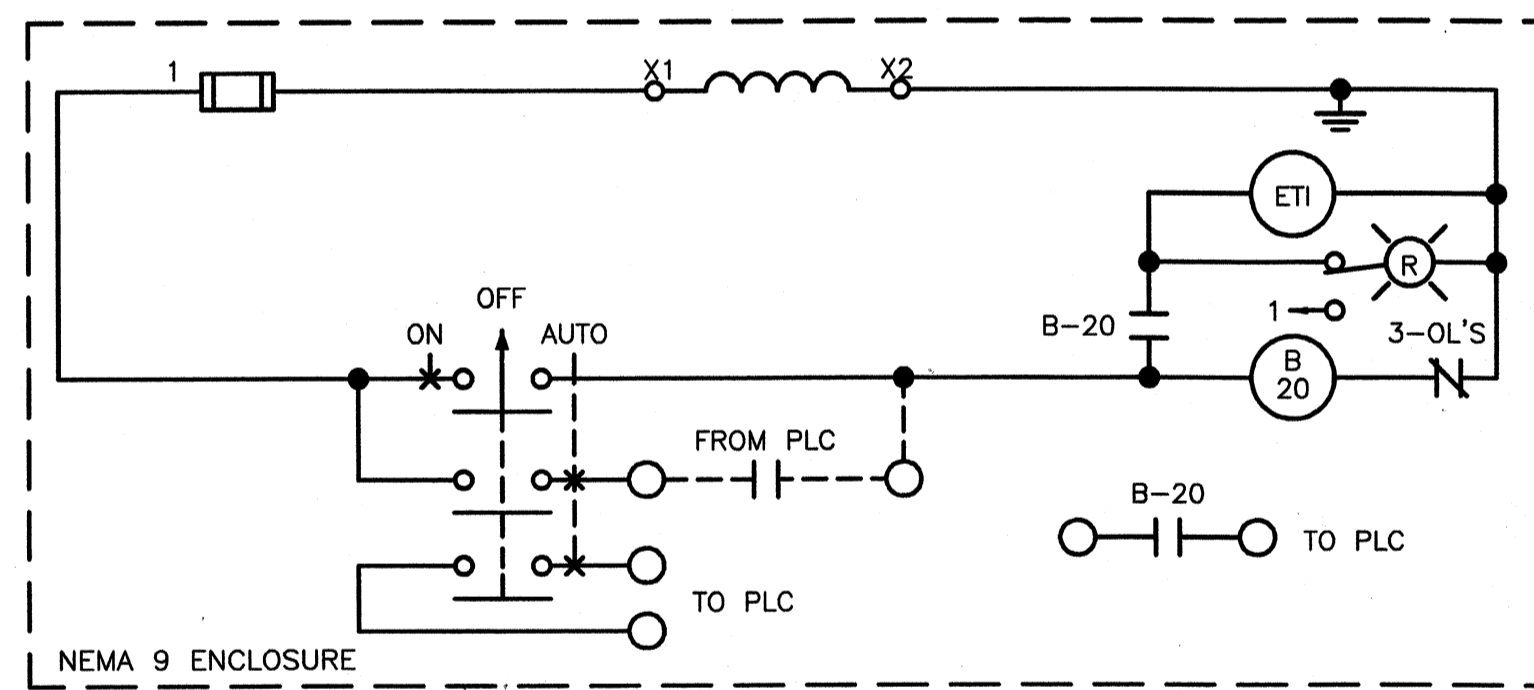
Thursday, July 02, 2009 2:20:30 PM DRAWING: \licorific\projects\120-07060 Ohio County\CONFORMED SET 5-08\ELECTRICAL\07060 E-604 WIRING DIAGRAMS.DWG LAYOUT: E-604 USER NAME: JEREMY M. FRONIGILLO



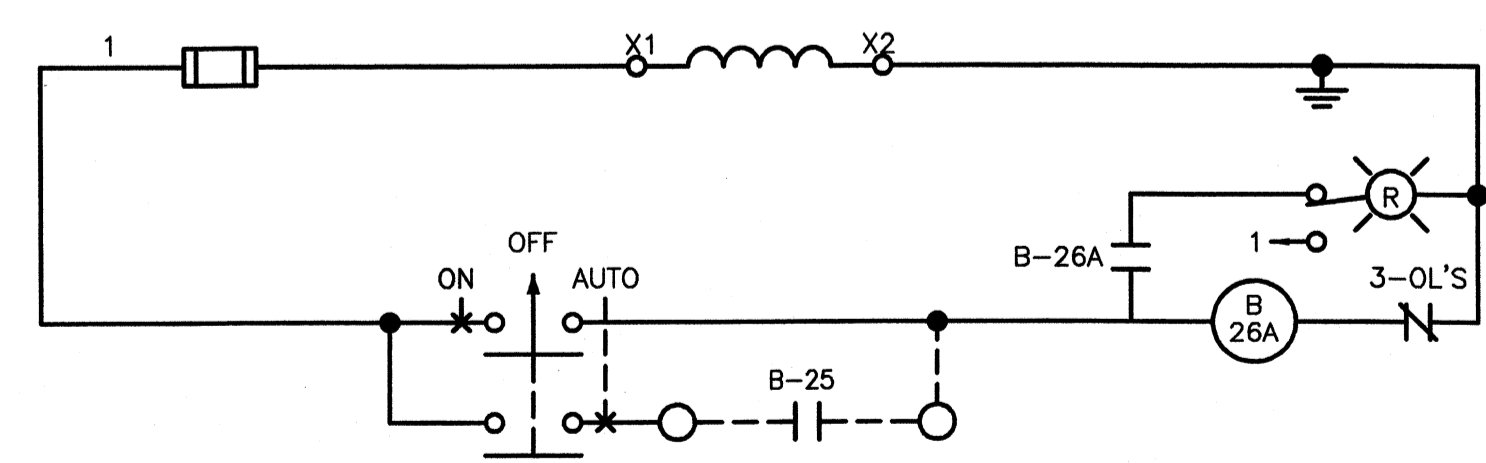
MIXERS
MXR 701, MXR 702



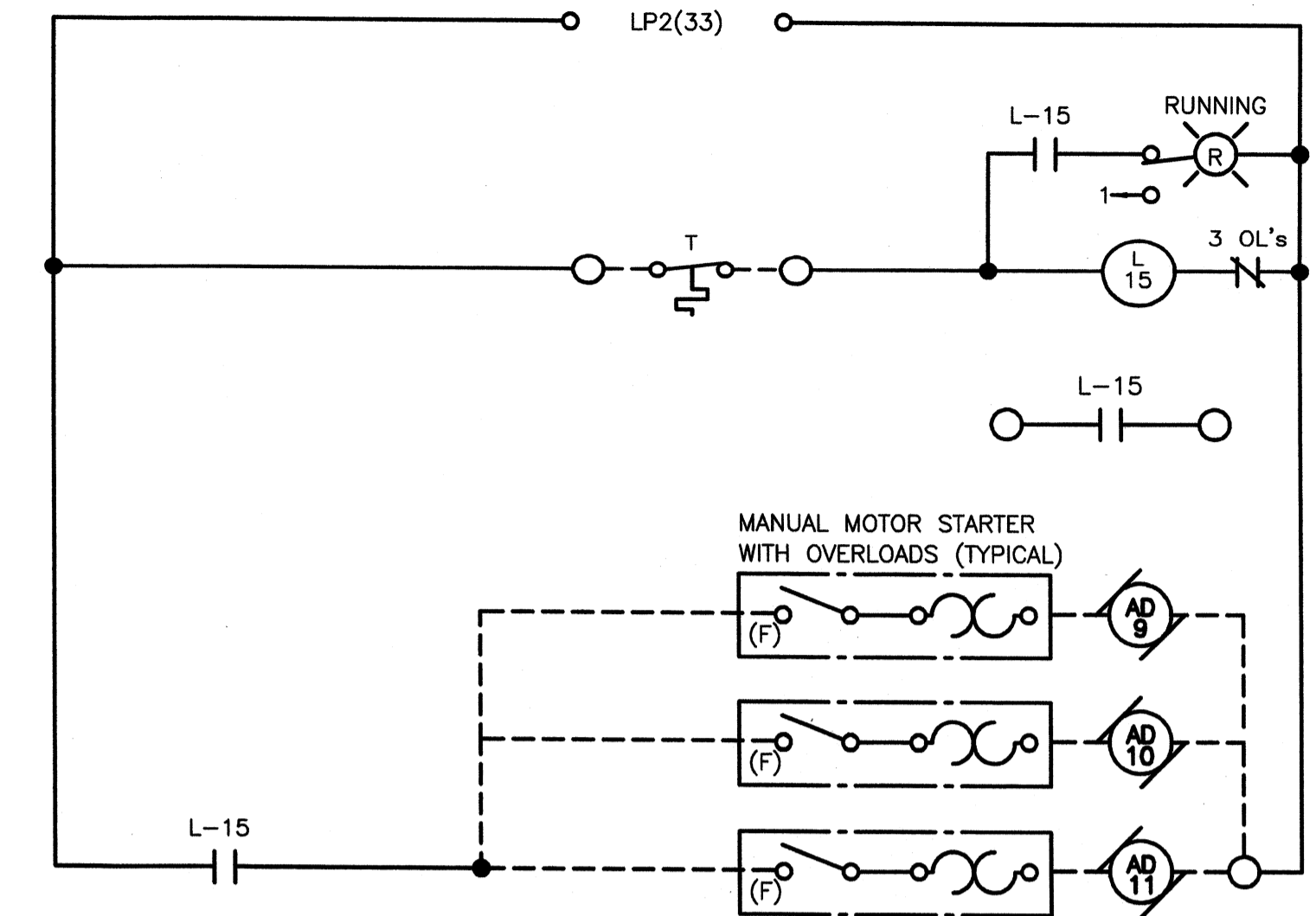
BUCKET ELEVATOR
E 701



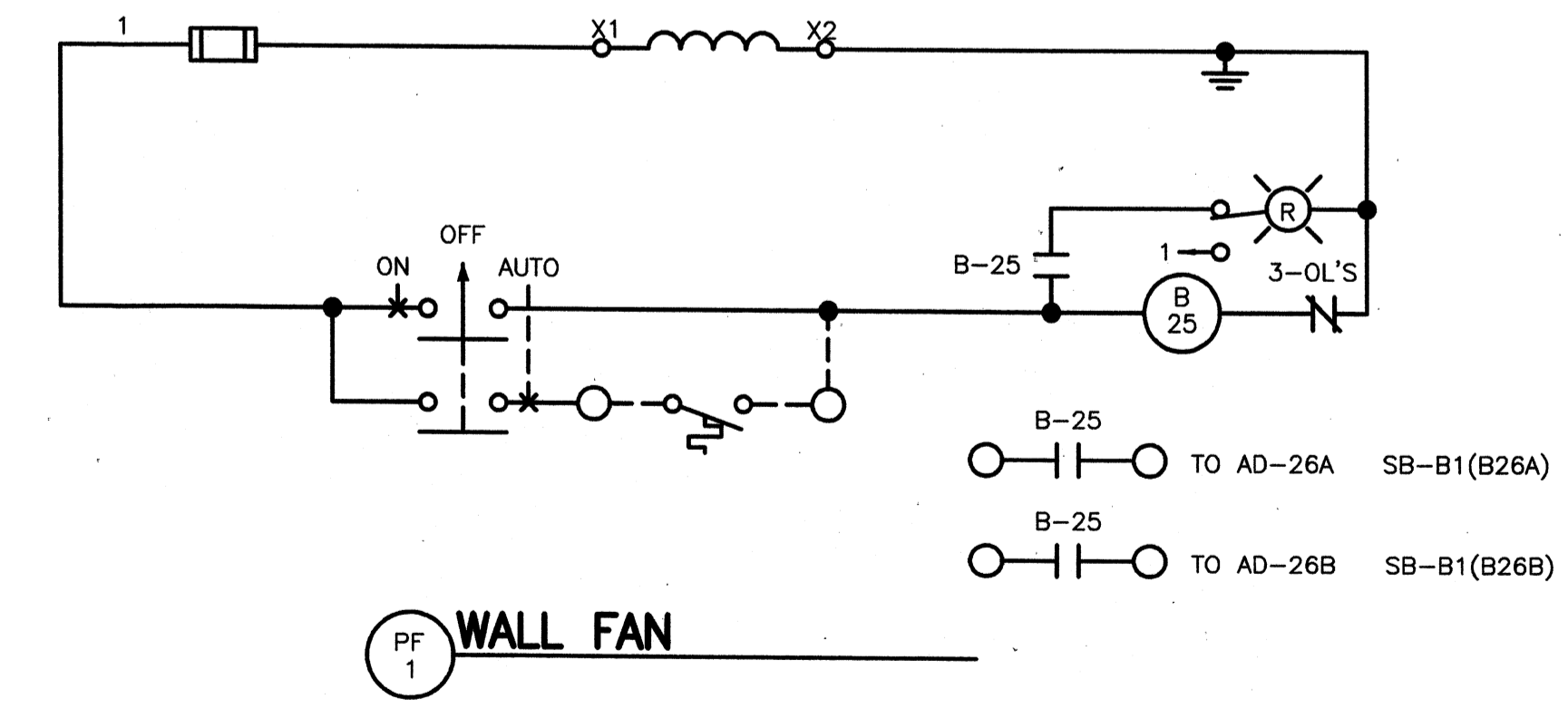
DUST COLLECTOR
DUST 701



AUTOMATIC DAMPER
AD 26B, AD 26A



INLINE 10 FAN & CONTROL DAMPER
IF 10, AD 9, AD 10, AD 11



WALL FAN
PF 1

TETRA TECH
www.tetrattech.com
800 Corporate Drive
Suite 200
Arling Heights, IL 60018
PHONE: (630) 223-8000 FAX: (630) 224-1025

PROJECT RECORD

CONFORMED SET 5/09

 J. M. Fronigillo
 5/12/2009

BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT
WIRING DIAGRAMS

Project No.: 120-07060
 Designed By: WAP/FWY
 Drawn By: FWY
 Checked By: LDC

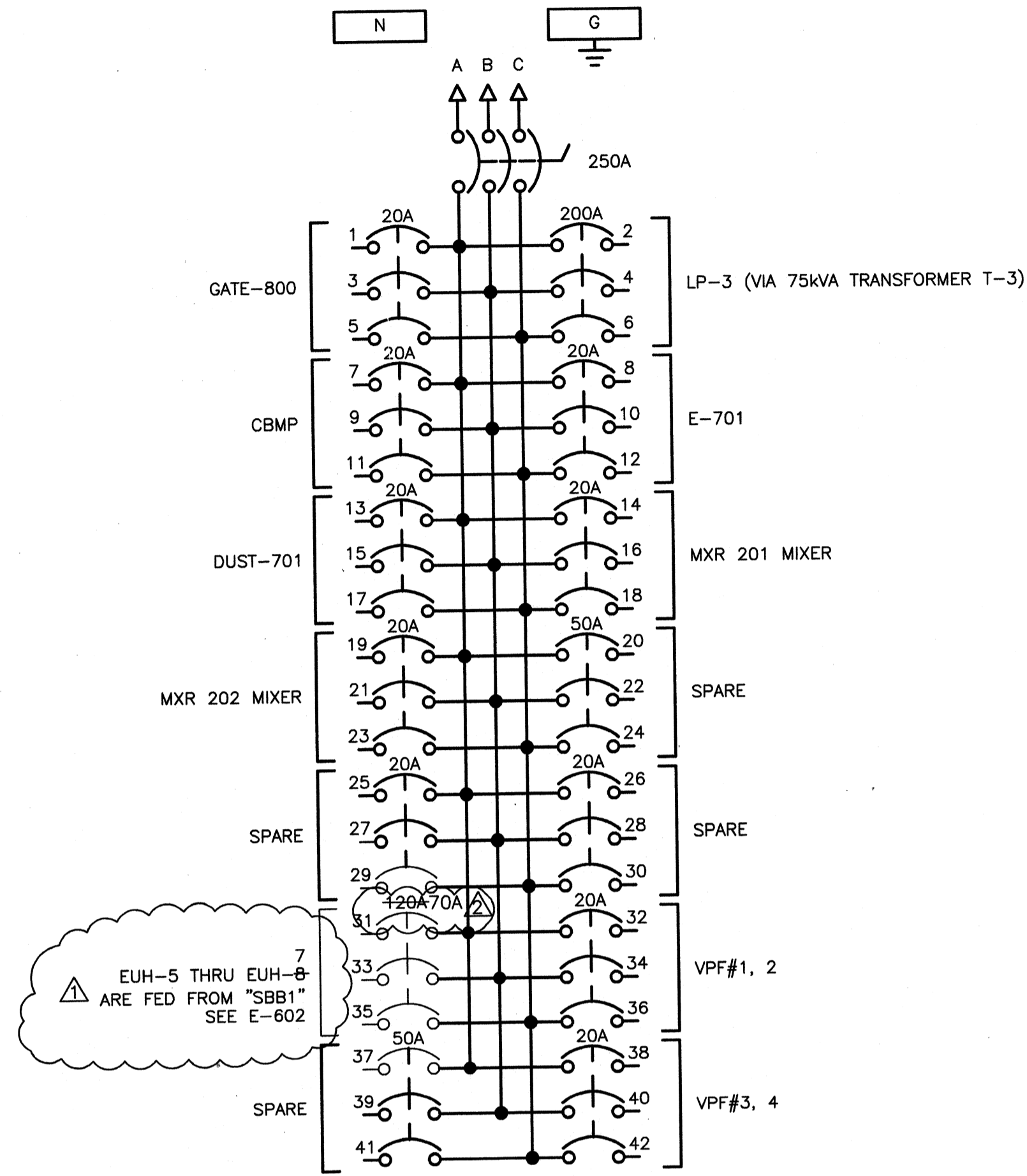
E-604

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Thursday, July 02, 2009 2:20:59 PM DRAWING: \\nrcorifs3\projects\120-07060 Ohio County\CONFORMED SET 15-09\EL\ELECTRICAL\07060 E-605 PANELBOARD & LUMINAIRE SCHEDULES .DWG LAYOUT: E-605 USER NAME: JEREMY M. FRONGILLO

PANELBOARD 'HP-2'

LOCATION: CHEMICAL BLDG
VOLTAGE: 277/480V
BUS RATING: 250A



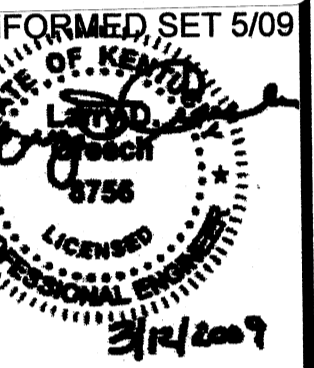
LUMINAIRE SCHEDULE

SYMBOL	DESCRIPTION	MOUNTING	LAMPS			MANUFACTURERS (OR EQUAL)	
			NO.	WATTAGE	TYPE	NAME	MODEL OR SERIES
A	1'x1' FLUORESCENT RECESSED VOLUMETRIC DOWNLIGHT	RECESSED	1	32	TRT	LITHONIA	RT5D-1/32TRT
A1	1'x1' FLUORESCENT RECESSED VOLUMETRIC DOWNLIGHT W/BATTERY PACK	RECESSED	1	32	TRT	LITHONIA	RT5D-1/32TRT-EL
B	2'x2' FLUORESCENT RECESSED VOLUMETRIC LIGHT	RECESSED	2	24	T5HO	LITHONIA	2RT5-24T5HO-MVOLT-GE10IS-LP835
B1	2'x2' FLUORESCENT RECESSED VOLUMETRIC LIGHT W/BATTERY PACK	RECESSED	2	24	T5HO	LITHONIA	2RT5-24T5HO-MVOLT-GE10IS-LP835-EL14
C	ALL-PURPOSE UNDERCABINET FLUORESCENT LIGHT	UNDER-CABINET	1	15	T12	LITHONIA	2UC-15-MVOLT-GE10IS
D	THERMOPLASTIC EXIT LED FIXTURE	WALL	1	0.72	LED	LITHONIA	LQM-S-W-1-R-120/277-EL-N-SD
F	VANITY LIGHT	WALL	2	21	LINEAR T5	LITHONIA	11728RET5-BN
G	1'x2' GENERAL-PURPOSE INDUSTRIAL FLUORESCENT LIGHT	SUSPEND	2	17	T8	LITHONIA	EJS-2-17-MVOLT-GE10IS-WGJ
H	8" HORIZONTAL LENSED COMPACT FLUORESCENT DOWNLIGHT	RECESSED	1	32	TRT	LITHONIA	LF8-1/32TRT-FBLS73-MVOLT-GE10
H1	8" HORIZONTAL LENSED COMPACT FLUORESCENT DOWNLIGHT WALLWASH W/DIMMER	RECESSED	1	32	TRT	LITHONIA	LF8-1/32TRT-FB8W4-MVOLT-GE10-DMHL
I	METAL HALIDE CAST WALL PACK W/INTEGRAL PHOTOCELL	WALL	1	70	MH	LITHONIA	TWR1C-70M-TB-LPI-PE
K	HAZARDOUS LOCATION FLUORESCENT EXPLOSION-PROOF LIGHT	SUSPEND	4	32	T8	HUBBELL	HL-HFX-265-30-4-WL
L	2'x4' FLUORESCENT HIGH BAY DUAL-LEVEL LIGHT	SUSPEND	6	54	T5HO	LITHONIA	FSB-654L-WDS-ACL-WGI
L-EM	2'x4' FLUORESCENT HIGH BAY DUAL-LEVEL LIGHT W/EMERGENCY BALLAST	SUSPEND	6	54	T5HO	LITHONIA	FSB-654L-WDS-ACL-EL14-WGI
M	30" AREA FIXTURE 400W METAL HALIDE W/INTEGRAL PHOTOCELL	POLE	2	400	MH	LITHONIA	KAD-400M-R2-TB-RPD09-KTMB-SCWA-PE7-LPI
N	1x4 ENCLOSED INDUSTRIAL FLUORESCENT	SURFACE/SUSPEND	2	32	T8	LITHONIA	DMS-2-32-MVOLT-GE10IS
N-EM	1x4 ENCLOSED INDUSTRIAL FLUORESCENT W/EMERGENCY BALLAST	SURFACE/SUSPEND	2	32	T8	LITHONIA	DMS-2-32-MVOLT-GE10IS-EL
O	ENCLOSED AND GASKETED GLOBE FIXTURE HANDRAIL MOUNTED W/WEATHERPROOF SWITCH	STANCHION	1	150W	MH	CROUSE-HINDS	VMVSJ150GP-G54-P50
P	25" ENCLOSED ACRYLIC LOW BAY 250W METAL HALIDE	SUSPEND	1	250W	MH	LITHONIA	TX-250M-PA25D-TBV-LLRPSL
PE	25" ENCLOSED ACRYLIC LOW BAY 250W METAL HALIDE W/EMERGENCY CIRCUIT	SUSPEND	1	250W	MH	LITHONIA	TX-250M-PA25D-TBV-LLRPSL-EC
Q	ARCHITECTURAL FLOODLIGHT 100W METAL HALIDE W/INTEGRAL PHOTOCELL	FLOOR	1	100W	MH	LITHONIA	ASF1-MDF-277-EC-QRS-PE-LPI-ASF1FV/BVG-DBLB
K-EM	HAZARDOUS LOCATION FLUORESCENT EXPLOSION-PROOF LIGHT W/EMERGENCY BALLAST	SUSPEND	4	32	T8	HUBBELL	HL-HFX-265-30-4-WL



www.tetrattech.com
800 Corporate Drive
Suite 200, Lexington, Ky, 40503
PHONE: (859) 233-9000 FAX: (859) 224-1025

PROJECT RECORD



BY	JAT	JAT	JAT

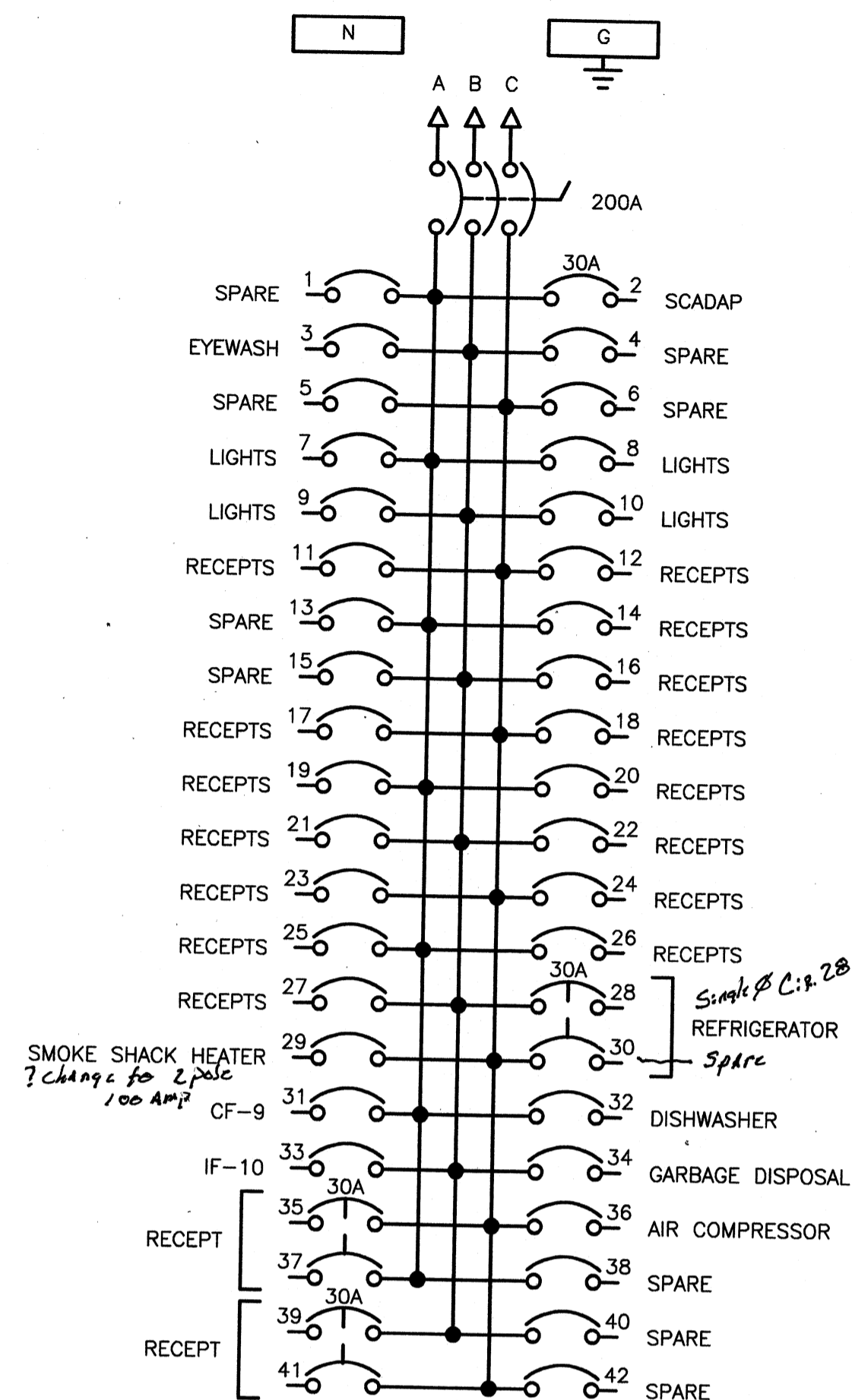
Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT

Project No.: 120-07060
Designed By: WAP/FWY
Drawn By: FWY
Checked By: LDC

E-605

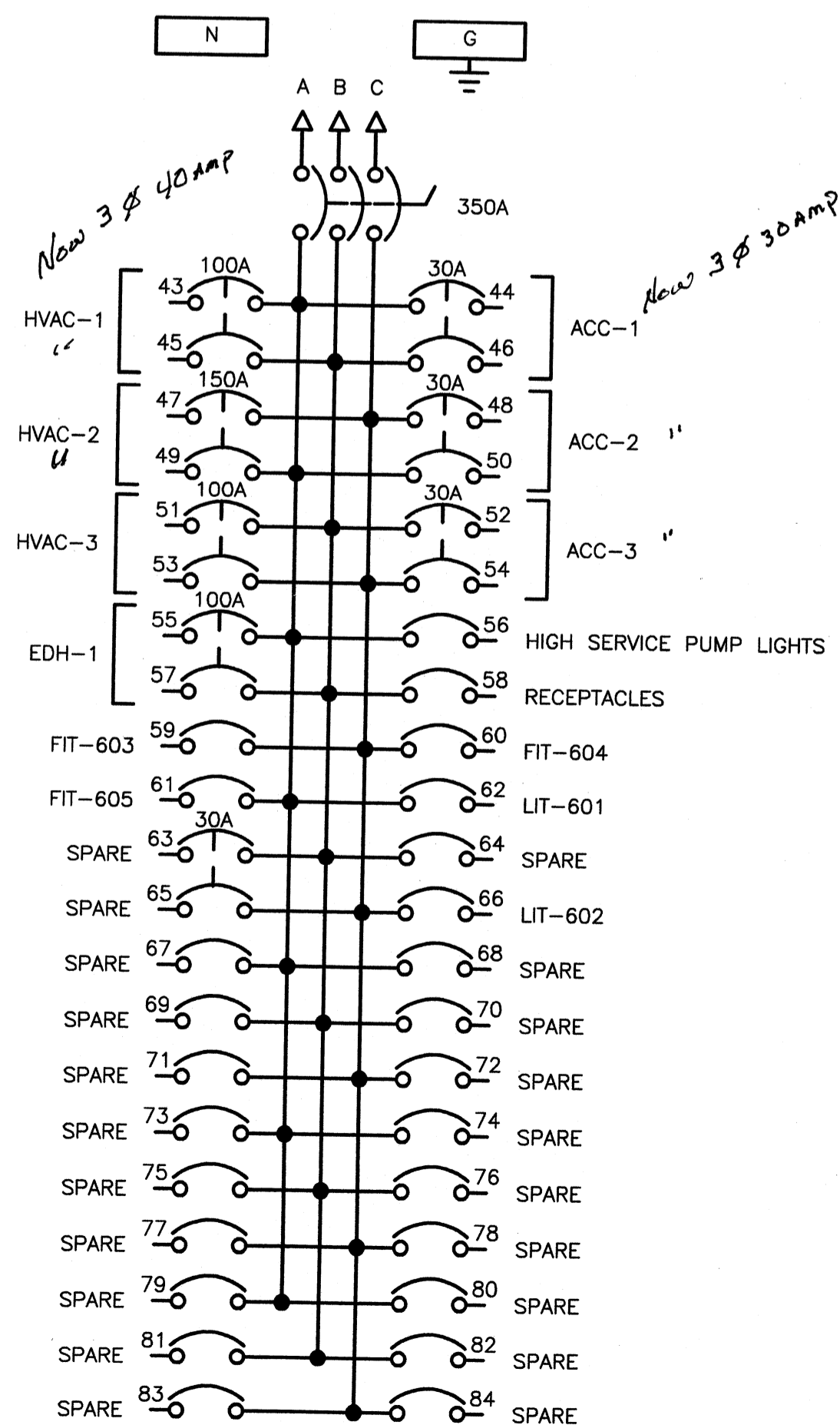
PANELBOARD 'LP-2' (SECTION A)

