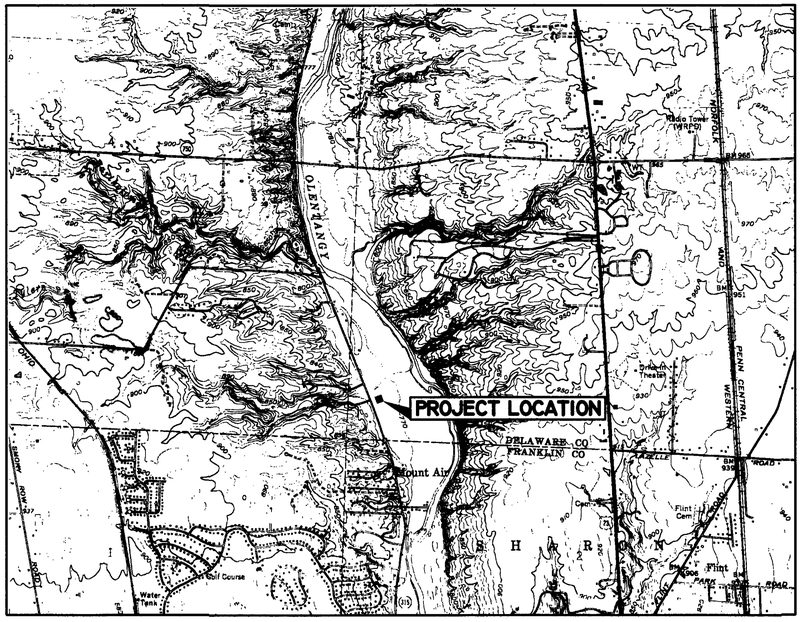
DELAWARE COUNTY, OHIO

OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

CONTRACT "S94-2"

COUNTY STAFF

BRIAN E. STANFILL	COUNTY ADMINISTRATOR
SCOTT PIKE	DIRECTOR OF ENVIRONMENTAL SERVICES
JACK SMELKER	SANITARY ENGINEER
RICK L. VARNER	PLANT SUPERINTENDENT
PAUL D. SANDSTROM	ASST. PLANT SUPERINTENDENT



VICINITY MAP

BOARD OF COUNTY COMMISSIONERS

Roy Jackson 12-12-94
ROY JACKSON DATE

Fay L. Parrott 12-12-94
FAY L. PARROTT DATE

Merlin Sheets 12-12-94
MERLIN SHEETS DATE

APPROVED THIS 9th DAY OF DEC., 1994
Jack Smelker
JACK SMELKER, DELAWARE COUNTY SANITARY ENGINEER

STATE OF OHIO · RONALD B. DICKERSON · 41310 · REGISTERED PROFESSIONAL ENGINEER

STATE OF OHIO · CRAIG MICHAEL GALANT · E-55920 · REGISTERED PROFESSIONAL ENGINEER

STATE OF OHIO · DELLOS D. MORRISON · 9352 · REGISTERED ARCHITECT

STATE OF OHIO · THOMAS R CROUSE · E-57794 · REGISTERED PROFESSIONAL ENGINEER

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	DLR
DRAWN BY:	DLR
CHECKED BY:	RBD
APPROVED BY:	RBD
DATE:	NOV. 1994

TITLE SHEET

SCALE: 1" = 2000'

SHEET NO. 1 OF 112

14-JUNE-94 N:\PROJECTS\PR15582\CADD\TITLE2

ABBREVIATIONS

AB	ANCHOR BOLT	HM	HOLLOW METAL	S	SLAB
ACP	ASBESTOS CEMENT PIPE	HORIZ	HORIZONTAL	SA	SUPPLY AIR
ADJ	ADJUSTABLE	HP	HORSEPOWER	SAN	SANITARY
AFF	ABOVE FINISHED FLOOR	HS	HIGH SERVICE	SAS	SANITARY SEWER
ALT	ALTERNATE	HU	HEATING UNIT	SCH	SCHEDULE
ALUM	ALUMINUM	HWL	HIGH WATER LEVEL	SECT	SECTION
@	AT			SF	SQUARE FEET
AVG	AVERAGE	ID	INSIDE DIAMETER	SHT	SHEET
AUTO	AUTOMATIC	IF	INSIDE FACE	SJ	SAW JOINT
		IJ	ISOLATION JOINT	SP	SEWER PIPE
B	BEAM OR BOTTOM	INFL	INFLUENT	SPC	SPACES
BB	BUMPER BLOCK	INT	INTERIOR	SPG	SPACING
BD	BALANCING DAMPER	INV	INVERT	SQ	SQUARE
℄	BASE LINE	IP	IRON PIN	ST	STRAIGHT
BLDG	BUILDING			STA	STATION
BM	BENCH MARK	LAV	LAVATORY	STD	STANDARD
BOT	BOTTOM	LB	POUND	STIR	STIRRUPS
BRG	BEARING	LG	LENGTH	S STL,SS	STAINLESS STEEL
		LL	LIVE LOAD	STL	STEEL
C	COLUMN	LLV	LONG LEG VERTICAL	STR	STRUCTURAL
CB	CATCH BASIN	LS	LOW SERVICE	STS	STORM SEWER
CDF	CONTROLLED DENSITY FILL	LTG	LIGHTING	SY	SQUARE YARD
CF	CUBIC FEET	LWL	LOW WATER LEVEL	SYM	SYMMETRICAL
CFM	CUBIC FEET PER MINUTE	LT	LEFT		
CI	CAST IRON			T	TOP OR TREAD
CIP	CAST IRON PIPE	MAX	MAXIMUM	T&B	TOP AND BOTTOM
℄	CENTERLINE	MCC	MOTOR CONTROL CENTER	TC	TOP OF COVER
C/C	CENTERLINE TO CENTERLINE	MGD	MILLION GALLONS PER DAY	T&G	TONGUE AND GROOVE
CL	CLEAR OR CLASS	MH	MANHOLE	THD	THREADED
CLG	CEILING	MIN	MINIMUM, MINUTE	TP	TURNING POINT OR TANGENT POINT
CMP	CORRUGATED METAL PIPE	MJ	MECHANICAL JOINT		
COL	COLUMN	MK	MARK	TS	STRUCTURAL TUBE
CONC	CONCRETE	MO	MASONRY OPENING OR MOTOR OPERATED	TYP	TYPICAL
COP	COPPER				
CJ	CONSTRUCTION JOINT	MRP	METAL REINFORCED PLASTIC PIPE	UNO	UNLESS NOTED OTHERWISE
CONTR JT	CONTRACTION JOINT			URN	URINAL
CONST	CONSTRUCTION				
CONT	CONTINUOUS	NC	NORMALLY CLOSED	V	VACUUM
CY	CUBIC YARD	NF	NEAR FACE	VAR	VARIES
		NO	NORMALLY OPEN	VCP	VALVE CONTROL PANEL
DIA	DIAMETER	NO.	NUMBER	VERT	VERTICAL
DIM	DIMENSION	NS	NEAR SIDE		
DIP	DUCTILE IRON PIPE	NWL	NORMAL WATER LEVEL	W/	WITH
DL	DEAD LOAD			W/O	WITHOUT
DO	DOOR OPENING	OC	ON CENTER	WC	WATER CLOSET
DS	DOWN SPOUT	OD	OUTSIDE DIAMETER	WH	WATER HEATER OR WALL HYDRANT
DWG	DRAWING	OF	OUTSIDE FACE	WL	WATER LEVEL OR WATER LINE
		OPG	OPENING	WWF	WELDED WIRE FABRIC
EA	EACH	OPP	OPPOSITE		
ED	EQUIPMENT DRAIN	OZ	OUNCE	YH	YARD HYDRANT
EF	EACH FACE			YP	YOLOY PIPE
EFFL	EFFLUENT	PCF	POUNDS PER CUBIC FOOT		
EL.,ELEV	ELEVATION	PCP	PUMP CONTROL PANEL		
EW	EACH WAY	PE	POLYETHYLENE OR PLAIN END		
EWC	ELECTRIC WATER COOLER	PEJM	PREMOLDED EXP. JT. MATERIAL		
EXF	EXHAUST FAN	ℙ	PLATE OR PROPERTY LINE		
EXIST	EXISTING	PNL	PANEL		
EXL	EXHAUST LOUVER	POL	POLISHED		
EXP JT	EXPANSION JOINT	PP	POLYPROPYLENE		
EXT	EXTERIOR	PRCP	PRESTRESSED REINFORCED CONCRETE PIPE		
FA	FRESH AIR	PSF	POUNDS PER SQUARE FOOT		
FAF	FRESH AIR FAN	PSI	POUNDS PER SQUARE INCH		
FAL	FIXED AIR LOUVER	PVC	POLYVINYL CHLORIDE		
FB	FLOOR BOX OR FOUNDATION BEAM	QUAN	QUANTITY		
FD	FLOOR DRAIN				
FDN	FOUNDATION	R	RADIUS OR RISER		
FEC	FIRE EQUIPMENT CABINET	RAD	RADIUS		
FF	FAR FACE	RA	RETURN AIR		
FIN	FINISHED	RB	ROOF BEAM		
FH	FIRE HYDRANT	RCP	REINFORCED CONCRETE PIPE		
FLG	FLANGE	RD	ROOF DRAIN		
FLR	FLOOR	REINF	REINFORCING		
FOC	FACE OF COLUMN	REQ'D	REQUIRED		
FRP	FIBERGLASS REINFORCED PLASTIC PIPE	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER		
FT	FEET OR FOOT	RT	RIGHT		
FTG	FOOTING	R/W	RIGHT-OF-WAY		
GA	GAUGE OR GAGE				
GAL	GALLON				
GALV	GALVANIZED				
GEN	GENERAL				
GRD	GROUND OR GRADE				
GYP	GALVANIZED YOLOY PIPE				

SCHEMATIC PIPING SYMBOLS

- AIR RELEASE VALVE
- ALTITUDE VALVE
- BACKPRESSURE VALVE
- BALL VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- DIAPHRAGM VALVE
- GATE VALVE
- GLOBE VALVE
- GLOBE VALVE (ANGLE)
- HOSE BIB OR WALL HYDRANT
- NEEDLE VALVE
- PLUG VALVE
- PRESSURE REDUCING VALVE
- 3-WAY VALVE
- 4-WAY VALVE
- CHAIN WHEEL OPERATOR
- FLOAT OPERATOR
- HANDWHEEL OPERATOR
- HYDRAULIC OPERATOR
- LEVER OPERATOR
- PNEUMATIC OPERATOR
- MOTOR OPERATOR
- SOLENOID OPERATOR
- WRENCH OPERATOR
- FLEXIBLE CONNECTOR
- PRESSURE GAUGE
- SLEEVE
- THERMOMETER
- TRAP
- UNION
- VACUUM BREAKER
- WYE STRAINER
- PRESSURE RELIEF VALVE
- REDUCER/INCREASER
- METER

TWO LINE PIPING SYMBOLS

- FLANGED JOINT
- MECHANICAL JOINT
- BELL & SPIGOT JOINT
- SCREWED JOINT
- FLEXIBLE COUPLING
- EXPANSION COUPLING
- SLEEVE COUPLING
- FLANGED COUPLING ADAPTER
- WALL PIPE; FLANGE MECHANICAL JOINT
- WALL SLEEVE
- GATE VALVE
- CHECK VALVE
- BUTTERFLY VALVE
- PLUG VALVE
- BALL VALVE
- WEDGE GATE VALVE
- GLOBE VALVE
- * REPRESENTS FUNCTION
- METER

SECTION DESIGNATIONS

SECTION CUT AND SHOWN ON DIFFERENT SHEETS

SHEET ON WHICH SECTION IS FIRST CUT — A / 3 / 5 — SHEET ON WHICH SECTION IS SHOWN

SECTION CUT AND SHOWN ON THE SAME SHEET

1

SITE PLAN SYMBOLS

- TEST PIT
- TEST BORING
- FENCE
- GUARDRAIL
- PROPERTY LINE
- SURVEY BASE LINE
- CENTERLINE
- RIGHT-OF-WAY
- NEW CONTOUR
- EXISTING CONTOUR
- NEW GRADE SPOT ELEVATION (+ 123.4)
- EXISTING GRADE SPOT ELEVATION (+ 123.4)
- EDGE OF WATER
- DRAINAGE FLOW
- CATCH BASIN
- MANHOLE
- ELECTRIC PULL BOX (PB / E)
- GUARD POST
- LIGHT POLE
- POWER POLE
- TELEPHONE POLE
- POLE GUY WIRE
- VALVE BOX
- FIRE HYDRANT
- YARD HYDRANT
- IRON PIN
- TREE OR SHRUB

SECTION SYMBOLS

- CONCRETE
- MASONRY
- METAL
- WOOD
- EXISTING GRADE
- FINISHED GRADE
- UNDISTURBED SUBGRADE
- ROCK
- POROUS BACKFILL
- COMPACTED GRANULAR BACKFILL OR COMPACTED FOUNDATION
- SAND
- CONTROLLED DENSITY FILL

INDEX

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

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DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

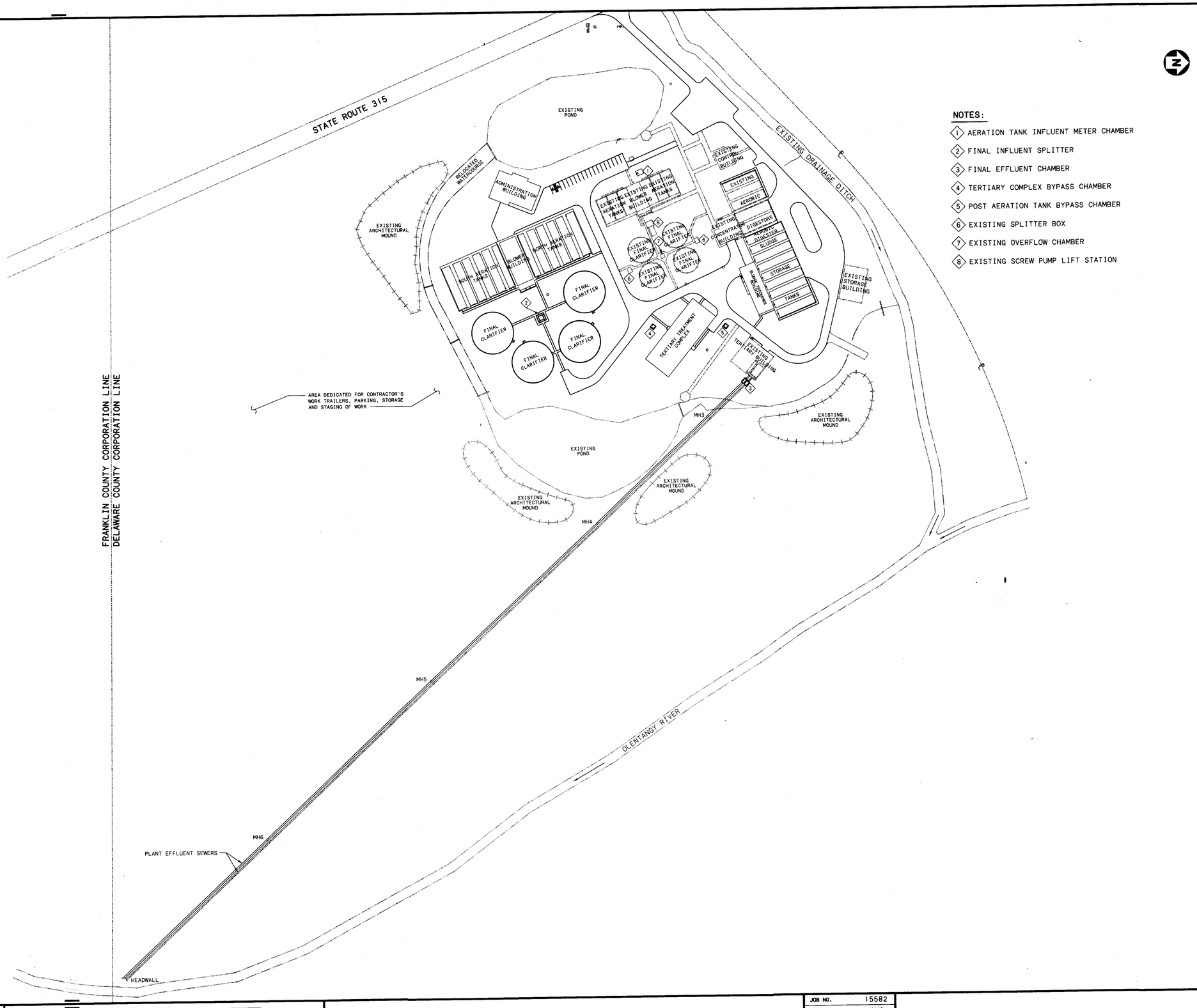
JOB NO.	15582
DESIGNED BY:	DLR
DRAWN BY:	DLR
CHECKED BY:	RBD
APPROVED BY:	RBD
DATE:	MARCH 1995

INDEX, SYMBOLS, AND ABBREVIATIONS

SCALE: AS NOTED

SHEET NO. 2 OF 112

03-30-95 N:\PROJECTS\PRI5582\CADD\SHT2



NOTES:

1. AERATION TANK INFLUENT METER CHAMBER
2. FINAL INFLUENT SPLITTER
3. FINAL EFFLUENT CHAMBER
4. TERTIARY COMPLEX BYPASS CHAMBER
5. POST AERATION TANK BYPASS CHAMBER
6. EXISTING SPLITTER BOX
7. EXISTING OVERFLOW CHAMBER
8. EXISTING SCREW PUMP LIFT STATION

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ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
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DESIGNED BY:	WKG
DRAWN BY:	DLR
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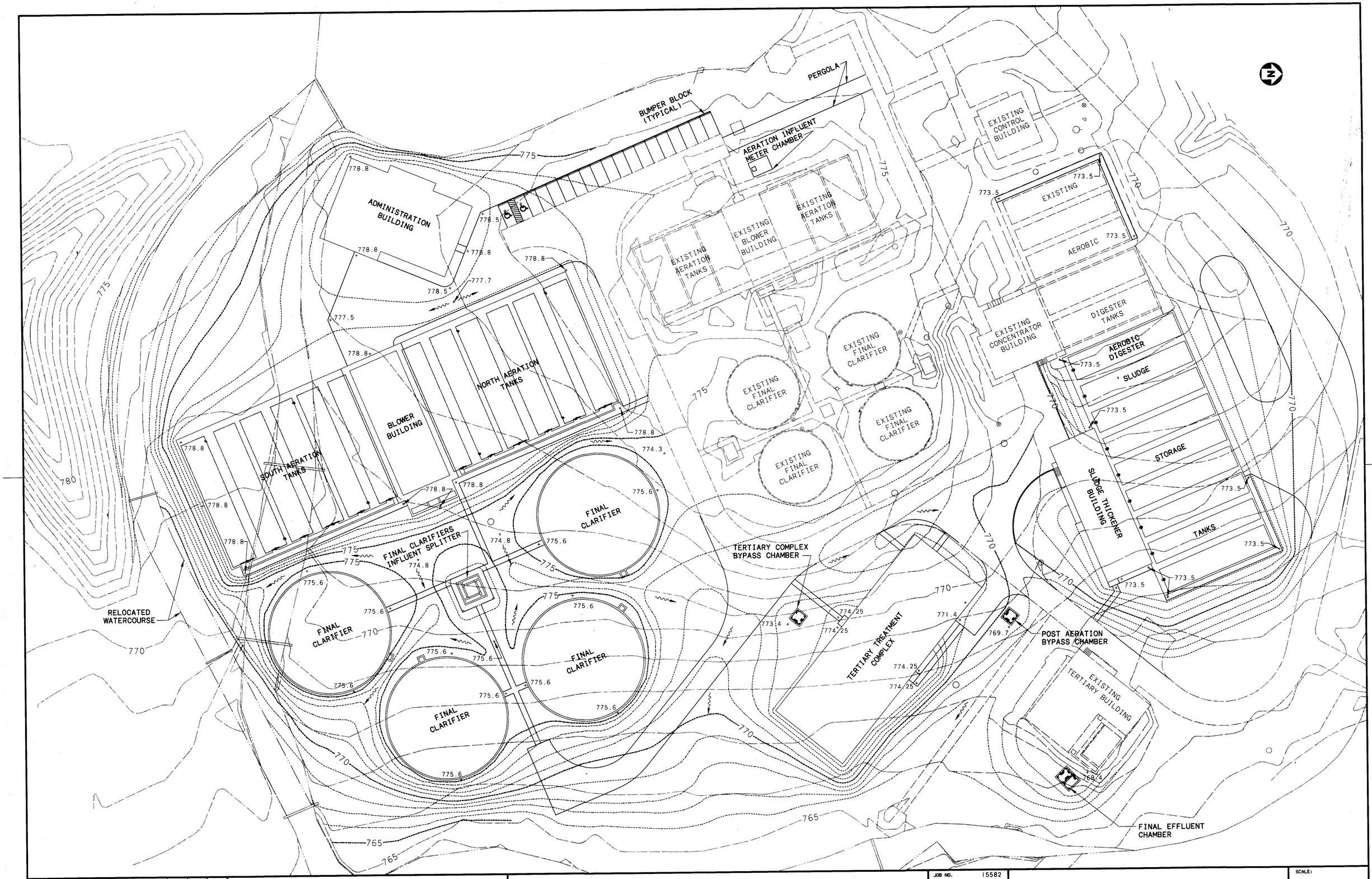
DATE:	FEB., 1995

GENERAL PLAN

SCALE: 1" = 100'

SHEET NO. 3 OF 112

20-FEB-95 N:\PROJECTS\PR15582\CADD\SHT3



NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

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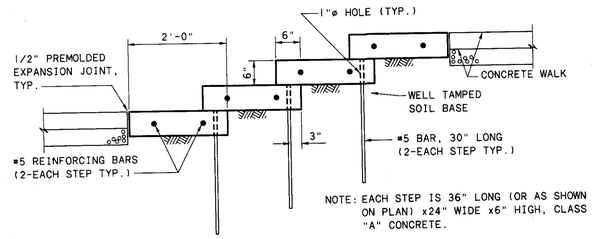
CHECKED BY:	VC
APPROVED BY:	RBD
DATE:	FEB., 1995

SITE PLAN

SCALE: 1" = 30'

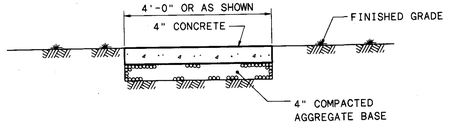
SHEET NO. 4 OF 112

20-FEB-95 N:\PROJECTS\PR15582\CADD\SHT4



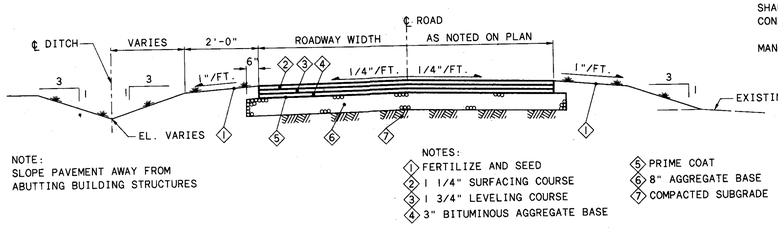
NOTE: EACH STEP IS 36" LONG (OR AS SHOWN ON PLAN) x24" WIDE x6" HIGH, CLASS "A" CONCRETE.

YARD STEP DETAIL



NOTE:
SCORE CONCRETE EVERY 4'-0". PROVIDE 1/2" PREMOLDED EXP. JOINT EVERY 20'-0" AND WHERE ABUTTING STEPS, EXISTING WALKS, AND STRUCTURAL MEMBERS.

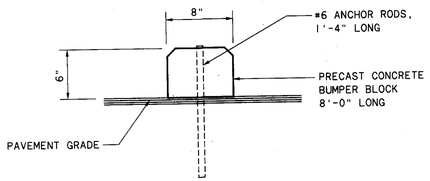
CONCRETE WALK DETAIL



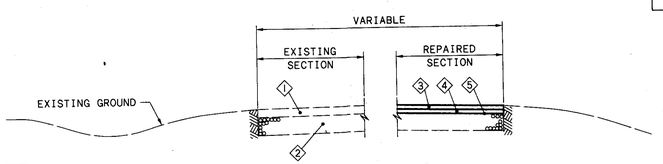
NOTE:
SLOPE PAVEMENT AWAY FROM ABUTTING BUILDING STRUCTURES

NOTES:
1. FERTILIZE AND SEED
2. 1 1/4" SURFACING COURSE
3. 1 3/4" LEVELING COURSE
4. 3" BITUMINOUS AGGREGATE BASE
5. PRIME COAT
6. 8" AGGREGATE BASE
7. COMPACTED SUBGRADE

TYPICAL ASPHALT ROADWAY & PARKING AREA



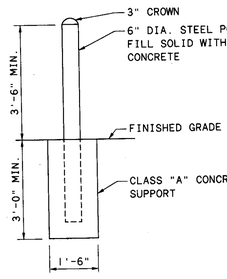
BUMPER BLOCK DETAIL



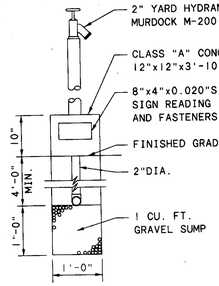
NOTE:
NEAR THE END OF CONSTRUCTION, CONTRACTOR SHALL REPAIR TO ORIGINAL GRADE ALL ASPHALTIC ROADWAYS AND PARKING AREAS THAT WERE DAMAGED DURING CONSTRUCTION.
THIS INCLUDES: 1) REMOVAL OF DAMAGED ASPHALTIC CONCRETE;
2) REPAIR OR REPLACEMENT OF EXISTING CRUSHED AGGREGATE BASE AND PREPARATION OF BASE TO 3" BELOW ORIGINAL GRADE;
3) APPLICATION OF PRIME COAT TO EXPOSED BASE;
4) PAVING WITH 2 COURSES OF ASPHALT CONCRETE.
LIMITS OF REPAIR TO BE DETERMINED BY THE ENGINEER.

NOTES:
1. EXISTING ASPHALT
2. EXISTING CRUSHED AGGREGATE, 8"
3. 1 1/2" SURFACING COURSE
4. 1 1/2" LEVELING COURSE
5. PRIME COAT

TYPICAL CONSTRUCTION SITE ACCESS ROADWAY REPAIR



GUARD POST DETAIL



YARD HYDRANT DETAIL

PIPE MATERIAL NOTES

NATURAL GAS PIPING SHALL BE CTS PLASTIC AS APPROVED BY COLUMBIA GAS OF OHIO, INC.

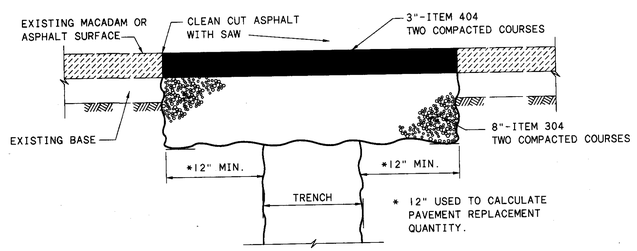
COPPER PIPE (COP) SHALL BE TYPE K, SOFT ANNEALED TUBING WITH SWAGELOK, TYLOK, OR EQUAL COMPRESSION JOINTS AND BRASS FITTINGS.

MANHOLE FRAMES AND COVERS SHALL BE NEENAH R-1762, EAST JORDAN OR EQUAL. WHEN REQUIRED, LOCKING FRAME AND COVER SHALL BE EQUAL TO NEENAH R-1762, WITH TYPE "E" HEX BOLTS LOCKING DEVICE WITH FRAME ANCHORED TO MANHOLE WITH FOUR 7/8" X 9" STAINLESS STEEL ANCHOR BOLTS. COVERS SHALL BE VENTED EXCEPT IN PAVEMENT WHERE THEY SHALL BE SOLID. HOWEVER, THERE SHALL BE NO MORE THAN TWO CONSECUTIVE MANHOLES WITH SOLID LIDS.

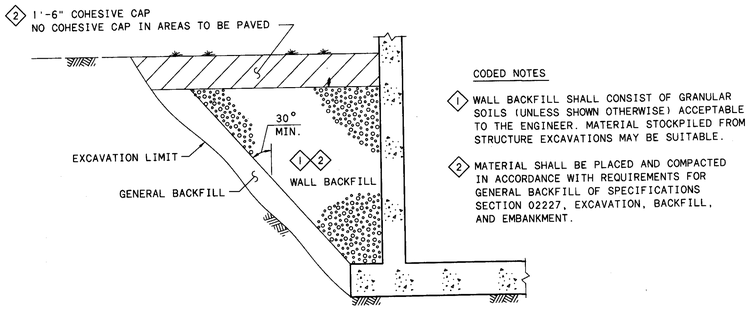
MANHOLE STEPS SHALL BE NEENAH R-1981-I, EAST JORDAN OR EQUAL.

MANHOLE SCHEDULE

MH #	INVERT ELEVATIONS IN	INVERT ELEVATIONS OUT	TOP CASTING ELEVATION	TYPE	REMARKS
MH 1	EXIST.18" SW 765.64	24" SE 765.45	772.6	B	CONTRACTOR SHALL FIELD VERIFY ELEVATIONS
		EXIST.18" NE 765.45			ABANDON ONCE NEW FINALS ON LINE
MH 2	42" SE 758.70		768.7	D	
	42" NW 758.70	42" NE 758.70			
MH 3	36" NW 757.83	36" SE 757.83	765.5	B	
MH 4	36" NW 755.09	36" SE 755.09	767.0	B	
MH 5	36" NW 753.94	36" SE 753.94	764.5	B	
MH 6	36" NW 752.79	36" SE 752.79	763.5	B	
MH 7	EXIST.16" NE 755.53	EXIST.16" SW 755.47	770.6	A	CONTRACTOR SHALL FIELD VERIFY ELEVATIONS
	8" SE 755.53				
	6" E 765.50				
MH 8	8" SE 759.08	8" NE 756.45	777.4	A	
	6" SW 770.83				
MH 9	6" NE 770.70	8" SW 770.70	775.0	A	
	6" E 770.70				
	6" SE 770.70				



ASPHALT REPLACEMENT DETAIL



CODED NOTES

1. WALL BACKFILL SHALL CONSIST OF GRANULAR SOILS (UNLESS SHOWN OTHERWISE) ACCEPTABLE TO THE ENGINEER. MATERIAL STOCKPILED FROM STRUCTURE EXCAVATIONS MAY BE SUITABLE.
2. MATERIAL SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH REQUIREMENTS FOR GENERAL BACKFILL OF SPECIFICATIONS SECTION 02227, EXCAVATION, BACKFILL, AND EMBANKMENT.

TYPICAL WALL BACKFILL

GENERAL NOTES FOR SITE WORK

MARKERS. PERMANENT SURVEY MARKERS SHALL BE REFERENCED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF ADJACENT WORK. ANY MARKERS DISTURBED BY THIS CONSTRUCTION SHALL BE ACCURATELY REPLACED BY A REGISTERED SURVEYOR AT THE CONTRACTOR'S EXPENSE.

EXCAVATIONS. IN AREAS DESIGNATED TO RECEIVE COMPACTED FOUNDATION, THE CONTRACTOR SHALL NOT EXCAVATE EXISTING MATERIAL UNTIL THE EXISTING MATERIAL HAS BEEN INSPECTED AND AUTHORIZED FOR REMOVAL BY THE ENGINEER. THE DEPTH OF REMOVAL SHALL BE AS DIRECTED AND AUTHORIZED BY THE ENGINEER.

SLOPES. FINISH GRADED SLOPES SHALL NOT EXCEED 3:1 UNLESS SHOWN OTHERWISE. PAVEMENT SLOPES SHALL NOT EXCEED 20:1 UNLESS SHOWN OTHERWISE.

SEEDING. ALL NONPAVED AREAS DISTURBED BY THIS CONSTRUCTION SHALL BE GRADED AND SEEDED IN ACCORDANCE WITH THE SPECIFICATIONS.

EROSION. THE CONTRACTOR SHALL USE APPROPRIATE EROSION CONTROL MEASURES IN ACCORDANCE WITH THE SPECIFICATIONS.

DUST AND NOISE. THE CONTRACTOR SHALL USE APPROPRIATE DUST AND NOISE CONTROL MEASURES TO AVOID NUISANCE CONDITIONS FOR PROPERTIES ADJOINING THE SITE.

SITE SECURITY. THE CONTRACTOR SHALL USE ALL APPROPRIATE MEASURES REQUIRED TO PROVIDE SAFETY AND SECURITY AT THE CONSTRUCTION SITE.

TOPSOIL. THE CONTRACTOR SHALL REMOVE TOPSOIL WITHIN THE EXCAVATED AND EMBANKMENT AREAS. THE TOPSOIL SHALL BE STOCKPILED FOR LATER USE IN TOPPING ALL NONPAVED AREAS DISTURBED BY THIS CONSTRUCTION.

TEMPORARY STORAGE OF EXCAVATED MATERIALS. TEMPORARY STORAGE OF EXCAVATED MATERIALS SHALL BE ON-SITE WHERE DIRECTED BY THE OWNER. AT THE COMPLETION OF THE PLANT IMPROVEMENTS, ALL MATERIAL STORED AT THE TEMPORARY SITE SHALL BE REMOVED BY THE CONTRACTOR AND THE SITE RESTORED AND GRADED TO ITS ORIGINAL GRADE, OR AS SHOWN ON THE PLANS. THE SITE SHALL BE GRADED AND SEEDED IN ACCORDANCE WITH THE SPECIFICATIONS.

SUBSURFACE INVESTIGATIONS HAVE BEEN MADE ON THIS PROJECT FOR DESIGN AND ESTIMATING PURPOSES AND ARE INCLUDED IN APPENDIX A OF THE SPECIFICATIONS. LOGS AND TEST DATA ARE NOT WARRANTED TO SHOW THE ACTUAL SUBSURFACE CONDITIONS. THE CONTRACTOR SHALL EXAMINE THIS INFORMATION AND OBTAIN ADDITIONAL INFORMATION, IF NECESSARY IN HIS JUDGMENT.

COMPACTED GRANULAR BACKFILL SHALL BE PLACED IN AREAS BELOW CONCRETE SIDEWALKS, ASPHALT DRIVES, AND PARKING AREAS, WHERE BACKFILL IS REQUIRED.

GENERAL NOTES FOR YARD PIPING

ALIGNMENT AND GRADE. ALL YARD PIPING SHALL BE SLOPED UNIFORMLY BETWEEN GIVEN ELEVATIONS UNLESS APPROVED OTHERWISE. WHERE UNIFORMLY SLOPED PIPING IS NOT FEASIBLE, THE CONTRACTOR SHALL PROVIDE VERTICAL BENDS OR OFFSETS AS NECESSARY.

SUPPORT. YARD PIPING WITHIN STRUCTURE EXCAVATIONS SHALL BE ADEQUATELY SUPPORTED WITH HAUNCHES, SUPPORT BEAMS, CLASS C FILL CONCRETE, CONTROLLED DENSITY FILL, OR COMPACTED GRANULAR BACKFILL. YARD PIPING ACROSS TRENCH EXCAVATIONS SHALL BE ADEQUATELY SUPPORTED WITH COMPACTED COMPACTED GRANULAR BACKFILL OR CLASS C FILL CONCRETE. PIPE CROSSING OVER OTHER PIPE SHALL BE SUPPORTED WITH COMPACTED GRANULAR BACKFILL OR CLASS C FILL CONCRETE. THE METHOD OF SUPPORT IN ALL CASES SHALL BE AS SHOWN, UNLESS APPROVED OTHERWISE.

PAVED AREAS. YARD PIPING THROUGH NEW AND EXISTING PAVED AREAS SHALL BE BACKFILLED WITH COMPACTED GRANULAR BACKFILL. EXISTING PAVEMENT SHALL BE REPLACED TO ORIGINAL CONDITION OR AS SPECIFIED OTHERWISE.

SEEDED AREAS. YARD PIPING THROUGH NEW AND EXISTING SEEDED AREAS SHALL HAVE TRENCHES GRADED AND SEEDED AS SPECIFIED.

FREEZING. YARD PIPING SUBJECT TO FREEZING SHALL HAVE A MINIMUM COVER OF 4 FEET UNLESS SHOWN OR APPROVED OTHERWISE.

ABANDONED PIPING. EXISTING YARD PIPING DESIGNATED TO BE ABANDONED SHALL BE REMOVED AS NECESSARY, SEVERED AND PLUGGED WITH CLASS C FILL CONCRETE TO PREVENT SETTLEMENT INTO THE PIPE.

RESTRAINTS. ALL FITTINGS SHALL BE ADEQUATELY RESTRAINED WITH CONCRETE BLOCKING OR OTHER APPROVED JOINT RESTRAINING SYSTEM.

EXISTING PIPE AND CONDUIT. LOCATIONS, SIZES AND MATERIALS OF EXISTING PIPING, UTILITIES AND STRUCTURES INDICATED ON THE PLANS ARE DETERMINED FROM AVAILABLE RECORDS AND FIELD SURVEYS. THESE LOCATIONS INDICATED ARE NOT NECESSARY COMPLETE OR CORRECT. CONTRACTOR SHALL FIELD VERIFY AS NECESSARY. THE LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL PIPING, UTILITIES AND STRUCTURES ARE THE RESPONSIBILITY OF THE CONTRACTOR. BURIED ELECTRICAL CONDUIT IS NOT SHOWN.

PIPES IN FILL AREAS. PIPES THAT ARE LOCATED IN AREAS TO RECEIVE FILL MATERIAL SHALL NOT BE INSTALLED UNTIL THE FILL HAS BEEN PLACED AT LEAST 2 FEET ABOVE THE TOP OF THE PIPE. THE PIPE TRENCH MAY THEN BE EXCAVATED THROUGH THE FILL AND THE PIPE INSTALLED.

VALVES FOR NONPOTABLE PIPING SHALL BE GATE VALVES UNLESS NOTED OTHERWISE.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

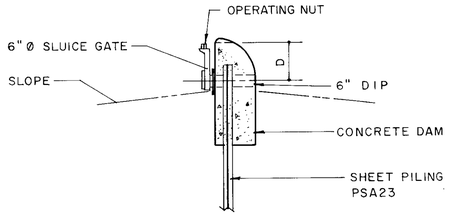
JOB NO.	15582
DESIGNED BY:	WKG
DRAWN BY:	DLR
CHECKED BY:	WKG
APPROVED BY:	RBD
DATE:	MARCH 1995

MISC. SITE DETAILS, SITE & PIPING PLANS GENERAL NOTES

SCALE: NONE

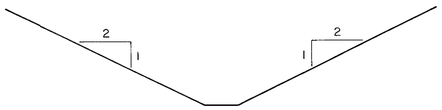
SHEET NO. 5 OF 112

03-30-95 N:\PROJECTS\PR15582\CADD\SH15



WATERCOURSE DRAIN DETAIL

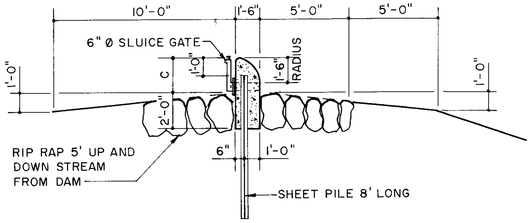
SCALE: NONE



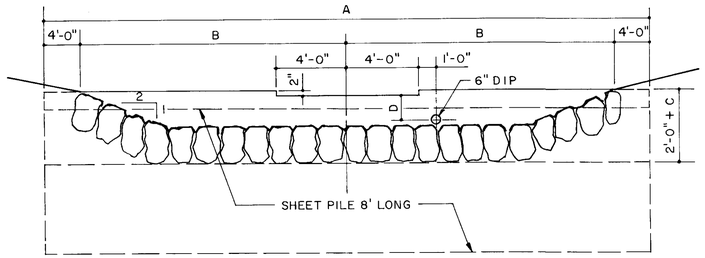
NOTE:
CHANNEL TOP WIDTHS DETERMINED FROM SHEET 4 AND DAM TABLE THIS SHEET. BOTTOM WIDTH VARIES.

WATERCOURSE CROSS-SECTION

SCALE: NONE



SECTION

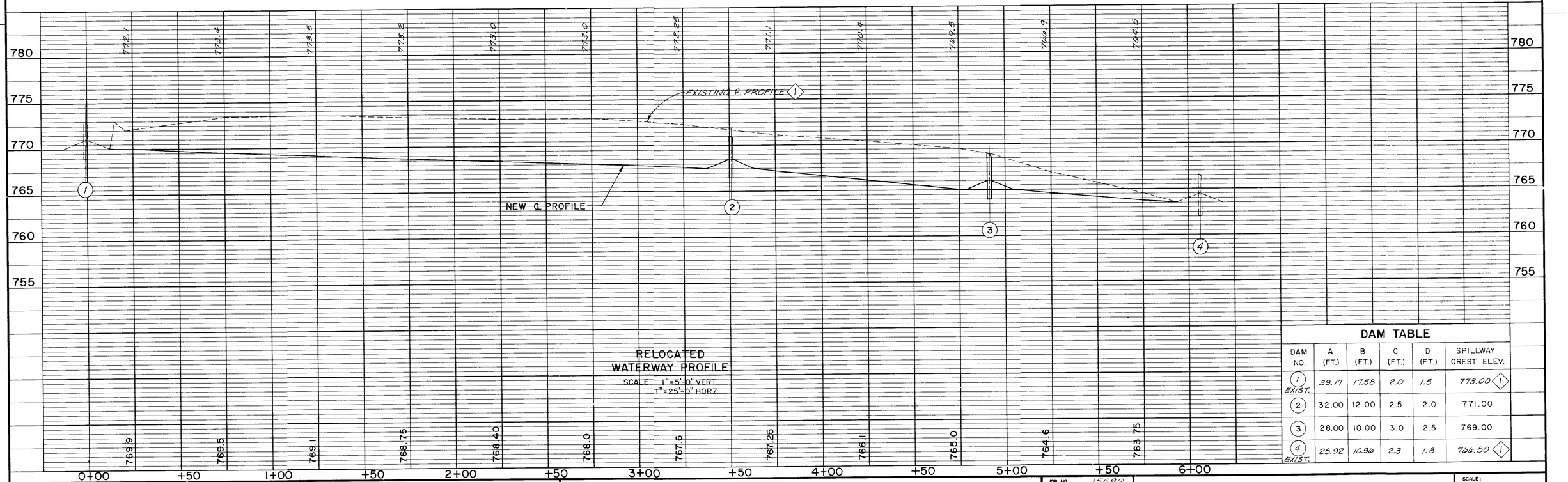


ELEVATION

DAM DETAILS

SCALE: NONE

CODED NOTE:
⟨1⟩ CONTRACTOR SHALL FIELD VERIFY ALL NECESSARY ELEVATIONS AND DIMENSIONS.



RELOCATED WATERWAY PROFILE

SCALE: 1"=5'-0" VERT.
1"=25'-0" HORZ

DAM TABLE

DAM NO.	A (FT.)	B (FT.)	C (FT.)	D (FT.)	SPILLWAY CREST ELEV.
1 EXIST.	39.17	17.58	2.0	1.5	773.00 ⟨1⟩
2	32.00	12.00	2.5	2.0	771.00
3	28.00	10.00	3.0	2.5	769.00
4 EXIST.	25.92	10.90	2.3	1.8	766.50 ⟨1⟩

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	VVC
DRAWN BY:	DEH
CHECKED BY:	VVC
APPROVED BY:	RBL
DATE:	FEB., 1995

WATERWAY RELOCATION DETAILS

SCALE: AS NOTED

SHEET NO. 5A OF 112

ATLAS BLUEPRINT 547505
FORM #51

NOTE:
COORDINATES SHOWN FOR RECTANGULAR STRUCTURES ARE FOR OUTSIDE CONCRETE WALL OR FLOOR SLABS. COORDINATES SHOWN FOR CIRCULAR STRUCTURES ARE FOR THE CENTER.

LEGEND

- NEW ASPHALT SURFACES
- EXISTING ASPHALT AREAS TO BE RESURFACED
- EXISTING ASPHALT AND BASE TO BE REVOVED BUT NOT REPLACED

BENCHMARK:
CHISEL MARK IN NORTH WINGWALL OF CONCRETE CULVERT ON WEST SIDE OF STATE ROUTE 315 EL.778.25
N 8401.25
E 10651.77

PROVIDE NEW GAS METER SETTING SEE DETAIL THIS SHEET

STATE ROUTE 315

EXISTING POND

EXISTING DAM NO.1

N 8159.42
E 11105.25

STA.1+18

N 8045.47
E 11127.19

STA.1+78

STA.2+48

STA.18+77.30

STA.3+20

STA.3+50.31

STA.3+72.28

NEW DAM NO.2

N 7976.96
E 11375.30

STA.4+23.75

NEW DAM NO.3

STA.4+83.23

N 8144.32
E 11387.32

STA.6+12.35

EXISTING DAM NO.4

B-16 ADMINISTRATION BUILDING

B-17

B-18

B-20

B-25

B-24

B-23

NORTH AERATION TANKS

SOUTH AERATION TANKS

BLOWER BUILDING

N 8366.35
E 11075.74

N 8384.63
E 11080.07

TB-8 EXISTING AERATION TANKS

EXISTING BLOWER BUILDING

EXISTING TB-7 AERATION TANKS

TB-5

EXISTING FINAL CLARIFIER

TB-6

N 8169.90
E 11252.00

B-21

FINAL CLARIFIER
N 8251.49
E 11336.97

B-19

N 8170.99
E 11341.59

FINAL CLARIFIER
N 8050.58
E 11427.54

N 8167.89
E 11396.93

B-22

FINAL CLARIFIER
N 8239.57
E 11445.26

FINAL CLARIFIER
N 8136.35
E 11488.70

PC STA.2+06.54

PT STA.2+28.26

STA.2+79.71

EXISTING CONTROL BUILDING TB-1

EXISTING B-11 AEROBIC

TB-3 DIGESTER TANKS

TB-9

EXISTING CONCENTRATOR BUILDING

TB-4

N 8590.53
E 11289.51

N 8556.07
E 11286.71

PC STA.13+68.07=
PC STA. 0+00.00

N 8473.71
E 11322.92

B-13

SLUDGE THICKENER BUILDING

AEROBIC DIGESTER SLUDGE STORAGE TANKS

B-12

TB-10

STA.8+43

EXISTING STORAGE BUILDING

PT STA.7+73.94

PC STA.6+43.10

STA.5+38

N 8684.15
E 11187.95

PT STA.10+46.57

N 8759.08
E 11366.17

PC STA.9+28.38

N 8488.41
E 11354.07

B-14

TERTIARY TREATMENT COMPLEX

N 8558.63
E 11408.78

N 8560.13
E 11422.84

N 8393.93
E 11415.44

N 8401.71
E 11421.72

N 8518.18
E 11466.88

B-15

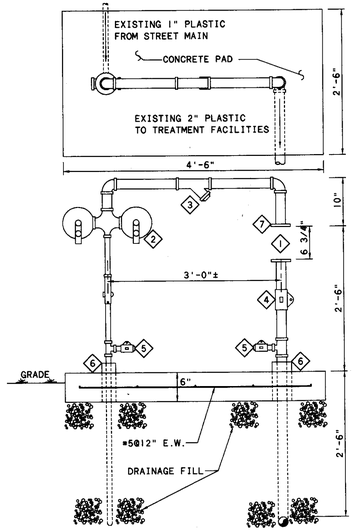
N 8432.74
E 11525.01

EXISTING TERTIARY BUILDING TB-2

N 8600.44
E 11528.05

N 8601.99
E 11547.20

EXISTING POND



NEW GAS METER SETTING

CODED NOTES

1. NEW METER FURNISHED AND INSTALLED BY COLUMBIA GAS. VERIFY SPACING WITH GAS COMPANY.
2. 1"x2" B-531-1MR REGULATOR
3. 2" STRAINER
4. 2" WING LOCK VALVE
5. 1" WING LOCK VALVE
6. GALVANIZED STEEL SLEEVE
7. FLAT FACED FLANGES

NOTES:
EXTEND EXISTING BURIED PIPE TO ITEM (5) WITH IPS PLASTIC AS REQUIRED BY COLUMBIA GAS COMPANY. ALL PIPE ABOVE (5) TO BE SCHEDULE 40 STEEL WITH MALEABLE FITTINGS AND SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR.

ITEMS (2)-(5)&(7) FURNISHED BY COLUMBIA GAS COMPANY AND INSTALLED BY CONTRACTOR.

ALL STEEL PIPE TO BE PAINTED AS PER SPECIFICATION 9900.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	VC/RBD
DRAWN BY:	DLR
CHECKED BY:	VC
APPROVED BY:	RBD
DATE:	MARCH 1995

LOCATION PLAN AND MISC. SITE WORK

SCALE: 1" = 50'

SHEET NO. 6 OF 112

03-21-95 N:\PROJECTS\PR15582\CADD\SHT6

EXISTING POND

SEE SHEET 7A

RELOCATED WATERCOURSE

ADMINISTRATION BUILDING

LS-3

PS-5

TX-50

NEW PERGOLA SEE SHEET 7A FOR DETAIL

FP-2

MR-4

EXISTING TREES TO REMAIN TYP. REMOVE TREE WHERE NEW BUILDINGS ARE SHOWN ON TOP OF EXISTING TREES. GEN. CONTRACTOR TO PROTECT TREE THROUGHOUT CONSTRUCTION. IF THERE IS A QUESTION ABOUT A TREE BEING REMOVED REVIEW WITH ENGINEER / ARCHITECT AND OWNERS PRIOR TO REMOVING THE TREE.

GENERAL CONTRACTOR TO TRANSPLANT TREES TYP. OF 10. TRANSPLANT PRIOR TO CONSTRUCTION & WATER THROUGHOUT THE CONSTRUCTION PERIOD

EXISTING CONTROL BUILDING

EXISTING AERATION TANKS

EXISTING BLOWER BUILDING

EXISTING AERATION TANKS

WF- ONE AT EACH PERGOLA POST NEW AND EXISTING PERGOLA TYP.

PN-5

EXISTING AEROBIC

DIGESTER TANKS

EXISTING CONCENTRATOR BUILDING

AEROBIC DIGESTER

SLUDGE

STORAGE

TANKS

SLUDGE THICKENER BUILDING

GT-3

NORTH AERATION TANKS

BLOWER BUILDING

SOUTH AERATION TANKS

PN-5

MN-4

EXISTING FINAL CLARIFIER

EXISTING FINAL CLARIFIER

EXISTING FINAL CLARIFIER

EXISTING FINAL CLARIFIER

MR-2

PN-5

MR-1

AR-1

FINAL CLARIFIER

FINAL CLARIFIER

FINAL CLARIFIER

FINAL CLARIFIER

MR-3

PS-6

AR-4

TERTIARY TREATMENT COMPLEX

PS-3

PS-6

TC-3

WF- ONE AT EACH PERGOLA POST NEW AND EXISTING PERGOLA TYP.

PS-3

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	DDM
DRAWN BY:	WBK
CHECKED BY:	DDM
APPROVED BY:	DDM
DATE:	MARCH 1995

LANDSCAPE PLAN

SCALE: 1"=30'-0"

SHEET NO. 7 OF 112

O:\SHT07 02-14-95 2:25:24 pm EST

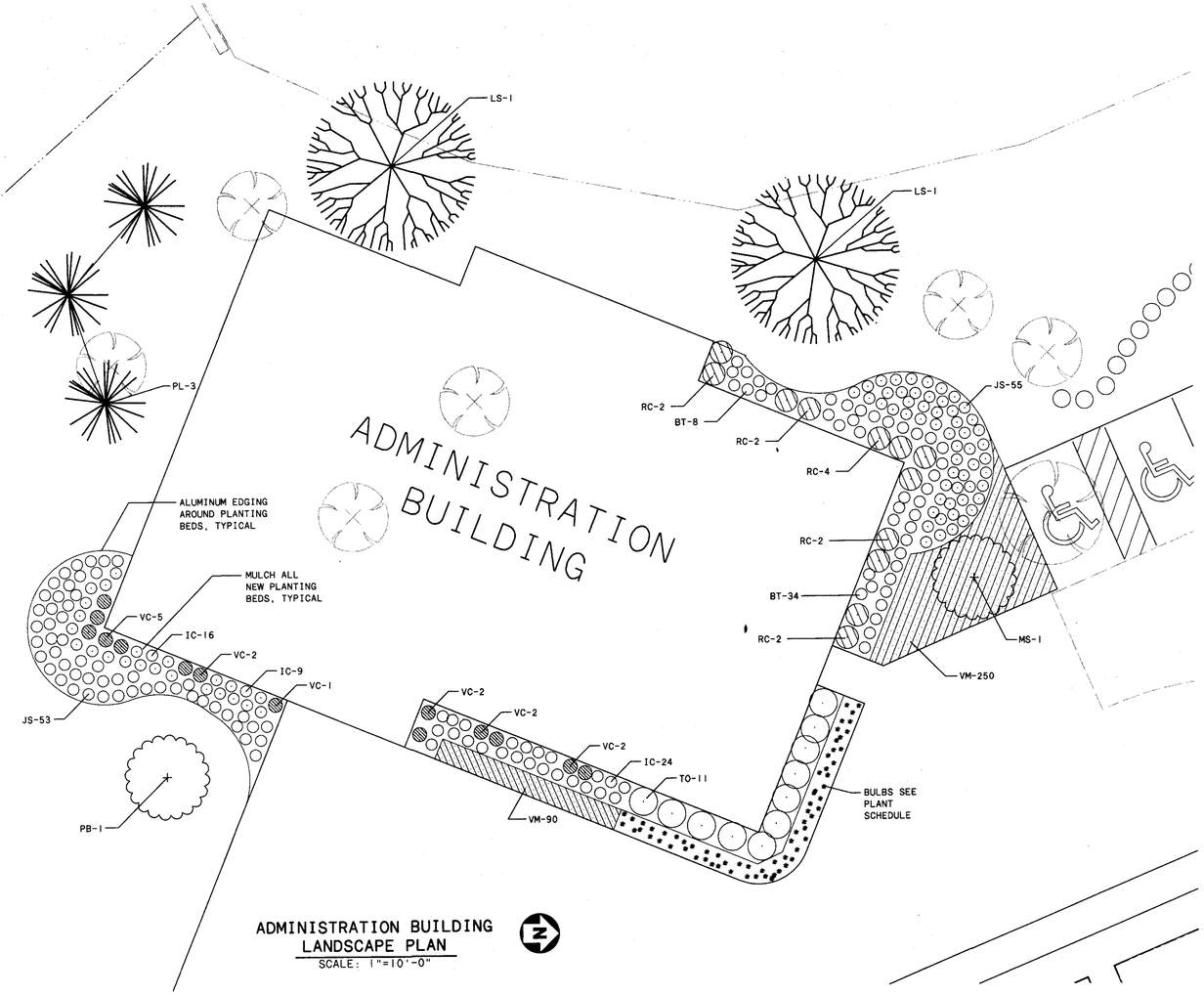
PLANT LIST

QUAN	ABBREV	SCIENTIFIC NAME	COMMON NAME	SIZE	COMMENTS
5	AR	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2"-2 1/2"	B & B
42	BT	BERBERIS THUNBERGI ATROPURPUREUM NANA	CRIMSON PYGMY BARBERRY	20"-24"	POTTED
2	FP	FRAXINUS PENNSYLVANICA "MARSHALL'S SEEDLESS"	MARSHALL SEEDLESS ASH	2"-2 1/2"	B & B
3	GT	GLENDITSIA TRIACANTHOS 'INERMIS'	THORNLESS HONEY LOCUST	2"-2 1/2"	B & B
49	IC	ILEX CRENATA 'GREEN LUSTRE'	GREEN LUSTRE HOLLY	12"	NO 3 CONT.
55	JS	JUNIPERUS SABINA 'BROADMOOR'	BROADMOOR JUNIPER	12" SPD.	NO 3 CONT.
5	LSG	LIQUIDAMBAR STYRACIFLUA	AMERICAN SWEET GUM	2 1/2"-3"	B & B
4	MN	MALUS 'SNOWDRIFT'	SNOWDRIFT CRABAPPLE	2"-2 1/2"	B & B
10	MR	MALUS 'RADIANT'	CRABAPPLE	2"-2 1/2"	B & B
1	MS	MAGNOLIA STELLATA	STAR MAGNOLIA	2"-2 1/2"	B & B
1	PB	PYRUS CALLORYANA "BRADFORD"	BRADFORD PEAR	2"-2 1/2"	B & B
3	PL	PINUS SYLVESTRIS	SCOTCH PINE	8'-10'	B & B
15	PN	PINUS NIGRA	AUSTRIAN PINE	6'-8'	B & B
23	PS	PINUS STROBUS	WHITE PINE	6'-8'	B & B
12	RC	RHODODENDRON 'CAROLINIANA'	'CAROLINIANA' RHODODENDRON	24" HT	B & B
3	TC	TILIA CORDATA	LITTLE LEAF LINDEN	2"-2 1/2"	B & B
11	TO	THUJA OCCIDENTALIS 'MISSION'	MISSION ARBORVITAE	5'-6' HT	B & B
62	TX	TAXUS x MEDIA "HICKSII"	HICK'S YEW	24"- 36" HT	B & B
14	VC	VIBURNUM CARLESII	KOREAN SPICE VIBURNUM	36" HT	B & B
340	VM	VINCA MINOR	COMMON PERIWINKLE	2 YR	POTTED
124	WF	WISTERIA FLORIBUNDA	JAPANESE WISTERIA	1 GAL	B & B

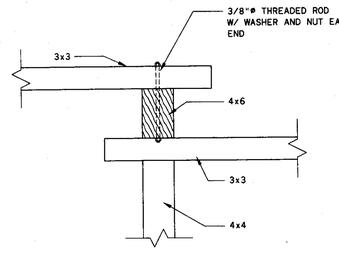
BULB LIST

QUAN	MONTH	SCIENTIFIC NAME	COMMON NAME	SIZE	COMMENTS
150	FEB.- MAR.	1. CROCUS "CHRYSANTHUS ADVANCE"	ADVANCE CROCUS	4"-6"	PURPLE/YELLOW
150		2. NARCISSUS ROSEWORTHY	ROSEWORTHY DAFFODIL	10"-12" HT	WHITE/ORANGE
100	ARR.- MAY	1. JULIETTE DARWIN HYBRID	TULIP	6"-8"	YELLOW/RED
100		2. BEAUTY OF APELDOORN	TULIP	16"-24"	YELLOW/ORANGE RED
100		3. APELDOORN	TULIP	16"-24"	
300	JUNE- JULY		ASIATIC LILLES	24"-36" HT	(MIXED COLORS)

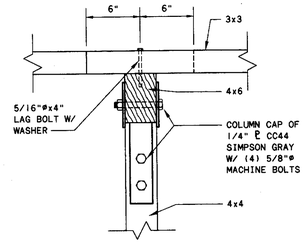
* VERIFY ALL QUANTITIES LISTED ABOVE



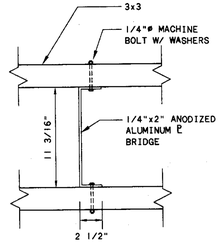
ADMINISTRATION BUILDING
LANDSCAPE PLAN
SCALE: 1"=10'-0"



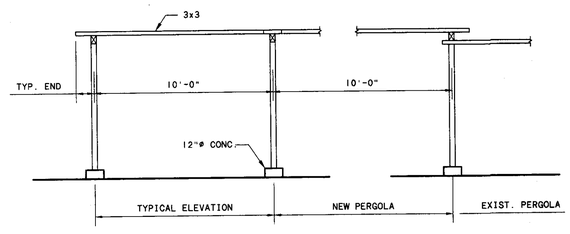
PERGOLA DETAIL
SCALE: 1 1/2"=1'-0"



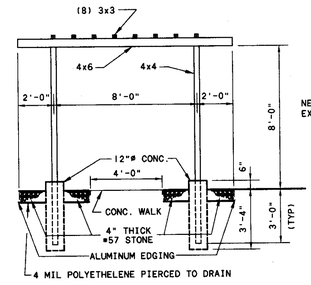
PERGOLA POST DETAIL
SCALE: 1 1/2"=1'-0"



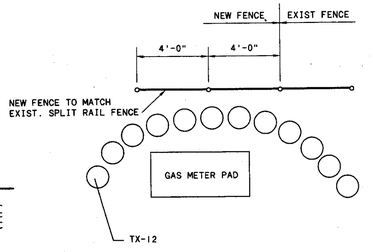
PERGOLA BRIDGING @ CENTER SPAN
SCALE: 1 1/2"=1'-0"



PERGOLA DETAILS



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



LANDSCAPE @ GAS METER
SCALE: 1/4"=1'-0"

NOTE: ALL WOOD FOR THE PERGOLAS TO BE ROUGH SAWN CEDAR

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	JF
DRAWN BY:	WBK
CHECKED BY:	DDM
APPROVED BY:	DDM
DATE:	MARCH 1995

ENLARGED LANDSCAPE PLAN AND SCHEDULES

SCALE: AS NOTED

SHEET NO. 7A OF 112

Q:\SHT07A 03-14-95

CODED NOTES

1. REMOVE EXISTING 6" CIP SLUDGE MAIN AS SHOWN AND CONNECT TO NEW 6" DIP SLUDGE MAIN.
2. SEE SHEET 82 FOR CLARIFICATION OF NONPOTABLE PIPING THRU AREA.
3. PIPE TO BE ABANDONED.
4. REMOVE EXISTING MAIN. CONNECT EXISTING MAIN TO NEW MAIN.
5. YARD PIPING VALVES NOT SHOWN THIS AREA. SEE SHEET 39 FOR VALVE LOCATIONS.
6. REROUT EXISTING PIPING (24) (23) (28); PROVIDE NEW PIPING AS NECESSARY TO AVOID NEW PIPING IN VICINITY OF NEW DIGESTOR AND EXISTING CONCENTRATOR BUILDING.
7. CATCH BASIN NO.1 (CB1) SHALL BE ODOT STANDARD NO. 2-2-B, INV.EL.768.33 SLOPE 8" OUTLET TO DAYLIGHT.

EXISTING POND
ADMINISTRATION BUILDING
EXISTING AERATION TANKS
EXISTING BLOWER BUILDING
EXISTING AERATION TANKS
EXISTING CONTROL BUILDING
EXISTING AEROBIC DIGESTER TANKS
EXISTING CONCENTRATOR BUILDING
AEROBIC DIGESTER SLUDGE STORAGE TANKS
SLUDGE THICKENER BUILDING
NORTH AERATION TANKS
BLOWER BUILDING
SOUTH AERATION TANKS
TYPICAL FOR NORTH AERATION TANKS
EXISTING FINAL CLARIFIER
EXISTING FINAL CLARIFIER
EXISTING FINAL CLARIFIER
EXISTING FINAL CLARIFIER
FINAL CLARIFIER
FINAL CLARIFIER
FINAL CLARIFIER
FINAL CLARIFIER
TERTIARY TREATMENT COMPLEX
EXISTING TERTIARY BUILDING
TO STORAGE BUILDING
GUARD POST (TYP.)
MH1
MH2
MH9
MH18
YH
CB-1

EXISTING PIPING LEGEND

1. 14" CIP CLASS 25 AERATION INFLUENT
2. 6" CIP AERATION TANK DEWATERING
3. 16" DUCTILE IRON CLASS 6 TERTIARY BUILDING TANK DEWATERING
4. 6" CIP DIGESTER SUPERNATANT RETURN
5. 10" CIP AEROBIC DIGESTER AIR MAIN
6. 6" CIP WASTE ACTIVATED SLUDGE MAIN
7. 6" CIP CLARIFIER SCUM DRAIN AND DEWATERING
8. 18" CIP AERATION EFFLUENT
9. 6" CIP CLARIFIER DEWATERING
10. 16" CIP CLASS 25 CLARIFIER INFLUENT
11. 8" CIP CLASS 24 CLARIFIER RETURN SLUDGE
12. 16" CIP SCREW PUMP LIFT STATION INFLUENT
13. 4" CIP CLARIFIER SCUM DRAIN
14. 14" CIP CLARIFIER EFFLUENT
15. 18" CIP FINAL CLARIFIER EFFLUENT
16. 2" GAS PIPING
17. 6" CIP NONPOTABLE WATER
18. 4" CIP POND WATER SUPPLY
19. 24" SEWER PIPE, CLASS III C. PLANT EFFLUENT
20. 3" YOLOY NONPOTABLE WATER
21. 2" COPPER, TYPE K, NONPOTABLE WATER
22. 2" YOLOY NONPOTABLE WATER
23. 1" GAS PIPING
24. 1" COPPER, TYPE K, NONPOTABLE WATER
25. 1 1/2" GAS PIPING
26. 4" CIP POTABLE WATER
27. 2" YOLOY POTABLE WATER
28. 1" CONTAINED FIBERGLASS FUEL TANK SUPPLY & RETURN PIPING
29. 3" YOLOY POTABLE WATER
30. 6" CIP AEROBIC DIGESTER DEWATERING
31. 12" CMP STORM CULVERT
32. 8" DIP AEROBIC DIGESTER AIR MAIN
33. 12" REINFORCED CONCRETE STORM SEWER, ASTM C-76, CLASS III
34. 6" DIP SLUDGE TRANSFER DRAIN
35. 12" DIP DIGESTER SLUDGE
36. 8" DIP DRAIN
37. 18" RAW SEWAGE
38. 42" CONCRETE CLASS V RAW SEWAGE INFLUENT

NEW PIPING LEGEND

1. 24" DIP AERATION INFLUENT
2. 18" DIP AERATION INFLUENT
3. 10" DIP AERATION INFLUENT
4. 30" DIP AERATION EFFLUENT
5. 20" DIP FINAL CLARIFIER INFLUENT
6. 18" DIP FINAL CLARIFIER EFFLUENT
7. 24" DIP FINAL CLARIFIER EFFLUENT
8. 30" DIP FINAL CLARIFIER EFFLUENT
9. 36" DIP FINAL CLARIFIER EFFLUENT
10. 42" DIP FILTER INFLUENT
11. 36" DIP FILTER INFLUENT
12. 30" DIP FILTER INFLUENT
13. 42" DIP TERTIARY COMPLEX BYPASS
14. 54" DIP UV EFFLUENT
15. 54" DIP POST AERATION INFLUENT
16. 42" DIP POST AERATION BY-PASS
17. 36" DIP PLANT EFFLUENT SEWER
18. 24" DIP PLANT EFFLUENT SEWER
19. 12" DIP RETURN SLUDGE
20. 6" DIP WASTE ACTIVATED SLUDGE MAIN
21. 8" DIP WASTE ACTIVATED SLUDGE MAIN
22. 8" DIP DIGESTED, THICKENED SLUDGE MAIN
23. 12" DIP DIGESTED SLUDGE MAIN
24. 6" DIP DIGESTED SLUDGE MAIN
25. 6" DIP SCUM MAIN
26. 8" DIP WASH WATER DRAIN SEWER
27. 10" DIP WASH WATER DRAIN SEWER
28. 6" DIP SCUM SEWER
29. 8" DIP DRAIN SEWER
30. 6" DIP DRAIN SEWER
31. 8" DIP DECANT DRAIN SEWER
32. 6" DIP DECANT RETURN DRAIN SEWER
33. 6" DIP SLUDGE TRANSFER DRAIN SEWER
34. 24" DIP AIR MAIN
35. 4" DIP AIR MAIN
36. 16" DIP AEROBIC DIGESTER AIR MAIN
37. 12" DIP AEROBIC DIGESTER AIR MAIN
38. 8" DIP AEROBIC DIGESTER AIR MAIN
39. 10" DIP SLUDGE STORAGE AIR MAIN
40. 3" COPPER, TYPE K POTABLE WATER MAIN
41. 2" COPPER, TYPE K POTABLE WATER MAIN
42. 1 1/4" COPPER, TYPE K POTABLE WATER MAIN
43. 2" COPPER, TYPE K NONPOTABLE WATER MAIN
44. 1 1/2" COPPER, TYPE K NONPOTABLE WATER MAIN
45. 1" COPPER, TYPE K NONPOTABLE WATER MAIN
46. 6" DIP NONPOTABLE WATER MAIN
47. 3" DIP NONPOTABLE WATER MAIN
48. 10" DIP FOAM SPRAY MAIN
49. 8" DIP FOAM SPRAY MAIN
50. 6" DIP FOAM SPRAY MAIN
51. 3" DIP FOAM SPRAY MAIN
52. 4" DIP POND WATER SUPPLY
53. 1-1/2" PVC PHOSPHORUS REMOVAL PIPING
54. 2" GAS MAIN
55. 1 1/4" GAS MAIN
56. 1" GAS MAIN
57. 8" RCP STORM SEWER, ASTM C-76, CLASS III
58. 1" CONTAINED FIBERGLASS FUEL TANK SUPPLY PIPE
59. 1" CONTAINED FIBERGLASS FUEL TANK RETURN PIPE
60. 6" DIP SANITARY SEWER
61. 8" DIP SCUM SEWER

LEGEND
PIPING TO BE ABANDONED

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

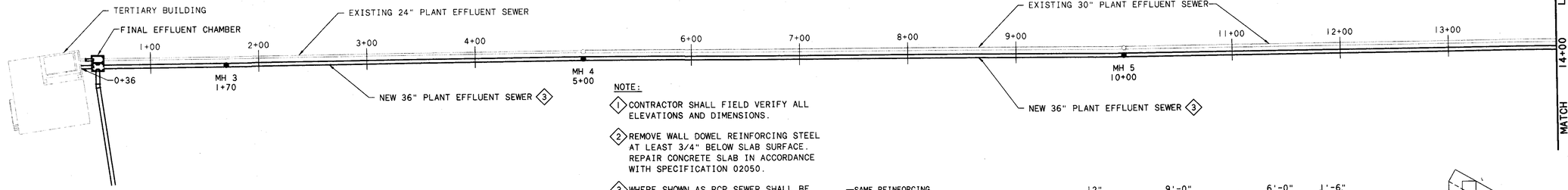
JOB NO.	15582
DESIGNED BY:	WKG
DRAWN BY:	DLR
CHECKED BY:	WKG
APPROVED BY:	RBD
DATE:	MARCH 1995

PIPING PLAN

SCALE: 1" = 30'

SHEET NO. 8 OF 112

03-14-95 N:\PROJECTS\PR15582\CADD\SHT8

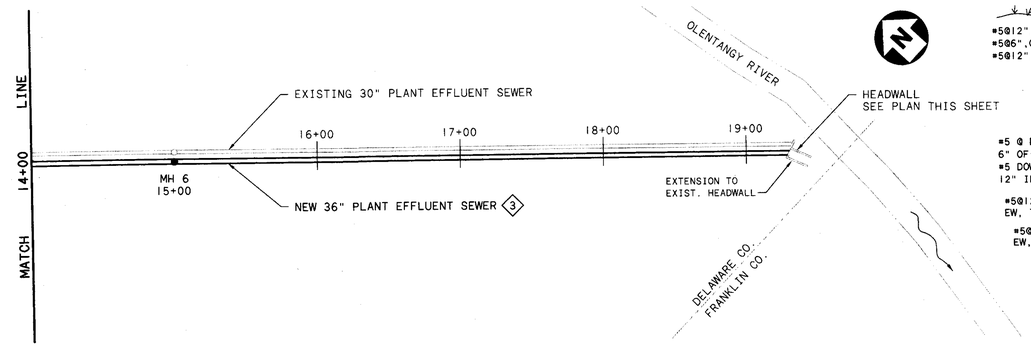


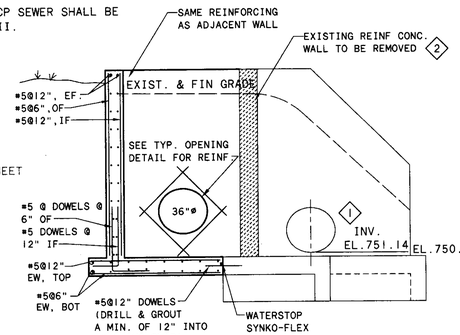
NOTE:

(1) CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS AND DIMENSIONS.

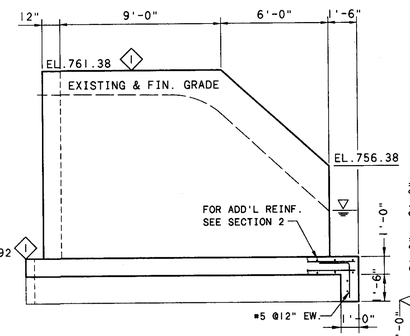
(2) REMOVE WALL DOWEL REINFORCING STEEL AT LEAST 3/4" BELOW SLAB SURFACE. REPAIR CONCRETE SLAB IN ACCORDANCE WITH SPECIFICATION 02050.

(3) WHERE SHOWN AS RCP SEWER SHALL BE ASTM C-76, CLASSII.

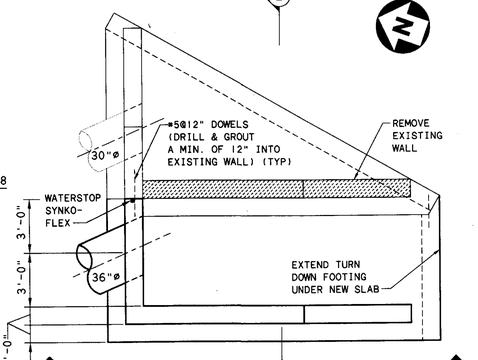




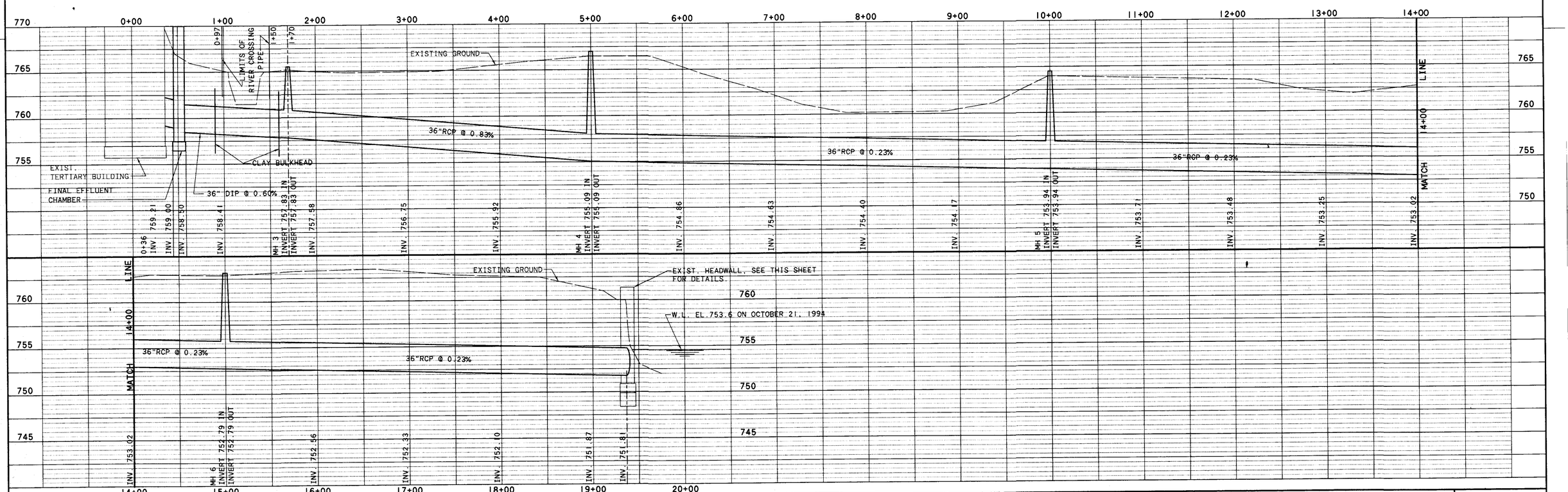
SECTION (2)
SCALE: 1/4"=1'-0"



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



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



NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

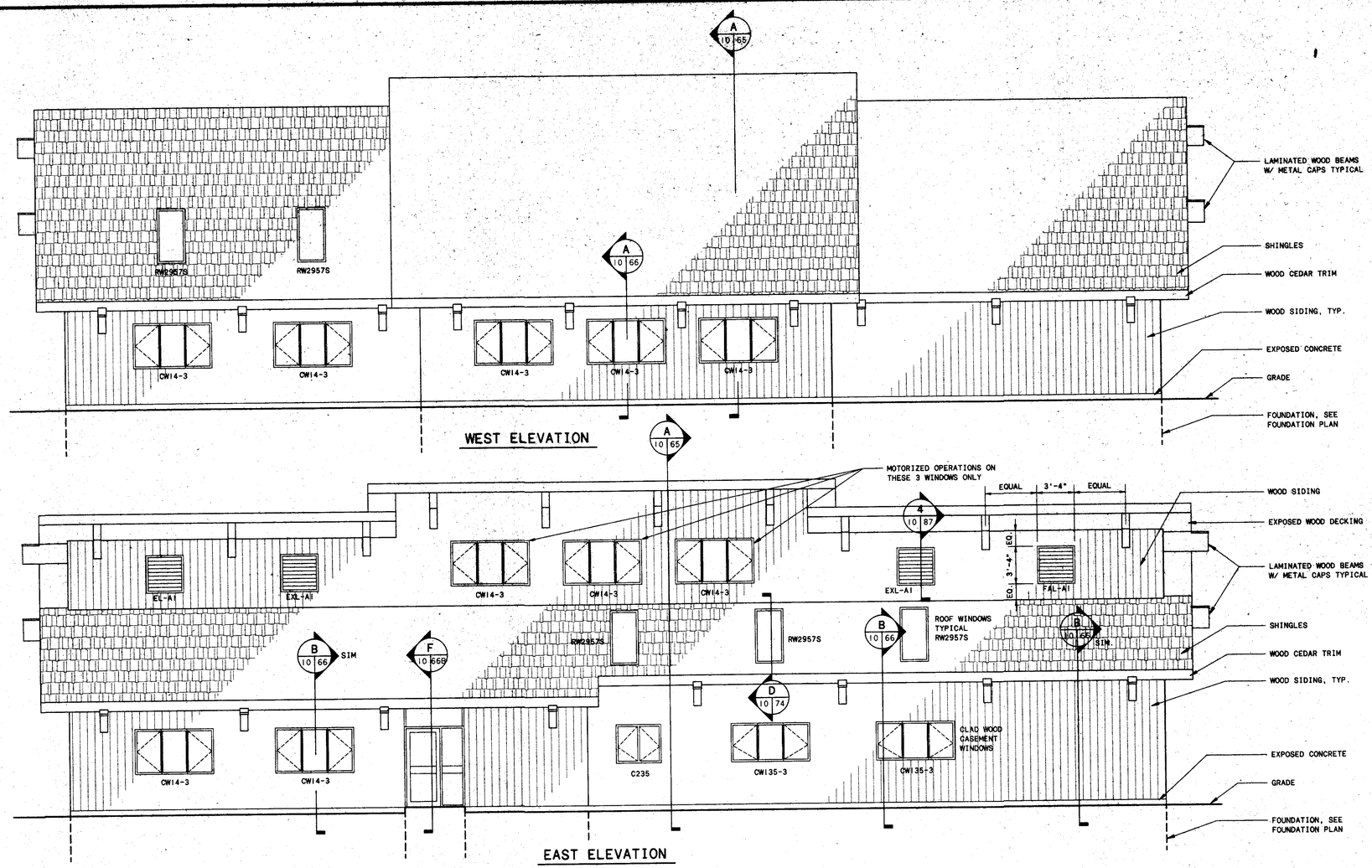
DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	VC
DRAWN BY:	TWD/DLR
CHECKED BY:	VC
APPROVED BY:	RBD
DATE:	MARCH 1995

PLANT EFFLUENT SEWER

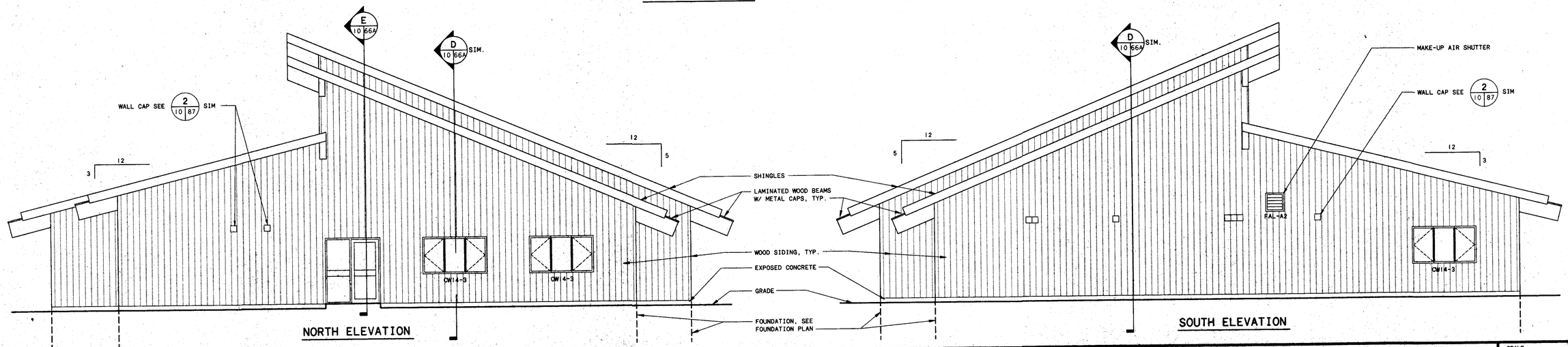
SCALE:	
1"=50' HOR.	
1"=5' VERT.	
SHEET NO.	OF
9	112

N:\PROJECTS\PR15582\CADD\SHT09 03-23-95



WEST ELEVATION

EAST ELEVATION



NORTH ELEVATION

SOUTH ELEVATION

GENERAL NOTES

1. NUMBERS SHOWN BELOW WINDOWS ARE ANDERSON #'S. THIS IS FOR DESIGN INTENT AND DOES NOT LIMIT OTHER MANUFACTURERS SEE SPECS.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	DM
DRAWN BY:	BK
CHECKED BY:	DM
APPROVED BY:	DM
DATE:	MARCH 1995

ADMINISTRATION BUILDING ELEVATIONS

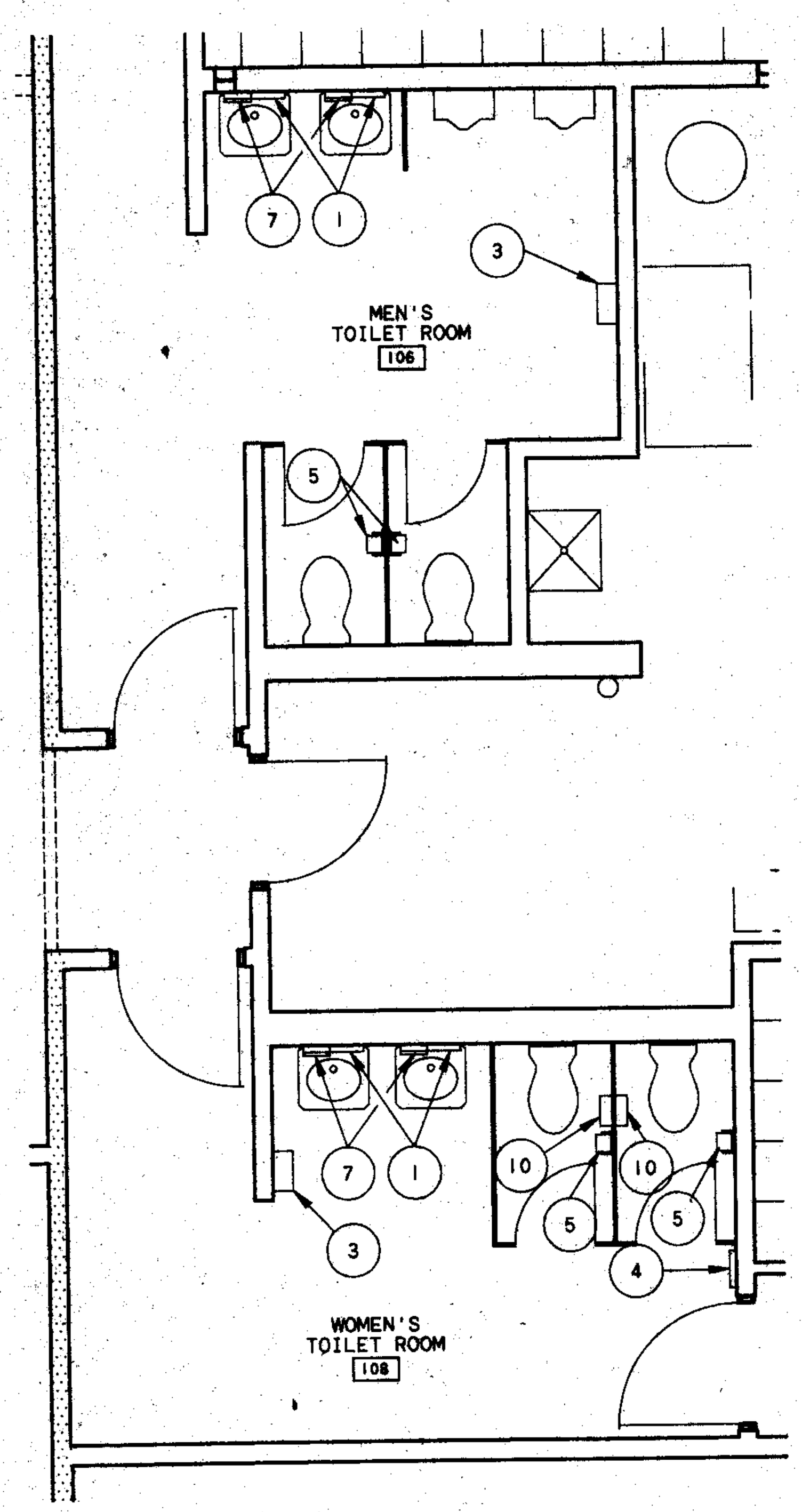
SCALE: 3/16"=1'-0"

SHEET NO. 10 OF 112

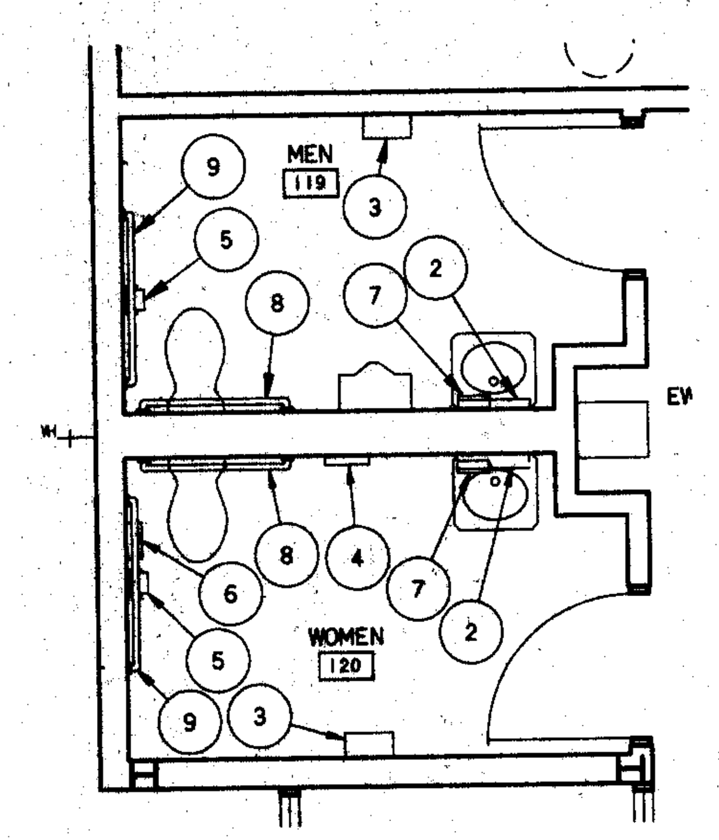
N:\PR15582\CADD\SHT10 3-24-95 3:34:37 pm EST

TOILET ACCESSORIES SCHEDULE

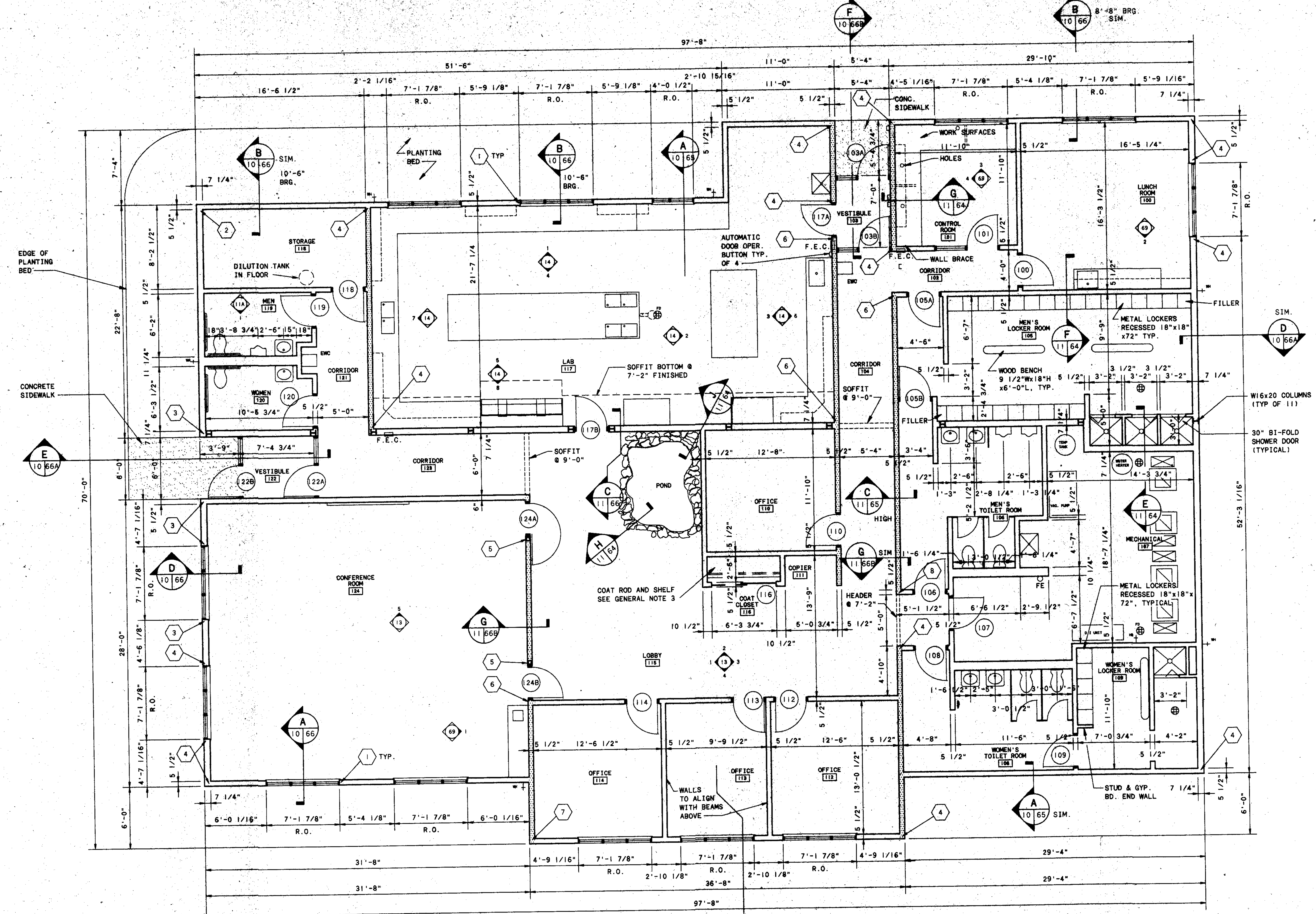
MARK	DESCRIPTION	BOBRICK MODEL #
1	MIRROR 18" x 24"	B-166
2	MIRROR 18" x 30"	B-293
3	PAPER TOWEL / WASTE RECEPTACLE	B-3944
4	NAPKIN / TAMPON DISPENSER	B-3500
5	TOILET PAPER DISPENSER DOUBLE ROLL	B-2740
6	SANITARY NAPKIN DISPOSAL	B-353
7	SOAP DISPENSER	B-40
8	GRAB BAR 36"	B-6806 x 36
9	GRAB BAR 42"	B-6806 x 42
10	SANITARY NAPKIN DISPOSAL DOUBLE	B-354
11	TOWEL BAR (1 WOMEN – 2 MEN)	B-205 x 18



ENLARGED TOILET PLAN
SCALE: 1/4"=1'-0"



ENLARGED TOILET PLAN
SCALE: 1/4"=1'-0"



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

WALL TYPES

- INDICATES WALLS THAT HAVE 1/2" PLYWOOD EACH SIDE OF THE STUDS AND 5/8" GYP. BD. OVER THE PLYWOOD INSIDE FACES & WOOD SIDING OVER THE PLYWOOD EXTERIOR FACES
- INTERIOR WALLS WITH 5/8" GYP. BD. EACH SIDE
- ALL EXTERIOR WALLS 1/2" PLYWOOD & WOOD SIDING ON THE EXTERIOR & 5/8" GYP. BD. ON THE INTERIOR, UNO.

CODED NOTES FOR SHEAR WALLS

1. 2 STUDS EACH SIDE OF ALL WINDOWS AND DOOR OPENINGS ON EXTERIOR EAST AND WEST WALLS
2. 2 STUDS W/ PLYWOOD NAILED @ 4" SPACING
3. 4 STUDS
4. 2 STUDS
5. 4"x4"x3/16" STRUCTURAL TUBE W/ STUD BOLTED TO THE OPENING SIDE AND PLYWOOD NAILED @ 4" SPACING EACH SIDE
6. 3 STUDS
7. 3 STUDS W/ PLYWOOD NAILED @ 3" SPACING EACH SIDE. PROVIDE SIMPSON HD10A HOLDOWN AT BASE OF STUDS
8. 5 STUDS

GENERAL NOTES

1. THE ROUGH OPENING DIMENSIONS FOR THE WINDOWS ARE BASED ON ANDERSON WINDOWS. IF ANOTHER WINDOW MANUFACTURER IS USED, THE DIMENSIONS MAY REQUIRE MODIFICATIONS. THE CONTRACTOR WILL ASSUME ALL RESPONSIBILITY FOR THE DIMENSION MODIFICATIONS
2. DIMENSIONS ARE FROM FACE OF STUD OR FACE OF FOUNDATION
3. COAT RACK SHALL BE EMCO SYSTEMS NO. 1R1 BRONZE WITH 30 TYPE B RECEPTACLES & 30 NO. 10 HANGERS. MOUNT PER MANUFACTURERS RECOMMENDATIONS. EMCO INC. LENEXA, KANSAS OR EQUAL MANUFACTURER
4. ALL INTERIOR WALLS ARE FULL HEIGHT TO BOTTOM OF ROOF DECK WITH GYP. BD. FULL HEIGHT. ALL INTERIOR WALLS TO HAVE SOUND ATTENUATION BATT. INSUL.
5. ALL CORRIDORS AND LOBBY WALLS TO BE 1 HOUR RATED
6. GEOTHERMAL UNITS, DIONIZED WATER SYSTEM, VACUUM PUMP TEMPERING TANK & WATER HEATER TO HAVE EQUIPMENT PADS

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

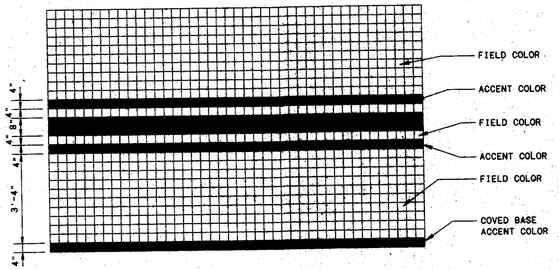
B U R G E S S & N I P L E
E N G I N E E R S
A R C H I T E C T S

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

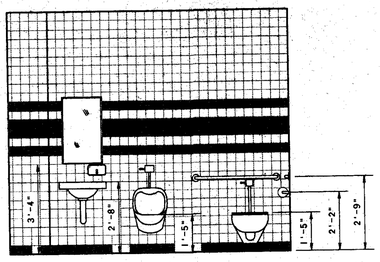
JOB NO.	15582
DESIGNED BY:	DDM
DRAWN BY:	BWK
CHECKED BY:	DDM
APPROVED BY:	RD
DATE:	MARCH 1995

ADMINISTRATION BUILDING PLAN

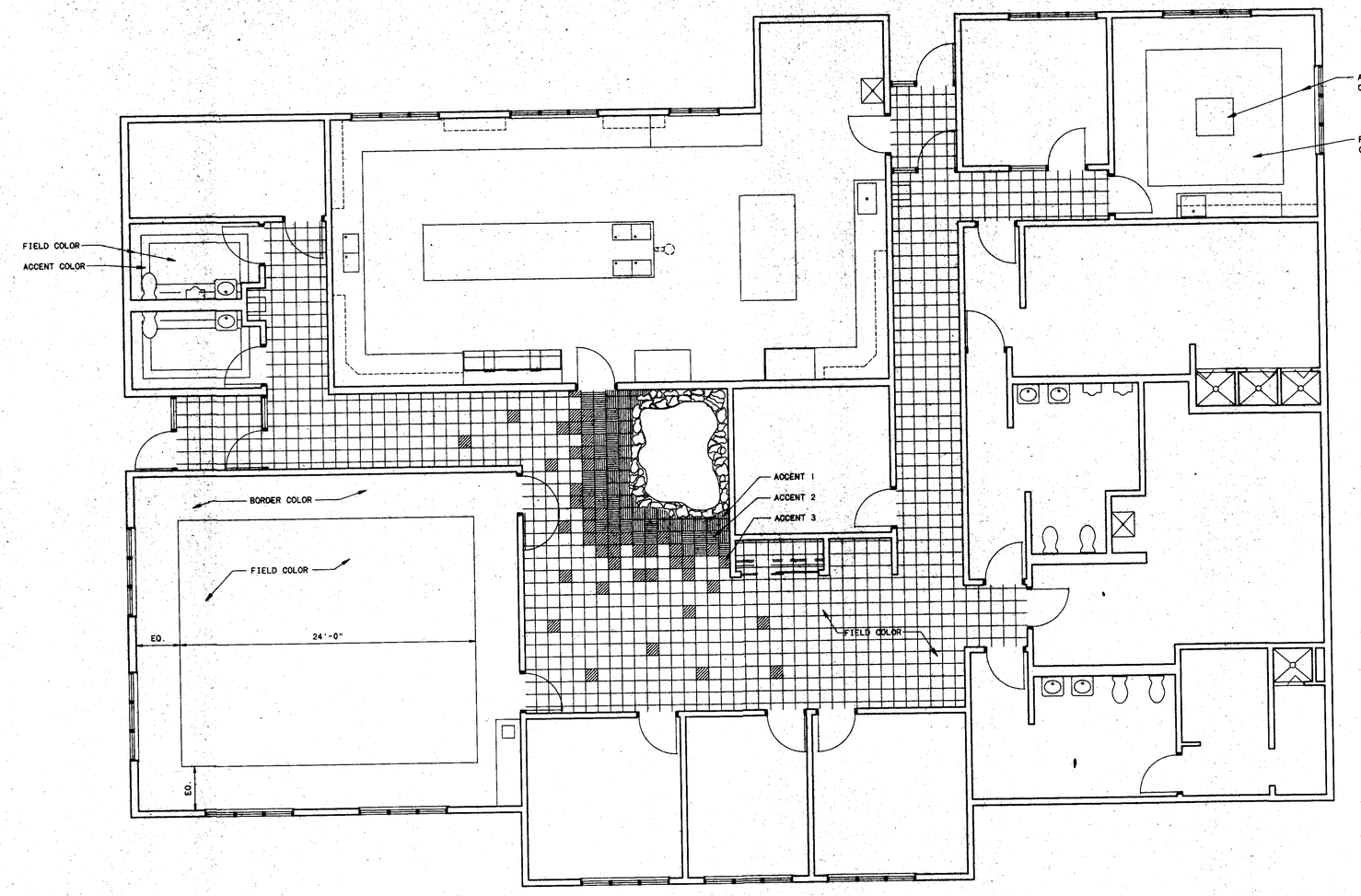
SCALE: 3/16"=1'-0"
SHEET NO. 11 OF 112



TYPICAL PATTERNS FOR
WALLS WITH CERAMIC TILE
SCALE: 3/8"=1'-0"



ACCESSIBLE TOILET ELEVATION
SCALE: 3/8"=1'-0"



FLOOR PATTERN COLOR LEGEND

- ACCENT 1 - ADRIATIC BLUE (CROSSVILLE CERAMICS)
- ACCENT 2 - SEA MIST (CROSSVILLE CERAMICS)
- ACCENT 3 - ATLANTIC GREY (CROSSVILLE CERAMICS)
- FIELD - PEPPER QUARTZ (CROSSVILLE CERAMICS)

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

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	DDM
DRAWN BY:	WBK
CHECKED BY:	DDM
APPROVED BY:	DDM
DATE:	MARCH 1995

ADMINISTRATION BUILDING
FLOOR PATTERNS

SCALE:	
3/16"=1'-0"	
SHEET NO.	OF
11A	112

N:\PR\15582\CADD\SHT\11A 3-24-95 3:41:21 pm EST

EMBANKMENT AT THE ADMINISTRATION BUILDING

THE EMBANKMENT AT THE ADMINISTRATION BUILDING SHALL BE CONSTRUCTED OF GRANULAR SOILS, ACCEPTABLE TO THE ENGINEER/ARCHITECT. MATERIAL STOCKPILED FROM STRUCTURE EXCAVATIONS MAY BE SUITABLE. EMBANKMENT SHALL BE PLACED UNDER THE ENTIRE ADMINISTRATION BUILDING AND ADJACENT AREAS TO BE PAVED AS SOON AS SUITABLE MATERIAL IS AVAILABLE. THE LIMITS OF EMBANKMENT SHALL BE AS SHOWN ON THE PLANS (SEE SHEET 65). ALL TOPSOIL SHALL BE REMOVED FROM THE AREA TO RECEIVE EMBANKMENT AND STOCKPILED FOR LATER USE. CONFORM TO SPECIFICATION SECTION 02227 AND GENERAL NOTES, SHEET 59.

SETTLEMENT PLATFORMS

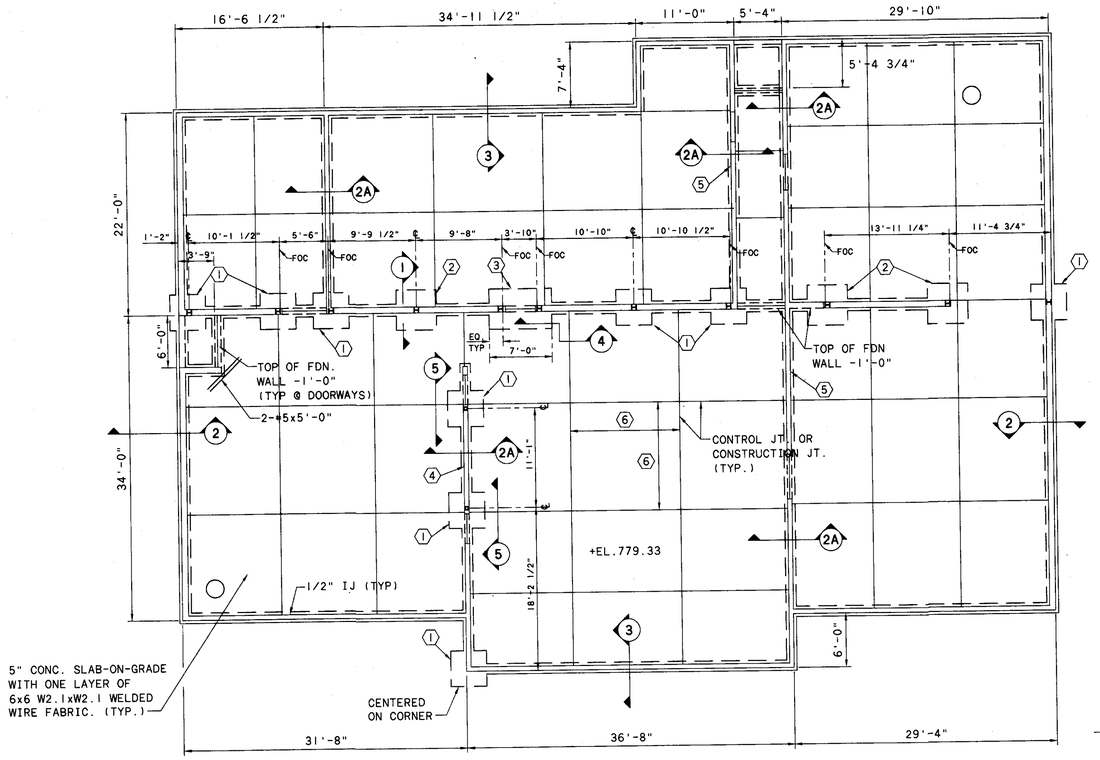
TWO SETTLEMENT PLATFORMS (SEE DETAIL) SHALL BE INSTALLED AT THE SITE OF THE ADMINISTRATION BUILDING AT LOCATIONS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER/ARCHITECT. SETTLEMENT PLATFORMS SHALL BE INSTALLED AFTER THE REMOVAL OF TOPSOIL AND BEFORE EMBANKMENT CONSTRUCTION BEGINS. THE ELEVATION OF THE SETTLEMENT PLATFORM SHALL BE MONITORED EVERY 3 DAYS BY THE CONTRACTOR WHO SHALL SUBMIT THE INFORMATION TO THE ENGINEER/ARCHITECT. THE DATA SHALL BE USED TO DETERMINE WHEN SETTLEMENT HAS ABATED. THE FIRST ELEVATION READING SHALL BE MADE PRIOR TO COMMENCEMENT OF EMBANKMENT CONSTRUCTION. WHEN NO LONGER NEEDED, THE SETTLEMENT PLATFORMS SHALL BE CUT OFF 12 INCHES BELOW THE BOTTOM OF THE SLAB.

WAITING PERIOD

A MINIMUM WAITING PERIOD OF 60 DAYS OR A WAITING PERIOD DETERMINED BY THE ENGINEER/ARCHITECT, BASED ON SETTLEMENT PLATFORM DATA, SHALL ELAPSE BETWEEN THE COMPLETION OF THE ADMINISTRATION BUILDING EMBANKMENT AND THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES FOR THE ADMINISTRATION BUILDING.

CODED NOTES:

1. 4'-0" x 4'-0" x 1'-0" FOOTING, REINFORCED W/ 5-#6 BARS EW. ON BOTTOM
2. 4'-6" x 4'-6" x 1'-0" FOOTING, REINFORCED W/ 5-#6 BARS EW. ON BOTTOM.
3. 7'-0" x 4'-0" x 1'-0" FOOTING, REINFORCED W/ 5-#6 N-S & 7-#6 E-W ON BOTTOM.
4. ATTACH SOLE PLATE TO FOUNDATION WITH 3/4"ø x 1'-6" ANCHOR BOLTS @ 2'-0" OC. OVER ENTIRE LENGTH OF WALL.
5. ATTACH SOLE PLATE TO FOUNDATION WITH 3/4"ø x 1'-6" ANCHOR BOLTS @ 3'-0" OC. OVER ENTIRE LENGTH OF WALL.
6. MAX. JOINT SPACING SHALL NOT EXCEED 13'-0". LENGTH TO WIDTH RATIO SHALL NOT EXCEED 1.5. MATCH THE CONSTRUCTION AND CONTROL JOINT LAYOUTS WITH THE CERAMIC TILE JOINT LAYOUTS, SEE SHEET 11A.
7. PLATE ANCHOR BOLTS AND PERIMETER INSULATION NOT SHOWN. SEE SHEETS 66 THRU 66B FOR ADDITIONAL DETAILS.



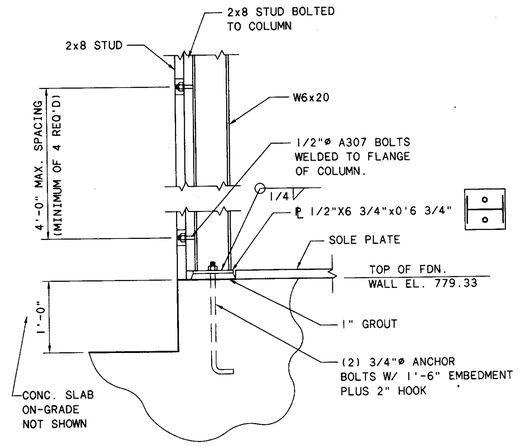
FOUNDATION PLAN
SCALE: 1/8"=1'-0"

PLAN NOTES:

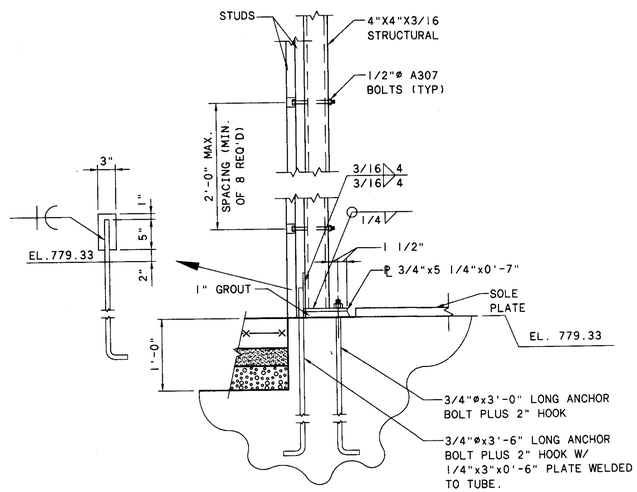
1. WATERSTOPS NOT REQUIRED FOR SLAB-ON-GRADE.
2. SEE ARCHITECTURE SHEETS FOR ADDITIONAL ANCHOR BOLTS SPACING FOR THE ATTACHMENT OF THE SOLE PLATE.

LEGEND

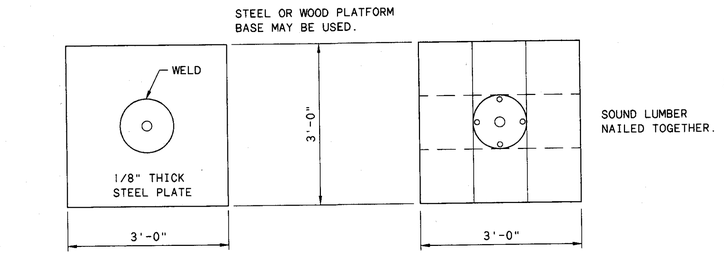
○ - SETTLEMENT PLATFORM APPROXIMATE LOCATION

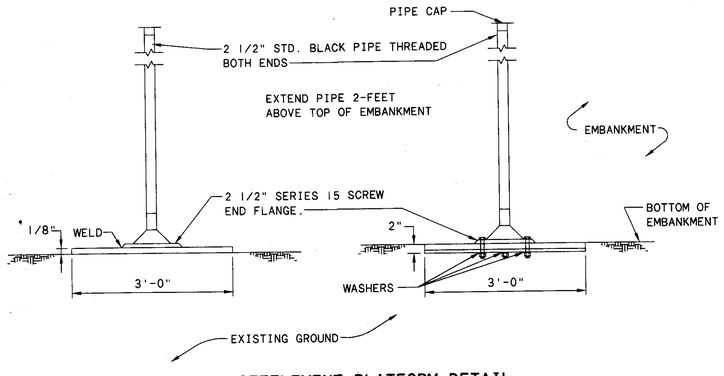


TYPICAL STEEL COLUMN DETAIL @ OPENING (4)
SCALE: 1"=1'-0"

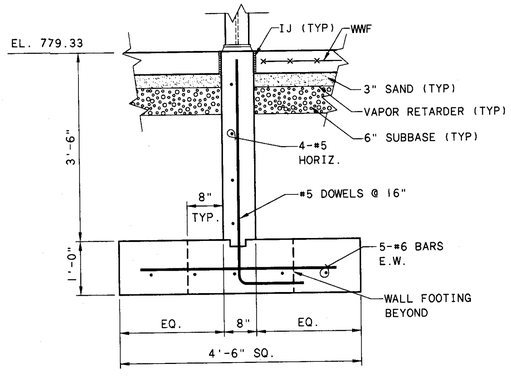


SECTION (5)
SCALE: 1"=1'-0"





SETTLEMENT PLATFORM DETAIL
SCALE: 3/4"=1'-0"



SECTION (1)
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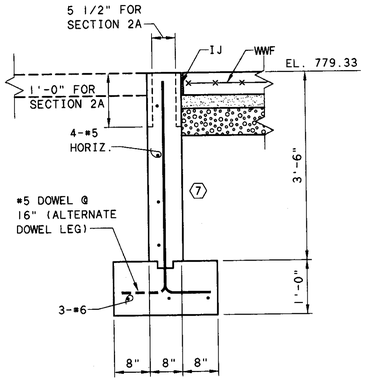
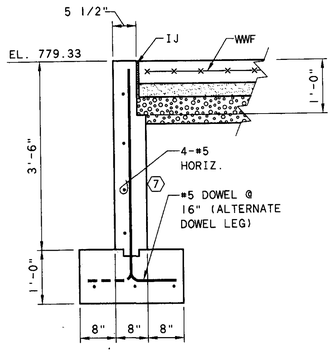


SECTION (2) (2A)
SCALE: 3/4"=1'-0"



SECTION (3)
SCALE: 3/4"=1'-0"

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

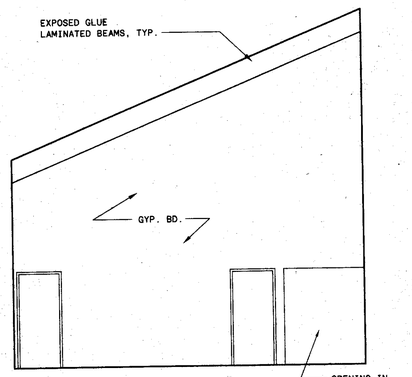
JOB NO.	15582
DESIGNED BY:	CMG
DRAWN BY:	LKK
CHECKED BY:	CMG
APPROVED BY:	DRT
DATE:	NOV., 1994

ADMINISTRATION BUILDING FOUNDATION AND SLAB PLAN

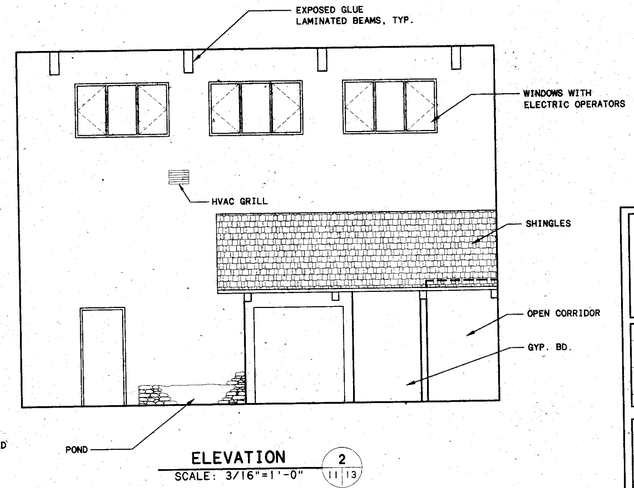
SCALE: AS NOTED

SHEET NO. 12 OF 112

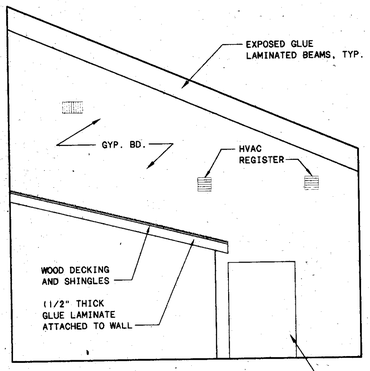
P:\PR15582\CADD\SHT12 03-21-95



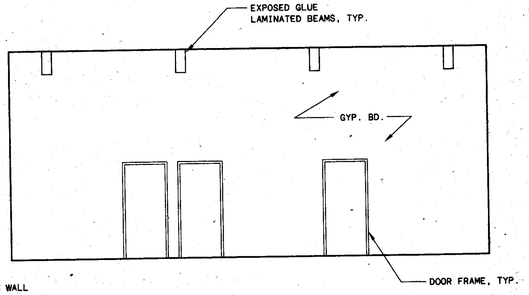
ELEVATION 1
SCALE: 3/16"=1'-0" 11|13



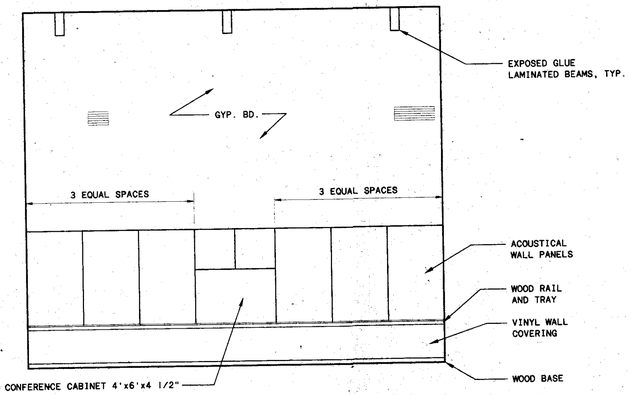
ELEVATION 2
SCALE: 3/16"=1'-0" 11|13



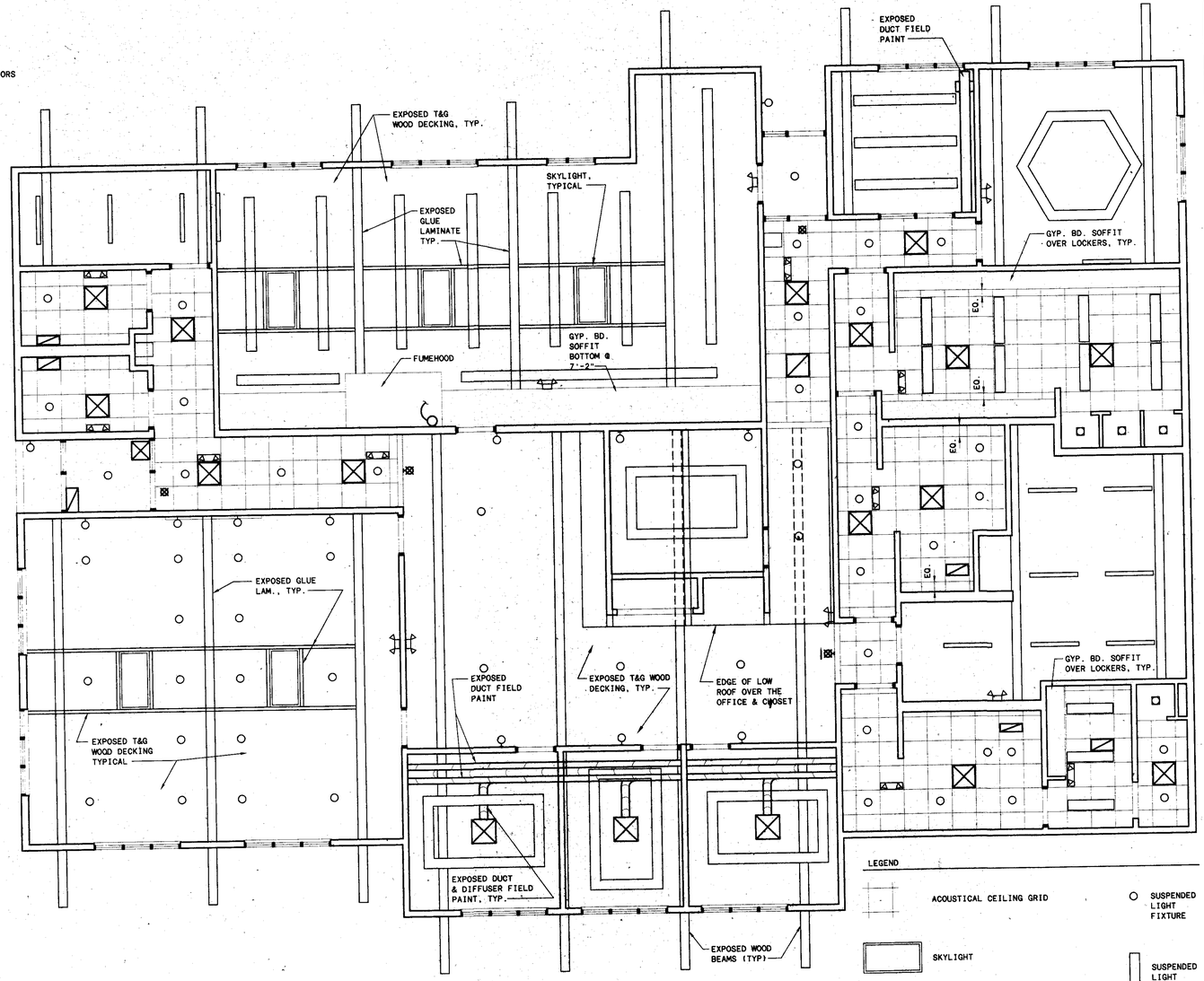
ELEVATION 3
SCALE: 3/16"=1'-0" 11|13



ELEVATION 4
SCALE: 3/16"=1'-0" 11|13



ELEVATION 5
SCALE: 3/16"=1'-0" 11|13



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

NOTES:

ACOUSTICAL WALL PANELS - BY DECOUSTICS. P.O. BOX 630 GETZVILLE, NY., 14068. (716)692-6332. PANELS TO BE TYPE A.P. 2" THICK, WITH CONCEALED FACTORY INSTALLED MOUNTING HARDWARE, FABRIC FINISH-COLOR AS SELECTED BY ENGINEER / ARCHITECT FROM MANUFACTURES FULL RANGE OF COLORS. EDGES TO BE CHAMFERED WHERE PANELS MEET AND SQUARE WHERE THEY MEET OTHER FINISHES.

CONFERENCE CABINET - BY MARSH CHALKBOARD COMPANY, DOVER OHIO, 1-800-289-6277, STYLE HC 4'-0" HIGH x 6'-0" WIDE x 4 1/2" DEEP. NATURAL FINISH RED OAK. DRY ERASE MARKER BOARD, FABRIC BULLETIN BOARDS EACH SIDE, FABRIC COLOR SELECTED BY ENGINEER / ARCHITECT. PROVIDE MARKER TRAY FULL WIDTH, 4 DRY ERASE MARKERS & ERASER.

LEGEND

- ACOUSTICAL CEILING GRID
- SKYLIGHT
- LAY-IN 1x4 LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- SUPPLY DIFFUSER
- RETURN OR EXHAUST GRILL
- EXIT LIGHT
- SUSPENDED LIGHT FIXTURE
- SUSPENDED LIGHT FIXTURE
- EMERGENCY LIGHT

NO.	REVISIONS	DATE	BY	CHK.
	1			

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

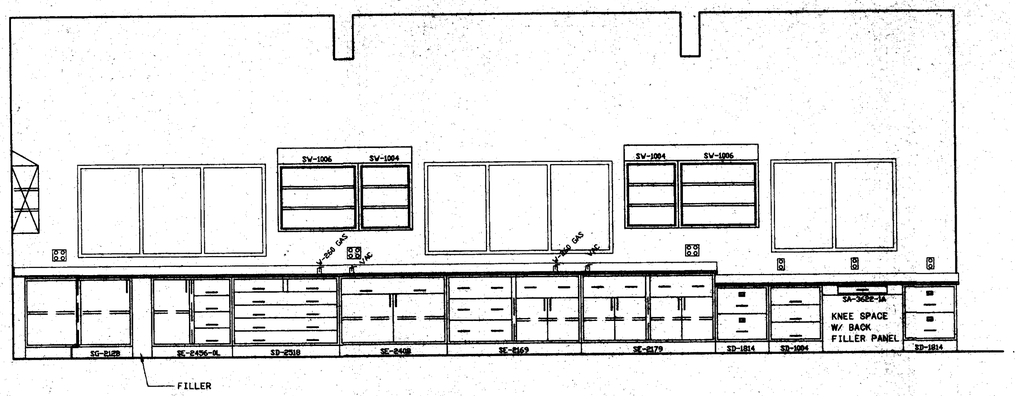
JOB NO.	15582
DESIGNED BY:	DM
DRAWN BY:	BK
CHECKED BY:	DM
APPROVED BY:	RD
DATE:	MARCH 1995

ADMINISTRATION BUILDING
REFLECTED CEILING PLAN & MISC. DETAILS

SCALE: AS NOTED

SHEET NO. 13 OF 112

D:\SHT13 03-14-95



ELEVATION 1
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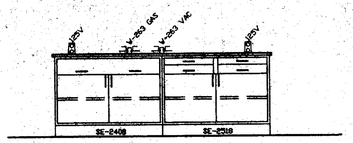

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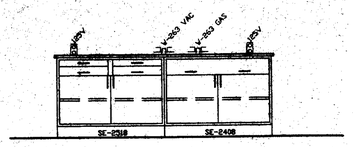
SCALE: 3/8"=1'-0"



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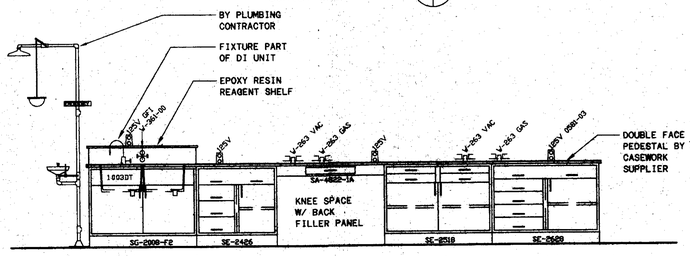

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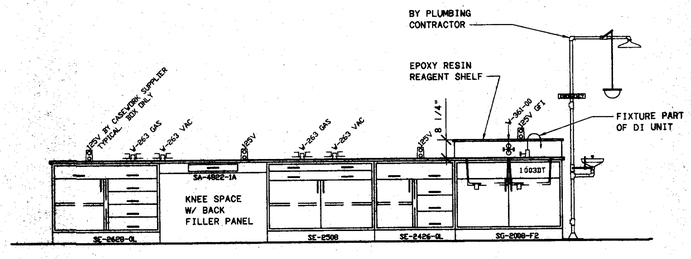
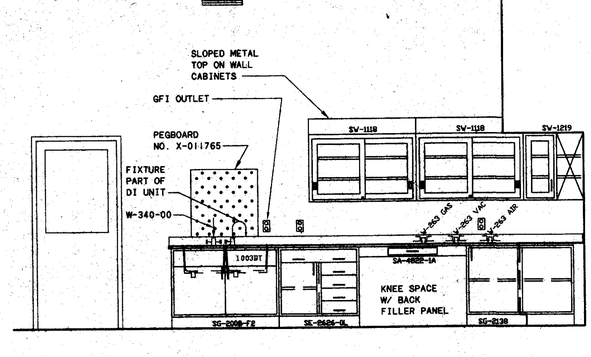


ELEVATION 5
SCALE: 3/8"=1'-0"



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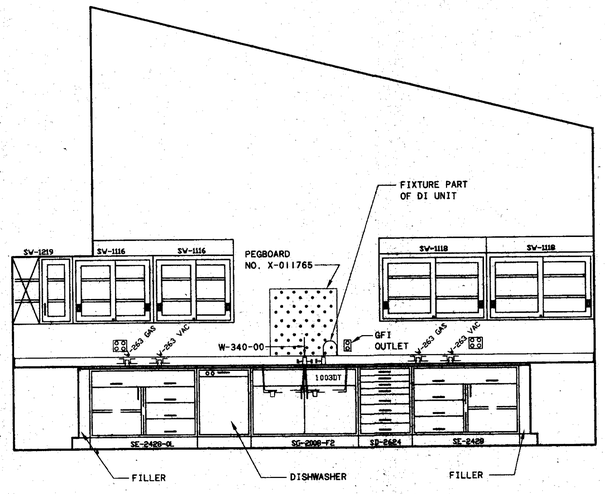
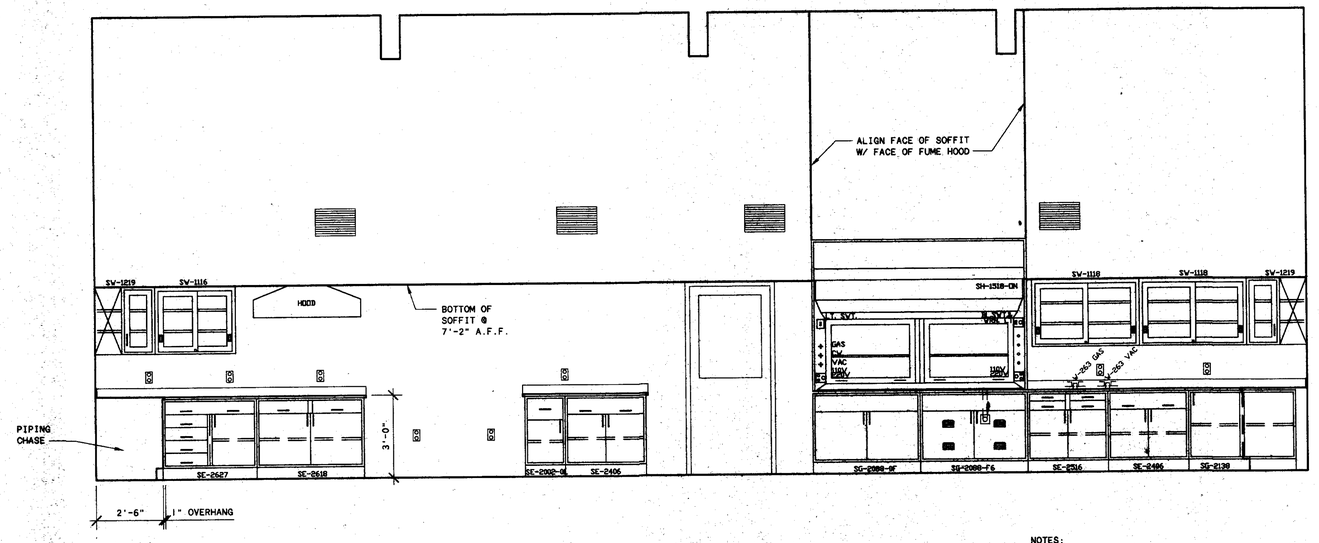
SCALE: 3/8"=1'-0"



ELEVATION 7
SCALE: 3/8"=1'-0"



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

NOTES:
1. CATALOG NUMBERS SHOWN ON THE CASEWORK ARE KEWAUNEE AND ARE FOR IDENTIFICATION. THEY ARE NOT INTENDED TO PRECLUDE THE USE OF ANY OTHER ACEPTABLE MANUFACTURER.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

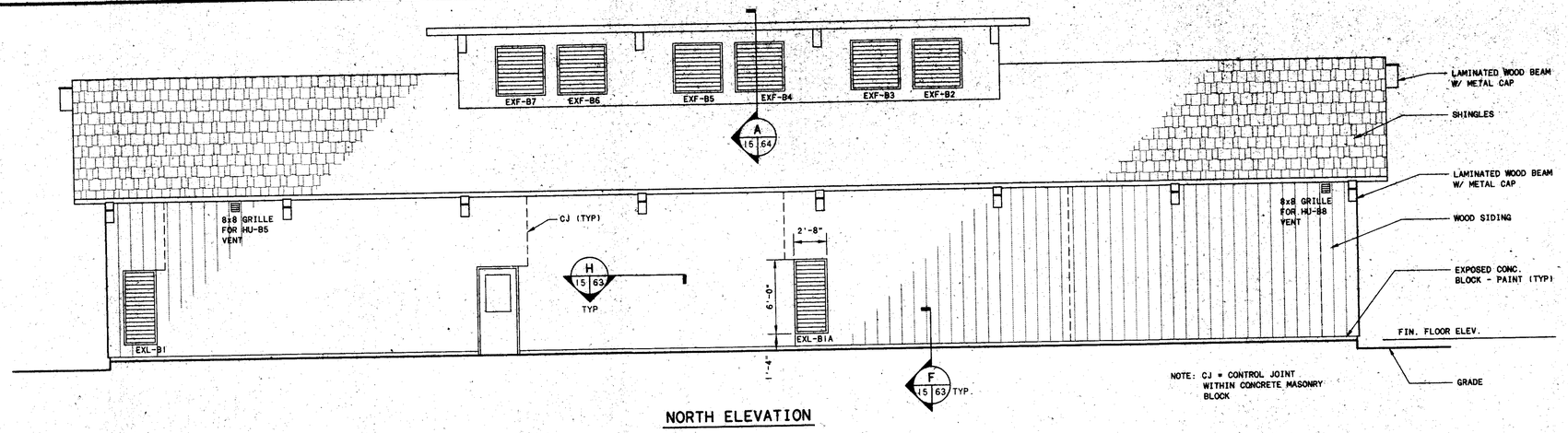
DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	DDM
DRAWN BY:	BWK
CHECKED BY:	DDM
APPROVED BY:	RD
DATE:	MARCH 1995

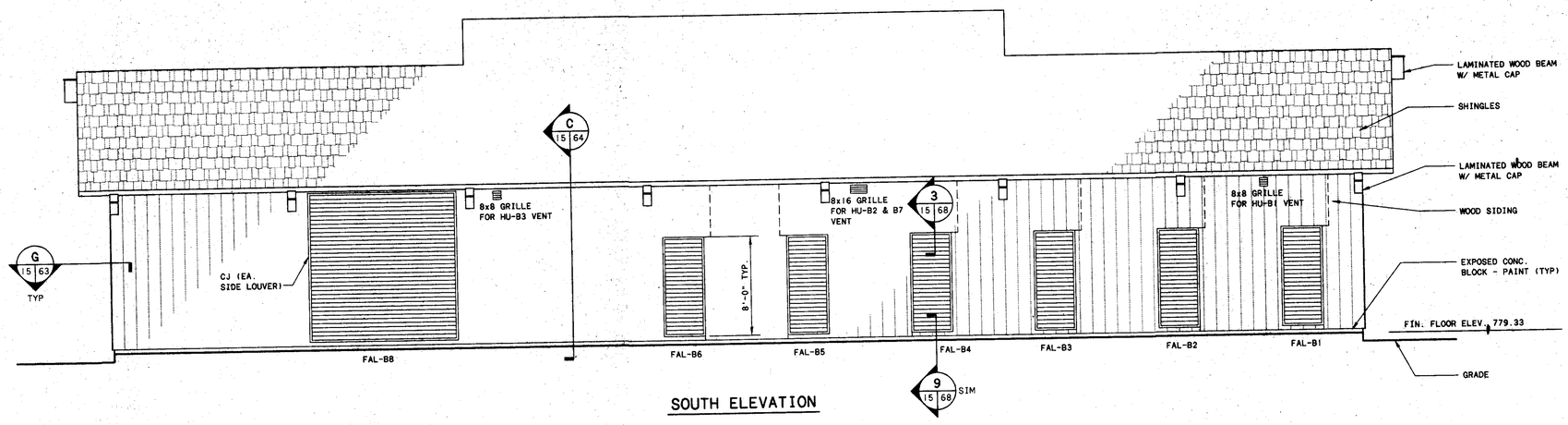
ADMINISTRATION BUILDING
CASEWORK ELEVATIONS

SCALE: 3/8"=1'-0"
SHEET NO. 14 OF 112

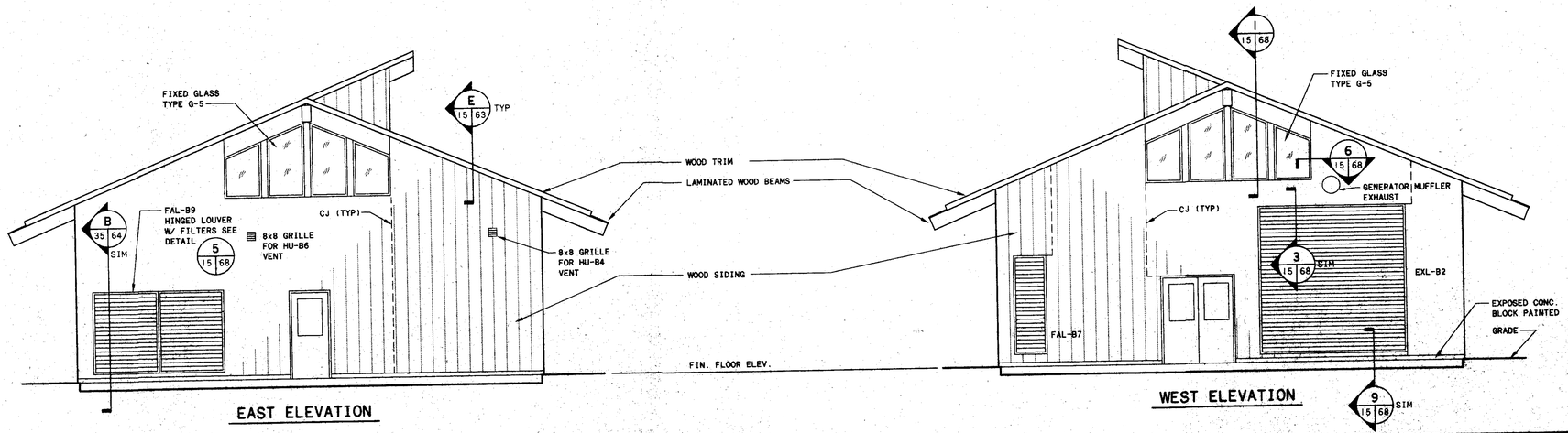
N:\PROJECTS\15582\SHT14 3-17-95 11:45:48 am EST



NORTH ELEVATION



SOUTH ELEVATION



EAST ELEVATION

WEST ELEVATION

NO.	REVISIONS	DATE	BY	CHK.

