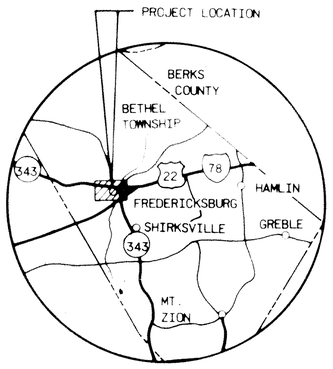
FREDERICKSBURG SEWER AND WATER AUTHORITY

LEBANON COUNTY, PENNSYLVANIA

WASTEWATER TREATMENT PLANT

CONTRACT NO. 2

AUGUST , 1981



ENVIRONMENTAL PROTECTION AGENCY

These Plans and Specifications submitted in connection with an Application for a Federal grant of the construction of treatment works under the provision of the Federal Water Pollution Control Act, as amended and the regulations promulgated thereunder have been complied.

(Reviewing Engineer)

and are herewith APPROVED.

for Chief, Branch Section

(Date)

Region III, Philadelphia, Pennsylvania

PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES

These Plans submitted in connection with a Federal grant for Wastewater Facilities under the Clean Water Act, as amended and the regulations promulgated thereunder have been approved.

4/15/82.
(Date)

James V. Donato
(Regional Water Quality Manager)

APR 15 1982
(Date)

DER
MAR 10 1982
Water Quality Management
Harrisburg Region

FREDERICKSBURG SEWER AND WATER AUTHORITY

DALE E. RICHARD	-	CHAIRMAN
NEAL C. GRIMES	-	VICE CHAIRMAN
NEAL G. YIENGST	-	SECRETARY
JACK L. GUILLIAMS, D.C.	-	TREASURER
A. ROBERT LOSIEWICZ	-	ASS'T SECRETARY-TREASURER

These plans approved by the
FREDERICKSBURG SEWER AND WATER AUTHORITY
FREDERICKSBURG, PENNSYLVANIA
This _____ day _____ 19
_____, CHAIRMAN
_____, SECRETARY

designed by

BUCHART — HORN

YORK, PENNSYLVANIA

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SCALE	N.T.S
DATE	7/81
ENG.	J.W.S.
DES.	W.S.R.
CHK BY	D.D.Q.
DWN BY	W.S.R.

FREDERICKSBURG
SEWER AND WATER AUTHORITY

SHEET INDEX

GROUP NUMBER					JOB NO.
A	E	LA	PM	S	60785
					SHT. NO.
					1

GENERAL STRUCTURAL NOTES

1. GRADE 60 MINIMUM LAP, 36 DIAMETER, UNLESS NOTED OTHERWISE.
2. PROVIDE CORNER BARS IN ALL CONCRETE WALLS SAME SIZE AND SPACING AS HORIZONTAL REINFORCING BARS, EXCEPT AS SHOWN OR NOTED.
3. PROVIDE MINIMUM A.C.I. STEEL REINFORCING IN ALL CONCRETE WALLS SLABS AND FOOTINGS WHERE NONE IS SHOWN OR NOTED.
4. PROVIDE ADDITIONAL REINFORCING AROUND ALL OPENINGS IN SLABS. AND WALLS NOT SHOWN OR NOTED, SIMILAR TO THOSE SHOWN AND NOTES.
5. ALL BOLTS SHALL BE 3/4" ϕ UNLESS NOTED OTHERWISE.
6. ALUMINUM:

   STRUCTURAL SHAPES AND PLATES 6061-T6
   TREADS AND GRATING 6063-T6 BOLTS--
   7075 -- T73 AND ASTM 370 PAINT WITH ASPHALT EMULSION OR ZINC CHROMATE PRIMER, OR EQUAL. ALL SURFACES THAT COME IN CONTACT WITH CONCRETE.

7. PROVIDE PRESSURE RELIEF VALVES, LOCATION AND SIZE SHOWN, NOTED AND/OR SPECIFIED AS MANUFACTURED BY NEENAH FOUNDRY, NEENAH WISCONSIN; CLOW COOPERATION, BENSENVILLE, ILLINOIS OR EQUAL.
8. ALL STRUCTURAL CONCRETE BASE SLABS SHALL BE UNDERLAIN WITH A 6" LAYER OF CRUSHED STONE.

ABBREVIATIONS

ALUM.	ALUMINIUM
BIT.	BITUMINOUS
CL.	CLEARANCE
C.M.P	CORREGATED METAL PIPE
CONC.	CONCRETE
CONST.	CONSTRUCTION
CONT.	CONTINUATION
D.I.P.	DUCTILE IRON PIPE
DWN., DN.	DOWN
DWG.,	DRAWING
DWN. INV.	DOWN STREAM INVERT
E.F.	EACH FACE
EL., ELEV.	ELEVATION
E.W.	EACH WAY
EXIST.	EXISTING
F.G.	FINISH GRADE
F.M.	FORCE MAIN
FT.	FOOT
GALV.	GALVANIZED
h'	HEIGHT
H.W.	HIGH WATER
INV.	INVERT
JT.	JOINT
L.O.C.	LIMIT OF CONTRACT
LT	LIGHT
MATL	MATERIAL
MAX.	MAXIMUM
MIN.	MINIMUM
M.H.	MANHOLE
O.C.	ON CENTER
P.S.	PUMP STATION
P.V.	PLUG VALVE
P.V.C.	POLYVYNAL CHLORIDE
R, RAD.	RADIUS
RED.	REDUCER
REINF.	REINFORCED
R.O.W.-R/W	RIGHT OF WAY
SECT.	SECTION
SHT.	SHEET
SQ.	SQUARE
STA.	STATION
STL.	STEEL
T	THICKNESS
TYP.	TYPICAL
A UP. INV. A	UPSTREAM INVERT SECTION
L.R.	LONG RADIUS
R.O.W.-R/W	RIGHT-OF-WAY
F.D.	FLOOR DRAIN
FLR.	FLOOR
H.V.A.C	HEATING, VENTILATON, AIR CONDITIONING
EMBED.	EMBEDDED
SCH.	SCHEDULE
BLDG.	BUILDING
NO.	NUMBER

LEGEND

- COUPLING
- LINE STRAINER
- YH YARD HYDRANT
- WEDGE, KNIFE VALVE
- PRESSURE REDUCING VALVE
- PRESSURE RELIEF
- DIAPHRAM
- STATIC MIXER
- ORIFICE PLATE
- FLEXIBLE CONNECTIONS
- SIGHT FLOW INDICATOR
- OTHER
- GATE VALVE
- CHECK VALVE
- P.V. PLUG VALVE
- BALL VALVE
- GLOBE VALVE
- (4 WAY) (3 WAY) (2 WAY) SOLENOID VALVE
- NEEDLE VALVE
- TOGGLE
- SHUT-OFF COCK
- ℄ CENTER LINE
- ℄ BASE LINE
- DIA, ϕ DIAMETER
- ELL., 90° ELBOW
- TEE
- CROSS
- REDUCER
- UNION
- ℙ PROPERTY LINE
- PRESSURE SUSTAINING OR BACK PRESSURE

- REDUCER
- PRESSURE GAGE w/ DIAPHRAM
- WYE-BRANCH
- SOLID WEDGE GATE VALVE
- CHECK VALVE
- BUTTERFLY VALVE
- FLOW REGULATING VALVE
- GLOBE VALVE
- 4 WAY SOLENOID VALVE
- COMBINED PRESSURE & VACCUM RELIEF VALVE
- WM WATER METER
- DM DENSITY METER
- FM FLOW METER
- PULSATION DAMPENER
- PET COCK
- HOSE BIBB
- (P) PULSATION DAMPER

- INDICATES SECTION CUT (MECHANICAL)
- INDICATES SHT. WHERE SECTION IS LOCATED (MECHANICAL)
- INDICATES SHT. WHERE SECTION IS CUT (MECHANICAL)
- INDICATES SECTION CUT (ARCHITECTURAL)
- INDICATES SHT. WHERE SECTION IS LOCATED (ARCHITECTURAL)
- INDICATES DETAIL (ARCHITECTURAL)
- INDICATES SHT. WHERE DETAIL IS LOCATED (ARCHITECTURAL)

ABBREVIATIONS (CONT.)

GAL.	GALLON
I.D.	INSIDE DIAMETER
W.L.	WATER LEVEL
AVG.	AVERAGE
FLEX.	FLEXIBLE
N.P.T.	NATIONAL PIPE THREAD
R.D.	ROAD
ANC.	ANCHOR
BOT.	BOTTOM
REQ'D.	REQUIRED
BET.	BETWEEN
O.D.	OUTSIDE DIAMETER
F.F.	FINISH FLOOR
T.O.W.	TOP OF WALL
RET. WALL	RETAINING WALL
I.P.	IRON PIN
L.F.	LINEAR FEET
FND.	FOUNDATION
U-DRAIN	UNDERDRAIN

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SCALE	AS SHOWN
DATE	7/81
ENG.	J.W.S.
DES	W.S.R.
CHK BY	W.S.R.
DWN BY	W.S.R.

GENERAL STRUCTURAL NOTES ,ABBREVIATIONS ,& LEGEND

OVERFLOW WEIR BOX (EFFLUENT BOX)

STA. 10+00 300.00 LT.

STA. 12+80 300.00 LT.

℄ S 82° 20' 51" E 280'

STA. 10+68.33 277.92 LT.

STA. 10+75.67 277.92 LT.

467

468

468

SO. ℄ OXIDATION DITCH

STA. 11+68 268.00' LT.

SECONDARY ℄ CLARIFIER NO. 2

CLARIFIER DISTRIBUTION BOX

STA. 11+65.50 243.50 LT.

STA. 11+63 209.00' LT.

STA. 11+68 205.00' LT.

STA. 10+72 228.00' LT.

STA. 11+65.50 229.50' LT.

SCUM PIT

STA. 12+31 205.00' LT.

STA. 10+72 222.00' LT.

℄ ACCESS BRIDGE

SECONDARY ℄ CLARIFIER NO. 1

SLUDGE ℄ HOLDING TANK

25'R

STA. 11+91.64 210.36' LT.

STA. 11+97 205.00' LT.

132'

270'

132'

270'

B.M. "O" SEE NOTE 9 ON SHT. 5

EXISTING PROPERTY LINE

STA. 8+29 166' LEFT

STA. 10+72 162.00 LT.

℄ AERATOR

25'R

13'R

STA. 12+35.67 178.00' LT.

10'R

STA. 12+36.67 174.00' LT.

STA. 11+32 178.00' LT.

STA. 11+63 159.00' LT.

STA. 12+41.7 145.00' LT.

CHLORINE CONTACT TANK

STA. 11+63 147.00' LT.

5'

5'

5'

STA. 12+79 145.00' LT.

N 07° 39' 09" E

12'

16'

℄ AERATOR & ACCESS BRIDGE

6'

S 07° 39' 09" W

STA. 11+57.17 130.33' LT.

STA. 11+76 130.33' LT.

STA. 10+72 102.00' LT.

CONTROL BUILDING

25'R

STA. 12+71.67 110.00' LT.

42' R

60' R

STA. 11+76 100.00' LT.

5' (TYP.)

STA. 11+61.67 85.00' LT.

15'R

STA. 11+48.67 75.00' LT.

STA. 11+61.67 75.00' LT.

STA. 12+24.67 100.00' LT.

STA. 12+35.67 75.00' LT.

N 82° 20' 51" W P.T.

STA. 12+09.67 100.00' LT.

STA. 12+61.67 50.00' LT.

STA. 11+61.67 69.00' LT.

15'R

15'R

STA. 11+61.67 54.00' LT.

MATCH SHEET NO. 4

STA. 10+00 30.00' LT.

STA. 11+76.67 40.00' LT.

STA. 12+46.67 40.00' LT.

1' TYP.

N 82° 20' 51" W 280'

STA. 12+80 30.00 LT.

NOTE: ALL LAYOUT POINTS ARE STATIONED AND OFFSET FROM CONSTRUCTION BASELINE.

20 0 20

SCALE

CONSTRUCTION BASELINE

EXIST. I.P. 10+00

EXIST. HUB 11+00

EXIST. HUB 12+00

H-1 | H-1

BM-1

REVISIONS

NO.	SYM.	BY	DATE	DESCRIPTION

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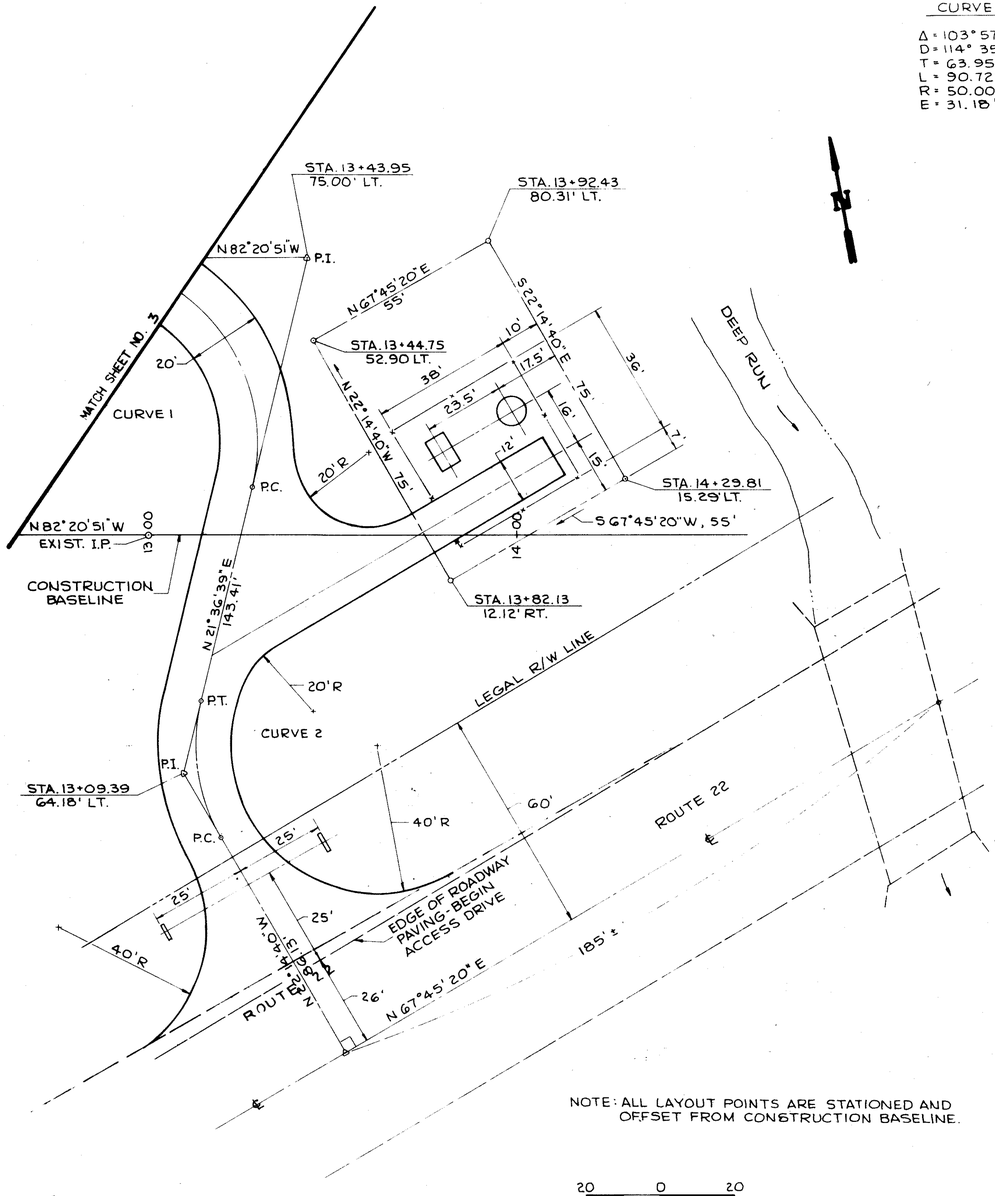
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DATE 7/81
ENG. J. W. S.
DES. DNS
DR. BY DNS
CK. BY DLS

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HORIZONTAL LAYOUT AREA - 1

GROUP NUMBER					JOB NO.
A	E	LA	PM	S	60785
					SHT. NO.
					3

CURVE 1	CURVE 2
Δ = 103° 57' 30"	Δ = 43° 51' 19"
D = 114° 35' 30"	D = 114° 35' 30"
T = 63.95'	T = 20.13'
L = 90.72'	L = 38.27'
R = 50.00'	R = 50.00'
E = 31.18'	E = 3.90'



NOTE: ALL LAYOUT POINTS ARE STATIONED AND OFFSET FROM CONSTRUCTION BASELINE.

20 0 20

SCALE

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NO.	BY	DATE	DESCRIPTION

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NO.	BY	DATE	DESCRIPTION

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DES.	DNS
CHK BY	DNS
DWN BY	DLS

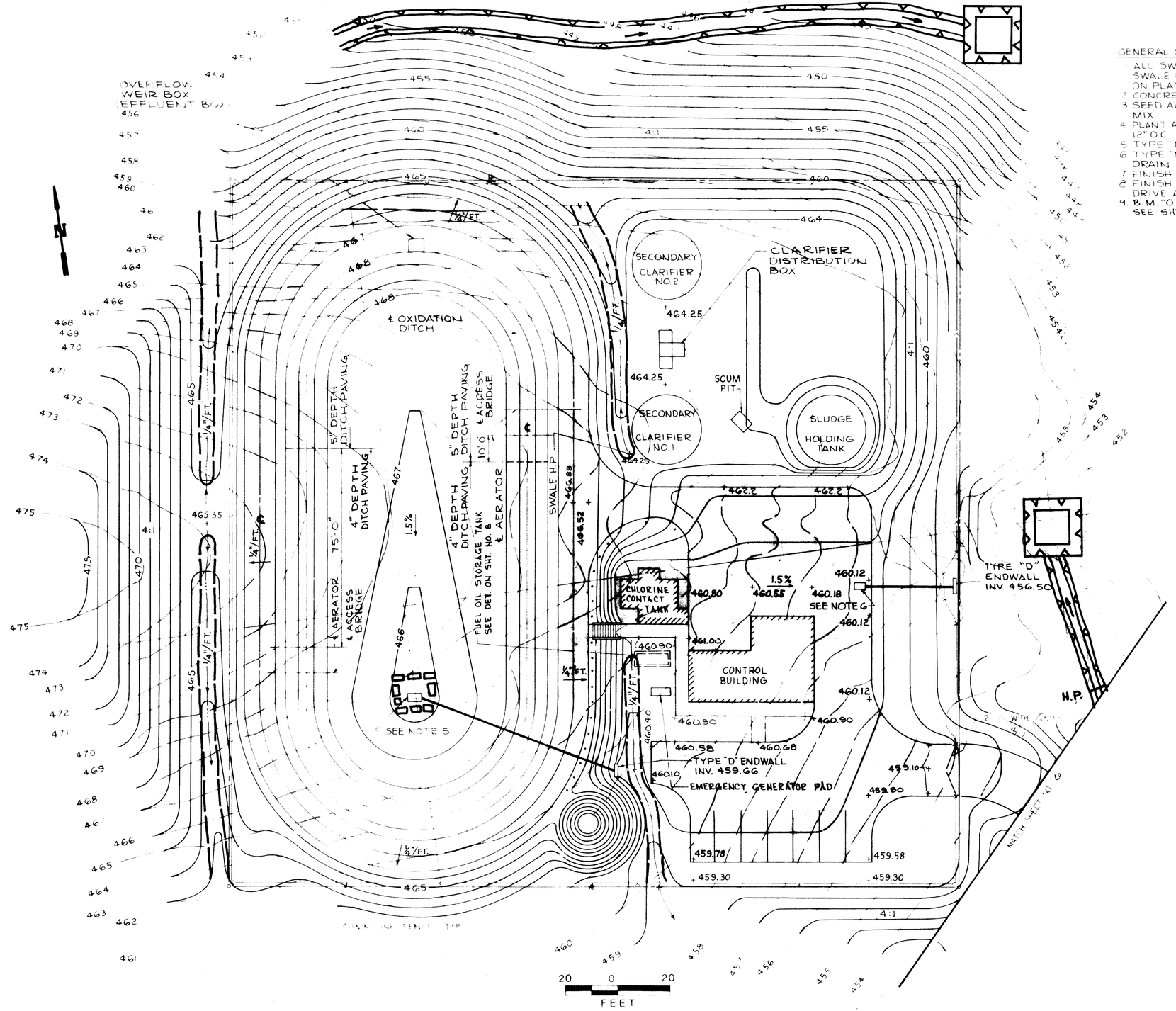
FREDERICKSBURG
SEWER AND WATER AUTHORITY

HORIZONTAL LAYOUT AREA- II

GROUP NUMBER					JOB NO.
A	E	LA	PM	S	60785
					SHT. NO.
					4

GENERAL NOTES

1. ALL SWALES HAVE 4' WIDE BOTTOM AND 4:1 SIDE SLOPES. SWALE DEPTH IS 1'-0" UNLESS OTHERWISE NOTED OR SHOWN ON PLAN.
2. CONCRETE WALKS SLOPE AWAY FROM STRUCTURES AT 1/4"/FT.
3. SEED ALL AREAS 3:1 OR LESS WITH SPECIFIED GRASS SEED MIX.
4. PLANT ALL AREAS 3:1 OR MORE WITH BALTIC IVY PLANTED 12" O.C.
5. TYPE "M" INLET, T.G. EL. 465.35, INV. 460.50, 80 L.F. 18"ø C.M.P.
6. TYPE "M" INLET, T.G. EL. 459.90, INV. 456.90, INCORPORATE BASE COURSE DRAIN INTO INLET, 35 L.F. 18"ø C.M.P.
7. FINISH GRADE AT OXIDATION DITCH IS 468.00
8. FINISH GRADE AT INSIDE EDGE OF 12' WIDE BITUMINOUS DRIVE AROUND OXIDATION DITCH IS 467.00
9. B.M. "O" RR SPIKE IN BASE OF POLE # M.E. BL - 271 ELEV. 476.33 SEE SHT. 3 FOR LOCATION



REVISIONS						REVISIONS					
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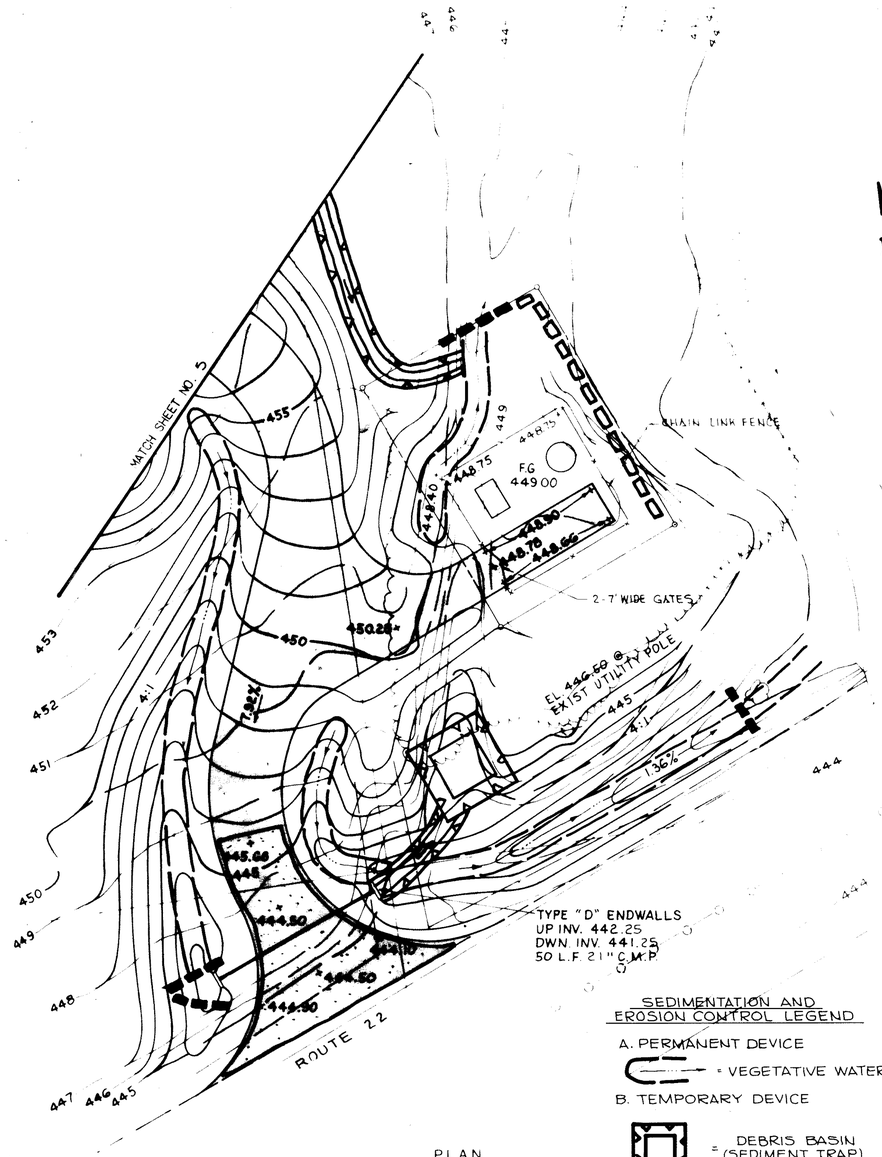
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ENG.
DES.
CHK BY
DWN BY R.A.E.

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SITE GRADING AREA 1

GROUP NUMBER					JOB NO.
A	E	LA	PM	S	60785
					SHT. NO.
					5

LA3.1 LA3.1
LA2.1 LA2.1
LA1.1 LA1.1
BM-1



PLAN
20 0 20
FEET

SEDIMENTATION AND EROSION CONTROL LEGEND

A. PERMANENT DEVICE

= VEGETATIVE WATERWAY (SWALE)

B. TEMPORARY DEVICE

= DEBRIS BASIN (SEDIMENT TRAP)

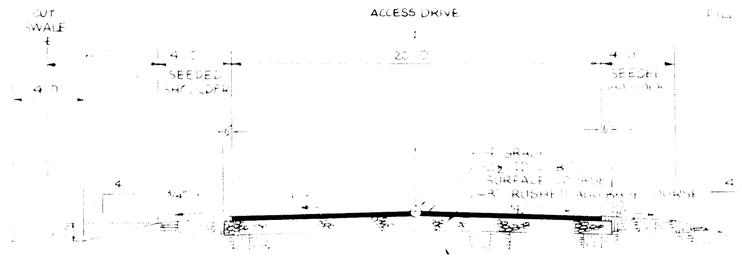
= SWALE TREATMENT

= STRAW EROSION CHECK

= STABILIZED CONSTRUCTION ENTRANCE

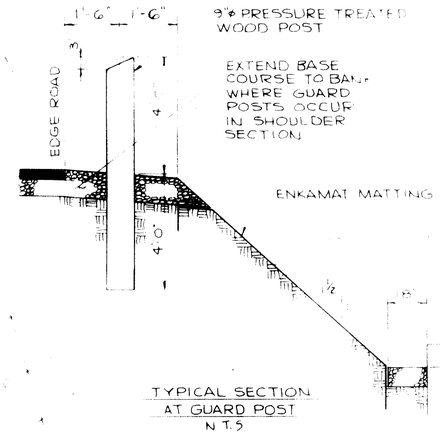
= DIVERSION

H.P. = HIGH POINT

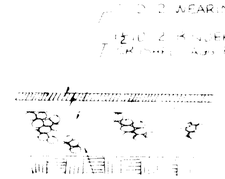


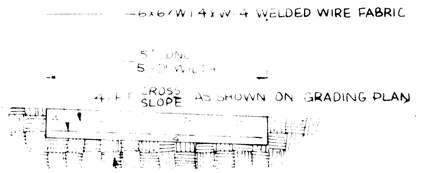
TYPICAL DRIVEWAY SECTION
ACCESS DRIVE

40 0 40
FEET



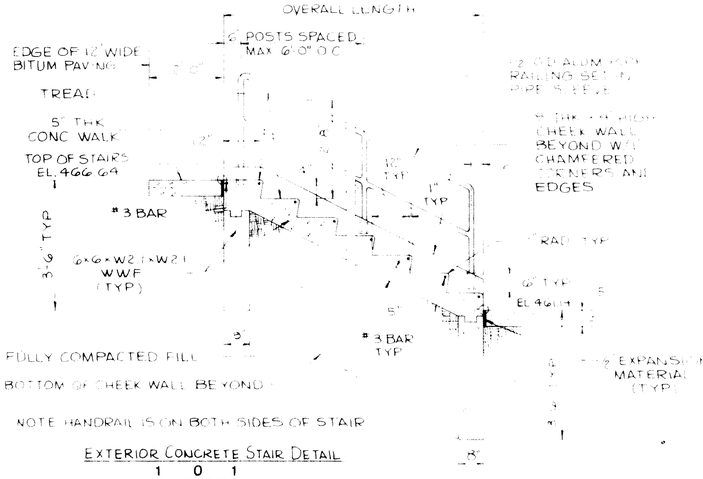
TYPICAL SECTION
AT GUARD POST
N.T.S



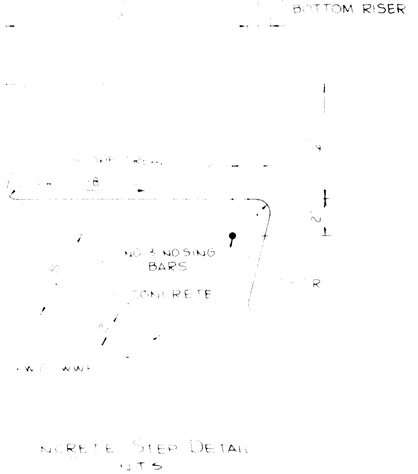


NOTE
SCORING 5' OC. ¼ SLAB DEPTH
½ EXPANSION JOINT 20' O.C. AND BETWEEN WALK AND STRUCTURE.