LOCATION: OPERATIONS BLDG MCC ROOM
 VOLTAGE: 120/208V
 BUS RATING: 225A



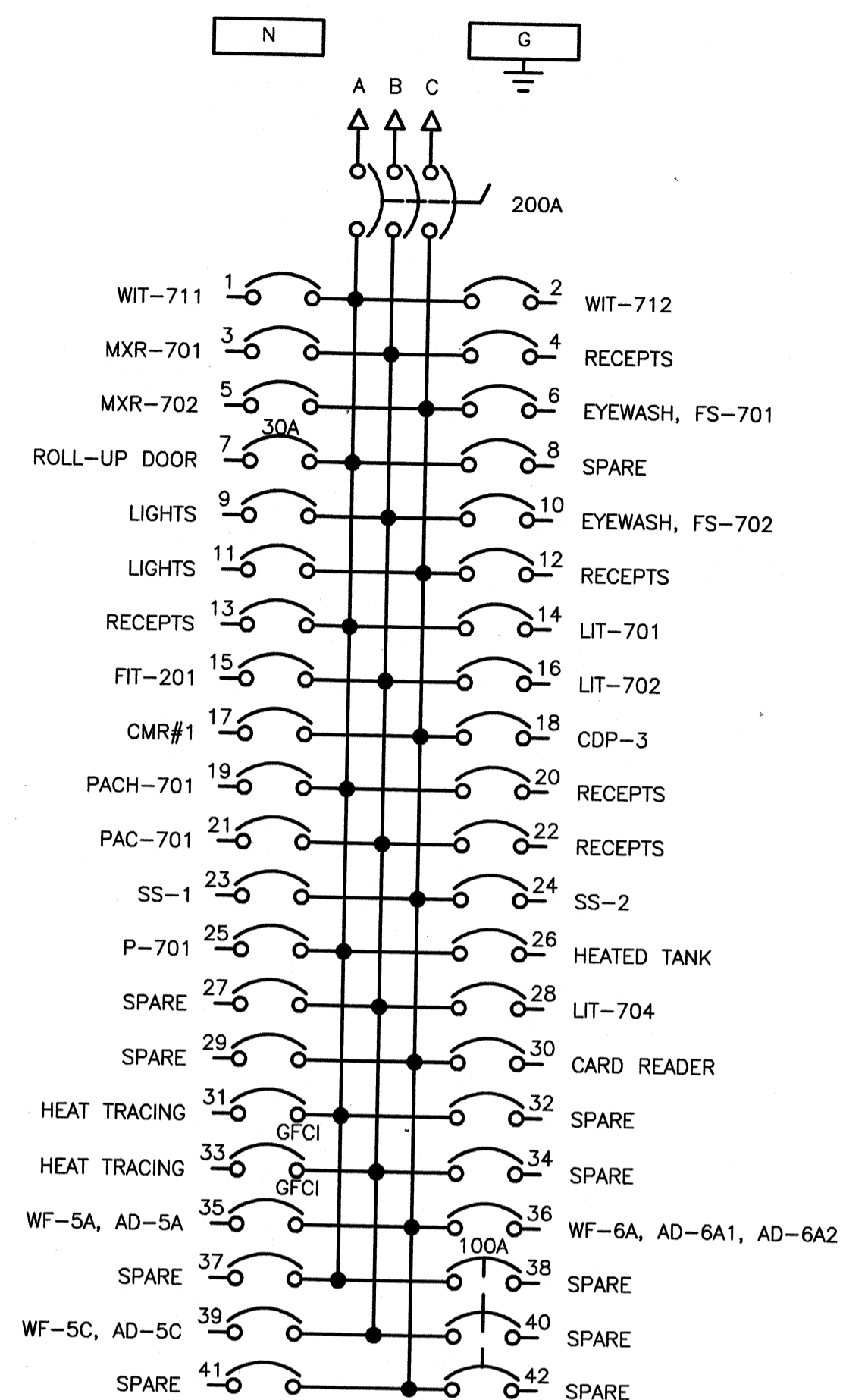
PANELBOARD 'LP-2' (SECTION B)

LOCATION: OPERATIONS BLDG MCC ROOM
 VOLTAGE: 120/208V
 BUS RATING: 400A



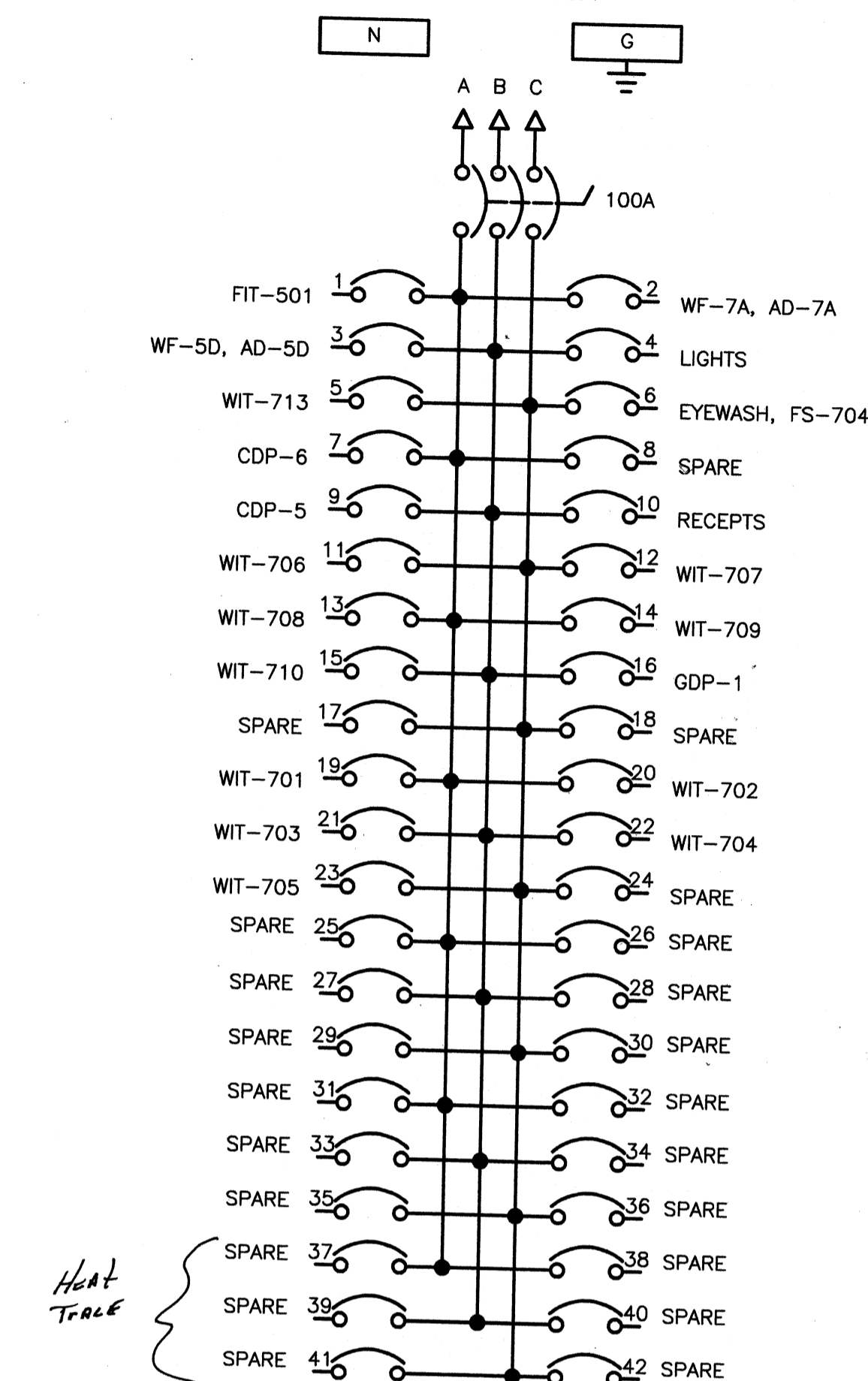
PANELBOARD 'LP-3' (SECTION A)

LOCATION: CHEMICAL BLDG ELECTRICAL ROOM
 VOLTAGE: 120/208V
 BUS RATING: 225A



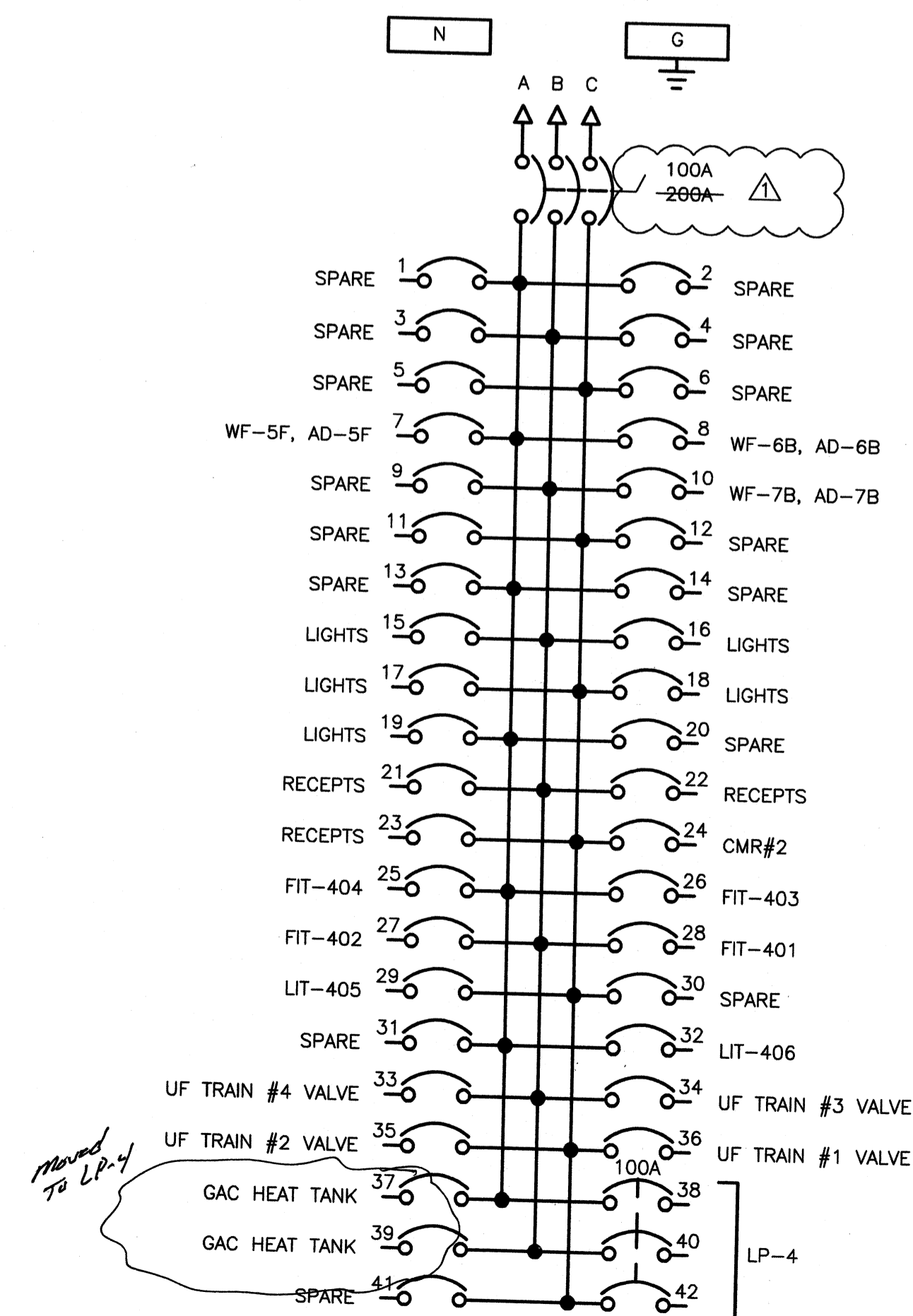
PANELBOARD 'LP-4'

LOCATION: CHEMICAL BLDG OUTSIDE
 VOLTAGE: 120/208V
 BUS RATING: 125A



PANELBOARD 'LP-5'

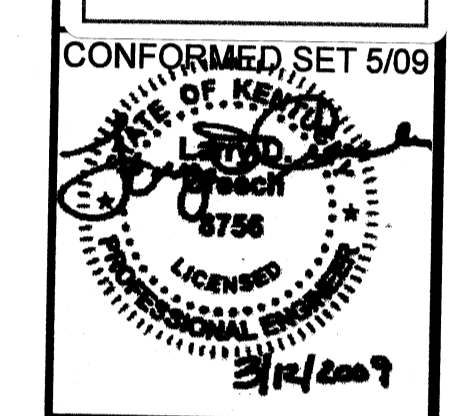
LOCATION: UF BLDG ELECTRICAL ROOM
 VOLTAGE: 120/208V
 BUS RATING: 225A



Wednesday, July 15, 2009 3:49:24 PM DRAWING: \\nrc\dfs\projects\120-07060 Ohio County\CONFORMED SET E-606\ELECTRICAL\07060 E-606 PANELBOARD SCHEDULES DWG LAYOUT E-606 USER NAME: JEREMY M. FRONGILLO



PROJECT RECORD



DATE	DESCRIPTION	BY	JAT
5/5/09	ADDENDUM 1		

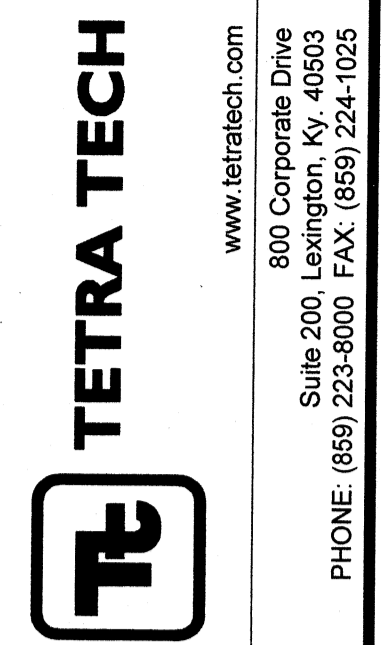
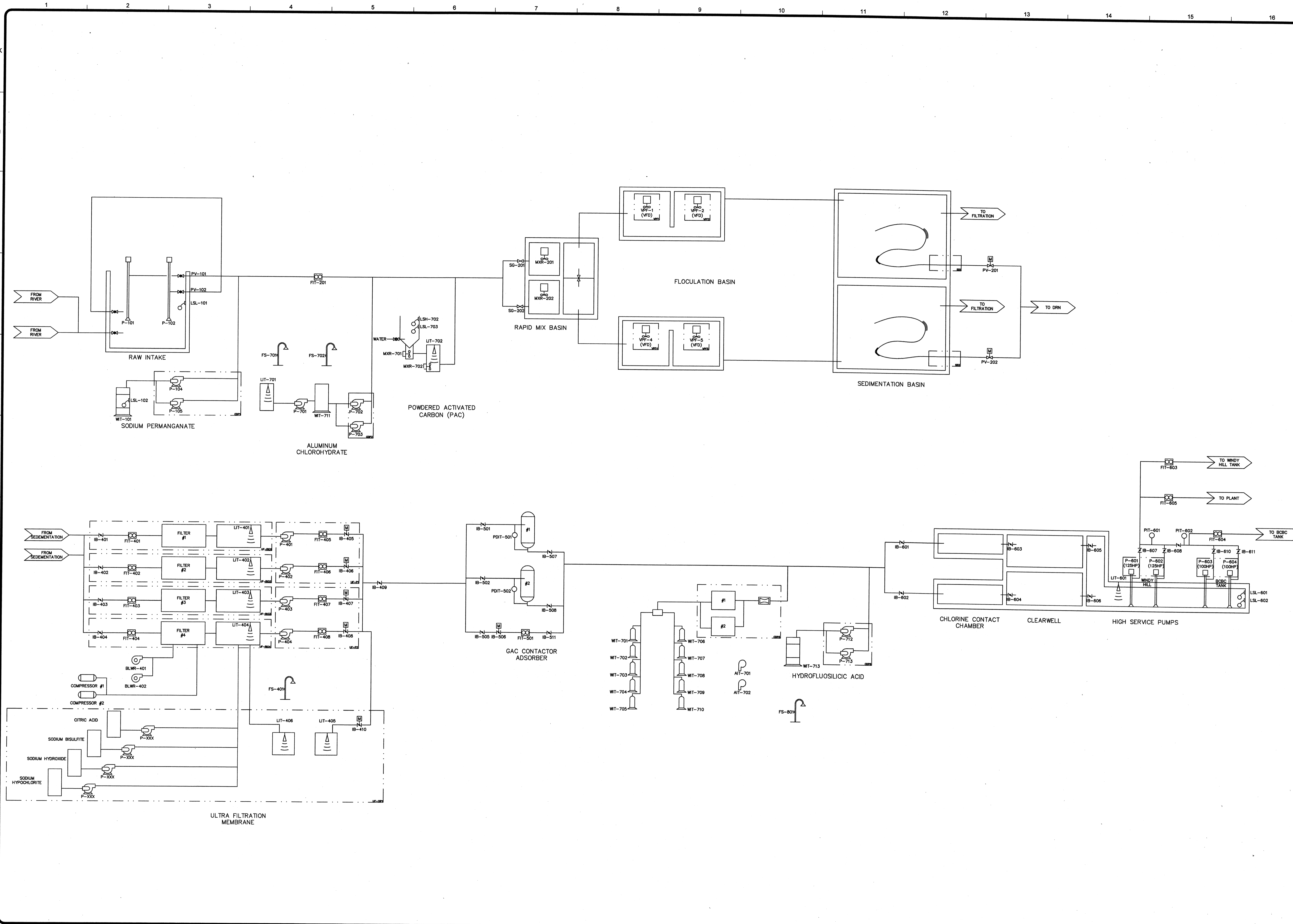
Client: OHIO COUNTY WATER DISTRICT
 Proj. Loc.: CROMMELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT

PANELBOARD SCHEDULE

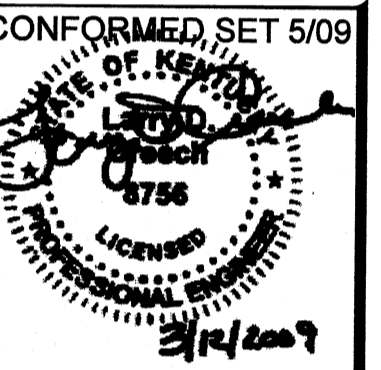
Project No.: 120-07060
 Designed By: WAP/FWY
 Drawn By: FWY
 Checked By: LDC

E-606

Wednesday, July 15, 2009 3:49:54 PM DRAWING: Hierofies\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-700 PFD.DWG LAYOUT: E-700 USER NAME: JEREMY M. FRONGILLO

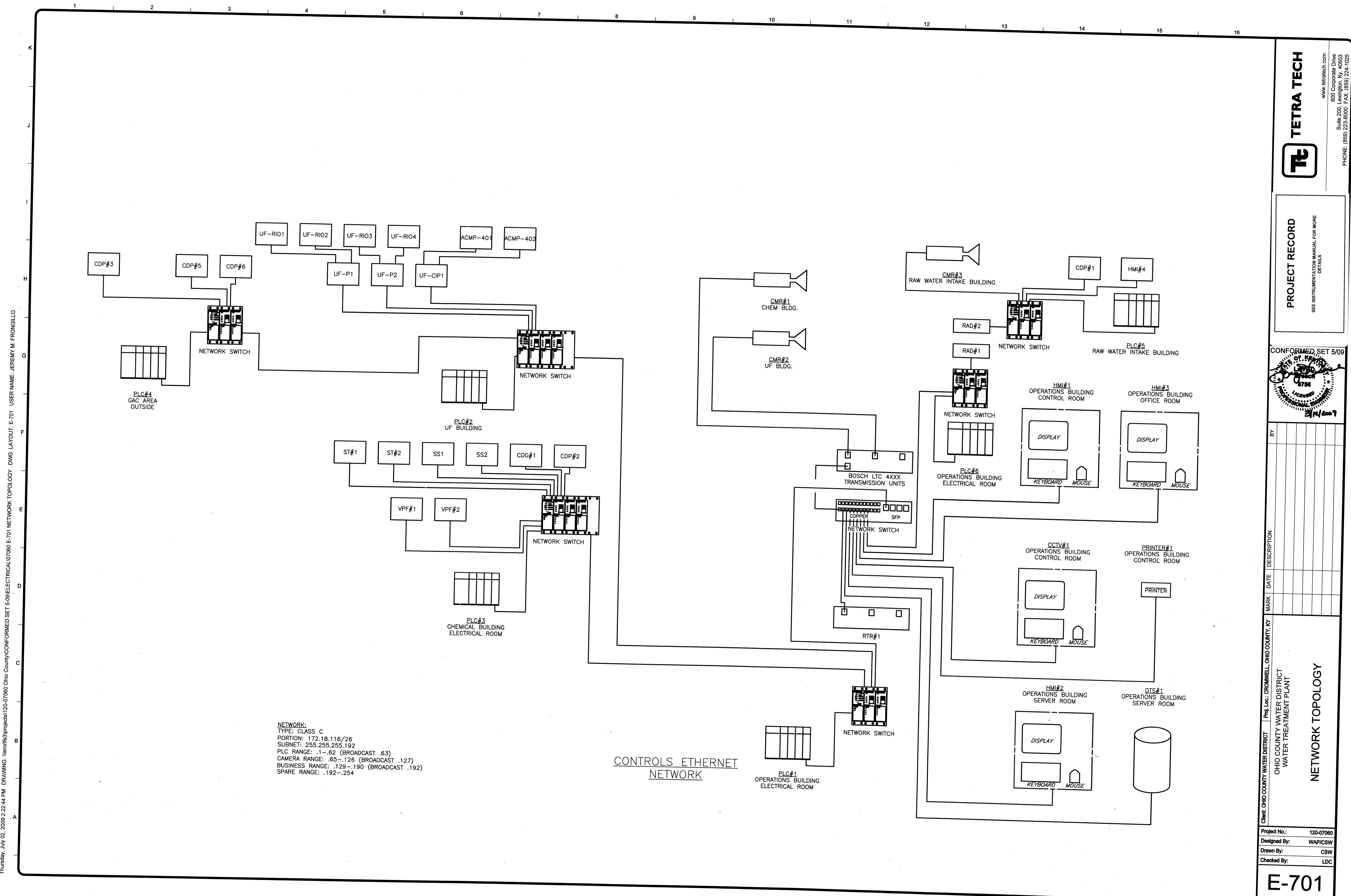


PROJECT RECORD
SEE INSTRUMENTATION MANUAL FOR MORE DETAILS



BY	DATE	DESCRIPTION

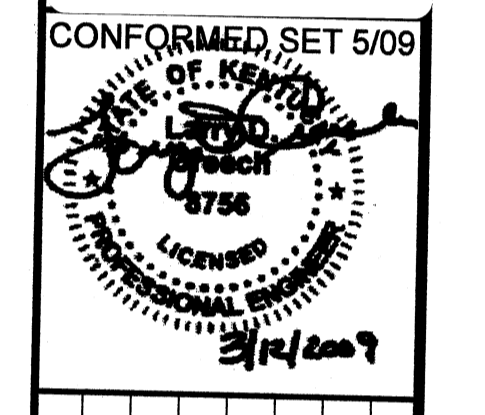
Client: OHIO COUNTY WATER DISTRICT | Prof. Loc: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT
PROCESS FLOW DIAGRAM
Project No.: 120-07060
Designed By: WAP/CSW
Drawn By: CSW
Checked By: LDC
E-700
Copyright: Tetra Tech



NETWORK:
 TYPE: CLASS C
 PORTION: 172.18.116/26
 SUBNET: 255.255.255.192
 PLC RANGE: .1-.62 (BROADCAST .63)
 CAMERA RANGE: .65-.126 (BROADCAST .127)
 BUSINESS RANGE: .129-.190 (BROADCAST .192)
 SPARE RANGE: .192-.254

CONTROLS ETHERNET NETWORK

PROJECT RECORD
 SEE INSTRUMENTATION MANUAL FOR MORE DETAILS



CONFORMED SET 5/09

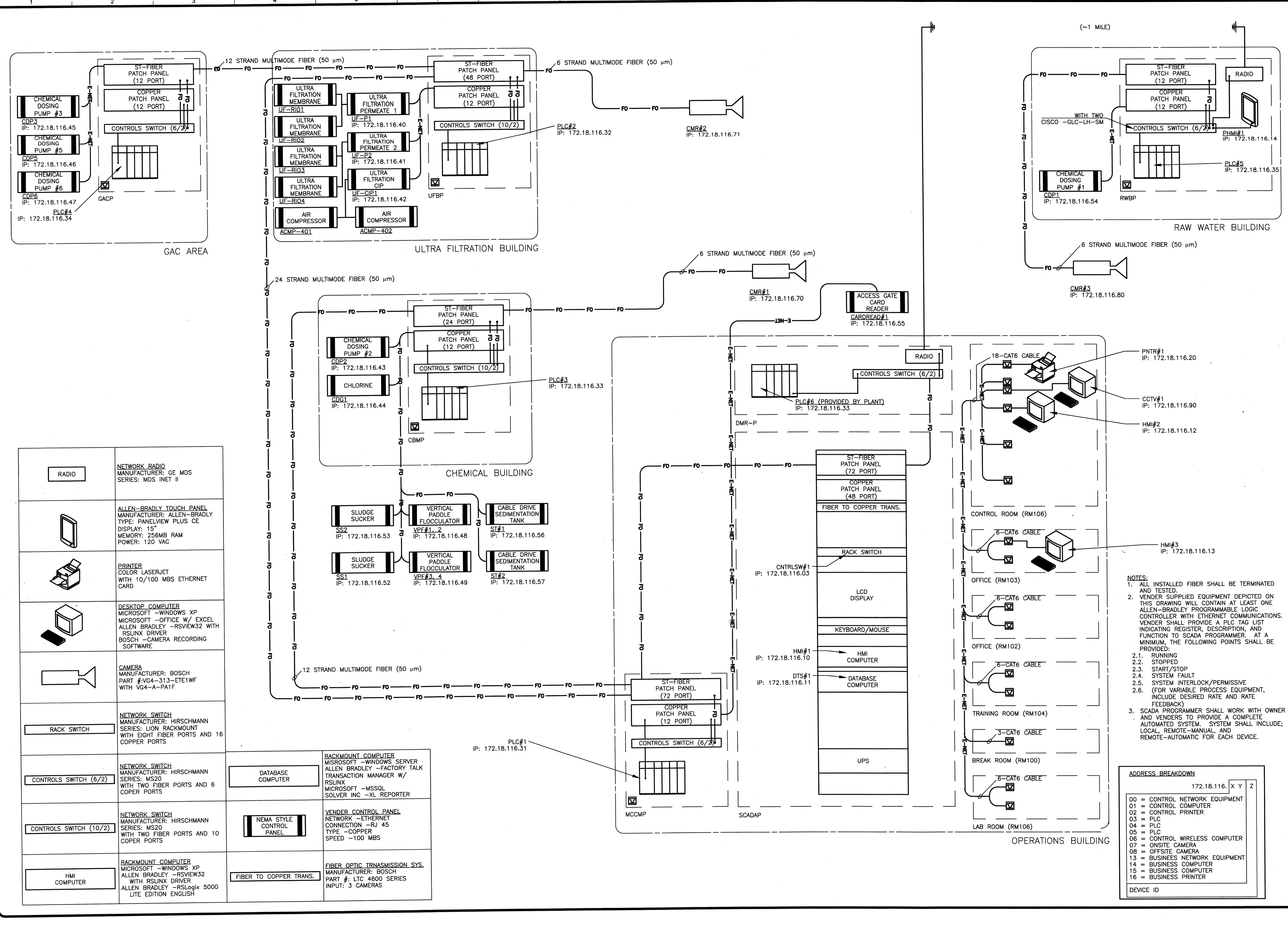
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT
NETWORK TOPOLOGY

Project No.:	120-07080
Designed By:	WAP/CSW
Drawn By:	CSW
Checked By:	LDC

Thursday, July 02, 2009 2:22:44 PM DRAWING: \\lraoffis3\projects\120-07080 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07080 E-701 NETWORK TOPOLOGY DWG LAYOUT: E-701 USER NAME: JEREMY M. FRONGILLO

Wednesday, July 15, 2009 3:50:24 PM DRAWING: \\arc\ifs3\projects\120-07060 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07060 E-702 CONTROL NETWORK DWG LAYOUT: E-702 USER NAME: JEREMY M. FRONGILLO



	RADIO NETWORK RADIO MANUFACTURER: GE MDS SERIES: MDS INET II
	ALLEN-BRADLY TOUCH PANEL MANUFACTURER: ALLEN-BRADLY TYPE: PANELVIEW PLUS CE DISPLAY: 15" MEMORY: 256MB RAM POWER: 120 VAC
	PRINTER COLOR LASERJET WITH 10/100 MBS ETHERNET CARD
	DESKTOP COMPUTER MICROSOFT -WINDOWS XP MICROSOFT -OFFICE W/ EXCEL ALLEN BRADLEY -RSVIEW32 WITH RSLINX DRIVER BOSCH -CAMERA RECORDING SOFTWARE
	CAMERA MANUFACTURER: BOSCH PART #VG4-313-ETE1WF WITH VG4-A-PA1F
	NETWORK SWITCH MANUFACTURER: HIRSCHMANN SERIES: LION RACKMOUNT WITH EIGHT FIBER PORTS AND 16 COPPER PORTS
	NETWORK SWITCH MANUFACTURER: HIRSCHMANN SERIES: MS20 WITH TWO FIBER PORTS AND 6 COPPER PORTS
	NETWORK SWITCH MANUFACTURER: HIRSCHMANN SERIES: MS20 WITH TWO FIBER PORTS AND 10 COPPER PORTS
	RACKMOUNT COMPUTER MICROSOFT -WINDOWS XP ALLEN BRADLEY -RSVIEW32 WITH RSLINX DRIVER ALLEN BRADLEY -RSLogix 5000 LITE EDITION ENGLISH

	DATABASE COMPUTER MICROSOFT -WINDOWS SERVER ALLEN BRADLEY -FACTORY TALK TRANSACTION MANAGER W/ RSLINX MICROSOFT -MSSQL SOLVER INC -XL REPORTER
	VENDOR CONTROL PANEL NETWORK -ETHERNET CONNECTION -RJ 45 TYPE -COPPER SPEED -100 MBS
	FIBER OPTIC TRANSMISSION SYS. MANUFACTURER: BOSCH PART #: LTC 4600 SERIES INPUT: 3 CAMERAS

- NOTES:**
- ALL INSTALLED FIBER SHALL BE TERMINATED AND TESTED.
 - VENDOR SUPPLIED EQUIPMENT DEPICTED ON THIS DRAWING WILL CONTAIN AT LEAST ONE ALLEN-BRADLEY PROGRAMMABLE LOGIC CONTROLLER WITH ETHERNET COMMUNICATIONS. VENDOR SHALL PROVIDE A PLC TAG LIST INDICATING REGISTER, DESCRIPTION, AND FUNCTION TO SCADA PROGRAMMER. AT A MINIMUM, THE FOLLOWING POINTS SHALL BE PROVIDED:
 - RUNNING
 - STOPPED
 - START/STOP
 - SYSTEM FAULT
 - SYSTEM INTERLOCK/PERMISSIVE
 - (FOR VARIABLE PROCESS EQUIPMENT, INCLUDE DESIRED RATE AND RATE FEEDBACK)
 - SCADA PROGRAMMER SHALL WORK WITH OWNER AND VENDORS TO PROVIDE A COMPLETE AUTOMATED SYSTEM. SYSTEM SHALL INCLUDE: LOCAL, REMOTE-MANUAL, AND REMOTE-AUTOMATIC FOR EACH DEVICE.