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DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

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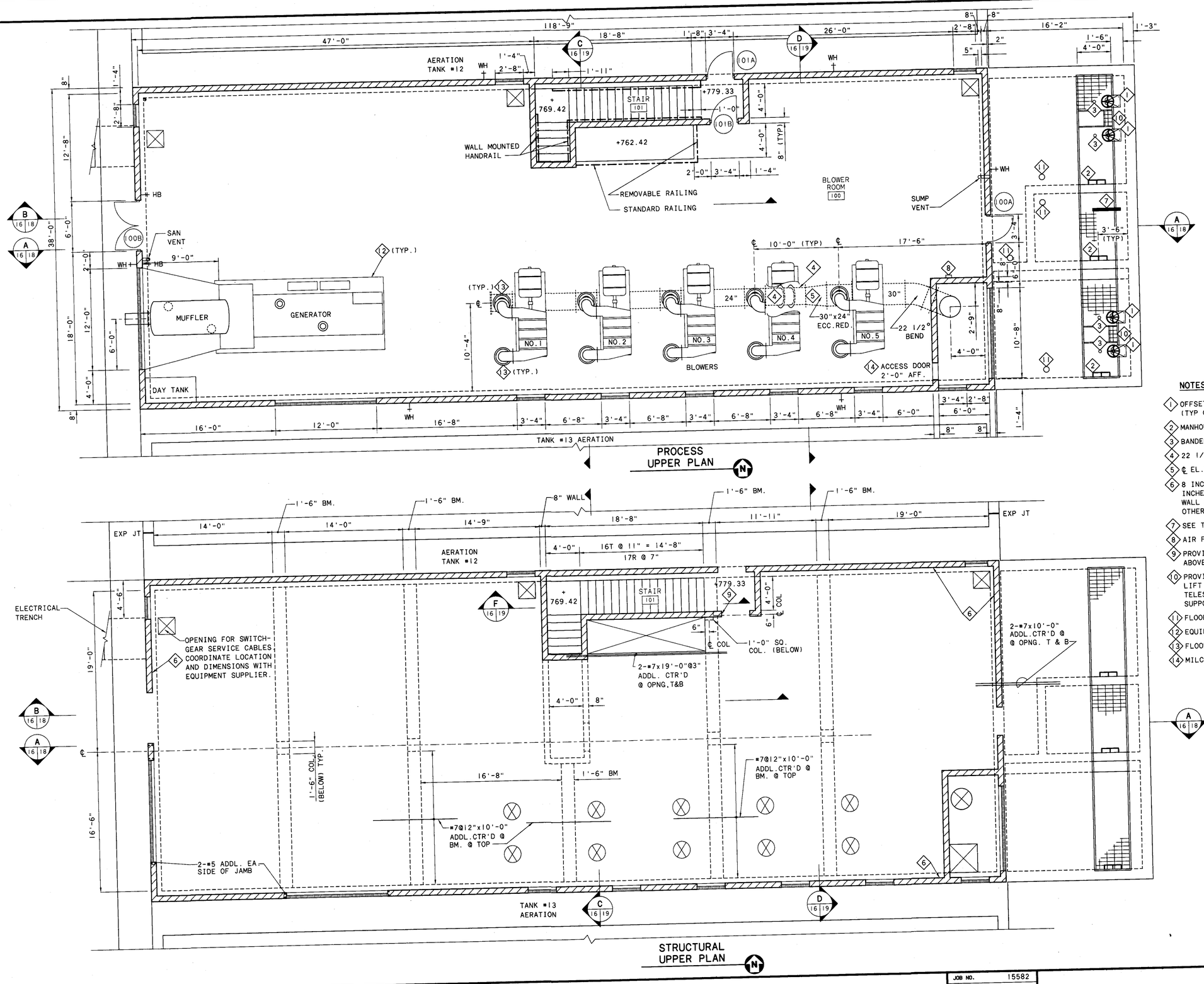
BLOWER BUILDING ELEVATIONS

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

SHEET NO. 15 OF 112

C:\SHTS 03-29-95



NOTES:

1. OFFSET FLOOR STAND FOR TELESCOPING SLUDGE VALVE (TYP OF 4)
2. MANHOLE STEPS
3. BANDED OPENING FOR VALVE OPERATING NUT
4. 22 1/2° BEND
5. ℄ EL.771.75
6. 8 INCH CMU REINFORCED WITH VERTICAL NO. 5 AT 48 INCHES C/C WITH DOWELS TO MATCH. REINFORCEMENT WALL SHALL BE OVER ENTIRE LENGTH OF WALL UNLESS OTHERWISE DIMENSIONED.
7. SEE TYPICAL SUBMERSIBLE MIXER DETAIL ON SHEET 23.
8. AIR FILTER GAUGE
9. PROVIDE CONTROL JOINT @ END OF LINTEL ABOVE DOOR OPENING.
10. PROVIDE 1'-0"x2'-0" LIFT OUT SECTION OF GRATING. LIFT OUT SECTION SHALL BE CENTERED BETWEEN TELESCOPING SLUDGE VALVES. PROVIDE ALUMINUM SUPPORTING "C" CHANNELS AROUND LIFT OUT SECTION.
11. FLOOR BOX
12. EQUIPMENT BASE
13. FLOOR CLOSURE PLATE REQUIRED SEE DETAIL SHEET 62.
14. MILCOR STYLE M OR EQUAL. 24"x24" ACCESS DOOR.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	VC/MJM
DRAWN BY:	DLR
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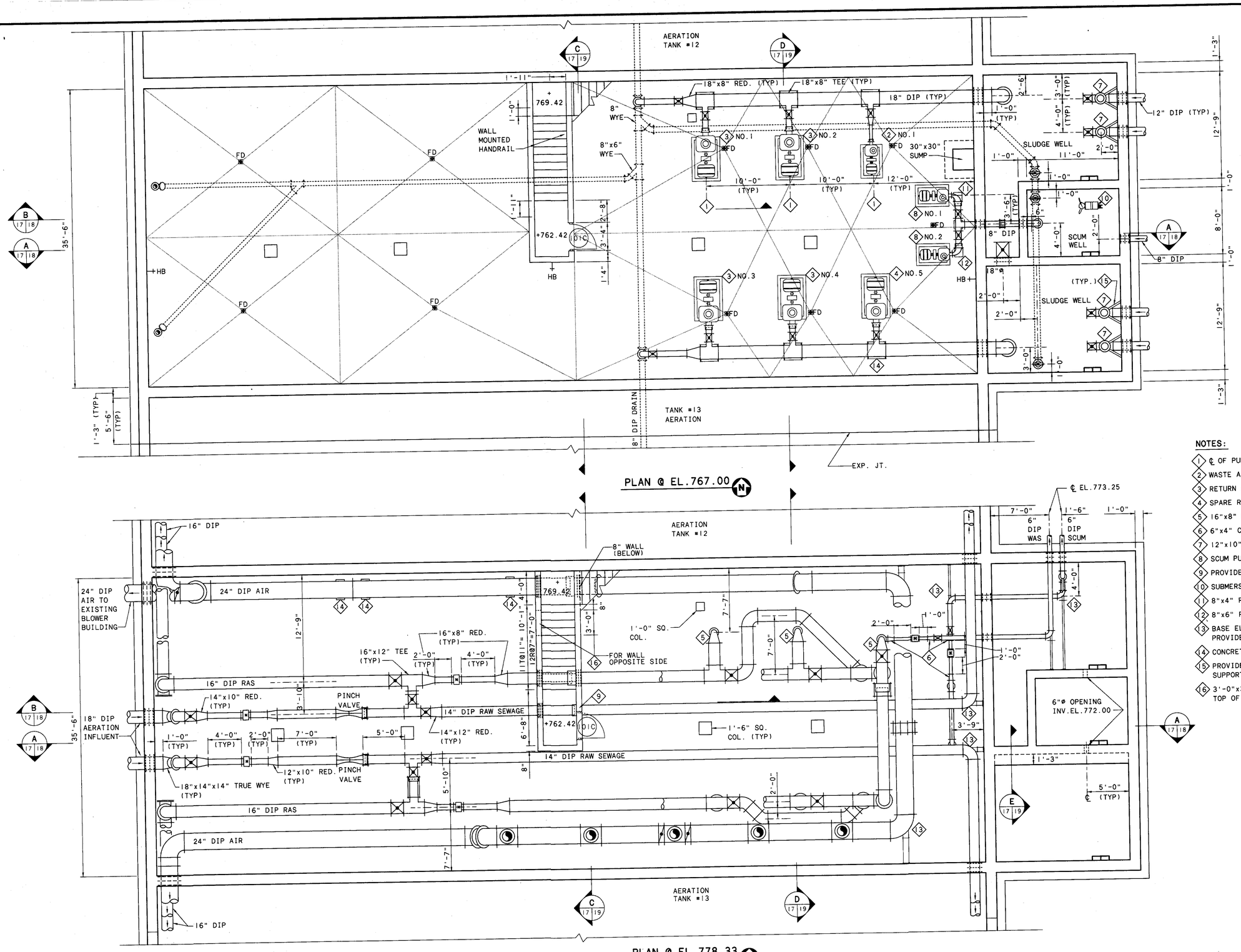
APPROVED BY:	RBD
DATE:	MARCH 1995

BLOWER BUILDING UPPER PLANS

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

SHEET NO. 16 OF 112

03-21-95 N:\PROJECTS\PR15582\CADD\SH120



NOTES:

1. ℄ OF PUMP DISCHARGE
2. WASTE ACTIVATED SLUDGE PUMP
3. RETURN ACTIVATED SLUDGE PUMP
4. SPARE RAS/WAS PUMP
5. 16"x8" RED. ELBOW
6. 6"x4" CONCENTRIC RED.
7. 12"x10"x10" TEE
8. SCUM PUMPS
9. PROVIDE FLANGE/FLANGE WALL PIPE
10. SUBMERSIBLE MIXER
11. 8"x4" RED. ELBOW
12. 8"x6" RED. ELBOW
13. BASE ELBOW. (TYP) EXTEND SUPPORT PIPE AND PROVIDE ALL NECESSARY S STL ANCHORS.
14. CONCRETE PIPE SUPPORT. (TYP)
15. PROVIDE SUPPORT. SEE TELESCOPING VALVE PIPE SUPPORT DETAIL SHEET 19.
16. 3'-0"x3'-0" OPENING IN WALL FOR PIPE ACCESS. TOP OF OPENING AT EL.765.42.

NO.	REVISIONS	DATE	BY	CHK.

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OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

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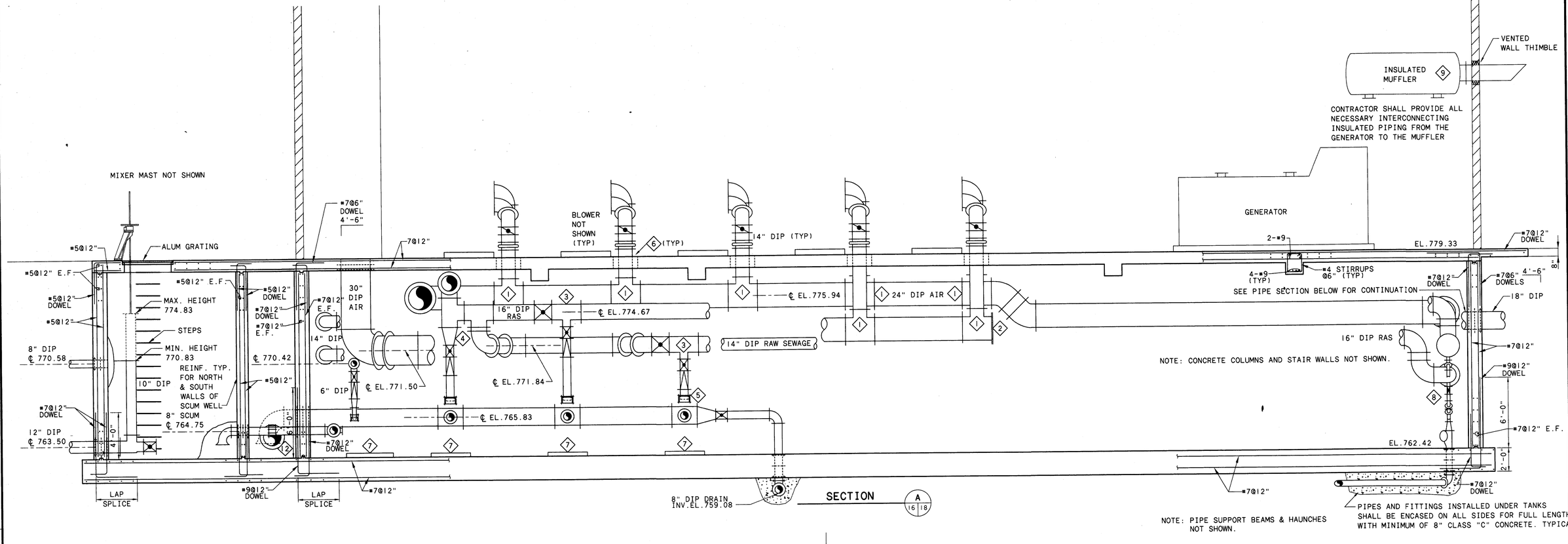
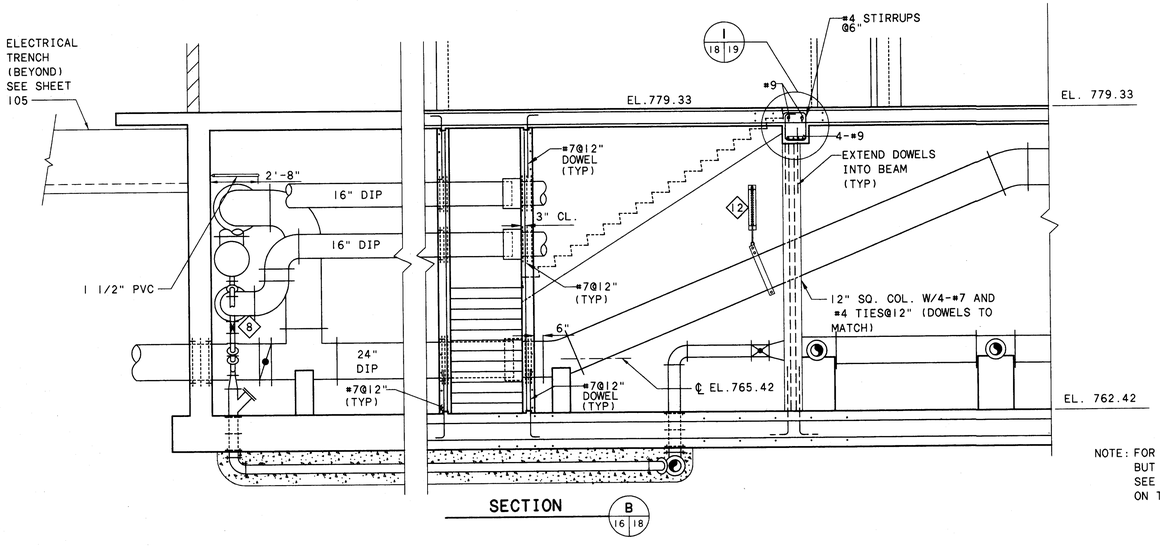
BLOWER BUILDING LOWER PLANS

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

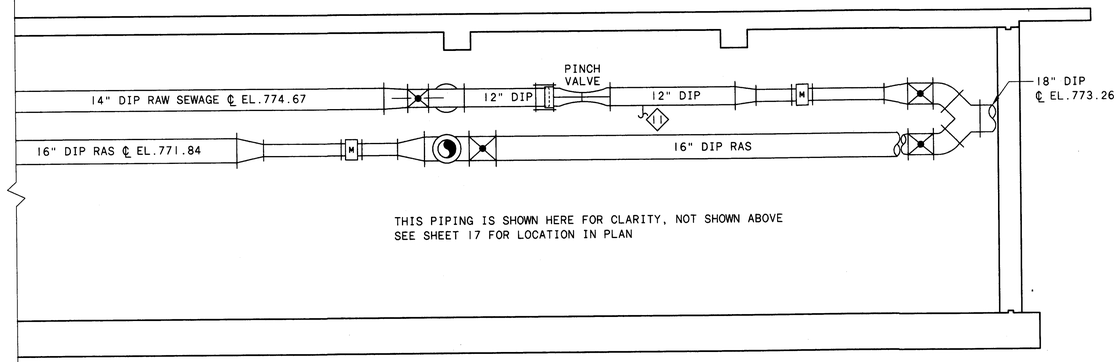
SHEET NO. 17 OF 112

03-30-95 N:\PROJECTS\PR15582\CADD\SHT21





NOTE: FOR REINF. SHOWN BUT NOT NOTED SEE SECTION "A" ON THIS SHEET



NOTES:

1. 24"x14" TEE
2. BLIND FLANGE
3. 16"x8" TEE
4. 16"x8" CONC. RED.
5. FLANGE COUPLING ADAPTER WITH ANCHORING RODS (TYP)
6. FLOOR CLOSURE PLATES REQUIRED (NOT SHOWN)
7. PUMP NOT SHOWN
8. 16" 90 DEG ELBOW. PROVIDE A BOSS FOR 3" DIP DRAIN AT LOCATION "T" (TYP FOR 2)
9. SEE SUPPORT DETAIL SHEET 71
10. 18" PLUG VALVE ℄ EL.764.25
11. PROVIDE 2" TAP, MANUAL PLUG VALVE AND 2" COPPER PIPE DRAIN. EXTEND 2" COPPER TO CONNECT WITH 2" AIR RELEASE PIPING CALLED OUT IN NOTE 8 ON SHEET 19 (TYP OF 4).
12. PROVIDE A DOUBLE BOLT PIPE CLAMP (GRINELL FIG.295) WITH 3/4" DIAMETER ROD AND WELDLESS EYE NUT (GRINELL FIG.290). ATTACH ROD TO HEAVY WELDED STEEL BRACKET (GRINELL FIG.199). PROVIDE BRACKET WITH ONE HOLE TOP AND BOTTOM AND ANCHOR TO CONCRETE USING (2) - 3/4" DIAMETER HILTI KWIK BOLTS WITH A MINIMUM EMBEDMENT OF 4 3/4".

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

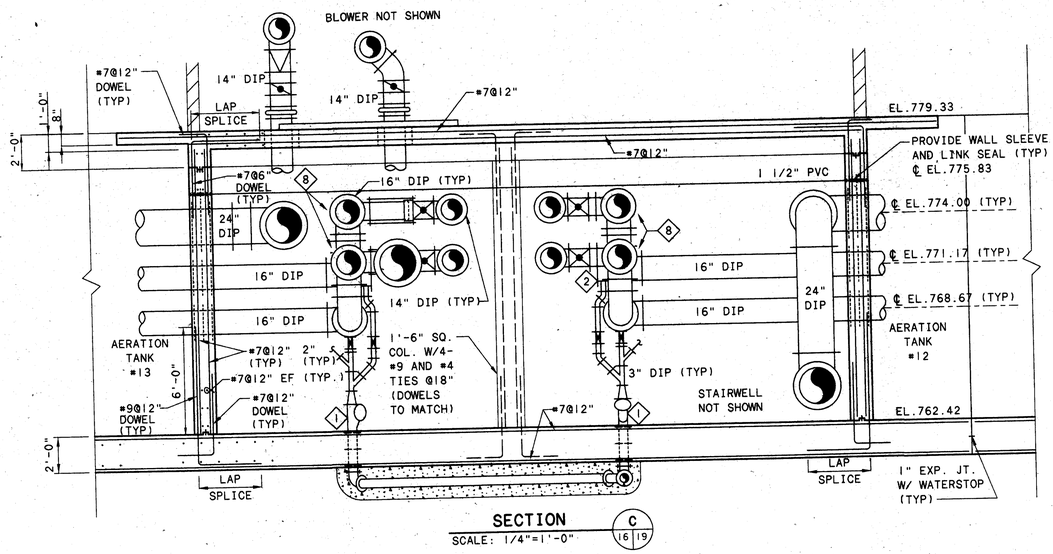
DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	VC/MJM
DRAWN BY:	DLR
CHECKED BY:	VC/MJM
APPROVED BY:	RBD
DATE:	MARCH 1995

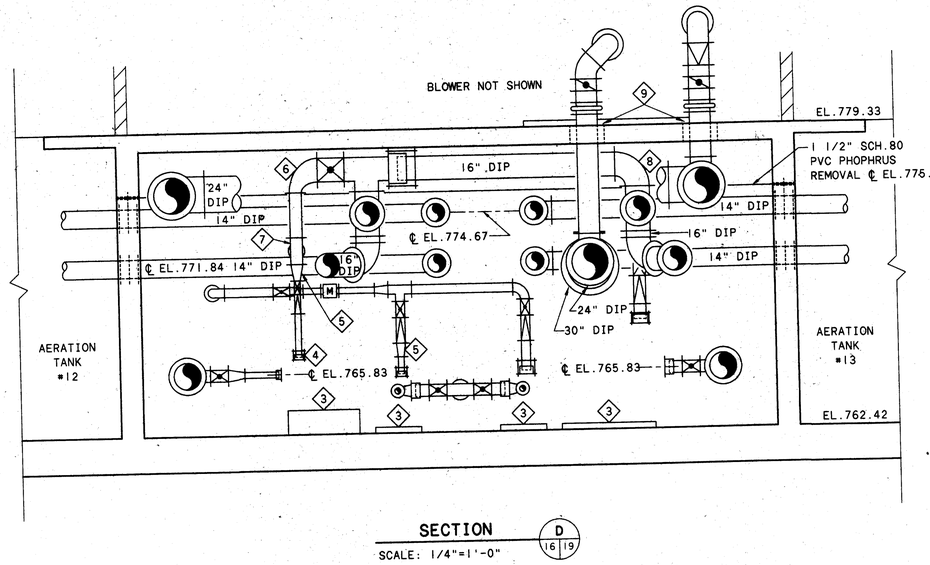
BLOWER BUILDING SECTIONS

SCALE:	
1/4" = 1'-0"	
SHEET NO.	OF
18	112

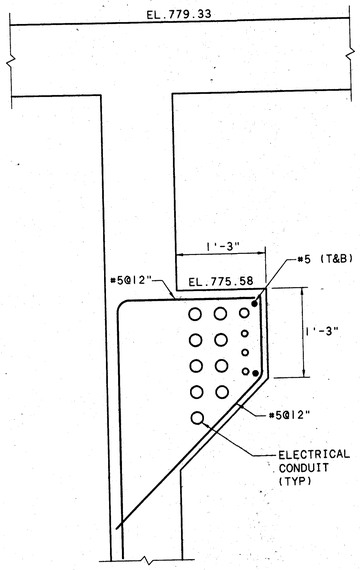
03-22-95 N:\PROJECTS\PR15582\CADD\SHT22



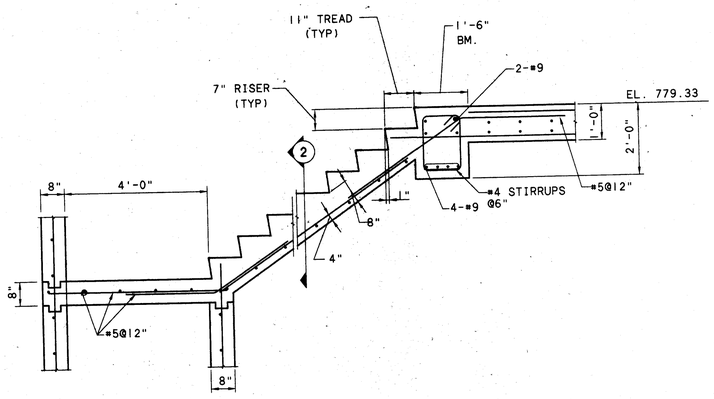
SECTION C
SCALE: 1/4"=1'-0"



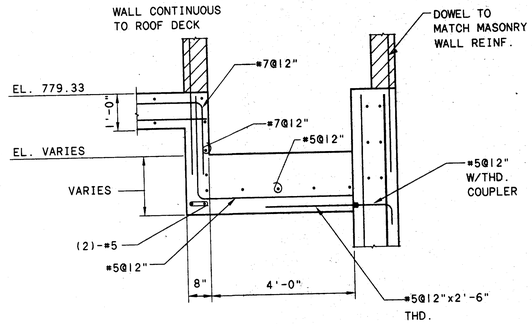
SECTION D
SCALE: 1/4"=1'-0"



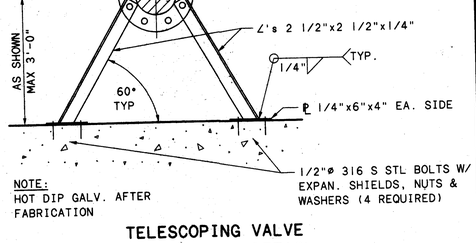
SECTION E
SCALE: 1"=1'-0"



CONCRETE STAIR DETAIL F
SCALE: 1/2"=1'-0"



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



NOTE:
HOT DIP GALV. AFTER FABRICATION

TELESCOPING VALVE PIPE SUPPORT DETAIL
SCALE: NONE

NOTES:

1. 6" DIP LATERAL. PROVIDE A BLIND FLANGE ON LATERAL.
2. 16"x16" TEE WITH BOSS FOR 3" DIP DRAIN AT LOCATION. "T" (TYP FOR 2)
3. PUMP NOT SHOWN.
4. FLANGE COUPLING ADAPTER WITH TIERODS (TYP).
5. 6"x4" CONC. RED.
6. 16"x8" REDUCING ELBOW WITH A 2"ø TAP AT LOCATION "T" FOR AIR RELEASE. PROVIDE A MANUAL PLUG VALVE. EXTEND 2" COPPER AIR RELEASE PIPING DOWN TO FLOOR DRAIN.
7. 8"x6" TEE. ℄ 6" EL.773.25.
8. 90° ELBOW WITH A 2"ø TAP AT LOCATION "T" FOR AIR RELEASE. PROVIDE A MANUAL PLUG VALVE. EXTEND 2" COPPER AIR RELEASE PIPING TO CONNECT TO 3" DIP WYE IN DRAIN RISER WEST END OF BUILDING (TYP OF 4).
9. FLOOR CLOSURE PLATES REQUIRED (NOT SHOWN).

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

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DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	VC/MJM
DRAWN BY:	DLR
CHECKED BY:	VC/MJM
APPROVED BY:	RBD
DATE:	MARCH 1995

BLOWER BUILDING SECTIONS

SCALE: AS NOTED
SHEET NO. 19 OF 112

03-21-95 N:\PROJECTS\PR15582\CADD\SHT23

CODED NOTES

1. 10'-0"x4'-0" SLIDE GATE, DOWNWARD OPENING
2. 5'-0"x4'-0" SLIDE GATE, DOWNWARD OPENING
3. 24" DIP AIR
4. 18" DIP AIR
5. 14" DIP AIR
6. 10" DIP AIR
7. 8" DIP AIR
8. 6" DIP AIR
9. 4" DIP AIR
10. 24"x18" CONCENTRIC REDUCER
11. 18"x14" CONCENTRIC REDUCER
12. 16" DIP AERATION TANK INFLUENT
13. 14" DIP AERATION TANK INFLUENT
14. EXTERIOR ALUMINUM RAILING
15. 8" MUD VALVE WITH EXTENSION STEM, STEM GUIDES AND HANDWHEEL
16. CAP END OF PIPE, TYP.
17. CRANK OPERATED FLOOR STAND, CENTER 2'-0" WIDE RAILING OPENING ON ℄ FLOOR STAND.
18. 1 1/2" SCH.80 PVC PHOSPHORUS REMOVAL PIPING WITH BALL VALVE AND 90° BEND ON DISCHARGE BEYOND WYE WALL. PROVIDE BANDED HOLE IN GRATING FOR ACCESS TO EFFLUENT FLUME DISCHARGE VALVE.
19. 16" FLARE
20. 14" FLARE
21. TYPE "A" AERATION BAFFLE, SEE DETAIL [1] SHT.24
22. TYPE "B" AERATION BAFFLE, SEE DETAIL [1] SHT.24
23. SEE SUPPORT CABLE TERMINATION DETAIL [2] SHT.24
24. SEE SUPPORT CABLE TERMINATION DETAIL [3] SHT.24
25. SEE SUPPORT CABLE TERMINATION DETAIL [4] SHT.24
26. BAR SCREEN AND BEACH PLATE, SEE SECTION 1, THIS SHT.
27. AERATION MIXING EQUIPMENT WITH MAST, HOIST AND POWER/CONTROL STATION. SET MIXER LOCATION AND ORIENTATION ACCORDING TO EQUIPMENT MANUFACTURER'S. FINAL RECOMMENDATIONS TO PRODUCE OPTIMUM MIXING IN ZONE. SEE DETAIL SHT.23
28. MAST WITH HOIST AND POWER/CONTROL STATION FOR AERATION MIXING EQUIPMENT (NO MIXER PROVIDED). SET LOCATION ACCORDING TO AERATION MIXING EQUIPMENT MANUFACTURER'S FINAL RECOMMENDATIONS. SEE DETAIL SHT.23
29. FOAM SPRAY NOZZLE AND 2" COPPER PIPING, TYP., SEE DETAIL SHT.23
30. 3" SCH.80 PVC DRAIN AT BOTTOM OF AERATION WYE WALL. DRAIN TO 1/2 CUBIC YARD OF NO.57 STONE AT EXTERIOR WALL OF TANKS.
31. 3" ANGLE GLOBE VALVE.
32. AIR METER
33. BLIND FLANGE WITH 1-INCH BLOW-OFF VALVE AT BOTTOM WITH EXTENSION STEM, VALVE BOX, AND COVER.
34. 5'-0"x5'-7" ALUMINUM ACCESS DOOR TO AIR METER CHAMBER (NOT SHOWN), BILCO TYPE JD OR EQUAL. PIPE FRAME DRAIN TO ADJACENT TANK.
35. FILL WYE WALL VOIDS BETWEEN AIR METERING CHAMBERS WITH NO.57 STONE TO 2" BELOW TOP OF WALL. PROVIDE 2" ASPHALT WALK ATOP STONE BASE.
36. 8" CONCRETE WALL REINFORCED WITH #5 DOWELS @12" O.C. E.W. REINFORCEMENT SHALL BE CENTERED WITHIN WALL. PROVIDE 3" SCH.80 PVC DRAIN AT BOTTOM.
37. REINFORCED CONCRETE SUPPORTS REQUIRED ALL PIPING (NOT SHOWN).
38. MJ-MJ WALL PIPE
39. MJ-FLG WALL PIPE
40. POST WITH 3 POWS CHAIN (TYP).
41. FLG-FLG WALL PIPE
42. PROVIDE SLEEVE AND LINK SEAL AT ALL LOCATIONS WHERE 1 1/2" PVC PIPING PASSES THRU WALLS AND SLABS.

⬡ BAFFLED AERATION ZONE NO.

NORTH AERATION TANKS LOCATION SCHEDULES
(DISTANCE FROM WEST TANK WALL INTERNAL SURFACE)

BAFFLES [21] [22]

TANK #	BAFFLE #1	BAFFLE #2
7	33'-0"	74'-0"
8	33'-0"	82'-6"
9	10'-0"	49'-6"
10	33'-0"	74'-0"
11	33'-0"	82'-6"
12	10'-0"	49'-6"

AERATION MIXING EQUIPMENT [27] [28]

TANK #	A	B	C	D
7	68'-10"	53'-6"	24'-9"	---
8	86'-7"	57'-9"	39'-2"	8'-3"
9	92'-10"	74'-3"	39'-8"	7'-6"
10	68'-10"	53'-6"	24'-9"	---
11	86'-7"	57'-9"	39'-2"	8'-3"
12	92'-10"	74'-3"	39'-8"	7'-6"

NOTE:
INSTALLED MIXER ARRANGEMENT SHOWN IS APPROPRIATE FOR ANOXIC ZONES WITHOUT RECYCLE PROCESS PATTERN.

AIR DROPS [31]

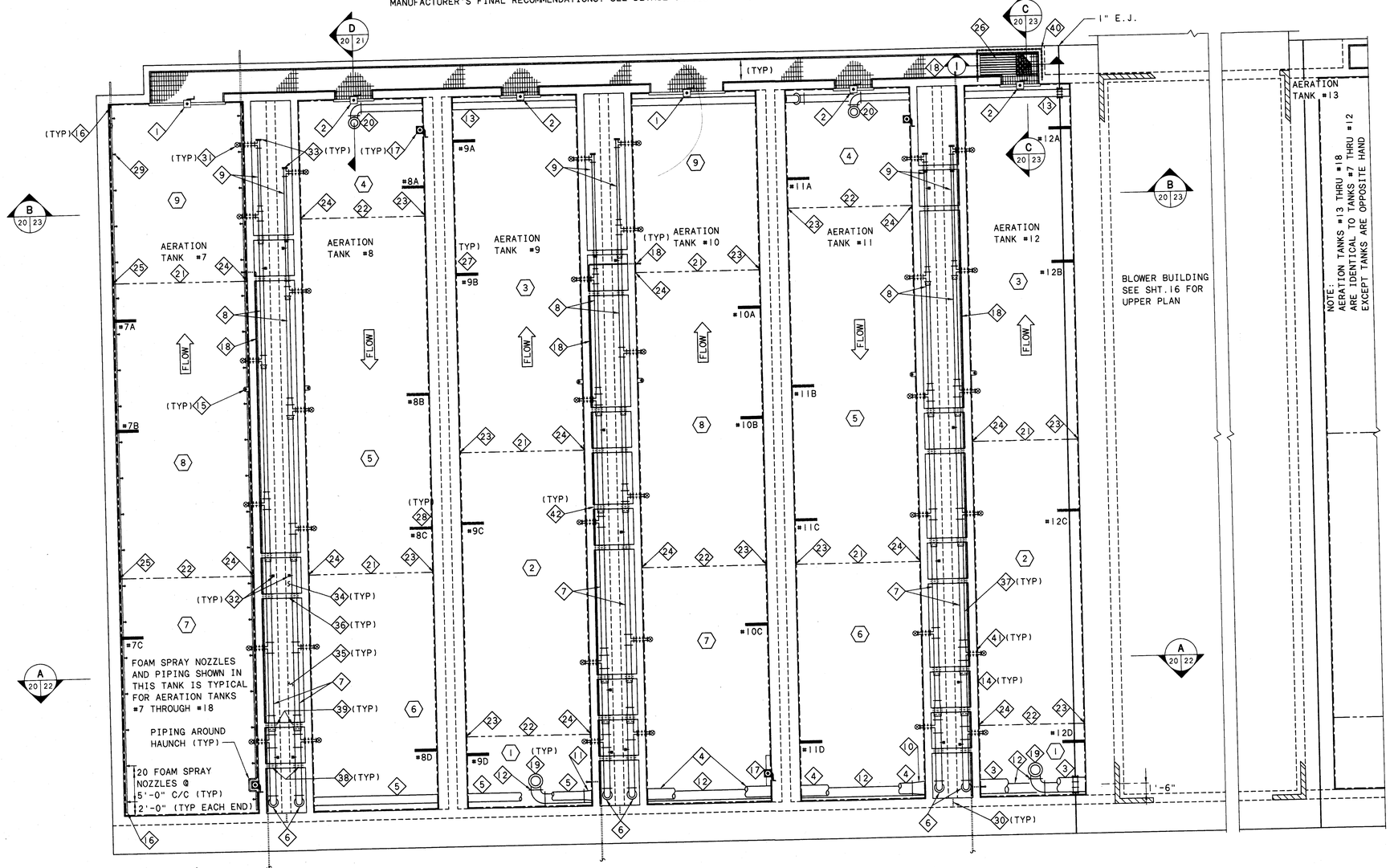
TANK #						
7	10'-0"	13'-0"	43'-0"	63'-0"	83'-0"	93'-0"
8	10'-0"	13'-0"	39'-6"	56'-0"	72'-6"	89'-0"
9	9'-0"	20'-0"	39'-6"	56'-6"	73'-3"	90'-0"
10	10'-0"	23'-0"	43'-0"	63'-0"	80'-0"	92'-0"
11	10'-0"	23'-0"	39'-6"	56'-0"	72'-6"	89'-0"
12	9'-0"	20'-0"	39'-6"	56'-6"	73'-3"	90'-0"

AIR METERS [32]

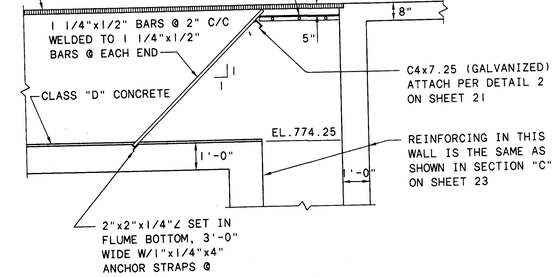
TANK#				
7	7'-9"	33'-0"	75'-9"	
8	7'-9"	33'-0"	78'-6"	
9	7'-5"	16'-1"	52'-3"	
10	7'-9"	38'-0"	75'-9"	
11	7'-9"	33'-0"	84'-10"	
12	7'-1"	16'-1"	52'-3"	

℄ 8" CONCRETE WALL [36] FOR AIR METERING CHAMBERS

TANK #									
7 & 8	6'-7"	12'-3"	30'-2"	35'-10"	74'-4"	80'-0"			
9 & 10	6'-7"	12'-3"	17'-11"	35'-11"	41'-7"	49'-5"	55'-1"	71'-3"	76'-11"
11 & 12	6'-7"	12'-3"	17'-11"	30'-2"	35'-10"	48'-3"	53'-11"	82'-0"	87'-8"



PLAN



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

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	WKG
DRAWN BY:	DLR
CHECKED BY:	WKG
APPROVED BY:	RBD
DATE:	MARCH 1995

NORTH AERATION TANKS - UPPER PLAN

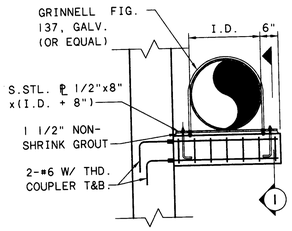
SCALE: 1/8" = 1'-0" OR AS NOTED

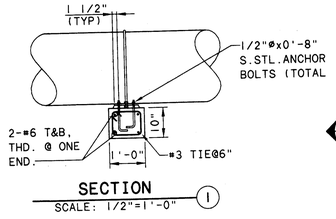
SHEET NO. 20 OF 112

03-23-95 N:\PROJECTS\PR15582\CADD\SHT20

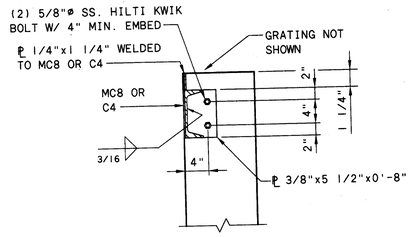
CODED NOTES

1. 16" DIP AERATION TANK INFLUENT
2. 14" DIP AERATION TANK INFLUENT
3. 48" SLUICE GATE
4. 8" MUD VALVE WITH EXTENSION STEM, STEM GUIDES AND OPERATING NUT
5. SLIDE GATE, NOT SHOWN
6. 4" PRESSURE RELIEF VALVE IN SLAB, TYPICAL FOR ALL TANKS, SEE SHEET 61
7. 4" PRESSURE RELIEF VALVE IN WALL, TYPICAL FOR ALL TANKS, SEE SHEET 61
8. AERATION MIXING EQUIPMENT WITH MAST
9. MAST FOR AERATION MIXING EQUIPMENT, (ALTERNATE LOCATION FOR MIXER)
10. 16" DIP FLG-FLG WALL PIPE. BLIND FLANGE BOTH SIDES.
11. AERATION BAFFLE
12. 4" AIR DROP AND 4" LATERAL. HEADER, DIFFUSERS AND SUPPORTS NOT SHOWN
13. 3" DIP FOAM SPRAY MAIN
14. GATE VALVE WITH EXTENSION STEM, STEM GUIDES AND OPERATING NUT, TYPICAL
15. PIPE SUPPORTS NOT SHOWN, SEE DETAIL THIS SHEET AND SECTIONS A & B
16. INSTALL CONTROLLED DENSITY FILL IN ACCORDANCE WITH SPECFICATION 03300 FOR ALL PIPING REQUIRING SUPPORT THROUGH EXCAVATION LIMITS OF STRUCTURE. CDF TO BE INSTALLED FULL DEPTH OF EXCAVATION TO PIPE INVERT. SEE ALSO PRESSURE RELIEF VALVE DETAIL ON SHEET 61.

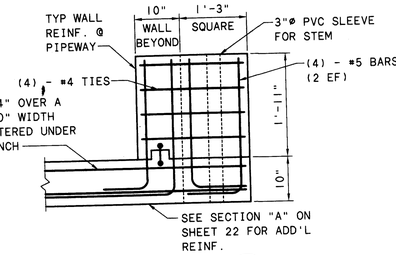




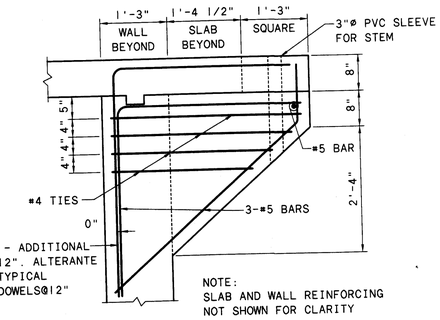
SECTION
SCALE: 1/2"=1'-0" (1)



CONNECTION DETAIL
SCALE: 1"=1'-0" (2)

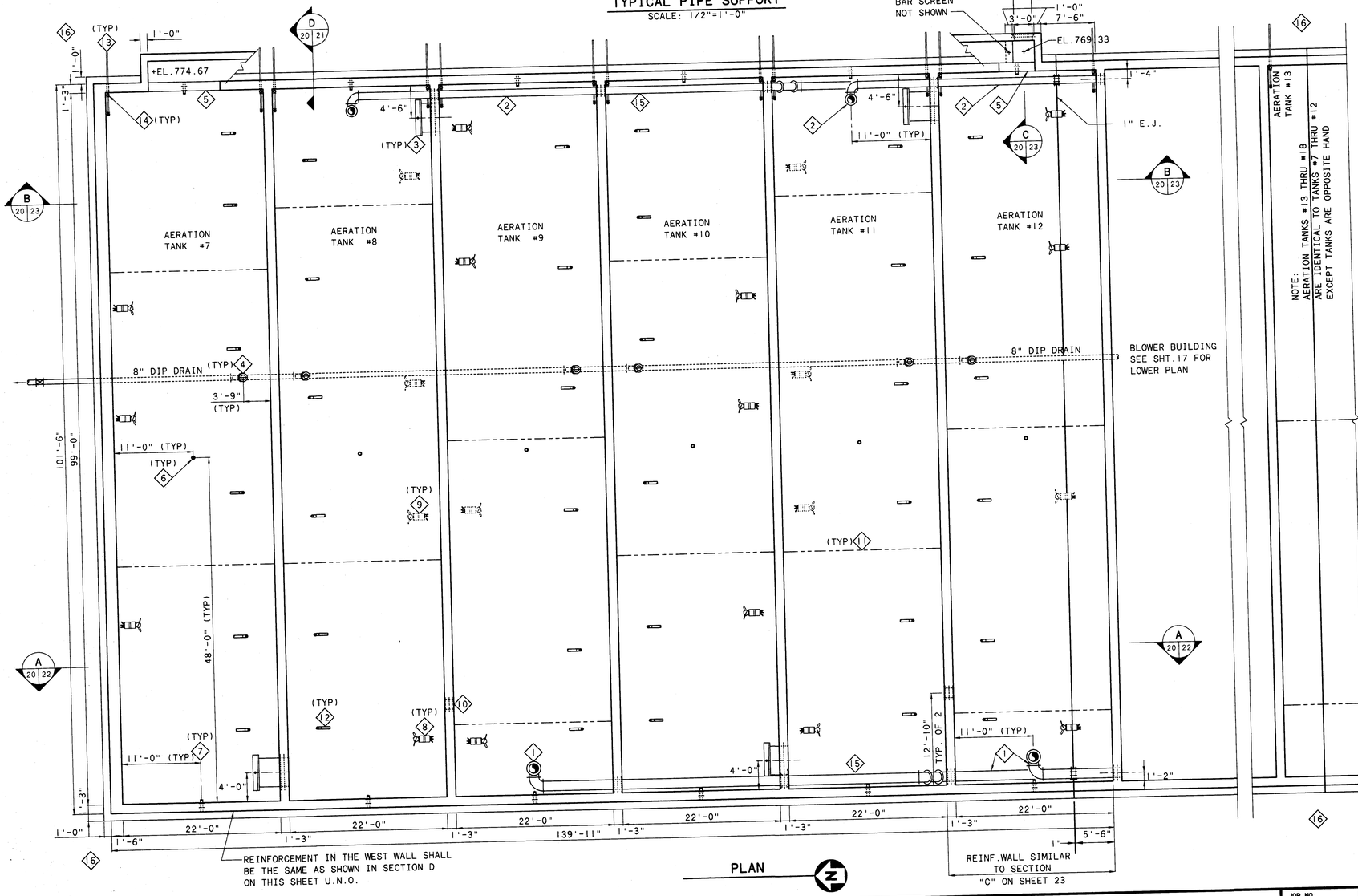


HAUNCH DETAIL (3, 22|21)
SCALE: 3/4"=1'-0"



HAUNCH DETAIL (4, 22|21)
SCALE: 3/4"=1'-0"

TYPICAL PIPE SUPPORT
SCALE: 1/2"=1'-0"



PLAN

SECTION
SCALE: 3/8"=1'-0" (D, 20|21)

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

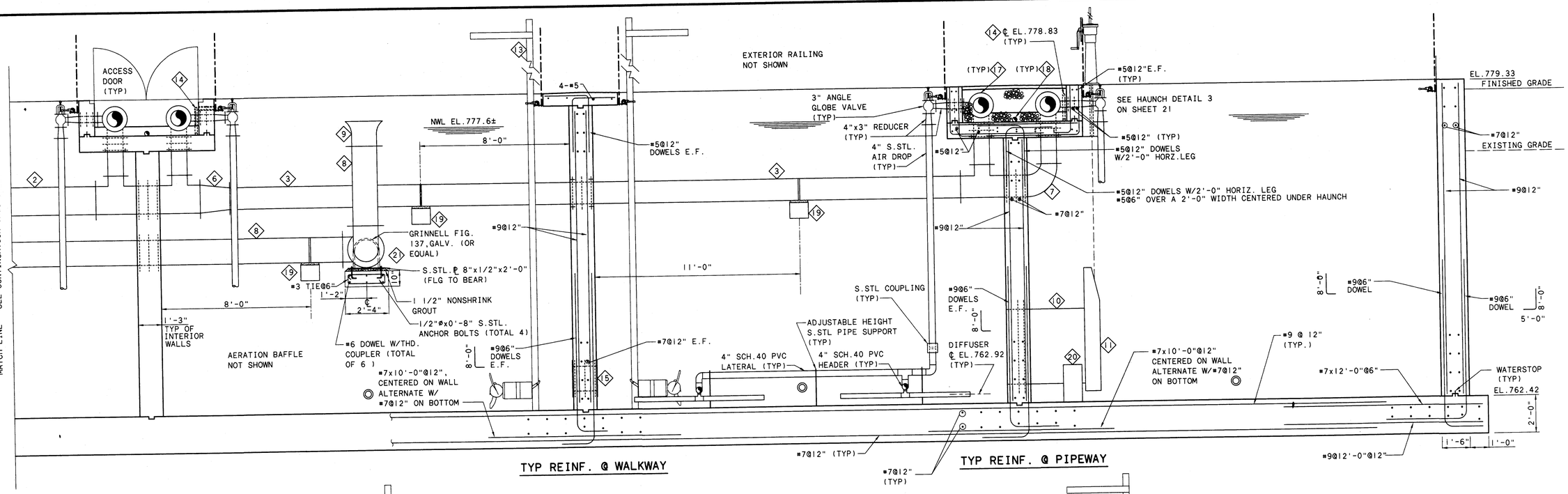
DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	WKG/CMG
DRAWN BY:	DLR
CHECKED BY:	WKG/CMG
APPROVED BY:	RBD
DATE:	MARCH 1995

NORTH AERATION TANKS - LOWER PLAN

SCALE: 1/8" = 1'-0" OR AS NOTED
SHEET NO. 21 OF 112

03-30-95 N:\PROJECTS\PR15582\CADD\SHT21



CODED NOTES

1. 24" DIP AIR
2. 18" DIP AIR
3. 14" DIP AIR
4. 10" DIP AIR
5. 24"x18" CONCENTRIC REDUCER
6. 18"x14" CONCENTRIC REDUCER
7. 14"x10" REDUCER 90° ELBOW
8. 16" DIP AERATION TANK INFLUENT
9. 16" FLARE
10. 48" DIP, ℄ EL.765.42
11. 48" SLUICE GATE, EXTENSION STEM, STEM GUIDE AND FLOORSTAND
12. PRESSURE RELIEF VALVE
13. AERATION MIXING EQUIPMENT WITH MAST, HOIST, AND POWER/CONTROL STATION. SEE DETAIL SHT.23
14. 1 1/2" PVC PHOSPHORUS REMOVAL PIPING. PROVIDE SLEEVE AND LINK SEAL AT ALL WALL AND SLAB PENETRATIONS, 1 1/2" ENTERS WYE WALL AT ℄ EL.777.58.
15. 16" DIP FLG-FLG WALL PIPE, ℄ EL.764.09. BLIND FLANGE BOTH SIDES.
16. FOAM SPRAY PIPING, TYP., SEE DETAIL SHT.23
17. ALL AIR PIPING IN WYE WALL @ INV. EL.777.92
18. 8" WIDE CONCRETE PIPE SUPPORT @ MAXIMUM 10'-0" C/C. PROVIDE 3" SCH.80 PVC DRAIN AT BOTTOM. REINFORCING STEEL SHALL BE #5@12" E.W. (VERT.). TYPICAL.
19. PIPE SUPPORT, SEE DETAIL ON SHEET 21
20. PROVIDE REINFORCED CONCRETE PIPE SUPPORT (TYP EACH SLUICE GATE)
21. 2'-4"x10"x3'-0" CANTILEVERED PIPE SUPPORT

SECTION A (20|22)

NO.	REVISIONS	DATE	BY	CHK.

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NORTH AERATION TANKS SECTION

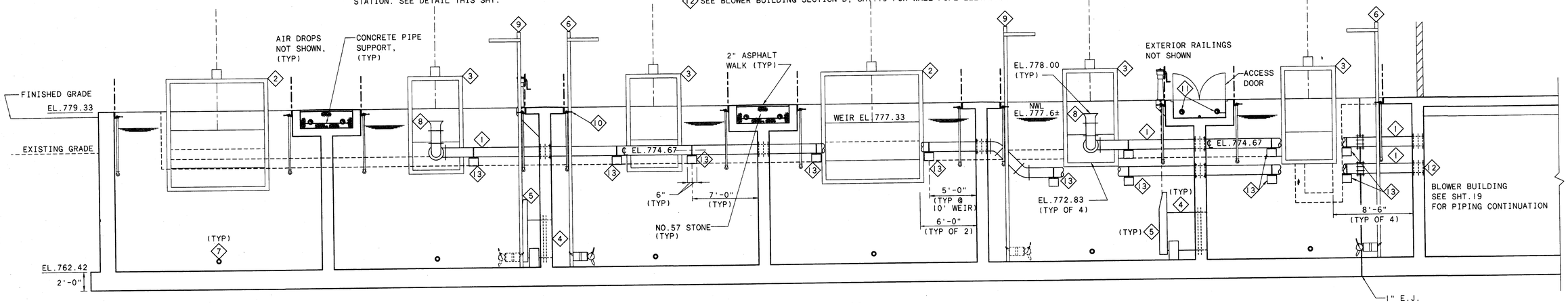
SCALE: 3/8" = 1'-0"

SHEET NO. 22 OF 112

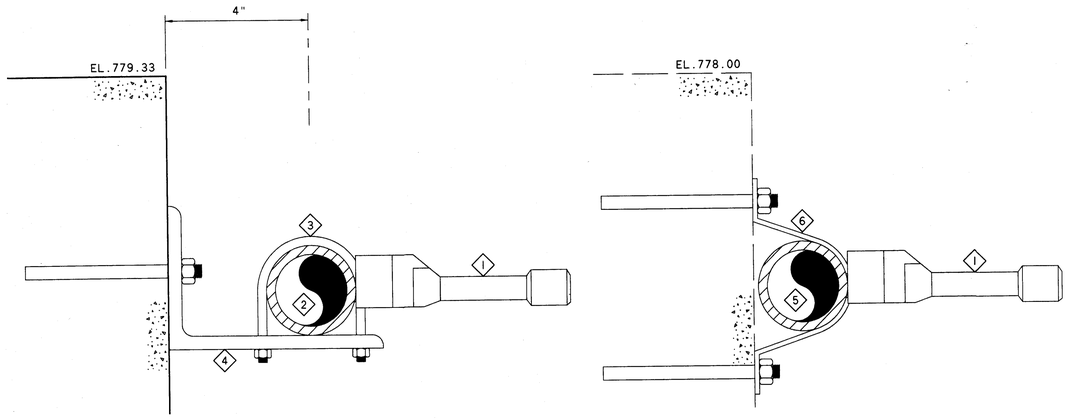
03-23-95 N:\PROJECTS\PR15582\CADD\SHT22

SECTION B CODED NOTES

1. 14" DIP AERATION TANK INFLUENT
2. 10'-0"x4'-0" SLIDE GATE, DOWNWARD OPENING
3. 5'-0"x4'-0" SLIDE GATE, DOWNWARD OPENING
4. 48" DIP, ℄ EL.765.42
5. 48" SLUICE GATE, EXTENSION STEM, STEM GUIDE AND FLOORSTAND
6. AERATION MIXING EQUIPMENT WITH MAST, HOIST, AND POWER/CONTROL STATION. SEE DETAIL THIS SHT.
7. PRESSURE RELIEF VALVE
8. 14" FLARE
9. MAST WITH HOIST AND POWER/CONTROL STATION FOR AERATION MIXING EQUIPMENT (NO MIXER PROVIDED) SEE DETAIL THIS SHT.
10. FOAM SPRAY PIPING, TYP., SEE DETAIL THIS SHT.
11. 4" DIP AIR, TYP.
12. SEE BLOWER BUILDING SECTION D, SHT.19 FOR WALL PIPE ELEVATION
13. PIPE SUPPORT, SEE DETAIL SHEET 21



SECTION B (20|23)



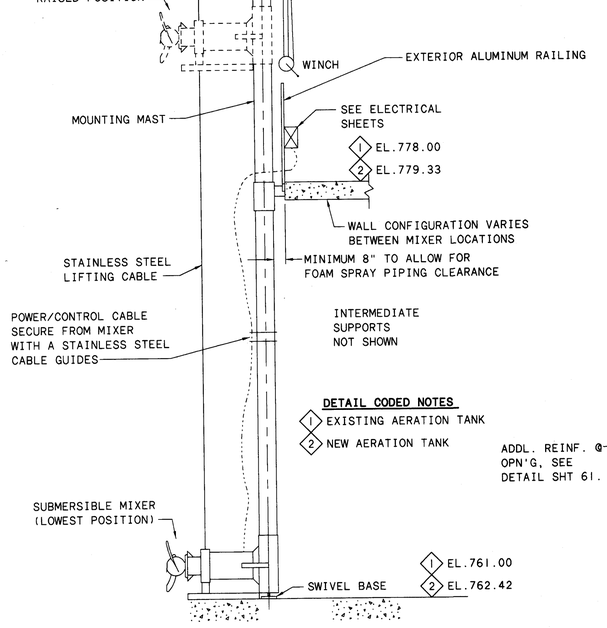
NEW AERATION TANKS

EXISTING AERATION TANKS

DETAIL CODED NOTES

1. FLIP-OPEN, QUICK CLEANING TYPE SPRAY NOZZLE WITH 60" SPRAY SPREAD, LECHLER 564.918.32.BC, SPRAYING SYSTEMS CO. 22561-14529 OR EQUAL.
2. 2" COPPER FOAM SPRAY PIPING, TYPE L WITH 1/4" TAP, ℄ EL.778.83. ISOLATE PIPE FROM SUPPORT WITH NEOPRENE.
3. STAINLESS STEEL U-BOLT
4. 6"x4"x3/8" STAINLESS STEEL ∠, 1 1/2" WIDE WITH 3/8"x4" LONG TYPE 316 S.STL. ADHESIVE ANCHORS, @ 4'-0" C/C.
5. 2" COPPER FOAM SPRAY PIPING, TYPE L WITH 1/4" TAP, ℄ EL.777.50
6. DOUBLE HOLE COPPER PIPE STRAP, GRINNELL FIG.9124 OR EQUAL. ATTACH TO WALL WITH 3/8"x4" LONG TYPE 316 S.STL. ADHESIVE ANCHORS @ 4'-0" C/C.

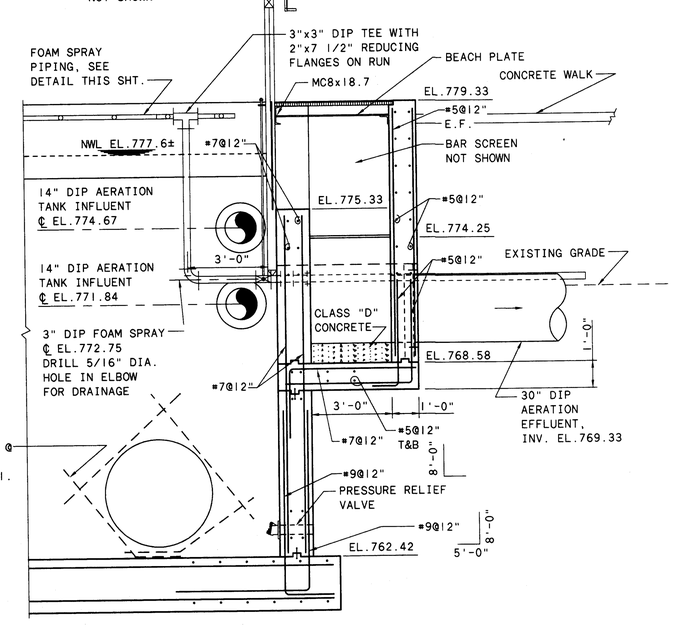
FOAM SPRAY PIPING DETAILS
SCALE: NONE



DETAIL CODED NOTES

1. EXISTING AERATION TANK
2. NEW AERATION TANK

TYPICAL SUBMERSIBLE MIXER DETAIL
SCALE: NONE



SECTION C (20|23)
SCALE: 3/8"=1'-0"

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

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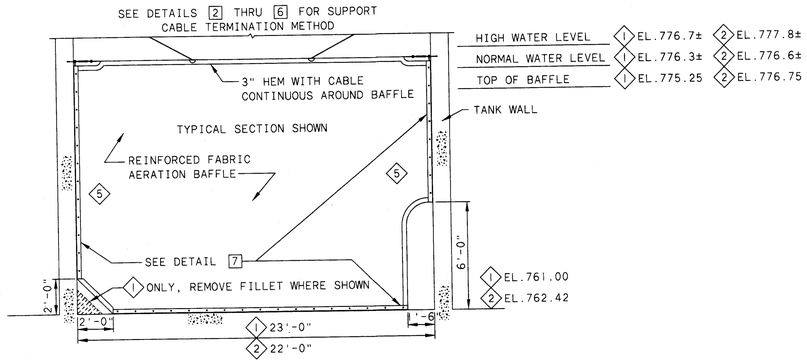
NORTH AERATION TANKS SECTIONS & DETAILS

SCALE: 3/16" = 1'-0" OR AS NOTED

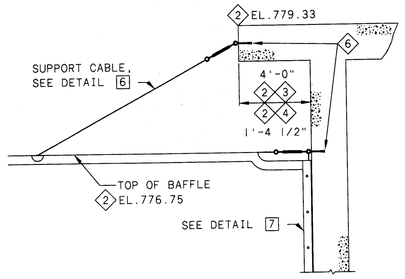
SHEET NO. 23 OF 112

03-23-95 N:\PROJECTS\PR15582\CADD\SHT23

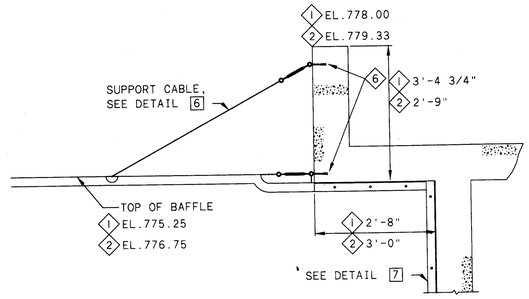


TYPICAL TYPE "A" AERATION BAFFLE SECTION DETAIL 1

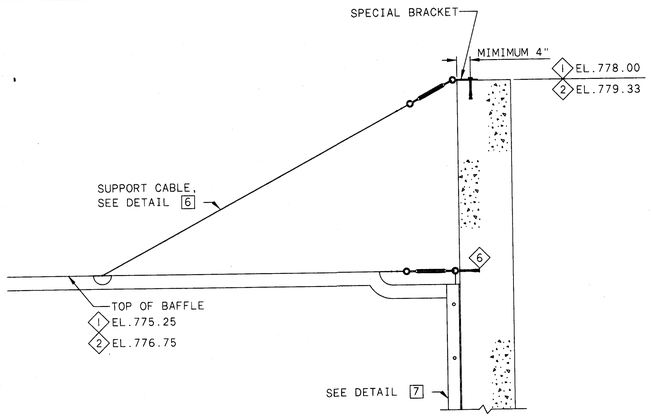
TYPICAL TYPE "B" AERATION BAFFLE OPPOSITE HAND



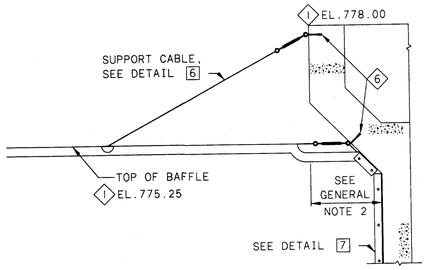
SUPPORT CABLE TERMINATION DETAIL 2



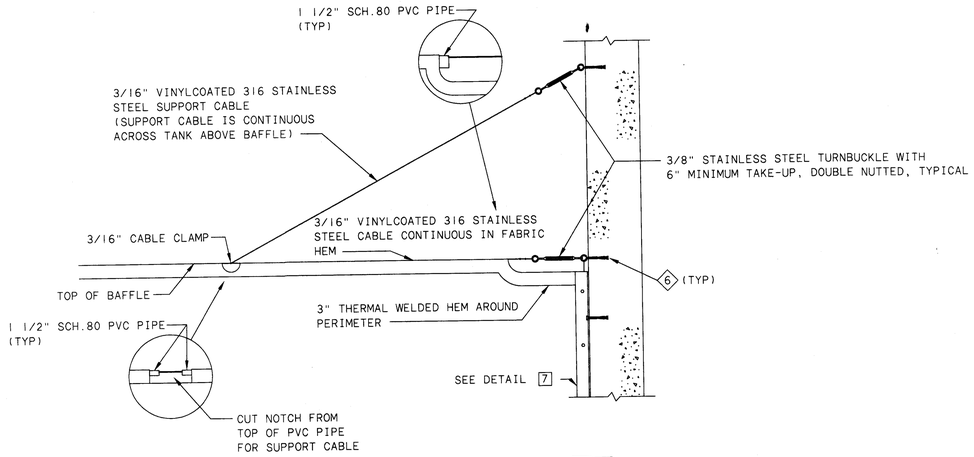
SUPPORT CABLE TERMINATION DETAIL 3



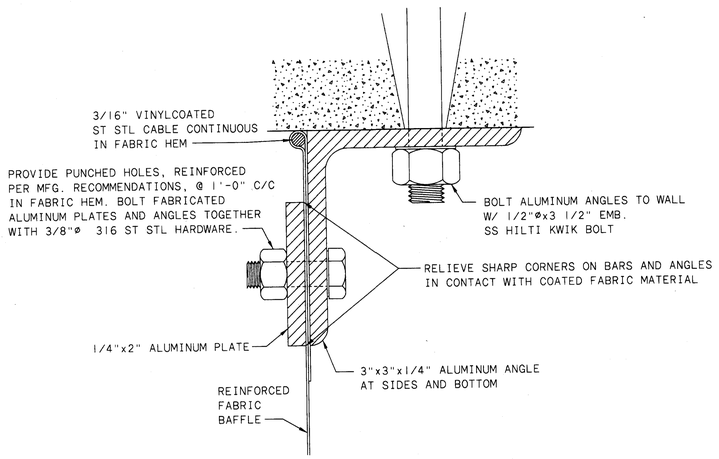
SUPPORT CABLE TERMINATION DETAIL 4



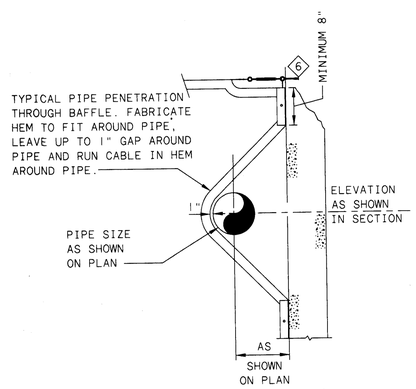
SUPPORT CABLE TERMINATION DETAIL 5



TYPICAL SUPPORT CABLE DETAIL 6



TYPICAL BAFFLE ATTACHMENT DETAIL 7



TYPICAL PIPE PENETRATION DETAIL 8

GENERAL NOTES

1. RAILING AND FOAM SPRAR PIPING NOT SHOWN IN DETAILS
2. FIELD VERIFY DIMENSIONS AT EACH BAFFLE LOCATION PRIOR TO FABRICATION.

CODED NOTES

1. EXISTING AERATION TANKS
2. NEW AERATION TANKS
3. TANK NO.12, SOUTH WALL, TANK NO.13, NORTH WALL
4. TANKS NO.8 THRU 11 AND TANKS 14 THRU 17 TEE WALLS
5. SEE DETAIL 8 FOR PIPE PENETRATIONS, WHERE REQUIRED
6. 3/8" STAINLESS STEEL EYE W/ 3/8"ø x3 1/2" EMB. HFA INSERT

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AERATION TANK BAFFLE DETAILS

SCALE: NONE

SHEET NO. 24 OF 112

03-23-95 N:\PROJECTS\PR15582\CADD\SHT24

CODED NOTES

1. DUCKING SCUM SKIMMER
2. ROTATING SCUM TROUGH
3. SCUM DROP BOX
4. ACCESS BRIDGE W/STD. ALUMINUM RAILING & KICK PLATE
5. FLOCCULATION WELL
6. COLLECTOR DRIVE
7. FLOCCULATOR DRIVE
8. FLOCCULATOR W/ PADDLES
9. SCUM TROUGH ACTIVATOR
10. FINAL CLARIFIER INFLUENT PIPE AND SLUDGE HOPPER LOCATIONS ARE OPPOSITE HAND FROM FINAL CLARIFIER #5.
11. CONCRETE LAUNDER COVER. SEE DETAIL SHT.26
12. SPIRAL COLLECTOR
13. FLOCCULATION WELL SUPPORTS
14. SLUDGE HOPPER
15. CENTER COLUMN
16. FINAL CLARIFIER ACCESS BRIDGE, ROTATING SCUM TROUGH, AND SCUM DROP BOX LOCATIONS ARE OPPOSITE HAND FROM FINAL CLARIFIER #8.
17. FINAL CLARIFIER INFLUENT PIPE AND SLUDGE HOPPPER LOCATIONS ARE OPPOSITE HAND FROM FINAL CLARIFIER #6.
18. FINAL CLARIFIER ACCESS BRIDGE, ROTATING SCUM TROUGH, AND SCUM DROP BOX LOCATIONS ARE OPPOSITE HAND FROM FINAL CLARIFIER #7
19. STANDARD ALUMINUM RAILING
20. EXTERIOR ALUMINUM RAILING
21. FINAL CLARIFIER DROP BOX. SEE DETAIL SHT.28
22. 2'0" X 3'0" ALUM ACCESS DOOR BILCO TYPE "K" OR EQUAL. 4 PER TANK, TYP CENTER IN CONC. FLUME COVER SEGMENT AT DROP BOX AND IN 6TH, 13TH AND 19TH SEGMENTS CLOCKWISE FROM DROP BOX. SEE SHT.27 FOR DETAIL.
23. EFFLUENT WEIR AND BAFFLE. SEE DETAIL SHT.26
24. 4" DIAMETER PRESSURE RELIEF VALVE IN SLAB. TYPICAL FOR 4 TANKS SEE SHT.61
25. 4" DIAMETER PRESSURE RELIEF VALVE IN WALL. TYPICAL FOR 4 TANKS SEE SHT.61

FINAL CLARIFIER #6 (LOWER PLAN SHOWN)
45' R. (TYP)
DIRECTION OF COLLECTOR ARM ROTATION (TYP)
FINAL CLARIFIER #7 (UPPER PLAN SHOWN)
LAUNDER HIGH POINT EL.772.83 (TYP)
(NOT SHOWN)
LAUNDER LOW POINT EL.772.67 (TYP)
6" DIP SCUM
36" DIP FINAL CLARIFIER EFFLUENT
18" DIP
8" DIP DRAIN
18" DIP FINAL CLARIFIER EFFLUENT
30" DIP FINAL CLARIFIER EFFLUENT
8" DIP DRAIN
20" DIP FINAL CLARIFIER INFLUENT
18" DIP FINAL CLARIFIER EFFLUENT
FINAL CLARIFIER #8 (UPPER PLAN SHOWN)
FINAL CLARIFIER #5 (INTERMEDIATE PLAN SHOWN)
COLLECTOR AND FLOCCULATION WELL (NOT SHOWN)
90° (TYP)
45° TO ℄ OF DROP BOX (TYP)
LAUNDER HIGH POINT EL.772.83 (TYP)
FINAL INFLUENT SPLITTER
20" DIP FINAL CLARIFIER INFLUENT
20" DIP FINAL CLARIFIER INFLUENT
DIRECTION OF FLOCCULATOR ROTATION, (TYP)
WEIR ℄ UNDER
SCUM BAFFLE UNDER
6" DIP SCUM
6" DIP SCUM
MH #9
8" DIP
12" DIP RETURN SLUDGE
8" DIP DRAIN SEWER
10" DIP FOAM SPRAY MAIN
30" DIP AERATION EFFLUENT
30" DIP AERATION EFFLUENT
8" DIP
6" DIP
WALKS NOT SHOWN
6" DIP FOAM SPRAY MAIN
3" DIP FOAM SPRAY MAIN
8" DIP FOAM SPRAY MAIN
6" DIP SCUM MAIN
2" COPPER
6" DIP WASTE ACTIVATED SLUDGE MAIN
2" COPPER NONPOTABLE WATER MAIN
3" DIP FOAM SPRAY MAIN
NORTH AERATION TANKS (TANKS #7-12)
SOUTH AERATION TANKS (TANKS #13-18)
YH

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

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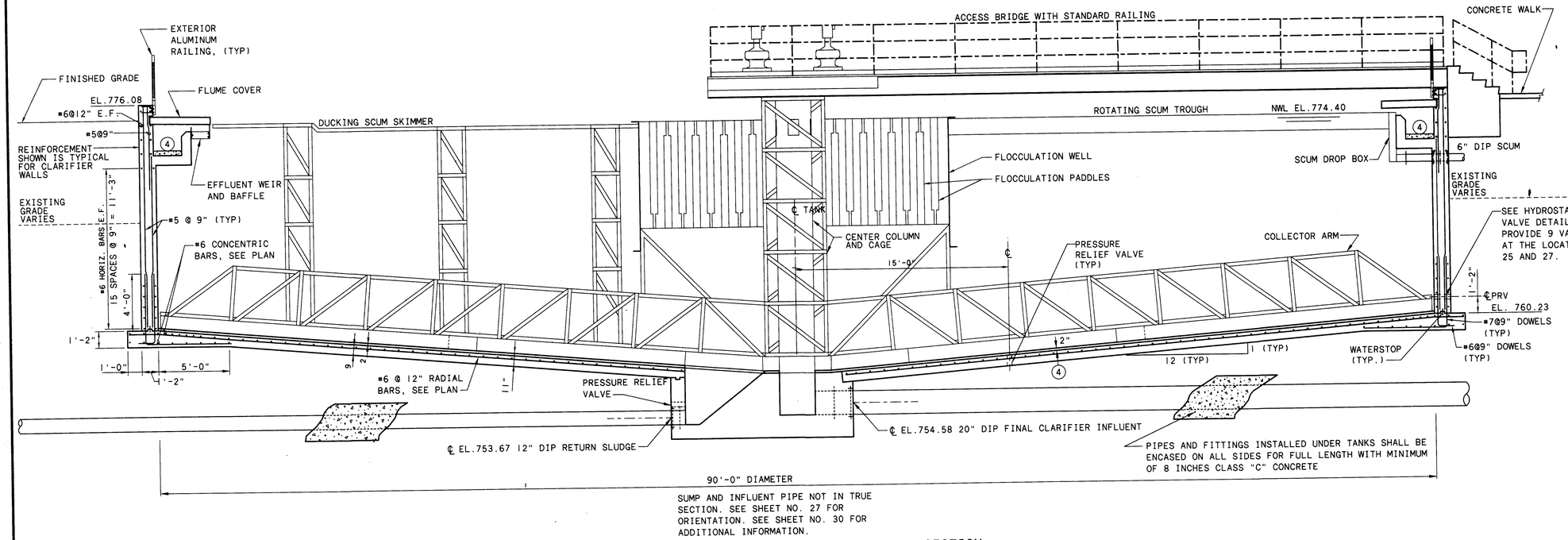
CHECKED BY:	WKG
APPROVED BY:	RBD
DATE:	MARCH 1995

FINAL CLARIFIERS PLAN

SCALE: 3/32" = 1'-0"

SHEET NO. 25 OF 112

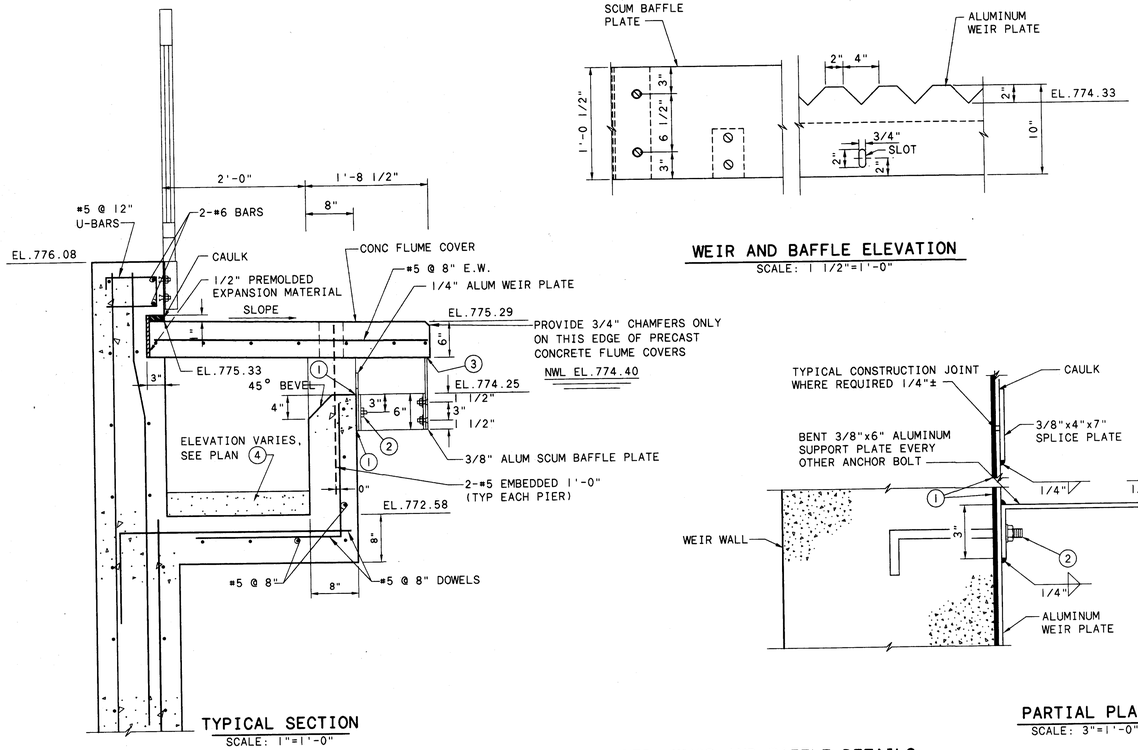
03-23-95 N:\PROJECTS\PR15582\CADD\SHT25



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

NOTES:

1. SET BOTTOM OF V-NOTCH TRUE AND LEVEL AT EL.774.33
2. WEIRS, BAFFLES AND SUPPORTS SHALL BE ALL ALUMINUM CONSTRUCTION.
3. ALL ALUMINUM IN CONTACT WITH CONCRETE OR DISSIMILAR METALS SHALL BE ISOLATED BY COATING THE CONTACT SURFACES WITH TWO COATS OF EPOXY PAINT.
4. PROVIDE CDF SUPPORT FOR PIPING WITHIN EXCAVATION LIMITS OF CLARIFIERS. CDF TO EXTEND FROM BOTTOM OF EXCAVATION TO PIPE INVERT. SEE ALSO PRESSURE RELIEF VALVE DETAIL ON SHEET 61.

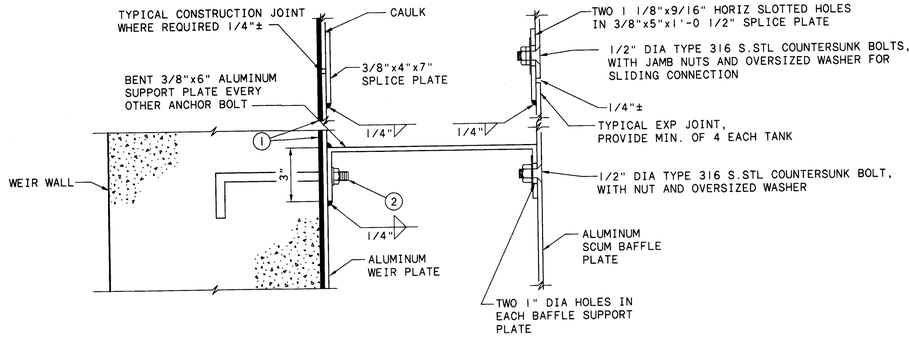


WEIR AND BAFFLE ELEVATION
SCALE: 1 1/2"=1'-0"

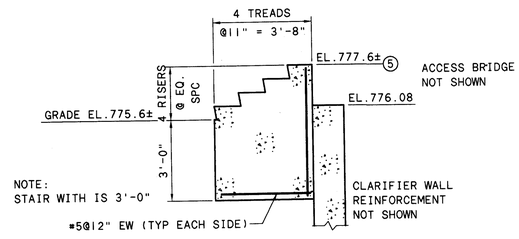
TYPICAL SECTION
SCALE: 1"=1'-0"

CODED NOTES:

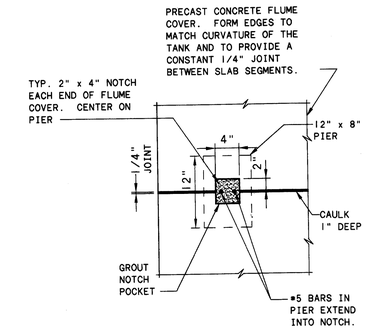
1. SEAL WITH 1/8" THICK CONTINUOUS NEOPRENE GASKET. CAULK AT ALL GASKET JOINTS.
2. 1/2"ø x6" LONG PLUS 2" HOOK TYPE 316 S.STL ANCHOR BOLTS WITH 1 1/2" PROJECTION @ 1'-3" C/C. PROVIDE NUT AND OVERSIZED WASHER.
3. CONTROL FIT TO -0" TO +1/4" BY SHIMMING CONCRETE LAUNDER COVER, GRINDING TOP OF LAUNDER COVER PIERS, OR ADJUSTING SCUM BAFFLE.
4. CLASS "D" CONCRETE.
5. VERIFY ELEVATION WITH CLARIFIER EQUIPMENT.



PARTIAL PLAN
SCALE: 3"=1'-0"



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



PLAN DETAIL
SCALE: 1"=1'-0"

EFFLUENT LAUNDER, WEIR AND BAFFLE DETAILS

NO.	REVISIONS	DATE	BY	CHK.

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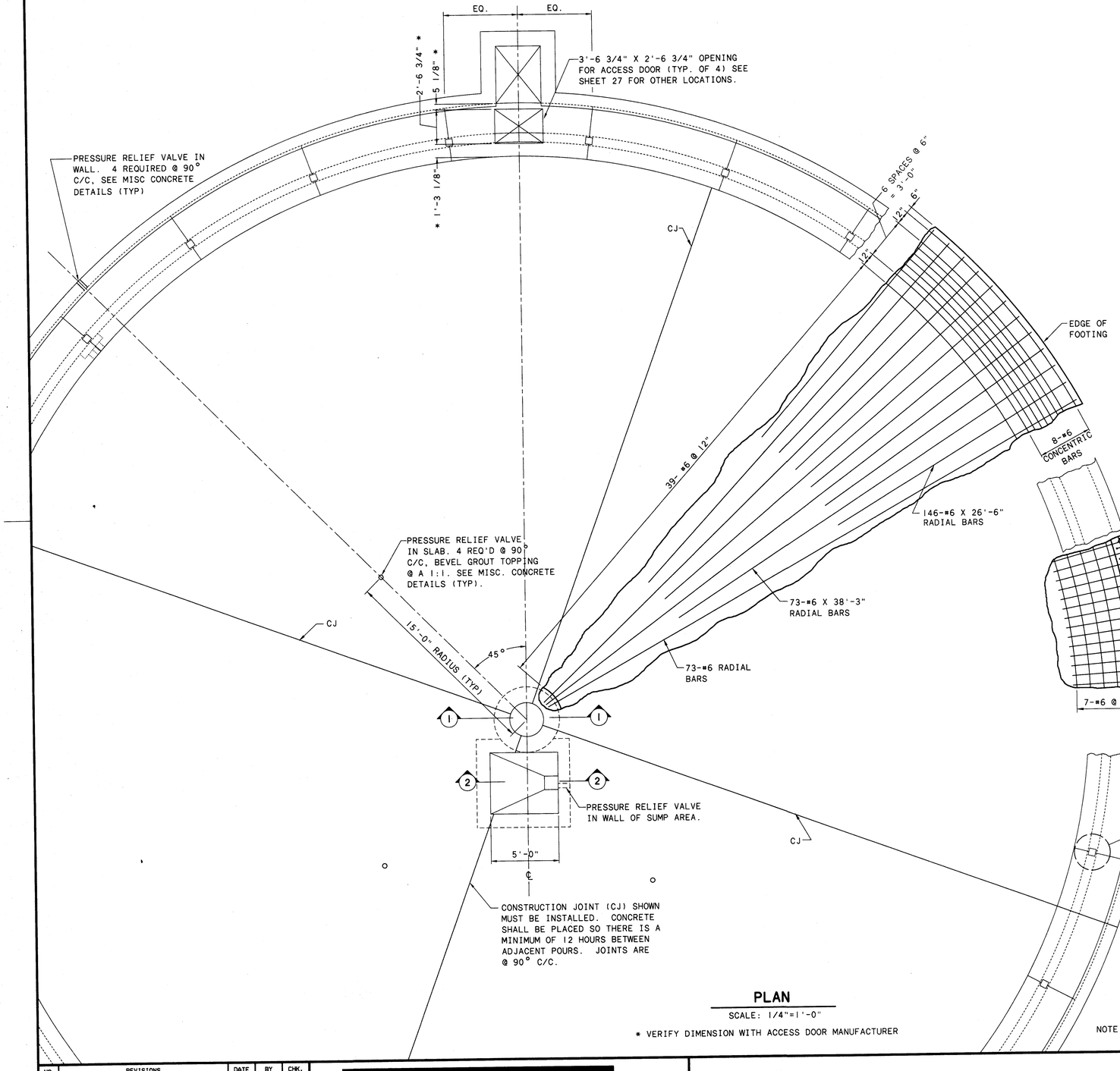
FINAL CLARIFIERS SECTIONS & MISC. DETAILS

SCALE: AS NOTED

SHEET NO. 26 OF 112

03-30-95 N:\PROJECTS\PR15582\CADD\SHT26

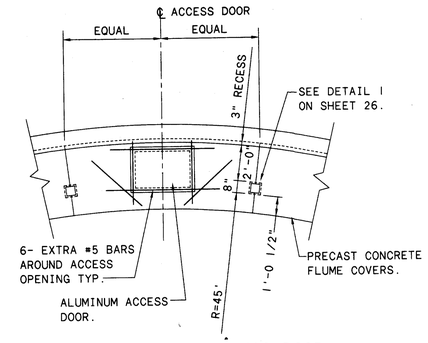


PLAN

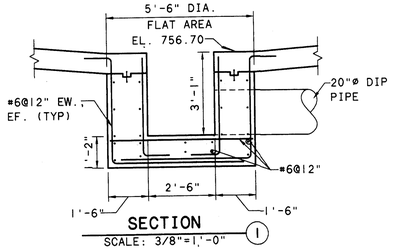
SCALE: 1/4"=1'-0"

* VERIFY DIMENSION WITH ACCESS DOOR MANUFACTURER

NOTE: THIS CLARIFIER IS TYPICAL OF 4

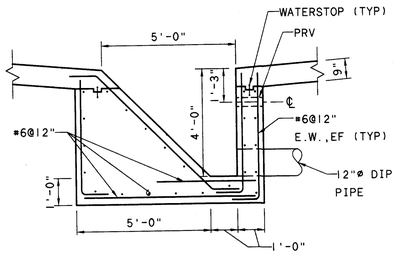


ALUMINUM ACCESS DOOR



SECTION

SCALE: 3/8"=1'-0" (1)



SECTION

SCALE: 3/8"=1'-0" (2)

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

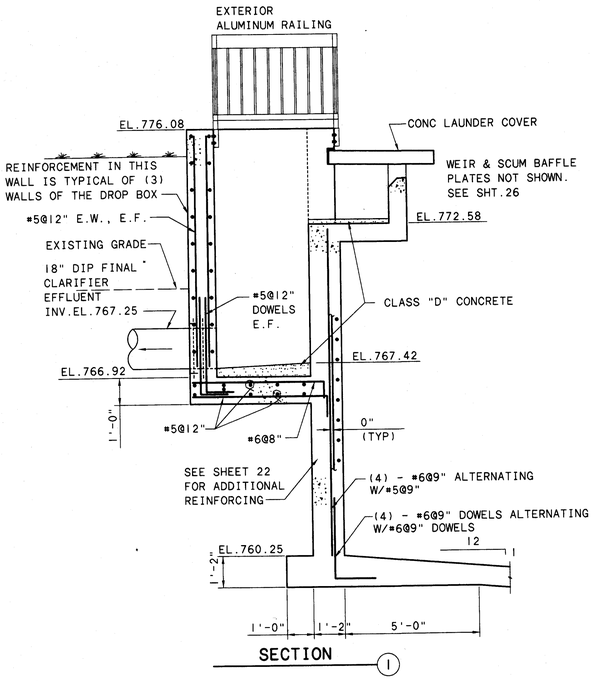
DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	WKG/CMG
DRAWN BY:	DLR
CHECKED BY:	WKG/CMG
APPROVED BY:	RBD
DATE:	MARCH 1995

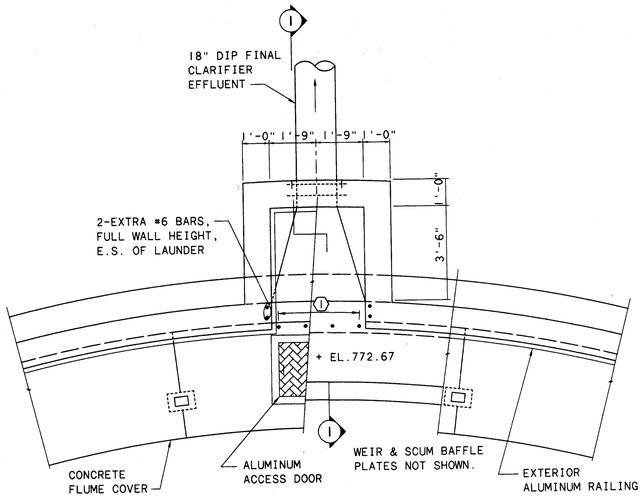
FINAL CLARIFIERS CONCRETE AND REINFORCING STEEL

SCALE:	
AS SHOWN	
SHEET NO.	OF
27	112

03-28-95 N:\PROJECTS\PR15582\CADD\SHT27



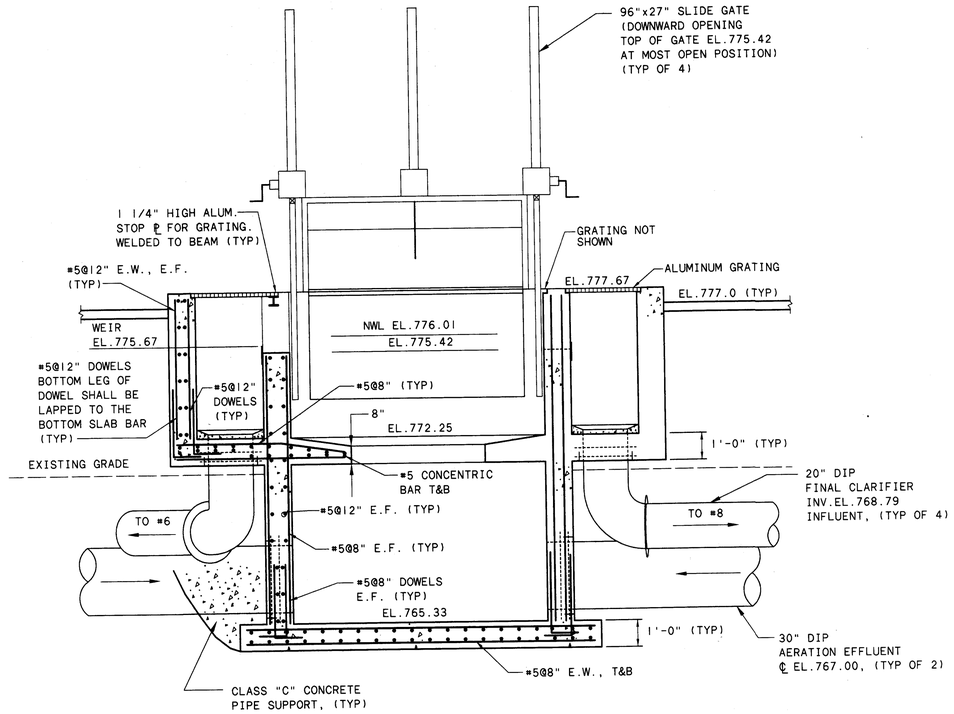
SECTION (1)



PLAN

(1) SEE SHT.28 FOR LOCATION ON EACH CLARIFIER
4-EXTRA #6 BARS @ 9"O.C.,W/#6 DOWELS TO
MATCH (I.F.ONLY), ALTERNATE W/#5@9"

FINAL CLARIFIER DROP BOX DETAIL



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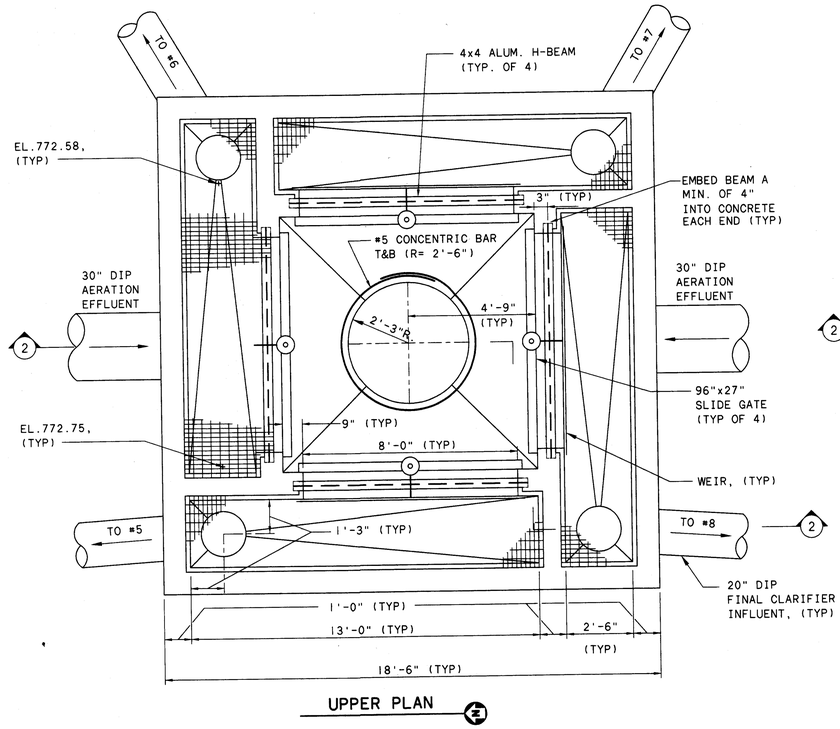
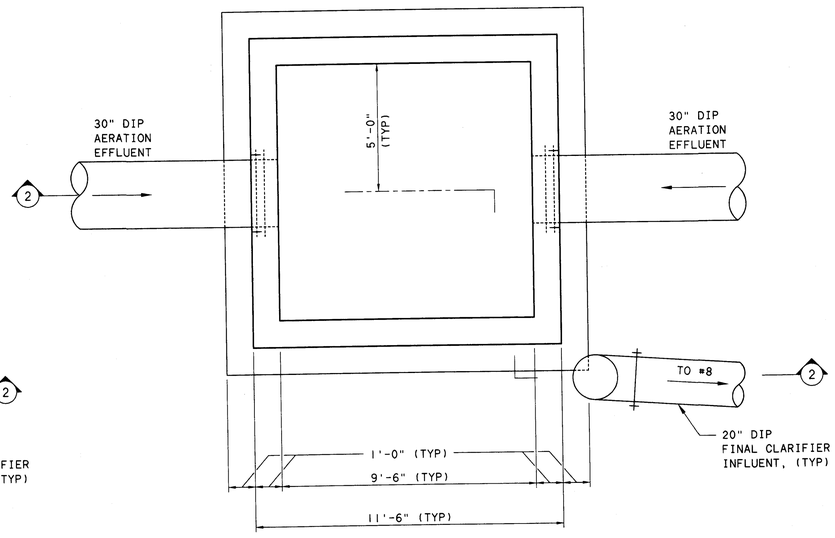


UPPER PLAN (N)



LOWER PLAN (N)

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

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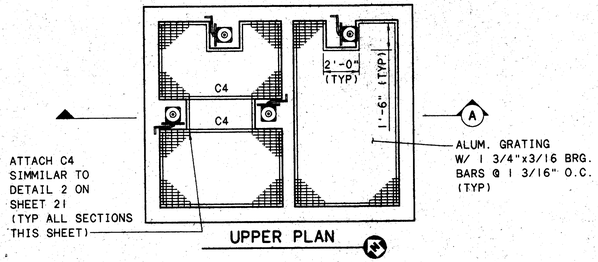
DRAWN BY:	DLR
CHECKED BY:	WKG/CMG
APPROVED BY:	RBD
DATE:	MARCH 1995

FINAL CLARIFERS
MISC. DETAILS & FINAL INFL. SPLITTER

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

SHEET NO. 28 OF 112

03-24-95 N:\PROJECTS\PR15582\CADD\SHT28



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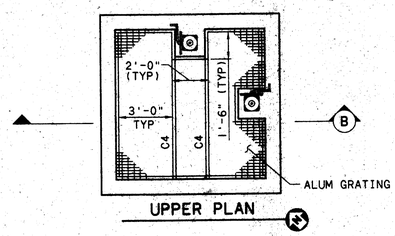

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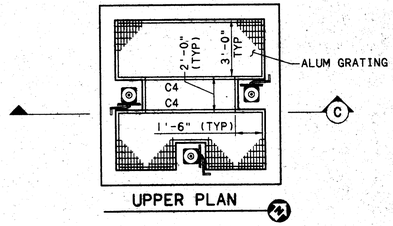

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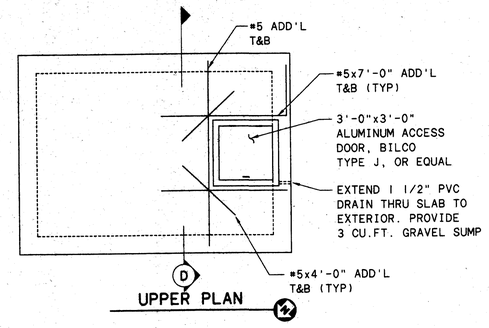
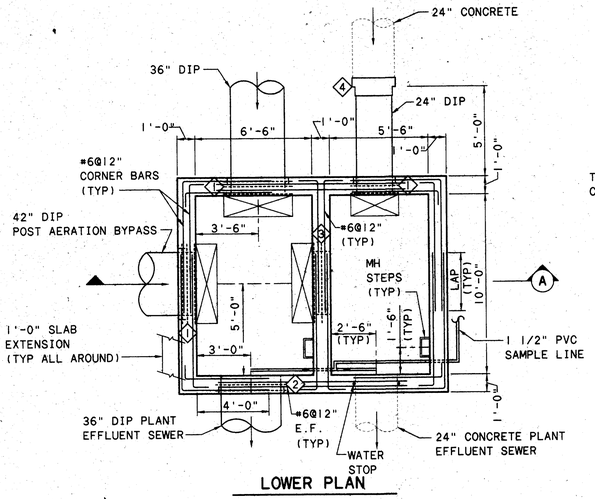
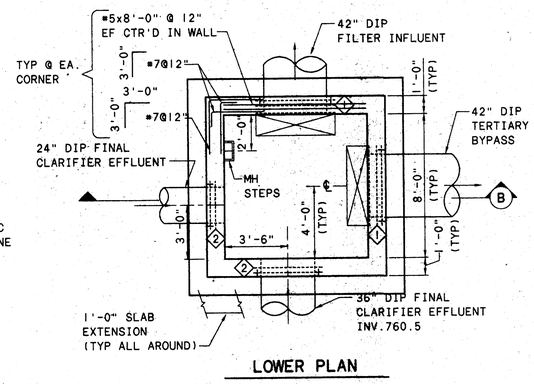


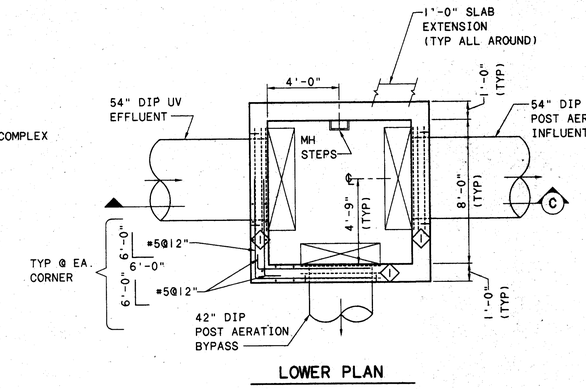
UPPER PLAN



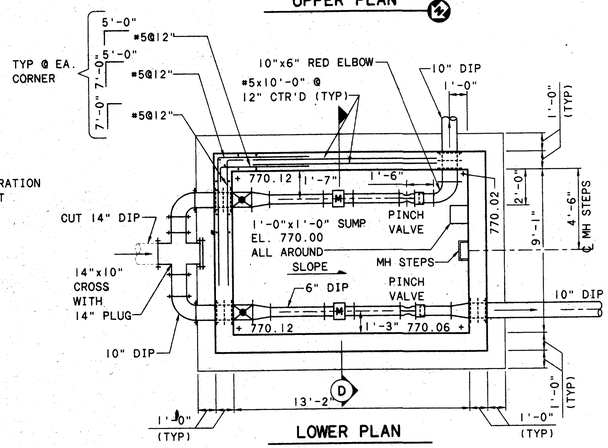
LOWER PLAN



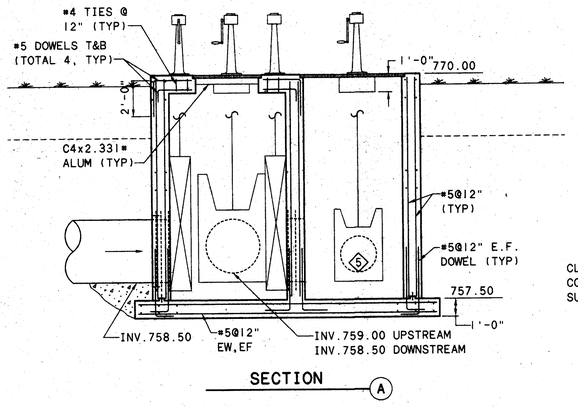
LOWER PLAN



LOWER PLAN

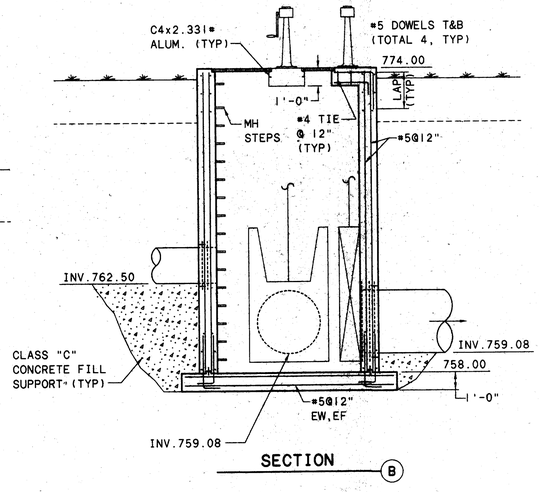


LOWER PLAN



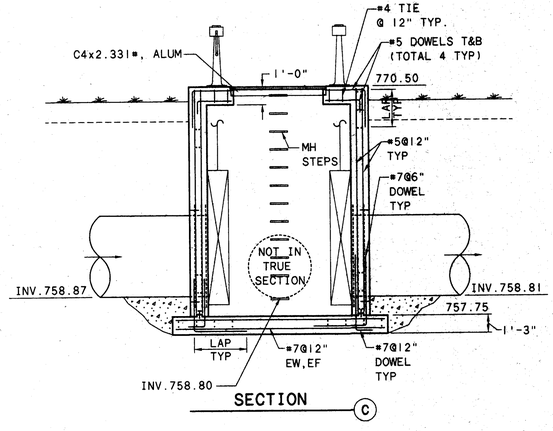
SECTION A

FINAL EFFLUENT CHAMBER



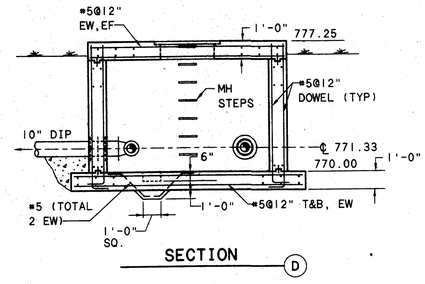
SECTION B

TERTIARY COMPLEX BYPASS CHAMBER



SECTION C

POST AERATION TANK BYPASS CHAMBER



SECTION D

AERATION TANK INFLUENT METER CHAMBER

NOTES:

1. F-MJ WALL THIMBLE
2. MJ-PE WALL PIPE
3. 36"ø WALL THIMBLE INV.EL.758.50
4. 415 STEEL REDUCING COUPLING AS MANUFACTURED BY SMITH BLAIR, OR EQUAL. CONTRACTOR SHALL FIELD VERIFY O.D. OF EXISTING PIPE.
5. CONTRACTOR SHALL FIELD VERIFY ELEVATION AND SLOPE OF EXISTING 24" CONCRETE PIPE AND THE NEW SECTION OF 24" DIP SHALL HAVE THE SAME SLOPE.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

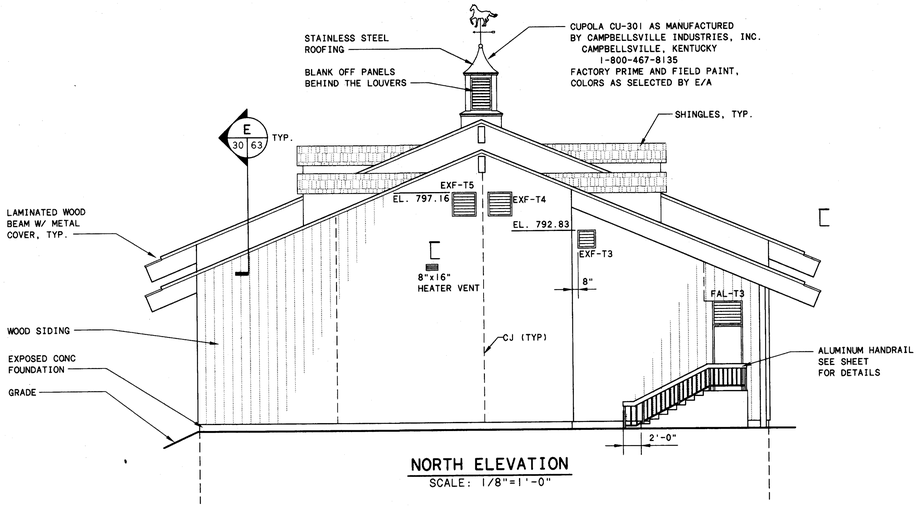
JOB NO.	15582
DESIGNED BY:	VC/WKG
DRAWN BY:	DLR
CHECKED BY:	VC/WKG
APPROVED BY:	RBD
DATE:	MARCH 1995

MISCELLANEOUS STRUCTURES PLANS & SECTIONS

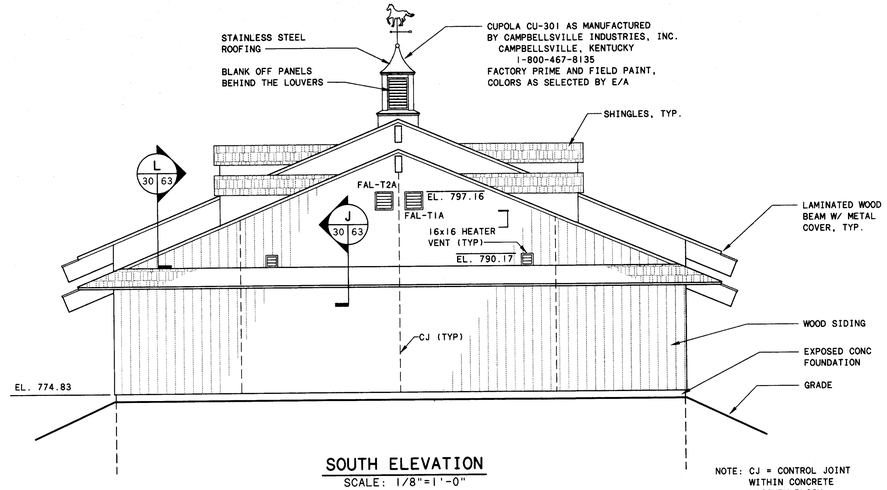
SCALE: 1/4" = 1'-0"

SHEET NO. 29 OF 112

03-24-95 N:\PROJECTS\PR15582\CADD\SHT29

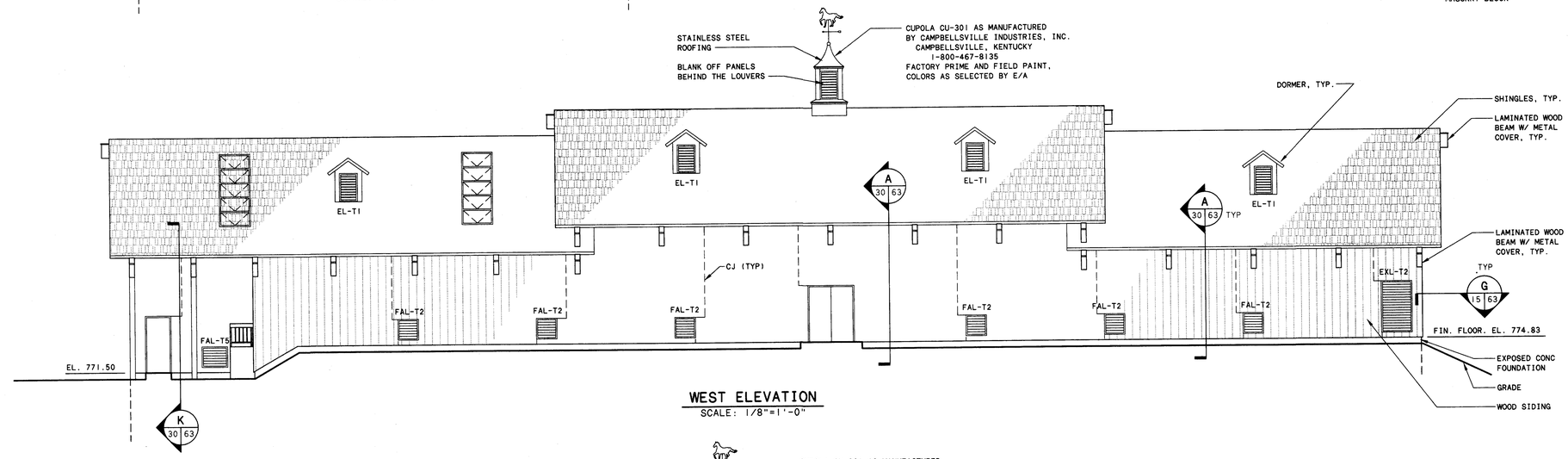


NORTH ELEVATION
SCALE: 1/8"=1'-0"

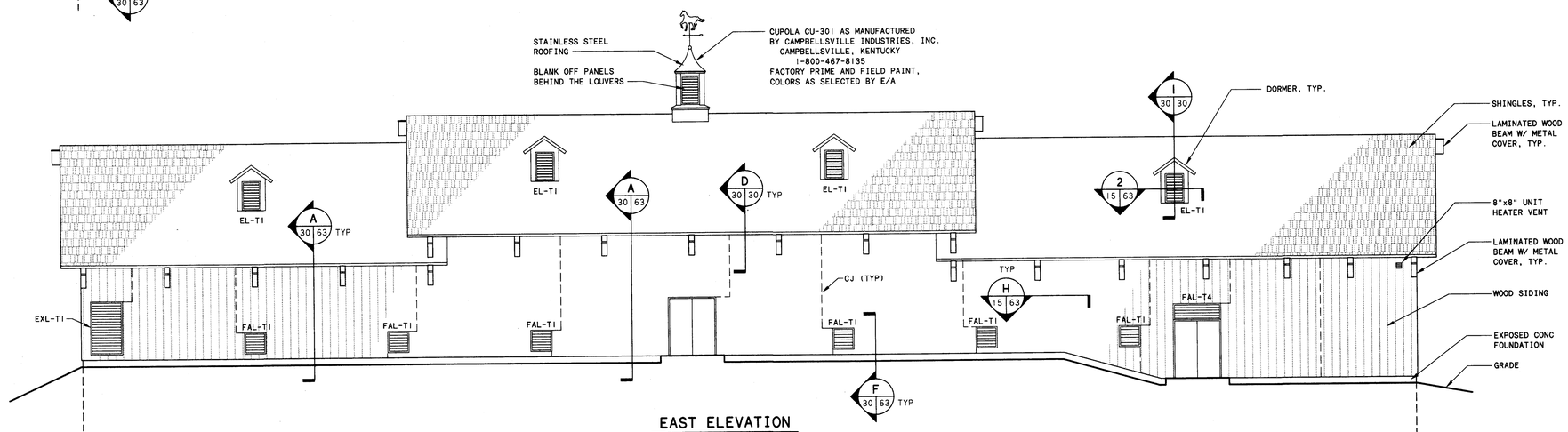


SOUTH ELEVATION
SCALE: 1/8"=1'-0"

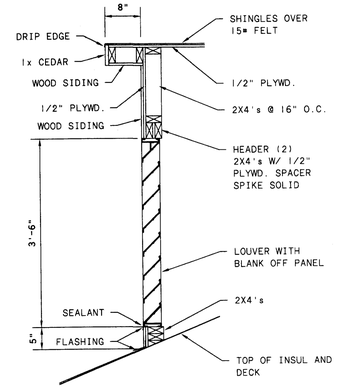
NOTE: CJ = CONTROL JOINT WITHIN CONCRETE MASONRY BLOCK



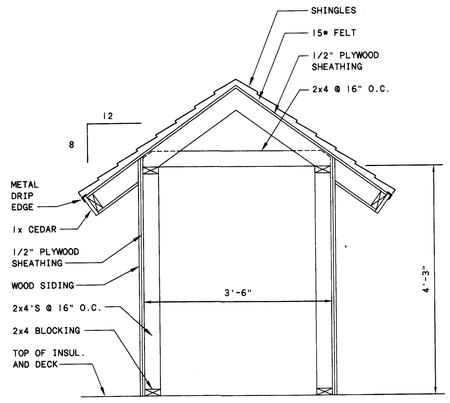
WEST ELEVATION
SCALE: 1/8"=1'-0"



EAST ELEVATION
SCALE: 1/8"=1'-0"



DETAIL
SCALE: 3/4"=1'-0"
I 30 30



DETAIL
SCALE: 3/4"=1'-0"
2 30 30

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	DM
DRAWN BY:	BK
CHECKED BY:	DM
APPROVED BY:	DM
DATE:	MARCH 1995

TERTIARY TREATMENT COMPLEX ELEVATIONS

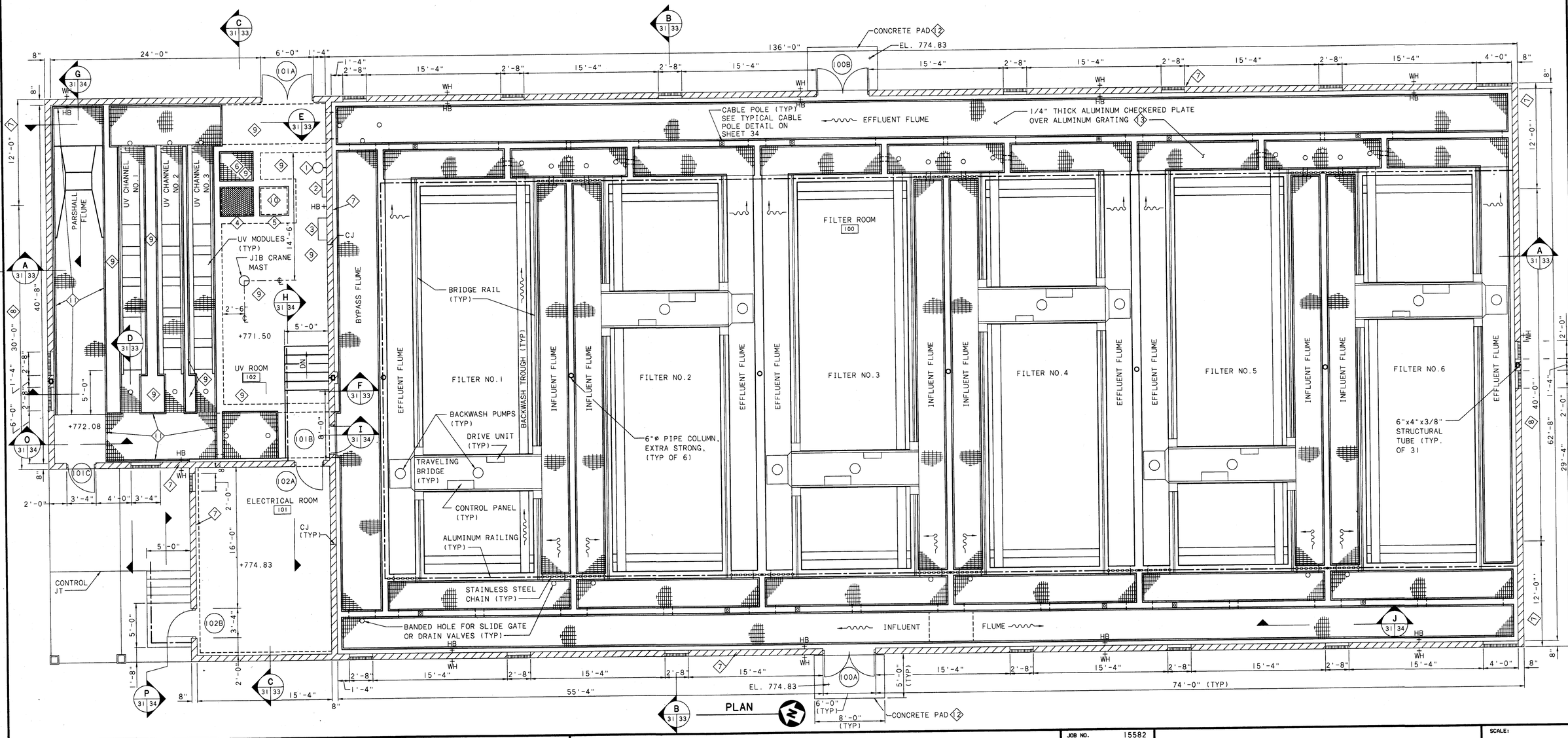
SCALE: AS NOTED

SHEET NO. 30 OF 112

O:\SHT30 03-30-95

NOTES:

1. EMERGENCY SHOWER AND EYEWASH
2. HOSE REEL
3. UV PANEL
4. UV MODULE CLEANING TANK
5. 3'-0"x3'0" ALUMINUM ACCESS DOOR, BILCO DOOR TYPE J. CHANNEL DRAIN SHALL BE DIRECTED TO WIPE DOWN AREA.
6. UV MODULE WIPE DOWN AREA
7. 8 INCH CMU REINFORCED WITH VERTICAL NO. 5 AT 48 INCHES C/C WITH DOWELS TO MATCH. REINFORCEMENT IN WALL SHALL BE OVER ENTIRE LENGHT OF WALL UNLESS OTHERWISE DIMENSIONED.
8. 8 INCH CMU REINFORCED WITH VERTICAL NO. 6 AT 24 INCHES C/C WITH DOWELS TO MATCH.
9. COAT EXPOSED CONCRETE SURFACES WITH "DURAL 360"
10. COAT VALVE VAULT WITH "DURAL 360"
11. 1 3/4"x3/16" ALUMINUM GRATING. PROVIDE 2"x2"x1/4" ALUMINUM ANGLES EMBEDDED INTO THE CONCRETE SIMILAR TO THE DETAIL SHOWN ON THE MISC. METALS DETAIL SHEET.
12. PROVIDE 6x6 W2.1xW2.1 WWF IN 7" THICK SLAB. PROVIDE 2'-0" THICK DRAINAGE FILL BASE BELOW SLAB.
13. TYPICAL FOR ALL GRATED AREAS WITHIN FILTER ROOM 100. REQUIRES DEEPER SUPPORT ANGLE SEE SHEET 62.



NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
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APPROVED BY:	RBD
DATE:	MARCH 1995

TERTIARY TREATMENT COMPLEX UPPER PLAN

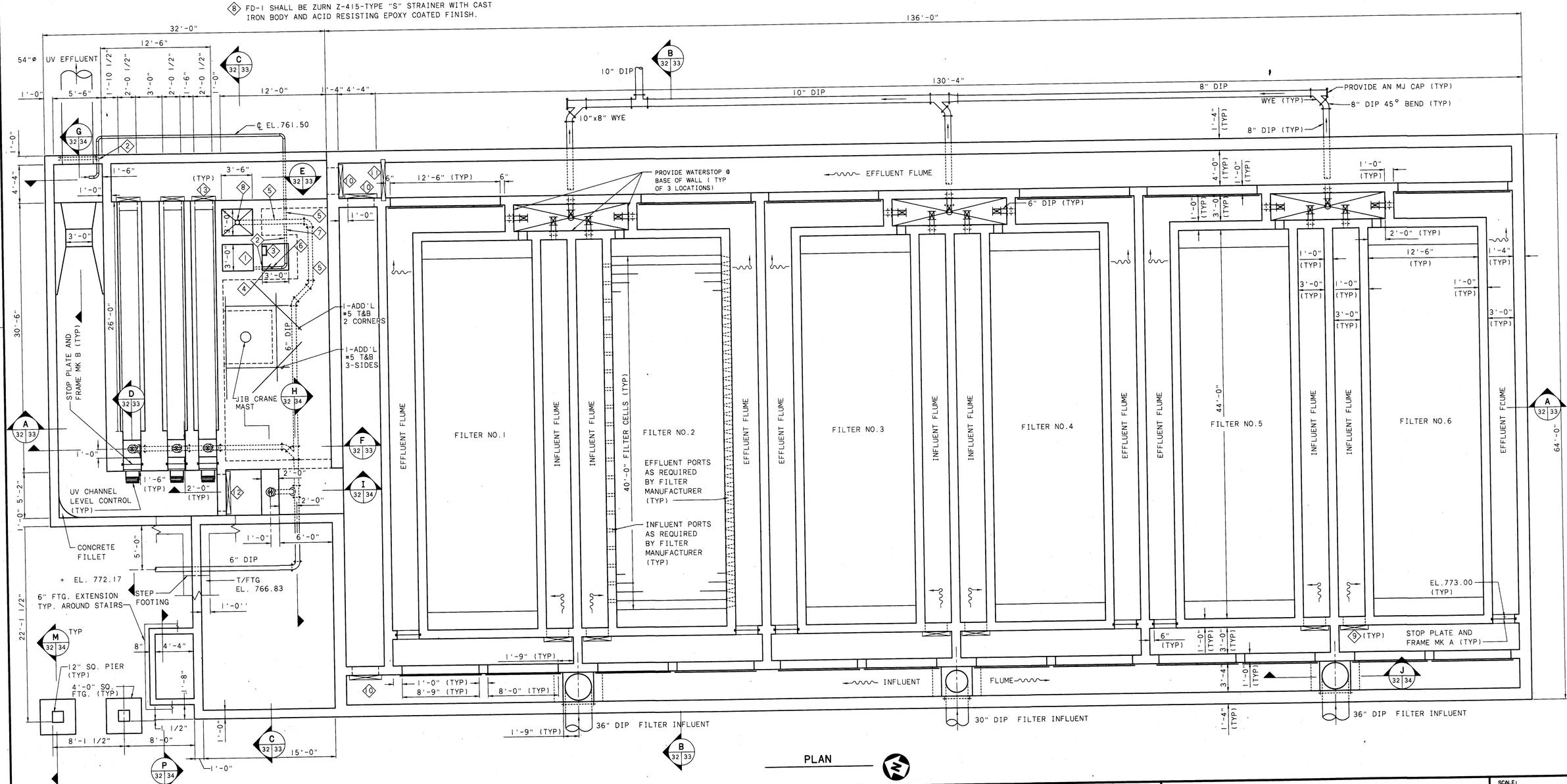
SCALE: 3/16" = 1'-0"

SHEET NO. 31 OF 112

03-30-95 N:\PROJECTS\PR15582\CADD\SHT31

NOTES:

1. DIMENSIONS OF CONCRETE VAULT FOR THE INSTALLATION OF THE STAINLESS STEEL LINER SHALL BE OBTAINED FROM THE UV EQUIPMENT MANUFACTURER. 3"ø S STL PIPE INV. 765.50. PIPE TO THREAD INTO S STL LINER.
2. 3"ø TYPE 304 SCHEDULE 40 THREADED STAINLESS STEEL CLEANING TANK DRAIN. PROVIDE TYPE 304 S STL SLEEVE & LINK SEAL.
3. MH STEPS
4. INV.EL.764.17
5. PIPES AND FITTINGS INSTALLED UNDER TANKS AND SLABS SHALL BE ENCASED ON ALL SIDES FOR FULL LENGTH WITH MINIMUM OF 8 INCHES CLASS "C" CONCRETE.
6. PROVIDE BALL VALVE WITH EXTENSION STEM TO EL.770.50. PROVIDE OPERATING LEVER. PROVIDE REINFORCED CONCRETE PIPE SUPPORTS - NOT SHOWN.
7. PROVIDE 2-90° BENDS.
8. FD-1 SHALL BE ZURN Z-415-TYPE "S" STRAINER WITH CAST IRON BODY AND ACID RESISTING EPOXY COATED FINISH.
9. 2'-6"x2'-6" SLIDE GATE.
10. 3'-0"x3'-0" SLIDE GATE.
11. 4'-0"x3'-0" SLIDE GATE
12. 4'-0"x2'-0" SLIDE GATE.
13. 2'-6"x3'-" SLIDE GATE.



PLAN

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

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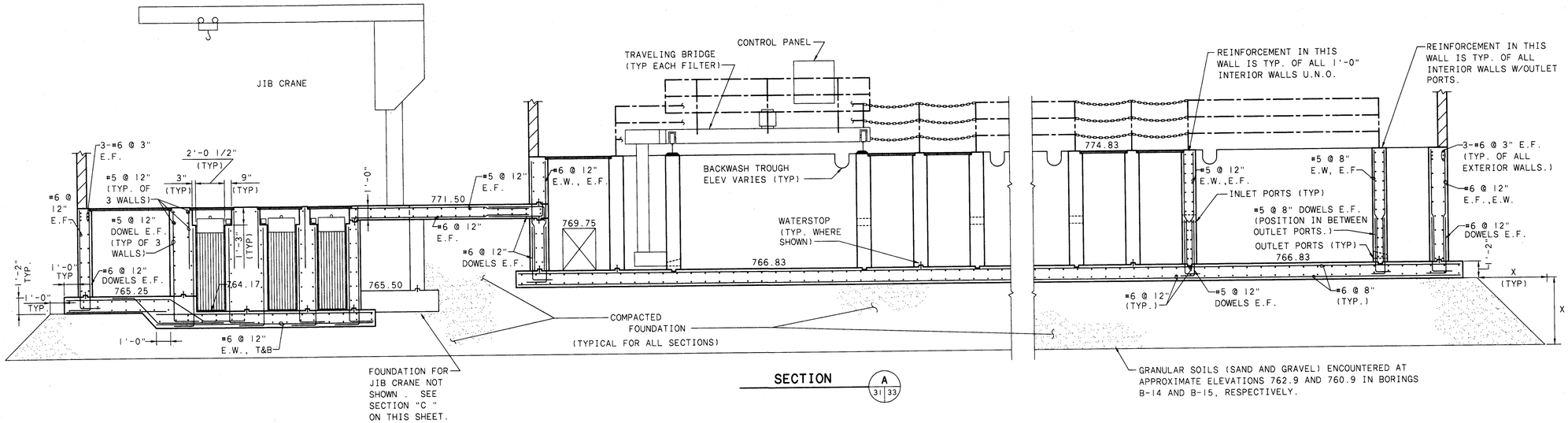
APPROVED BY:	RBD
DATE:	MARCH 1995

TERTIARY TREATMENT COMPLEX LOWER PLAN

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

SHEET NO. 32 OF 112

03-30-95 N:\PROJECTS\PR15582\CADD\SHT32



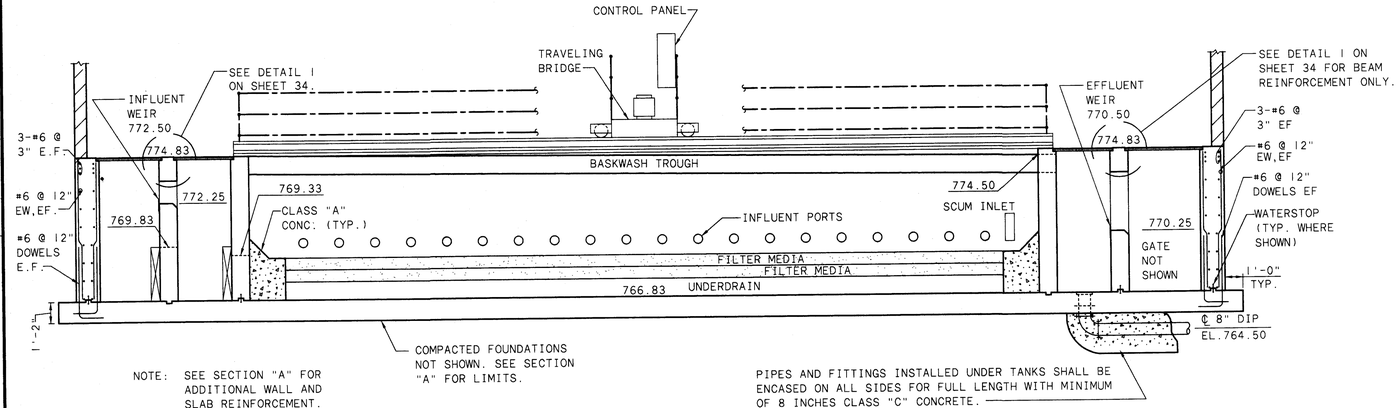
SECTION A (31|33)

TERTIARY COMPLEX FOUNDATIONS

IN ALL AREAS DESIGNATED TO RECEIVE COMPACTED FOUNDATION MATERIAL, NO EXCAVATION OF EXISTING MATERIAL SHALL BE MADE UNTIL THE EXISTING MATERIAL HAS BEEN INSPECTED AND AUTHORIZED FOR REMOVAL BY THE ENGINEER. DEPTH OF REMOVAL SHALL BE AS DIRECTED AND AUTHORIZED BY THE ENGINEER.

TOPSOIL AND COHESIVE SOILS CONSISTING OF DARK BROWN SANDY CLAY, BROWN CLAY, AND LEAN CLAY AND BROWN LEAN SANDY CLAY, SHALL BE EXCAVATED FROM THE FOUNDATION AREA OF THE TERTIARY COMPLEX DOWN TO THE SURFACE OF THE UNDERLYING GRANULAR SOILS AS DIRECTED BY THE ENGINEER. THE EXPOSED EXISTING GRANULAR SOIL SHALL BE RECOMPACTED IN ACCORDANCE WITH THE PLAN NOTES ON SHEET 59 PRIOR TO THE PLACEMENT OF COMPACTED FOUNDATION.

NOTE: DOWELS FOR MASONRY ARE NOT SHOWN. THIS IS TYPICAL FOR ALL SECTIONS.



NOTE: SEE SECTION "A" FOR ADDITIONAL WALL AND SLAB REINFORCEMENT.

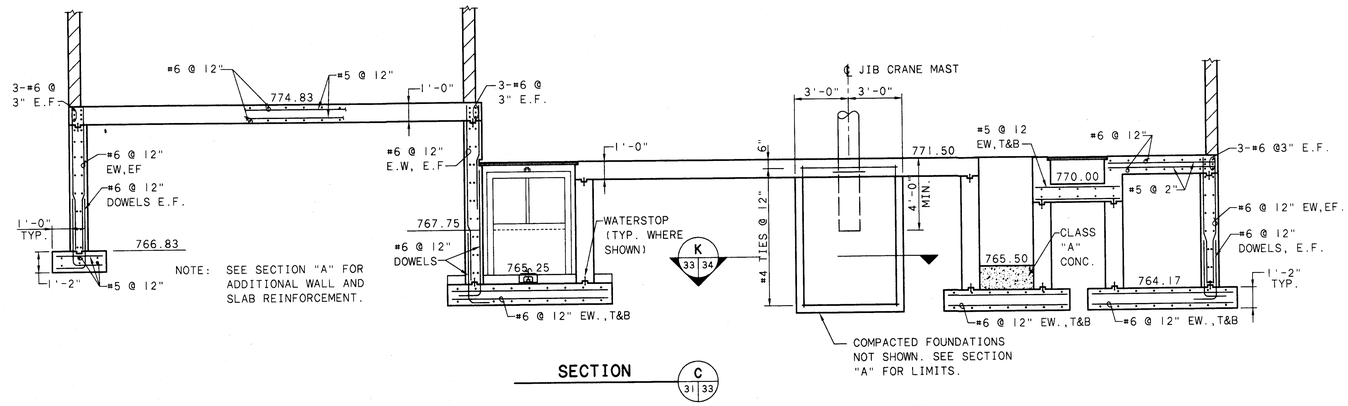
SECTION B (31|33)

NOTE: SEE SECTION "A" FOR SLAB REINFORCEMENT SIZE AND SPACING.

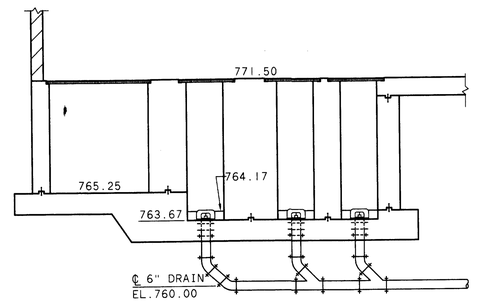
SECTION D (31|33)

NOTE: SEE SECTION "A" FOR ADDITIONAL WALL AND SLAB REINFORCEMENT.

SECTION E (31|33)



SECTION C (31|33)



NOTE: SEE SECTION "A" FOR WALL AND SLAB REINFORCEMENT.