SECTION LONG WALK
1 0 1
FEET

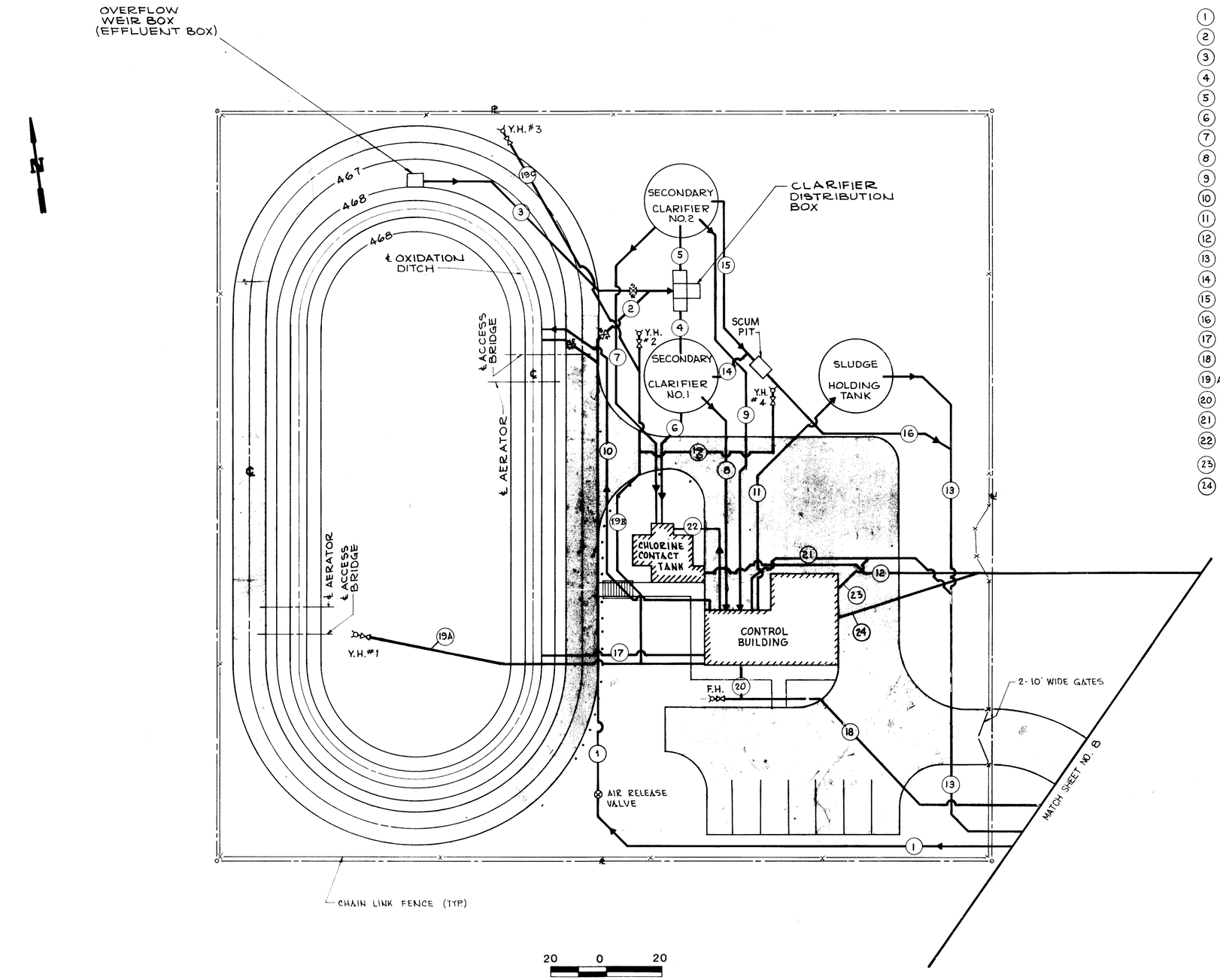


EXTERIOR CONCRETE STAIR DETAIL
1 0 1
FEET



NCRETE STEP DETAIL
N.T.S

| | | |



1. 6"ϕ INFLUENT LINE TO OXIDATION DITCH
2. 6"ϕ INFLUENT BY-PASS LINE TO CLARIFIER DISTRIBUTION BOX
3. 8"ϕ OXIDATION DITCH EFFLUENT LINE
4. 8"ϕ INFLUENT LINE - CLARIFIER #1
5. 8"ϕ INFLUENT LINE - CLARIFIER #2
6. 8"ϕ EFFLUENT LINE - CLARIFIER #1
7. 8"ϕ EFFLUENT LINE - CLARIFIER #2
8. 4"ϕ RETURN SLUDGE SUCTION LINE - CLARIFIER #1
9. 4"ϕ RETURN SLUDGE SUCTION LINE - CLARIFIER #2
10. 6"ϕ RETURN SLUDGE - TO OXIDATION DITCH
11. 6"ϕ SLUDGE LINE - TO SLUDGE HOLDING TANK
12. 8"ϕ PLANT DISCHARGE LINE
13. 6"ϕ SLUDGE HOLDING TANK DECANT LINE TO PUMP STATION WET WELL.
14. 4"ϕ SCUM LINE - CLARIFIER #1
15. 4"ϕ SCUM LINE - CLARIFIER #2
16. 6"ϕ PIPE FROM SCUM PIT TO HOLDING TANK DECANT LINE.
17. 3/4"ϕ CHEMICAL FEED LINE
18. 6"ϕ WATER MAIN - POTABLE WATER SUPPLY
19. A,B,C & D 2"ϕ POTABLE WATER LINE - YARD SUPPLY LINES
20. 2"ϕ POTABLE WATER LINE - TAP SUPPLY TO CONTROL BUILDING
21. 6"ϕ SANITARY DRAIN LINE
22. 1"ϕ CHLORINE SOLUTION LINE
23. 4"ϕ DRAIN LINE - UTILITY ROOM
24. 4"ϕ DRAIN LINE - FOUNDATION DRAIN

NOTE:

1- FOR PIPE PROFILES REFER TO SHEET NOS. 9 & 10.

PM1.2 PM1.1
SM-1

REVISIONS

NO	SYM	BY	DATE	DESCRIPTION

REVISIONS

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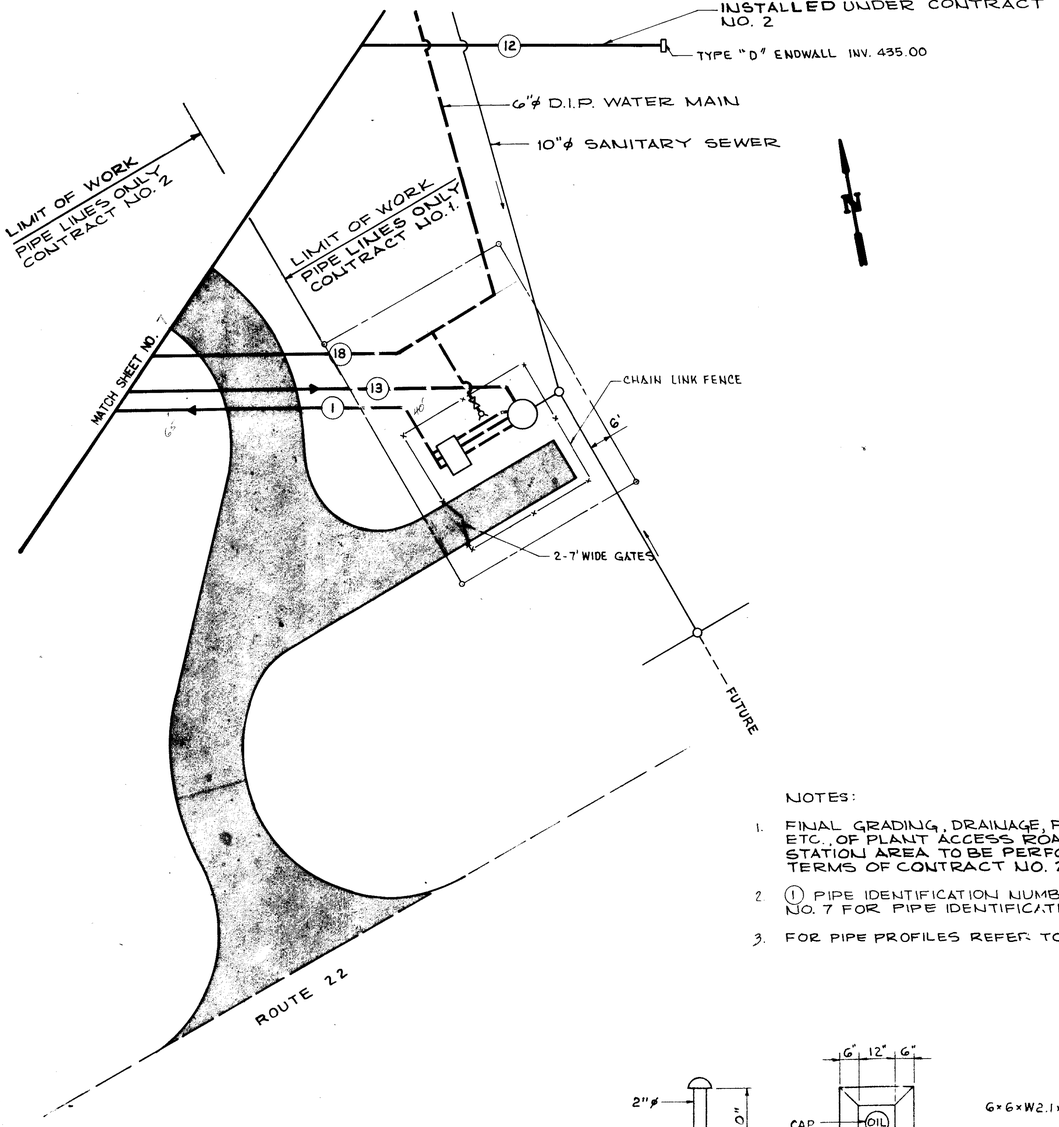
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SCALE AS SHOWN
DATE 7/81
ENG
DES
CHK BY
DWN BY W.S.R

FREDERICKSBURG
SEWER AND WATER AUTHORITY

YARD PIPING AREA -1

GROUP NUMBER					JOB NO.
A	E	LA	PM	S	60785
					SHT. NO.
					7



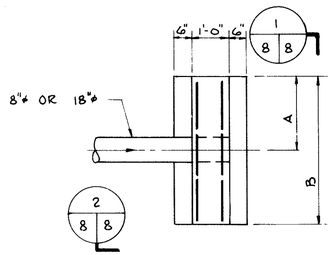
NOTES:

1. FINAL GRADING, DRAINAGE, FENCING, PAVING, ETC., OF PLANT ACCESS ROAD, AND PUMP STATION AREA TO BE PERFORMED UNDER TERMS OF CONTRACT NO. 2.
2. (1) PIPE IDENTIFICATION NUMBER, REFER TO SHEET NO. 7 FOR PIPE IDENTIFICATION LIST.
3. FOR PIPE PROFILES REFER TO SHEET NOS. 9 & 10.

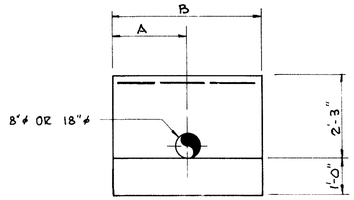
PLAN

20 0 20

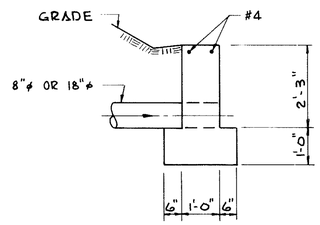
FEET



PLAN



SECTION 1 / 8 8

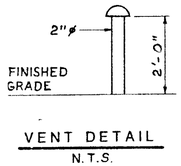


SECTION 2 / 8 8

TYPE "D" ENDWALL DETAIL

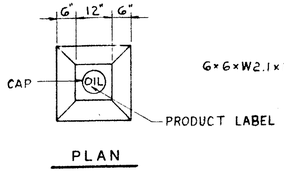
N.T.S.

DIMENSIONS	8"ϕ	18"ϕ & 21"ϕ
A	2'-0"	2'-6"
B	4'-0"	5'-0"

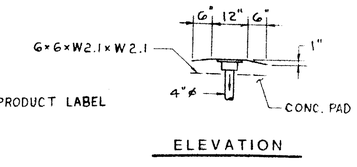


VENT DETAIL

N.T.S.



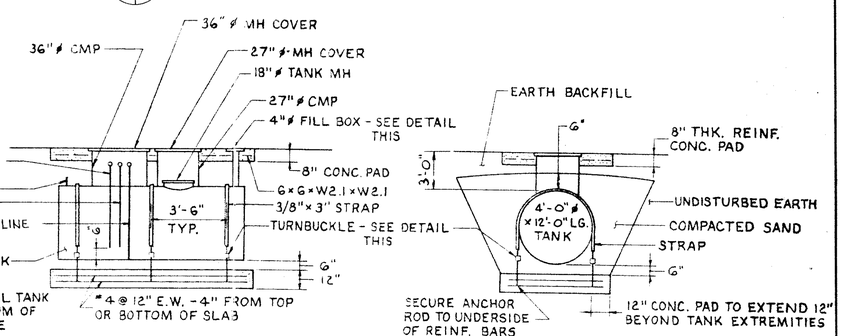
PLAN



ELEVATION

FILL BOX DETAIL

N.T.S.



NOTES:
1. INSTALL FUEL OIL TANK PIPING A MINIMUM OF 30" BELOW GRADE
2. SEE SHT. 5 FOR FUEL TANK LOCATION.

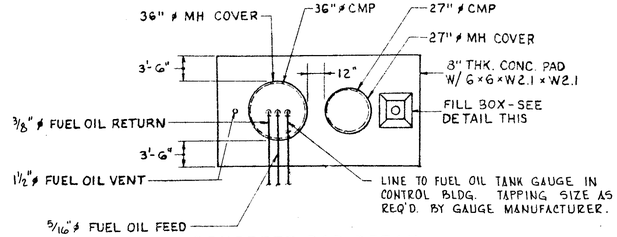
#4 @ 12" E.W. - 4" FROM TOP OR BOTTOM OF SLAB

SIDE VIEW

END VIEW

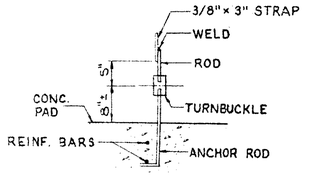
UNDERGROUND FUEL OIL STORAGE TANK

N.T.S.



CONCRETE PAD DETAIL

N.T.S.



TURNBUCKLE DETAIL

N.T.S.

REVISIONS

NO	SYM	BY	DATE	DESCRIPTION

REVISIONS

NO	SYM	BY	DATE	DESCRIPTION

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ENG.
DES. W.S.R.
CHK BY
DWN BY W.S.R.

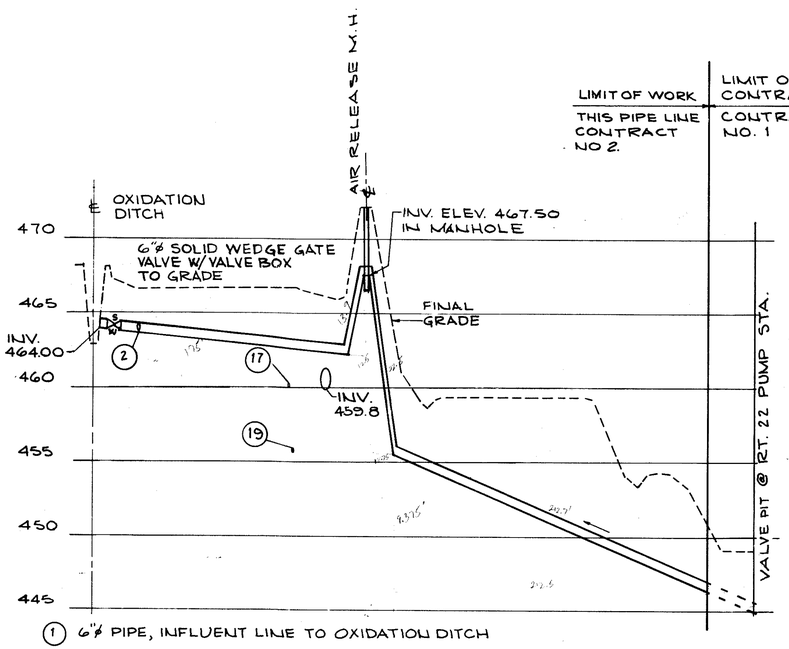
FREDERICKSBURG
SEWER AND WATER AUTHORITY

YARD PIPING AREA -II

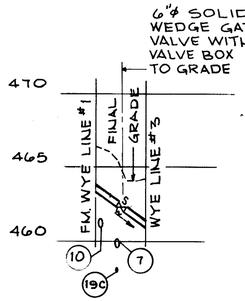
GROUP NUMBER				
A	E	LA	PM	S

JOB NO. 60785

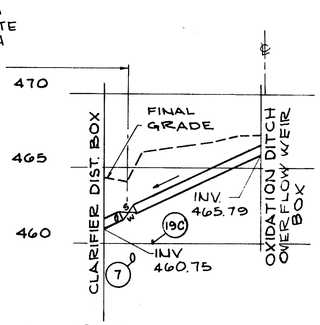
SHT. NO. 8



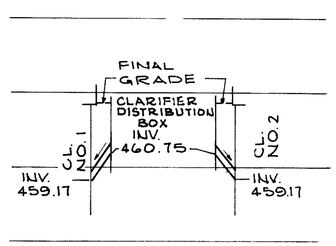
(1) 6"ϕ PIPE, INFLUENT LINE TO OXIDATION DITCH



(2) 6"ϕ PIPE, INFLUENT BY-PASS LINE TO CLARIFIER DISTRIBUTION BOX

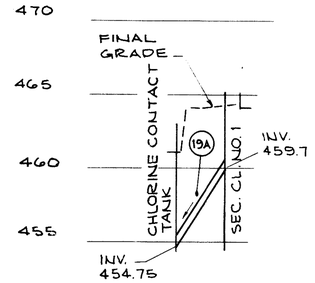


(3) 8"ϕ PIPE FROM OXIDATION WEIR BOX TO CLARIFIER DISTRIBUTION BOX



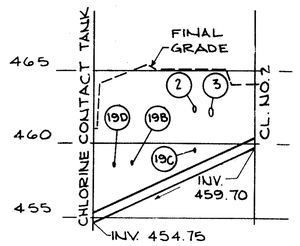
(4) 8"ϕ PIPE FROM CLARIFIER DISTRIBUTION BOX TO CLARIFIER NO. 1

(5) 8"ϕ PIPE FROM CLARIFIER DISTRIBUTION BOX TO CLARIFIER NO. 2

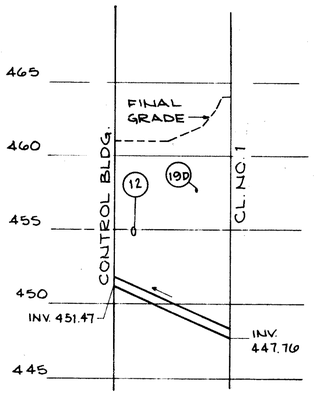


(6) 8"ϕ PIPE, FROM TO CHLORINE CONTACT TANK

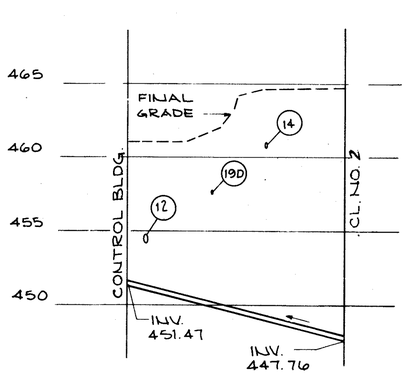
* NOTE : SEE SHT. NO. 10 FOR PROFILE 19D



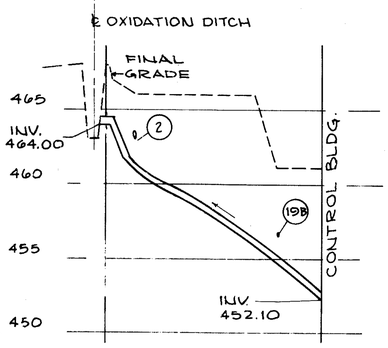
(7) 8"ϕ PIPE FROM CLARIFIER NO. 2 TO CHLORINE CONTACT TANK



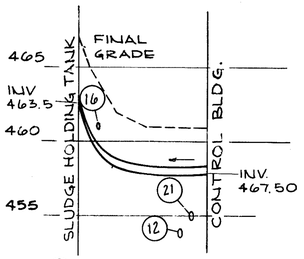
(8) 4"ϕ PIPE, SUCTION LINE FROM CLARIFIER NO. 1 TO CONTROL BLDG.



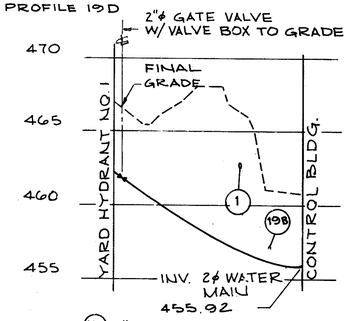
(9) 4"ϕ PIPE, SUCTION LINE FROM CLARIFIER NO. 2 TO CONTROL BUILDING.



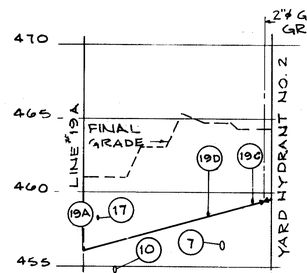
(10) 6"ϕ PIPE, RETURN SLUDGE LINE FROM CONTROL BLDG. TO OXIDATION DITCH.



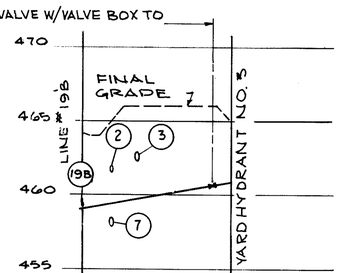
(11) 6"ϕ PIPE, SLUDGE LINE FROM CONTROL BLDG. TO SLUDGE HOLDING TANK



(19A) 2"ϕ PIPE, NON-POTABLE WATER FROM CONTROL BLDG. TO YARD HYDRANT NO. 1 INSIDE OXIDATION DITCH



(19B) 2"ϕ PIPE, NON-POTABLE WATER FROM 19A TO YARD HYDRANT NO. 2 AT CLARIFIERS



(19C) 2"ϕ PIPE, NON-POTABLE WATER FROM 19B TO YARD HYDRANT NO. 3 NORTH OF OXIDATION DITCH

NOTE:

1- (1) FOR PIPE IDENTIFICATION NUMBER REFER TO SHT. NO. 7 FOR PIPE IDENTIFICATION LIST.

HORIZ. 50 0 50

VERT. 5 0 5

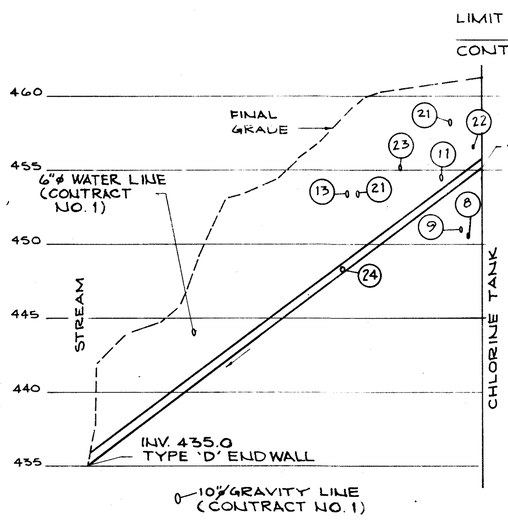
JOHN W. SAYLOR — NORTH CAROLINA — REG. NO. 5405 — ENGINEER

REVISIONS					REVISIONS			
NO	SYM	BY	DATE	DESCRIPTION	NO	SYM	BY	DATE	DESCRIPTION

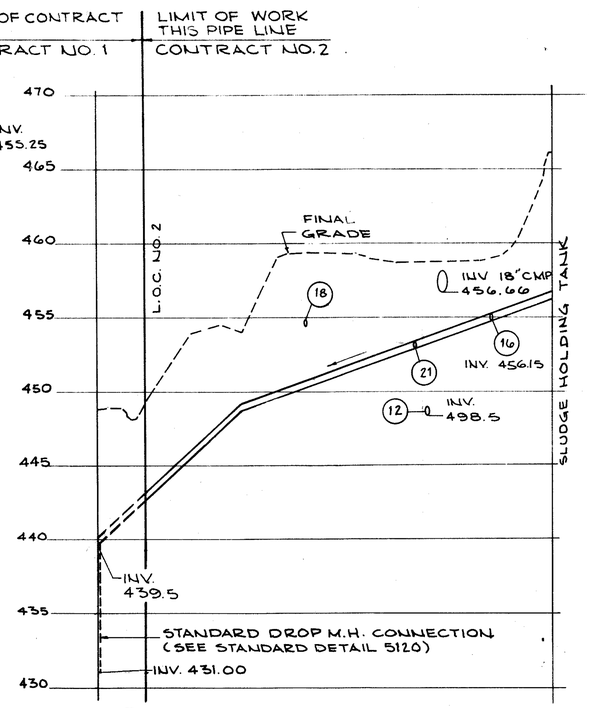
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SCALE	AS SHOWN
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ENG.	J.W.S.
DES	D.D.Q.
CHK BY	D.D.Q.
DWN BY	W.S.R.

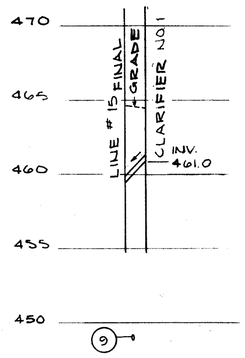
YARD PIPING PROFILES



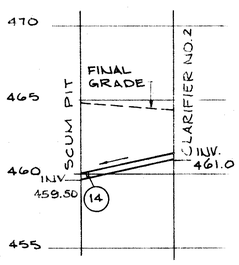
(12) 8"ϕ PIPE, PLANT DISCHARGE LINE FROM CHLORINE CONTACT TANK TO STREAM



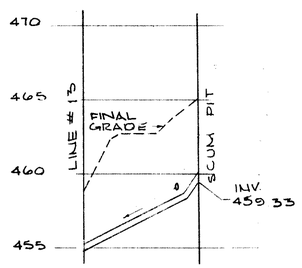
(13) 6"ϕ PIPE, FROM DECANT VALVE SLUDGE HOLDING TANK TO WET WELL ROUTE 22 PUMP STATION INCLUDING LINES 16 & 21 (CONNECT TO CONTRACT NO. 1)



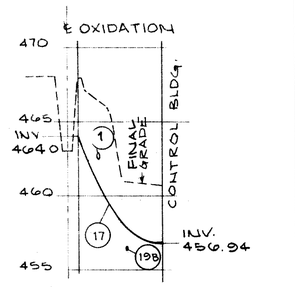
(14) 4"ϕ PIPE, SCUM LINE FROM CLARIFIER NO. 1 TO LINE 15



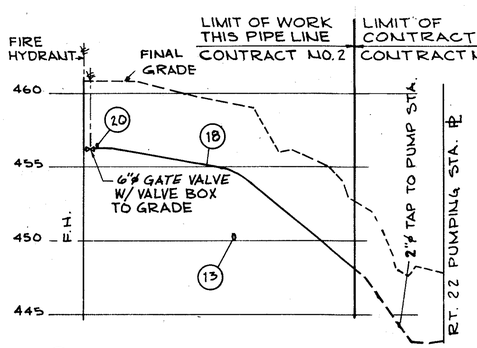
(15) 4"ϕ PIPE, SCUM LINE FROM CLARIFIER NO. 2 TO SCUM PIT



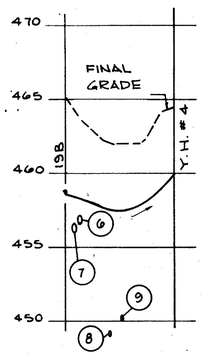
(16) 6"ϕ PIPE OVERFLOW FROM SCUM PIT TO LINE 13



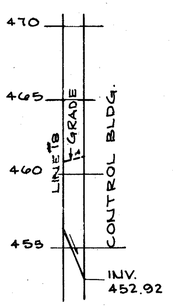
(17) 3/4"ϕ PIPE, CHEMICAL FEED FROM CONTROL BUILDING TO OXIDATION DITCH



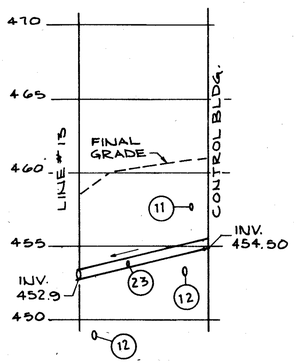
(18) 6"ϕ PIPE POTABLE WATER LINE FROM LIMIT OF CONTRACT NO. 1 TO FIRE HYDRANT AT CONTROL BUILDING



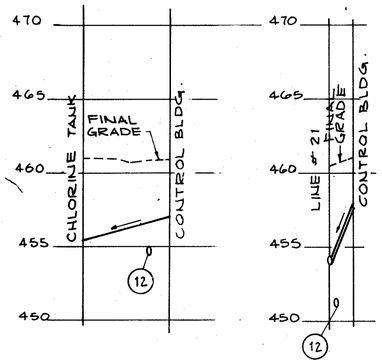
(19D) 2"ϕ PIPE, NON-POTABLE WATER FROM LINE 19B TO YARD HYDRANT NO. 4 ADJACENT TO SLUDGE HOLDING TANK



(20) 2"ϕ PIPE, POTABLE WATER SUPPLY FROM LINE 18 TO CONTROL BLDG.

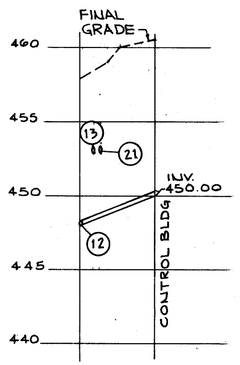


(21) 6"ϕ PIPE, SANITARY DRAIN FROM CONTROL BLDG. TO LINE 15.



(22) 1"ϕ PIPE, CHLORINE SOLUTION LINE FROM CONTROL BLDG. TO CHLORINE CONTACT TANK

(23) 4"ϕ PIPE, DRAIN FROM CONTROL BLDG. UTILITY ROOM TO LINE 21



(24) 4"ϕ PIPE DRAIN FROM CONTROL BUILDING FOUNDATION DRAIN TO LINE 12

NOTE:

① PIPE IDENTIFICATION NUMBER REFER TO SHT. NO. 7 FOR PIPE IDENTIFICATION LIST.

REVISIONS

NO.	SYM.	BY	DATE	DESCRIPTION

REVISIONS

NO.	SYM	BY	DATE	DESCRIPTION

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SCALE	AS SHOWN
DATE	7/81
ENG.	J.W.S.
DES.	D.D.Q.
CHK BY	D.D.Q.
DWN BY	W.S.R.