ADDRESS BREAKDOWN

ADDRESS	NETWORK	Y	X	Z
00	172.18.116.			
01				
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				

DEVICE ID

TETRA TECH
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PROJECT RECORD
SEE INSTRUMENTATION MANUAL FOR MORE DETAILS

CONFORMED SET 5/09

BY	DATE	DESCRIPTION
JAT	5/5/09	ADDENDUM 1

Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: CROMWELL, OHIO COUNTY, KY

OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

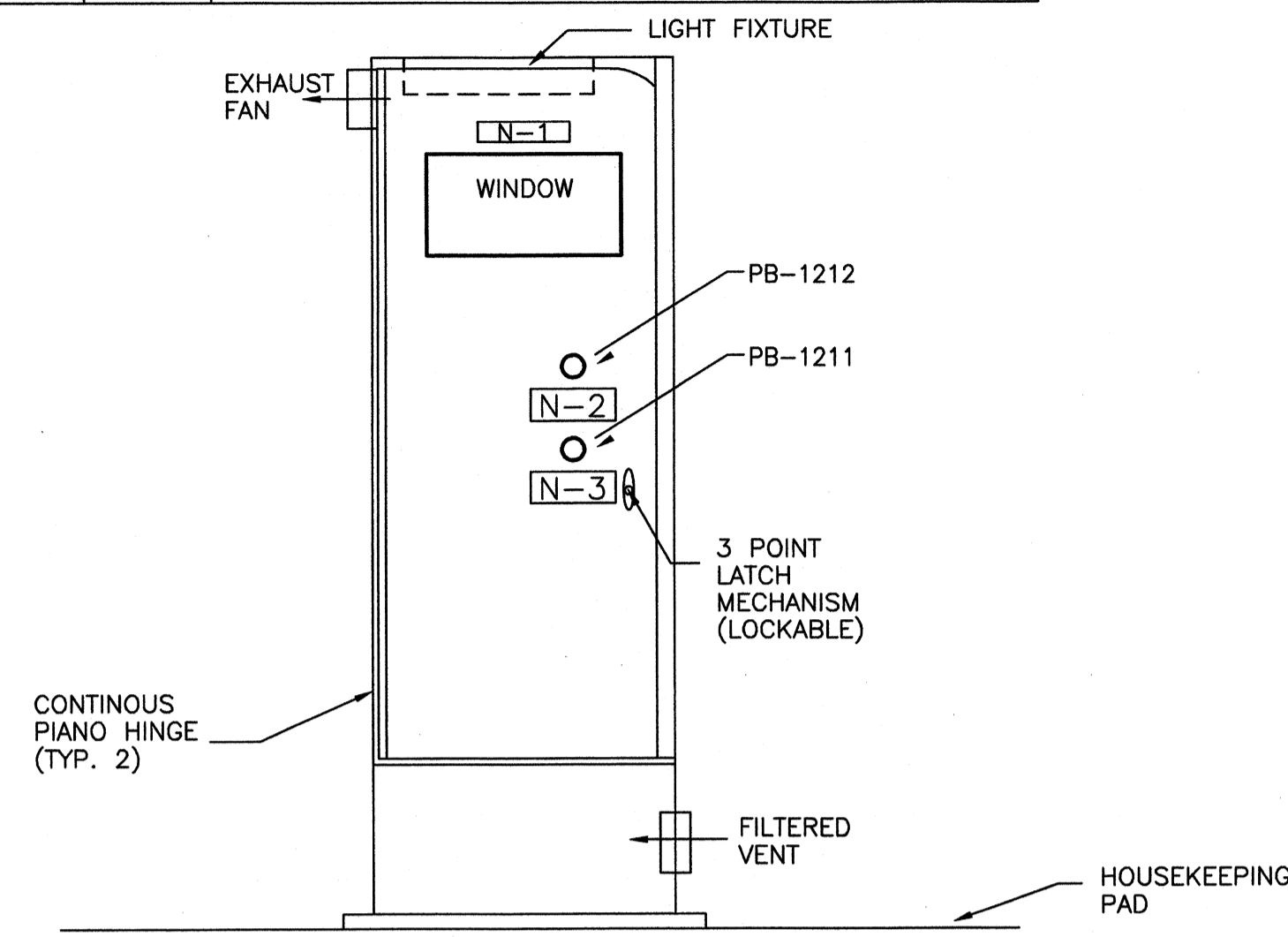
NETWORK LAYOUT

Project No.:	120-07060
Designed By:	WAP/CSW
Drawn By:	CSW
Checked By:	LDC

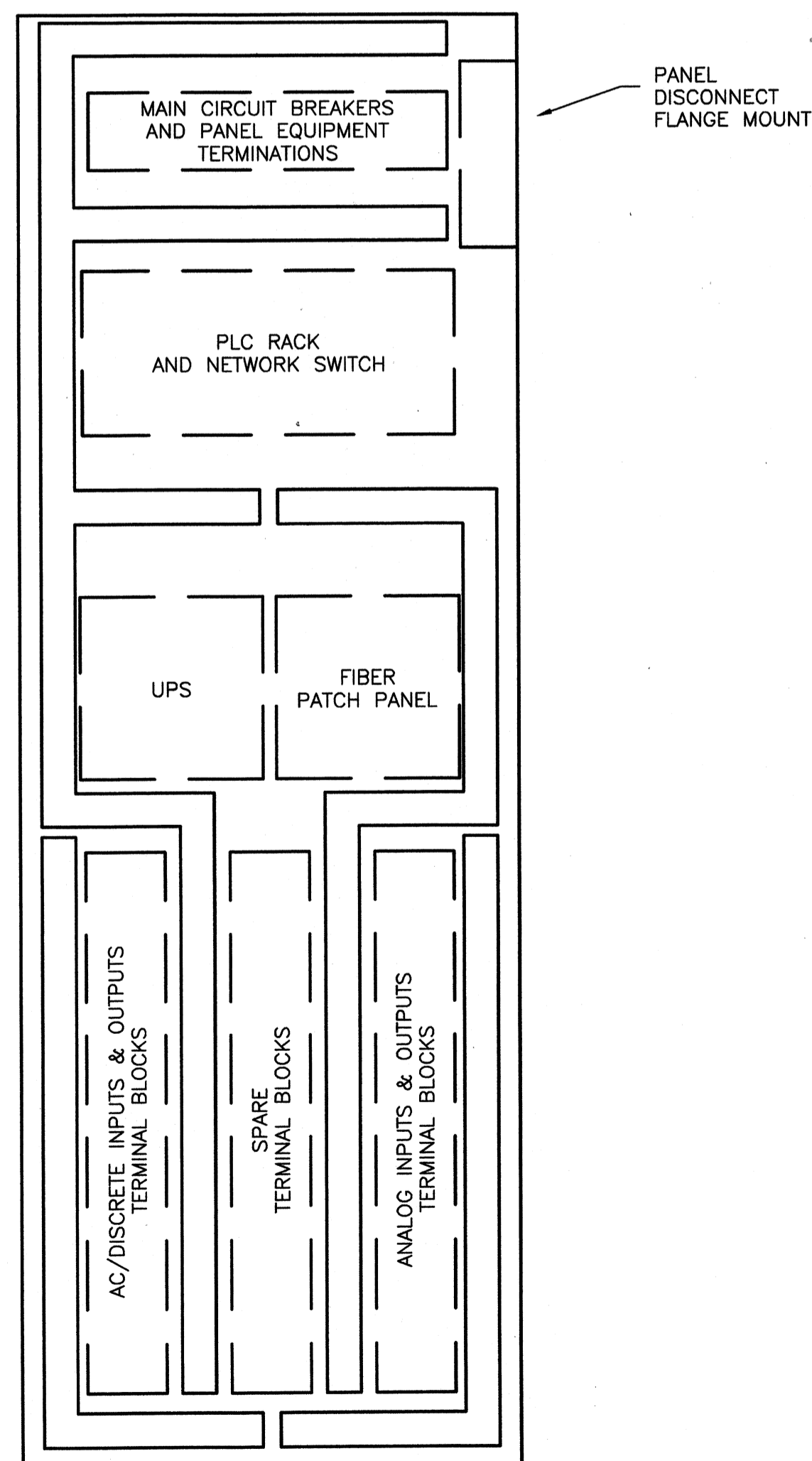
E-702

Copyright: Tetra Tech

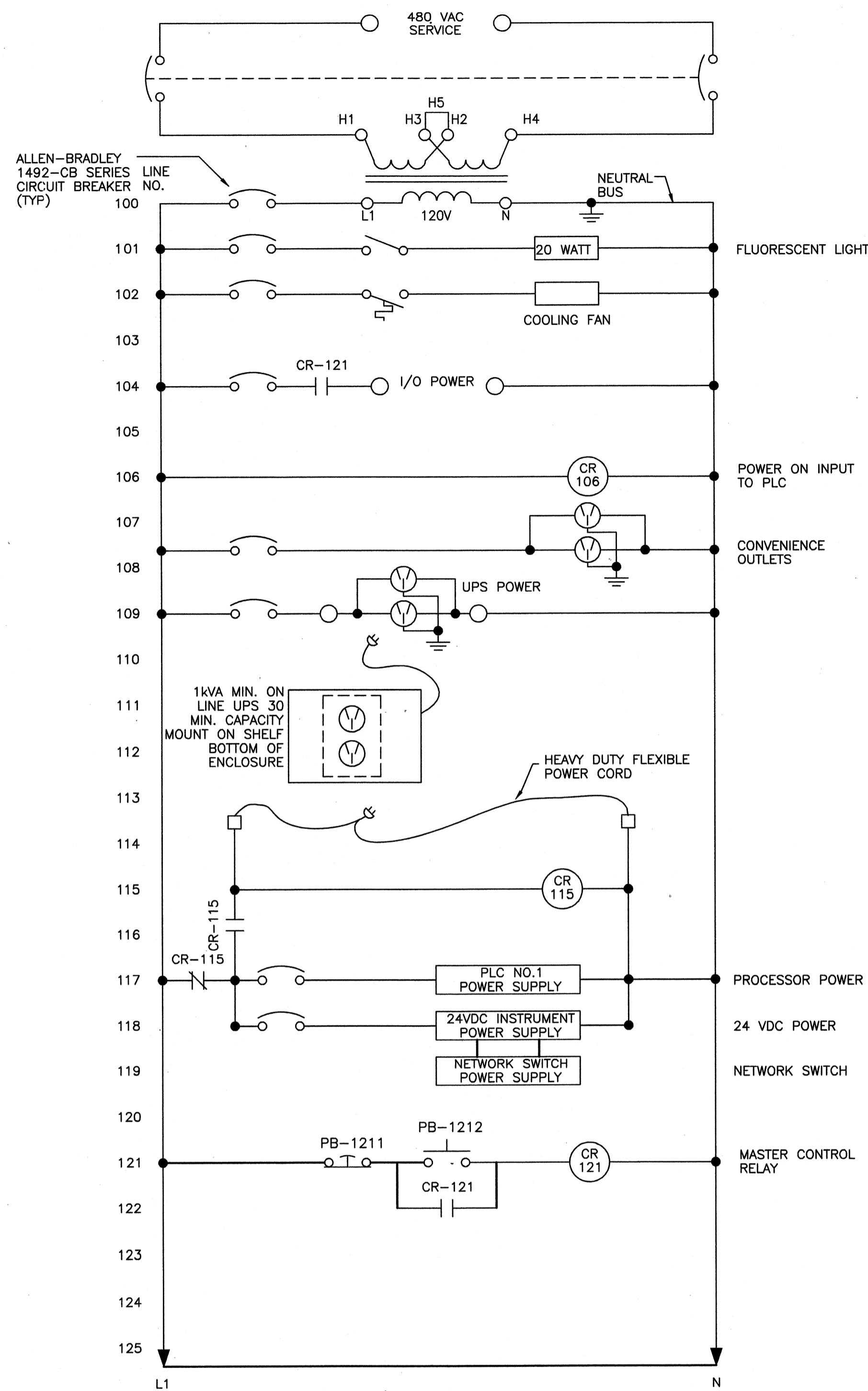
NAMEPLATE LEGEND			
QTY.	NO.	LETTER HEIGHT	NOMENCLATURE
1	N-1	3/8"	MCC BUILDING MAIN I/O PANEL (MCCMP)
1	N-2	3/8"	ENERGIZE I/O
1	N-3	3/8"	DE-ENERGIZE I/O



MCC BUILDING MAIN PANEL (MCCMP)
OUTSIDE I/O PANEL LAYOUT
NEMA 12 (NOT TO SCALE)



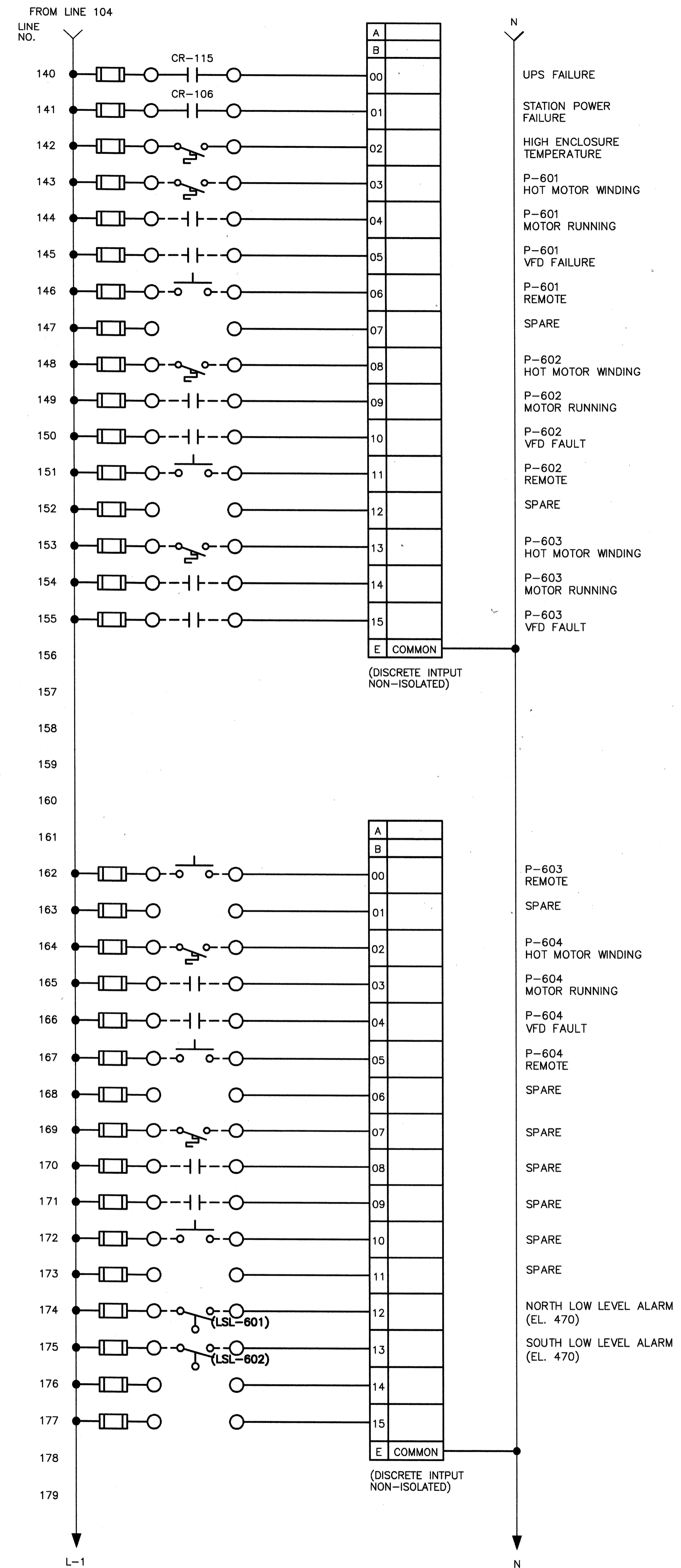
MCC BUILDING MAIN PANEL (MCCMP)
INSIDE I/O PANEL LAYOUT
NEMA 12 (NOT TO SCALE)



MCCMP I/O PANEL LAYOUT
120V AC

1769-L32E W/ COMPACT FLASH	1769-IA16 (DISCRETE INPUT)	1769-IA16 (DISCRETE INPUT)	1769-IA16 (DISCRETE INPUT)	1769-PA2 (POWER SUPPLY)	1769-OB8 (DISCRETE OUTPUT)	1769-IF4I (ANALOG INPUT)	1769-IF4I (ANALOG INPUT)	1769-IF4I (ANALOG INPUT)	1769-OF4CI (ANALOG OUTPUT)	1769-OF4CI (ANALOG OUTPUT)
----------------------------	----------------------------	----------------------------	----------------------------	-------------------------	----------------------------	--------------------------	--------------------------	--------------------------	----------------------------	----------------------------

MCCMP I/O PLC LAYOUT
(NOT TO SCALE)



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PROJECT RECORD
SEE INSTRUMENTATION MANUAL FOR MORE DETAILS

CONFORMED SET 5/09
STATE OF KENTUCKY
LICENSED PROFESSIONAL ENGINEER
No. 12070
7/15/2009

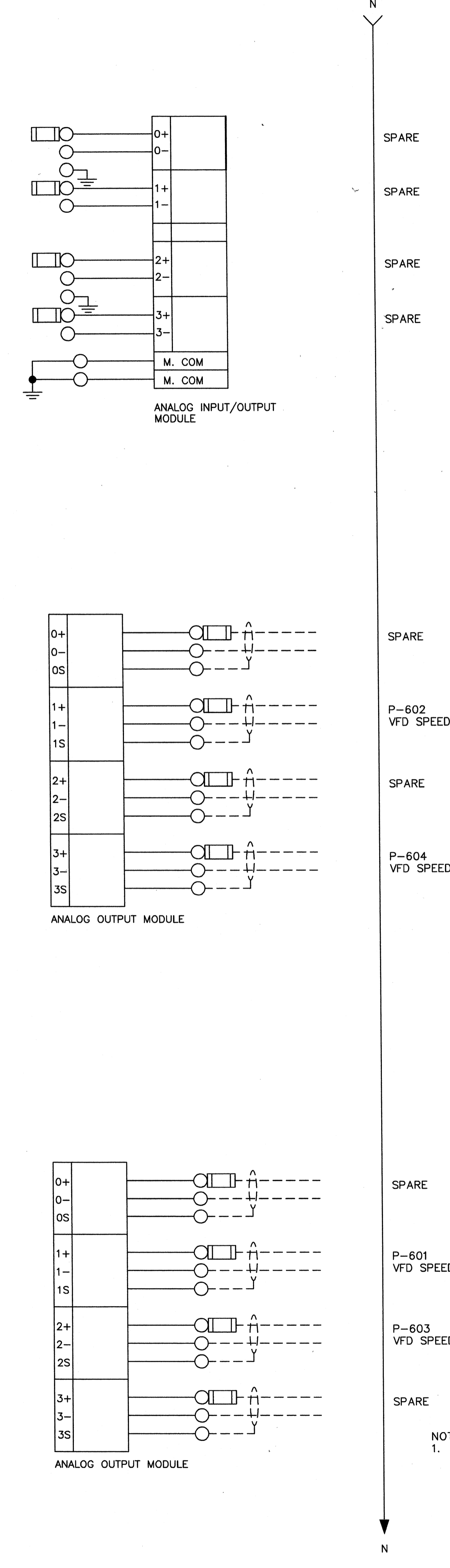
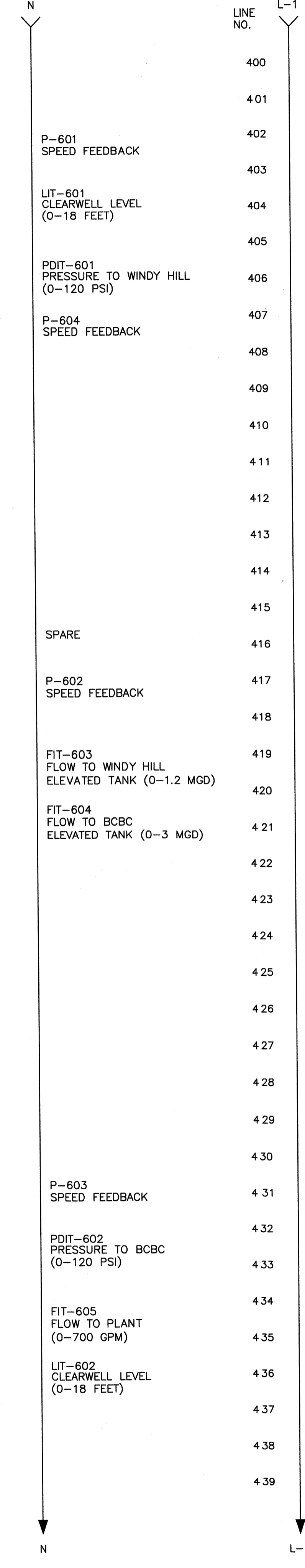
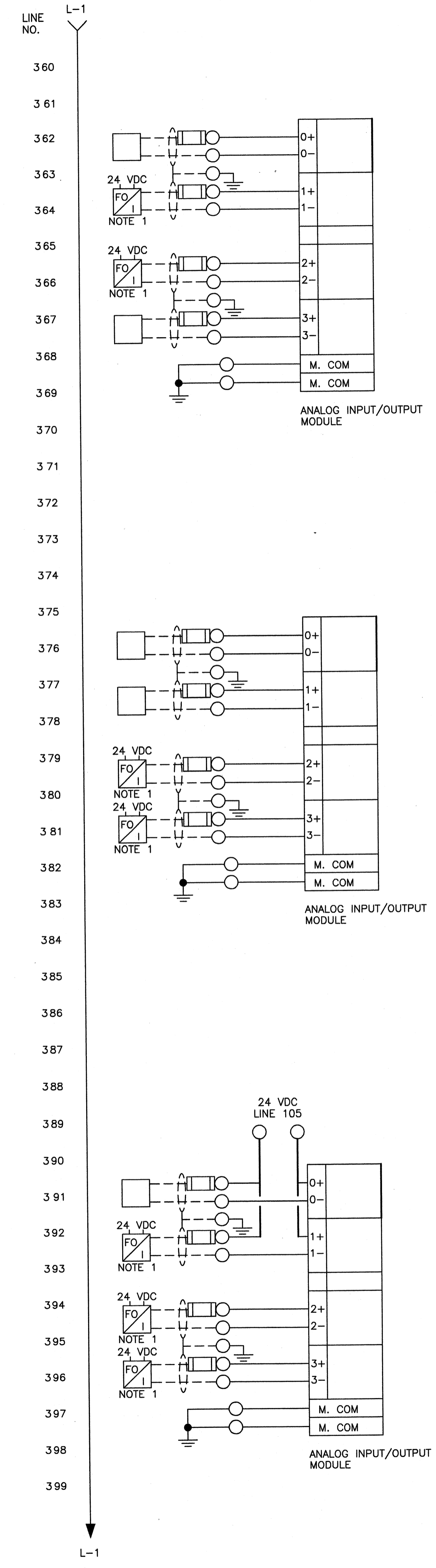
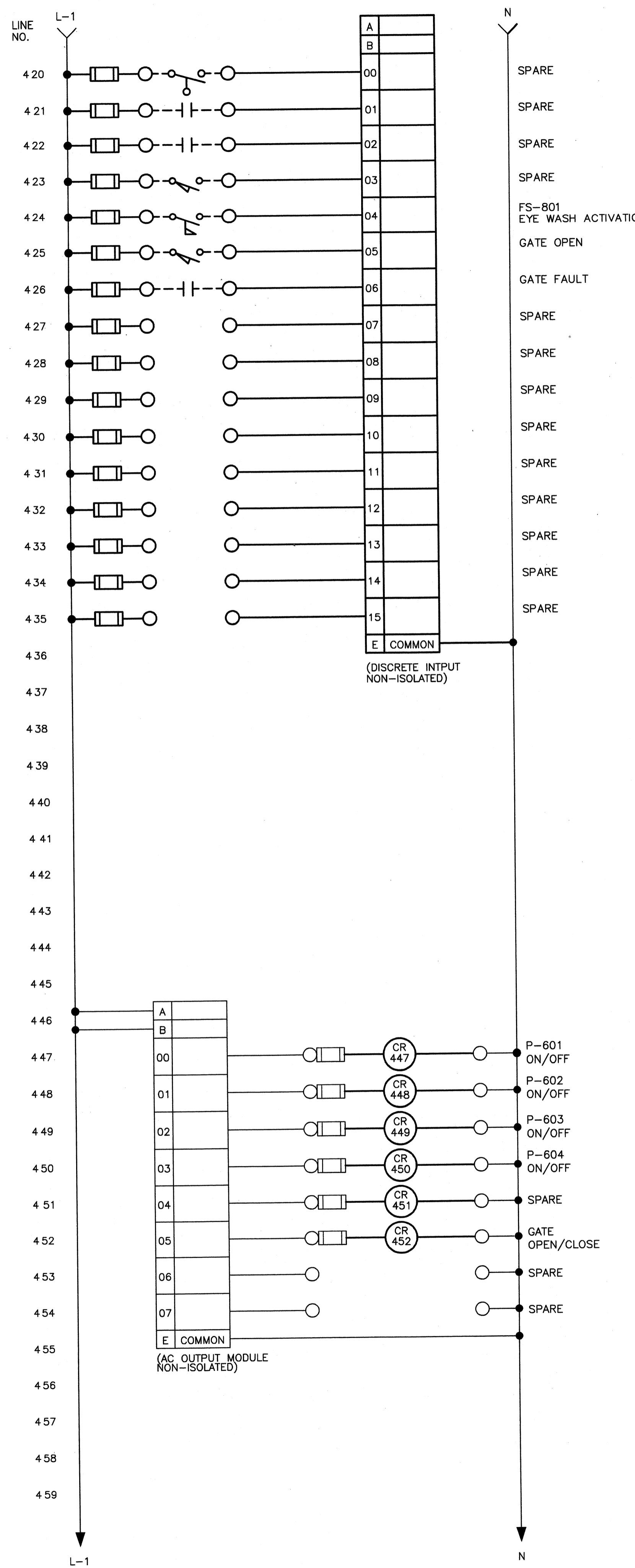
BY	DATE	DESCRIPTION

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

Project No.:	120-07080
Designed By:	WAP/CSW
Drawn By:	CSW
Checked By:	LDC

E-800

Wednesday, July 15, 2009 3:51:23 PM DRAWING: \\herofiles3\projects\120-07080 Ohio County\CONFORMED SET 5-09\ELECTRICAL\07080 E-801 CP-MCCMP-2.DWG LAYOUT: E-801 CP-MCCMP-2 USER NAME: JEREMY M. FRONCILLO



NOTES:
 1. SUPPLY WEED INSTRUMENTS EO TEC 2000 MODEL 2R14 FOR PANEL AND MODEL 2T14 IN NEMA 4, S.S. BOX FOR FIELD MOUNTING. PROVIDE 24 POWER, FIBER TERMINATION, AND COPPER TERMINALS.