SECTION F (31|33)

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

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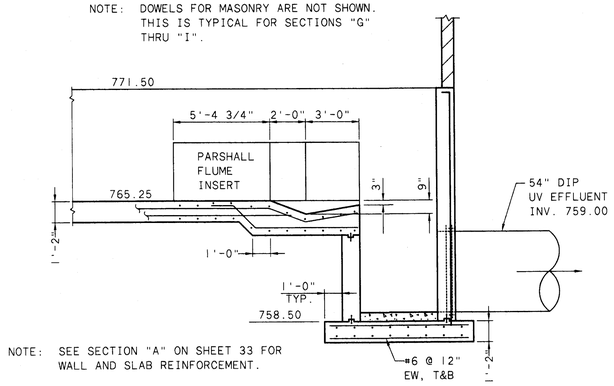
DESIGNED BY:	VC
DRAWN BY:	DLR
CHECKED BY:	VC
APPROVED BY:	RBD
DATE:	MARCH 1995

TERTIARY TREATMENT COMPLEX SECTIONS

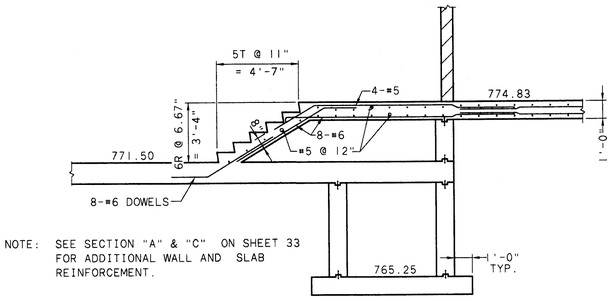
SCALE: 1/4" = 1'-0"

SHEET NO. 33 OF 112

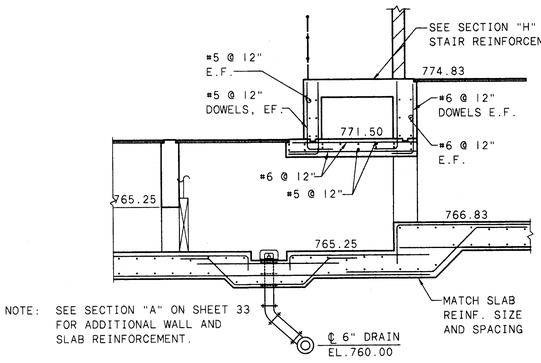
03-30-95 N:\PROJECTS\PR15582\CADD\SHT33



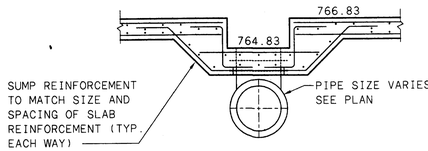
SECTION G (31|34)



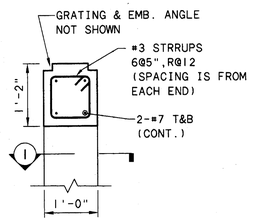
SECTION H (31|34)



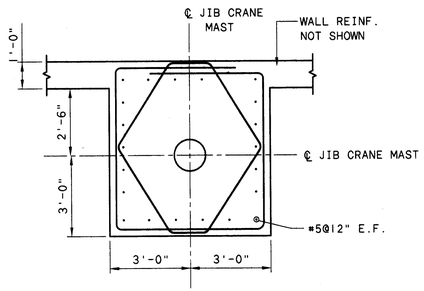
SECTION I (31|34)



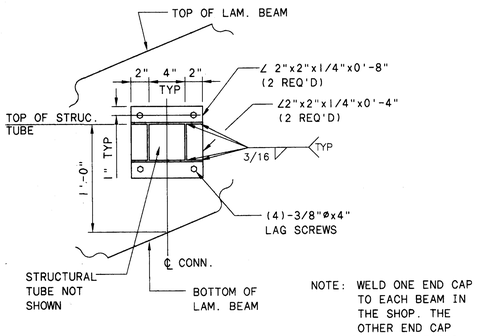
SECTION J (31|34)



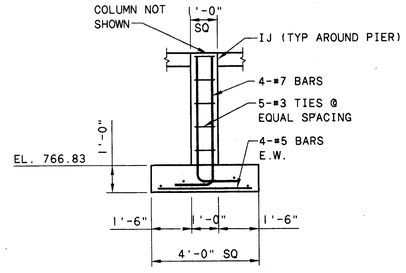
DETAIL I
SCALE: 3/4"=1'-0" (33|34)



SECTION K
SCALE: 3/8"=1'-0" (33|34)



SECTION L
SCALE: 1-1/2"=1'-0" (72|34)



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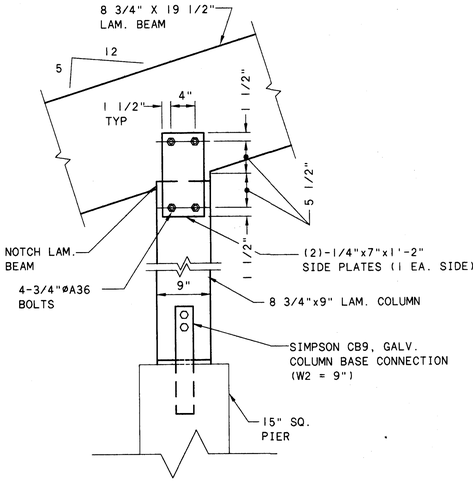
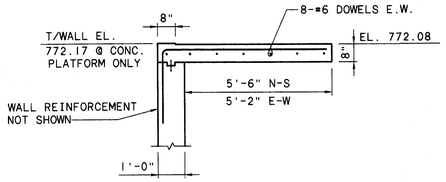
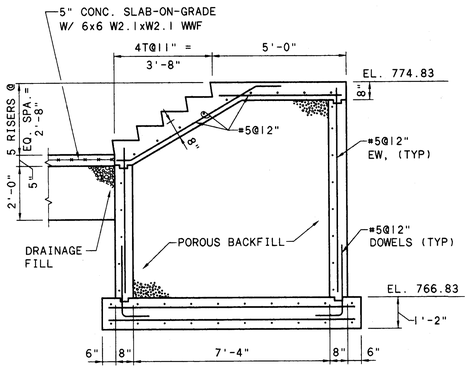
SCALE: 3/8"=1'-0" (32|34)



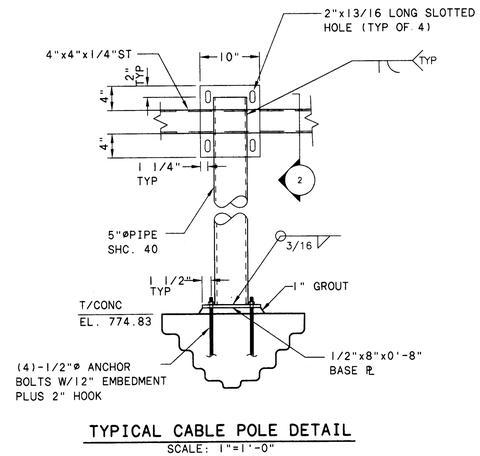
SECTION N
SCALE: 1"=1'-0" (72|34)



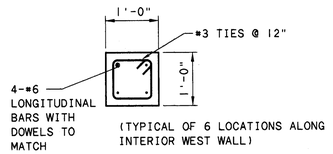
SECTION O
SCALE: 3/8"=1'-0" (31|34)



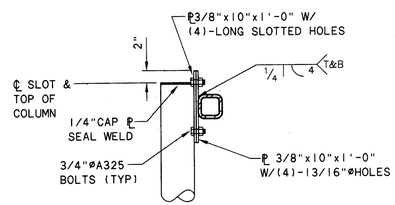
SECTION P
SCALE: 3/8"=1'-0" (31|34)



TYPICAL CABLE POLE DETAIL
SCALE: 1"=1'-0"



SECTION I
SCALE: 3/4"=1'-0" (1)



SECTION 2
SCALE: 1"=1'-0" (2)

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

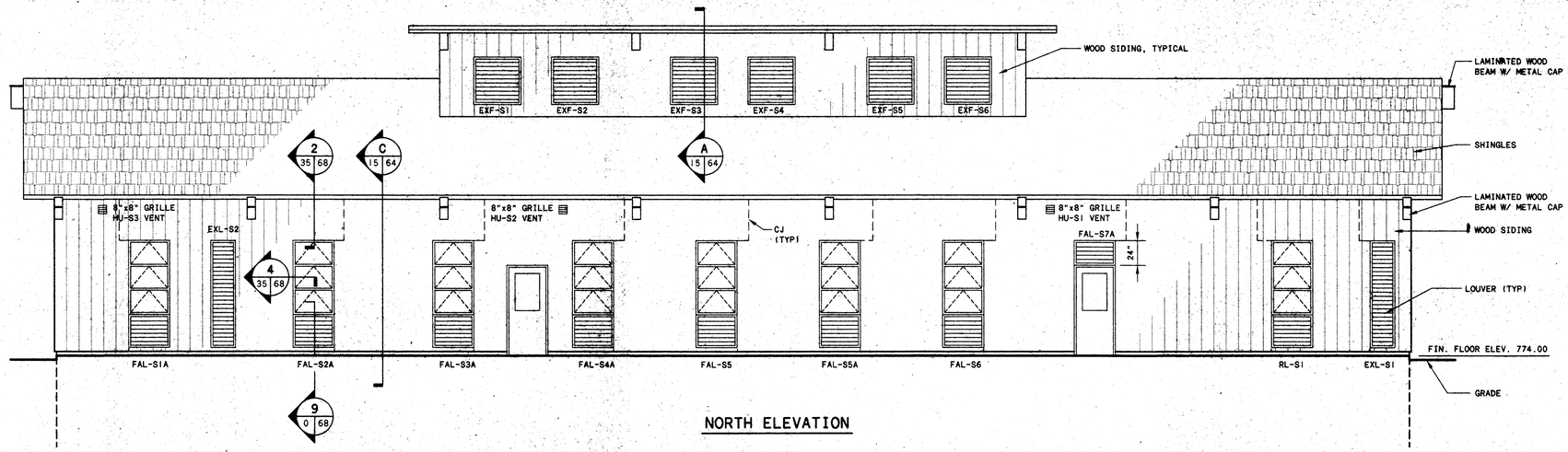
JOB NO.	15582
DESIGNED BY:	CMG
DRAWN BY:	JSG
CHECKED BY:	CMG
APPROVED BY:	DRT
DATE:	MARCH 1995

TERTIARY TREATMENT COMPLEX
MISC. SECTIONS & DETAILS

SCALE: AS SHOWN

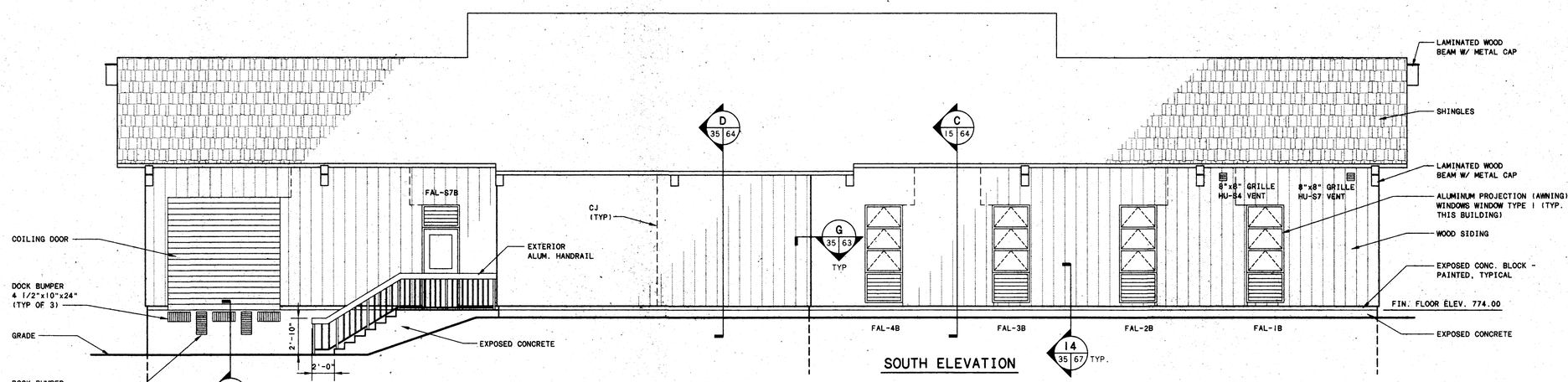
SHEET NO.	OF
34	112

0:\SH134 03-30-95

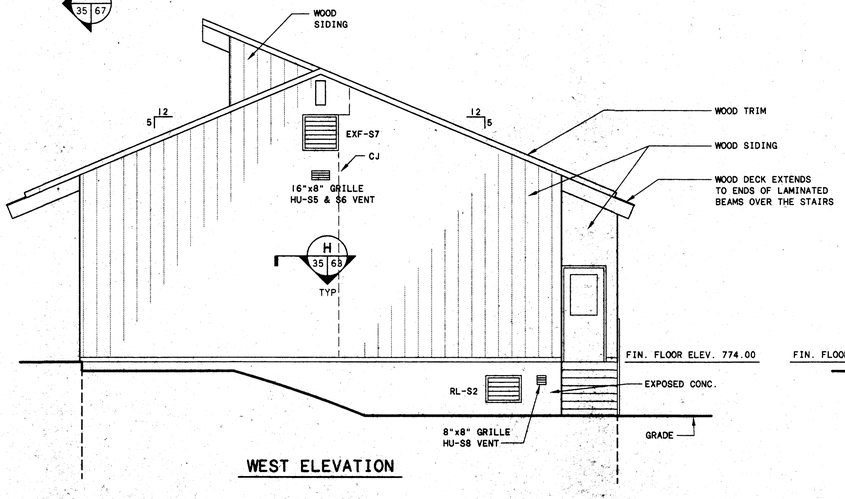


NORTH ELEVATION

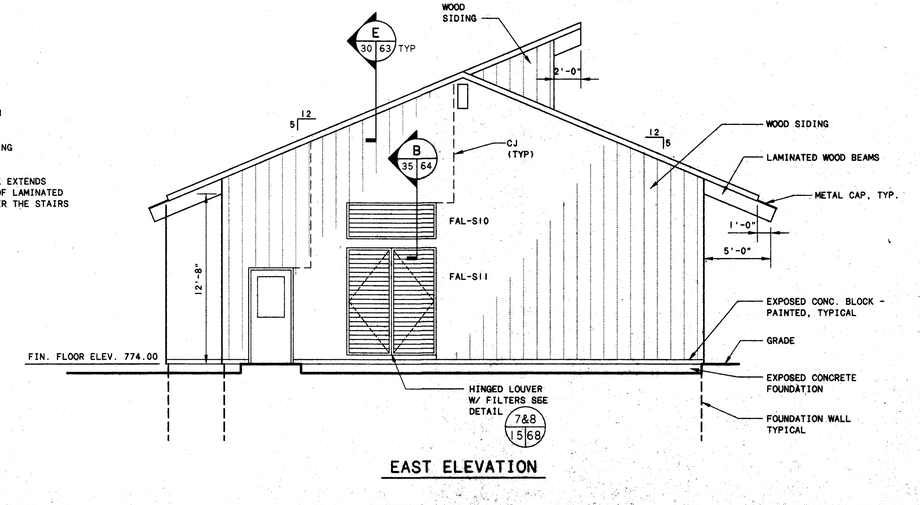
NOTE: CJ = CONTROL JOINT WITHIN CONCRETE MASONRY BLOCK



SOUTH ELEVATION



WEST ELEVATION



EAST ELEVATION

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	DM
DRAWN BY:	BK
CHECKED BY:	DM
APPROVED BY:	DM
DATE:	MARCH 1995

SLUDGE THICKENER BUILDING ELEVATIONS

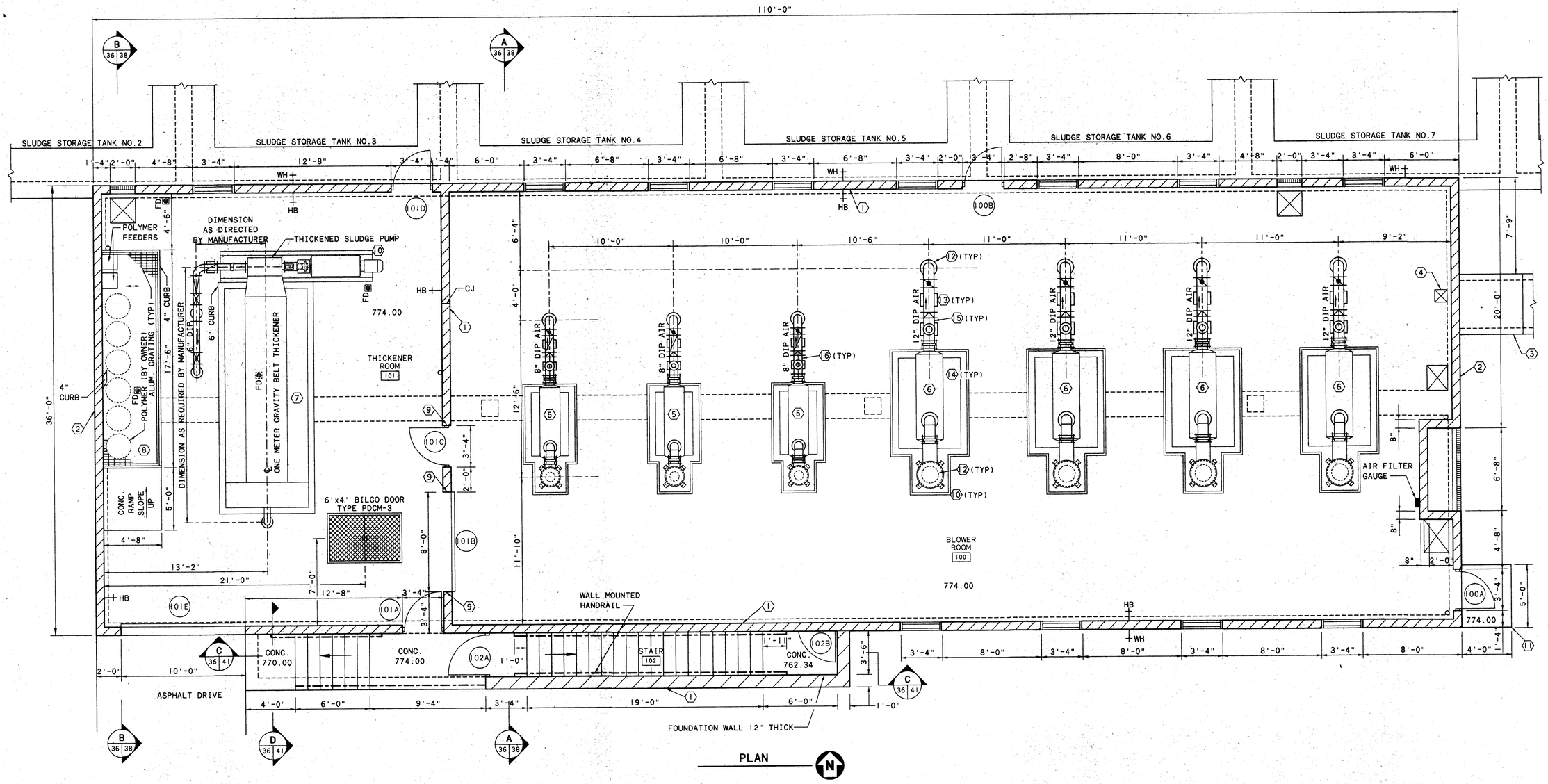
SCALE: 3/16"=1'-0"

SHEET NO. 35 OF 112

N:\FRI5582\CADD\SHT35 03-27-95

NOTES:

1. 8 INCH CMU REINFORCED WITH VERTICAL NO. 5 AT 48 INCHES C/C WITH DOWELS TO MATCH. REINFORCEMENT IN WALL SHALL BE OVER ENTIRE LENGTH WALL.
2. 8 INCH CMU RINFORCED WITH VERTICAL NO. 5 AT 24 INCHES C/C WITH DOWELS TO MATCH. REINFORCEMENT IN WALL SHALL BE OVER ENTIRE LENGTH OF WALL.
3. ELECTRICAL TRENCH. SEE SHEET 105.
4. OPENING FOR SWITCHGEAR SERVICE CABLES. COORDINATE LOCATION AND DIMENSIONS WITH EQUIPMENT SUPPLIER.
5. 1540 SCFM POSITIVE DISPLACEMENT DIGESTER BLOWER AND MOTOR (NOT SHOWN).
6. 3750 SCFM POSITIVE DISPLACEMENT SLUDGE STORAGE BLOWER AND MOTOR (NOT SHOWN).
7. SEE SHEET 41 FOR GRAVITY BELT THICKENER CURB & DRAIN DETAILS.
8. SEE SHEET 41 FOR POLYMER AREA CURB, GRATING & DRAIN DETAILS.
9. PROVIDE CONTROL JOINT @ END OF LINTEL ABOVE DOOR OPENING.
10. EQUIPMENT PAD
11. 4'-0"x5'-0" THICK CONCRETE SLAB. REINFORCED WITH 6x6 W2.1xW2.1 WWF AND PROVIDE 2'-0" THICK DRAINAGE FILL BASE BELOW SLAB.
12. FLOOR CLOSURE PLATE REQUIRED SEE DETAIL ON SHEET 62.
13. REINFORCED CONCRETE PIPE SUPPORT.
14. VIBRATION SUPPRESSION SYSTEM.
15. 12"x6" TEE.
16. 8"x3" TEE.



NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

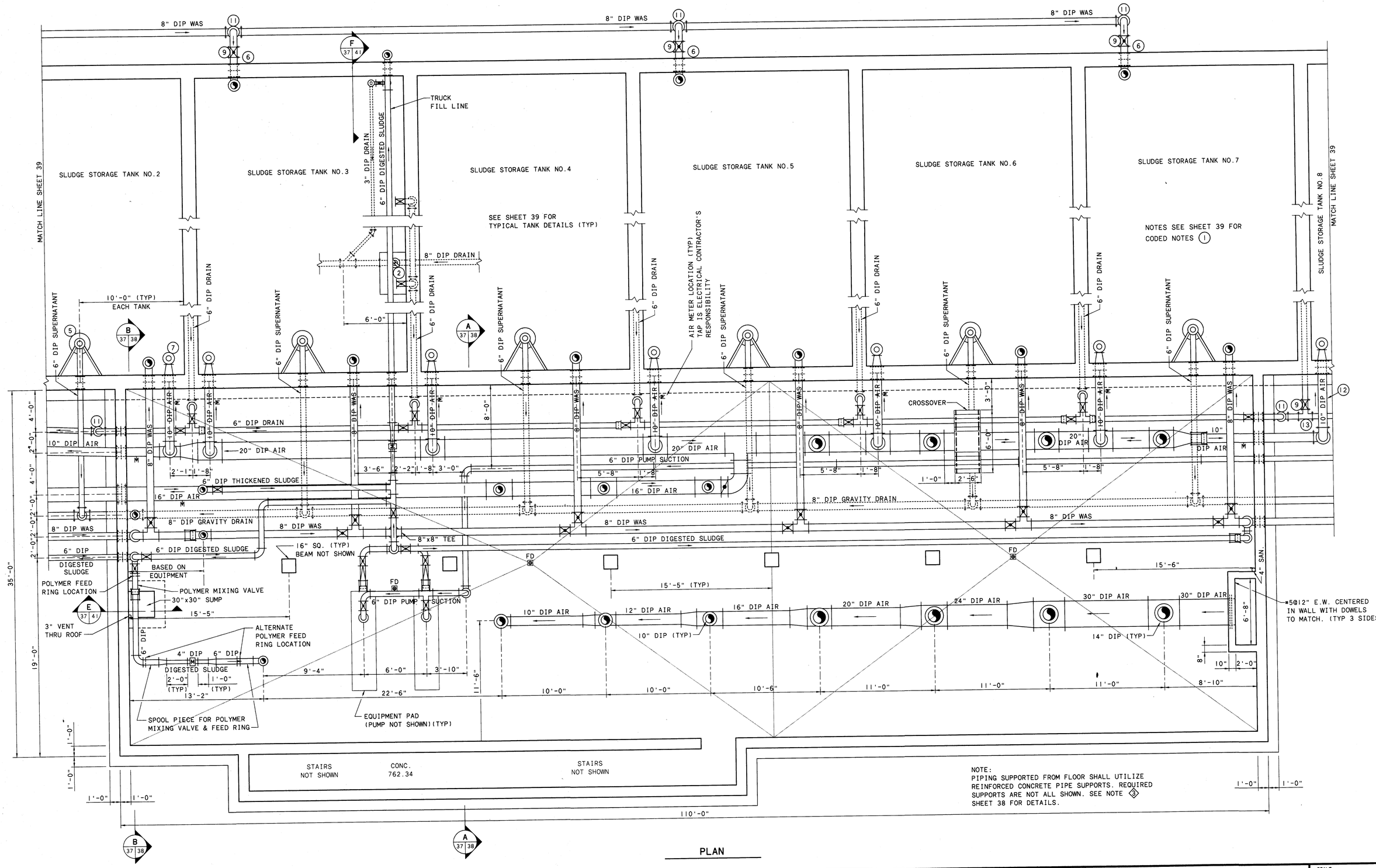
JOB NO.	15582
DESIGNED BY:	RLJ
DRAWN BY:	DLR
CHECKED BY:	CMG/RW
APPROVED BY:	RBD
DATE:	MARCH 1995

SLUDGE THICKENER BUILDING & SLUDGE STORAGE TANKS UPPER PLAN

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

SHEET NO. 36 OF 112

03-27-95 N:\PROJECTS\PR15582\CADD\SHT36



PLAN

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

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DRAWN BY:	DLR
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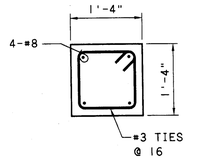
APPROVED BY:	RBD
DATE:	MARCH 1995

SLUDGE THICKENER BUILDING & SLUDGE STORAGE TANKS LOWER PLAN

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

SHEET NO. 37 OF 112

03-27-95 N:\PROJECTS\PRI15582\CADD\SHT37



COLUMN SECTION (1)
SCALE: 3/4"=1'-0"

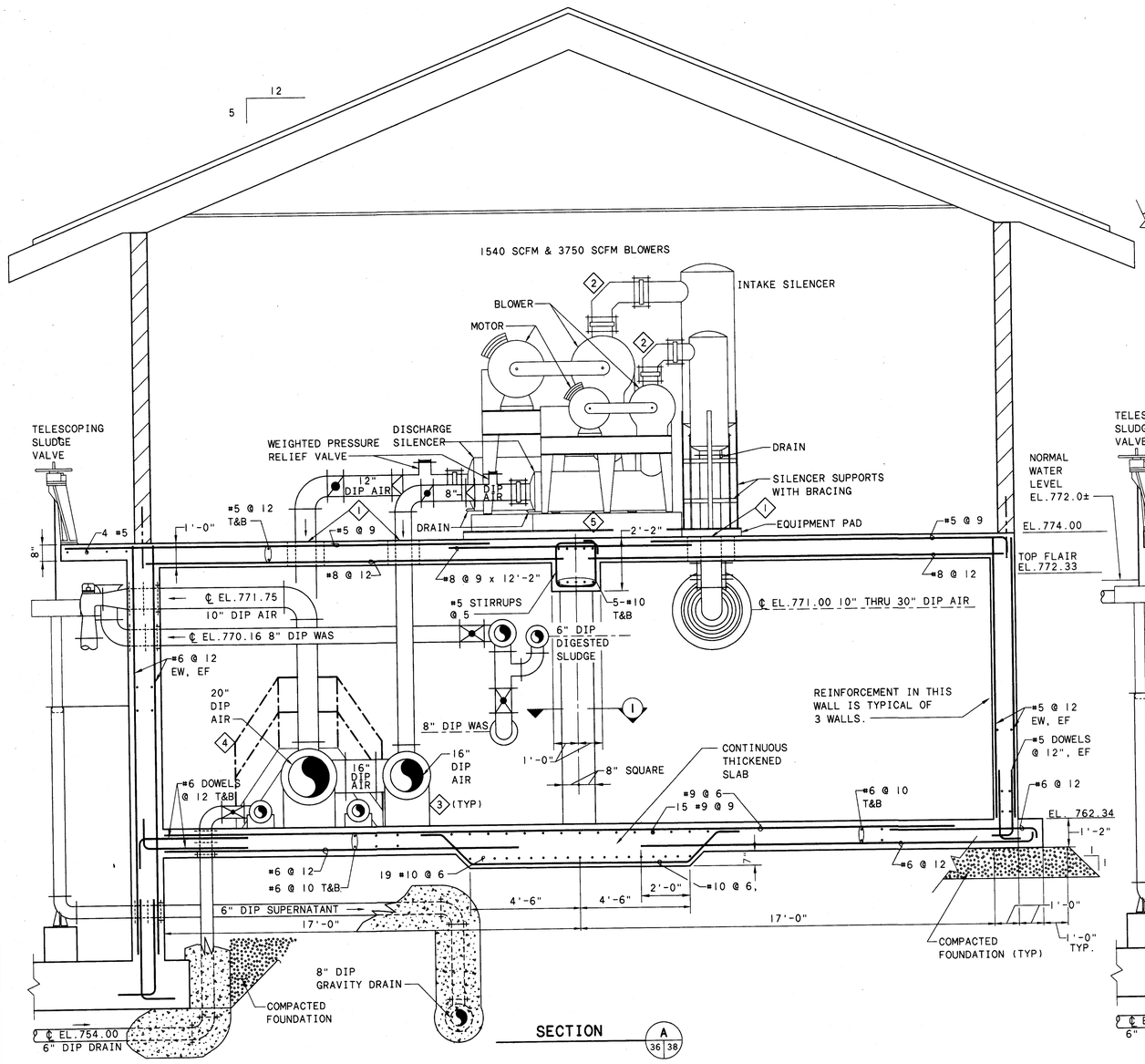
CODED NOTES

1. FLOOR CLOSURE PLATE REQUIRED (NOT SHOWN).
2. THREE PIECE FABRICATED STEEL ELBOW, 1/4" WALL THICKNESS WITH CLASS B FLANGES. FLANGES TO BE ANSI B16.1 DIAMETER AND DRILLING. SUPPORT ELBOW FROM BLOWER BASE.
3. PIPE SUPPORT FROM FLOOR SHALL BE ACCOMPLISHED WITH REINFORCED CONCRETE PIPE SUPPORTS (SEE DETAIL ON SHEET 61). SUPPORTS SHALL BE LOCATED AT ALL FITTINGS AND ON STRAIGHT RUNS AT A MINIMUM 10'-0" SPACING. REQUIRED SUPPORTS ARE NOT ALL SHOWN.
4. CONTRACTOR TO VERIFY PIPE CLEARANCE PRIOR TO PLACING CROSS OVER ORDER.
5. VIBRATION SUPPRESSION SYSTEM.
6. 8" MJ PIPING BY GENERAL CONTRACTOR. PIPING ABOVE SLAB BY PLUMBING CONTRACTOR SEE SHEET 79.

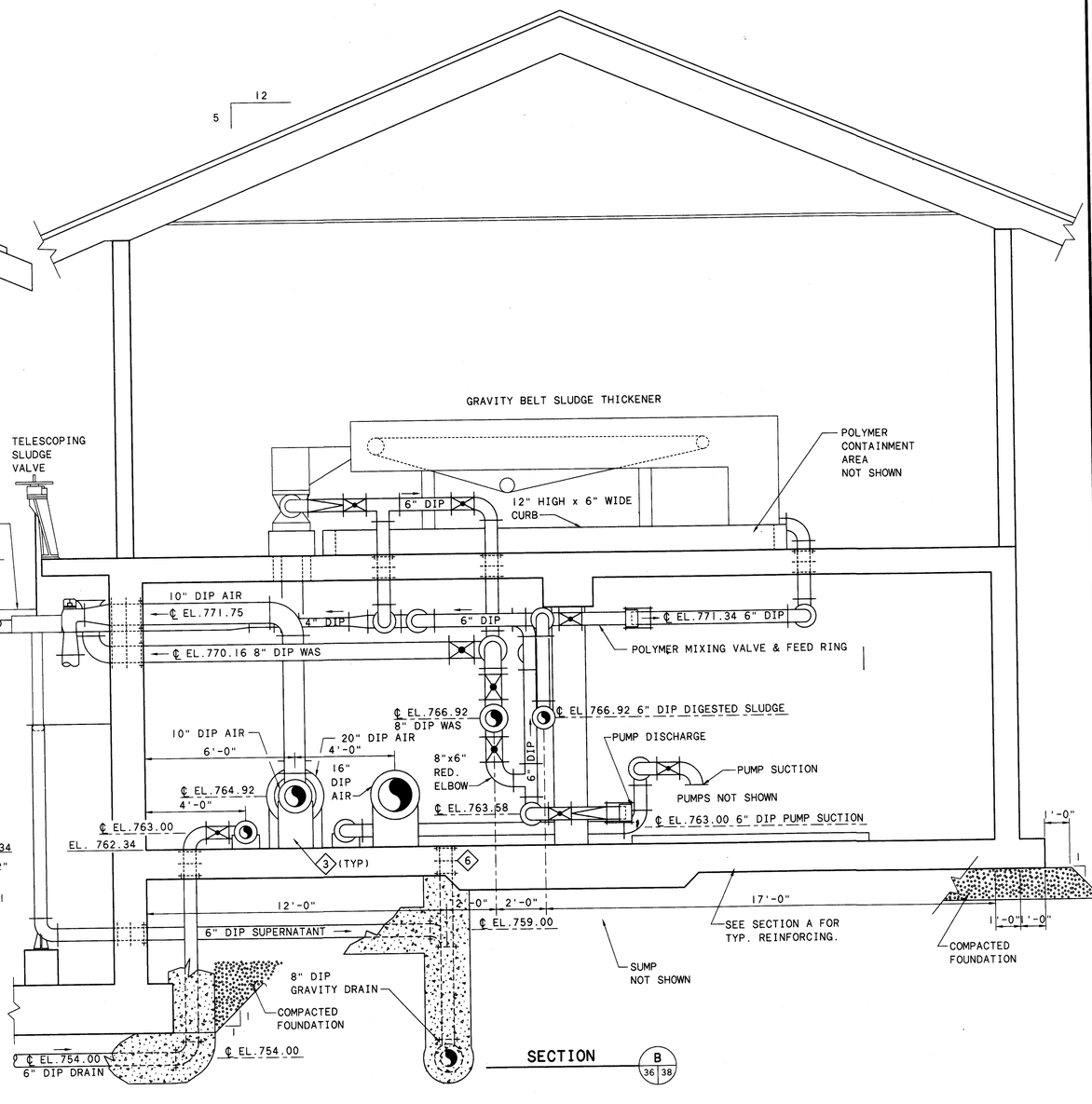
SLUDGE THICKENER BUILDING FOUNDATIONS

IN ALL AREAS DESIGNATED TO RECEIVE COMPACTED FOUNDATION MATERIAL, NO EXCAVATION OF EXISTING MATERIAL SHALL BE MADE UNTIL THE EXISTING MATERIAL HAS BEEN INSPECTED AND AUTHORIZED FOR REMOVAL BY THE ENGINEER. DEPTH OF REMOVAL SHALL BE AS DIRECTED AND AUTHORIZED BY THE ENGINEER.

TOPSOIL AND COHESIVE SOILS CONSISTING OF DARK BROWN LEAN SANDY CLAY, BROWN LEAN CLAY, AND BROWN LEAN CLAY AND CLAY, SHALL BE EXCAVATED FROM THE FOUNDATION AREA OF THE SLUDGE THICKENER BUILDING DOWN TO THE SURFACE OF THE UNDERLYING GRANULAR SOILS AS DIRECTED BY THE ENGINEER. THE EXPOSED EXISTING GRANULAR SOIL SHALL BE RECOMPACTED IN ACCORDANCE WITH THE PLAN NOTE "SUBGRADE" PRIOR TO THE PLACEMENT OF COMPACTED FOUNDATION.



SECTION (A) 36 | 38



SECTION (B) 36 | 38

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	RLJ/DRK
DRAWN BY:	DLR
CHECKED BY:	RBD/CMG
APPROVED BY:	RBD
DATE:	MARCH 1995

SLUDGE THICKENER BUILDING SECTIONS

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

SHEET NO. 38 OF 112

03-28-95 N:\PROJECTS\PR15582\CADD\SHT38

CODED NOTES:

(1) 6 INCH MUD VALVE, EXTENSION STEM WITH OPERATING NUT TO ELEVATION 774.0, AND STEM GUIDES.

(2) 6 INCH MUD VALVE, EXTENSION STEM WITH OPERATING NUT TO ELEVATION 773.67, STEM GUIDES, AND FLOOR BOX (TYP. TANKS D1 AND S1 THRU S7).

(3) 6 INCH PLUG VALVE, EXTENSION STEM WITH OPERATING NUT TO ELEVATION 774.0, AND STEM GUIDES (TYP. OF 3 IN TANK S8).

(4) 6 INCH PLUG VALVE, EXTENSION STEM WITH OPERATING NUT TO ELEVATION 773.67, STEM GUIDES, AND FLOOR BOX (TYP. OF 3 EACH IN TANKS D1 AND S1 THRU S7).

(5) TELESCOPING VALVE WITH SCUM BAFFLE, OFFSET FLOOR STAND, GEARED HANDWHEEL (TYP. FOR ALL TANKS).

(6) ANCHORING COUPLING REQUIRED BETWEEN TANK AND VALVE OR ELBOW.

(7) 8 INCH AIR ANGLE GLOBE VALVE, OPERATING NUT,FLOOR BOX (TYP. FOR TANKS S1 THRU S8).

(8) CORE EXISTING STEEL REINFORCED CONCRETE WALL, PROVIDE LINK SEAL WITH STAINLESS STEEL BOLTS.

(9) BURIED PLUG VALVE, VALVE BOX, EXTENSION STEM SECURED TO VALVE NUT AND EXTENDED TO 2'-0" BELOW FINISHED GRADE WITH OPERATING NUT.

(10) SEE EXTENSIONS INSIDE CONCENTRATOR BUILDING CRAWL SPACE ON SHEET 57.

(11) MECHANICAL JOINT ANCHORING ELBOW.

(12) PIPE WITH RESTRAINED JOINTS AT EACH END.

(13) MECHANICAL JOINT ANCHORING TEE.

(14) BURIED BUTTERFLY VALVE, VALVE BOX, EXTENSION STEM SECURED TO VALVE NUT AND EXTENDED TO 2'-0" BELOW FINISHED GRADE WITH OPERATING NUT.

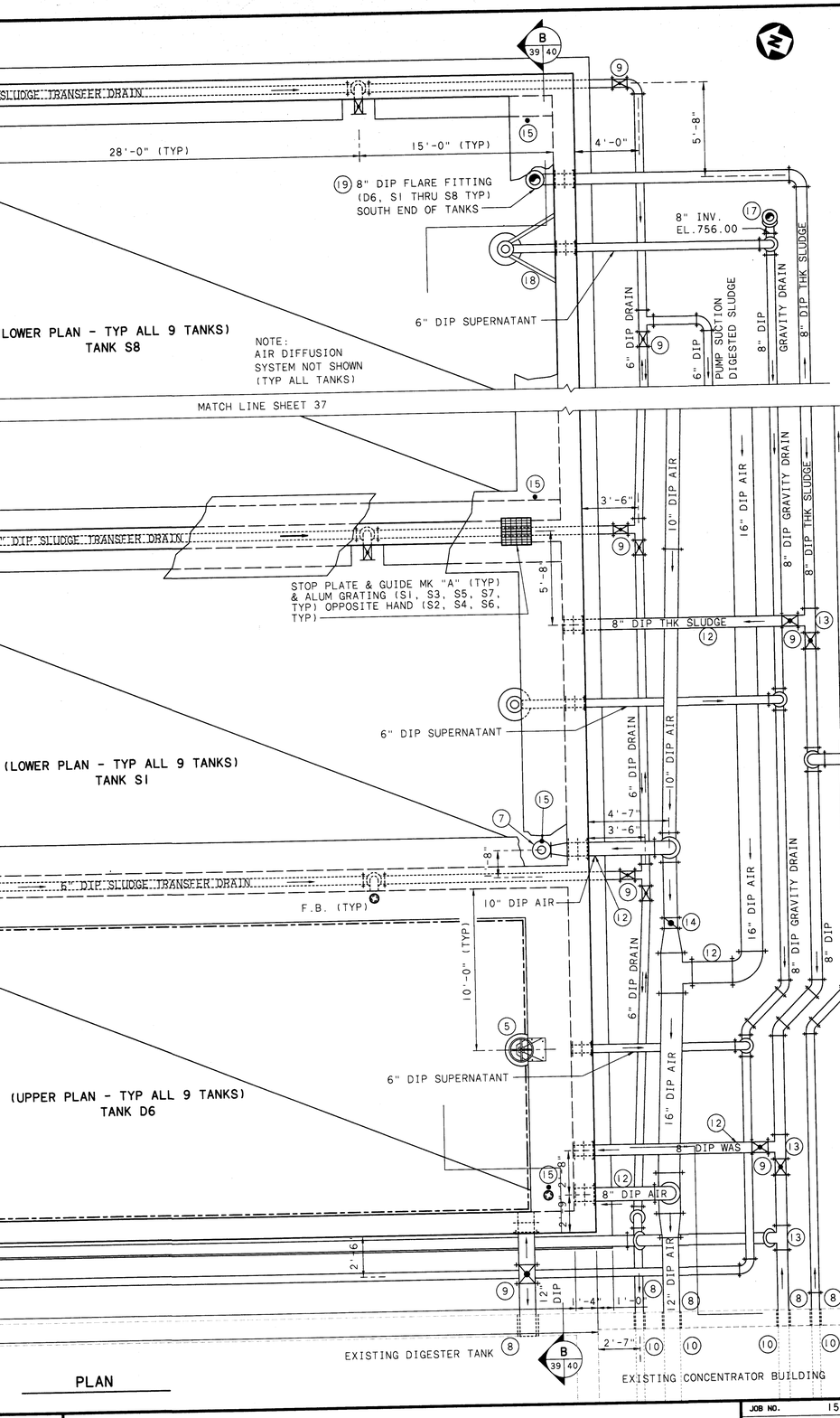
(15) ROCK ANCHOR, 18 REQUIRED IN BASE SLAB. SEE SHEET 41 FOR DETAIL.

(16) PROVIDE CONSTANT GRADE FROM EXISTING 8" GRAVITY SEWER TO END OF NEW GRAVITY SEWER (LOCATE AND VERIFY INV. EL. OF EXISTING 8" SEWER).

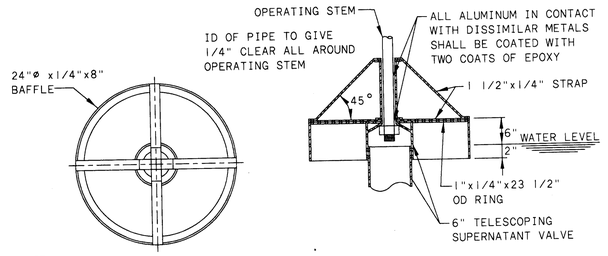
(17) CLEANOUT. PROVIDE TWO 45° BENDS, VERTICAL RISER PIPE TO FINISHED GRADE SURFACE AND REMOVABLE CAP. MATERIALS SHALL BE DIP OR CIP OF SAME SIZE AS DRAIN.

(18) SUPPORT REQUIRED- TYP EACH TELESCOPING VALVE. SEE TELESCOPING VALVE PIPE SUPPORT DETAIL ON SHEET 19.

(19) PROVIDE 1 1/2"ø DRAINAGE HOLE IN BOTTOM OF ° BENDS AT LOCATION "T".



PLAN



SCUM BAFFLE DETAIL

SCALE: NONE

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	RLJ
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CHECKED BY:	RBD/RLJ
APPROVED BY:	RBD
DATE:	MARCH 1995

SLUDGE STORAGE TANKS PLAN

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

SHEET NO. 39 OF 112

03-28-95 N:\PROJECTS\PR15582\CADD\SHT39

#9 @ 6 H-EF
3'-6"
8'-6"
2'-7"
#7 @ 12 H-EF
#6 @ 12 H-EF
PLAN
DETAIL B
TYP CORNER

#7 x 9' @12 H-EF
#7 @12 H-EF
#8 DOWELS @6 H-EF
#6 @ 12 H-EF
8'-6"
2'-7"
PLAN
DETAIL A
TYP TEE CORNER

NOTE: ALUM RAILING AND STAFF GAUGES NOT SHOWN
LADDER NOT SHOWN TANK S8

CONC. WALK
WALKWAY NOT SHOWN (TYP. EA. END)
3 #8 @ 3" H-E.F.
12" DIP
℄ 12"ø EL. 768.50
PIPE SUPPORT BEAM
HAUNCH
#6 @ 12 V-O.F. SPLICE TO #9 DOWEL.
#6 @ 12H-EF W/#9 @ 6 H-DOWELS AT END WALLS, SEE DETAIL B
#6 @ 12V-IF (SPLICE TO SHORT DOWEL)
TANK D1
#5 DOWELS @ 12 W/1'-11" LEGS
#6 @ 12 H-EF W/#8 @ 6 H-DOWELS AT END WALLS, SEE DETAIL A
8 #8
5'-0"
#5 @ 12
8"
1/2"
EL.772.33
EL.772.00 NWL
8" DIP WAS (TYP)
℄ EL.769.50
#6 @ 12 V-EF (SPLICE TO SHORT DOWELS)
REINF. TYP.FOR ALL INT. WALLS
TANK S1
TANK S2
TANK S8
SLOPE
EL. 770.0
EL.774.00
℄ 6" TRANSFER DRAIN (TYP) EL.757.60
℄ 6" TRANSFER DRAIN (TYP) EL.756.35
EL. 756.75 (TYP)
8'-0"
5'-8"
4'-5"
PIER SUPPORT
ALT @ 6"
#9 DOWEL @ 12 V-IF
#9 DOWEL @ 12 V-IF
ALT. @ 6"
#9 DOWEL @ 12 V-O.F.
#10 DOWELS @ 12 V-OF
#9 DOWEL @ 12 V-IF
#9 DOWEL @ 12 V-EF
ALT. @ 6"
#9 DOWEL @ 12 V-EF
6'-6"
4'-5"
7'-6"
#9 @ 12
EL.757.00
757.00 (TYP)
REINF. SYM. ABOUT ℄ STRUCTURE
1'-0" TYP
WALL DOWELS AT SUMPS
CONC. FILLET REQ'D ALONG 88'-0" WALLS (18 LOCATIONS)
1'-3"
1'-10"
2'-0"
#8 @ 6
5'-8"
MAX. 5" CL ADJ. TO SUM
45°
#8 @ 12 T&B-EW
#10 @ 12
20'-0" (TYP ALL 8 TANKS)
4 #9 TOP EW, TYP AT SUMPS
6" DIP (TYP)
4 #10 BOT EW, TYP. @ SUMPS
1'-4"
1'-0"
8" DIP DRAIN
6" DIP (TYP)
8" DIP GRAVITY DRAIN
SLOPE CONSTANT GRADE TO EXISTING 8" DRAIN
8"x6" WYE (TYP)
INV.EL.751.20
8"x6" REDUCER
TYPICAL 8" MIN. CLASS "C" CONCRETE ENCASEMENT FULL LENGTH OF PIPING UNDER SLABS

SECTION B
39 | 40

SCUM BAFFLE SEE DETAIL ON SHT.39
#5 @ 12 W/1'-11" V LEG
2'-8"
NOTE: ALUM RAILING AND STAFF GAUGES NOT SHOWN
EL.773.5 (TYP)
EL.774.00
3-#6 @ 3 H-EF
EL.772.33
EL.772.00 NWL
℄ EL.769.50
#7 @ 12 H-EF
#6 @ 12 V-EF
8" DIP WAS
#9 DOWEL @ 12 V-EF
5'-0"
7'-6"
5'-11"
#9 @ 12
#8 @ 12 T&B
℄ 8" WAS EL.757.56
EL.757.00
2'-0"
PROVIDE CONCRETE CRADLE IN EXCAVATED AREA
4'-7"
#10 @ 12
#8 DOWELS @ 12 T&B
1'-0"
1'-4"
℄ 6" DIP DRAIN EL.757.60
8" DIP GRAVITY DRAIN
EL.772.33 (FLARE TYP)
EL.772.00 NWL
7 AIR 6"x8" (TANK D6) 8"x10" (TANKS S1-S8)
8 AIR 6"x8" (TANK D6) 8"x12" (TANKS S1-S8)
1'-0" SQ. PIER W/4 #5 DOWELS AND #3 TIES @ 10". (5 REQ'D.)
2'-0"
4'-0"
1'-0"
℄ 6" DIP DRAIN EL.757.60
℄ 6" SUMP DRAIN EL.756.35
45°
88'-0"
45°
CONCRETE SUPPORT
℄ 8" AIR (TANK D6) 10" AIR (TANKS S1-S8) EL.771.75
4'-0"
℄ 8" WAS EL.766.92
℄ 6" DIG. SLUDGE EL.766.92
℄ 16" AIR. EL.765.08
CONTROLLED DENSITY FILL AS PER SPECIFICATION 03300 ENTIRE SOUTH SIDE OF DIGESTERS / STORAGE TANKS, BETWEEN EXISTING CONCENTRATOR AND SLUDGE BUILDINGS AND EAST OF SLUDGE THICKENER BUILDING.
℄ 8" DIP WAS EL.757.56
℄ 6" DIP DRAIN EL.754.00
℄ 6" SUPERNATANT EL.761.50
1'-4"
1'-0"

SECTION A
39 | 40

NOTE:
1. ANCHORING COUPLING REQUIRED (TYPICAL EACH TANK).
2. RESTRAINED ELBOW REQUIRED (TYPICAL EACH TANK).
3. PIPES AND FITTINGS INSTALLED UNDER TANKS SHALL BE ENCASED ON ALL SIDES FOR FULL LENGTH WITH MINIMUM OF 8 INCHES CLASS "C" CONCRETE.
4. PIPE WITH RESTRAINED JOINT AT EACH END (TYPICAL).
5. 8" AND 12" DIA. AIR DROPS PROVIDED WITH AERATION EQUIPMENT.
6. HAUNCH FOR YARD HYDRANT SUPPORT (HYDRANT NOT SHOWN TYP OF 2).

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

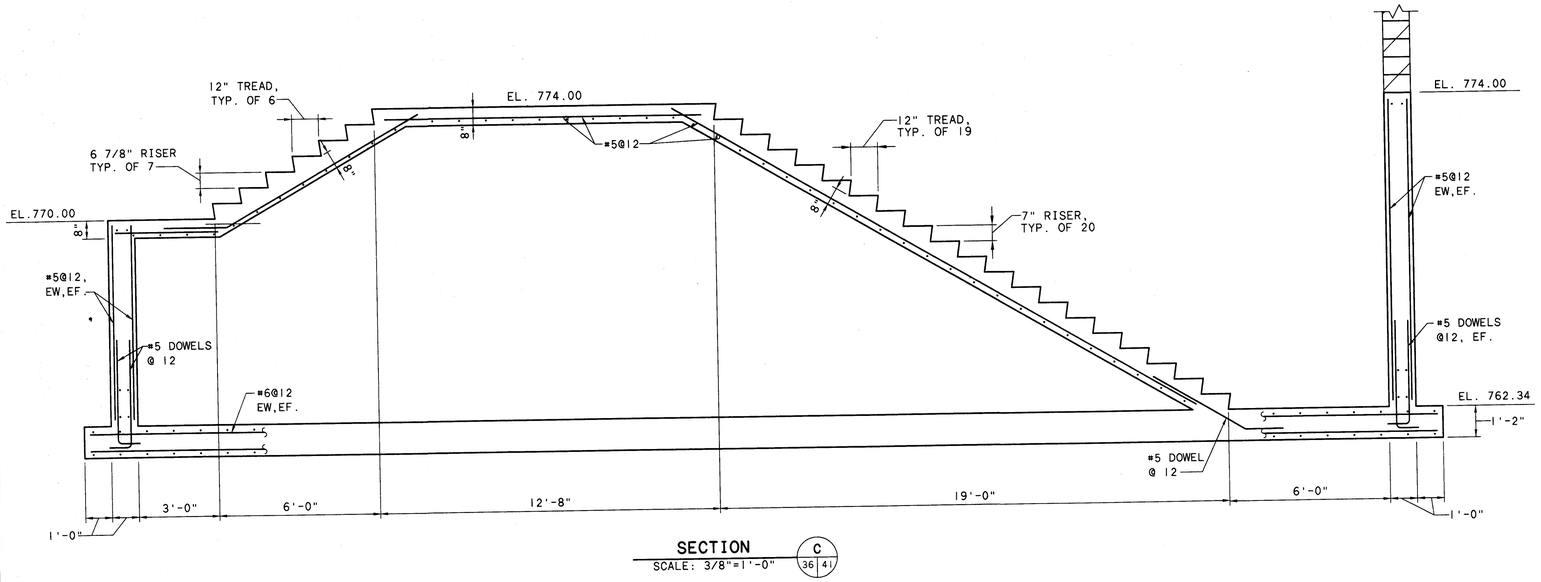
DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	DRK/RLJ
DRAWN BY:	DLR/LKK
CHECKED BY:	RBD/LEL
APPROVED BY:	RBD
DATE:	MARCH 1995

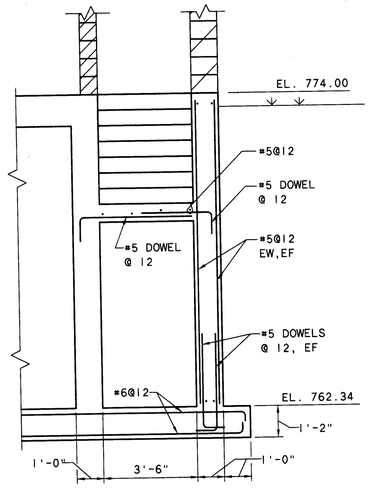
SLUDGE STORAGE TANKS SECTIONS

SCALE: 3/8" = 1'-0"
SHEET NO. 40 OF 112

03-28-95 N:\PROJECTS\PRI5582\CADD\SHT40



SECTION
SCALE: 3/8"=1'-0" C 36 41



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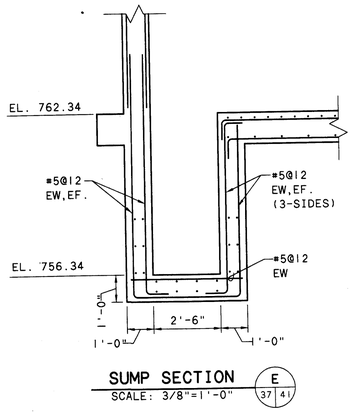
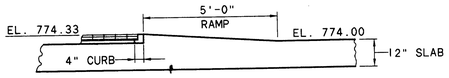
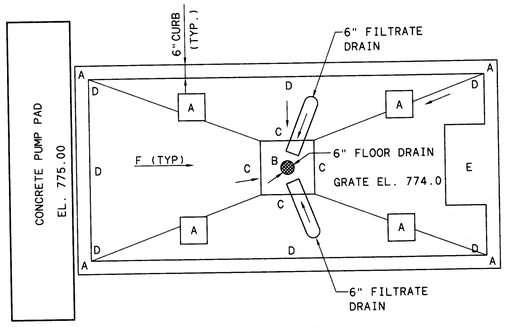


SUMP SECTION
SCALE: 3/8"=1'-0" E 37 41



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

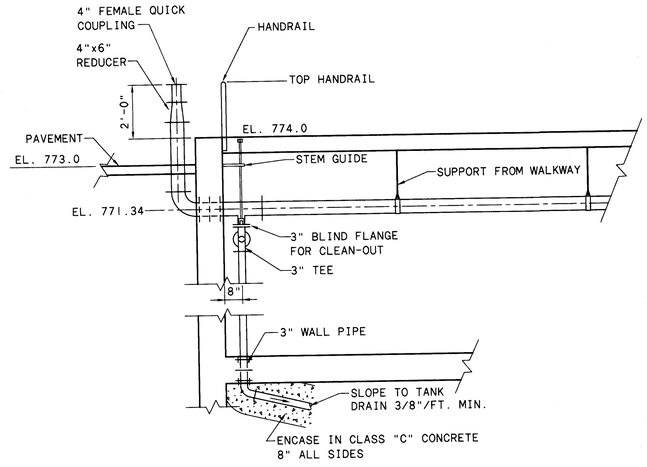


GRAVITY BELT THICKENER
CURBED ENCLOSURE AND FILTRATE DRAIN

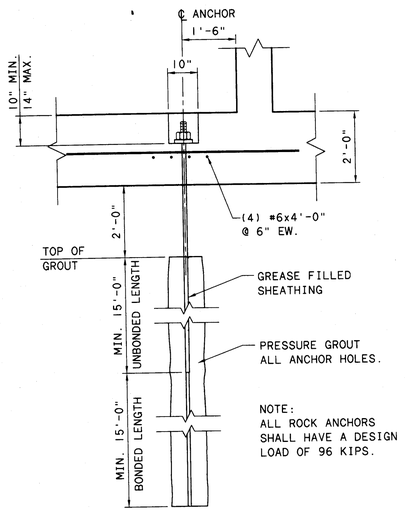
NO SCALE

POINT	DESCRIPTION	ELEV.
A	BELT THICKENER CONCRETE PADS AND CURB	775.00
B	FILTRATE SUMP BOTTOM 24" SQUARE	774.00
C	TOP OF SUMP	774.33
D	TOP OF SLOPE TO SUMP	774.67
E	FEED TANK CONCRETE PAD	775.00
F	SLOPE TO SUMP WITH GROUT	

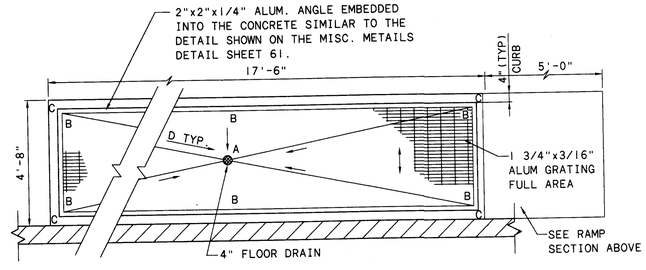
NOTES:
1. OUTSIDE DIMENSIONS OF CURB SHALL BE SIZED TO ENCLOSE GRAVITY BELT THICKENER OUTSIDE DIMENSIONS.
2. SIZE AND LOCATION OF CONCRETE PADS TO BE BASED ON GRAVITY BELT THICKENER REQUIREMENTS.



SECTION
SCALE: 3/8"=1'-0" F 37 41



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



POLYMER AREA DRAIN
SCALE: 3/8"=1'-0"

POINT	DESCRIPTION	ELEV.
A	DRAIN GRATING	774.00
B	HIGH POINTS INSIDE CURB	774.12
C	TOP OF 4" CURB	774.33
D	SLOPE TO DRAIN WITH GROUT	

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

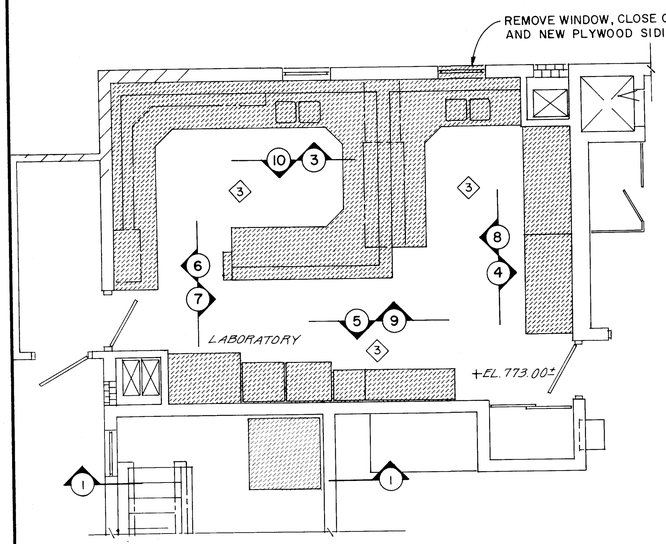
JOB NO.	15582
DESIGNED BY:	DRK
DRAWN BY:	LKK
CHECKED BY:	CMG
APPROVED BY:	DRT
DATE:	MARCH 1995

SLUDGE THICKENER BUILDING
SECTIONS & DETAILS

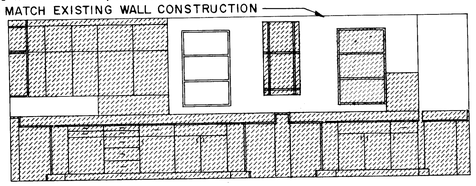
SCALE: AS SHOWN

SHEET NO. 41 OF 112

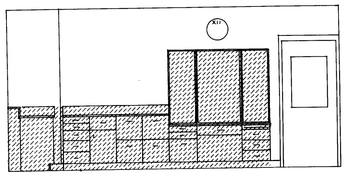
03-28-95 N:\PROJECTS\PR15582\CADD\SHT41



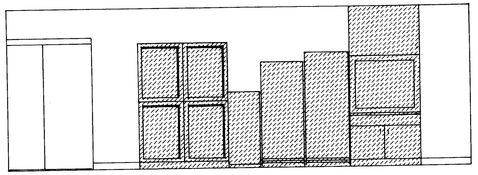
PARTIAL UPPER FLOOR PLAN
SCALE: 1/4" = 1'-0"



SECTION 3



SECTION 4



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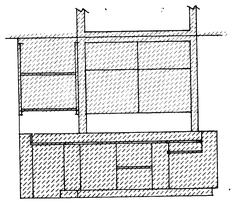

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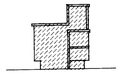
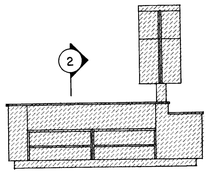
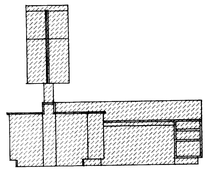


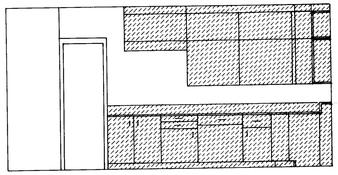
SECTION 2



SECTION 9



SECTION 10



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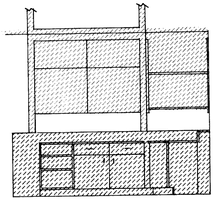
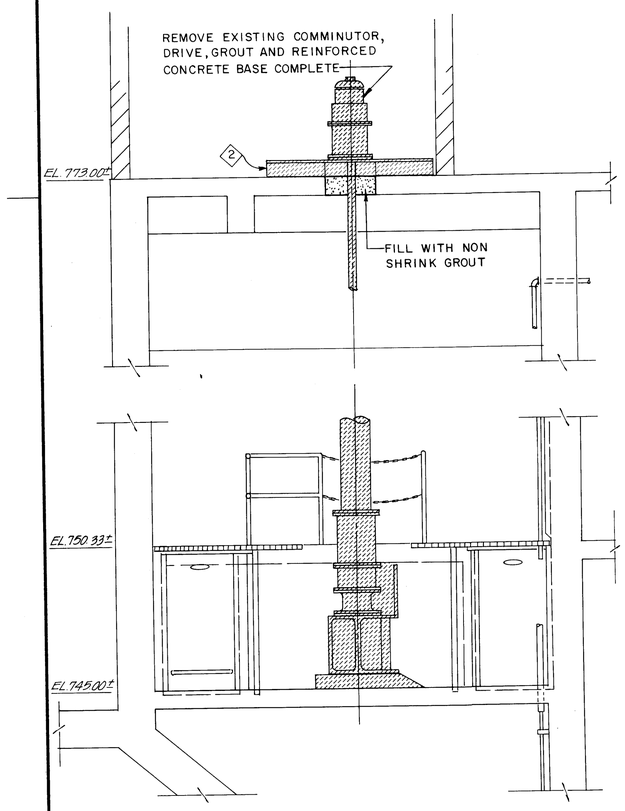


SECTION 8

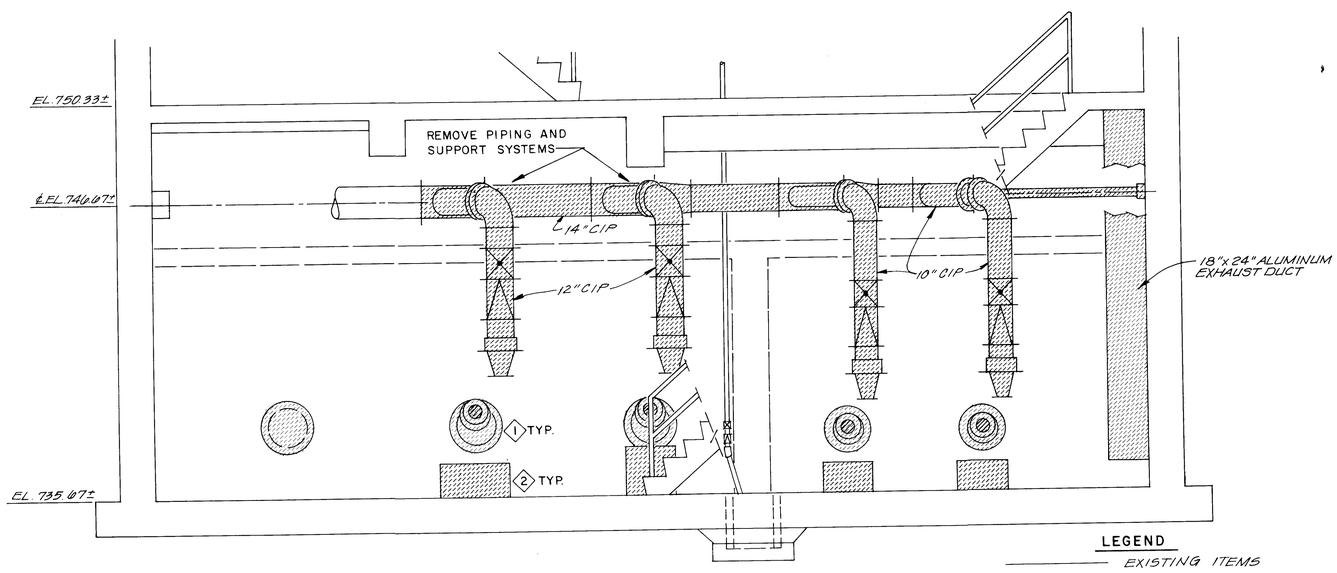
LABORATORY DETAILS
SCALE: 1/4" = 1'-0"

CODED NOTES

1. REMOVE FOUR RAW SEWAGE PUMPS (NOT SHOWN), ASSOCIATED DRY WELL SUCTION PIPING, AND REINFORCED CONCRETE BASES AND SUPPORTS.
2. REMOVE REINFORCING STEEL TO A DEPTH OF 1 INCH BELOW OPERATING FLOOR. PATCH FLOOR AFTER BASE REMOVAL IN ACCORDANCE WITH SPECIFICATION 02050.
3. REMOVE EXISTING LABORATORY CABINETS, SHELF SYSTEMS, SINKS, FUME HOOD, AND EQUIPMENT AS SHOWN. REMOVE EXISTING CEILING COMPLETE INCLUDING PANELS, GRID AND SUPPORTS. REMOVE EXISTING VINYL TILE AND BASE, ENTIRE ROOM.

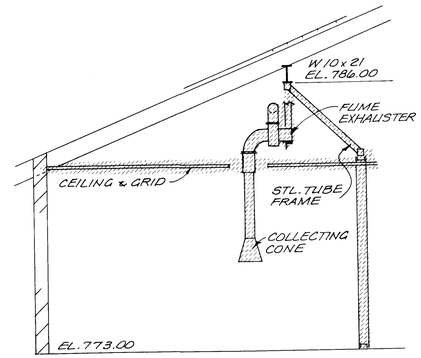


PARTIAL SECTION 1

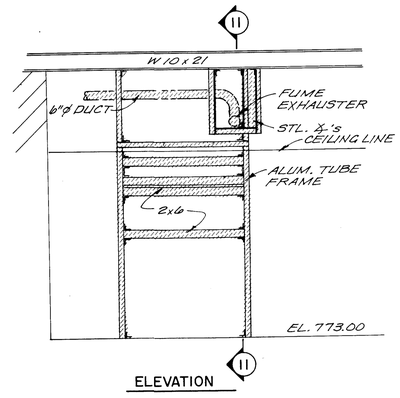


PARTIAL SECTION THRU EXISTING PUMP ROOM
(LOOKING NORTH)

LEGEND
- EXISTING ITEMS
- PROPOSED ITEMS
- DEMOLITION ITEMS



SECTION 11



ELEVATION

SUPPORT FOR LAB CABINETS AND FUME EXHAUSTER
SCALE: NONE

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

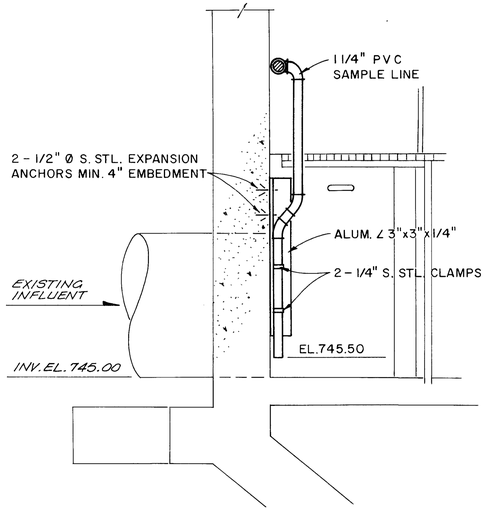
JOB NO.	15582
DESIGNED BY:	RAR
DRAWN BY:	DEH
CHECKED BY:	RAR
APPROVED BY:	RBD
DATE:	FEB., 1995

EXISTING CONTROL BUILDING
DEMOLITION AND MODIFICATIONS

SCALE: 3/8"=1'-0" OR AS NOTED

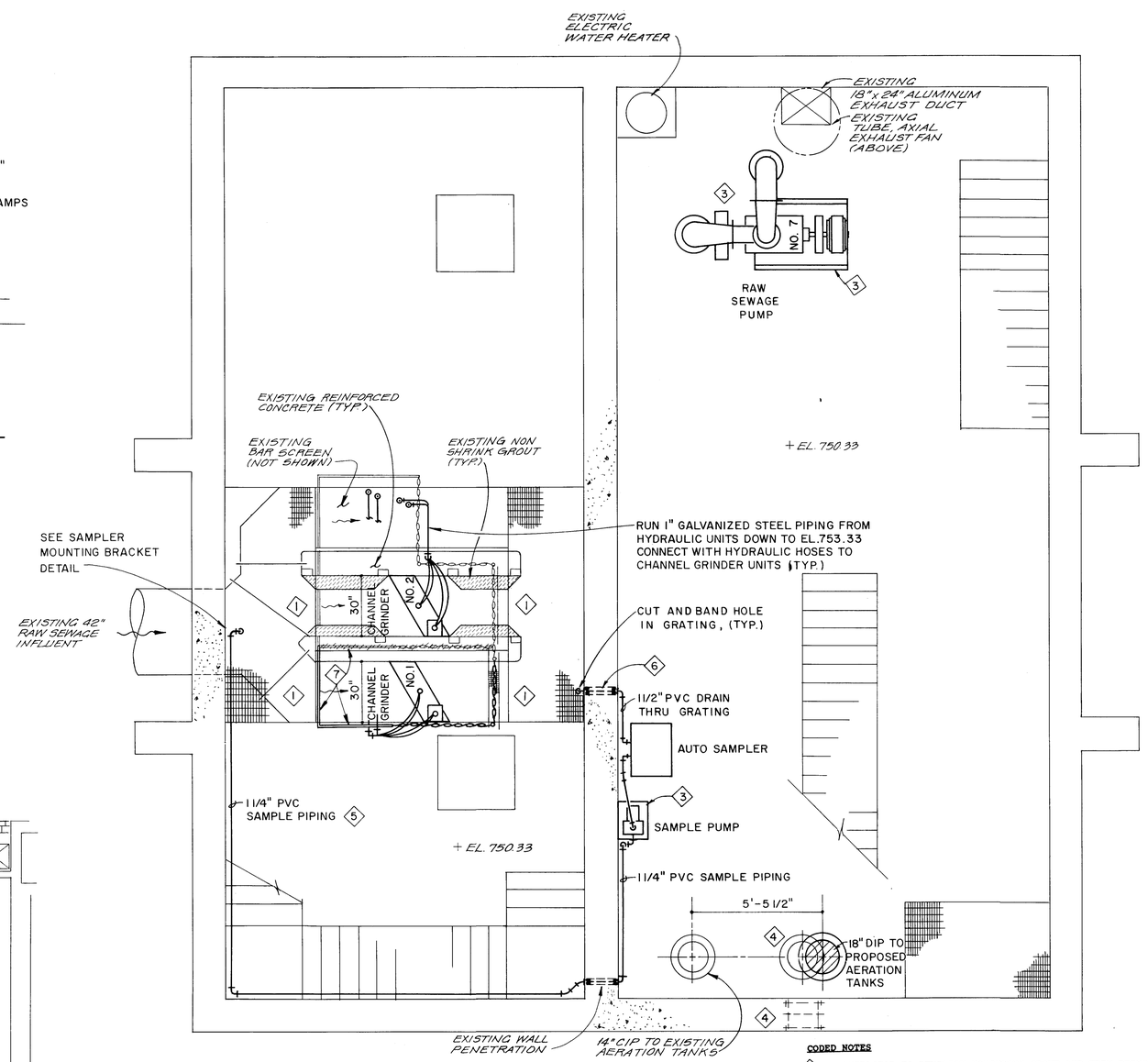
SHEET NO. 42 OF 112

ATLAS BLUEPRINT 503517

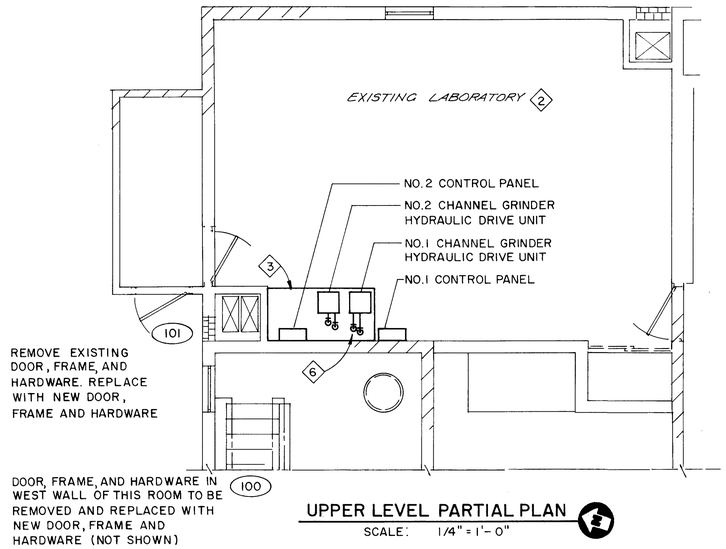


SAMPLER MOUNTING BRACKET DETAIL

SCALE: NONE



INTERMEDIATE LEVEL PARTIAL PLAN



UPPER LEVEL PARTIAL PLAN

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

LEGEND

EXISTING ITEMS

PROPOSED ITEMS

DEMOLITION ITEMS

CODED NOTES

1. CONTRACTOR TO DEMOLISH NONSHRINK GROUT AND TRIM REINFORCED CONCRETE WALLS AS NECESSARY TO PROVIDE 30-INCH-WIDE CHANNELS UPSTREAM AND DOWNSTREAM OF CHANNEL GRINDERS. REFER TO SPECIFICATION 02550 FOR PATCHING DETAILS. MOUNT GRINDER FRAMES TO CHANNEL WITH TYPE 316 STAINLESS STEEL EXPANSION ANCHORS. SEAL PERIMETER OF FRAME WITH NONSHRINK GROUT SEQUENCE WORK TO PERMIT CONTINUOUS PLANT OPERATION.
2. ALL WALLS IN EXISTING LABORATORY SHALL BE REPAIRED IN ACCORDANCE WITH SPECIFICATION 02050 AND TOTALLY PAINTED IN ACCORDANCE WITH SPECIFICATION 09900. PROVIDE NEW "B" ACOUSTIC CEILING AND SUPPORT SYSTEM - SEE SHEET 44A. PROVIDE NEW RESILIENT FLOORING AND BASE, ENTIRE ROOM.
3. REINFORCED CONCRETE EQUIPMENT PAD OR PIPE SUPPORT.
4. REMOVE EXISTING 16-INCH DIAMETER WALL PIPE, CLOSE OPENING WITH NONSHRINK GROUT.
5. SUPPORTS OTHER THAN IN SEWAGE CHANNEL TO BE STRAP-TYPE AS DETAILED FOR FOAM SPRAY PIPING, SHEET 23.
6. CORE HOLES FOR PIPING IN REINFORCED CONCRETE, SEAL AROUND PIPE WITH LINK SEAL. CLOSURE TO BE GAS-TIGHT.
7. REMOVE EXISTING STL. HANDRAILS AND CHAIN WHERE SHOWN. PROVIDE NEW STANDARD RAILING, RAILING POSTS, AND CHAIN. REMOVE GRATING WITHIN BOUNDARIES OF HANDRAIL/CHAIN SYSTEM.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15552
DESIGNED BY:	RAR
DRAWN BY:	BLD
CHECKED BY:	RAR
APPROVED BY:	RBD
DATE:	FEB., 1995

EXISTING CONTROL BUILDING
PLANS MODIFICATIONS

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

SHEET NO. 43 OF 112

ATLAS BLUEPRINT 553937

CODED NOTES

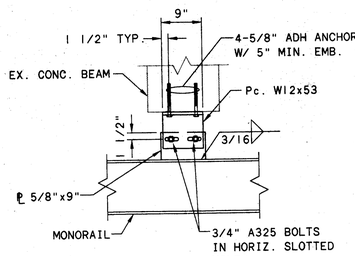
1. CORE HOLE IN EXISTING REINFORCED CONCRETE AND SEAL WITH LINK SEAL.
2. CORE HOLE IN EXISTING REINFORCED CONCRETE AND NONSHRINK GROUT WALL PIPE INTO EXISTING CONCRETE.
3. ADJUSTABLE CLEVIS PIPE HANGER (FIGURE 260) HUNG BY THREADED ROD FROM L6 X 4 X 1/2 X 1'-0" LLV ANCHORED TO CONCRETE BY 2 - 3/4" THREADED ROD ADHESIVE SET WITH 6 5/8" MINIMUM EMBEDMENT.
4. UNIVERSAL TRAPEZE HANGER (FIGURE 46) TUBE 4 X 3 X 3/16 WITH 2 - 3/4" THREADED ROD ADHESIVE SET WITH 10" MINIMUM EMBEDMENT.
5. ADJUSTABLE CLEVIS PIPE HANGER (FIGURE 260) HUNG BY THREADED ROD WITH FORGED STEEL CLEVIS (FIGURE 299) FROM CONCRETE SINGLE LUG PLATE (FIGURE 47) ANCHORED TO CONCRETE BY 4 - 5/8" ADHESIVE SET THREADED RODS WITH 5" MINIMUM EMBEDMENT.
6. 4 - 3/4" THREADED RODS ADHESIVE SET WITH 10" MINIMUM EMBEDMENT.
7. SPECIAL PIPE SUPPORT, SHT 61.
8. TYP. PIPE SUPPORT, SHT 61.
9. PROVIDE 2 TIE-ROD ASSEMBLES, EA. TIE-ROD ASSEMBLY TO CONSIST OF: TWO 3/4", SST7 TIE BOLTS, ONE 3/4", SS12 TIERODS & TWO 3/4" SS8 TIE NUTS AS MFR BY STAR NATIONAL PRODUCTS, COLUMBUS, OH.
10. 10" LONG RADIUS 90° BEND.
11. SEE DETAIL 11.
12. SEE DETAIL 12.
13. SEE DETAIL 13.
14. 18"x24" ALUMINUM DUCT.

NOTES

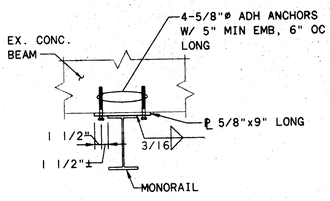
1. ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR.
2. PIPE SUPPORTS ARE DESIGNED TO SUPPORT THE WEIGHT OF THE PIPING FULL OF WATER AND TO RESIST A SURGE OF 1100 POUNDS.
3. FOR ATTACHMENT TO CONCRETE, FHA INSERTS (BY HILTI OR EQUAL) AND BOLTS MAY BE SUBSTITUTED FOR THREADED ROD.
4. PROVIDE LOCK NUTS TORQUED TOGETHER ON ALL HANGING ATTACHMENTS.
5. ADHESIVE FOR SETTING RODS AND INSERTS SHALL BE HILTI HIT C 100 OR EQUAL. INSTALL INACCORDANCE WITH MFR'S RECOMMENDED PROCEDURES.
6. THREADED RODS FOR ADJUSTABLE CLEVIS PIPE HANGERS SHALL BE:

PIPE DIAMETER	DIAMETER OF THREADED ROD
10"	7/8"
12	7/8
14	1
16	1
20	1-1/4

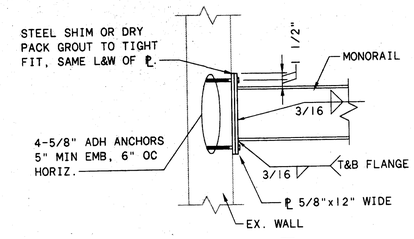
7. USE "LOCKTITE" ON THREADS OF NUTS & BOLTS OF ALL ATTACHMENTS FOR MONORAIL.



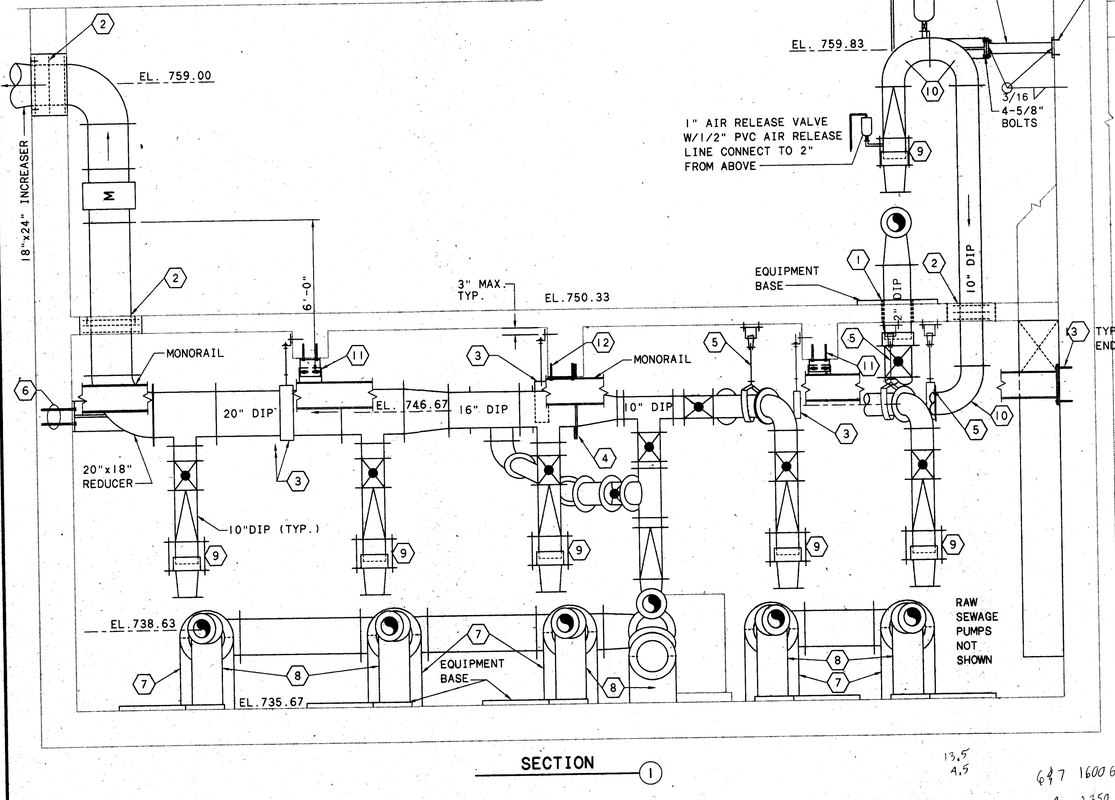
DETAIL ⟨11⟩
SCALE: 3/4"=1'-0"



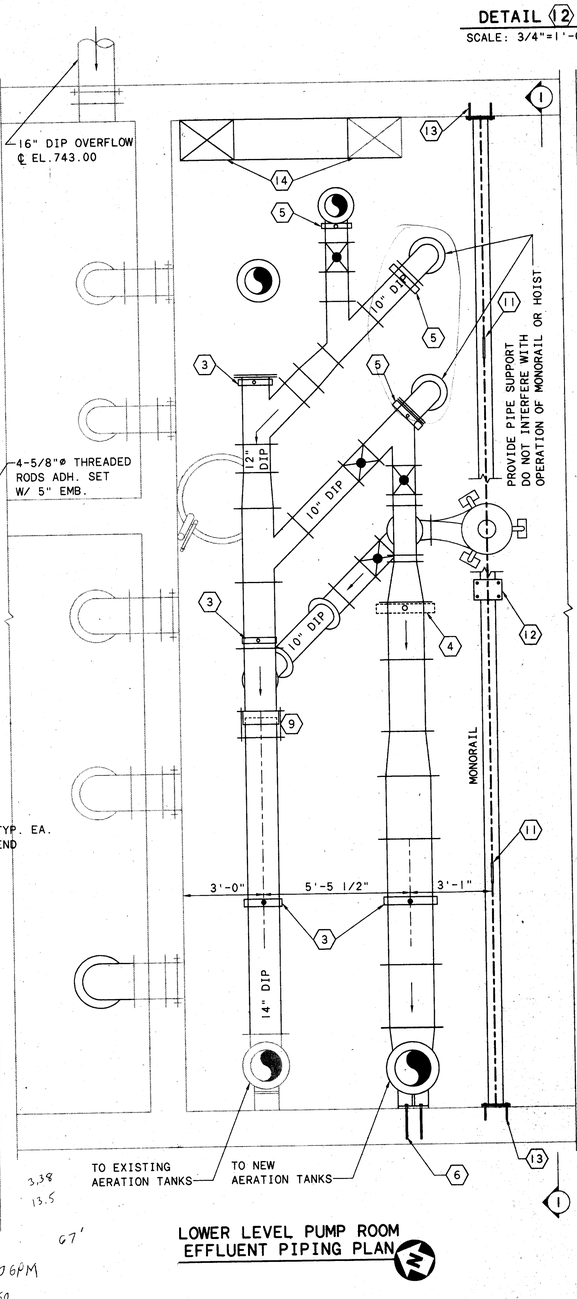
DETAIL ⟨12⟩
SCALE: 3/4"=1'-0"



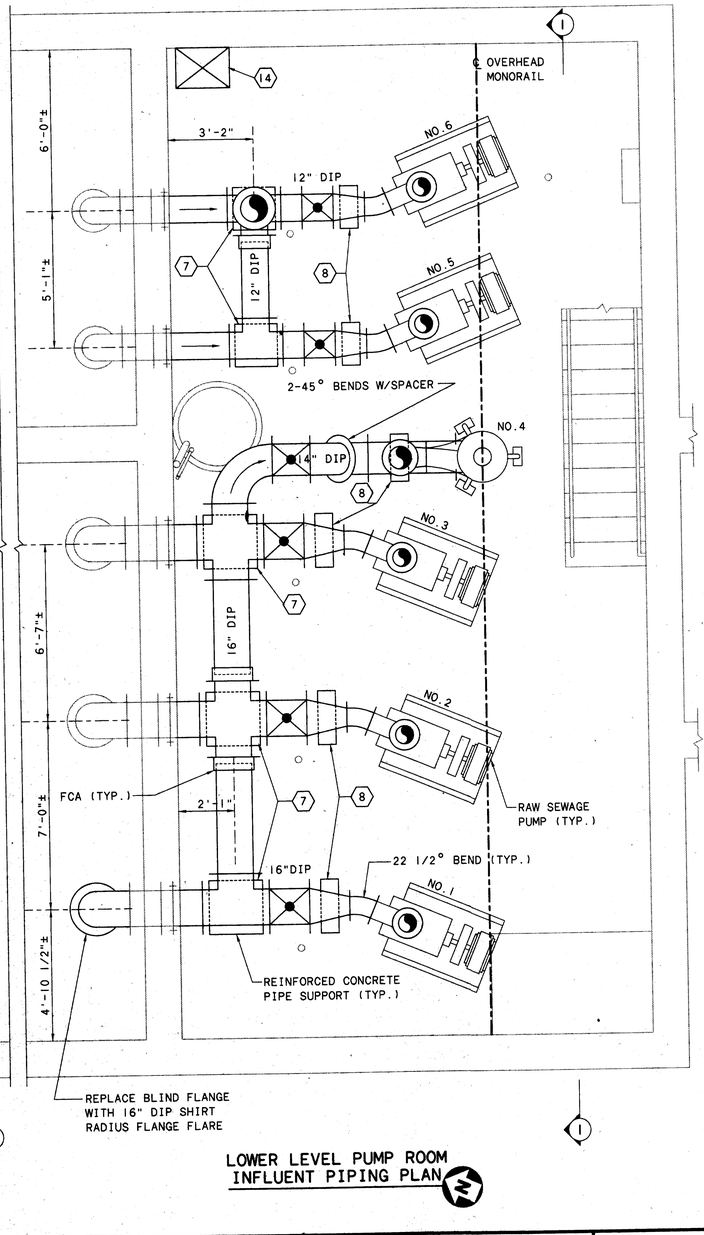
DETAIL ⟨13⟩
SCALE: 3/4"=1'-0"



SECTION ⟨1⟩



LOWER LEVEL PUMP ROOM EFFLUENT PIPING PLAN ⟨1⟩



LOWER LEVEL PUMP ROOM INFLUENT PIPING PLAN ⟨1⟩

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

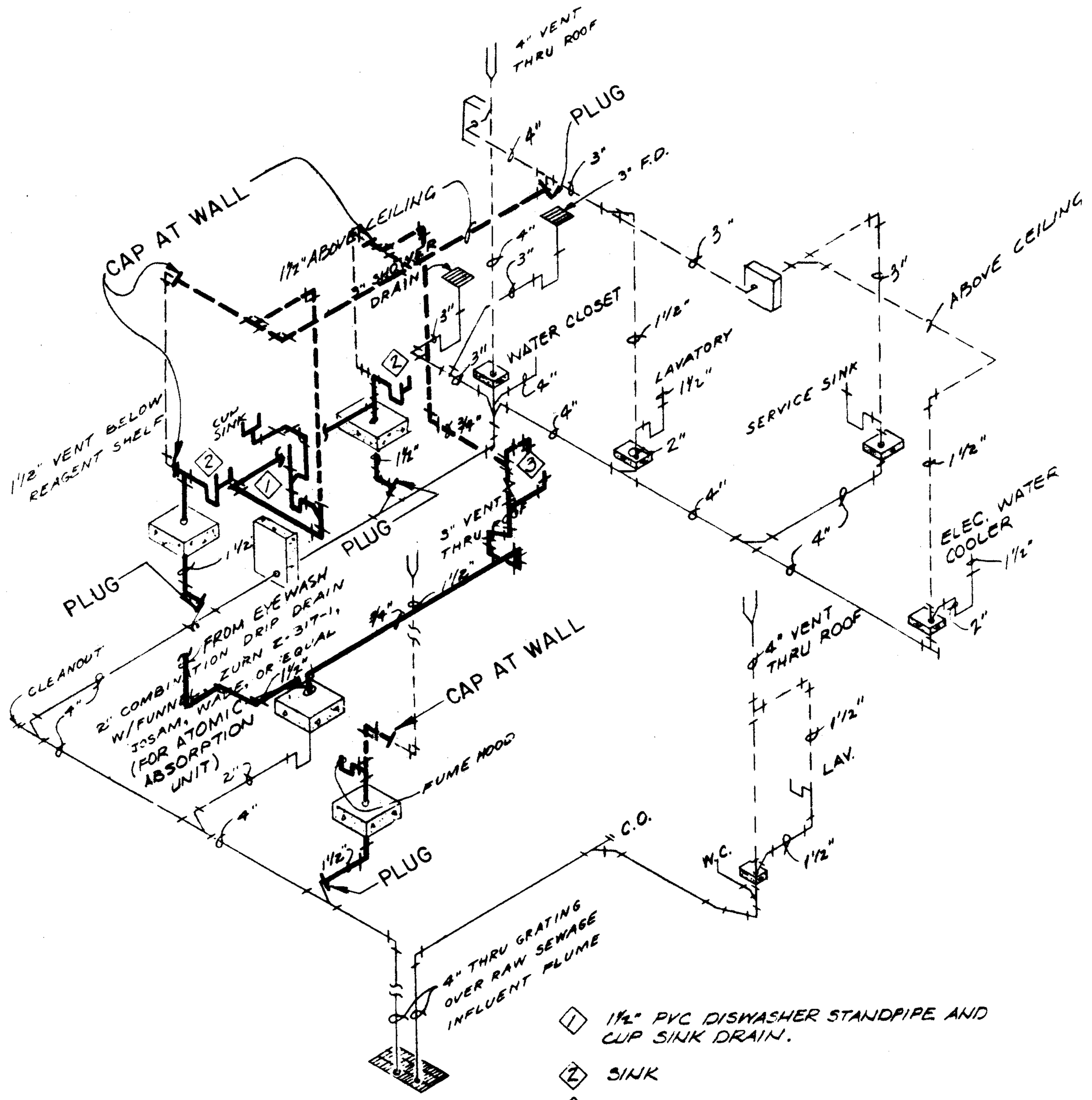
JOB NO.	15582
DESIGNED BY:	RER
DRAWN BY:	DLR
CHECKED BY:	RER
APPROVED BY:	RBD
DATE:	MARCH 1995

EXISTING CONTROL BUILDING PLANS MODIFICATIONS

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

SHEET NO. 44 OF 112

03-13-95 N:\PROJECTS\PR\15582\CADD\SHT44



◇1 1½" PVC DISHWASHER STANDPIPE AND CUP SINK DRAIN.

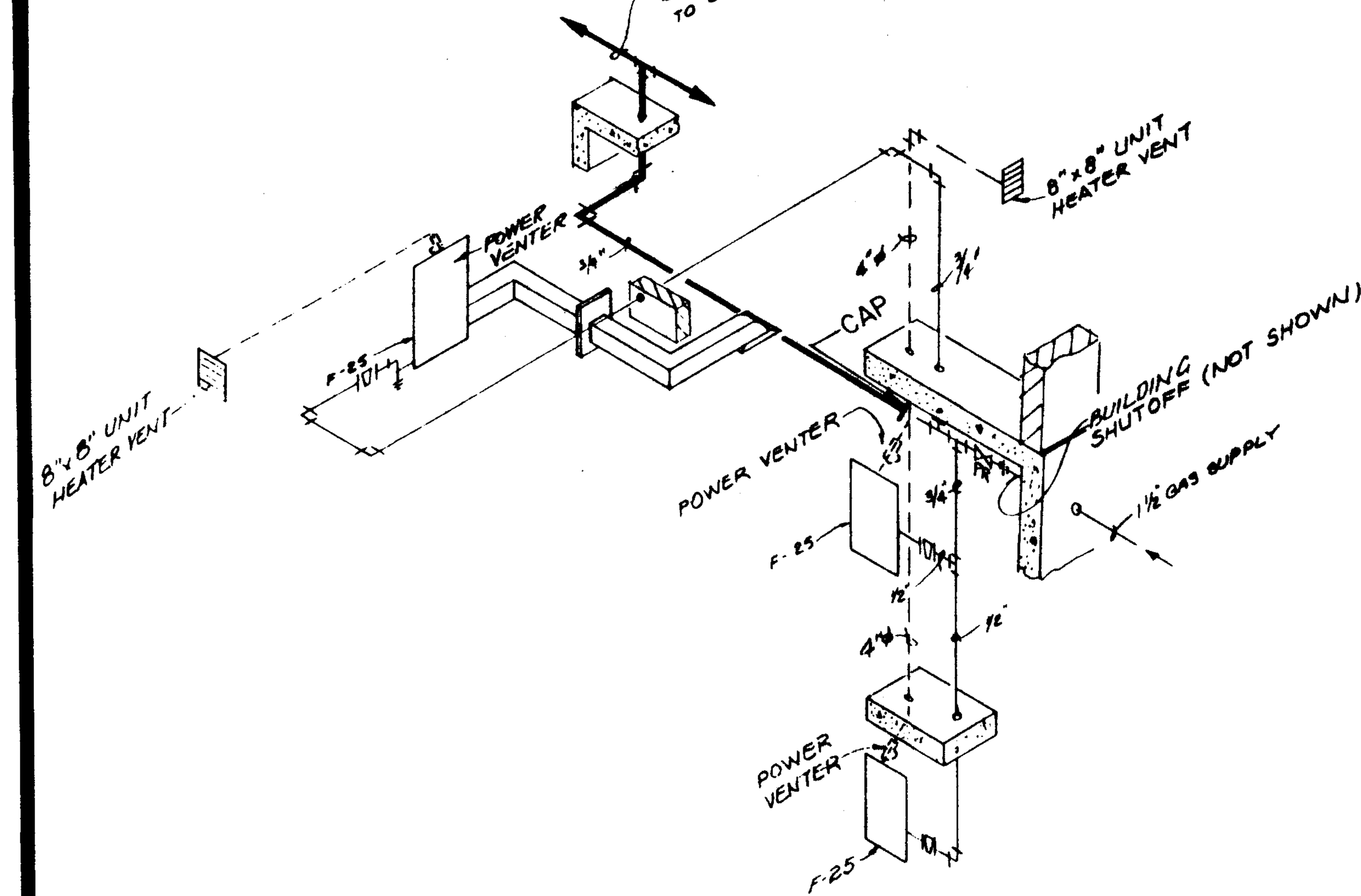
◇2 SINK

◇3 AUTOCLAVE

NOTE: LABORATORY SINK DRAINS ARE PVC FROM THE TRAP TO THE MAIN.

SANITARY PIPING

(WORK THIS DETAIL IS PLUMBING CONTRACTOR'S RESPONSIBILITY)

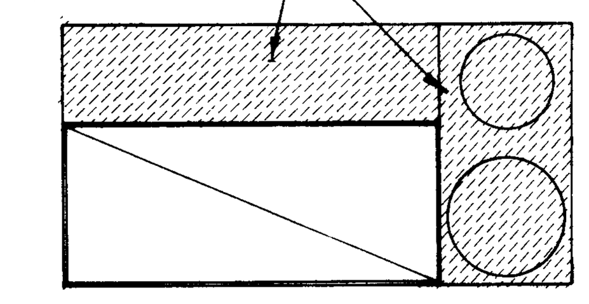


GAS PIPING ◇4

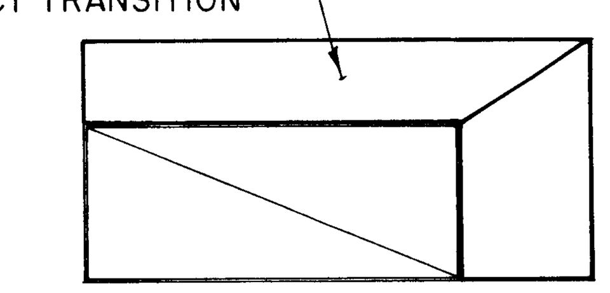
LEGEND

EXISTING PIPING TO REMAIN

EXISTING PIPING TO BE REMOVED

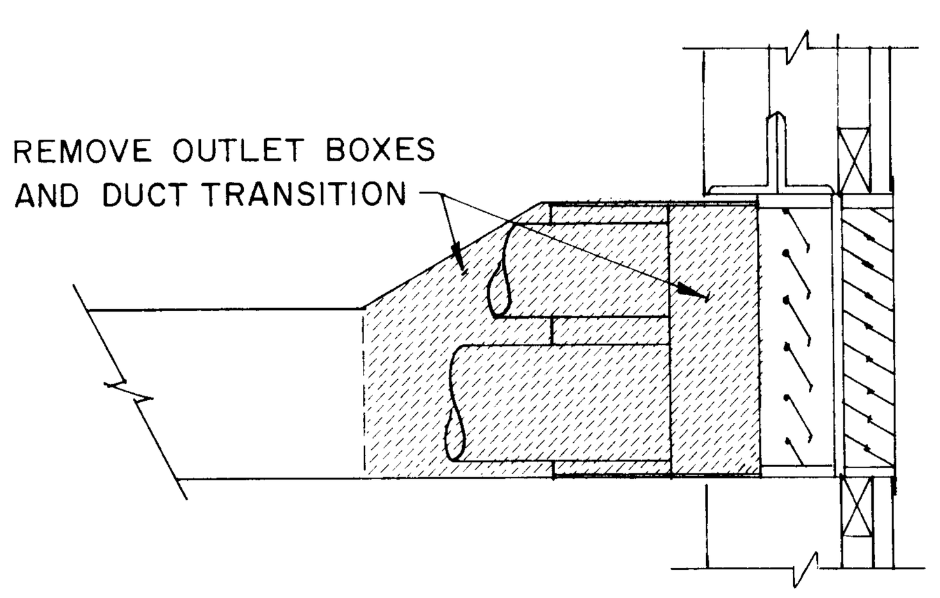


DEMOLITION

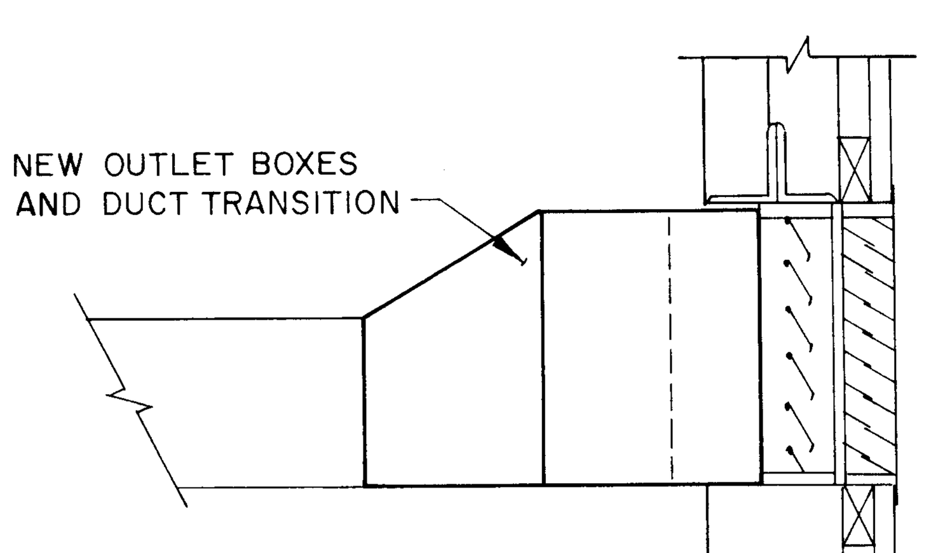


REVISED

SECTION (1)



DEMOLITION



REVISED

SECTION (2)

LEGEND

DEMOLITION ITEMS

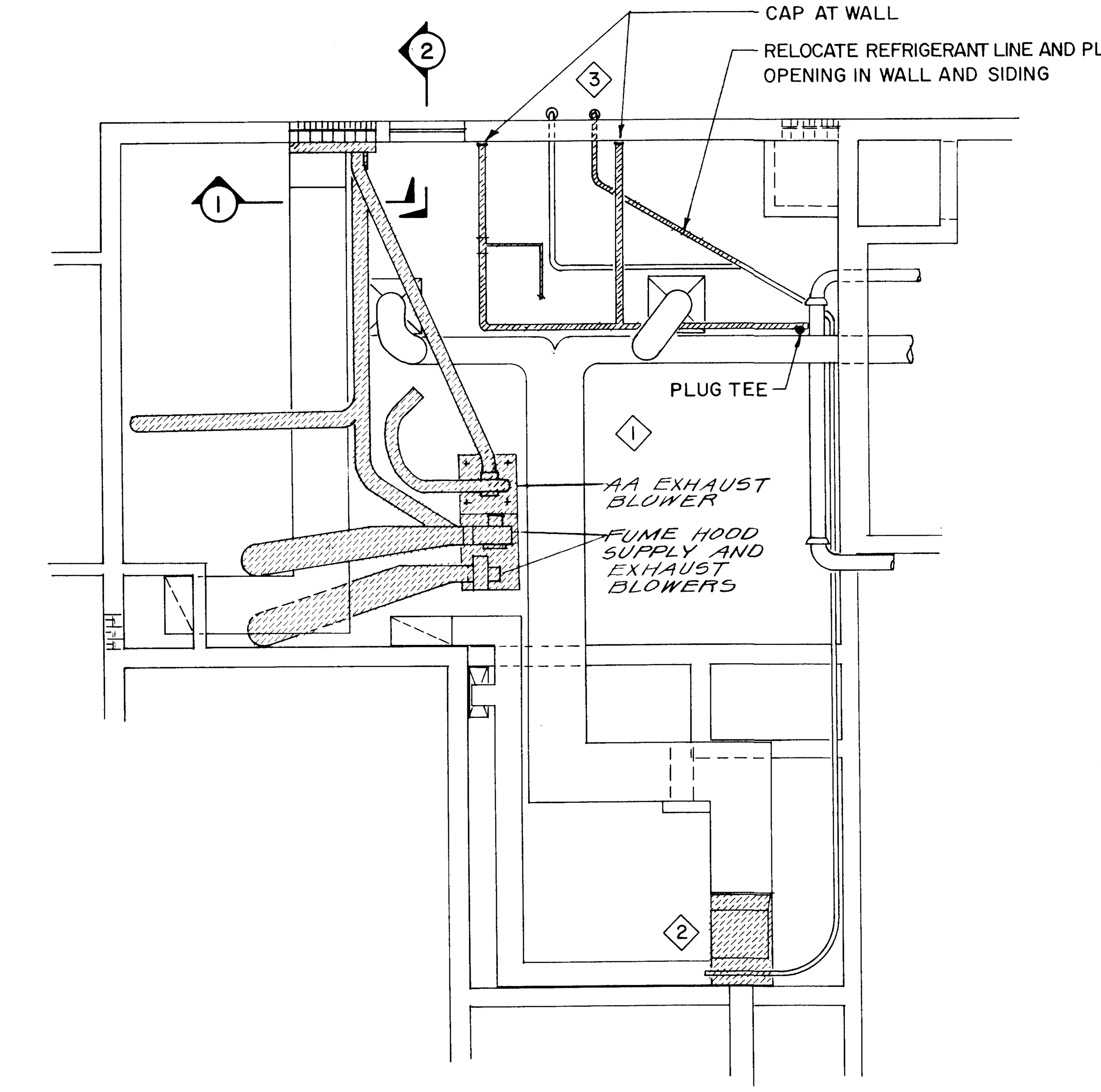
CODED NOTES

◇1 REMOVE LABORATORY FUME HOOD, RANGE HOOD, AND AA DUCTS COMPLETE WITH ALL BLOWERS, BLOWER SUPPORTS, BRACKETS AND HANGERS.

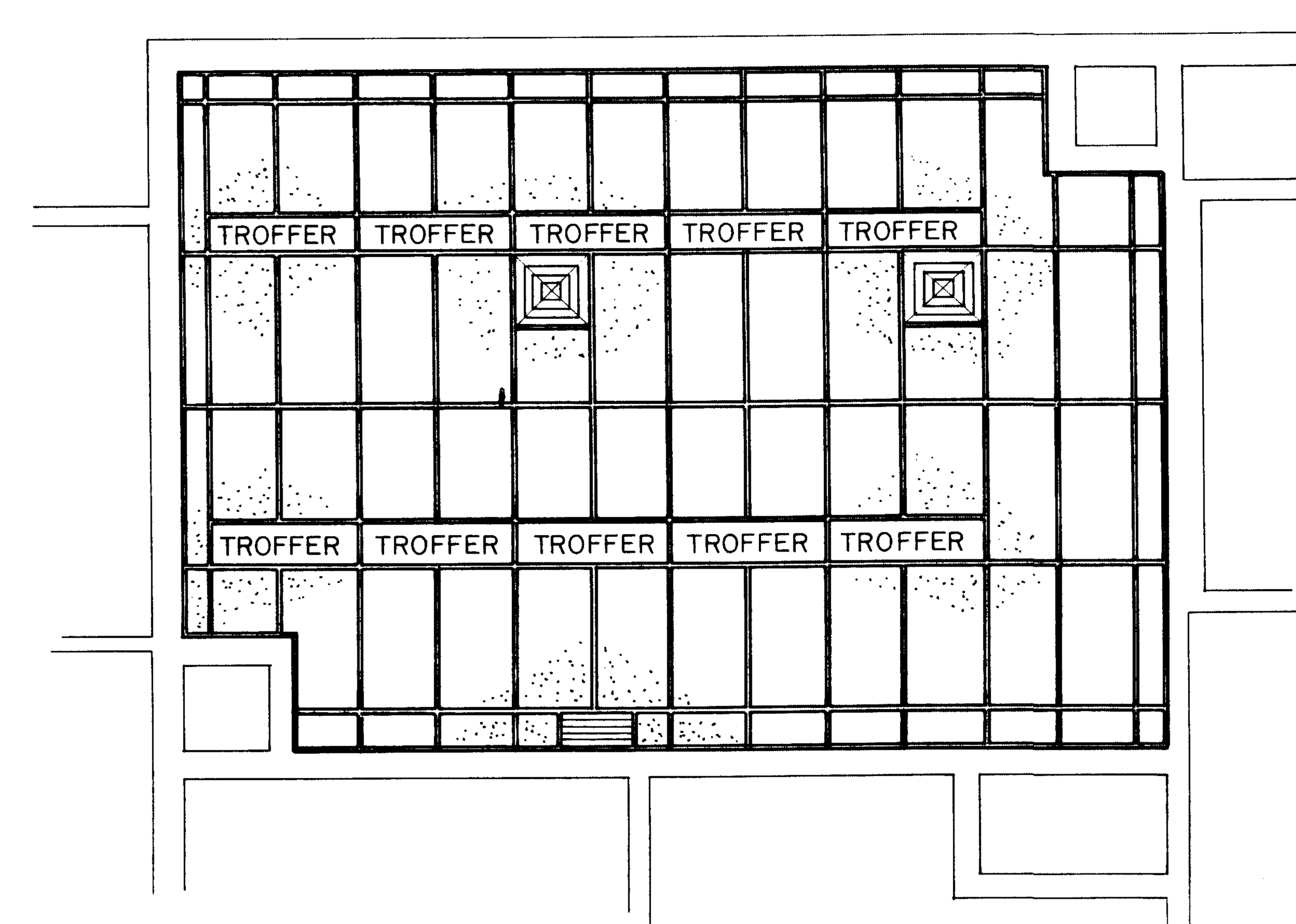
2 REMOVE BLOWER AND EVAPORATOR COIL. REPLACE WITH NEW. REVISE DUCT AS REQUIRED.

3 PROVIDE AND INSTALL NEW 4-TON HEAT PUMP UNIT (NOT SHOWN).

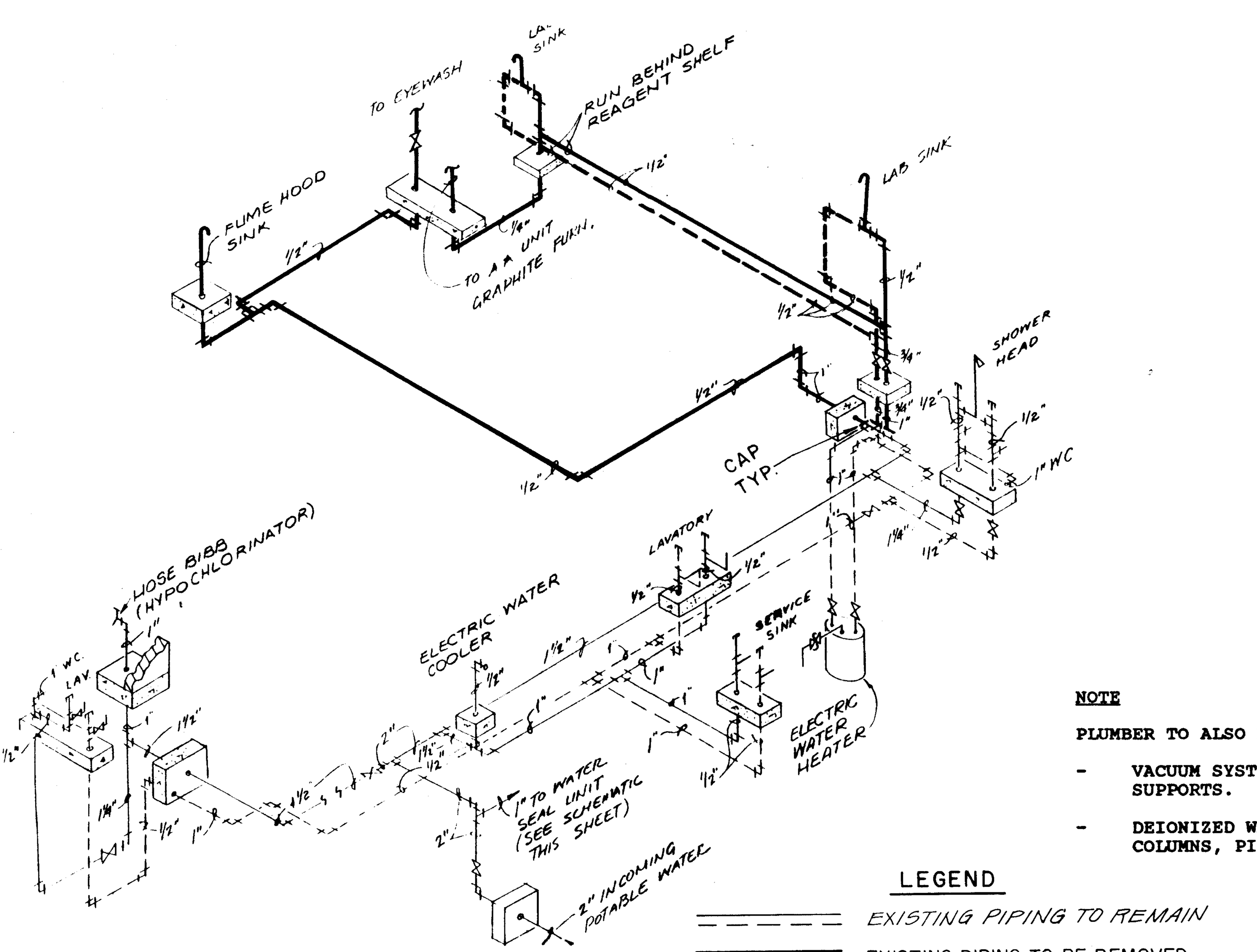
4 WORK THIS DETAIL TO BE HVAC CONTRACTOR'S RESPONSIBILITY.



EXISTING DUCTWORK ◇4



NEW REFLECTED CEILING PLAN



NOTE

PLUMBER TO ALSO REMOVE FOLLOWING ITEMS (NOT SHOWN):

- VACUUM SYSTEM COMPLETE INCLUDING PUMP, PIPING, OUTLETS, SUPPORTS.
- DEIONIZED WATER SYSTEM COMPLETE INCLUDING, FILTERS AND COLUMNS, PIPING, OUTLETS, SUPPORTS.

LEGEND

EXISTING PIPING TO REMAIN

EXISTING PIPING TO BE REMOVED

POTABLE WATER PIPING

(WORK THIS DETAIL IS PLUMBING CONTRACTOR'S RESPONSIBILITY)

NO.	REVISIONS	DATE	BY	CHK.

ATLAS BLUEPRINT 563617

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

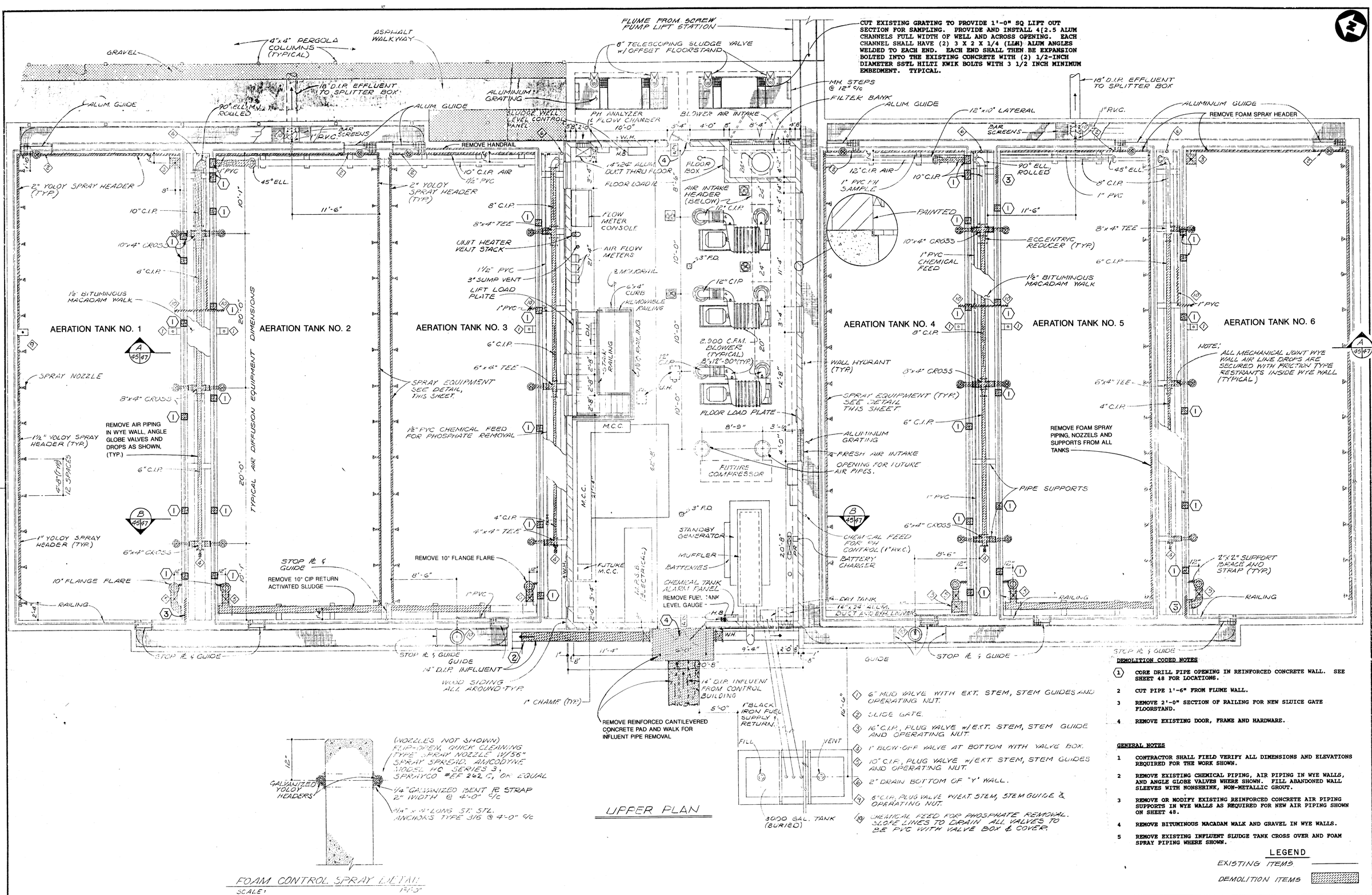
DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO. 15582
DESIGNED BY: HJS
DRAWN BY: DEH
CHECKED BY: HJS
APPROVED BY: RBD
DATE: FEB., 1995

EXISTING CONTROL BUILDING MODIFICATIONS

SCALE: NONE

SHEET NO. 44A OF 112



(NOZZLES NOT SHOWN) FLIP-OPEN, QUICK CLEANING TYPE SPRAY NOZZLE W/56° SPRAY SPREAD, AMCODYNE MODEL HC SERIES 3, SPRAYCO #EF 262 C, OR EQUAL

GALVANIZED YOLOY HEADERS

¼"GALVANIZED BENT PL STRAP 2" WIDTH @ 4'-0" c/c

¾" x 4" LONG ST. STL. ANCHORS TYPE 316 @ 4'-0" c/c

FOAM CONTROL SPRAY DETAIL

SCALE: 1"=1'-0"

UPPER PLAN

1. 6" MUD VALVE WITH EXT. STEM, STEM GUIDES AND OPERATING NUT.
2. SLIDE GATE.
3. 16" C.I.P., PLUG VALVE W/EXT. STEM, STEM GUIDE AND OPERATING NUT.
4. 1" BLOW-OFF VALVE AT BOTTOM WITH VALVE BOX.
5. 10" C.I.P., PLUG VALVE W/EXT. STEM, STEM GUIDES AND OPERATING NUT.
6. 2" DRAIN BOTTOM OF "Y" WALL.
7. 6" C.I.P., PLUG VALVE W/EXT. STEM, STEM GUIDE & OPERATING NUT.
10. CHEMICAL FEED FOR PHOSPHATE REMOVAL. SLOPE LINES TO DRAIN. ALL VALVES TO BE PVC WITH VALVE BOX & COVER.

DEMOLITION CODED NOTES

1. CORE DRILL PIPE OPENING IN REINFORCED CONCRETE WALL. SEE SHEET 48 FOR LOCATIONS.
2. CUT PIPE 1'-6" FROM FLUME WALL.
3. REMOVE 2'-0" SECTION OF RAILING FOR NEW SLUICE GATE FLOORSTAND.
4. REMOVE EXISTING DOOR, FRAME AND HARDWARE.

GENERAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS REQUIRED FOR THE WORK SHOWN.
2. REMOVE EXISTING CHEMICAL PIPING, AIR PIPING IN WYE WALLS, AND ANGLE GLOBE VALVES WHERE SHOWN. FILL ABANDONED WALL SLEEVES WITH NONSHRINK, NON-METALLIC GROUT.
3. REMOVE OR MODIFY EXISTING REINFORCED CONCRETE AIR PIPING SUPPORTS IN WYE WALLS AS REQUIRED FOR NEW AIR PIPING SHOWN ON SHEET 48.
4. REMOVE BITUMINOUS MACADAM WALK AND GRAVEL IN WYE WALLS.
5. REMOVE EXISTING INFLUENT SLUDGE TANK CROSS OVER AND FOAM SPRAY PIPING WHERE SHOWN.

LEGEND

EXISTING ITEMS

DEMOLITION ITEMS

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

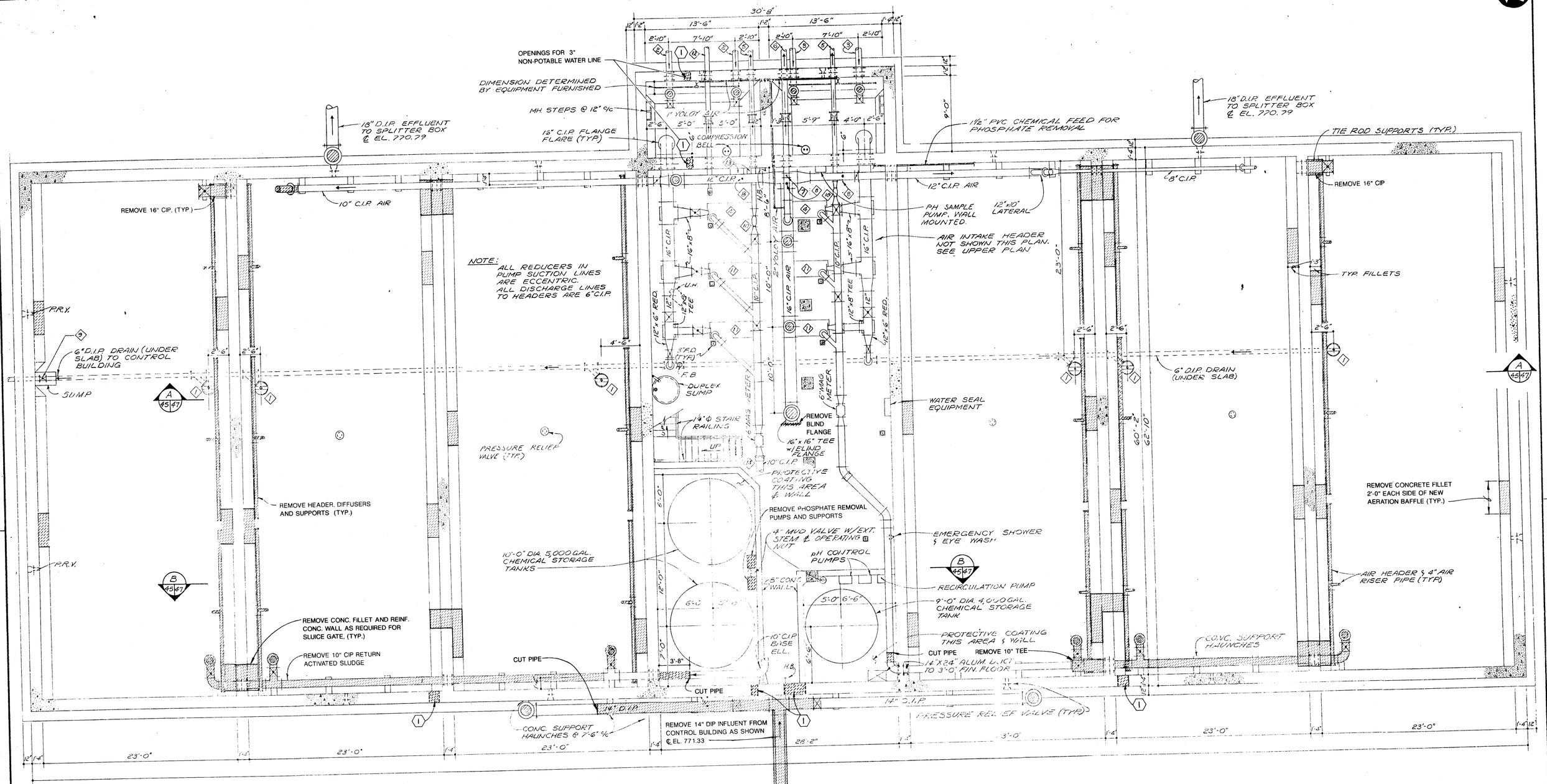
JOB NO.	15582
DESIGNED BY:	WKG
DRAWN BY:	BLD
CHECKED BY:	WKG
APPROVED BY:	RBD
DATE:	FEB., 1995

EXISTING BLOWER BUILDING & AERATION TANKS
UPPER PLAN DEMOLITION

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

SHEET NO. 45 OF 112

ATLAS BLUEPRINT 336917



LOWER PLAN

DEMOLITION CODED NOTES

(1) CORE DRILL OR CUT PIPING OPENING IN REINFORCED CONCRETE WALL.

GENERAL NOTES

1 REMOVE EXISTING AIR RISERS, HEADERS, DIFFUSERS, AND SUPPORTS FROM AERATION TANK NOS. 1 THROUGH 6; OTHER PIPING AS SHOWN.

(1) 6" MUD VALVE WITH EXT. STEM, STEM GUIDES AND OPERATING NUT.
(2) 6" D.I.P. RETURN SLUDGE FROM INTERMEDIATE CLARIFIERS.
(3) 6" D.I.P. RETURN SLUDGE FROM FINAL CLARIFIERS
(4) 525 G.P.M. RETURN ACTIVATED SLUDGE PUMPS.
(5) 6" D.I.P. WASTE ACTIVATED SLUDGE TO AEROBIC DIGESTER TANKS.
(6) 10" D.I.P. AIR TO AEROBIC DIGESTER TANKS.
(7) 10" C.I.P. AIR, BUTTERFLY VALVE, EXT. STEM & FLOOR BOX.
(8) TAP PIPE FOR AIR FLOW SENSOR.
(9) 6" C.I.P. PLUG VALVE W/EXT. STEM, STEM GUIDE & OPERATING NUT.
(10) 4" MAGNETIC SLUDGE METER.
(11) 525 G.P.M. VARIABLE SPEED RETURN ACTIVATED SLUDGE PUMP.
(12) 6" D.I.P. NON-POTABLE WATER FROM TERTIARY BLDG.
(13) SLUDGE WELLS LEVEL CONTROL AIR SUPPLY.

LEGEND
EXISTING ITEMS
DEMOLITION ITEMS

LOWER PLAN

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

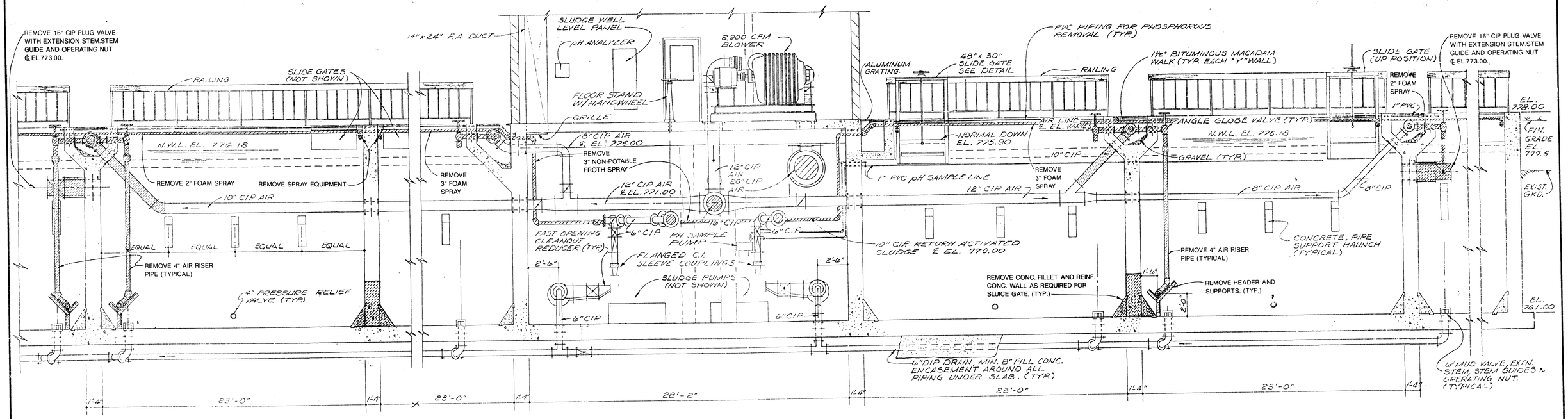
DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	WKG
DRAWN BY:	BLD
CHECKED BY:	WKG
APPROVED BY:	ABD
DATE:	FEB., 1995

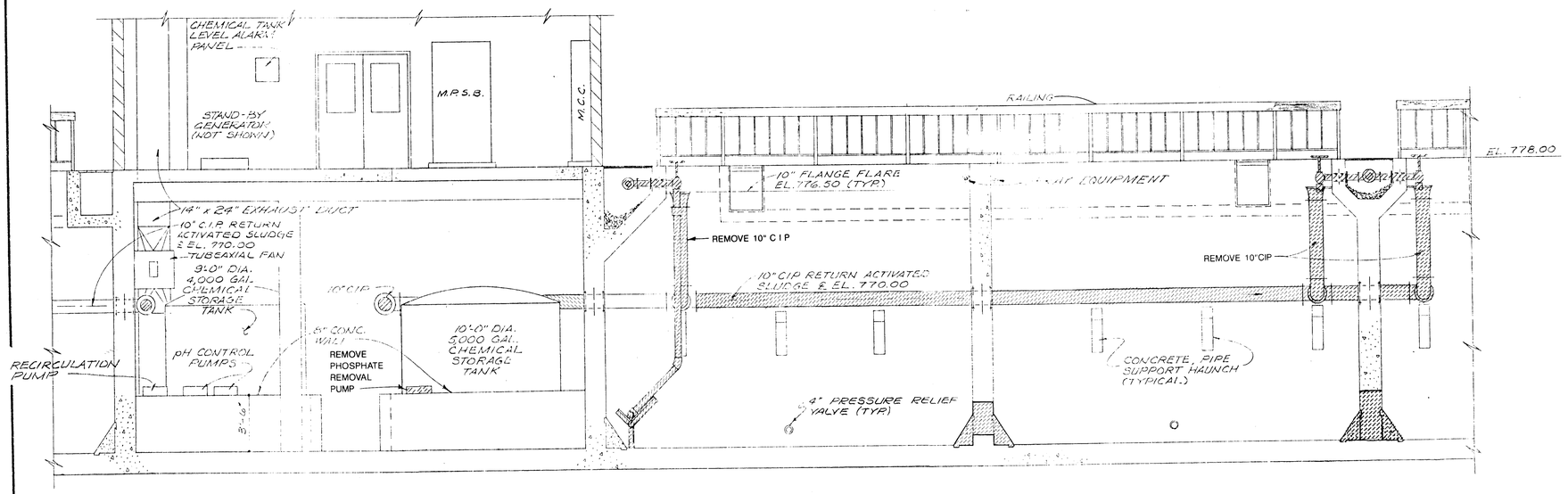
EXISTING BLOWER BUILDING & AERATION TANKS
LOWER PLAN DEMOLITION

SCALE: 3/16" = 1'-0"
SHEET NO. 46 OF 112

ATLAS BLUEPRINT 344417



SECTION (A) 45/47



SECTION (B) 45/47

LEGEND

EXISTING ITEMS

DEMOLITION ITEMS

NO.	REVISIONS	DATE	BY	CHK

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

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DESIGNED BY:	WKG
DRAWN BY:	BLD
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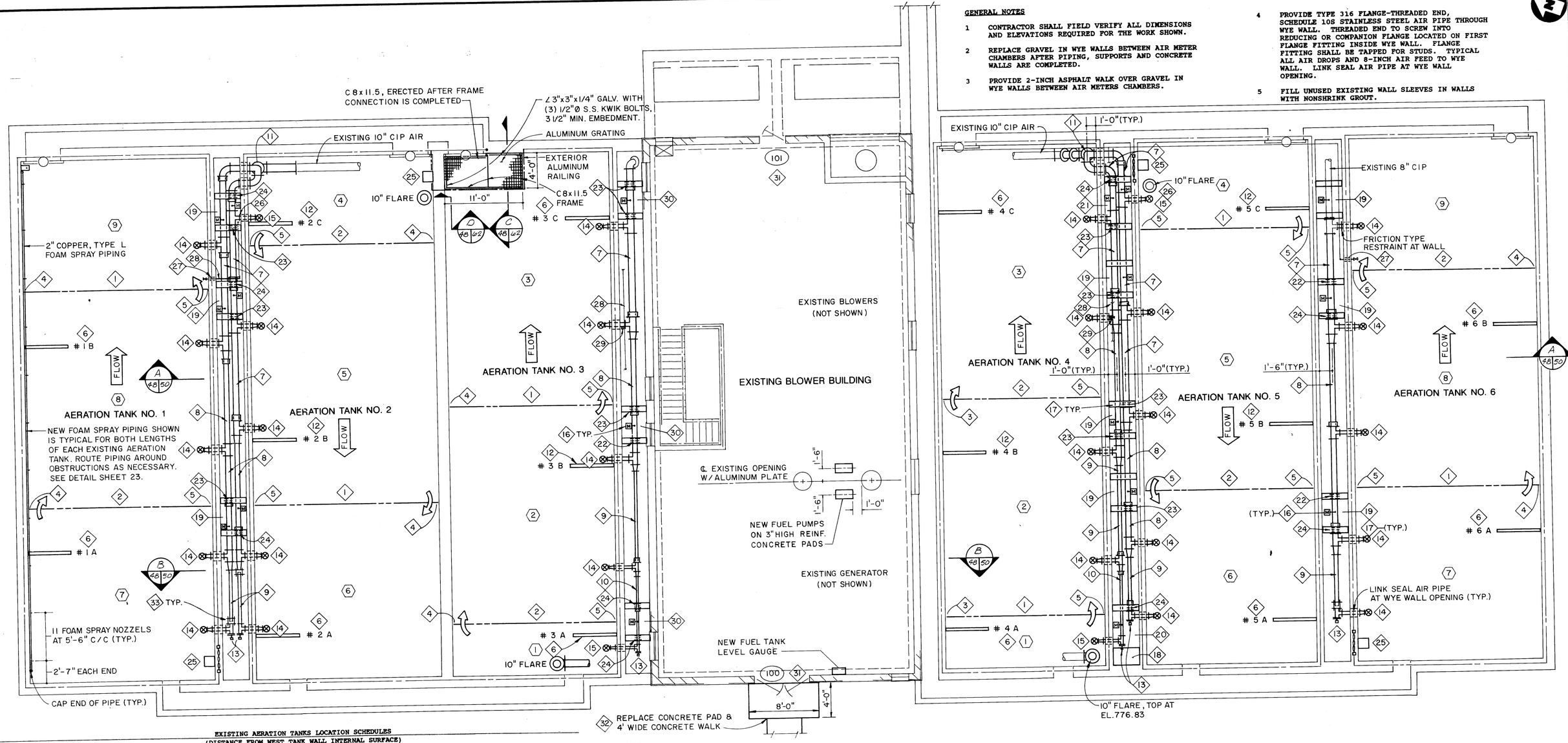
APPROVED BY:	RBD
DATE:	FEB, 1995

EXISTING BLOWER BUILDING & AERATION TANKS
SECTIONS DEMOLITION

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

SHEET NO. 47 OF 112

ATLAS BLUEPRINT 23017



GENERAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS REQUIRED FOR THE WORK SHOWN.
2. REPLACE GRAVEL IN WYE WALLS BETWEEN AIR METER CHAMBERS AFTER PIPING, SUPPORTS AND CONCRETE WALLS ARE COMPLETED.
3. PROVIDE 2-INCH ASPHALT WALK OVER GRAVEL IN WYE WALLS BETWEEN AIR METERS CHAMBERS.
4. PROVIDE TYPE 316 FLANGE-THREADED END, SCHEDULE 10S STAINLESS STEEL AIR PIPE THROUGH WYE WALL. THREADED END TO SCREW INTO REDUCING OR COMPANION FLANGE LOCATED ON FIRST FLANGE FITTING INSIDE WYE WALL. FLANGE FITTING SHALL BE TAPPED FOR STUDS. TYPICAL ALL AIR DROPS AND 8-INCH AIR FEED TO WYE WALL. LINK SEAL AIR PIPE AT WYE WALL OPENING.
5. FILL UNUSED EXISTING WALL SLEEVES IN WALLS WITH NONSHRINK GROUT.

EXISTING AERATION TANKS LOCATION SCHEDULES
(DISTANCE FROM WEST TANK WALL INTERNAL SURFACE)

BAFFLES (1) (2)

TANK #	BAFFLE #1	BAFFLE #2
1	20'-0"	45'-0"
2	20'-0"	50'-0"
3	6'-0"	31'-0"
4	6'-0"	31'-0"
5	20'-0"	50'-0"
6	20'-0"	45'-0"

AERATION MIXING EQUIPMENT (6) (12)

TANK #	A	B	C
1	15'-0"	38'-9"	---
2	5'-0"	27'-6"	52'-6"
3	4'-6"	24'-9"	52'-8"
4	4'-6"	24'-9"	52'-8"
5	5'-0"	27'-6"	52'-6"
6	15'-0"	38'-9"	---

AIR DROPS (14) (15)

TANK #					
1	5'-9"	14'-3"	26'-6"	38'-9"	50'-1"
2	5'-9"	14'-3"	29'-0"	40'-9"	53'-2"
3	3'-0"	12'-3"	24'-9"	40'-2"	51'-8"
4	3'-0"	12'-3"	24'-9"	40'-2"	51'-8"
5	5'-9"	14'-3"	29'-0"	40'-9"	53'-8"
6	5'-9"	14'-3"	26'-6"	38'-9"	50'-1"

AIR METER (16)

TANK #			
1	17'-8"	42'-6"	53'-0"
2	19'-11"	44'-6"	54'-8"
3	5'-4"	28'-8"	54'-8"
4	5'-4"	28'-8"	53'-8"
5	19'-11"	44'-6"	55'-2"
6	17'-2"	41'-6"	52'-5"

CENTERLINE 8" CONCRETE WALL (17) FOR AIR METERING CHAMBERS

TANK #						
1 & 2	17'-0"	20'-8"	41'-11"	45'-7"	52'-1"	55'-9"
3	4'-1"	7'-9"	26'-10"	30'-6"	52'-9"	56'-5"
4 & 5	6'-7 1/2"		18'-1"	21'-9"	26'-6"	30'-2"
	42'-8"	46'-4"	50'-7"	56'-0"		
6	15'-3"	18'-11"	39'-10"	43'-6"	51'-8"	54'-8"

PROPOSED

BAFFLED AERATION ZONE NUMBER

EXISTING

CODED NOTES

1. TYPE "A" BAFFLE, SEE DETAIL [1] SHEET 24.
2. TYPE "B" BAFFLE, SEE DETAIL [1] SHEET 24.
3. SEE SUPPORT CABLE TERMINATION DETAIL [3], SHEET 24.
4. SEE SUPPORT CABLE TERMINATION DETAIL [4], SHEET 24.
5. SEE SUPPORT CABLE TERMINATION DETAIL [5], SHEET 24.
6. AERATION MIXING EQUIPMENT WITH MAST, HOIST AND POWER CONTROL STATION. SET MIXER LOCATION AND ORIENTATION ACCORDING TO EQUIPMENT MANUFACTURER'S FINAL RECOMMENDATIONS TO PRODUCE OPTIMUM MIXING IN ZONE. SEE DETAIL SHEET 23.
7. 8-INCH DIP AIR.
8. 6-INCH DIP AIR.
9. 4-INCH DIP AIR.
10. 3-INCH DIP AIR.
11. SIDE OUTLET 90° ELBOW.
12. MAST WITH HOIST AND POWER CONTROL STATION FOR AERATION MIXING EQUIPMENT (NO MIXER INSTALLED). SET LOCATION ACCORDING TO AERATION MIXING EQUIPMENT MANUFACTURER'S FINAL RECOMMENDATIONS. SEE DETAIL SHEET 23.
13. BLIND FLANGE WITH 1-INCH BLOW-OFF VALVE AT BOTTOM WITH VALVE BOX.
14. 3-INCH ANGLE GLOBE VALVE WITH 4" X 3" REDUCER ON INLET AND DISCHARGE.
15. 2-INCH ANGLE GLOBE VALVE WITH 3" X 2" REDUCER ON INLET AND DISCHARGE.
16. AIR METER. TAPS ARE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.
17. 8-INCH CONCRETE WALL EXTENDING FROM FLUME BOTTOM TO ELEVATION 778.0, REINFORCED WITH #5 DOWELS (DRILLED AND GROUTED) AT 12-INCH O.C.E.W. REINFORCEMENT SHALL BE CENTERED WITHIN WALL. PROVIDE 3-INCH SCHEDULE 80 PVC DRAIN AT BOTTOM. WHERE NO WALL PIPE IS SHOWN, BOX OUT "U" FOR PIPE, NONSHRINK GROUT PIPE IN PLACE.
18. 3'-0" X 2'-1/2" X 8" THICK CONCRETE SLAB REINFORCED WITH FOUR #5 EACH WAY WITH DOWELS TO MATCH ON THREE SIDES. DOWELS SHALL BE DRILLED AND GROUTED MINIMUM 8 INCHES INTO WALLS. TOP OF SLAB ELEVATION 778.0.
19. 2'-5" X 2'-5" ALUMINUM ACCESS DOOR TO AIR METER CHAMBER (NOT SHOWN) BILCO TYPE "K" OR EQUAL. SEE ACCESS DOOR DETAILS SHEET 50.
20. 2'-5" X 3'-8" ALUMINUM ACCESS DOOR TO AIR METER CHAMBER (NOT SHOWN), BILCO TYPE "KD" OR EQUAL. SEE ACCESS DOOR DETAILS SHEET 50.
21. 2'-5" X 4'-2" ALUMINUM ACCESS DOOR TO AIR METER CHAMBER (NOT SHOWN), BILCO TYPE "KD" OR EQUAL. SEE ACCESS DOOR DETAILS SHEET 50.
22. MJ - MJ WALL PIPE.
23. MJ - FLG WALL PIPE.
24. FLG - FLG WALL PIPE.
25. SLUICE GATE FLOOR STAND (NOT SHOWN) AND SUPPORT. CENTER 2'-0" WIDE RAILING OPENING ON SLUICE GATE. PROVIDE NEW POSTS MATCHING EXISTING AND CONNECT RAILING TO SAME. PROVIDE STAINLESS STEEL CHAINS BETWEEN POSTS.
26. 3" X 9" REDUCING FLANGE.
27. LINK SEAL PIPE AT WALL OPENING.
28. 1 1/2 INCH SCHEDULE 80 PVC PHOSPHORUS REMOVAL PIPING.
29. CAP PIPE.
30. 2'-1" X 2'-5" ALUMINUM ACCESS DOOR TO AIR METER CHAMBER (NOT SHOWN), BILCO TYPE "K" OR EQUAL. SEE ACCESS DOOR DETAILS SHEET 50.
31. NEW DOORS, FRAME AND HARDWARE.
32. CONCRETE PAD TO BE 8 INCHES THICK WITH #5 @ 12 INCHES EW EF. ENTIRE VOLUME BETWEEN PAD AND WALK BOTTOMS TO INVERT OF NEW PIPE TRENCH TO BE FILLED WITH CDF.
33. FLANGED COUPLING ADAPTER SECURED WITH THREADED RODS TO FLANGE.

NO.	REVISIONS	DATE	BY	CHK.