FREDERICKSBURG
SEWER AND WATER AUTHORITY

YARD PIPING PROFILES

GROUP NUMBER					JOB NO.
A	E	LA	PM	S	60785
					SHT. NO.
					10

PLANT INFLUENT

AVERAGE DAILY FLOW = 0.150 MGD
PEAK FLOW = 0.375 MGD
LOADING:
BOD5 = 260#/DAY AVERAGE
SS = 313#/DAY AVERAGE
P = 14#/DAY AVERAGE

OXIDATION DITCH

NUMBER OF UNITS = 1
NUMBER OF UNITS = 2 @ 6'
LENGTH = 504'
WIDTH = 14'@ SURFACE, 6'@ INVERT
DEPTH = 4' TO INVERT
VOLUME = 150,725 GAL
DETENTION TIME @ ADF = 24 HRS.
DETENTION TIME @ PEAK = 9.6 HRS
O_2/HR/FT ROTOR = 2.4 LBS

CLARIFIERS

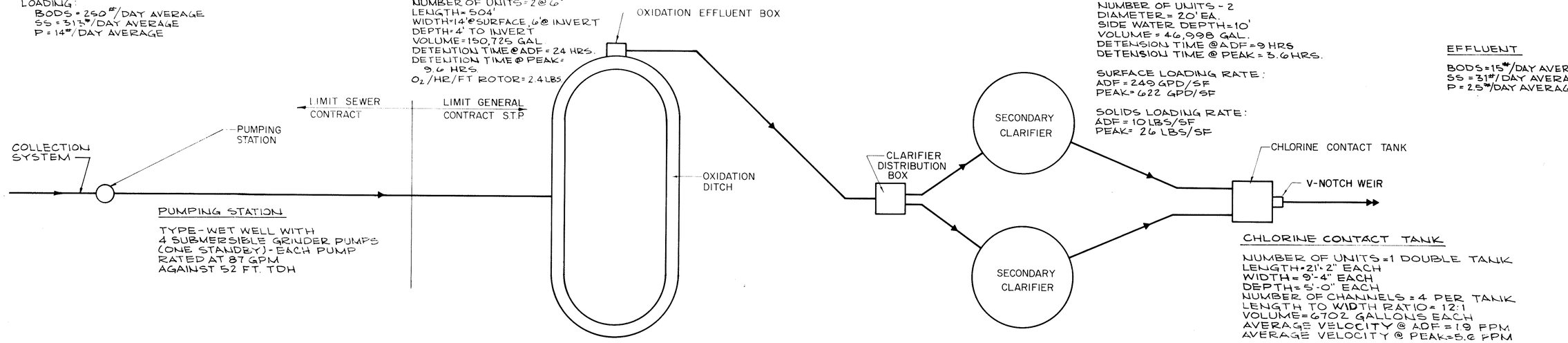
NUMBER OF UNITS = 2
DIAMETER = 20' EA.
SIDE WATER DEPTH = 10'
VOLUME = 46,998 GAL.
DETENSION TIME @ ADF = 9 HRS
DETENSION TIME @ PEAK = 3.6 HRS.

SURFACE LOADING RATE:
ADF = 249 GPD/SF
PEAK = 622 GPD/SF

SOLIDS LOADING RATE:
ADF = 10 LBS/SF
PEAK = 26 LBS/SF

EFFLUENT

BOD5 = 15#/DAY AVERAGE
SS = 31#/DAY AVERAGE
P = 2.5#/DAY AVERAGE



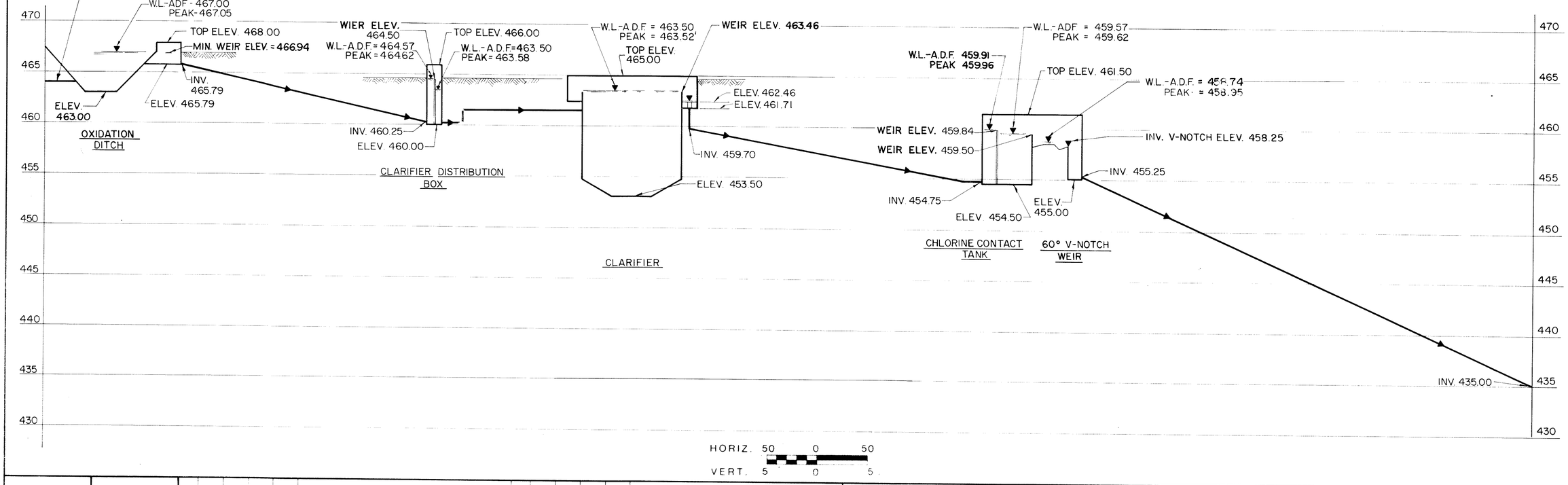
PUMPING STATION

TYPE - WET WELL WITH
4 SUBMERSIBLE GRINDER PUMPS
(ONE STANDBY) - EACH PUMP
RATED AT 87 GPM
AGAINST 52 FT. TDH

CHLORINE CONTACT TANK

NUMBER OF UNITS = 1 DOUBLE TANK
LENGTH = 21'-2" EACH
WIDTH = 9'-4" EACH
DEPTH = 5'-0" EACH
NUMBER OF CHANNELS = 4 PER TANK
LENGTH TO WIDTH RATIO = 12:1
VOLUME = 6702 GALLONS EACH
AVERAGE VELOCITY @ ADF = 19 FPM
AVERAGE VELOCITY @ PEAK = 5.6 FPM

PLAN
N.T.S.



HORIZ. 50 0 50
VERT. 5 0 5

REVISIONS

NO	SYM	BY	DATE	DESCRIPTION

REVISIONS

NO	SYM	BY	DATE	DESCRIPTION

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DES	D.D.Q.
CHK BY	D.D.Q.
DWN BY	W.S.R.

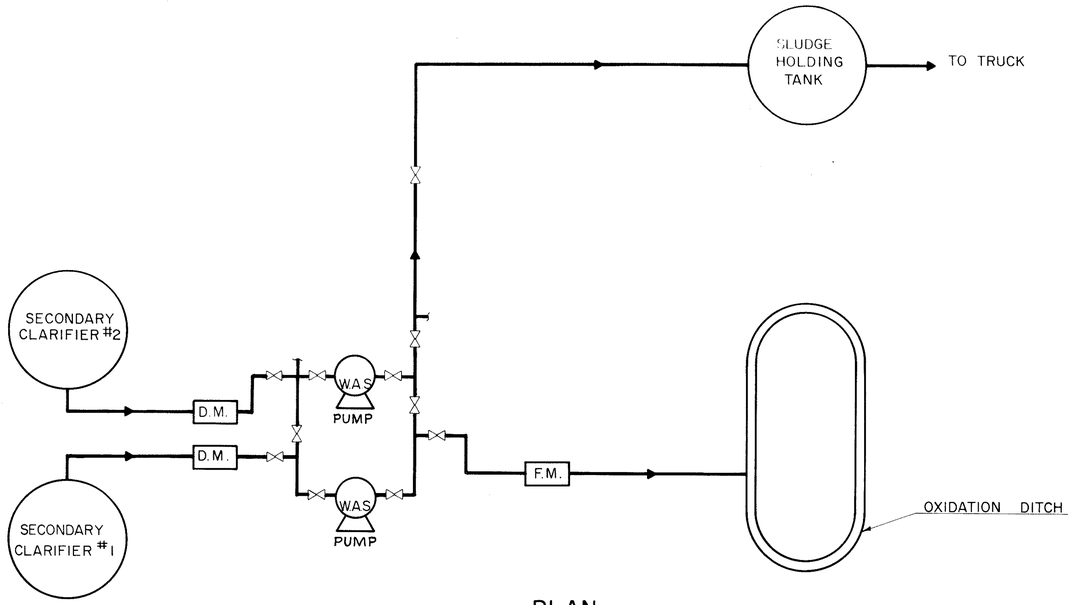
FREDERICKSBURG
SEWER AND WATER AUTHORITY

HYDRAULIC PROFILE

GROUP NUMBER: A E LA PM S

JOB NO 60785

SHT. NO. 11

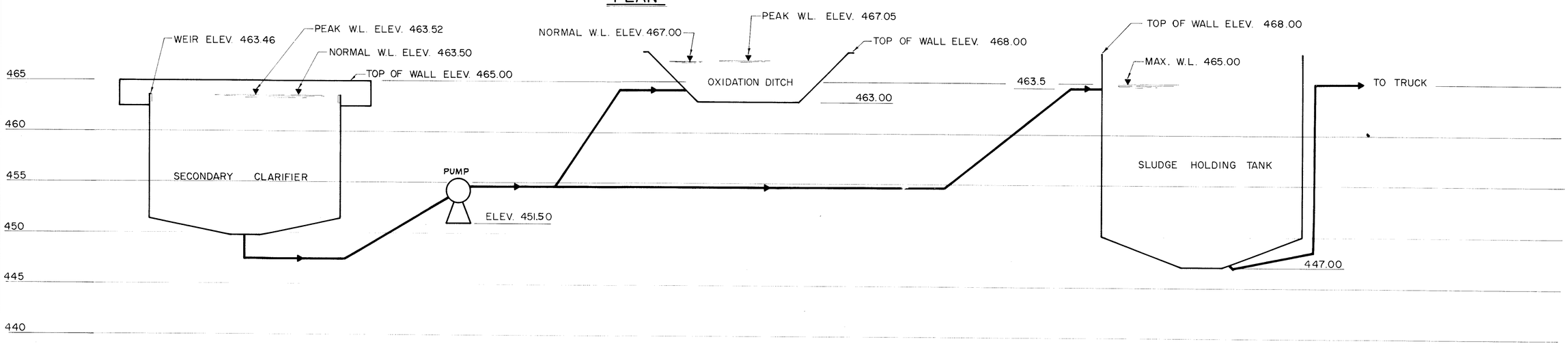


PLAN

NOTE: ALL SLUDGE GATE VALVES TO BE SOLID WEDGE TYPE.

D.M. = DENSITY METER
F.M. = FLOW METER

W.A.S. = WASTE ACTIVATED SLUDGE



REVISIONS NO	SYM	BY	DATE	DESCRIPTION	REVISIONS NO	SYM	BY	DATE	DESCRIPTION

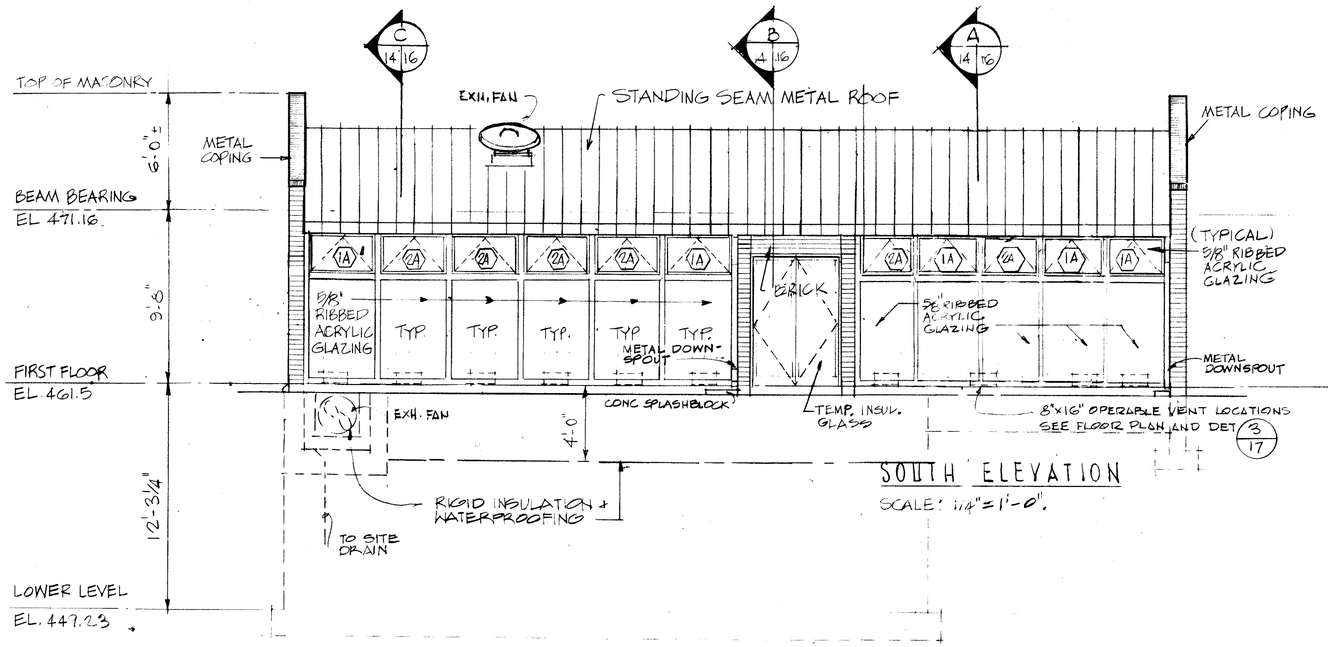
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WILLIAMSBURG, VA. CHARLESTON, W.VA.

SCALE	N.T.S.
DATE	7/81
ENG.	J.W.S.
DES.	D.D.Q.
CHK BY	D.D.Q.
DWN BY	W.S.R.

FREDERICKSBURG
SEWER AND WATER AUTHORITY

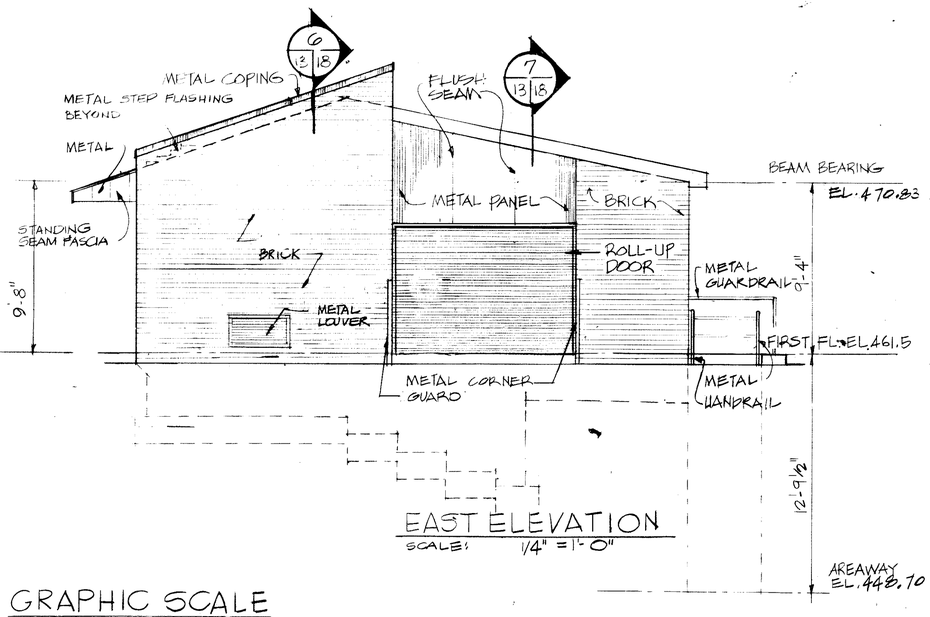
SLUDGE FLOW

GROUP NUMBER A	E	LA	PM	S	JOB NO
					60785
					SHT. NO.
					12



SOUTH ELEVATION

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



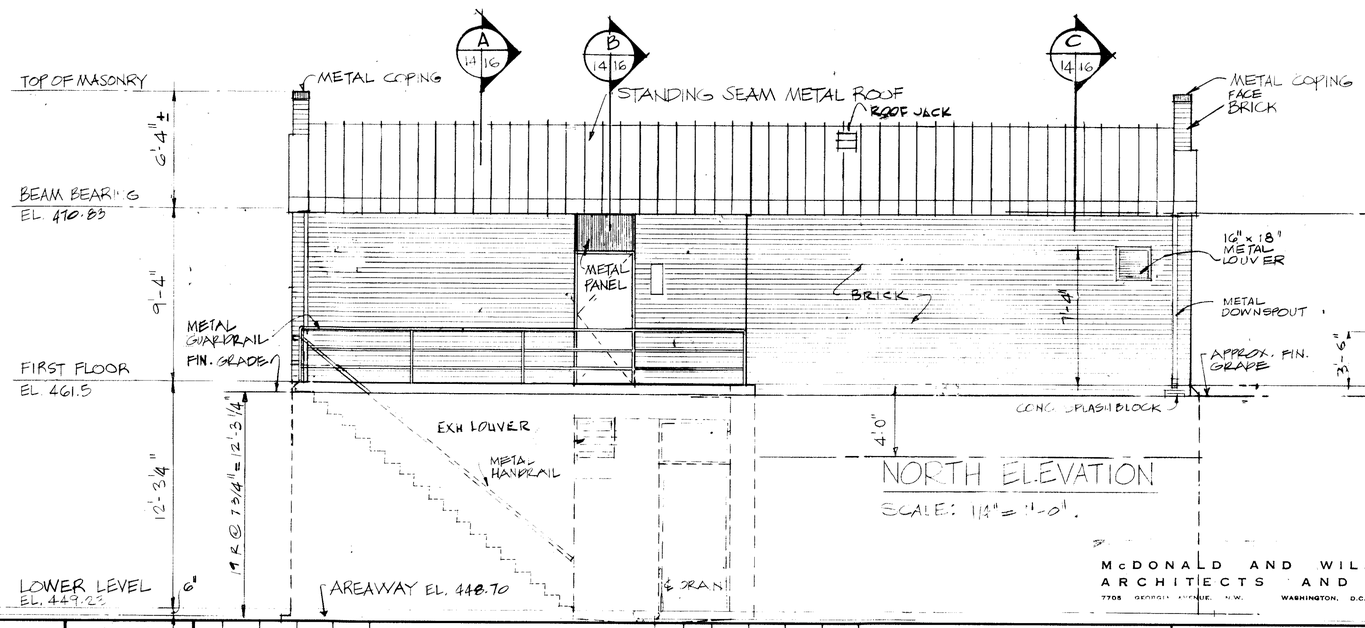
EAST ELEVATION

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

GRAPHIC SCALE

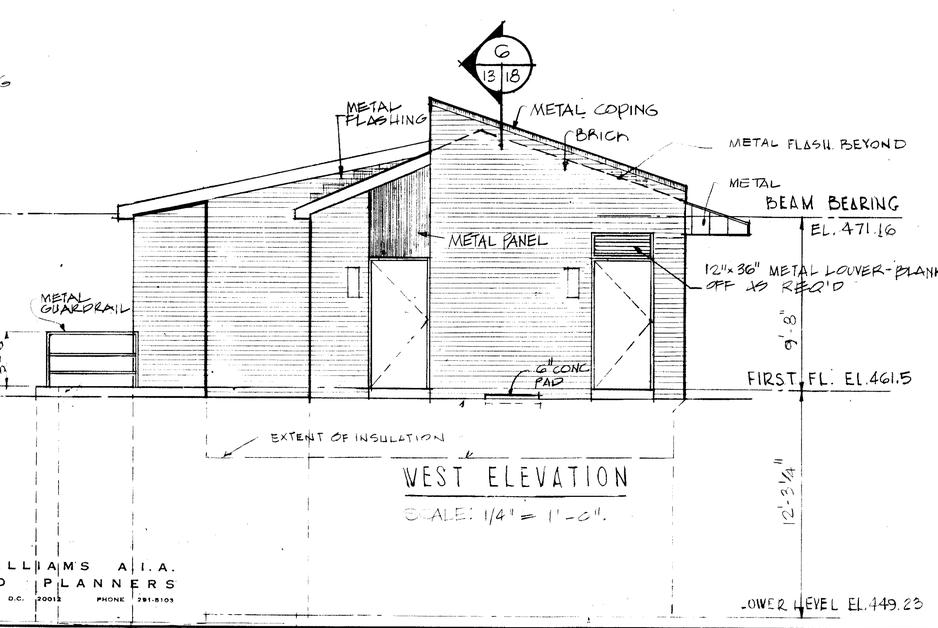
1/4"=1'-0"

0 2 4 6 8 10



NORTH ELEVATION

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



WEST ELEVATION

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

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REVISIONS					
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REVISIONS					
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SCALE	AS SHOWN
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ENG.	
DES.	
CHK BY	
DWN BY	

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SEWER AND WATER AUTHORITY

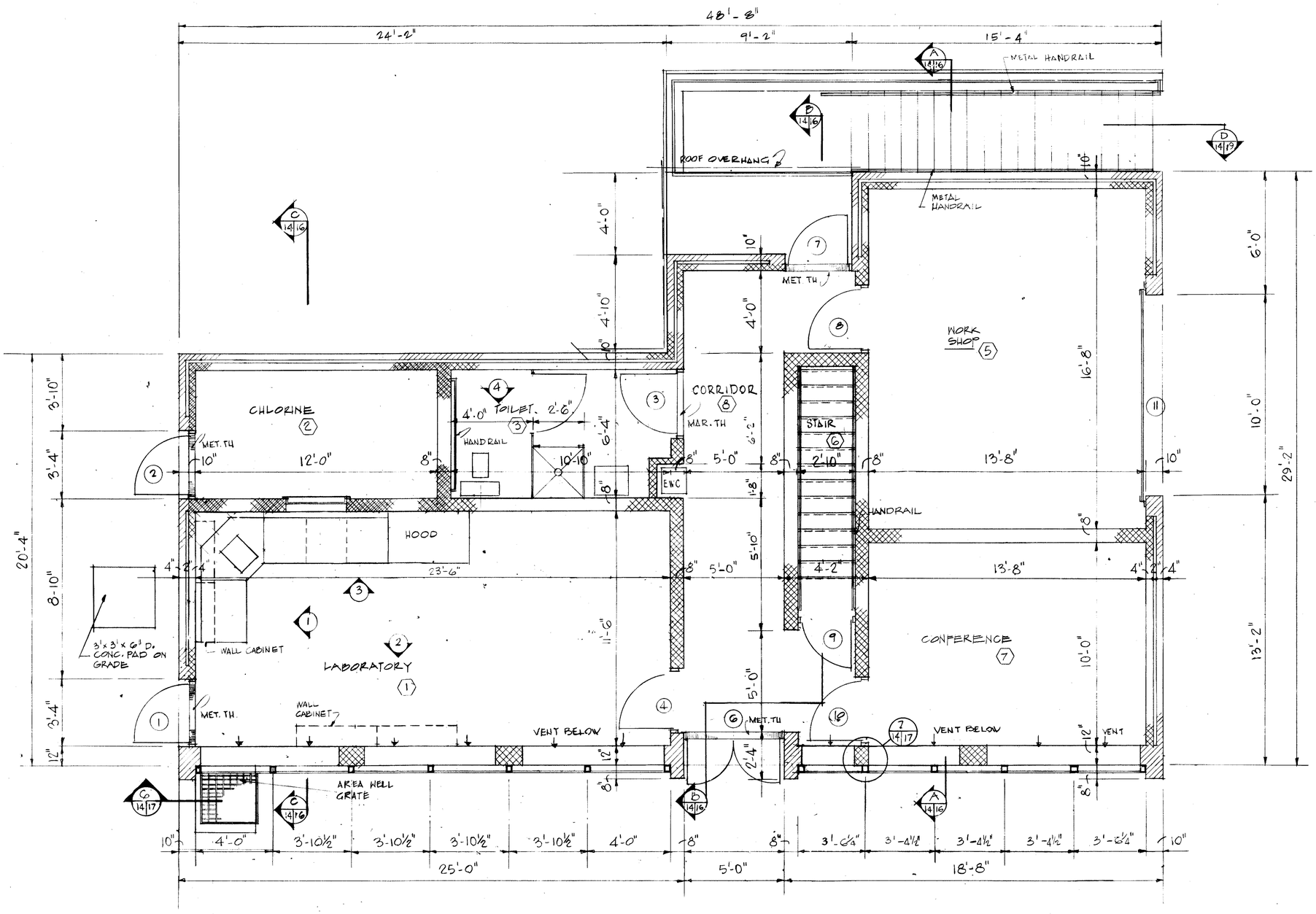
CONTROL BUILDING - ARCHITECTURAL

ELEVATIONS

GROUP NUMBER				
A	E	LA	PM	S

JOB NO. 60785

SHT. NO. 13



FIRST FLOOR PLAN

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

1 0 8

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SCALE	AS SHOWN
DATE	7/81
ENG.	
DES.	
CHK BY	
DWN BY	

[redacted] - ARCHITECTURAL

FIRST FLOOR PLAN

GROUP NUMBER					JOB NO.
A	E	LA	PS	S	[redacted]
					ART NO.

14

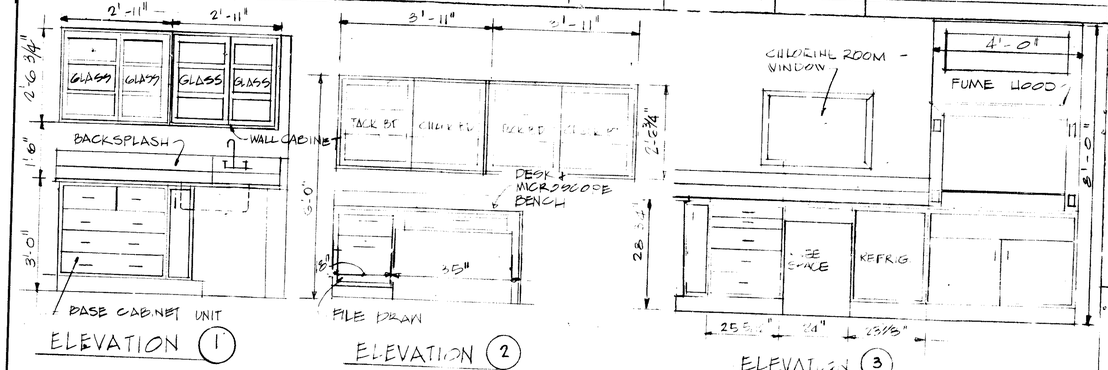
DOOR SCHEDULE

SEE PLAN DWG. NO.	MARK	LOCATION	DOOR OPG. WIDTH	DOOR OPG. HEIGHT	DOOR TYPE	DOOR THICKNESS	DOOR LOUVER W × H	FRAME TYPE	FRAME HEAD DETAIL	FRAME JAMB DETAIL	FRAME THRE'H.	DOOR MAT'L.	HDW. LABEL	REMARKS
	1	LABORATORY	3'-0"	7'-0"	C	1 3/4"		1	E	B	2	HM		INSULATED
	2	CHLORINE	3'-0"	7'-0"	C	1 3/8"		1	C	B	2	HM		INSULATED
	3	TOILET	3'-0"	7'-0"	C	1 3/8"		1	D	D	1	HM		
	4	LABORATORY	3'-0"	7'-0"	B	1 3/8		1	D	D	—	HM		
	5	NOT USED												
	6	ENTRANCE	2'-2 1/4"	7'-0"	A			2	A	B	2	ALUM.		INSTALL ALUM. FRAME AND DOOR
	7	CORRIDOR EXIT	3'-0"	7'-0"	C	1 3/4"		1	C	B	2	HM		INSULATED
	8	WORK SHOP	3'-0"	7'-0"	B	1 3/8		1	D	D	—	HM		
	9	STAIRWELL	2'-0	7'-0"	C	1 3/8"		1	D	D	—	HM	C	
	10	CONFERENCE	3'-0"	7'-0"	B	1 3/8"		1	D	D	—	HM		
	11	WORK SHOP	10'-0"	7'-8"	D	—	—	—	—	—	—	—		ROLL-UP DOOR - INSULATED
	12	LOWER LEVEL EXIT	3'-6"	7'-0"	C	1 3/4"		1	C	B	2	HM		INSULATED

HM HOLLOW METAL

FINISH SCHEDULE

ROOM NAME	FLOOR	BASE	WALL MATERIAL	WALL FINISH	CEILING MATERIAL	CEILING FINISH	•REMARKS
LABORATORY	RESIL. TILE	4" COVE VINYL	CMU	PAINT	EXPOSED CONST.	PAINT	
CHLORINE	CONC. SEALED	NONE	SOLID CMU	PAINT •	VENEER PLASTER	PAINT •	CORROSION RESISTANT
TOILET	CER. TILE	4" COVE CER.T	CER.T/CMU	PAINT •	GYPSUM PLASTER BD. SUSPEND'D. GYP. BD.	PAINT •	SEE INTERIOR ELEV. TYPE MOIST. RESISTANT G.P.B.
WORK SHOP	CONC. SEALED	NONE	CMU	PAINT	EXPOSED CONST.	PAINT	
STAIRWELL	CONC. SEALED	NONE	CONC / CMU	PAINT	EXPOSED CONC.	PAINT	
CONFERENCE	RESIL. TILE	4" COVE VINYL	CMU	PAINT	ACOUSTICAL TILE	PAINT	
CORRIDOR	RESIL. TILE	4" COVE VINYL	CMU	PAINT	EXPOSED CONST.	PAINT	

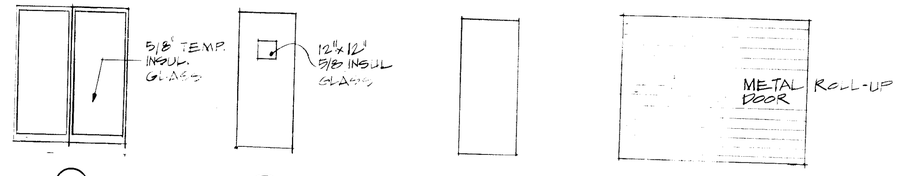


ELEVATION (1) ELEVATION (2) ELEVATION (3)

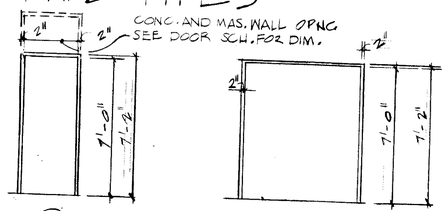
LABORATORY ROOM EQUIPMENT

SEE 3/8" PLAN FOR EQUIPMENT LAYOUT SCALE: 1/2" = 1'-0"

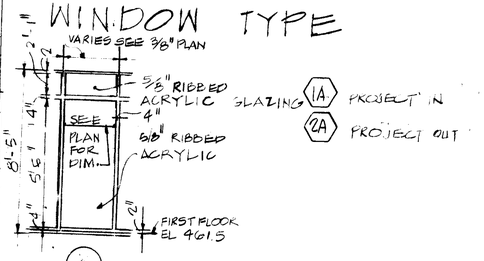
DOOR TYPES



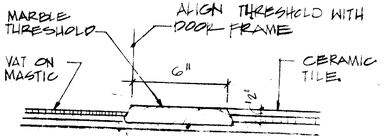
FRAME TYPES

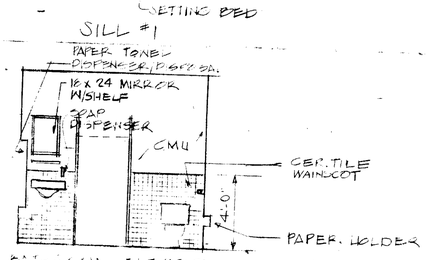


WINDOW TYPE

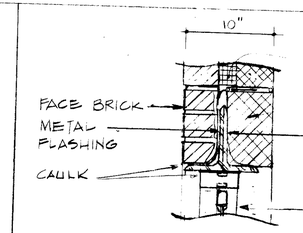


THRESHOLD DETAILS

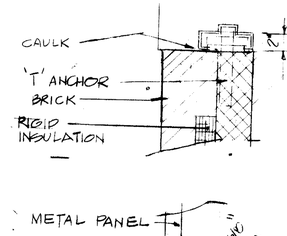




BATHROOM ELEVATION SCALE: 1/4" = 1'-0"

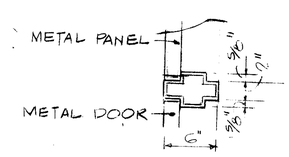


HEAD DET 'A'

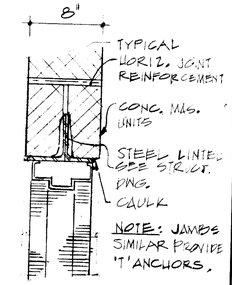


JAMB DET 'B'

HOLLOW METAL SHOWN DOOR NO. G-ALUM. FRAME DETAIL SIMILAR.