TETRA TECH

PROJECT RECORD
SEE INSTRUMENTATION MANUAL FOR MORE DETAILS

CONFORMED SET 5/09

OHIO COUNTY WATER DISTRICT
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: CROMWELL, OHIO COUNTY, KY
 Project No.: 120-07080
 Designed By: WAP/CSW
 Drawn By: CSW
 Checked By: LDC

E-801

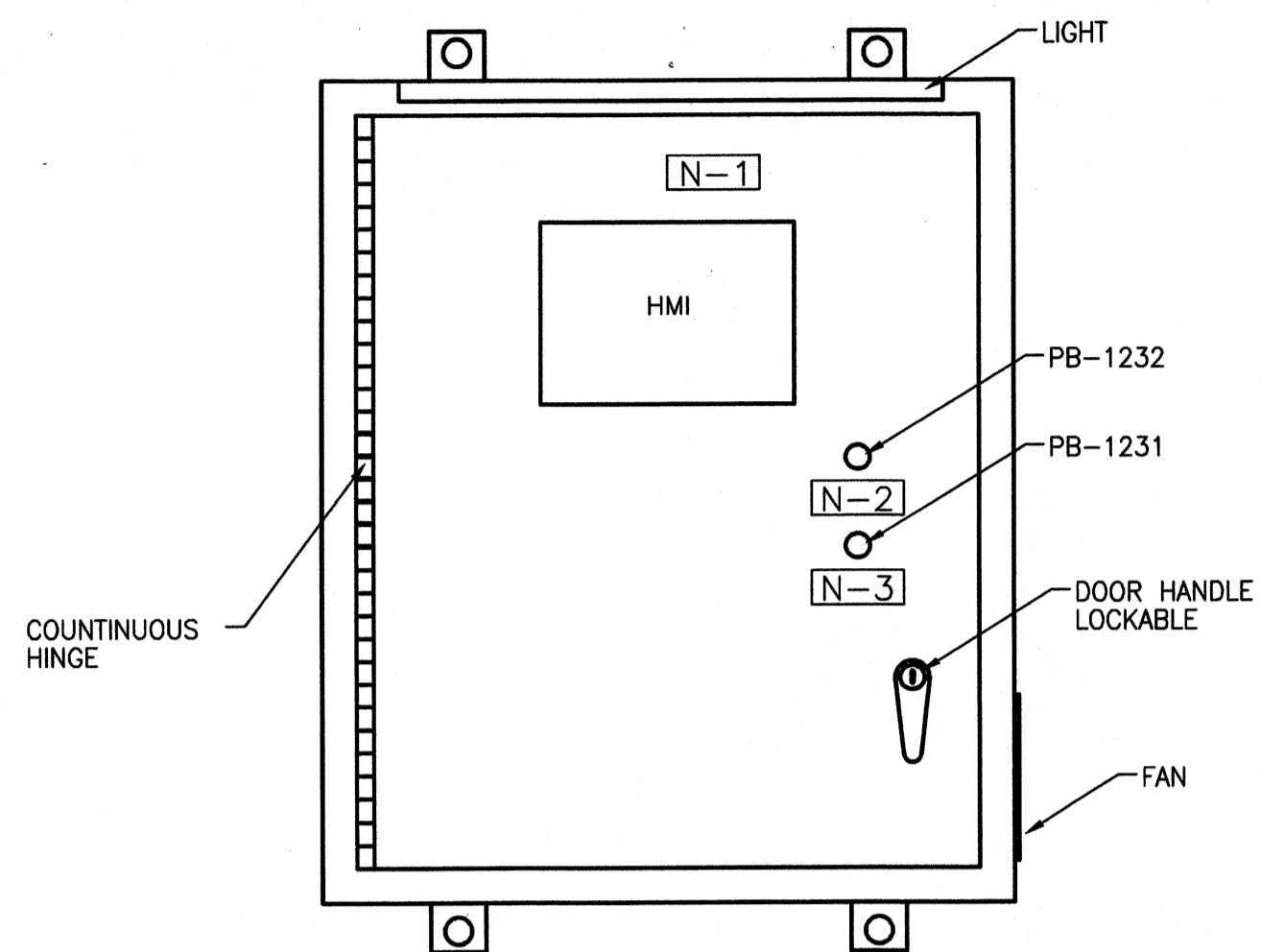
CP-MCCMP
PAGE 2

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Suite 200, Lexington, KY 40503
PHONE: (859) 223-9000 FAX: (859) 224-1025

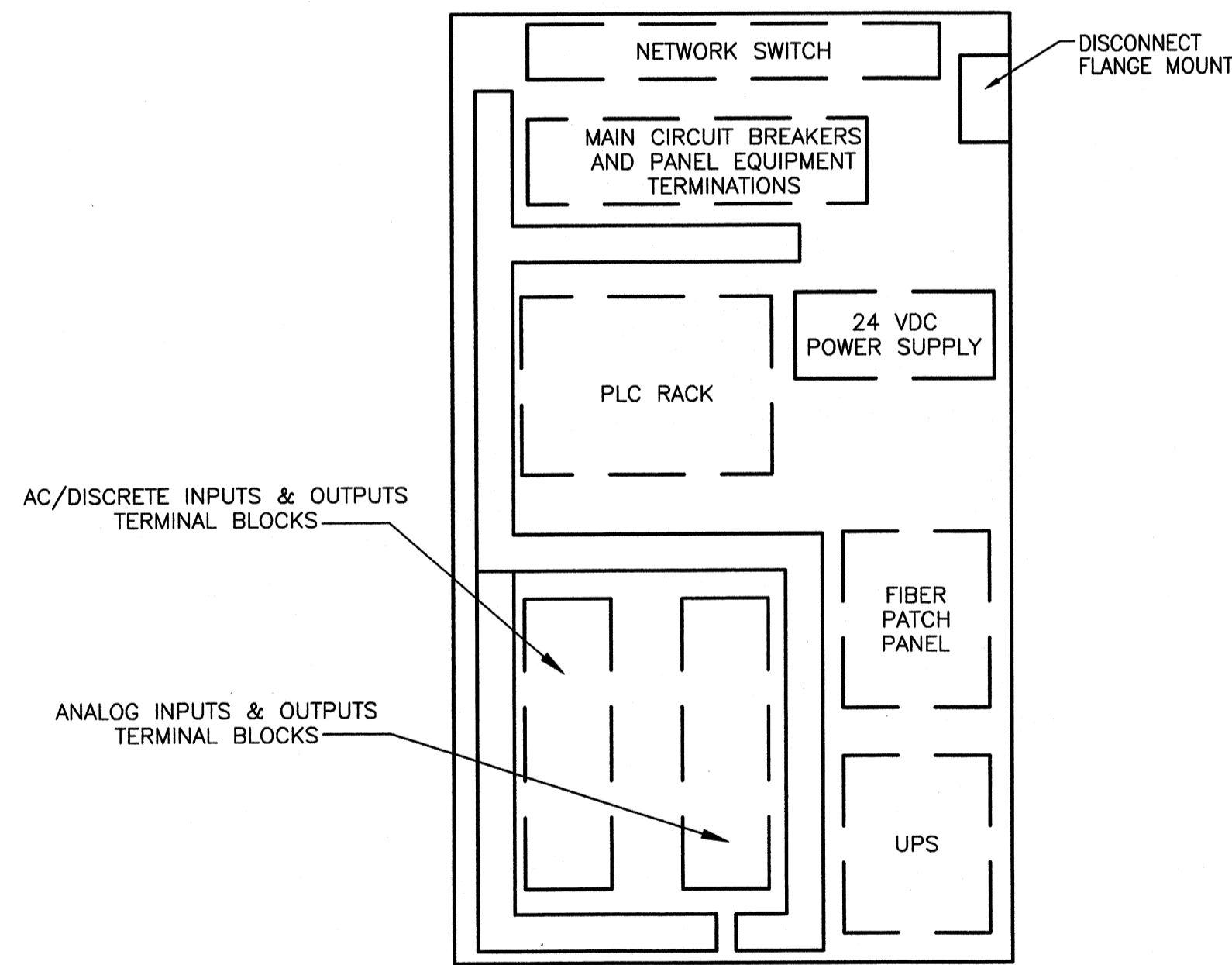
Copyright: Tetra Tech

Thursday, July 02, 2009 2:25:24 PM DRAWING: \\eroff3\projects\120-07060 Ohio County\CONFORMED SET 5-29\ELECTRICAL\07060 E-803 CP-RWBP-1.DWG LAYOUT: E-803 USER NAME: JEREMY M. FRONIGILLO

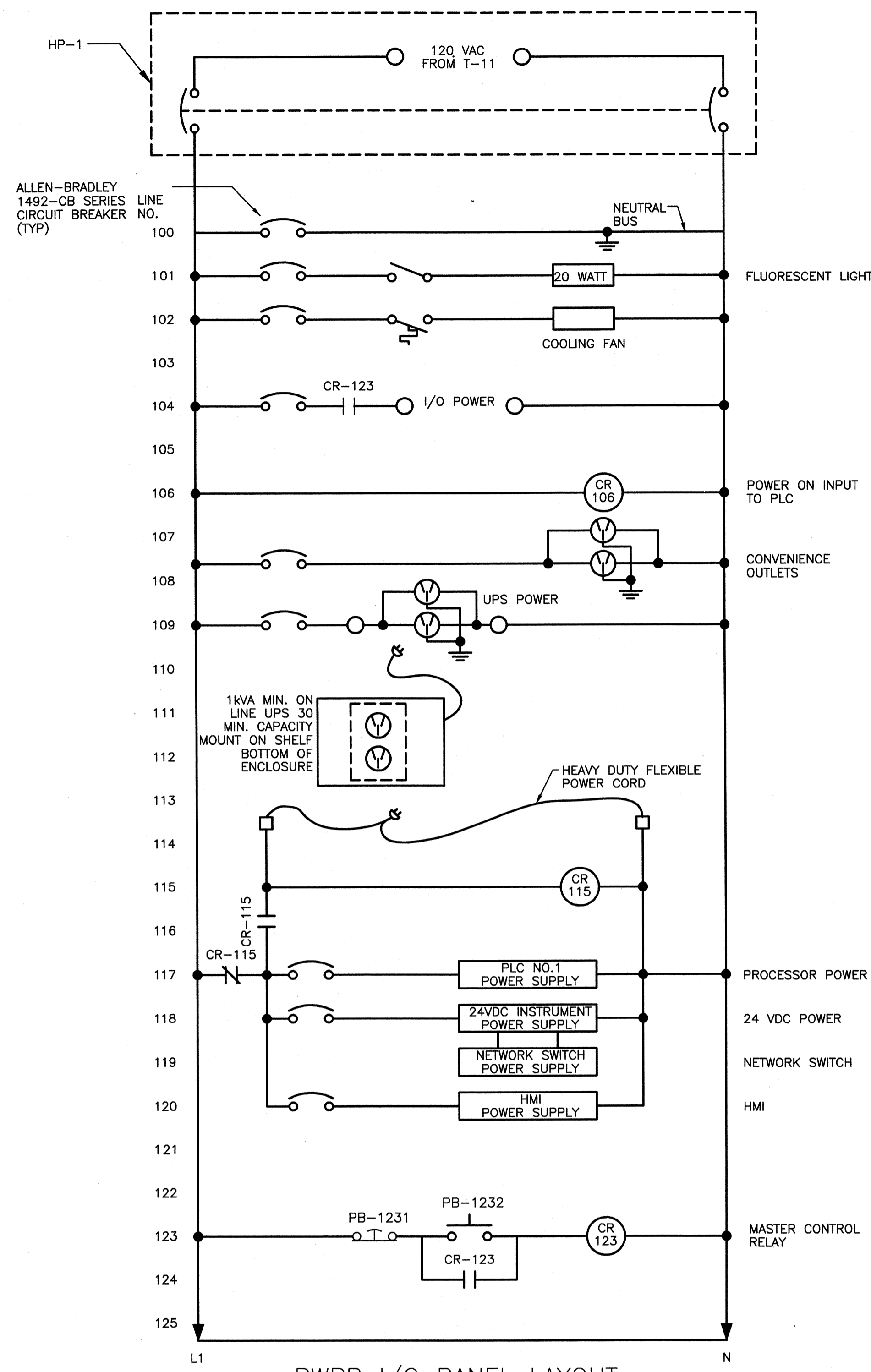
NAMEPLATE LEGEND			
QTY.	NO.	LETTER HEIGHT	NOMENCLATURE
1	N-1	3/8"	RAW WATER INTAKE BUILDING REMOTE I/O PANEL (RWBP)
1	N-2	3/8"	ENERGIZE I/O
1	N-3	3/8"	DE-ENERGIZE I/O



RAW WATER INTAKE BUILDING PANEL (RWBP)
OUTSIDE I/O PANEL LAYOUT
NEMA 12 (NOT TO SCALE)



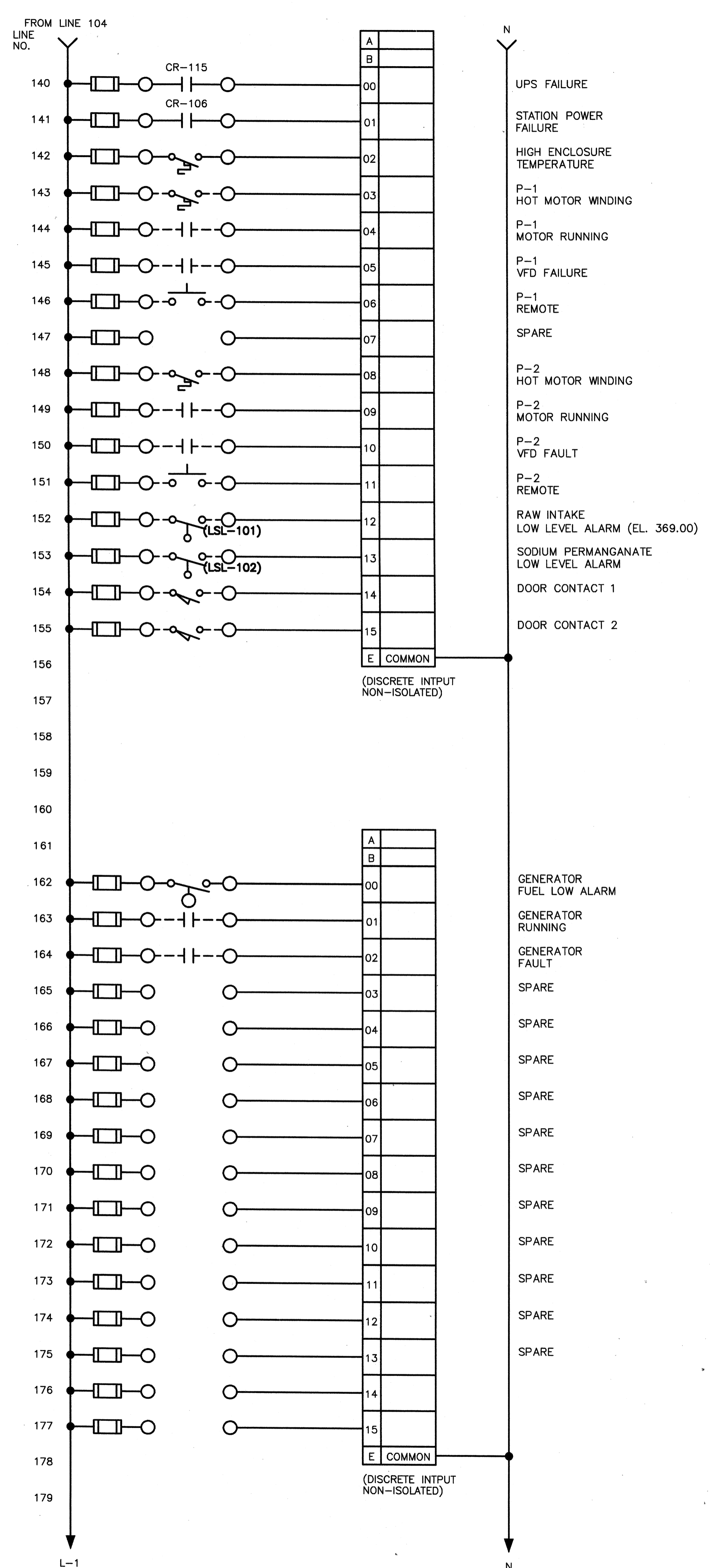
RAW WATER INTAKE BUILDING PANEL (RWBP)
INSIDE I/O PANEL LAYOUT
NEMA 12 (NOT TO SCALE)



RWBP I/O PANEL LAYOUT
120V AC

1769-L3ZE W/ COMPACT FLASH (DISCRETE INPUT)
1769-IA16 (DISCRETE INPUT)
1769-IA16 (DISCRETE INPUT)
1769-0A8 (DISCRETE OUTPUT)
1769-PA2 (POWER SUPPLY)
1769-IF4I (ANALOG INPUT)
1769-OF4CI (ANALOG OUTPUT)

RWBP I/O PLC LAYOUT
(NOT TO SCALE)



Client: OHIO COUNTY WATER DISTRICT Proj. Loc.: CROMWELL, OHIO COUNTY, KY

Ohio County Water District
Water Treatment Plant

Project No.: 120-07060
Designed By: WAP/CSW
Drawn By: CSW
Checked By: LDC

E-803

TETRA TECH

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PHONE: (609) 223-8000 FAX: (609) 224-1025

PROJECT RECORD
SEE INSTRUMENTATION MANUAL FOR MORE DETAILS

CONFORMED SET 5/09

BY: _____ DATE: _____

MARK: _____

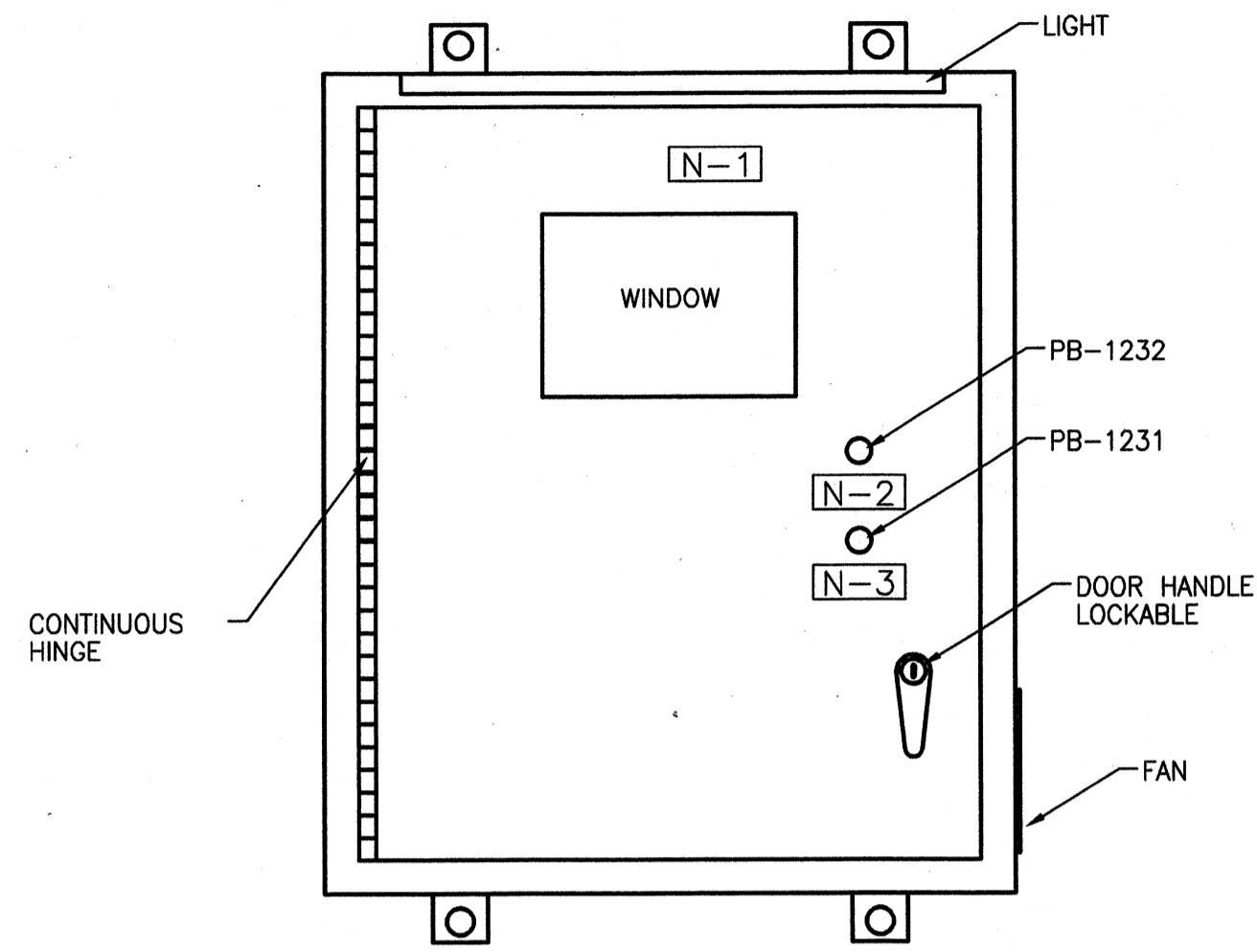
DESCRIPTION: _____

CP-RWBP
PAGE 1

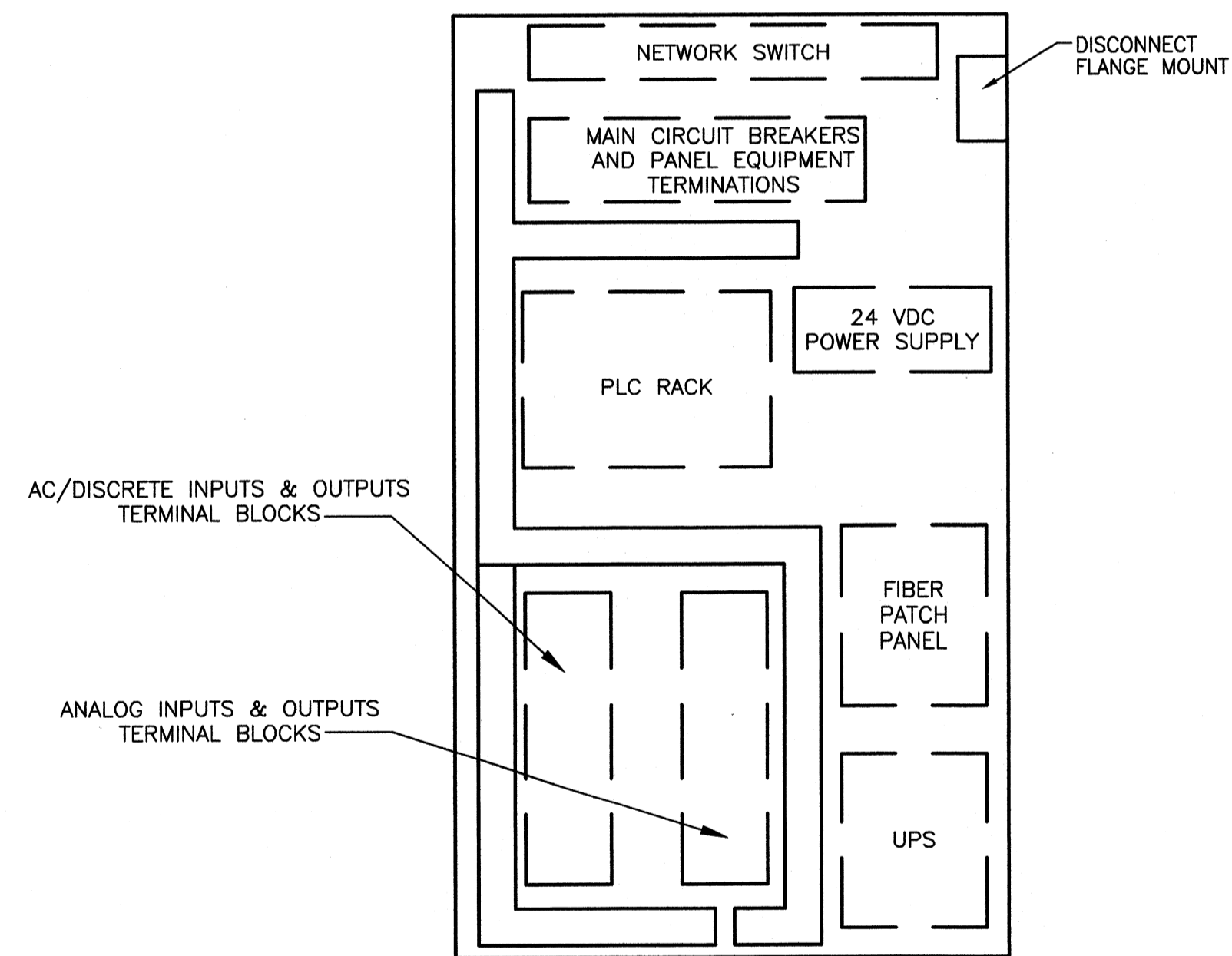
Copyright: Tetra Tech

Wednesday, July 15, 2009 3:51:57 PM DRAWING: \\eriffes3\projects\120-07060 Ohio County\CONFORMED\SET 5-09\ELECTRICAL\07060 E-807 CP-GACP-1.DWG LAYOUT: E-807 USER NAME: JEREMY M. FRONGILLO

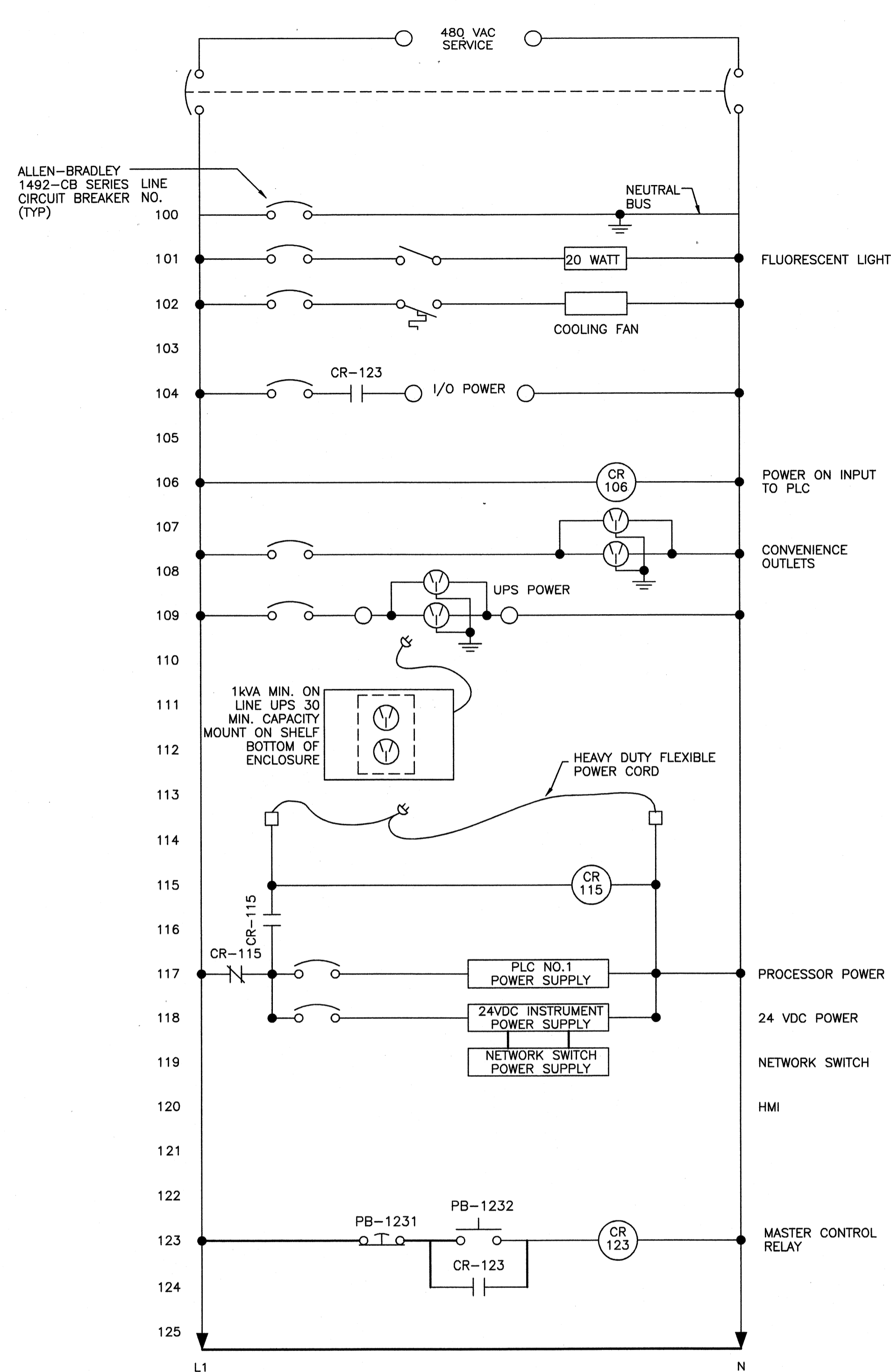
NAMEPLATE LEGEND			
QTY.	NO.	LETTER HEIGHT	NOMENCLATURE
1	N-1	3/8"	GAC PROCESS AREA I/O PANEL (GACP)
1	N-2	3/8"	ENERGIZE I/O
1	N-3	3/8"	DE-ENERGIZE I/O



GAC PROCESS AREA (GACP)
OUTSIDE I/O PANEL LAYOUT
NEMA 3R S.S (NOT TO SCALE)