ATLAS BLUEPRINT 336817

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

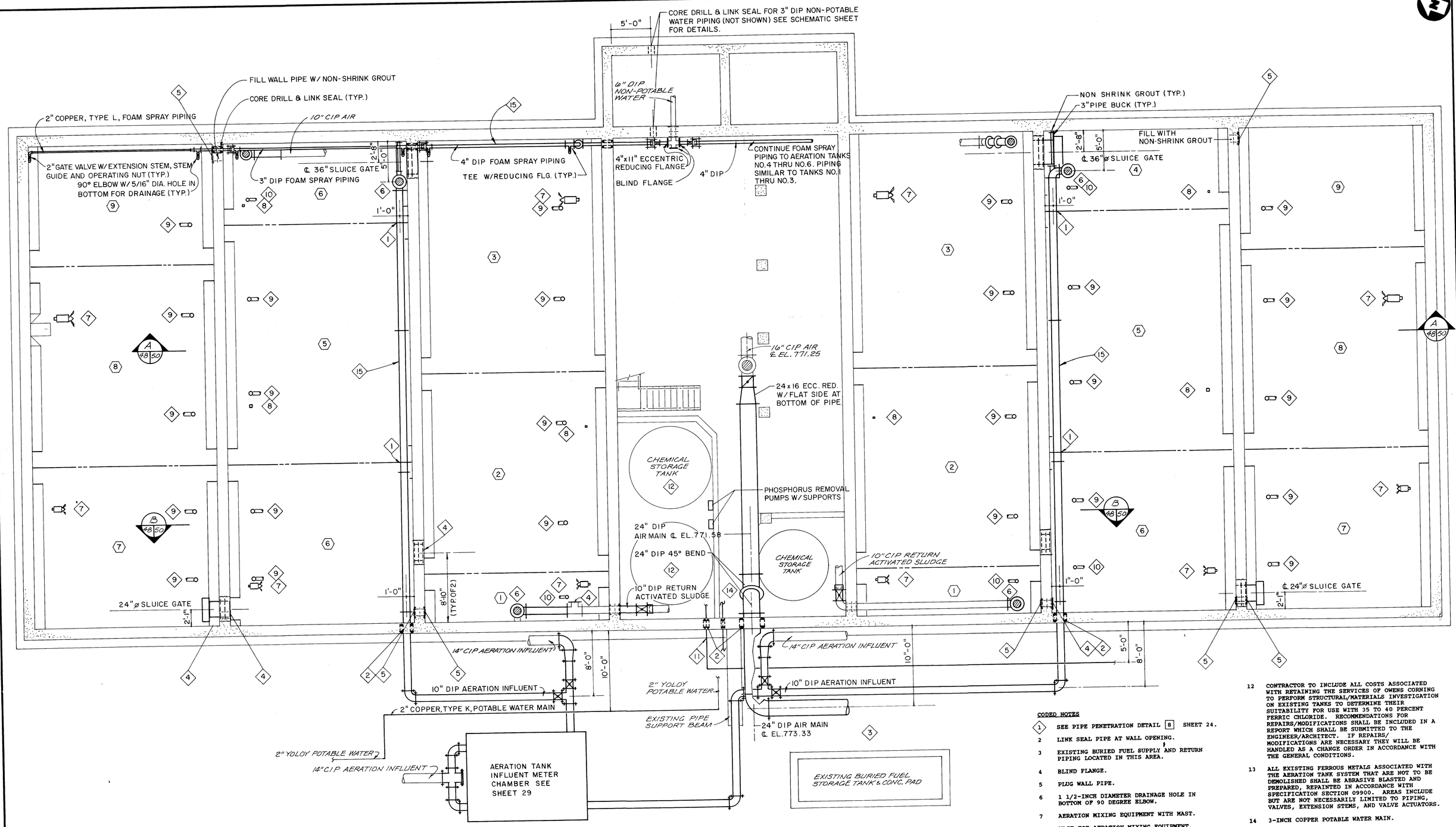
DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	WKG
DRAWN BY:	DEH
CHECKED BY:	WKG
APPROVED BY:	RBD
DATE:	FEB., 1995

EXISTING BLOWER BUILDING & AERATION TANKS UPPER PLAN MODIFICATIONS

SCALE: 3/16"=1'-0" OR AS NOTED

SHEET NO. 48 OF 112



CODED NOTES

1. SEE PIPE PENETRATION DETAIL [8] SHEET 24.
2. LINK SEAL PIPE AT WALL OPENING.
3. EXISTING BURIED FUEL SUPPLY AND RETURN PIPING LOCATED IN THIS AREA.
4. BLIND FLANGE.
5. PLUG WALL PIPE.
6. 1 1/2-INCH DIAMETER DRAINAGE HOLE IN BOTTOM OF 90 DEGREE ELBOW.
7. AERATION MIXING EQUIPMENT WITH MAST.
8. MAST FOR AERATION MIXING EQUIPMENT. (ALTERNATE LOCATION FOR MIXER).
9. 4-INCH AIR DROP AND 4-INCH LATERAL. HEADER, DIFFUSERS, AND SUPPORTS NOT SHOWN.
10. 3-INCH AIR DROP AND 3-INCH LATERAL. DIFFUSERS AND SUPPORTS NOT SHOWN.
11. 1 1/2-INCH PVC PHOSPHORUS REMOVAL PIPE. @ ELEVATION 772.08.
12. CONTRACTOR TO INCLUDE ALL COSTS ASSOCIATED WITH RETAINING THE SERVICES OF OWENS CORNING TO PERFORM STRUCTURAL/MATERIALS INVESTIGATION ON EXISTING TANKS TO DETERMINE THEIR SUITABILITY FOR USE WITH 35 TO 40 PERCENT FERRIC CHLORIDE. RECOMMENDATIONS FOR REPAIRS/MODIFICATIONS SHALL BE INCLUDED IN A REPORT WHICH SHALL BE SUBMITTED TO THE ENGINEER/ARCHITECT. IF REPAIRS/MODIFICATIONS ARE NECESSARY THEY WILL BE HANDLED AS A CHANGE ORDER IN ACCORDANCE WITH THE GENERAL CONDITIONS.
13. ALL EXISTING FERROUS METALS ASSOCIATED WITH THE AERATION TANK SYSTEM THAT ARE NOT TO BE DEMOLISHED SHALL BE ABRASIVE BLASTED AND PREPARED, REPAINTED IN ACCORDANCE WITH SPECIFICATION SECTION 09900. AREAS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO PIPING, VALVES, EXTENSION STEMS, AND VALVE ACTUATORS.
14. 3-INCH COPPER POTABLE WATER MAIN.
15. SUPPORT FOAM SPRAY AND AERATION INFLUENT PIPING ENTIRE LENGTH WITHIN TANKS WITH GRINNEL FIGURE 199 OR EQUAL STEEL BRACKETS, 10 FEET C/C. BRACKETS TO BE APPROPRIATELY SIZED, TO HAVE TWO ANCHOR BOLT HOLES, AND TO BE HOT DIPPED GALVANIZED. SECURE BRACKETS TO WALL WITH TWO 5/8-INCH DIAMETER STAINLESS STEEL HILTI KWIK BOLTS, OR EQUAL; MINIMUM 4-INCH EMBEDMENT. SECURE PIPE TO BRACKETS WITH 1/2-INCH DIAMETER STAINLESS STEEL "U" BOLTS.

LEGEND

(1) BAFFLED AERATION ZONE NUMBER
PROPOSED ITEMS
EXISTING ITEMS

NO.	REVISIONS	DATE	BY	CHK.

ATLAS BLUEPRINT 183817

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
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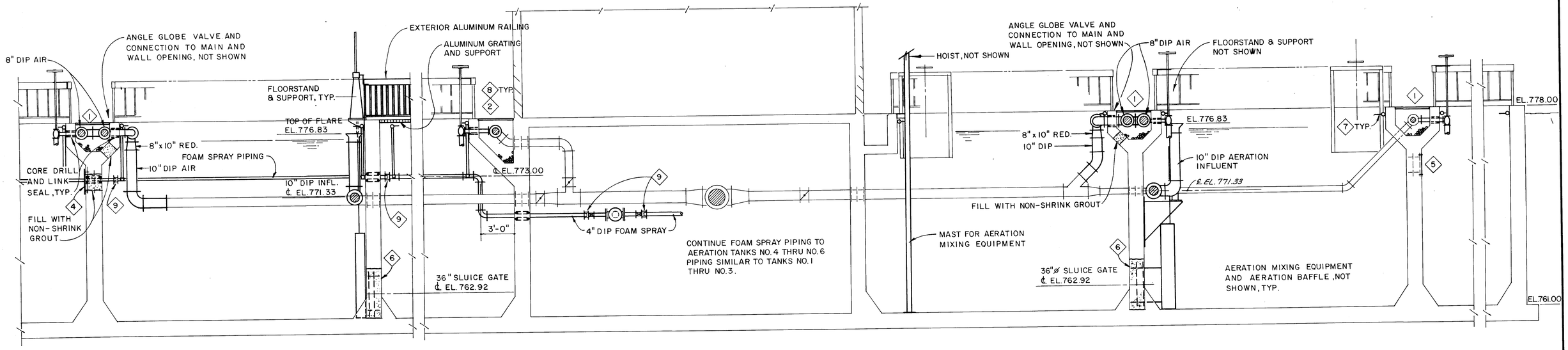
DRAWN BY:	DEH/BLD
CHECKED BY:	WKG
APPROVED BY:	RBD
DATE:	FEB., 1995

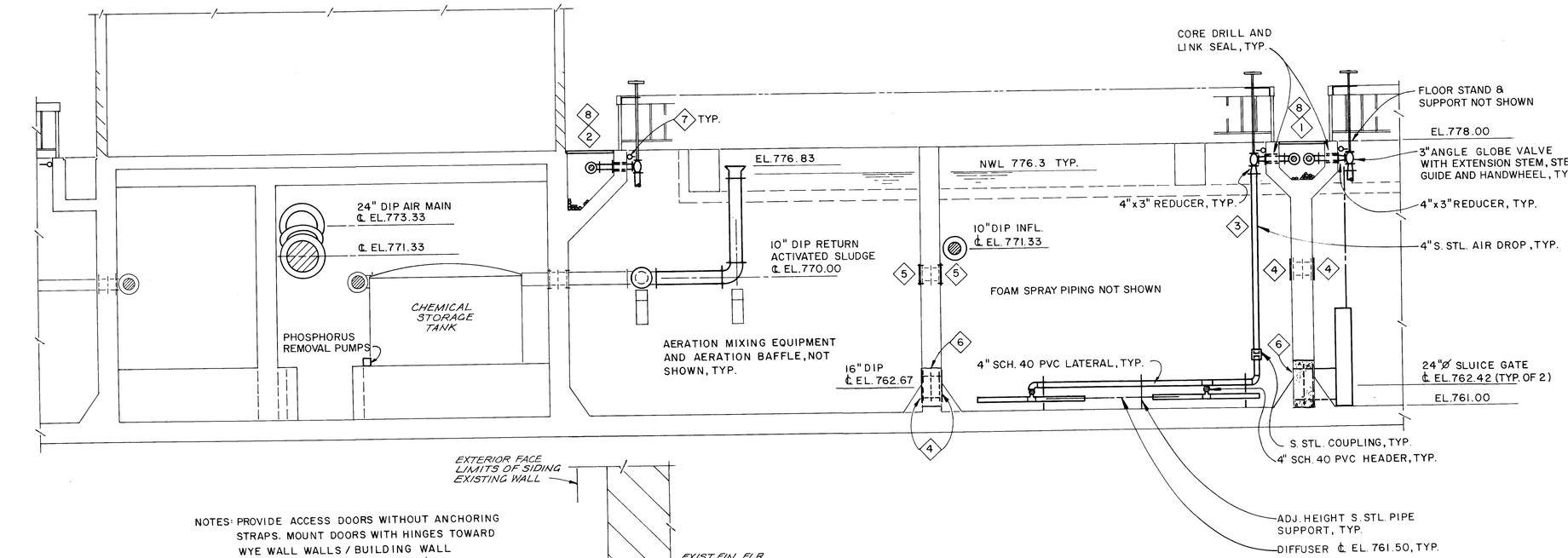
EXISTING BLOWER BUILDING & AERATION TANKS LOWER PLAN MODIFICATIONS

SCALE: 3/16"=1'-0" OR AS NOTED

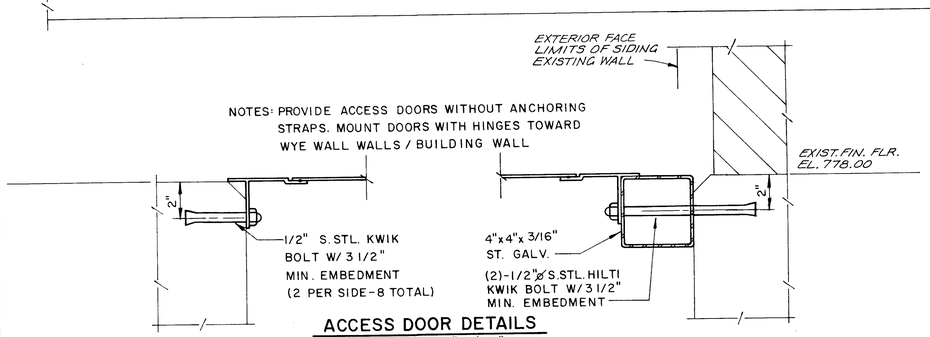
SHEET NO. 49 OF 112



SECTION A (48|50)



SECTION B (48|50)



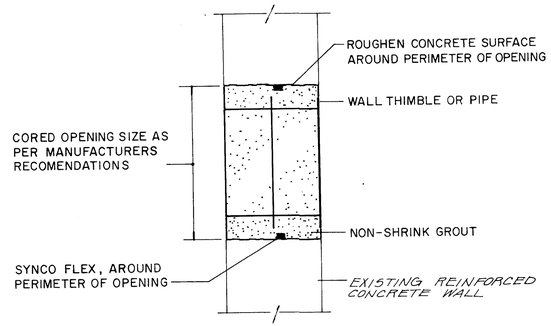
ACCESS DOOR DETAILS
SCALE: 3" = 1'-0"

LEGEND
- EXISTING ITEMS
- PROPOSED ITEMS

CODED NOTES

1. ALL AIR LINES IN WYE WALL AT INVERT ELEVATION 776.67. USE ECCENTRIC REDUCERS
2. ALL AIR LINES IN WYE WALL AT INVERT ELEVATION 776.58. USE ECCENTRIC REDUCERS
3. SIZES SHOWN FOR PIPING AND VALVE ARE TYPICAL FOR 4-INCH AIR DROP. DECREASE SIZES BY 1 INCH FOR 3-INCH AIR DROPS.
4. BLIND FLANGE.
5. PLUG WALL PIPE.
6. SEE TYPICAL PIPE CLOSURE, EXISTING WALL DETAIL THIS SHEET.
7. FOAM SPRAY PIPING, SEE DETAIL SHEET 23.
8. REPLACE GRAVEL BETWEEN AIR METER CHAMBERS AFTER PIPING, SUPPORTS, AND CONCRETE WALLS ARE COMPLETED. PROVIDE 2-INCH ASPHALT WALK OVER GRAVEL.
9. FLANGED COUPLING ADAPTER. LOCATE UNIFLANGE FARTHER BACK ON PIPE BARREL AND TIE FCA TO UNIFLANGE WITH THREADED RODS.

NOTE: REQUIRED PIPING SUPPORTS NOT ALL SHOWN.



TYPICAL PIPE CLOSURE EXISTING WALLS
SCALE: NONE

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	WKG
DRAWN BY:	DEH
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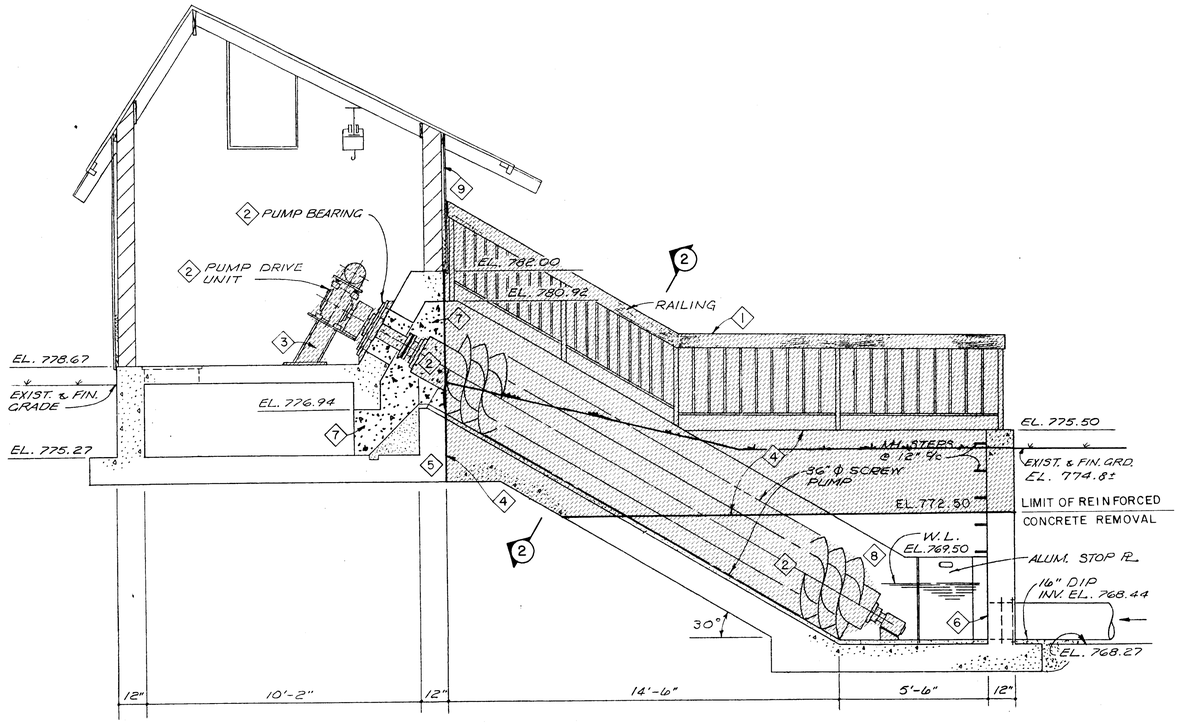
APPROVED BY:	RBD
DATE:	FEB., 1995

EXISTING BLOWER BUILDING & AERATION TANKS SECTIONS MODIFICATIONS

SCALE: 1/4 = 1'-0" OR AS NOTED

SHEET NO. 50 OF 112

ATLAS BLUEPRINT 563417



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

CODED NOTES

1 REMOVE RAILING AND GATES. SALVAGE ONE OF THE GATES AND REMOUNT AT EXISTING TERTIARY BUILDING.

2 REMOVE SCREW PUMP, PUMP BEARING AND PUMP DRIVE UNIT COMPLETE. TYPICAL OF TWO.

3 REMOVE PUMP DRIVE SUPPORT. CUT ANCHORS TO 1-INCH BELOW FLOOR SLAB. FILL HOLES AND PATCH FLOOR WITH NONSHRINK GROUT. FINISHED ELEVATION SHALL MATCH EXISTING FLOOR.

4 REMOVE PORTION OF REINFORCED CONCRETE WALLS AS SHOWN.

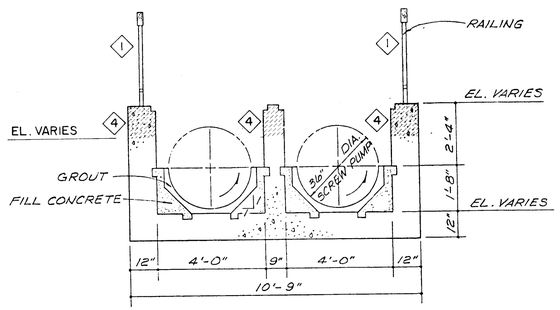
5 REMOVE REINFORCING STEEL TO A DEPTH OF 1 INCH ALONG THE ENTIRE CUT WALL AND FILL VOID WITH NONSHRINK GROUT.

6 PLUG PIPE WITH CLASS C CONCRETE.

7 FILL AREA SHOWN WITH CLASS B CONCRETE.

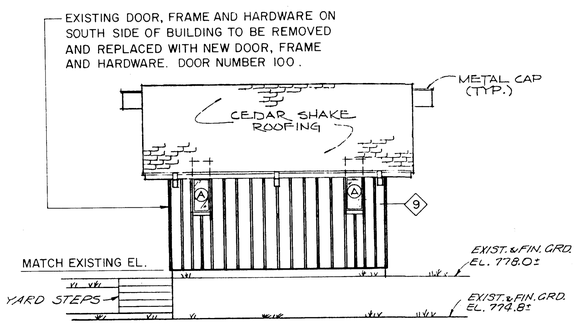
8 FILL REMAINING TANK VOLUME WITH BACKFILL AND GRADE TO MATCH EXISTING GROUND.

9 REMOVE EXISTING SIDING ON EAST ELEVATION. EXTEND EXISTING FURRING STRIPS ONTO CONCRETE FACE WITH 1/2-INCH THICK FURRING STRIPS (SHIM AS NECESSARY). INSTALL NEW PLYWOOD SIDING. SEE EAST ELEVATION FOR FINISHED VIEW.



SECTION
SCALE: 3/8" = 1'-0" (2)

NOTE: THIS SECTION SHOWN FOR INFORMATION ONLY. PLEASE REFER TO LONGITUDINAL SECTION FOR ITEMS TO BE DEMOLISHED.



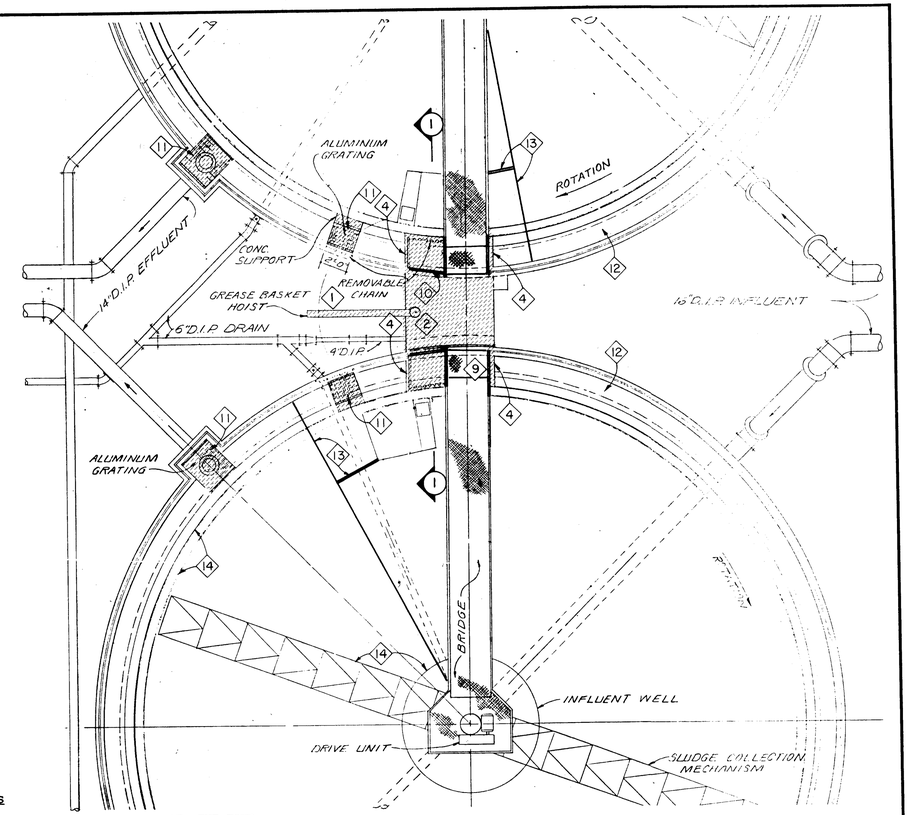
EAST BUILDING ELEVATION
SCALE: 3/16" = 1'-0"

EXISTING SCREW PUMP STATION

NOTE: CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS AND DIMENSIONS

LEGEND

EXISTING ITEMS
PROPOSED ITEMS
DEMOLITION ITEMS



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

CODED NOTES

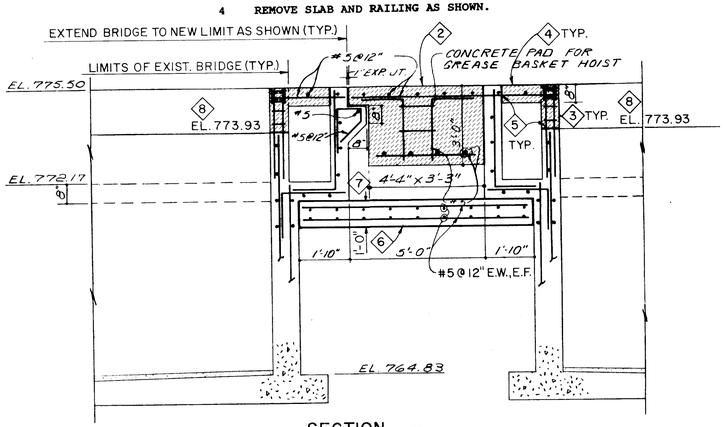
THE FOLLOWING NOTES APPLY TO EACH OF THE FOUR EXISTING CLARIFIERS UNLESS NOTED OTHERWISE)

1 REMOVE GREASE BASKET HOIST. TYPICAL FOR EACH PAIR OF EXISTING CLARIFIERS.

2 REMOVE CONCRETE SUPPORT FOR GREASE BASKET HOIST. TYPICAL FOR EACH PAIR OF EXISTING CLARIFIERS. RETAIN LIGHT POLE HAUNCH.

3 REMOVE CONCRETE PIER. TYPICAL OF THREE EACH EXISTING CLARIFIER.

4 REMOVE SLAB AND RAILING AS SHOWN.



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

EXISTING FINAL CLARIFIERS

5 REMOVE REINFORCING STEEL TO 1 INCH BELOW CUT SURFACES AND FILL VOID WITH NONSHRINK GROUT.

6 EXCAVATE TO THE DEPTH REQUIRED FOR INSTALLATION OF THE 12-INCH THICK CONCRETE SLAB. SLAB WIDTH SHALL EXTEND 6 INCHES BEYOND EACH SIDE OF THE BRIDGE. TYPICAL FOR EACH PAIR OF EXISTING CLARIFIERS.

7 BACKFILL TO MATCH EXISTING GRADE. TYPICAL FOR EACH PAIR OF EXISTING CLARIFIERS. ADD NEW CONCRETE SIDEWALK (NOT SHOWN) BETWEEN CLARIFIER BRIDGES. EXTEND NORTH AND SOUTH AS NECESSARY TO ABUT EXISTING WALK (MATCH EXISTING WALK WIDTH).

8 ELEVATION SHALL MATCH EXISTING WALL. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS.

9 EXTEND BRIDGE TO EXTERIOR WALL - SEE SPECIFICATION SECTION 11356 FOR DETAILS

10 SALVAGE EXISTING RAILING (FROM CLARIFIER OR SCREW PUMP STATION)/PROVIDE NEW RAILING IF NECESSARY; INSTALL THIS LOCATION.

11 REMOVE GRATING. REMOVE ANY GRATING SUPPORT THAT MAY INTERFERE WITH THE INSTALLATION AND OPERATION OF THE ALGAE SWEEP EQUIPMENT.

12 PROVIDE AND INSTALL NEW ALGAE SWEEP ASSEMBLY (TYPICAL EACH EXISTING CLARIFIER). SEE SPECIFICATION SECTION 11356.

13 MODIFY SKIMMER TO TANGENTIAL TYPE; MODIFY SCUM BOX; PROVIDE AND INSTALL AN ANTI-ROTATION SCUM BAFFLE - TYPICAL FOR THREE OF THE FOUR EXISTING CLARIFIERS. MODIFY EXISTING ANTI-ROTATION BAFFLE - TYPICAL FOR ONE UNIT. SEE SPECIFICATION SECTION 11356.

14 ALL SUBMERGED FERROUS METALS CURRENTLY COATED WITH COAL TAR EPOXY TO BE ABRASIVE BLASTED AND PREPARED, REPAINTED IN ACCORDANCE WITH SPECIFICATION SECTION 09900. AREAS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO SLUDGE COLLECTION MECHANISM, INFLUENT WELL, BAFFLE, WEIR, SUPPORTS, SLUDGE WELL, AND FITTINGS - TYPICAL OF FOUR EXISTING CLARIFIERS.

NOTE: WEIRS MUST BE REMOVED TO PAINT BOTH SIDES. REMOUNT WEIRS AT EXISTING ELEVATIONS.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

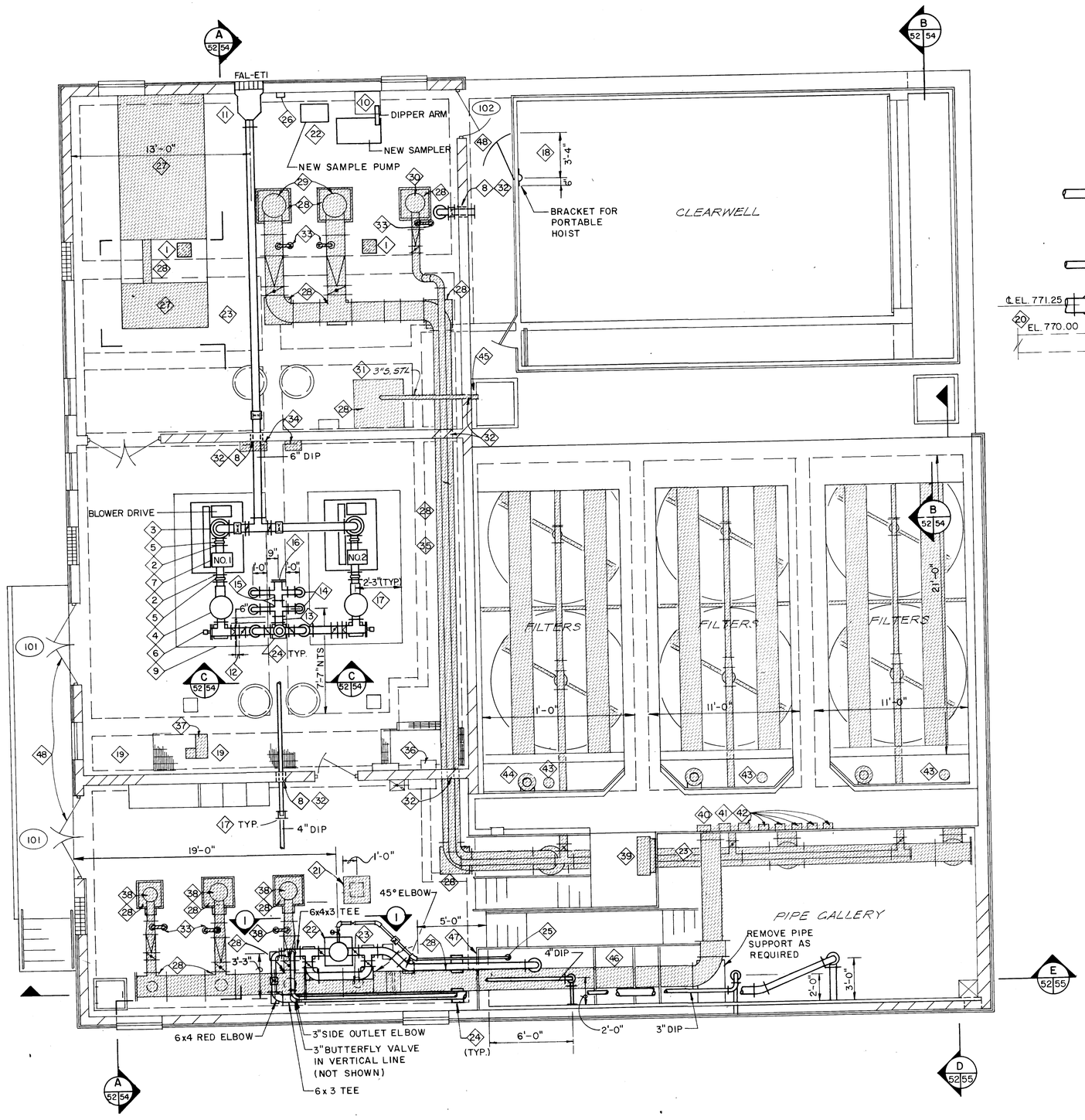
DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

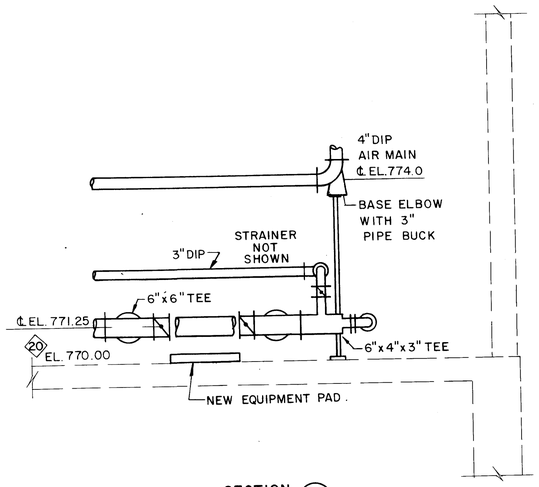
JOB NO.	15582
DESIGNED BY:	VVC
DRAWN BY:	DEH
CHECKED BY:	VVC
APPROVED BY:	RBO
DATE:	FEB., 1995

EXISTING SCREW PUMP STATION & FINAL CLARIFIERS MODIFICATIONS

SCALE: AS NOTED
SHEET NO. 51 OF 112

ATLAS BLUEPRINT 293817





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

20 UPPER PLAN

CODED NOTES

1. REMOVE EXISTING FLOOR STAND/SLUICE GATE. CUT BOLTS 1 INCH BELOW CONCRETE, FILL VOID AND SHAFT HOLE WITH NONSHRINK GROUT, IF NOT REUSABLE. INSTALL NEW FLOOR STAND/SLUICE GATE.
2. 5" X 11" REDUCING FLANGE.
3. INLET SILENCER.
4. DISCHARGE SILENCER.
5. EXPANSION JOINT.
6. PRESSURE RELIEF VALVE.
7. POST AERATION BLOWER.
8. CORE DRILL HOLE IN MASONRY WALL FOR NEW PIPE.
9. REMOVE EXISTING OZONE GENERATOR EQUIPMENT INCLUDING BASE PLATE. CUT PIPES AND CONDUITS FLUSH WITH EQUIPMENT PAD AND PLUG WITH NONSHRINK GROUT. REMOVE EXISTING OVERHEAD OZONE PIPING. NEW BLOWER EQUIPMENT SHALL BE INSTALLED ON EXISTING CONCRETE PAD. SEE ELECTRICAL PLANS FOR MODIFICATIONS OF EXISTING ELECTRICAL EQUIPMENT.
10. REMOVE EXISTING SAMPLER FROM SERVICE. CUT SUCTION LINE FLUSH WITH FLOOR AND FILL HOLE WITH NONSHRINK GROUT.
11. ALUMINUM (12 GAUGE) TRANSITION/FILTER BOX. PROVIDE FULL PERIPHERY GASKETED FLANGE AND 6-INCH DIAMETER FLANGED NIPPLE SECURE TO MASONRY WITH 1/2-INCH DIAMETER STAINLESS STEEL EXPANSION BOLTS AND NUTS. MINIMUM TWO PER SIDE.
12. PROVIDE MINIMUM 3 INCHES BETWEEN CHECK VALVE AND BUTTERFLY VALVE (TYPICAL).
13. LOCATE AIR METER AT THIS POINT. TAP IS ELECTRICAL CONTRACTOR'S RESPONSIBILITY.
14. 3-INCH ANGLE GLOBE VALVE. TYPICAL OF FOUR.
15. 6" X 3" CROSS. PROVIDE REINFORCED CONCRETE PIPE SUPPORTS (NOT SHOWN).
16. PROVIDE BLIND FLANGE.
17. FLANGED COUPLING ADAPTER SECURED WITH TIE RODS TO UNIFLANGE.
18. REMOVE PORTION OF EXISTING RAILING AND INSTALL A GATE AND POST TO SWING OPEN AS SHOWN. REUSE EXISTING GATE AND POST FROM SCREW PUMP STATION.
19. LOCATION OF EXISTING HYPOCHLORITE FEED EQUIPMENT.
20. CONTRACTOR SHALL FIELD VERIFY ALL NECESSARY ELEVATIONS AND DIMENSIONS.
21. REMOVE EXISTING PUMP PAD FLUSH WITH EXISTING FLOOR. REMOVE REINFORCING TO 1 INCH BELOW EXISTING FLOOR ELEVATION AND FILL WITH NONSHRINK GROUT. FILL HOLE IN FLOOR WITH NONSHRINK GROUT.
22. NEW REINFORCED CONCRETE EQUIPMENT PAD.
23. PROVIDE PIPE AND ASSOCIATED SUPPORTS.
24. PROVIDE NEW REINFORCED CONCRETE PIPE SUPPORTS. NOT ALL REQUIRED SUPPORTS ARE SHOWN.
25. EXTEND 2-INCH STRAINER, COPPER WASH WATER DRAIN DOWN TO EXISTING 16-INCH CIP.
26. AIR FILTER GAUGE.
27. REMOVE EXISTING AIR PREPARATION SYSTEM INCLUDING METAL SUPPORT FRAMES AND EQUIPMENT BASE. REMOVE EXISTING COMPRESSOR INCLUDING AIR PIPING TO POST AERATION TANK. DISCONNECT NONPOTABLE WATER LINE INCLUDING FILTER MOUNTED ON EAST WALL TO DOWNSTREAM OF ISOLATION VALVE (MOUNTED ON EAST WALL). PROVIDE A CAP AT END OF NONPOTABLE LINE.
28. REMOVE CONCRETE EQUIPMENT BASE OR PIPE SUPPORT (NOT ALL SHOWN) FLUSH WITH FLOOR LEVEL. REMOVE REINFORCING TO 1 INCH BELOW EXISTING FLOOR ELEVATION AND FILL VOID WITH NONSHRINK GROUT. FILL ALL HOLES THRU FLOOR WITH NONSHRINK GROUT.
29. REMOVE BACKWASH PUMPS INCLUDING SUCTION BOWLS, COLUMNS, AND DRIVES COMPLETE.
30. REMOVE SURFACE WASH PUMP INCLUDING SUCTION BOWLS, COLUMN, AND DRIVE COMPLETE.
31. REMOVE OZONE DESTRUCT UNIT INCLUDING STAINLESS STEEL VENT LINE IN THE POST AERATION TANK AND STAINLESS STEEL VENT LINE ABOVE THE UNIT AND EXTENDING OUTSIDE.
32. FILL HOLES THROUGH MASONRY WALL WITH NONSHRINK GROUT. PAINT FILLED AREA MATCHING EXISTING COLOR. SEE SPECIFICATION SECTION 09900.
33. FILL HOLES IN FLOOR WITH NONSHRINK GROUT.
34. REMOVE AMBIENT OZONE MONITOR AND OZONE SYSTEM POWER MONITOR.
35. REMOVE PIPE SUPPORTS, PATCH HOLES WITH NONSHRINK GROUT AND PAINT AREA MATCHING EXISTING COLOR.
36. REMOVE FILTER EFFLUENT FLOW RECORDER.
37. REMOVE PLANT EFFLUENT FLOW METER AND RATIO/BIAS CONTROL. REMOVE PIPE SUPPORT AND FLANGE ON WALL.
38. REMOVE FILTER INFLUENT PUMPS INCLUDING SUCTION BOWLS, COLUMNS, AND DRIVES.
39. REMOVE FILTER CONTROL PANEL AND SUPPORTS.
40. REMOVE BACKWASH CONTROLLER.
41. REMOVE FILTER LEVEL INDICATOR.
42. REMOVE FILTER CONTROLLER.
43. REMOVE FILTER HIGH LEVEL SWITCH.
44. REMOVE FLANGE FLARE AND 90 DEGREE BEND. TYPICAL OF THREE.
45. REMOVE EXISTING SIDING WHERE PIPE PENETRATION IS AND REPLACE WITH MATCHING NEW CEDAR PLYWOOD SIDING.
46. REMOVE PIPE HANGER.
47. PROVIDE A STAINLESS STEEL CHAIN FROM THE TOP RAIL TO THE SOUTH WALL.
48. REMOVE EXISTING DOOR, FRAME AND HARDWARE. REPLACE WITH NEW DOOR, FRAME AND HARDWARE.

NOTE: SEE ADDITIONAL REQUIREMENTS FOR PATCHING CONCRETE IN SPECIFICATION 02050.

LEGEND

- EXISTING ITEMS
- PROPOSED ITEMS
- DEMOLITION ITEMS

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

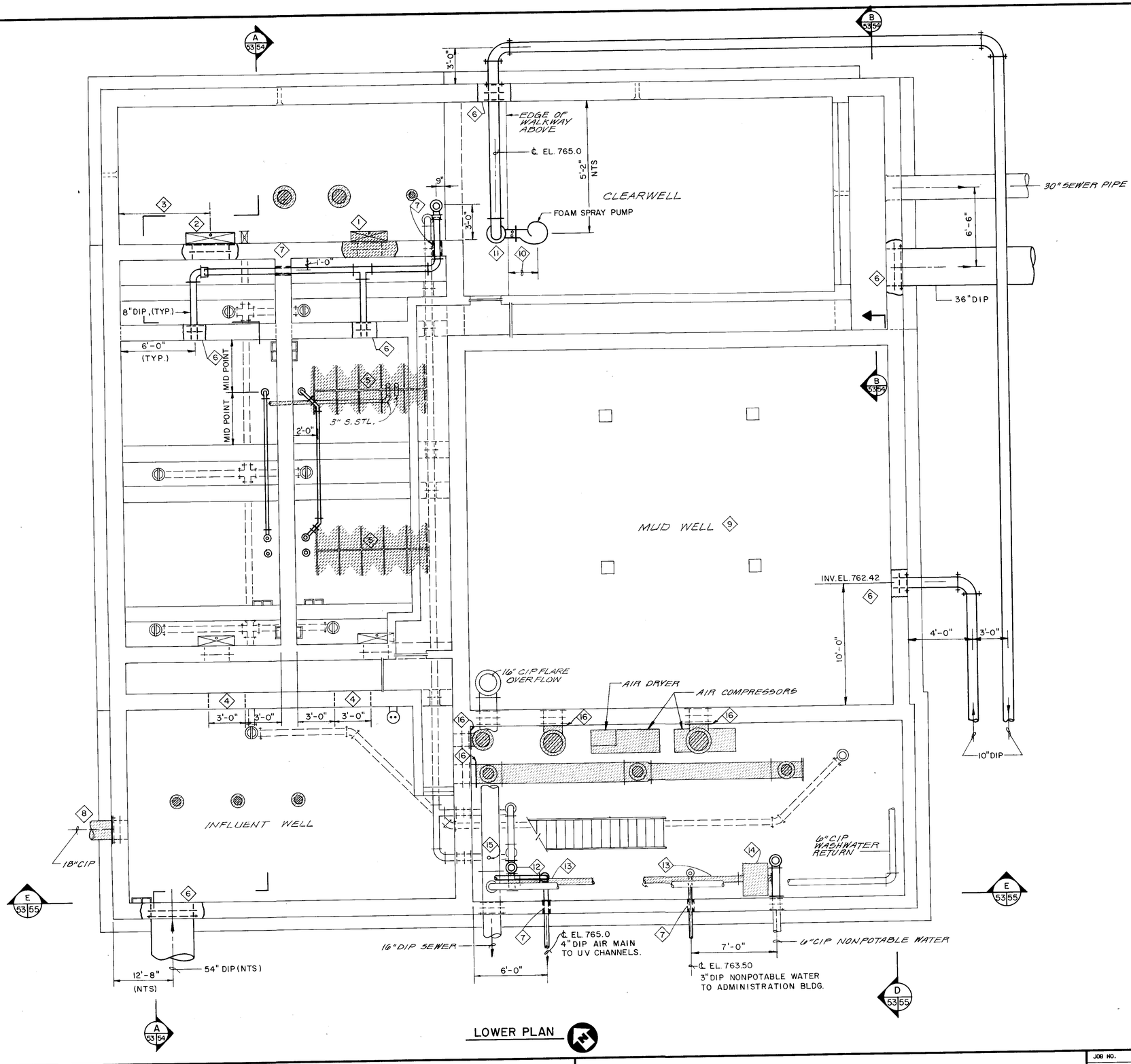
JOB NO.	15582
DESIGNED BY:	VC
DRAWN BY:	DEH/BLD
CHECKED BY:	VC
APPROVED BY:	RBD
DATE:	FEB., 1995

EXISTING TERTIARY BUILDING
UPPER PLAN MODIFICATIONS

SCALE: 1/4" = 1'-0" UNLESS NOTED

SHEET NO. 52 OF 112

ATLAS BLUEPRINT 55871



LOWER PLAN

CODED NOTES

1. REMOVE EXISTING 24-INCH SQUARE SLUICE GATE. CUT AND BREAK OUT REINFORCED CONCRETE, REMOVE THIMBLE. TYPICAL OF TWO.
2. GROUT NEW THIMBLE IN PLACE WITH NONSHRINK GROUT PER TYPICAL PIPE CLOSURE, EXISTING WALLS DETAIL SHEET 50. INSTALL NEW 36-INCH SQUARE SLUICE GATE. TYPICAL OF TWO.
3. LOCATE ℄ OF NEW SLUICE GATE ON THE ℄ OF EXISTING SLUICE GATE. TYPICAL OF TWO.
4. CUT OPENING AS SHOWN, BURN REINFORCING TO 1 INCH BEYOND CUT AND PLUG WITH NONSHRINK GROUT.
5. REMOVE EXISTING AIR PIPING, INCLUDING DOWN PIPE AND ALL SUPPORTS. TYPICAL TWO TANKS.
6. CORE DRILL REINFORCED CONCRETE. GROUT WALL PIPE IN PLACE WITH NONSHRINK GROUT PER TYPICAL PIPE CLOSURE EXISTING WALLS, DETAIL SHEET 50.
7. CORE DRILL AND PROVIDE LINK SEAL.
8. REMOVE 4 FEET SECTION OF EXISTING PIPE. PROVIDE MJ PLUG AT WALL. FILL ABANDONED PIPE WITH CLASS "C" CONCRETE.
9. REMOVE FILTER MEDIA AND ACCUMULATED SOLIDS FROM THE MUD WELL. DISPOSE OF MATERIALS OFF-SITE IN ACCORDANCE WITH ALL EPA AND OTHER GOVERNING REGULATIONs.
10. DIMENSION SHALL BE AS RECOMMENDED BY THE PUMP MANUFACTURER. LOCATION OF THE PUMP SHALL BE COMPATIBLE WITH THE PORTABLE HOIST FURNISHED.
11. MOUNT 10-INCH DIAMETER CHECK VALVE IN THE VERTICAL POSITION.
12. REMOVE EXISTING PIPE AND INSTALL A NEW 90 DEGREE ELBOW.
13. REMOVE EXISTING NONPOTABLE PIPING.
14. REMOVE EXISTING BASKET STRAINER.
15. TAP EXISTING 16-INCH CIP AND CONNECT 2-INCH STRAINER WASH WATER DRAIN.
16. PROVIDE BLIND FLANGE.

LEGEND

- EXISTING ITEMS
- PROPOSED ITEMS
- DEMOLITION ITEMS

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

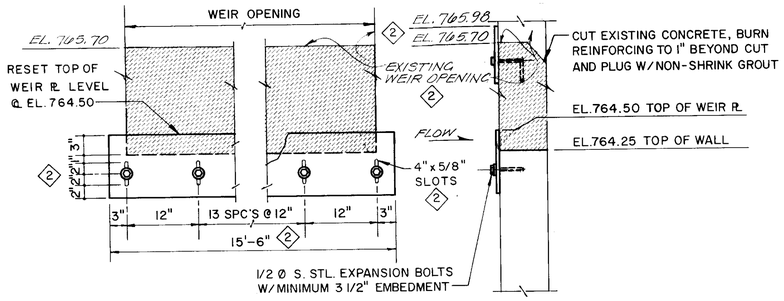
JOB NO.	15582
DESIGNED BY:	VVC
DRAWN BY:	BLD/DEH
CHECKED BY:	VVC
APPROVED BY:	RBD
DATE:	FEB., 1995

EXISTING TERTIARY BUILDING
LOWER PLAN MODIFICATIONS

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

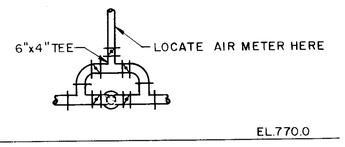
SHEET NO. 53 OF 112

ATLAS BLUEPRINT 55817



EXISTING EFFLUENT WEIR MODIFICATIONS

SCALE: 1" = 1'-0"



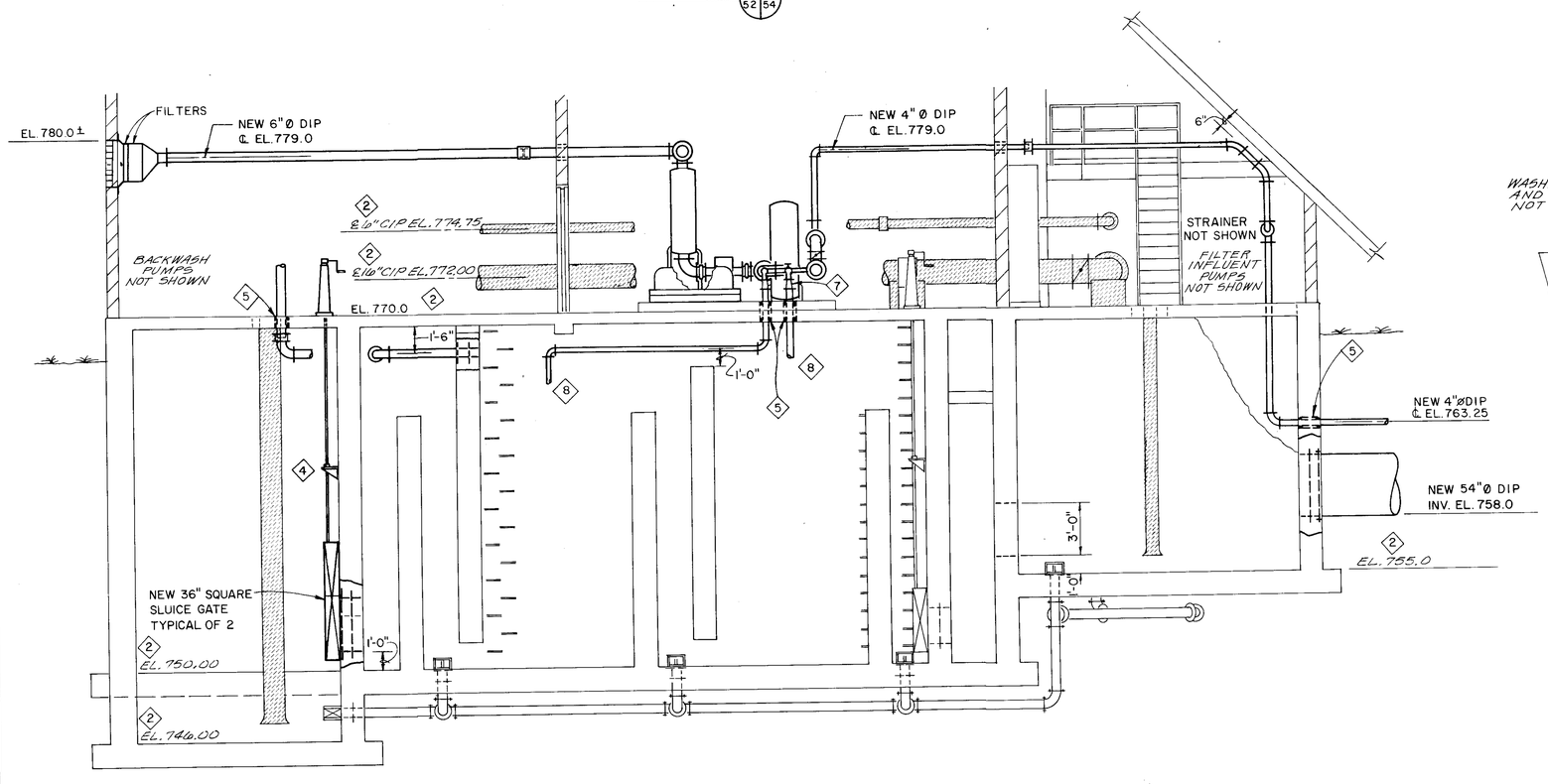
SECTION C (52 | 54)

CODED NOTES:

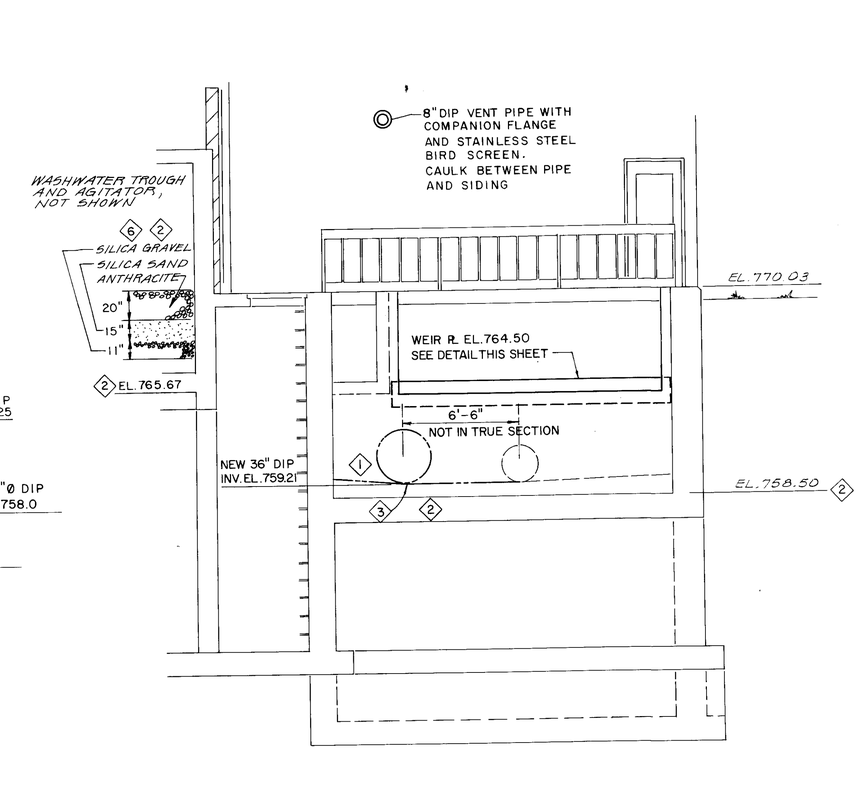
1. REMOVE GROUT AS NECESSARY.
2. CONTRACTOR SHALL FIELD VERIFY ALL NECESSARY ELEVATIONS AND/OR DIMENSIONS.
3. REMOVE CONCRETE AT EXTERIOR WALL FOR INSTALLATION OF MJ-PE WALL PIPE FOR NEW 36-INCH DIP SEWER. SALVAGE EXISTING REINFORCING TO WITHIN 2 INCHES OF NEW WALL PIPE. GROUT WALL PIPE IN PLACE WITH NONSHRINK GROUT.
4. REMOVE EXISTING STEM GUIDE AND PROVIDE NEW STEM GUIDE AS NECESSARY.
5. CORE DRILL AND PROVIDE LINK SEAL.
6. CONTRACTOR SHALL REMOVE FILTER MEDIA (ANTHRACITE, SILICA SAND, AND SILICA GRAVEL) AND DISPOSE MEDIA OFF SITE.
7. 4" X 3" DIP REDUCER (TYPICAL)
8. 4-INCH STAINLESS STEEL AIR DROPS. COUPLINGS, HEADERS, LATERALS, SUPPORTS AND FINE BUBBLE DIFFUSERS NOT SHOWN.

LEGEND

- EXISTING ITEMS
- PROPOSED ITEMS
- DEMOLITION ITEMS



SECTION A (52 | 54)



SECTION B (52 | 54)

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

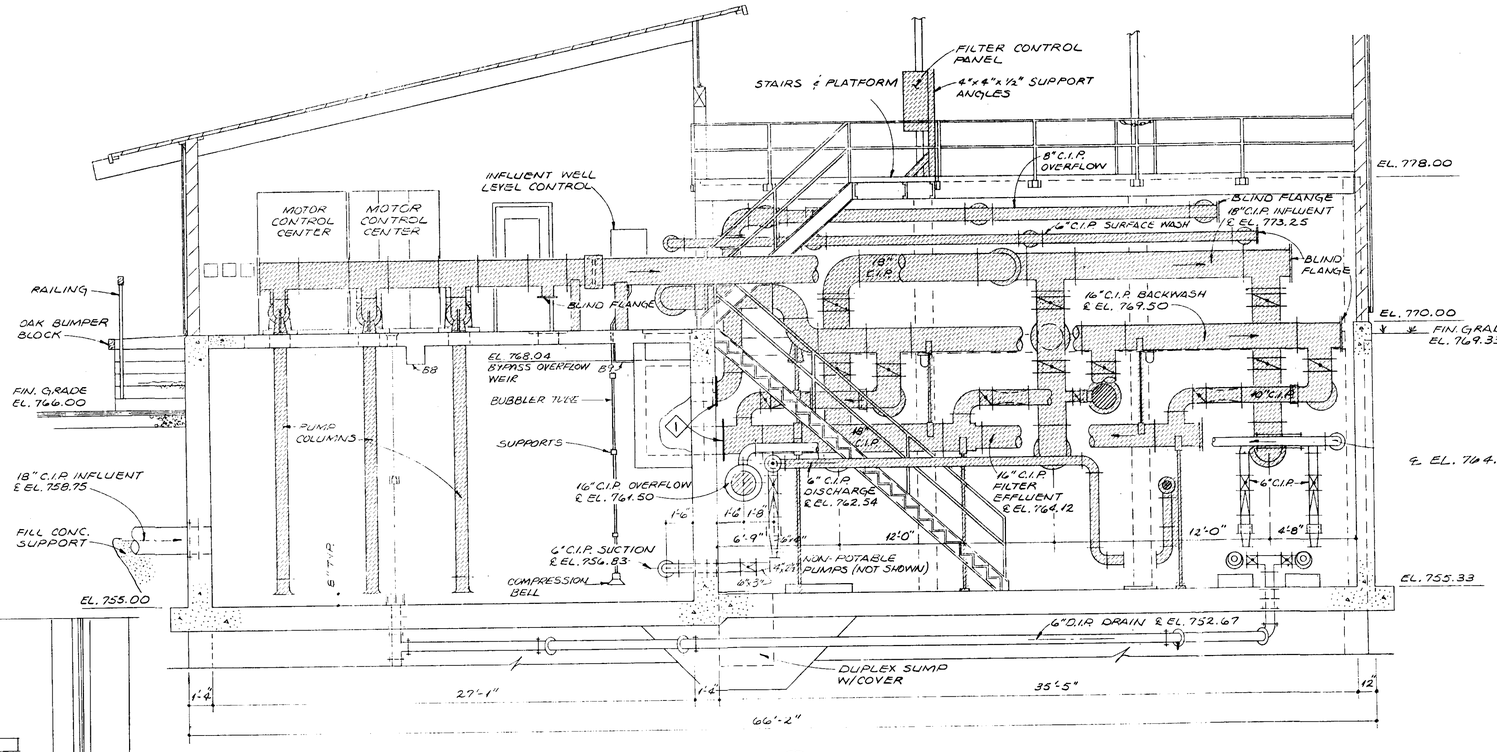
JOB NO.	15582
DESIGNED BY:	VVC
DRAWN BY:	BLD/DEH
CHECKED BY:	VVC
APPROVED BY:	RBD
DATE:	FEB. ,1995

EXISTING TERTIARY BUILDING SECTIONS MODIFICATIONS

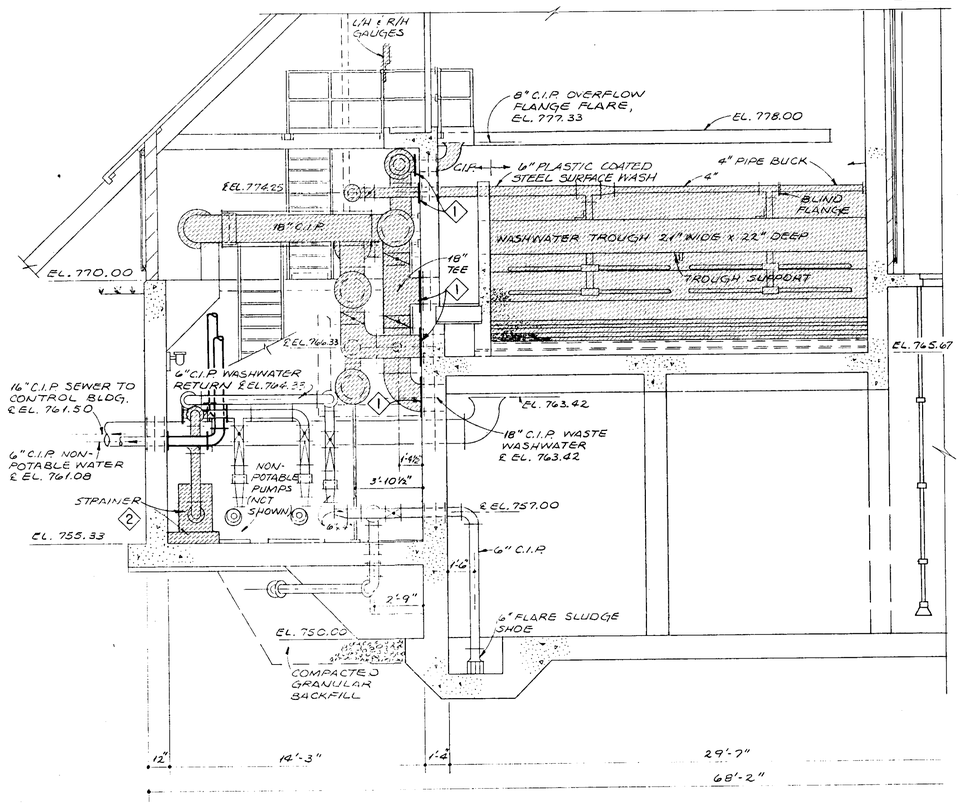
SCALE: 1/4"=1'-0" UNLESS NOTED

SHEET NO. 54 OF 112

ATLAS BLUEPRINT 58317



SECTION E (52/55)



SECTION D (52/55)

GENERAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS AND DIMENSIONS.

CODED NOTES

1. PROVIDE BLIND FLANGE. TYPICAL EACH FILTER (SECTION D).
2. REMOVE CONCRETE EQUIPMENT PAD FLUSH WITH EXISTING FLOOR. REMOVE REINFORCING TO 1 INCH BELOW FLOOR AND FILL VOID WITH NONSHRINK GROUT.

LEGEND

- EXISTING ITEMS
- PROPOSED ITEMS
- DEMOLITION ITEMS

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

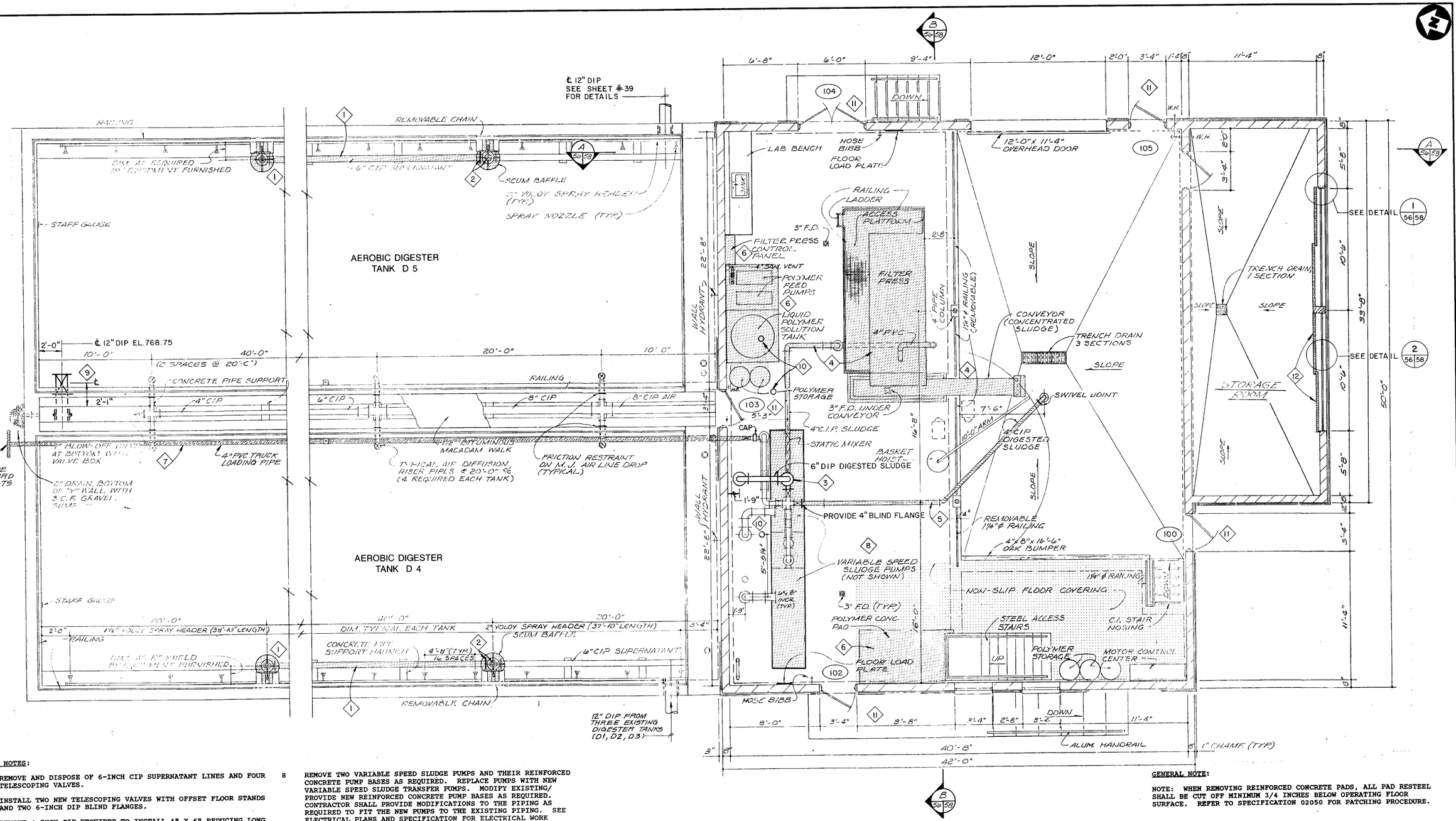
JOB NO.	15582
DESIGNED BY:	VVC
DRAWN BY:	DEH
CHECKED BY:	VVC
APPROVED BY:	RBD
DATE:	FEB, 1995

EXISTING TERTIARY BUILDING SECTIONS MODIFICATIONS

SCALE: 1/4" = 1'-0" DR AS NOTED

SHEET NO. 55 OF 112

ATLAS BLUEPRINT 45817



UPPER PLAN

CODED NOTES:

1. REMOVE AND DISPOSE OF 6-INCH CIP SUPERNATANT LINES AND FOUR TELESCOPING VALVES.
2. INSTALL TWO NEW TELESCOPING VALVES WITH OFFSET FLOOR STANDS AND TWO 6-INCH DIP BLIND FLANGES.
3. REMOVE 4-INCH CIP REQUIRED TO INSTALL 4" X 6" REDUCING LONG RADIUS ELBOW AND 6-INCH DIP. SUPPORT 6-INCH PIPE FROM ROOF BEAMS.
4. REMOVE AND STORE BELT FILTER PRESS, CONVEYOR AND ACCESS PLATFORM. REMOVE AND DISPOSE OF ALL BFP FEED, DISCHARGE, AND DRAIN PIPING, AND REINFORCED CONCRETE CURB. PROVIDE CLOSURE CAPS/PLUGS ON ALL PIPE TERMINATIONS.
5. REMOVE AND DISPOSE OF TRUCK LOADING PIPE AND SUPPORTS.
6. REMOVE AND DISPOSE OF POLYMER SYSTEM, REINFORCED CONCRETE PADS, AND PIPING.
7. REMOVE AND DISPOSE OF 4-INCH PVC TRUCK LOADING PIPE, VALVE, PIPE GUARD POSTS, AND PIPE HANGERS. PATCH ALL CONCRETE AND MASONRY HOLES WITH NONSHRINK GROUT AND RUB SMOOTH. REPAIR OPENING IN EXTERIOR SIDING OF BUILDING TO MATCH EXISTING. PROVIDE PVC CAP ON 4-INCH PVC PIPE INSIDE BUILDING AT REMOVAL TERMINATION. DO NOT REMOVE TRUCK LOADING PIPE UNTIL THE NEW TRUCK LOADING SYSTEM INSTALLED WITH THIS CONTRACT IS IN PLACE AND OPERATING.
8. REMOVE TWO VARIABLE SPEED SLUDGE PUMPS AND THEIR REINFORCED CONCRETE PUMP BASES AS REQUIRED. REPLACE PUMPS WITH NEW VARIABLE SPEED SLUDGE TRANSFER PUMPS. MODIFY EXISTING/ PROVIDE NEW REINFORCED CONCRETE PUMP BASES AS REQUIRED. CONTRACTOR SHALL PROVIDE MODIFICATIONS TO THE PIPING AS REQUIRED TO FIT THE NEW PUMPS TO THE EXISTING PIPING. SEE ELECTRICAL PLANS AND SPECIFICATION FOR ELECTRICAL WORK REQUIREMENTS.
9. CORE EXISTING REINFORCED CONCRETE WALL FOR 12-INCH DIP, ROUGHEN SURFACE AND GROUT PIPE IN PLACE WITH NONSHRINK GROUT. PROVIDE 12-INCH PLUG VALVE, VALVE EXTENSION STEM FROM VALVE NUT UP TO ELEVATION 774.0, STEM GUIDE, AND PIPE HANGER FROM CONCRETE TROUGH TO SUPPORT PIPE AND VALVE.
10. NEW FLOOR BOX FOR VALVE BELOW.
11. REMOVE DOOR, FRAME AND HARDWARE; REPLACE WITH NEW DOOR, FRAME AND HARDWARE.
12. REMOVE EXISTING DOORS, FRAMES AND HARDWARE. FILL OPENING WITH WOOD FRAMING, INSULATION, SHEATHING, WOOD SIDING AND PARTICLE BOARD.

GENERAL NOTE:

NOTE: WHEN REMOVING REINFORCED CONCRETE PADS, ALL PAD RESTEEL SHALL BE CUT OFF MINIMUM 3/4 INCHES BELOW OPERATING FLOOR SURFACE. REFER TO SPECIFICATION 02050 FOR PATCHING PROCEDURE.

EXISTING AEROBIC DIGESTERS 1, 2, 3 NOTE:

THE CONTRACTOR SHALL PERFORM THE FOLLOWING WORK IN THE THREE EXISTING AEROBIC DIGESTER TANKS LOCATED IMMEDIATELY WEST OF AEROBIC DIGESTER TANK D4:

THERE ARE APPROXIMATELY 160 DIFFUSERS IN EACH OF THE THREE EXISTING TANKS (TOTAL OF 480). THE DIFFUSER BASES ARE MADE OF MOLDED CELCON PLASTIC AND HAVE 3/4-INCH NPT MALE THREADS SCREWED INTO PVC COUPLINGS ON 12-INCH-LONG PVC EXTENSION STEMS. THE 12-INCH EXTENSION STEMS HAVE 3/4-INCH NPT MALE THREADS SCREWED INTO 4-INCH PVC HEADERS. REMOVE THE DIFFUSERS AND EXTENSION STEMS, DISPOSE OF THE EXTENSION STEMS, AND SCREW THE DIFFUSERS DIRECTLY INTO THE HEADERS.

LEGEND

EXISTING ITEMS
DEMOLITION ITEMS
PROPOSED ITEMS

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	RLJ
DRAWN BY:	DEH
CHECKED BY:	RLJ
APPROVED BY:	RLJ
DATE:	FEB. 1995

EXISTING CONCENTRATOR BUILDING & AEROBIC DIGESTERS UPPER PLAN MODIFICATIONS

SCALE: 1/4"=1'-0" OR AS NOTED

SHEET NO. 56 OF 112

ATLAS BLUEPRINT 143917

LOWER PLAN

LEGEND

- EXISTING ITEMS
- DEMOLITION ITEMS
- PROPOSED ITEMS

CODED NOTES:

1. REMOVE 6-INCH CIP AND PROVIDE TWO BLIND FLANGES.
2. INSTALL NEW 6-INCH DIP DIGESTED SLUDGE AND VALVE.
3. INSTALL NEW 12-INCH DIP AIR, REDUCER AND VALVE.
4. INSTALL NEW 8-INCH DIP WAS REDUCING ELBOW AND VALVE.
5. INSTALL NEW 6-INCH DIP DIGESTED SLUDGE.
6. REMOVE AND DISPOSE OF EXISTING AIR DIFFUSION SYSTEM FROM ANGLE GLOBE VALVES DOWNWARD (SAVE VALVES). INSTALL NEW AIR DIFFUSION SYSTEM IN EACH TANK. NEW AIR SYSTEM SHALL INCLUDE DROP PIPES, MANIFOLDS, HEADERS, DIFFUSERS, AND FLOOR STAND SUPPORTS FOR FULL FLOOR COVERAGE IN ACCORDANCE WITH EXISTING DIGESTER DIFFUSION SYSTEM OF SPECIFICATION SECTION 11377.
7. REMOVE AND DISPOSE OF BELT PRESS DRAIN PIPING. PROVIDE BLIND FLANGE AT TERMINATION POINT.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

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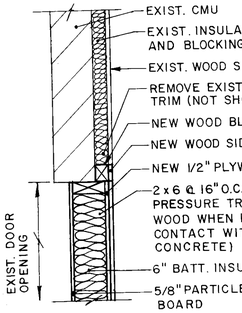
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	RLJ
DRAWN BY:	DEH
CHECKED BY:	RLJ
APPROVED BY:	RBD
DATE:	FEB, 1995

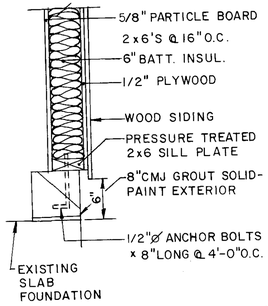
EXISTING CONCENTRATOR BUILDING
& AEROBIC DIGESTERS
LOWER PLAN MODIFICATIONS

SCALE: 1/4"=1'-0" OR AS NOTED

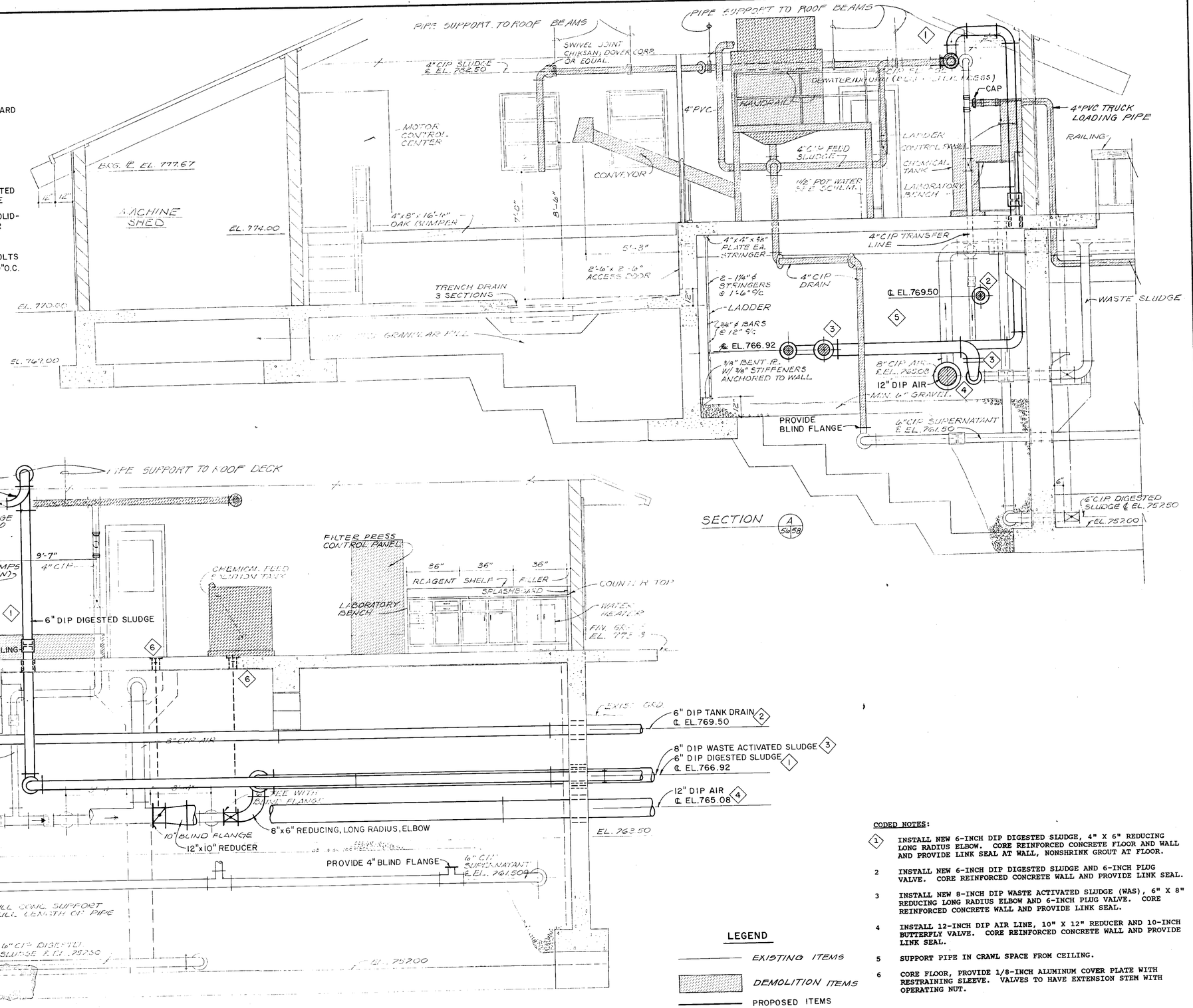
SHEET NO. 57 OF 112



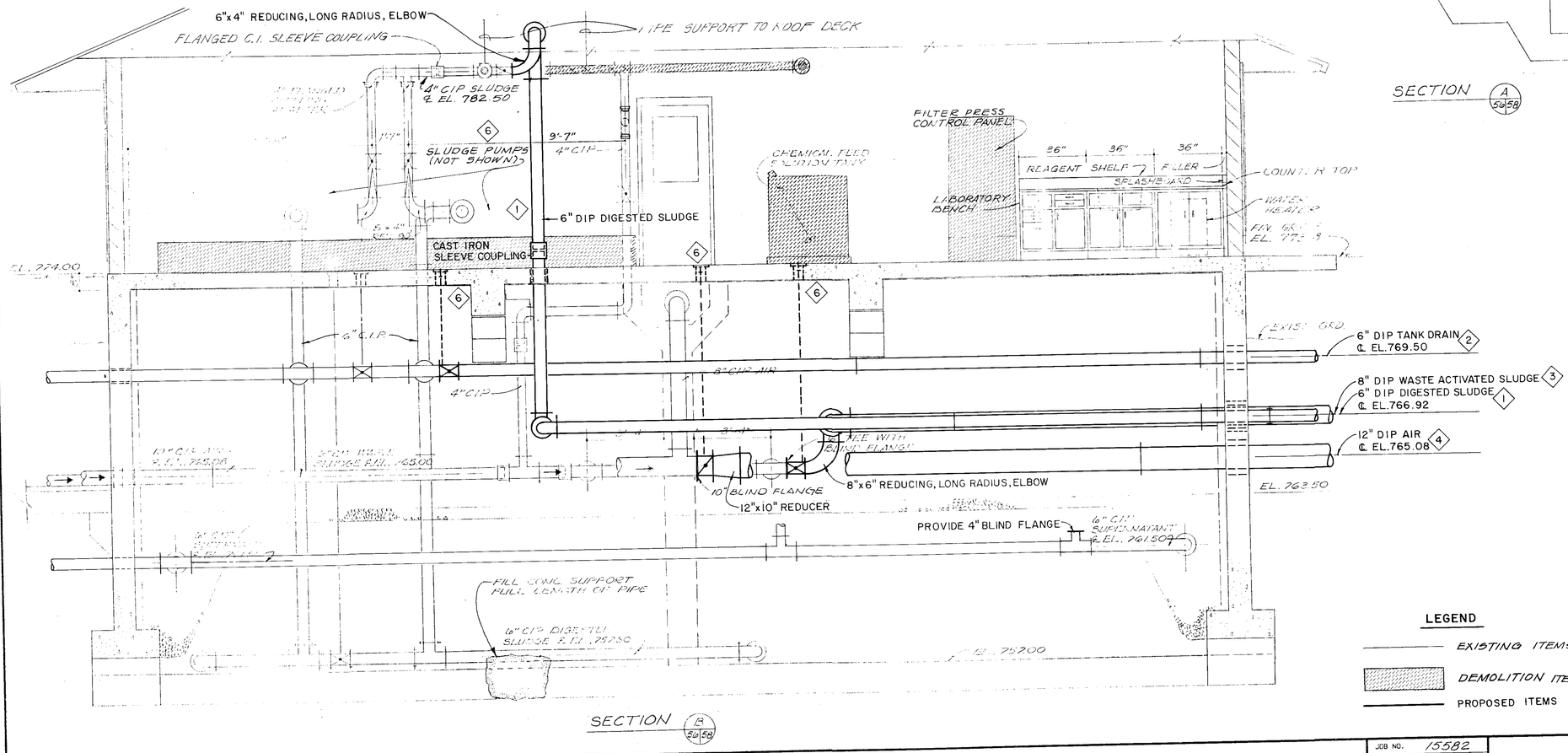
DETAIL 1
SCALE: 3/4"=1'-0" 56/58



SILL DETAIL 2
SCALE: 3/4"=1'-0" 56/58



SECTION A 56/58



SECTION B 56/58

CODED NOTES:

1. INSTALL NEW 6-INCH DIP DIGESTED SLUDGE, 4" X 6" REDUCING LONG RADIUS ELBOW. CORE REINFORCED CONCRETE FLOOR AND WALL AND PROVIDE LINK SEAL AT WALL, NONSHRINK GROUT AT FLOOR.
2. INSTALL NEW 6-INCH DIP DIGESTED SLUDGE AND 6-INCH PLUG VALVE. CORE REINFORCED CONCRETE WALL AND PROVIDE LINK SEAL.
3. INSTALL NEW 8-INCH DIP WASTE ACTIVATED SLUDGE (WAS), 6" X 8" REDUCING LONG RADIUS ELBOW AND 6-INCH PLUG VALVE. CORE REINFORCED CONCRETE WALL AND PROVIDE LINK SEAL.
4. INSTALL 12-INCH DIP AIR LINE, 10" X 12" REDUCER AND 10-INCH BUTTERFLY VALVE. CORE REINFORCED CONCRETE WALL AND PROVIDE LINK SEAL.
5. SUPPORT PIPE IN CRAWL SPACE FROM CEILING.
6. CORE FLOOR, PROVIDE 1/8-INCH ALUMINUM COVER PLATE WITH RESTRAINING SLEEVE. VALVES TO HAVE EXTENSION STEM WITH OPERATING NUT.

LEGEND

- EXISTING ITEMS
- DEMOLITION ITEMS
- PROPOSED ITEMS

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

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EXISTING CONCENTRATOR BUILDING & AEROBIC DIGESTERS SECTIONS MODIFICATIONS

SCALE: 3/8"=1'-0" OR AS NOTED

SHEET NO. 58 OF 112

ATLAS BLUEPRINT 55017

GENERAL NOTES

GENERAL

THESE NOTES ARE GENERAL REQUIREMENTS. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

CONFLICT OF DIMENSIONS OR DETAILS SHOWN ON THE STRUCTURAL, ARCHITECTURAL, PROCESS, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS SHALL BE PROMPTLY REPORTED TO THE ENGINEER/ARCHITECT.

FIELD VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS BEFORE PROCEEDING WITH THE WORK. ANY DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS AND THE ACTUAL FIELD CONDITIONS MUST BE REPORTED IMMEDIATELY TO THE ENGINEER/ARCHITECT.

ALL DETAILS AND SECTIONS SHOWN ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT UNLESS NOTED OR SHOWN OTHERWISE.

SHOP DRAWINGS PREPARED BY SUPPLIERS AND SUBCONTRACTORS SHALL BE REVIEWED AND APPROVED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION TO THE ENGINEER/ARCHITECT.

THE STRUCTURE IS DESIGNED TO BE STABLE AND SELF-SUPPORTING AT THE COMPLETION OF CONSTRUCTION. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE STABILITY AND SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS, AND THE ADEQUACY OF TEMPORARY OR INCOMPLETE CONNECTIONS DURING CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS OR TIE-DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL IS NOT INDICATED ON THE DRAWINGS AND, IF PROVIDED, SHALL BE REMOVED, AS CONDITIONS PERMIT AND REMAIN THE PROPERTY OF THE CONTRACTOR.

SUPPORT, BRACE, AND SECURE EXISTING STRUCTURES AS REQUIRED TO PREVENT DAMAGE AND MOVEMENT. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFETY OF EXISTING STRUCTURES DURING CONSTRUCTION.

COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR LINTELS, METAL PAN STAIRS, SIZE AND LOCATION OF FLOOR SLOPES, DEPRESSED AREAS, FINISH FILLS, CHAMFERS, GROOVES, RAILING SLEEVES, ROOF EDGES, INSERTS, ETC.

COORDINATE WITH CIVIL, MECHANICAL AND ELECTRICAL DRAWINGS FOR PIPE SLEEVES, FLOOR DRAINS, ROOF DRAINS, INSERTS, HANGERS, TRENCHES, PITS, WALL AND SLAB OPENINGS, CONDUIT RUNS IN WALLS AND SLABS, SIZE AND LOCATION OF MACHINE OR EQUIPMENT SUPPORTS, BASE AND ANCHOR BOLTS, RAILING, ETC.

COORDINATE WITH SITE, ARCHITECTURAL, ELECTRICAL, MECHANICAL, AND CIVIL DRAWINGS FOR RETAINING WALLS, PADS, PAVEMENT AND OTHER CONCRETE STRUCTURES.

CODES AND SPECIFICATIONS

OHIO BASIC BUILDING CODE, 1993
AMERICAN CONCRETE INSTITUTE:
- ACI 301-89 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
- ACI 302.1 R-89 "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION"
- ACI 304R-89 "GUIDE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE"
- ACI 311.1 R-92 "ACI MANUAL OF CONCRETE INSPECTION (SP-2)"
- ACI 315-80 (REVISED 1986) "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT"
- ACI 318-89 (REVISED 1992) "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
- ACI 347-88 "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK"

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) - "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS - ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN"
AMERICAN IRON AND STEEL INSTITUTE (AISI):
- "SPECIFICATION FOR DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS"

ALUMINUM ASSOCIATION - "SPECIFICATIONS FOR ALUMINUM STRUCTURES"
WOOD:
- NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, NDS-91
- AMERICAN INSTITUTE FOR TIMBER CONSTRUCTION (AITC)

DESIGN LOADS AND ASSUMPTIONS

DEAD LOADS:

COLLATERAL LOAD INCLUDES:	
DUCTWORK, PIPING, LIGHTS, CEILING	6.5 PSF

LIVE LOADS (LIVE LOAD REDUCTION USED IN ACCORDANCE WITH BUILDING CODE):

ROOF	21 PSF
FLOORS	300 PSF
STAIRS AND EXITS	150 PSF
GRATING	250 PSF

WIND COEFFICIENTS:

BASIC WIND SPEED	80 MPH
EXPOSURE	C
IMPORTANCE CATEGORY	III
IMPORTANCE FACTOR, I	1.07

EARTHQUAKE (V=2.5AvIKCSW):

SEISMIC ZONE	1
OCCUPANCY IMPORTANCE FACTOR, I	1.5
EFFECTIVE PEAK VELOCITY RELATED ACCELERATION, Av	0.07
HORIZONTAL FORCE FACTOR, K	1.00
C	0.12
SOIL FACTOR, S	1.2

DESIGN WATER LEVELS:

100 YEAR FLOOD ELEVATION	766.1 FEET

THE DESIGN GROUND WATER ELEVATIONS FOR THE VARIOUS STRUCTURES ARE AS FOLLOWS:

CLARIFIERS	772.00 FEET
BLOWER BUILDING & AERATION TANKS	772.00 FEET
SLUDGE THICKENER BUILDING & TANKS	766.10 FEET
TERTIARY COMPLEX	766.10 FEET
ADMINISTRATION BUILDING	773.00 FEET

WHERE PRESSURE RELIEF VALVES ARE PROVIDED THE DESIGN OF BOTTOM SLAB WALLS FOR HYDROSTATIC PRESSURE ASSUMES THAT THE MAXIMUM GROUND WATER LEVEL IS NO HIGHER THAN 1 FOOT ABOVE THE PRESSURE RELIEF VALVE ELEVATION.

THE ALLOWABLE SOIL BEARING PRESSURES ARE AS FOLLOWED FOR FOUNDATIONS PREPARED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS:

CLARIFIERS	8000 PSF
BLOWER BUILDING & AERATION TANKS	8000 PSF
SLUDGE THICKENER BUILDING & TANKS	8000 PSF
TERTIARY COMPLEX	4000 PSF
ADMINISTRATION BUILDING	2000 PSF

BUOYANCY

DURING CONSTRUCTION, TANKS, BASEMENTS, AND OTHER STRUCTURES, WHETHER THEY BE CONCRETE OR OTHER MATERIAL, CAN BE BUOYANT PRIOR TO BEING LOADED WITH BACKFILL AND SUPERSTRUCTURE. IN THE EVENT THAT THE EXCAVATION OR OTHER AREA AROUND THE STRUCTURE IS IN DANGER OF BEING FLOODED OR THE SURROUNDING GROUND AROUND THE EXCAVATION BECOMES SATURATED, THE CONTRACTOR SHALL PROVIDE SUFFICIENT OPENINGS OR OTHER DEVICES THAT WILL MAINTAIN THE WATER LEVEL ON THE INSIDE AT THE SAME ELEVATION AS THE OUTSIDE AND TAKE OTHER APPROPRIATE MEASURES THAT INSURES THAT THE STRUCTURES DO NOT FLOAT. THE MEASURES TAKEN SHALL NOT DAMAGE THE STRUCTURES. MEASURES SHALL BE PROVIDED THAT WILL INSURE PROTECTION OF THE STRUCTURES AGAINST FLOTATION WHEN THE CONSTRUCTION SITE IS UNATTENDED. THE CONTRACTOR WILL BE RESPONSIBLE FOR DESIGN OF A PLAN TO PREVENT ANY DAMAGE DUE TO FLOTATION AND SHALL SUBMIT THE PLAN TO THE OWNER PRIOR TO INITIATION OF CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE TO IMPLEMENT THE PLAN FOR PROTECTION, AND WILL BE RESPONSIBLE FOR ALL DAMAGES TO STRUCTURES THAT BECOME BUOYANT.

THE WEIGHT OF SOIL ABOVE THE FOOTINGS IS REQUIRED TO RESIST BUOYANCY AND MUST NOT BE REMOVED BY FUTURE CONSTRUCTION.

EARTHWORK/FOUNDATIONS

SUBSURFACE INFORMATION WAS TAKEN FROM THE REPORT PREPARED BY THE H.C. NUTTING COMPANY, DATED JUNE 1994. THE SUBSURFACE REPORT IS NOT TO BE CONSIDERED AS COMPLETE RECORD OF THE EXISTING CONDITIONS AT THE SITE. THE CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS, INCLUDING SUBSURFACE CONDITIONS.

NOTIFY ENGINEER IF FOUNDATION CONDITIONS ENCOUNTERED DIFFER FROM SOILS EXPLORATION INFORMATION MADE AVAILABLE TO THE CONTRACTOR.

MATERIALS FROM FOUNDATION EXCAVATIONS SHALL BE SEGREGATED AND STOCKPILED FOR LATER USE. MATERIALS SHALL BE SEGREGATED INTO STOCKPILES OF TOP SOIL, COHESIVE SOILS (SILT AND CLAY), AND GRANULAR SOILS (SAND AND GRAVEL).

BEARING SURFACES FOR FOUNDATIONS AND SLABS ON GRADE SHALL BE APPROVED PRIOR TO PLACING REINFORCING STEEL AND PRIOR TO PLACING CONCRETE.

ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL UNLESS SHOWN OTHERWISE.

CENTER FOOTINGS UNDER COLUMNS OR WALLS UNLESS NOTED.

SOIL UNDER FOOTINGS SHALL BE PROTECTED AGAINST FREEZING.

SUBSEQUENT TO SUBGRADE PREPARATION AT STRUCTURES OR PAVEMENTS AND PRIOR TO EXCAVATION FOR FOOTINGS, THE SUBGRADE BENEATH THE ENTIRE PLAN AREA OF ALL STRUCTURES OR PAVEMENTS SHALL BE PROOFROLLED. THE PROOFROLLING EQUIPMENT SHALL CONSIST OF A HEAVILY LOADED PNEUMATIC TIRED VEHICLE, SUCH AS A LOADED DUMP TRUCK, THAT IS ACCEPTABLE TO THE ENGINEER. THE GROSS LOAD OF THE VEHICLE SHALL BE AT LEAST 25 TONS. THE STRUCTURE OR PAVEMENT'S SUBGRADE SHALL BE ROLLED WITH AT LEAST TWO COVERAGES OF THE VEHICLE OVER THE ENTIRE AREA OR AS DIRECTED BY THE ENGINEER. ANY SOFT OR WEAK AREAS SHALL BE REMOVED AND REPLACED OR THE EXISTING SOILS SHALL BE MOISTURE CONDITIONED AND RECOMPACTED. SEE NOTES ON SHEET 12 FOR EMBANKMENT AT ADMINISTRATIVE BUILDING.

BACKFILL AGAINST WALLS SHALL NOT BE PLACED UNTIL THE FLOOR CONSTRUCTION AT THE FIRST FLOOR HAS BEEN COMPLETED TO BRACE THE WALL. FLOOR CONSTRUCTION CONCRETE SHALL HAVE OBTAINED ITS DESIGN STRENGTH. AT THE CONTRACTOR'S OPTION, WALLS MAY BE BRACED AND BACKFILL PRIOR TO CONSTRUCTING THE FIRST FLOOR. ANY SUCH BRACING SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL REMAIN IN PLACE UNTIL THE FIRST FLOOR IS COMPLETED.

THE DIFFERENCE IN ELEVATION OF THE BACKFILL ON THE INSIDE AND OUTSIDE OF WALLS SHALL NOT EXCEED TWO FEET UNTIL THE FIRST FLOOR SUPPORTED BY THE WALLS IS IN PLACE, UNLESS THE WALL IS BRACED TO PREVENT MOVEMENT.

CONCRETE AND REINFORCEMENT

ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH "THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" ACI 318-89.

ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI.

CONCRETE MAY CONTAIN FLY ASH NOT EXCEEDING 33 PERCENT OF THE CEMENT CONTENT BY WEIGHT. THE FLY ASH SHALL CONFORM TO ASTM C618, TYPE C OR F INCLUDING SUPPLEMENTARY OPTIONAL PHYSICAL REQUIREMENTS EXCEPT LOSS ON IGNITION SHALL NOT EXCEED 3 PERCENT.

CONCRETE MAY CONTAIN GGBF SLAG NOT EXCEEDING 50 PERCENT OF THE CEMENT CONTENT BY WEIGHT. THE GGBF SLAG SHALL CONFORM TO ASTM C989 GRADE 100 OR 120 AND SHALL CONTAIN LESS THAN 11 PERCENT ALUMINA (C3A).

ALL REINFORCING DETAILS SHALL CONFORM TO "DETAILS AND DETAILING OF REINFORCEMENT" ACI 315-80 (REVISED 1986), UNLESS DETAILED OTHERWISE ON THE STRUCTURAL DRAWINGS.

CONCRETE FORMS SHALL NOT BE ERECTED UNTIL REINFORCING STEEL SHOP DRAWINGS HAVE BEEN APPROVED.

DO NOT PLACE REINFORCING STEEL OR CONCRETE FOR FOOTINGS AND SLABS ON GRADE UNTIL THE BEARING SURFACE HAS BEEN APPROVED BY THE ENGINEER/ARCHITECT.

BEFORE PLACING CONCRETE VERIFY SIZE AND LOCATIONS OF ALL OPENINGS, PADS, SLEEVES, ANCHOR BOLTS, MASONRY ANCHORS, INSERTS, ETC., AS REQUIRED BY OTHER TRADES BEFORE CONCRETE IS PLACED. NO SLEEVE, OPENING, ANCHOR BOLT, OR INSERT, SHALL BE CAST INTO CONCRETE UNLESS SHOWN ON SHOP DRAWINGS WHICH HAVE BEEN REVIEWED BY THE ENGINEER/ARCHITECT.

PROVIDE DOWELS FOR ALL REINFORCED MASONRY WALLS. THE SIZE AND SPACING SHALL MATCH WALL REINFORCING. COORDINATED LOCATION WITH THE MASONRY CONTRACTOR. EXCEPT WHERE OTHERWISE NOTED, EXTEND DOWELS 48 BAR DIAMETER ABOVE TOP OF CONCRETE AND ANCHORAGE LENGTH INTO CONCRETE.

PROVIDE DOWELS FROM FOUNDATIONS TO MATCH COLUMN AND WALL VERTICAL REINFORCING. WHERE SHOWN, PROVIDE DOWELS OUT OF WALLS TO MATCH SLAB REINFORCING.

PROVIDE ADEQUATE BOLSTERS, HI-CHAIRS, SUPPORT BARS, ETC., TO MAINTAIN SPECIFIED CLEARANCES FOR THE ENTIRE LENGTH OF ALL REINFORCING BARS. PROVIDE CONTINUOUS NO. 4 SPACER BARS IN WALLS AND SLABS TO SUPPORT DOWELS. PROVIDE NO. 5 SUPPORT BARS CONT. 4'-0" O.C. FOR ALL STEEL IN CONCRETE SLABS.

ALL BEAMS, SLABS, WALLS AND COLUMNS SHALL BE POURED MONOLITHICALLY, EXCEPT FOR THE REQUIRED CONSTRUCTION JOINTS.

PROVIDE 3/4 INCH CHAMFER ON ALL EXPOSED CORNERS OF COLUMNS, BEAMS AND WALLS UNLESS OTHERWISE INDICATED ON THE ARCHITECTURAL DRAWINGS. MINIMUM CLEARANCES FOR REINFORCING STEEL SHALL BE MAINTAINED AS SPECIFIED BY ACI.

ALL WATERSTOPS SHALL BE PROPERLY SUPPORTED AND WIRED TO REINFORCING TO REMAIN STRAIGHT AND TRUE.

IN CONSTRUCTION JOINTS IN BEAMS, SUPPORTED SLABS AND WALL FOOTINGS PROVIDE HORIZONTAL KEYWAYS AT MEMBER CENTERLINE WITH A DEPTH OF 1 1/2 INCH AND HEIGHT EQUAL TO ONE-THIRD OF THE MEMBER'S DEPTH.

FOR WALL VERTICAL CONSTRUCTION JOINTS OF WALLS, PROVIDE VERTICAL KEYWAYS AT MEMBER CENTERLINE WITH A DEPTH OF 1 1/2 INCH AND WIDTH EQUAL TO ONE-THIRD OF THE WALL THICKNESS.

PROVIDE TWO NO. 5 BARS AROUND ALL OPENINGS, EXTEND 2'-0" BEYOND THE OPENING. PROVIDE TWO NO. 5 BARS 5'-0" LONG DIAGONALLY AT EACH CORNER OF OPENINGS.

CONTRACTOR SHALL KEEP A COPY OF "FIELD REFERENCE MANUAL" (ACI-PUBLICATION SP-15, 1989) AT THE PROJECT FIELD OFFICE.

PITCH CONCRETE SLABS TO FLOOR DRAINS SHOWN ON MECHANICAL, PROCESS, AND ARCHITECTURAL DRAWINGS.

ALL HORIZONTAL AND VERTICAL PIPE SLEEVE OPENINGS THROUGH BEAMS SHALL BE FORMED WITH STANDARD STEEL PIPE.

ALLOW A MINIMUM OF 12 HOURS TO ELAPSE BETWEEN ADJACENT CONCRETE POURS.

PROVIDE A VAPOR RETARDER COVERED WITH 3-INCH SAND CUSHION UNDER ALL INTERIOR SLABS ON GRADE WHERE INDICATED ON THE DRAWINGS.

NO ELECTRICAL CONDUIT SHALL BE PLACED IN SLABS ABOVE THE WELDED WIRE FABRIC OR TOP REINFORCING.

COORDINATE ALL FLOOR PENETRATIONS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS. CORE DRILLING OF SLABS WILL NOT BE PERMITTED.

MINIMUM HORIZONTAL CLEARANCE BETWEEN REINFORCING SHALL BE THE BAR DIAMETER BUT SHALL NOT BE LESS THAN ONE INCH.

BEAM WITH TOP OR BOTTOM REINFORCING IN TWO LAYERS SHALL HAVE 1 INCH CLEARANCE BETWEEN THE LAYERS.

EMBEDDED PLATES SHALL CONFORM TO ASTM A36. HEADED STUDS AND STUD WELDING OF HEADED STUDS AND REINFORCING STEEL SHALL CONFORM TO AWS D1.1 SECTION 7.

REINFORCEMENT STEEL COVER SHALL BE AS GIVEN IN "CONCRETE COVER FOR REINFORCEMENT TABLE", UNLESS NOTED OTHERWISE.

TEMPERATURE STEEL SHALL BE PLACED FURTHER FROM THE SURFACE OF THE CONCRETE THAN THE MAIN REINFORCING.

ALL JOINTS SHALL BE LOCATED WHERE SHOWN ON THE DRAWINGS. NO HORIZONTAL JOINTS SHALL BE MADE IN SLABS OR BEAMS. THE CONTRACTOR SHALL SUBMIT PROPOSED CONSTRUCTION JOINT LOCATIONS AND DETAILS TO THE ENGINEER FOR REVIEW. THE MAXIMUM CONSTRUCTION JOINT SPACING SHALL BE AS FOLLOWS:

WALLS	
VERTICAL JOINTS	40 FEET
HORIZONTAL JOINTS	18 FEET
FLOOR SLABS	2,800 SQUARE FEET
ONE-WAY SLABS	40 FEET MAXIMUM WIDTH

ALL ALUMINUM IN CONTACT WITH CONCRETE OR DISSIMILAR METALS SHALL BE COATED WITH TWO COATS OF COAL TAR EPOXY, APPROVED BY THE ENGINEER.

FOR WALLS OF CIRCULAR TANKS SPLICES OF CIRCUMFERENTIAL BARS SHALL BE STAGGERED BY NOT LESS THAN THE SPLICE LENGTH PLUS THREE FEET AND SHALL NOT COINCIDE IN VERTICAL ALIGNMENT MORE FREQUENTLY THAN EVERY THIRD BAR.

ALL REINFORCING STEEL LAP SPLICES AND ANCHORAGES SHALL CONFORM TO THE "MINIMUM LAP SPLICE AND ANCHORAGE DIMENSION TABLE" UNLESS NOTED OTHERWISE.

ALL LAP-SPLICES SHALL BE BY WIRING TOGETHER IN CONTACT, UNLESS OTHERWISE SHOWN.

MECHANICAL SPLICES, COUPLERS, AND DOWEL BAR SUBSTITUTES SHALL CONFORM TO ACI 318 PER 12.14.3.4 BY ERICO, CONCRETE CONSTRUCTION PRODUCTS, BAR SPLICE PRODUCTS, INC., OR EQUAL.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	CMG
DRAWN BY:	DLR
CHECKED BY:	CMG
APPROVED BY:	DRT
DATE:	MARCH 1995

GENERAL NOTES

SCALE: NONE

SHEET NO. 59 OF 112

03-24-95 N:\PROJECTS\PRI5582\CADD\SHT59

CONCRETE MASONRY

MASONRY CONSTRUCTION AND MATERIAL SHALL CONFORM TO ALL REQUIREMENTS OF "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI/ASCE 530.1) EXCEPT AS MODIFIED IN THE SPECIFICATIONS AND BELOW.

CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, GRADE N, TYPE I, NORMAL WEIGHT.

MORTAR FOR CONCRETE MASONRY UNITS SHALL BE NON-AIR ENTRAINED PORTLAND CEMENT-LIME CONFORM TO ASTM C270, TYPE S.

MINIMUM NET AREA COMPRESSIVE STRENGTH OF CONCRETE MASONRY UNITS SHALL BE:

STANDARD BLOCK	= 1,900 PSI (f'm = 1,500 psi)
SOUND ABSORBING BLOCK	= 1,900 PSI (f'm = 1,500 psi)

CELLS CONTAINING VERTICAL REINFORCING STEEL, CELLS UNDER BEAM BEARINGS AND BOND BEAMS SHALL BE FILLED WITH GROUT.

GROUT SHALL CONFORM TO ASTM C476.

GROUT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2,000 PSI.

PRIOR TO PLACING MASONRY THE CONTRACTOR SHALL INSPECT ITS SUPPORTING CONCRETE FOR CORRECT DOWEL PLACEMENT AND FOR DEVIATIONS FROM TOLERANCES GIVEN IN ACI 530.1 ARTICLE 2.3.2.1 PROMPTLY REPORT DEVIATIONS TO THE ARCHITECT/ENGINEER.

USE COARSE GROUT (MAXIMUM 3/8 INCH AGGREGATE) WHERE PERMITTED BY ACI/ASCE 530.1.

GROUT FOR MASONRY SHALL HAVE SLUMP OF BETWEEN 8 AND 11 INCHES. PLACE GROUT WITHIN 1/2 HOUR OF INTRODUCTION OF WATER AND PRIOR TO INITIAL SET.

CELLS SHALL VERTICALLY ALIGN WHERE VERTICAL REINFORCING STEEL AND GROUT FILLING IS REQUIRED.

SPACES TO BE GROUTED SHALL BE FREE OF MORTAR PROTRUDING IN EXCESS OF 3/8 INCH, MORTAR DROPPING, AND OTHER DEBRIS.

PROVIDE 3 INCH X 3 INCH MINIMUM SIZE CLEANOUTS AT THE BOTTOM COURSE OF EACH CELL WHEN GROUT POUR HEIGHT EXCEEDS 5 FEET. CLEANOUTS SHALL BE ONE SIDE OF BLOCKS NOT EXPOSED TO VIEW IN COMPLETED CONSTRUCTION.

CONSOLIDATED GROUT AT TIME OF PLACEMENT. FOR POURS OVER 12 INCHES IN HEIGHT USE MECHANICAL VIBRATION AND RECONSOLIDATE BY MECHANICAL VIBRATION AFTER INITIAL WATER LOSS AND SETTLEMENT HAS OCCURRED. EXTEND VIBRATOR AT LEAST 6 INCHES INTO PREVIOUS LIFT.

FOR HORIZONTAL CONSTRUCTION JOINTS, STOP GROUT POUR 1 1/2 INCHES BELOW THE TOP OF A UNIT. FOR TOP LIFT, RECONSOLIDATE THEN FILL CELL TO TOP OF UNIT. COVER TOP OF GROUTED WALL FOR 48 HOURS COMMENCING IMMEDIATELY AFTER CONSOLIDATION.

PLACE REINFORCING STEEL PRIOR TO GROUTING.

ALL REINFORCING BARS SHALL BE AT LEAST 1/2 INCH CLEAR OF ANY INTERIOR BLOCK SURFACE.

VERTICAL REINFORCEMENT SHALL BE HELD IN POSITION AT THE TOP AND BOTTOM AND AT A MAXIMUM SPACING OF 5'-0". REINFORCEMENT SHALL BE PLACED IN THE CENTER OF THE MASONRY CELL, UNLESS OTHERWISE NOTED.

REINFORCING STEEL SPLICES SHALL BE LAPPED A MINIMUM OF 48 BAR DIAMETERS BUT NO LESS THAN 12 INCHES UNLESS NOTED OTHERWISE.

REINFORCING STEEL ANCHORAGE SHALL BE 30 BAR DIAMETERS BUT NO LESS THAN 12 INCHES UNLESS NOTED OTHERWISE.

IN GENERAL, ALIGN VERTICAL WALL BARS WITH DOWELS. WHEN A FOUNDATION DOWEL DOES NOT LINE UP WITH A VERTICAL CORE, IT SHALL NOT BE SLOPED MORE THAN ONE HORIZONTAL IN SIX VERTICALS. DOWELS SHALL BE GROUTED INTO A CORE IN VERTICAL ALIGNMENT, EVEN THOUGH IT IS IN THE CELL ADJACENT TO THE VERTICAL WALL REINFORCEMENT.

UNLESS SHOWN OTHERWISE, HORIZONTAL WALL REINFORCEMENT SHALL BE STANDARD NO. 9 GAGE ROD LADDER TYPE AT 16 INCHES C/C, AND EVERY 8-INCH COURSE FOR THREE CONSECUTIVE COURSES ABOVE LINTELS AND ABOVE AND BELOW OPENINGS. EXTEND REINFORCEMENT 2 FEET BEYOND EACH SIDE OF OPENINGS BUT DO NOT EXTEND THROUGH CONTROL JOINTS.

SPLICES FOR WIRE REINFORCEMENT SHALL BE LAPPED AT LEAST 6 INCHES AND SHALL CONTAIN AT LEAST ONE CROSS WIRE OF EACH PIECE OF REINFORCEMENT WITHIN THE 6 INCHES. LAP WITH STANDARD "T" AND "L" SHAPED PIECES AT INTERSECTIONS AND CORNERS.

PROVIDE A MINIMUM OF 24 INCHES HIGH BY 4 FEET WIDE GROUTED SOLID MASONRY OR SOLID UNITS CENTERED UNDER BEAM BEARING.

BOND PILASTERS TO ADJOINING MASONRY WALLS WITH INTERLOCKING UNITS.

PROVIDE BOND BEAMS IN EACH WALL AT EACH FLOOR LEVEL, ROOF LEVEL, AND AT TOP OF WALL. REINFORCE WITH 1-NO. 6 UNLESS NOTED OTHERWISE.

BOND BEAM REINFORCEMENT AND GROUT SHALL BE CONTINUOUS AT WALL CONTROL JOINTS. PROVIDE A DUMMY CONTROL IN THE EXPOSED FACES OF BOND BEAMS ALIGNED WITH WALL CONTROL JOINTS. THE DUMMY CONTROL JOINT SHALL HAVE BACKING ROD AND CAULK AS USED IN THE CONTROL JOINT.

BOND BEAMS SHALL ATTAIN THE SPECIFIED STRENGTH PRIOR TO SUPERIMPOSING LOAD.

DISCARD GROUT NOT PLACED WITHIN 2 1/2 HOURS AFTER WATER IS FIRST ADDED.

ANCHOR MASONRY TO ADJACENT COLUMNS, FLOOR, AND ROOF BEAMS.

AT ENDS OF LINTELS WITH CONTROL JOINTS, PROVIDE 15 POUND FELT BOND BREAKER UNDER LINTEL BEARING AND DUMMY CONTROL JOINT ON EXPOSED FACES.

BEARING PLATES SUPPORTED BY MASONRY SHALL BE PLACED 1/2" FROM THE FACE OF MASONRY NEAREST THE SUPPORTED LINTEL, BEAM OR JOIST UNLESS NOTED OTHERWISE.

PROVIDE A MINIMUM OF 1/2" OF NONSHRINK GROUT UNDER ALL STEEL BEARING ON MASONRY UNLESS THICKER GROUT IS OTHERWISE SHOWN. THE EDGE OF THE GROUT SHALL BE 1/2" FROM THE EDGE OF THE MASONRY.

PROVIDE 1 NO. 5 BAR VERTICALLY IN EACH CORNER, END OF WALL, AND ADJACENT TO OPENINGS AND CONTROL JOINT UNLESS SHOWN OR NOTED OTHERWISE.

STRUCTURAL STEEL

STRUCTURAL STEEL WORK SHALL CONFORM TO THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN."

UNLESS CONNECTIONS ARE DETAILED OR REACTIONS ARE INDICATED, PROVIDE BEAM CONNECTIONS DESIGNED FOR THE REACTION PRODUCED BY THE MAXIMUM UNIFORM LOAD WHICH THE BEAM CAN SUPPORT FOR ITS SPAN SHOWN IN AISC "MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN" GIVEN IN THE "ALLOWABLE LOADS ON BEAMS" TABLES.

CONNECTION PLATES SUCH AS COLUMN CAP PLATES, COLUMN BASE PLATES, PLATES FOR CONNECTION OF BRACING MEMBERS, AND OTHER SIMILAR CONNECTION PLATES SHALL BE SHOP WELDED TO STRUCTURAL STEEL MEMBERS WITH FULL-LENGTH, CONTINUOUS FILLET WELDS ON EACH SIDE OF PLATE UNLESS SHOWN OTHERWISE.

VERIFY THE EXACT LOCATION AND SIZE OF ALL OPENINGS FOR MECHANICAL EQUIPMENT WITH THE MECHANICAL CONTRACTOR PRIOR TO FABRICATION OF MATERIALS.

ALL FRAMING MEMBERS PROVIDED TO SUPPORT ELECTRICAL OR MECHANICAL EQUIPMENT ARE FOR BIDDING PURPOSES ONLY. SUBMIT MANUFACTURER'S DATA FOR THE EQUIPMENT TO BE FURNISHED TO STRUCTURAL ENGINEER FOR VERIFICATION OR REDESIGN.

STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE NOTED:

STRUCTURAL SHAPES, PLATES, ETC...ASTM A36.

STRUCTURAL STEEL PIPE...ASTM A53, GRADE B SCHEDULE 40 UNLESS NOTED OTHERWISE.

STRUCTURAL TUBING...ASTM A500, GRADE B.

WELDING ELECTRODES SHALL BE E70XX LOW HYDROGEN SERIES FOR ASTM A36 STEEL.

ANCHOR BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 OR A36.

IN GENERAL, IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS THAT ALL SHOP CONNECTIONS BE WELDED OR BOLTED AND ALL FIELD CONNECTIONS BE BOLTED EXCEPT WHERE NOTED OTHERWISE.

ALL BEAM AND COLUMN CONNECTIONS SHALL BE MADE WITH 3/4-INCH ASTM A325 BOLTS TIGHTENED TO SNUG-TIGHT CONDITION UNLESS OTHERWISE NOTED.

HEADED STUDS AND STUD WELDING SHALL CONFORM TO AWS D1.1 SECTION 7.

PROVIDE 1/4" DIAMETER WEEP HOLES AT BASE OF TUBE AND PIPE COLUMNS AND IN BOTTOM OF SAPPED TUBULAR BEAMS.

GALVANIZED STEEL SHALL CONFORM TO ASTM A123.

BOLTS AND OTHER HARDWARE SHALL BE GALVANIZED CONFORMING TO ASTM A153.

PROVIDE HOLES IN CAPPED TUBE AND PIPE SECTIONS AS REQUIRED BY THE GALVANIZER.

WELDING OF ALUMINUM SHALL CONFORM TO AWSD1.2 "STRUCTURAL WELDING CODE - ALUMINUM" AND WORKMANSHIP REQUIREMENTS FOR CLASS II STRUCTURES.

STAINLESS STEEL SHALL BE TYPE 316 UNLESS NOTED OTHERWISE.

FOR STAINLESS STEEL NUTS AND BOLTS IN CONTACT WITH ALUMINUM PROVIDE FIBER GLASS FLAT WASHERS AGAINST THE ALUMINUM AND UNDER STAINLESS STEEL WASHERS. FIBERGLASS WASHERS FROM MCMASTERS CARR (708)833-0300 OR EQUAL.

BOLTS SHALL BE INSTALLED IN THE CENTER OF SLOTTED HOLES UNLESS OTHERWISE INSTRUCTED.

FINGER TIGHTEN NUTS WITHIN SLOTTED HOLES AND TACK WELD OR PROVIDE LOCK NUT.

SLOTTED HOLES SHALL BE "LONG SLOTTED HOLES" UNLESS OTHERWISE NOTED.

LINTELS

PROVIDE LINTELS OVER ALL MASONRY OPENINGS AND RECESSES UNLESS NOTED OTHERWISE.

LINTELS NOT SCHEDULED ON DRAWINGS SHALL CONSIST OF ONE GALVANIZED STEEL ANGLE (WITH 3-1/2 INCH LEG HORIZONTAL) FOR EACH 4 INCHES OF OVERALL MASONRY THICKNESS AND SHALL BE AS GIVEN IN THE FOLLOWING TABLE:

MASONRY OPENINGS	SIZE	BEARING EACH END
8'-0" OR LESS	L 5 1/2 X 3 1/2 X 3/8 LLV	8"
8'-0" TO 10'-0"	L 6 X 3 1/2 X 3/8	8"

ALL EXTERIOR WALL LINTEL ANGLES SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123.

EXTENT THE BOTTOM PLATE OF LINTEL TO THE END OF THE LINTEL MEMBER UNLESS NOTED OTHERWISE ON THE LINTEL SCHEDULE.

ALL STEEL LINTELS SPANNING OVER OPENINGS GREATER THAN OR EQUAL TO 6'-0" SHALL BE ANCHORED TO THE MASONRY BEARING AT EACH END USING TWO 3/4 INCH DIAMETER A307 BOLTS WITH BOTH ENDS SLOTTED UNLESS NOTED OTHERWISE.

PROVIDE SHORING FOR MASONRY LINTELS UNTIL GROUT ATTAINS A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI.

BOTTOM PLATES SHALL BE WELDED TO THE LINTEL BEAM WITH A 1/4 INCH INTERMITTENT WELD AT 2 INCHES ON CENTER ON BOTH SIDES.

ADHESIVE AND EXPANSION ANCHOR BOLTS AND OTHER FASTENERS

ADHESIVE AND EXPANSION ANCHORS SHALL BE USED ONLY WHERE SHOWN ON THE PLANS OR APPROVED BY THE ENGINEER.

PRIOR TO DRILLING FOR THE ANCHOR CONCRETE REINFORCING STEEL SHALL BE LOCATED WITH A MAGNETIC BAR LOCATOR.

THE PLAT, ANGLE, ETC., TO BE ATTACHED TO THE CONCRETE BY THE ADHESIVE OR EXPANSION FASTENER SHALL NOT BE FABRICATED UNTIL THE HOLES FOR THE FASTENERS ARE DRILLED.

FASTENERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PREFERRED RECOMMENDED INSTALLATION PROCEDURES AND AS GIVEN BELOW. NOTIFY THE ENGINEER IF CONFLICTS EXIST BETWEEN MANUFACTURER'S RECOMMENDED PROCEDURES AND THE BELOW REQUIREMENTS.

ROTARY PERCUSSION DRILL HOLES USING DEPTH GAGE. CLEAN HOLE WITH OIL FREE COMPRESSED AIR OR WITH HAND BLOW BULB.

FOR ADHESIVE SET FASTENERS: CLEAN WITH WATER ONLY IF RECOMMENDED BY MANUFACTURER. SCRUB HOLES WITH STIFF NYLON BRUSH AND BLOW HOLES CLEAN AGAIN. BLOW HOLES DRY. IF PERMITTED BY ADHESIVE MANUFACTURER, THE CONCRETE MAY BE DAMP AFTER TRYING TO BLOW DRY. THE ANCHORS MAY NOT BE SET IF SEEPING WATER; NOTIFY THE ENGINEER.

FOR EXPANSION ANCHORS: DRILL HOLE TO NOMINAL DIAMETER OF ANCHOR. IF METRIC ANCHORS ARE USED METRIC BITS MUST BE USED. INSTALL ANCHOR AND TIGHTEN TO RECOMMENDED TORQUE.

ALL FASTENERS SHALL BE STAINLESS STEEL TYPE 316.

EXPANSION BOLTS SHALL BE "KWIK BOLT II" BY HILTI, "PARABOLT" BY MOLLY, "TURBOLT" BY ITW RAMSET/RED HEAD, OR APPROVED EQUAL.

ADHESIVE ANCHORS IN CONCRETE SHALL BE OF THE TYPE SHOWN AND INSTALLED USING "HIT C-100" BY HILTI, "PARAFAST" BY MOLLY, "EPCON SYSTEM" BY ITW RAMSET/RED HEAD OR APPROVED EQUAL.

WOOD

GLUED-LAMINATED MEMBER COMBINATIONS SHALL CONFORM TO AITC 117-79 AND BE MANUFACTURED IN ACCORDANCE WITH PS 56-73.

SHEATHING TO BE A.P.A. RATED SHEATHING, 32/16, EXPOSURE I, CONFORMING TO U.S. PRODUCT STANDARD PS 1-83. THICKNESS AS SPECIFIED ON ARCHITECTURAL DRAWINGS.

CONNECTION HARDWARE AND FASTENERS TO BE GALVANIZED STEEL.

BEAM CONNECTIONS SHALL BE MADE WITH A36 STEEL PLATES AND A307 BOLTS, BOTH GALVANIZED.

ALL WOOD SHALL BE NAILED IN ACCORDANCE WITH OBBC "RECOMMENDED FASTENING SCHEDULE" WITHIN APPENDIX C.

THE DECKING SHALL BE ATTACHED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, BUT NOT LESS THAN THE SIZE AND SPACING SHOWN ON THE PLANS.

ALL SOLE PLATES SHALL BE PRESSURE TREATED.

PROVIDE HEAVY STEEL WASHER (CONFORMING TO ANSI B18.22.1 TYPE B WIDE SERIES OR EQUAL) UNDER ALL NUTS, AND BOLT AND LAG SCREW HEADS THAT ARE IN CONTACT WITH WOOD.

ALL ANCHORS AND CONNECTORS SHALL BE INSTALLED CONFORMING TO THE MANUFACTURERS INSTRUCTIONS. PROVIDE NAILS OF RECOMMENDED SIZE IN ALL NAIL HOLES.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	CMG
DRAWN BY:	DLR
CHECKED BY:	CMG
APPROVED BY:	DRT
DATE:	MARCH 1995

GENERAL NOTES

SCALE: NONE

SHEET NO. 59A OF 112

03-24-95 N:\PROJECTS\PR15582\CADD\SHT59A

MINIMUM LAP SPLICE AND ANCHORAGE DIMENSION TABLE

(4000 PSI CONCRETE)

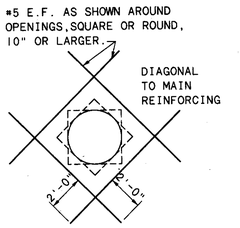
BAR SIZE	TOP BARS SPLICE	TOP BARS ANCHORAGE	OTHER BARS BAR SIZE	OTHER BARS SPLICE	OTHER BARS ANCHORAGE
#3	18"	14"	#3	16"	12"
#4	24"	19"	#4	19"	14"
#5	30"	23"	#5	23"	18"
#6	40"	31"	#6	31"	23"
#7	54"	42"	#7	42"	32"
#8	71"	55"	#8	55"	42"
#9	90"	69"	#9	69"	53"
#10	114"	88"	#10	88"	68"
#11	CADWELD	108"	#11	108"	83"
#14	CADWELD	147"	#14	CADWELD	113"
#18	CADWELD	216"	#18	CADWELD	166"

NOTES:

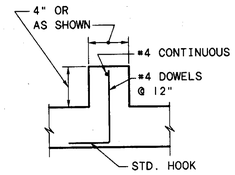
1. WHERE CADWELD IS NOTED IN THE TABLE, PROVIDE WELDED OR MECHANICAL CONNECTION CAPABLE OF DEVELOPING 125 PERCENT OF YIELD STRENGTH, Fy, OF THE BAR IN TENSION OR COMPRESSION (ACI 318-89, 12-14.3.4)
2. WHEN LAPPING TWO DIFFERENT SIZE BARS, USE THE SPLICE DIMENSION OF THE SMALLER BAR OR THE ANCHORAGE DIMENSION OF THE LARGER BAR. USE WHICHEVER DIMENSION IS LARGER.
3. TOP BARS SHALL BE BEAM AND/OR SLAB HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE TOP REINFORCEMENT.
4. MODIFY THE REQUIRED LENGTH BY THE FOLLOWING FACTOR, WHEN APPLICABLE:
   - LIGHTWEIGHT CONCRETE AGGREGATE x1.3
   - EPOXY COATED REINFORCEMENT x1.5
   - REINFORCEMENT MEETING THE CRITERIA OR ACI 318-89 SECTION 12.2.3.2 ..... x1.43
   - BUNDLED BARS: 3 BAR BUNDLE x1.2
     4 BAR BUNDLE x1.33
5. THIS TABLE IS FOR "LAP CLASS B" AND "CATEGORY 3."

CONCRETE COVER FOR REINFORCEMENT TABLE

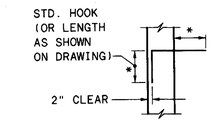
SUPPORTED SLABS AND JOISTS:	
FOR DRY CONDITIONS (TOP AND BOTTOM BARS):	
#14 AND #18 BARS	1 1/2 IN.
#11 BARS AND SMALLER	1 IN.
EXPOSED TO EARTH, WATER, SEWAGE OR WEATHER, OR OVER SEWAGE:	
#5 BARS AND SMALLER	1 1/2 IN.
#6 THROUGH #18 BARS	2 IN.
BEAMS AND COLUMNS:	
FOR DRY CONDITIONS:	
STIRRUPS, SPIRALS AND TIES	1 1/2 IN.
PRINCIPAL REINFORCEMENT	2 IN.
EXPOSED TO EARTH, WATER, SEWAGE OR WEATHER	
STIRRUPS AND TIES	2 IN.
PRINCIPAL REINFORCEMENT	2 1/2 IN.
WALLS:	2 IN.
FOOTINGS AND BASE SLABS:	
FORMED SURFACES AND BOTTOMS BEARING ON CONCRETE WORK MAT	2 IN.
UNFORMED SURFACES AND BOTTOMS IN CONTACT WITH EARTH	3 IN.
TOP OF FOOTINGS	2 IN.
OVER TOP OF PILES	3 IN.



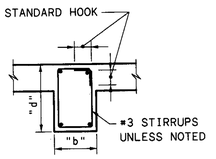
TYPICAL OPENING DETAIL



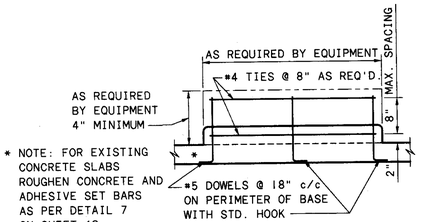
TYPICAL CURB DETAIL



TYPICAL WALL DOWEL DETAIL

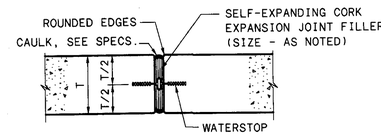


TYPICAL STIRRUP DETAIL



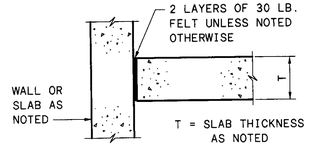
* NOTE: FOR EXISTING CONCRETE SLABS ROUGHEN CONCRETE AND ADHESIVE SET BARS AS PER DETAIL 7 ON SHEET 49.

TYPICAL EQUIPMENT BASE

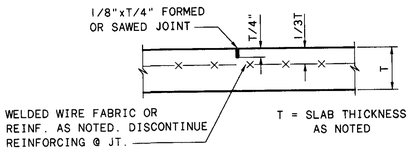


NOTE: REINFORCING SHALL NOT EXTEND THRU JOINT. CAULKING NOT REQUIRED ON BOTTOM OF FOOTING SLAB.

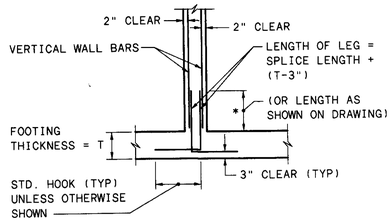
TYPICAL EXPANSION JOINT DETAIL



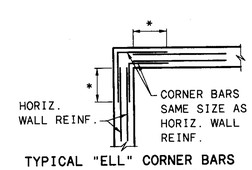
TYPICAL ISOLATION JOINT (IJ)



TYPICAL SLAB-ON-GRADE CONTROL JOINT (CJ)

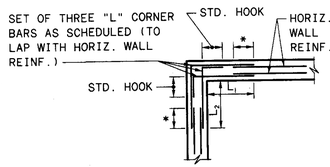


TYPICAL FOOTING DOWEL DETAIL



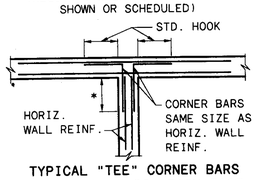
TYPICAL "ELL" CORNER BARS HORIZ. WALL BARS, EACH FACE

(REQUIRED WHEN NOT OTHERWISE SHOWN OR SCHEDULED)



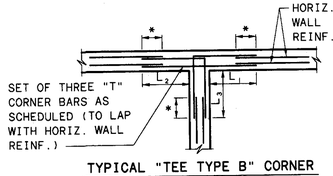
TYPICAL "ELL-TYPE A" CORNER

(WHEN SCHEDULED OR SHOWN)



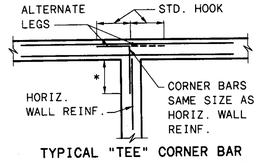
TYPICAL "TEE" CORNER BARS HORIZ. WALL BARS, EACH FACE

(REQUIRED WHEN NOT OTHERWISE SHOWN OR SCHEDULED)



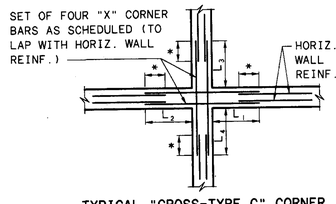
TYPICAL "TEE TYPE B" CORNER

(WHEN SCHEDULED OR SHOWN)



TYPICAL "TEE" CORNER BAR HORIZ. WALL BAR, SINGLE LAYER

(REQUIRED WHEN NOT OTHERWISE SHOWN OR SCHEDULED)



TYPICAL "CROSS-TYPE C" CORNER

(WHEN SCHEDULED OR SHOWN)

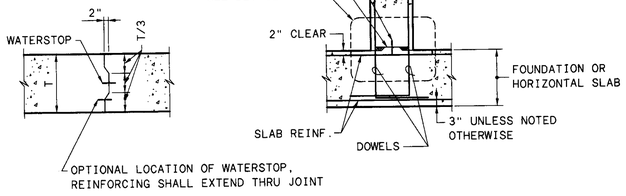
TYPICAL HORIZONTAL CORNER BAR DETAILS

(VERTICAL REINFORCING NOT SHOWN)

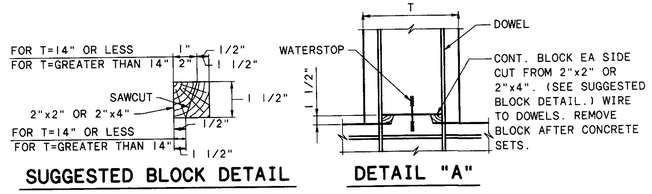
L_1, L_2, L_3 AND L_4 SHALL BE 4'-0" UNLESS SCHEDULED OTHERWISE.

(VERTICAL REINFORCING NOT SHOWN)

* ALL REINFORCING STEEL LAP SPLICES SHALL CONFORM TO THE "MINIMUM LAP SPLICE AND ANCHORAGE DIMENSION TABLE" UNLESS SHOWN OR NOTED OTHERWISE.

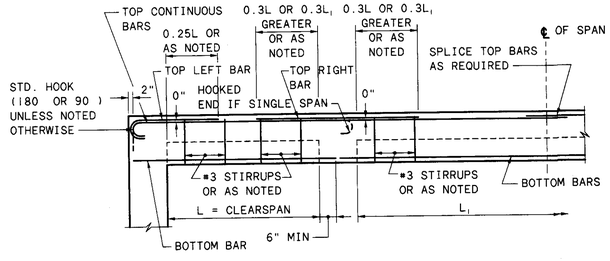


TYPICAL CONSTRUCTION JOINT DETAIL



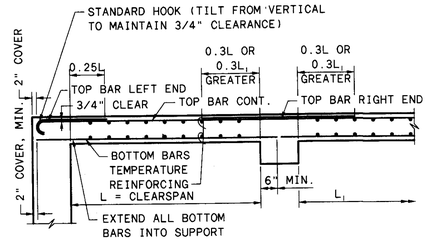
SUGGESTED BLOCK DETAIL

DETAIL "A"



NOTE: THE LEFT AND RIGHT END OF EACH BEAM IS DETERMINED BY THE ORIENTATION OF THE BEAM MARK ON THE FRAMING PLAN. THE LEFT END BAR SIZE IN SPAN L_1 IS THE SAME AS THE RIGHT END BAR OF SPAN L.

CONCRETE BEAM DETAIL



NOTES: THE LEFT AND RIGHT END OF EACH SLAB IS DETERMINED BY THE ORIENTATION OF THE SLAB MARK ON THE FRAMING PLAN. THE LEFT END BAR SIZE AND SPACING IN SPAN L_1 IS THE SAME AS THE RIGHT END BAR OF SPAN L_1. TOP LEFT AND RIGHT END BARS ALTERNATE WITH TOP CONTINUOUS BARS.

CONCRETE SLAB DETAIL

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	DSR/LEL
DRAWN BY:	LLK
CHECKED BY:	CMG
APPROVED BY:	DRT
DATE:	MARCH 1995

MISCELLANEOUS DETAILS
CONCRETE AND REINFORCING STEEL

SCALE: NONE

SHEET NO. 60 OF 112

O:\SHT60 03-30-95

PIPE SUPPORT BEAM SCHEDULE

PIPE SIZES AND DEPTH OF FILL (H)	BEAM SIZE b	BEAM SIZE d	BEAM SIZE MAX. LG. L	REINFORCING TOP NO. SIZE	REINFORCING BOTTOM NO. SIZE	#3 CLOSED STIRRUPS SPACED CONTINUOUS ALONG LENGTH OF BEAM
1"-12"ø ,0-5'	12"	12"	0-10'	2-#5	4-#5	12"
1"-12"ø ,0-5'	12"	12"	10'-15'	2-#5	4-#7	12"
1"-12"ø ,5'-10'	12"	14"	0-10'	2-#5	4-#6	12"
1"-12"ø ,5'-10'	12"	14"	10'-15'	2-#5	4-#9	12"
1"-12"ø ,10'-15'*	12"	14"	0-10'	2-#5	4-#8	12"
1"-12"ø ,10'-15'*	12"	14"	10'-15'	2-#5	4-#11	12"
14"ø ,0-5'	14"	14"	0-10'	2-#5	4-#5	12"
14"ø ,0-5'	14"	14"	10'-15'	2-#5	4-#8	12"
14"ø ,5'-10'	14"	16"	0-10'	2-#5	4-#6	12"
14"ø ,5'-10'	14"	16"	10'-15'	2-#5	4-#9	12"
14"ø ,10'-15'	14"	16"	0-10'	2-#5	4-#8	12"
14"ø ,10'-15'*	14"	16"	10'-15'	2-#5	4-#11	12"
16"ø ,0-5'	16"	14"	0-10'	2-#5	4-#6	12"
16"ø ,0-5'	16"	14"	10'-15'	2-#5	4-#8	12"
16"ø ,5'-10'	16"	16"	0-10'	2-#5	4-#7	12"
16"ø ,5'-10'	16"	16"	10'-15'	2-#5	4-#10	12"
16"ø ,10'-20'* (4)	16"	16"	0-10'	2-#5	4-#8	12"
16"ø ,10'-15'* (4)	16"	18"	10'-15'	2-#5	4-#11	12"
18"ø ,0-5'	18"	14"	0-10'	3-#5	4-#6	12"
18"ø ,0-5'	18"	16"	10'-15'	3-#5	4-#8	12"
18"ø ,5'-10'	18"	16"	0-10'	3-#5	4-#7	12"
18"ø ,5'-10' *	18"	16"	10'-15'	3-#5	4-#11	12"
18"ø ,10'-15'*	18"	16"	0-10'	3-#5	4-#9	12"
18"ø ,10'-15'* (4)	18"	20"	10'-15'	3-#5	4-#11	12"
20"ø ,0-5'	20"	14"	0-10'	3-#5	4-#6	12"
20"ø ,0-5'	20"	16"	10'-15'	3-#5	4-#9	12"
20"ø ,5'-10'	20"	16"	0-10'	3-#5	4-#8	12"
20"ø ,5'-10' *	20"	16"	10'-15'	3-#5	4-#11	12"
20"ø ,10'-15'*	20"	16"	0-10'	3-#5	4-#9	12"
20"ø ,10'-15'* (4)	20"	20"	10'-15'	3-#5	5-#11	12"
24"ø ,0-5'	24"	14"	0-10'	3-#5	4-#7	12"
24"ø ,0-5'	24"	16"	10'-15'	3-#5	4-#10	12"
24"ø ,5'-10'	24"	16"	0-10'	3-#5	4-#8	12"
24"ø ,5'-10' *	24"	16"	10'-15'	3-#5	5-#11	12"
24"ø ,10'-15'*	24"	16"	0-10'	3-#5	4-#10	12"
24"ø ,10'-15'* (4)	24"	22"	10'-15'	3-#5	5-#11	12"

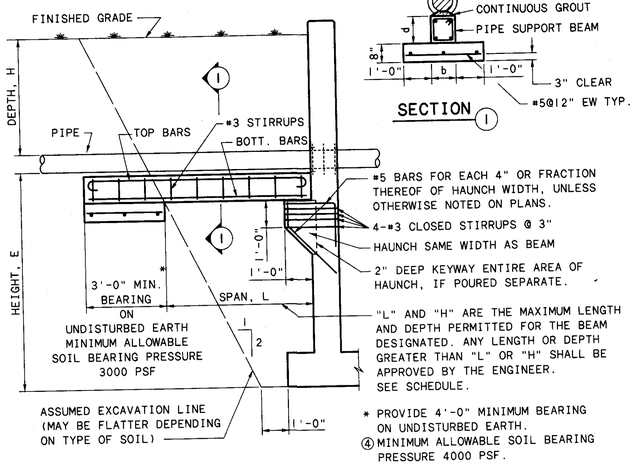
NOTES: FOR PIPE SIZES NOT LISTED USE THE NEXT AVAILABLE LARGER PIPE SIZE FOR BEAM SIZE AND REINFORCING.

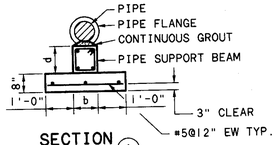
ALL PIPE SHALL BE BEAM SUPPORTED UNLESS SHOWN OTHERWISE.

BEARING PAD SIZE ON UNDISTURBED EARTH

DUCTILE IRON PIPE	DEPTH OF FILL (FT)	MAXIMUM REACTION (KIPS)	a (FT)	b (FT)
30"	5	25	3	3
	10	45	3	5
	15	65	5	5
36"	5	30	4	3
	10	55	4	5
	15	78	5	5

IF ALLOWABLE BEARING IS LESS THAN 3000 PSF, PAD SIZE SHALL BE DETERMINED BY THE ENGINEER.

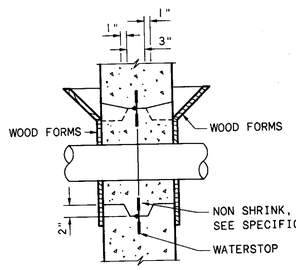




SECTION (1)

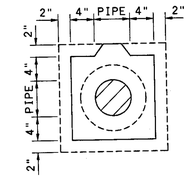
TYPICAL PIPE SUPPORT BEAM DETAIL

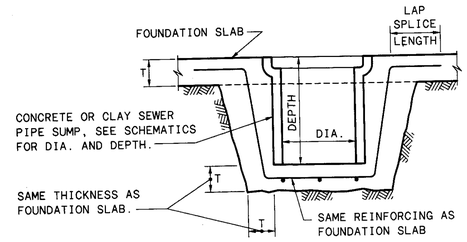
SCALE: 3/8"=1'-0"



STANDARD BOX-OUT DETAIL

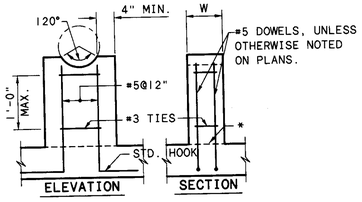
SCALE: 1"=1'-0"





SUMP DETAIL

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

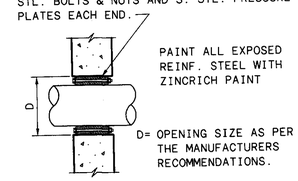


W = 8" FOR PIPE UP TO AND INCLUDING 8" PIPE. 1'-0" FOR PIPE OVER 12".

TYPICAL PIPE SUPPORT

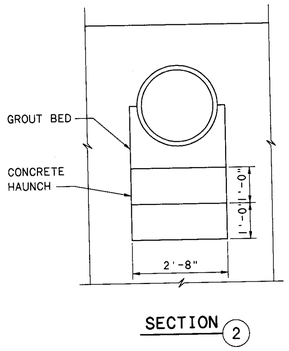
SCALE: 3/4"=1'-0"

* FOR EXISTING CONCRETE SLABS ROUGHEN CONCRETE AND ADHESIVE SET BARS PER "SPECIAL PIPE SUPPORT", BELOW.