HEAD DETAIL 'C' TYPICAL

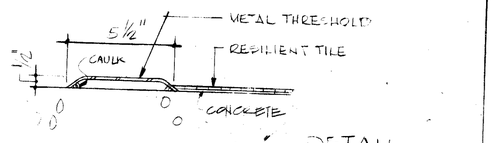


NOTE: JAMBS SIMILAR PROVIDE 'T' ANCHORS.

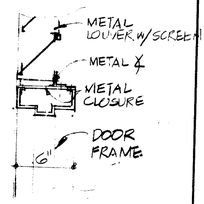
HEAD DETAIL 'D' TYPICAL AT INTERIOR

DOOR DETAILS

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



SILL #2 DETAIL SCALE 1 1/2" = 1'-0"



HEAD DETAIL 'E'

AT DOOR NO 1 - JAMB SIMILAR TO DETAIL IS SHOWN ABOVE SCALE 1 1/2" = 1'-0"

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

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SCALE	AS SHOWN
DATE	1/8
ENG.	
DES.	
CHK BY	

FREDERICKSBURG SEWER AND WATER AUTHORITY

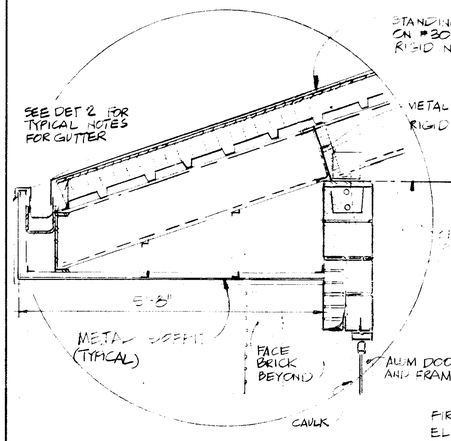
CONTROL BUILDING - ARCHITECTURAL

DOOR & FINISH SCHEDULE

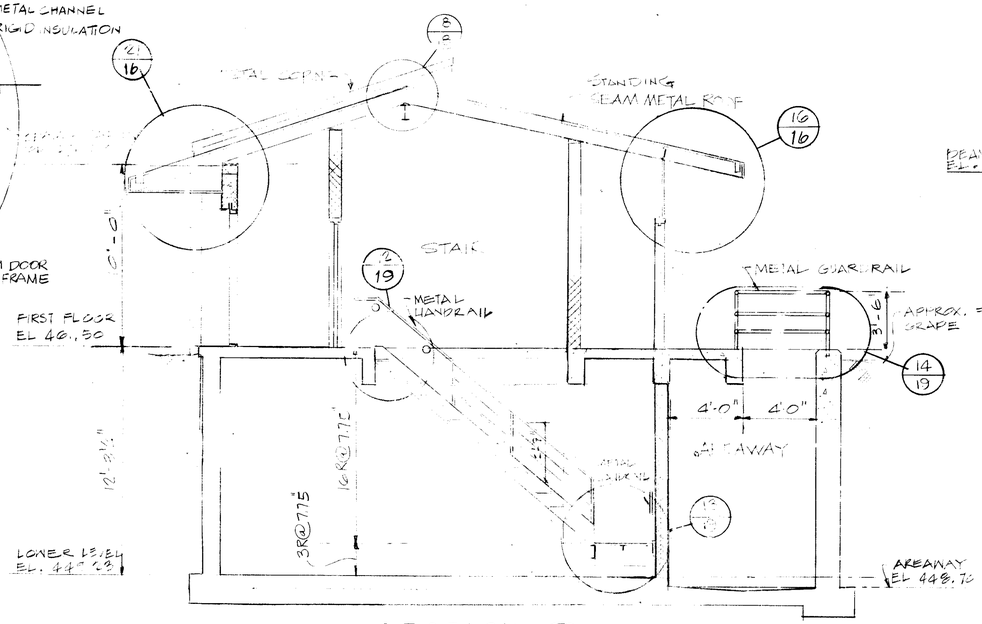
GROUP NUMBER A	E	LA	PM	S

JOB NO. 60785

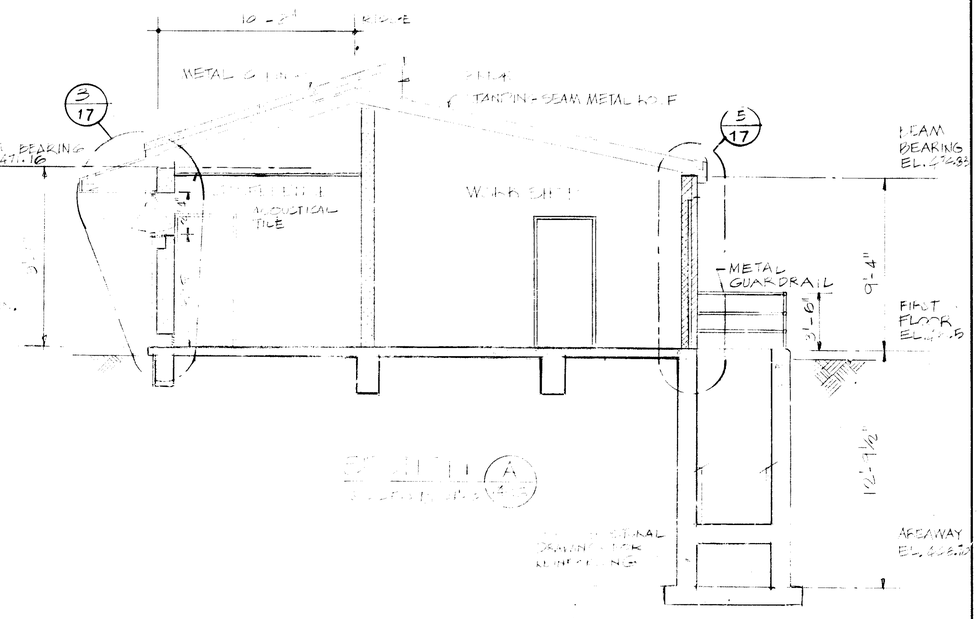
SHT. NO.

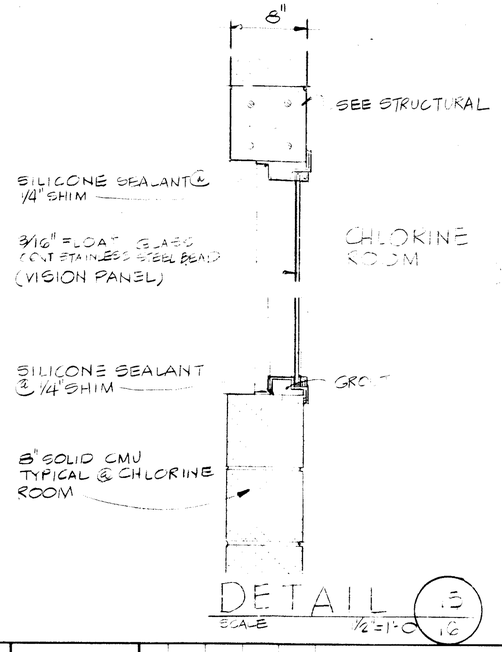


DETAIL (21)
SHOWING ENTRANCE (ALUM) DOOR
SCALE 3/4"=1'-0"

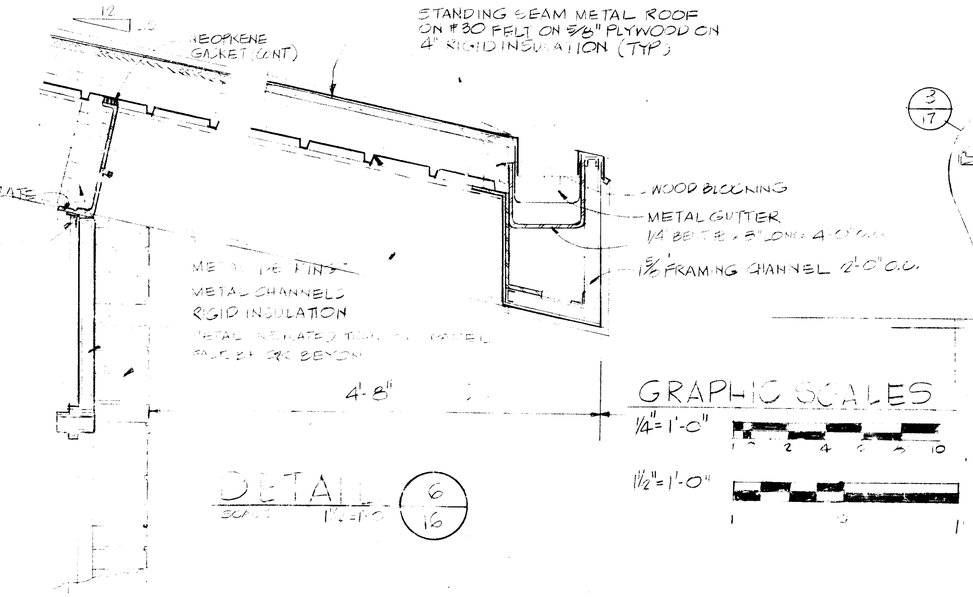


SECTION (B)



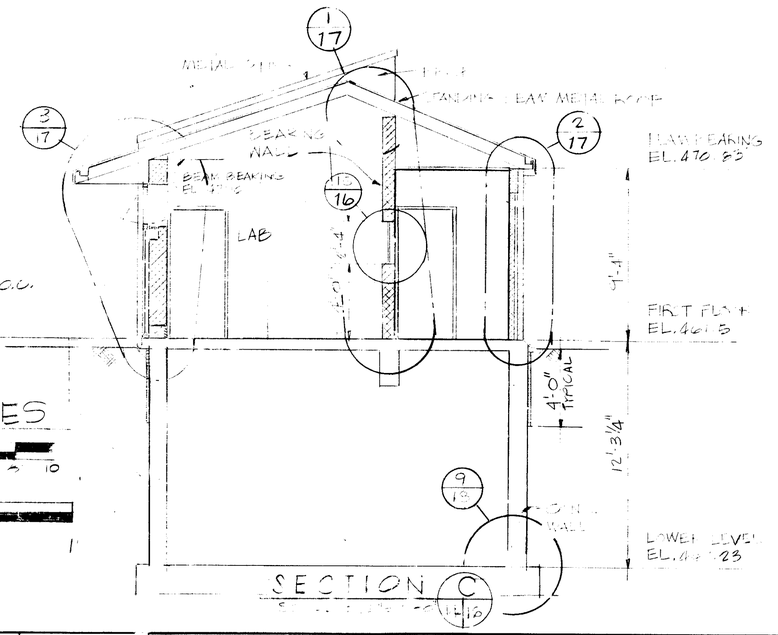


DETAIL (5/16)
SCALE 1½"=1'-0"



DETAIL (6/16)
SCALE 1"=1'-0"

GRAPHIC SCALES
1/4"=1'-0"
1 0 2 4 6 8 10
1½"=1'-0"
1 0 1'



SECTION (C)

REVISIONS NO	SYM	BY	DATE	DESCRIPTION	REVISIONS NO	SYM	BY	DATE	DESCRIPTION

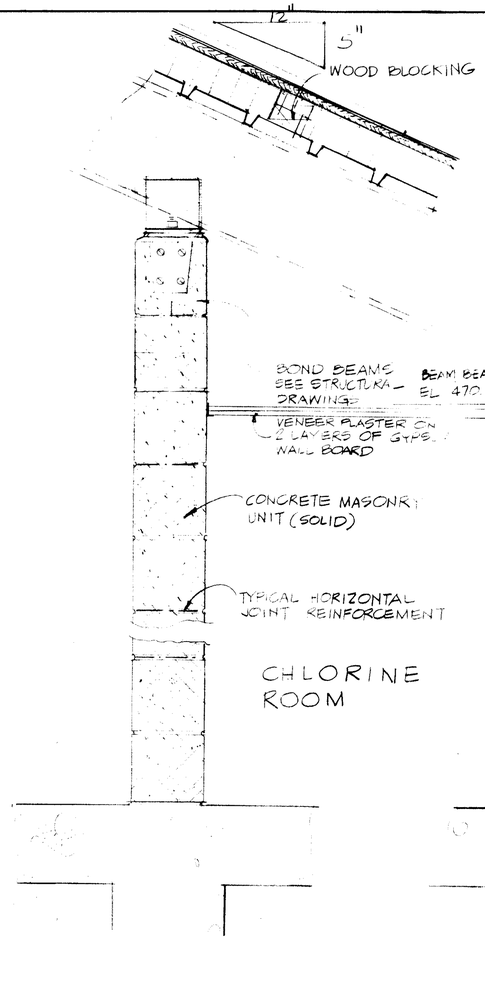
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SCALE	AS SHOWN
DATE	7/81
ENG.	J.W.S
DES.	H.W.
CHK BY	J.W.S.
DWN BY	H.W.

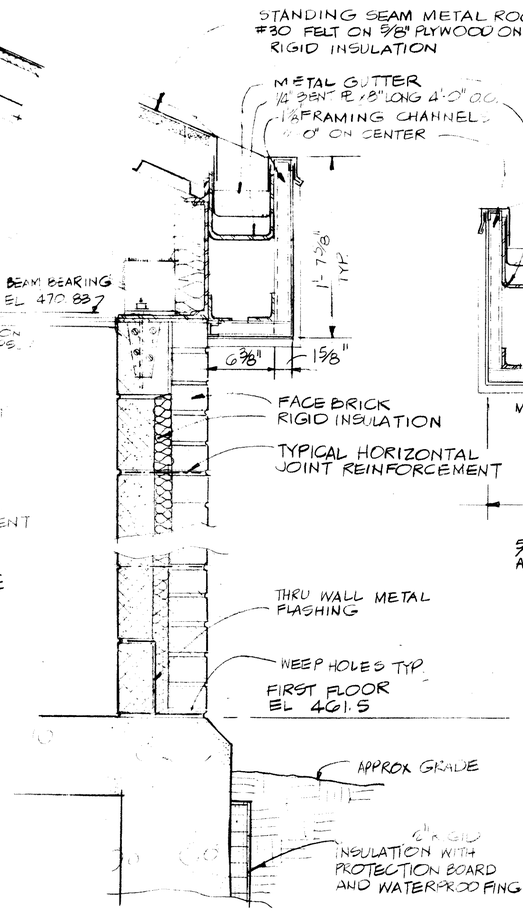
FREDERICKSBURG
SEWER AND WATER AUTHORITY
CONTROL BUILDING ARCHITECTURAL
WALL & ROOF SECTIONS

GROUP NUMBER	A	E	LA	PM	S
1					

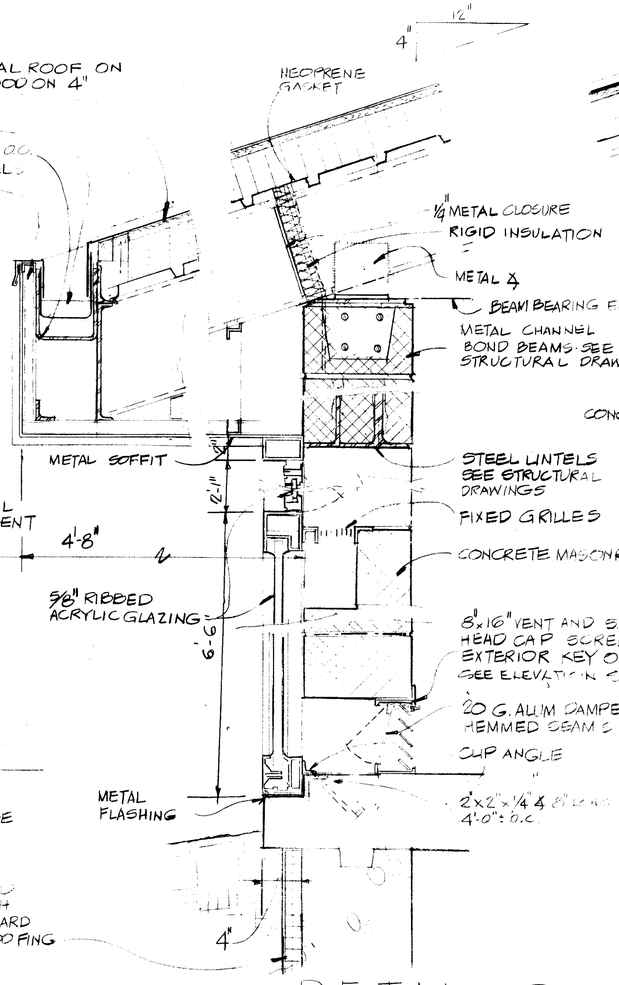
JOB NO. 60785
SHT. NO. 16



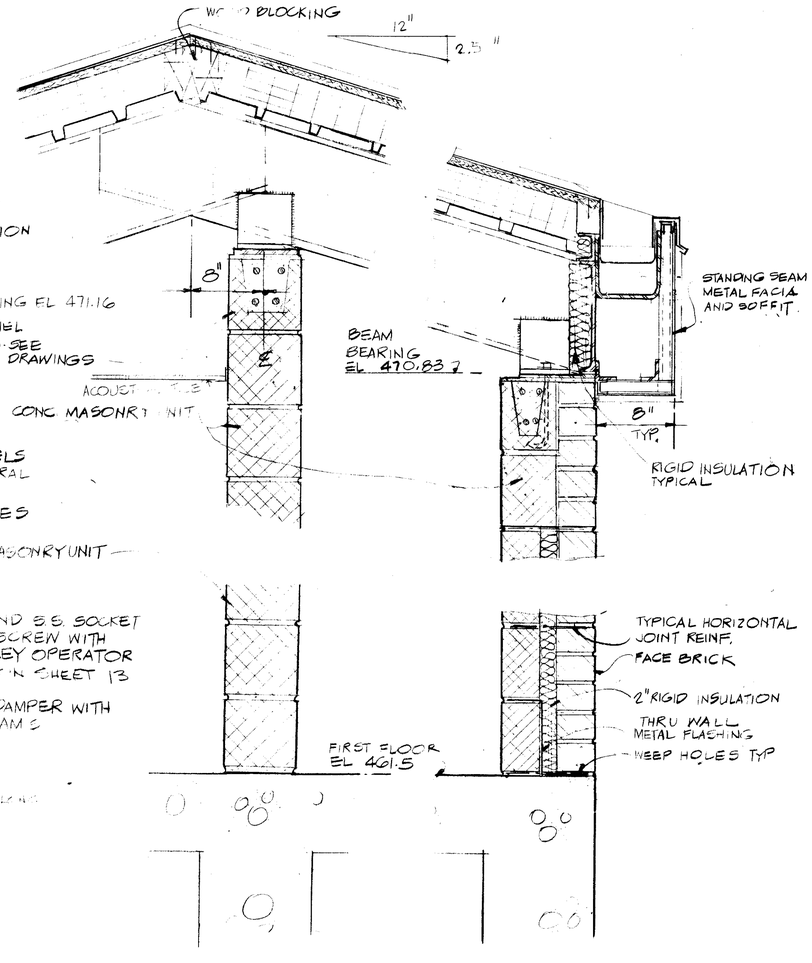
DETAIL 1/17
SCALE: 1 1/2" = 1'-0"



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

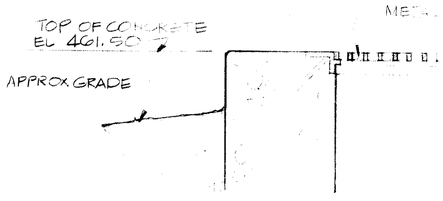


DETAIL 3/17
SCALE: 1 1/2" = 1'-0"

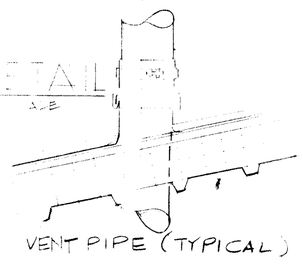


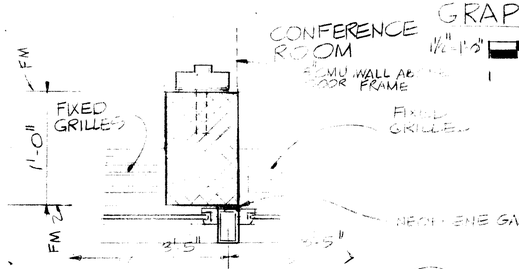
DETAIL 4/17
SCALE: 1 1/2" = 1'-0"

DETAIL 5/17
SCALE: 1 1/2" = 1'-0"



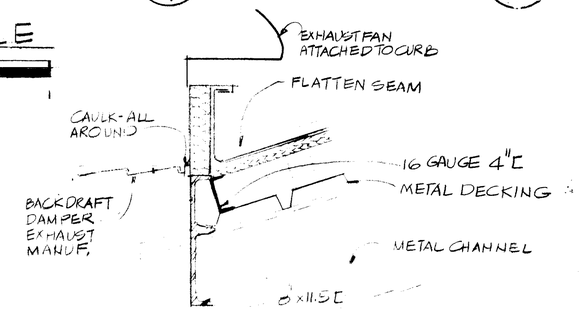
DETAIL C 14/17
SCALE 1 1/2" = 1'-0"





PLAN DETAIL 7/14/7
SCALE 1 1/2" = 1'-0"

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



TYPICAL CURB DETAIL NO SCALE

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NO. SYM. BY DATE DESCRIPTION

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SCALE AS SHOWN
DATE 1/8
ENG.
DES.
CHK BY
DWN BY

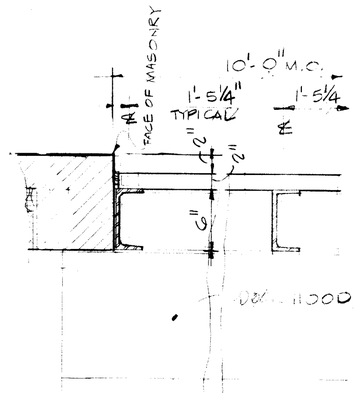
FREDERICKSBURG
SEWER AND WATER AUTHORITY

CONTROL BUILDING - ARCHITECTURAL

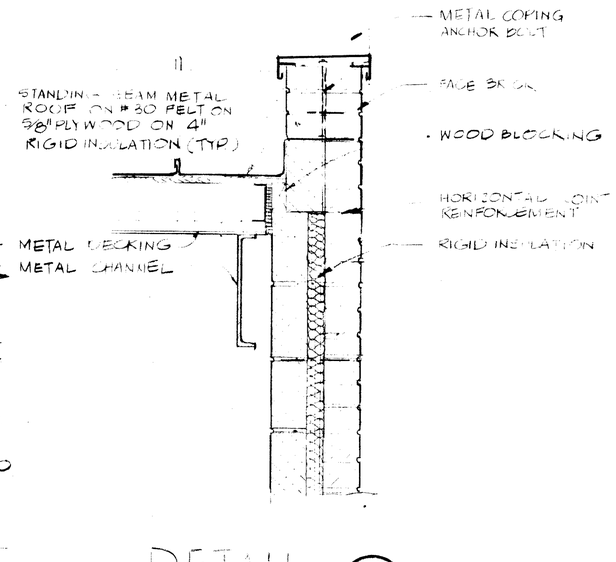
WALL & ROOF SECTIONS

GROUP NUMBER				
A	E	LA	PM	S

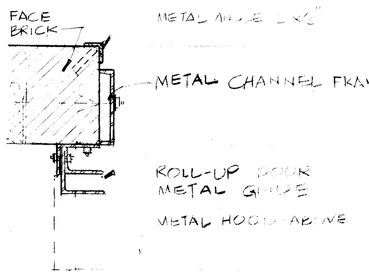
JOB NO. 60785
SHT. NO. 17



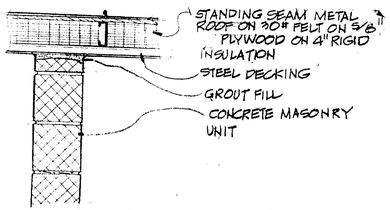
DETAIL 10/18
SCALE 1½" = 1'-0"



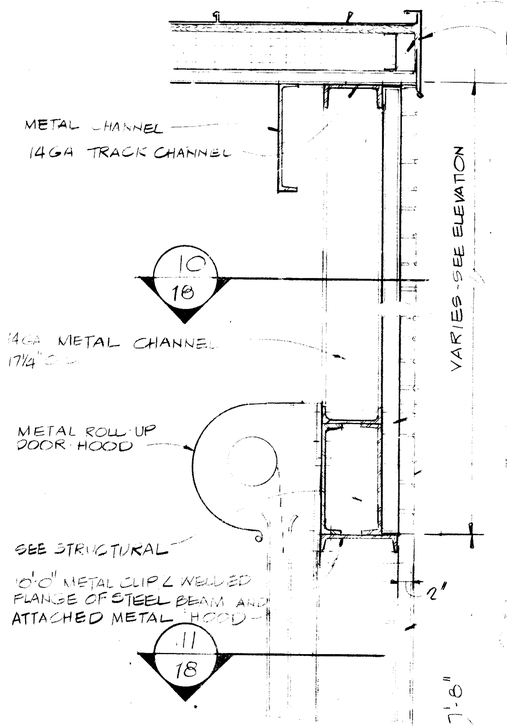
DETAIL 6/13|18
SCALE 1½" = 1'-0"

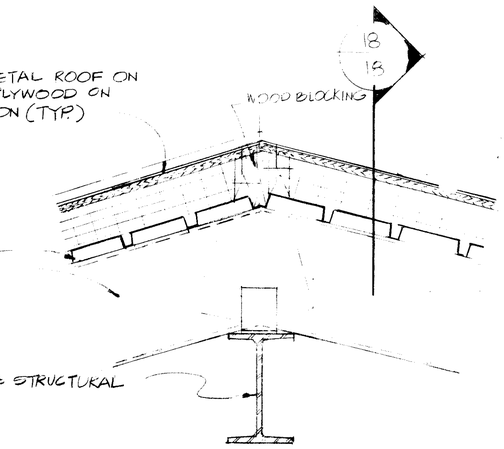


DETAIL 11/18
SCALE 1½" = 1'-0"

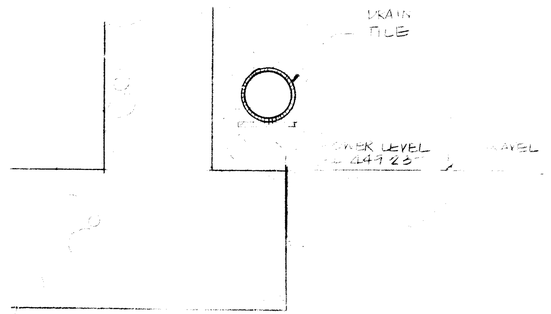


DETAIL @ MASONRY WALL and ROOF 18/18
1"=1'-0" NON BEARING WALL

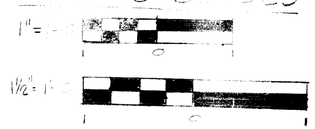




DETAIL 8/18
SCALE 1½" = 1'-0"
DETAIL OF ABOVE CORRIDOR



DETAIL 7/18
SCALE 1½" = 1'-0"



SYNTHETIC SLATE

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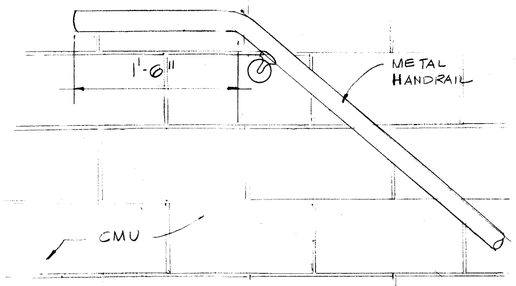
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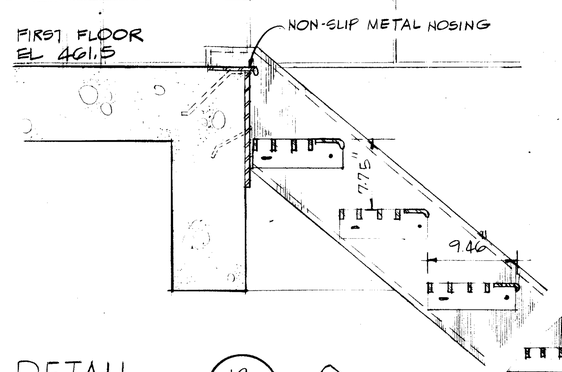
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DATE 1/79
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DES [illegible]
CHK BY [illegible]
DWN BY [illegible]