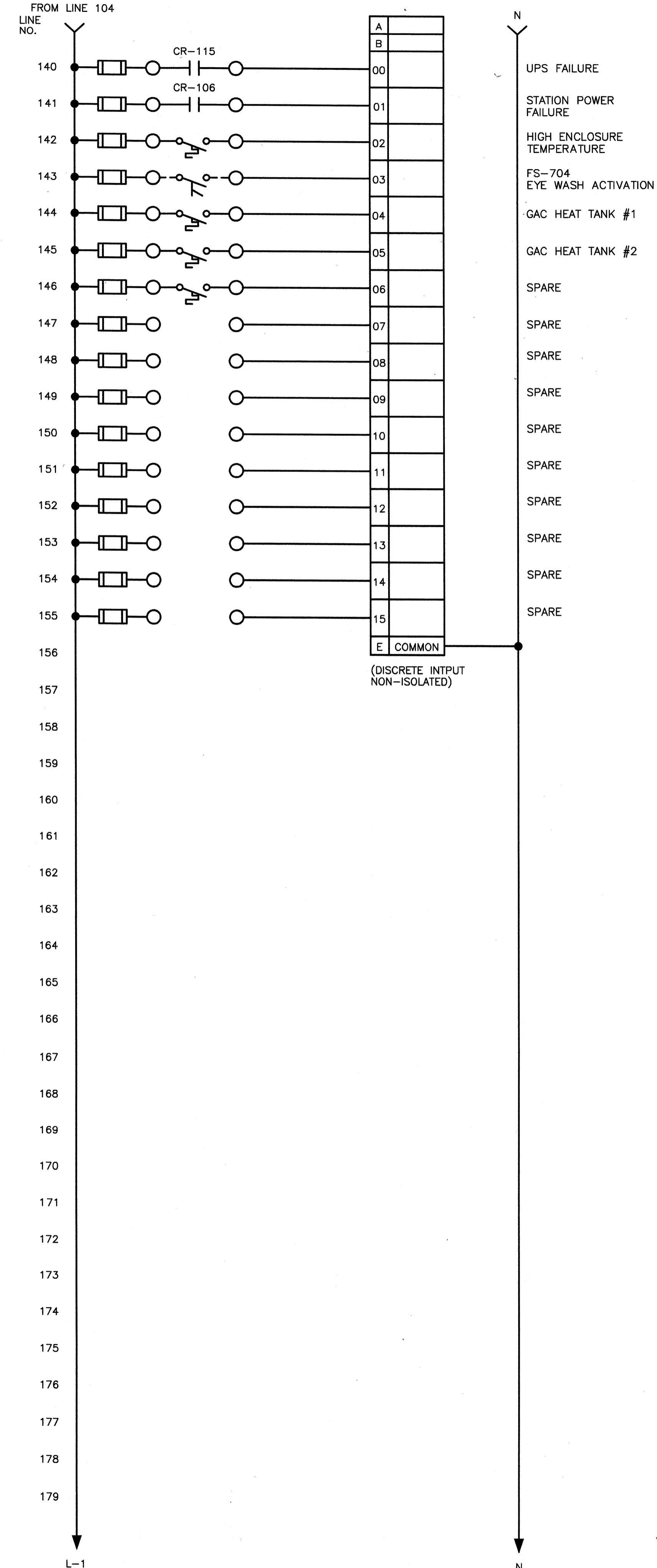


GAC PROCESS AREA (GACP)
INSIDE I/O PANEL LAYOUT
NEMA 4 (NOT TO SCALE)



1769-L32E W/ COMPACT FLASH
1769-A1E (DISCRETE INPUT)
1769-OA8 (DISCRETE OUTPUT)
1769-IF4I (ANALOG INPUT)
1769-PA2 (POWER SUPPLY)
1769-IF4I (ANALOG INPUT)
1769-IF4I (ANALOG INPUT)
1769-IF4I (ANALOG INPUT)
1769-OF4CI (ANALOG OUTPUT)

GACP I/O PLC LAYOUT
(NOT TO SCALE)



Client: OHIO COUNTY WATER DISTRICT
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

Project No.: 120-07060
Designed By: WAPICSW
Drawn By: CSW
Checked By: LDC

Project RECORD
SEE INSTRUMENTATION MANUAL FOR MORE DETAILS

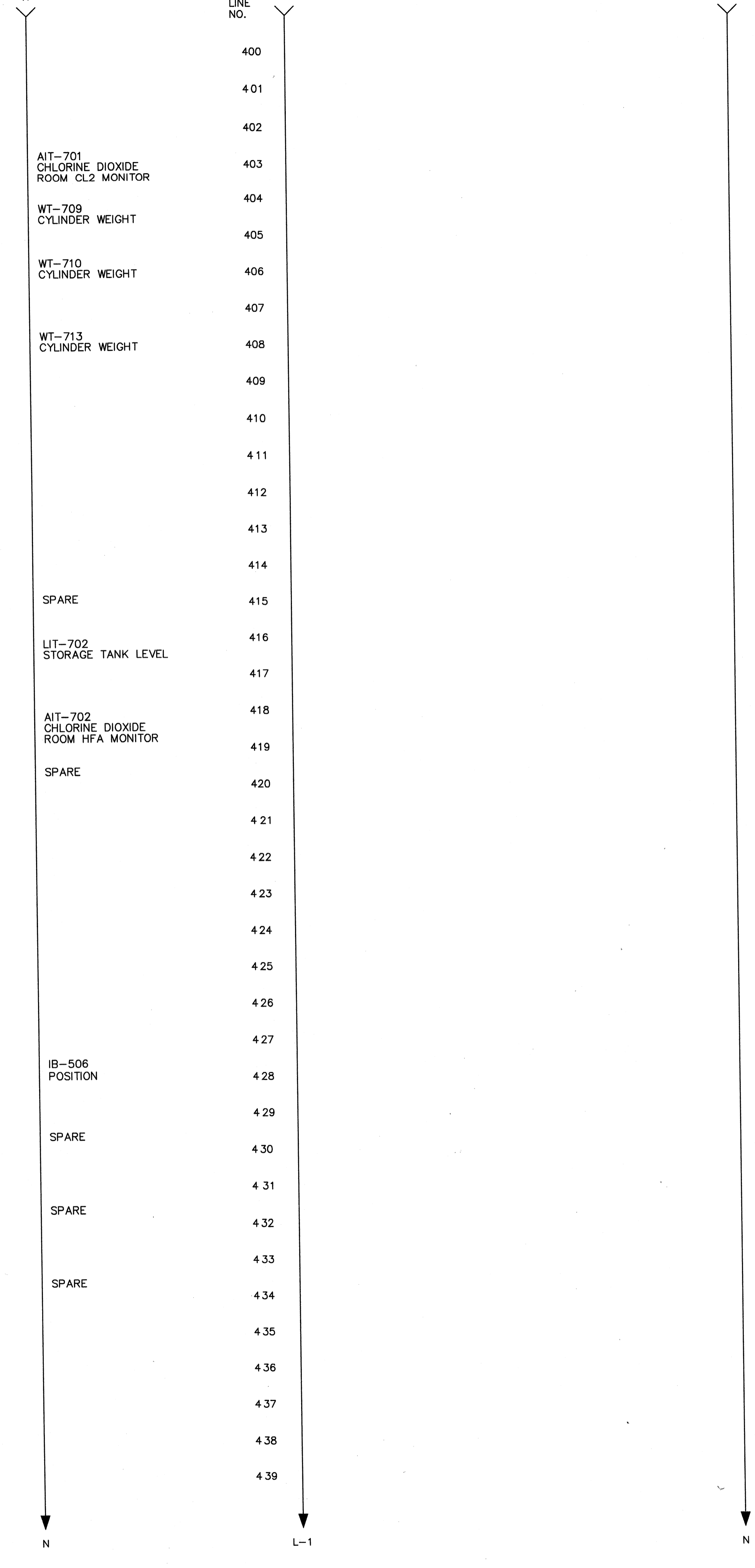
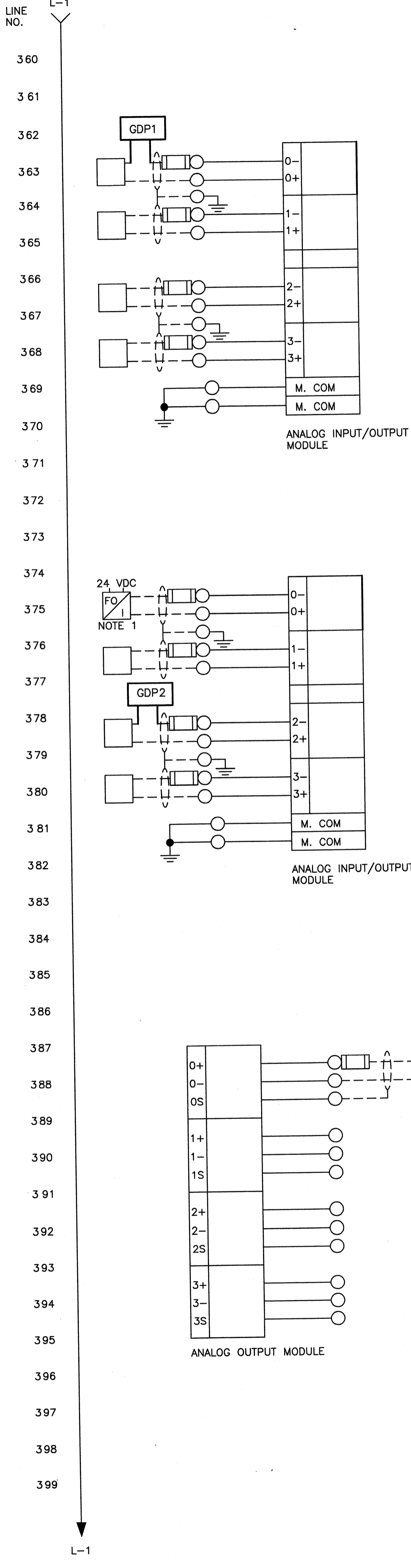
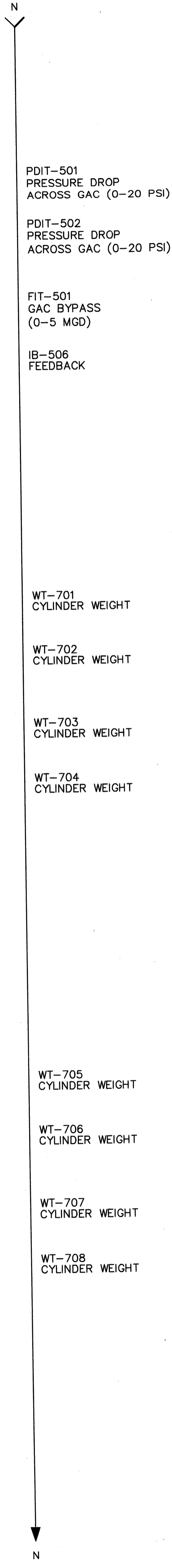
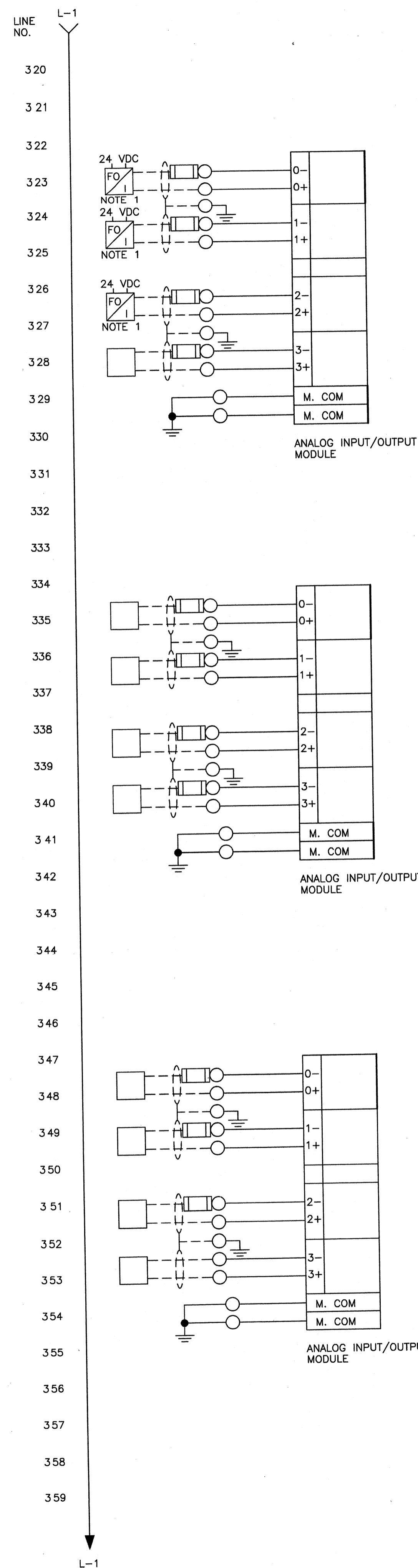
CONFORMED SET 5/09

E-807

CP-GACP
PAGE 1

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Tuesday, July 21, 2009 2:43:45 PM DRAWING: P:\120-07060 Ohio County Redesign\ORLANDO\CONFORMED\SET 5-09\ELECTRICAL\07060 E-808 CP-GACP-2 .DWG LAYOUT: E-808 USER NAME: JEREMY M. FRONGILLO



NOTES:
 1. SUPPLY WEED INSTRUMENTS EO TEC 2000 MODEL 2R14 FOR PANEL AND MODEL 2T14 IN NEMA 4, S.S. BOX FOR FIELD MOUNTING. PROVIDE 24 POWER, FIBER TERMINATION, AND COPPER TERMINALS.

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PROJECT RECORD
 SEE INSTRUMENTATION MANUAL FOR MORE DETAILS

CONFORMED SET 5/09

BY: _____ DATE: _____

DESCRIPTION: _____

MARK: _____

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROWMELL, OHIO COUNTY, KY

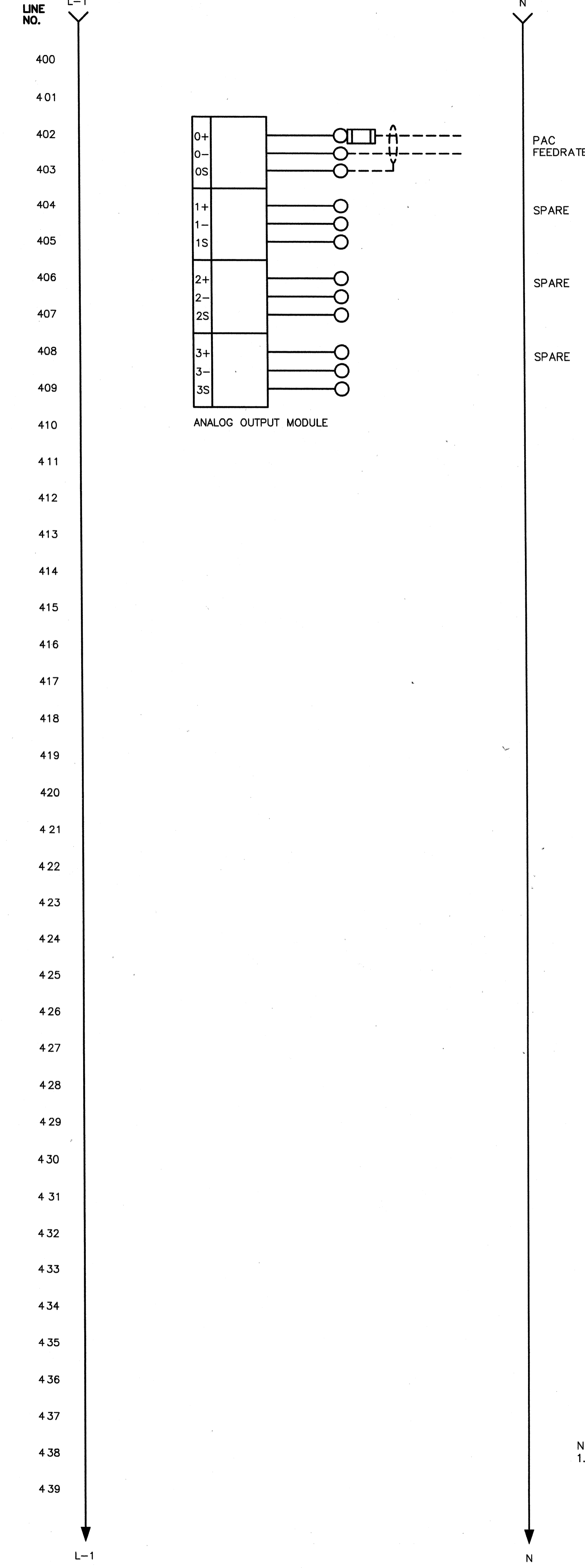
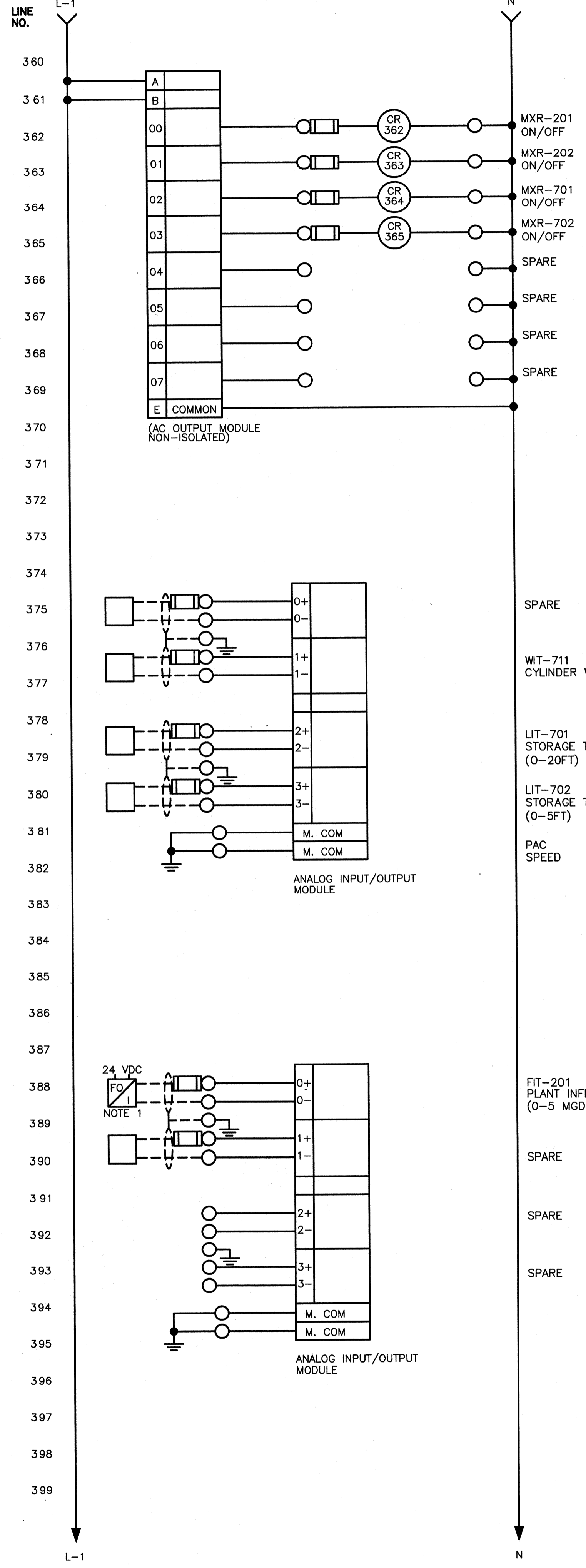
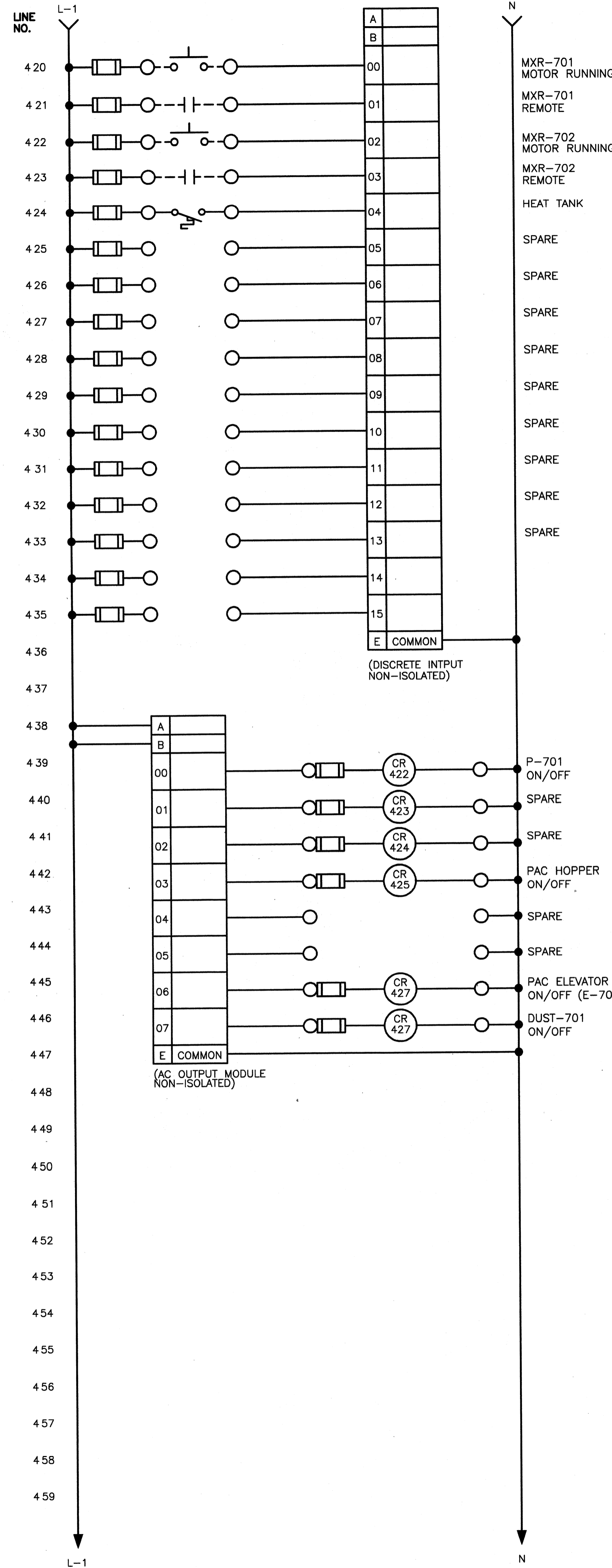
OHIO COUNTY WATER DISTRICT
 WATER TREATMENT PLANT

Project No.: 120-07060
 Designed By: WAP/CSW
 Drawn By: CSW
 Checked By: LDC

E-808

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Thursday, July 02, 2009 2:30:32 PM DRAWING: \\netorins3\projects\120-07060 Ohio County\CONFORMED SE 5-09\ELECTRICAL\07060 E-810 CP-CBMP-2.DWG LAYOUT: E-810 USER NAME: JEREMY M. FRONGILLO



NOTES:
1. SUPPLY WEED INSTRUMENTS EO TEC 2000 MODEL 2R14 FOR PANEL AND MODEL 2T14 IN NEMA 4, S.S. BOX FOR FIELD MOUNTING. PROVIDE 24 POWER, FIBER TERMINATION, AND COPPER TERMINALS.

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PROJECT RECORD
SEE INSTRUMENTATION MANUAL FOR MORE DETAILS

CONFORMED SET 5/09

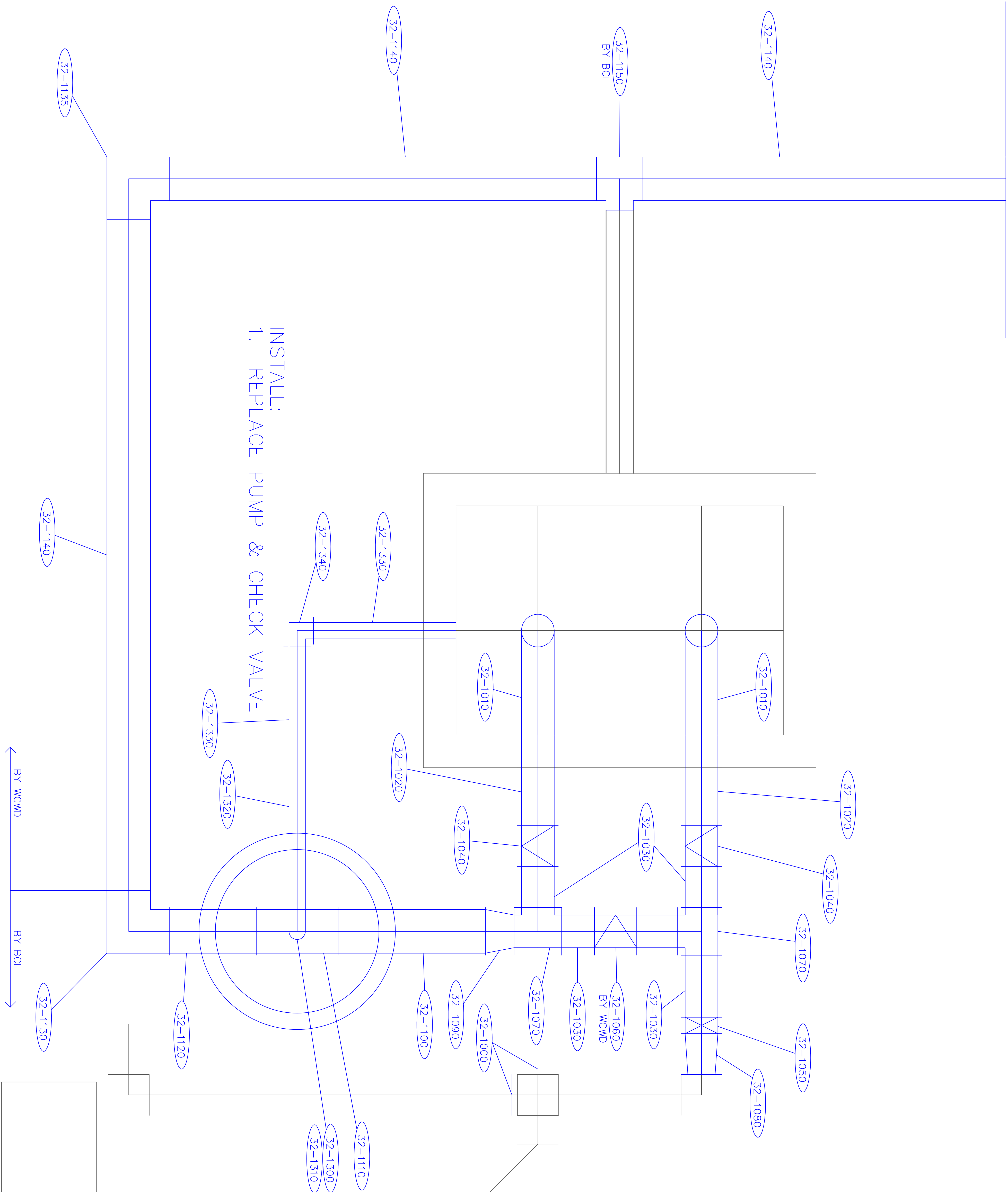
OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

CP-CBMP
PAGE 2

Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMWELL, OHIO COUNTY, KY | Project No.: 120-07060
Designed By: WAP/CSW
Drawn By: CSW
Checked By: LDC