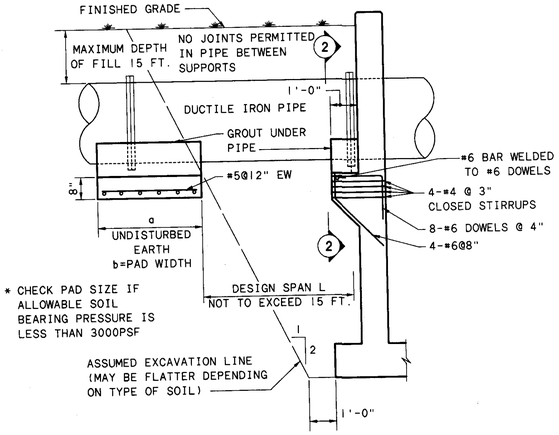


TYPICAL PIPE CLOSURE EXISTING BEARING WALLS

SCALE: 3/4"=1'-0"

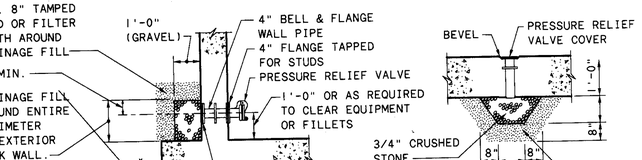


SECTION (2)



PIPE SUPPORT DETAIL FOR 30" & 36" DUCTILE IRON PIPE

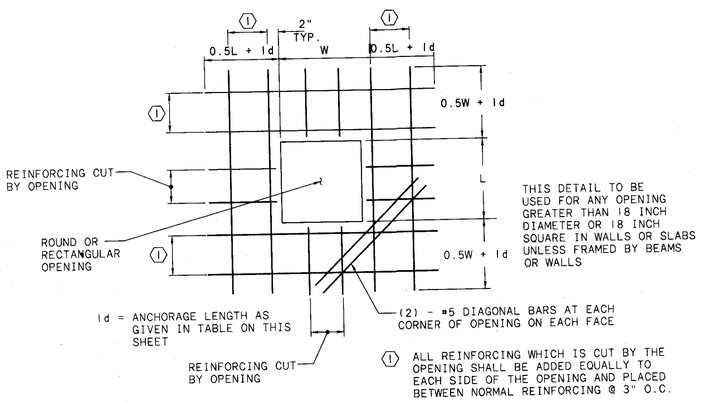
SCALE: 3/8"=1'-0"



* IN AREAS WHERE CDF IS INSTALLED FOR PIPE SUPPORT WITHIN EXCAVATION, DRAINAGE FILL SHALL BE EXTEND TO FULL WIDTH OF EXCAVATION FROM BOTTOM OF FOOTING TO MIN. 6" ABOVE PRV.

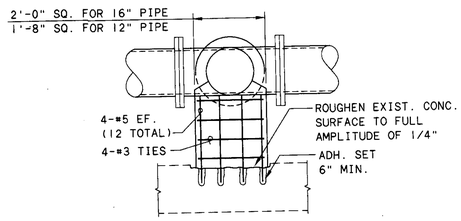
PRESSURE RELIEF VALVE DETAILS

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



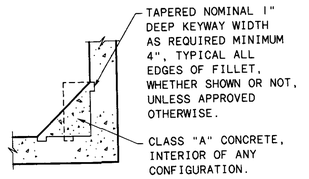
TYP. OPENING DETAIL

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



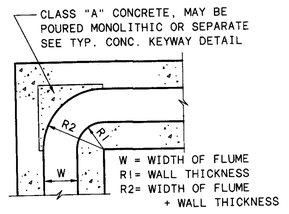
SPECIAL PIPE SUPPORT

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



TYPICAL CONCRETE FILLET DETAIL

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



TYPICAL FLUME CORNER DETAIL

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

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

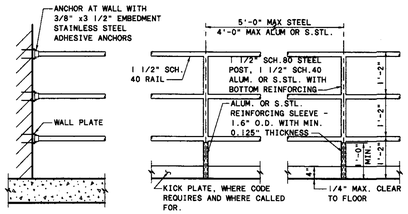
JOB NO.	15582
DESIGNED BY:	DSR/LEL
DRAWN BY:	LLK
CHECKED BY:	CMG
APPROVED BY:	DRT
DATE:	MARCH 1995

MISCELLANEOUS DETAILS
CONCRETE AND REINFORCING STEEL

SCALE: NONE

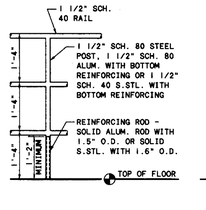
SHEET NO. 61 OF 112

03-30-95 N:\PROJECTS\PR15582\CADD\SHT61

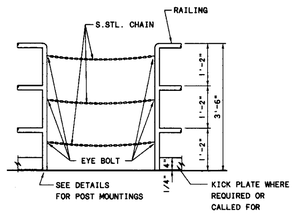


WALL MOUNTING

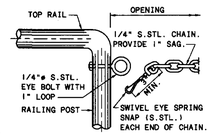
STANDARD RAILING



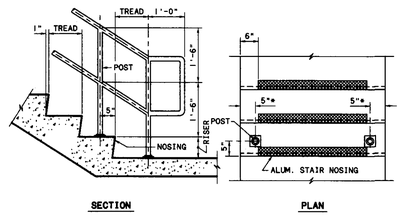
SPECIAL RAILING



CHAIN AT RAIL OPENING

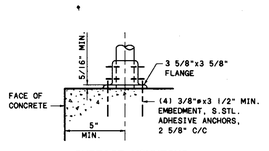


RAILING POST AND CHAIN

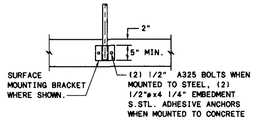


SECTION PLAN

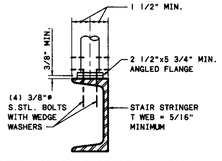
STAIR RAILING



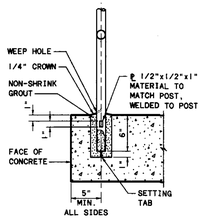
SURFACE MOUNTING
STANDARD AND SPECIAL RAILING



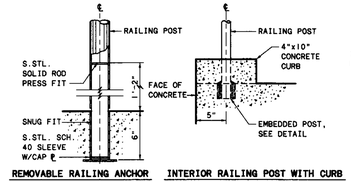
SIDE MOUNTED RAILING
FOR STANDARD RAILING ONLY



STEEL STAIR SURFACE MOUNTING
STAIR RAILING

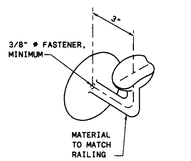


EMBEDDED POST
FOR INTERIOR USE ONLY

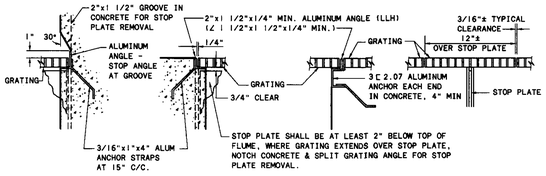


REMOVABLE RAILING ANCHOR INTERIOR RAILING POST WITH CURB

RAILING DETAILS
FOR INTERIOR USE ONLY



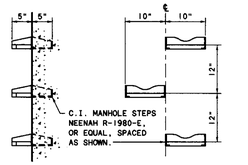
HANDRAIL WALL BRACKET



RECESSED SUPPORT TYPICAL SUPPORT SUPPORT OVER OPENINGS OVER STOP PLATES

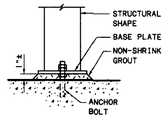
GRATING DETAILS

NOTE:
WHERE ALUMINUM PLATE IS CALLED FOR OVER GRATING ANGLES SHALL HAVE DEPTH SUCH THAT ALUMINUM PLATE IS FLUSH WITH FINISHED CONCRETE.

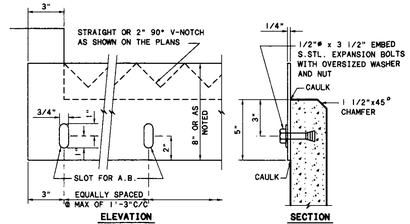


SECTION ELEVATION

TYPICAL ACCESS STEPS



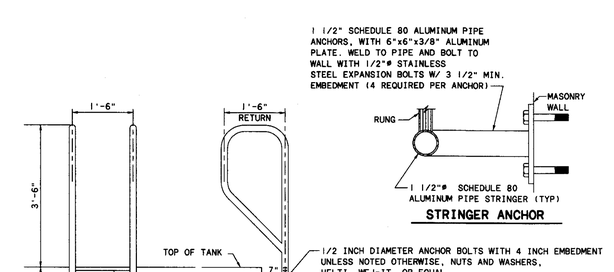
TYPICAL BASE PLATE SETTING



ELEVATION SECTION

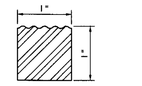
NOTE: ALL WEIRS SHALL BE TRUE AND LEVEL TO WITHIN ±1/16" OF NOTED ELEVATION.

STANDARD WEIR

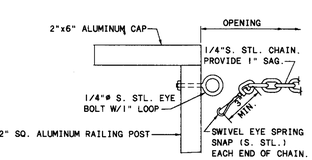


LADDER DETAILS

STRINGER ANCHOR

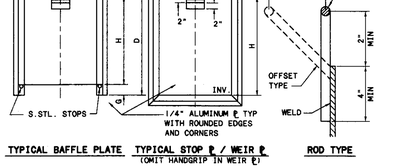


ALUMINUM RUNG
CROSS SECTION



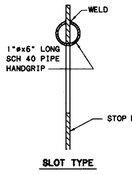
RAILING POST AND CHAIN

PROVIDE TWO CHAINS AT EACH LADDER OPENING AT 18" AND 34" ABOVE TOP OF TANK.

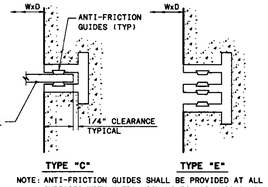


TYPICAL BAFFLE PLATE TYPICAL STOP ℄ / WEIR ℄ (OMIT HANDGRIP IN WEIR ℄) ROD TYPE

ELEVATIONS



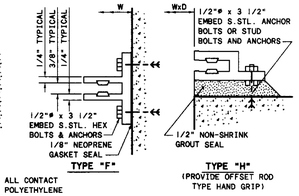
SLOT TYPE



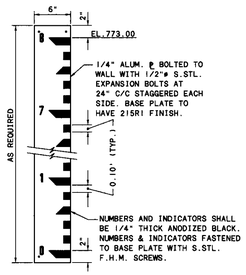
TYPE "C" TYPE "E"

NOTE: ANTI-FRICTION GUIDES SHALL BE PROVIDED AT ALL CONTACT SURFACES WITH ULTRA HIGH MOLECULAR WEIGHT POLYETHYLENE (UHMW) BEARING BARS, CONTINUOUSLY AND MECHANICALLY LOCKED IN PLACE.

TYPICAL HANDGRIPS

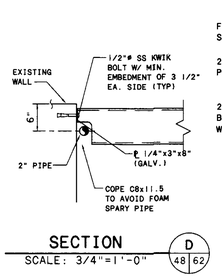


TYPE "F" TYPE "H" (PROVIDE OFFSET ROD TYPE HAND GRIP)

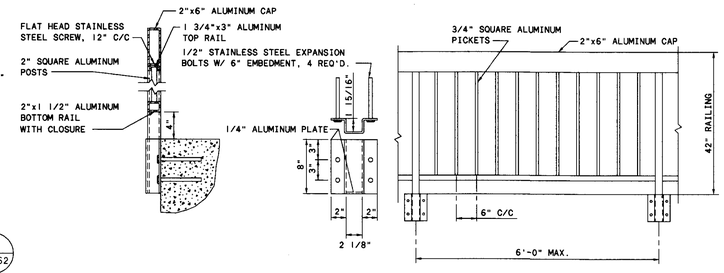


GUIDE CROSS-SECTIONS (ALUMINUM)

STAFF GAUGE



SECTION D
SCALE: 3/4"=1'-0" 48|62



EXTERIOR ALUMINUM RAILING DETAIL

PLATE SCHEDULE													
LOCATION	MARK	GUIDE				STOP ℄		WEIR ℄		BAFFLE ℄			REMARKS
		TYPE	W	D	NO.	H	NO.	H	NO.	H	G	NO.	
TERTIARY TREATMENT COMPLEX:													
ø FILTER BYPASS	A	C	2'-6"	1'-10"	6	1'-10"	6						
ø UV CHANNEL	B	C	2'-0"	3'-8"	3	3'-7"	3						
AROBIC DIGESTER	C	C	1'-6"	4'-0"	1	3'-10"	1						
SLUDGE STORAGE TANKS	C	C	1'-6"	4'-0"	7	3'-10"	7						

NOTE:
PROVIDE TWO HANDGRIPS IN PLATES 30" WIDE OR WIDER. PROVIDE EXTENDED ROD TYPE HANDGRIPS TO (D-2") WHEN "D" EXCEEDS "H" BY 1'-0" OR MORE. PROVIDE STIFFENING MEMBERS AS REQUIRED TO KEEP DEFLECTION TO LESS THAN W/360 UNDER MAXIMUM HEAD.

FLOOR LOAD PLATE TABLE		
LOCATION	* LOAD	QUAN.
TERTIARY COMPLEX - ROOM 102	300	1
TERTIARY COMPLEX - ROOM 100	300	1
BLOWER BUILDING - ROOM 100	300	1
SLUDGE THICKENER BUILDING - ROOM 100	300	2
SLUDGE THICKENER BUILDING - ROOM 101	300	1

MAXIMUM FLOOR LOAD * LBS./SQ.FT.

ALL PLATES ARE PLASTIC

LIFT LOAD PLATE TABLE		
LOCATION	** LOAD	QUAN.
BLOWER BUILDING - ROOM 100	2000	1
CONTROL BUILDING - LOWER LEVEL PUMP ROOM	3000	1
TERTIARY COMPLEX - ROOM 102	1000	1

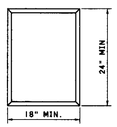
MAXIMUM LIFT LOAD ** POUNDS

ALL PLATES ARE PLASTIC

OCCUPANCY / CLASSIFICATION LOAD		
LOCATION	** LOAD	QUAN.
TERTIARY COMPLEX - F2	0	2
BLOWER BUILDING - F2	0	2
SLUDGE THICKENER BUILDING - F2	0	3

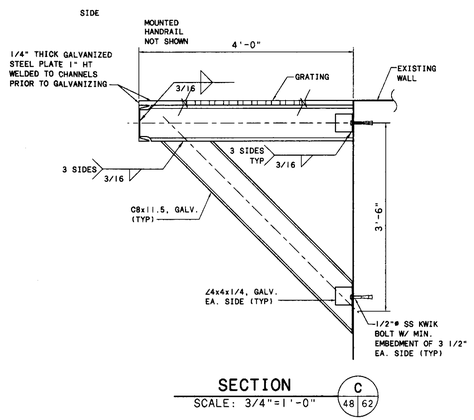
AREA OCCUPANCY LOAD BUILDING CLASSIFICATION

ALL PLATES ARE PLASTIC

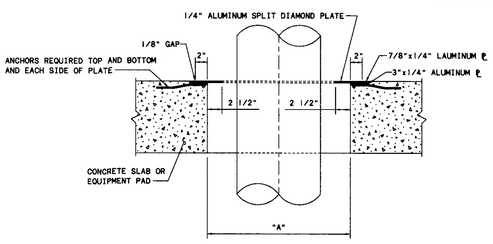


NOTE:
PLAQUE SHALL CONTAIN PROJECT, NAMES OF OFFICIALS, CONTRACTOR, ENGINEER AND DATE. MOUNT WHERE DIRECTED.

ALUMINUM PLAQUE



SECTION C
SCALE: 3/4"=1'-0" 48|62



CONCRETE OPENING "A"	PIPE SIZE	CLOSURE PLATE NO.REQD.	LOCATION
24"	14"	10	BLOWER BUILDING
24"	14"	3	SLUDGE THICKENER BUILDING
20"	12"	3	
18"	10"	4	
16"	8"	4	

FLOOR CLOSURE PLATE DETAIL

NOTES

1. ALL ALUMINUM IN CONTACT WITH CONCRETE, MASONRY, OR DISSIMILAR METALS SHALL BE ISOLATED BY COATING THE CONTACT SURFACES WITH TWO COATS OF EPOXY.
2. ALL FASTENERS AND ANCHORS SHALL BE TYPE 316 STAINLESS STEEL UNLESS OTHERWISE NOTED.
3. ALL GRATING SHALL BE ALUMINUM UNLESS OTHERWISE NOTED.
4. ALL RAILING SHALL BE ALUMINUM UNLESS OTHERWISE NOTED.
5. ALL RAILING SHALL BE STANDARD TYPE UNLESS OTHERWISE NOTED.
6. ALL RAILING SHALL BE SURFACE MOUNTED UNLESS OTHERWISE NOTED.
7. ALL STAINLESS STEEL SHALL BE TYPE 316.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

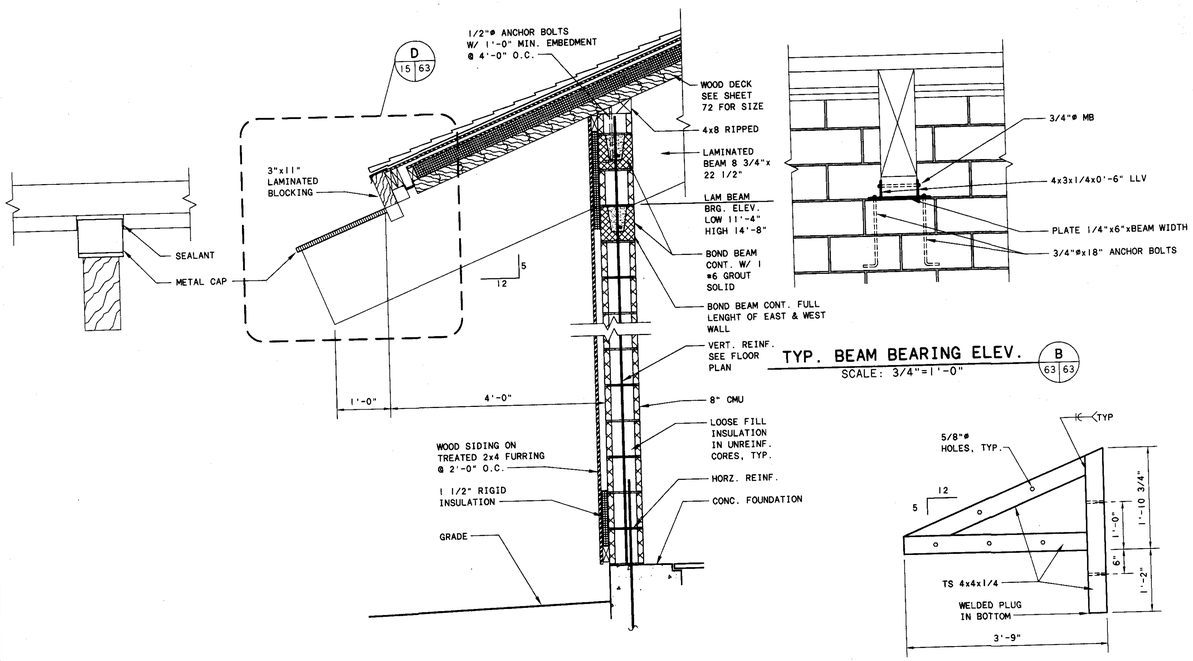
JOB NO.	15582
DESIGNED BY:	WKG
DRAWN BY:	DLR
CHECKED BY:	WKG
APPROVED BY:	RBD
DATE:	MARCH 1995

MISCELLANEOUS METALS DETAILS

SCALE: AS NOTED

SHEET NO. 62 OF 112

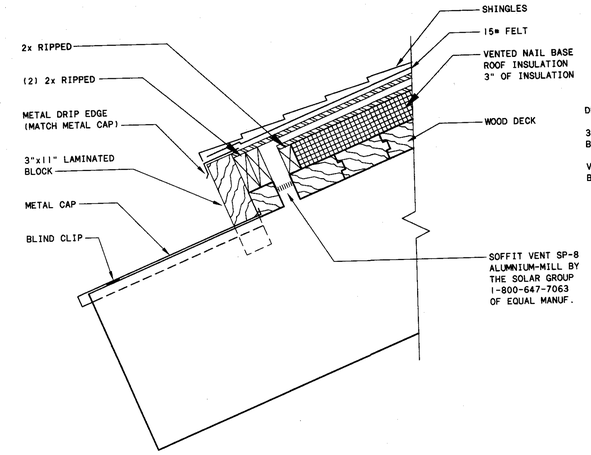
03-28-95 N:\PROJECTS\PR\15582\CADD\SHT62



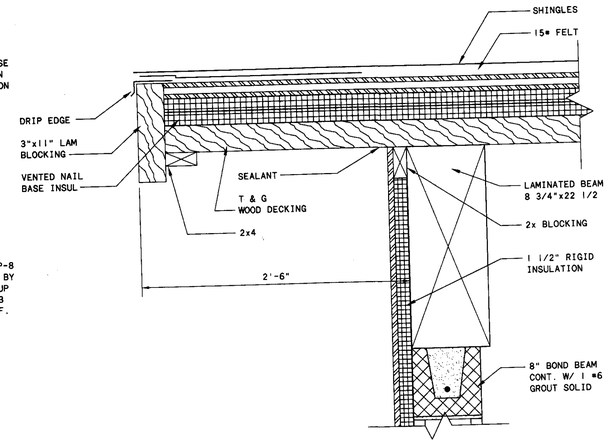
TYPICAL EAVE WALL SECTION — A — 30 63
SCALE: 3/4"=1'-0"

TYP. BEAM BEARING ELEV. — B — 63 63
SCALE: 3/4"=1'-0"

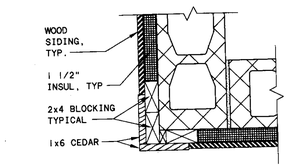
ELEV. OF METAL BRACKETS — C — 63 63
SCALE: 3/4"=1'-0"



SECTION THRU METAL CAP — D — 15 63
SCALE: 1 1/2"=1'-0"

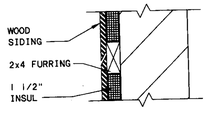


TYP. RAKED SECTIONS — E — 30 63
SCALE: 1 1/2"=1'-0"

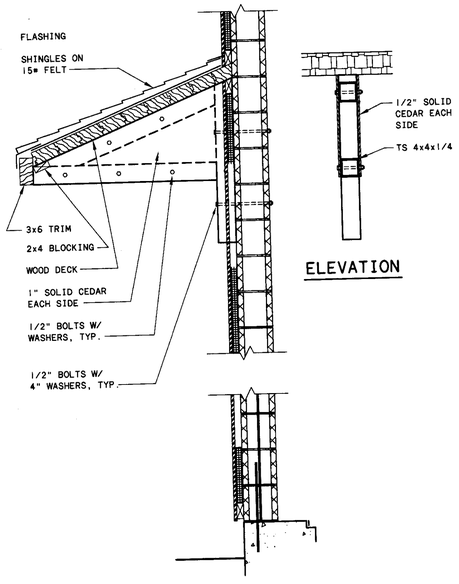


TYP. SILL — F — 15 63
SCALE: 1 1/2"=1'-0"

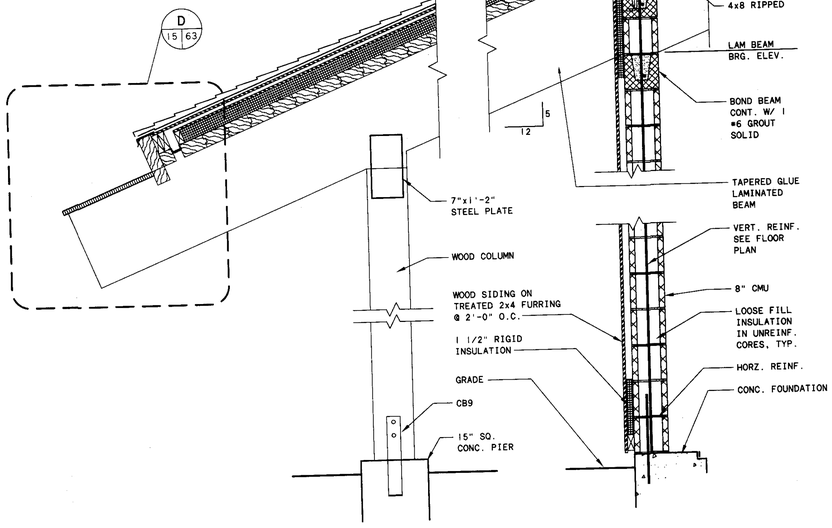
TYP. CORNER — G — 15 63
SCALE: 1 1/2"=1'-0"



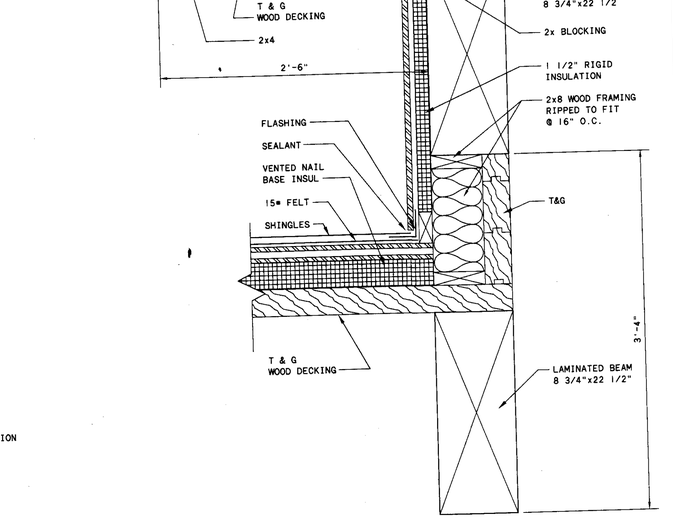
TYP. HORIZ.-JOINT IN PLYWOOD SIDING — H — 15 63
SCALE: 1 1/2"=1'-0"



WALL SECTION SOUTH WALL — J — 30 63
SCALE: 3/4"=1'-0"



WALL SECTION — K — 30 63
SCALE: 3/4"=1'-0"



ROOF TRANSITION DETAIL — L — 30 63
SCALE: 1 1/2"=1'-0"

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

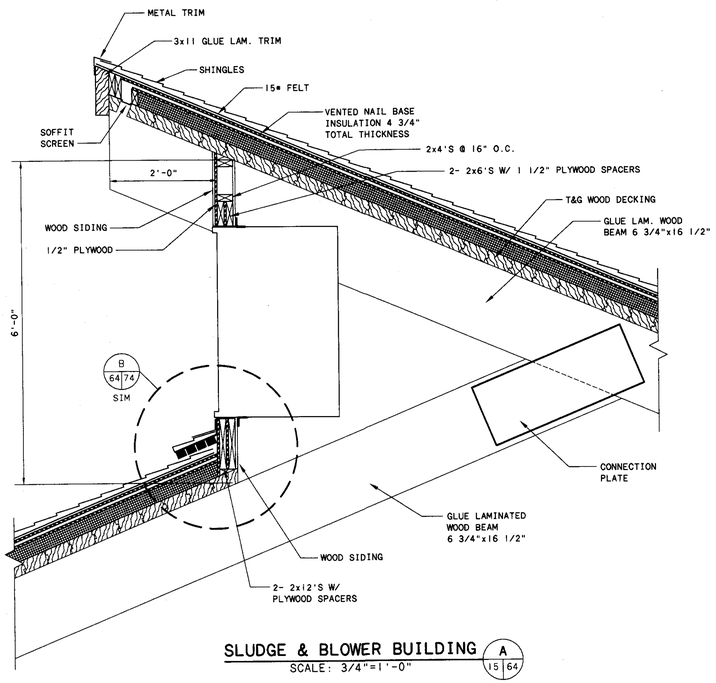
DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	DM
DRAWN BY:	BK
CHECKED BY:	DM
APPROVED BY:	DM
DATE:	MARCH 1995

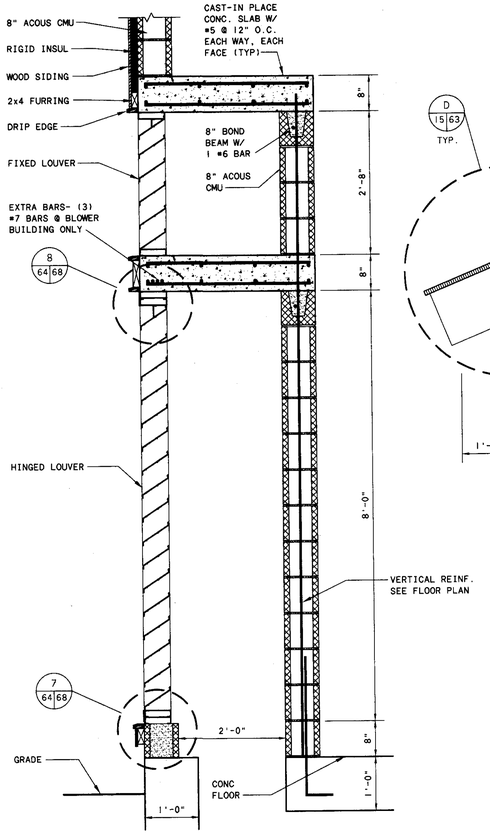
ARCHITECTURAL DETAILS

SCALE:	
AS NOTED	
SHEET NO.	OF
63	112

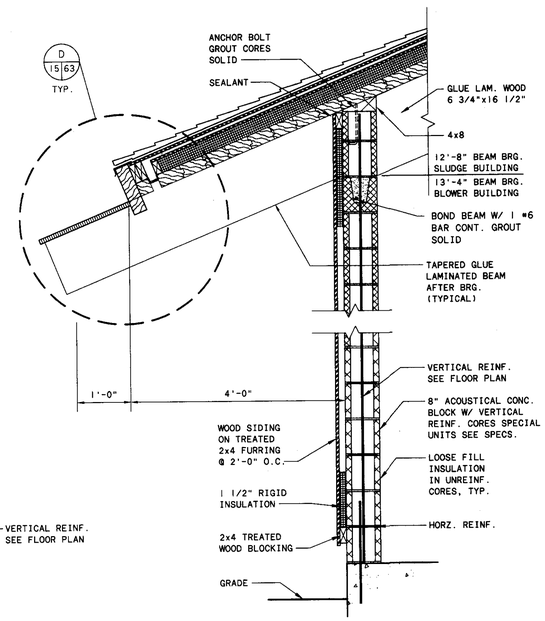
O:\SHT63 03-24-95



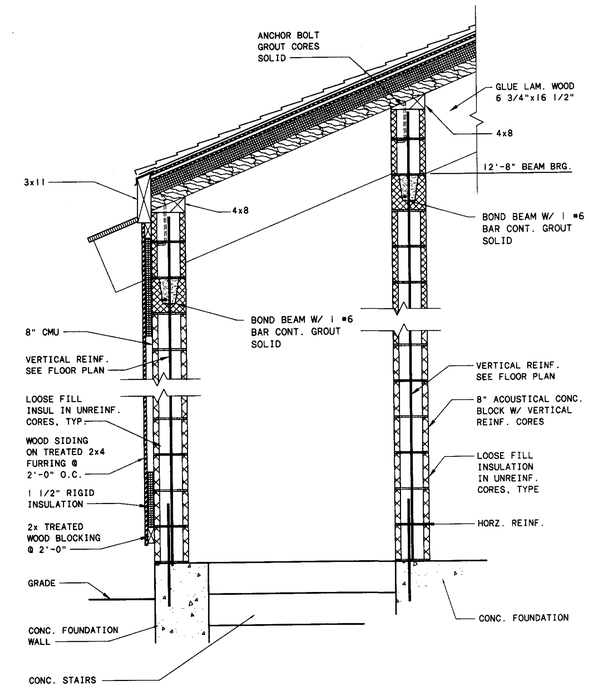
SLUDGE & BLOWER BUILDING (A 15 64)
SCALE: 3/4"=1'-0"



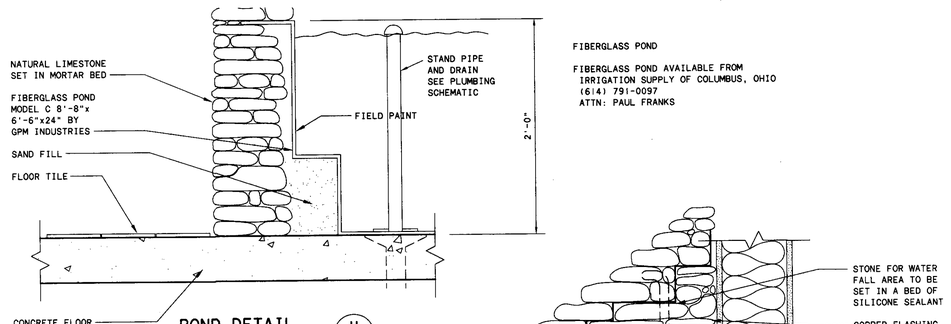
SLUDGE BUILDING (B 35 64)
SCALE: 3/4"=1'-0"



WALL SECTION (C 15 64)
SCALE: 3/4"=1'-0"

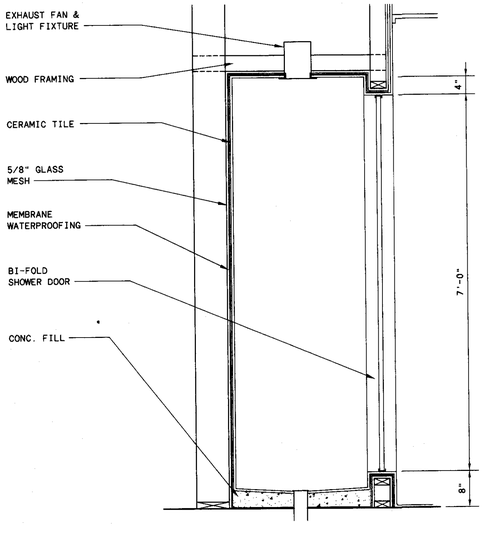


WALL SECTION (D 35 64)
SCALE: 3/4"=1'-0"

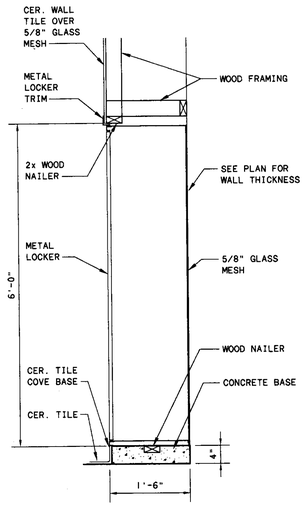


POND DETAIL (H 11 64)
SCALE: 1 1/2"=1'-0"

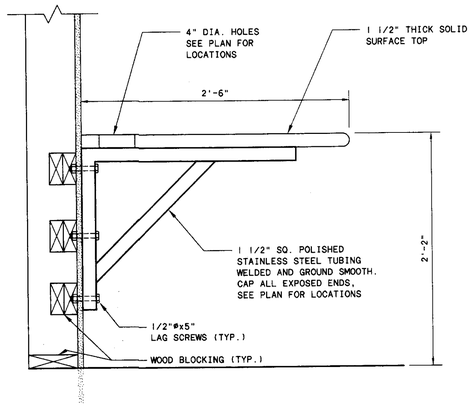
POND DETAIL (J 11 64)
SCALE: 1 1/2"=1'-0"



SHOWER DETAIL (E 11 64)
SCALE: 3/4"=1'-0"



LOCKER DETAIL (F 11 64)
SCALE: 3/4"=1'-0"



WORKSURFACE DETAIL (G 11 64)
SCALE: 1 1/2"=1'-0"

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

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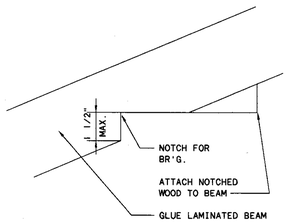
APPROVED BY:	DM
DATE:	MARCH 1995

ARCHITECTURAL DETAILS

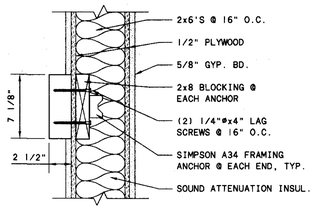
SCALE: AS NOTED

SHEET NO. 64 OF 112

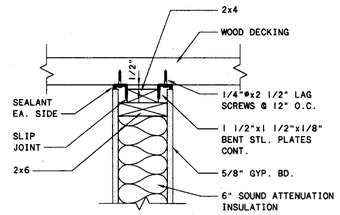
O:\SH164 03-24-95



GLUE LAM. BR'G DETAIL (D 66|65)
SCALE: 1 1/2"=1'-0"

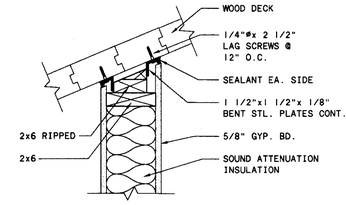


DETAIL AT LOW BEAM (C 11|65)
SCALE: 1 1/2"=1'-0"



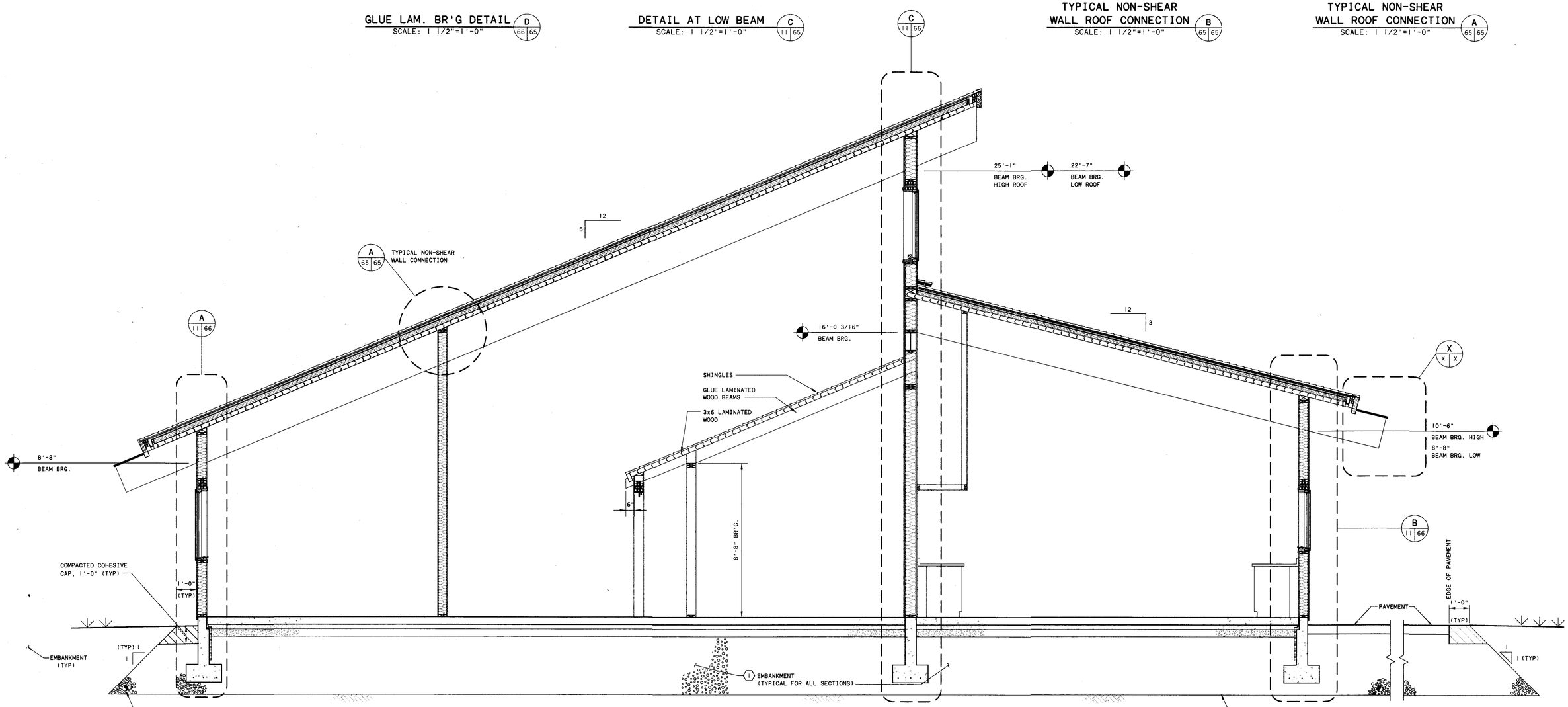
PARALLEL TO ROOF SLOPE

TYPICAL NON-SHEAR WALL ROOF CONNECTION (B 65|65)
SCALE: 1 1/2"=1'-0"



PERPENDICULAR TO ROOF SLOPE

TYPICAL NON-SHEAR WALL ROOF CONNECTION (A 65|65)
SCALE: 1 1/2"=1'-0"



ADMINISTRATION BUILDING SECTION (A 10|65)
SCALE: 3/8"=1'-0"

1 SEE NOTES ON SHEET 12 FOR EMBANKMENT, SETTLMENT PLATFORMS AND WAITING PERIOD.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

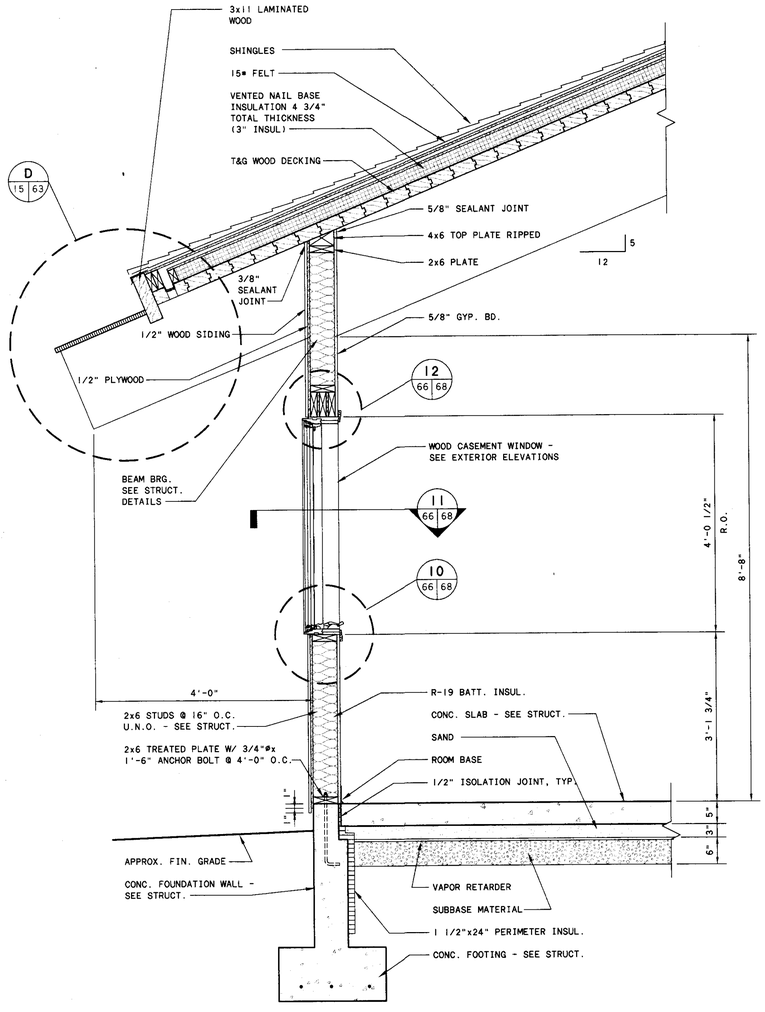
DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	DDM
DRAWN BY:	WBK
CHECKED BY:	DDM
APPROVED BY:	DDM
DATE:	MARCH 1995

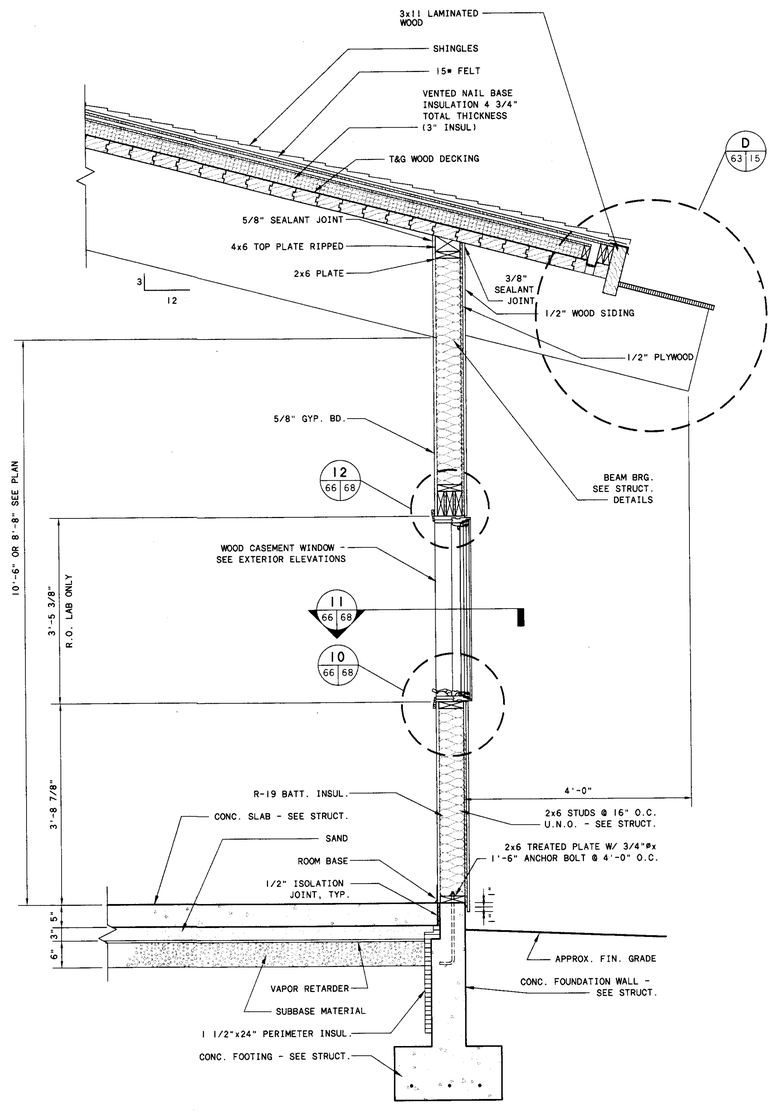
ADMINISTRATION BUILDING
ARCHITECTURAL DETAILS

SCALE:	
3/8"=1'-0"	
SHEET NO.	OF
65	112

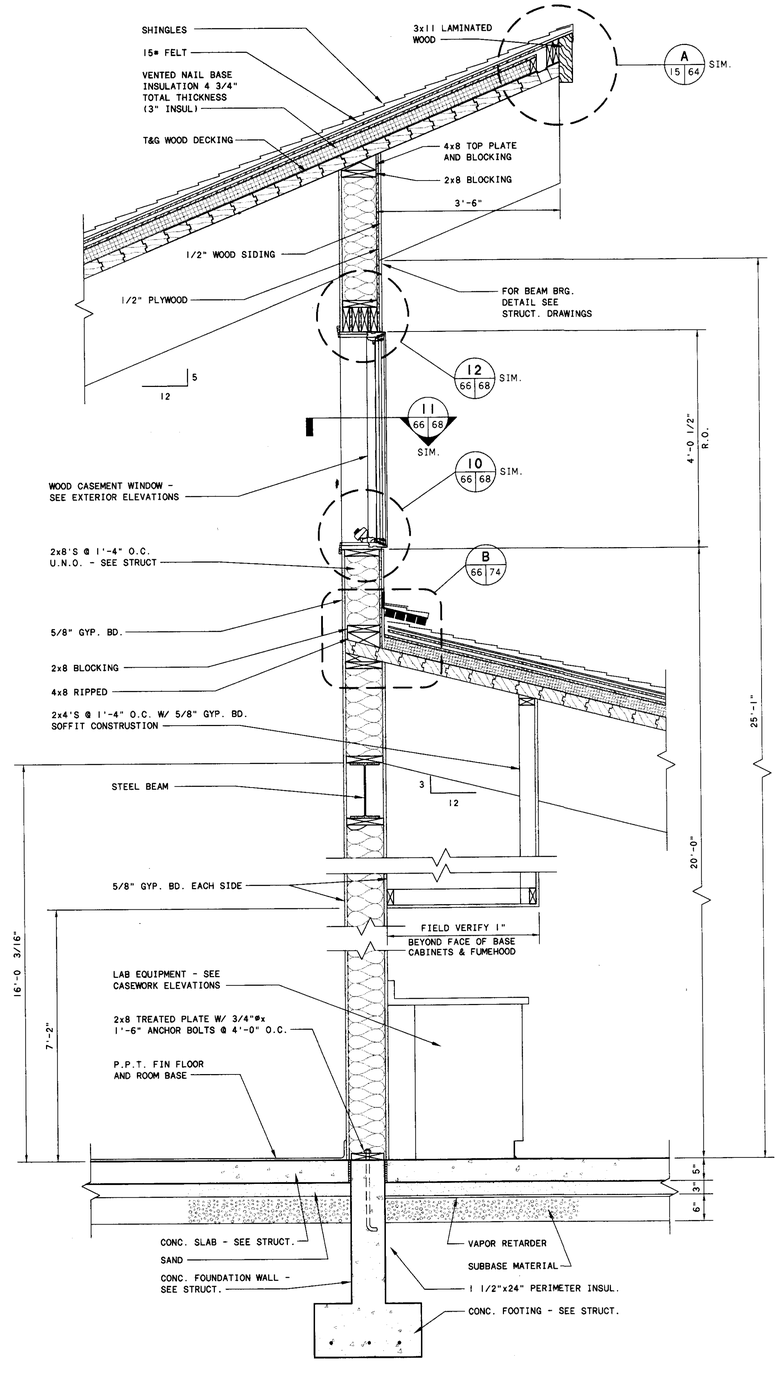
N:\PR15582\CADD\SHT65 3-28-95



WALL SECTION A
SCALE: 3/4"=1'-0" (10 66)



WALL SECTION B
SCALE: 3/4"=1'-0" (10 66)



WALL SECTION C
SCALE: 3/4"=1'-0" (11 66)

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
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DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

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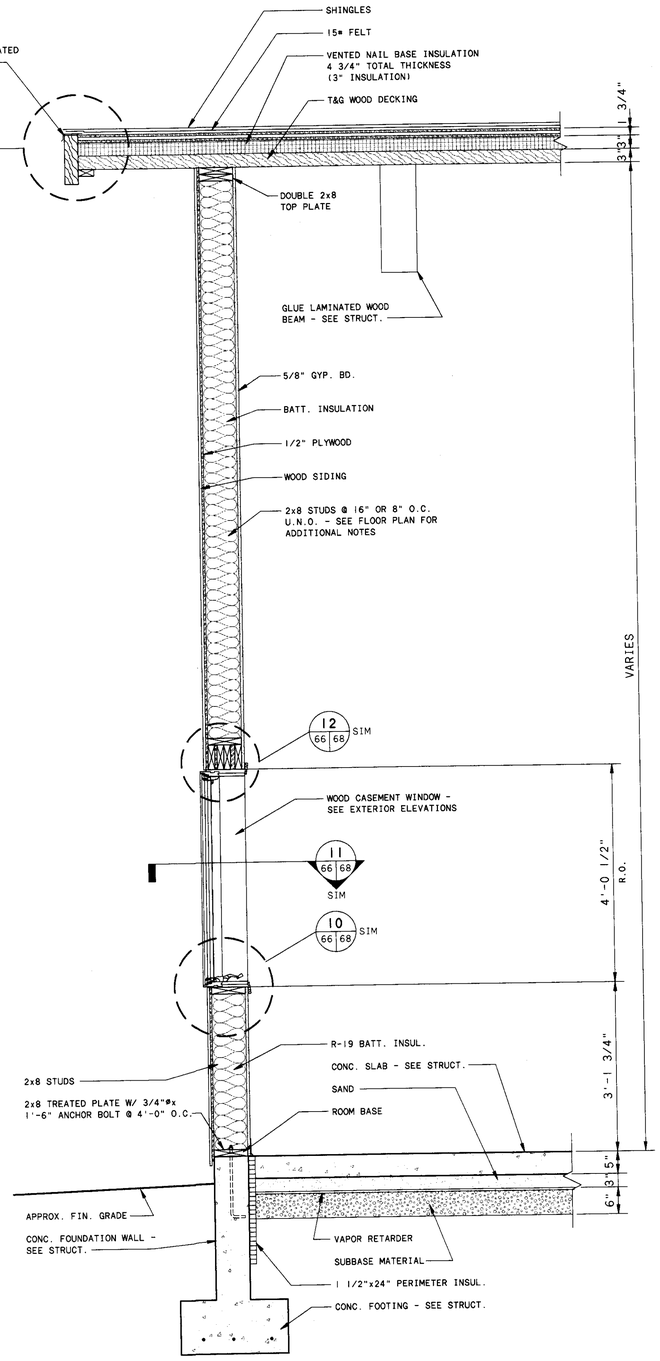
APPROVED BY:	DM
DATE:	MARCH 1995

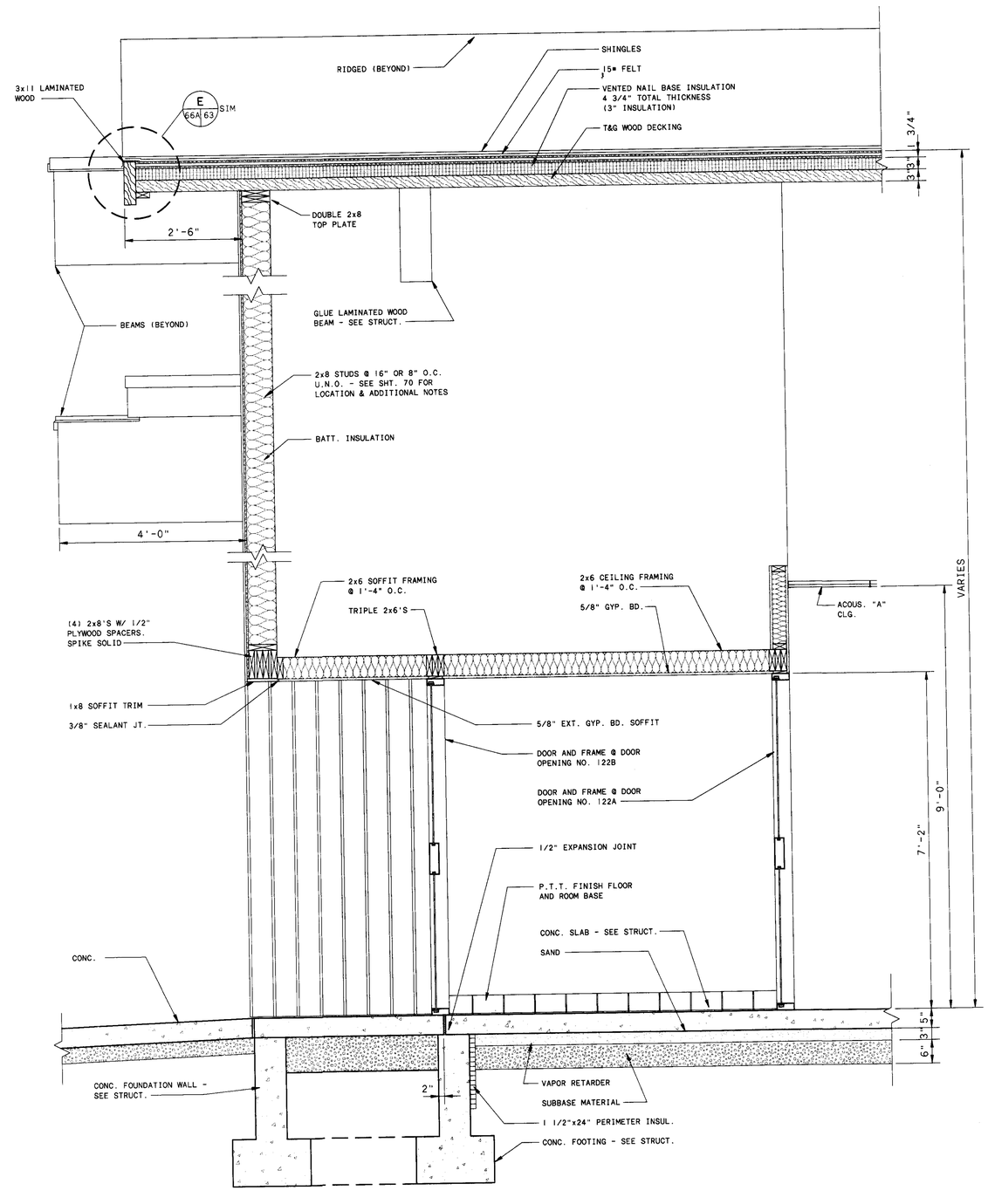
ADMINISTRATION BUILDING
ARCHITECTURAL DETAILS

SCALE:	
3/4"=1'-0"	
SHEET NO.	OF
66	112

N:\PR\15582\CADD\SHT66 03-30-95 3:30:17 pm EST



WALL SECTION D
SCALE: 3/4"=1'-0"
10 66A



WALL SECTION E
SCALE: 3/4"=1'-0"
10 66A

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

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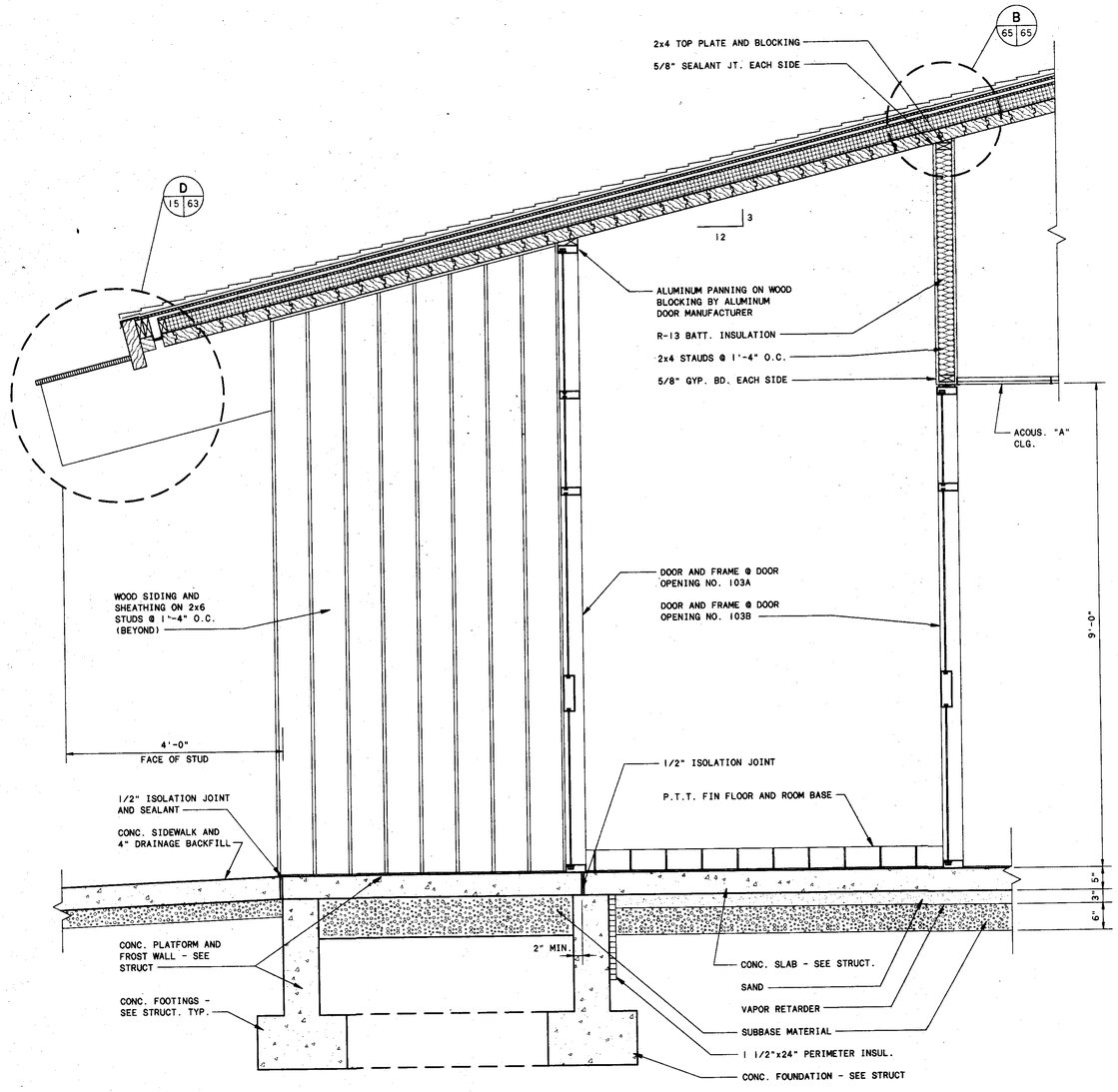
DATE:	MARCH 1995

ADMINISTRATION BUILDING
ARCHITECTURAL DETAILS

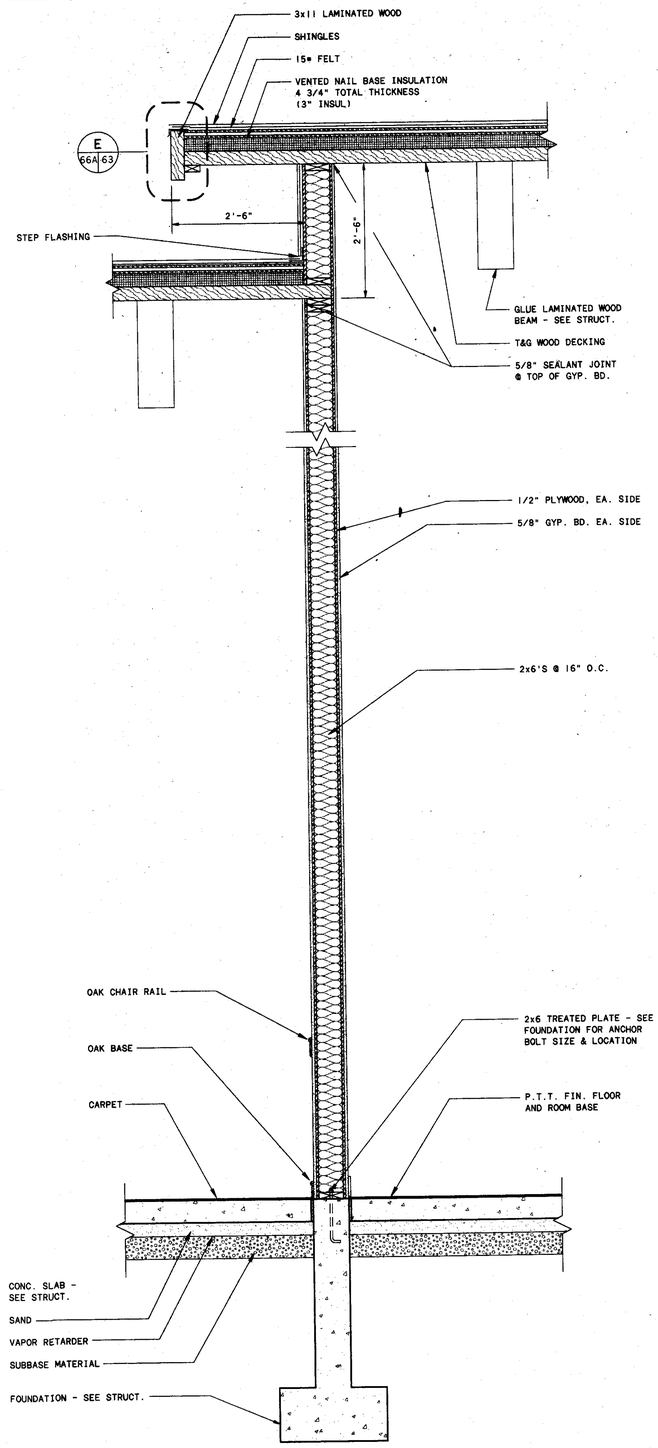
SCALE: 3/4"=1'-0"

SHEET NO. 66A OF 112

N:\PRI5582\CADD\SHT66A 3-17-95 3:53:51 pm EST



WALL SECTION F (10 | 66B)
SCALE: 3/4"=1'-0"



WALL SECTION G (10 | 66B)
SCALE: 3/4"=1'-0"

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

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ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

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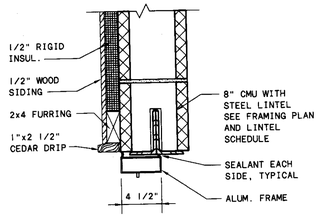
DRAWN BY:	BK
CHECKED BY:	DM
APPROVED BY:	DM
DATE:	MARCH 1995

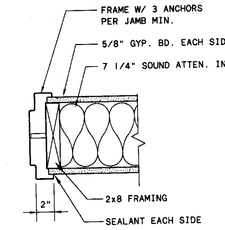
ADMINISTRATION BUILDING
ARCHITECTURAL DETAILS

SCALE:	
3/4"=1'-0"	
SHEET NO.	OF
66B	112

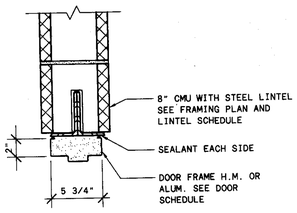
N:\PR15582\CADD\SHT66B 3-17-95 4:23:29 pm EST



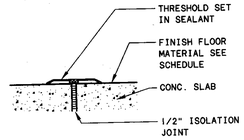
HEAD DETAIL 1
SCALE: 1 1/2"=1'-0" 67 | 67



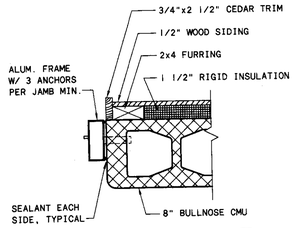
JAMB DETAIL 6
SCALE: 1 1/2"=1'-0" 67 | 67



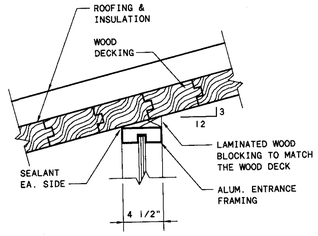
HEAD DETAIL 11
SCALE: 1 1/2"=1'-0" 67 | 67



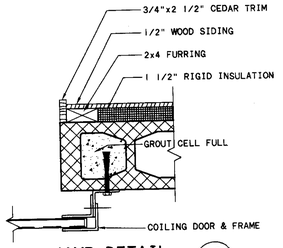
SILL DETAIL 16
SCALE: 1 1/2"=1'-0" 67 | 67



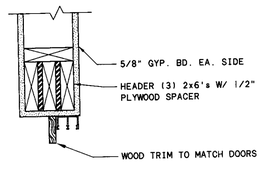
JAMB DETAIL 2
SCALE: 1 1/2"=1'-0" 67 | 67



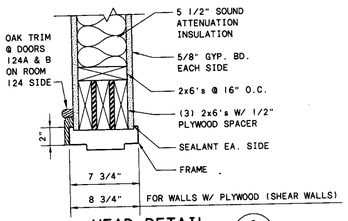
HEAD DETAIL 7
SCALE: 1 1/2"=1'-0" 67 | 67



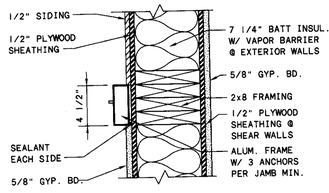
JAMB DETAIL 12
SCALE: 1 1/2"=1'-0" 67 | 67



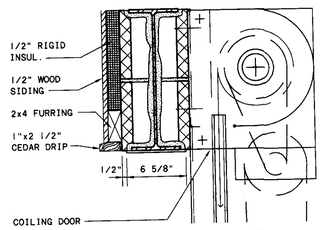
HEAD DETAIL 17
SCALE: 1 1/2"=1'-0" 67 | 67



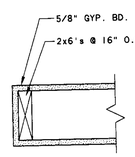
HEAD DETAIL 3
SCALE: 1 1/2"=1'-0" 67 | 67



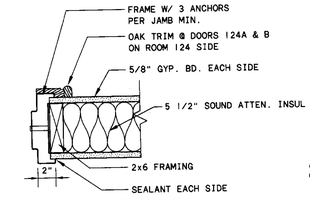
JAMB DETAIL 8
SCALE: 1 1/2"=1'-0" 67 | 67



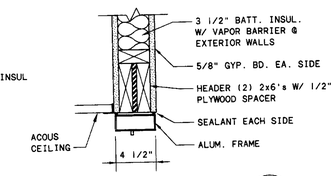
HEAD DETAIL 13
SCALE: 1 1/2"=1'-0" 67 | 67



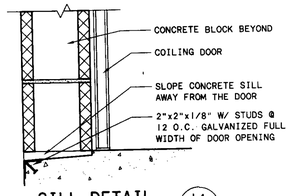
JAMB DETAIL 18
SCALE: 1 1/2"=1'-0" 67 | 67



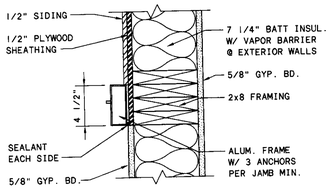
JAMB DETAIL 4
SCALE: 1 1/2"=1'-0" 67 | 67



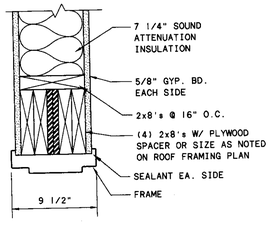
HEAD DETAIL 9
SCALE: 1 1/2"=1'-0" 67 | 67



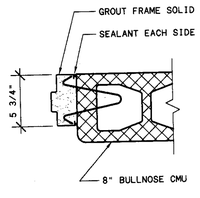
SILL DETAIL 14
SCALE: 1 1/2"=1'-0" 35 | 67



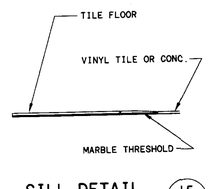
JAMB DETAIL 19
SCALE: 1 1/2"=1'-0" 67 | 67



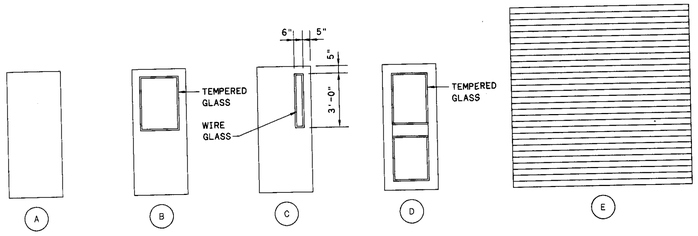
HEAD DETAIL 5
SCALE: 1 1/2"=1'-0" 67 | 67



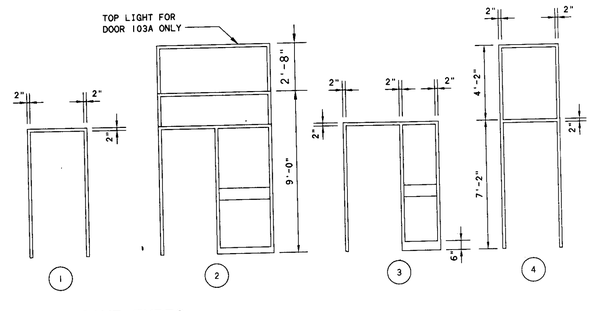
JAMB DETAIL 10
SCALE: 1 1/2"=1'-0" 67 | 67



SILL DETAIL 15
SCALE: 1 1/2"=1'-0" 67 | 67



DOOR ELEVATIONS
SCALE: 1/4"=1'-0"



FRAME TYPES
SCALE: 1/4"=1'-0"

DOOR SCHEDULE

DOOR NO.	DOOR DIMENSION W	DOOR DIMENSION H	DOOR DIMENSION T	DOOR MAT	DOOR TYPE	DOOR GLASS	FRAME MAT	FRAME DETAILS H	FRAME DETAILS J	FRAME DETAILS S	FRAME TYPE	HDWRE	LABEL	REMARKS
ADMINISTRATION BUILDING														
100	3'-0"	7'-0"	1 3/4"	WOOD	B	G-3	H.M.	3	4	15	1	1	20 MIN	
101	3'-0"	7'-0"	1 3/4"	WOOD	B	G-3	H.M.	3	4	15	3	1	20 MIN	3'-0" WIDE SIDE LIGHT
103A	3'-0"	7'-0"	1 3/4"	ALUM	D	G-3	ALUM	7	8	16	2	2	-	AUTOMATIC DOOR OPERATOR
103B	3'-0"	7'-0"	1 3/4"	ALUM	D	G-3	ALUM	9	8 SIM	-	2	3		
105A	3'-0"	7'-0"	1 3/4"	WOOD	A	-	H.M.	3	4	-	1	4	20 MIN	
105B	3'-0"	7'-0"	1 3/4"	WOOD	A	-	H.M.	3	4	-	1	5	-	
106	3'-0"	7'-0"	1 3/4"	WOOD	A	-	H.M.	3	4	-	1	4	20 MIN	
107	3'-0"	7'-0"	1 3/4"	WOOD	A	-	H.M.	3	4	15	1	1	20 MIN	
108	3'-0"	7'-0"	1 3/4"	WOOD	A	-	H.M.	3	4	-	1	4	20 MIN	
109	3'-0"	7'-0"	1 3/4"	WOOD	A	-	H.M.	3	4	-	1	5	-	
110	3'-0"	7'-0"	1 3/4"	WOOD	A	-	H.M.	3	4	15	1	1	20 MIN	
112	3'-0"	7'-0"	1 3/4"	WOOD	A	-	H.M.	3	4	15	1	1	20 MIN	
113	3'-0"	7'-0"	1 3/4"	WOOD	A	-	H.M.	3	4	15	1	1	20 MIN	
114	3'-0"	7'-0"	1 3/4"	WOOD	A	-	H.M.	3	4	15	1	1	20 MIN	
116	(2) 3'-2"	7'-0"	1 3/4"	WOOD	A	-	H.M.	17	18	-	-	6	-	SLIDING DOORS
117A	3'-0"	7'-0"	1 3/4"	WOOD	B	G-3	H.M.	3	4	15	1	7	20 MIN	AUTOMATIC DOOR OPERATOR
117B	3'-0"	7'-0"	1 3/4"	WOOD	B	G-3	H.M.	5	6	15	1	7	20 MIN	
118	3'-0"	7'-0"	1 3/4"	WOOD	A	-	H.M.	3	4	15	1	1	20 MIN	
119	3'-0"	7'-0"	1 3/4"	WOOD	A	-	H.M.	3	4	-	1	8	20 MIN	
120	3'-0"	7'-0"	1 3/4"	WOOD	A	-	H.M.	3	4	-	1	8	20 MIN	
122A	3'-0"	7'-0"	1 3/4"	ALUM	D	G-3	ALUM	9	8 SIM	-	3	3	-	
122B	3'-0"	7'-0"	1 3/4"	ALUM	D	G-3	ALUM	-	19	16	3	2	-	FOR HEAD DETAIL E/66A
124A	3'-0"	7'-0"	1 3/4"	WOOD	A	-	H.M.	9	19	15	1	9	20 MIN	OAK TRIM ON ROOM 124 SIDE
124B	3'-0"	7'-0"	1 3/4"	WOOD	A	-	H.M.	9	4	15	1	9	20 MIN	OAK TRIM ON ROOM 124 SIDE
BLOWER BUILDING														
100A	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1	2	16	1	10	-	
100B	(2)2'-10"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1	2	16	1	11	-	
101A	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1	2	16	1	10	-	
101B	3'-0"	7'-2"	1 3/4"	S.S.	C	G-9	S.S.	10	11	-	1	12	1 1/2 HR.	STAINLESS STEEL DOOR & FRAME
101C	3'-0"	7'-2"	1 3/4"	S.S.	C	G-9	S.S.	10	11	-	1	12	1 1/2 HR.	STAINLESS STEEL DOOR & FRAME
TERTIARY TREATMENT COMPLEX														
100A	(2)2'-10"	7'-2"	1 3/4"	ALUM	A	-	ALUM	1	2	16	1	13	-	
100B	(2)2'-10"	7'-2"	1 3/4"	ALUM	A	-	ALUM	1	2	16	1	13	-	
101A	(2)2'-10"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1	2	16	1	13	-	
101B	3'-0"	7'-2"	1 3/4"	ALUM	A	-	ALUM	10	11	-	1	14	-	
101C	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	10	11	-	1	15	-	
102A	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1	2	16	1	14	-	
102B	3'-0"	7'-2"	1 3/4"	ALUM	A	-	ALUM	1	2	16	1	15	-	
SLUDGE BUILDING														
100A	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1	2	16	1	16	-	
100B	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1	2	16	1	16	-	
101A	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1	2	16	1	17	-	
101B	8'-0"	10'-0"	-	ALUM	E	-	ALUM	13 SIM	12 SIM	-	-	18	-	
101C	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	10	11	-	1	19	-	
101D	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1	2	16	1	16	-	
101E	10'-0"	10'-0"	-	ALUM	E	-	ALUM	13	12	14	-	18	-	
102A	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1	2	16	1	17	-	
102B	3'-0"	7'-2"	1 3/4"	S.S.	C	G-9	S.S.	10	11	-	1	19	1 1/2 HR	STAINLESS STEEL DOOR & FRAME
EXISTING CONTROL BUILDING														
100	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1 SIM	2 SIM	16	1	20	-	
101	3'-0"	7'-0"	1 3/4"	ALUM	B	G-3	ALUM	1 SIM	2 SIM	16	1	20	-	
EXISTING BLOWER BUILDING														
100	(2)2'-10"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1 SIM	2 SIM	16	1	21	-	
101	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1 SIM	2 SIM	16	1	22	-	
EXISTING TERTIARY BUILDING														
100	(2)2'-10"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1 SIM	2 SIM	16	1	23	-	
101	(2)2'-10"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1 SIM	2 SIM	16	1	23	-	
102	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1 SIM	2 SIM	16	1	24	-	
EXISTING CONCENTRATOR BUILDING														
100	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1 SIM	2 SIM	16	1	25	-	
101	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1 SIM	2 SIM	16	1	25	-	
102	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1 SIM	2 SIM	16	1	25	-	
103	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1 SIM	2 SIM	16	1	25	-	
104	(2)2'-10"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1 SIM	2 SIM	16	4	26	-	
105	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1 SIM	2 SIM	16	1	25	-	
EXISTING SCREW PUMP BUILDING														
100	3'-0"	7'-2"	1 3/4"	ALUM	B	G-3	ALUM	1 SIM	2 SIM	16	1	27	-	

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

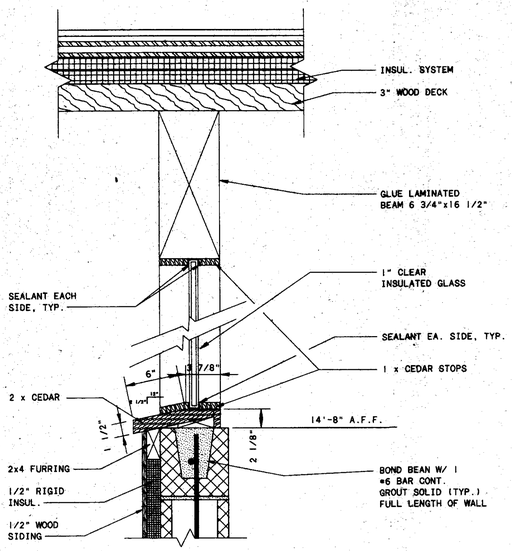
JOB NO.	15582
DESIGNED BY:	DM
DRAWN BY:	BK
CHECKED BY:	DM
APPROVED BY:	DM
DATE:	MARCH 1995

DOOR SCHEDULE AND DETAILS

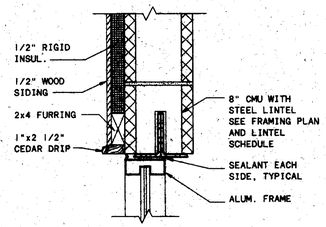
SCALE: AS NOTED

SHEET NO. 67 OF 112

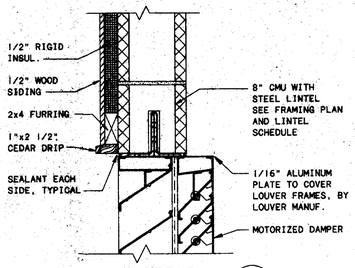
N:\PR15582\CADD\SHT67 3-28-95



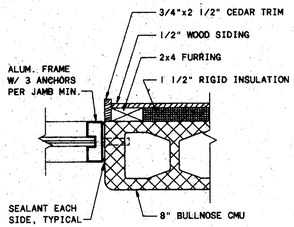
WINDOW SILL DETAIL 1
SCALE: 1 1/2"=1'-0" (15|68)



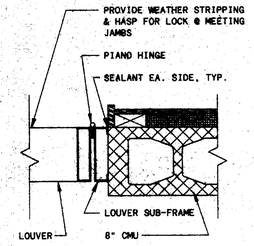
HEAD DETAIL 2
SCALE: 1 1/2"=1'-0" (35|68)



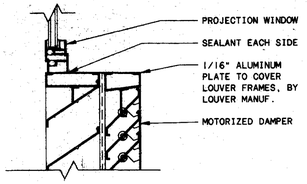
HEAD DETAIL 3
SCALE: 1 1/2"=1'-0" (15|68)

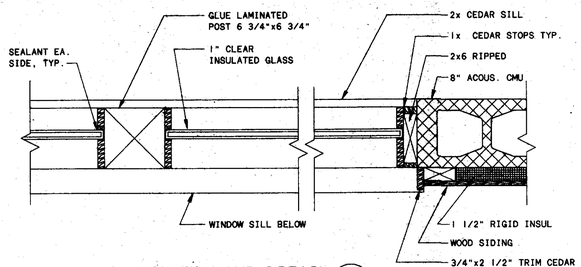


JAMB DETAIL 4
SCALE: 1 1/2"=1'-0" (35|68)

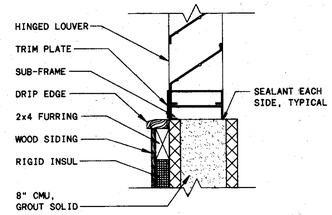


HINGED LOUVER JAMB DETAIL 5
SCALE: 1 1/2"=1'-0" (15|68)

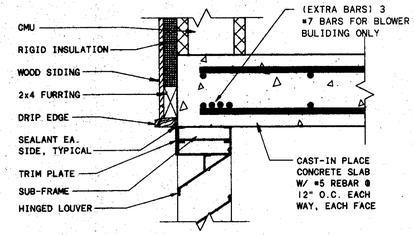




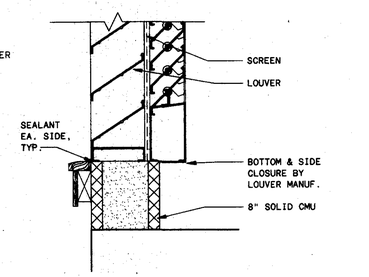
WINDOW JAMB DETAIL 6
SCALE: 1 1/2"=1'-0" (15|68)



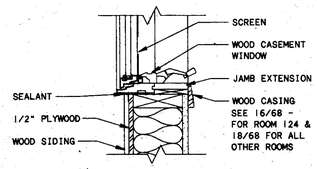
HINGED LOUVER SILL DETAIL 7
SCALE: 1 1/2"=1'-0" (15|68)



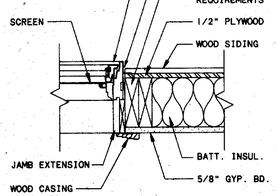
HINGED LOUVER HEAD DETAIL 8
SCALE: 1 1/2"=1'-0" (15|68)



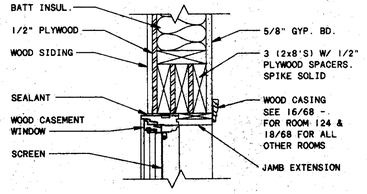
SILL DETAIL 9
SCALE: 1 1/2"=1'-0" (15|68)



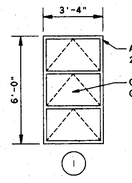
SILL DETAIL 10
SCALE: 1 1/2"=1'-0" (66|68)



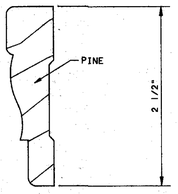
JAMB DETAIL 11
SCALE: 1 1/2"=1'-0" (66|68)



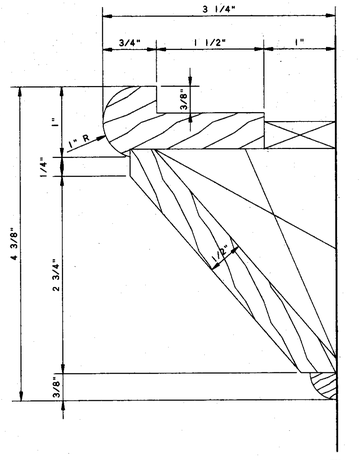
HEAD DETAIL 12
SCALE: 1 1/2"=1'-0" (66|68)



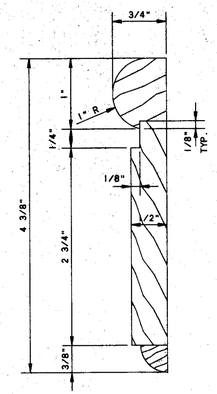
WINDOW TYPES
SCALE: 1/4"=1'-0"



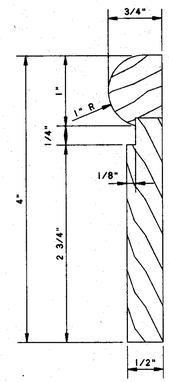
WINDOW CASING 18
SCALE: 1"=1" (68|68)



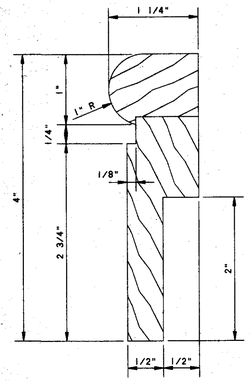
TRAY DETAIL 14
SCALE: 1"=1" (10|68)



CHAIR RAIL DETAIL 15
SCALE: 1"=1" (10|68)



WINDOW TRIM & BASE DETAIL 16
SCALE: 1"=1" (10|68)



DOOR JAMB DETAIL 17
SCALE: 1"=1" (10|68)

NOTE: ALL WOOD TO BE RED OAK FOR DETAIL 14 THRU 17

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

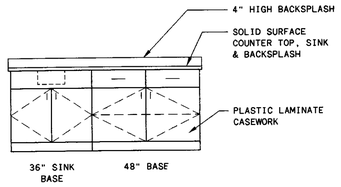
JOB NO.	15582
DESIGNED BY:	DDM
DRAWN BY:	WBK
CHECKED BY:	DDM
APPROVED BY:	?
DATE:	MARCH 1995

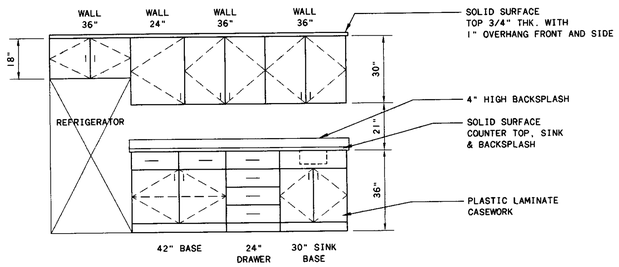
WINDOW AND LINTEL SCHEDULE AND DETAILS

SCALE: AS NOTED

SHEET NO. 68 OF 112

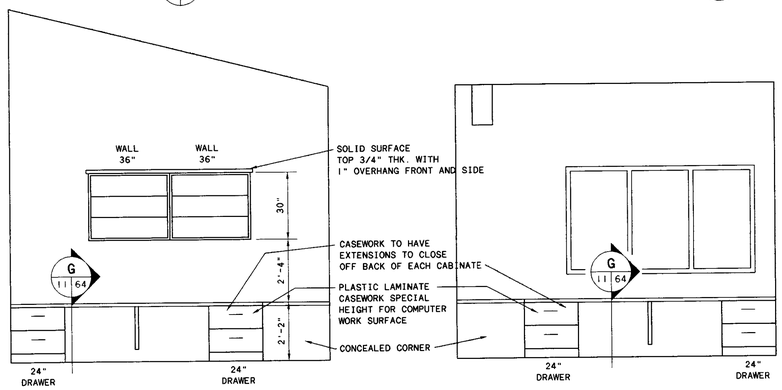
N:\PR\15582\CADD\SHT68 3-20-95 8:44:55 am EST





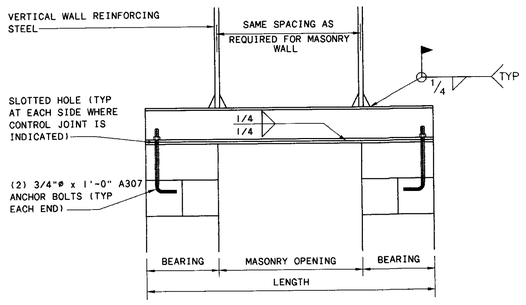
ELEVATION 1 (11|69)
SCALE: 3/8"=1'-0"

ELEVATION 2 (11|69)
SCALE: 3/8"=1'-0"



ELEVATION 3 (11|69)
SCALE: 3/8"=1'-0"

ELEVATION 4 (11|69)
SCALE: 3/8"=1'-0"



LINTEL DETAIL

ROOM FINISH SCHEDULE

ROOM NO.	DESCRIPTION	FLOOR BASE	FLOOR MAT.	NORTH WALL MAT.	NORTH WALL FINISH	EAST WALL MAT.	EAST WALL FINISH	SOUTH WALL MAT.	SOUTH WALL FINISH	WEST WALL MAT.	WEST WALL FINISH	CEILING MAT.	CEILING FIN.	CEILING HEIGHT	REMARKS
ADMINISTRATION BUILDING															
100	LUNCH ROOM	RES	VINYL TILE	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	EXPOSED	NOTE 1	VARIES	
101	CONTROL ROOM	RES	VINYL TILE	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	EXPOSED	NOTE 1	VARIES	
102	CORRIDOR	PPT	PPT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	ACOUS A	-	9'-0"	
103	VESTIBULE	PPT	PPT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	EXPOSED	NOTE 1	VARIES	
104	CORRIDOR	PPT	PPT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	ACOUS A	-	9'-0"	
105	MEN'S LOCKER ROOM	COVED CT	CT	GYP. BD.	CT	GYP. BD.	CT	GYP. BD.	CT	GYP. BD.	CT	ACOUS B	-	9'-0"	NOTE 2
106	MEN'S TOILET ROOM	COVED CT	CT	GYP. BD.	CT	GYP. BD.	CT	GYP. BD.	CT	GYP. BD.	CT	ACOUS B	-	9'-0"	NOTE 2
107	MECHANICAL ROOM	RES	CONC. SEALER	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	EXPOSED	NOTE 1	VARIES	
108	WOMEN'S TOILET ROOM	COVED CT	CT	GYP. BD.	CT	GYP. BD.	CT	GYP. BD.	CT	GYP. BD.	CT	ACOUS B	-	9'-0"	NOTE 2
109	WOMEN'S LOCKER ROOM	COVED CT	CT	GYP. BD.	CT	GYP. BD.	CT	GYP. BD.	CT	GYP. BD.	CT	ACOUS B	-	9'-0"	NOTE 2
110	OFFICE	RES	CARPET	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	EXPOSED	NOTE 1	VARIES	
111	COPIER	PPT	PPT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	EXPOSED	NOTE 1	VARIES	
112	OFFICE	RES	CARPET	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	EXPOSED	NOTE 1	VARIES	
113	OFFICE	RES	CARPET	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	EXPOSED	NOTE 1	VARIES	
114	OFFICE	RES	CARPET	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	EXPOSED	NOTE 1	VARIES	
115	LOBBY	PPT	PPT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	EXPOSED	NOTE 1	VARIES	
116	COAT CLOSET	PPT	PPT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	EXPOSED	NOTE 1	VARIES	
117	LABORATORY	RES	VINYL TILE	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	EXPOSED	NOTE 1	VARIES	
118	STORAGE	RES	VINYL TILE	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	EXPOSED	NOTE 1	VARIES	
119	MEN'S TOILET ROOM	COVED CT	CT	GYP. BD.	CT	GYP. BD.	CT	GYP. BD.	CT	GYP. BD.	CT	ACOUS A	-	9'-0"	NOTE 2
120	WOMEN'S TOILET ROOM	COVED CT	CT	GYP. BD.	CT	GYP. BD.	CT	GYP. BD.	CT	GYP. BD.	CT	ACOUS A	-	9'-0"	NOTE 2
121	CORRIDOR	PPT	PPT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	ACOUS A	-	9'-0"	
122	VESTIBULE	PPT	PPT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP BD	-	7'-2"	
123	CORRIDOR	PPT	PPT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	ACOUS A	-	9'-0"	
124	CONFERENCE ROOM	WOOD	CARPET	GYP. BD.	PAINT	A PANELS	PAINT	GYP. BD.	PAINT	GYP. BD.	PAINT	EXPOSED	NOTE 1	VARIES	NOTES 3, 4 & 5
BLOWER BUILDING															
001	LOWER LEVEL	-	CONC. SEALER	CONC.	PAINT	CONC.	PAINT	CONC.	PAINT	CONC.	PAINT	EXPOSED	PAINT	-	
100	BLOWER ROOM	-	CONC. SEALER	ACOUS CMU	PAINT	ACOUS CMU	PAINT	ACOUS CMU	PAINT	ACOUS CMU	PAINT	WOOD	NOTE 1	VARIES	
101	STAIRS	-	CONC. SEALER	CMU	PAINT	CMU	PAINT	CMU	PAINT	CMU	PAINT	WOOD	NOTE 1	VARIES	
TERTIARY TREATMENT COMPLEX															
100	FILTER ROOM	-	CONC. SEALER	CMU	PAINT	CMU	PAINT	CMU	PAINT	CMU	PAINT	WOOD	NOTE 1	VARIES	
101	ELECTRICAL ROOM	-	CONC. SEALER	CMU	PAINT	CMU	PAINT	CMU	PAINT	CMU	PAINT	WOOD	NOTE 1	VARIES	
102	UV ROOM	-	CONC. SEALER	CMU	PAINT	CMU	PAINT	CMU	PAINT	CMU	PAINT	WOOD	NOTE 1	VARIES	
SLUDGE STORAGE BUILDING															
001	LOWER LEVEL	-	CONC. SEALER	CONC.	PAINT	CONC.	PAINT	CONC.	PAINT	CONC.	PAINT	EXPOSED	PAINT	-	
101	BLOWER ROOM	-	CONC. SEALER	ACOUS CMU	PAINT	ACOUS CMU	PAINT	ACOUS CMU	PAINT	ACOUS CMU	PAINT	WOOD	NOTE 1	VARIES	
102	THICKNER ROOM	-	CONC. SEALER	CMU	PAINT	CMU	PAINT	CMU	PAINT	CMU	PAINT	WOOD	NOTE 1	VARIES	
103	STAIR	-	CONC. SEALER	CMU	PAINT	CMU	PAINT	CMU	PAINT	CMU	PAINT	WOOD	NOTE 1	VARIES	

ABBREVIATIONS

PPT - PORCELAIN PAVER TILE

CT - CERAMIC TILE

CMU - CONCRETE MASONRY UNIT

ACMU - ACOUSTICAL CONCRETE MASONRY UNIT

RES - RESILENT

A PANEL - ACOUSTICAL WALL PANELS

NOTES

1. ALL EXPOSED WOOD DECKING, BEAMS & TRIM TO BE FACTORY FINISHED PER SPECIFICATIONS.
2. WALLS THAT ARE SCHEDULED TO RECIEVE CERAMIC TILE HAVE A SPECIAL GYP. BD. BACKING, SEE SPECIFICATIONS.
3. VINYL WALL COVERING ON ALL WALLS BELOW THE CHAIRRAIL.
4. EAST WALL TO HAVE A DISPLAY RAIL AND THE WEST, SOUTH & NORTH WALLS TO HAVE A CHAIR RAIL. SEE DETAILS ON SHEET 68.
5. EAST WALL TO HAVE GYP. BD. AND ACOUSTICAL PANELS SEE SHEET 13 FOR ELEVATION.

LINTEL SCHEDULE

MARK	DESCRIPTION	DRAWING	MO	BEARING	LENGTH	REMARK
L-1	W8X18 W/ 3/8 X 6 5/8 PL	I	6'-0"	8/8	7'-4"	
L-2	2 L5 X 3 1/2 X 3/8 LLV	L	2'-8"	8/8	4'-0"	
L-3	2 L5 X 3 1/2 X 3/8 LLV	L	4'-0"	8/8	5'-4"	
L-4	2 L5 X 3 1/2 X 3/8 LLV	L	3'-4"	8/8	4'-8"	
L-5	2 L5 X 3 1/2 X 3/8 LLV	L	2'-0"	8/8	3'-4"	
L-6	W8X18 W/ 3/8 X 6 5/8PL	I	10'-0"	8/8	11'-4"	
L-7	W8X18 W/ 3/8" X 6 5/8PL	I	12'-0"	8/8	13'-4"	
L-8	WI6X31 W/ 3/8" X 6 5/8PL	I	12'-0"	8/8	13'-4"	
L-9	W8X18 W/ 3/8" X 6 5/8PL	I	8'-0"	8/8	9'-4"	

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

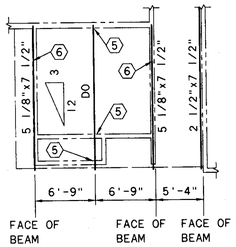
JOB NO.	15582
DESIGNED BY:	DM
DRAWN BY:	BK
CHECKED BY:	DM
APPROVED BY:	DM
DATE:	JAN., 1995

ROOM FINISH SCHEDULE & INTERIOR DETAILS

SCALE: AS NOTED

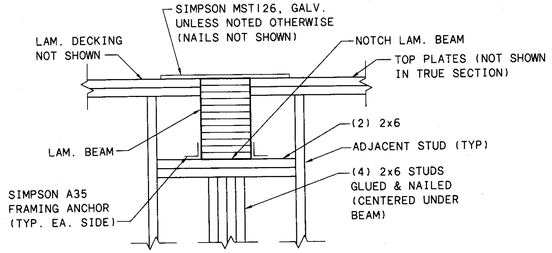
SHEET NO. 69 OF 112

Q:\SHT69 1-13-95 9:26:33 am EST



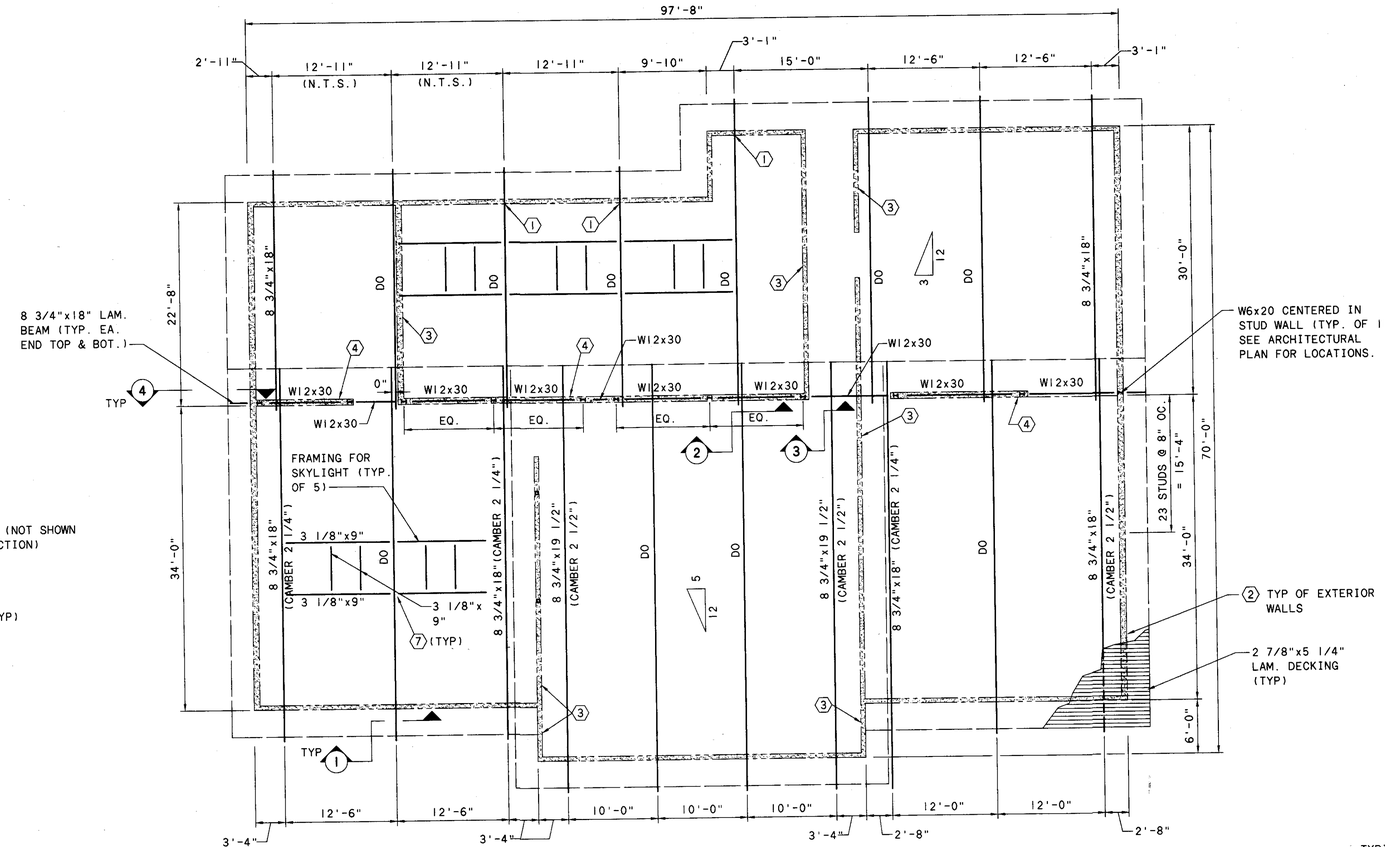
PARTIAL ROOF FRAMING PLAN @ OFFICE

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



SECTION 1

SCALE: NONE



ROOF FRAMING PLAN

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

CODED NOTES

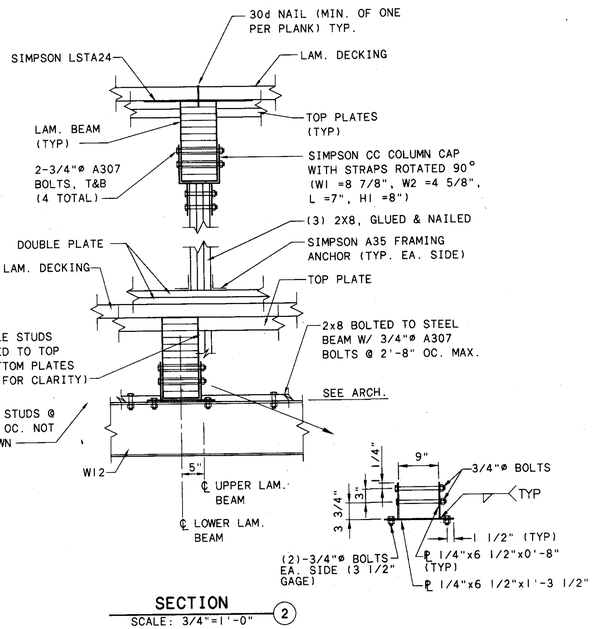
1. SEE SECTION 1. PROVIDE SIMPSON MSTI48, GALV. STRAP TIES.
2. 1/2" PLYWOOD ON EXTERIOR WITH 5/8" GYP. BOARD ON INTERIOR, OVER ENTIRE LENGTH OF WALL.
3. 1/2" PLYWOOD ON EACH SIDE OF STUD WALL OVER ENTIRE LENGTH OF WALL.
4. 5/8" GYP. BOARD ON EACH INTERIOR SIDE OF STUD WALL OVER ENTIRE LENGTH OF WALL.
5. PROVIDE 2 STUDS BELOW LAM. BEAM. ATTACH BEAM SIMILAR TO WHAT IS SHOWN IN SECTION 1 ON THIS SHEET.
6. ATTACH LAM. BEAM TO TOP PLATES WITH SIMPSON A35 FRAMING ANCHORS (A MINIMUM OF 4 REQ'D)
7. PROVIDE SIMPSON LEG3 TOP FLANGE HANGERS.

NOTES

1. ALL PLYWOOD PANEL EDGES SHALL BE BACKED WITH 2-INCH NOMINAL OR WIDER FRAMING. NAILS (8d) SHALL BE SPACED NOT MORE THAN 6 INCHES ON CENTER ALONG PANEL EDGE BEARINGS AND NOT MORE THAN 12 INCHES ON CENTER ALONG INTERMEDIATE FRAMING MEMBERS, UNLESS NOTED OTHERWISE. SEE ARCHITECTURAL PLAN FOR ADDITIONAL SPACING REQUIREMENTS.
2. ALL GYPSUM WALLBOARD SHALL BE NAILED TO ALL STUDS, TOP AND BOTTOM PLATES, WITH 6d NAILS SPACED NOT MORE THAN 7 INCHES ON CENTER UNLESS NOTED OTHERWISE.
3. ALL WALL STUDS SHALL BE SPACED AT 16" ON CENTER, EXCEPT AS SHOWN ON PLAN.
4. THE LAMINATED DECKING SHALL BE NAILED TO ALL SHEARWALLS USING 30d NAILS.

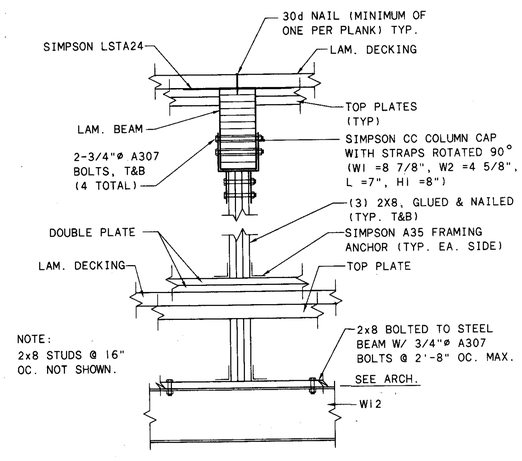
LEGEND

SHEARWALL



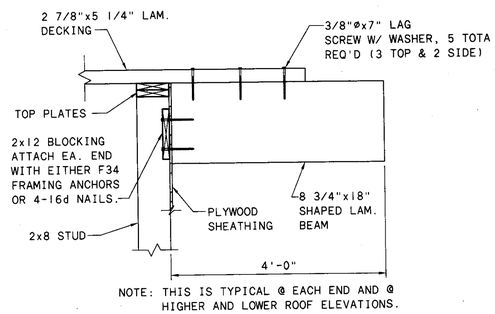
SECTION 2

SCALE: 3/4"=1'-0"



SECTION 3

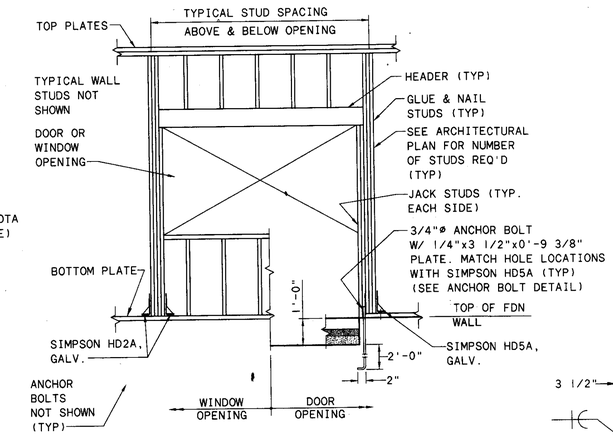
SCALE: 3/4"=1'-0"



NOTE: THIS IS TYPICAL @ EACH END AND @ HIGHER AND LOWER ROOF ELEVATIONS.

SECTION 4

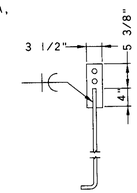
SCALE: 3/4"=1'-0"



NOTE: PROVIDE SIMPSON HD8A HOLDOWNS AT THE CORNER OF ALL SHEARWALLS RUNNING EAST/WEST AND SIMPSON HD5A HOLDOWNS AT THE CORNER OF ALL SHEARWALLS RUNNING NORTH/ SOUTH UNLESS NOTED OTHERWISE.

TYPICAL OPENING DETAIL FOR EXTERIOR WALLS AND SHEARWALLS

SCALE: NONE



ANCHOR BOLT DETAIL

SCALE: 3/4"=1'-0"

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

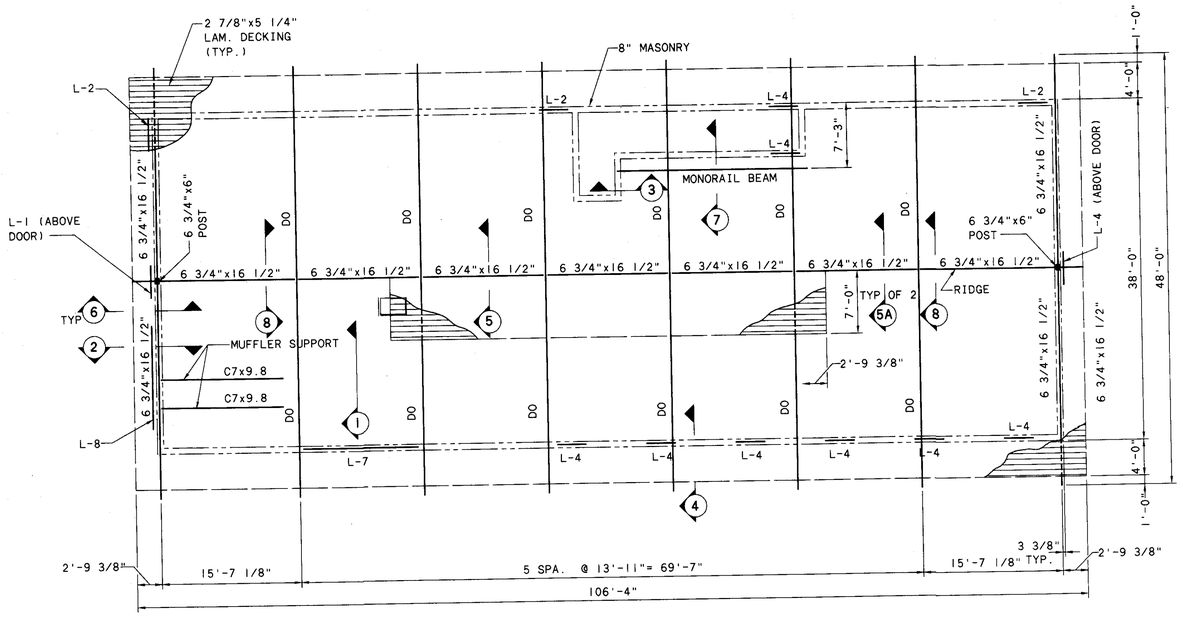
JOB NO.	15582
DESIGNED BY:	CMG
DRAWN BY:	LKK
CHECKED BY:	CMG
APPROVED BY:	DRT
DATE:	MARCH 1995

ADMINISTRATION BUILDING
ROOF FRAMING OF PLAN & DETAILS

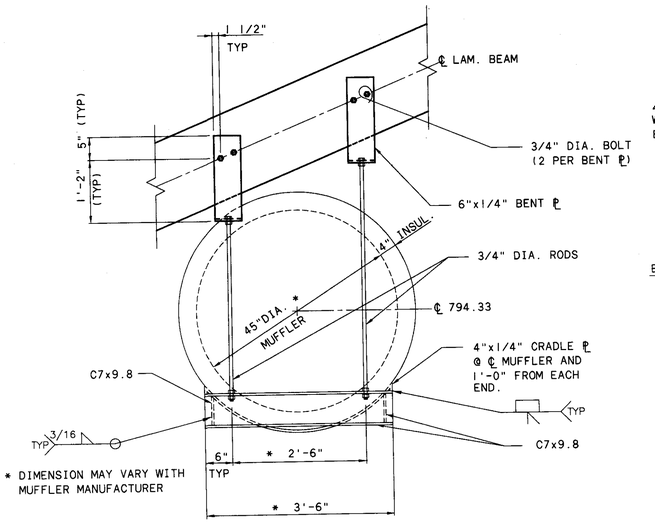
SCALE: AS NOTED

SHEET NO. 70 OF 112

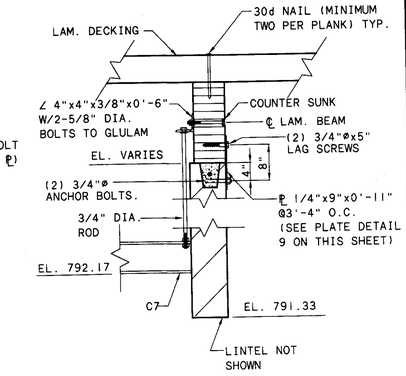
Q:\SH170 12-29-95



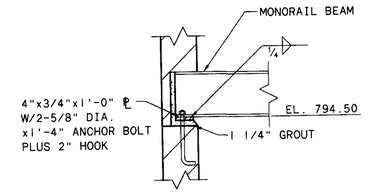
ROOF FRAMING PLAN
SCALE: 1/8"=1'-0"



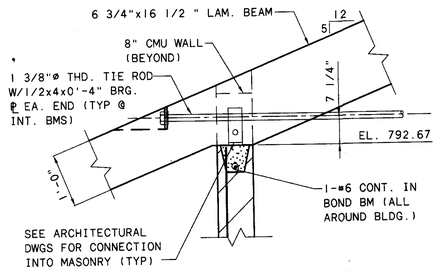
MUFFLER SUPPORT DETAIL (1)
SCALE: 3/4"=1'-0"



MUFFLER SUPPORT AND TIE PLATE DETAIL (2)
SCALE: 3/4"=1'-0"



MONORAIL SUPPORT DETAIL (3)
SCALE: 3/4"=1'-0"

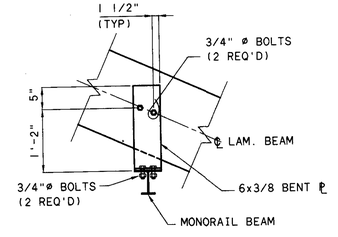


TIE ROD CONNECTION DETAIL (4)
SCALE: 3/4"=1'-0"

SEE DETAIL ON SHEET 73
RAFTER CONNECTION (5) (5A)

SEE DETAIL ON SHEET 73
RIDGE CONNECTON DETAIL (8)

WALL BRACING DETAIL (6)
SCALE: 3/8"=1'-0"



MONORAIL SUPPORT DETAIL (7)
SCALE: 3/4"=1'-0"

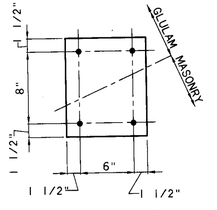
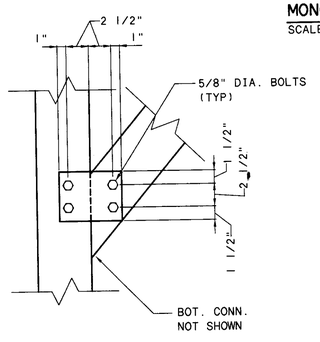


PLATE DETAIL (9)
SCALE: 1 1/2"=1'-0"



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

LEGEND
L-2 = LINTEL MARK

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

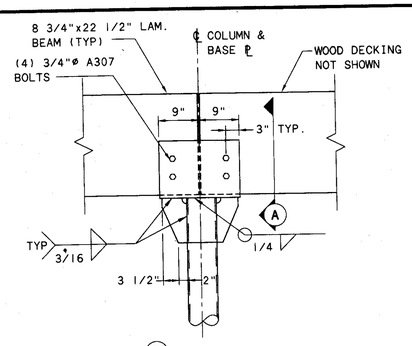
DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

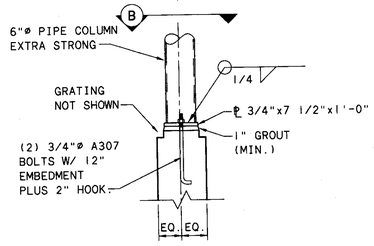
JOB NO.	15582
DESIGNED BY:	DRK
DRAWN BY:	LKK
CHECKED BY:	CMG
APPROVED BY:	DRT
DATE:	MARCH 1995

BLOWER BUILDING
ROOF FRAMING PLAN AND DETAILS

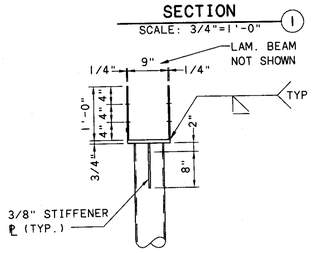
SCALE: AS NOTED
SHEET NO. 71 OF 112

O:\SH171 03-29-95

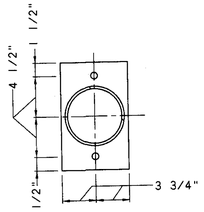




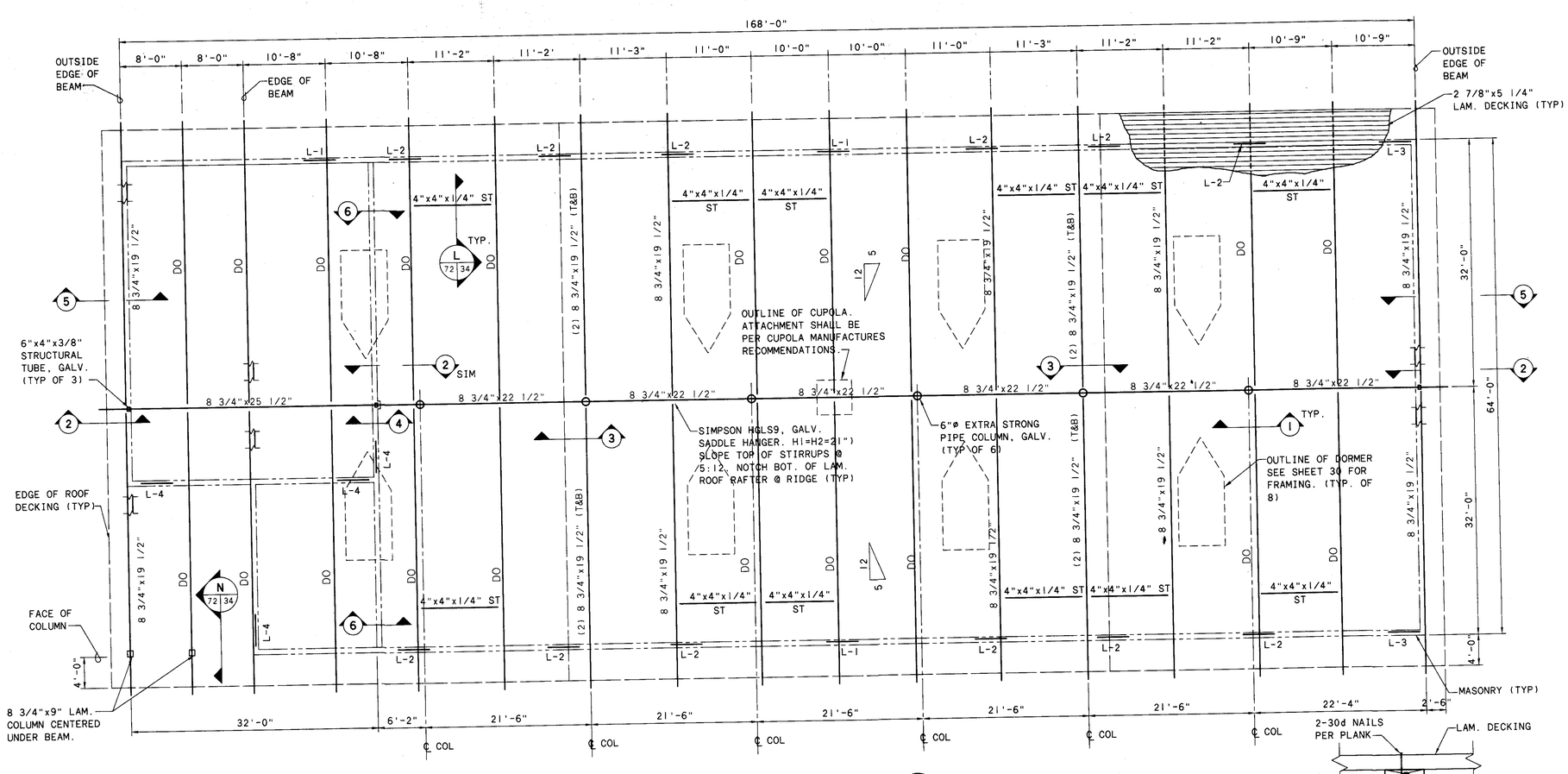
SECTION (I)
SCALE: 3/4"=1'-0"



SECTION (A)
SCALE: 3/4"=1'-0"

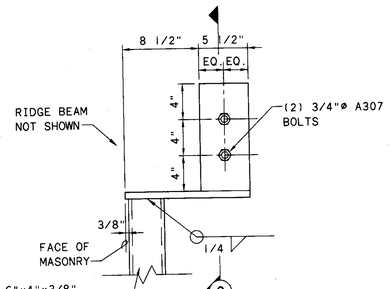


SECTION (B)
SCALE: 1 1/2"=1'-0"

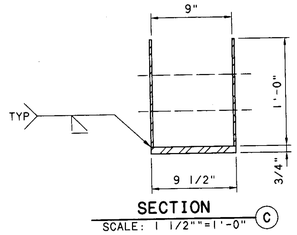


LEGEND
L-2 = LINTEL MARK

ROOF FRAMING PLAN
SCALE: 1/8"=1'-0"



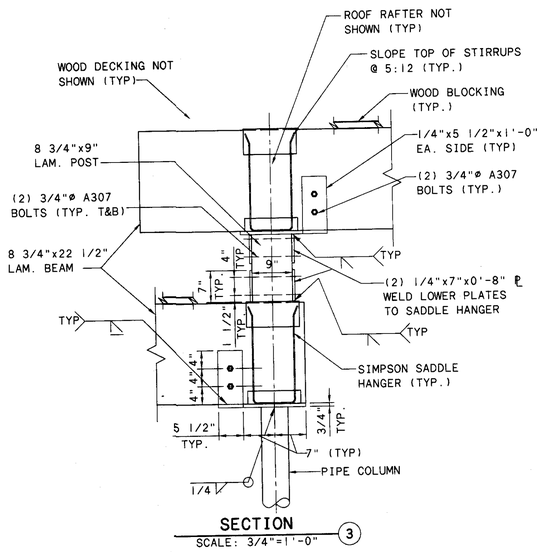
SECTION (2)
SCALE: 1 1/2"=1'-0"



SECTION (C)
SCALE: 1 1/2""=1'-0"

SECTION (D)
SCALE: 1 1/2""=1'-0"

NOTE: MASONRY AND GLULAM BEAM NOT SHOWN.



SECTION (3)
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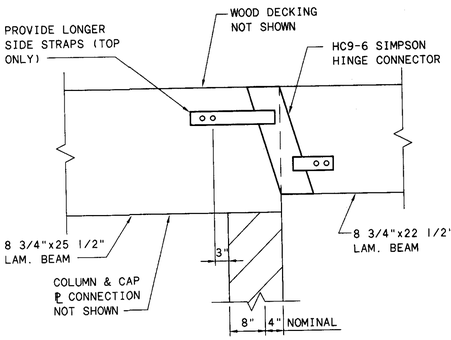


SECTION (4)
SCALE: 3/4"=1'-0"

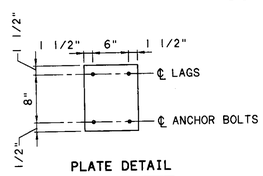
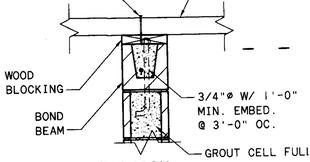
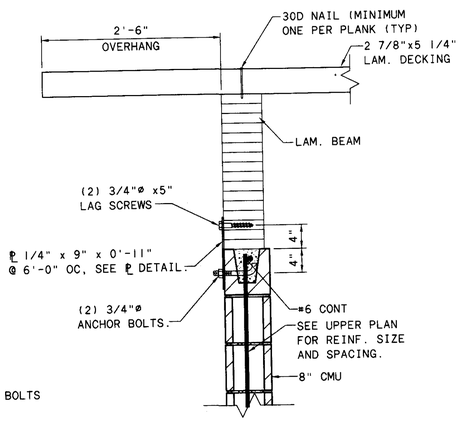


PLATE DETAIL



SECTION (6)
SCALE: 1"=1'-0"



SECTION (5)
SCALE: 1"=1'-0"

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

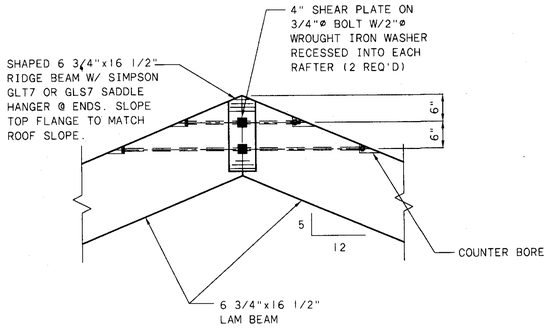
JOB NO.	15582
DESIGNED BY:	CMG
DRAWN BY:	LKK
CHECKED BY:	CMG
APPROVED BY:	DRT
DATE:	MARCH 1995

TERTIARY COMPLEX
ROOF FRAMING OF PLAN & DETAILS

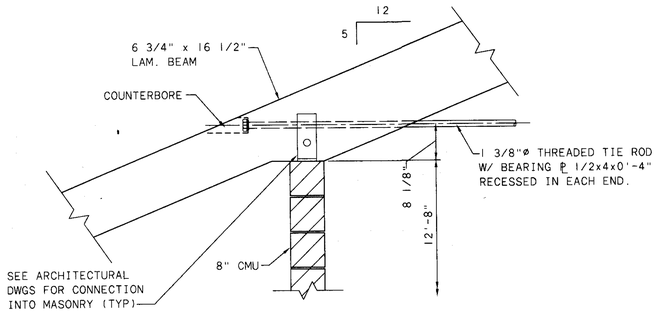
SCALE: AS NOTED

SHEET NO. 72 OF 112

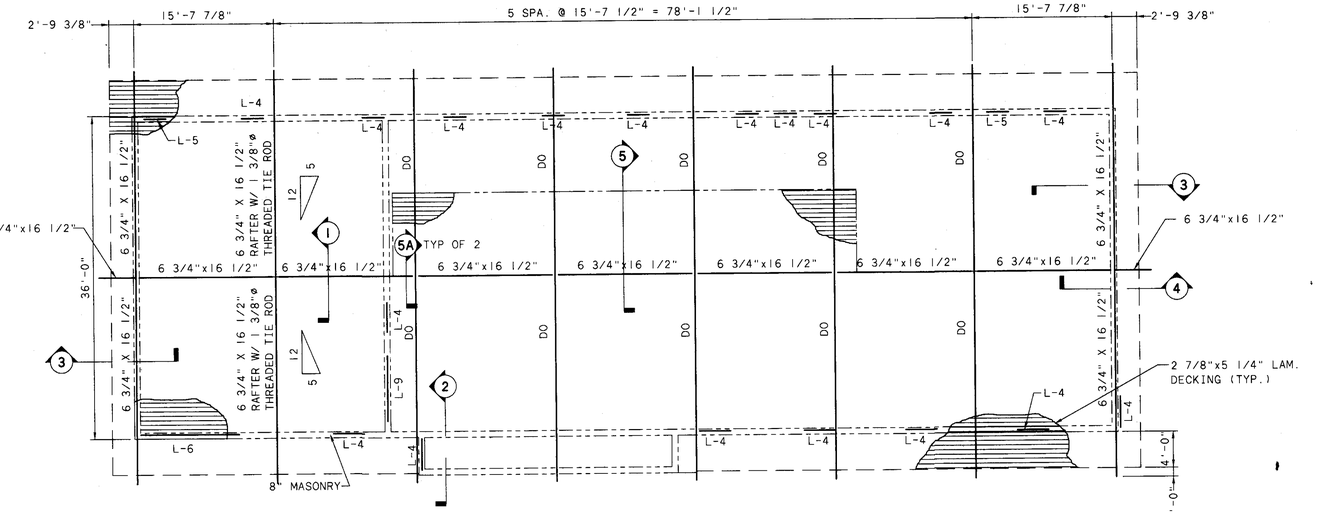
Q:\SHT72 03-29-95



RIDGE CONNECTION DETAIL (1)
SCALE: 3/4"=1'-0"



TIE ROD CONNECTION DETAIL (2)
SCALE: 3/4"=1'-0"



ROOF FRAMING PLAN (N)
SCALE: 1/8"=1'-0"

CODED NOTES

1. 3/8"x3"℄ TO SUPPORT DECKING (FOR SECTION 5A ONLY). PROVIDE NAIL HOLES IN PLATE.
2. SHIM AS REQUIRED TO SUPPORT DECKING.
3. OUTLINE OF SHAPED 6 3/4"x16 1/2" LAM. BEAM DASHED SO THAT BOLT PATTERN CAN BE SEEN. PROVIDE 1/2"x6 1/2" WIDE SLOT IN END OF BEAM.
4. STRAP TIE
5. ℄ 3/8"x8" WIDE. WELD FULL LENGTH WITH 1/4-INCH FILLET WELD EACH SIDE.

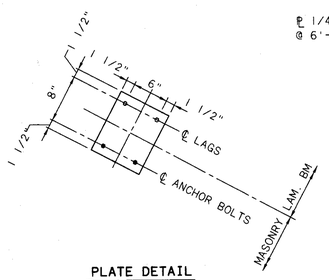
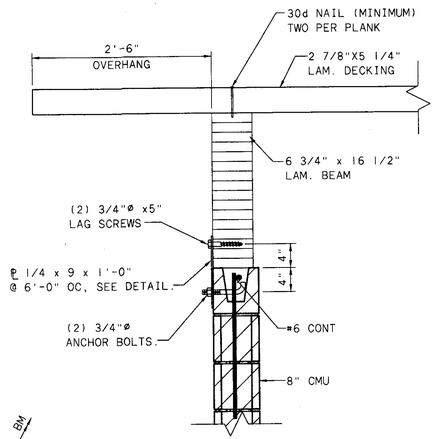
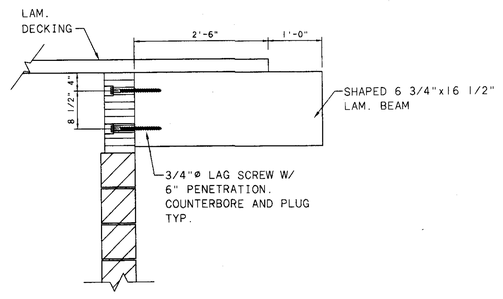


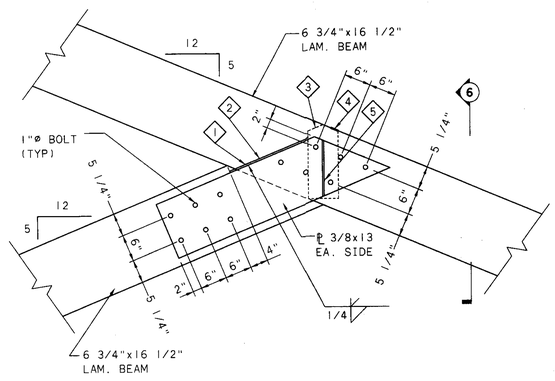
PLATE DETAIL



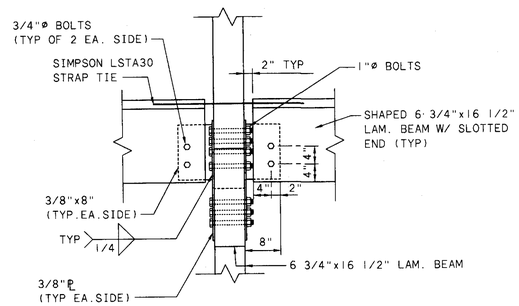
BEAM CONNECTION DETAIL (3)
SCALE: 1"=1'-0"



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



RAFTER CONNECTION (5)
SCALE: 3/4"=1'-0"



SECTION (6)
SCALE: 3/4"=1'-0"

LEGEND
L-2 = LINTEL MARK

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

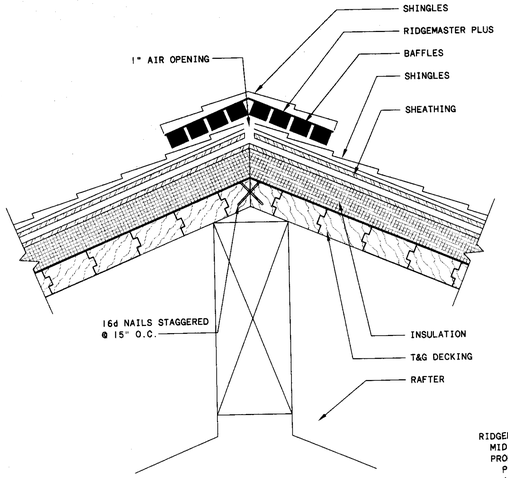
JOB NO.	15582
DESIGNED BY:	DRK
DRAWN BY:	LKK
CHECKED BY:	CMG
APPROVED BY:	DRT
DATE:	MARCH 1995

SLUDGE THICKENER BUILDING ROOF FRAMING PLAN & DETAILS

SCALE: AS NOTED

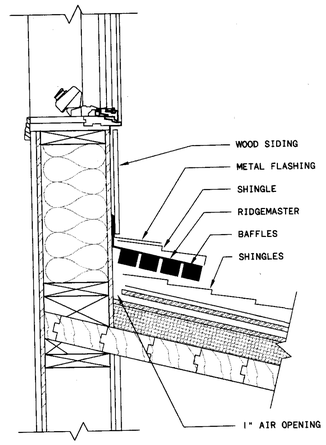
SHEET NO. 73 OF 112

O:\SHT73 03-30-95

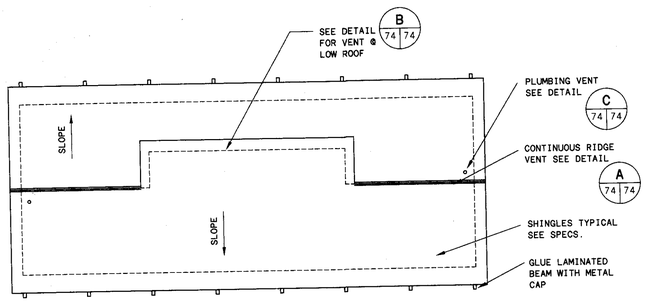


VENT DETAIL (A 74|74)
SCALE: 1 1/2"=1'-0"

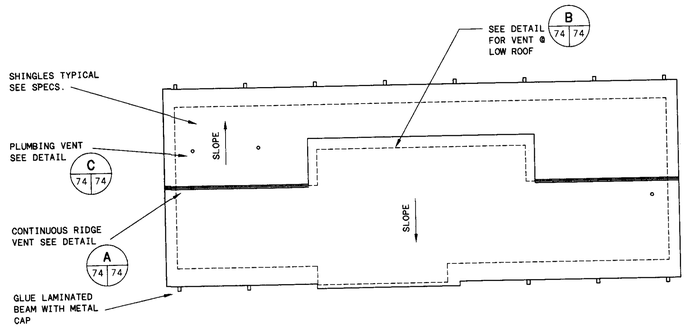
RIDGEMASTER BY:
MID AMERICAN BUILDING PRODUCTS CORPORATION
PLYMOUTH, MICHIGAN
(313) 459-5151
OR EQUAL MANUFACTURER



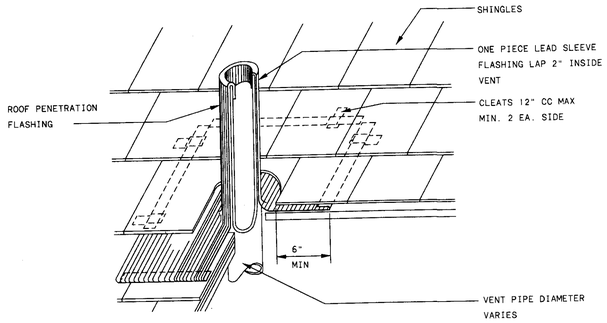
VENT DETAIL (B 66|74)
SCALE: 1 1/2"=1'-0"



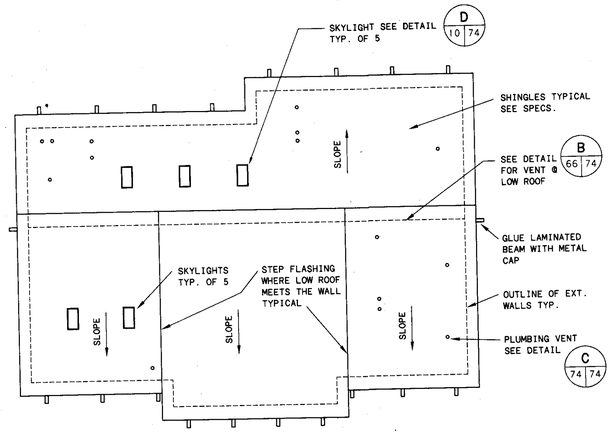
BLOWER BUILDING ROOF PLAN
SCALE: 1/16"=1'-0"



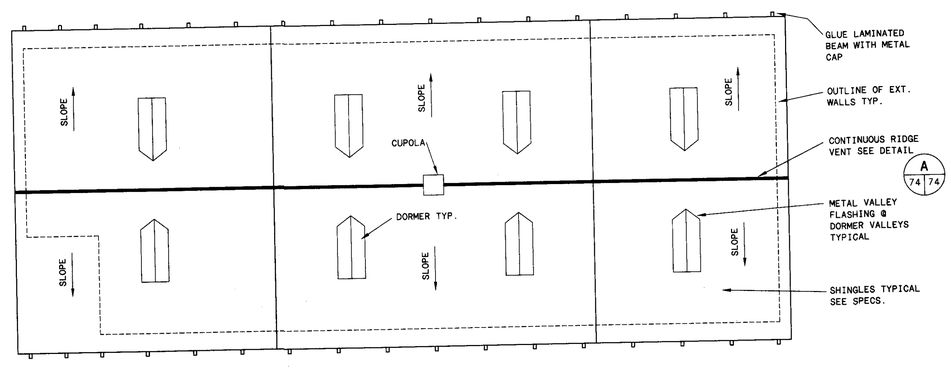
SLUDGE BUILDING ROOF PLAN
SCALE: 1/16"=1'-0"



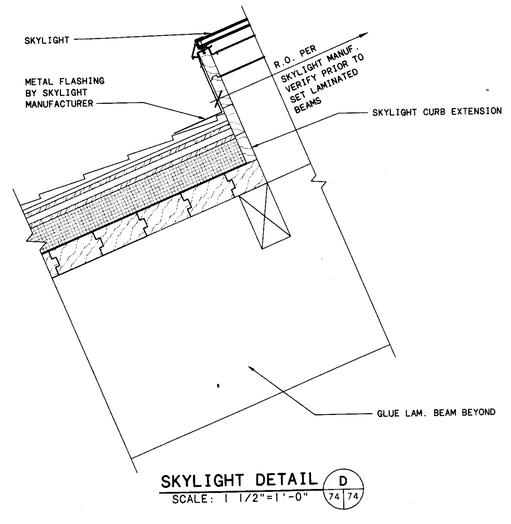
VENT DETAIL (C 74|74)
SCALE: 1 1/2"=1'-0"



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



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



SKYLIGHT DETAIL (D 74|74)
SCALE: 1 1/2"=1'-0"

N:\PR\15582\CADD\SH174 03-29-95

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	DDM
DRAWN BY:	WBK
CHECKED BY:	DDM
APPROVED BY:	DRT
DATE:	MARCH 1995

ROOF PLANS AND DETAILS

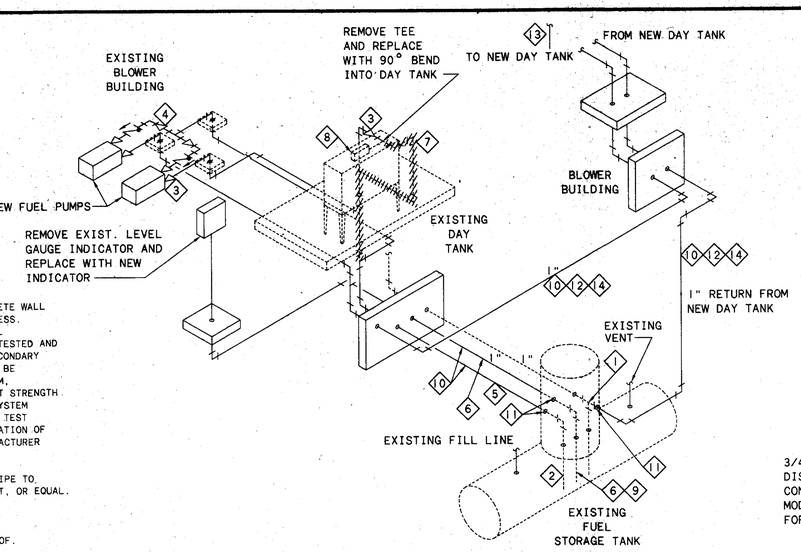
SCALE: AS NOTED

SHEET NO. 74 OF 112

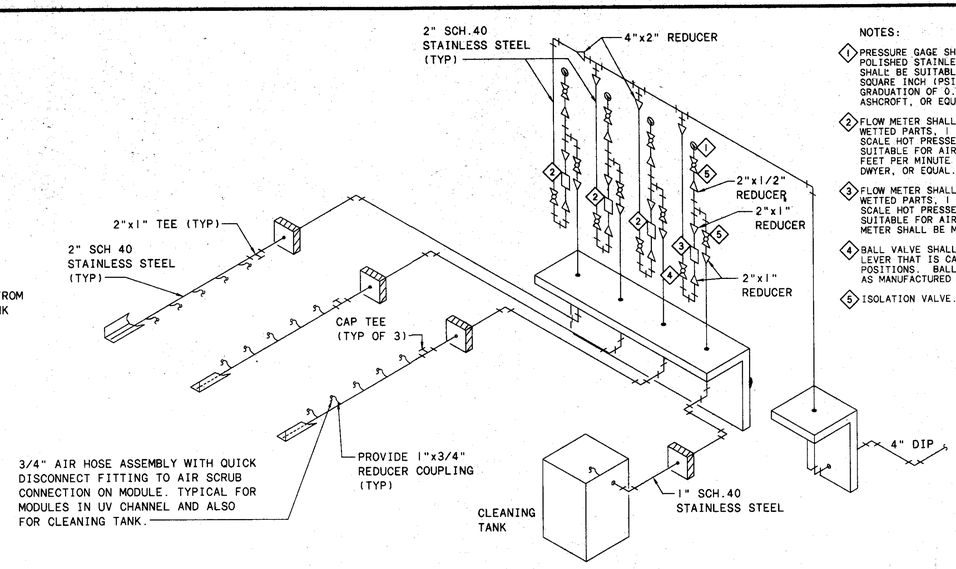
NOTES:

1. REMOVE EXISTING 1-INCH 90 DEGREE BEND AND PROVIDE NEW 1-INCH TEE.
2. REMOVE EXISTING FUEL LEVEL SENSOR. PROVIDE A 2-INCH DIAMETER FOOT VALVE AND 2-INCH FIBERGLASS SUCTION LINE.
3. PROVIDE REDUCER AS REQUIRED (TYPICAL).
4. 2" X 1" RED (TYPICAL)
5. REMOVE EXISTING 1-INCH LINE AND REPLACE WITH 2-INCH DIAMETER PRIMARY FIBERGLASS PIPE FROM THE FUEL STORAGE TANK TO INSIDE BUILDING.
6. REMOVE EXISTING 1-INCH LINE AND REPLACE WITH NEW 1-INCH PRIMARY FIBERGLASS PIPE TO INSIDE BUILDING.
7. REMOVE EXISTING 1-INCH LINE.
8. REMOVE EXISTING FUEL PUMP.
9. PROVIDE AND INSTALL NEW LEVEL SENSOR.
10. PROVIDE SECONDARY PIPING CONTAINMENT SYSTEM. SECONDARY CONTAINMENT SYSTEM SHALL EXTEND MINIMUM 1-FOOT INSIDE CONCRETE WALL AND BE SEALED WITH BULKHEAD FITTINGS TO PROVIDE WATERTIGHTNESS. SECONDARY CONTAINMENT SYSTEM SHALL BE "PIPE JACKET" BY TOTAL CONTAINMENT, OR EQUAL. THE PRIMARY PIPING SYSTEM SHALL BE TESTED AND RESULTS APPROVED BY THE E/A PRIOR TO INSTALLATION OF THE SECONDARY CONTAINMENT SYSTEM. THE SECONDARY CONTAINMENT SYSTEM SHALL BE COMPATIBLE WITH THE PRODUCTS CONTAINED IN THE PRIMARY SYSTEM, NONCORROSIVE, DIELECTRIC, NONDEGRADABLE, AND HAVE SUFFICIENT STRENGTH TO WITHSTAND THE BURIAL LOADS. THE SECONDARY CONTAINMENT SYSTEM SHALL UNDERGO A 5 PSI AIR PRESSURE/SOAP TEST OR HYDROSTATIC TEST IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. INSTALLATION OF THE SECONDARY CONTAINMENT PIPING SYSTEM SHALL BE BY A MANUFACTURER CERTIFIED INSTALLER.
11. PROVIDE TEST REDUCER FITTED WITH AIR STEM TO SEAL PRIMARY PIPE TO SECONDARY PIPE. TEST REDUCERS SHALL BE BY TOTAL CONTAINMENT, OR EQUAL.
12. PROVIDE 1-INCH PRIMARY FIBERGLASS LINE TO INSIDE BUILDING.
13. EXTEND 1-INCH SCH.40 BLACK STEEL VENT FROM DAY TANK THRU ROOF.
14. PROVIDE TWO OBSERVATION PIPES COMPLETE WITH CAPS. RELOCATION SHALL BE DETERMINED IN THE FIELD BY E/A. OBSERVATION PIPE SYSTEM SHALL BE BY TOTAL CONTAINMENT, OR EQUAL.