FREDERICKSBURG
SEWER AND WATER AUTHORITY
CONTROL BUILDING ARCHITECTURAL
ADDITIONAL SECTIONS

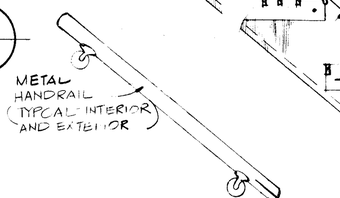
GROUP NUMBER: A | E | LA | PM | S

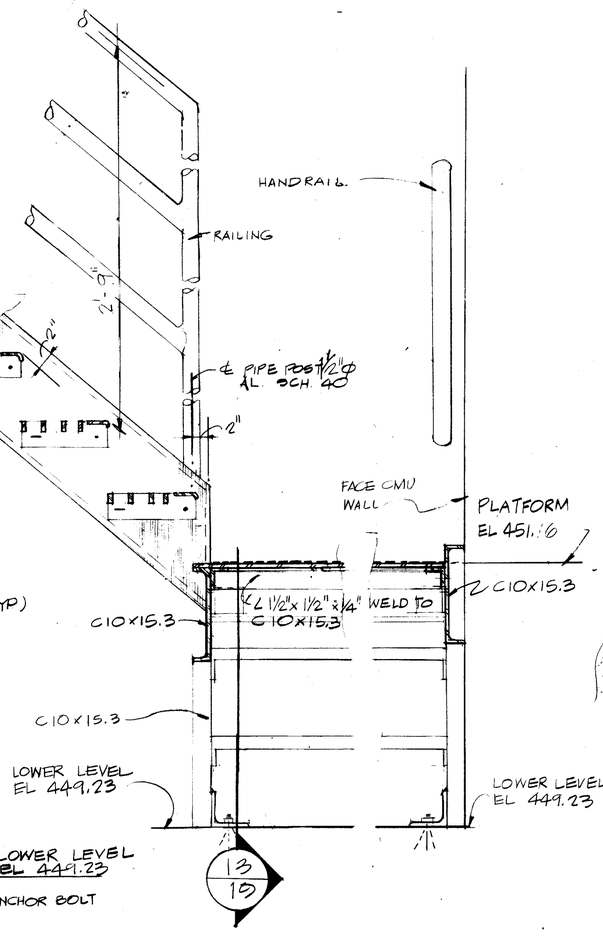
JOB NO. 60785
SHT. NO. 18



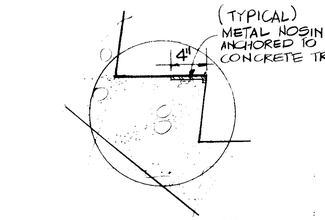


DETAIL
SCALE 1½" = 1'-0"
12 / 16

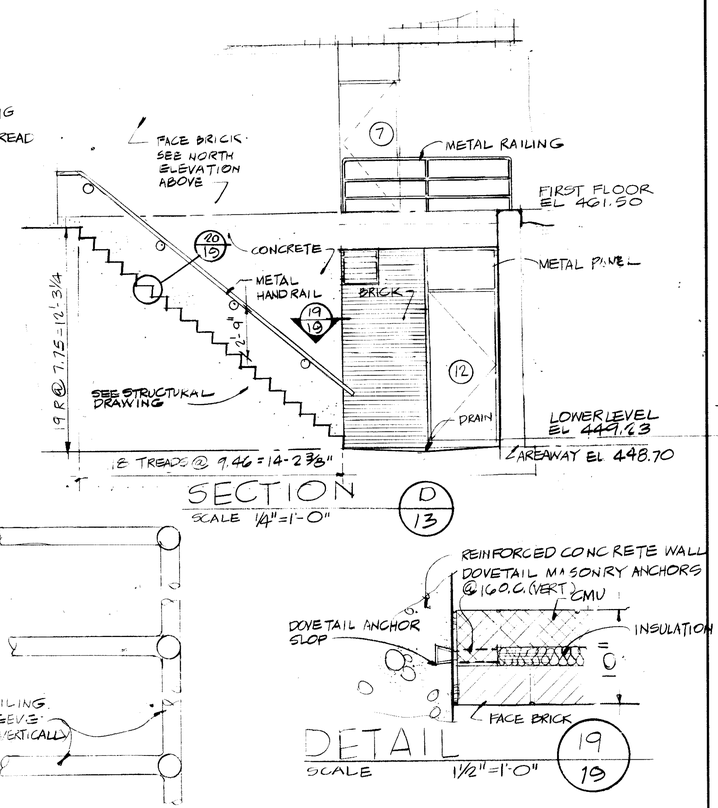




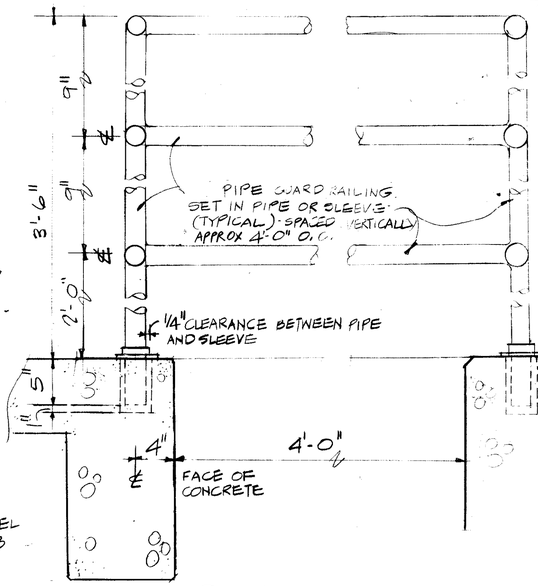
DETAIL
SCALE 1½" = 1'-0"
13 / 19



DETAIL
SCALE 1½"=1'-0"
20 / 14



SECTION
SCALE 1/4"=1'-0"
D / 13



GRAPHIC SCALE
1½"=1'-0"
1 0 1

GUARDRAIL DETAIL
SCALE 1½" = 1'-0"
14 / 16

DETAIL
SCALE 1½"=1'-0"
19 / 19

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ARCHITECTS AND PLANNERS
7705 GEORGIA AVENUE, N.W. WASHINGTON, D.C. 20012 PHONE 291-5103

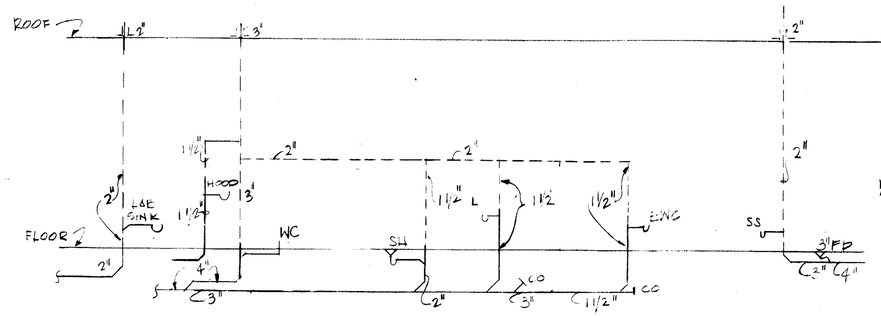
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SCALE	AS SHOWN
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CHK BY	
DWN BY	

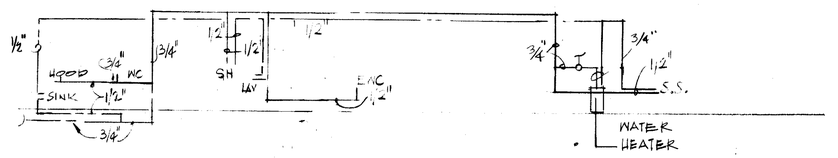
FREDERICKSBURG
SEWER AND WATER AUTHORITY
CONTROL BUILDING - ARCHITECTURAL
STAIR DETAILS

GROUP NUMBER					JOB NO.
A	E	LA	PM	S	60785
					SHT. NO.
					19



SANITARY DRAINAGE DIAGRAM

N.T.S.



WATER RISER DIAGRAM

N.T.S.

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	WASTE	VENT	CW	HW	REMARKS
WC	WATER CLOSET	4"	3"	1½"	–	FLUSH TANK
L	LAVATORY	1½"	1½"	½"	½"	
SH	SHOWER	2"	1½"	½"	½"	
SS	SERVICE SINK	3"	1½"	½"	½"	
E.W.C.	ELECTRIC WATER COOLER	1½"	1½"	½"	–	
SK	SINK (LABORATORY)	2"	2"	½"	½"	
HOOD	——	1½"	1½"	½"	–	

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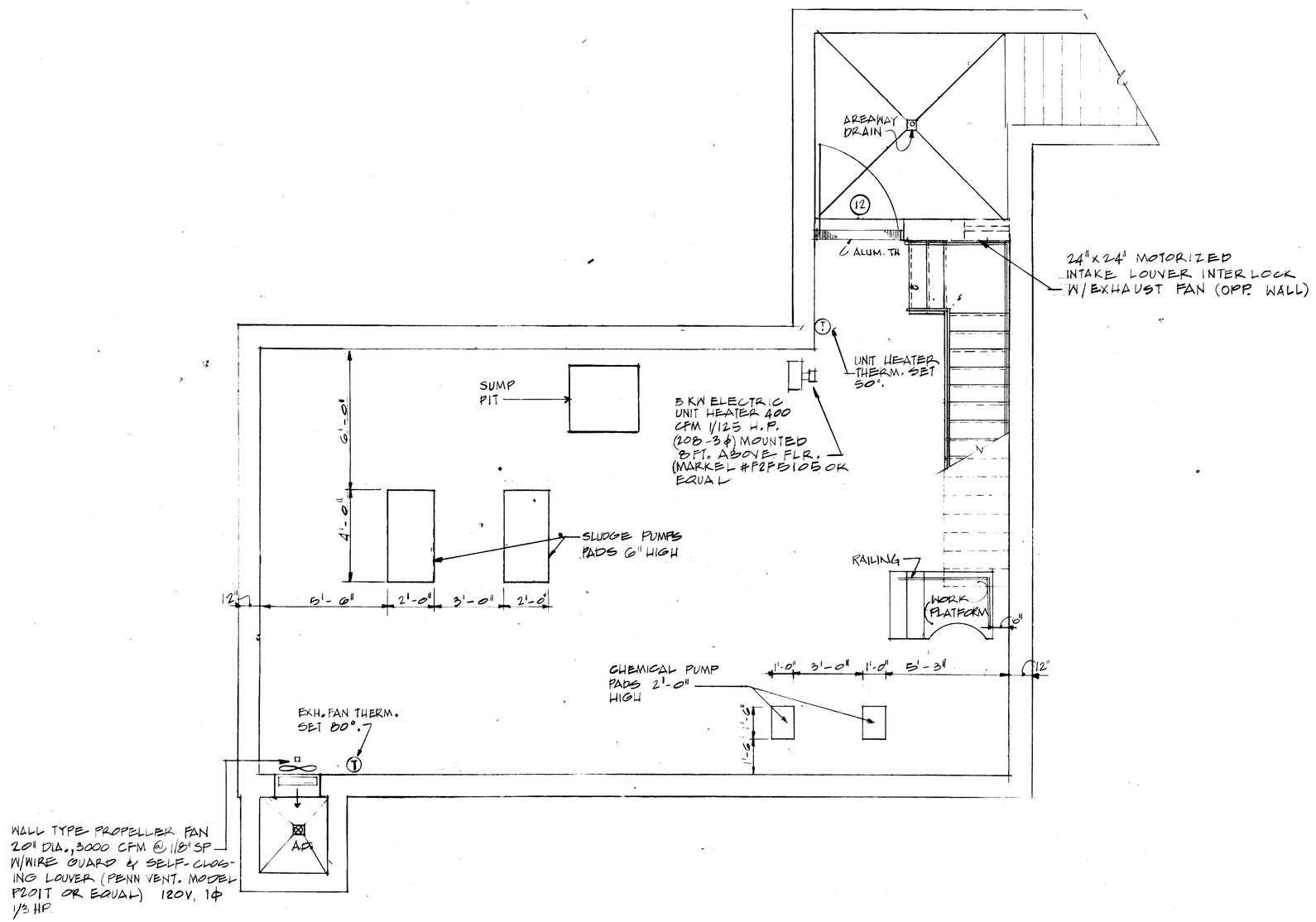
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DATE 7/81
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DES. [illegible]
CHK BY [illegible]
DWN BY [illegible]

CONTROL BUILDING -- PLUMBING

RISER DIAGRAMS

JOB NO. 60785

SHT NO. 20



LOWER LEVEL PLAN

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

1 0 8

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DES.	H.J
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DWN BY	H.J.

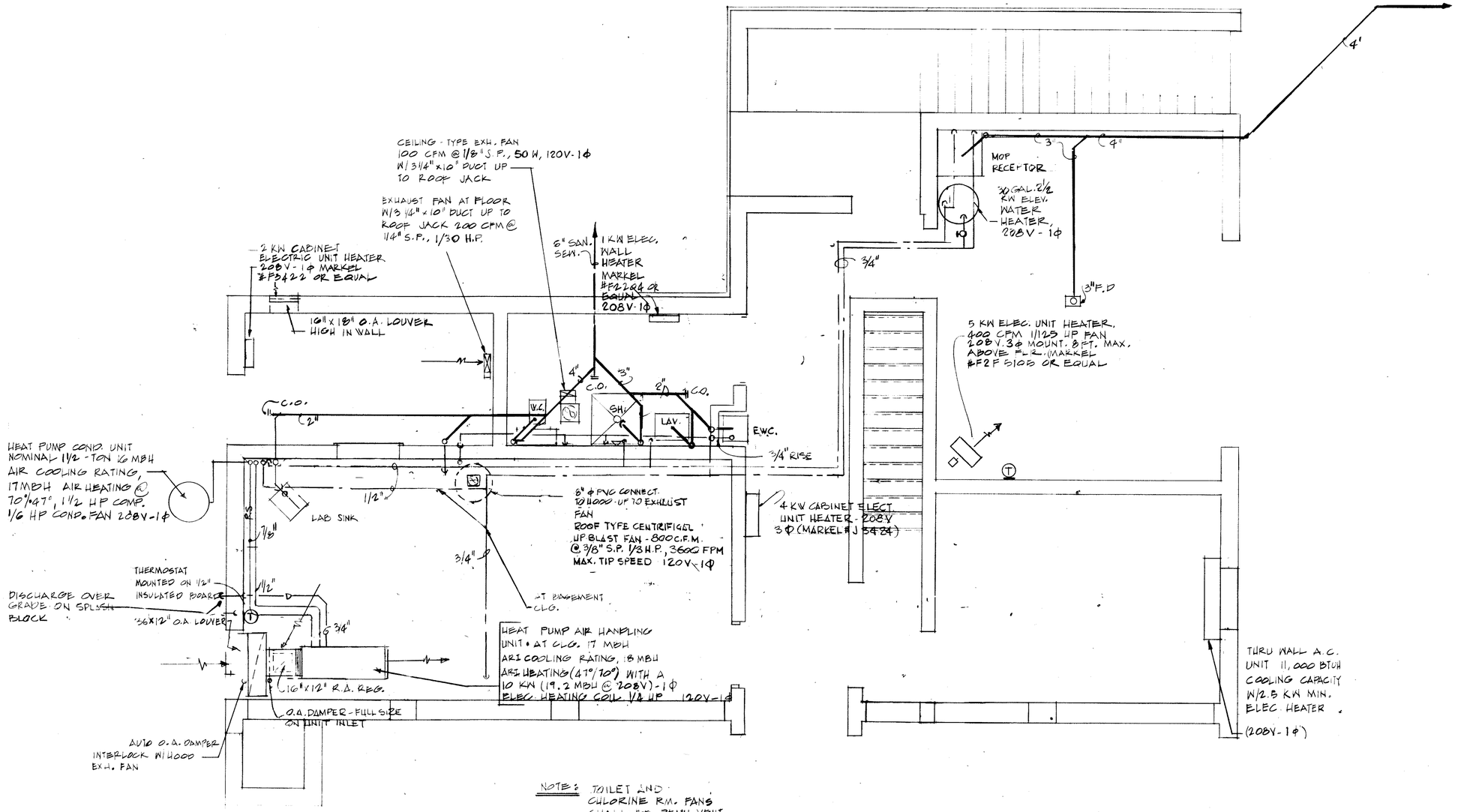
FREDERICKSBURG SEWER AND WATER AUTHORITY

CONTROL BUILDING - HVAC

LOWER LEVEL

JOB NO. 80785

SHT NO. 21



NOTE: TOILET AND CHLORINE RM. FANS SHALL BE PENN VENT "JR ZEPHYR" OR EQUAL.

FIRST FLOOR PLAN

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

1 0 8

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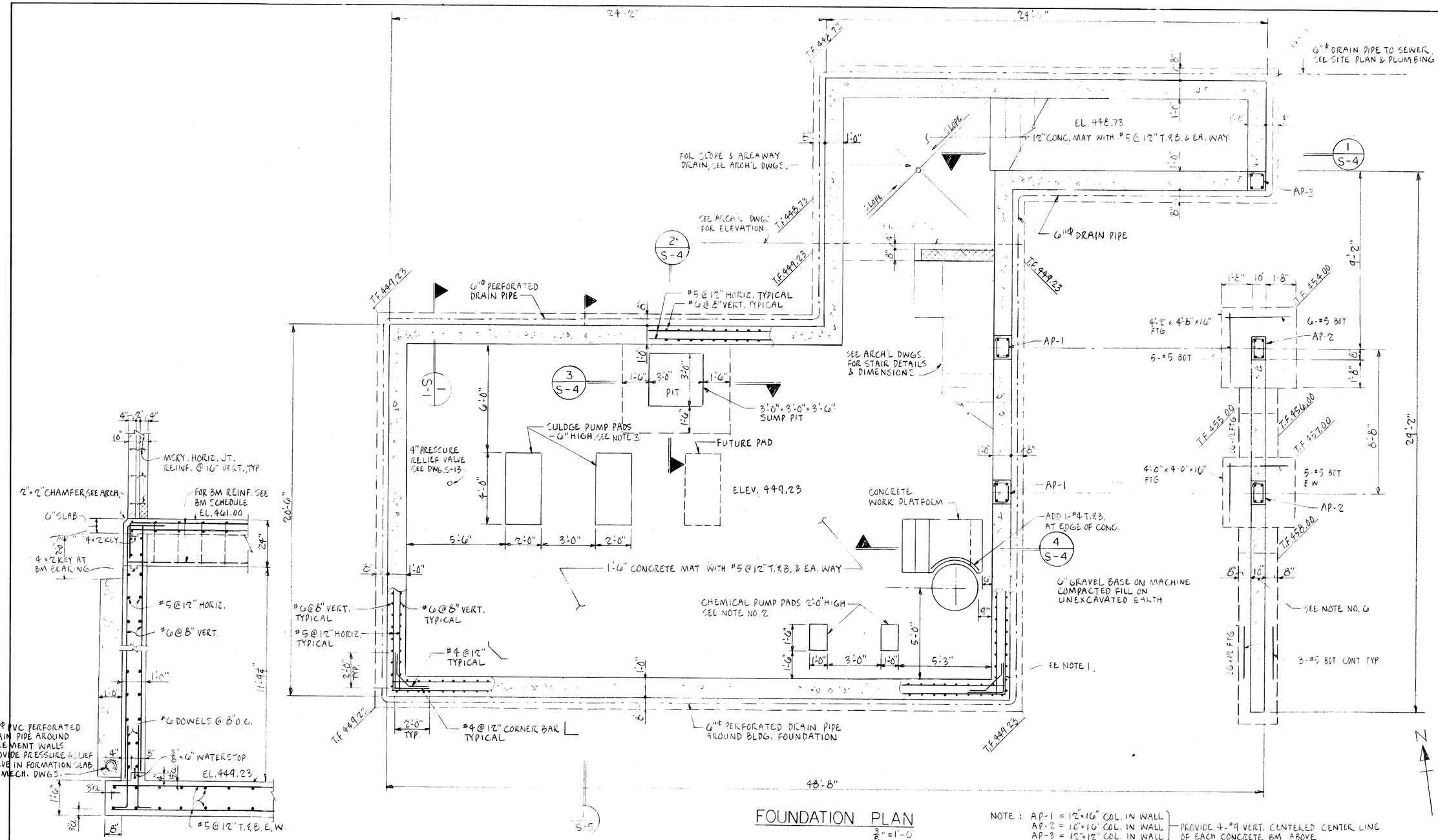
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SCALE	AS SHOWN
DATE	7/81
ENG.	
DES.	
CHK BY	
DWN BY	

FREDERICKSBURG [illegible] WATER AUTHORITY
[illegible]-HVAC & PLUMBING
FIRST FLOOR PLAN

GROUP NUMBER					JOB NO.
A	E	LA	ME	P	8016
					SHT. NO.
					22



1 S-1 WALL SECTION
1/2" = 1'-0"

FOUNDATION PLAN
3/16" = 1'-0"

NOTE: AP-1 = 12"x16" COL. IN WALL
AP-2 = 10"x16" COL. IN WALL
AP-3 = 12"x12" COL. IN WALL
} PROVIDE 4-#9 VERT. CENTERED CENTER LINE OF EACH CONCRETE BM. ABOVE. PROVIDE #3 TIES @ 12" O.C. VERT. AND #9 DOWELS AT FOOTING TO MATCH VERT. BARS. CONC. COLS. SHALL BE PLACED MONOLITHICALLY WITH ADJACENT CONC. WALLS.

NOTES:
1. FOR TYPICAL WALL CORNER REINF. DETAIL, SEE S/S-13.
2. FOR TYPICAL CHEMICAL PUMP PAD DETAIL, SEE 10/S-13.
3. FOR CONC. PAD REINF. DETAILS SEE 2/S-13.
4. FOR TYPICAL REINF. FOR OPENING IN WALLS, SEE 1/S-13.
5. FOR TYPICAL REINF. FOR OPENING IN SLABS, SEE 4/S-13.
6. 10" WALL REINF. NOT SHOWN ARE AS FOLLOWS: #4@12" O.C. HORIZ. E.F. #5@12" VERT. E.F. (OUTER MOST LAYERS) WITH #5@12" E.F. DOWELS.
7. FOR TYP. STEPPED FOOTING DETAIL, SEE 7/S-13.
8. FOR DIMENSIONS NOT SHOWN, SEE ARCHITECTUAL DWGS.
9. SEE MECH. DWGS. FOR AIRTIGHT SLEEVES THRU WALLS.
10. FOR ALL CONC. WALL BEARING NOT SHOWN ON PLAN: PROVIDE COL. 12"x16" (FOR 16" WIDTH BEAM) OR COL. 12"x12" (FOR 12" WIDTH BEAM) IN WALL, WITH 4-#9 VERT. CENTERED CENTER LINE OF EACH CONC. BM. ABOVE. PROVIDE #3 TIES @ 12" O.C. VERT. AND #9 DOWELS AT FOOTING TO MATCH VERT. BARS.

CARSON K. C. MOK
CONSULTING ENGINEER
817 SILVER SPRING AVENUE SILVER SPRING MD 20910

S-1

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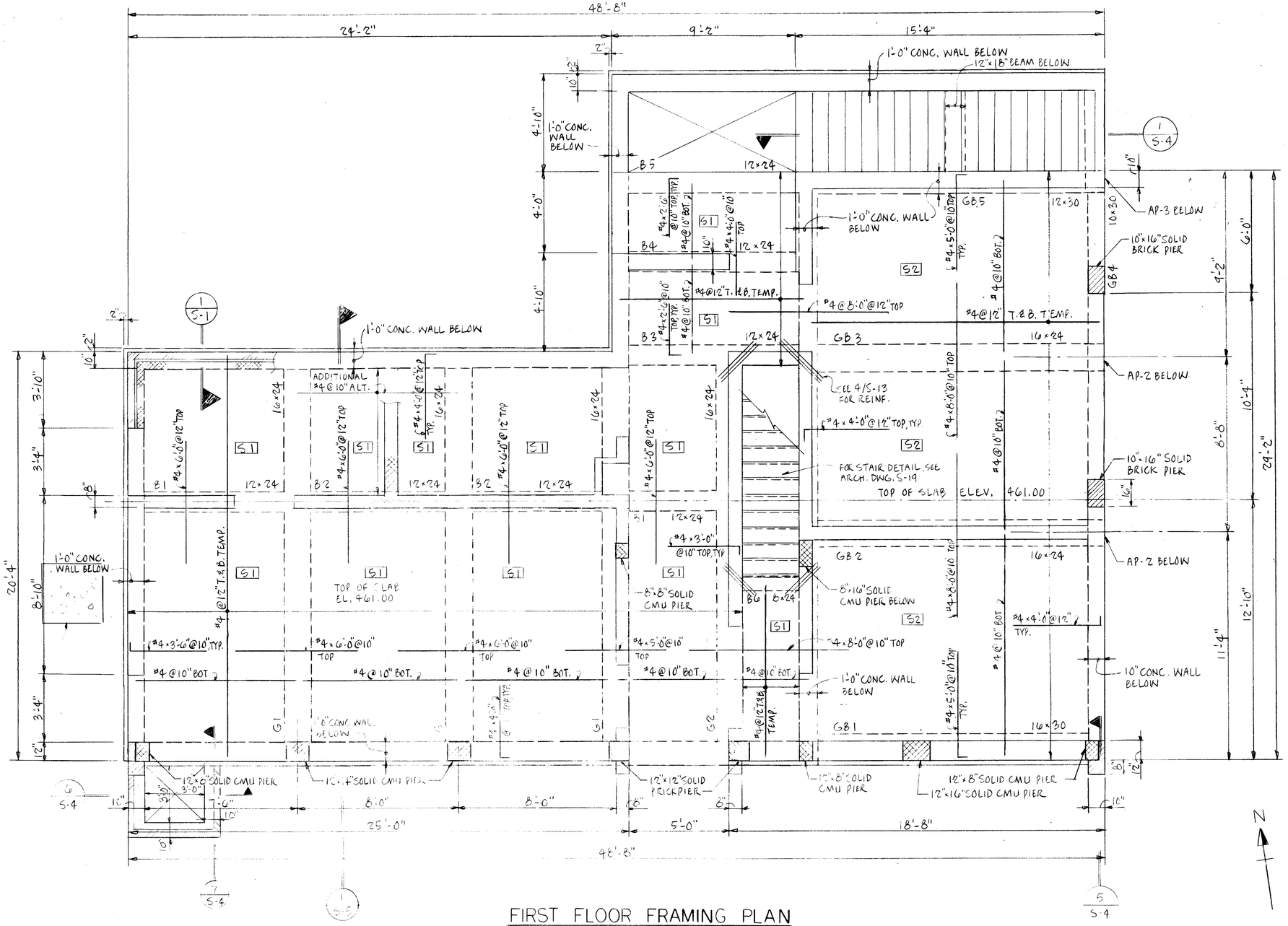
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SCALE	AS SHOWN
DATE	7/81
ENG.	
DES.	C.1
CHK BY	
DWN BY	C.M.

FREDERICKSBURG
SEWER AND WATER AUTHORITY
CONTROL BUILDING – STRUCTURAL
FOUNDATION PLAN

GROUP NUMBER					JOB NO
A	E	LA	PM	S	60785
					SHT. NO.
					23



FIRST FLOOR FRAMING PLAN

3/8" = 1'-0"

NOTES:

1. S1 = 12" CONCRETE SLAB
   S2 = 16" CONCRETE SLAB
2. FOR BEAM BAR BENDING AND PLACING DETAIL SEE DWG. S-13.
3. FOR CONCRETE BM SCHEDULE SEE SH. S-13.
4. FOR TYP. REINFORCING AT OPENING IN SLABS SEE DWG. S-13.

CARSON K. C. MOK
CONSULTING ENGINEER
817 SILVER SPRING AVENUE SILVER SPRING, MD. 20910

S-2

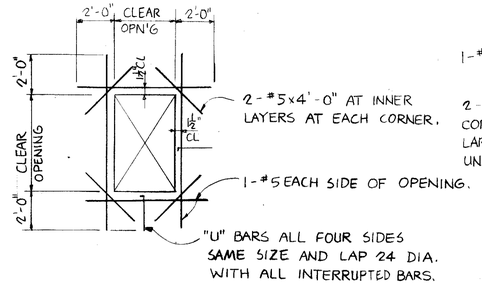
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NO.	SYM	BY	DATE	DESCRIPTION		NO	SYM	BY	DATE	DESCRIPTION	

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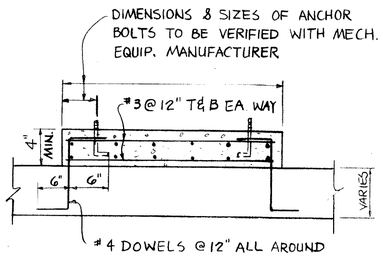
FREDERICKSBURG
SEWER AND WATER AUTHORITY
CONTROL BUILDING – STRUCTURAL
FIRST FLOOR FRAMING PLAN

GROUP NUMBER					JOB NO.
A	E	LA	PM	S	60785
					SHT. NO.
					24



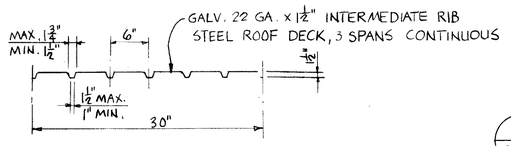
1 S-13 TYP. REINF'G FOR OPNG'S IN CONC. WALL

NO SCALE



2 S-13 TYP. CONC. PAD REINF. DETAIL

NO SCALE

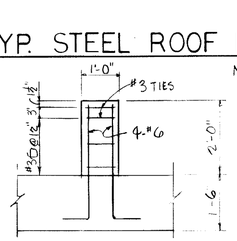


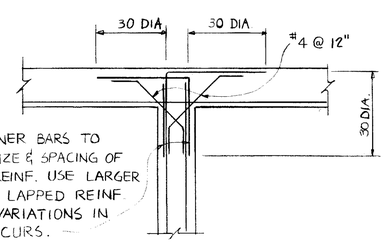
SECTIONAL PROPERTIES:

MOMENT OF INERTIA: 0.146 IN⁴
SECTION MODULUS: 0.139 IN³
WEIGHT GALV.: 1.81 PSF
FY: 33,000 PSI

3 S-13 TYP. STEEL ROOF DECK

NO SCALE





ADD CORNER BARS TO MATCH SIZE & SPACING OF HORIZ. REINF. USE LARGER SIZE OF LAPPED REINF. WHERE VARIATIONS IN SIZE OCCURS.