E-810

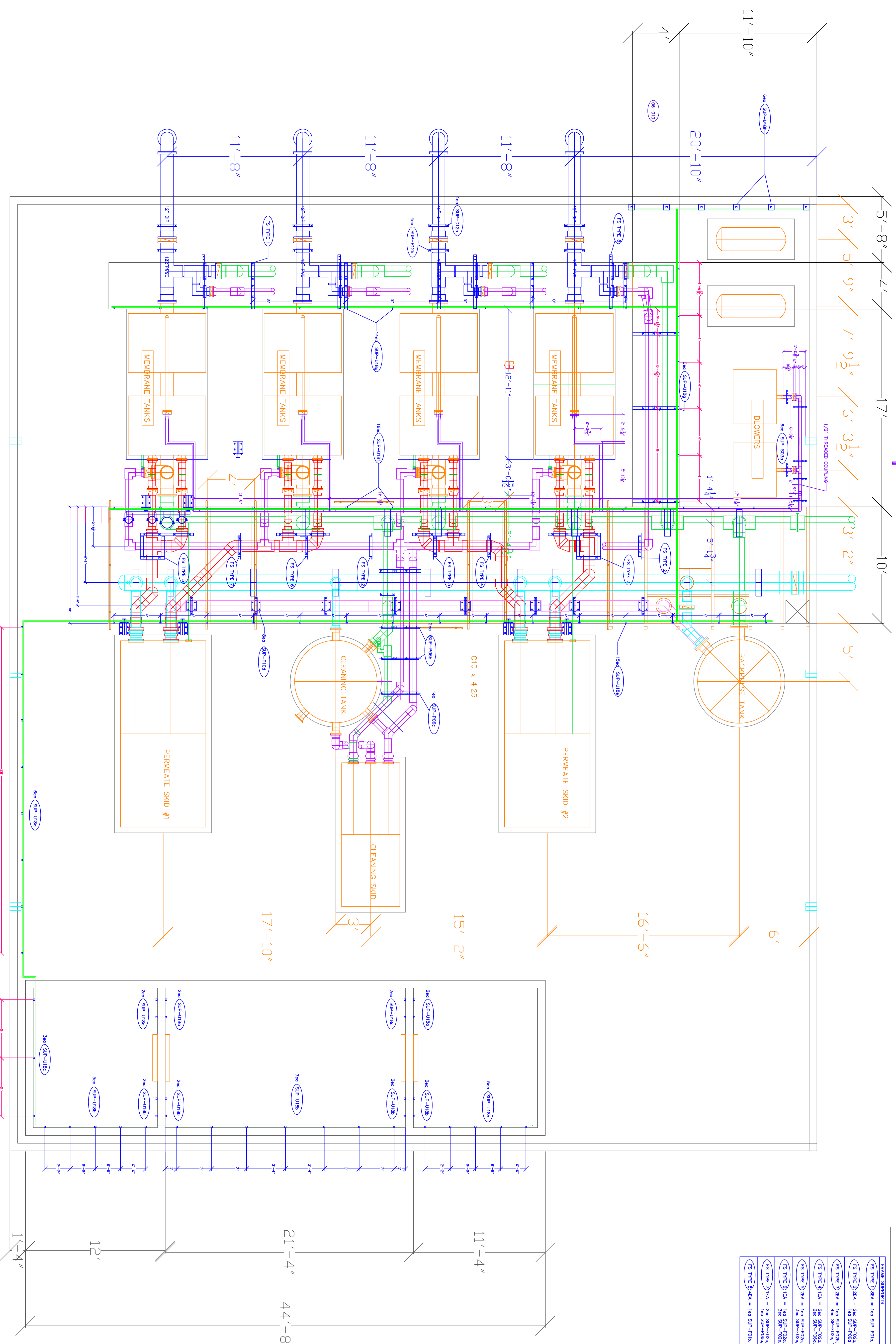
Copyright: Tetra Tech



INSTALL:
1. REPLACE PUMP & CHECK VALVE

RECORD DRAWING

OHIO COUNTY WATER TREATMENT PLANT	
R/WI PIPING PHASE 4	
DATE	08-18-2010
SCALE	IND SCALE
REV	

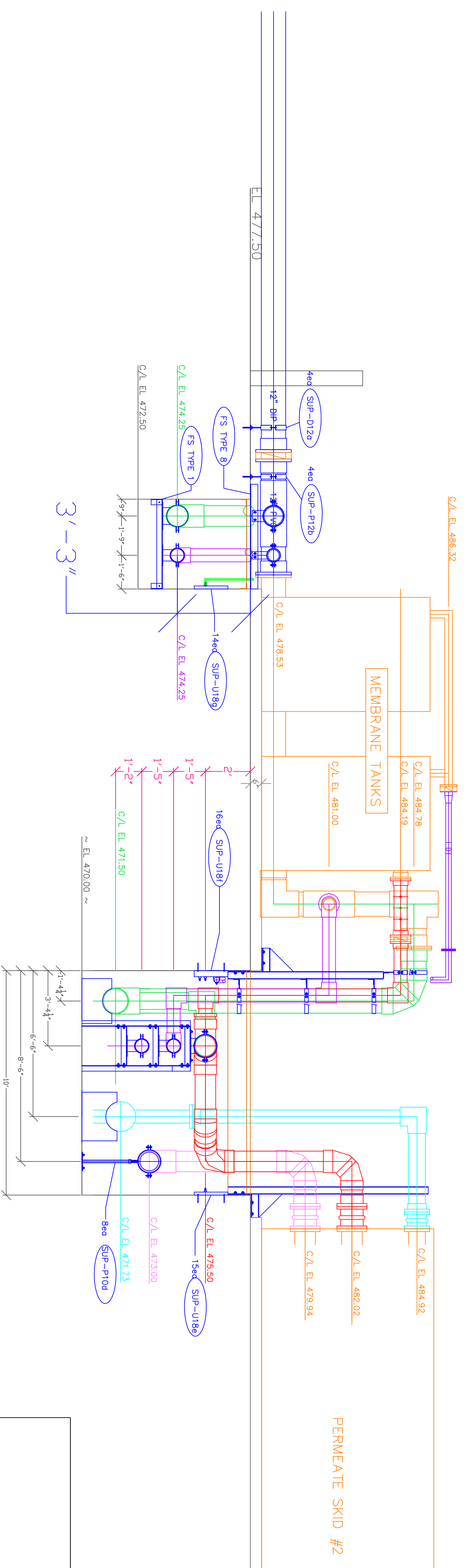
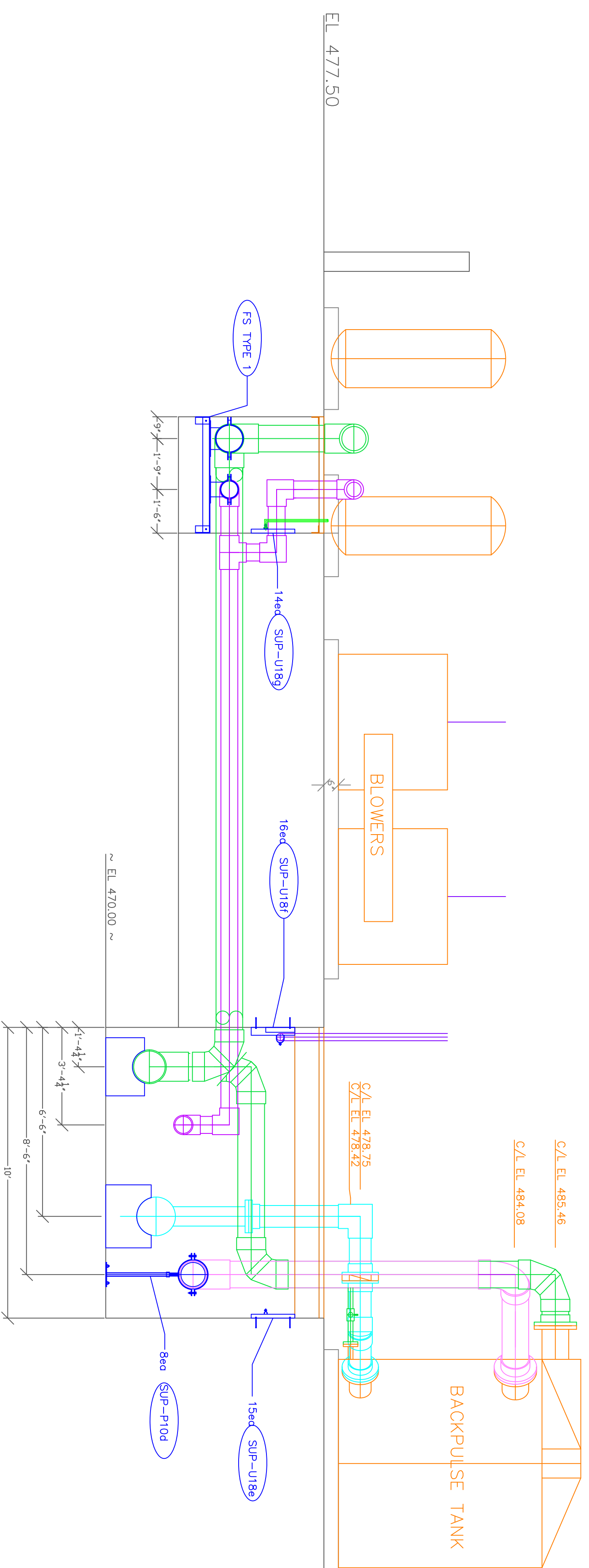


FRAME SUPPORTS

(S TYPE 1) 1KA = 1ea SUP-F01a, 1ea SUP-F06a, 1ea SUP-F10a
(S TYPE 2) 2KA = 2ea SUP-F02a, 2ea SUP-F04a, 2ea SUP-F08a, 1ea SUP-F12a
(S TYPE 3) 2KA = 2ea SUP-F02a, 2ea SUP-F04a, 2ea SUP-F08a, 1ea SUP-F12a
(S TYPE 4) 1KA = 1ea SUP-F02a, 1ea SUP-F04a, 1ea SUP-F08a, 1ea SUP-F12a
(S TYPE 5) 2KA = 2ea SUP-F02a, 2ea SUP-F04a, 2ea SUP-F08a, 1ea SUP-F12a
(S TYPE 6) 1KA = 1ea SUP-F02a, 1ea SUP-F04a, 1ea SUP-F08a, 1ea SUP-F12a
(S TYPE 7) 1KA = 1ea SUP-F02a, 1ea SUP-F04a, 1ea SUP-F08a, 1ea SUP-F12a
(S TYPE 8) 1KA = 1ea SUP-F02a, 1ea SUP-F04a, 1ea SUP-F08a, 1ea SUP-F12a
(S TYPE 9) 1KA = 1ea SUP-F02a, 1ea SUP-F04a, 1ea SUP-F08a, 1ea SUP-F12a
(S TYPE 10) 1KA = 1ea SUP-F02a, 1ea SUP-F04a, 1ea SUP-F08a, 1ea SUP-F12a
(S TYPE 11) 1KA = 1ea SUP-F02a, 1ea SUP-F04a, 1ea SUP-F08a, 1ea SUP-F12a
(S TYPE 12) 1KA = 1ea SUP-F02a, 1ea SUP-F04a, 1ea SUP-F08a, 1ea SUP-F12a
(S TYPE 13) 1KA = 1ea SUP-F02a, 1ea SUP-F04a, 1ea SUP-F08a, 1ea SUP-F12a
(S TYPE 14) 1KA = 1ea SUP-F02a, 1ea SUP-F04a, 1ea SUP-F08a, 1ea SUP-F12a
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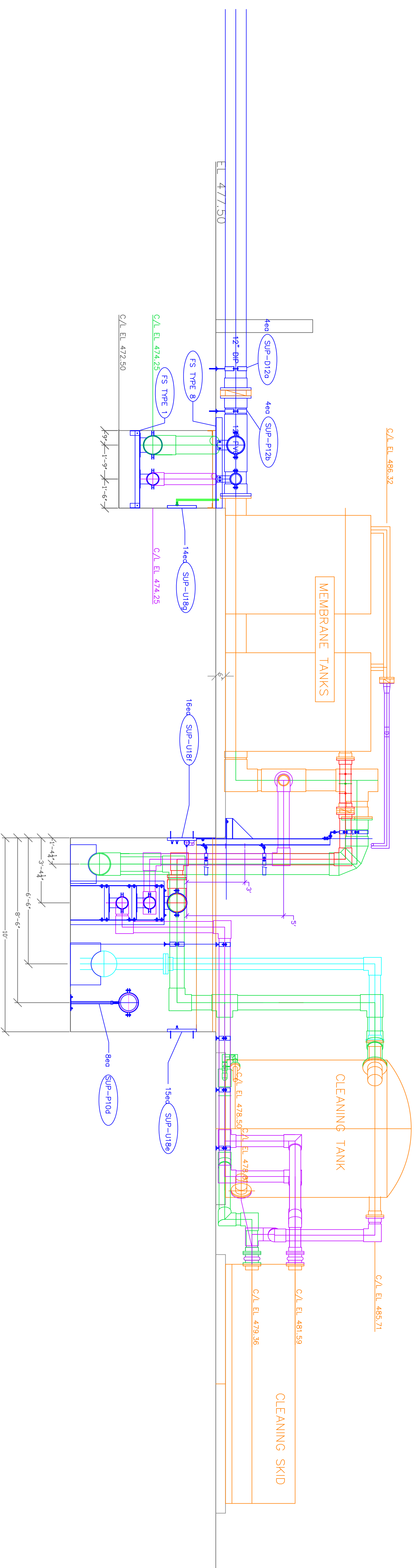
RECORD DRAWING

OHIO COUNTY WATER TREATMENT PLANT	
UF BUILDING PIPING	
REV 08-23-2011	
REV 12-06-2010	
REV 10-13-2010	
REV 09-30-2010	
REV 09-27-2010	
REV 09-24-2010	
DATE 09-10-2010	REV
SCALE 1/8" = 1'-0"	SHEET 01

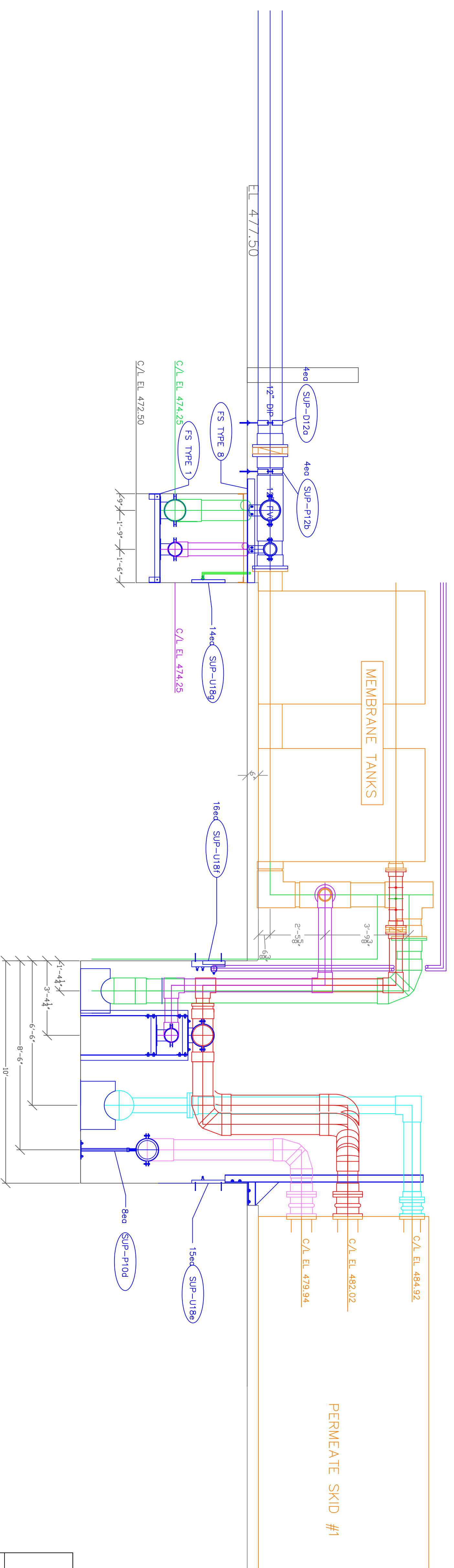


RECORD DRAWING

OHIO COUNTY WATER TREATMENT PLANT	
MEMBRANE / PIPE SECTION	
REV 10-13-2010	
REV 09-27-2010	
REV 09-24-2010	
SIZE / FSQM NO.	DATE
SCALE	REV
IND SCALE	SHEET 10



SECTION AT CIP TANK/SKID



SECTION AT MEMBRANE TANK TO PERM SKID #2

RECORD DRAWING

OHIO COUNTY WATER TREATMENT PLANT	
MEMBRANE / PIPE SECTION	
REV 12-06-2010	
REV 10-13-2010	
REV 09-27-2010	
REV 09-24-2010	
DATE	REV
SIZE / FROM NO.	
SCALE	SHEET 11

Thursday, December 03, 2009 10:18:28 AM DRAWING: C:\Orlando\leof\proj\PROJECTS\120-07060\Ohio County Redesign\ORLANDO\CONFORMED SET 5-09\ARCHITECTURAL\A-001 SCHEDULES.dwg LAYOUT: A-001 USER NAME: PETAJA, MATT

RECORD DRAWING

CONFORMED SET 5/09

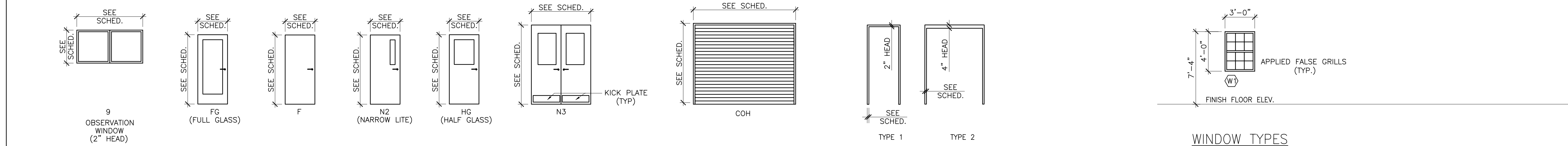


Table with columns: MARK, DATE, DESCRIPTION, BY. Entry: 11/11/09 KY HBC REVIEW 10-06-09

Client: OHIO COUNTY WATER DISTRICT
Project No.: 120-07060
OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT
Designd By: JQB
Drawn By: JQB
Checked By: MSP

Project No.: 120-07060
Designd By: JQB
Drawn By: JQB
Checked By: MSP

A-001
Sheet of 147



DOOR TYPES

FRAME TYPES

WINDOW TYPES

DOOR AND FRAME SCHEDULE

Table with columns: MARK, LOCATION, STRUCTURAL, DOOR, GLASS, FRAME, and REMARKS. Includes sections for UF BLDG (121), CHEMICAL FEED BLDGS (161), OPERATIONS BLDG (171), and OBSERVATION WINDOWS.

LEGEND: AL - ALUMINUM, COH - COILING OVERHEAD, EXT - EXTERIOR, F - FLUSH (SEE ELEVATION), FG - FULL GLASS (SEE ELEVATION), FRP - FIBERGLASS REINFORCED PLASTIC, etc.

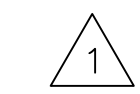
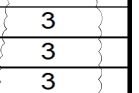
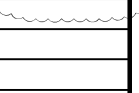
FINISH SCHEDULE

Table with columns: NO., ROOM NAME, FLOOR SUB/FIN, BASE SUB/FIN, N. WALL SUB/FIN, E. WALL SUB/FIN, S. WALL SUB/FIN, W. WALL SUB/FIN, CEILING SUB/FIN, HGT., SPECIAL CONDITIONS FLOOR, WALL, CLG., MISC.

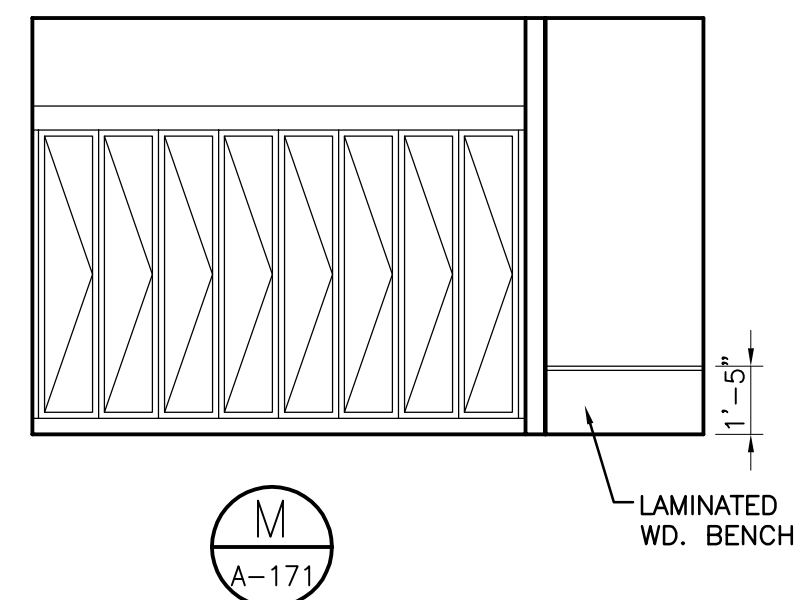
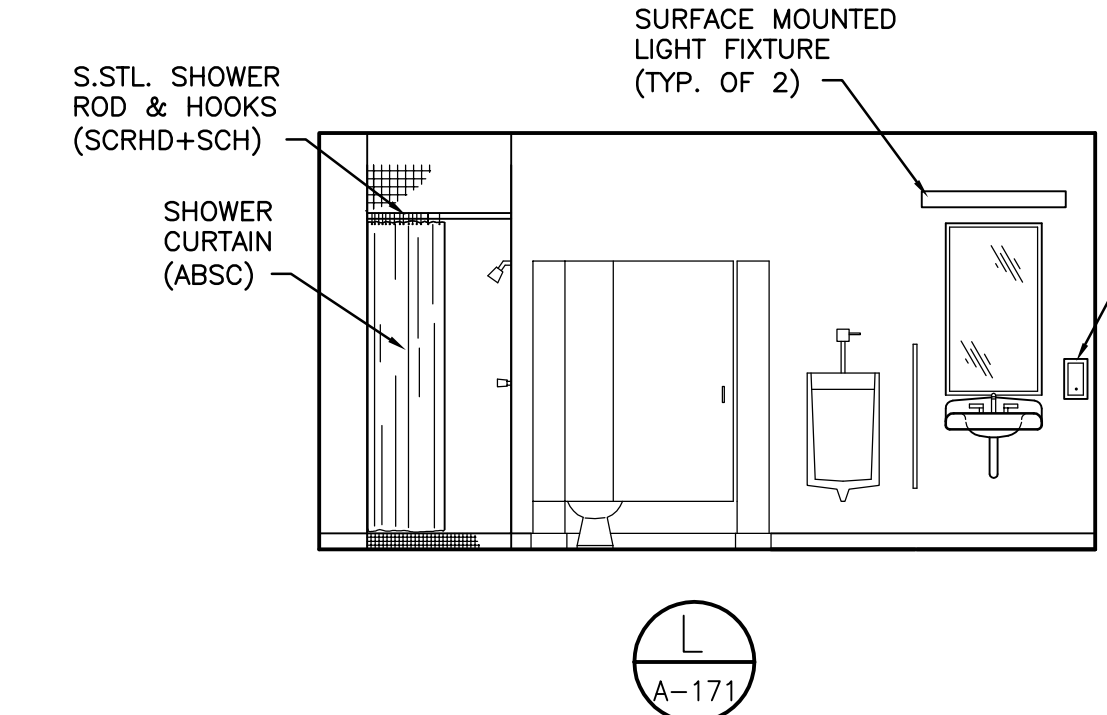
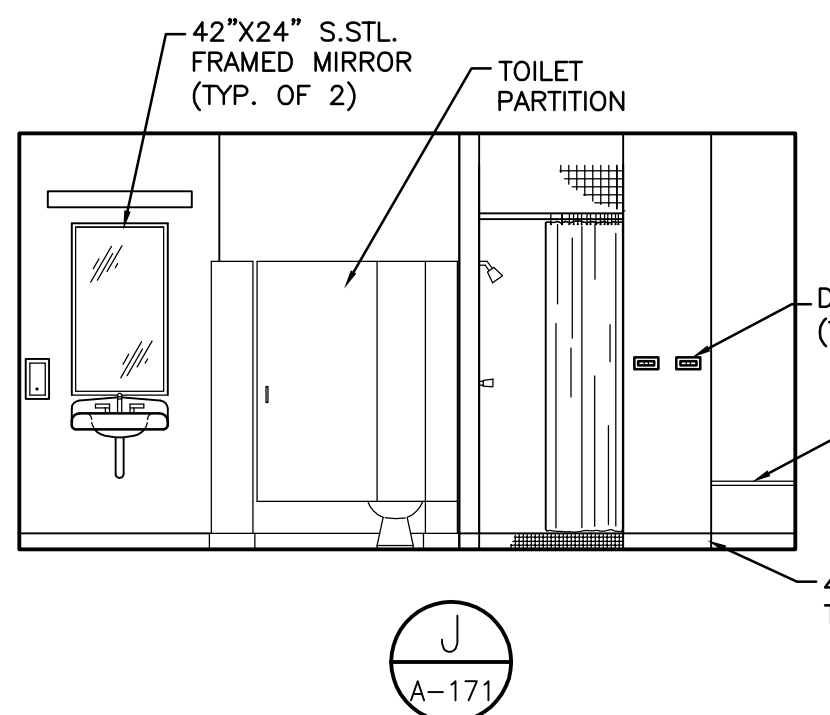
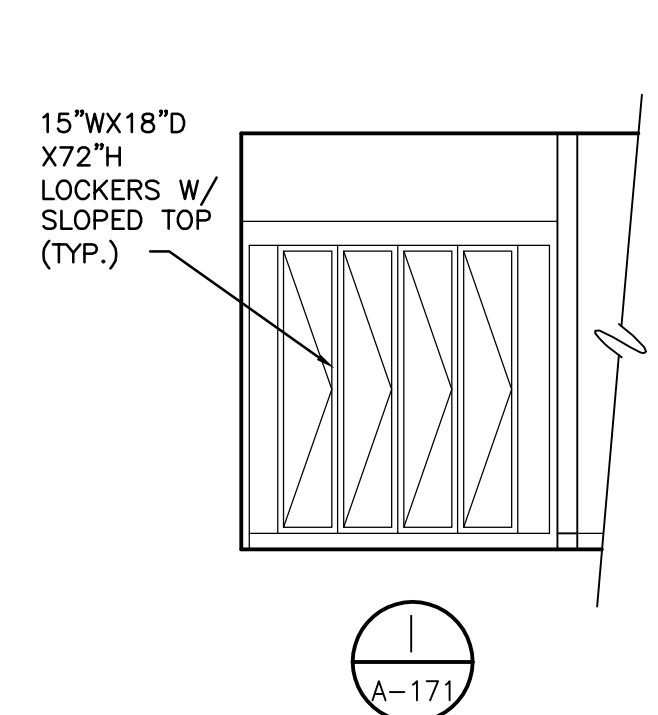
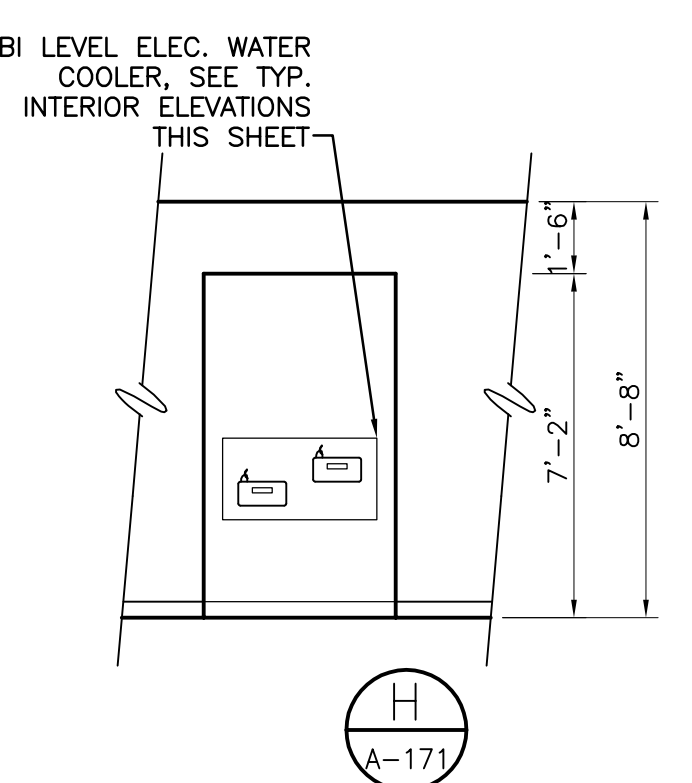
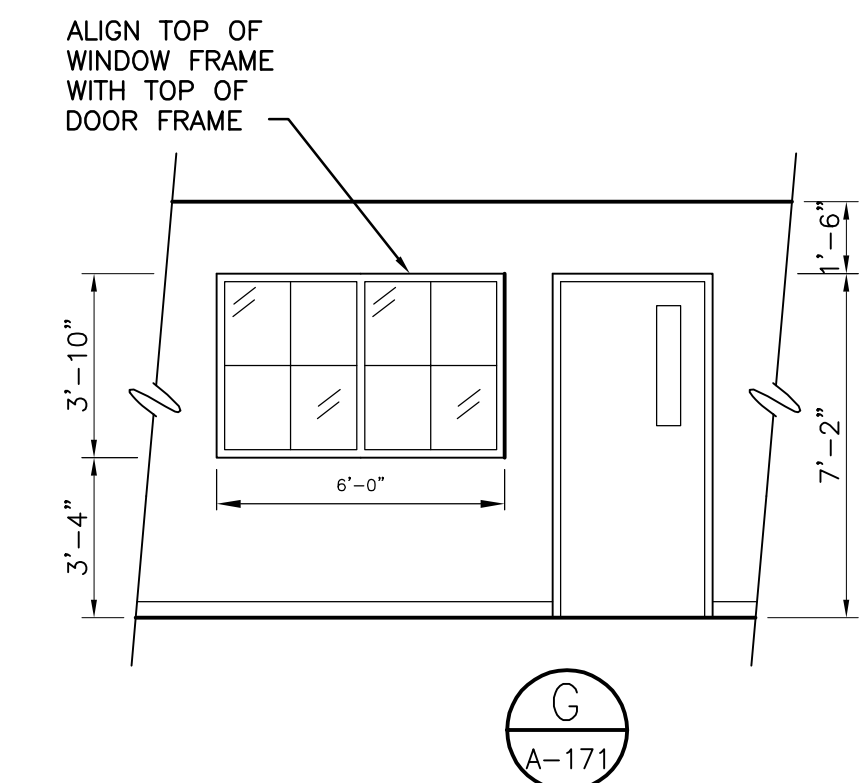
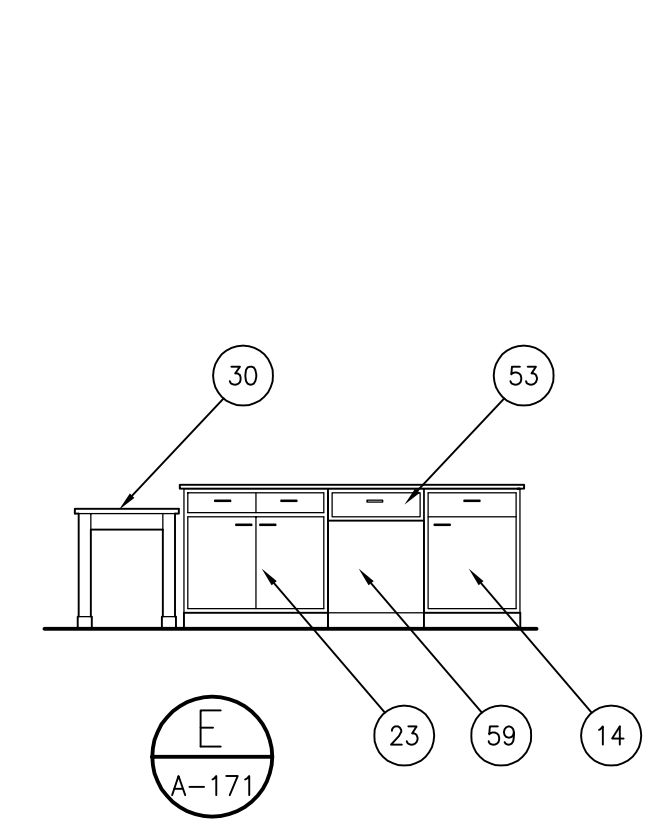
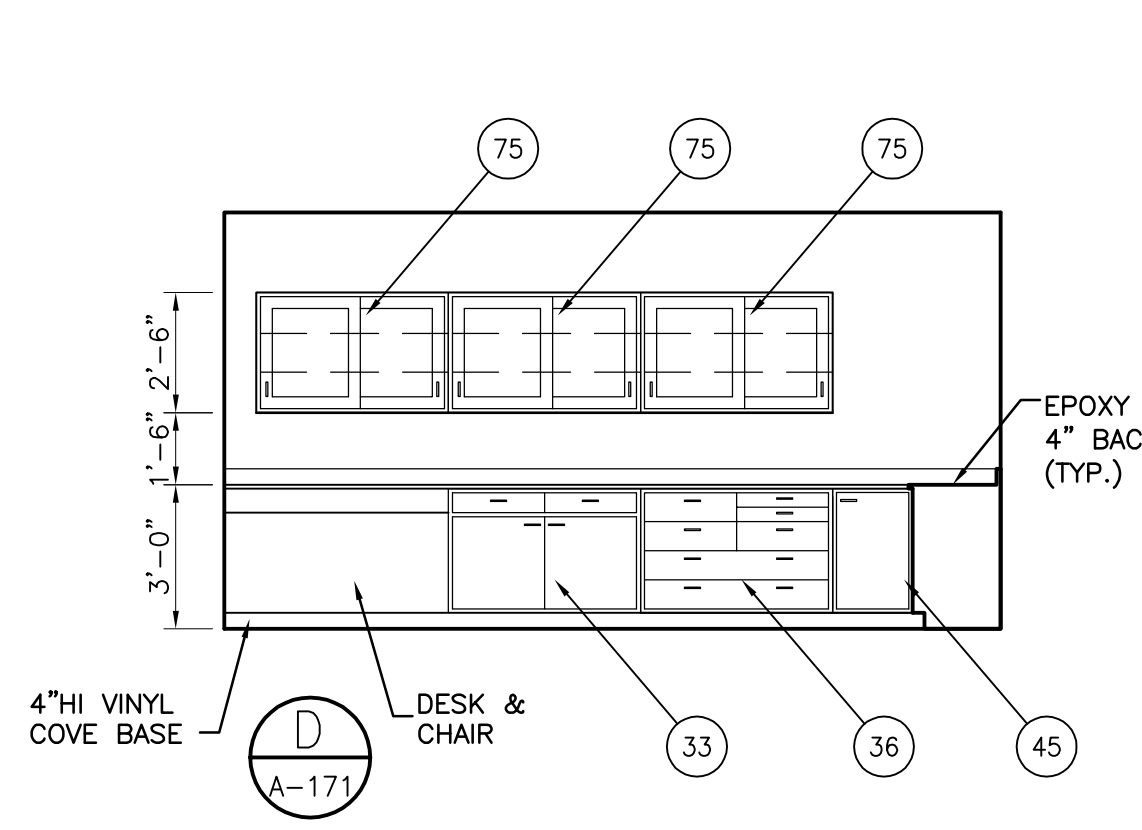
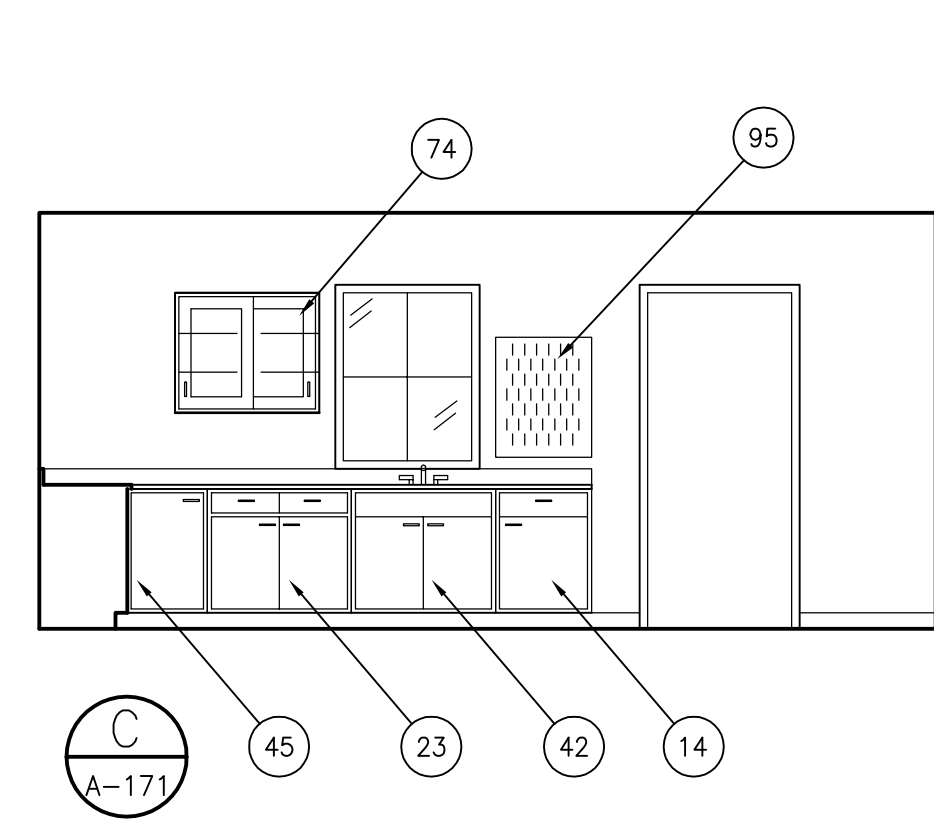
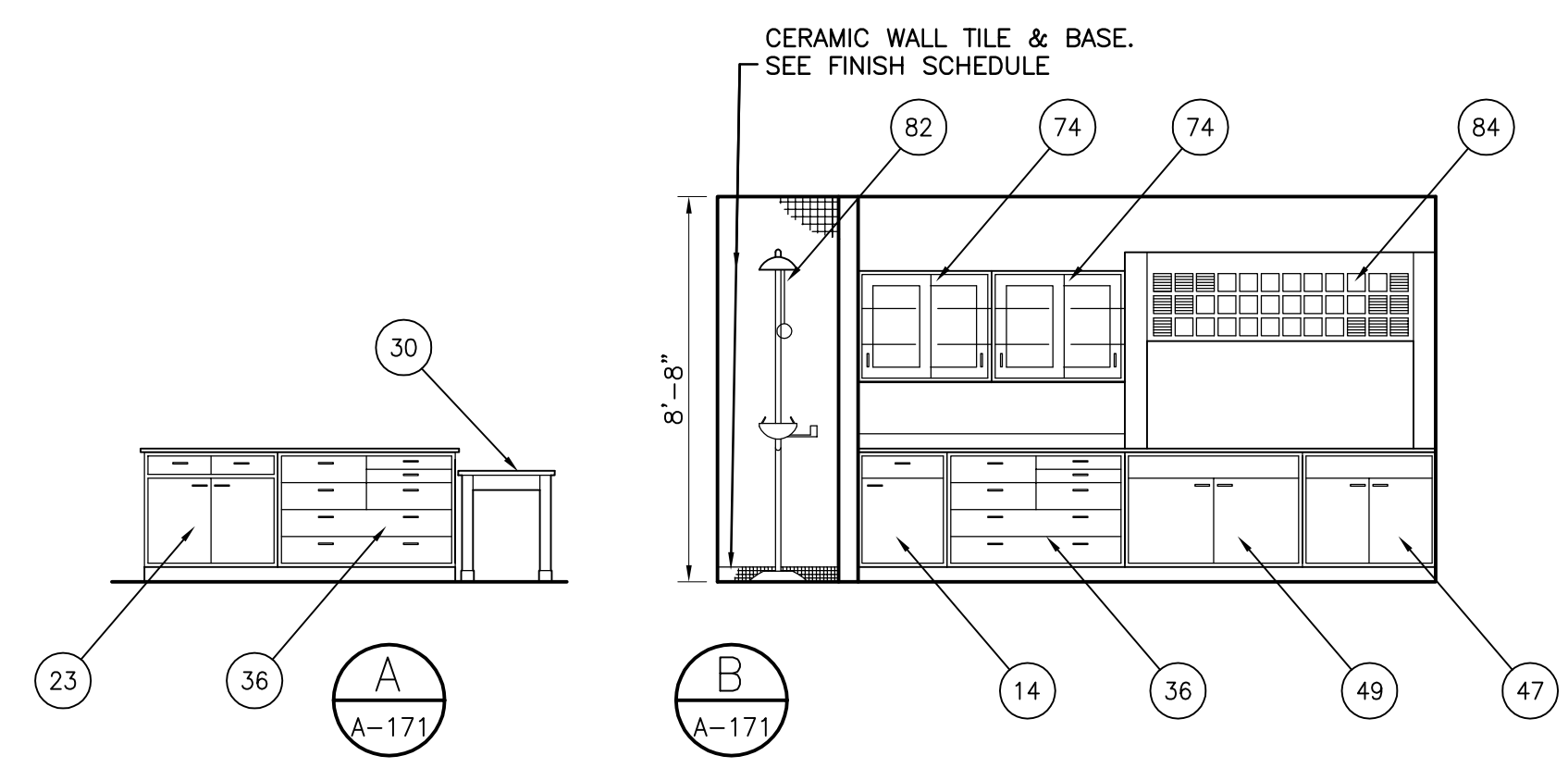
NOTE 1: COAT ALL EXPOSED INTERIOR CONCRETE SURFACES BELOW FINISHED FLOOR ELEVATION PER SPECIFICATION 09900
LEGEND: ACC - ACOUSTIC CERAMIC LAY-IN TILE, ACM - ACOUSTIC MINERAL LAY-IN TILE, BLK - CONCRETE BLOCK, CAR - CARPET, CBB - CEMENT BACKER BOARD, etc.