NOTE:
ONCE INSIDE BUILDING AND BEYOND CONTAINMENT PIPE, THE PIPE MATERIAL SHALL CHANGE FROM FIBERGLASS TO SCH.40 BLACK STEEL. PROVIDE ALL REQUIRES TRANSITIONS.



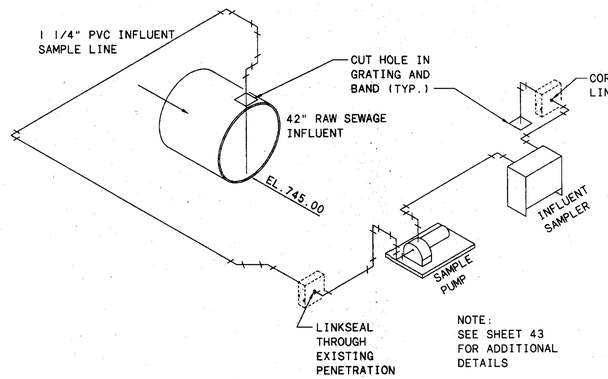
FUEL PUMP PIPING



NOTES:

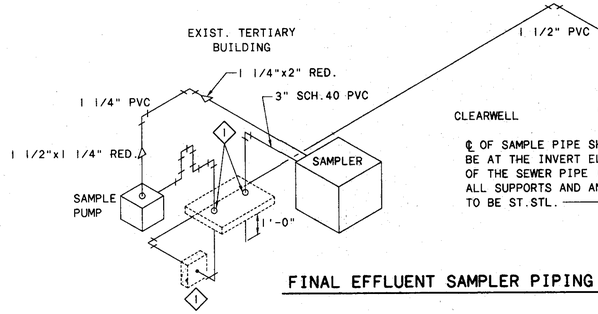
1. PRESSURE GAGE SHALL BE MINIMUM 3 INCHES IN DIAMETER, HAVE POLISHED STAINLESS STEEL CASE AND BAYONET LOCK RING. GAGE SHALL BE SUITABLE FOR OPERATION FROM 0 TO 15 POUNDS PER SQUARE INCH (PSI) WITH FIGURE INTERVAL OF 1 AND MINOR GRADUATION OF 0.1. PRESSURE GAGE SHALL BE TYPE 1009 BY ASHCROFT, OR EQUAL
2. FLOW METER SHALL HAVE AN ACRYLIC BODY WITH STAINLESS STEEL WETTED PARTS, 1 INCH NPT END CONNECTIONS, WITH METERING SCALE HOT PRESSED INTO ACRYLIC BODY. FLOW METER SHALL BE SUITABLE FOR AIR FLOW RANGE FROM 10 TO 100 STANDARD CUBIC FEET PER MINUTE (SCFM). FLOW METER SHALL BE MODEL VFC BY DWYER, OR EQUAL.
3. FLOW METER SHALL HAVE AN ACRYLIC BODY WITH STAINLESS STEEL WETTED PARTS, 1 INCH NPT END CONNECTIONS, WITH METERING SCALE HOT PRESSED INTO ACRYLIC BODY. FLOW METER SHALL BE SUITABLE FOR AIR FLOW RANGE FROM 2.5 TO 25 SCFM. FLOW METER SHALL BE MODEL VFC BY DWYER, OR EQUAL.
4. BALL VALVE SHALL BE STAINLESS STEEL WITH AN ADJUSTABLE STOP LEVER THAT IS CAPABLE OF PROVIDING AN INFINITE AMOUNT OF POSITIONS. BALL VALVE WITH ADJUSTABLE STOP LEVER SHALL BE AS MANUFACTURED BY APOLLO, OR EQUAL.
5. ISOLATION VALVE.

UV AIR PIPING

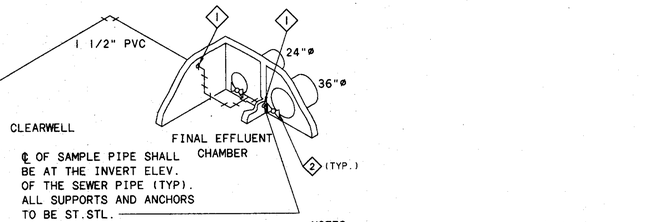


NOTE:
SEE SHEET 43 FOR ADDITIONAL DETAILS

INFLUENT SAMPLER PIPING

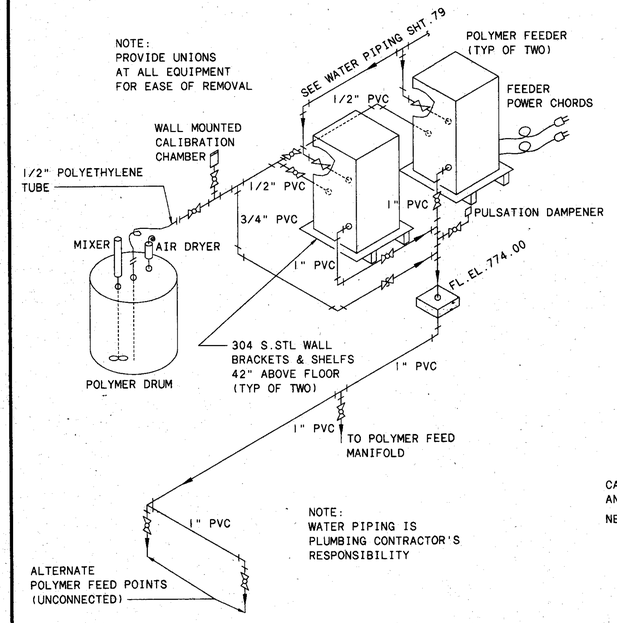


FINAL EFFLUENT SAMPLER PIPING



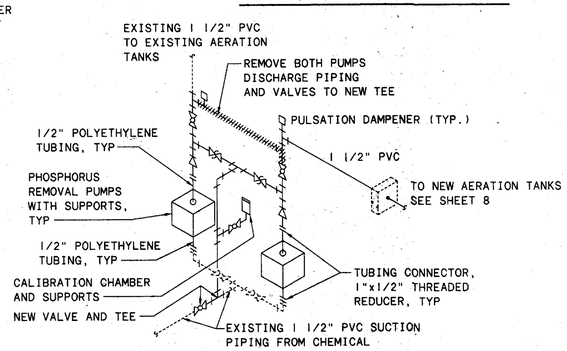
NOTES:

1. CORE DRILL REINFORCED CONCRETE AND LINK SEAL.
2. PROVIDE 1 1/2" BALL VALVE, EXTENSION STEM, STEM GUIDE, AND OPERATING LEVER.



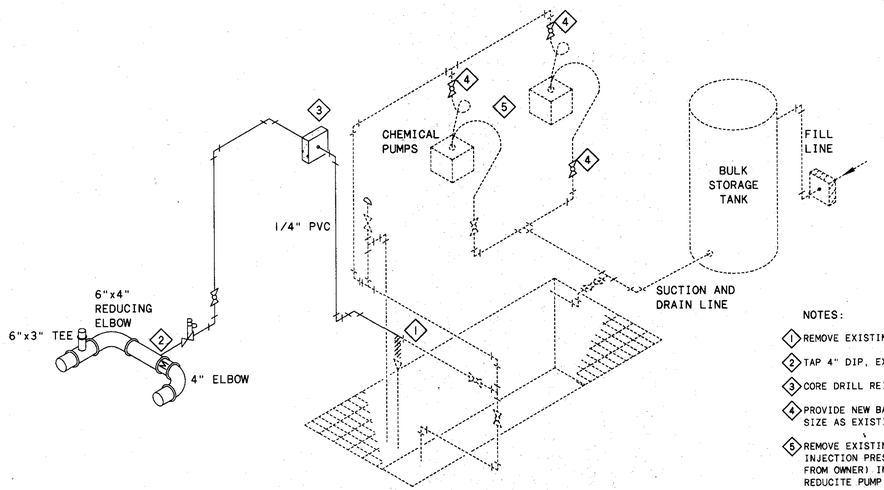
NOTE:
WATER PIPING IS PLUMBING CONTRACTOR'S RESPONSIBILITY

POLYMER FEED SYSTEM SLUDGE THICKENER BUILDING



NOTE:
PHOSPHORUS REMOVAL PIPING SHALL BE SCH.80 PVC

PHOSPHORUS REMOVAL PIPING



NOTES:

1. REMOVE EXISTING ELBOW AND PROVIDE PROPOSED PIPING AS SHOWN.
2. TAP 4" DIP, EXTEND CHEMICAL FEED PIPE 2" INTO PIPE.
3. CORE DRILL REINFORCED CONCRETE AND LINK SEAL.
4. PROVIDE NEW BALL VALVE. VALVE DIAMETER SHALL BE THE SAME SIZE AS EXISTING LINE.
5. REMOVE EXISTING LMI CHEMICAL FEED PUMP THAT HAS A RATED 30 PSI INJECTION PRESSURE. INSTALL EXISTING REDUCITE PUMP (OBTAINED FROM OWNER) IN SAME LOCATION. PRIOR TO INSTALLATION OF THE REDUCITE PUMP CONTRACTOR SHALL THOROUGHLY CLEAN PUMP IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS PRIOR TO REUSE WITH SODIUM HYPOCHLORITE.

SODIUM HYPOCHLORITE PIPING

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

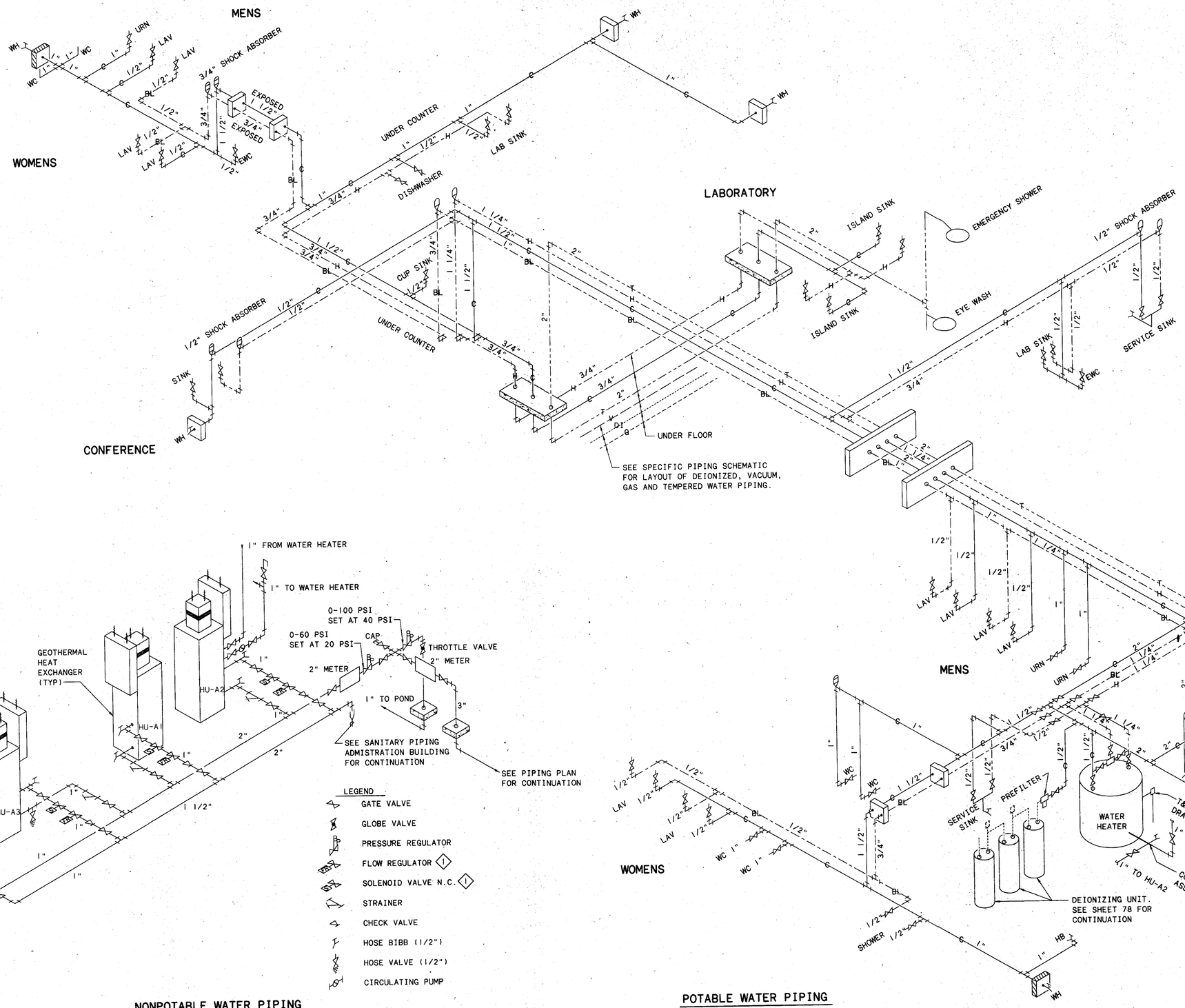
JOB NO.	15582
DESIGNED BY:	VC
DRAWN BY:	DLR
CHECKED BY:	VC
APPROVED BY:	RBD
DATE:	MARCH 1995

EQUIPMENT SCHEMATICS

SCALE: NONE

SHEET NO. 75 OF 112

03-14-95 N:\PROJECTS\PR15582\CADD\SH75



LEGEND

- C — COLD WATER
- BL — BLENDED WATER
- H — HOT WATER
- T — TEMPERED WATER
- DI — DEIONIZED WATER
- G — GAS
- V — VACUUM

NOTE:
ALL PIPING TO BE COPPER, TYPE "L" ABOVE GROUND & TYPE "K" BELOW GROUND

(1) ITEM PROVIDED BY HVAC CONTRACTOR FOR MECHANICAL INSTALLATION BY PLUMBING CONTRACTOR.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

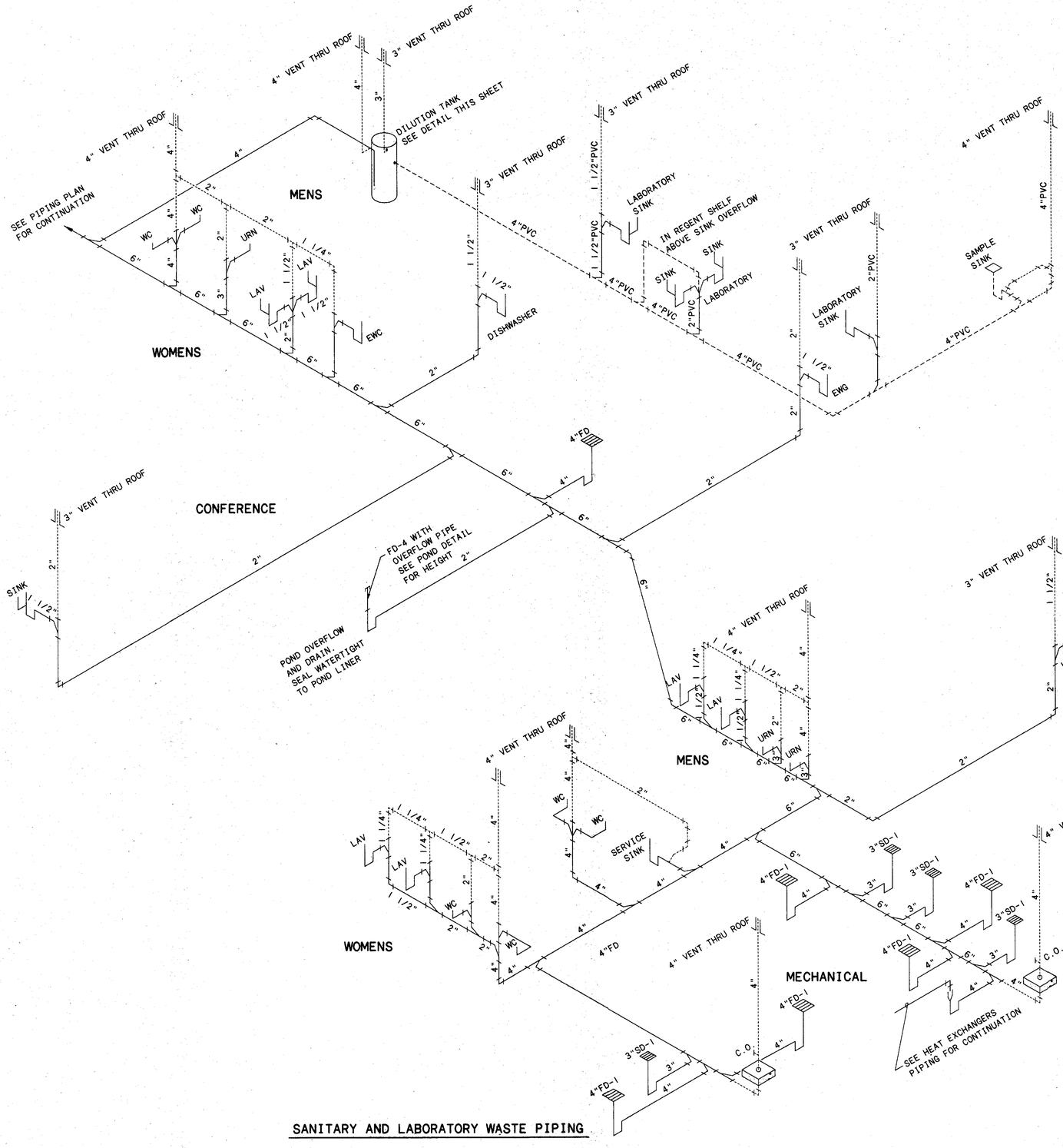
JOB NO.	15582
DESIGNED BY:	HJS
DRAWN BY:	DLR
CHECKED BY:	HJS
APPROVED BY:	RBD
DATE:	MARCH 1995

ADMINISTRATION BUILDING
PLUMBING SCHEMATICS

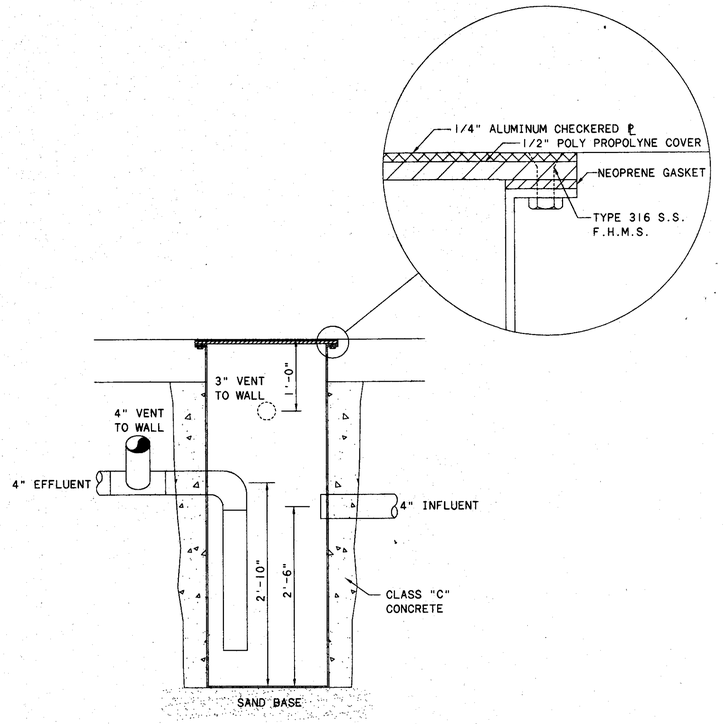
SCALE: NONE

SHEET NO. 76 OF 112

03-14-95 N:\PROJECTS\PR15582\CADD\SH176



SANITARY AND LABORATORY WASTE PIPING



DILUTION TANK

LEGEND

---------- VENT LINES
- - - - - - - - CHEMICAL LINES
———— SANITARY LINES
SD SHOWER DRAIN
FD FLOOR DRAIN

NOTES:

1. ALL LABORATORY WASTE PIPING AND VENTS (CHEMICAL) SHALL BE SCHEDULE 40 PVC OR POLYPROPOLYNE.
2. ALL SANITARY PIPING AND VENTS 3" AND LARGER SHALL BE CAST IRON SOIL PIPE, STANDARD WEIGHT, BELL AND SPIGOT PUSH ON WITH NEOPRENE GASKETS.
3. ALL SANITARY PIPING AND VENTS UNDER 3" SHALL BE SCHEDULE 40 YOLOY OR SCHEDULE 80 GALVANIZED STEEL PIPE.

GENERAL

FD-1 - CAST IRON BODY, ENAMEL COATED FLOOR DRAIN WITH 6" B TYPE BRONZE STRAINER. ZURN Z415, WADE W-1104-STD, OR EQUAL.

SD-1 - CAST IRON BODY, ENAMEL COATED SHOWER DRAIN WITH 6" B TYPE BRONZE STRAINER. ZURN Z415, WADE W-1104-STD, OR EQUAL.

FD-4 - CAST IRON BODY, ENAMEL COATED WITH TYPE P STRAINER. ZURN Z415 WITH EXTENDED STANDPIPE.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

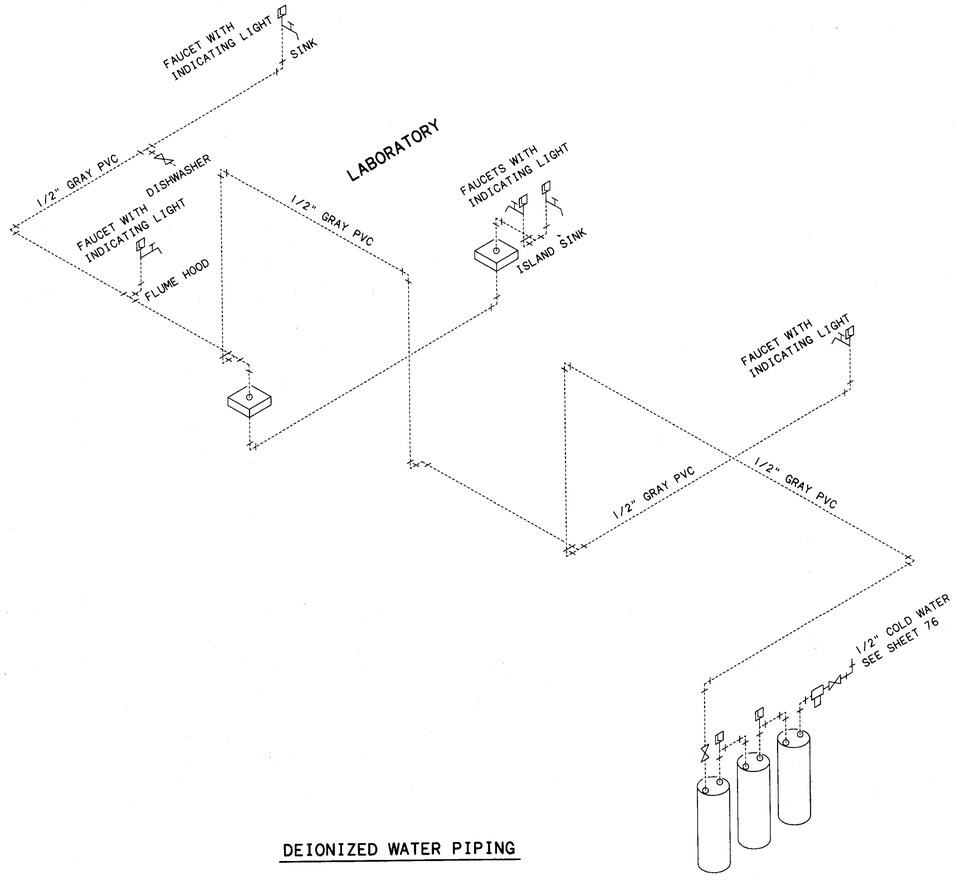
JOB NO.	15582
DESIGNED BY:	HJS
DRAWN BY:	DLR
CHECKED BY:	HJS
APPROVED BY:	RBD
DATE:	MARCH 1995

ADMINISTRATION BUILDING
PLUMBING SCHEMATICS

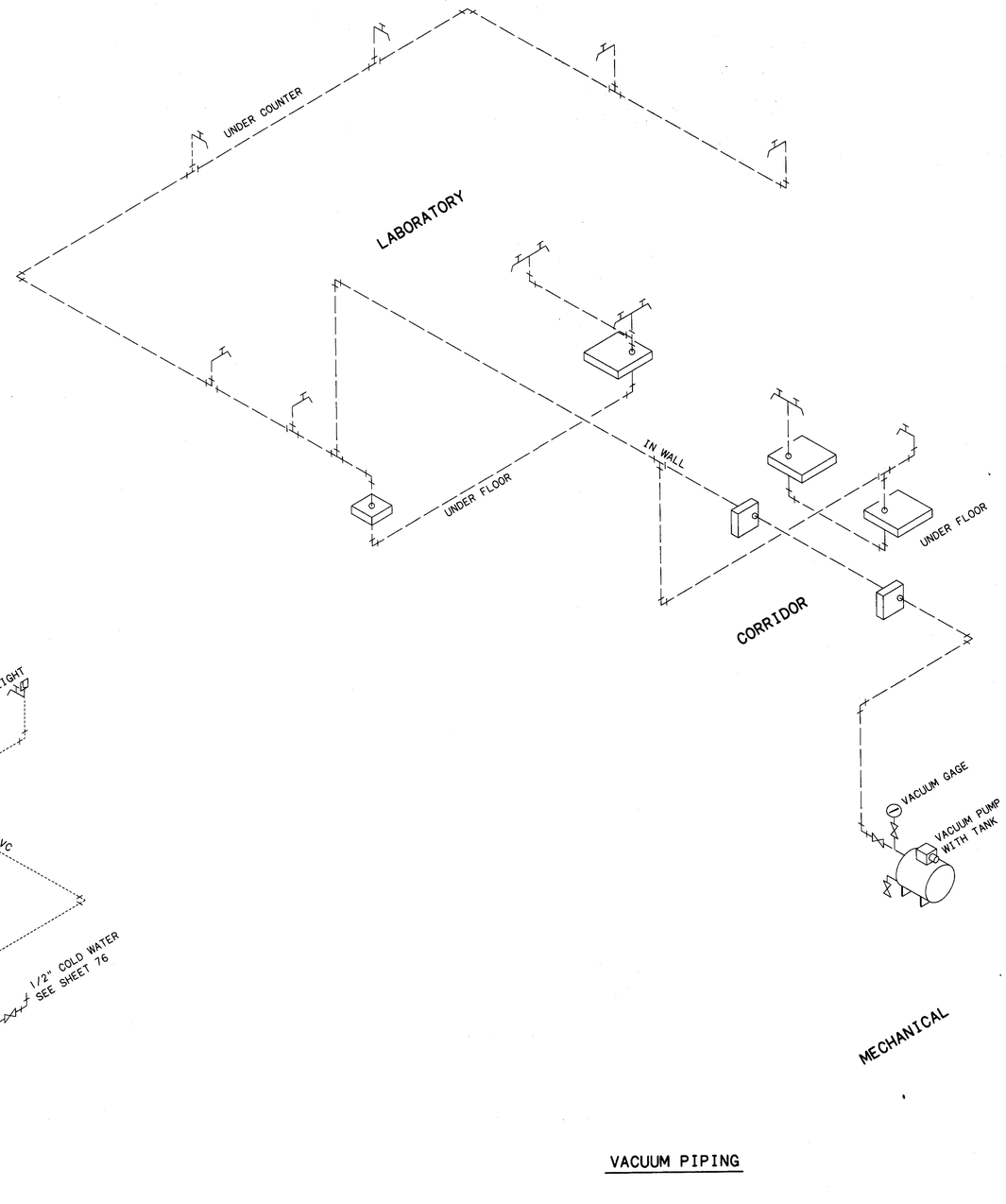
SCALE: NONE

SHEET NO. 77 OF 112

03-20-95 N:\PROJECTS\PR\15582\CADD\SHT77



DEIONIZED WATER PIPING



VACUUM PIPING

LEGEND
---------- DEIONIZED WATER
— — — — VACUUM LINES

NOTES:
1. ALL DEIONIZED WATER LINES TO BE GRAY PVC WITH SCREWED FITTINGS.
2. ALL VACUUM PIPING TO BE COPPER WITH ALL JOINTS SOLDERED. COPPER PIPING TO BE TYPE "L" ABOVE GROUND & TYPE "K" BELOW GROUND

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

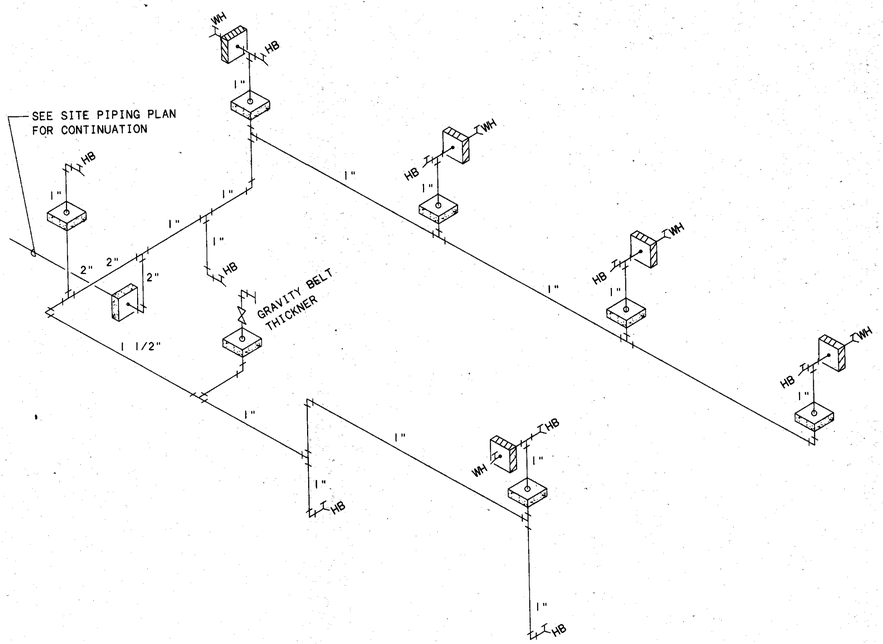
JOB NO.	15582
DESIGNED BY:	HJS
DRAWN BY:	DLR
CHECKED BY:	HJS
APPROVED BY:	RBD
DATE:	NOV., 1994

ADMINISTRATION BUILDING
PLUMBING SCHEMATICS

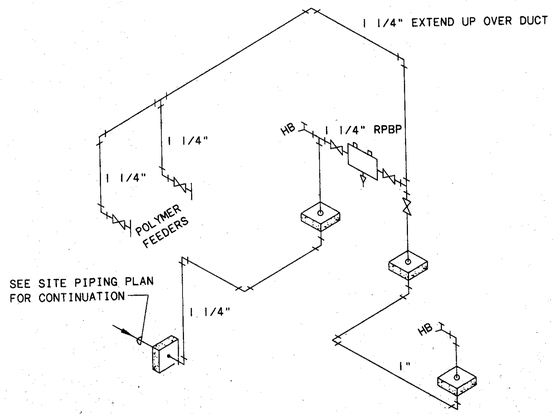
SCALE: NONE

SHEET NO. 78 OF 112

13-DEC-94 N:\PROJECTS\PRI5582\CADD\SHT78



NON-POTABLE WATER PIPING



POTABLE WATER PIPING

NOTE:

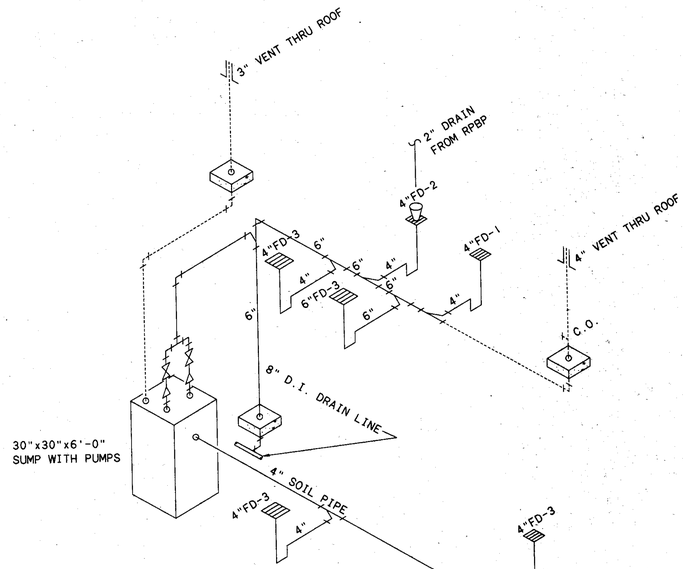
1. ALL WATER PIPING TO BE COPPER, TYPE "L" ABOVE GROUND & TYPE "K" BELOW GROUND.
2. ALL SANITARY PIPING AND VENTS 3" AND LARGER SHALL BE CAST IRON SOIL PIPE, STANDARD WEIGHT, BELL AND SPIGOT PUSH ON WITH NEOPRENE GASKETS.
3. ALL SANITARY PIPING AND VENTS UNDER 3" SHALL BE SCHEDULE 40 YOLOY OR SCHEDULE 80 GALVANIZED STEEL PIPE.

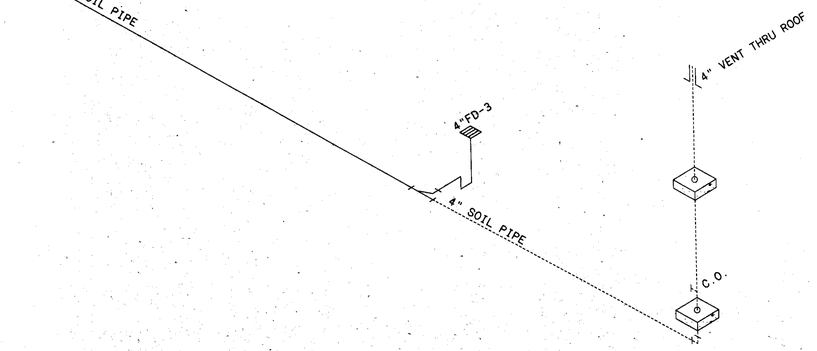
GENERAL:

FD-1 CASE IRON BODY, ENAMEL COATED FLOOR DRAIN WITH 6" B TYPE BRONZE STRAINER. ZURN Z 415; WADE 2-1104-STD OR EQUAL.

FD-2 CASE IRON BODY, ENAMEL COATED FLOOR DRAIN WITH 10" ROUND TOP WITH 4" DIAMETER FUNNEL ZURN Z-520 W/Z414; WADE 2-1340-TD/W/EF4; OR EQUAL.

FD-3 CAST IRON BODY, ENAMEL COATED, FLOOR DRAIN WITH 12 X 12 SQUARE TOP, ACID RESISTANT COATED. ZURN Z-610-12; WADE 2-1744-12; OR EQUAL.





SANITARY PIPING

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

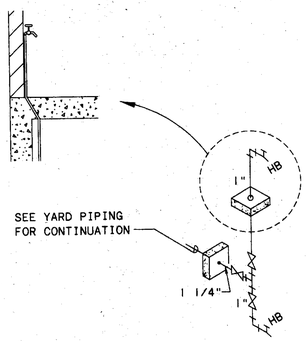
JOB NO.	15582
DESIGNED BY:	HJS
DRAWN BY:	DLR
CHECKED BY:	HJS
APPROVED BY:	RBD
DATE:	MARCH 1995

SLUDGE THICKENER BUILDING
PLUMBING SCHEMATICS

SCALE: NONE

SHEET NO. 79 OF 112

03-20-95 N:\PROJECTS\PR15582\CADD\SHT79



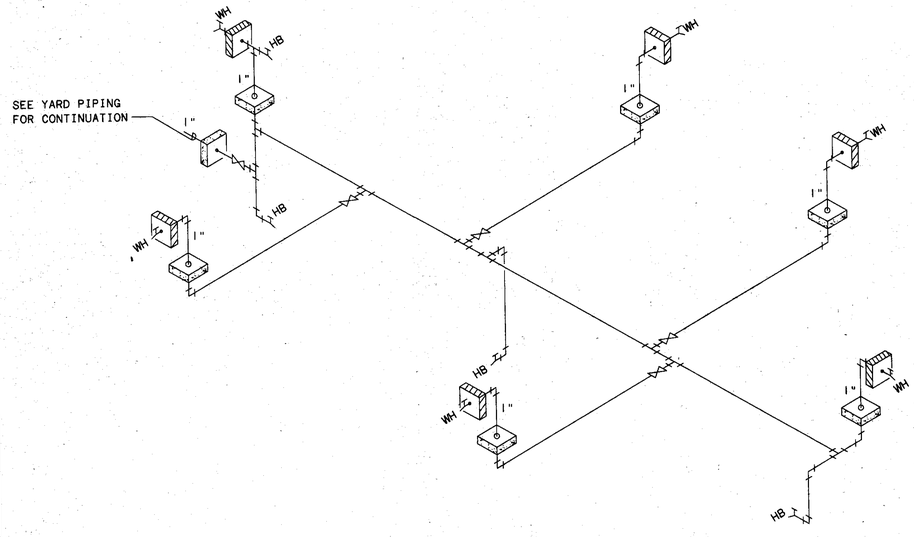
POTABLE WATER PIPING

NOTE:

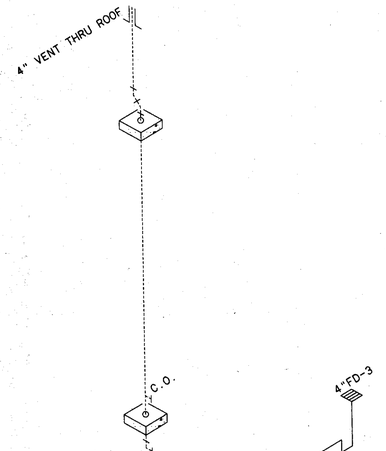
1. ALL WATER PIPING TO BE COPPER, TYPE "L" ABOVE GROUND & TYPE "K" BELOW GROUND.
2. ALL SANITARY PIPING AND VENTS 3" AND LARGER SHALL BE CAST IRON SOIL PIPE, STANDARD WEIGHT, BELL AND SPIGOT PUSH ON WITH NEOPRENE GASKETS.
3. ALL SANITARY PIPING AND VENTS UNDER 3" SHALL BE SCHEDULE 40 YOLOY OR SCHEDULE 80 GALVANIZED STEEL PIPE.

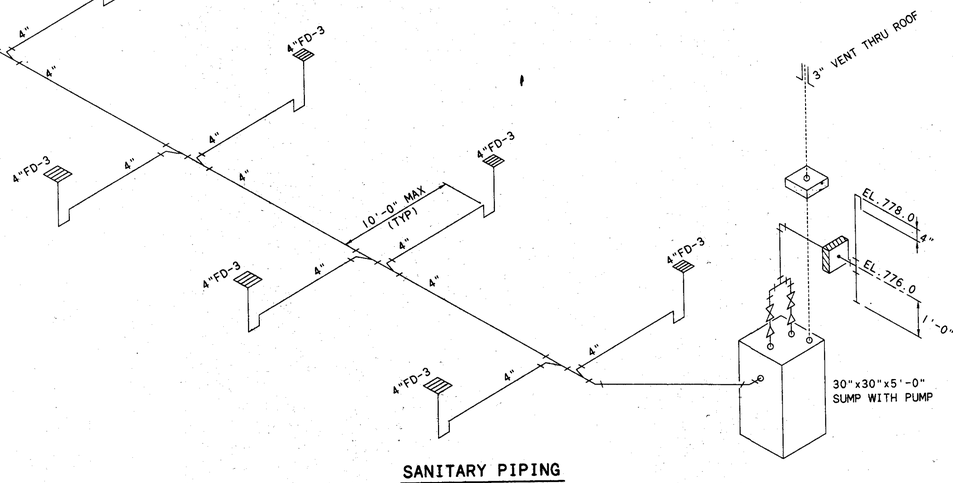
GENERAL:

FD-3 CAST IRON BODY, ENAMEL COATED, FLOOR DRAIN WITH 12 X 12 SQUARE TOP, ACID RESISTANT COATED. ZURN Z-610-12; WADE 2-1744-12; OR EQUAL.



NON-POTABLE WATER PIPING





SANITARY PIPING

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

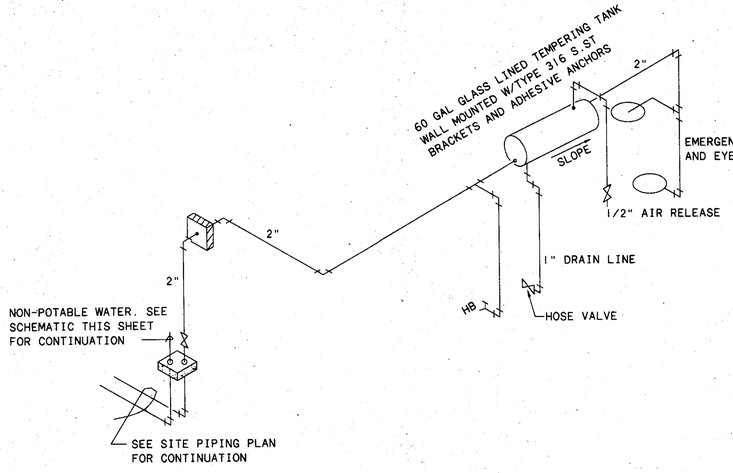
JOB NO.	15582
DESIGNED BY:	HJS
DRAWN BY:	DLR
CHECKED BY:	HJS
APPROVED BY:	RBD
DATE:	MARCH 1995

BLOWER BUILDING
PLUMBING SCHEMATICS

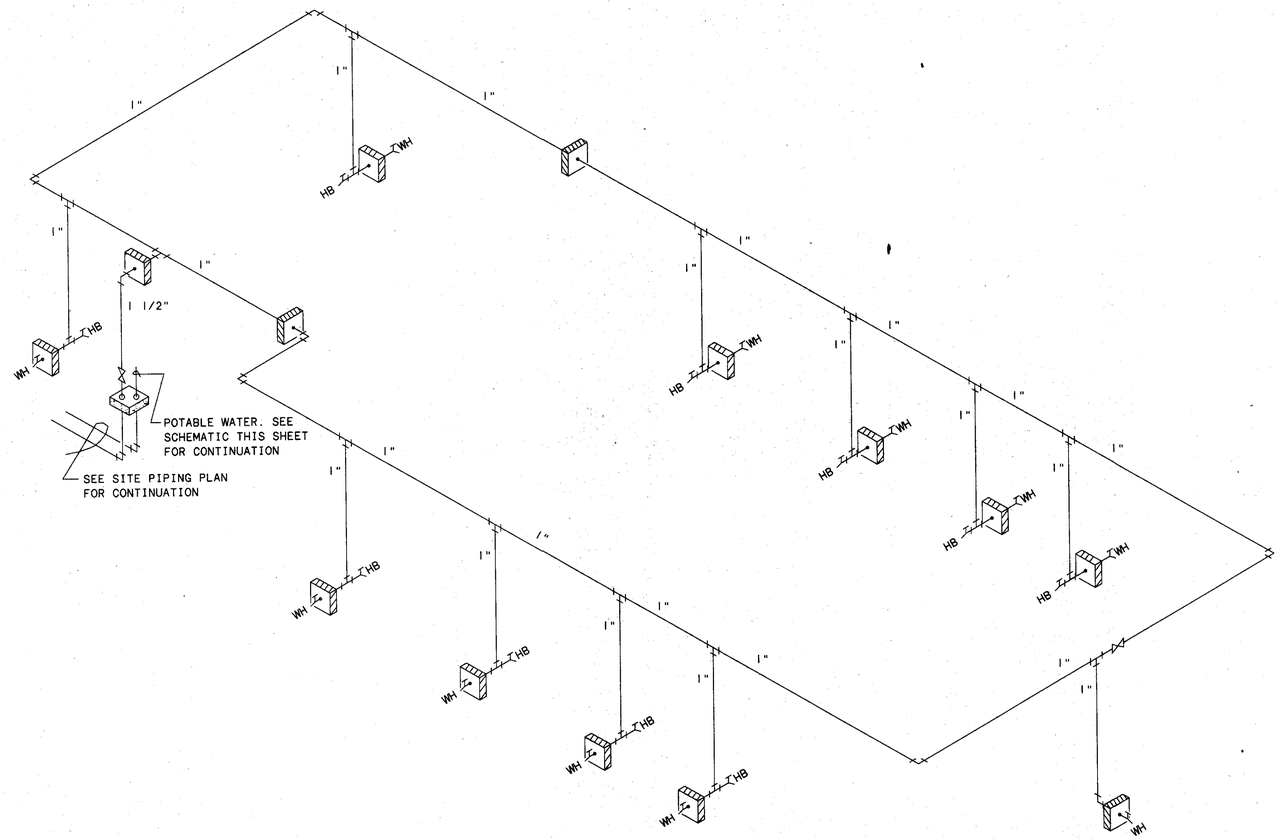
SCALE: NONE

SHEET NO. 80 OF 112

03-20-95 N:\PROJECTS\PR15582\CADD\SHT80



POTABLE WATER PIPING



NON-POTABLE WATER PIPING

NOTE:
ALL PIPING TO BE COPPER,
TYPE "L" ABOVE GROUND &
TYPE "K" BELOW GROUND

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

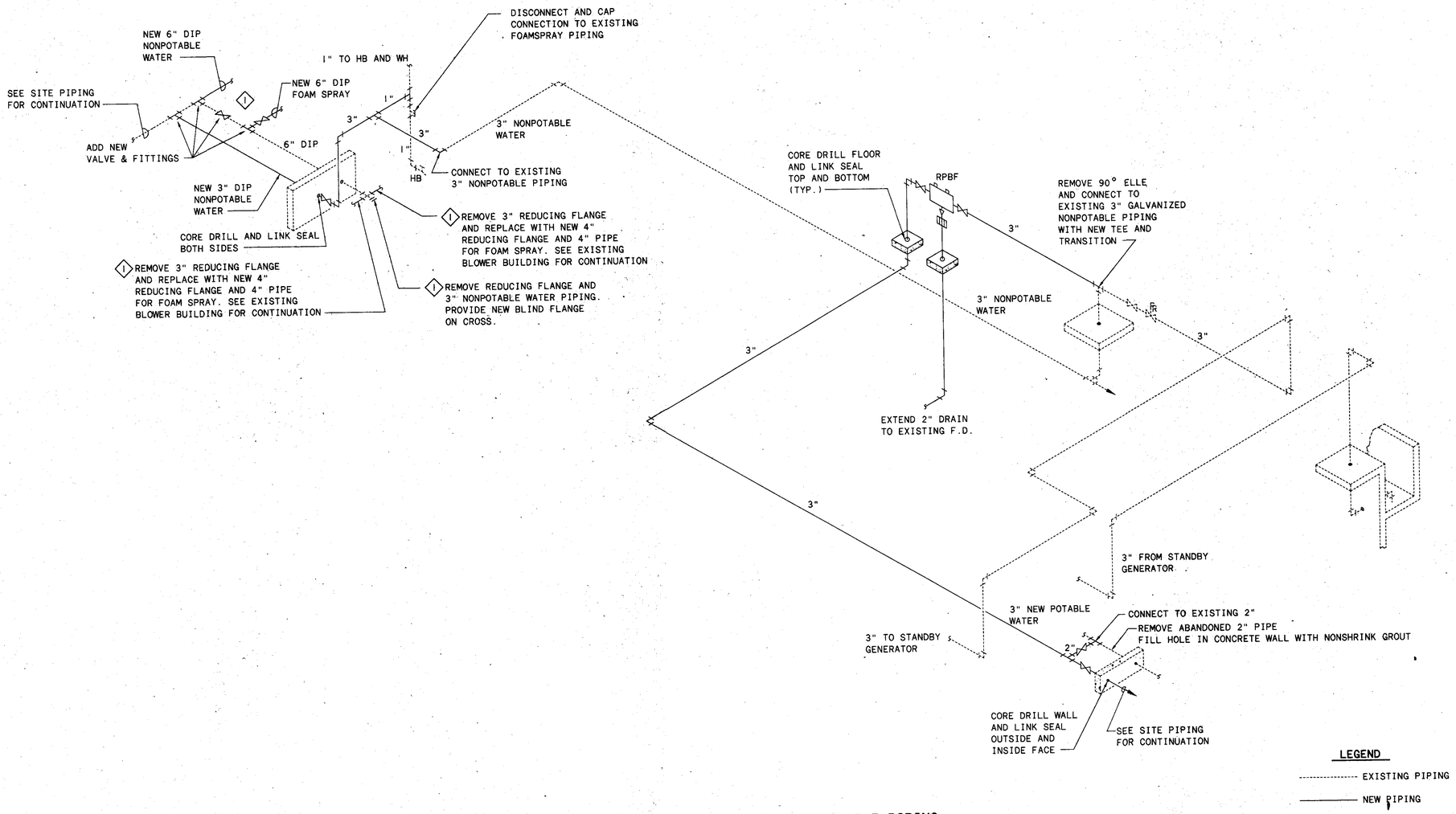
JOB NO.	15582
DESIGNED BY:	HJS
DRAWN BY:	DLR
CHECKED BY:	HJS
APPROVED BY:	RBD
DATE:	MARCH 1995

TERTIARY BUILDING
PLUMBING SCHEMATICS

SCALE: NONE

SHEET NO. 81 OF 112

03-20-95 N:\PROJECTS\PRI5582\CADD\SHT81



POTABLE / NONPOTABLE PIPING

CODED NOTES:

1 WORK SHOWN IS GENERAL CONTRACTOR'S RESPONSIBILITY AND IS SHOWN FOR CLARITY ONLY.

AERATION TANK FOAM SPRAY PIPING (NOT SHOWN) SHALL BE GENERAL CONTRACTOR'S RESPONSIBILITY.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

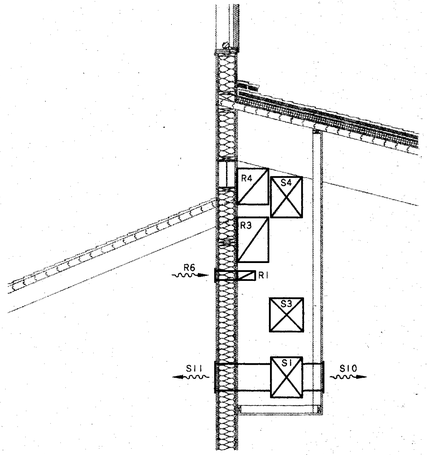
JOB NO.	15582
DESIGNED BY:	HJS
DRAWN BY:	DLR
CHECKED BY:	HJS
APPROVED BY:	RBD
DATE:	MARCH 1995

EXISTING BLOWER BUILDING
PLUMBING SCHEMATICS

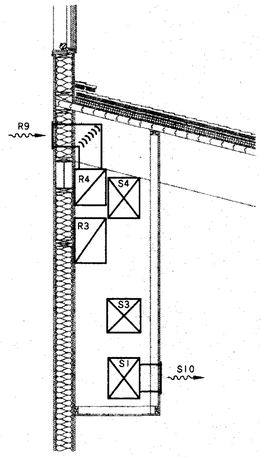
SCALE: NONE

SHEET NO. 82 OF 112

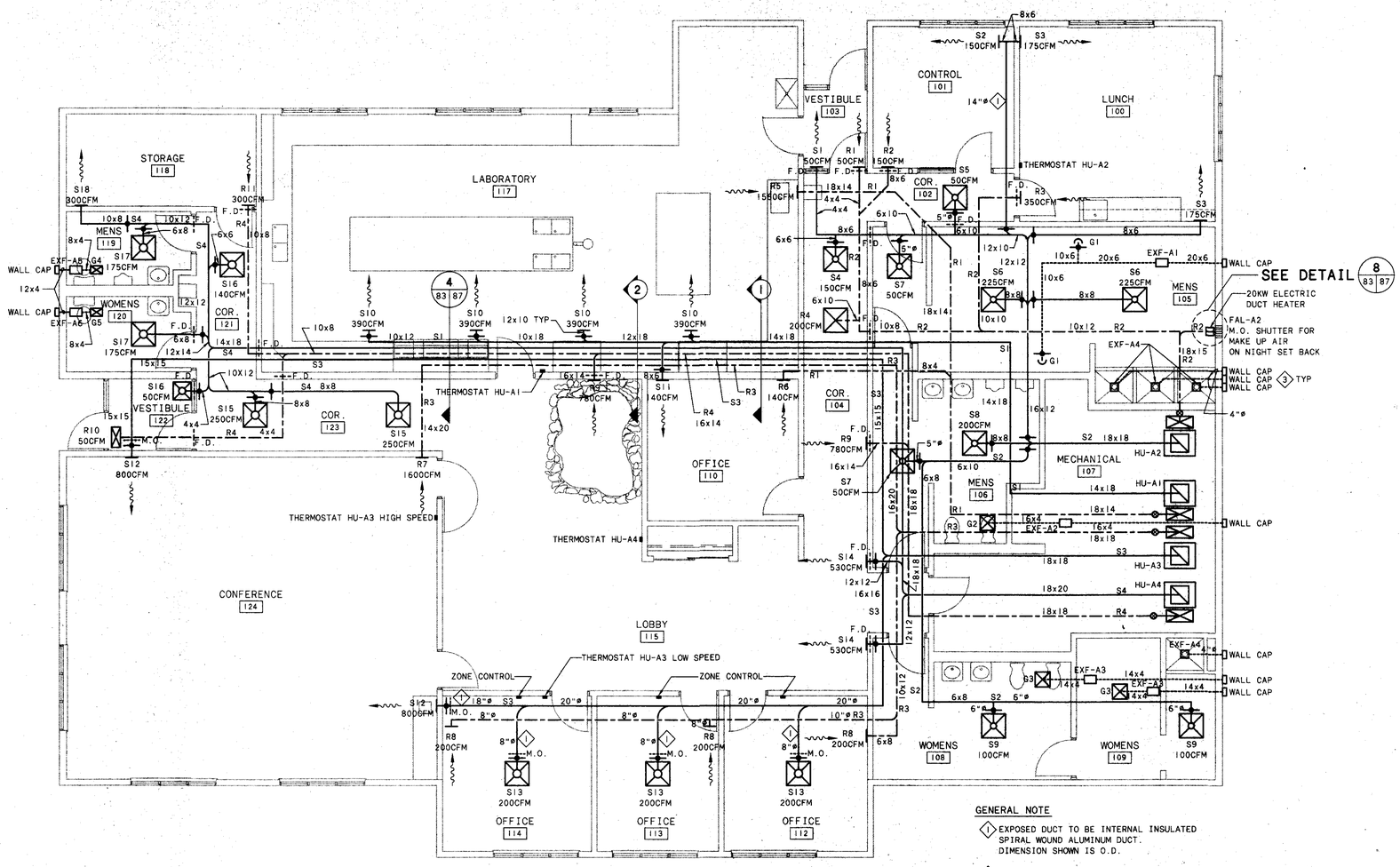
03-20-95 N:\PROJECTS\PR15582\CADD\SHT82



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



SECTION
SCALE: 3/8"=1'-0" (2)



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

GENERAL NOTE

1. EXPOSED DUCT TO BE INTERNAL INSULATED SPIRAL WOUND ALUMINUM DUCT. DIMENSION SHOWN IS O.D.
2. EXPOSED DUCT TO BE INTERNAL INSULATED ALUMINUM DUCT. DIMENSION SHOWN IS I.D.
3. SEE DETAIL 2 ON SHEET 87 FOR VENT THRU THE WALL DETAIL.

LEGEND

SUPPLY	Sx
RETURN	Rx
EXHAUST	
DIFFUSSER	Sx
GRILLE	Rx Gx
REGISTER	Sx
BALANCING DAMPER	
ZONE DAMPER	M.O.
LOUVER WITH MOTOR OPERATED SHUTTER	M.O.
SMOKE DETECTOR	(SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR)
FIRE DAMPER	F.D.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

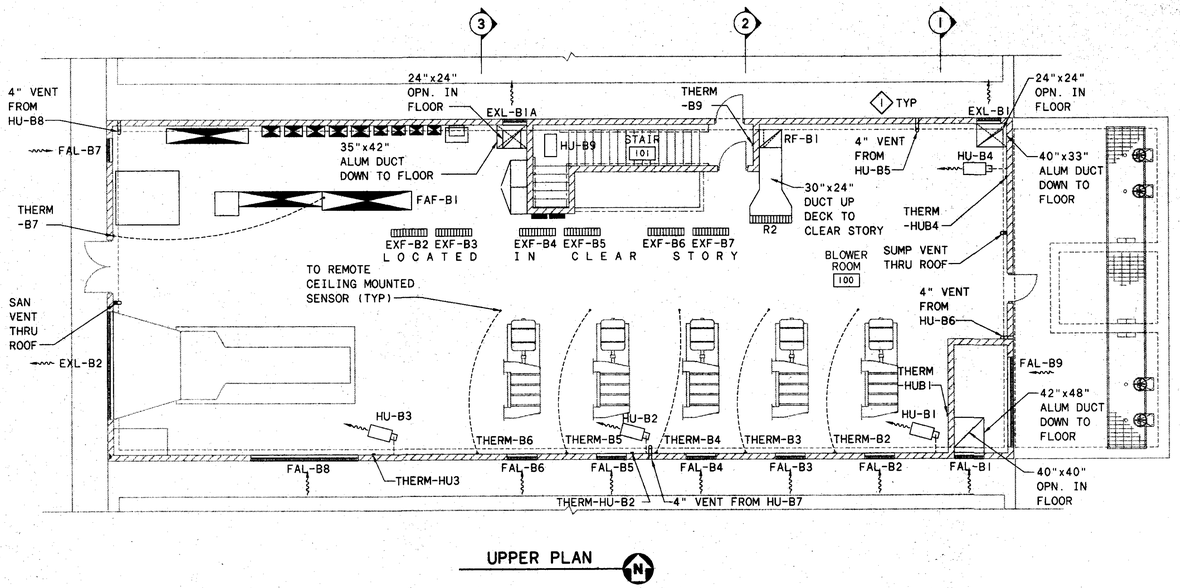
JOB NO.	15582
DESIGNED BY:	HJS
DRAWN BY:	DLR
CHECKED BY:	HJS
APPROVED BY:	RBD
DATE:	FEB., 1995

ADMINISTRATION BUILDING
HEATING, VENTILATION, & AIR CONDITIONING

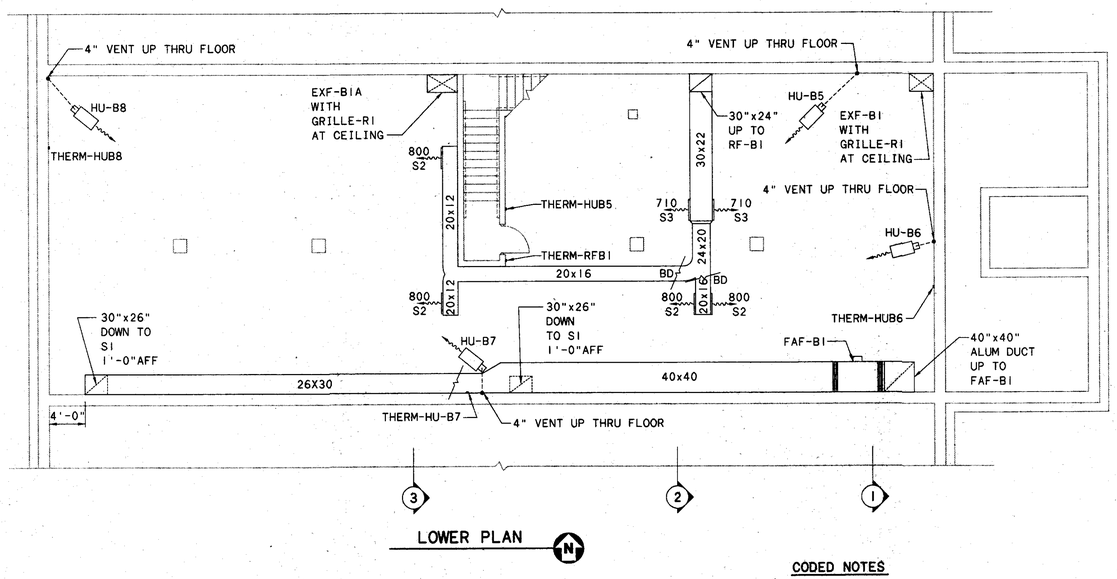
SCALE: AS SHOWN

SHEET NO. 83 OF 112

03-08-95 N:\PROJECTS\VPR15582\CADD\SHT83



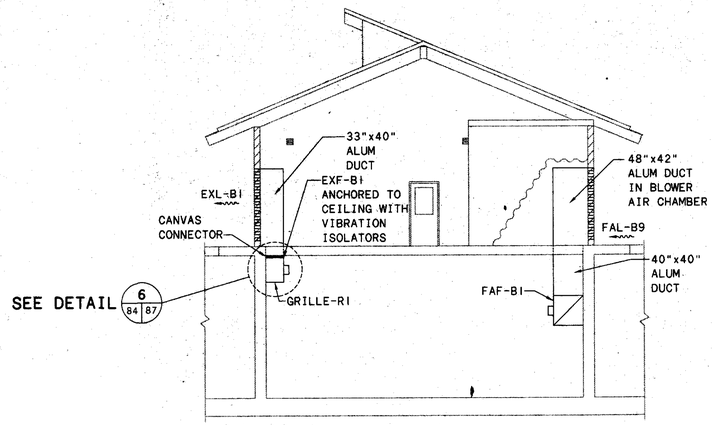
UPPER PLAN (N)



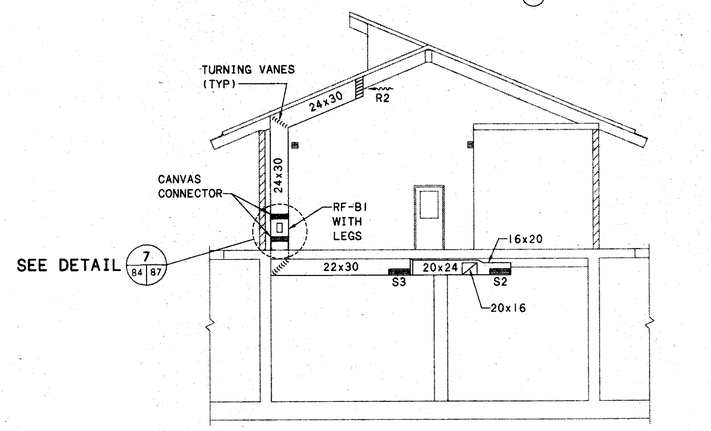
LOWER PLAN (N)

CODED NOTES

(1) SEE DETAIL 1 ON SHEET 87 FOR UNIT HEATER VENT THRU WALL DETAILS.



SECTION (1)



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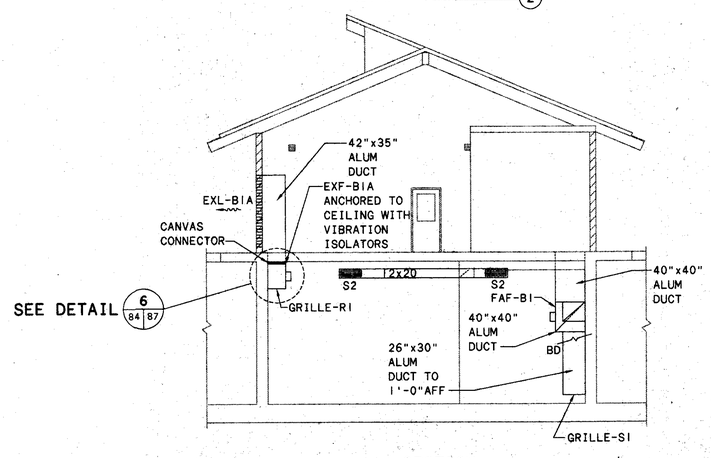


SECTION (3)

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

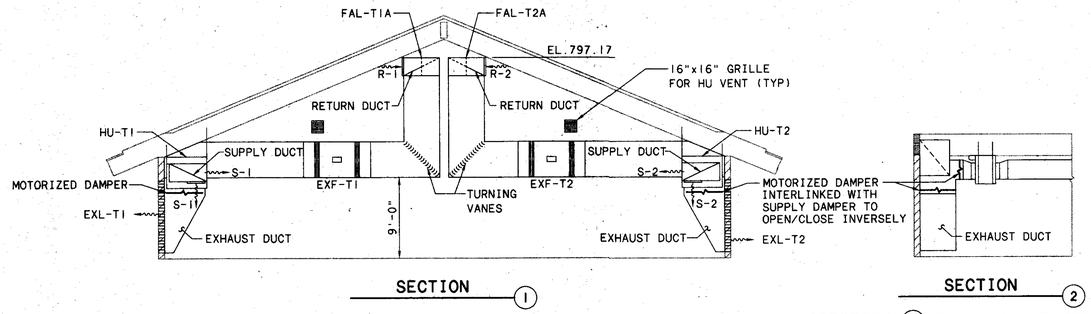
JOB NO.	15582
DESIGNED BY:	HJS
DRAWN BY:	DLR
CHECKED BY:	HJS
APPROVED BY:	RBD
DATE:	MARCH 1995

BLOWER BUILDING HEATING & VENTILATION

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

SHEET NO. 84 OF 112

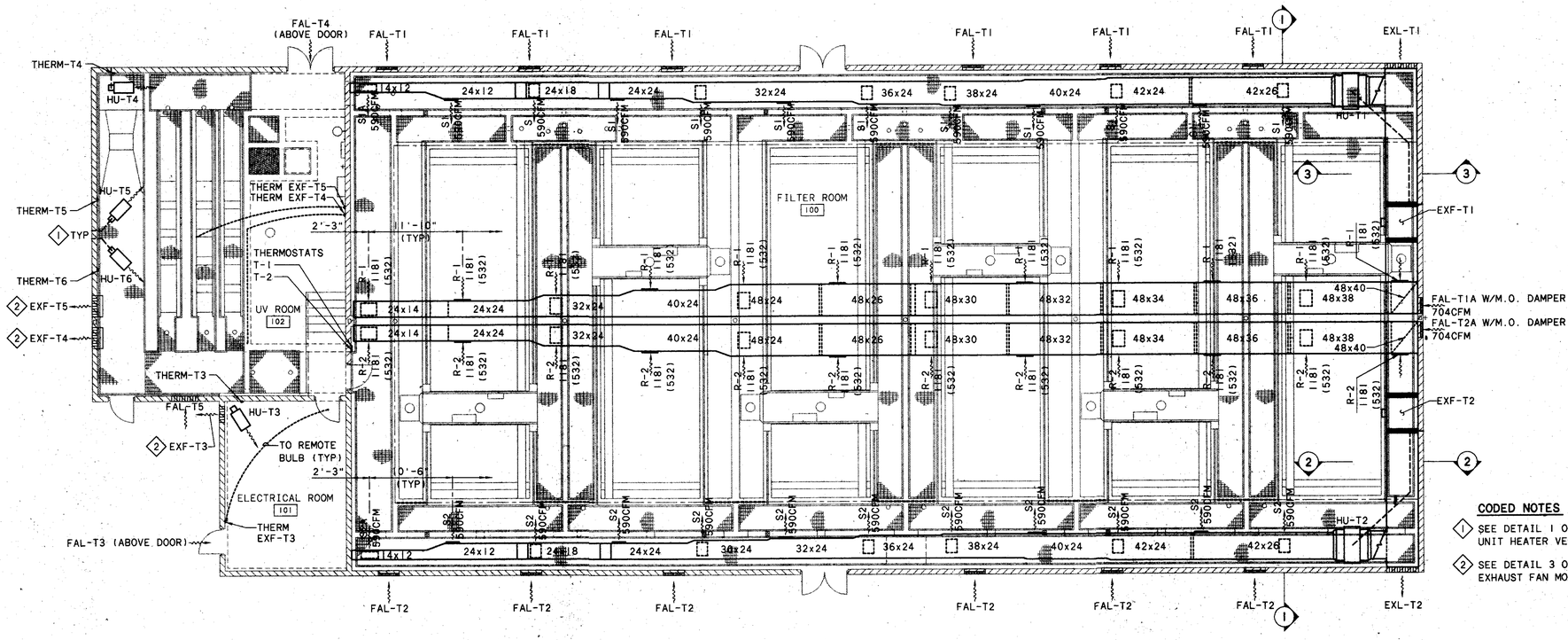
03-13-95 N:\PROJECTS\PF15582\CADD\SH84



SECTION (1)

SECTION (2)

(SECTION (3) SIMILAR BUT OPPOSITE)



PLAN

CODED NOTES

1. SEE DETAIL 1 ON SHEET 87 FOR UNIT HEATER VENT THRU WALL DETAILS.
2. SEE DETAIL 3 ON SHEET 87 FOR EXHAUST FAN MOUNTING DETAIL.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

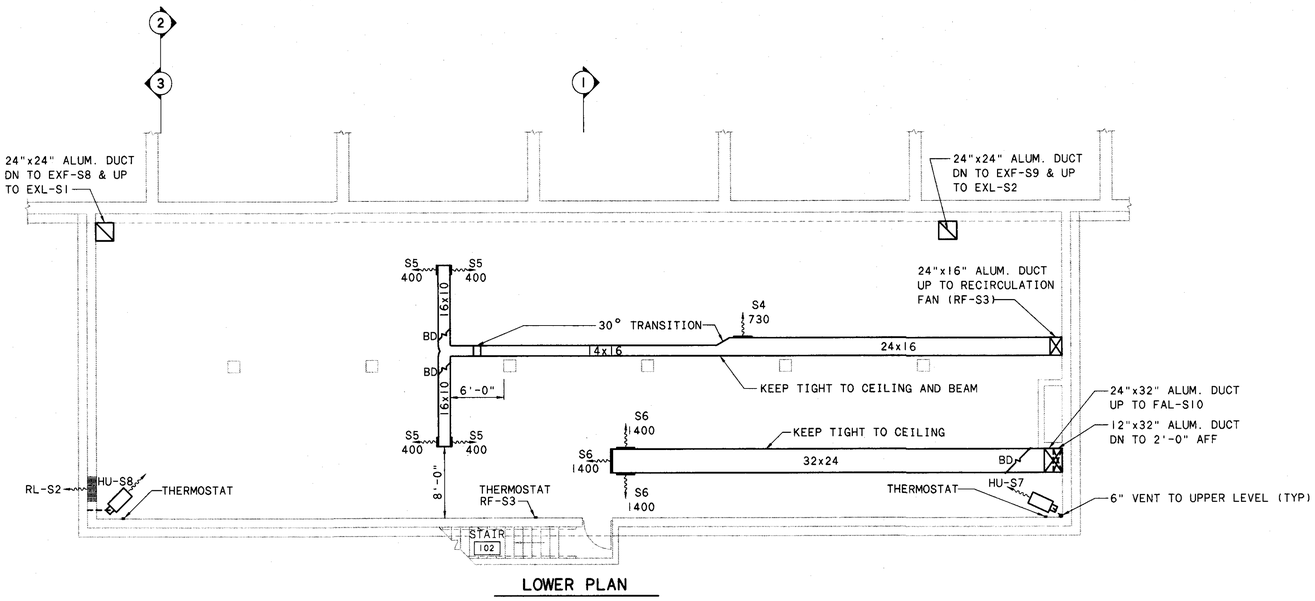
JOB NO.	15582
DESIGNED BY:	HJS
DRAWN BY:	DLR
CHECKED BY:	HJS
APPROVED BY:	RBD
DATE:	MARCH 1995

TERTIARY COMPLEX HEATING & VENTILATION

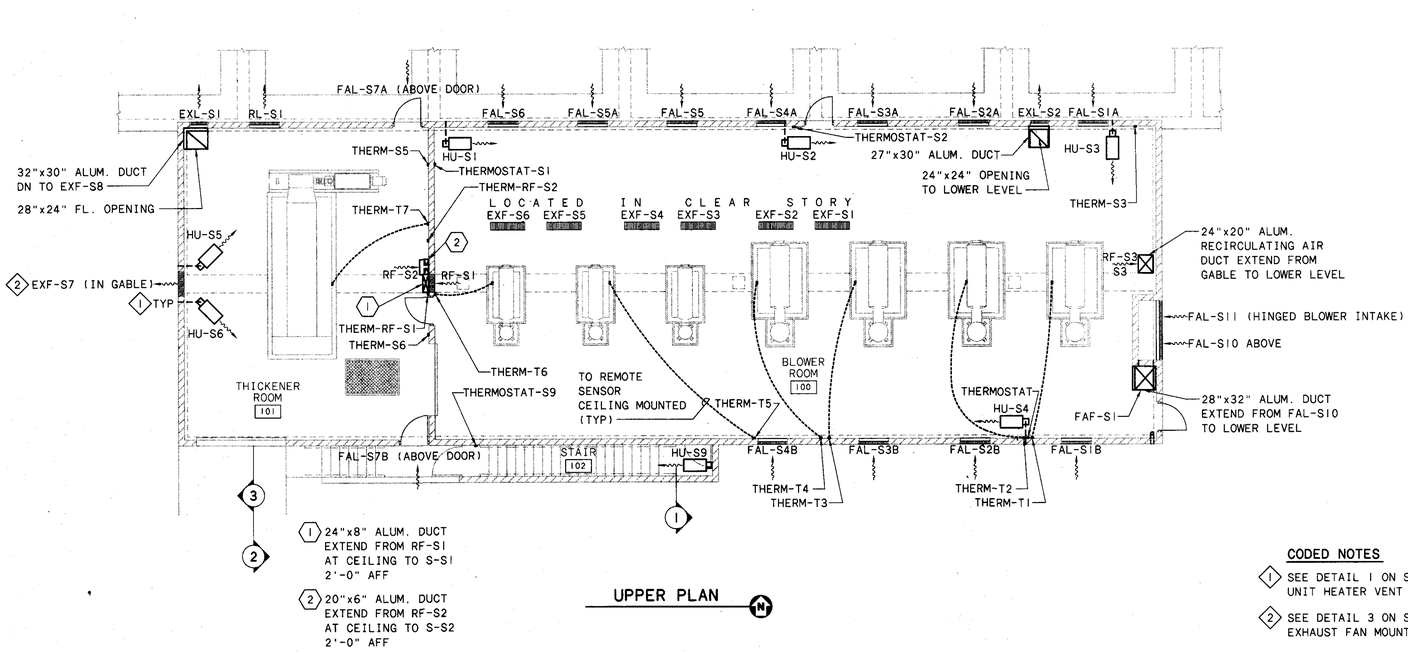
SCALE: 1/8" = 1'-0"

SHEET NO. 85 OF 112

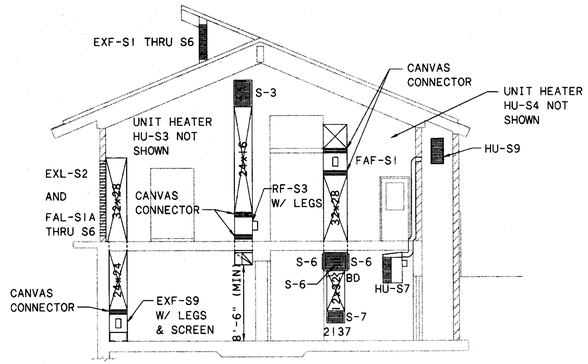
03-13-95 N:\PROJECTS\PR15582\CADD\SHT85



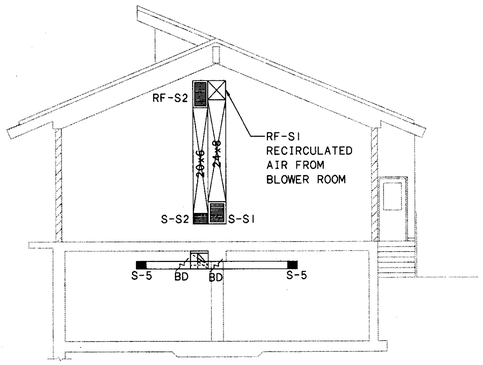
LOWER PLAN



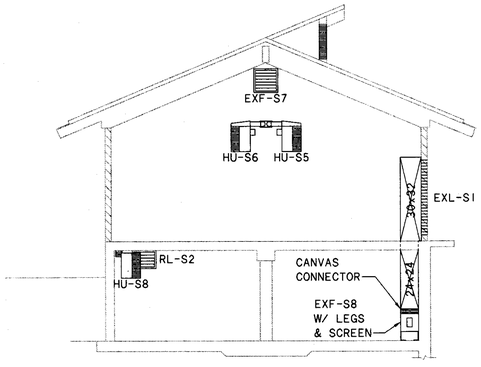
UPPER PLAN



SECTION 1



SECTION 2



SECTION 3

CODED NOTES

1. SEE DETAIL 1 ON SHEET 87 FOR UNIT HEATER VENT THRU WALL DETAILS.
2. SEE DETAIL 3 ON SHEET 87 FOR EXHAUST FAN MOUNTING DETAIL.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

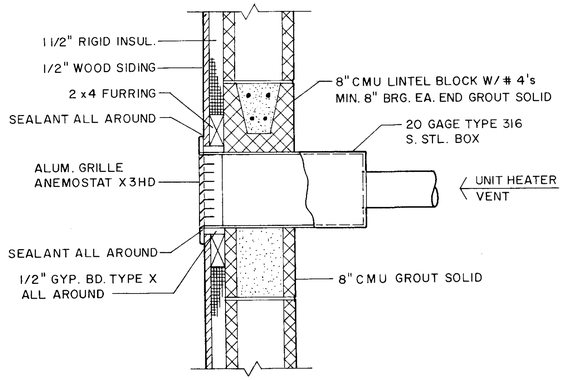
DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	HJS
DRAWN BY:	DLR
CHECKED BY:	HJS
APPROVED BY:	RBD
DATE:	FEB., 1995

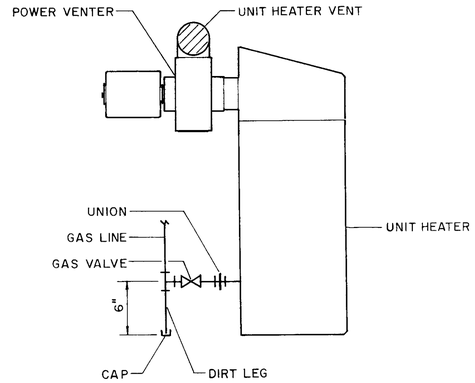
SLUDGE THICKENER BUILDING
HEATING & VENTILATION

SCALE:	
1/8" = 1'-0"	
SHEET NO.	OF
86	112

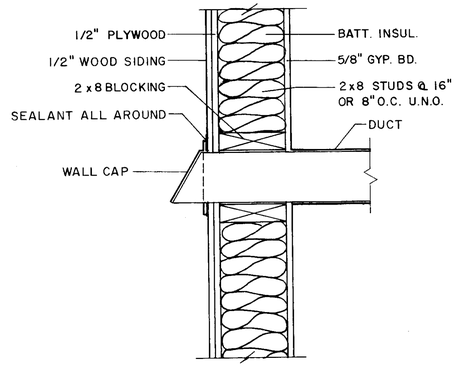
20-FEB-95 N:\PROJECTS\PR15582\CADD\SHT86



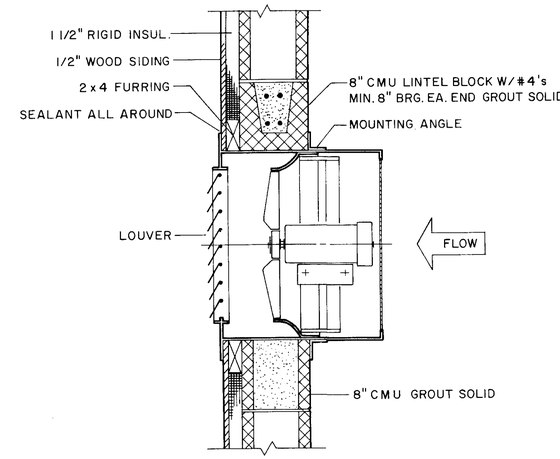
DETAIL 1/87



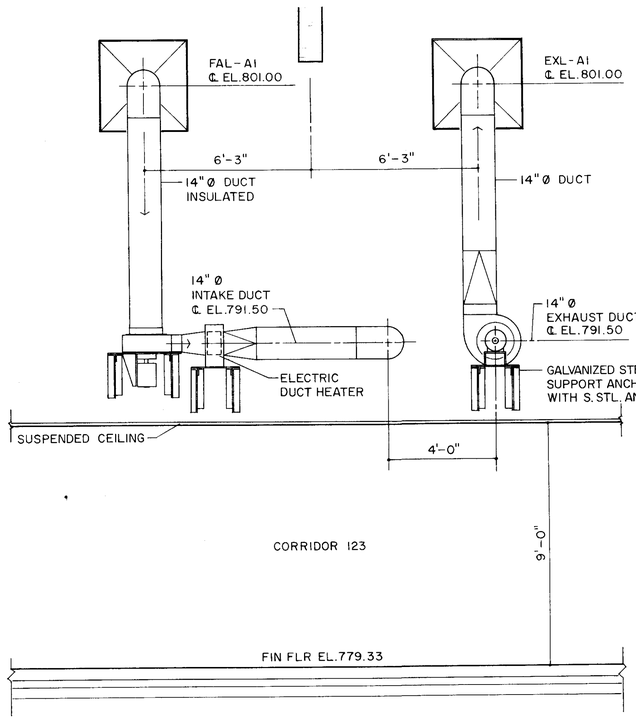
UNIT HEATER DETAIL



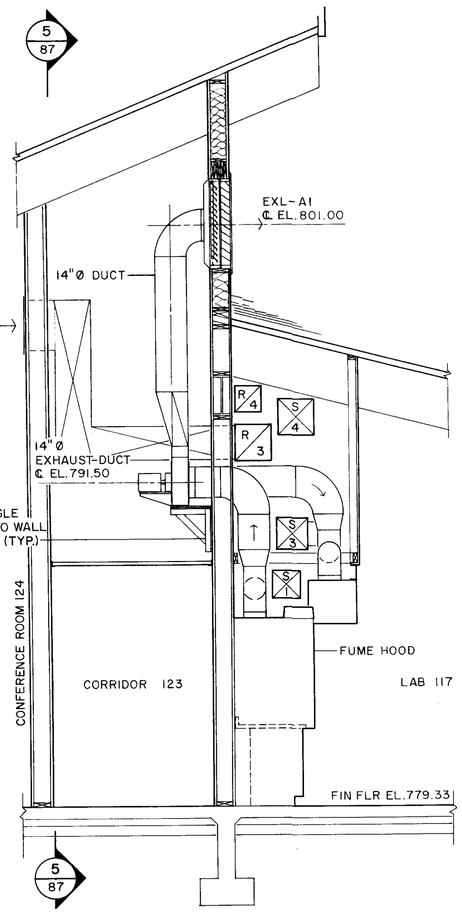
DETAIL 2/87



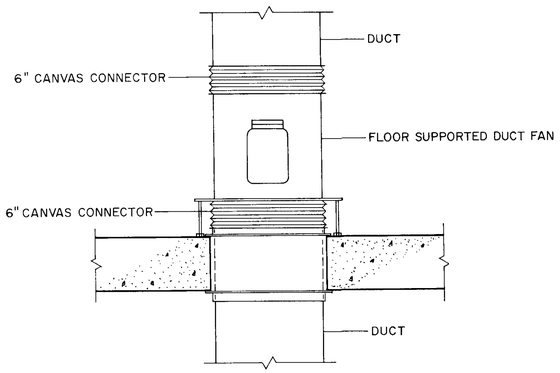
DETAIL 3/87



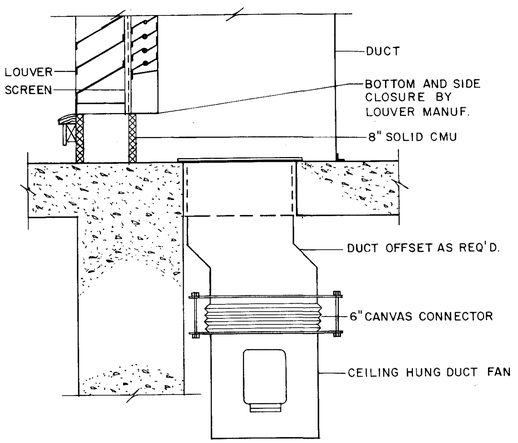
SECTION 5/87



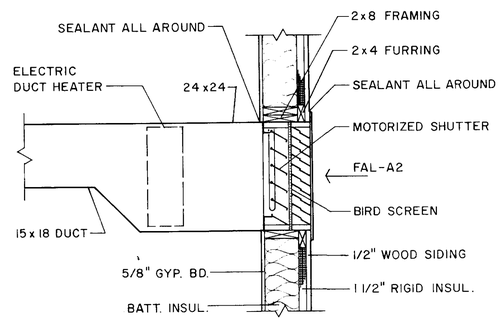
SECTION 4/87



DETAIL 7/87



DETAIL 6/87



DETAIL 8/87

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	HJS
DRAWN BY:	DEH
CHECKED BY:	HJS
APPROVED BY:	RBD
DATE:	FEB., 1995

HEATING & VENTILATION DETAILS

SCALE: NONE

SHEET NO. 87 OF 112

ATLAS BLUEPRINT, 259317

AIR DEVICE SCHEDULE

LOCATION	MARK	NECK	DIFFUSER	REGISTER	GRILLE	MODEL NUMBER ANEMOSTAT	SUPPLY	RETURN	EXHAUST	TRANSFER	4 WAY	3 WAY	2 WAY	1 WAY	VOLUME CFM	INTEGRAL DAMPER	BALANCING DAMPER	CEILING	WALL	DUCT	HEIGHT	FINISH	NUMBER REQUIRED	REMARKS
DEFINITION AND SIZE = NECK / DIFFUSER / REGISTER / GRILLE; **DUTY** = SUPPLY / RETURN / EXHAUST / TRANSFER; **AIR PATTERN** = 4 WAY / 3 WAY / 2 WAY / 1 WAY; **MOUNTING** = CEILING / WALL / DUCT / HEIGHT																								
SLUDGE THICKENER BUILDING																								
BLOWER RM 100	S3				20 X 36	X3VS				●			●		2,330					●	18'	ALUM	1	DUCT TO LOWER LEVEL
THICKENER RM 101	S1				18 X 24	X3VS				●			●		1,645					●	2'	ALUM	1	
	S2				12 X 18	X3VS				●			●		813					●	2'	ALUM	1	
LOWER LEVEL	S4			18 X 12		X2VO	●				●				777	●				●	8' 6"	ALUM	1	
	S5			10 X 16		X2VO	●				●				400		●			●	8' 6"	ALUM	4	
	S6				28 * 18	X2VS	●				●				1,400		●			●	1' 0"	ALUM	3	
	S7				24 * 16	X3VS	●				●				1,068		●			●	1' 0"	ALUM	2	
TERTIARY TREATMENT BUILDING																								
FILTER RM 100	S1			20 X 16		X2HO	●				●				600		●			●	*	ALUM	11	* AMOUNT VARIES AS TO BOTTOM OR SIDE OF DUCT. RETURN DUCT MOUNTED AT 19'± AFF AND SUPPLY DUCT AT 9' 0" AFF
	R1				24 X 18	X3VD		●					●		1,180					●	*	ALUM	12	
	S2			20 X 16		X2HO	●				●				600		●			●	*	ALUM	11	
	R2				24 X 18	X3VD		●					●		1,180						*	ALUM	12	
	S1A			26 X 10		X2HO	●						●		1,180		●			●	*	ALUM	1	
	S2A			26 X 10		X2HO	●						●		1,180		●			●	*	ALUM	1	
BLOWER BUILDING																								
BLOWER RM 100	R2				30 X 56	3XVS		●						●	4,620					●	*	ALUM	1	* SEE SECTION DETAIL
LOWER LEVEL 010	S1				26 X 30	X3HD	●						●		5,200		●			●	1'	ALUM	2	
	R1				24 X 24	X3HD		●						●	5,242					●	*	ALUM	2	* BASE OF FAN
	S2			28 X 8		X2VO	●				●				800	●	●			●		ALUM	4	
	S3			28 X 8		X2VO	●				●				719	●	●			●		ALUM	2	
ADMINISTRATION BUILDING ZONE 2																								
LUNCH ROOM 100	S3			8 X 6		X2VO	●				●				175	●	●		●		*	ALUM	2	* 8'-8" REG ON NORTH WALL AND 12'-0" REG ON WEST WALL
	R3				12 X 10	X3XS		●						●	350				●		12'-0"	ALUM	1	
CONTROL ROOM 101	S2			8 X 6		X2VO	●				●				150	●	●			●	8'-8"	ALUM	1	
	R2				8 X 6	X3VS		●						●	150				●		11'-0"	ALUM	1	
VESTIBULE 103	S1			4 X 4		X2VO	●				●				50	●	●		●		10'-0"	ALUM	1	
	R1				6 X 4	X3VS		●						●	50				●		11'-0"	ALUM	1	
CORRIDOR 102&104	S4	6"	24 X 24			LEPA	●				●				150	●	●	●			9'-0"	WHITE	1	
	S5	5"	24 X 24			LEPA	●								50	●	●	●			9'-0"	WHITE	1	
	R4				24 X 24	X3HD		●			●			●	200			●			9'-0"	ALUM	1	
MENS LOCKER 105	S7	5"	24 X 24			LEPA	●						●		50	●	●	●			9'-0"	WHITE	1	
	S6	8"	24 X 24			LEPA	●				●				225	●	●	●			9'-0"	WHITE	2	
	G1				10 X 6	X3HD			●					●	513				●		8'-0"	ALUM	2	
MENS TOILET 106	S7	5"	24 X 24			LEPA	●						●		50	●	●	●			9'-0"	WHITE	1	
	S8	8"	24 X 24			LEPA	●				●				200	●	●	●			9'-0"	WHITE	1	
	G2				24 X 9	X3HD			●					●	375			●			9'-0"	ALUM	1	
WOMENS TOIL/LOCK 108 / 109	S9	6"	24 X 24			LEPA	●				●				100	●	●	●			9'-0"	WHITE	2	
	G3				24 X 8	X3HD			●					●	210			●			9'-0"	ALUM	2	
ZONE 1																								
LABORATORY 117	S10			18 X 12		X2VO	●				●				390	●	●		●		9'-0"	ALUM	4	
	R5				24 X 9	X3VS		●						●	1560				●		12'-0"	ALUM	1	
OFFICE 110	S11			8 X 6		X2VO	●				●				140	●	●			●	9'-0"	ALUM	1	
	R6				6 X 6	X3VS		●						●	140	●			●		11'-0"	ALUM	1	
ZONE 3																								
CONFERENCE 124	S12			18 X 12		X2VO	●				●				800	●	●		●		*	ALUM	2	* 11'-0" SOUTH WALL 18'-0" EAST WALL
	R7				36 X 12	X3VS		●						●	1600				●		18'-0"	ALUM	1	
OFFICE 114&113	S13	8"	24 X 24				●				●				200	●	●			●	9'-0"	WHITE	2	
	R8				8 X 6	X3VS		●						●	200					●	11'-0"	ALUM	2	
OFFICE 112	S13	8"	24 X 24				●				●				200	●	●			●	9'-0"	WHITE	1	
	R8				8 X 6	X3VS		●						●	200				●		11'-0"	ALUM	1	
ZONE 4																								
LOBBY 115	S14			12 X 12		X2VO	●				●				530	●	●		●		12'-6"	ALUM	2	
	R9				18 X 10	X3VS		●						●	780				●		16'-6"	ALUM	2	
CORRIDOR 121&123	S15	8"	24 X 24			LEPA	●				●				250	●	●	●			9'-0"	WHITE	2	
	S16	6"	24 X 24			LEPA	●				●				140	●	●	●			9'-0"	WHITE	1	
VESTIBULE 122	S16	5"	12 X 12			LEPA	●						●		50	●	●	●			9'-0"	WHITE	1	
	R10				6 X 6	X3HD		●						●	50			●			9'-0"	ALUM	1	
WOMENS 120	S17	6"	24 X 24			LEPA	●				●				175	●	●	●			9'-0"	WHITE	1	
	G5				24 X 7	X3VS			●					●	110			●			9'-0"	ALUM	1	
MENS 119	S17	6"	24 X 24			LEPA	●				●				175						9'-0"	WHITE	1	
	G4				24 X 7	X3VS			●					●	110			●			9'-0"	ALUM	1	
STORAGE 118	S18			12 X 8		X2VO	●				●				300	●	●		●		11'-0"	ALUM	1	
	R11				10 X 8	X3VS		●						●	300				●		12'-0"	ALUM	1	

VENTILATION SCHEDULE

LOCATION	MARK	MOUNTING	CONSTANT	VARIABLE	CFM	MAX. S.P. INCHES	MAXIMUM RPM	HORSEPOWER	VOLTAGE	PHASE	MANUFACTURER	MODEL	SIZE	LOUVER	BIRDSCREEN	GRAVITY	MOTOR OPER	215RI	EISENHEI33	GRILLE	LIGHT	SEPARATE		QUANTITY	REMARKS
SPEED = CONSTANT / VARIABLE; **MAKE AND MODEL** = MANUFACTURER / MODEL / SIZE; **SHUTTER** = GRAVITY / MOTOR OPER; **FINISH** = 215RI / EISENHEI33; **SWITCH** = LIGHT / SEPARATE																									
SLUDGE THICKENER BUILDING																									
BLOWER RM 100	EXF-S1	WALL	●		6,572	0.125	700	3/4	480	3	COOK	APD	36P8DA		●			●				●		1	THERMOSTAT CONTROL
	EXF-S2	WALL	●		6,572	0.125		3/4	480	3	COOK	APD	36P8DA		●			●				●		1	THERMOSTAT CONTROL
	EXF-S3	WALL	●		6,572	0.125		3/4	480	3	COOK	APD	36P8DA		●			●				●		1	THERMOSTAT CONTROL
	EXF-S4	WALL	●		6,572	0.125		3/4	480	3	COOK	APD	36P8DA		●			●				●		1	THERMOSTAT CONTROL
	EXF-S5	WALL	●		6,051	0.375	900	1	480	3	COOK	APD	36P8DB		●			●				●		1	THERMOSTAT CONTROL
	EXF-S6	WALL	●		6,051	0.375	900	1	480	3	COOK	APD	36P8DB		●			●				●		1	THERMOSTAT CONTROL
	FAL-S1A	WALL	●		3,280	0.23		1/70	120	1	AIROLITE	V677/T663E	40 X 32	●	●		●	●		●				1	INTERCONNECT TO EXF-S1
	FAL-S1B	WALL	●		3,280	0.23		1/70	120	1	AIROLITE	V677/T663E	40 X 32	●	●		●	●		●				1	INTERCONNECT TO EXF-S1
	FAL-S2A	WALL	●		3,280	0.23		1/70	120	1	AIROLITE	V677/T663E	40 X 32	●	●		●	●		●				1	INTERCONNECT TO EXF-S2
	FAL-S2B	WALL	●		3,280	0.23		1/70	120	1	AIROLITE	V677/T663E	40 X 32	●	●		●	●		●				1	INTERCONNECT TO EXF-S2
	FAL-S3A	WALL	●		3,280	0.23		1/70	120	1	AIROLITE	V677/T663E	40 X 32	●	●		●	●		●				1	INTERCONNECT TO EXF-S3
	FAL-S3B	WALL	●		3,280	0.23		1/70	120	1	AIROLITE	V677/T663E	40 X 32	●	●		●	●		●				1	INTERCONNECT TO EXF-S3
	FAL-S4A	WALL	●		3,280	0.23		1/70	120	1	AIROLITE	V677/T663E	40 X 32	●	●		●	●		●				1	INTERCONNECT TO EXF-S4
	FAL-S4B	WALL	●		3,280	0.23		1/70	120	1	AIROLITE	V677/T663E	40 X 32	●	●		●	●		●				1	INTERCONNECT TO EXF-S4
	FAL-S5	WALL	●		6,051	0.19		1/70	120	1	AIROLITE	V677/T663E	40 X 32	●	●		●	●		●				1	INTERCONNECT TO EXF-S5
	FAL-S6A	WALL	●		6,051	0.19		1/70	120	1	AIROLITE	V677/T663E	40 X 32	●	●		●	●		●				1	INTERCONNECT TO EXF-S5 & S6
	FAL-S6	WALL	●		6,051	0.19		1/70	120	1	AIROLITE	V677/T663E	40 X 32	●	●		●	●		●				1	INTERCONNECT TO EXF-S6
THICKENER RM 101	EXF-S7	WALL	●		3,115	0.125	1,200	1/3	120	1	COOK	APD	24 P11D		●			●				●		1	THERMOSTAT CONTROL
	FAL-S7A	WALL	●		1,558	0.125		1/70	120	1	AIROLITE	K6776/T663E	40 X 24	●	●		●	●						1	INTERCONNECT TO EXF-S7
	FAL-S7B	WALL	●		1,558	0.125		1/70	120	1	AIROLITE	K6776/T663E	40 X 24	●	●		●	●				●		1	INTERCONNECT TO EXF-S7
	RF-S1	WALL	●		1,645	0.20	1,075	1/2	120	1	COOK	GEMINI	9-10						●			●		1	THERMOSTAT CONTROL
	RF-S2	DUCT	●		845	0.20	1,075	1/6	120	1	COOK	GEMINI	7-10						●			●		1	THERMOSTAT CONTROL
	RL-S1	WALL	●		1,645						AIROLITE	K6776/T725	40 X 32	●	●	●		●						1	
LOWER LEVEL	EXF-S8	FLOOR	●		3,150	0.25	1,400	1	480	3	COOK	SQI-B	165						●			●		1	LEGS W/VIBRATION ISOLATORS DETAIL SIMILAR
	EXF-S9	FLOOR	●		3,150	0.25	1,400	1	480	3	COOK	SQI-B	165						●			●		1	LEGS W/VIBRATION ISOLATORS DETAIL SIMILAR
	EXL-S1	WALL	●		3,150	0.10					AIROLITE	K6776/T725	24 X 104	●	●	●		●						1	
	EXL-S2	WALL	●		3,150	0.10					AIROLITE	K6776/T725	24 X 104	●	●	●		●						1	
	FAF-S1	DUCT	●		6,337	0.375	1,700	3	480	3	COOK	SQI-B	180						●			●		1	INTERCONNECT TO EXF-S8 & EXF-S9
	FAL-S10	WALL	●		6,337	0.175		1/70	120	1	AIROLITE	K6776/T663E	80 X 32	●	●		●	●						1	INTERCONNECT TO FAF-S1
	FAL-S11	WALL		●	19,620	0.08					AIROLITE	K6776	80 X 100	●	●			●						1	HINGED AS 2 UNITS TO ALLOW 6' X 8' ACCESS
	RF-S3	DUCT	●		2,330	0.50	1,200	1/3	120	1	COOK	SQI-D	165SQ10D						●			●		1	THERMOSTAT CONTROL
	RL-S2	WALL		●	1,645	0.10					AIROLITE	K6776/T725	32 X 24	●	●	●		●						1	
TERTITARY TREATMENT BUILDING																									
FILTER RM 100	EXF-T1	DUCT		●	14,176 /7,088	0.75	662	5	480	3	COOK	SQI-B	330						●			●		1	SEE OPERATIONAL SQUENCE FOR CONTROLS
	EXF-T2	DUCT		●	14,176 /7,088	0.75	662	5	480	3	COOK	SQI-B	330						●			●		1	SEE OPERATIONAL SQUENCE FOR CONTROLS
	EXL-T1	WALL	●		14,176	0.35					AIROLITE	K6776/T725	48 X 80	●	●	●		●						1	SEE OPERATIONAL SQUENCE FOR CONTROLS
	EXL-T2	WALL	●		14,176	0.35					AIROLITE	K6776/T725	48 X 80	●	●	●		●						1	SEE OPERATIONAL SQUENCE FOR CONTROLS
	FAL-T1	WALL	●		2,363	0.20		1/70	120	1	AIROLITE	K6776/T663E	32 X 32	●	●		●	●						6	
	FAL-T2	WALL	●		2,363	0.20		1/70	120	1	AIROLITE	K6776/T663E	32 X 32	●	●		●	●						6	
	FAL-T1A	WALL	●		1,400	0.1		1/70	120	1	AIROLITE	K6776	24 X 24	●	●			●							M.O. OPPOSED BLADE DAMPERS W/LIMIT SWITCH
	FAL-T2A	WALL	●		1,400	0.1		1/70	120	1	AIROLITE	K6776	24 X 24	●	●			●							M.O. OPPOSED BLADE DAMPERS W/LIMIT SWITCH
ELECTRICAL RM 101	EXF-T3	WALL	●		1,113	0.25	1,725	1/4	120	1	COOK	APD	16P17D		●				●			●		1	THERMOSTAT CONTROL
	FAL-T3	WALL	●		1,113	0.24	1,113	1/70	120	1	AIROLITE	K6776/T663E	40 X 24	●	●									1	INTERCONNECT TO EXF-T3
UV RM 102	EXF-T4	WALL	●		3,115	0.25	1,200	1/3	120	1	COOK	APD	24P11D		●				●			●		1	THERMOSTAT CONTROL
	EXF-T5	WALL	●		3,115	0.25	1,200	1/3	120	1	COOK	APD	24P11D		●				●			●		1	THERMOSTAT CONTROL
	FAL-T4	WALL	●		3,115	0.22		1/70	120	1	AIROLITE	K6776/T663E	72 X 24	●	●		●	●						1	INTERCONNECT TO EXF-T4
	FAL-T5	WALL	●		3,115	0.21		1/70	120	1	AIROLITE	K6776/T663E	40 X 32	●	●		●	●						1	INTERCONNECT TO EXF-T5
DORMERS	EL-T1	WALL									AIROLITE	K6776/PLATE	28 X 42	●				●						8	BLANKED OFF WITH ALUMINUM PLATE
BLOWER BUILDING																									
BLOWER RM 100	EXF-B2	WALL	●		10,018	0.25	860	1 1/2	480	3	COOK	APD	36P8DC		●			●				●		1	THERMOSTAT CONTROL
	EXF-B3	WALL	●		10,018	0.25	860	1 1/2	480	3	COOK	APD	36P8DC		●			●				●		1	THERMOSTAT CONTROL
	EXF-B4	WALL	●		10,018	0.25	860	1 1/2	480	3	COOK	APD	36P8DC		●			●				●		1	THERMOSTAT CONTROL
	EXF-B5	WALL	●		10,018	0.25	860	1 1/2	480	3	COOK	APD	36P8DC		●			●				●		1	THERMOSTAT CONTROL
	EXF-B6	WALL	●		10,018	0.25	860	1 1/2	480	3	COOK	APD	36P8DC		●			●				●		1	THERMOSTAT CONTROL
	FAL-B2	WALL	●		10,018	0.17		1/70	120	1	AIROLITE	K6776/T663E	40 X 96	●	●		●	●						1	INTERCONNECT TO EXF-B2
	FAL-B3	WALL	●		10,018	0.17		1/70	120	1	AIROLITE	K6776/T663E	40 X 96	●	●		●	●						1	INTERCONNECT TO EXF-B3
	FAL-B4	WALL	●		10,018	0.17		1/70	120	1	AIROLITE	K6776/T663E	40 X 96	●	●		●	●						1	INTERCONNECT TO EXF-B4
	FAL-B5	WALL	●		10,018	0.17		1/70	120	1	AIROLITE	K6776/T663E	40 X 96	●	●		●	●						1	INTERCONNECT TO EXF-B5
	FAL-B6	WALL	●		10,018	0.17		1/70	120	1	AIROLITE	K6776/T663E	40 X 96	●	●		●	●						1	INTERCONNECT TO EXF-B6
	EXF-B7	WALL	●		8,229	0.25	860	1	480	3	COOK	APD	36P8DB		●			●				●		1	THERMOSTAT CONTROL
	FAL-B7	WALL	●		8,229	0.23		1/70	120	1	AIROLITE	K6776/T663E	32 X 96	●	●		●	●						1	INTERCONNECT TO EXF-B7
	FAL-B8	WALL	●		85,415	0.37		1/70	120	1	AIROLITE	K6776/T663E	144 X 144	●	●		●	●						1	SPRING OPEN MOTOR CLOSED-INTERLOCK TO GENERATOR
	EXL-B2	WALL	●		81,000	0.35					AIROLITE	K6776/T725	144 X 144	●	●	●		●						1	DUCT TO GENERATOR
	FAL-B9	WALL		●	5,300 /26500	0.10					AIROLITE	K6776	128 X 80	●	●			●						1	HINGED AS 2 UNITS TO ALLOW 10'-0" x 6'-0" ACCESS
LOWER LEVEL	FAF-B1	DUCT	●		10,035	0.375	800	3	480	3	COOK	SQI-B	270						●			●		1	INTERCONNECT TO EXF-B1 AND B1A & FAL-B1
	EXF-B1	DUCT	●		5,242	0.25	1,088	1 1/2	480	3	COOK	SQI-B	195						●			●		1	INTERCONNECT TO FAF-B1
	EXF-B1A	DUCT	●		5,242	0.25	1,088	1 1/2	480	3	COOK	SQI-B	195						●			●		1	INTERCONNECT to FAF-B1
	EXL-B1	WALL	●		5,242	0.27					AIROLITE	K6776/T725	32 X 72	●	●	●		●						1	
	EXL-B1A	WALL	●		5,242	0.27					AIROLITE	K6776/T725	32 X 72	●	●	●		●						1	
	FAL-B1	WALL	●		10,035	0.17		1/70	120	1	AIROLITE	K6776/T663E	40 X 96	●	●		●	●						1	INTERCONNECT TO FAF-B1
	RF-B1	DUCT	●		4,690	0.25	986	1	480	3	COOK	SQI-B	195						●			●		1	THERMOSTAT CONTROL
ADMINISTRATION BUILDING																									
MENS TOILET 106	EXF-A1	DUCT	●		375	0.25	1,550	155W	120	1	COOK	GEMINI	5-15					●		●				1	WALL CAP WC-50 BRONZE COLOR
MENS LOCKER 105	EXF-A2	DUCT	●		1,026	0.375	1,075	1/3	120	1	COOK	GEMINI	8-10					●		●				1	WALL CAP WC-8 BRONZE COLOR
WOMENS TOILET 108	EXF-A3	DUCT	●		210	0.25	1,050	81W	120	1	COOK	GEMINI	5-10					●		●				2	WALL CAP WC-5 BRONZE COLOR
SHOWERS	EXF-A4	CEILNG	●		90	0.1			120	1	NUTONE	8672						●			●			4	WALL CAP 885-AL BRONZE & 2 60W BULBS
MENS RM 119	EXF-A5	CEILNG	●		110	0.20	1,550	35W	120	1	COOK	GEMINI	4-15					●		●				1	WALL CAP WC-4 BRONZE COLOR
WOMENS RM 120	EXF-A6	CEILNG	●		110	0.20	1,550	35W	120	1	COOK	GEMINI	4-15					●		●				1	WALL CAP WC-4 BRONZE COLOR
MAKEUP AIR HU-A2	FAL-A2	WALL	●		1,050	0.20		1/70	120	1	AIROLITE	K6776/T663E	24 X 24	●	●	●	●	*						1	* ANODIZE MEDIUM BRONZE, INTERCONNECT TO HU-A2
LABORATORY FUME HOOD	FAL-A1	WALL	●		1,045	0.05		1/70	120	1	AIROLITE	K6776/T663E	40 X 40	●	●		●	*				●		1	* BRONZE FINISH, INTERCONNECT TO FLUME HOOD FAF
	EXL-A1	WALL	●		1,865	0.10					AIROLITE	K6776/T725	40 X 40	●	●	●		*						1	* BRONZE FINISH
LABORATORY RANGE HOOD	EXL-A2	WALL	●		200	0.10		1/70	120	1	AIROLITE	K6776/T725	40 X 40	●	●	●		*				●		1	* BRONZE FINISH
CLEAR STORY	EL-A1	WALL								1	AIROLITE	K6776	40 X 40	●				*						1	* BRONZE FINISH W/ENTIRE LOUVER BLANKED OFF W/ALUM PL.
EXISTING TERTIARY BUILDING																									
BLOWER RM	FAL-ET1	WALL	●		700	0.022				1	AIROLITE	K6776	30x30	●	●			●						1	FRAME W/HINGE TO PROVIDE 25x25 CLEAR OPENING

HEATING UNIT SCHEDULE

LOCATION	MARK	TYPE	QUANTITY	MANUFACTURER	MODEL	MIN BTU INPUT	MIN BTU OUTPUT	MIN CFM	MAX RPM	MAX HP	VOLTS	PHASE	DISCONNECT SWITCH	OVERHEAT & FAN DELAY SWITCH	REMOTE THEMOSTAT	POWER VENTER	MOUNTING HT. BOTTOM FT.	REMARKS
CAPACITY = MIN BTU INPUT / MIN BTU OUTPUT / MIN CFM; **FAN DATA** = MAX RPM / MAX HP; **ELECTRICAL** = VOLTS / PHASE																		
SLUDGE THICKENER BUILDING																		
BLOWER RM 100	HU-S1	GAS	1	HASTINGS	F-100	100,000	76,000	1,230	1,050	1/15	120	1	●	●	●	●	10'	
	HU-S2	GAS	1	HASTINGS	F-100	100,000	76,000	1,230	1,050	1/15	120	1	●	●	●	●	10'	
	HU-S3	GAS	1	HASTINGS	F-100	100,000	76,000	1,230	1,050	1/15	120	1	●	●	●	●	10'	
	HU-S4	GAS	1	HASTINGS	F-100	100,000	76,000	1,230	1,050	1/15	120	1	●	●	●	●	10'	
													●	●	●	●		
													●	●	●	●		
THICKENER RM 101	HU-S5	GAS	1	HASTINGS	F-50	50,000	37,500	530	1,050	1/40	120	1	●	●	●	●	10'	
	HU-S6	GAS	1	HASTINGS	F-50	50,000	37,500	530	1,050	1/40	120	1	●	●	●	●	10'	
LOWER LEVEL	HU-S7	GAS	1	HASTINGS	F-100	100,000	76,000	1,230	1,050	1/15	120	1	●	●	●	●	7'	
	HU-S8	GAS	1	HASTINGS	F-100	100,000	76,000	1,230	1,050	1/15	120	1	●	●	●	●	7'	
STAIRWELL 102	HU-S9	ELEC	1	QMARK	MUH-341	3KW	3KW	350	1,600	1/100	480	3	●	●	●		*	* CEILING MOUNT

HEATING UNIT SCHEDULE (CONTINUED)

LOCATION	MARK	TYPE	QUANTITY	MANUFACTURER	MODEL	MIN BTU INPUT	MIN BTU OUTPUT	MIN CFM	MAX RPM	MAX HP	VOLTS	PHASE	DISCONNECT SWITCH	OVERHEAT & FAN DELAY SWITCH	REMOTE THEMOSTAT	POWER VENTER	MOUNTING HT. BOTTOM FT.	REMARKS
CAPACITY = MIN BTU INPUT / MIN BTU OUTPUT / MIN CFM; **FAN DATA** = MAX RPM / MAX HP; **ELECTRICAL** = VOLTS / PHASE																		
TERTIARY TREATMENT BUILDING																		
FILTER RM 100	HU-T1	GAS	1	HASTINGS	SD400	400,000	304,000	5,630	*	*	*	*	●	●	●	●	8'	* SEE EXF-T1 & T2
	HU-T2	GAS	1	HASTINGS	SD400	400,000	304,000	5,630	*	*	*	*	●	●	●	●	8'	* SEE EXF-T1 & T2
ELECTRICAL RM 101	HU-T3	ELEC	1	QMARK	MUH-0541	5KW	5KW	350	1,600	1/100	480	3	●	●	●		10'	
ULTRAVIOLET RM 102	HU-T4	GAS	1	HASTINGS	F-50	50,000	37,500	530	1,050	1/40	120	1	●	●	●	●	8'	
	HU-T5	GAS	1	HASTINGS	F-50	50,000	37,500	530	1,050	1/40	120	1	●	●	●	●	10'	
	HU-T6	GAS	1	HASTINGS	F-50	50,000	37,500	530	1,050	1/40	120	1	●	●	●	●	10'	
BLOWER BUILDING																		
BLOWER RM 100	HU-B1	GAS	1	HASTINGS	F-50	50,000	37,500	530	1,050	1/40	120	1	●	●	●	●	*	* NOT LESS THAN 8'-0"
	HU-B2	GAS	1	HASTINGS	F-50	50,000	37,500	530	1,050	1/40	120	1	●	●	●	●	*	* NOT LESS THAN 8'-0"
	HU-B3	GAS	1	HASTINGS	F-50	50,000	37,500	530	1,050	1/40	120	1	●	●	●	●	*	* NOT LESS THAN 8'-0"
	HU-B4	GAS	1	HASTINGS	F-100	100,000	76,000	1,230	1,050	1/15	120	1	●	●	●	●	*	* NOT LESS THAN 8'-0"
LOWER LEVEL 010	HU-B5	GAS	1	HASTINGS	F-50	50,000	37,500	530	1,050	1/40	120	1	●	●	●	●	*	* NOT LESS THAN 8'-0"
	HU-B6	GAS	1	HASTINGS	F-50	50,000	37,500	530	1,050	1/40	120	1	●	●	●	●	*	* NOT LESS THAN 8'-0"
	HU-B7	GAS	1	HASTINGS	F-50	50,000	37,500	530	1,050	1/40	120	1	●	●	●	●	*	* NOT LESS THAN 8'-0"
	HU-B8	GAS	1	HASTINGS	F-50	50,000	37,500	530	1,050	1/40	120	1	●	●	●	●	*	* NOT LESS THAN 8'-0"
STAIRWELL	HU-B9	ELEC	1	QMARK	MUH-0341	3KW	3KW	350	1,600	1/100	480	1	●	●	●		*	* WALL MOUNT @ CEILING HGT
ADMINISTRATION BUILDING																		
MECHANICAL RM 107	HU-A1	GEOTHERM	1	SEE SPECIFICATIONS														
	HU-A2		1															
	HU-A3		1															
	HU-A4		1															

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

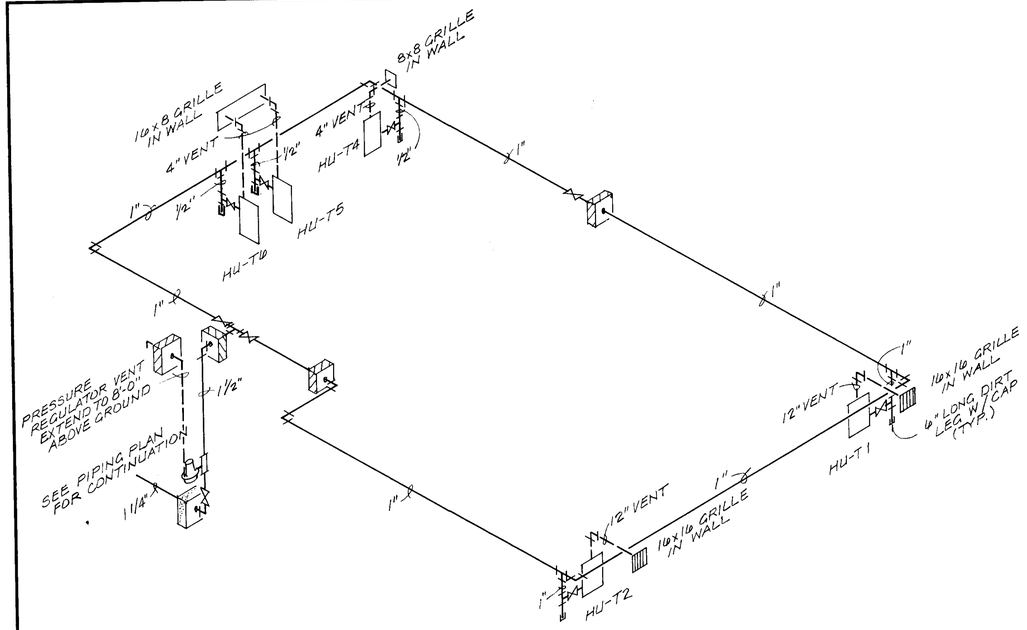
JOB NO.	15582
DESIGNED BY:	HJS
DRAWN BY:	DLR
CHECKED BY:	HJS
APPROVED BY:	RBD
DATE:	FEB., 1995

HEATING AND VENTILATION SCHEDULES

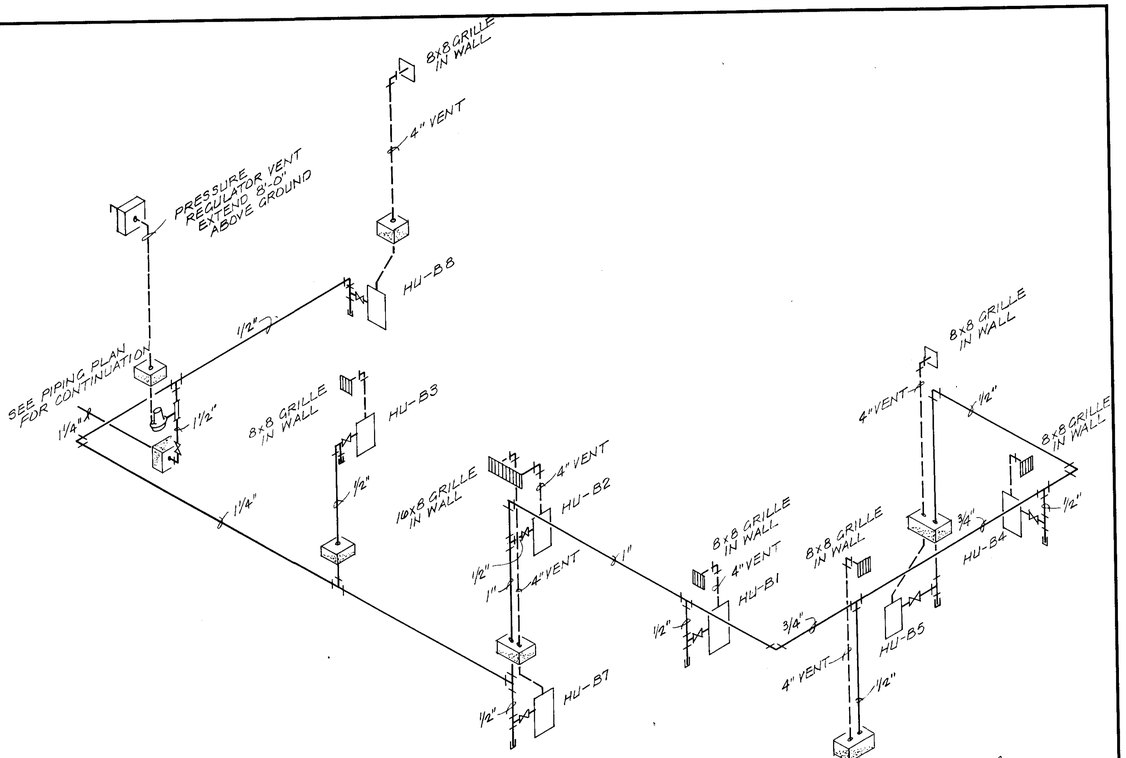
SCALE: NONE

SHEET NO. 88 OF 112

20-FEB-95 N:\PROJECTS\PR15582\CADD\SHT88



GAS PIPING TERTIARY BUILDING

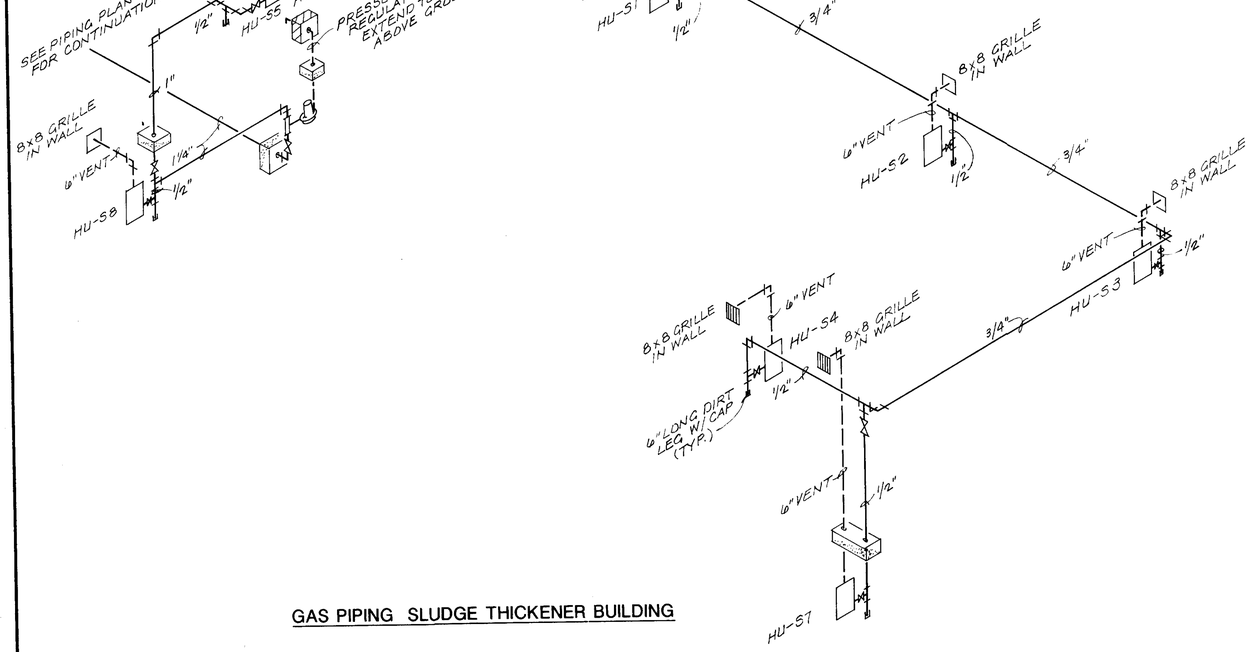


GAS PIPING BLOWER BUILDING

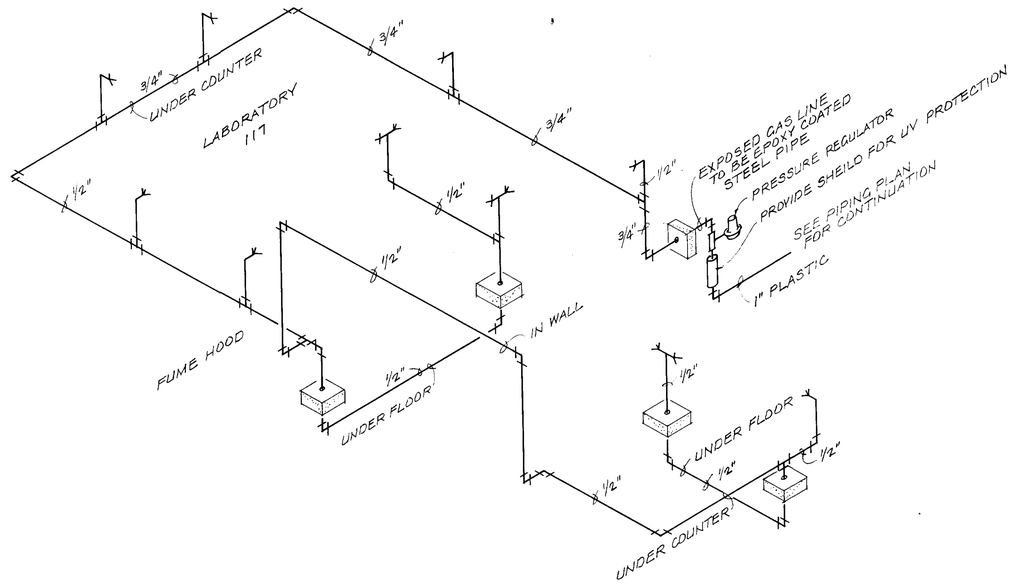
NOTES:

ALL EXISTING REGULATORS SHALL BE RESET AS REQUIRED OR REPLACED.

POWER VENTERS NOT SHOWN - SEE SCHEDULE SHEET 88. PROVIDE 3-STL. INSECT SCREEN ON REGULATOR VENTS.



GAS PIPING SLUDGE THICKENER BUILDING



GAS PIPING ADMINISTRATION BUILDING

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	HJS
DRAWN BY:	DEH
CHECKED BY:	HJS
APPROVED BY:	RBD
DATE:	FEB. 1995

GAS PIPING SCHEMATICS

SCALE: NONE

SHEET NO. 89 OF 112

ATLAS BLUEPRINT 593617

SYMBOLS

$_{x,y}$ WALL SWITCH: X INDICATES TYPE[1], BLANK = SINGLE POLE

2 = TWO POLE
3 = THREE WAY
4 = FOUR WAY
K = KEYED
D = DIMMER
V = VARIABLE SPEED
P = PILOT LIGHT
T = TIMER
M = MANUAL STARTER
WP = WEATHERPROOF
XP = EXPLOSION PROOF

Y LOWER CASE LETTER INDICATING SWITCH AND LUMINAIRE GROUPS FOR MULTIPLE LEVEL SWITCHING.

$_{x}^{z}$ DUPLEX RECEPTACLE, X INDICATES TYPE[1]
F = FLOOR
GF = GROUND FAULT
I = ISOLATED GROUND
T = TWIST LOCK

$_{x}^{z}$ SINGLE RECEPTACLE
C = CLOCK
WP = WEATHERPROOF
XP = EXPLOSION PROOF
WC = WATER COOLER

Y INDICATES NON STANDARD MOUNTING HEIGHT
Z INDICATES CIRCUIT NO.

1. COMBINATIONS OF MORE THAN ONE TYPE ARE SEPARATED BY A COMMA
EXAMPLE: F,T = FLOOR TWIST LOCK

$_{x}^{z}$ SPECIAL RECEPTACLE: DEFINED ON PLANS

▼ TELEPHONE OUTLET: F = FLOOR MOUNTED, BLANK = WALL MOUNTED

▽ DATA OUTLET: F = FLOOR MOUNTED, W = WALL MOUNTED

(T) THERMOSTAT (J) JUNCTION BOX

○ CEILING LUMINAIRE ○ WALL LUMINAIRE

LUMINAIRE WITH LIGHTING STANDARD

FLUORESCENT LUMINAIRE: TO SCALE ALPHANUMERIC CODE WITH LUMINAIRE OR SIGN REFERS TO FIXTURE SCHEDULE

TRACK LIGHTING

EMERGENCY WALL LUMINAIRE

CEILING MOUNT ILLUMINATED EXIT SIGN ARROW INDICATES DIRECTION OF EXIT

WALL MOUNT ILLUMINATED EXIT SIGN ARROW INDICATES DIRECTION OF EXIT

EMERGENCY EGRESS LUMINAIRE

MOTOR CONTROL CENTER: TO SCALE

PANELBOARD

[X] A,B,C DISCONNECT SWITCH: X INDICATES TYPE
F = FUSIBLE
WP = WEATHERPROOF
XP = EXPLOSION PROOF
A,B,C WHERE USED INDICATES SIZE, FUSING, NUMBER OF POLES

MOTOR CONTROLLER

COMBINATION MOTOR CONTROLLER

(X) CONTROL STATION: X INDICATES QUANTITY OF DEVICES. SEE CONTROL DIAGRAMS OR PLAN SHEETS FOR TYPE.

CONTROL DEVICE: X INDICATES TYPE
FS = FLOAT SWITCH
LS = LIMIT SWITCH
PE = PHOTOELECTRIC CELL
PS = PRESSURE SWITCH
R = RECEIVER
SL = SOLENOID
SP = SPEED SWITCH
T = TRANSMITTER
TC = TIME CLOCK
TQ = TORQUE SWITCH
TS = TEMPERATURE SWITCH

SIGNALING DEVICE: X INDICATES TYPE
BE = BEACON
H = HORN
S = STROBE

SYMBOLS

[X] FIRE ALARM SYSTEM DEVICE:
X INDICATES TYPE
S = SMOKE DETECTOR
H = HEAT DETECTOR
SH = SMOKE & HEAT DETECTOR
DM = DUCT MOUNTED SMOKE DETECTOR
HN = HORN
T = BEAM SMOKE DETECTOR TRANSMITTER
R = BEAM SMOKE DETECTOR RECEIVER
PS = PULL STATION
LH = LIGHT & HORN COMBINATION
FS = FLOW SWITCH
TS = TAMPER SWITCH

[X] INTERCOM AND PAGING DEVICE:
X INDICATES TYPE
W = WALL STATION
D = DESK STATION
WP = WEATHERPROOF WALL STATION
HN = OUTDOOR HORN/AMPLIFIER
SP = SPEAKER/AMPLIFIER
CS = CEILING SPEAKER

[X] CLOCK SYSTEM DEVICE:
X INDICATES TYPE
M = MASTER CLOCK
F = FLUSH CLOCK
D = DOUBLE DIAL WALL CLOCK
SK = SKELETON DIAL CLOCK

[X] SOUND SYSTEM DEVICE:
X INDICATES TYPE
A = AMPLIFIER
S = SPEAKER
V = VOLUME CONTROL

[X] SECURITY SYSTEM DEVICE:
X INDICATES TYPE
C = CENTRAL STATION
K = KEY STATION
TV = CLOSED CIRCUIT TV

INSTRUMENTATION SENSOR

[XMTR] INSTRUMENTATION TRANSMITTER

SINGLE PHASE MOTOR (M) THREE PHASE MOTOR

[X] MANHOLE, HANDHOLE, UNDERGROUND PULLBOX
X= MH, HH, UPB

PROPOSED POLE EXISTING POLE

GROUND ROD DOWN GUY

EXPOSED CONDUIT(S) WITH APPROPRIATE CONDUCTOR QUANTITIES. SEE GENERAL NOTES

CONCEALED CONDUIT(S):BELOW GRADE OR FLOOR, OR IN SLAB WITH APPROPRIATE CONDUCTOR QUANTITIES. SEE GENERAL NOTES

CONCEALED CONDUIT(S):ABOVE CEILING OR IN WALL WITH APPROPRIATE CONDUCTOR QUANTITIES. SEE GENERAL NOTES

CONDUIT TURNS TOWARD VIEWER[2]

CONDUIT TURNS AWAY FROM VIEWER[2]

A5 CONDUIT HOME RUN[2]
A5 INDICATES DESTINATION, PANELBOARD A, CIRCUIT 5

2. ROUTING AS INDICATED BY CONDUIT SYMBOLS ABOVE

—X— OVERHEAD LINE ---X--- UNDERGROUND LINE
X INDICATES TYPE: E=ELECTRIC, EX=EXISTING
T=TELEPHONE, G=GROUNDING CONDUCTOR

DIAGRAM SYMBOLS

FUSED SWITCH
CIRCUIT BREAKER
DISCONNECT SWITCH
TRANSFER SWITCH
POTENTIAL TRANSFORMER
CURRENT TRANSFORMER

(X) METER: X INDICATES TYPE
V = VOLTMETER
A = AMMETER
W = WATT METER
H = KILOWATT HOUR METER
D = KILOWATT HOUR DEMAND METER

[DM] DIGITAL METERING

[AS] AMMETER SWITCH
[VS] VOLTMETER SWITCH

[GF] GROUND FAULT INTERRUPTER
[K] KIRK KEY INTERLOCK

[XX] MOTOR CONTROLLER: XX INDICATES TYPE
SS = SOLID STATE STARTER
AF = ADJUSTABLE FREQUENCY STARTER
AT = AUTO TRANSFORMER STARTER
PW = PART WINDING STARTER
Y-Δ = WYE-DELTA STARTER
WR = WOUND ROTOR STARTER
22 = TWO SPEED TWO WINDING
21 = TWO SPEED ONE WINDING
NR = FULL VOLTAGE NON REVERSING STARTER
R = FULL VOLTAGE REVERSING STARTER
LC = LIGHTING CONTACTOR

CAPACITOR
LIGHTNING ARRESTER
EARTH GROUND
TRANSFORMER
PLUG AND RECEPTACLE OR DRAWOUT DEVICE

(X) MOTOR (G) GENERATOR [X] GENERAL LOADS

X INDICATES HORSEPOWER OR KILOWATTS

CONTROL DIAGRAM SYMBOLS

NOTE: ALL CONTROL SYMBOLS ARE DRAWN ASSUMING DEENERGIZED CIRCUITS, EMPTY TANKS, UNPRESSURIZED LINES, ETC.

OPEN ON INCREASE	CLOSE ON INCREASE	
		PRESSURE SWITCH
		LEVEL SWITCH
		FLOW SWITCH
		TEMPERATURE SWITCH
NORMALLY CLOSED	NORMALLY OPEN	
		PUSH BUTTON
		INSTANTANEOUS CONTACT
		TIMED CLOSE CONTACT
		TIMED OPEN CONTACT
		LIMIT SWITCH

CONTROL DIAGRAM SYMBOLS (CONT.)

XO / OX SELECTOR SWITCH: QUANTITY OF ARROWS INDICATES NUMBER OF POSITIONS. XO INDICATES UPPER CONTACT CLOSED IN LEFT POSITION AND OPEN IN RIGHT POSITION

RELAY COIL
STARTER COIL AND OVERLOAD

XX ZZ YY ON DELAY TIMER
XX ZZ YY OFF DELAY TIMER

XX-TIMING RANGE, YY-UNITS, ZZ-INITIAL SETTING

(X) PILOT LIGHT
(X) PUSH TO TEST PILOT LIGHT

X INDICATES COLOR: R=RED, G=GREEN, A=AMBER, B=BLUE, W=WHITE, Y=YELLOW

[ETM] ELAPSED TIME METER

HORN BELL SOLENOID

XXX IN — INPUT TO COMPUTER, CONTROLLER, ETC.

XXX OUT — OUTPUT FROM COMPUTER, CONTROLLER, ETC.