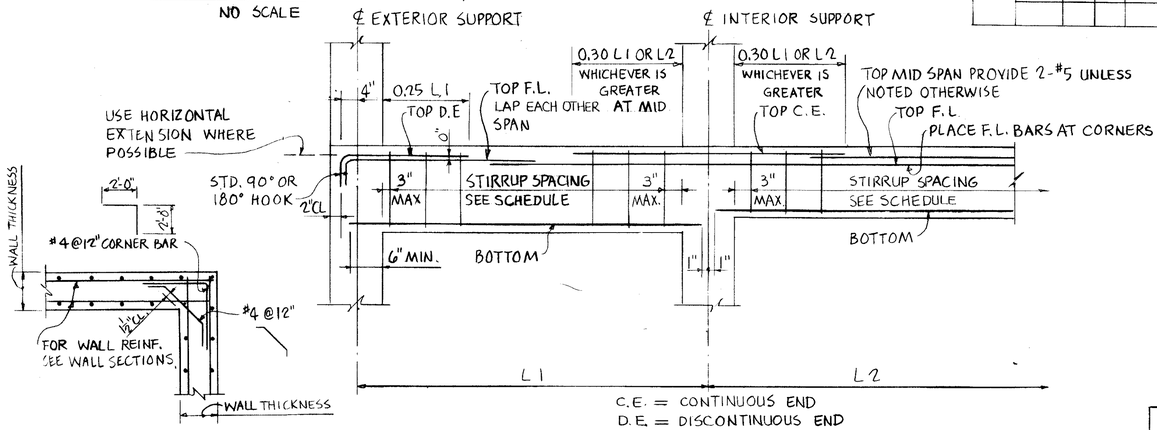
10 S-13 TYP. CHEMICAL PUMP PAD DETAIL NO SCALE

6 S-13 TYP. CROSS WALL REINF. DETAIL

NO SCALE

4 S-13 TYP. REINF'G FOR OPN'G IN SLABS

NO SCALE



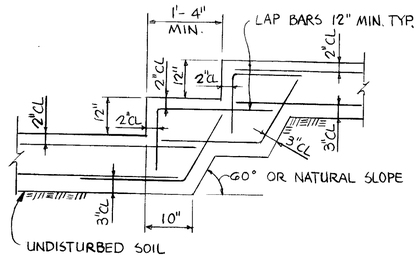
C.E. = CONTINUOUS END
D.E. = DISCONTINUOUS END
F.L. = FULL LENGTH

5 S-13 TYP. WALL CORNER REINF. DETAIL

NO SCALE

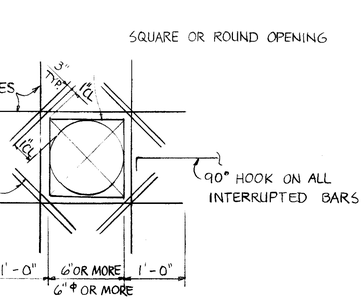
8 S-13 BEAM BAR BENDING AND PLACING DETAIL

NO SCALE



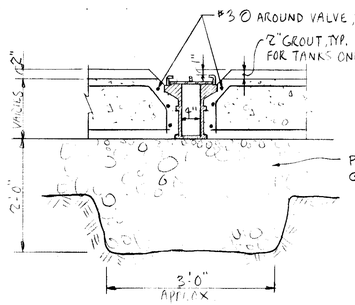
7 S-13 TYP. STEPPED FOOTING

NO SCALE



9 S-13 PRESSURE RELIEF VALVE

NO SCALE



NOTE: SUBMIT SHOP DWGS. FOR APPROVAL.

CONCRETE BEAM SCHEDULE

	MARK	B	D	REINFORCING BOT.	REINFORCING TOP	STIRRUPS AT	STIRRUPS SIZE	STIRRUPS SPACING	STIRRUPS AT	REMARKS
FLOOR BEAMS	B-1	12	24	3-#8	3-#9	FL	#3 ⊏	1@5", 2@7", @12"	EE	
	B-2	12	24	3-#8	3-#9	FL	#3 ⊏	DO	EE	
	B-3	12	24	3-#8	2-#9	FL	#3 ⊏	DO	EE	
	B-4	12	24	3-#8	2-#9	FL	#3 ⊏	DO	EE	
	B-5	12	24	3-#8	2-#9	FL	#3 ⊏	DO	EE	
	B-6	8	24	2-#9	2-#9	FL	#3 ⊏	DO	EE	
	G-1	16	24	3-#9	3-#9	FL	#3 ⊏	DO	EE	
	G-2	16	24	3-#9	3-#9	FL	#3 ⊏	DO	EE	
GRADE BEAMS	GB-1	16	30	3-#10	3-#10	FL	#3 ⊏	DO	EE	
	GB-2	16	24	3-#10	3-#10	FL	#3 ⊏	DO	EE	
	GB-3	16	24	3-#10	3-#10	FL	#3 ⊏	DO	EE	
	GB-4	10	30	3-#9	3-#9	FL	#3 ⊏	DO	EE	
	GB-5	12	30	4-#10	3-#10	FL	#3 ⊏	DO		

SPECIAL LINTEL SCHEDULE

MARK	STEEL	PRECAST CONC. SIZE	PRECAST CONC. REINF.	SKETCH	REMARKS
L1	∠4×3½×5/16	—	—	⊥L	
L2	C12×20.7	—	—	[	SEE DWG. 16/16
L3	2-C12×20.7 + C6×10.5 + C8×11.5	—	C6×10.5 2-C12×20.7 C8×11.5		SEE DWG. 7/18
L4	3-∠6×3½×5/16	—	—	⊥LL	
L5	—	2-3⅝×7⅞	1-#4 T&B	⊡	
L6	3-∠4×3½×5/16	—	—	⊥LL	
L7	3-∠5×3½×5/16	—	—	⊥LL	

S-13 CARSON K. C. MOK
CONSULTING ENGINEER
817 SILVER SPRING AVENUE SILVER SPRING, MD 20910

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NO.	SYM.	BY	DATE	DESCRIPTION

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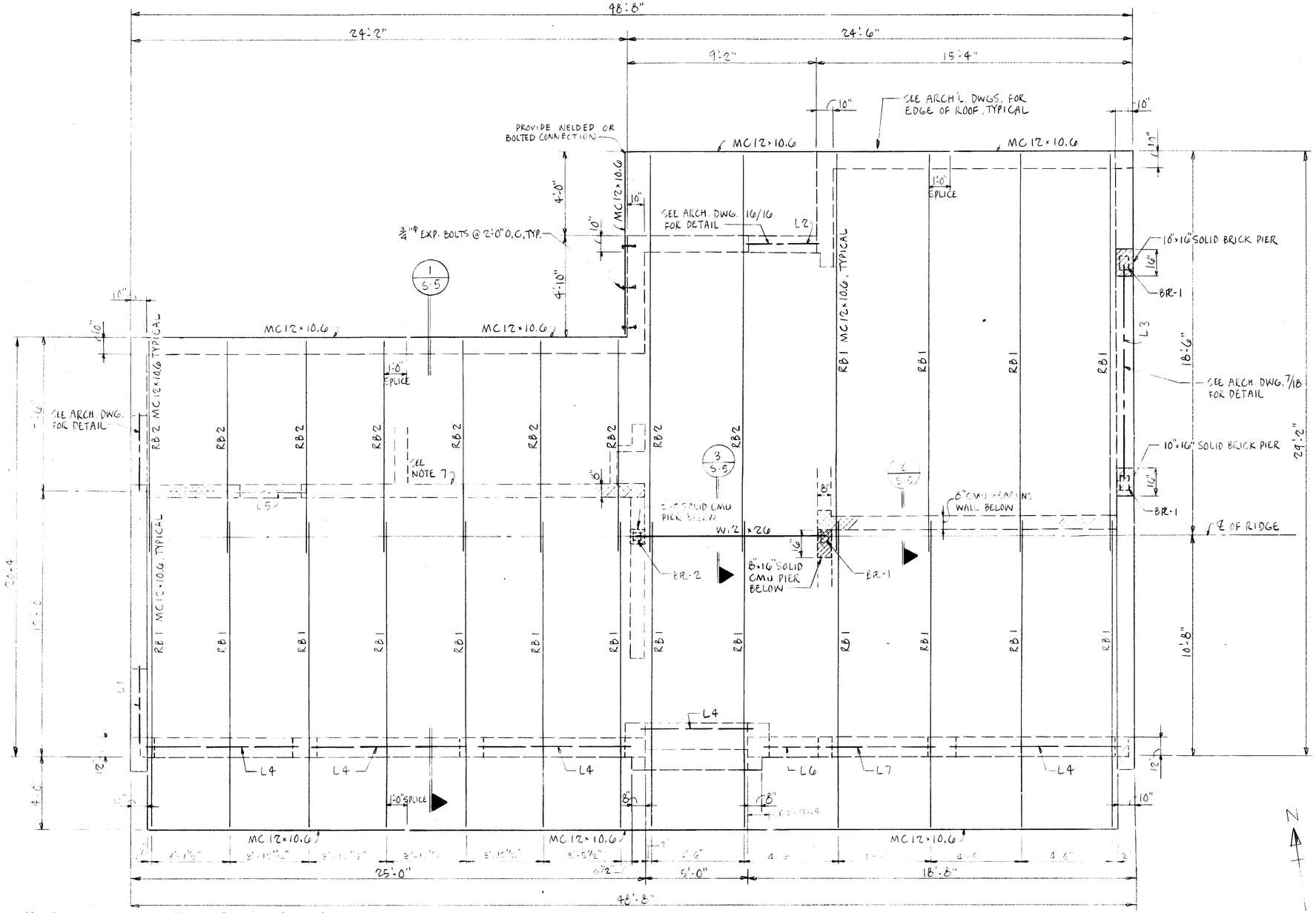
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SCALE	AS SHOWN
DATE	7/81
ENG.	
DES.	
CHK BY	
DWN BY	

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SEWER AND WATER AUTHORITY
CONTROL BUILDING – STRUCTURAL
CONCRETE BEAM SCHEDULE & DETAILS

GROUP NUMBER A	E	LA	PM	S	JOB NO.
					60785
					SHT. NO.
					25



NOTES:

1. FOR LINTEL SCHEDULE SEE SHEET S-13.
2. ROOF DECKING SHALL BE GALVANIZED 22 GA. X 1½" INTERMEDIATE RIB STEEL DECK WELDED TO SUPPORTING STRUCTURE STRICTLY IN CONFORMANCE WITH STEEL DECKING INSTITUTE SPECIFICATIONS, SEE 3/S-13 FOR DETAILS.
3. GENERAL CONTRACTOR SHALL VERIFY AND FURNISH LOCATIONS AND DIMENSIONS OF ALL MECHANICAL OPENINGS THRU ROOF TO FABRICATOR TO SUMISSION OF SHOP DRAWINGS OF STEEL.
4. PREDRILL HOLES IN STEEL STRUCTURES FOR ATTACHMENT OF FASCIA AND GUTTERS AS REQUIRED. UNLESS OTHERWISE NOTED PROVIDE $\frac{7}{16}$"ϕ HOLES @ 2'-0" O.C. FOR $\frac{3}{8}$"ϕ BOLTS
5. ALL BOLTS FOR CONNECTIONS SHALL BE HIGH STRENGTH BOLTS CONFORMING TO ASTM A-325.
6. PROVIDE MC12×10.6 FOR CLOSURE CHANNEL BETWEEN ROOF JOISTS, UNLESS OTHERWISE NOTED.
7. ALL WALLS SHOWN ON ROOF FRAMING PLAN ARE BEARING WALLS ONLY. FOR NON-BEARING WALLS NOT SHOWN SEE ARCH'L. DWGS.

ROOF FRAMING PLAN

$\frac{3}{8}$" = 1'-0"

BR-1 = PL $\frac{3}{8}$" × 8" × 0'-6" WITH 2 - ¾"ϕ A.B.
BR-2 = PL $\frac{3}{8}$" × 6" × 0'-6" WITH 2 - ¾"ϕ A.B.

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S-3

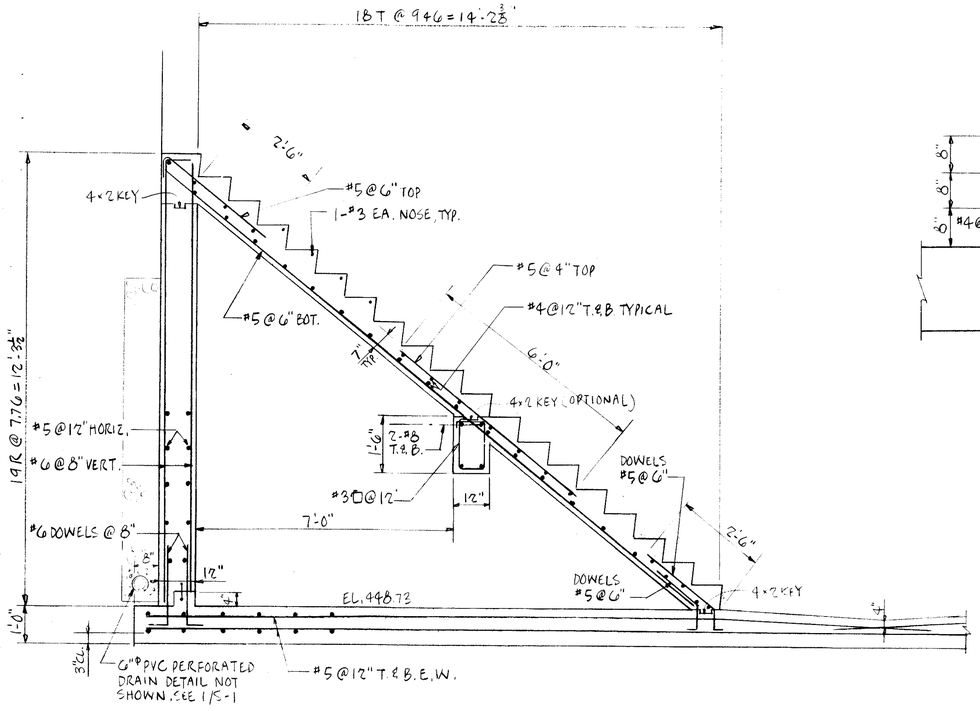
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CHK BY	
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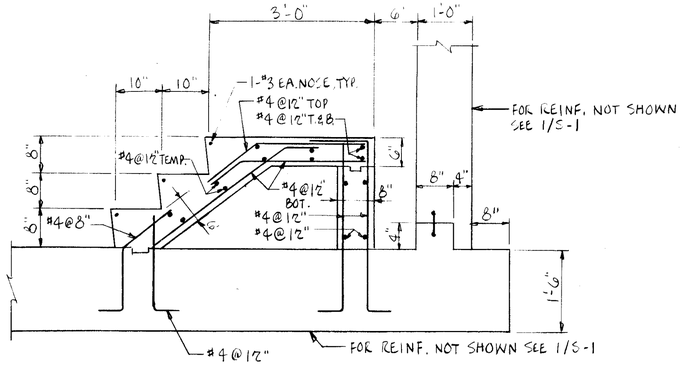
FREDERICKSBURG
SEWER AND WATER AUTHORITY
CONTROL BUILDING – STRUCTURAL
ROOF FRAMING PLAN

GROUP NUMBER					JOB NO
A	B	C	PM	S	60785
					SHT. NO.
					26



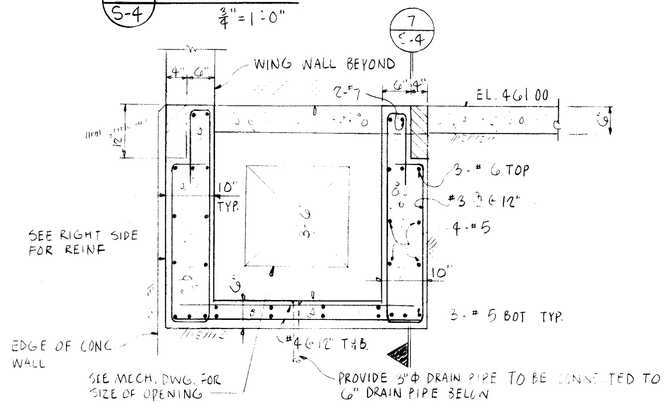
1 / S-4 SECTION THRU EXTERIOR STAIR

1/2" = 1'-0"



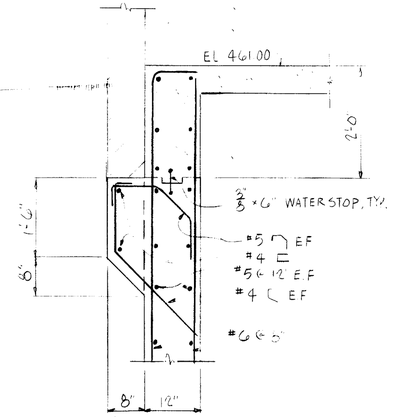
4 / S-4 SECTION

3/4" = 1'-0"



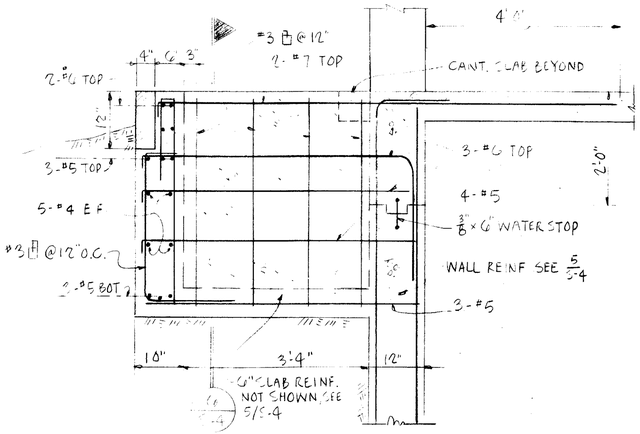
6 / S-4 SECTION THRU AIRWAY

3/4" = 1'-0"



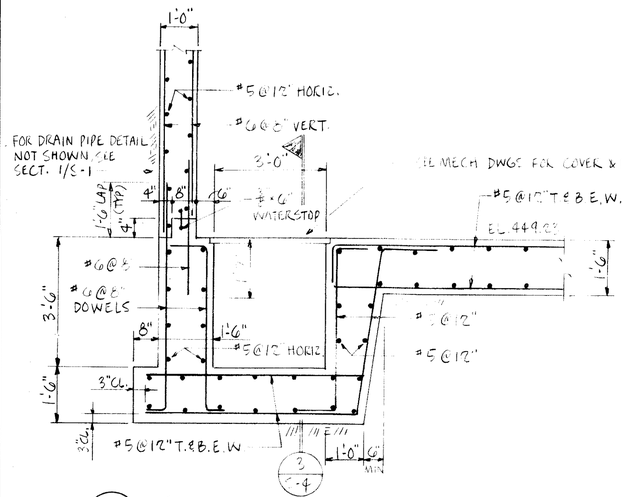
5 / S-4 TYP. WING WALL DETAIL

3/4" = 1'-0"



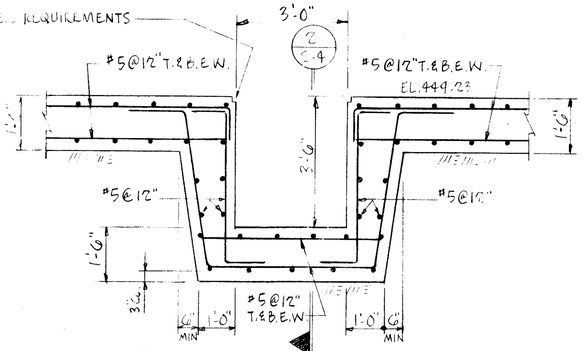
7 / S-4 TYP. WING WALL AT AIRWAY

3/4" = 1'-0"



2 / S-4 SECTION THRU SUMP PIT

1/2" = 1'-0"



3 / S-4 SECTION THRU SUMP PIT

1/2" = 1'-0"

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S-4 | 117 SILVER SPRING AVENUE SILVER SPRING, MD. 20910

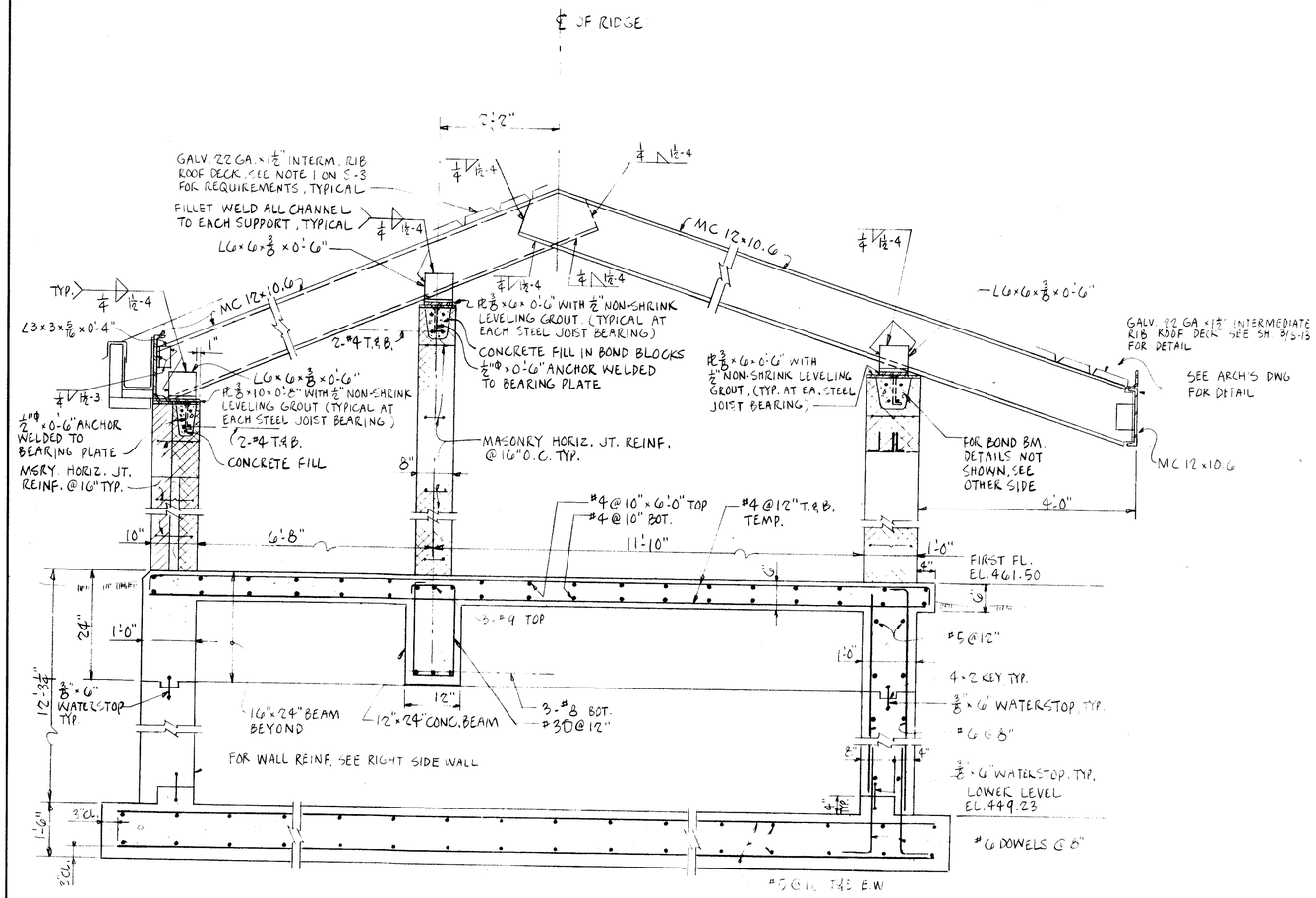
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WILLIAMSBURG, VA. CHARLESTON, W.VA.

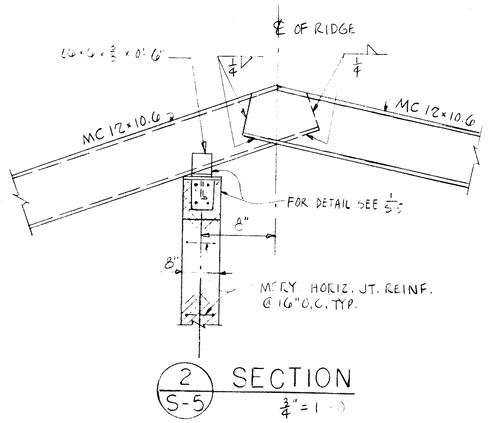
SCALE	AS SHOWN
DATE	7/81
ENG	
DES	M.S.
CHK BY	
DWN BY	

FREDERICKSBURG
SEWER AND WATER AUTHORITY
CONTROL BUILDING – STRUCTURAL
STAIR AND CUTOUT DETAILS

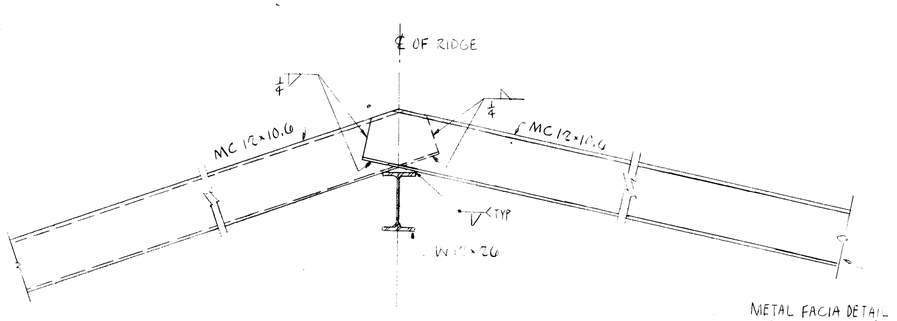
JOB NUMBER				JOB NO.
A		PM	S	60785
				SHT. NO.
				27



1 / S-5 ELEVATION
¾" = 1'-0"



2 / S-5 SECTION
¾" = 1'-0"



3 / S-5 SECTION
¾" = 1'-0"

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CONSULTING ENGINEER
S-5 8717 SILVER SPRING AVENUE SILVER SPRING, MD. 20910

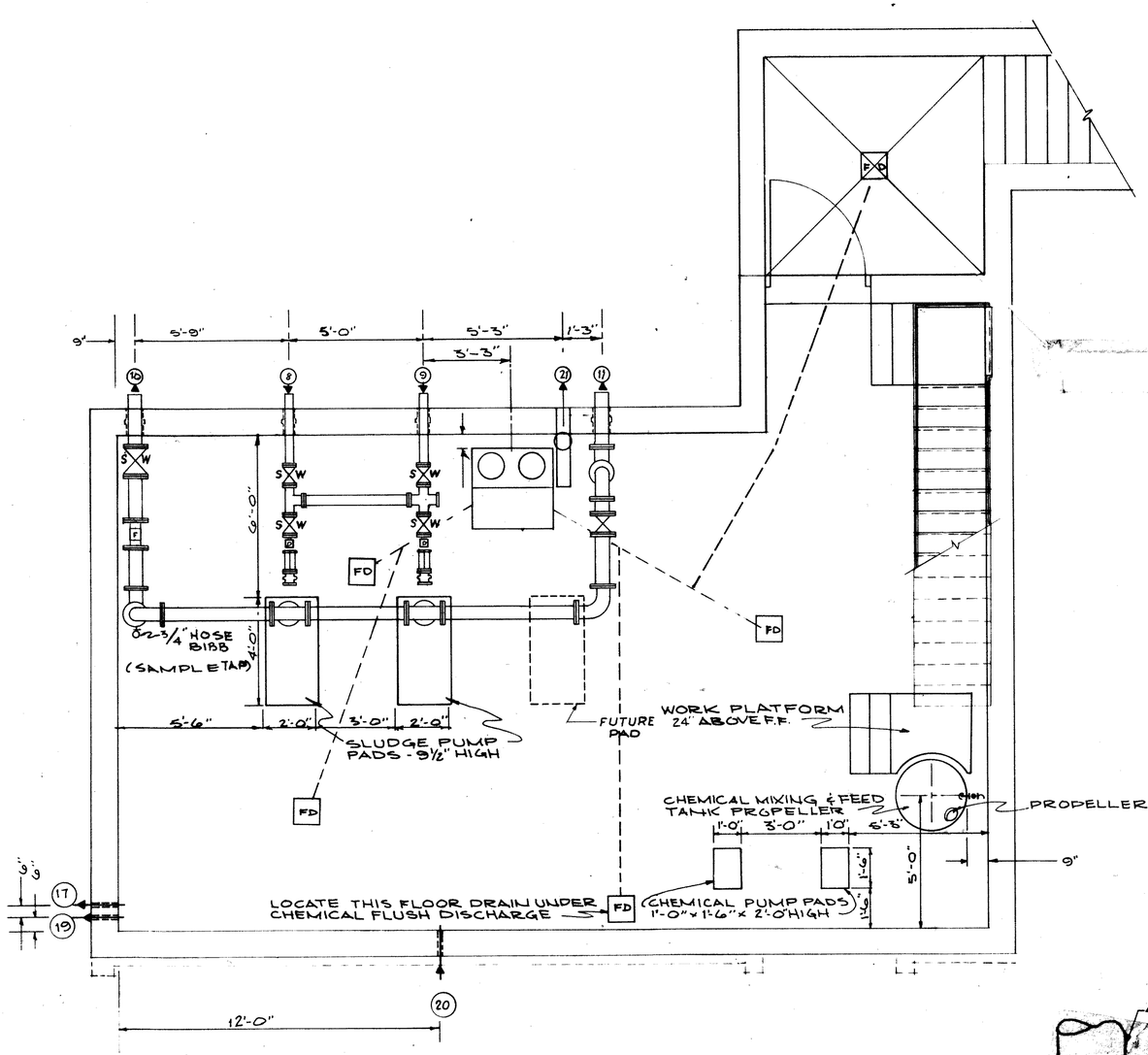
REVISIONS					REVISIONS				
NO	SYM	BY	DATE	DESCRIPTION	NO	SYM	BY	DATE	DESCRIPTION

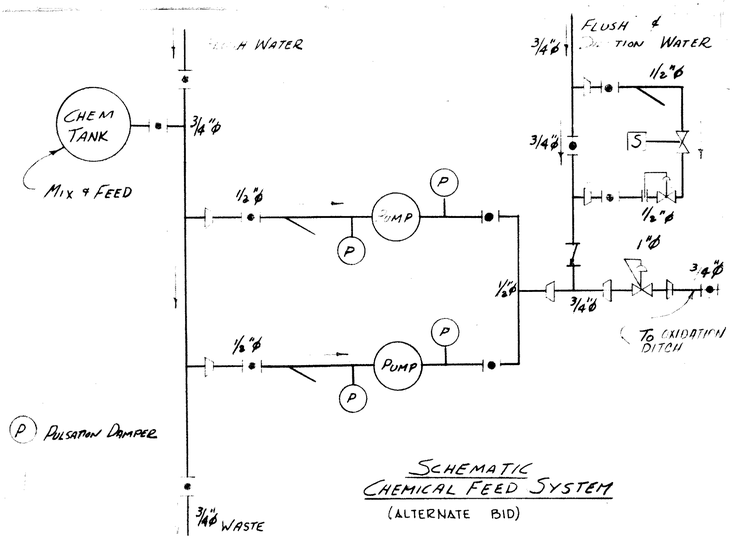
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SCALE	AS SHOWN
DATE	1/81
ENG	
DES	G.M.
CHK BY	
DWN BY	H.H.

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SEWER AND WATER AUTHORITY
CONTROL BUILDING – STRUCTURAL
ELEVATION & ROOF SECTIONS

GROUP NUMBER					JOB NO
A	E	LA	PM	S	60785
					SHT. NO.
					28

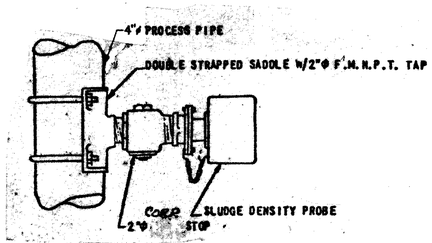




SCHEMATIC
CHEMICAL FEED SYSTEM
(ALTERNATE BID)

DRAWING NOTES:

1. FOR COMPLETE PIPING LAYOUT SEE SHEET NO. 30.
2. FOR ELEVATIONS OF WALL PIPE SLEEVES SEE SHEET NO. 30.
3. FOR STRUCTURAL DESIGN SEE SHEET NO. 23.
4. USE LONG RADIUS ON ALL SLUDGE LINES BENDS
5. THE LOCATION OF FLOOR DRAINS CAN BE ADJUSTED TO CLEAR REINFORCED STEEL, EXCEPT AS NOTED.
6. SLOPE FLOOR TO DRAIN.
7. ① PIPE IDENTIFICATION NUMBER, REFER TO SHEET NO. 7 FOR PIPE IDENTIFICATION LIST.