NOTE 1: COAT ALL EXPOSED INTERIOR CONCRETE SURFACES BELOW FINISHED FLOOR ELEVATION W/P 2
ABBREVIATIONS: AFF - ABOVE FINISH FLOOR, BLDG - BUILDING, CFS - COLD FORM STEEL, etc.

FIRE RATED GLASS AND FRAMING NOTES:
1. REFERENCES: A. AMERICAN SOCIETY FOR TESTING MATERIALS (ASTM), B. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), C. UNDERWRITERS LABORATORIES, INC. (UL), D. GLASS ASSOCIATION OF NORTH AMERICA (GANA), E. KENTUCKY BUILDING CODE - 2007 WITH SUPPLIMENTS
2. SYSTEM DESCRIPTION: A. PROVIDE A FIRE RATING GLAZING MANUFACTURED, FABRICATED AND INSTALLED TO MAINTAIN PERFORMANCE CRITERIA STATED BY MANUFACTURER WITHOUT DEFECTS, DAMAGE OR FAILURE.
3. SUBMITTALS: A. SUBMIT SHOP DRAWINGS SHOWING LAYOUT, PROFILES AND PRODUCT COMPONENTS.
4. PROJECT CONDITIONS: A. CONTRACTOR SHALL VERIFY IN FIELD ALL OPENINGS PRIOR TO FABRICATION.
5. WARRANTY: A. WARRANTY PERIOD IS FOR 10 YEARS FROM DATE OF SUBSTANTIAL COMPLETION.
BASIS OF DESIGN MANUFACTURER: SAFTEI FIRST FIRE RATED GLAZING SOLUTIONS, A DIVISION OF O'KEEFE'S INC. 325 NEWHALL STREET, SAN FRANCISCO, CA 94124 OR APPROVED EQUAL.
1. THICKNESS: 3/16\"/>



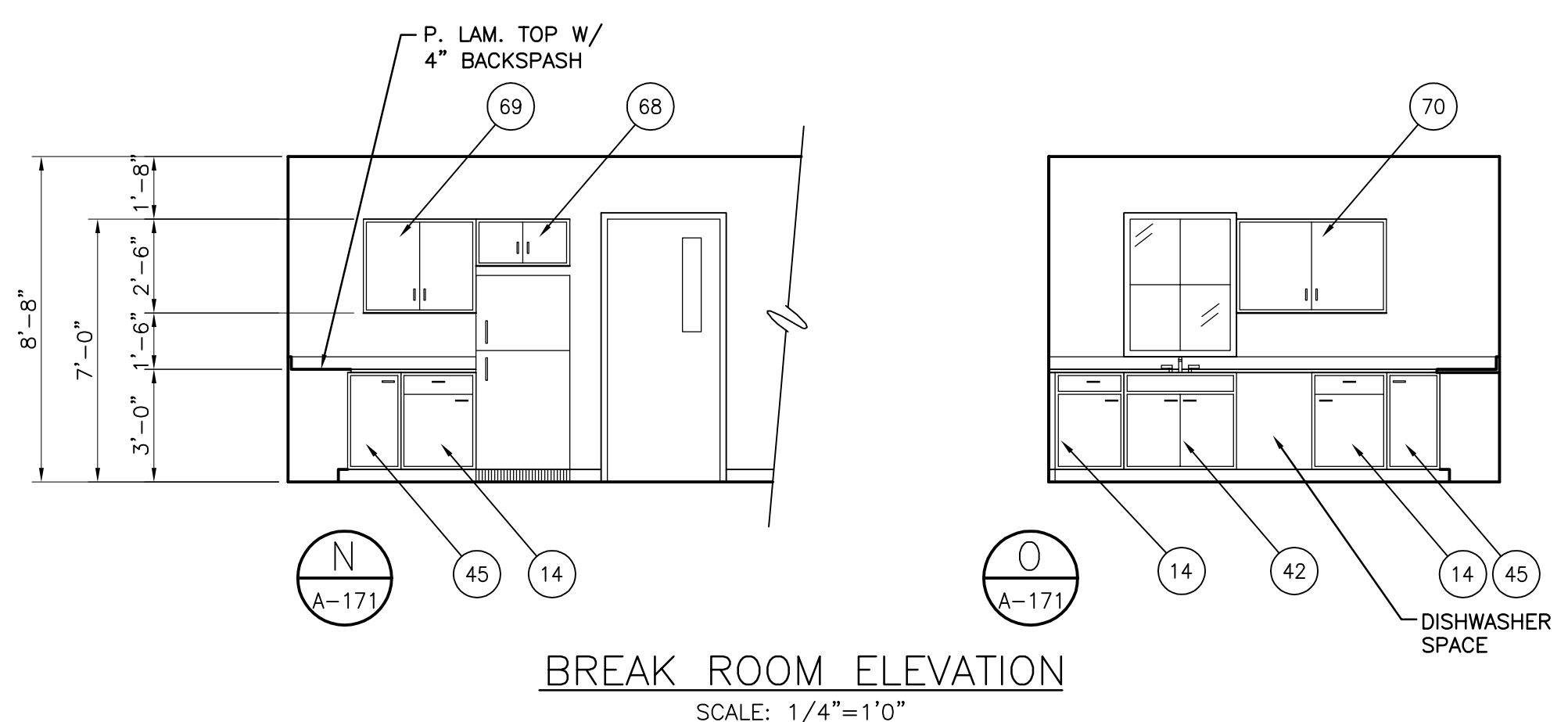
Thursday, December 03, 2009 10:31:25 AM DRAWING: C:\Orlando\orl\proj\PROJECTS\120-07060 Ohio County Redesign\ORLANDO\CONFORMED SET 5-09\ARCHITECTURAL\A-173 OP BUILDING INT. ELEV./REFLECTED CLG PLAN & ELEV.conformed11-11-09 .DWG LAYOUT: A-173 USER NAME: PETAJA, MATT



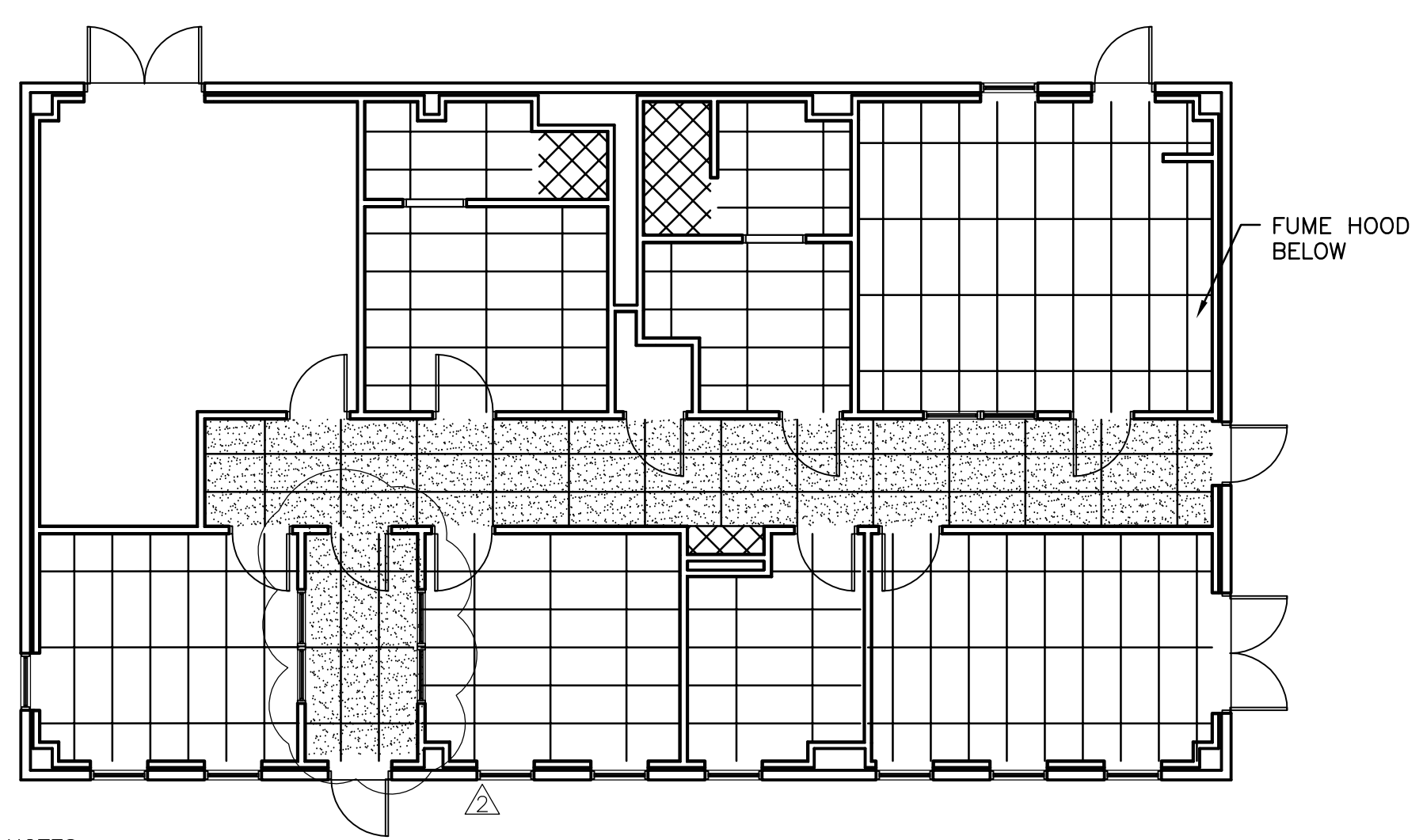
CORRIDOR ELEVATION
SCALE: 1/4"=1'-0"

WOMENS SHOWER/
LOCKER ROOM ELEVATION
SCALE: 1/4"=1'-0"

MENS SHOWER/
LOCKER ROOM ELEVATION
SCALE: 1/4"=1'-0"



BREAK ROOM ELEVATION
SCALE: 1/4"=1'-0"

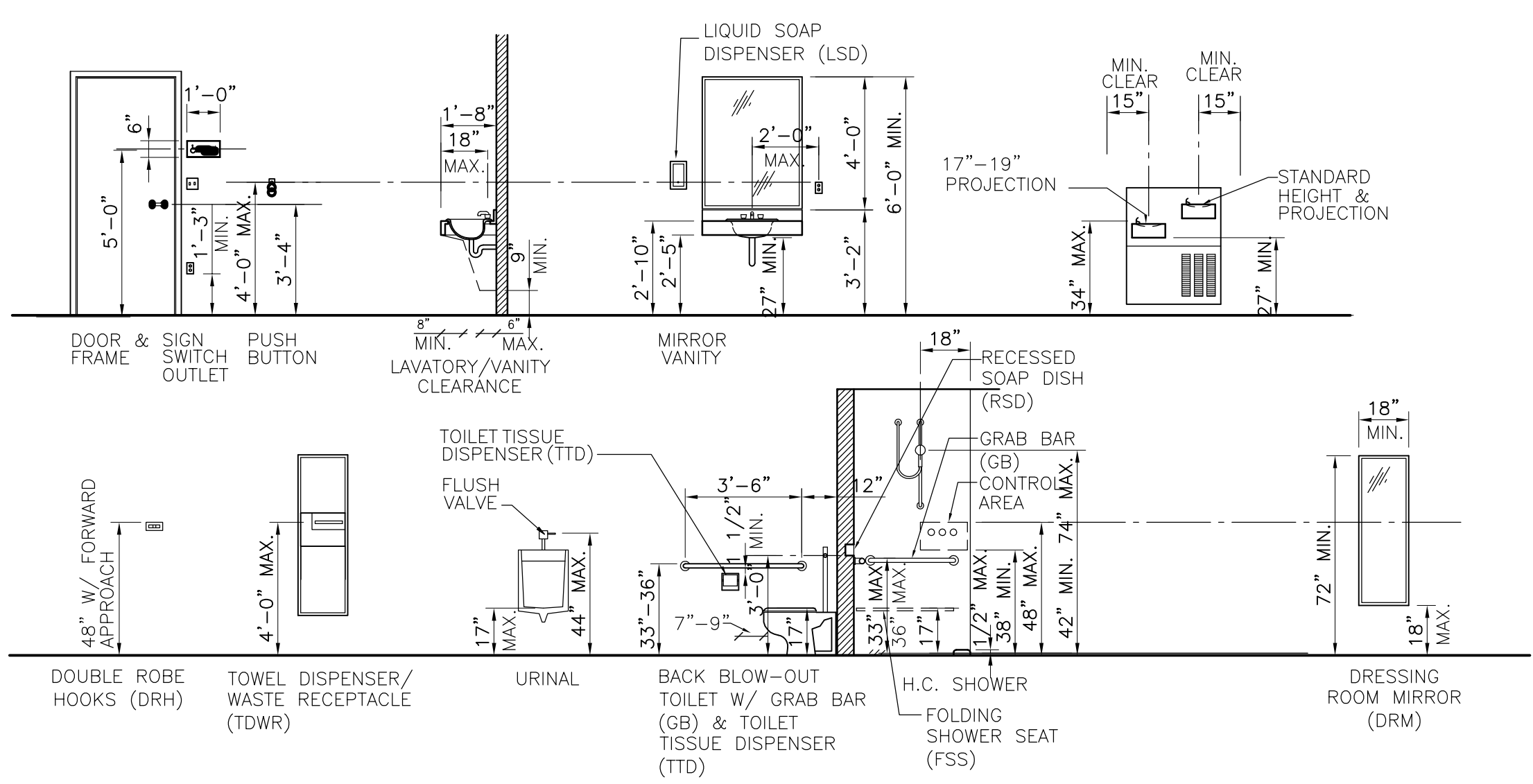


NOTES:

- REFER TO ELECTRICAL DRAWINGS FOR LIGHTING PLAN.
- FINISH CEILING ELEVATION SHALL EQUAL 8'-8" ABOVE FINISH FLOOR, UNLESS NOTED OTHERWISE.
- 1 HR RATED CEILING IN CORRIDOR ONLY.

REFLECTED CEILING PLAN
SCALE: 1/8"=1'-0"

- LEGEND**
- 1HR FIRE PARTITION (UL 465)
 - LIGHT FIXTURE
 - LIGHT FIXTURE
 - 2X2 LIGHT FIXTURE
 - ▤ 2x4 LAY-IN CEILING
 - ⊠ MECH. SUPPLY
 - ⊡ MECH. RETURN
 - ▨ 1 HR RATED CEILING (UL U499), CEILING ELEV. = 10'-0" A.F.F.
 - ▩ 5/8" MOISTURE RESISTANT GYPSUM WALLBOARD



TYP. INTERIOR ELEVATIONS
SCALE: 1/4"=1'-0"

NOTES:
1. SEE TOILET ACCESSORIES SPEC FOR ABBREVIATIONS INDICATED.

TETRA TECH
www.tetrattech.com
800 Corporate Drive
Suite 200, Lexington, Ky, 40503
PHONE: (859) 225-9000 FAX: (859) 224-1025

RECORD DRAWING

CONFORMED SET 5/09

BY	DATE	DESCRIPTION
JMF	5/5/09	ADDENDUM 1
	11/11/08	KY HBC REVIEW 10-06-09

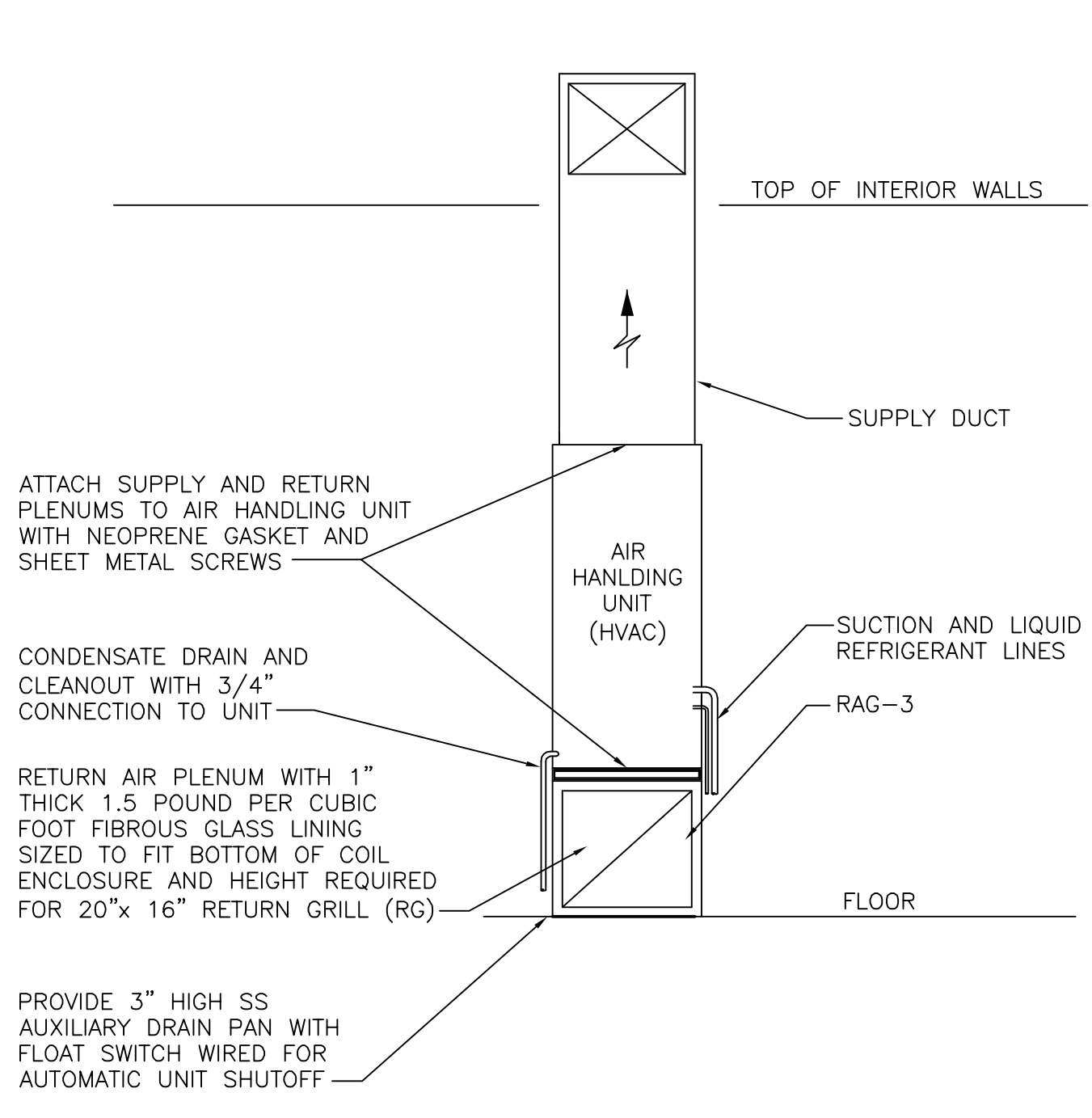
Client: OHIO COUNTY WATER DISTRICT | Proj. Loc.: CROMMELL, OHIO COUNTY, KY