XXX INDICATES TYPE
ON/OFF = DISCRETE OR TWO STATE
4/20 = ANALOG, 4-20MA

TERMINAL JUNCTION NO JUNCTION

FIELD WIRING
INTERNAL WIRING

ELECTRICAL ABBREVIATIONS

A	AMPERE	MH	MANHOLE
AC	ALTERNATING CURRENT	MCC	MOTOR CONTROL CENTER
AFC	ADJUSTABLE FREQUENCY CONTROLLER	NC	NORMALLY CLOSED
AFF	ABOVE FINISHED FLOOR	NL	NIGHT LIGHT
AFG	ABOVE FINISHED GRADE	NO	NORMALLY OPEN
C	CONDUIT	OL	OVERLOAD
CB	CIRCUIT BREAKER	P	POLE
CKT	CIRCUIT	PB	PULL BOX OR PUSH BUTTON
CP	CONTROL PANEL	PNL	PANEL OR PANELBOARD
CR	CONTROL RELAY	PT	POTENTIAL TRANSFORMER
CT	CURRENT TRANSFORMER	PTT	PUSH TO TEST
DC	DIRECT CURRENT	RCVR	RECEIVER
EL	ELEVATION	SS	STAINLESS STEEL
ETM	ELAPSED TIME METER	TR	TIMING RELAY OR TIMER
EX	EXISTING	TYP	TYPICAL
FM	FLOW METER	UPB	UNDERGROUND PULL BOX
GF	GROUND FAULT INTERRUPTER	V	VOLT
GRD	GROUND	W	WATT
HH	HANDHOLE	WH	WATTHOUR
HOA	HAND-OFF-AUTOMATIC	WP	WEATHERPROOF
HP	HORSEPOWER	XFMR	TRANSFORMER
KCMIL	THOUSAND CIRCULAR MILLS	XFR	TRANSFER
KVA	KILOVOLT AMPERE	XMTR	TRANSMITTER
KW	KILOWATT	XP	EXPLOSION PROOF
LA	LIGHTNING ARRESTER	Ø	PHASE
LGT	LIGHTING OR LIGHT		

GENERAL NOTES

UNLESS OTHERWISE INDICATED, ALL MOUNTING ELEVATIONS ARE BOTTOM ELEVATIONS.

WIRE AND CONDUIT SIZES AND QUANTITIES FOR FEEDERS AND BRANCH CIRCUITS WHICH ARE SHOWN ON ONE LINE POWER DIAGRAMS APPLY TO PLAN SHEETS.

CONDUIT RUNS TO DEVICES WHICH ARE NOT MARKED SHALL BE CONSIDERED THE SAME AS THE HOME RUN OR THE LAST CONDUIT IN RUN WHICH IS MARKED.

CONDUIT RUNS NOT OTHERWISE MARKED SHALL BE CONSIDERED 3/4" WITH 2#12, #12 GRD.

WIRE AND CONDUIT TO AND BETWEEN INTERIOR LIGHTING CIRCUITS ARE NOT SPECIFICALLY SHOWN ON PLAN. CONTRACTOR IS RESPONSIBLE FOR CIRCUITING BETWEEN FIXTURES AND TO/BETWEEN WALL SWITCHES. AREAS WITH MULTIPLE SWITCHED LIGHTING CIRCUITS ARE SHOWN ON PLAN WITH LETTERS ADJACENT THE RELATED FIXTURES AND SWITCHES.

CONSOLIDATION OF INDIVIDUAL CONDUIT HOME RUNS SHOWN ON THE DRAWINGS SHALL BE PERMITTED ONLY AS FOLLOWS:

A MAXIMUM OF THREE GENERAL USE 120V RECEPTACLE OR LIGHTING CIRCUITS MAY SHARE THE SAME CONDUIT PROVIDED THEY ARE PROTECTED BY NO GREATER THAN A 20A CB.

NEUTRALS SHALL BE PROVIDED FOR EACH CIRCUIT - SHARING OF THE NEUTRAL CONDUCTOR SHALL NOT BE PERMITTED.

TRAVELERS FOR MULTIPLE LOCATION SWITCHING ARE NOT MARKED ON THE PLANS. CONTRACTOR SHALL PROVIDE QUANTITY OF CONDUCTORS REQUIRED FOR THE INDICATED SWITCHING.

CIRCUIT IDENTIFICATION SHALL BE AS FOLLOWS:
A-5,7 INDICATES TWO SINGLE POLE BREAKERS AT CIRCUITS 5 & 7 OF PANELBOARD A
F-19/21/23 INDICATES A THREE POLE BREAKER AT CIRCUITS 19,21, & 23 OF PANELBOARD F
MCC B INDICATES HOME RUN TO MCC B

REFERENCES TO "DIVISION 13" IMPLIES WORK COVERED BY SPECIFICATION SECTIONS 13301-13365.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	TRC
DRAWN BY:	TRF
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	FEB., 1995

ELECTRICAL SYMBOLS & ABBREVIATIONS

SCALE: NONE
SHEET NO. 90 OF 112

28-FEB-1995 N:\PROJECTS\PR15582\CADD\SH190

CONDUIT SCHEDULE

(1) 1 - 2" CONDUIT FOR ETHERNET DATA HIGHWAY CABLE.

(2) 1 - 2" CONDUIT FOR REMOTE I/O NETWORK CABLE.

(3) 1 - 2" CONDUIT FOR REMOTE I/O NETWORK CABLE AND EIA/RS485 CABLE.

(4) 1 - 2" CONDUIT FOR EIA/RS485 CABLE.

(5) 1 - 2" CONDUIT FOR CONTROL & 120 VOLT SIGNAL CABLES.

(6) 1 - 2" CONDUIT FOR CONTROL & LOW VOLTAGE SIGNAL CABLES.

(7) 1 - 1" CONDUIT FOR VENDOR SUPPLIED CABLE.

(8) 1 - 1" CONDUIT FOR 120 VOLT TRANSMITTER POWER.

(9) 1 - 1" CONDUIT FOR SIGNAL CABLE.

(10) 1 - 1" CONDUIT WITH 2-#12, 1-#12 GRD FOR SITE LIGHTING.

(11) 1 - 2" CONDUIT FOR SIGNAL CABLES.

(12) 1 - 1 1/2" CONDUIT FOR 120 VOLT TRANSMITTER POWER.

(13) 1 - EXISTING 2 1/2" CONDUIT FOR 120 VOLT TRANSMITTER POWER.

(14) 1 - EXISTING 3" CONDUIT FOR SIGNAL CABLES.

(15) 1 - 1 1/2" CONDUIT WITH 12-#12, 1-#12 GRD FOR POST AERATION BLOWER NO. 1 AND NO. 2 REMOTE CONTROL STATIONS. SEE NOTE NO.4 THIS SHEET.

(16) 1 - 1" CONDUIT WITH 2-#8, 1-#8 GRD FOR FLOCCULATOR AND COLLECTOR DRIVE HEATERS.

(17) 1 - 1" CONDUIT WITH 4-#10, 1-#10 GRD FOR PLATFORM LIGHTING AND DUPLEX RECEPTACLE.

(18) 1 - 1" CONDUIT WITH 3-#10, 1-#10 GRD FOR SCUM TROUGH ACTUATOR CONTROL PANEL POWER.

(19) 1 - 1" CONDUIT WITH 6-#10, 2-#12, 1-#10 GRD FOR COLLECTOR TORQUE SWITCH, COLLECTOR AND FLOCCULATOR DRIVES.

(20) 1 - 2" CONDUIT WITH 12-#10, 4-#12, 1-#10 GRD FOR COLLECTOR TORQUE SWITCHES (2), FLOCCULATOR DRIVES (2) AND COLLECTOR DRIVES (2).

(21) 1 - 1" CONDUIT WITH 6-#10, 1-#10 GRD FOR SCUM TROUGH ACTUATOR CONTROL PANEL POWER (2 LOCATIONS).

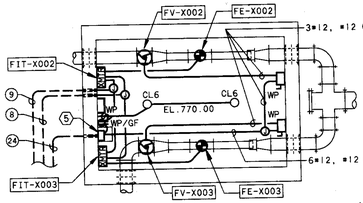
(22) 1 - 2" CONDUIT WITH 8-#10, 1-#10 GRD FOR PLATFORM LIGHTING AND DUPLEX RECEPTACLES (2 LOCATIONS).

(23) 1 - 1" CONDUIT WITH 4-#8, 1-#8 GRD FOR FLOCCULATOR AND COLLECTOR DRIVE HEATERS (2 LOCATIONS).

(24) 1 - 1" CONDUIT WITH 8-#12, 1-#12 GRD FOR METER CHAMBER FLOW CONTROL VALVES, METER CHAMBER LIGHTS AND RECEPTACLES.

(25) 1 - 1" CONDUIT WITH 2-#10, 1-#10 GRD FOR PORTABLE SLUICE GATE OPERATOR.

(26) 1 - 2" CONDUIT WITH 24-#10, 1-#10 GRD FOR FLOCCULATOR DRIVES AND COLLECTOR DRIVES (4 LOCATIONS EACH).



METER CHAMBER
NOT TO SCALE

CONDUIT SCHEDULE (CONTINUED)

(27) 1 - 2" CONDUIT WITH 12-#10, 1-#10 GRD FOR SCUM TROUGH ACTUATOR CONTROL PANEL POWER (4 LOCATIONS).

(28) 1 - 2" CONDUIT WITH 16-#10, 1-#10 GRD FOR PLATFORM LIGHTING AND DUPLEX RECEPTACLES (4 LOCATIONS).

(29) 1 - 2" CONDUIT WITH 8-#8, 1-#8 GRD FOR FLOCCULATOR AND COLLECTOR DRIVE HEATERS (4 LOCATIONS).

(30) POWER FEEDER FROM MCC-B2 (SOUTH BLOWER BUILDING) TO MCC-AD (ADMINISTRATION BUILDING).

(31) 1-1" CONDUIT WITH 2-#10, 1-#10 GRD FOR SITE LIGHTING.

(32) STANDBY POWER FEEDER FROM MS-3 (SOUTH BLOWER BUILDING) TO AUTOMATIC TRANSFER SWITCH "S1" (SLUDGE THICKENER BUILDING). SEE ONE LINE POWER DIAGRAM FOR CONDUIT AND FEEDER SIZE. INCLUDE 1-1" CONDUIT WITH 2-#12, #12 GRD. FOR GENERATOR CONTROLS FROM TRANSFER SWITCH IN SLUDGE THICKENER BUILDING.

(33) POWER FEEDER FROM "MCC-ST2" (SLUDGE THICKENER BUILDING) TO EXISTING "MCC-D1" (EXISTING TERTIARY BUILDING). SEE ONE LINE POWER DIAGRAM FOR CONDUIT AND FEEDER SIZE. SEE NOTE NO.2 THIS SHEET.

(34) POWER FEEDER FROM "MCC-ST1" (SLUDGE THICKENER BUILDING) TO EXISTING "MCC-D2" (EXISTING TERTIARY BUILDING). SEE ONE LINE POWER DIAGRAM FOR CONDUIT AND FEEDER SIZE. SEE NOTE NO.2 THIS SHEET.

(35) POWER FEEDER FROM "MCC-ST1" (SLUDGE THICKENER BUILDING) TO EXISTING "MCC-C" (EXISTING CONCENTRATOR BUILDING). SEE ONE LINE POWER DIAGRAM FOR CONDUIT AND FEEDER SIZE. SEE NOTE NO.3 THIS SHEET.

(36) POWER FEEDER FROM "MCC-ST2" (SLUDGE THICKENER BUILDING) TO "MCC-T" (TERTIARY TREATMENT COMPLEX). SEE ONE LINE POWER DIAGRAM FOR CONDUIT AND FEEDER SIZE.

(37) STANDBY POWER FEEDER FROM AUTOMATIC TRANSFER SWITCH "A1" (EXISTING BLOWER BUILDING) TO DISTRIBUTION SWITCHBOARD "DS-1" (EXISTING CONTROL BUILDING). SEE ONE LINE POWER DIAGRAM FOR CONDUIT AND FEEDER SIZE.

(38) 1-5" PRIMARY ELECTRIC CONDUIT. CONDUIT UNDER DIVISION 16, PRIMARY ELECTRIC CABLE BY UTILITY CO.

(39) 1-5" SPARE CONDUIT.

(40) 1-2" CONDUIT WITH 25 PAIR TELEPHONE CABLE.

(41) 1-EXISTING 1" CONDUIT (WITH EXISTING COMMUNICATION CABLES TO BE REMOVED) WITH 1-25 PAIR TELEPHONE CABLE.

(42) 1 - 2" CONDUIT WITH 22-#12, 10-#12 SPARE, 1-#12 GRD FOR TRUCK LOADING STATION POWER AND CONTROLS.

(43) 1 - 2" CONDUIT WITH 2 - TRIAD SIGNAL CABLES, 2 - SPARE TRIAD SIGNAL CABLES.

(44) 1 - 2" CONDUIT WITH 16-#12, 8-#12 SPARE, 1-#12 GRD. TO CONCENTRATOR SLUDGE PUMPS FROM GBT CONTROL PANEL.

(45) 1 - 2" SPARE CONDUIT.

(46) 1 - 4" SPARE CONDUIT.

(47) 1 - 2" CONDUIT WITH 8-#12, 1-#12 GRD FOR FUEL TRANSFER PUMP CONTROLS.

(48) 1 - 3" CONDUIT FOR NEW TELEPHONE SERVICE.

(49) SCUM MIXER POWER AND CONTROLS. SEE ONE LINE DIAGRAM.

CODED NOTES

1. PROVIDE A TEMPORARY OVERHEAD 15 KV SERVICE TO EXISTING PADMOUNTED TRANSFORMER. SET NEW PRECAST MANHOLE AND PROVIDE NEW DUCTS AS INDICATED BETWEEN MANHOLE AND TRANSFORMER. MAINTAIN TEMPORARY SERVICE UNTIL NEW UNDERGROUND PRIMARY DISTRIBUTION SYSTEM IS COMPLETE. COORDINATE TEMPORARY OVERHEAD SERVICE WITH UTILITY AND MEET ALL NESC AND OSHA REQUIREMENTS FOR TEMPORARY AND OVERHEAD SERVICES.
2. REMOVE EXISTING STANDBY AND NORMAL POWER FEEDERS IN 4" CONDUITS SERVING EXISTING MOTOR CONTROL CENTERS "MCC-D1" & "MCC-D2" FROM MOTOR CONTROL CENTERS "MCC-D1" & "MCC-D2" TO EXISTING MOTOR CONTROL CENTER "MCC-A1" AND "MCC-A2" IN EXISTING BLOWER BUILDING. PULL NEW STANDBY AND NORMAL POWER FEEDERS (CONDUIT SCHEDULE ITEMS NO. 33 & 34 THIS SHEET) IN VACATED 4" CONDUITS.
3. REMOVE EXISTING NORMAL POWER FEEDER IN 3" CONDUIT SERVING EXISTING MOTOR CONTROL CENTER "MCC-C" FROM MOTOR CONTROL CENTER "MCC-C" TO MOTOR CONTROL CENTER "MCC-A1" IN EXISTING BLOWER BUILDING. FEEDER REMOVAL TO INCLUDE FEEDER SPLICE AND CONDUCTORS SERVING EXISTING MOTOR CONTROL CENTER "MCC-V1" IN EXISTING CONTROL BUILDING. PULL NEW NORMAL POWER FEEDER (CONDUIT SCHEDULE ITEM NO. 35 THIS SHEET) IN VACATED 3" CONDUIT. (NOTE: NOT ALL EXISTING CONDUIT SHOWN FOR CLARITY).
4. EXTEND POST AERATION BLOWER REMOTE CONTROL STATION WIRING (CONDUIT SCHEDULE ITEM NO.15 THIS SHEET) IN EXISTING SPARE CONDUIT.
5. STAINLESS STEEL PULLBOX, SIZED PER NEC 370, MOUNTED TIGHT TO CEILING OF METER CHAMBER.
6. MOUNT RECEPTACLE ON A 3" X 3" X 3/8" THICK STAINLESS STEEL STRUCTURAL TUBE. TUBE LENGTH TO BE 7'-0. MOUNT TUBE VERTICALLY IN A CONCRETE BASE 12 INCHES IN DIAMETER AND 36 INCHES DEEP. WELD A CAP OVER TUBE'S TOP OPENING. MOUNT RECEPTACLE AT 3'-6" AFG.
7. WALL MOUNT RECEPTACLE AT EL.777.5 TO TOP OF RECEPTACLE. RUN SURFACE CONDUIT BETWEEN RECEPTACLES.
8. REMOVE EXISTING POLE LIGHTS BETWEEN EXISTING CLARIFIERS. (TWO LOCATIONS) PROVIDE A BLANK PLATE AND GASKET TO SEAL TOP OF POLE BASE WATERTIGHT. MODIFY EXISTING CIRCUITRY AS REQUIRED TO RENDER EXISTING BASE MOUNTED RECEPTACLE FUNCTIONAL. PROVIDE WP COVERPLATE AND GFI RECEPTACLE SHOULD EXISTING INSTALLATION NOT HAVE THESE CHARACTERISTICS.
9. TERMINATE TELEPHONE SERVICE CONDUIT AT EXISTING PEDESTAL PER DIRECTION OF LOCAL EXCHANGE CARRIER.
10. TOP OF BOTTOM TRENCH SLAB @ EL775.67'.
11. TOP OF BOTTOM TRENCH SLAB @ EL775.5'.
12. 4" ø PVC DRAIN @ EL.775.33'.
13. TOP OF BOTTOM TRENCH SLAB @ EL770.17'.
14. 4" ø PVC DRAIN @ EL.770.00'.
15. TERMINATE 25 PAIR TELEPHONE CABLE IN A 24" X 24" X 8" DEEP STAINLESS STEEL HINGED DOOR ENCLOSURE. WALL MOUNT ENCLOSURE AT 6'-0" AFF TO TOP OF ENCLOSURE. PROVIDE ENCLOSURE WITH A 25 PAIR MODULAR PROTECTOR TO TERMINATE INCOMING 25 PAIR CABLE. EXTEND #4 GROUND CONDUCTOR IN 3/4" CONDUIT TO GROUND BUS IN BUILDING'S NEAREST POWER PANEL.
16. PROVIDE TELEPHONE JACK (▼W) WITH A SINGLE GANG CAST OUTLET BOX AND AN 8 CONDUCTOR, CONNECTING BLOCK WITH STAINLESS STEEL COVERPLATE WITH TELEPHONE MOUNTING STUDS. WALL MOUNT BOX AT 4'-0" AFF. EXTEND 1-4 PAIR TELEPHONE CABLE TO TELEPHONE TERMINAL ENCLOSURE, (SEE CODED NOTE NO. 15) AND TERMINATE ON PROTECTOR'S TERMINALS.
17. SEE DETAIL D/106 FOR METER INSTALLATION AND DETAIL F/105A FOR PAD MOUNTED TRANSFORMER BASE DETAILS.
18. TRUCK LOADING STATION CONTROL PANEL. SEE CONTROL PANEL ELEVATION SHEET 105A AND RACK DETAIL C/105A FOR RACK MOUNTING OF CONTROL PANEL.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

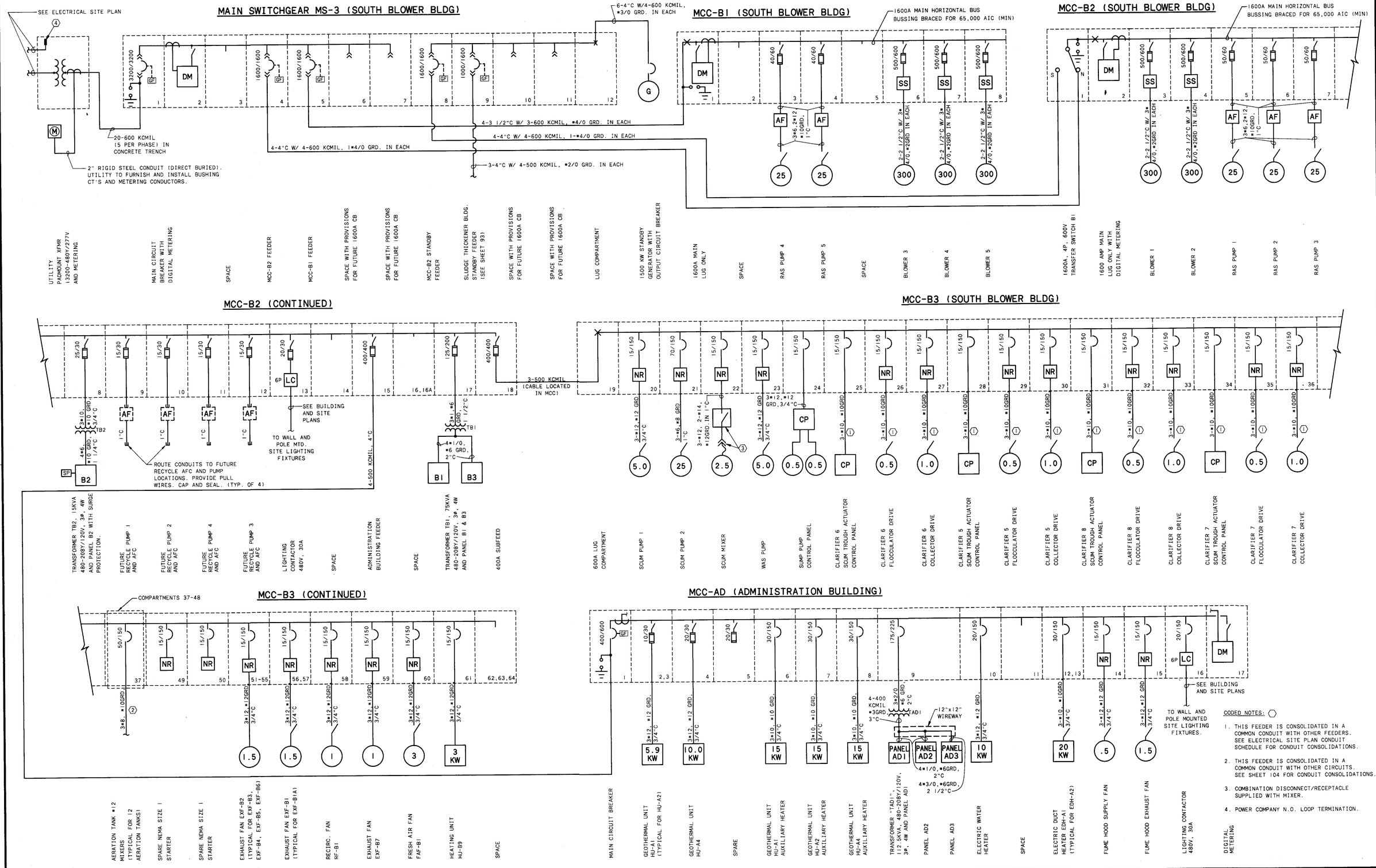
JOB NO.	15582
DESIGNED BY:	SAT/TRC
DRAWN BY:	TRF
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	MARCH 1995

ELECTRICAL SITE PLAN

SCALE: 1"=30'

SHEET NO. 91 OF 112

N:\PR15582\CADD\SHT91 4-4-95 9:10:46 am EST



NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

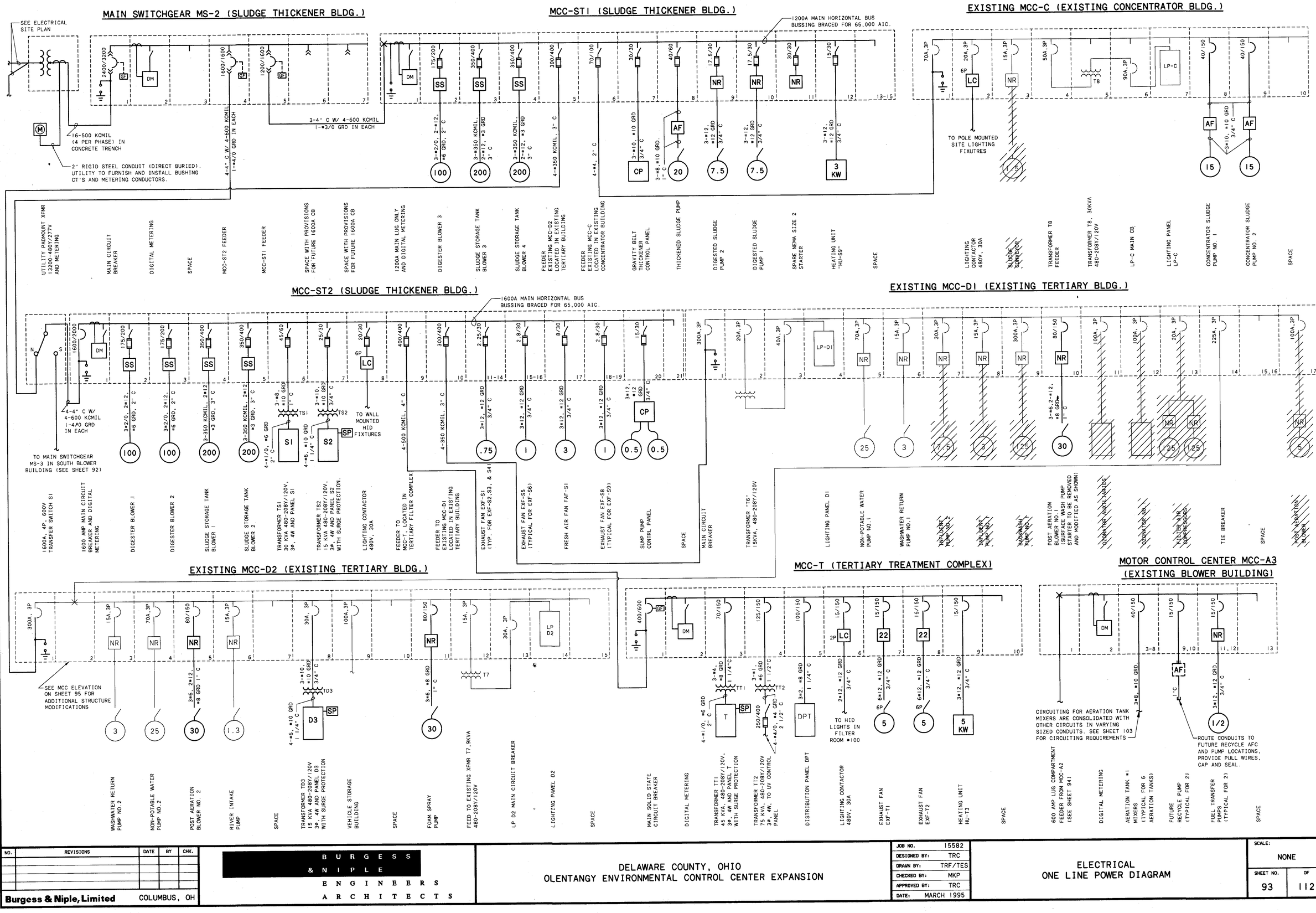
JOB NO.	15582
DESIGNED BY:	TRC
DRAWN BY:	RER/TES
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	MARCH 1995

ELECTRICAL
ONE LINE POWER DIAGRAM

SCALE: NONE

SHEET NO. 92 OF 112

N:\PR15582\CADD\SH192 4-3-95 4:06:28 pm EST



NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	TRC
DRAWN BY:	TRF/TES
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	MARCH 1995

ELECTRICAL
ONE LINE POWER DIAGRAM

SCALE: NONE

SHEET NO. 93 OF 112

N:\PRI5582\CADD\SHT93 4-3-95 4:10:02 pm EST

EXISTING MAIN SWITCHGEAR MS-1 (EXISTING BLOWER BLDG.)

SEE ELECTRICAL SITE PLAN

TO EXISTING UTILITY METER MOUNTED ON BUILDING WALL

DM

GF

2500/3P

400A/3P

400A/3P

150A/3P

200A/3P

800/1200

800A/3P

800A/3P (K)

2-4"C W/4-600 KCMIL, 1-#1/0 GRD IN EACH

2-4"C, W/ 4-600 KCMIL 1-#1/0 GRD IN EACH

REMOVE EXISTING FEED FROM MS-1 TO EXISTING TRANSFER SWITCH AND FROM EXISTING TRANSFER SWITCH TO MCC-A2 (2-4"C WITH 4-500 KCMIL IN EACH)

2-3"C, W/4-350 KCMIL 1-#1 GRD. IN EACH

EXISTING UTILITY PADMOUNT TRANSFORMER 13200-480Y/277V

DIGITAL METERING (SEE ELEVATION SHEET 95)

MAIN CIRCUIT BREAKER - 1750A TRIP SETTING

UTILITY METERING COMPARTMENT

FEED TO EXISTING XFMR T1, 30 KVA 480-208Y/120V

SPACE FOR 100A FUSED SWITCH

SPARE

EXISTING FEED TO MCC-B IN EXISTING CONTROL BUILDING TO BE REMOVED (4-#2/0, 2 1/2"C)

SPARE

DS-1 FEEDER

FEEDER MCC-A2

FEEDER MCC-A1

EXISTING MCC-A1 (EXISTING BLOWER BLDG)

600A/3P (K)

90A/3P

LP A1

T1

100A/3P

30A/3P NR

30A/3P NR

30A/3P NR

30A/3P NR

30A/3P NR

400A/3P

300A/3P AT

TIE SWITCH

LP A1 MAIN CIRCUIT BREAKER

LIGHTING PANEL A1

SPACE

SPACE

MCC-E1 FEEDER

RETURN SLUDGE PUMP NO.1

RETURN SLUDGE PUMP NO.2

CLARIFIER DRIVE NO.1

SPACE

SPACE

RETURN SLUDGE PUMP NO.4

CLARIFIER DRIVE NO.4

EXISTING FEED TO MCC-C IN EXISTING CONCENTRATOR BUILDING AND MCC-V1 IN EXISTING CONTROL BUILDING TO BE REMOVED. (4-500 KCMIL, 4"C)

BLOWER NO.3

INCOMING LUG SECTION

EXISTING MCC-A1 (CONTINUED)

400A/3P

DISTRIBUTION SWITCHBOARD DS-2 (EXISTING BLOWER BLDG.)

1200A MAIN BUS

3-4"C W/ 4-600 KCMIL 1-#3/0 GRD. IN EACH

G

1200/1200 GF

800/800 GF

600/800 GF

600/800 GF

2-4"C, W/4-600 KCMIL 1-#1/0 GRD. IN EACH

2-3"C, W/4-350 KCMIL 1-#1 GRD. IN EACH

800A, 4P, 600V TRANSFER SWITCH A1

800A, 4P, 600V TRANSFER SWITCH A2

2-4"C, W/4-600 KCMIL, IN EACH

2-4"C, W/4-600 KCMIL, 1-#1/0 GRD. IN EACH

EXISTING MCC-A2 (EXISTING BLOWER BLDG.)

800A/3P

30A/3P

30A/3P

LP A2

T2

200A/3P

EXISTING FEED TO MCC-V2 IN EXISTING CONTROL BUILDING TO BE REMOVED (4-#4/0, 3"C)

25/30

3#10, #10GRD, 3/4"C

T3 4#6, #10GRD, 1/4"C

A3 SP

300A/3P AT

300A/3P AT

30A/3P NR

100A/3P

45/60

3#8, #10GRD, 1"C

T4 4#2, #8GRD, 1 1/2"C

A4 SP

400A/3P

30A/3P NR

30A/3P NR

30A/3P NR

30A/3P NR

20/30

6P LC

SEE BUILDING AND SITE PLAN

TO BUILDING AND POLE MOUNTED SITE LIGHTING FIXTURES

EXISTING FEED TO MCC-D2 IN EXISTING TERTIARY BUILDING-TO BE REMOVED (4-500 KCMIL, 4"C)

SPACE

SPACE

EXISTING 625KW STANDBY GENERATOR

1200 AMP MAIN CIRCUIT BREAKER

DS-1 EMERGENCY FEEDER

MCC-A2 EMERGENCY FEEDER

MCC-A1 EMERGENCY STANDBY FEEDER

SPACE

MAIN FUSED SWITCH

FEED TO EXISTING 9KVA XFMR

LP A2 MAIN SWITCH

LIGHTING PANEL A2

FEEDER TO MCC-E2 (SEE SHEET 931)

TRANSFORMER T3 15KVA 480-208Y/120V, 3Φ, 4W, AND PANEL A3 WITH SURGE PROTECTION

BLOWER NO.1

BLOWER NO.2

RETURN SLUDGE PUMP NO.3

MCC-E2 FEEDER

TRANSFORMER T4 30KVA 480-208Y/120V, 3Φ, 4W, AND PANEL A4

EXISTING FEEDER TO MCC-D1 IN EXISTING TERTIARY BUILDING TO BE REMOVED (4-500 KCMIL, 4"C)

RETURN SLUDGE PUMP NO.5

RETURN SLUDGE PUMP NO.6

CLARIFIER DRIVE NO.2

CLARIFIER DRIVE NO.3

LIGHTING CONTACTOR 480Y, 30A

SPACE

DISTRIBUTION SWITCHBOARD DS-1 (EXISTING CONTROL BLDG.)

800A MAIN BUS

800/800 GF

DM

125/150 AF 3#1, 2#12, #6 GRD, 1 1/2"C

125/150 AF 3#1, 2#12, #6 GRD, 1 1/2"C

125/150 AF

125/150 AF 3#1, 2#12, #6 GRD, 1 1/2"C

125/150 AF

100/150 AF 3#2, 2#12, #8 GRD, 1 1/4"C

100/150 AF

20/150 3#12, #12GRD, 3/4"C

20/150 3#12, #12GRD, 3/4"C

20/150 3#12 GRD, 3/4"C

30/150 3#10, #10 GRD, 3/4"C T5

100/150 4#2, #8 GRD, 1 1/2"C

30/150 3#10, #10GRD, 3/4"C TI 4#6, #10GRD, 1 1/4"C IP SP

75 96A

75 96

75 96

64 77

75 96

50 65

50 65

7.5

7.5

LP V

IN ABANDONED MCC-V2

VxA=W 625,000 / 480 = 1302 A

533 use 500

MAIN SOLID STATE CIRCUIT BREAKER

DIGITAL METERING (DM)

INFLUENT PUMP NO.1

INFLUENT PUMP NO.2

INFLUENT PUMP NO.3

INFLUENT PUMP NO.4

INFLUENT PUMP NO.5

INFLUENT PUMP NO.6

INFLUENT PUMP NO.7

CHANNEL GRINDER NO.1

CHANNEL GRINDER NO.2

EXISTING 12KW DUCT HEATER

EXISTING XFMR T5, 15 KVA 480-208Y/120V, LIGHTING PANEL V

FEEDER EXISTING MCC-B

TRANSFORMER TI. 15 KVA, 480-208Y/120V, 3Φ, 4W, AND PANEL IP

SPACE

SPACE

EXISTING MCC-B (EXISTING CONTROL BLDG.)

100A,3P

15A,3P

60A,3P

125A/3P

LP

T4

20A/3P

15A/3P

CP

5

MAIN CIRCUIT BREAKER

2-3KW, 1Φ WET WELL HEATERS

FEED TO EXISTING XFMR T4, 45 KVA 480-208Y/120V

LP B MAIN CIRCUIT BREAKER

LIGHTING PANEL B

SPARE

ELECTRIC HOIST

SPACE

SPACE

SPACE

SPACE

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

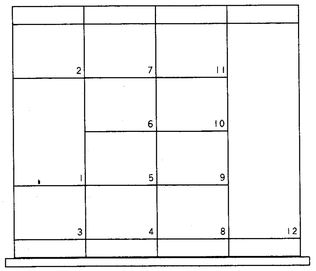
JOB NO.	15582
DESIGNED BY:	TRC
DRAWN BY:	TES
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	FEB., 1995

ELECTRICAL
ONE LINE POWER DIAGRAM

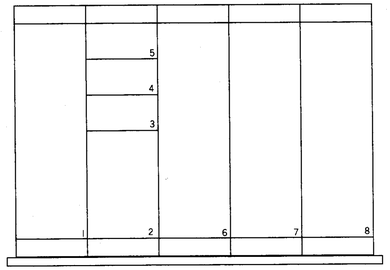
SCALE: NONE

SHEET NO. 94 OF 112

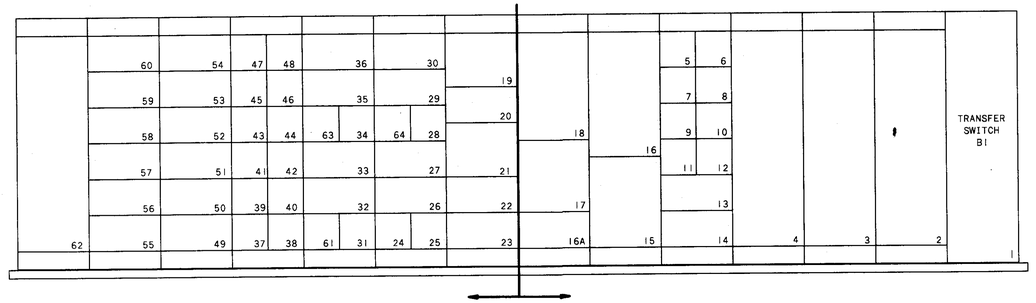
12-21-94 P:\PR15582\CADD\SHT94



MAIN SWITCHGEAR MS-3

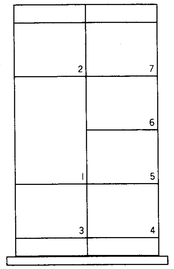


MCC-B1

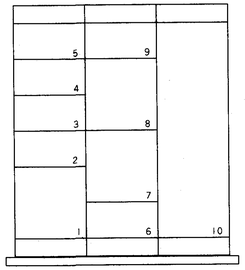


MCC-B3

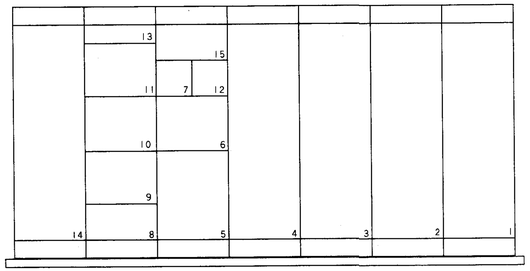
MCC-B2



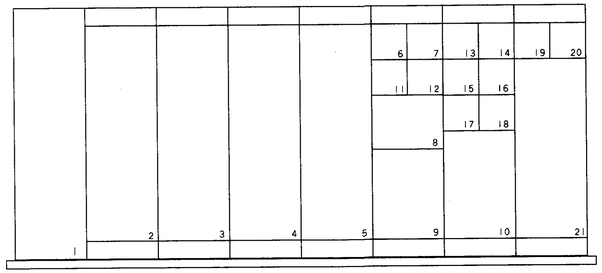
MAIN SWITCHGEAR MS-2



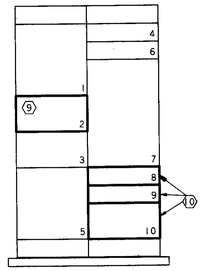
MCC-T



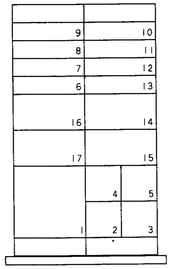
MCC-ST1



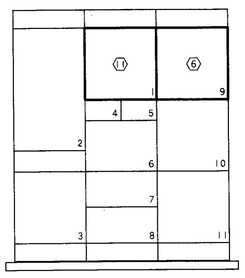
MCC-ST2



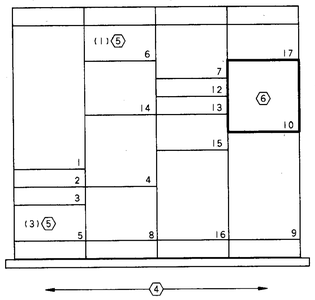
EXISTING MCC-C



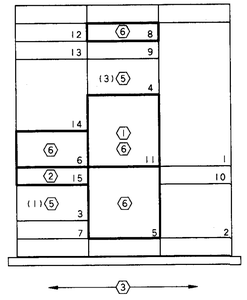
MCC-AD



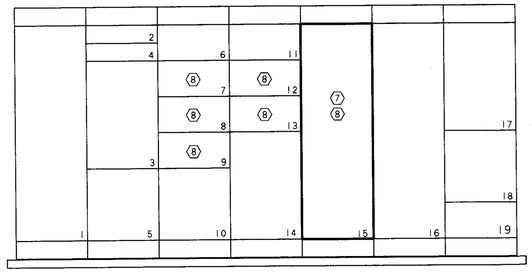
EXISTING MAIN SWITCHGEAR MS-1



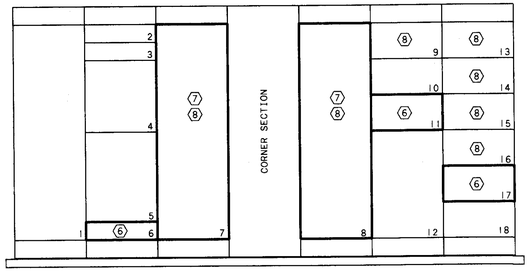
EXISTING MCC-D1



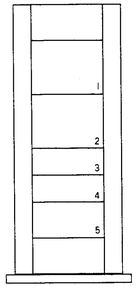
EXISTING MCC-D2



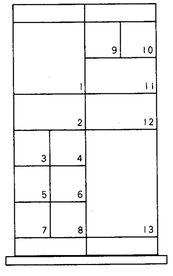
EXISTING MCC-A1



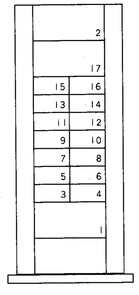
EXISTING MCC-A2



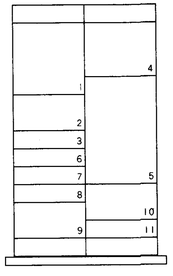
DISTRIBUTION SWITCHBOARD DS-2



MCC-A3



DISTRIBUTION SWITCHBOARD DS-1



EXISTING MCC-B

CODED NOTES: ⬡

1. RELOCATE STARTER SERVING RIVER INTAKE PUMP TO SPACE VACATED BY INFLUENT PUMP NO.3 (SEE NOTE NO.3). EXTEND POWER & CONTROL CIRCUITRY TO STARTER'S NEW LOCATION AND RECONNECT COMPLETE AND OPERATING AS ORIGINALLY INSTALLED.
2. PROVIDE FILLER PANEL AS REQUIRED.
3. REMOVE EXISTING STARTERS SERVING BACKWASH PUMP #2 & INFLUENT PUMP #3.
4. REMOVE EXISTING STARTER SERVING SURFACE WASH PUMP.
5. PROVIDE AUXILIARY MOTOR STARTER CONTACTS TO EXISTING STARTER FOR REMOTE CONTROL AND RUN INDICATION. NUMBER BESIDE NOTE SYMBOL INDICATES NUMBER OF AUXILIARY CONTACTS REQUIRED.
6. MODIFY EXISTING MCC STRUCTURE AS INDICATED ON ONE LINE POWER DIAGRAM.
7. SEE CONTROL DIAGRAMS FOR MODIFICATIONS.
8. REUSE EXISTING AUXILIARY RUN CONTACT FOR REMOTE RUN INDICATION.
9. REUSE EXISTING 20A CB AND MODIFY STRUCTURE TO ACCOMODATE LIGHTING CONTACTOR AS INDICATED ON ONE LINE DIAGRAM.
10. REMOVE TWO EXISTING FVNR SIZE 1 STARTERS AND REPLACE WITH FEEDER BREAKERS PER ONE LINE POWER DIAGRAM.
11. PROVIDE NEW DIGITAL METERING IN EXISTING METERING COMPARTMENT. REUSE EXISTING CT'S AND PROVIDE A FUSIBLE DISCONNECTING MEANS.

GENERAL NOTES:

1. PROVIDE NEW DOORS FOR ALL MODIFIED EXISTING MCC AND SWITCHGEAR COMPARTMENTS.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

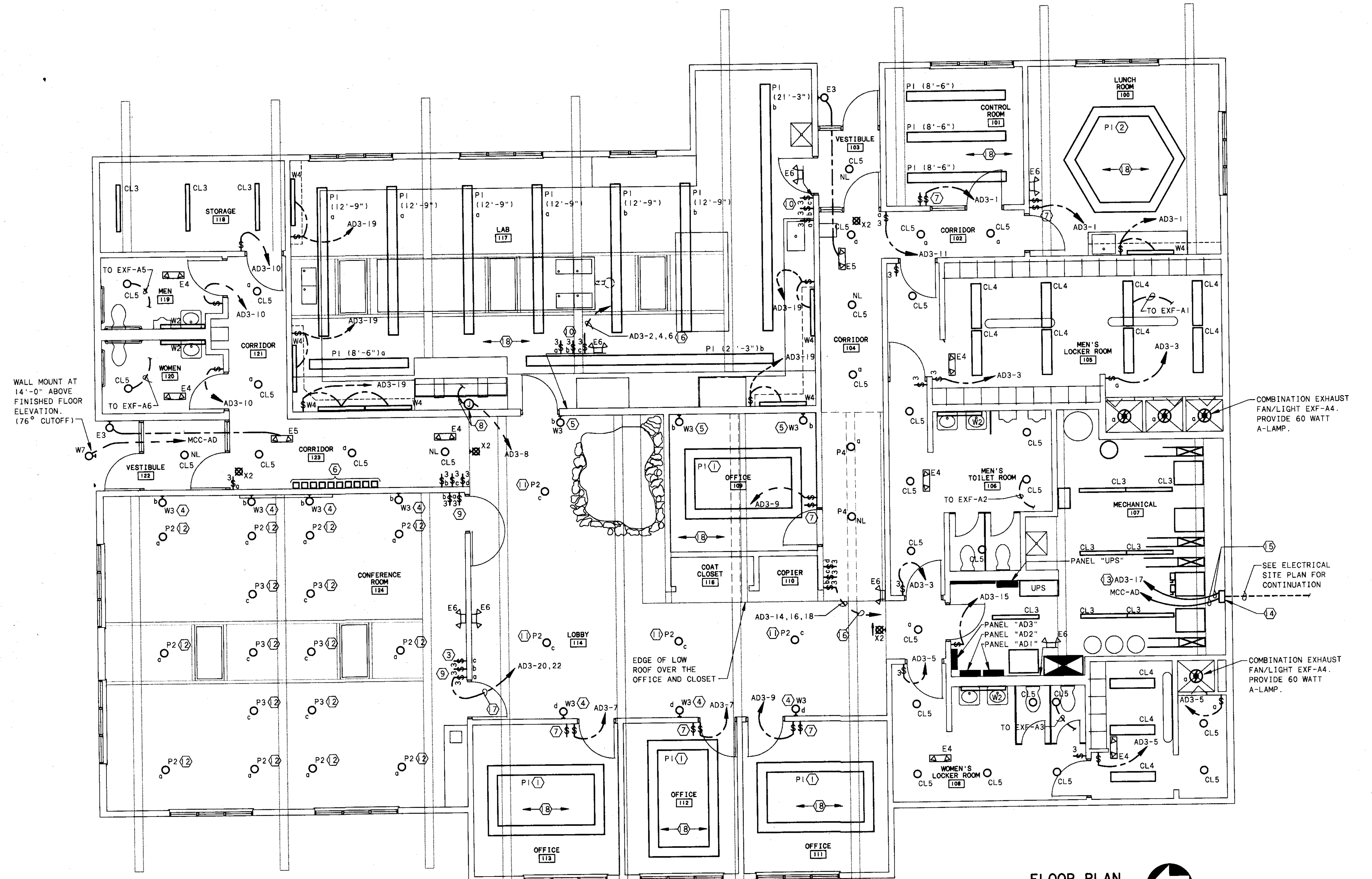
JOB NO.	15582
DESIGNED BY:	TRC
DRAWN BY:	RER/TES
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	MARCH 1995

ELECTRICAL
SWITCHGEAR AND MOTOR CONTROL CENTER ELEVATIONS

SCALE: NONE

SHEET NO. 95 OF 112

03-APR-95 N:\PROJECTS\PR15582\CADD\SH195



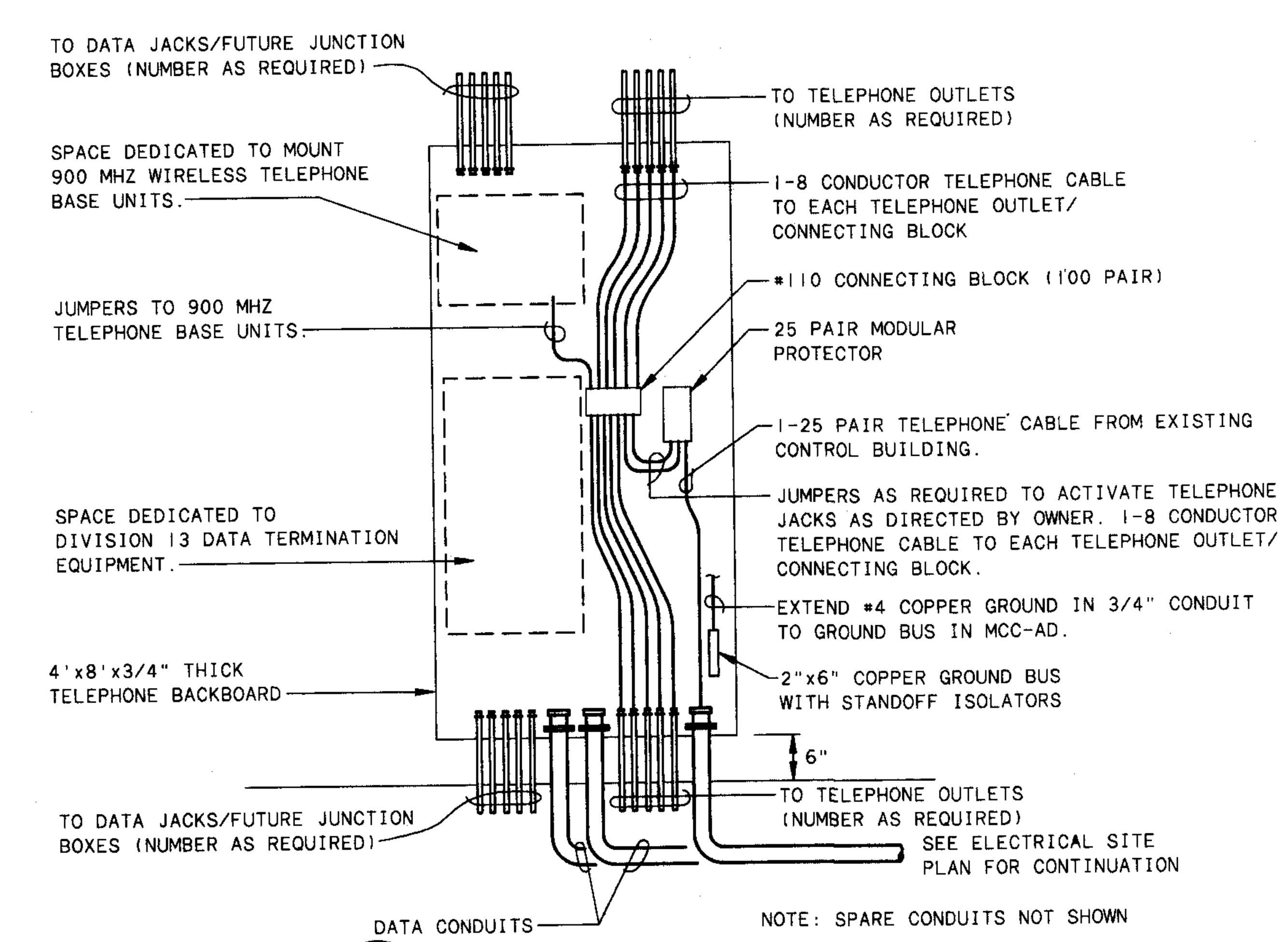
FLOOR PLAN

PANELBOARD "AD3"

208Y/120V, 3ø, 4 W, 225 AMP BUS			PANEL LOADING SCHEDULE				
200A MAIN: CB (X) SW ( ) LUGS ( )			CONNECTED				DEMAND
FEED THRU LUGS ( )			PHASE	A	B	C	TOTAL
SURFACE (X) FLUSH ( ) COLUMN TYPE ( )			AMPS	104	169.7	136.8	136.8
ENCLOSURE: NEMA 1(X) 3R( ) 12( ) 4X( )			KVA	12.5	20.36	16.42	49.28 / 49.28

CIRCUIT DESCRIPTION	LOAD AMPS	BKR./POLES	CKT. NO.	CKT. NO.	BKR./POLES	LOAD AMPS	CIRCUIT DESCRIPTION
CONTROL, LUNCH RM LTS	12.5	20/1	1	2	20/1	9.8	LAB LIGHTS SWITCH "a"
MEN'S LOCKER LTS, EXF	8.9	20/1	3	4	20/1	9.1	LAB LIGHTS SWITCH "b"
WOMENS LOCK, TOIL RM LTS, EXF	6.7	20/1	5	6	20/1	10.3	LAB LIGHTS
OFFICE 112, 113 LIGHTS	11.7	20/1	7	8	20/1	1.5	FUME HOOD LIGHTS
OFFICE 109, 111 LIGHTS	11.7	20/1	9	10	20/1	4.7	MEN & WOMEN RR, STORAGE LIGHTS, EXF-A5 & A6
CORR. 102, 104, 121, 123 LTS	4.0	20/1	11	12	20/1		SPARE
CORR/VEST NIGHT LIGHTS	1.5	20/1	13	14	20/1	12.0	LOBBY INDIRECT LIGHTS
MECH RM 107 LTS	5.0	20/1	15	16	20/1	12.0	LOBBY INDIRECT LIGHTS
BOLLARD LIGHTS	6.0	20/1	17	18	20/1	4.2	LOBBY PENDANT LIGHTS
LAB-UNDER CABINET LIGHTS	3.6	20/1	19	20	20/1	16.0	CONF RM INDIRECT LIGHTS
SPARE		20/1	21	22	20/1	12.7	CONF PENDANT LTS SWS"a"&"c"
SPARE		20/1	23	24	20/1		SPARE
SPARE		20/1	25	26	20/1		SPARE
SPARE		20/1	27	28	20/1		SPARE
SPARE		20/1	29	30	20/1		SPARE
SPARE		20/1	31	32	20/1		SPARE
SPARE		20/1	33	34	20/1		SPARE
SPARE		20/1	35	36	20/1		SPARE
SPARE		20/1	37	38	* 60/3	36.4	HU-A3
HU-A3 AUXILIARY HEATER	69.2	* 100/2	39	40		36.4	
	69.2		41	42		36.4	

* HACR RATED CIRCUIT BREAKER



A / 96 TELEPHONE BACKBOARD
SCALE: NONE

CODED NOTES

1. THIS P1 FIXTURE CONSISTS OF TWO 4'-3" LIGHTED SECTIONS AND TWO 8'-6" LIGHTED SECTIONS CONNECTED TOGETHER WITH FOUR 90° MATCHING ELBOWS (UNLIGHTED).
2. THIS P1 FIXTURE CONSISTS OF SIX 4'-3" LIGHTED SECTIONS CONNECTED TOGETHER WITH SIX 60° MATCHING ELBOWS (UNLIGHTED).
3. LUTRON DIMMER CONTROLLER TO CONTROL DIMMING BALLAST OF P3 FIXTURES. COORDINATE CONTROLLER AND BALLAST COMPATIBILITY PRIOR TO ORDERING DEVICE. SEE NOTE #9 THIS SHEET.
4. WALL MOUNT FIXTURE AT 11'-0" AFF TO CENTERLINE OF FIXTURE.
5. WALL MOUNT FIXTURE AT 16'-6" AFF TO CENTERLINE OF FIXTURE.
6. REMOTE BALLAST FOR W3 FIXTURES. VERTICALLY WALL MOUNT ABOVE ACCESSIBLE LAY-IN CEILING WITH 6" SPACE BETWEEN BALLAST. CIRCUIT TO FIXTURE WITH #12 WIRING IN 3/4" C.
7. SWITCH INSIDE LAMP BALLAST SEPARATE FROM OUTSIDE LAMP BALLAST FOR MULTILEVEL LIGHTING.
8. JUNCTION BOX FOR CONNECTION TO FUME HOOD LIGHTS. VERIFY EXACT LOCATION AND MOUNTING HEIGHT WITH FUME HOOD EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN. EXTEND CIRCUITRY TO SWITCH (MOUNTED ON FACE OF FUME HOOD) AND FIXTURE. LAMP FIXTURE AS RECOMMENDED BY FIXTURE MANUFACTURER.
9. 3-WAY WALL SWITCHES TO CONTROL P2 & W3 FIXTURES. PROVIDE LUTRON NT-3PS LINEAR SLIDE SWITCHES TO MATCH DIMMER CONTROLLER CONTROLLING P3 FIXTURES. PROVIDE A CUSTOM, SINGLE COVER PLATE FOR ALL DEVICES AT THIS LOCATION.
10. CONTROL OUTSIDE LAMPS OF P1 "a" FIXTURES FROM TWO 3-WAY SWITCHES (CKT AD3-2), CONTROL OUTSIDE LAMPS OF P1 "b" FIXTURES FROM TWO 3-WAY SWITCHES (CKT AD3-4), AND CONTROL INSIDE LAMPS OF ALL P1 FIXTURES ("a" & "b") FROM TWO 3-WAY SWITCHES (CKT AD3-6).
11. PENDANT MOUNT FIXTURE TO 11'-0" AFF TO BOTTOM OF FIXTURE.
12. PENDANT MOUNT FIXTURE TO 10'-6" AFF TO BOTTOM OF FIXTURE.
13. CIRCUIT TO PANEL VIA LIGHTING CONTACTOR IN MOTOR CONTROL CENTER MCC-AD.
14. STAINLESS STEEL PULLBOX, SIZED PER NEC 370. WALL MOUNT AT 6'-0" AFF.
15. SEE ELECTRICAL SITE PLAN CONDUIT SCHEDULE FOR CONDUIT AND CONDUCTOR SIZES.
16. 6#12, #12GRD, 3/4"C
17. 4#12, #12GRD, 3/4"C
18. PROVIDE PENDANT LENGTHS AS REQUIRED FOR P1 FIXTURE IN THIS SPACE TO MOUNT FIXTURES AT 9'-0" AFF. TO CENTERLINE OF FIXTURE.

GENERAL NOTES

1. CIRCUIT ALL EMERGENCY EGRESS/EXIT LIGHTS TO LOCAL LIGHTING CIRCUIT AHEAD OF SWITCH.
2. ALL CIRCUITRY BETWEEN FIXTURES AND FROM SWITCHES TO FIXTURES TO BE RUN CONCEALED IN INSULATION LAYER ABOVE TONGUE AND GROOVE ROOF DECK. SEE DETAIL C/105 FOR TYPICAL/SIMILIAR CONDUIT ROUTING REQUIREMENTS.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

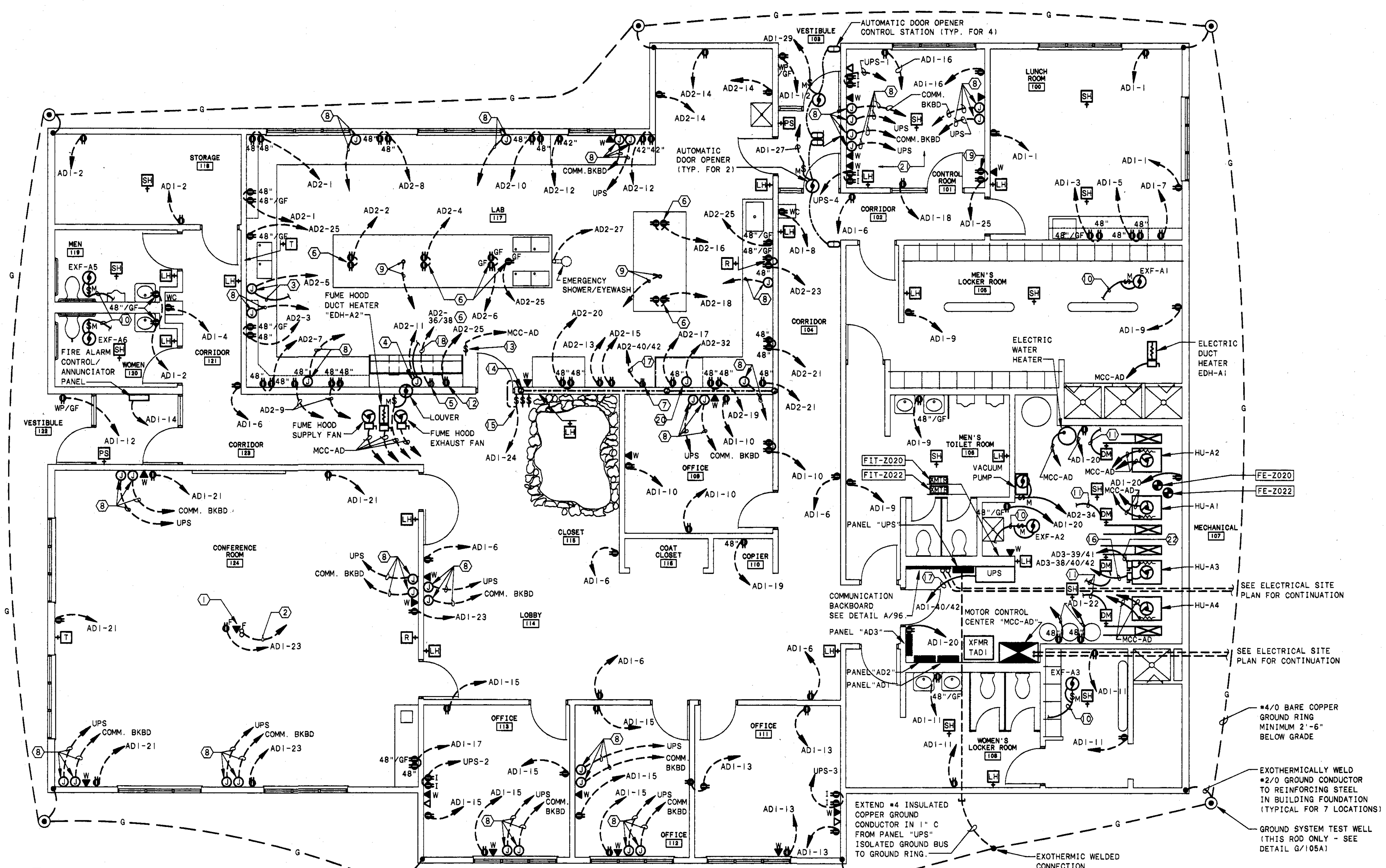
DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	SAT
DRAWN BY:	TRF
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	FEB., 1995

ADMINISTRATION BUILDING LIGHTING PLAN

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

SHEET NO. 96 OF 112



FLOOR PLAN

CODED NOTES

1. PROVIDE TWO FLUSH FLOOR BOXES TO INSTALL DUPLEX RECEPTACLES (1 BOX) AND TELEPHONE AND JACK(1 BOX). VERIFY SLAB DEPTH AT THIS LOCATION.
2. RUN TWO 1 1/4" CONDUITS BELOW SLAB TO COMMUNICATIONS BACKBOARD IN MECHANICAL ROOM #107. TERMINATE CONDUIT AT BACKBOARD 12" ABOVE FINISHED FLOOR.
3. JUNCTION BOX FOR CONNECTION TO DISHWASHER. COORDINATE JUNCTION BOX LOCATION AND MOUNTING HEIGHT WITH DISHWASHER EQUIPMENT SUPPLIER.
4. JUNCTION BOX FOR CONNECTION TO FUME HOOD MOUNTED RECEPTACLES. VERIFY EXACT MOUNTING HEIGHT AND LOCATION WITH FUME HOOD EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
5. 30 AMP, 250 VOLT, 2 POLE, 3 WIRE, TWISTLOCK, GROUNDING RECEPTACLE (NEMA L6-30), HUBBELL NO. 2620A. MOUNT RECEPTACLE IN A CAST ALUMINUM SURFACE MOUNTED SERVICE FITTING INSIDE FUME HOOD. ROUTE CONDUIT AND WIRING CONCEALED. COORDINATE INSTALLATION WITH FUME HOOD EQUIPMENT SUPPLIER.
6. DUPLEX RECEPTACLES FURNISHED AND INSTALLED BY DIVISION 16 CONTRACTOR IN SURFACE MOUNTED SERVICE FITTINGS FURNISHED BY LAB EQUIPMENT SUPPLIER. INSTALLATION OF SERVICE FITTING BY DIVISION 16.
7. 50 AMP, 250 VOLT, 2 POLE, 3 WIRE, GROUNDING RECEPTACLE (6-50R), HUBBELL #9367. PROVIDE AUTOCLAVE WITH NEW 5 FOOT LENGTH OF "SO" CORD (2-#8, #10 GRD) AND MATCHING ANGLE PLUG (HUBBELL #9368).
8. FLUSH TWO GANG OUTLET BOX FOR FUTURE USE. WALL MOUNT AT 48" AFF (UNLESS NOTED OTHERWISE) AND PROVIDE BLANK COVERPLATE. EXTEND 1" CONDUIT WITH PULLWIRE TO PANEL "AD2". (UNLESS NOTED OTHERWISE)
9. STUB AND CAP 1" CONDUIT 12" AFF IN UTILITY CHASE FOR FUTURE USE. EXTEND CONDUIT TO PANEL "AD2".
10. EXTEND CIRCUITRY TO LIGHTING FIXTURE IN SPACE SERVED BY EXHAUST FAN. SEE SHEET 96. CONTROL EXHAUST FAN FROM LIGHT SWITCH(ES) SERVING SPACE SERVED BY EXHAUST FAN.
11. EXTEND 2-#14, #14 GRD FROM N.C. AUXILIARY CONTACTS IN BASE OF SMOKE DETECTOR TO HEATING UNIT'S CONTROL PANEL FOR EMERGENCY SHUT-DOWN SHOULD SMOKE BE SENSED BY UNIT'S DUCT MOUNTED SMOKE DETECTOR. PROVIDE AN INTERPOSING RELAY SHOULD UNIT'S CONTROL VOLTAGE AND POWER REQUIREMENTS EXCEED DETECTOR'S AUXILIARY CONTACT RATING.
12. MOUNT DUPLEX RECEPTACLE IN A CAST ALUMINUM SURFACE MOUNTED SERVICE FITTING INSIDE FUME HOOD. ROUTE CONDUIT AND WIRING CONCEALED. COORDINATE INSTALLATION WITH FUME HOOD EQUIPMENT SUPPLIER.
13. TOGGLE SWITCH (BY FUME HOOD EQUIPMENT SUPPLIER) MOUNTED IN FACE OF FUME HOOD TO CONTROL EXHAUST AND MAKE-UP AIR FANS. SEE CONTROL DIAGRAM.
14 JUNCTION BOX ADJACENT WINDOW FOR LOW VOLTAGE POWER CONNECTION TO ELECTRIC OPERATOR. VERIFY EXACT LOCATION AND MOUNTING HEIGHT WITH WINDOW MANUFACTURER PRIOR TO ROUGH-IN. TYPICAL OF 3.
15. WINDOW OPERATOR CONTROL STATION (TYPICAL OF 3). FURNISHED BY WINDOW SUPPLIER, INSTALLED UNDER DIVISION 16. VERIFY WIRING REQUIREMENTS WITH WINDOW MANUFACTURER. MOUNT LOW VOLTAGE POWER SUPPLY ABOVE CORRIDOR #123 CEILING (NOT SHOWN).
16. 3-#6, #10 GRD 1"C.
17. 2-#8, #10 GRD 3/4"C.
18. 2-#10, #10 GRD 3/4"C.
19. WALL MOUNT PORTABLE PHONE CHARGING STATION 5'-0" AFF.
20. JUNCTION BOX FOR CONNECTION TO RANGE HOOD. VERIFY EXACT MOUNTING HEIGHT AND LOCATION WITH RANGE HOOD EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
21. WALL MOUNT ALL DEVICES ON THE NORTH AND EAST WALLS IN THIS SPACE AT 3'-0" AFF TO CENTERLINE OF DEVICE.
22. 2-#2, #8 GRD, 1 1/4"C.

GENERAL NOTES

1. PROVIDE EACH TELEPHONE OUTLET (▼) WITH A FLUSH SINGLE GANG OUTLET BOX AND AN 8 CONDUCTOR CONNECTING BLOCK, WITH STAINLESS STEEL COVERPLATE. WALL MOUNT AT SAME ELEVATION AS DUPLEX RECEPTACLES. EXTEND 1 - 4 PAIR TELEPHONE CABLE TO TERMINAL BLOCKS ON COMMUNICATION BACKBOARD. SEE DETAIL A/96. PROVIDE WALL TELEPHONE JACKS (▼W) WITH STAINLESS STEEL COVERPLATES WITH TELEPHONE MOUNTING STUDS. WALL MOUNT OUTLET BOXES AT 48" AFF.
2. PROVIDE EACH DATA OUTLET (▽) WITH A SINGLE GANG FLUSH WALL BOX FOR INSTALLATION OF DATA JACK FURNISHED UNDER DIVISION 13. RUN 1" CONDUIT TO COMMUNICATION BACKBOARD. TERMINATE CONDUIT AT BACKBOARD 12" AFF.
3. ALL DASHED HOMERUNS ( ) SHALL BE ROUTED CONCEALED UNDER SLAB PER SPECIFICATIONS.

PANELBOARD "AD1"

208Y/120V, 3ø, 4 W, 225 AMP BUS				PANEL LOADING SCHEDULE			
150A MAIN: CB (X) SW ( ) LUGS ( )				CONNECTED			DEMAND
FEED THRU LUGS ( )	PHASE	A	B	C	TOTAL		
SURFACE (X) FLUSH ( ) COLUMN TYPE ( )	AMPS	49.5	70.3	60.8		60.2	
ENCLOSURE: NEMA 1(X) 3R( ) 12( ) 4X( )	KVA	5.6	8.4	7.3	21.3	21.3	

CIRCUIT DESCRIPTION	LOAD AMPS	BKR./ POLES	CKT. NO.	CKT. NO.	BKR./ POLES	LOAD AMPS	CIRCUIT DESCRIPTION
LUNCH RM RECEPT	4.5	20/1	1	2	20/1	6.0	STOR 118, MEN'S 119, & WOMEN'S 120 RECEPT
LUNCH RM COUNTER RECEPT	10.0	20/1	3	4	20/1	5.0	WATER COOLER RECEPT
LUNCH RM COUNTER RECEPT	10.0	20/1	5	6	20/1	10.5	CORR 104, 121, LOBBY 114 RECEPT
LUNCH RM REFRIG RECEPT	5.0	20/1	7	8	20/1	5.0	WATER COOLER RECEPT
MEN'S LOCK/TOIL RM RECEPT	6.0	20/1	9	10	20/1	7.5	OFFICE 109 RECEPT
WOMEN'S LOCK/TOIL RM RECEPT	6.0	20/1	11	12	20/1	3.0	EXTERIOR RECEPT
OFFICE 111, 112 RECEPT	9.0	20/1	13	14	20/1	5.0	FIRE ALARM PANEL
OFFICE 112, 113 RECEPT	12.0	20/1	15	16	20/1	3.0	CONTROL ROOM RECEPT
CONF RM COUNTER RECEPT	10.0	20/1	17	18	20/1	3.0	CONTROL ROOM RECEPT
COPIER RECEPT	6.0	20/1	19	20	20/1	6.0	MECH RM 107 RECEPT
CONF RM RECEPT	6.0	20/1	21	22	20/1	5.0	DI WATER EQUIPMENT
CONF RM RECEPT	6.0	20/1	23	24	20/1	1.5	CLERESTORY WINDOW OPERATOR
PORTABLE PHONE CHARGER	3.0	20/1	25	26	20/1	-	SPARE
INSIDE DOOR OPENER	5.8	20/1	27	28	20/1	-	SPARE
OUTSIDE DOOR OPENER	5.8	20/1	29	30	20/1	-	SPARE
SPARE	-	20/1	31	32	20/1	-	SPARE
SPARE	-	20/1	33	34	20/1	-	SPARE
SPARE	-	20/1	35	36	20/1	-	SPARE
SPARE	-	20/1	37	38	20/1	-	SPARE
SPARE	-	20/1	39	40	40/2	10.0	UPS
SPARE	-	20/1	41	42		10.0	

PANELBOARD "AD2"

208Y/120V, 3ø, 4 W, 225 AMP BUS				PANEL LOADING SCHEDULE			
150A MAIN: CB (X) SW ( ) LUGS ( )				CONNECTED			DEMAND
FEED THRU LUGS ( )	PHASE	A	B	C	TOTAL		
SURFACE (X) FLUSH ( ) COLUMN TYPE ( )	AMPS	61.5	71.3	85.0		72.5	
ENCLOSURE: NEMA 1(X) 3R( ) 12( ) 4X( )	KVA	7.4	8.5	10.2	26.1	26.1	

CIRCUIT DESCRIPTION	LOAD AMPS	BKR./ POLES	CKT. NO.	CKT. NO.	BKR./ POLES	LOAD AMPS	CIRCUIT DESCRIPTION
LAB 117 RECEPT	6.0	20/1	1	2	20/1	3.0	LAB 117 RECEPT
LAB 117 RECEPT	3.0	20/1	3	4	20/1	3.0	LAB 117 RECEPT
LAB 117 DISHWASHER RECEPT	10.0	20/1	5	6	20/1	3.0	LAB 117 RECEPT
LAB 117 RECEPT	3.0	20/1	7	8	20/1	3.0	LAB 117 RECEPT
LAB 117 RECEPT	4.5	20/1	9	10	20/1	3.0	LAB 117 RECEPT
LAB 117 FUME HOOD RECEPT	6.0	20/1	11	12	20/1	4.5	LAB 117 RECEPT
LAB 117 REFRIGERATOR RECEPT	5.0	20/1	13	14	20/1	4.5	LAB 117 RECEPT
LAB 117 REFRIGERATOR RECEPT	5.0	20/1	15	16	20/1	3.0	LAB 117 RECEPT
LAB 117 RECEPT	1.5	20/1	17	18	20/1	3.0	LAB 117 RECEPT
LAB 117 RECEPT	3.0	20/1	19	20	20/1	3.0	LAB 117 RECEPT
LAB 117 RECEPT	4.5	20/1	21	22	20/1	-	SPARE
LAB 117 RECEPT	3.0	20/1	23	24	20/1	-	SPARE
LAB 117 DI WATER INDICATOR	2.0	20/1	25	26	20/1	-	SPARE
LAB EMERGENCY EYEWASH	1.5	20/1	27	28	20/1	-	SPARE
SPARE	-	20/1	29	30	20/1	-	SPARE
SPARE	-	20/1	31	32	20/1	5.0	LAB RANGE HOOD
SPARE	-	20/1	33	34	20/1	13.8	VACUUM PUMP
SPARE	-	20/1	35	36	30/2	24.0	HOT PLATE
SPARE	-	20/1	37	38		24.0	
SPARE	-	20/1	39	40	40/2	30.0	AUTOCLAVE
SPARE	-	20/1	41	42		30.0	

* PANELBOARD "UPS"

208/120V, 1ø, 3 W, 100 AMP BUS				PANEL LOADING SCHEDULE			
60A MAIN: CB (X) SW ( ) LUGS ( )				CONNECTED			DEMAND
FEED THRU LUGS ( )	PHASE	A	B	C	TOTAL		
SURFACE (X) FLUSH ( ) COLUMN TYPE ( )	AMPS	10.0	10.0			10.0	
ENCLOSURE: NEMA 1(X) 3R( ) 12( ) 4X( )	KVA	1.2	1.2		2.4	2.4	

CIRCUIT DESCRIPTION	LOAD AMPS	BKR./ POLES	CKT. NO.	CKT. NO.	BKR./ POLES	LOAD AMPS	CIRCUIT DESCRIPTION
CONTROL ROOM RECEPT	5.0	15/1	1	2	15/1	5.0	OFFICE 113 RECEPT
OFFICE 111 RECEPT	5.0	15/1	3	4	15/1	5.0	CONTROL ROOM RECEPT
SPARE	-	15/1	5	6	15/1	-	SPARE
SPARE	-	15/1	7	8	15/1	-	SPARE
SPARE	-	15/1	9	10	15/1	-	SPARE
SPACE	-	-	11	12	-	-	SPACE
SPACE	-	-	13	14	-	-	SPACE
SPACE	-	-	15	16	-	-	SPACE
SPACE	-	-	17	18	-	-	SPACE
SPACE	-	-	19	20	-	-	SPACE

* PROVIDE ISOLATED GROUND BUS

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

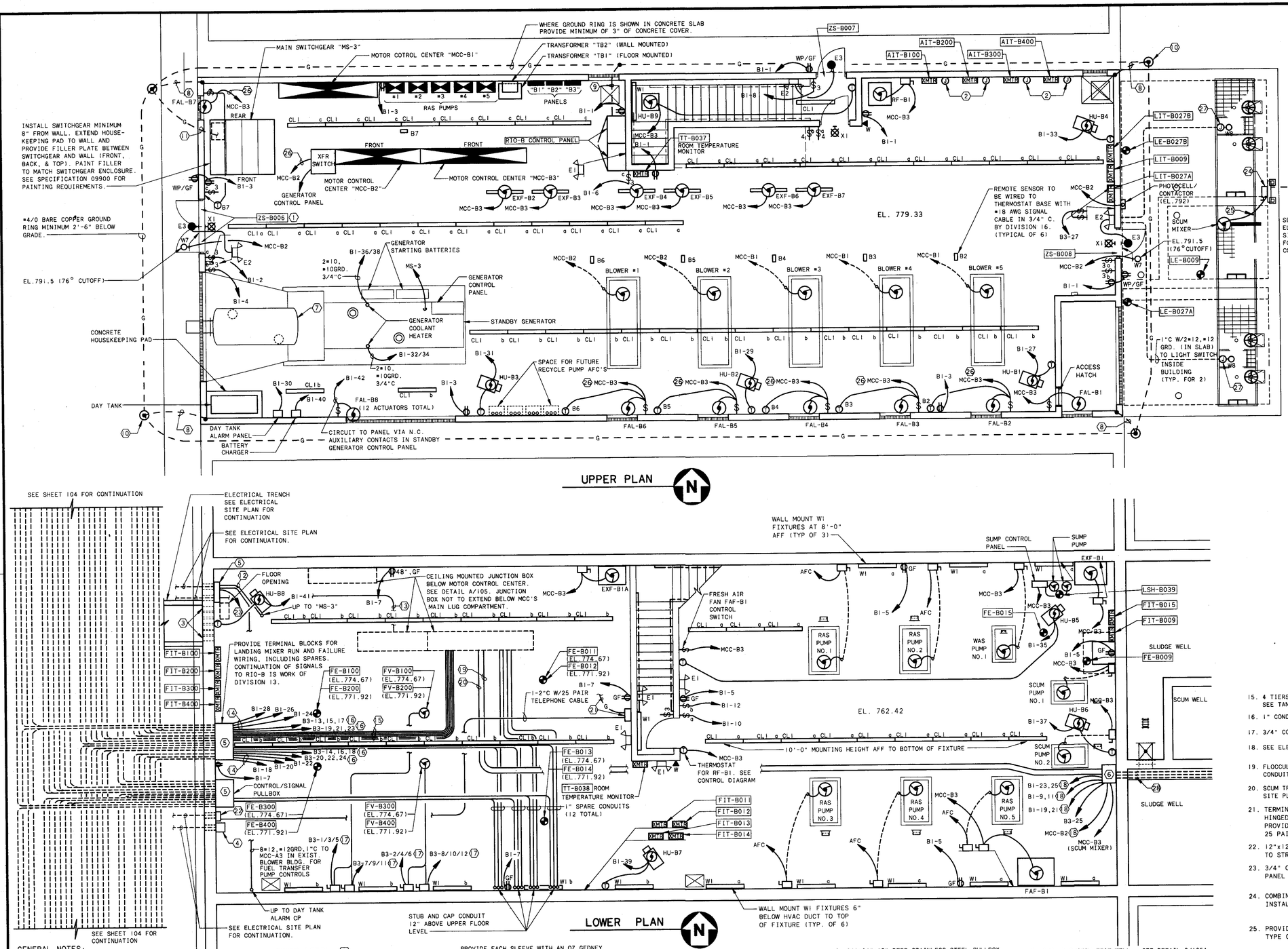
DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	SAT
DRAWN BY:	TRF
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	FEB., 1995

ADMINISTRATION BUILDING
POWER & SYSTEMS PLAN

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

SHEET NO. 97 OF 112



PANELBOARD "B1"							
208Y/120V, 3#, 4 W, 225 AMP BUS			PANEL LOADING SCHEDULE				
150A MAIN: CB (X) SW ( ) LUGS ( )			CONNECTED				DEMAND
FEED THRU LUGS ( )			PHASE	A	B	C	TOTAL
SURFACE (X) FLUSH ( ) COLUMN TYPE ( )			AMPS	101.8	92.4	80.5	91.57
ENCLOSURE: NEMA 1(X) 3R( ) 12( ) 4X( )			KVA	12.22	11.09	9.66	32.97
CIRCUIT DESCRIPTION	LOAD AMPS	BKR./ POLES	CKT. NO.	BKR./ POLES	LOAD AMPS	CIRCUIT DESCRIPTION	
UPPER LEVEL RECEPTACLES	9.0	20/1	1 2	20/1	15.0	UPPER LEVEL LIGHTS	
UPPER LEVEL RECEPTACLES	7.5	20/1	3 4	20/1	11.1	UPPER LEVEL LIGHTS	
LOWER LEVEL RECEPTACLES	6.0	20/1	5 6	20/1	5.3	UPPER LEVEL LIGHTS	
LOWER LEVEL RECEPTACLES	6.0	20/1	7 8	20/1	2.8	STAIRWELL LIGHTS	
CLARIF. PLATFORM #5&8 LTGS.	2.0	20/1	9 10	20/1	13.0	LOWER LEVEL LIGHTS	
CLARIF. PLATFORM #6&7 LTGS.	2.0	20/1	11 12	20/1	15.6	LOWER LEVEL LIGHTS	
SPARE	-	20/1	13 14	20/1	-	SPARE	
SPARE	-	20/1	15 16	20/1	-	SPARE	
SPARE	-	20/1	17 18	20/1	10.0	SLUICE GATE PORT. OPERATOR	
FLOCCULATR DRIVE HEATERS(2)	6.0	20/1	19 20	20/1	10.0	SLUICE GATE PORT. OPERATOR	
FLOCCULATR DRIVE HEATERS(2)	6.0	20/1	21 22	20/1	10.0	SLUICE GATE PORT. OPERATOR	
CLARIF. PLATFORM #5&8 REC.	3.0	20/1	23 24	20/1	10.0	SLUICE GATE PORT. OPERATOR	
CLARIF. PLATFORM #6&7 REC.	3.0	20/1	25 26	20/1	10.0	SLUICE GATE PORT. OPERATOR	
HEATING UNIT "HU-B1"	.8	20/1	27 28	20/1	10.0	SLUICE GATE PORT. OPERATOR	
HEATING UNIT "HU-B2"	.8	20/1	29 30	20/1	4.0	DAY TANK ALARM PANEL	
HEATING UNIT "HU-B3"	.8	20/1	31 32	30/2	19.2	GENERATOR COOLANT HEATER	
HEATING UNIT "HU-B4"	2.0	20/1	33 34		19.2		
HEATING UNIT "HU-B5"	.8	20/1	35 36	30/2	19.2	GENERATOR COOLANT HEATER	
HEATING UNIT "HU-B6"	.8	20/1	37 38		19.2		
HEATING UNIT "HU-B7"	.8	20/1	39 40	20/1	10.0	BATTERY CHARGER	
HEATING UNIT "HU-B8"	.8	20/1	41 42	20/1	3.0	STANDBY GENERATOR FAL-B8	

PANELBOARD "B2"							
208Y/120V, 3#, 4 W, 100 AMP BUS			PANEL LOADING SCHEDULE				
60A MAIN: CB (X) SW ( ) LUGS ( )			CONNECTED				DEMAND
FEED THRU LUGS ( )			PHASE	A	B	C	TOTAL
SURFACE (X) FLUSH ( ) COLUMN TYPE ( )			AMPS	-	-	-	-
ENCLOSURE: NEMA 1(X) 3R( ) 12( ) 4X( )			KVA	-	-	-	-
CIRCUIT DESCRIPTION	LOAD AMPS	BKR./ POLES	CKT. NO.	BKR./ POLES	LOAD AMPS	CIRCUIT DESCRIPTION	
*	-	20/1	1 2	20/1	-	*	
*	-	20/1	3 4	20/1	-	*	
*	-	20/1	5 6	20/1	-	*	
*	-	20/1	7 8	20/1	-	*	
*	-	20/1	9 10	20/1	-	*	
*	-	20/1	11 12	20/1	-	*	
*	-	20/1	13 14	20/1	-	*	
SPARE	-	20/1	15 16	20/1	-	SPARE	
SPARE	-	20/1	17 18	20/1	-	SPARE	
SPARE	-	20/1	19 20	20/1	-	SPARE	
SPARE	-	20/1	21 22	20/1	-	SPARE	
SPACE	-	-	23 24	-	-	SPACE	
SPACE	-	-	25 26	-	-	SPACE	
SPACE	-	-	27 28	-	-	SPACE	
SPACE	-	-	29 30	-	-	SPACE	

* - PANELBOARD SPACE DEDICATED FOR DIVISION 13 EQUIPMENT AND ELECTRICAL REQUIREMENTS.

PANELBOARD "B3"							
208Y/120V, 3#, 4 W, 225 AMP BUS			PANEL LOADING SCHEDULE				
150A MAIN: CB (X) SW ( ) LUGS ( )			CONNECTED				DEMAND
FEED THRU LUGS ( )			PHASE	A	B	C	TOTAL
SURFACE (X) FLUSH ( ) COLUMN TYPE ( )			AMPS	55.36	49.56	45.36	50.1
ENCLOSURE: NEMA 1(X) 3R( ) 12( ) 4X( )			KVA	6.64	5.95	5.44	18.03
CIRCUIT DESCRIPTION	LOAD AMPS	BKR./ POLES	CKT. NO.	BKR./ POLES	LOAD AMPS	CIRCUIT DESCRIPTION	
FLOW VALVE	4.14		1 2		4.14		
	4.14	15/3	3 4	15/3	4.14	FLOW VALVE	
	4.14		5 6		4.14		
FLOW VALVE	4.14		7 8		4.14		
	4.14	15/3	9 10	15/3	4.14	FLOW VALVE	
	4.14		11 12		4.14		
ELECTRIC WINCH-TANK #7	7.2	15/1	13 14	15/1	7.2	ELECTRIC WINCH-TANK #13	
ELECTRIC WINCH-TANK #8	7.2	15/1	15 16	15/1	7.2	ELECTRIC WINCH-TANK #14	
ELECTRIC WINCH-TANK #9	7.2	15/1	17 18	15/1	7.2	ELECTRIC WINCH-TANK #15	
ELECTRIC WINCH-TANK #10	7.2	15/1	19 20	15/1	7.2	ELECTRIC WINCH-TANK #16	
ELECTRIC WINCH-TANK #11	7.2	15/1	21 22	15/1	7.2	ELECTRIC WINCH-TANK #17	
ELECTRIC WINCH-TANK #12	7.2	15/1	23 24	15/1	7.2	ELECTRIC WINCH-TANK #18	
SLUICE GATE PORT. OPERATOR	10.0	20/1	25 26	20/1	-	SPARE	
RAS WELL LIGHTS	4.2	20/1	27 28	20/1	-	SPARE	
SPARE	-	20/1	29 30	20/1	-	SPARE	
SPARE	-	20/1	31 32	20/1	-	SPARE	
SPARE	-	20/1	33 34	20/1	-	SPARE	
SPARE	-	20/1	35 36	20/1	-	SPARE	
SPARE	-	20/1	37 38	20/1	-	SPARE	
SPARE	-	20/1	39 40	20/1	-	SPARE	
SPARE	-	20/1	41 42	20/1	-	SPARE	

GENERAL NOTES:

1. CIRCUIT ALL EXIT AND EMERGENCY EGRESS LIGHTING FIXTURES TO LOCAL LIGHTING CIRCUIT AHEAD OF SWITCH.
2. TAGGED DEVICES (XX-XXX), UNLESS INDICATED OTHERWISE, ARE SUPPLIED AND INSTALLED UNDER DIVISION 13.
3. PROVIDE EACH TELEPHONE JACK (▼W) WITH A SINGLE GANG CAST OUTLET BOX AND AN 8 CONDUCTOR, CONNECTING BLOCK, WITH STAINLESS STEEL COVERPLATE WITH TELEPHONE MOUNTING STUDS. WALL MOUNT BOX AT 4'-0" AFF. EXTEND 1-4 PAIR TELEPHONE CABLE IN 1" CONDUIT TO TELEPHONE TERMINAL ENCLOSURE, SEE NOTE NO.21 THIS SHEET, AND TERMINATE ON PROTECTOR'S TERMINALS.

CODED NOTES: ⬡

1. DOOR MONITOR SWITCH - TYPICAL OF TWO WIRED IN SERIES.
2. VENDOR SUPPLIED JUNCTION BOX FOR D.O. PROBE CALIBRATION AND CONNECTION TO FIELD MOUNTED JUNCTION BOXES.
3. PROVIDE 6-5" CONDUIT SLEEVES (5 USED, 1 SPARE) THROUGH WALL FOR PASSAGE OF MAIN SWITCHGEAR MS-3 SERVICE CONDUCTORS.

PROVIDE EACH SLEEVE WITH AN OZ GEDNEY (TYPE CSBG) OR EQUAL, CONDUIT SEALING BUSHING TO SEAL AROUND SERVICE CABLES AND INTERIOR OF CONDUIT SLEEVE. INSIDE BUILDING (NOT SHOWN) PROVIDE A CABLE TRAY (SAME WIDTH AS USED IN TRENCH) TO SUPPORT/PROTECT CABLES. PROVIDE TRAY WITH A 90° UP TURNING ELBOW TO EXTEND TRAY FROM UNDERSIDE OF WALL PENETRATIONS TO OPPOSITE SIDE OF FLOOR PENETRATION. RIGIDLY ATTACH TRAY TO WALL AND CEILING STRUCTURE. ROUTE SERVICE CABLES THROUGH SLEEVES/CONDUIT SEALS AND UP THROUGH FLOOR OPENING TO SWITCHGEAR LUGS. DAM FLOOR OPENING AND SEAL PENETRATION WITH RTV SILICON FOAM ONCE SERVICE CONDUCTOR INSTALLATION IS COMPLETE.

4. 12"x12"x6" DEEP STAINLESS STEEL PULLBOX WALL MOUNTED TIGHT TO STRUCTURE ABOVE FOR PASSAGE OF DIVISION 13 SIGNAL AND/OR CONTROL CABLES.
5. STAINLESS STEEL PULLBOX, SIZED PER NEC SECTION 370, MOUNTED TIGHT TO STRUCTURE ABOVE.
6. 24"x24"x18" DEEP STAINLESS STEEL PULLBOX. SUPPORT FROM STRUCTURE ABOVE.
7. SEE MUFFLER MOUNTING DETAIL (DETAIL 1, SHEET 71) AND FUEL PUMP PIPING SCHEMATIC ON SHEET 75 FOR ADDITIONAL GENERATOR INSTALLATION REQUIREMENTS.
8. EXOTHERMICALLY WELD #2/0 GROUND CONDUCTOR TO REINFORCING STEEL IN BUILDING FOUNDATION.
9. ISOLATED SIGNAL GROUND - SEE SPECIFICATION SECTION NO. 16452.
10. GROUND SYSTEM TEST WELL - SEE DETAIL G/105A.
11. EXTEND #4/0 BARE COPPER GROUNDING ELECTRODE CONDUCTOR FROM MS-3 GROUND BUS TO GROUND RING.
12. STANDBY POWER FEEDER TO SLUDGE THICKENER BUILDING. SEE ONE LINE POWER DIAGRAM FOR CONDUIT AND FEEDER SIZE.
13. POWER FEEDER TO ADMINISTRATION BUILDING. SEE ONE LINE POWER DIAGRAM FOR CONDUIT AND FEEDER SIZE.
14. 1" CONDUIT WITH 4-#8, #8 GRD.
15. 4 TIERS OF 6 CONDUITS (24 CONDUITS TOTAL) SERVING TANK MIXERS. SEE TANK PLAN SHEET #104 FOR CONDUIT AND CONDUCTOR SIZES.
16. 1" CONDUIT WITH 6-#10, 1-#10 GRD.
17. 3/4" CONDUIT WITH 3-#12, 1#12 GRD.
18. SEE ELECTRICAL SITE PLAN CONDUIT SCHEDULE FOR CONDUIT AND CONDUCTOR SIZES.
19. FLOCCULATOR AND COLLECTOR DRIVE POWER CONDUCTOR CONDUIT. SEE ELECTRICAL CONDUIT. SEE ELECTRICAL SITE PLAN CONDUIT SCHEDULE FOR CONDUIT AND CONDUCTOR SIZES.
20. SCUM TROUGH ACTUATOR CONTROL PANEL POWER CONDUCTOR CONDUIT. SEE ELECTRICAL SITE PLAN CONDUIT SCHEDULE FOR CONDUIT AND CONDUCTOR SIZE.
21. TERMINATE 25 PAIR TELEPHONE CABLE IN A 24"x24"x8" DEEP STAINLESS STEEL HINGED DOOR ENCLOSURE. WALL MOUNT ENCLOSURE AT 6'-0" AFF TO TOP OF ENCLOSURE PROVIDE ENCLOSURE WITH A 25 PAIR MODULAR PROTECTOR TO TERMINATE INCOMING 25 PAIR CABLE. EXTEND #4 GROUND CONDUCTOR IN 3/4" CONDUIT TO BUILDING GROUND RING.
22. 12"x12"x6" DEEP STAINLESS STEEL PULLBOX MOUNTED TIGHT TO STRUCTURE FOR PASSAGE OF TELEPHONE CABLE.
23. 3/4" CONDUIT WITH 2#12, #12GRD. TO GENERATOR CONTROL PANEL FROM TRANSFER SWITCH IN SLUDGE THICKENER BUILDING.
24. COMBINATION DISCONNECT/RECEPTACLE SUPPLIED WITH MIXER. INSTALL EQUIPMENT ON RACK AS SHOWN IN DETAIL C/105A.
25. PROVIDE A STAINLESS STEEL HOOK ANCHORED IN CONCRETE AND KELLUM TYPE CORD GRIP TO SUPPORT PUMP CABLE AT LOCATION SHOWN.
26. 3/4" CONDUIT WITH 4#12, #12 GRD.
27. CAST JUNCTION BOX WITH THREADED CAST COVER MOUNTED TO FACE OF SLAB OPENING FOR MOUNTING OF W8. INSTALL JUNCTION BOX AND FIXTURE SUCH THAT GRATING MAY BE INSTALLED WITHOUT INTERFERENCE. AIM FIXTURE TO GIVE MAXIMUM ILLUMINATION ON TELESCOPING VALVES.
28. TRANSITION FROM PVC CONDUIT TO RIGID STEEL. CONDUITS PLACED IN HAUNCH BY DIVISION 16. CONCRETE AND FORMWORK BY OTHERS. SEE SECTION E ON SHEET 19 FOR CONDUIT PLACEMENT AND HAUNCH DETAILS.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	SAT/TRC
DRAWN BY:	TRF
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	MARCH 1995

ELECTRICAL BLOWER BUILDING
UPPER AND LOWER PLANS

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

SHEET NO. 98 OF 112

N:\PR15582\CADD\SHT98 4-3-95 4:17:18 pm EST

CODED NOTES ⟨⟩

1. MOUNT ALL CL1 FIXTURES IN UV ROOM AT ELEVATION 786.5.
2. MOUNT ALL CL1 FIXTURES IN ELECTRICAL ROOM AT ELEVATION 786.83.
3. MOUNT ALL W1 FIXTURES IN FILTER AREA 8'-0" ABOVE WALKWAY, PROVIDE 45° MOUNTING BRACKET-UNISTRUT P1944 OR EQUAL.
4. FIXTURE CL2 LOWERING DEVICE LOCKING UNIT.
5. TO LIGHTING CONTACTOR IN MCC-T.
6. MOUNT ALL CL2 FIXTURES IN FILTER AREA AT ELEVATION 793.0.
7. ROUTE CONDUIT IN SLAB FROM DISCONNECT TO JIB CRANE PILLAR. TURN CONDUIT UP AT PILLAR AND ROUTE CONDUIT AND WIRE TO ELECTRICAL CONNECTION POINT.
8. 12" X 12" X 6" DEEP STAINLESS STEEL PULLBOX WALL MOUNTED AT 6'-0" AFF FOR PASSAGE OF DIVISION 13 SIGNAL AND/OR CONTROL CABLES.
9. REMOTE PUSH BUTTON CONTROL STATIONS FOR POST AERATION BLOWERS NO.1 & 2 LOCATED IN EXISTING TERTIARY BUILDING.
10. EXOTHERMICALLY WELD #2/0 GROUND CONDUCTOR TO REINFORCING STEEL IN BUILDING FOUNDATION.
11. ISOLATED SIGNAL GROUND - SEE SPECIFICATION 16452.
12. GROUND SYSTEM TEST WELL. SEE DETAIL G ON SHEET 105A.
13. DOOR MONITOR SWITCH - TYPICAL OF TWO WIRED IN SERIES.
14. 6"x6"x4" NEMA 4X STAINLESS STEEL ENCLOSURE AND AUXILIARY RELAY FOR REMOTE ANNUNCIATION OF SHOWER ALARM. PROVIDE N.O. OR N.C. CONTACT AS REQUIRED BASED ON OPERATION OF FLOW SWITCH.
15. EXTEND #1/0 BARE COPPER GROUNDING ELECTRODE FROM GROUND BUS IN MCC-T TO GROUND RING.
16. STAINLESS STEEL JUNCTION BOX. SIZED PER NEC 370. WALL MOUNTED AT 6'-0" AFF.
17. TO SITE LIGHTING CONTROL PANEL.
18. PROVIDE A NEMA 1 HINGED DOOR ENCLOSURE SIZED TO ENCLOSE A FUSED CONTROL POWER TRANSFORMER, "ON-OFF-PHOTO" SELECTOR SWITCH (MOUNTED THROUGH ENCLOSURE DOOR) AND A 6 POLE LIGHTING CONTACTOR. SEE "SITE LIGHTING" WIRING SCHEMATIC FOR WIRING REQUIREMENTS.
19. TERMINATE 25 PAIR TELEPHONE CABLE IN A 24"x24"x8" DEEP STAINLESS STEEL HINGED DOOR ENCLOSURE. WALL MOUNT ENCLOSURE AT 6'-0" AFF TO TOP OF ENCLOSURE. PROVIDE ENCLOSURE WITH A 25 PAIR MODULAR PROTECTOR TO TERMINATE INCOMING 25 PAIR CABLE. EXTEND #4 GROUND CONDUCTOR IN 3/4" CONDUIT TO BUILDING GROUND RING.
20. 4#12, #12 GRD, 3/4"C
21. 6#12, #12 GRD, 3/4"C
22. 3#12, #12 GRD, 3/4"C
23. 1" CONDUIT FOR VENDOR SUPPLIED CABLES. ROUTE CONDUIT IN SLAB AND ACROSS CHANNELS MINIMUM 6" ABOVE MAXIMUM WATER LEVEL.
24. FLOAT SWITCH PROVIDED BY UV SYSTEM SUPPLIER AND INSTALLED BY DIVISION 16. MOUNTING HARDWARE INCLUDING SUPPORT PIPE SHALL BE PROVIDED BY DIVISION 16 AND INSTALLED PER UV SYSTEM MANUFACTURERS RECOMMENDATIONS.

GENERAL NOTES

1. CIRCUIT ALL EXIT AND EMERGENCY EGRESS LIGHTING FIXTURES TO LOCAL LIGHTING CIRCUIT AHEAD OF SWITCH.
2. TAGGED DEVICES (XX-XXX), UNLESS INDICATED OTHERWISE, ARE SUPPLIED AND INSTALLED UNDER DIVISION 13.
3. PROVIDE EACH TELEPHONE JACK (TV) WITH A SINGLE GANG CAST OUTLET BOX AND AN 8 CONDUCTOR, CONNECTING BLOCK, WITH STAINLESS STEEL COVERPLATE WITH TELEPHONE MOUNTING STUDS. WALL MOUNT BOX AT 4'-0" AFF. EXTEND 1-4 PAIR TELEPHONE CABLE IN 1" CONDUIT TO TELEPHONE TERMINAL ENCLOSURE, SEE NOTE NO.19 THIS SHEET, AND TERMINATE ON PROTECTOR'S TERMINALS.

DISTRIBUTION PANELBOARD "DPT"

480V, 3Φ, 3 W, 225 AMP BUS
100A MAIN: CB (X) SW ( ) LUGS ( )
FEED THRU LUGS ( )
SURFACE (X) FLUSH ( ) COLUMN TYPE ( )
ENCLOSURE: NEMA 1( ) 3R( ) 12(X) 4X( )

PANEL LOADING SCHEDULE

	PHASE	A	B	C	TOTAL	DEMAND
CONNECTED	AMPS	70.2	70.2	70.2	XXX	70.2
	KVA	19.44	19.44	19.44	58.36	58.36

CIRCUIT DESCRIPTION	LOAD AMPS	BKR./ POLES	CKT. NO.		BKR./ POLES	LOAD AMPS	CIRCUIT DESCRIPTION
	11.0		1	2		11.0	
TERTIARY FILTER NO. 1	11.0	20/3	3	4	20/3	11.0	TERTIARY FILTER NO. 2
	11.0		5	6		11.0	
	11.0		7	8		11.0	
TERTIARY FILTER NO. 3	11.0	20/3	9	10	20/3	11.0	TERTIARY FILTER NO. 4
	11.0		11	12		11.0	
	11.0		13	14		11.0	
TERTIARY FILTER NO. 5	11.0	20/3	15	16	20/3	11.0	TERTIARY FILTER NO. 6
	11.0		17	18		11.0	
	1.8		19	20			
JIB CRANE	1.8	15/3	21	22	15/3		SPARE
	1.8		23	24			
	2.4		25	26			
SITE LIGHTING CONTROL PANEL	2.4	20/3	27	28	20/3		SPARE
	2.4		29	30			

PANELBOARD "T"

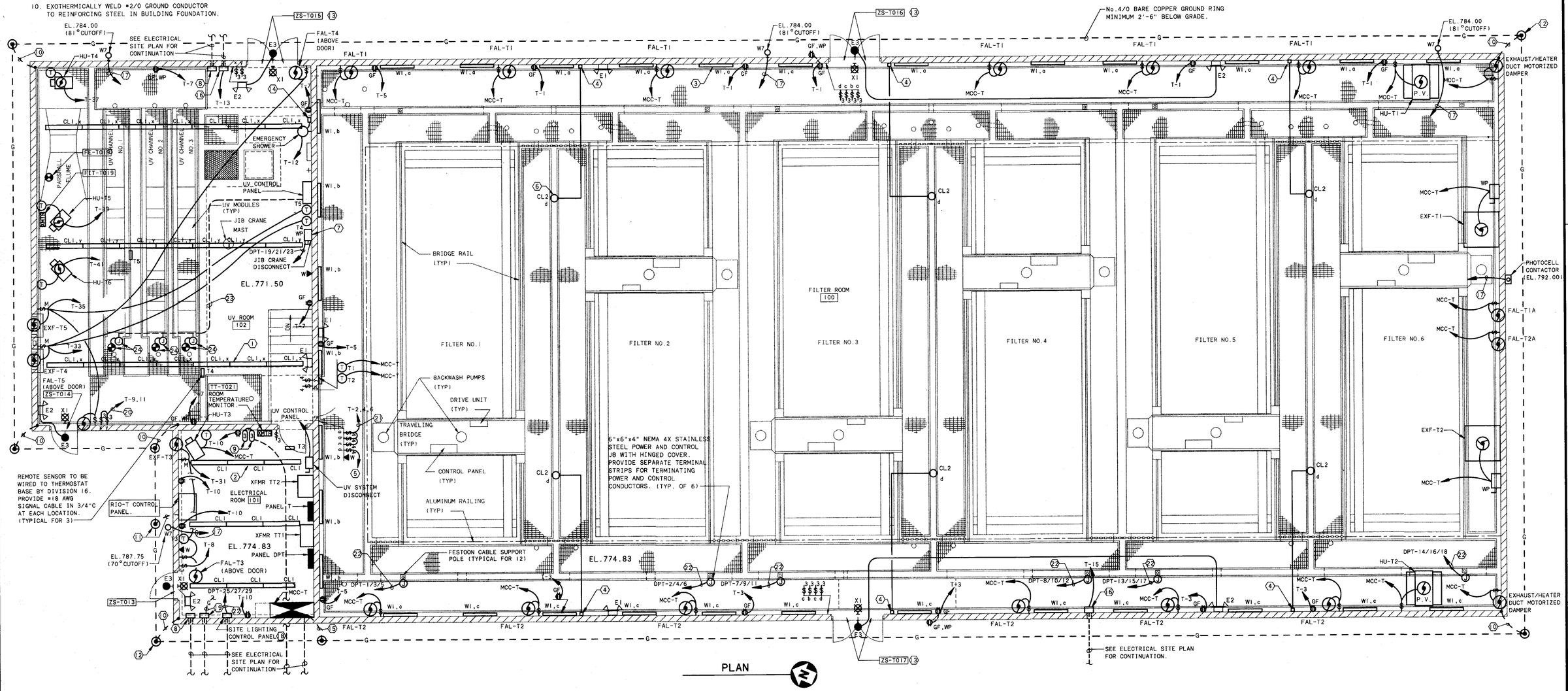
208Y/120V, 3#, 4 W, 225 AMP BUS
150A MAIN: CB (X) SW ( ) LUGS ( )
FEED THRU LUGS ( )
SURFACE (X) FLUSH ( ) COLUMN TYPE ( )
ENCLOSURE: NEMA 1( ) 3R( ) 12(X) 4X( )

PANEL LOADING SCHEDULE

	PHASE	A	B	C	TOTAL	DEMAND
CONNECTED	AMPS	-	-	-	XXX	-
	KVA	-	-	-	-	-

CIRCUIT DESCRIPTION	LOAD AMPS	BKR./ POLES	CKT. NO.		BKR./ POLES	LOAD AMPS	CIRCUIT DESCRIPTION
RECEPTACLES - FILTER AREA	9.0	20/1	1	2	20/1	12.0	SWITCH a - FILTER AREA
RECEPTACLES - FILTER AREA	9.0	20/1	3	4	20/1	12.0	SWITCH b - FILTER AREA
RECEPTACLES - FILTER AREA	4.5	20/1	5	6	20/1	6.0	SWITCH c - FILTER AREA
RECEPTACLES - UV AREA	6.0	20/1	7	8	20/1	7.5	LIGHTS - ELECTRICAL ROOM
LIGHT SWITCH y - UV AREA	6.0	20/1	9	10	20/1	6.0	RECEPT. - ELECTRICAL ROOM
LIGHT SWITCH x - UV AREA	12.0	20/1	11	12	20/1	1.5	EMERGENCY SHOWER
SLUICE GATE PORT. OPERATOR	10.0	20/1	13	14	20/1		SPARE
SLUICE GATE PORT. OPERATOR	10.0	20/1	15	16	20/1		SPARE
SPARE		20/1	17	18	20/1		SPARE
SPARE		20/1	19	20	20/1		SPARE
SPARE		20/1	21	22	20/1		SPARE
SPARE		20/1	23	24	20/1		*
SPARE		20/1	25	26	20/1		*
HU-T1	4.8	20/1	27	28	20/1		*
HU-T2	4.8	20/1	29	30	20/1		*
EXHAUST FAN EXF-T3	6.2	20/1	31	32	20/1		*
EXHAUST FAN EXF-T4	7.6	20/1	33	34	20/1		*
EXHAUST FAN EXF-T5	7.6	20/1	35	36	20/1		*
HEATING UNIT HU-T4	1.0	20/1	37	38	20/1		*
HEATING UNIT HU-T5	1.0	20/1	39	40	20/1		*
HEATING UNIT HU-T6	1.0	20/1	41	42	20/1		*

* - PANELBOARD SPACE DESIGNATED FOR DIVISION 13 EQUIPMENT AND ELECTRICAL REQUIREMENTS.



NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

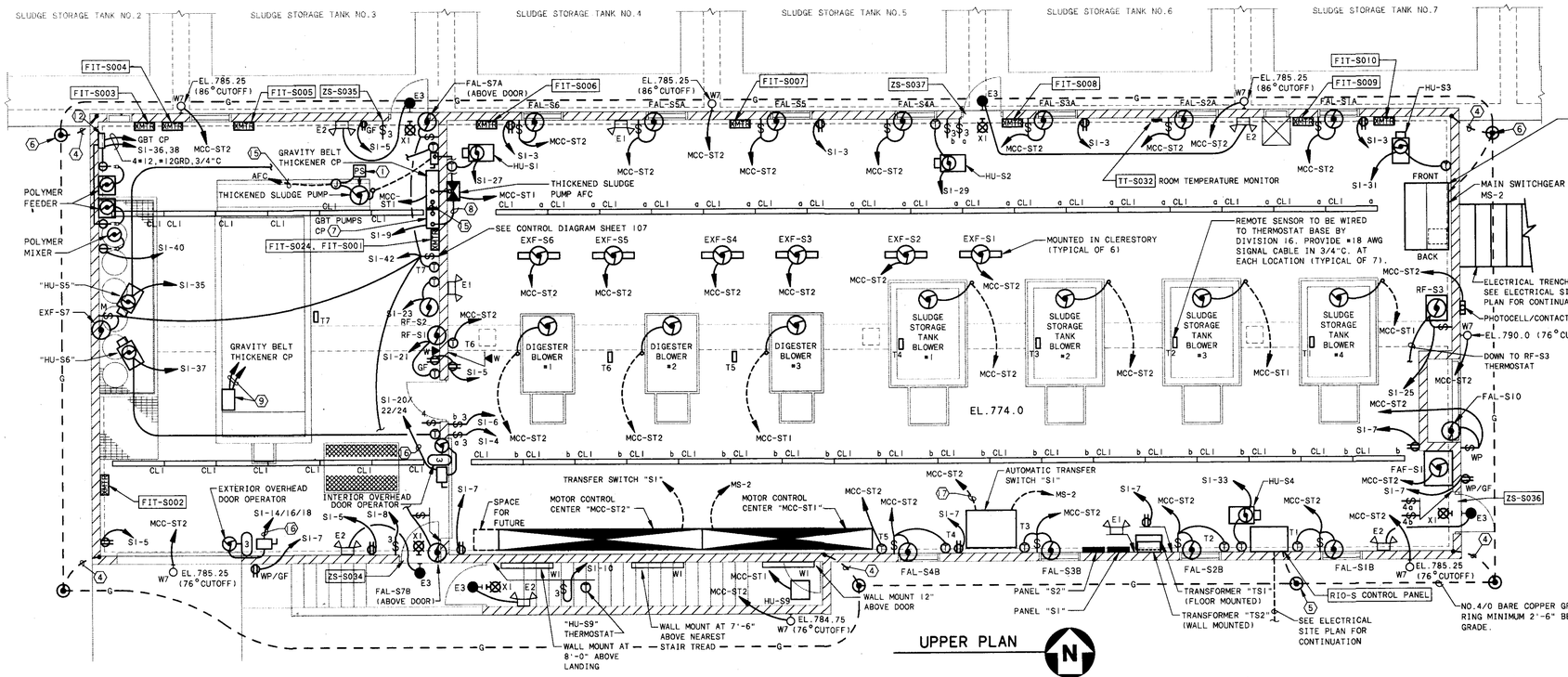
JOB NO.	15582
DESIGNED BY:	TRC
DRAWN BY:	TRF/RER
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	FEB., 1995

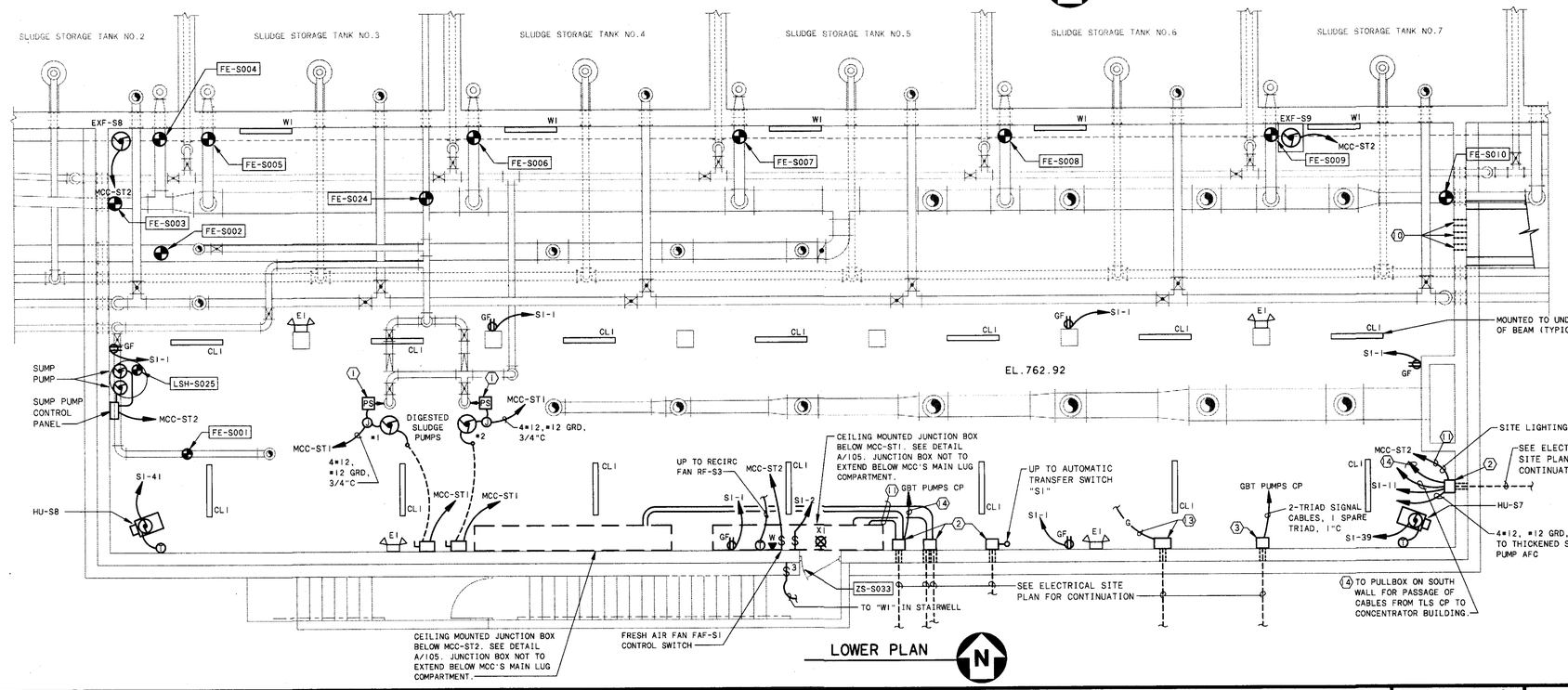
ELECTRICAL TERTIARY COMPLEX PLAN

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

SHEET NO. 99 OF 112

05-JAN-95 N:\PROJECTS\PR\15582\CADD\SHT99





PANELBOARD "S1"

208Y/120V, 3Φ, 4 W, 225 AMP BUS
150A MAIN: CB (X) SW ( ) LUGS ( )
FEED THRU LUGS ( )
SURFACE (X) FLUSH ( ) COLUMN TYPE ( )
ENCLOSURE: NEMA 1(X) 3R( ) 12( ) 4X( )

PANEL LOADING SCHEDULE

	CONNECTED				DEMAND
PHASE	A	B	C	TOTAL	
AMPS	61.6	44.3	62.2		56.0
KVA	7.39	5.32	7.46	20.17	20.17

CIRCUIT DESCRIPTION	LOAD AMPS	BKR./ POLES	CKT. NO.	BKR./ POLES	LOAD AMPS	CIRCUIT DESCRIPTION
LOWER LEVEL RECEPTACLES	9.0	20/1	1	20/1	12.4	LOWER LEVEL LIGHTS
UPPER LEVEL RECEPTACLES	6.0	20/1	3	20/1	11.7	UPPER LEV BLOWER RM LIGHTS
UPPER LEVEL RECEPTACLES	7.5	20/1	5	20/1	11.7	UPPER LEV BLOWER RM LIGHTS
UPPER LEVEL RECEPTACLES	9.0	20/1	7	20/1	7.8	UPPER LEV CONVEYOR LIGHTS
GBT PUMPS CP	3.0	20/1	9	20/1	2.0	STAIRWELL LIGHTS
TRUCK LOADING STA. CP	5.0	20/1	11	20/1	-	SPARE
SPARE	-	20/1	13	14		4.1 EXTERIOR OVERHEAD DOOR OPERATOR
SPARE	-	20/1	15	16	15/3	4.1
SPARE	-	20/1	17	18		4.1
SPARE	-	20/1	19	20		4.1 INTERIOR OVERHEAD DOOR OPERATOR
RECIRC FAN "RF-S1"	9.8	20/1	21	22	15/3	4.1
RECIRC FAN "RF-S2"	9.8	20/1	23	24		4.1
RECIRC FAN "RF-S3"	4.4	20/1	25	26	20/1	- SPARE
HEATING UNIT "HU-S1"	2.0	20/1	27	28	20/1	- SPARE
HEATING UNIT "HU-S2"	2.0	20/1	29	30	20/1	- SPARE
HEATING UNIT "HU-S3"	2.0	20/1	31	32	20/1	- SPARE
HEATING UNIT "HU-S4"	2.0	20/1	33	34	20/1	- SPARE
HEATING UNIT "HU-S5"	.8	20/1	35	36	15/1	8.0 POLYMER FEEDER
HEATING UNIT "HU-S6"	.8	20/1	37	38	15/1	8.0 POLYMER FEEDER
HEATING UNIT "HU-S7"	2.0	20/1	39	40	15/1	7.4 POLYMER MIXER
HEATING UNIT "HU-S8"	2.0	20/1	41	42	20/1	7.2 EXHAUST FAN EXF-S7

PANELBOARD "S2"

208Y/120V, 3Φ, 4 W, 100 AMP BUS
60A MAIN: CB (X) SW ( ) LUGS ( )
FEED THRU LUGS ( )
SURFACE (X) FLUSH ( ) COLUMN TYPE ( )
ENCLOSURE: NEMA 1(X) 3R( ) 12( ) 4X( )

PANEL LOADING SCHEDULE

	CONNECTED				DEMAND
PHASE	A	B	C	TOTAL	
AMPS	-	-	-		-
KVA	-	-	-	-	-

CIRCUIT DESCRIPTION	LOAD AMPS	BKR./ POLES	CKT. NO.	BKR./ POLES	LOAD AMPS	CIRCUIT DESCRIPTION
*	-	20/1	1	2	20/1	- *
*	-	20/1	3	4	20/1	- *
*	-	20/1	5	6	20/1	- *
*	-	20/1	7	8	20/1	- *
*	-	20/1	9	10	20/1	- *
*	-	20/1	11	12	20/1	- *
SPARE	-	20/1	13	14	20/1	- SPARE
SPARE	-	20/1	15	16	20/1	- SPACE
SPACE	-	-	17	18	-	- SPACE
SPACE	-	-	19	20	-	- SPACE
SPACE	-	-	21	22	-	- SPACE
SPACE	-	-	23	24	-	- SPACE
SPACE	-	-	25	26	-	- SPACE
SPACE	-	-	27	28	-	- SPACE
SPACE	-	-	29	30	-	- SPACE

* - PANELBOARD SPACE DEDICATED FOR DIVISION 13 EQUIPMENT AND ELECTRICAL REQUIREMENTS.

GENERAL NOTES:

1. CIRCUIT ALL EXIT AND EMERGENCY EGRESS LIGHTING FIXTURES TO LOCAL LIGHTING CIRCUIT AHEAD OF SWITCH.
2. TAGGED DEVICES (XX-XXX), UNLESS INDICATED OTHERWISE, ARE SUPPLIED AND INSTALLED UNDER DIVISION 13.
3. PROVIDE EACH TELEPHONE JACK (▼W) WITH A SINGLE GANG CAST OUTLET BOX AND AN 8 CONDUCTOR, CONNECTING BLOCK, WITH STAINLESS STEEL COVERPLATE WITH TELEPHONE MOUNTING STUDS. WALL MOUNT BOX AT 4'-0" AFF. EXTEND 1-4 PAIR TELEPHONE CABLE IN 1" CONDUIT TO TELEPHONE TERMINAL ENCLOSURE, SEE NOTE 13 THIS SHEET, AND TERMINATE ON PROTECTOR'S TERMINALS.

CODED NOTES: ⬡

1. PRESSURE SWITCH PROVIDED UNDER DIV. 11. CONDUIT AND WIRE BY DIVISION 16.
2. STAINLESS STEEL PULLBOX, SIZED PER NEC SECTION 370, MOUNTED TIGHT TO STRUCTURE ABOVE.
3. 12"x12"x6" DEEP STAINLESS STEEL PULLBOX WALL MOUNTED TIGHT TO STRUCTURE ABOVE FOR PASSAGE OF DIVISION 13 SIGNAL AND/OR CONTROL CABLES.
4. EXOTHERMICALLY WELD #2/0 GROUND CONDUCTOR TO REINFORCING IN BUILDING FOUNDATION.
5. ISOLATED SIGNAL GROUND. SEE SPECIFICATION 16452.
6. GROUND SYSTEM TEST WELL. SEE DETAIL G/105A.
7. GRAVITY BELT THICKENER (GBT) PUMPS CP. SEE CONTROL PANEL ELEVATION ON SHEET 105A AND CONTROL DIAGRAM ON SHEET 109A. PROVIDE 8#12,#12 GRD, 1"C TO MCC-ST1 FOR REMOTE DIGESTED SLUDGE PUMP CONTROL REQUIREMENTS.
8. 4#12, #12 GRD, 1-TRIAD SIGNAL CABLE, 3/4"C.
9. GRAVITY BELT THICKENER TERMINAL BOX (APPROXIMATE LOCATION-FIELD VERIFY). PROVIDE 2-1 1/4"C W/ 12#12, #12GRD. IN EACH BETWEEN TERMINAL BOX AND GRAVITY BELT THICKENER CP FOR POWER AND CONTROLS.
10. PROVIDE 6-5" CONDUIT SLEEVES (4 USED, 2 SPARE) THROUGH WALL FOR PASSAGE OF MAIN SWITCHGEAR MS-2 SERVICE CONDUCTORS. PROVIDE EACH SLEEVE WITH AN OZ GEDNEY (TYPE CSBG) OR EQUAL, CONDUIT SEALING BUSHING TO SEAL AROUND SERVICE CABLES AND INTERIOR OF CONDUIT SLEEVE. INSIDE BUILDING (NOT SHOWN) PROVIDE A CABLE TRAY (SAME WIDTH AS USED IN TRENCH) TO SUPPORT/PROTECT CABLES. PROVIDE TRAY WITH A 90° UP TURNING ELBOW TO EXTEND TRAY FROM UNDERSIDE OF WALL PENETRATIONS TO OPPOSITE SIDE OF FLOOR PENETRATIONS, RIGIDLY ATTACH TRAY TO WALL AND CEILING STRUCTURE. ROUTE SERVICE CABLES THROUGH SLEEVES/CONDUIT SEALS AND UP THROUGH OPENING TO SWITCHGEAR LUGS. DAM FLOOR OPENING AND SEAL PENETRATION WITH RTV SILICONE FOAM ONCE SERVICE CONDUCTOR INSTALLATION IS COMPLETE.
11. SEE ELECTRICAL SITE PLAN CONDUIT SCHEDULE FOR CONDUIT AND CONDUCTOR SIZES.
12. POLYMER FEED PUMP CONTROL PANEL - SEE CONTROL DIAGRAM ON SHEET 106.
13. TERMINATE 25 PAIR TELEPHONE CABLE IN A 24"x24"x8" DEEP STAINLESS STEEL HINGED DOOR ENCLOSURE. WALL MOUNT ENCLOSURE AT 6'-0" AFF TO TOP OF ENCLOSURE. PROVIDE ENCLOSURE WITH A 25 PAIR MODULAR PROTECTOR TO TERMINATE INCOMING 25 PAIR CABLE. EXTEND #4 GROUND CONDUCTOR IN 3/4" CONDUIT TO BUILDING GROUND RING.
14. 8#12, 4#12 SPARE, #12 GRD, 1"C
15. 6#12, #12 GRD, 1"C
16. 3#12, #12 GRD, 3/4" C.
17. 8#12, #12 GRD 3/4" C.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

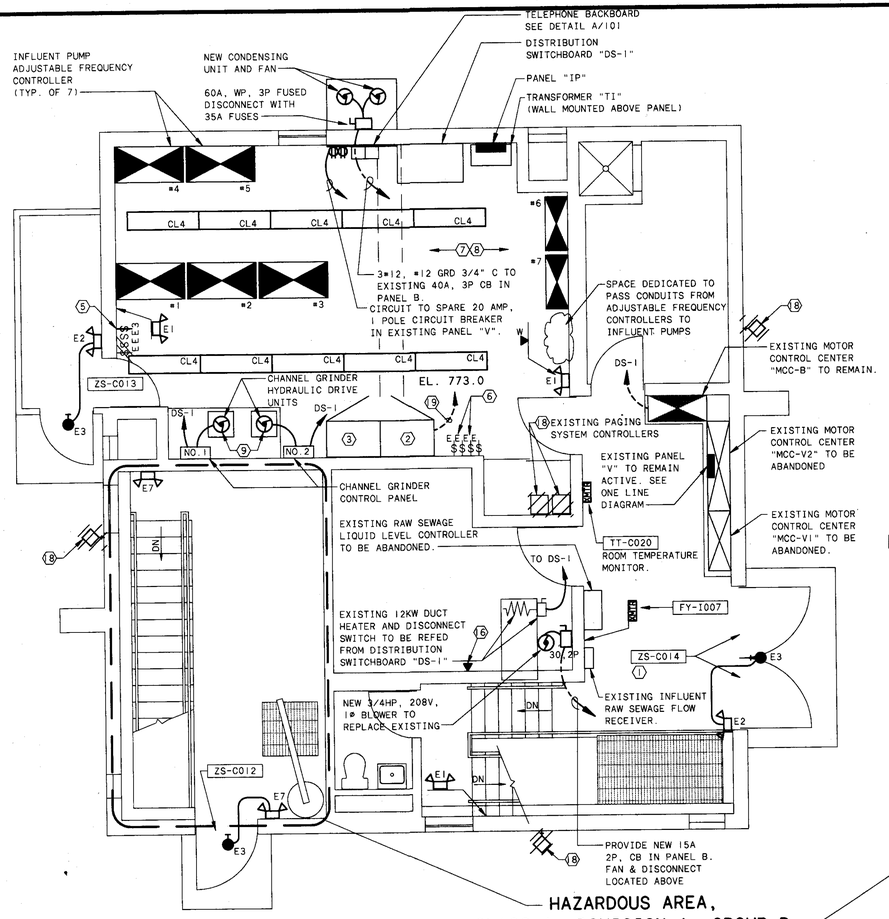
JOB NO.	15582
DESIGNED BY:	TRC/SAT
DRAWN BY:	TRF/TES
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	MARCH 1995

ELECTRICAL SLUDGE THICKENER BUILDING PLAN

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

SHEET NO. 100 OF 112

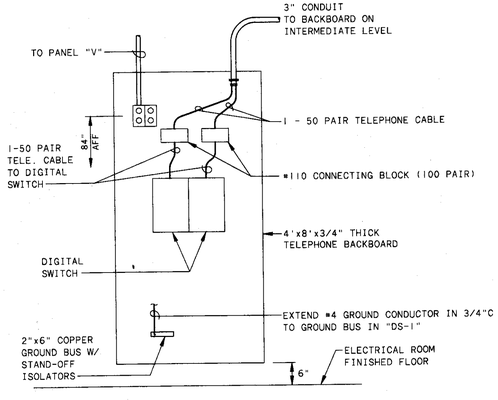
N:\PN15582\CADD\SHT100 4-3-95 10:12:57 am EST



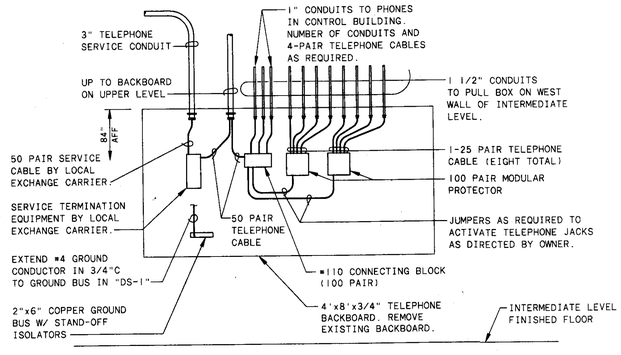
UPPER PLAN

INTERMEDIATE PLAN

LOWER PLAN



A/101 TELEPHONE BACKBOARD
SCALE: NONE



B/101 TELEPHONE BACKBOARD
SCALE: NONE

GENERAL NOTES:

1. TAGGED DEVICES (XXX-XX) ARE SUPPLIED AND INSTALLED COMPLETE UNDER DIVISION 13.
2. CIRCUIT ALL EMERGENCY EGRESS LIGHTING FIXTURES TO LOCAL LIGHTING CIRCUIT AHEAD OF SWITCH.
3. PROVIDE EACH TELEPHONE JACK (▼W) WITH A SINGLE GANG CAST OUTLET BOX AND AN 8 CONDUCTOR CONNECTING BLOCK WITH STAINLESS STEEL COVERPLATE WITH TELEPHONE MOUNTING STUDS. WALL MOUNT BOX AT 4'-0"AFF. EXTEND 1-4 PAIR TELEPHONE CABLE IN 1"C. TO TELEPHONE BACKBOARD. SEE DETAIL B/101.

PANELBOARD "IP"

208Y/120V, 3Ø, 4 W, 100 AMP BUS								
60A MAIN: CB (X) SW ( ) LUGS ( )								
FEED THRU LUGS ( )								
SURFACE (X) FLUSH ( ) COLUMN TYPE ( )								
ENCLOSURE: NEMA 1(X) 3R( ) 12( ) 4X( )								

PANEL LOADING SCHEDULE					
CONNECTED					DEMAND
PHASE	A	B	C	TOTAL	
AMPS	-	-	-		-
KVA	-	-	-	-	-

CIRCUIT DESCRIPTION	LOAD AMPS	BKR./ POLES	CKT. NO.		BKR./ POLES	LOAD AMPS	CIRCUIT DESCRIPTION
*	-	20/1	1	2	20/1	-	*
*	-	20/1	3	4	20/1	-	*
*	-	20/1	5	6	20/1	-	*
SPARE	-	20/1	7	8	20/1	-	SPARE
SPARE	-	20/1	9	10	20/1	-	SPARE
SPARE	-	20/1	11	12	20/1	-	SPARE
SPARE	-	20/1	13	14	20/1	-	SPARE
SPARE	-	20/1	15	16	20/1	-	SPARE
SPACE	-	-	17	18	-	-	SPACE
SPACE	-	-	19	20	-	-	SPACE
SPACE	-	-	21	22	-	-	SPACE
SPACE	-	-	23	24	-	-	SPACE
SPACE	-	-	25	26	-	-	SPACE
SPACE	-	-	27	28	-	-	SPACE
SPACE	-	-	29	30	-	-	SPACE

* - PANELBOARD SPACE DESIGNATED FOR DIVISION 13 EQUIPMENT AND ELECTRICAL REQUIREMENTS.

CODED NOTES:

1. DOOR MONITOR SWITCH, TYPICAL, TWO WIRED IN SERIES.
2. RIO-C CONTROL PANEL
3. INFLUENT PUMP CONTROL PANEL WITH SLC-IP. SUPPLIED AND INSTALLED BY INFLUENT PUMP SUPPLIER.
4. SUBMERSIBLE INFLUENT PUMP POWER AND CONTROL CORD JUNCTION BOX. PROVIDE TERMINALS FOR POWER AND CONTROL WIRING. ROUTE POWER AND CONTROL WIRING IN SEPARATE CONDUITS TO AFC. MOUNT BOX TO WALL AT ELEVATION 767.
5. MOUNT NEW 3-WAY SWITCH ADJACENT EXISTING SWITCHES TO CONTROL NEW CL1 FIXTURES.
6. REPLACE EXISTING SINGLE POLE SWITCHES CONTROLLING EXISTING FIXTURES WITH NEW 3-WAY SWITCH TO CONTROL NEW CL4 FIXTURES. REUSE EXISTING CONDUIT IN WALL TO CIRCUIT NEW FIXTURES.
7. CIRCUIT NEW CL4 FIXTURES TO CIRCUIT "B-1" IN EXISTING MCC-B.
8. CONDUITS ROUTED THRU THE ELECTRICAL EQUIPMENT ROOM SHALL BE ROUTED ABOVE THE DROP CEILING AND SHALL DROP VERTICALLLY TO ASSOCIATED EQUIPMENT. CONDUITS TO INFLUENT PUMPS SHALL FAN OUT ALONG SOUTH WALL AND PASS THRU FLOOR AT LOCATION INDICATED.
9. CHANNEL GRINDER FURNISHED, INSTALLED, AND CIRCUITED TO CONTROL PANEL BY OTHERS.
10. RUN CONDUIT FROM DISCONNECT SWITCH TO INFLUENT DRIVE VERTICALLY TO STRUCTURE ABOVE, HORIZONTALLY TIGHT TO STRUCTURE WITH A VERTICAL DROP TO INFLUENT DRIVE. TERMINATE RIGID CONDUIT 24" ABOVE DRIVE CONNECTION. FINAL 24" TO DRIVE CONNECTION TO BE IN FLEXIBLE CONDUIT.
11. STAINLESS STEEL PULLBOX, SIZED PER NEC SECTION 370, MOUNTED TIGHT TO STRUCTURE ABOVE.
12. 12"x12"x6" DEEP STAINLESS STEEL PULLBOX WALL MOUNTED TIGHT TO STRUCTURE FOR PASSAGE OF DIVISION 13 SIGNAL AND/OR CONTROL CABLES.
13. 12"x12"x6" DEEP STAINLESS STEEL PULLBOX WALL MOUNTED TIGHT TO STRUCTURE FOR PASSAGE OF NEW TELEPHONE SERVICE CABLE (SERVICE CABLE FURNISHED AND INSTALLED BY TELEPHONE LOCAL EXCHANGE CARRIER).
14. 24"x24"x12" DEEP STAINLESS STEEL PULLBOX WALL MOUNTED TIGHT TO STRUCTURE FOR PASSAGE OF TELEPHONE CABLES.
15. EXTEND TELEPHONE CONDUITS TO NEW TELEPHONE BACKBOARD. SEE DETAIL B/101.
16. INSTALL NEW TELEPHONE JACK AT EXISTING JACK LOCATION. REUSE EXISTING CONDUIT TO INSTALL NEW TELEPHONE CABLE.
17. ONCE NEW SERVICE TO THE BUILDING IS INSTALLED AND THE EXISTING MCC'S ARE OUT OF SERVICE, REMOVE EXISTING CONDUIT DUCTBANK (WITH THE EXCEPTION OF 3/4"C. TO PERGOLA LIGHTING) COMPLETE FROM BUILDING WALL PENETRATION TO A LOCATION 5'-0" SOUTH OF BUILDING WALL. SEAL ALL WALL PENETRATIONS WATERTIGHT WITH NON-SHRINK GROUT.
18. REMOVE ALL EXISTING PAGING AND INTERCOM SYSTEM COMPONENTS - SEE SPECIFICATION 16010.
19. ISOLATED SIGNAL GROUND TO MAIN GROUND BUS IN DS-1. SEE SPECIFICATION 16452.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

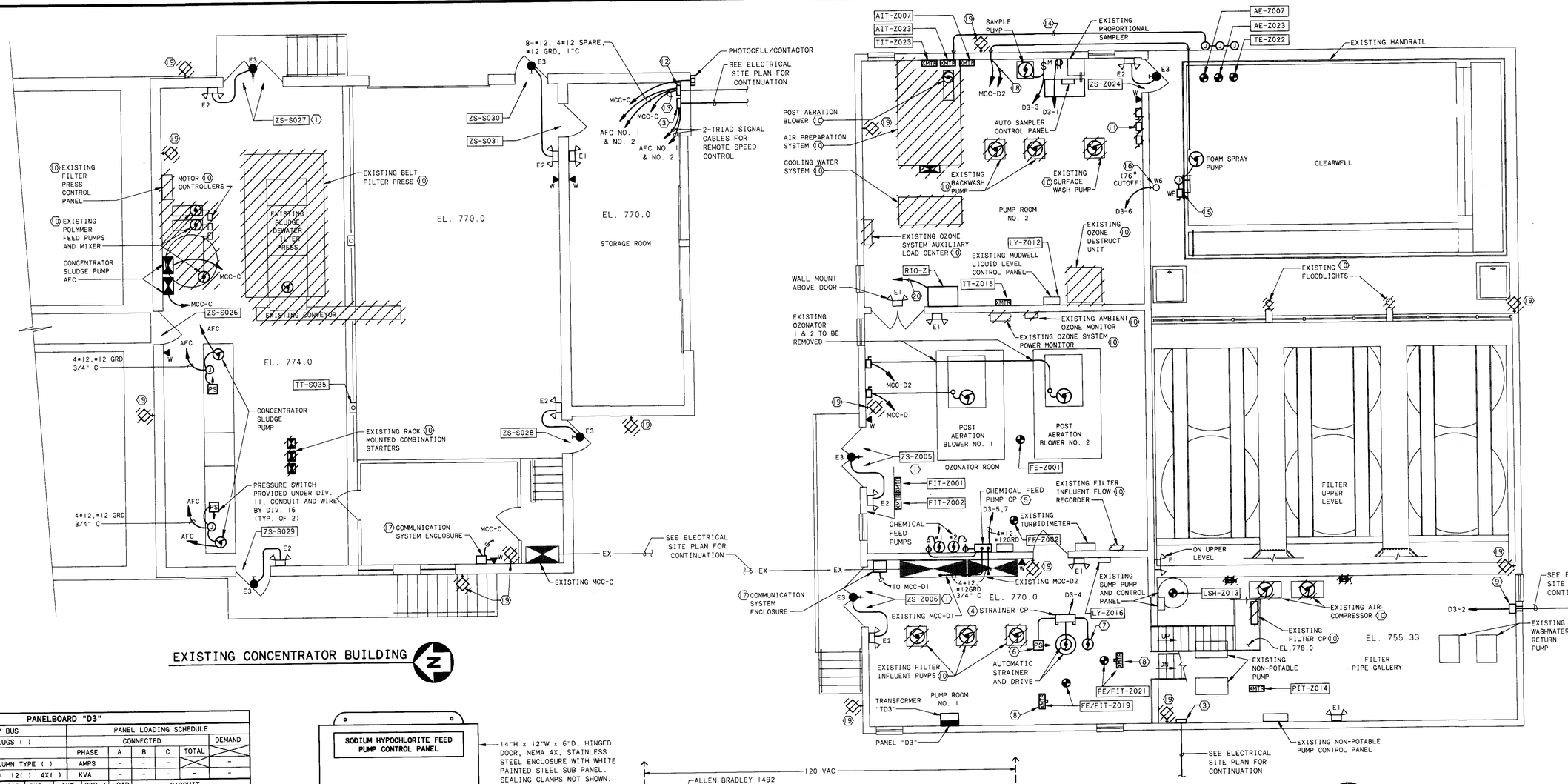
JOB NO.	15582
DESIGNED BY:	SAT/TRC
DRAWN BY:	RER/TES
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	FEB., 1995

ELECTRICAL
EXISTING CONTROL BUILDING PLANS

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

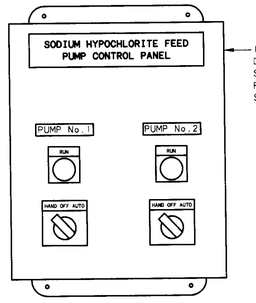
SHEET NO. 101 OF 112

N:\PR15582\CADD\SHT101 2-24-95 11:21:03 am EST



PANELBOARD "D3"										
208Y/120V, 3ø, 4 W, 150 AMP BUS			PANEL LOADING SCHEDULE							
60A MAIN: CB (X) SW ( ) LUGS ( )			CONNECTED						DEMAND	
FEED THRU LUGS ( )			PHASE	A		B		C	TOTAL	
SURFACE (X) FLUSH ( ) COLUMN TYPE ( )			AMPS	-		-		-		-
ENCLOSURE: NEMA 1(X) 3R( ) 12( ) 4X( )			KVA	-		-		-	-	-
CIRCUIT DESCRIPTION	LOAD AMPS	BKR./ POLES	CKT. NO.		BKR./ POLES	LOAD AMPS	CIRCUIT DESCRIPTION			
AUTO SAMPLER	9.0	20/1	1	2	20/1	10.0	SLUICE GATE PORT. OPERATOR			
SAMPLE PUMP	9.8	15/1	3	4	20/1	13.0	STRAINER CONTROL PANEL			
SODIUM HYPOCHLORITE PUMP 1	2.6	15/1	5	6	20/1	2.5	CLEARWELL FLOODLIGHT			
SODIUM HYPOCHLORITE PUMP 2	2.6	15/1	7	8	20/1	-	SPARE			
SPARE	-	20/1	9	10	20/1	-	SPARE			
SPARE	-	20/1	11	12	20/1	-	SPARE			
SPARE	-	20/1	13	14	20/1	-	SPARE			
SPARE	-	20/1	15	16	20/1	-	SPARE			
SPARE	-	20/1	17	18	20/1	-	SPARE			
*	-	20/1	19	20	20/1	-	*			
*	-	20/1	21	22	20/1	-	*			
*	-	20/1	23	24	20/1	-	*			
*	-	20/1	25	26	20/1	-	*			
*	-	20/1	27	28	20/1	-	*			
*	-	20/1	29	30	20/1	-	*			

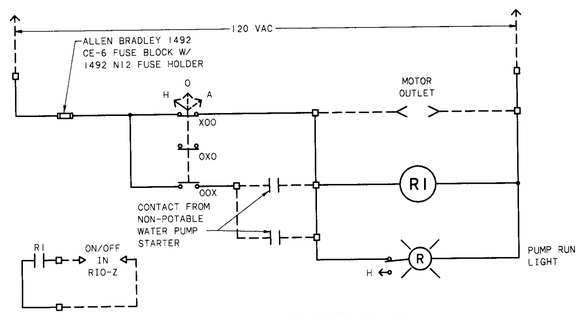
* - PANELBOARD SPACE DEDICATED FOR DIVISION 13 EQUIPMENT AND ELECTRICAL REQUIREMENTS



14"H x 12"W x 6"D, HINGED DOOR, NEMA 4X, STAINLESS STEEL ENCLOSURE WITH WHITE PAINTED STEEL SUB PANEL. SEALING CLAMPS NOT SHOWN.