SLUDGE DENSITY PROBE
MOUNTING DETAILS

REVISIONS					
NO.	SYM.	BY	DATE	DESCRIPTION	

REVISIONS					
NO.	SYM.	BY	DATE	DESCRIPTION	

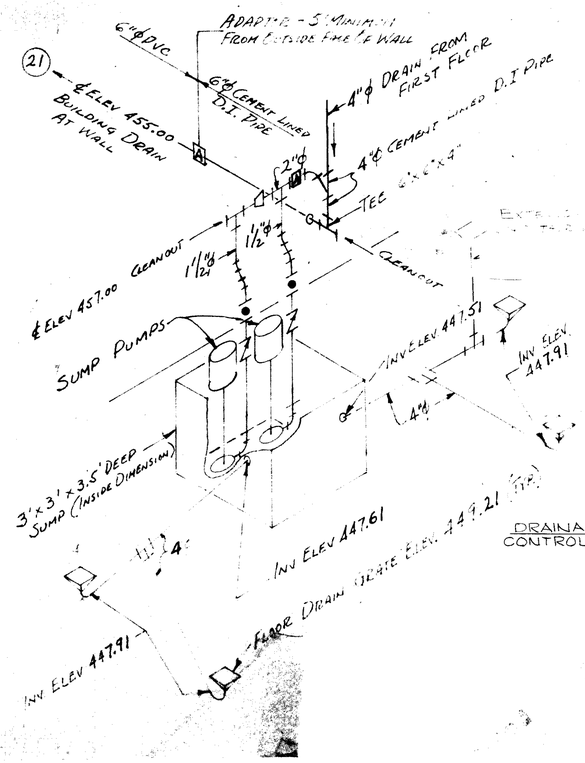
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SCALE	N.T.S.
DATE	7/81
ENG.	J.W.S.
DES.	D.D.Q.
CHK BY	D.D.Q.
DWN BY	W.S.R.

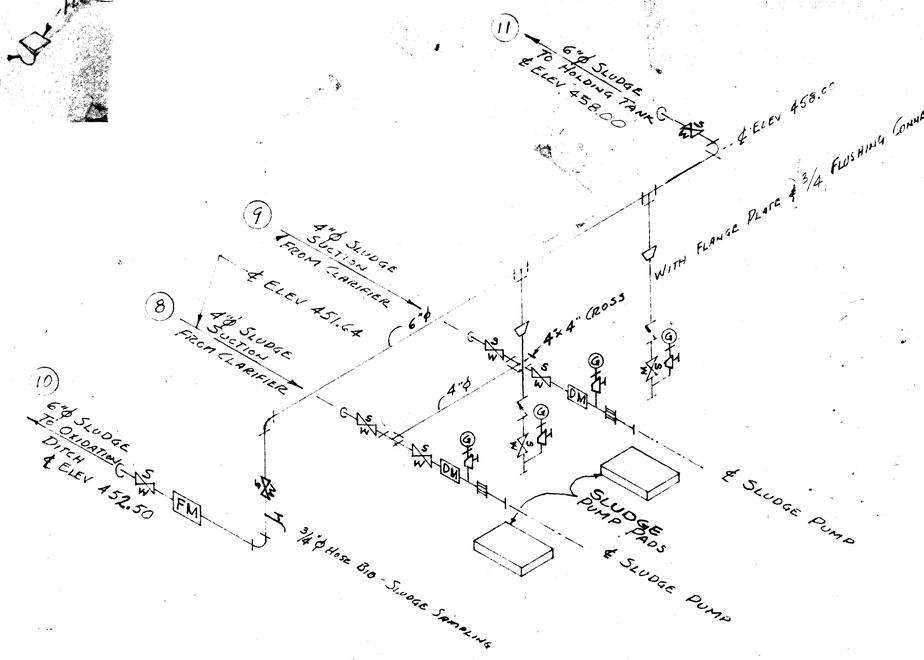
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CONTROL BUILDING - PROCESS
LOWER LEVEL PLAN &
CHEMICAL FEED SCHEMATIC

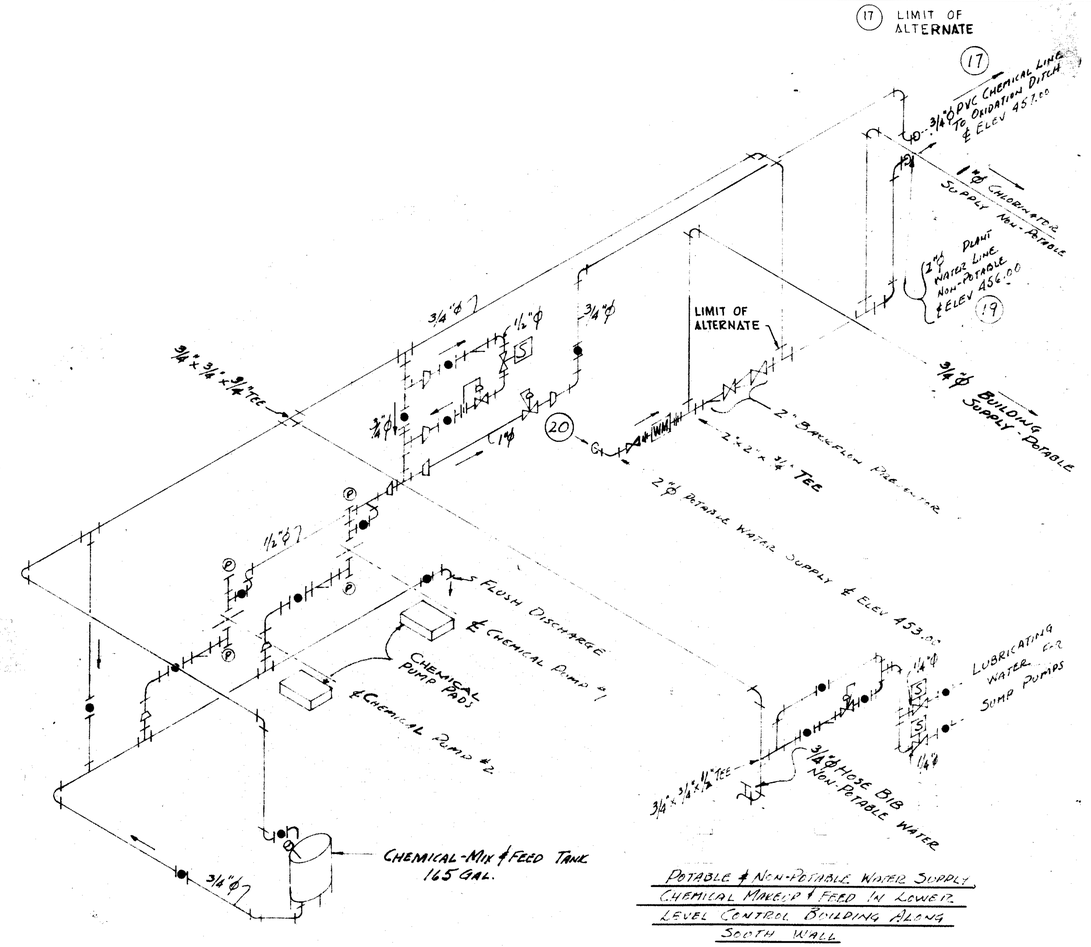
GROUP NUMBER					JOB NO
A	E	LA	PM	S	60785
					SHT. NO.
					29



DRAINAGE SYSTEM LOWER LEVEL
CONTROL BUILDING LOOKING TOWARD
NORTH WALL



SLUDGE PIPING LOWER LEVEL
CONTROL BUILDING ALONG NORTH WALL



POTABLE & NON-POTABLE WATER SUPPLY
CHEMICAL MAKEUP & FEED IN LOWER
LEVEL CONTROL BUILDING ALONG
SOUTH WALL

NOTE

1. ⓘ PIPE IDENTIFICATION NUMBER, REFER TO SHEET NO 7 FOR IDENTIFICATION LIST.
2. FOR LOWER LEVEL PLAN REFER TO SHEET NO 24.
3. ALL DRAINAGE LINES SHALL BE PVC UNLESS OTHERWISE NOTED.
4. ALL SLUDGE LINES SHALL BE D.I. PIPE
5. PIPE UNIONS TO EXPIDITE INSTALLATION, SHALL BE INDICATED ON THE SHOP DRAWINGS.
6. FOR PIPE SUPPORTS REFER TO SHEET NO. 44
7. ALL BENDS IN SLUDGE LINES SHALL BE LONG RADIUS.
8. FOR PIPE SYMBOLS AND ABBREVIATIONS REFER TO SHEET NO. 2

REVISIONS	NO.	SYM.	BY	DATE	DESCRIPTION

REVISIONS	NO	SYM	BY	DATE	DESCRIPTION

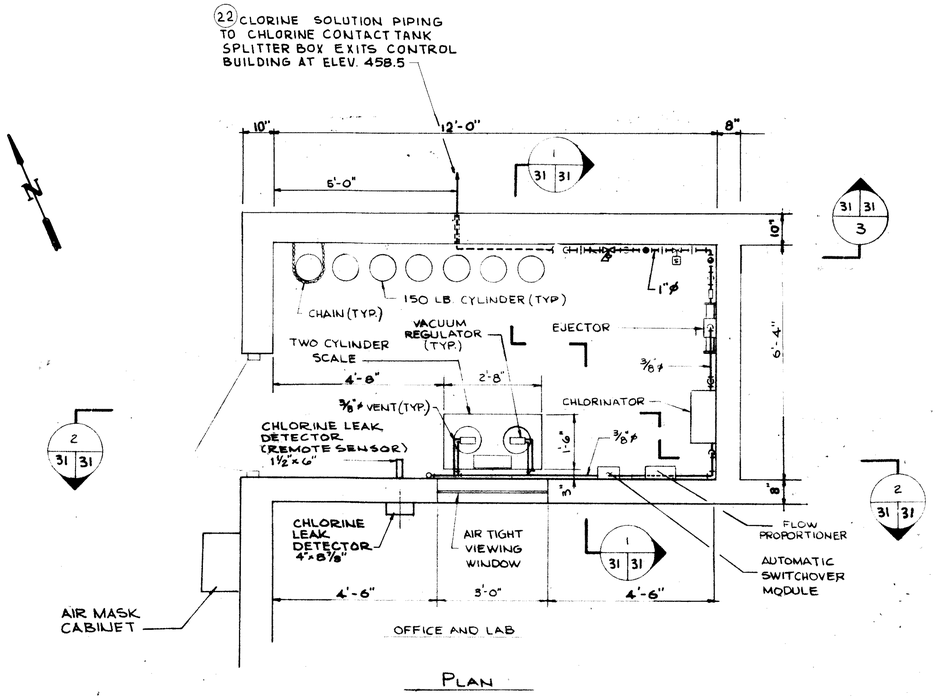
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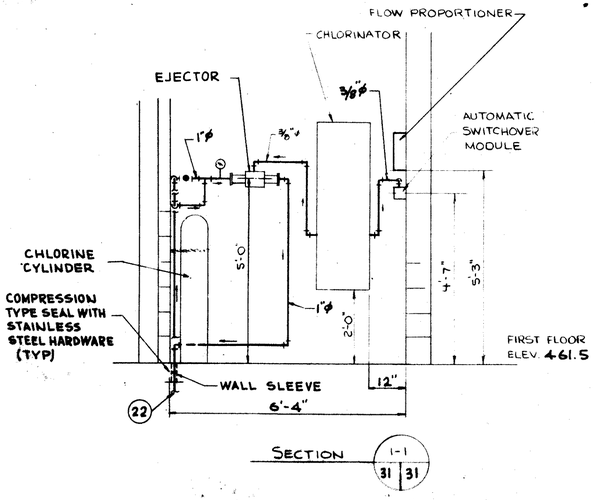
SCALE	N.T.S.
DATE	7/81
ENG.	J.W.S.
DES.	D.D.Q.
CHK BY	D.D.Q.
DWN BY	A.K./W.S.R.

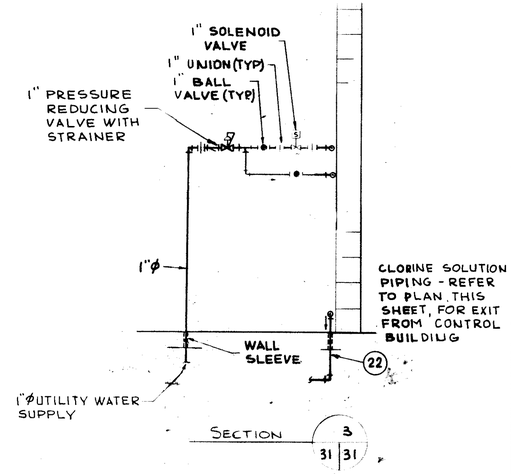
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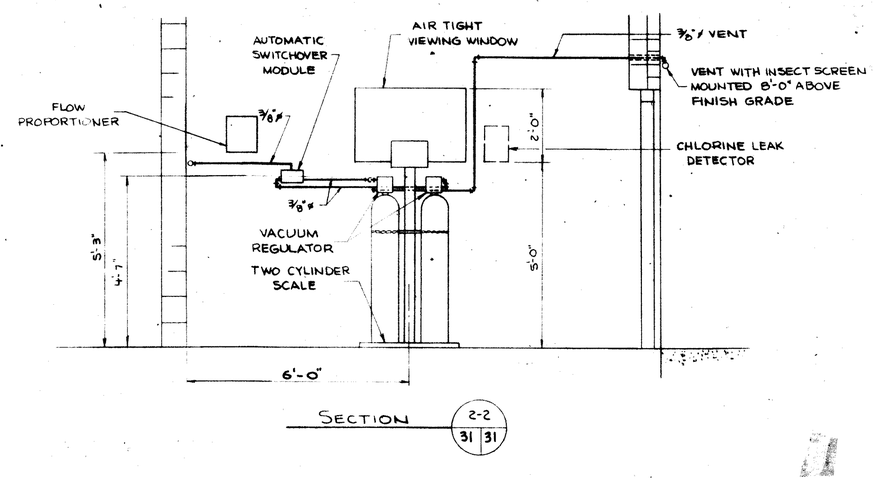
CONTROL BUILDING - PROCESS ISOMETRICS
LOWER LEVEL
WATER, SLUDGE & DRAINAGE

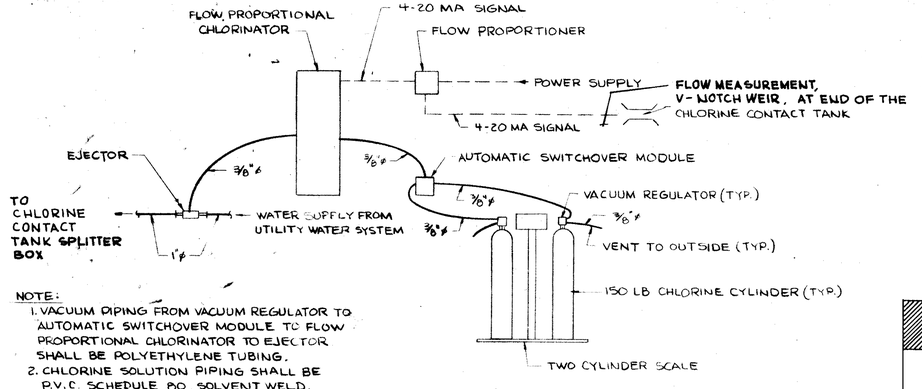
GROUP NUMBER					JOB NO
A	E	A	PM	S	60785
					SHT. NO.
					30







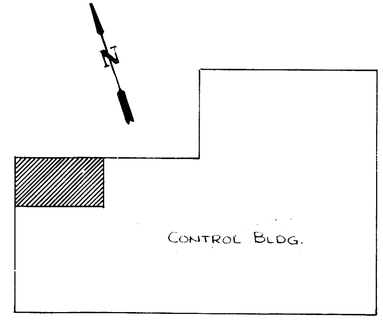




NOTE:
1. VACUUM PIPING FROM VACUUM REGULATOR TO AUTOMATIC SWITCHOVER MODULE TO FLOW PROPORTIONAL CHLORINATOR TO EJECTOR SHALL BE POLYETHYLENE TUBING.
2. CHLORINE SOLUTION PIPING SHALL BE P.V.C. SCHEDULE 80, SOLVENT WELD.
3. VENT PIPING SHALL BE POLYETHYLENE TUBING.
4. (22) YARD PIPING IDENTIFICATION NUMBER REFER TO SHT. NO. 6 FOR YARD PIPING IDENTIFICATION LIST.

CHLORINATION SYSTEM SCHEMATIC
N.T.S.

NOTE:
1 ① PIPE IDENTIFICATION NUMBER, REFER TO SHEET NO. 7 FOR PIPE IDENTIFICATION LIST.



FIRST FLOOR KEY PLAN
N.T.S.

1 0 1
FEET

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REVISIONS	NO.	SYM.	BY	DATE	DESCRIPTION

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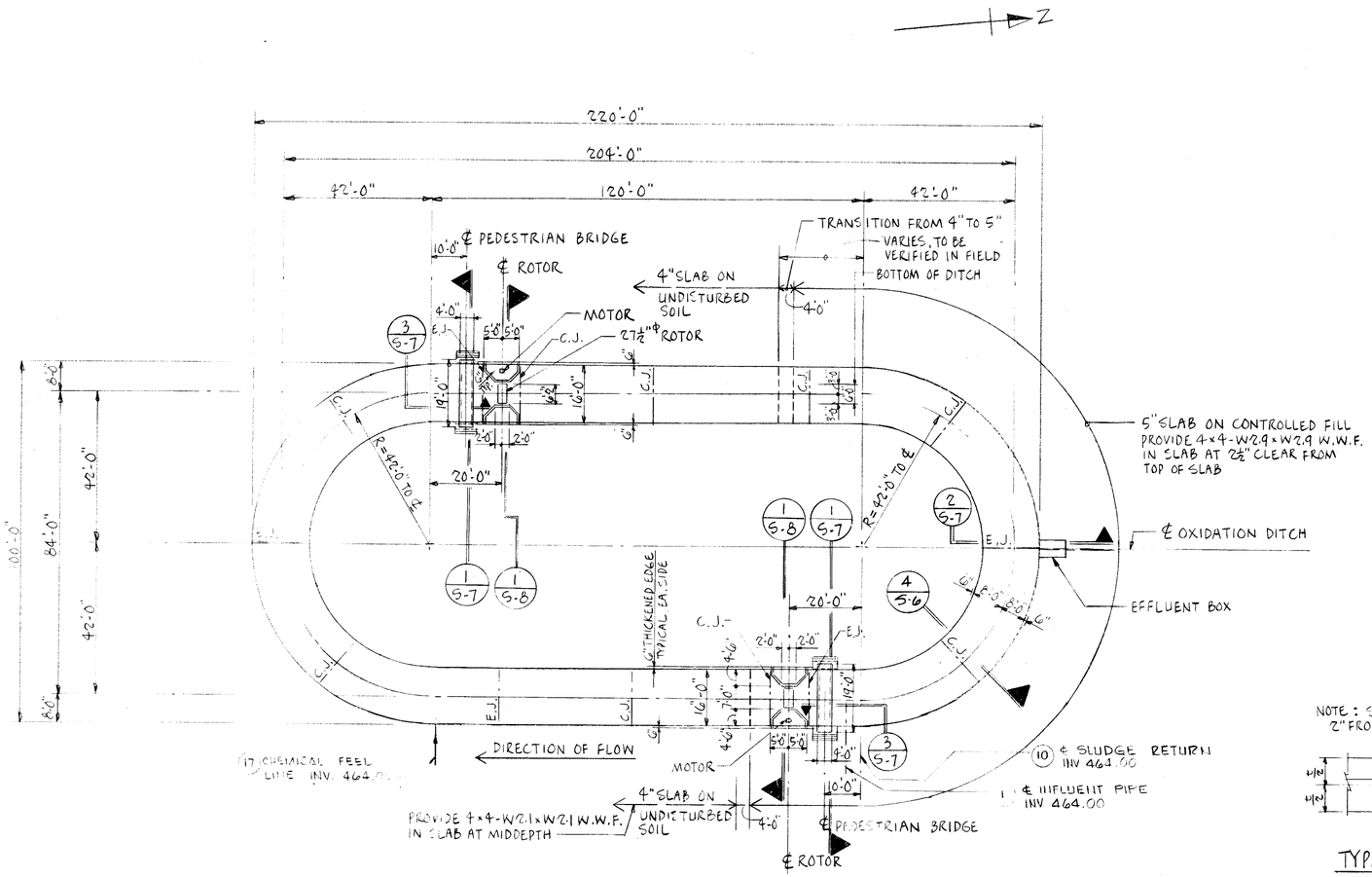
SCALE	AS SHOWN
DATE	7-81
ENG.	J.W.S.
DES.	D.D.Q.
CHK BY	D.D.Q.
DWN BY	A.K./W.S.R.

SEWER AND WATER AUTHORITY

CONTROL BUILDING PROCESS CHLORINATION PLAN AND SECTIONS

JOB NO. 60785

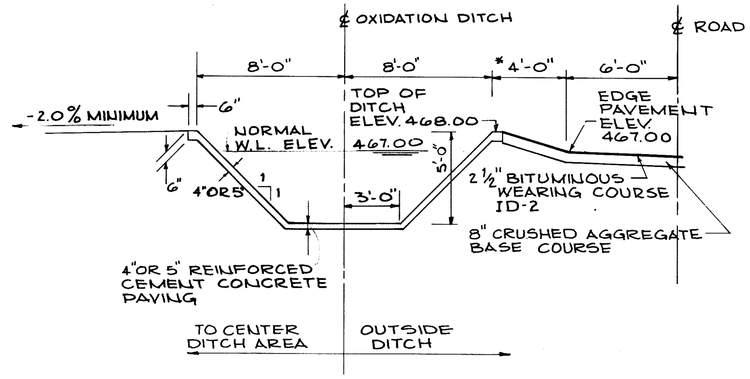
SHT. NO. 31



OXIDATION DITCH - PLAN

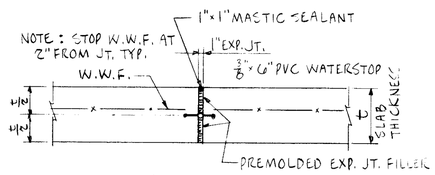
1" = 2'-0"

NOTE : PROVIDE CONTRACTION OR EXPANSION JOINTS WITH PVC WATERSTOP $\frac{3}{8}$"×6" AT 40'-0" ± O.C. IN CONCRETE DITCH AS SHOWN. SEE TYPICAL JOINT DETAILS THIS SHEET.

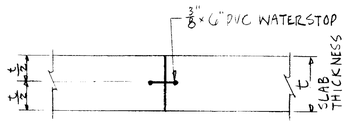


* 4'-0" MINIMUM WIDTH OF PAVED SHOULDER, AT NORTH END OF DITCH SHOULDER WIDTH INCREASE TO ABOUT 9'-0" HOWEVER, ELEVATIONS HOLD.

4 / S-6 SECTION
N.T.S.



TYP. EXPANSION JOINT
N.T.S.



TYP. CONTRACTION JOINT
N.T.S.

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CONSULTING ENGINEER
817 SILVER SPRING AVENUE SILVER SPRING, MD 20910

S-6

NO	SYM	BY	DATE	DESCRIPTION

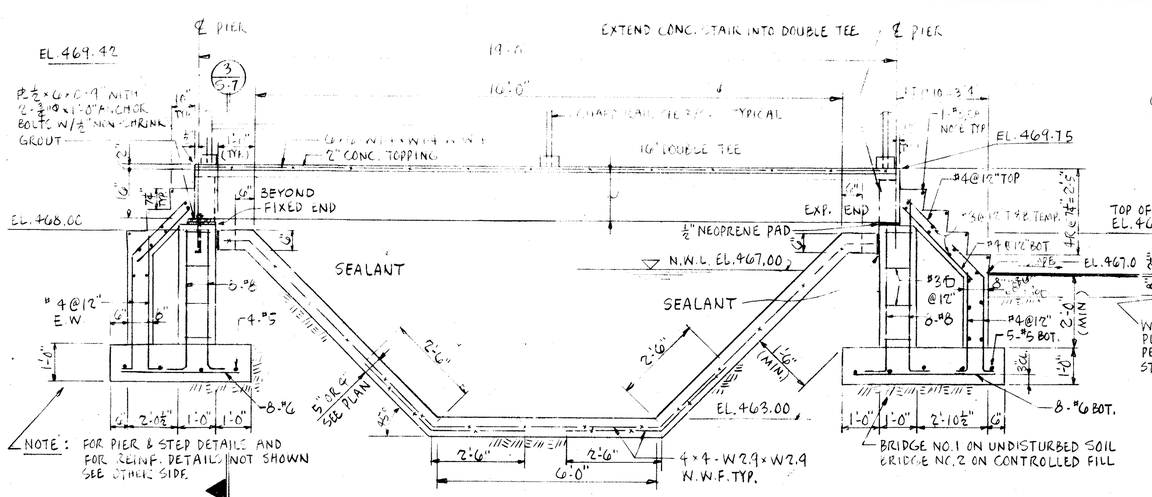
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SCALE AS SHOWN
DATE 7/81
ENG
DES C.M.
CHK BY
DWN BY

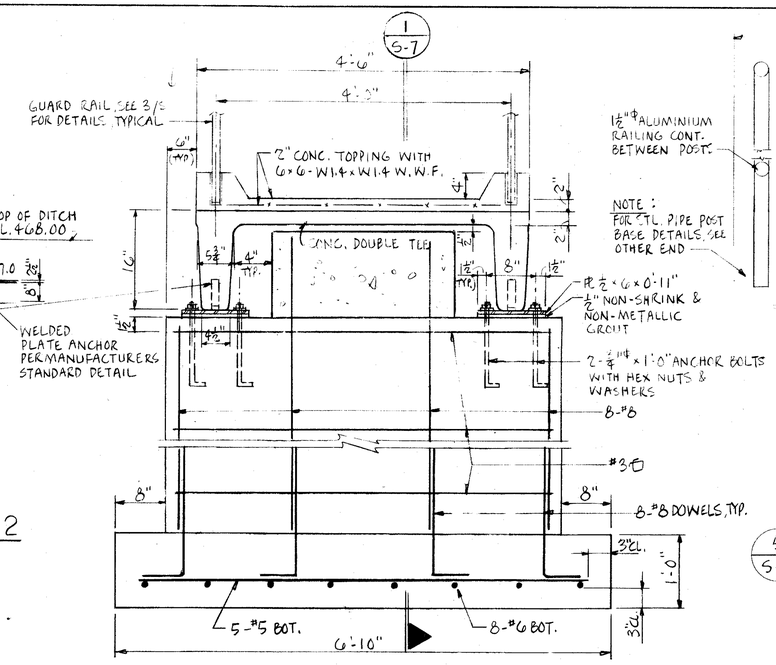
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SEWER AND WATER AUTHORITY
OXIDATION DITCH - STRUCTURAL - PROCESS
PLAN, SECTIONS & PAVING

GROUP NUMBER					JOB NO.
A	E	LA	PM	S	60785
					SHT. NO.
					32



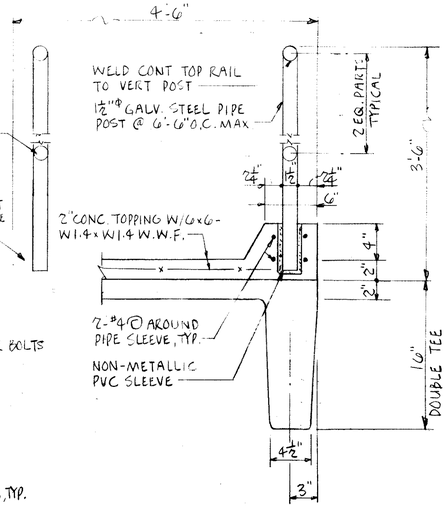
1/S-7 TYPICAL SECTION ALONG ℄ PROPOSED PEDESTRIAN BRIDGE NO.1 & NO.2

½" = 1'-0"



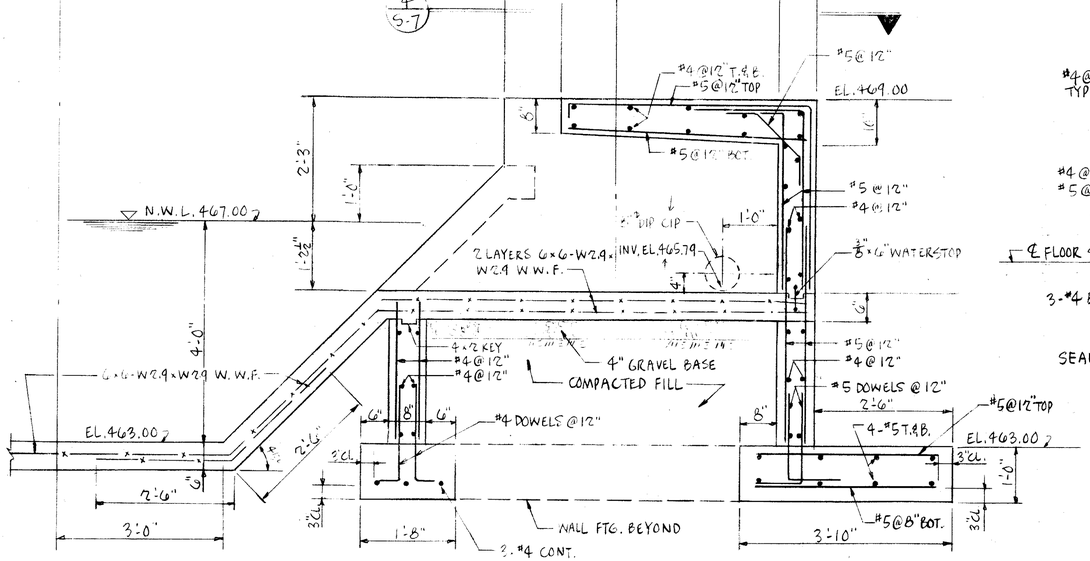
3/S-7 CROSS SECTION THRU PEDESTRIAN BRIDGE

1" = 1'-0"