OHIO COUNTY WATER DISTRICT
WATER TREATMENT PLANT

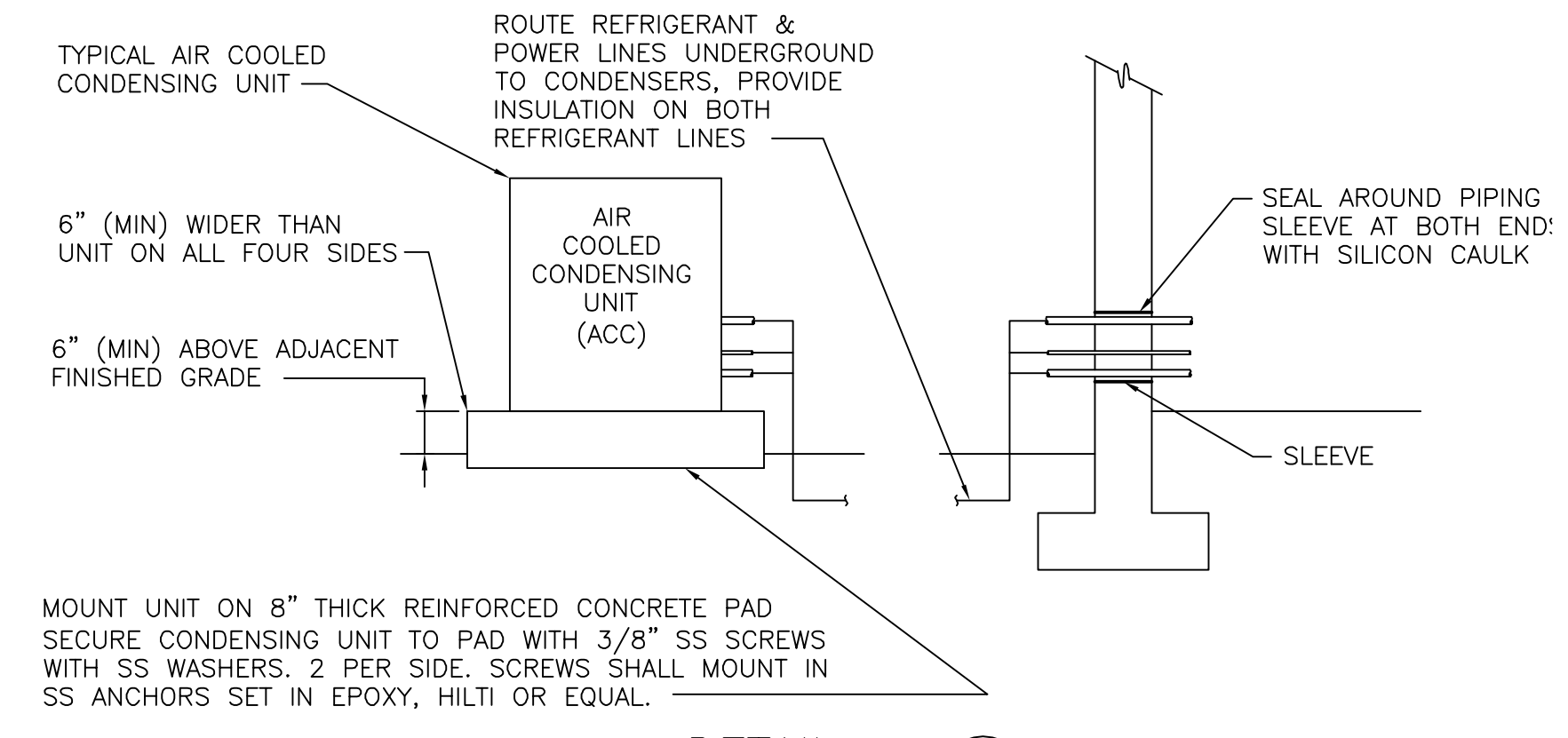
**OPERATIONS BUILDING
INTERIOR ELEVATIONS AND
REFLECTED CEILING PLAN**

Project No.: 120-07060
Designed By: JQB
Drawn By: JQB
Checked By: MSP

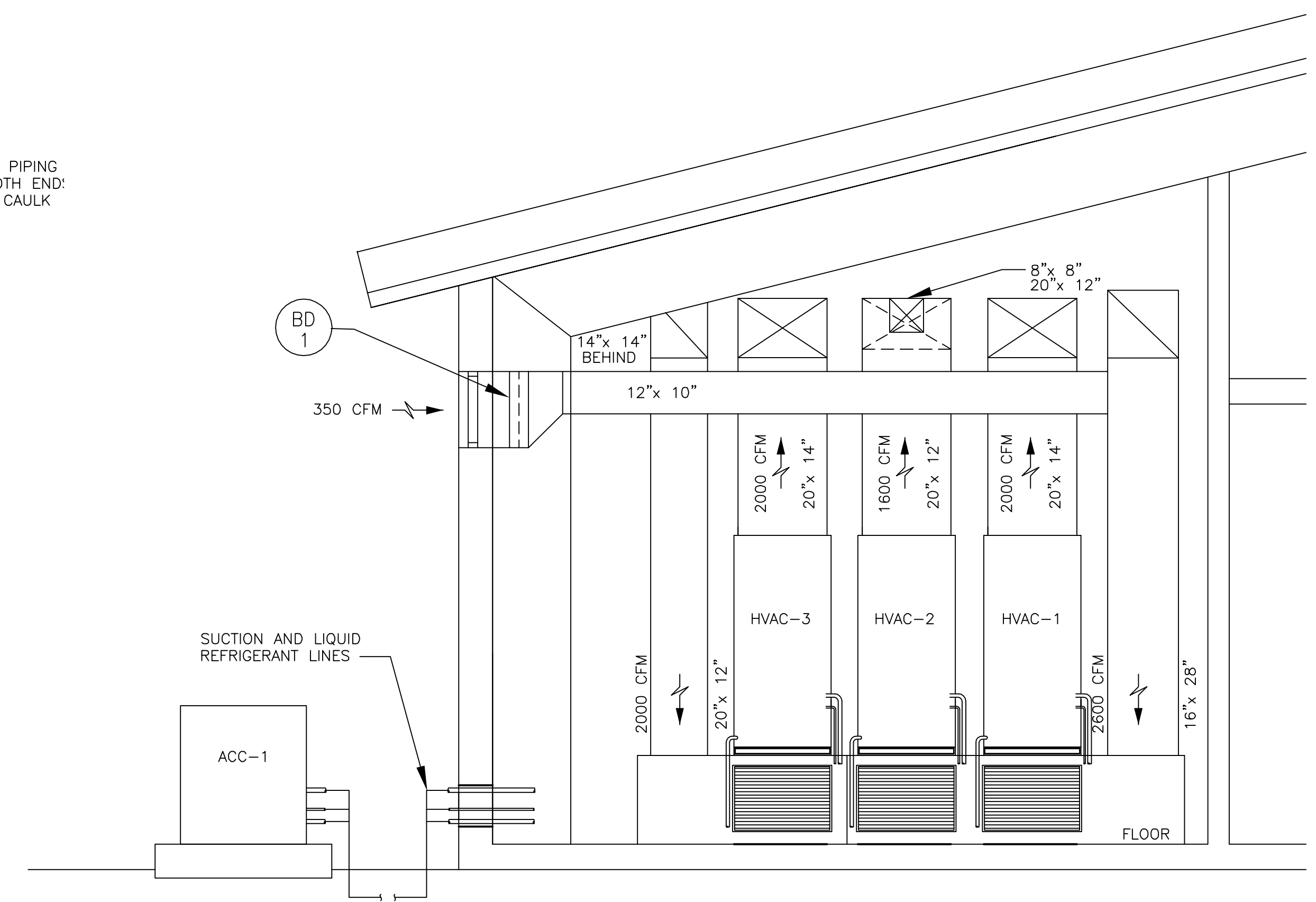
Thursday, July 08, 2010 9:50:09 AM DRAWING: P:\2009\120-07060 Ohio Co WTP Redesign\Deliverables\Drawings\Ohio County Water Treatment Plans\H-171 OPERATIONS BUILDING - HEATING & VENTILATING - HEATING & VENTILATING USER NAME: MARSH, JUSTIN



DETAIL 2
SCALE: NONE

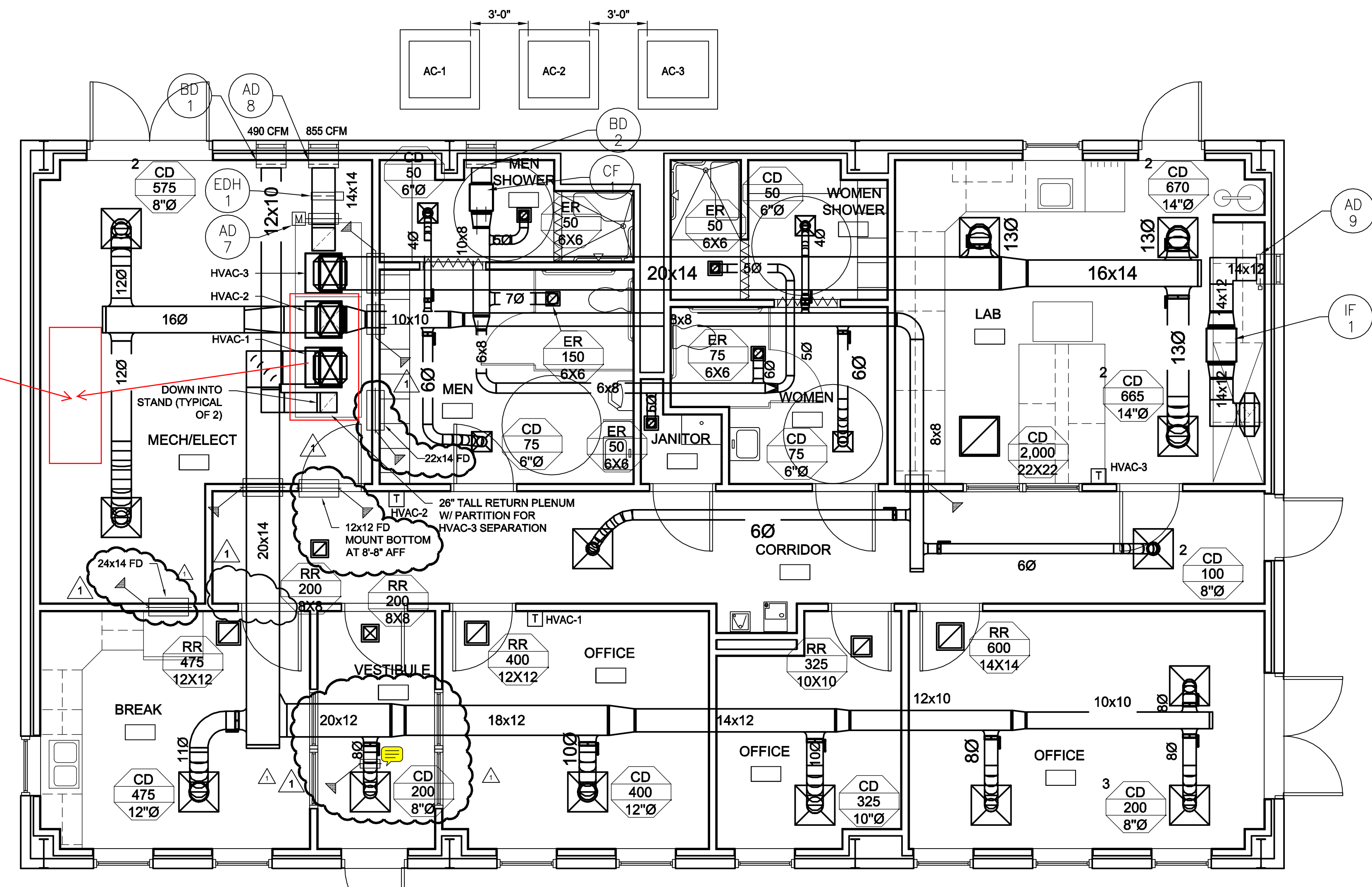


DETAIL 1
SCALE: NONE



SECTION A
SCALE: NONE

TWO HVAC UNITS
MOVED TO HERE



FLOOR PLAN
SCALE: 1/4"=1'-0"

TETRA TECH
www.tetratech.com
800 Corporate Drive
Suite 200, Lexington, KY 40503
PHONE: (859) 223-8000 FAX: (859) 224-1025

RECORD DRAWING



BY	DESCRIPTION
CWJ	

MARK	DATE	DESCRIPTION
Δ	11/17/09	HVAC Review Comments

Client: OHIO COUNTY WATER DISTRICT	Proj. Loc.: CROMWELL, OHIO COUNTY, KY
OHIO COUNTY WATER DISTRICT WATER TREATMENT PLANT	

Project No.:	120-07060
Designed By:	
Drawn By:	
Checked By:	

H-171
Sheet of 147

Copyright: Tetra Tech

RECORD DRAWING

CONFORMED SET 5/09

MARK	DATE	DESCRIPTION
10/09	RFP NO. 2	

GAC EQUIPMENT - PLAN
 WATER TREATMENT PLANT
 OHIO COUNTY WATER DISTRICT
 Proj. Loc.: CHAMWELL, OHIO COUNTY, KY

Project No.: 120-07050
 Designed By: J. BUNOY
 Drawn By:
 Checked By:

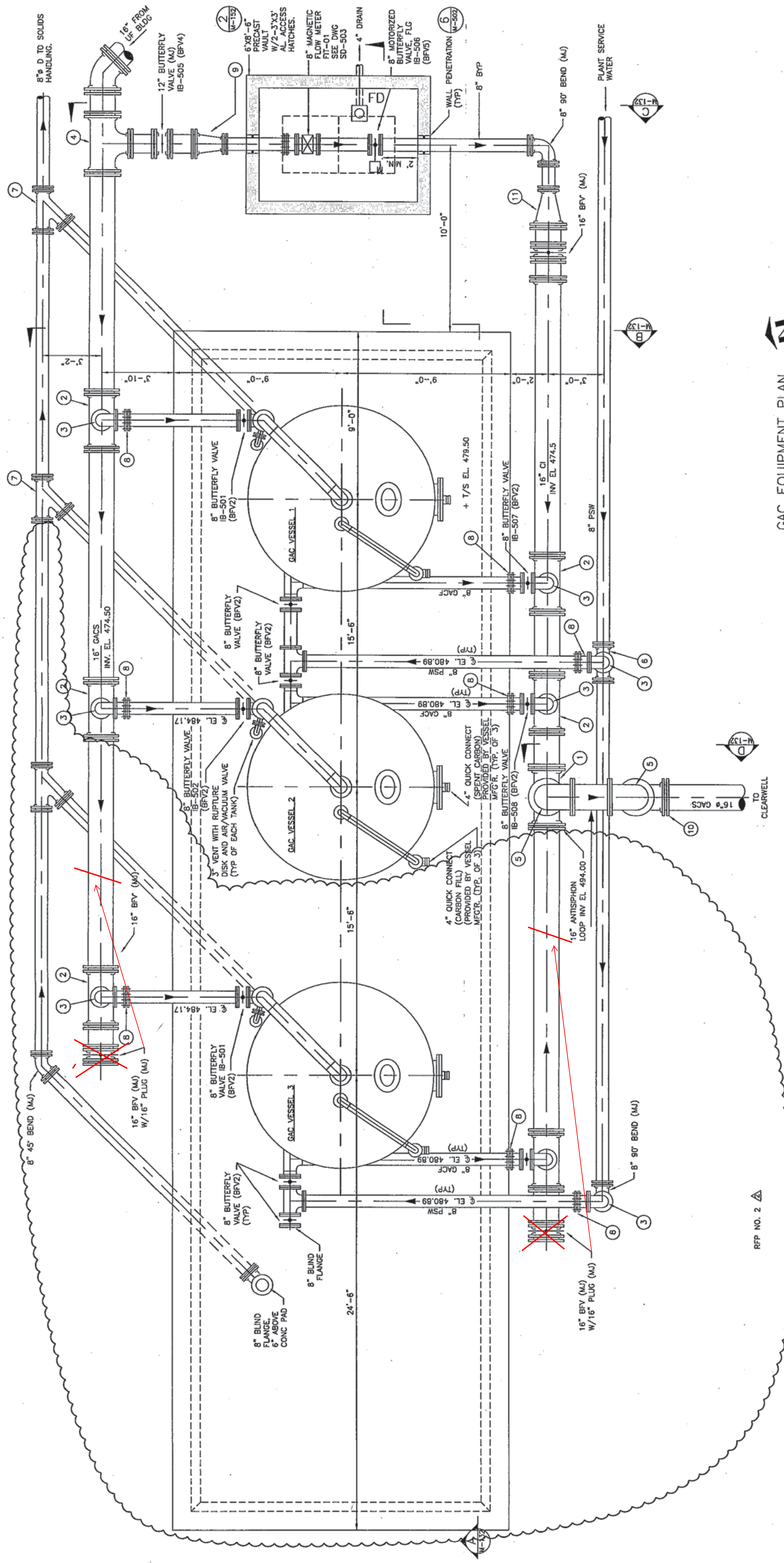
M-131

Copyright: Tetra Tech

16
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1

- LEGEND**
1. 16" TEE (M)
 2. 16" x 8" TEE (M)
 3. 8" 90° BEND (FL)
 4. 16" x 12" TEE (M)
 5. 16" 90° BEND (FL)
 6. 8" TEE (M)
 7. 8" WYE (M)
 8. 8" FLANGED COUPLING ADAPTER
 9. 12" x 8" REDUCER (M)
 10. 16" 90° BEND (M)
 11. 16" x 8" REDUCER (M)

NOTE
 1. A SAMPLE TAP SHALL BE LOCATED ON THE GAC FILTRATE PIPE FROM EACH GAC VESSEL.



GAC EQUIPMENT PLAN
 SCALE: 3/8"=1'-0"

RFP NO. 2

Wulff, Kerry

From: Wulff, Kerry
Sent: Monday, July 11, 2011 11:50 AM
To: 'MIKE COOPER'
Cc: 'Darryl Geiman'; 'Walt Beasley @ OCWD'; 'Rick Lovingood'; Shoemaker, Dan; Hayse, Susan; 'Bill Peterson'; Dunaway, Christian; storm60@msn.com; 'Robin Puskas @ GE/Zenon'; Christopher, James
Subject: OHIO COUNTY PUNCH LIST - PAE BLDG

Alum Storage:

- Complete final cleaning.
- Complete concrete interior coating at stairs.
- Touchup paint floors/walls.
- Label piping.
- Provide MSDS stickers.
- Install ladder to floor per mfr's recommendations.
- Caulk wall penetrations.
- Complete wiring at panel.
- Label panel interior wires.
- Seal panel conduits.
- Provide room ID.
- Complete handrail.
- Provide sign at spigot.

Alum Pump Room:

- Complete final cleaning.
- Caulk pipe and conduit penetrations.
- Install missing grill.
- Seal panel conduits.
- Label panel interior wires.
- Touchup paint walls/doors.
- Label piping.
- Caulk abandoned conduit at floor.
- Fix leaking BFP.
- Replace floor drain cover.
- Plumb emergency light fixture.
- Complete T-stat wiring.
- Provide MSDS stickers.
- Provide exterior room ID.

Electric Room:

- Complete final cleaning.
- Seal panel conduits.
- Provide typed panel list.
- Install grill @ ceiling.
- Caulk wall penetrations.
- Touchup paint walls/ceiling/door.
- Complete T-stat wiring.
- Provide exterior room ID.

PAC Room:

- Complete final cleaning.
- Label Panels.
- Seal panel conduits.
- Label panel interior wires.

- Caulk wall penetrations.
- Install ceiling grill.
- Complete T-stat wiring.
- Caulk ceiling penetrations.
- Install missing electrical covers.
- Label Piping.
- Touchup paint walls/door.
- Repair/replace rusting door.
- Provide MSDS stickers.

Building Exterior:

- Replace damaged down spout south wall.
- Address block stain south wall.
- Paint yard hydrants 084 and 085.
- Touchup paint doors.
- Repair/replace damaged door @ elec room.
- Provide splash blocks @ down spouts.
- Address cracked mortar joints @ Alum Storage.
- Caulk mortar joints at retention wall.
- Paint bollards.
- Label hydrants.
- Repair/replace PAC room door lock set.
- Correct room ID label.
- Label panel interior wires.
- Provide grounding grid test results.

Associated O&M's:

- 506 Alum Pump. Provide mfr's startup report.
- 513 PAC System. Provide mfr's startup report & certificate of demonstration form.

Spare parts:

- 11218 Chemical Transfer Pumps. Provide spare parts for 5yrs of operation.
- 11241 PAC Dry Feeder System. Provide spare parts for 2yrs of operation.
- 11240 Chemical Feed Systems. Provide spare parts for 2yrs of operation.

Wulff, Kerry

From: Wulff, Kerry
Sent: Monday, July 11, 2011 3:14 PM
To: 'MIKE COOPER'
Cc: 'Darryl Geiman'; 'Walt Beasley @ OCWD'; 'Rick Lovingood'; Shoemaker, Dan; Hayse, Susan; 'Bill Peterson'; Dunaway, Christian; 'storm60@msn.com'; 'Robin Puskas @ GE/Zenon'; Christopher, James
Subject: RE: OHIO COUNTY PUNCH LIST - Rapid Mix/Flocculation/Sedimentation

Rapid Mix:

- Install alum injection point as designed.
- Complete final cleaning.
- Seal panel conduits.
- Cap spare/abandoned conduit.
- Caulk conduit/pipe/sleeve penetrations.
- Complete electrical wiring.
- Band grating.
- Label piping.
- Patch exterior @ meter.
- Label panel interior wires.

Flocculation:

- Complete final cleaning.
- Tighten flex connections at motors.
- Touchup paint @ motors.
- Label VFD panels.
- Label motors.
- Seal panel conduits.
- Secure VFD panels.
- Install slide gate tube decal.
- Complete toe board south end of structure.
- Label panel on north wall and seal panel conduits.
- Patch southwest corner of structure.
- Label panel interior wires.
- Provide grounding grid test results.

Sedimentation:

- Complete final cleaning.
- Seal MRI and Instrumentation panel conduits.
- Address exposed horizontal conduits (tripping hazard per OCWD).
- Band grating at cuts.
- Complete level sensor installation.
- Paint and label hydrant.
- Secure conduit to motor operated valves.
- Repair/inspect failed trough welds.
- Paint valve extensions.
- Paint 20" valve hand wheel operators.
- Patch exterior SE corner of sludge collection box.
- Label piping to hydrant.
- Label electrical panel and seal panel conduits.
- Secure LB cover.
- Label panel interior wires.

Associated O&M's:

-502 Rapid Mix. Provide final O&M with mfr's startup report, certificate of demonstration, warranty, performance curves and misc info as noted in the return submittal.

Spare Parts:

-11221 Rapid Mixer. Provide 1 complete set of seals and bearings and 1yr supply of lubricants.

-11222 Flocculators. Provide 1yr supply of lubricants.

-11226 Submerged Sludge Collector. Provide 1 complete set of leveling skids, guide rollers and friction bearings as outlined in the O&M manual.

Wulff, Kerry

From: Wulff, Kerry
Sent: Tuesday, July 12, 2011 1:12 PM
To: 'MIKE COOPER'
Cc: 'Darryl Geiman'; 'Walt Beasley @ OCWD'; 'Rick Lovingood'; Shoemaker, Dan; Hayse, Susan; 'Bill Peterson'; Dunaway, Christian; 'storm60@msn.com'; 'Robin Puskas @ GE/Zenon'; Christopher, James
Subject: RE: OHIO COUNTY PUNCH LIST - Raw Water Intake Area

RWI Building/Intake Area:

- Complete final cleaning.
- Provide grounding grid test results.
- Label all piping.
- Label panels.
- Label panel interior wires.
- Install cap on spare conduit @ PS.
- Replace damaged exterior LB.
- Provide typed panel list.
- Caulk wall penetrations.

Associated O&M's:

- 501 Vertical Turbine Pumps. Provide mfr's Field Testing results.
- 522 Vertical Turbine VFD's. Provide mfr's Harmonic Analysis Calculations and Testing results. Provide certification of demonstration form.

Spare Parts:

- 11211 Vertical Turbine Raw Water Pumps. Provide as outlined in O&M manual.
- 11240 Chemical Feed Systems. Provide spare parts for 2yrs of operation.
- 11345 Packaged Chemical Feed Systems. Provide spare parts as outlined.

Wulff, Kerry

From: Wulff, Kerry
Sent: Tuesday, July 12, 2011 1:42 PM
To: 'MIKE COOPER'
Cc: 'Darryl Geiman'; 'Walt Beasley @ OCWD'; 'Rick Lovingood'; Shoemaker, Dan; Hayse, Susan; 'Bill Peterson'; Dunaway, Christian; 'storm60@msn.com'; 'Robin Puskas @ GE/Zenon'; Christopher, James
Subject: RE: OHIO COUNTY PUNCH LIST - Ultrafiltration Building Area

UF Building:

- Complete final cleaning.
- Provide grounding grid test results.
- Seal exterior penetrations @ influent pipes.
- Touchup paint trench walls and floors.
- Complete T-stat wiring.
- Provide MSDS stickers.
- Label all piping.
- Label all equipment.
- Label all panels.
- Touchup paint chemical room ceilings, walls and containment areas.
- Plumb roof curbs.
- Label panel interior wires.
- Provide typed panel list.
- Remove rust from building exterior.
- Paint bollards.

Spare Parts:

- 11300 Ultrafiltration Membrane System. Provide spare parts as listed, items 1 thru 11.
- 11240 Chemical Feed Systems. Provide spare parts for 2yrs of operation.
- 11345 Packaged Chemical Feed Systems. Provide spare parts as outlined.

Wulff, Kerry

From: Wulff, Kerry
Sent: Tuesday, July 12, 2011 2:11 PM
To: 'MIKE COOPER'
Cc: 'Darryl Geiman'; 'Walt Beasley @ OCWD'; 'Rick Lovingood'; Shoemaker, Dan; Hayse, Susan; 'Bill Peterson'; Dunaway, Christian; 'storm60@msn.com'; 'Robin Puskas @ GE/Zenon'; Christopher, James
Subject: RE: OHIO COUNTY PUNCH LIST - GAC Area

GAC Area:

- Complete final cleaning.
- Provide labels for piping.
- Label panels.
- Label panel interior wires.
- Paint hand wheel operators.

Associated O&M's:

- 505 GAC Vessels. Provide warranty statement and mfr's startup report.

Wulff, Kerry

From: Wulff, Kerry
Sent: Tuesday, July 12, 2011 2:43 PM
To: 'MIKE COOPER'
Cc: 'Darryl Geiman'; 'Walt Beasley @ OCWD'; 'Rick Lovingood'; Shoemaker, Dan; Hayse, Susan; 'Bill Peterson'; Dunaway, Christian; 'storm60@msn.com'; 'Robin Puskas @ GE/Zenon'; Christopher, James
Subject: RE: OHIO COUNTY PUNCH LIST - Site Work

Site:

- Complete final cleaning.
- Complete fence.
- Install gate controller access key pad.
- Complete grout @ light poles.
- Install R-1 stop sign.
- Install concrete wheel stops.
- Install cross drain pipe @ entrance per permit application.
- Install handicap parking sign.
- Provide "As-Built" survey to represent revised grading and drainage plan (include with Record Drawings).

Valve Vaults:

- Complete final cleaning.
- Touchup paint valves, piping, etc.
- Label piping.
- Label panels.
- Label panel interior wires.

Wulff, Kerry

From: Wulff, Kerry
Sent: Wednesday, July 13, 2011 8:19 AM
To: 'MIKE COOPER'
Cc: 'Darryl Geiman'; 'Walt Beasley @ OCWD'; 'Rick Lovingood'; Shoemaker, Dan; Hayse, Susan; 'Bill Peterson'; Dunaway, Christian; 'storm60@msn.com'; 'Robin Puskas @ GE/Zenon'; Christopher, James
Subject: RE: OHIO COUNTY PUNCH LIST - Chlorine Contact/Clearwell/HSPS

Clearwell/HSPS:

- Complete final cleaning.
- Complete handrail and straighten toe board.
- Touchup paint valves/hand wheels/pumps.
- Label piping.
- Label panels
- Label panel interior wires.
- Seal penetrations @ HSP ceiling.

Associated O&M's:

- 501 Vertical Turbine Pumps. Provide mfr's Field Test results.
- 522 Vertical Turbine VFD's. Provide final O&M with mfr's Harmonic Analysis Calculation and Testing results. Provide certification of demonstration form.

Spare Parts:

- 11212 Vertical Turbine Finished Water Pumps. Provide as outlined in O&M Manual.

Wulff, Kerry

From: Wulff, Kerry
Sent: Wednesday, July 13, 2011 9:21 AM
To: 'MIKE COOPER'
Cc: 'Darryl Geiman'; 'Walt Beasley @ OCWD'; 'Rick Lovingood'; Shoemaker, Dan; Hayse, Susan; 'Bill Peterson'; Dunaway, Christian; 'storm60@msn.com'; 'Robin Puskas @ GE/Zenon'; Christopher, James
Subject: RE: OHIO COUNTY PUNCH LIST - Chlorine and Fluoride Building

Chlorine Room:

- Complete final cleaning.
- Address roof curb leaks.
- Repair rain damaged ceiling.
- Repair damaged ceiling light.
- Touchup paint ceiling/walls/floor/doors.
- Replace rusted floor drn cover.
- Complete T-stat wiring.
- Caulk receptacles at wall.
- Label piping.
- Caulk wall penetrations.
- Label panels.
- Label panel interior wires.
- Provide MSDS stickers (by owner).

Fluoride Room:

- Complete final cleaning.
- Touchup paint ceiling/walls/sump/floor/doors.
- Complete T-stat wiring.
- Label piping.
- Caulk wall penetrations.
- Provide MSDS stickers (by owner).
- Label panels.
- Label panel interior wires.

Building Exterior:

- Complete final cleaning.
- Paint yard hydrant.
- Caulk vent penetrations.
- Provide splash blocks.
- Provide room ID.
- Touchup paint doors.
- Caulk @ sidewalk and bldg by CP-GACP.
- Remove concrete from conduits.
- Remove rust from LP-4.
- Label panel.
- Label panel interior wires.
- Provide typed panel list.
- Provide grounding grid test results.

Spare Parts:

- 11224 In-line Static Mixer. Provide 1 spare injector for each type used.
- 11240 Chemical Feed Systems. Provide spare parts for 2yrs operation.
- 11260 Chlorination Equipment and Accessories. Provide spare parts for 2yrs operation. Provide Emergency Repair Kit, gas mask and cabinets.
- 11345 Packaged Chemical Feed Systems. Provide spare parts as outlined.

Wulff, Kerry

From: Wulff, Kerry
Sent: Wednesday, July 13, 2011 2:24 PM
To: 'MIKE COOPER'
Cc: 'Darryl Geiman'; 'Walt Beasley @ OCWD'; 'Rick Lovingood'; Shoemaker, Dan; Hayse, Susan; 'Bill Peterson'; Dunaway, Christian; 'storm60@msn.com'; 'Robin Puskas @ GE/Zenon'; Christopher, James
Subject: RE: OHIO COUNTY PUNCH LIST - Operations Building

Operations Building:

- Complete final cleaning.
- Paint/seal wood window frames.
- Install room ID's.
- Label all panel interior wires.
- Repair leak at HVAC unit.
- Caulk all wall penetrations.
- Touchup paint walls/doors.
- Correct gap @ double door threshold.

Building Exterior:

- Complete final cleaning.
- Install screens.
- Repair damaged exterior at south door.
- Provide grounding grid test results.

Associated O&M's:

- 518 HVAC. Provide final O&M w/ mfr's Testing, Adjusting and Balancing Report for all systems. Provide certification of demonstration forms. Complete items identified in the preliminary review submittal.
- 519 Electrical Components. Provide final O&M with revisions outline in preliminary review submittal.

Spare Parts/Miscellaneous Equipment:

- 01590 Field Offices and Sheds. Provide Items 11 thru 14 (printer, computer, camera & memory card).
- 08710 Door Hardware. Provide key sets to owner as outlined.
- 09300 Tile. Extra Material (3% of amount installed).
- 09510 Acoustical Ceilings. Extra Material (2% of amount installed) -09650 Resilient Flooring. Extra Material (as noted) -10100 Visual Display Boards. Provide as outlined.
- 11240 Chemical Feed Systems. Accessories (gloves, apron, boots & face shield)
- 12482 Floor Mats and Frames. Provide as outlined.
- 13490 Calibration Equipment. Provide Instrument Calibrator and Power Quality Analyzer.
- 13491 Spare Parts. Provide Instrumentation spare parts as outlined.
- 15110 Water Valves and Accessories. Provide spare packing, gaskets and Startup Kit as outlined.
- 15140 Water Distribution Piping. Extra Stock, provide valve keys as outlined.
- 15410 Plumbing Fixtures. Extra Stock, provide as shown.
- 15830 Fans. Extra Materials, provide spare belts as required.
- 16050 Basic Electrical Requirements. Provide Amprobe as outlined.
- 16435 Switchboard. Provide Maintenance Stock Fuses as outlined.
- 16510 Lighting Fixtures. Extra Materials, provide as outlined.
- 16521 Roadway and Parking Area Lighting. Extra Stock, provide as outlined.

Miscellaneous:

- Provide Final O&M's for 502 (Rapid Mix), 518 (HVAC), 519 (Elec), 521 (Lighting), 522 (VFD's) and 523 (Instrumentation).

-Provide "Record Drawings" as outlined in Specification Section 01720. Include all revisions in change orders, work directives and owner directed changes (including HMI changes).