CHEMICAL FEED PUMP CONTROL PANEL ELEVATION

A/102 SCALE: NONE



SODIUM HYPOCHLORITE FEED PUMP #1 CONTROL CIRCUIT DIAGRAM

SCALE: NONE

(TYPICAL FOR PUMP #2)

CODED NOTES:

1. DOOR MONITOR SWITCHES - TYPICAL OF TWO WIRED IN SERIES.
2. NOT USED
3. 12"x12"x6" DEEP STAINLESS STEEL PULLBOX WALL MOUNTED AT 6'-0" AFF FOR PASSAGE OF DIV. 13 SIGNAL AND/OR CONTROL CABLES.
4. SEE DETAIL C/105A.
5. SEE DETAIL A/102.
6. DIFFERENTIAL PRESSURE SWITCH SUPPLIED WITH STRAINER.
7. ELECTRIC BACKWASH VALVE SUPPLIED WITH STRAINER.
8. MOUNT TRANSMITTER TO SINGLE VERTICAL SUPPORT AS SHOWN IN DETAIL C ON SHEET 105A. WELD U-CHANNEL TO VERTICAL SUPPORT AND ATTACH XMTR TO U-CHANNEL.
9. STAINLESS STEEL JUNCTION BOX, SIZED PER NEC 370.
10. EQUIPMENT TO BE REMOVED. SEE SPECIFICATION 16010 FOR ELECTRICAL DEMOLITION REQUIREMENTS.
11. EXISTING BACKWASH AND SURFACE WASH PUMPS DISCONNECT SWITCHES.
12. STAINLESS STEEL JUNCTION BOX SIZED PER NEC 370, WALL MOUNTED AT 6'-0" AFF.
13. SEE ELECTRICAL SITE PLAN CONDUIT SCHEDULE FOR CONDUIT AND CONDUCTOR SIZE.
14. 1 1/4"C FOR DIV.13 SENSOR CABLES. PENETRATE BUILDING WALL APPROX. 1'-0" AFG. AND TURN DOWN EXTERIOR WALL WITH LB FITTING. ROUTE CONDUIT UNDERGROUND AS SHOWN TO SENSOR LOCATIONS. PROVIDE CAST JUNCTION BOXES FOR FLEXIBLE CONNECTION TO SENSORS (BY DIV. 13). PROVIDE JB ON INSIDE WALL OVER CONDUIT THRU WALL FOR CONSOLIDATION OF SENSOR CABLES TO ASSOCIATED TRANSMITTER.
15. PROVIDE ALUMINUM PLATE SECURED TO HANDRAIL (SIMILAR TO DETAIL F/105) FOR MOUNTING PUMP DISCONNECT AND PUMP CABLE POWER/CONTROL JB. CORE DRILL THRU TANK WALL AND ROUTE CONDUIT EXPOSED ON FACE OF WALKWAY AS SHOWN. ROUTE CONDUIT INTO BUILDING WITH LB FITTINGS SIMILAR TO CONDUIT IN CODED NOTE 14.
16. WALL MOUNT AT 14'-0" ABOVE FINISHED FLOOR.
17. TERMINATE 25 PAIR TELEPHONE CABLE IN A 24"x24"x8" DEEP STAINLESS STEEL HINGED DOOR ENCLOSURE. WALL MOUNT ENCLOSURE AT 6'-0" AFF TO TOP OF ENCLOSURE. PROVIDE ENCLOSURE WITH 25 PAIR MODULAR PROTECTOR TO TERMINATE INCOMING 25 PAIR CABLE. EXTEND #4 GROUND CONDUCTOR IN 3/4" CONDUIT TO GROUND BUS IN PANEL INDICATED. EXTEND CONDUIT FROM EXISTING COMMUNICATION PB TO NEW TELEPHONE TERMINAL ENCLOSURE.
18. 4-#14, #12 GRD, 3/4" C FOR PUMP TEMPERATURE AND MOISTURE SENSORS.
19. REMOVE ALL EXISTING PAGING AND INTERCOM SYSTEM COMPONENTS. SEE SPECIFICATION 16010.
20. ISOLATED SIGNAL GROUND - TO MAIN GROUND BUS IN MCC-D1. SEE SPECIFICATION 16452.

GENERAL NOTES:

1. CIRCUIT ALL EXIT AND EMERGENCY EGRESS LIGHTING FIXTURES TO LOCAL LIGHTING CIRCUIT AHEAD OF SWITCH.
2. TAGGED DEVICES (XX-XXX), UNLESS INDICATED OTHERWISE, ARE SUPPLIED AND INSTALLED UNDER DIVISION 13.
3. PROVIDE EACH TELEPHONE JACK (▼W) WITH A SINGLE GANG CAST OUTLET BOX AND AN 8 CONDUCTOR, CONNECTING BLOCK, WITH STAINLESS STEEL COVERPLATE WITH TELEPHONE MOUNTING STUDS. WALL MOUNT BOX AT 4'-0" AFF. EXTEND 1-4 PAIR TELEPHONE CABLE TO TELEPHONE TERMINAL ENCLOSURE, SEE NOTE NO. 17 THIS SHEET, AND TERMINATE ON PROTECTORS TERMINAL'S.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	TRC
DRAWN BY:	RER
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	MARCH 1995

ELECTRICAL EXISTING CONCENTRATOR AND TERTIARY BUILDING PLANS

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

SHEET NO. 102 OF 112

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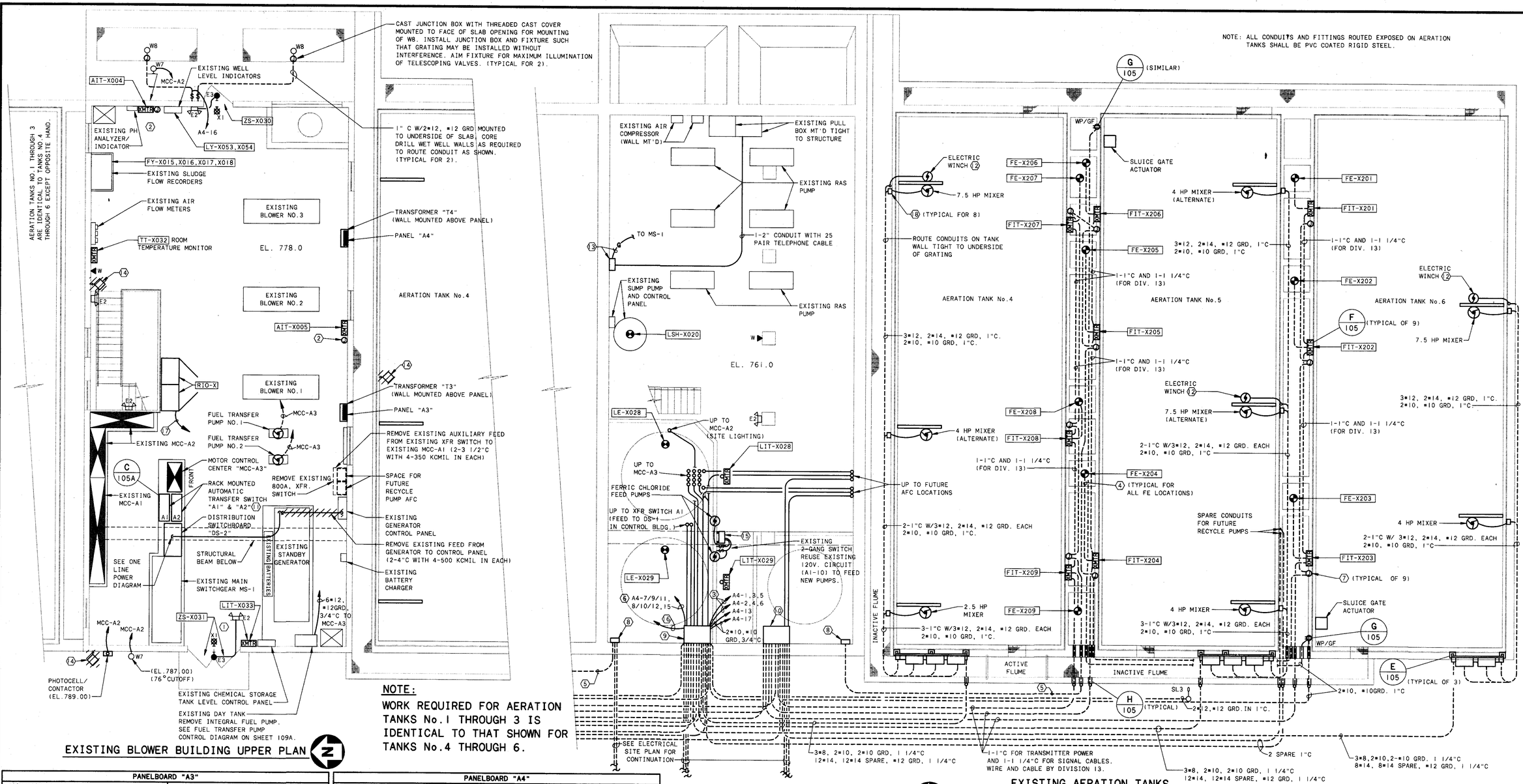


EXISTING BLOWER BUILDING UPPER PLAN

NOTE:

WORK REQUIRED FOR AERATION TANKS No.1 THROUGH 3 IS IDENTICAL TO THAT SHOWN FOR TANKS No.4 THROUGH 6.

EXISTING BLOWER BUILDING LOWER PLAN

EXISTING AERATION TANKS

PANELBOARD "A3"

208Y/120V, 3Φ, 4 W, 100 AMP BUS						PANEL LOADING SCHEDULE				
60A MAIN: CB (X) SW ( ) LUGS ( )						CONNECTED				DEMAND
FEED THRU LUGS ( )						PHASE	A	B	C	TOTAL
SURFACE (X) FLUSH ( ) COLUMN TYPE ( )						AMPS	-	-	-	-
ENCLOSURE: NEMA 1(X) 3R( ) 12( ) 4X( )						KVA	-	-	-	-
CIRCUIT DESCRIPTION	LOAD AMPS	BKR./ POLES	CKT. NO.	BKR./ POLES	LOAD AMPS	CIRCUIT DESCRIPTION				
*	-	20/1	1	2	20/1	-	*			
*	-	20/1	3	4	20/1	-	*			
*	-	20/1	5	6	20/1	-	*			
SPARE	-	20/1	7	8	20/1	-	SPARE			
SPARE	-	20/1	9	10	20/1	-	SPARE			
SPARE	-	20/1	11	12	20/1	-	SPARE			
SPARE	-	20/1	13	14	20/1	-	SPARE			
SPARE	-	20/1	15	16	20/1	-	SPARE			
SPACE	-	-	17	18	-	-	SPACE			
SPACE	-	-	19	20	-	-	SPACE			
SPACE	-	-	21	22	-	-	SPACE			
SPACE	-	-	23	24	-	-	SPACE			
SPACE	-	-	25	26	-	-	SPACE			
SPACE	-	-	27	28	-	-	SPACE			
SPACE	-	-	29	30	-	-	SPACE			

* - PANELBOARD SPACE DEDICATED FOR DIVISION 13 EQUIPMENT AND ELECTRICAL REQUIREMENTS.

PANELBOARD "A4"

208Y/120V, 3Φ, 4 W, 225 AMP BUS						PANEL LOADING SCHEDULE				
100A MAIN: CB (X) SW ( ) LUGS ( )						CONNECTED				DEMAND
FEED THRU LUGS ( )						PHASE	A	B	C	TOTAL
SURFACE (X) FLUSH ( ) COLUMN TYPE ( )						AMPS	32.6	30.3	32.6	31.8
ENCLOSURE: NEMA 1(X) 3R( ) 12( ) 4X( )						KVA	3.91	3.64	3.91	11.46
CIRCUIT DESCRIPTION	LOAD AMPS	BKR./ POLES	CKT. NO.	BKR./ POLES	LOAD AMPS	CIRCUIT DESCRIPTION				
ELECTRIC WINCH-TANK #1	7.2	15/1	1	2	15/1	7.2	ELECTRIC WINCH-TANK #4			
ELECTRIC WINCH-TANK #2	7.2	15/1	3	4	15/1	7.2	ELECTRIC WINCH-TANK #5			
ELECTRIC WINCH-TANK #3	7.2	15/1	5	6	15/1	7.2	ELECTRIC WINCH-TANK #6			
CONTROL VALVE (FV-X002)	4.1	15/3	7	8	15/3	4.1	CONTROL VALVE (FV-X003)			
	4.1		9	10		4.1				
	4.1		11	12		4.1				
SLUICE GATE PORT. OPER.-NO.	10.0	20/1	13	14	20/1	-	SPARE			
METER CHAMBER LTG. & REC.	3.5	20/1	15	16	20/1	4.2	RAS WELL LIGHTS			
SLUICE GATE PORT. OPER.-SO.	10.0	20/1	17	18	20/1	-	SPARE			
SPARE	-	20/1	19	20	20/1	-	SPARE			
SPARE	-	20/1	21	22	20/1	-	SPARE			
SPARE	-	20/1	23	24	20/1	-	SPARE			
SPACE	-	-	25	26	-	-	SPACE			
SPACE	-	-	27	28	-	-	SPACE			
SPACE	-	-	29	30	-	-	SPACE			

AE-X004 PORTABLE PROBE TO BE PLUGGED INTO ANY JUNCTION BOX ALONG TANKS 1, 2 & 3.

AE-X005 PORTABLE PROBE TO BE PLUGGED INTO ANY JUNCTION BOX ALONG TANKS 4, 5 & 6.

GENERAL NOTES:

1. CIRCUIT ALL EXIT AND EMERGENCY EGRESS LIGHTING FIXTURES TO LOCAL LIGHTING CIRCUIT AHEAD OF SWITCH.
2. TAGGED DEVICES (XX-XXXX), UNLESS INDICATED OTHERWISE, ARE SUPPLIED AND INSTALLED UNDER DIVISION 13. FE/FIT-X101 THRU X109 INSTALL IN TANKS 3, 2, & 1 USING TANKS 6, 5, & 4 AND FE/FIT-X201 THRU X209 AS MODEL.
3. PROVIDE EACH TELEPHONE JACK (▼W) WITH A SINGLE GANG CAST OUTLET BOX AND AN 8 CONDUCTOR, CONNECTING BLOCK, WITH STAINLESS STEEL COVERPLATE WITH TELEPHONE MOUNTING STUDS. WALL MOUNT BOX AT 4'-0" AFF. EXTEND 1-4 PAIR TELEPHONE CABLE IN 1" CONDUIT TO TELEPHONE TERMINAL ENCLOSURE. SEE NOTE NO.13 THIS SHEET, AND TERMINATE ON PROTECTOR'S TERMINALS.

CODED NOTES: ⬡

1. DOOR MONITOR SWITCH - TYPICAL OF TWO WIRED IN SERIES.
2. VENDOR SUPPLIED JUNCTION BOX FOR DO PROBE CALIBRATION AND CONNECTION TO FIELD MOUNTED JUNCTION BOXES. WORK OF DIVISION 13.
3. 3/4" CONDUIT WITH 6-#10, 1-#10 GRD.
4. TERMINATE 1" RIGID CONDUIT WITHIN 12" OF FLOW ELEMENT LOCATION. FINAL CONNECTION TO FLOW ELEMENT SHALL BE WITH FLEXIBLE CONDUIT BY DIVISION 13.
5. 1 1/4" CONDUIT BETWEEN EACH JB (SEE CODED NOTE 9) FOR MULTICONCUCTOR SIGNAL CABLE FURNISHED UNDER DIVISION 13 TO VENDOR SUPPLIED JUNCTION BOX ADJACENT XFMR. SEE NOTE 2.
6. 1" CONDUIT WITH 8-#12, 1-#12 GRD.
7. VENDOR SUPPLIED JUNCTION BOX FOR CONNECTION TO DISSOLVED OXYGEN PROBE.
8. 12"x12"x6" DEEP STAINLESS STEEL PULLBOX WALL MOUNTED TIGHT TO STRUCTURE ABOVE FOR PASSAGE OF DIVISION 13 SIGNAL AND/OR CONTROL CABLES.
9. 36"W x 36"H x 24"DEEP STAINLESS STEEL PULLBOX TIGHT TO STRUCTURE ABOVE. PROVIDE TERMINAL BLOCKS FOR LANDING MIXER RUN AND FAILURE SIGNAL WIRING, INCLUDING SPARES. CONTINUATION OF SIGNALS TO RIO-X WORK OF DIVISION 13.
10. 36"W x 36"H x 24" DEEP STAINLESS STEEL PULLBOX MOUNTED TIGHT TO STRUCTURE FOR PASSAGE OF DIVISION 13 SIGNAL AND/ OR CONTROL CABLES.
11. MOUNT TRANSFER SWITCHES BACK TO BACK ON RACK. PROVIDE A CENTER VERTICAL SUPPORT TO RACK IDENTICAL TO END SUPPORTS IN REFERENCED DETAIL. ROUTE 2#12, #12GRD IN 3/4" CONDUIT FROM EACH TRANSFER SWITCH TO GENERATOR CONTROL PANEL.
12. PROVIDE MANUAL MOTOR STARTER (MMS) AND INSTALL ON MIXER DISCONNECT BACK PLATE (SEE DETAIL E ON SHEET 105). ROUTE 3/4"C WITH 2#10, #10 GRD. FROM WIREWAY TO MMS AND FROM MMS TO ELECTRIC WINCH POWER CONNECTION.
13. TERMINATE 25 PAIR TELEPHONE CABLE IN A 24"x24" x8" DEEP STAINLESS STEEL HINGED DOOR ENCLOSURE. WALL MOUNT ENCLOSURE AT 6'-0" AFF. TO TOP OF ENCLOSURE. PROVIDE ENCLOSURE WITH AT&T NO. 110ANA1E4-25 MULTIPAIR PROTECTOR (WITH #4B1EW PROTECTOR UNITS) TO TERMINATE INCOMING 25 PAIR CABLE. EXTEND #4 GROUND CONDUCTOR IN 3/4" CONDUIT TO GROUND BUS IN PANEL INDICATED.
14. REMOVE ALL EXISTING PAGING AND INTERCOM SYSTEM COMPONENTS - SEE SPECIFICATION 16010.
15. FERRIC CHLORIDE FEED PUMP CP - SEE CONTROL DIAGRAM ON SHEET 106. MOUNT TOP OF CP 5'-0"AFF. ON U-CHANNEL SUPPORT. U-CHANNEL SHALL BE ANCHORED TO FACE OF CONTAINMENT WALL.
16. 1" CONDUIT WITH 8-#12, #12 GRD TO MCC-A3 FOR FUEL TRANSFER PUMP CONTROLS. SEE CONTROL DIAGRAM ON SHEET 109A.
17. ISOLATED SIGNAL GROUND TO MAIN GROUND BUS IN MS-1. SEE SPECIFICATION 16452.
18. MOUNT CIRCUIT BREAKING RECEPTACLE, ANGLE ADAPTER AND JUNCTION BOX (SUPPLIED WITH MIXER) TO 18"Wx36"Hx3/8" ALUMINUM PLATE (SECURED TO HANDRAIL - SIMILAR TO DETAIL F/105). MOUNT TOP OF RECEPTACLE APPROX. 30" ABOVE WALKWAY - ENSURE ADEQUATE CLEARANCE FOR INSERTION AND REMOVAL OF MIXER PLUG.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	SAT/TRC
DRAWN BY:	TES
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	MARCH 1995

EXISTING BLOWER BUILDING ELECTRICAL PLAN

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

SHEET NO. 103 OF 112

N:\PR15582\CADD\SHT103 4-4-95 9:20:21 am EST

AE-B100 PORTABLE PROBE TO BE PLUGGED INTO ANY JUNCTION BOX ALONG TANKS 7, 8 &9.

AE-B200 PORTABLE PROBE TO BE PLUGGED INTO ANY JUNCTION BOX ALONG TANKS 10, 11 &12.

AE-B300 PORTABLE PROBE TO BE PLUGGED INTO ANY JUNCTION BOX ALONG TANKS 13, 14 & 15.

AE-B400 PORTABLE PROBE TO BE PLUGGED INTO ANY JUNCTION BOX ALONG TANKS 16, 17 & 18.

NOTE: ALL CONDUITS AND FITTINGS ROUTED EXPOSED ON AERATION TANKS SHALL BE PVC COATED RIGID STEEL.

CONDUIT SCHEDULE

(1) 3#12, 2#14, #12 GRD. 1"C

(2) 2#10, #10 GRD. 1"C

(3) 3#8, 2#10, 2#10 GRD. 1 1/4"C
12#14, 12 #14 SPARE, #12 GRD, 1 1/4"C

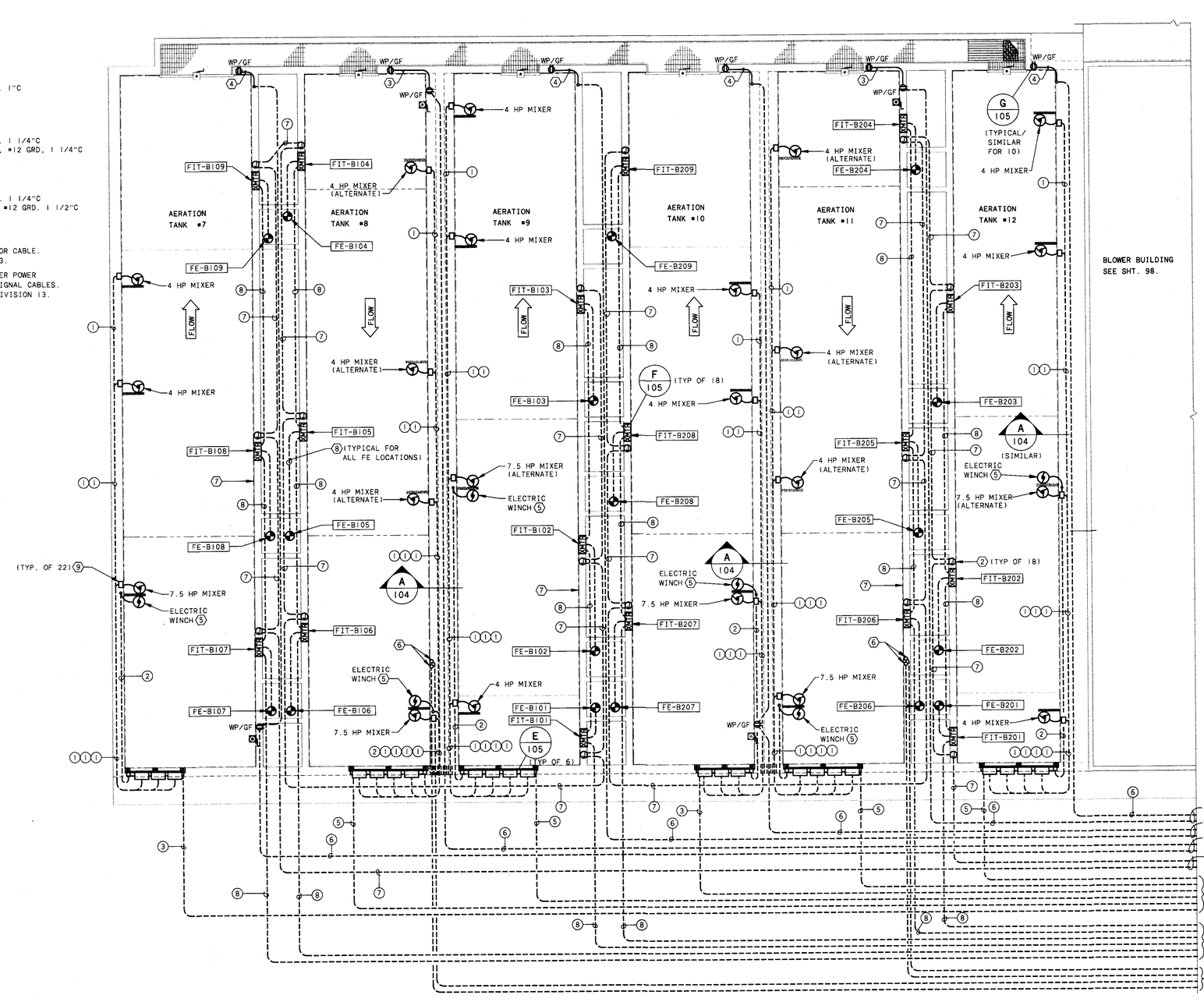
(4) NOT USED.

(5) 3#8, 2#10, 2#10 GRD. 1 1/4"C
16#14, 16#14 SPARE, #12 GRD. 1 1/2"C

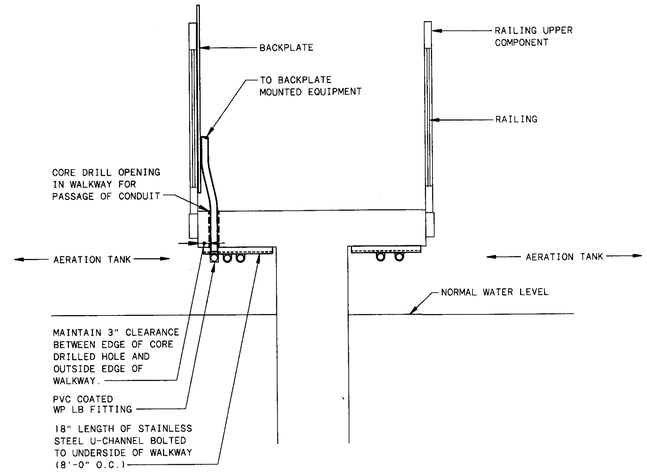
(6) 2#8, #8 GRD. 1"C

(7) 1 1/4"C FOR DO SENSOR CABLE. CABLE BY DIVISION 13.

(8) 1-1"C FOR TRANSMITTER POWER AND 1-1 1/4"C FOR SIGNAL CABLES. WIRE AND CABLE BY DIVISION 13.



PLAN



A 104 CONDUIT INSTALLATION ON "T" WALL/WALKWAY
SCALE: NONE

GENERAL NOTES:

1. TAGGED DEVICES (XX-XXXX) UNLESS INDICATED OTHERWISE, ARE SUPPLIED AND INSTALLED UNDER DIVISION 13. FE/FIT-B301 THRU B309 INSTALL IN TANKS 15, 14 & 13 USING TANKS 9, 8 &7 AND FE/FIT-B101 THRU B109 AS MODEL. FE/FIT-B401 THRU B409 LIKEWISE FOR TANKS 18, 17 &16 USING FE/FIT-B201 THRU B209 AS MODEL.

CODED NOTES: ⬡

1. MULTICONDUCTOR SIGNAL CABLE FURNISHED UNDER DIVISION 13 TO VENDOR SUPPLIED JUNCTION BOX ADJACENT XMTR IN BLOWER BUILDING. SEE NOTE #2 SHEET 98.
2. VENDOR SUPPLIED JUNCTION BOX FOR CONNECTION TO DISSOLVED OXYGEN PROBE.
3. ROUTE CONDUIT EXPOSED BETWEEN RAILING MOUNTED RECEPTACLES TIGHT TO UNDERSIDE OF RAILING'S UPPER COMPONENT.
4. ROUTE CONDUIT EXPOSED TIGHT TO UNDERSIDE OF RAILING'S UPPER COMPONENT TO AN AREA BETWEEN AERATION TANKS WHERE CONDUIT CAN DROP VERTICALLY TO BELOW SLAB.
5. MAKE FINAL CONDUIT CONNECTION TO ELECTRIC WINCH WITH LIQUIDTIGHT FLEXIBLE CONDUIT.
6. 2 SPARE 1"C FOR FUTURE RECYCLE PUMP.
7. CONDUITS LOCATED WITHIN WYE WALL SHALL BE RIGID STEEL AND SHALL BE SUPPORTED EITHER BY THE STRUCTURE FLOOR OR PIPE RACK. SEE NORTH AERATION TANKS-UPPER PLAN ON SHEET 20 FOR EXTENT AND CONSTRUCTION OF WYE WALL.
8. TERMINATE 1" RIGID CONDUIT WITHIN 12" OF FLOW ELEMENT LOCATION. FINAL CONNECTION TO FLOW ELEMENT SHALL BE WITH FLEXIBLE CONDUIT BY DIVISION 13.
9. MOUNT CIRCUIT BREAKING RECEPTACLE, ANGLE ADAPTER AND JUNCTION BOX (SUPPLIED WITH MIXER) TO 18"Wx36"Hx3/8" ALUMINUM PLATE (SECURED TO HANDRAIL - SIMILAR TO DETAIL F/105). MOUNT TOP OF RECEPTACLE APPROX. 30" ABOVE WALKWAY - ENSURE ADEQUATE CLEARANCE FOR INSERTION AND REMOVAL OF MIXER PLUG.

NOTE:
WORK REQUIRED FOR AERATION TANKS No.13 THROUGH 18 IS IDENTICAL TO THAT SHOWN FOR TANKS No.7 THROUGH 12.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	SAT/TRC
DRAWN BY:	TRF
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	MARCH 1995

AERATION TANKS ELECTRICAL PLAN

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

SHEET NO. 104 OF 112

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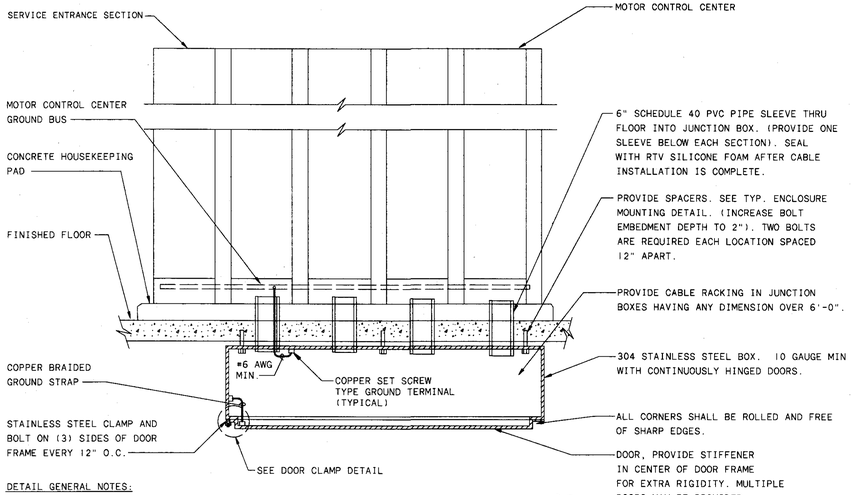
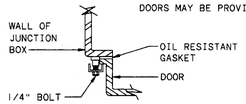


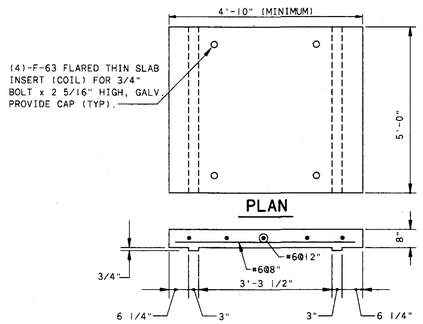
DETAIL GENERAL NOTES:

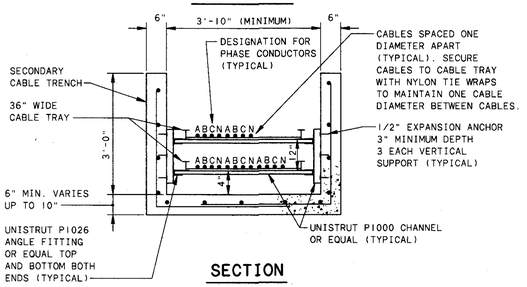
1. THIS DETAIL IS INTENDED TO BE AN EXAMPLE AND GUIDE TO THE INSTALLATION OF JUNCTION BOXES BENEATH ELECTRICAL EQUIPMENT. ACTUAL SIZES WILL VARY DEPENDING ON THE SIZE AND NUMBER OF CONDUITS ENTERING THE BOX. REFER TO NEC ART. 370 FOR ADDITIONAL INFORMATION.
2. MCC JUNCTION BOX TO EXTEND THE ENTIRE LENGTH OF MCC EXCEPT BELOW SERVICE ENTRANCE SECTION.



DOOR CLAMP DETAIL

A / 105 MCC JUNCTION BOX DETAIL
SCALE: NONE

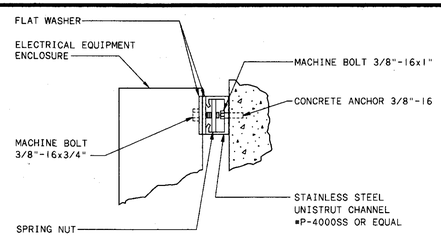




NOTES:

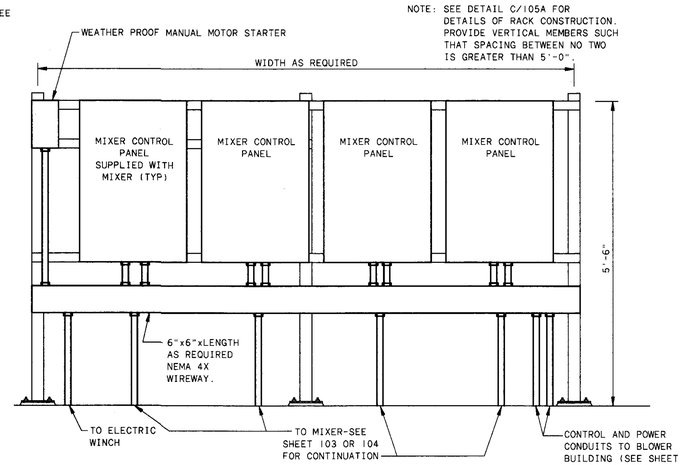
1. VERTICAL AND HORIZONTAL SUPPORTS SHALL BE LOCATED EVERY 4 LINEAR FEET.
2. GROUND ALL CABLE TRAY AND SUPPORTS WITH #3/0 GRD. TO GROUND LOOP.

D / 105 SECONDARY CABLE TRENCH DETAILS
SCALE: NONE

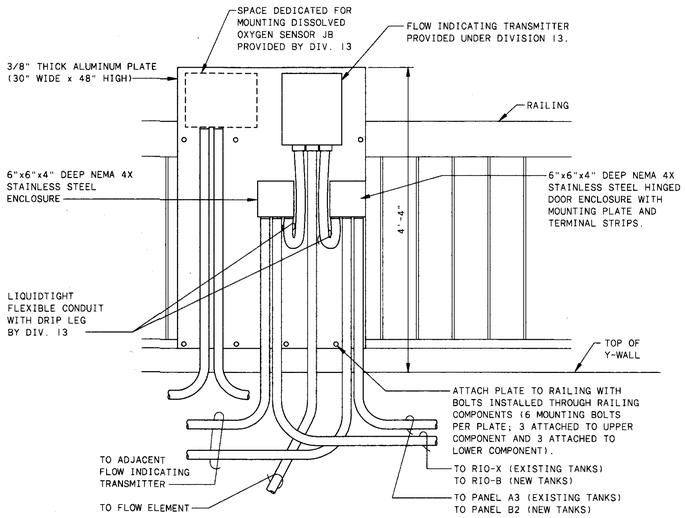


NOTE: ALL CHANNEL HARDWARE SHALL BE STAINLESS STEEL

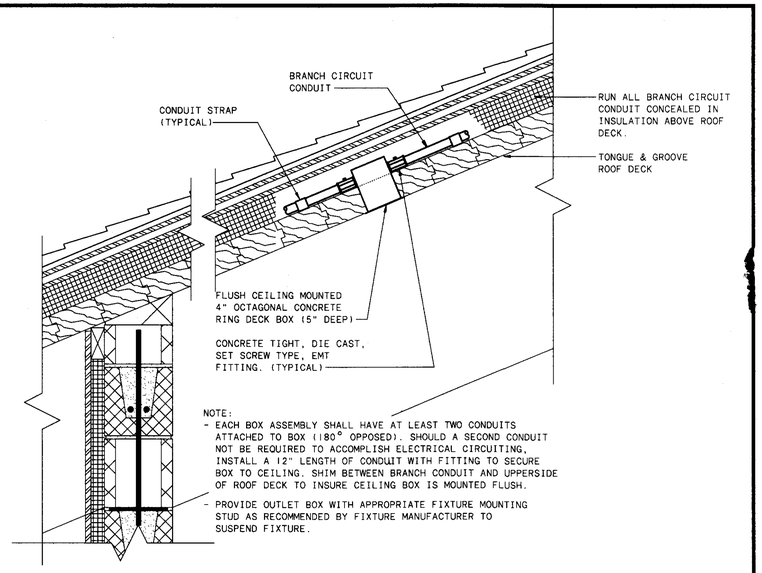
B / 105 ENCLOSURE MOUNTING DETAIL
SCALE: NONE



E / 105 MIXER CONTROL PANEL RACK ELEVATION
SCALE: NONE

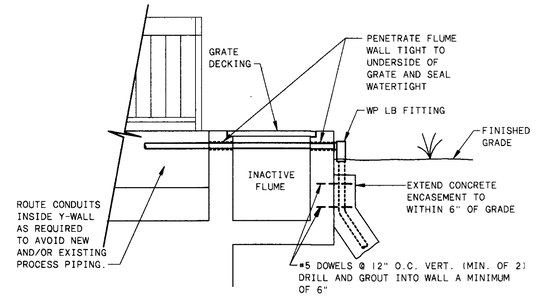


F / 105 FLOW INDICATING TRANSMITTER MOUNTING DETAIL
SCALE: NONE

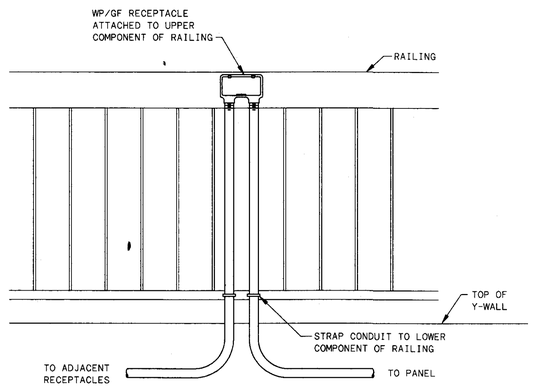


NOTE:
- EACH BOX ASSEMBLY SHALL HAVE AT LEAST TWO CONDUITS ATTACHED TO BOX (180° OPPOSED). SHOULD A SECOND CONDUIT NOT BE REQUIRED TO ACCOMPLISH ELECTRICAL CIRCUITING, INSTALL A 12" LENGTH OF CONDUIT WITH FITTING TO SECURE BOX TO CEILING. SHIM BETWEEN BRANCH CONDUIT AND UPPERSIDE OF ROOF DECK TO INSURE CEILING BOX IS MOUNTED FLUSH.
- PROVIDE OUTLET BOX WITH APPROPRIATE FIXTURE MOUNTING STUD AS RECOMMENDED BY FIXTURE MANUFACTURER TO SUSPEND FIXTURE.

C / 105 FLUSH MOUNTED CEILING BOX INSTALLATION DETAIL
SCALE: NONE



H / 105 CONDUIT PENETRATION OF FLUME WALL
SCALE: NONE



G / 105 SLUICE GATE PORTABLE OPERATOR POWER RECEPTACLE MOUNTING DETAIL
SCALE: NONE

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	SAT
DRAWN BY:	TRF/TES
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	MARCH 1995

ELECTRICAL DETAILS

SCALE:	
NONE	
SHEET NO.	OF
105	112

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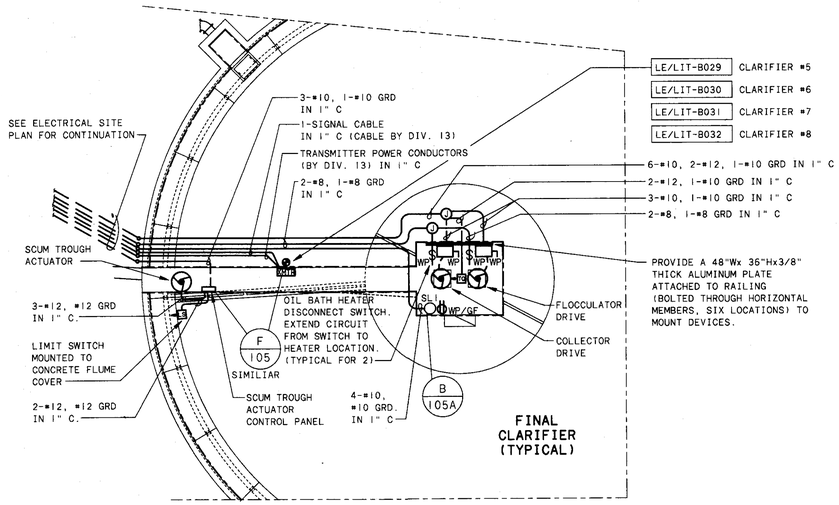
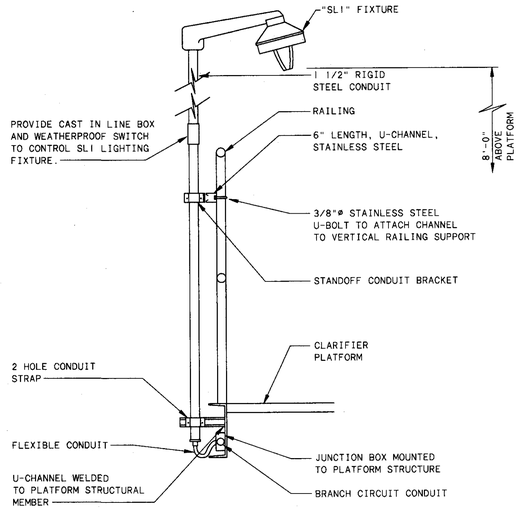
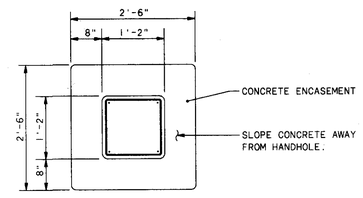


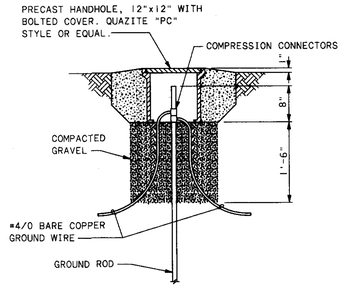
A 105A **TYPICAL CLARIFIER EQUIPMENT DETAIL**
SCALE: NONE



B 105A **SLI FIXTURE MOUNTING DETAIL**
SCALE: NONE

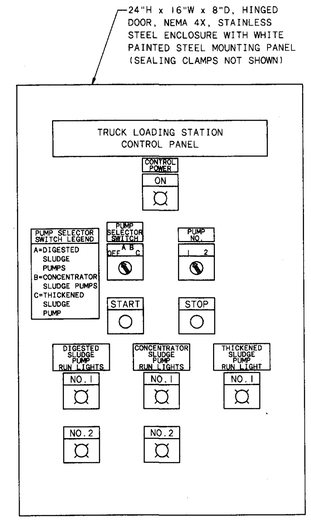


PLAN

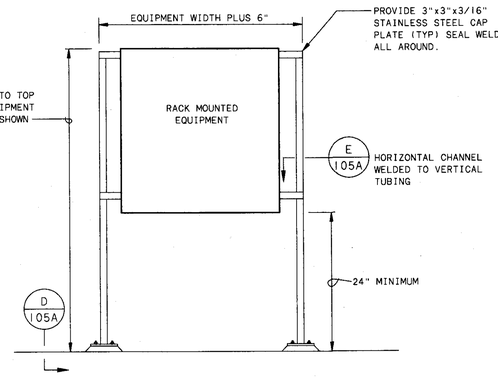


SECTION

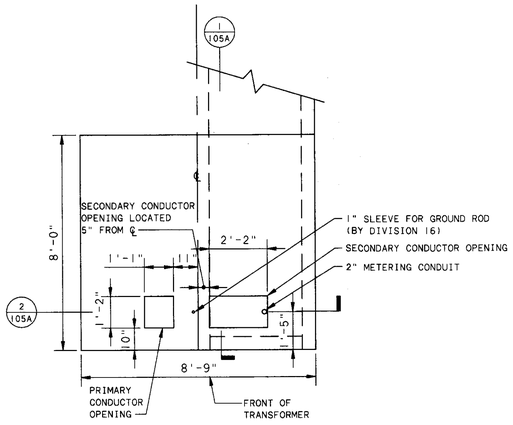
G 105A **GROUND SYSTEM TEST WELL**
SCALE: NONE



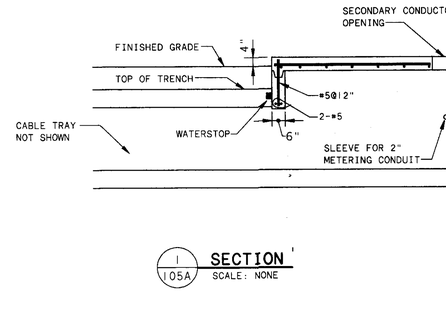
TRUCK LOADING STATION CONTROL PANEL ELEVATION
SCALE: NONE



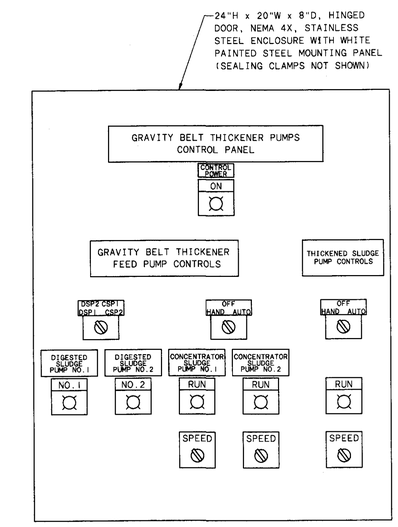
C 105A **EQUIPMENT RACK ELEVATION**
SCALE: NONE



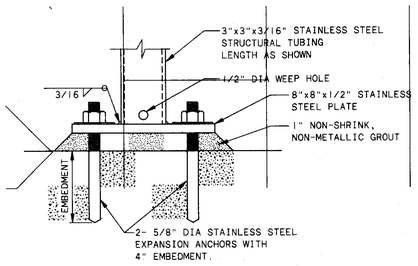
F 105A **TRANSFORMER BASE DETAIL**
SCALE: NONE



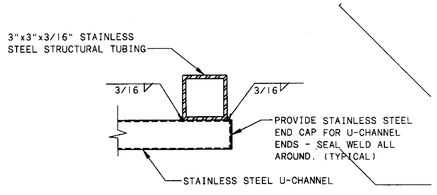
1 105A **SECTION**
SCALE: NONE



GRAVITY BELT THICKENER PUMPS CONTROL PANEL ELEVATION
SCALE: NONE

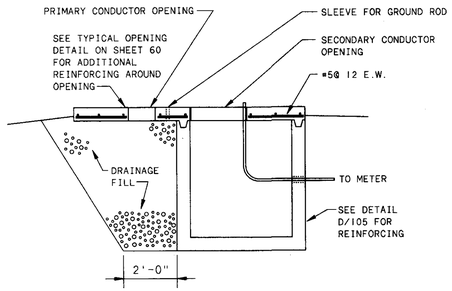


D 105A **TYPICAL ANCHOR DETAIL**
SCALE: NONE



NOTE: PRIOR TO ASSEMBLY, VERTICAL LOCATION OF THE UNISTRUT SHALL BE COORDINATED WITH THE ELECTRICAL CONTRACTOR.

E 105A **TYPICAL SECTION**
SCALE: NONE



2 105A **SECTION**
SCALE: NONE

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	SAT
DRAWN BY:	TRF
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	MARCH 1995

ELECTRICAL DETAILS

SCALE: NONE

SHEET NO. 105A OF 112

LIGHTING FIXTURE SCHEDULE

FIXTURE CODE ABBREVIATIONS: CL - CEILING MOUNT; R - RECESSED; W - WALL MOUNT; P - PENDANT MOUNT; E - EMERGENCY; X - EXIT SIGN; SL - SITE LIGHT; B - BOLLARD

LAMP ABBREVIATIONS: FLR - FLUORESCENT; INC - INCANDESCENT; MER - MERCURY VAPOR; MH - METAL HALIDE; LPS - LOW PRESSURE SODIUM; HPS - HIGH PRESSURE SODIUM; HAL - HALOGEN; TUN - TUNGSEN

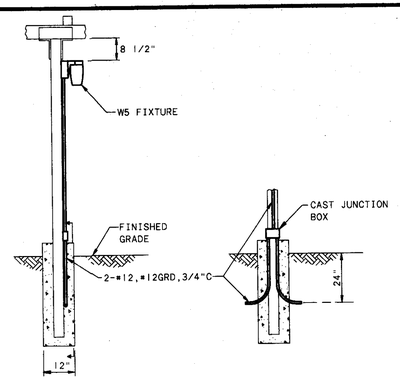
FIXT CODE	MANUFACTURER	MODEL	OPTICS	LAMP TYPE	LAMP QTY	LAMP SIZE	LAMP VOLT	REMARKS
B1	MOLDCAST	36-3-22-12-BZP-ASY-LEX-EVR-1F	CLEAR POLYCARBONATE LENS	HPS	1	150	120	- PROVIDE OSRAM/SYLVANIA #LU150/D/MED LAMP OR EQUAL. - 42" OVERALL HEIGHT - PROVIDE DARK BRONZE FIXTURE FINISH - PROVIDE ASYMMETRIC DOWNLIGHT DISTRIBUTION. - PROVIDE INTEGRAL FUSING. - PROVIDE TAMPER RESISTANT BASE HARDWARE. - SEE BASE DETAIL C/106.
CL1	LITHONIA	DMW240AR120-ES	HIGH IMPACT ACRYLIC DIFFUSER	FLR	2	34	120	- PROVIDE OSRAM/SYLVANIA #F40/D835/SS LAMPS OR EQUAL. - PROVIDE ENERGY SAVING BALLAST - PROVIDE 1-1/2" CEILING SPACER (OPTION "1B-1) FOR THOSE FIXTURES SURFACE MOUNTED ON A FLAT CEILING. - PROVIDE FIXTURE WITH SLOPE CEILING SWIVEL STEM HANGERS (OPTION SO) WITH SUFFICIENT STEM LENGTH TO MOUNT FIXTURE AT 10'-0" AFF (UNLESS NOTED OTHERWISE) FOR THOSE FIXTURES MOUNTED ON A SLOPED CEILING. - UL LISTED FOR WET LOCATIONS.
CL2	HOLOPHANE	EN-40LHP-48-X-8	PRISMATIC GLASS REFLECTOR	HPS	1	400	480	- PROVIDE OSRAM/SYLVANIA #LU400 LAMP OR EQUAL. - PROVIDE ENERGY SAVING BALLAST - PROVIDE FIXTURE WITH JOSLYN LOWERING DEVICE. PROVIDE ALL NECESSARY BRACKETS, PULLEYS, CABLES, CONNECTORS, WINCHES, LOCKS, AND ACCESSORIES FOR A COMPLETE AND OPERATING SYSTEM.
CL3	LITHONIA	UN240120ESWG9 SOXX	BARE LAMP STRIP	FLR	2	34	120	- PROVIDE OSRAM/SYLVANIA #F40/D835/SS LAMPS OR EQUAL - PROVIDE ENERGY SAVING BALLAST. - PROVIDE SWIVEL STEM HANGER WITH SUFFICIENT STEM LENGTHS TO MOUNT FIXTURE AT 8'-0" AFF TO BOTTOM OF FIXTURE.
CL4	LITHONIA	SPG240A12.125 120ES	CLEAR PRISMATIC LENS	FLR	2	34	120	- PROVIDE OSRAM/SYLVANIA #F40/D835/SS LAMPS OR EQUAL. - PROVIDE ENERGY SAVING BALLAST.
CL5	KIRLIN	RR90944 WITH FRESNEL LENS.	GLASS FRESNEL LENS	FLR	1	32	120	- PROVIDE PHILIPS #PL-T32W/35/4P LAMP
CL6	GE	H7110F3CDD	CLEAR GLASS GLOBE WITH GUARD	INC	1	100	120	- PROVIDE OSRAM/SYLVANIA #100A21 LAMP OR EQUAL.
E1	DUAL-LITE	N4X4 WITH PAR 36, 6 VOLT 12 WATT HALOGEN LAMPS	EMERGENCY FLOOD	INC	2	12	120	- PAR 36, 6 VOLT, 12 WATT, HALOGEN LAMPS FURNISHED WITH FIXTURE. - NEMA 4X HOUSING - WALL MOUNTED AT 7'-6" AFF UNLESS NOTED OTHERWISE.
E2	DUAL-LITE	N4X7 WITH PAR 36, 6 VOLT 12 WATT HALOGEN LAMPS	EMERGENCY FLOOD	INC	2	12	120	- PAR 36, 6 VOLT, 12 WATT, HALOGEN LAMPS FURNISHED WITH FIXTURE. - NEMA 4X HOUSING - BATTERY CAPACITY SUFFICIENT TO SUPPORT REMOTE HEAD - WALL MOUNT AT 7'-6" AFF UNLESS NOTED OTHERWISE.
E3	DUAL-LITE	EXT-P5-N4X-T (6V, 12W) WITH MP-100 MOUNTING PLATE.	EMERGENCY FLOOD	INC	1	12	6	- PAR 36, 6 VOLT, 12 WATT, HALOGEN LAMP FURNISHED WITH FIXTURE. - WALL MOUNT 12" ABOVE DOOR
E4	YORKLITE	AR2E12BE-120	EMERGENCY FLOOD	INC	2	12	6	- 6 VOLT, 12 WATT, HALOGEN LAMPS FURNISHED WITH FIXTURE.
E5	YORKLITE	AR2E22BE-120	EMERGENCY FLOOD	INC	2	12	6	- 6 VOLT, 12 WATT, HALOGEN LAMPS FURNISHED WITH FIXTURE. - BATTERY CAPACITY SUFFICIENT TO SUPPORT REMOTE HEAD.
E6	YORKLITE	A2E120TBE	EMERGENCY FLOOD	INC	2	12	6	- 6 VOLT, 12 WATT, HALOGEN LAMPS FURNISHED WITH FIXTURE. - WALL MOUNT AT 7'-6" AFF UNLESS NOTED OTHERWISE.
E7	DUAL-LITE	XPB-75P WITH TWO EX-1CD-DR -6V-28W FIXTURE HEADS	EXPLOSION PROOF EMERGENCY FLOOD	INC	2	28	120	- 6 VOLT, 28 WATT, LAMPS FURNISHED WITH FIXTURE. - CLASS 1, DIVISION 1 RATING - WALL MOUNT AT 7'-6" AFF UNLESS NOTED OTHERWISE.
P1	LITECONTROL	PID90XXT8 PALSS30XXTW 120	SEMI-SPECULAR ALUMINUM PARABOLIC BAFFLES	FLR	3	34	120	- PROVIDE THREE OSRAM/SYLVANIA #F032/835 LAMPS FOR EACH 4'-3" LENGTH OF LIGHTED SECTIONS. - PROVIDE FIXTURE FINISH PER ARCHITECT'S SELECTION. SUBMIT MANUFACTURER'S STANDARD COLOR SELECTION CHART. - PROVIDE STRAIGHT LENGTHS OF FIXTURE WITH TWO SC/P6 SWIVEL HANGERS (ONE AT EACH END, ONE POWER FEED) AND ADDITIONAL ACC INTERIM SUPPORT CABLES AS RECOMMENDED BY MANUFACTURER. - PROVIDE ASSEMBLED SHAPE FIXTURES (SEE NOTES #1 & 2 - ADMIN. BUILDING LIGHTING PLAN) WITH ONE SC/P6 SWIVEL HANGER AT EACH CORNER OF ASSEMBLY AND ADDITIONAL ACC INTERIM SUPPORT CABLES AS RECOMMENDED BY MANUFACTURER.

LIGHTING FIXTURE SCHEDULE (CONTINUED)

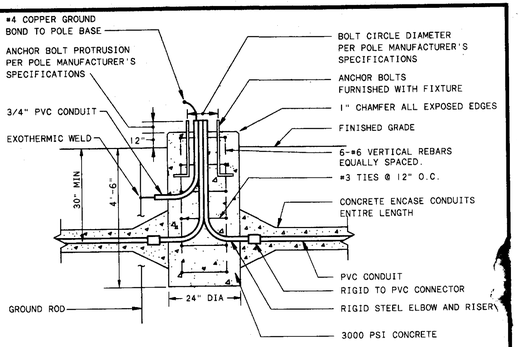
FIXTURE CODE ABBREVIATIONS: CL - CEILING MOUNT; R - RECESSED; W - WALL MOUNT; P - PENDANT MOUNT; E - EMERGENCY; X - EXIT SIGN; SL - SITE LIGHT; B - BOLLARD

LAMP ABBREVIATIONS: FLR - FLUORESCENT; INC - INCANDESCENT; MER - MERCURY VAPOR; MH - METAL HALIDE; LPS - LOW PRESSURE SODIUM; HPS - HIGH PRESSURE SODIUM; HAL - HALOGEN; TUN - TUNGSEN

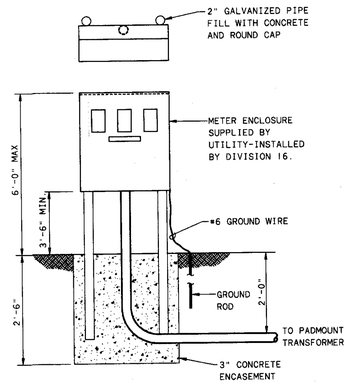
FIXT CODE	MANUFACTURER	MODEL	OPTICS	LAMP TYPE	LAMP QTY	LAMP SIZE	LAMP VOLT	REMARKS
P2	KIRLIN	SR51233-FR-PM-87	GLASS FRESNEL LENS	MH	1	100	120	- PROVIDE OSRAM/SYLVANIA #M100/C/U/MED LAMP OR EQUAL. - PROVIDE WITH SUFFICIENT PENDANT LENGTH TO MOUNT FIXTURE AT ELEVATIONS AS INDICATED ON PLAN. - PROVIDE FIXTURE AND PENDANT FINISH PER ARCHITECT'S SELECTION. SUBMIT MANUFACTURER'S STANDARD COLOR SELECTION CHART.
P3	KIRLIN	SR91255-39-PM-87 FRESNEL LENS	GLASS FRESNEL LENS	FLR	1	32	120	- PROVIDE PHILLIPS #PL-T32W/35/4P 4-PIN ELECTRONIC LAMP (SUITABLE FOR DIMMING). - PROVIDE WITH SUFFICIENT PENDANT LENGTH TO MOUNT FIXTURE AT ELEVATIONS AS INDICATED ON PLAN. - PROVIDE UNIT WITH ELECTRONIC DIMMING BALLAST. - PROVIDE FIXTURE AND PENDANT FINISH PER ARCHITECT'S SELECTION. SUBMIT MANUFACTURER'S STANDARD COLOR SELECTION CHART.
P4	KIRLIN	SR91255-PM-87 WITH FRESNEL LENS	GLASS FRESNEL LENS	FLR	1	32	120	- PROVIDE PHILLIPS #PL-T32W/35/4P LAMP. - PROVIDE WITH SUFFICIENT PENDANT LENGTH TO MOUNT FIXTURE AT 9'-0" AFF TO BOTTOM OF FIXTURE. - PROVIDE FIXTURE AND PENDANT FINISH PER ARCHITECT'S SELECTION. SUBMIT MANUFACTURER'S STANDARD COLOR SELECTION CHART.
SL1	GE	H2110M6JFG-F	LARGE GLASS GLOBE WITH GUARD	MH	1	100	120	- PROVIDE OSRAM/SYLVANIA #M100/C/U/MED LAMP OR EQUAL. - PROVIDE INTEGRAL FUSING - PROVIDE 1 1/2" ANGLE STANCHION MOUNTING BRACKET - SEE MOUNTING DETAIL B/105A
SL2	McGRAW EDISON	CN12521480-FF-B2 WITH SSA6X25W F-G-5 TENON (3" OD) POLE	DESIGN 20	HPS	1	250	480	- PROVIDE OSRAM/SYLVANIA #LU250 LAMP OR EQUAL. - PROVIDE INTEGRAL FUSING - PROVIDE DARK BRONZE HOUSING & POLE FINISH - PROVIDE WITH POLE TOP KNUCKLE FITTING - PROVIDE 3" OD POLE TOP TENON - PROVIDE GROUND LUG ON POLE - SEE BASE DETAIL B/106.
SL3	McGRAW EDISON	CN12541480-FF-B2 WITH SSA6X25WF-G-5 TENON (3" OD) POLE	DESIGN 40	HPS	1	250	480	- SAME REMARKS AS SL2.
W1	LITHONIA	DMW240AR120-ES	HIGH IMPACT ACRYLIC DIFFUSER	FLR	2	34	120	- PROVIDE OSRAM/SYLVANIA #F40/D835/SS LAMPS OR EQUAL. - PROVIDE ENERGY SAVING BALLAST - UL LISTED FOR WET LOCATIONS. - PROVIDE EACH FIXTURE WITH TWO UNISTRUT #P1944 MOUNTING BRACKETS (PROVIDE EACH BRACKET WITH APPROPRIATE MOUNTING HOLES FOR ATTACHMENT OF FIXTURE).
W2	LITHONIA	W240120A-ES	CLEAR PRISMATIC DOWN LENS, WHITE OPAL UP LENS	FLR	2	34	120	- PROVIDE OSRAM/SYLVANIA #F40/D835/SS LAMPS OR EQUAL. - PROVIDE ENERGY SAVING BALLAST. - PROVIDE BRUSHED ALUMINUM AND CAPS. - WALL MOUNT ABOVE MIRROR.
W3	SPI	EDR2603-CS	CLEAR GLASS LENS WITH SEGMENTED REFLECTOR PANELS	MH	1	400	120	- PROVIDE PHILLIPS #MH400/T15 LAMP OR EQUAL. - PROVIDE CUTOFF SHIELD. - PROVIDE FIXTURE AND SHIELD FINISH PER ARCHITECT'S SELECTION. SUBMIT MANUFACTURER'S STANDARD SELECTION CHART.
W4	LITHONIA	2UC132AR120	HIGH IMPACT ACRYLIC DIFFUSER	FLR	1	32	120	- PROVIDE OSRAM/SYLVANIA #F40/D835/SS LAMP OR EQUAL. - WALL MOUNT TIGHT TO UNDERSIDE OF CABINET.
W5	McPHILBEN	43-40VT WITH P-1147	WHITE GLASS DIFFUSER	INC	1	75	120	- PROVIDE OSRAM/SYLVANIA #75A/HAL LAMP OR EQUAL. - SEE MOUNTING DETAIL A/106
W6	MOLDCAST	90125-12-BZP-1FU-PCR WITH PHOTOCELL	FLAT TEMPERED GLASS LENS	HPS	1	250	120	- PROVIDE OSRAM/SYLVANIA #LU250 LAMP OR EQUAL. - PROVIDE INTEGRAL FUSING. - PROVIDE DARK BRONZE HOUSING FINISH - PROVIDE UNIT WITH ADJUSTABLE CUTOFF. - SET CUTOFF AS INDICATED ON PLAN. - PROVIDE 120 VOLT PHOTOCONTROL RECEPTACLE AND MATCHING RECEPTACLE.
W7	MOLDCAST	90125-48-BZP-2FU	FLAT TEMPERED GLASS LENS	HPS	1	250	480	- PROVIDE OSRAM/SYLVANIA #LU250 LAMP OR EQUAL. - PROVIDE INTEGRAL FUSING. - PROVIDE DARK BRONZE HOUSING FINISH - PROVIDE UNIT WITH ADJUSTABLE CUTOFF. - SET CUTOFF AS INDICATED ON PLAN.
W8	HUBBELL	325-5	TEMPERED GLASS LENS	INC	1	250	120	- PROVIDE T-4 LAMP. - CAST ALUMINUM BODY WITH KNUCKLE. - SUITABLE FOR WET LOCATIONS.
X1	DUAL-LITE	N4XER1-EP-120V	CLEAR POLYCARBONATE COVER WITH RED LETTERS	FLR	2	5	120	- LAMPS FURNISHED WITH FIXTURE. - WALL MOUNT ABOVE DOOR.
X2	SURELITES	CAX-7-1-70-00-R	BRUSHED ALUMINUM STENCIL FACE WITH RED LETTERS	LED LAMPS FURNISHED WITH FIXTURE			120	- WALL MOUNTED UNITS TO BE MOUNTED AT 9'-0" AFF.



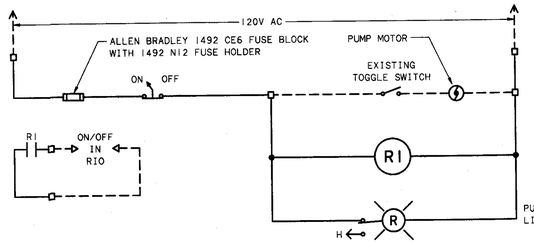
A/106 "W5" FIXTURE MOUNTING DETAIL
SCALE: NONE



B/106 "SL2" & "SL3" POLE BASE DETAIL
SCALE: NONE

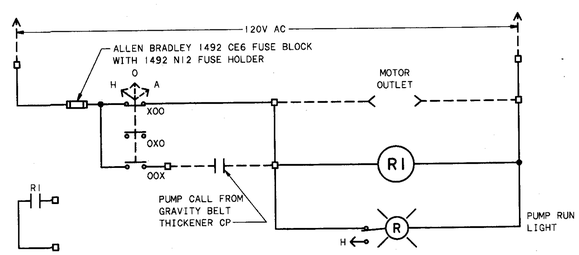


D/106 METER INSTALLATION DETAIL
SCALE: NONE



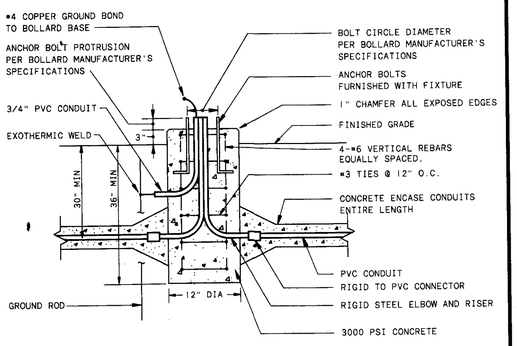
NOTE:
CONTROLS FOR FERRIC CHLORIDE FEED PUMP NO.1 AND NO.2 HOUSED IN COMMON CONTROL ENCLOSURE. ENCLOSURE SHALL BE IDENTICAL TO CHEMICAL FEED PUMP ENCLOSURE (SEE DETAIL A/102) EXCEPT PANEL NAMEPLATE SHALL READ "FERRIC CHLORIDE FEED PUMP CONTROL PANEL".

FERRIC CHLORIDE FEED PUMP NO.1 CONTROL DIAGRAM
SCALE: NONE
(TYPICAL FOR FEED PUMP NO.2)



NOTE:
CONTROLS FOR POLYMER FEED PUMP NO.1 AND NO.2 HOUSED IN COMMON CONTROL ENCLOSURE. ENCLOSURE SHALL BE IDENTICAL TO CHEMICAL FEED PUMP CONTROL PANEL (SEE DETAIL A/102) EXCEPT PANEL NAMEPLATE SHALL READ "POLYMER FEED PUMP CONTROL PANEL".

POLYMER FEED PUMP NO.1 CONTROL DIAGRAM
SCALE: NONE
(TYPICAL FOR FEED PUMP NO.2)



C/106 "B1" BASE DETAIL
SCALE: NONE

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

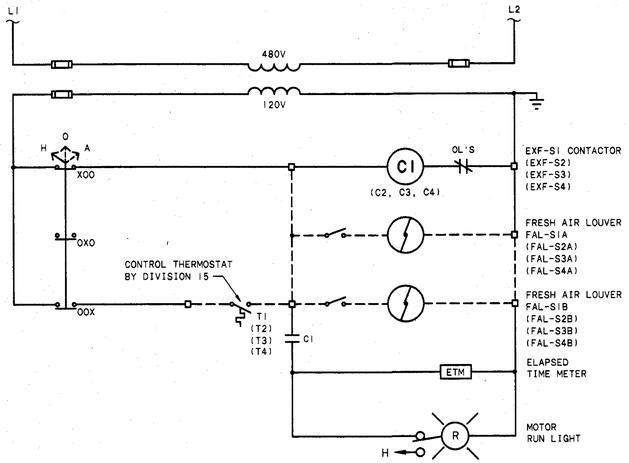
JOB NO.	15582
DESIGNED BY:	SAT
DRAWN BY:	TES
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	FEB., 1995

ELECTRICAL SCHEDULES

SCALE: NONE

SHEET NO. 106 OF 112

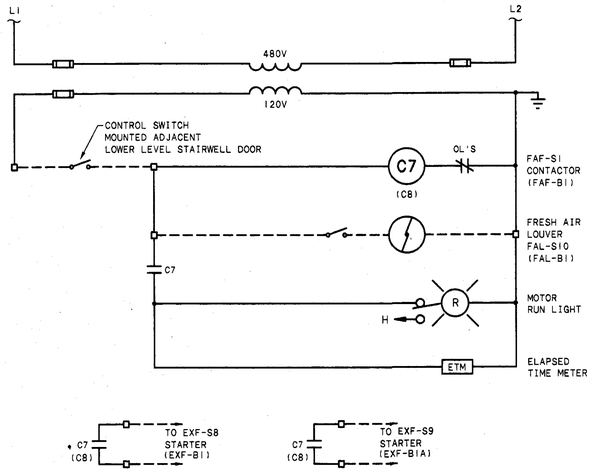
N:\PR\15582\CADD\SHT\106 2-24-95 1:32:25 pm EST



EXHAUST FAN EXF-S1 CONTROL DIAGRAM

SCALE: NONE

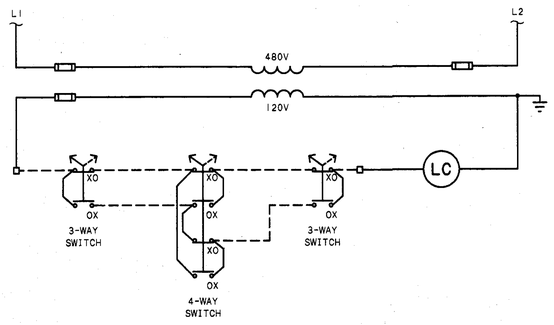
(TYPICAL FOR EXHAUST FANS EXF-S2 THROUGH EXF-S4)



FRESH AIR FAN FAF-S1 CONTROL DIAGRAM

SCALE: NONE

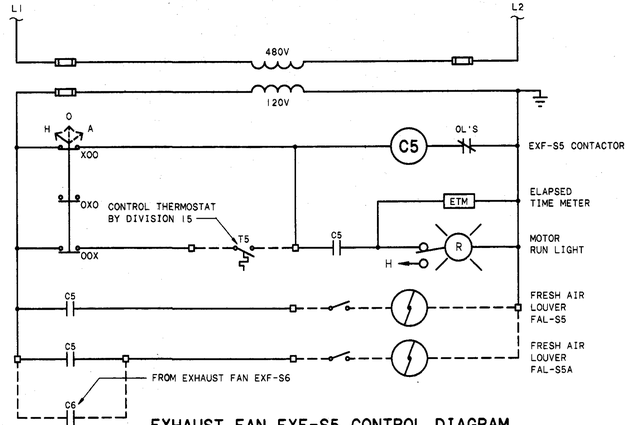
(TYPICAL FOR FAF-B1)



"CL2" FIXTURE LIGHTING CONTACTOR CONTROL DIAGRAM

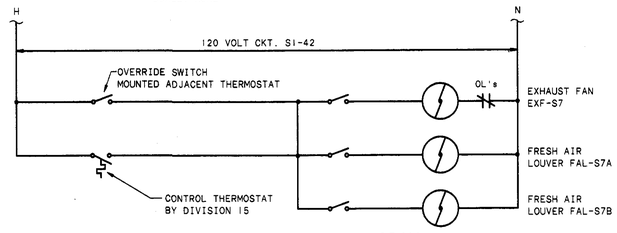
SCALE: NONE

(TERTIARY COMPLEX / FILTER ROOM, HID FIXTURES)



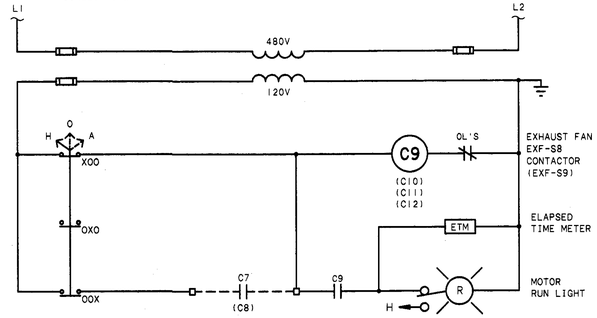
EXHAUST FAN EXF-S5 CONTROL DIAGRAM

SCALE: NONE



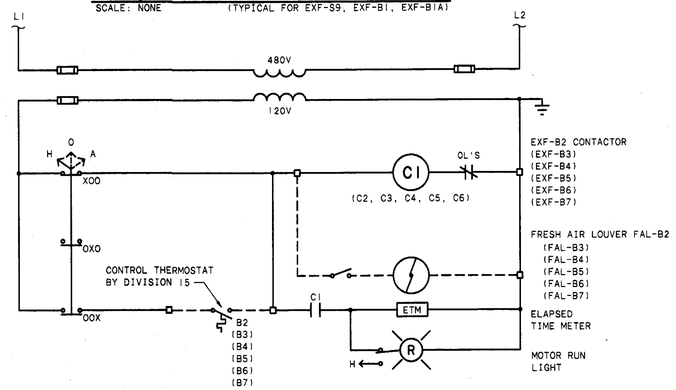
EXHAUST FAN EXF-S7 CONTROL DIAGRAM

SCALE: NONE



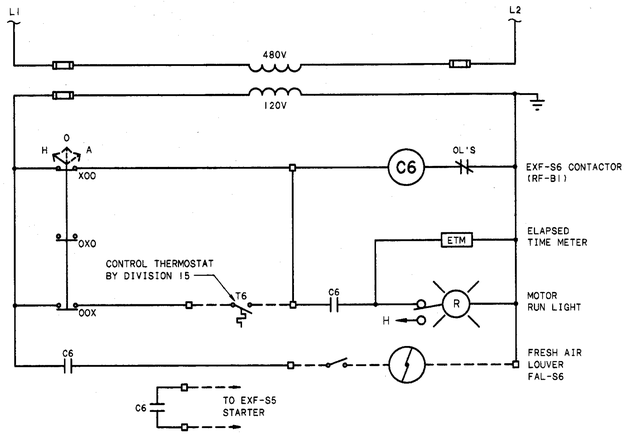
EXHAUST FAN EXF-S8 CONTROL DIAGRAM

SCALE: NONE (TYPICAL FOR EXF-S9, EXF-B1, EXF-B1A)



EXHAUST FAN EXF-B2 CONTROL DIAGRAM

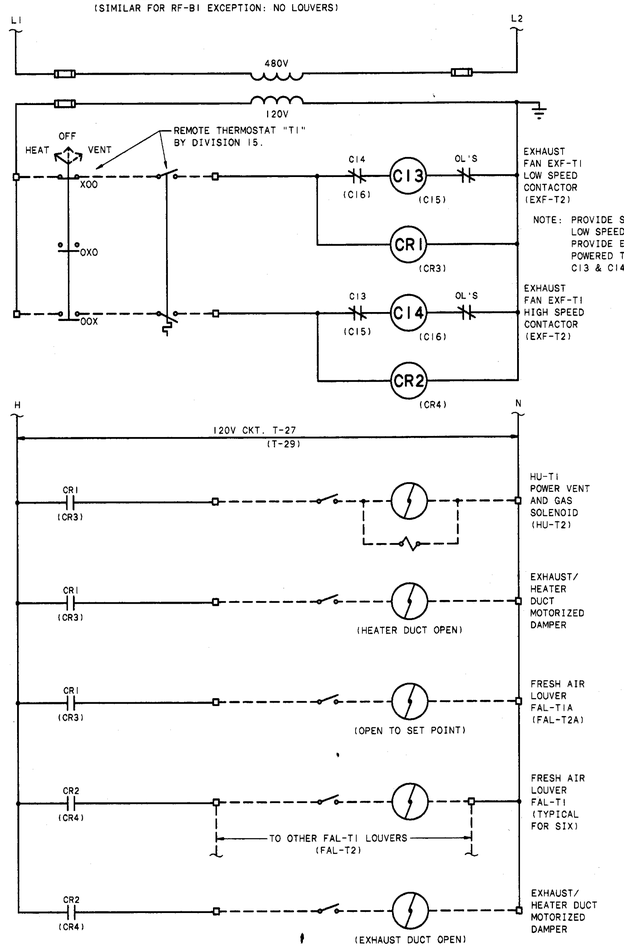
SCALE: NONE (TYPICAL FOR EXHAUST FANS EXF-B3 THROUGH EXF-B7)



EXHAUST FAN EXF-S6 CONTROL DIAGRAM

SCALE: NONE

(SIMILAR FOR RF-B1 EXCEPTION: NO LOUVERS)



EXHAUST FAN EXF-T1 CONTROL DIAGRAM

SCALE: NONE

(TYPICAL FOR EXHAUST FAN EXF-T2)

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

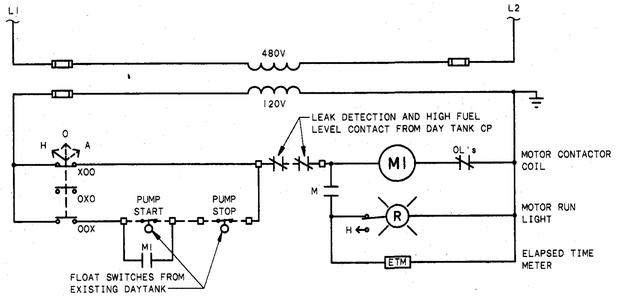
JOB NO.	15582
DESIGNED BY:	SAT
DRAWN BY:	TES
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	FEB., 1995

ELECTRICAL CONTROL DIAGRAMS

SCALE: NONE

SHEET NO. 107 OF 112

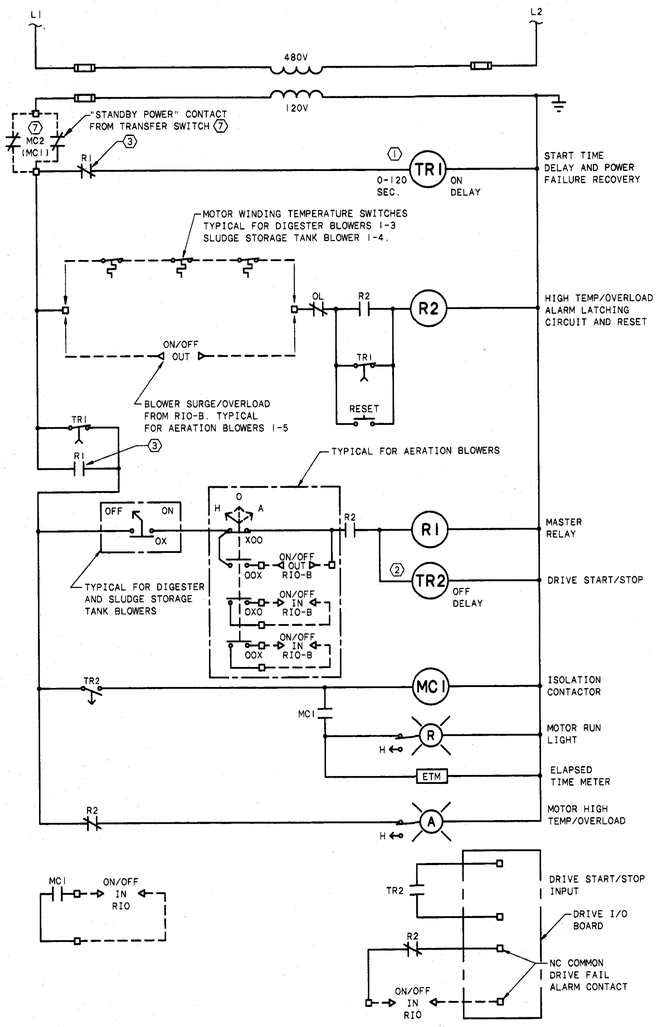
N:\PR15582\CADD\SHT107 3-3-95 1:22:02 pm EST



FUEL TRANSFER PUMP No.1 CONTROL DIAGRAM

SCALE: NONE

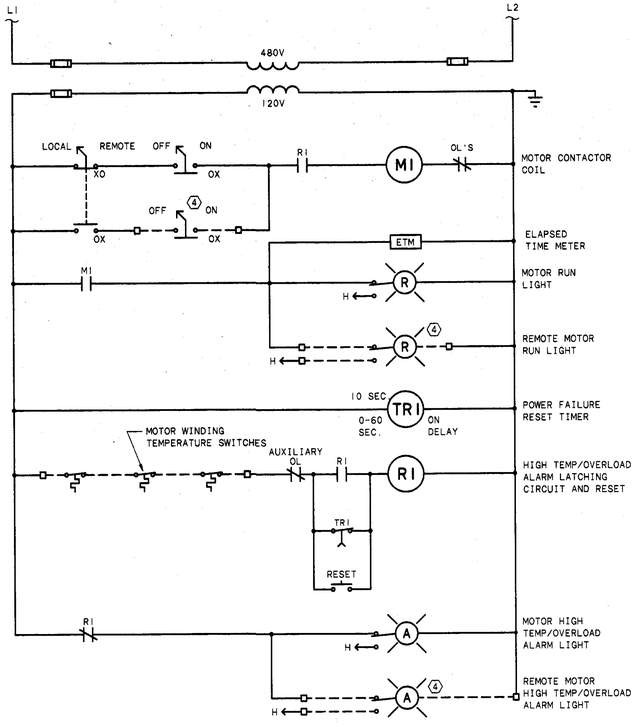
(TYPICAL FOR FUEL TRANSFER PUMP NO.2)



AERATION BLOWER No.1 CONTROL DIAGRAM

SCALE: NONE

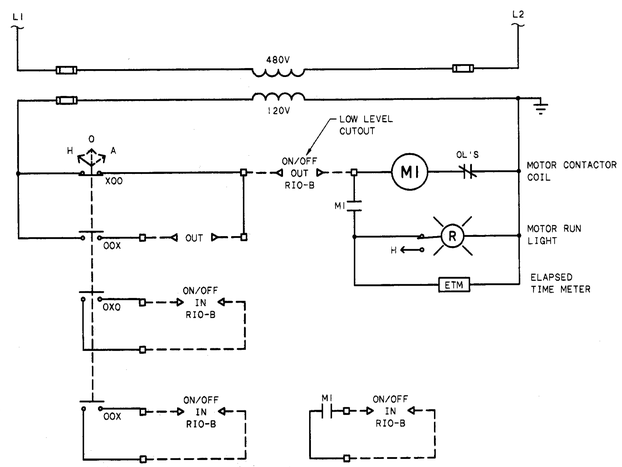
(TYPICAL FOR; AERATION BLOWERS NO.2, 3, 4, & 5; DIGESTER BLOWERS NO.1, 2, & 3; SLUDGE STORAGE TANK BLOWERS NO.1, 2, 3, & 4)



POST AERATION BLOWER No.1 CONTROL DIAGRAM

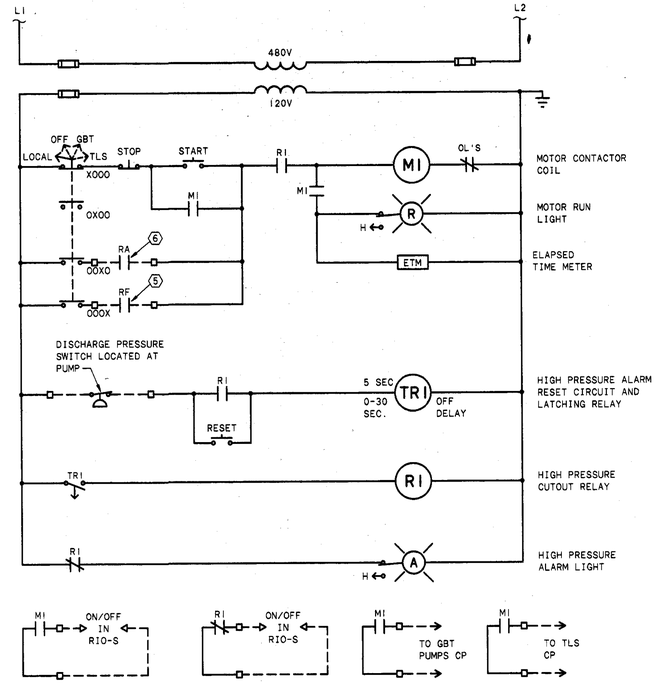
SCALE: NONE

(TYPICAL FOR POST AERATION BLOWER NO.2)



WAS PUMP NO. 1 CONTROL DIAGRAM

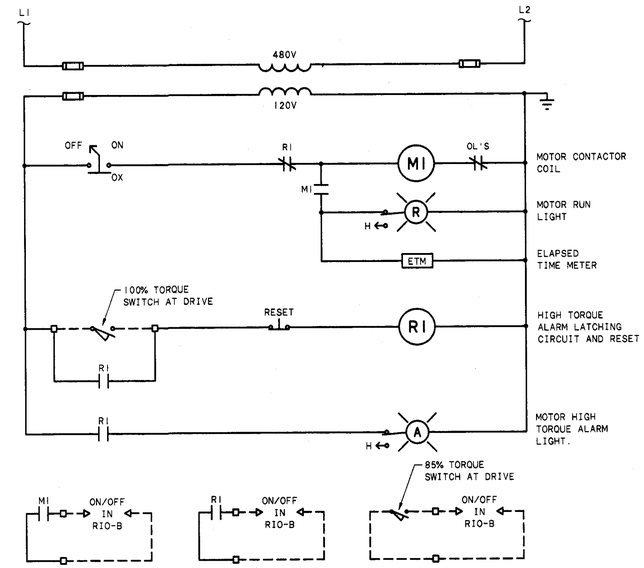
SCALE: NONE



DIGESTED SLUDGE PUMP No.1 CONTROL DIAGRAM

SCALE: NONE

(TYPICAL FOR DIGESTED SLUDGE PUMP NO.2)



FINAL CLARIFIER No.5 - COLLECTOR DRIVE CONTROL DIAGRAM

SCALE: NONE

(TYPICAL FOR FINAL CLARIFIERS NO.6, 7, & 8)

CODED NOTES: ⬡

1. TIME DELAY SETTING SHALL BE DETERMINED IN THE FIELD BASED ON PROGRAMMED STARTING RAMP TIMES FOR EACH PUMP. TIME SHALL BE STAGGERED TO ALLOW EACH PUMP IN SEQUENCE TO REACH FULL SPEED BEFORE ALLOWING THE NEXT PUMP TO START.
2. TIMER RANGE AND TIME DELAY SETTINGS SHALL BE PER DRIVE MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE OVERLAPPING CONTACTS.
4. MOUNTED IN CONTROL STATION IN TERTIARY BLDG. ELECTRICAL ROOM.
5. CONTACTS LOCATED AT TRUCK LOADING STATION (TLS). SEE CONTROL CIRCUIT DIAGRAM ON SHEET 109A.
6. CONTACTS LOCATED IN GRAVITY BELT THICKENER (GBT) PUMPS CP. SEE CONTROL CIRCUIT DIAGRAM ON SHEET 109A.
7. STANDBY POWER INTERLOCK BETWEEN EACH OF AERTION BLOWERS 1 & 2, DIGESTER BLOWERS 1 & 2 AND SLUDGE STORAGE TANK BLOWERS 1 & 2. INTERLOCKS NOT REQUIRED FOR REMAINDER OF BLOWERS.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

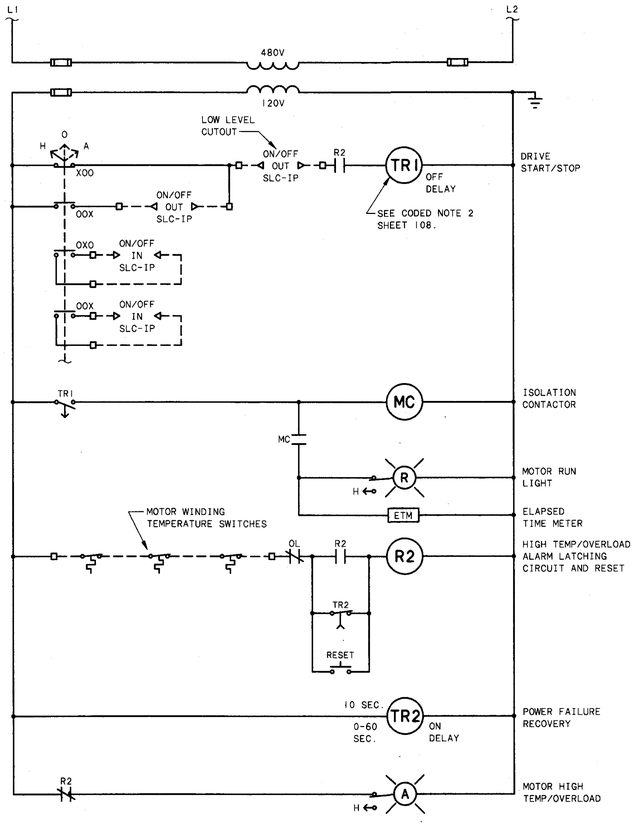
JOB NO.	15582
DESIGNED BY:	TRC/SAT
DRAWN BY:	RER/TES
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	FEB., 1995

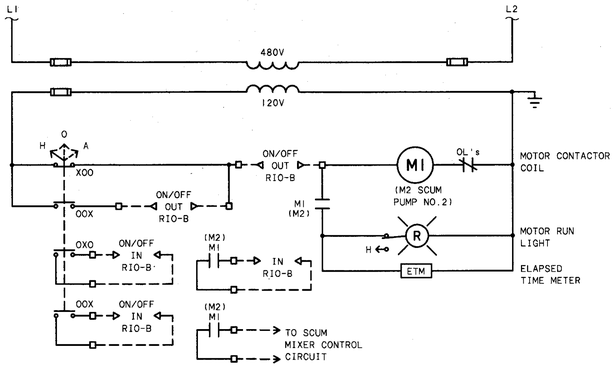
ELECTRICAL CONTROL DIAGRAMS

SCALE: NONE

SHEET NO. 108 OF 112

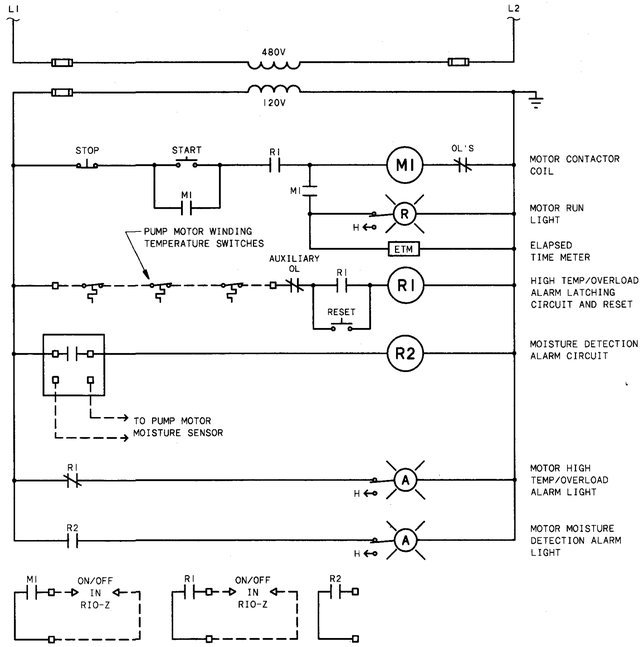
N:\PR15582\CADD\SHT108 3-3-95 1:25:08 pm EST





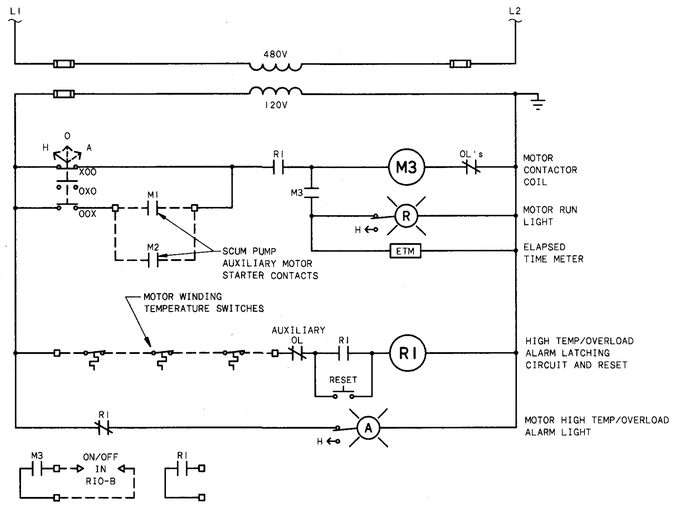
SCUM PUMP No.1 CONTROL DIAGRAM

SCALE: NONE
(TYPICAL FOR SCUM PUMP NO.2)



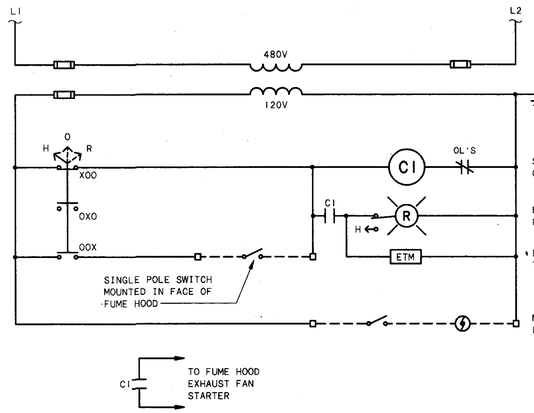
FOAM SPRAY PUMP CONTROL DIAGRAM

SCALE: NONE



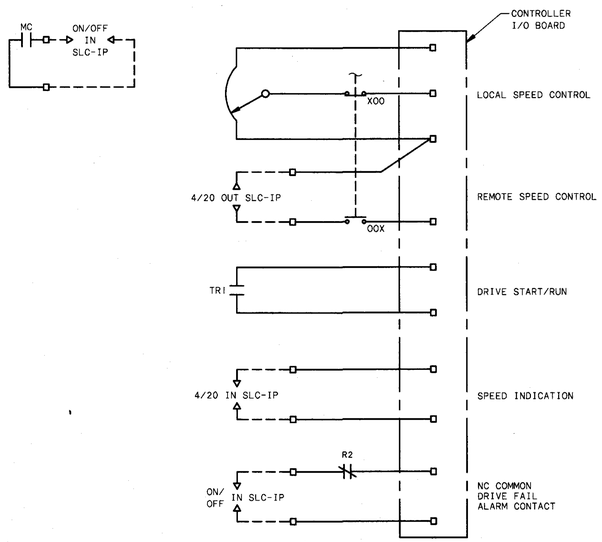
SCUM MIXER CONTROL DIAGRAM

SCALE: NONE



FUME HOOD SUPPLY FAN CONTROL DIAGRAM

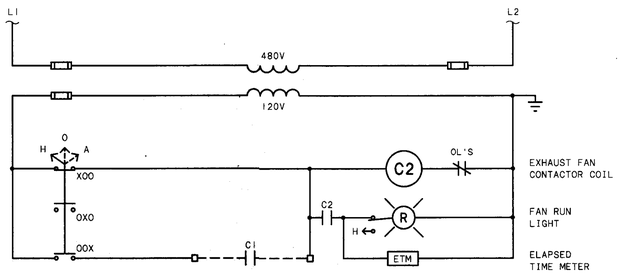
SCALE: NONE



INFLUENT PUMP No.1 CONTROL DIAGRAM

SCALE: NONE
(TYPICAL FOR INFLUENT PUMP No.2, 3, 4, 5, 6, & 7, RAS PUMP NO.1, 2, 3, 4, 5. NOTE: FOR RAS PUMPS, H-O-A SWITCH IS LABELED L-O-R COMPUTER INPUTS/OUTPUTS ARE TO RIO-B)

NOTE: INFLUENT PUMP AND RAS PUMP AFC'S SUPPLIED WITH PUMPS UNDER DIVISION 11.



FUME HOOD EXHAUST FAN CONTROL DIAGRAM

SCALE: NONE

GENERAL NOTES:

1. MOISTURE AND MOTOR TEMPERATURE SENSING MODULES ARE SHOWN SCHEMATICALLY AND OPERATING AT 120V. AC. IF MODULES/CIRCUITS REQUIRE VOLTAGES, SOURCES OR CONDUCTORS OTHER THAN THOSE INDICATED, IT IS THE EQUIPMENT SUPPLIERS RESPONSIBILITY TO PROVIDE ADDITIONAL EQUIPMENT NECESSARY TO RENDER CIRCUIT FUNCTIONAL.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Nipple, Limited — COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

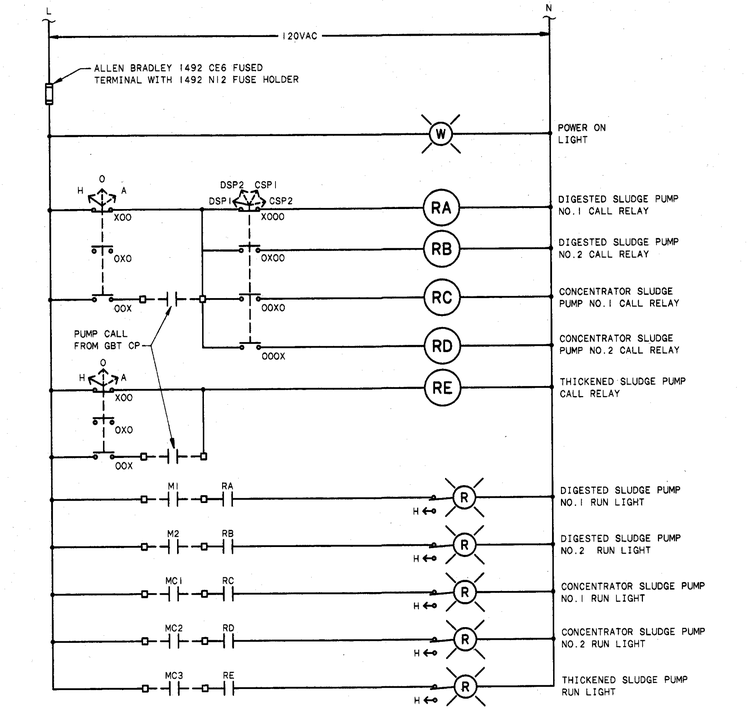
JOB NO.	15582
DESIGNED BY:	TRC
DRAWN BY:	TES
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	MARCH 1995

ELECTRICAL CONTROL DIAGRAMS

SCALE: NONE

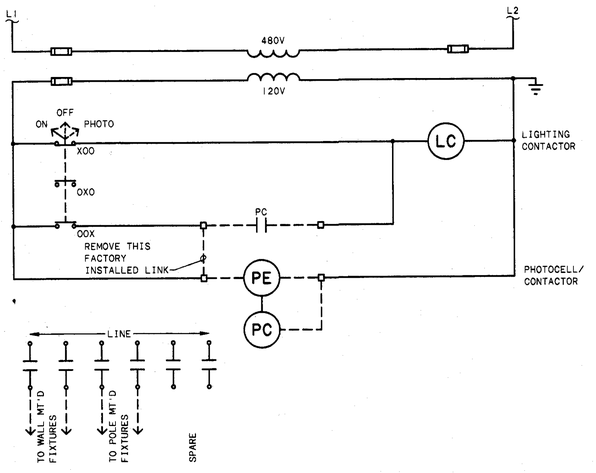
SHEET NO. 109 OF 112

N:\PR15582\CAD\SH1109 4-3-95 3:51:39 pm EST



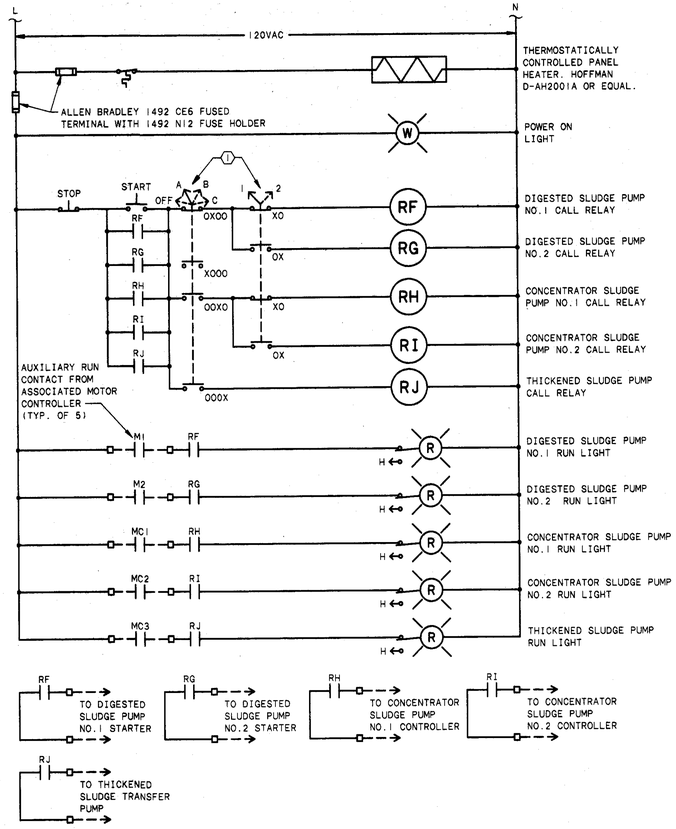
GRAVITY BELT THICKENER PUMPS CONTROL PANEL CONTROL DIAGRAM

SCALE: NONE
(SEE ELEVATION ON SHEET 105A)



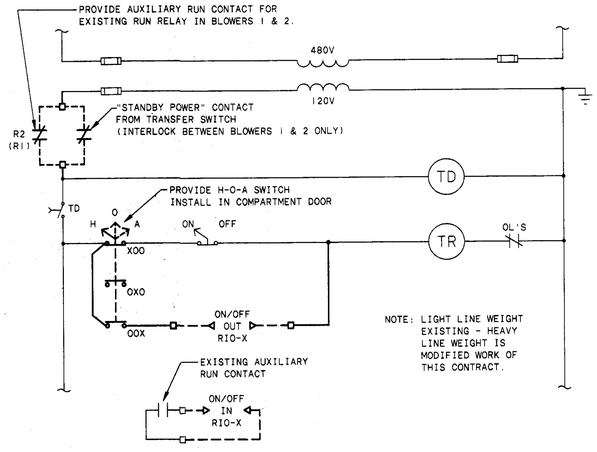
SITE LIGHTING CONTROL DIAGRAM

SCALE: NONE



TRUCK LOADING STATION CONTROL DIAGRAM

SCALE: NONE
(SEE ELEVATION ON SHEET 105A)

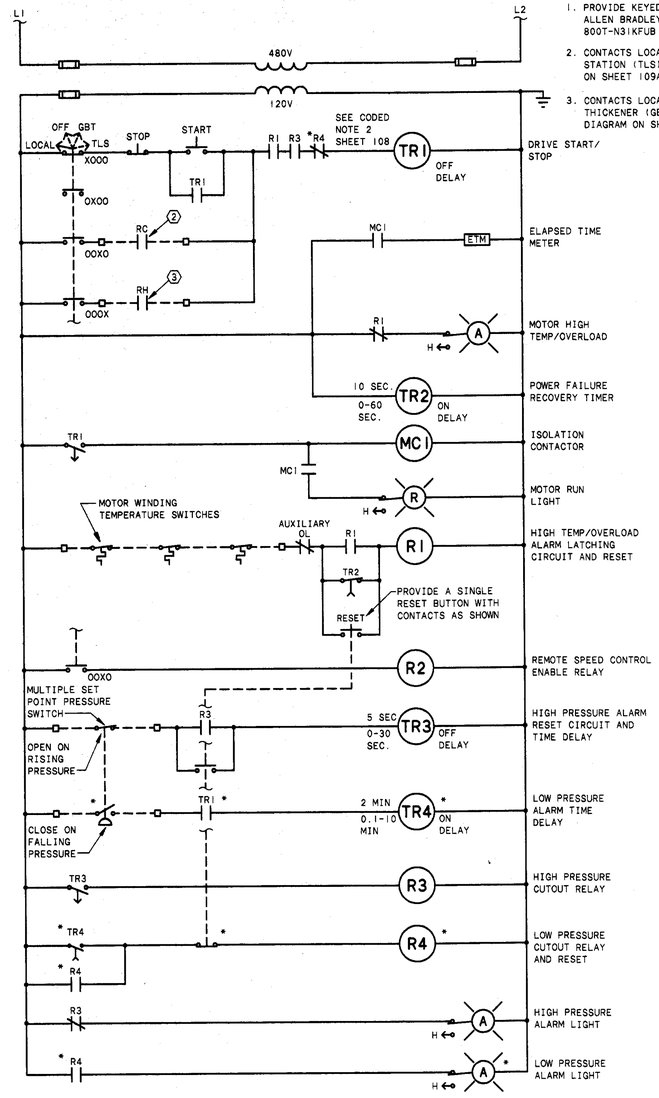


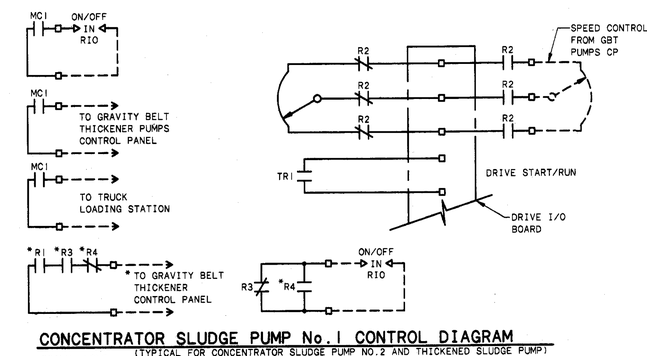
EXISTING BLOWER No.1 - MODIFIED CONTROL DIAGRAM

SCALE: NONE
(TYPICAL FOR BLOWER NO.2 AND NO.3)

CODED NOTES:

1. PROVIDE KEYED CYLINDER LOCK OPERATORS, ALLEN BRADLEY CAT. NO. 800T-H336, 800T-N31KFUB OR EQUAL.
2. CONTACTS LOCATED AT TRUCK LOADING STATION (TLS). SEE CONTROL DIAGRAM ON SHEET 109A.
3. CONTACTS LOCATED AT GRAVITY BELT THICKENER (GBT) PUMPS CP. SEE CONTROL DIAGRAM ON SHEET 109A.





CONCENTRATOR SLUDGE PUMP No.1 CONTROL DIAGRAM

(TYPICAL FOR CONCENTRATOR SLUDGE PUMP NO.2 AND THICKENED SLUDGE PUMP)

SCALE: NONE
NOTE: CONCENTRATOR SLUDGE AND THICKENED SLUDGE PUMP AFC'S SUPPLIED WITH PUMPS UNDER DIVISION 11.
* - MULTIPLE SET POINT PRESSURE SWITCH, TIMER RELAY AND CONTACTS REQUIRED FOR THICKENED SLUDGE PUMP AFC ONLY. SINGLE SET POINT PRESSURE SWITCH ADEQUATE FOR CONCENTRATOR SLUDGE PUMPS.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	TRC
DRAWN BY:	TES
CHECKED BY:	MKP
APPROVED BY:	TRC
DATE:	FEB., 1995

ELECTRICAL CONTROL DIAGRAMS

SCALE: NONE
SHEET NO. 109A OF 112

N:\PR15582\CADD\SHT109A 3-3-95 2:34:32 pm EST

CODED NOTES:

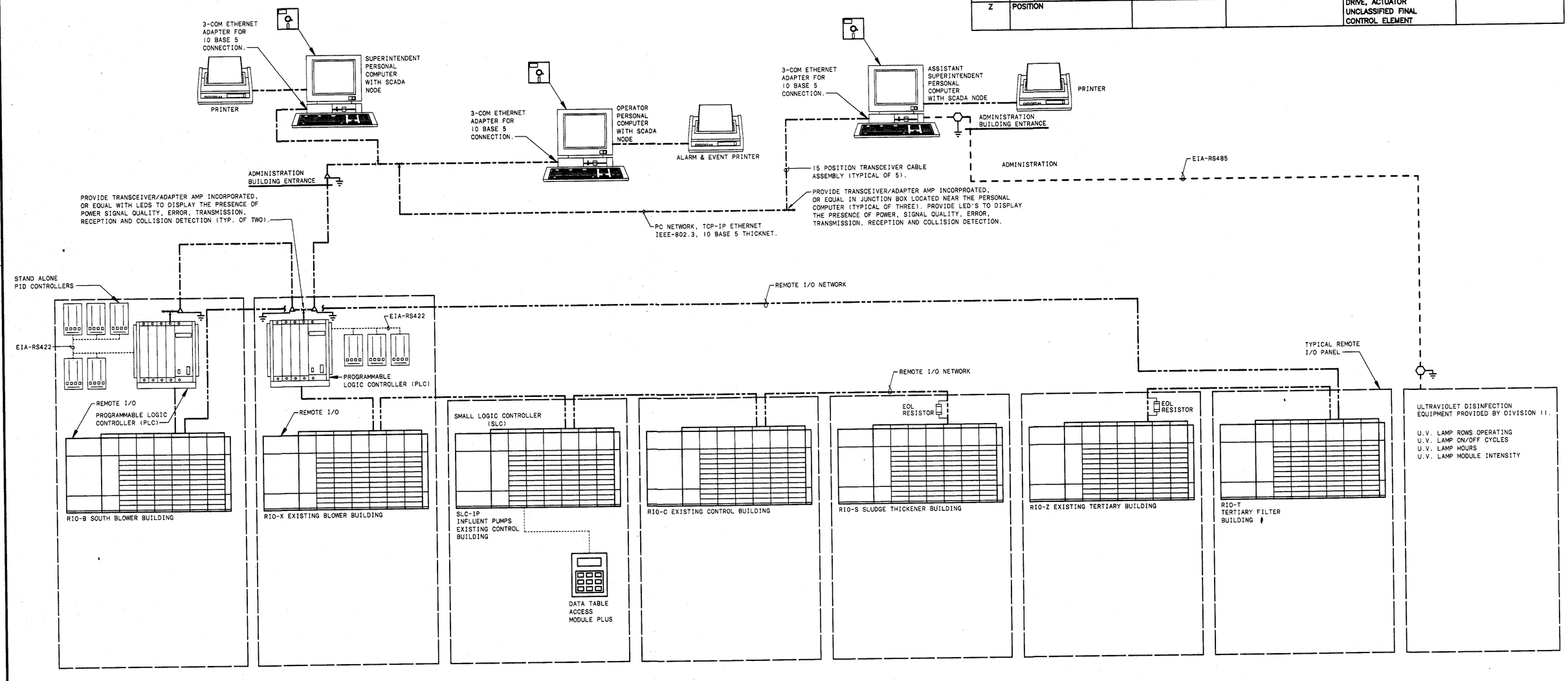
⬡ PROVIDE SECONDARY DATA LINE SURGE PROTECTION COMM-OMNI, EDCO SRS SERIES, OR EQUAL FOR EIA-485 INTERFACE.

△ PROVIDE ETHERNET COAX SURGE PROTECTION COMM-OMNI POLYPHASER IS-IE, OR EQUAL FOR 50 OHM COAX.

⏚ GROUND

INSTRUMENT TAGGING LEGEND

LETTER	FIRST LETTER (S)		SUCCEEDING LETTER (S)		
	PROCESS OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS (pH)		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE	CLOSE, STOP, DECREASE	CLOSE, STOP
C	CONDUCTIVITY			CONTROL	
D	DENSITY OR SP. GR.	DIFFERENTIAL		OPEN, START, INCREASE	OPEN, START
E	VOLTAGE		PRIMARY ELEMENT		
F	FLOW RATE				FAILURE
G			GLASS		
H	HAND (MANUAL)				HIGH
I	CURRENT (ELECT.)		INDICATE		
J	POWER	SCAN			
K	TIME OR TIME SCHEDULE	TREND		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOTION	MOMENTARY			MIDDLE OR INTERMEDIATE
N			ON	USER'S CHOICE	ON, OPERATE
O	TORQUE	OVERLOAD	ORIFICE (RESTRICTION)		
P	PRESSURE OR VACUUM		POINT (TEST CONNECTION)		
Q	QUANTITY OR EVENT	INTEGRATE, TOTALIZE			
R	RADIOACTIVITY		RECORD OR PRINT		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECH. ANALYSIS		VALVE	VALVE, DAMPER OR LOUVER	
W	WEIGHT OR FORCE		WELL		
X	UNCLASSIFIED		HORN		
Y	EVENT, STATE OR PRESENCE			RELAY, COMPUTE, CONVERT	
Z	POSITION			DRIVE, ACTUATOR UNCLASSIFIED FINAL CONTROL ELEMENT	



NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

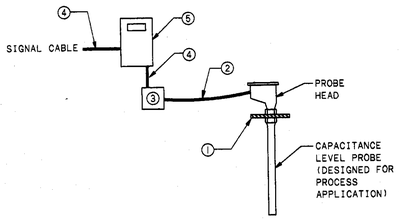
JOB NO.	15582
DESIGNED BY:	DLG
DRAWN BY:	TES
CHECKED BY:	EDT
APPROVED BY:	TRC
DATE:	FEB., 1995

COMPUTER MONITORING SYSTEM CONFIGURATION

SCALE: NONE

SHEET NO. 110 OF 112

N:\PR15582\CADD\SHT110 2-28-95 11:13:03 am EST

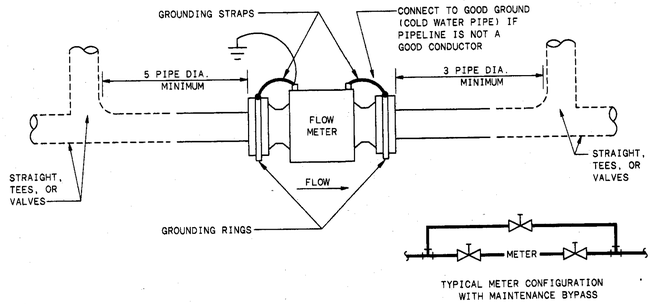


① S.S. FLANGE MOUNT
② FLEXIBLE WATERTIGHT CABLE
③ WATERTIGHT JUNCTION BOX
④ CONDUIT (SIGNAL CABLE)
⑤ LEVEL INDICATING TRANSMITTER

NOTES:
A -PROBE SHALL BE EASILY REMOVABLE. PROVIDE SUFFICIENT SLACK FOR SIGNAL CABLE.

B -PROBE SHALL BE INSTALLED WITHIN 5" OF THE STRUCTURE FLOOR.

RF IMPEDANCE LEVEL PROBE



TYPICAL METER CONFIGURATION WITH MAINTENANCE BYPASS

NOTES:

A -PIPELINE SHALL BE CONFIGURED TO KEEP METER FULL OF LIQUID AT ALL TIMES.

B -STRAIGHT LENGTHS OF PIPE UPSTREAM AND DOWNSTREAM SHALL BE MAINTAINED FOR ACCURATE MEASUREMENT. IT MUST MEET THE MANUFACTURER RECOMMENDATION FOR INSTALLATION.

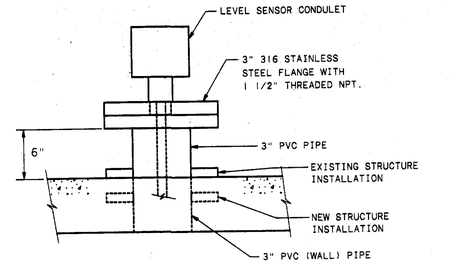
C -IF PIPE INNER DIMENSION IS LARGER THAN METER SIZE, THE REDUCING SECTION SHALL BE CONCENTRIC WITH METER AND THE ANGLE OF REDUCTION MUST NOT EXCEED A TOTAL OF 4°.

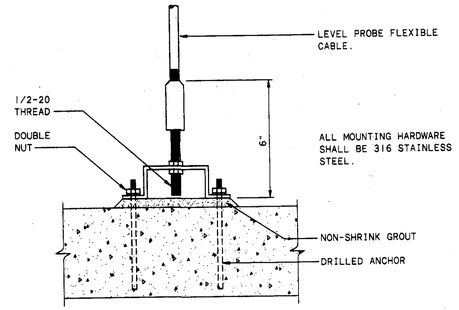
D -FLAT FACE OF FLANGES SHALL BE ALIGNED AND PARALLEL PRIOR TO FLOW METER INSTALLATION.

E -FLANGE BOLTS SHALL NOT BE USED TO ATTACH BONDING JUMPER TO PIPE.

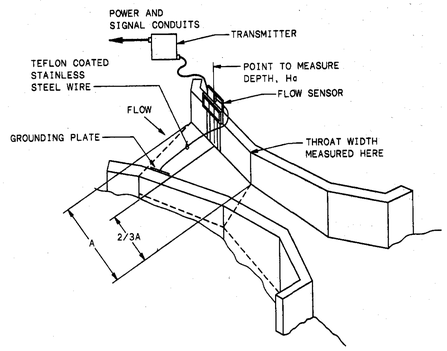
F -SIGNAL CONDUCTORS AND POWER CONDUCTORS TO METER SHALL RUN IN SEPARATE CONDUITS.

MAGNETIC FLOW METER

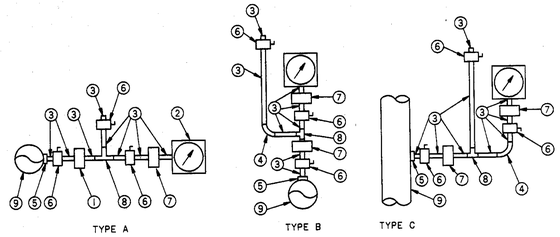




LEVEL ELEMENT MOUNTING AND ANCHOR MOUNTING DETAIL

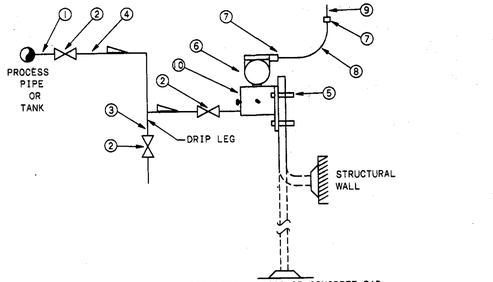


PARSHALL FLUME DETAIL



① DIAPHRAGM SEAL
② PRESSURE SWITCH/GAUGE
③ PIPE NIPPLE
④ PIPE ELBOW
⑤ PIPE COUPLING
⑥ SHUTOFF VALVE
⑦ SNUBBER
⑧ PIPE T
⑨ PROCESS PIPE OR TANK

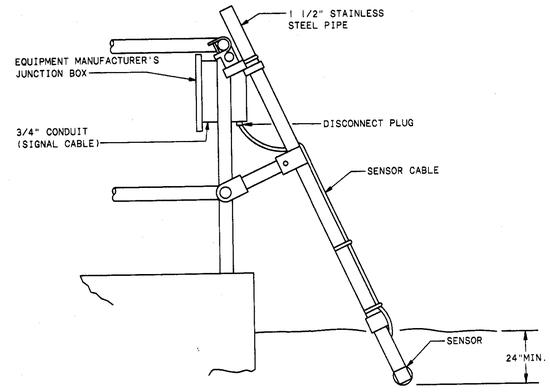
PRESSURE SWITCH/GAUGE



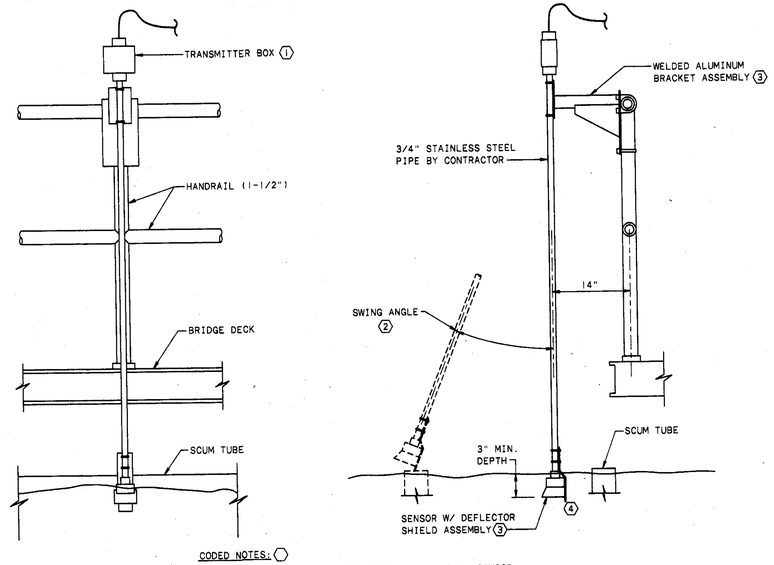
① 1/2" PIPE FITTING, NPT.
② 1/2" BALL VALVE
③ 1/2" S.S. DRAIN LINE
④ 1/2" S.S. TUBING
⑤ INSTRUMENT MOUNTING BRACKET
⑥ PRESSURE INDICATING TRANSMITTER
⑦ 3/4" MALE CONNECTOR
⑧ 3/4" LIQUIDTIGHT FLEXIBLE CONDUIT (SIGNAL CABLE)
⑨ 3/4" RIGID CONDUIT
⑩ VALVE MANIFOLD

NOTES: A -SLOPE ALL HORIZONTAL TUBING RUNS AT LEAST 1" PER FOOT TOWARDS DRIP LEG
B -USE VALVE MANIFOLD FOR SERVICING AND CALIBRATING TRANSMITTERS

PRESSURE TRANSMITTER

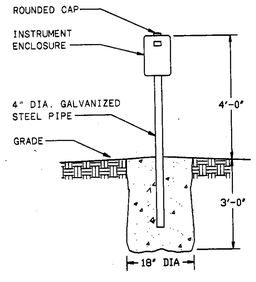


PH & DISSOLVED OXYGEN ANALYZER

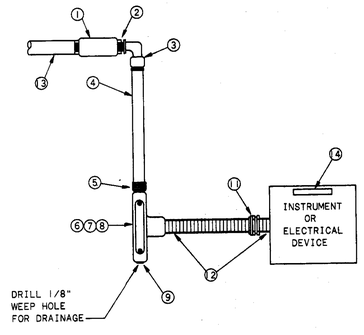


CODED NOTES: ⬡
1. TRANSMITTER BOX LOCATED LESS THAN 15' FROM SENSOR.
2. SWING DIMENSIONS MAX. ANGLE 80°
3. ALL MTG HARDWARE FOR WELDED BRACKET & DEFLECTOR SHIELD PROVIDED BY MANUFACTURER. MTD BRACKET PREDRILLED FOR 1-1/2" HANDRAIL. PROVIDE A SPARE DEFLECTOR SHIELD FOR EACH UNIT SUPPLIED.
4. CENTERLINE OF ASSEMBLY AT REST MUST BE WITHIN 5° OF VERTICAL; THERE MUST BE NO PERMANENT OBSTRUCTIONS IN TANK BELOW SENSOR WITHIN 3' OF CENTERLINE; AVOID MOUNTING SENSOR NEAR THE ENTRY OR EXIT POINTS OF TANK LIQUIDS.

CLARIFIER SLUDGE BLANKET LEVEL DETECTOR



POST MOUNTING DETAIL



TYPICAL DEVICE CONNECTION

TYPICAL DEVICE CONNECTION DESCRIPTION

① CONDUIT COUPLING, RIGID STEEL, GALVANIZED
② BUSHING, REDUCING, FERALOY
③ CONNECTOR, SEAL-TITE, 90°, STEEL
④ CONDUIT, FLEX, SEAL-TITE
⑤ CONNECTOR, SEAL-TITE, STRAIGHT, STEEL
⑥ CONDULET, FERALOY
⑦ CONDULET COVER, FERALOY
⑧ COVER GASKET, NEOPRENE
⑨ PLUG, RECESSED, FERALOY, OR DRAIN/BREATHER
⑩ UNION, FEMALE, FERALOY
⑫ CONDUIT NIPPLE, CLOSE, GALVANIZED/FLEXIBLE WATERTIGHT CONDUIT INTERNALLY SEALED (WHERE APPLICABLE)
⑬ CONDUIT, RIGID STEEL, GALVANIZED
⑭ INSTRUMENT OR ELECTRICAL DEVICE NAMEPLATE

GENERAL NOTES:
1. THE ABOVE INSTRUMENT DETAILS DO NOT INCLUDE ALL THE INSTRUMENTS THAT SHALL BE INSTALLED.
2. CONTRACTOR SHALL PREPARE INSTALLATION SHOP DRAWING OF ALL INSTRUMENTS, AND INSTALL AFTER ENGINEER'S APPROVAL.

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited — COLUMBUS, OH

BURGESS & NIPLE ENGINEERS ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

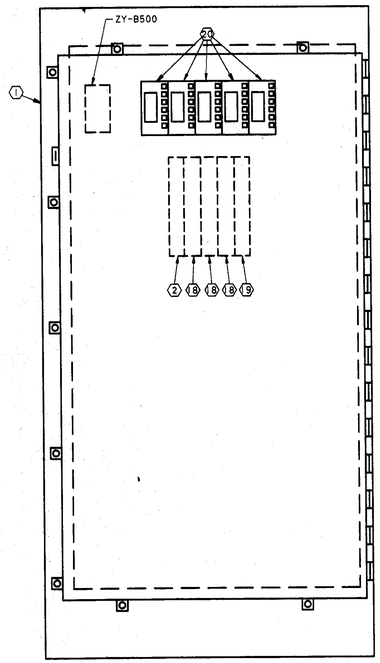
JOB NO.	15582
DESIGNED BY:	DLG
DRAWN BY:	TES
CHECKED BY:	EDT
APPROVED BY:	TRC
DATE:	FEB., 1995

FIELD INSTRUMENT INSTALLATION DETAILS AND NOTES

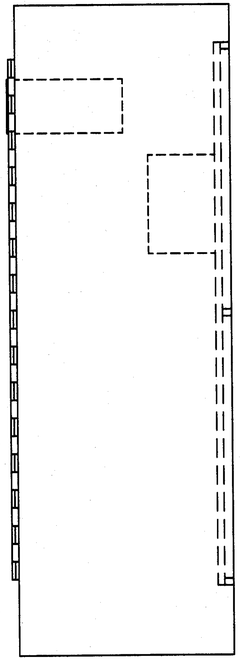
SCALE: NONE

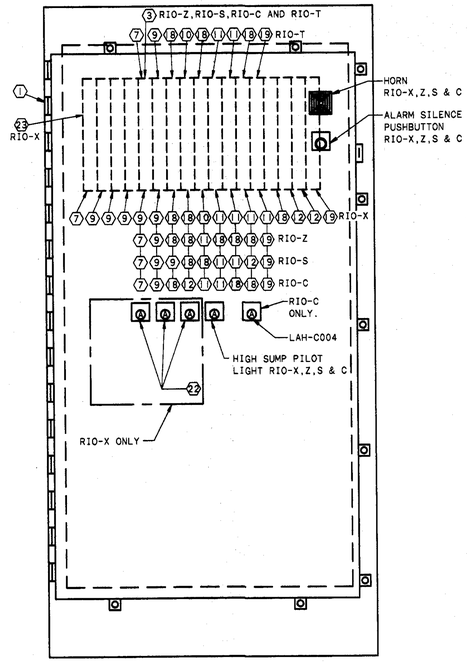
SHEET NO. 111 OF 112

N:\PR15124\CADD\SHT111.DWG 06-DEC-94

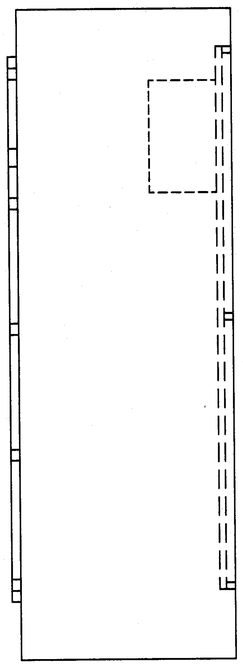


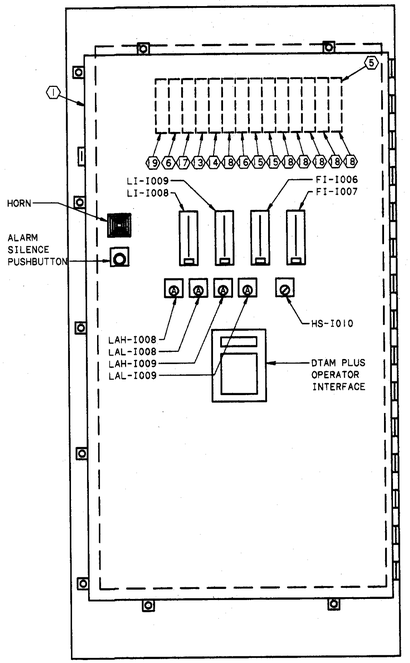
RIO-B ENCLOSURE 1
SCALE: 1-1/2"=1'-0"



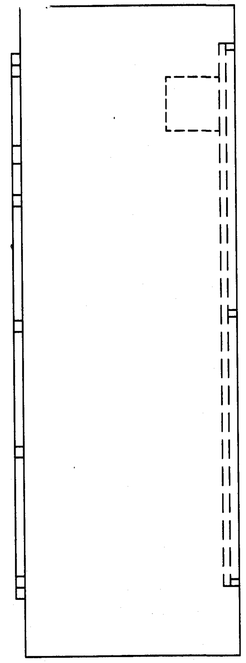


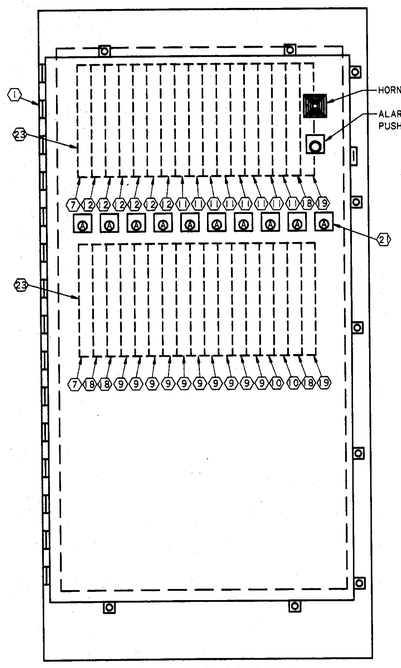
RIO-X ENCLOSURE 1 (TYPICAL FOR RIO-Z, S, C, AND T)
SCALE: 1-1/2"=1'-0"



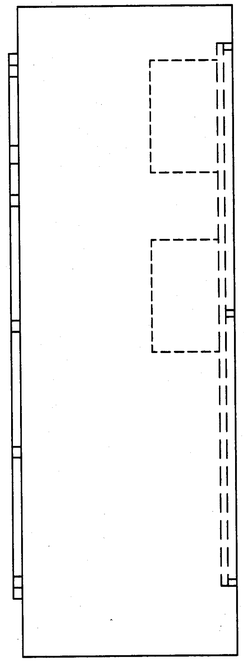


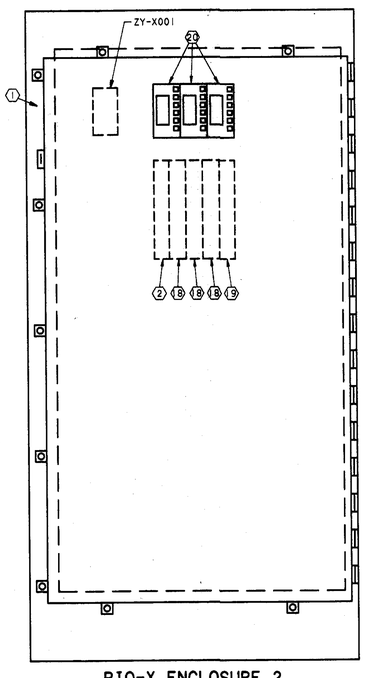
SLC-IP ENCLOSURE
SCALE: 1-1/2"=1'-0"



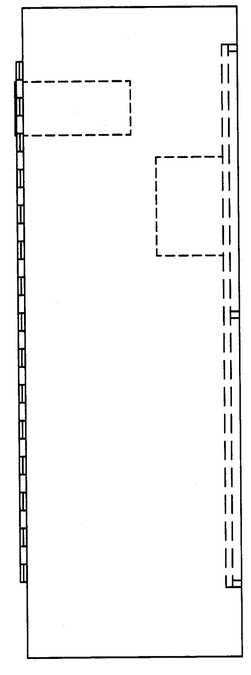


RIO-B ENCLOSURE 2
SCALE: 1-1/2"=1'-0"





RIO-X ENCLOSURE 2
SCALE: 1-1/2"=1'-0"



CODED NOTES:

1. HOFFMAN ENGINEERING COMPANY NEMA 4 ENCLOSURE MODEL A-72H3724FS WITH SUBPANEL.
2. ALLEN BRADLEY CO. PLC-5/40E, MICROPROCESSOR MODEL 1785-L40E W/ 4 SLOT I/O CHASSIS AND I/O POWER SUPPLY.
3. ALLEN BRADLEY CO. 8 SLOT I/O CHASSIS MODEL 1771-A2B WITH I/O POWER SUPPLY.
4. NOT USED.
5. ALLEN BRADLEY CO. 13 SLOT I/O CHASSIS MODEL 1746-A13 WITH I/O POWER SUPPLY.
6. ALLEN BRADLEY CO. SLC-500/02 CPU MODEL 1747-L524 WITH I/O POWER SUPPLY.
7. ALLEN BRADLEY CO. REMOTE I/O ADAPTER MODULE MODEL 1771-ASB/C
8. NOT USED.
9. ALLEN BRADLEY CO. ANALOG INPUT MODULE MODEL 1771-IFE.
10. ALLEN BRADLEY CO. ANALOG OUTPUT MODULE MODEL 1771-OFE.
11. ALLEN BRADLEY CO. DISCRETE INPUT MODULE MODEL 1771-IAD.
12. ALLEN BRADLEY CO. CONTACT OUTPUT MODULE MODEL 1771-OW.
13. ALLEN BRADLEY CO. ANALOG INPUT MODULE MODEL 1746-NI4.
14. ALLEN BRADLEY CO. ANALOG OUTPUT MODULE MODEL 1746-NO4I.
15. ALLEN BRADLEY CO. DISCRETE INPUT MODULE MODEL 1746-IA16.
16. ALLEN BRADLEY CO. CONTACT OUTPUT MODULE MODEL 1746-OW16.
17. ALLEN BRADLEY CO. DIRECT COMMUNICATION MODULE MODEL 1747-DCM.
18. SPARE SLOT.
19. CHASSIS I/O POWER SUPPLY.
20. FISCHER & PORTER MODEL MC5000 PID CONTROLLER.
21. BLOWER 1 THRU 5 SURGE HIGH AND LOW ALARM PILOT LIGHTS.
22. BLOWER 1 THRU 3 SURGE HIGH AND LOW ALARM PILOT LIGHTS.
23. ALLEN BRADLEY CO. 16 SLOT I/O CHASSIS MODEL 1771-A4B WITH I/O POWER SUPPLY.

SPARE PARTS

1. INCLUDE AN ALLEN BRADLEY CO. PLC-5/40E PROCESSOR CARD MODEL 1785-L40E.
2. INCLUDE A SPARE POWER SUPPLY FOR EACH TYPE OF POWER SUPPLY PROVIDED.
3. INCLUDE 2 SPARE MODULES FOR CODED NOTES 9,11, AND 12 ABOVE.
4. INCLUDE 1 SPARE MODULES FOR CODED NOTES 7,10,13,14,15,16, AND 17 ABOVE.
5. INCLUDE A SPARE FUSE FOR EACH FUSE SUPPLIED, AS A MINIMUM.

NOTE:

SEE SPECIFICATION SECTION 13360 "INSTRUMENT PANEL AND CONSOLES"

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Limited COLUMBUS, OH

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DELAWARE COUNTY, OHIO
OLENTANGY ENVIRONMENTAL CONTROL CENTER EXPANSION

JOB NO.	15582
DESIGNED BY:	DLG
DRAWN BY:	TES
CHECKED BY:	EDT
APPROVED BY:	TRC
DATE:	FEB., 1995

REMOTE I/O AND
SMALL LOGIC CONTROLLER
CONTROL PANEL ENCLOSURES

SCALE:	
1-1/2"=1'-0"	
SHEET NO.	OF
112	112

.82\CADD\SHT112 2-28-95 11:30:25 am EST