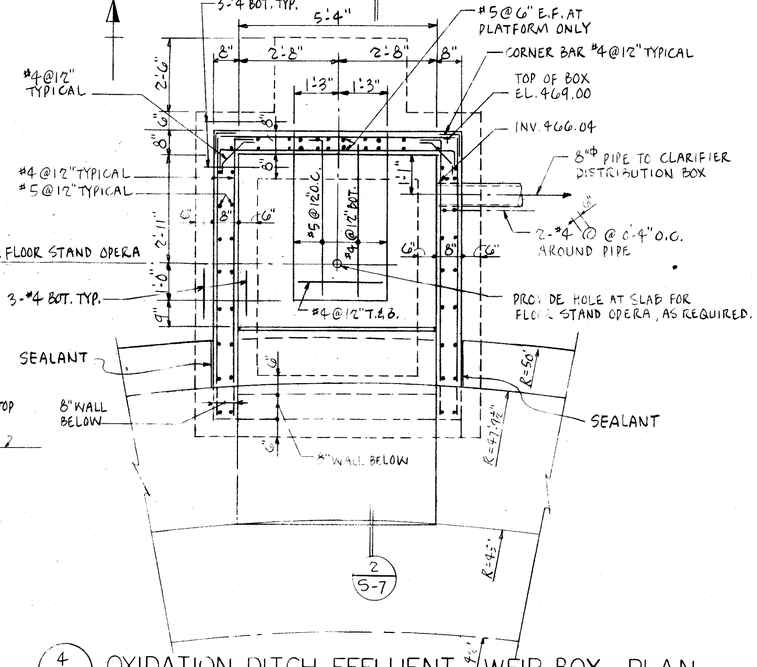
5/S-7 TYP. GUARD RAIL DETAIL

1½" = 1'-0"



2/S-7 SECTION THRU EFFLUENT WEIR BOX

¾" = 1'-0"



4/S-7 OXIDATION DITCH EFFLUENT WEIR BOX - PLAN

½" = 1'-0"

CARSON K. C. MOK
CONSULTING ENGINEER
S-7 817 SILVER SPRING AVENUE SILVER SPRING, MD. 20910

COMMONWEALTH OF PENNSYLVANIA — PROFESSIONAL ENGINEER — JOHN L. SAYLOR — ENGINEER — NO. 040 E

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NO.	BY	DATE	DESCRIPTION

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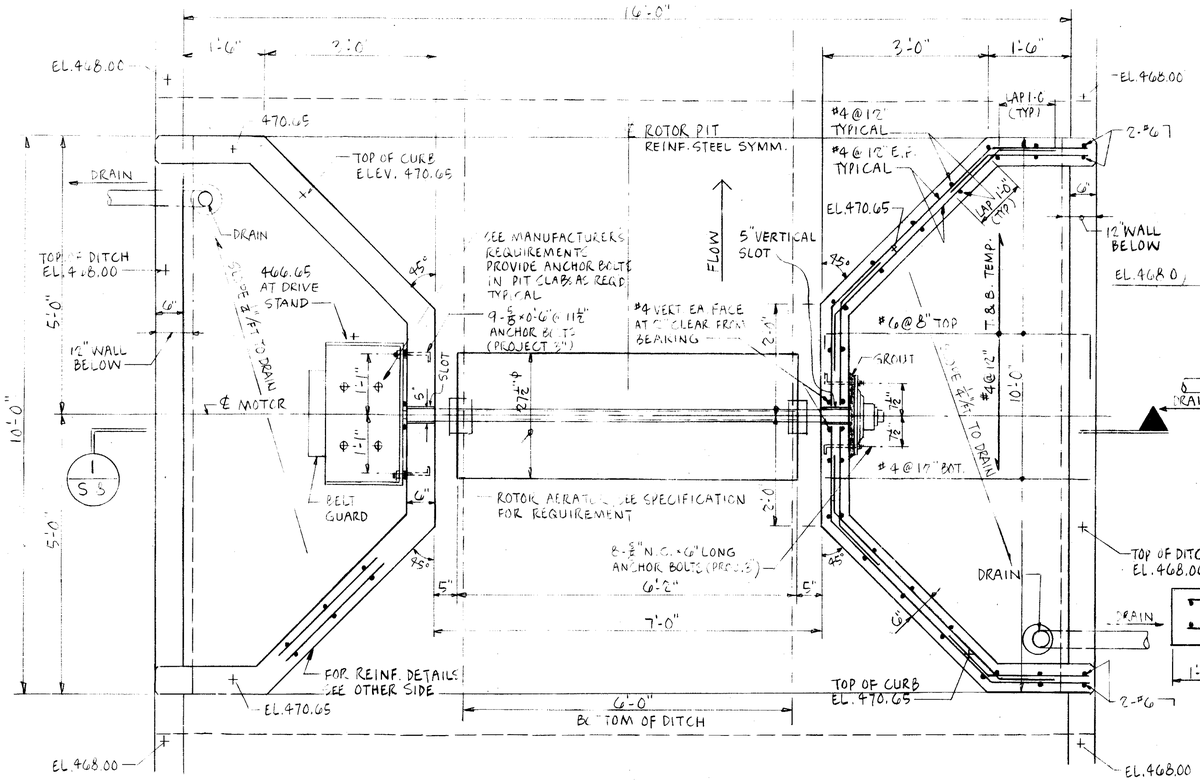
NO.	BY	DATE	DESCRIPTION

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ENG.	J.W.S.
DES.	C.M.
CHK BY	J.W.S.
DWN BY	C.M.

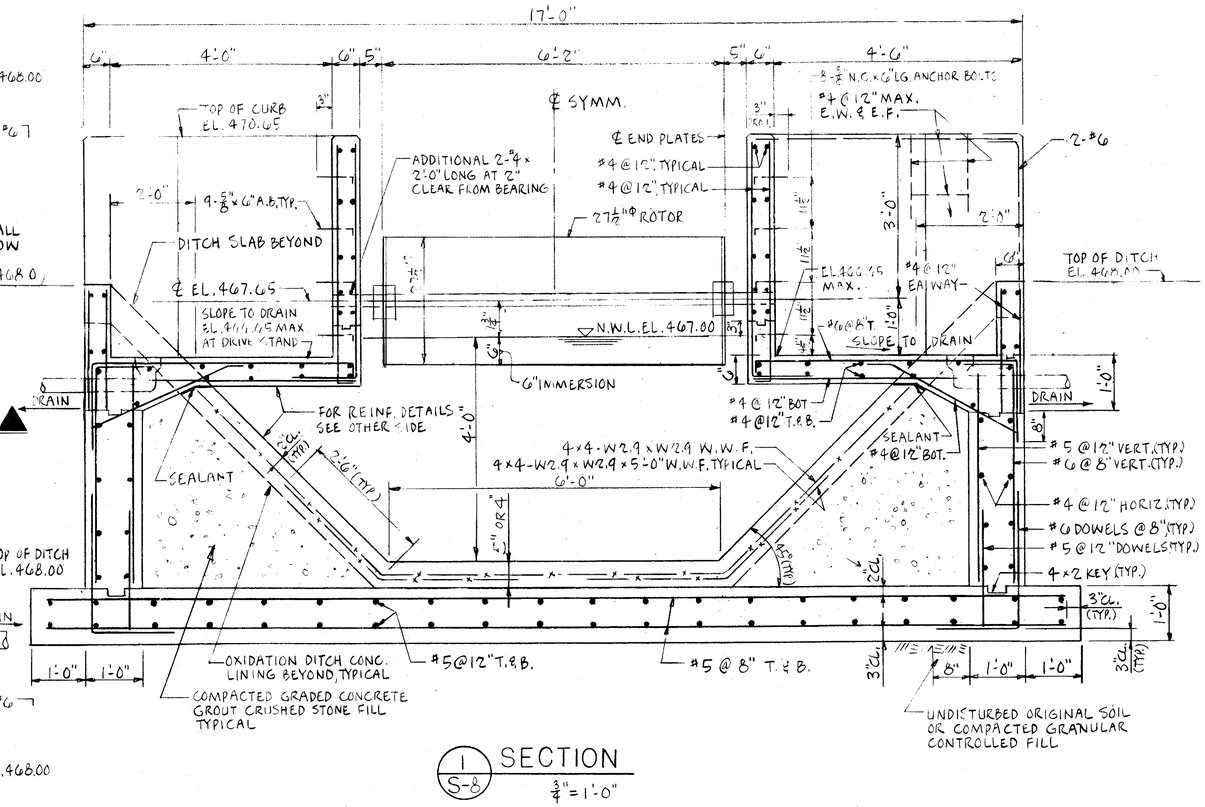
FREDERICKSBURG
SEWER AND WATER AUTHORITY
OXIDATION DITCH - STRUCTURAL
BRIDGE AND EFFLUENT WEIR BOX

GROUP NUMBER					JOB NO.
A	E	LA	PM	S	60785
					SHT. NO.
					33



ROTOR PIT - PLAN

¾" = 1'-0"



1/S-8 SECTION

¾" = 1'-0"

NOTES:

1. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER OF ROTOR AERATORS FOR DETAILS AND LOCATION OF ALL ANCHOR BOLTS SLEEVES AND OTHER CAST-IN-PLACE ITEMS PRIOR TO CONCRETE IS PLACE.
2. DRIVE STAND AND OUTBOARD BEARING MOUNTING PLATES MUST BE SQUARE WITH ℄ OF ROTOR IN HORIZONTAL AND VERTICAL PLANES TO MAINTAIN GOOD BEARING ALIGMENT.
3. PROVIDE ⅜"x⅜" CHAMFER AT ALL EXPOSED 90° CORNERS.

S-8

CARSON K. C. MOK
CONSULTING ENGINEER
817 SILVER SPRING AVENUE SILVER SPRING, MD. 20910

REVISIONS

DESCRIPTION

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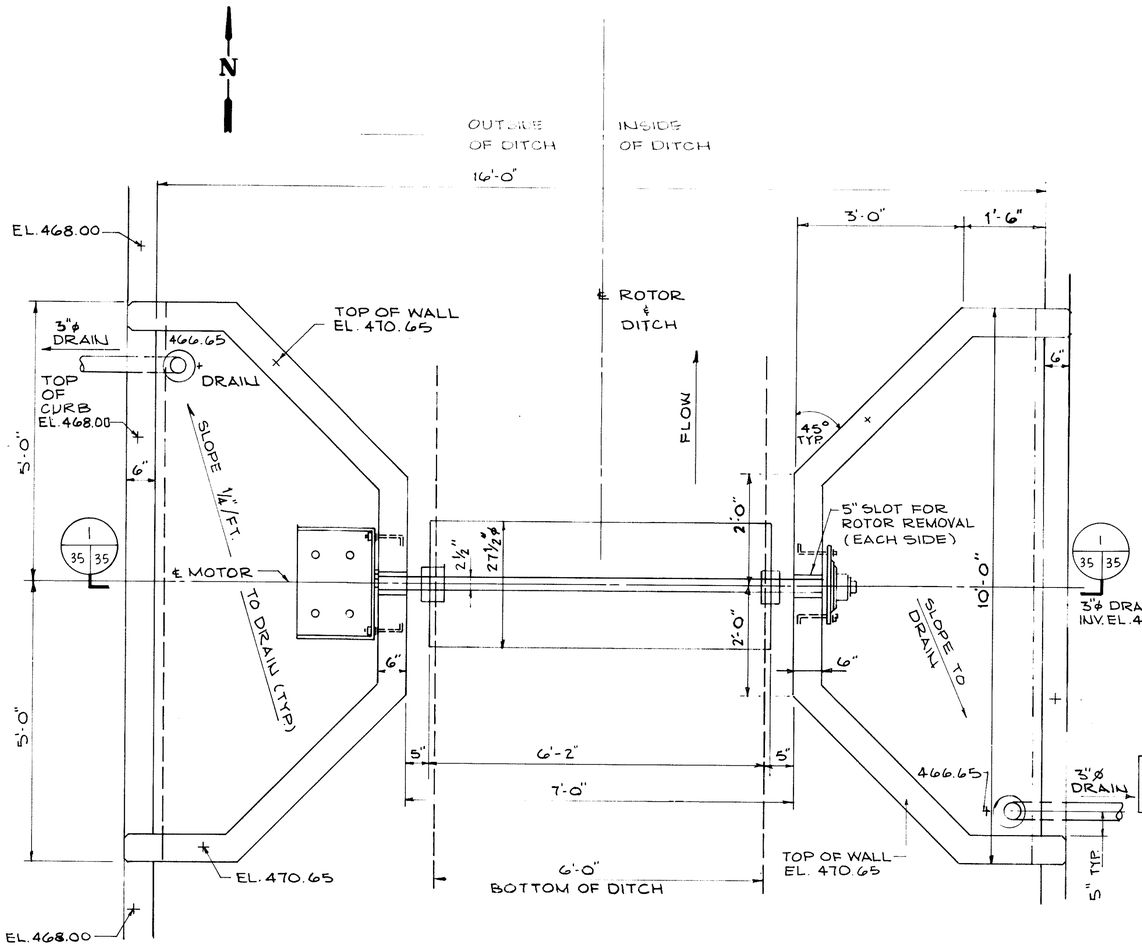
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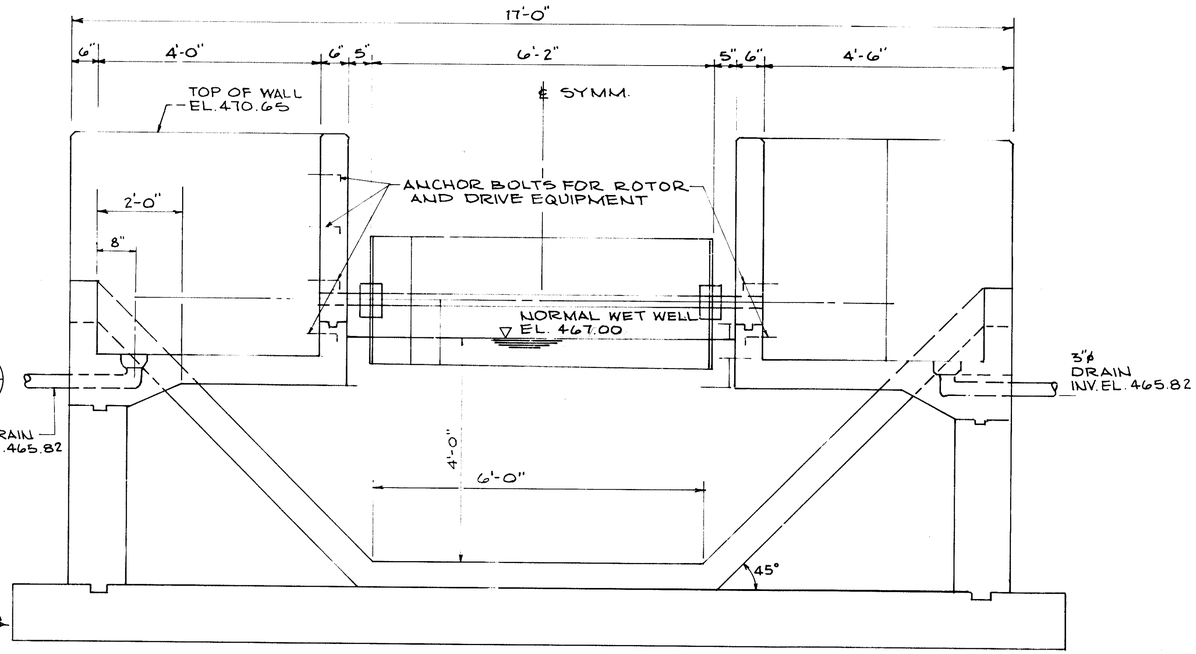
OXIDATION DITCH - STRUCTURAL

PLAN & SECTION -ROTOR

GROUP NUMBER					JOB NO.
A	E	LA	PM	S	60785
					SHT. NO.
					34



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



SECTION 1-1
SCALE: 3/4"=1'-0" 35 | 35

NOTES:
1. FOR STRUCTURAL DETAILS REFER TO SHT NO. 34.
2. 3"ø DRAINS
   (a) DRAINS TOWARD THE INTERIOR OF THE DITCH, SHALL BE CONNECTED TO THE INLET.
   (b) DRAINS TO THE OUTSIDE OF THE DITCH SHALL CROSS BENEATH THE ROADWAY AND OUTLET IN A DITCH.
3. THE DESIGN SHOWN IS BASE ON ONE MANUFACTURERS EQUIPMENT. IF THE CONTRACTOR PROPOSES TO SUPPLY EQUIPMENT THAT IS NOT COMPATABLE WITH THIS ARRANGEMENT HE SHALL SUPPLY THE NECESSARY COMPLETE STRUCTUREAL DESIGN ALONG WITH HIS SHOP DWGS
4. THE MOTOR AND DRIVE MECHANISM SHALL BE ORIENTED TO THE OUTSIDE OF THE OXIDATION DITCH.

REVISIONS

NO	SYM	BY	DATE	DESCRIPTION

REVISIONS

NO	SYM	BY	DATE	DESCRIPTION

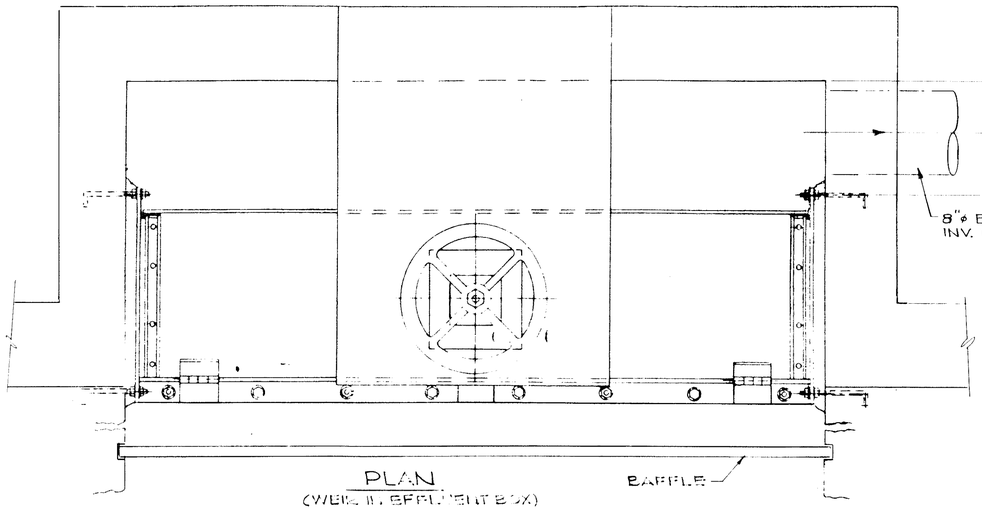
BUCHART-HORN, INC.
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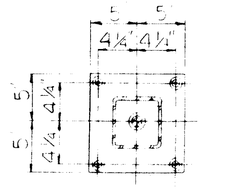
SCALE	AS SHOWN
DATE	7/81
ENG.	J.W.S.
DES.	D.D.Q.
CHK BY	D.D.Q.
DWN BY	W.S.R.

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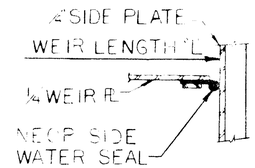
OXIDATION DITCH -PROCESS
PLAN AND SECTION -ROTOR

JOB NO	60785
SHT NO	35





2-2 / 36|36 SECTION N.T.S.

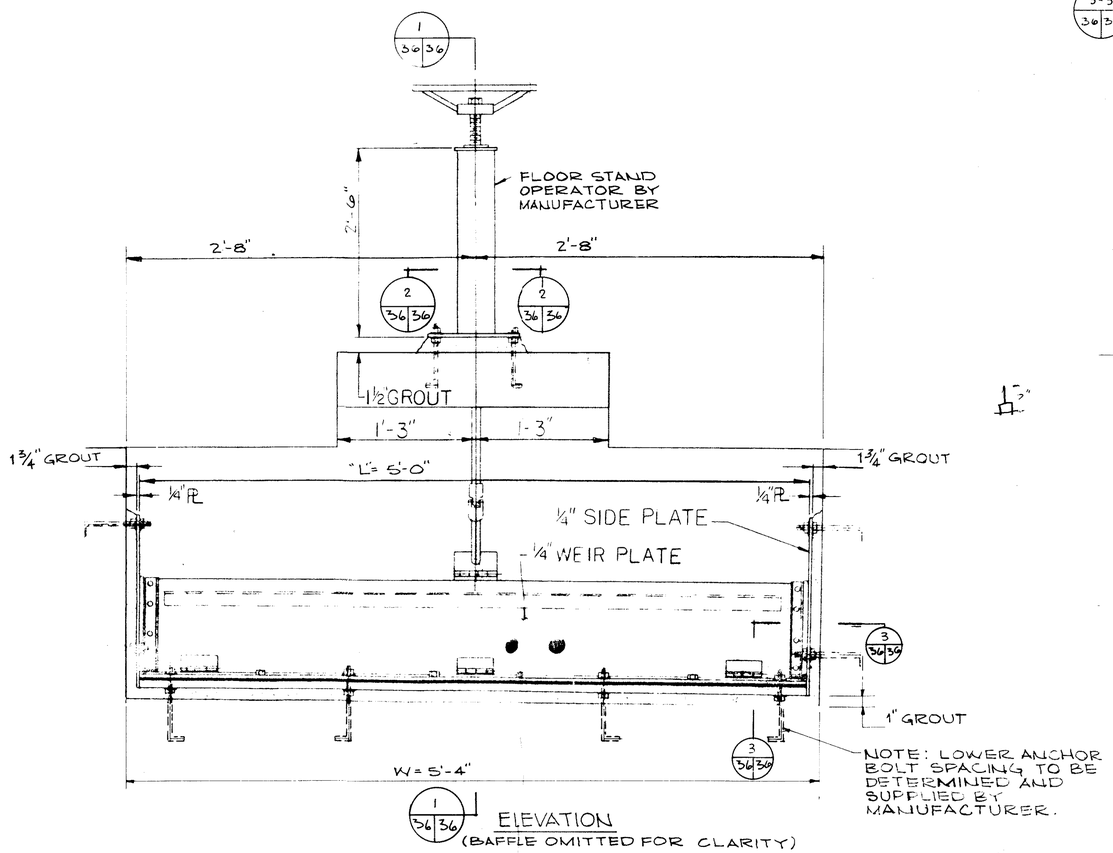


3-3 / 36|36 SECTION N.T.S.

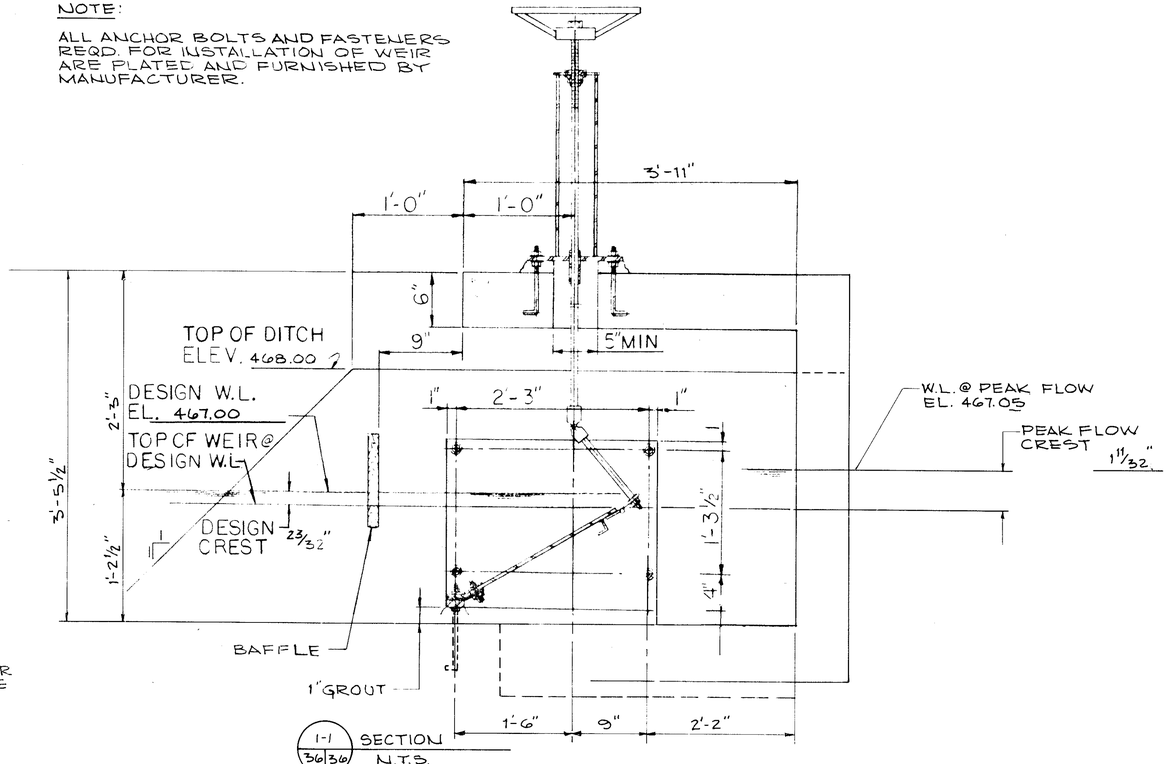
NOTE:
1. ① PIPE IDENTIFICATION NUMBER, REFER TO SHEET NO. 7 FOR PIPE IDENTIFICATION LIST.

NOTE:

ALL ANCHOR BOLTS AND FASTENERS REQD. FOR INSTALLATION OF WEIR ARE PLATED AND FURNISHED BY MANUFACTURER.



1 / 36|36 ELEVATION
(BAFFLE OMITTED FOR CLARITY)



1-1 / 36|36 SECTION N.T.S.

REVISIONS	NO.	SYM.	BY	DATE	DESCRIPTION
REVISIONS	NO.	SYM.	BY	DATE	DESCRIPTION

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DES.	D.D.Q.
CHK BY	D.D.Q.
DWN BY	W.S.R.

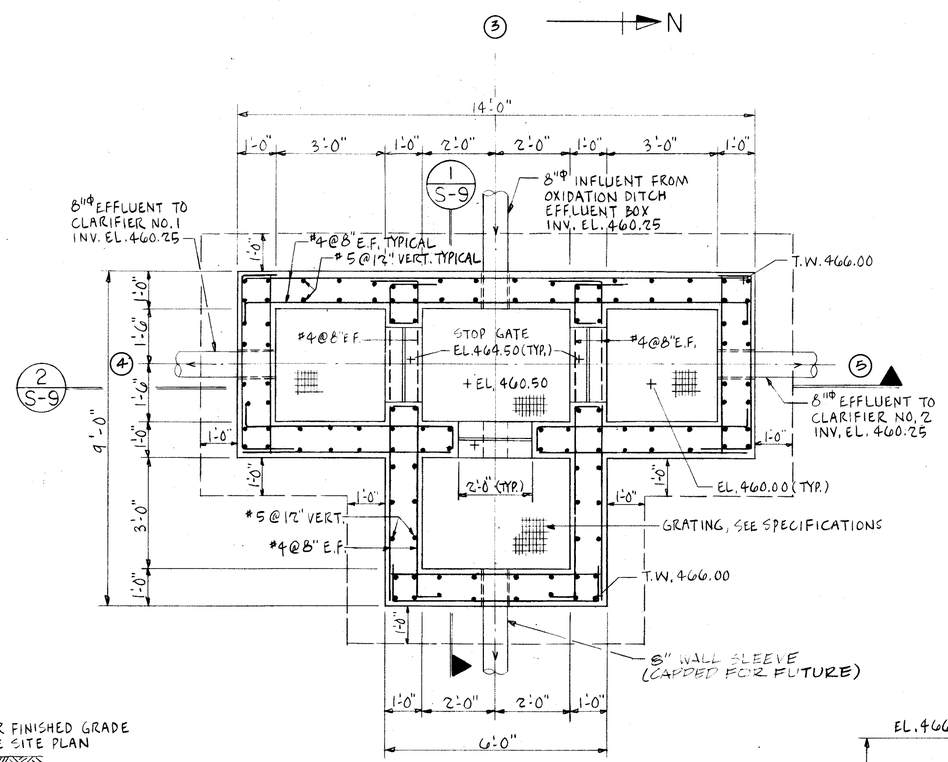
FREDERICKSBURG
SEWER AND WATER AUTHORITY

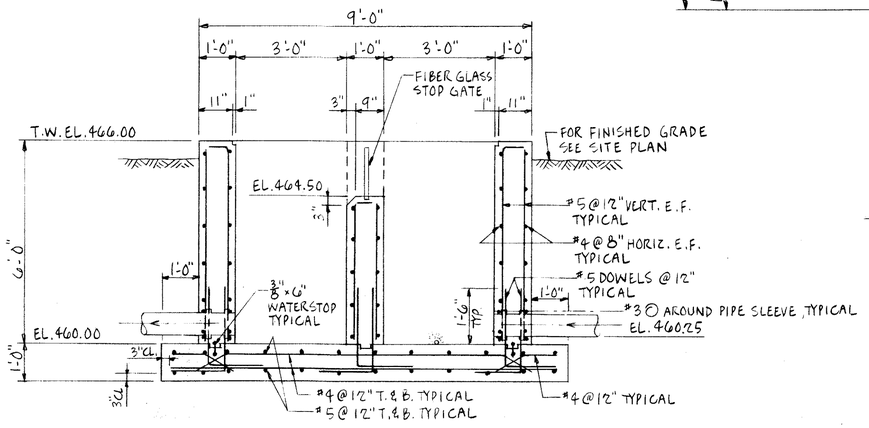
OXIDATION DITCH PROCESS EFFLUENT
WEIR PLAN & SECTIONS

GROUP NUMBER: A | A | PM | 5

JOB NO 60785

SHT NO 36



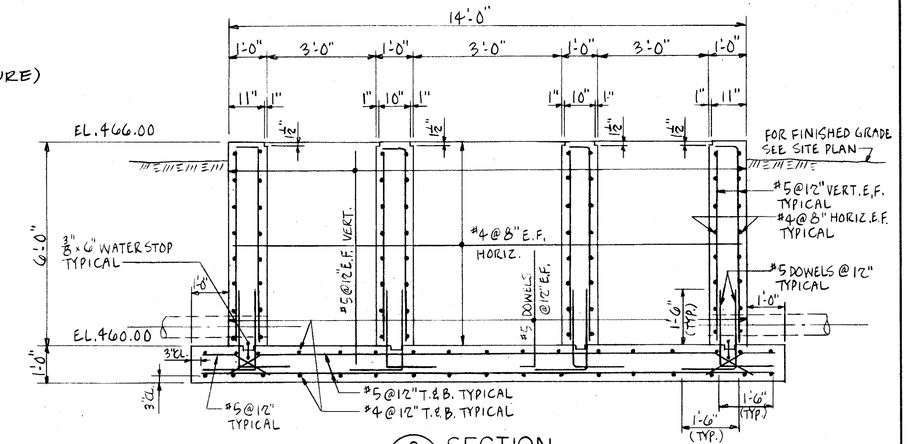


1 S-9 SECTION
1/2" = 1'-0"

DISTRIBUTION BOX - PLAN

1/2" = 1'-0"

NOTES:
1. FOR WALL CORNER DETAIL SEE 5/S-13 & 6/S-13.
2. FOR REINF. FOR OPENING IN CONC. WALLS SEE DET. 1/S-13.
3. Φ PIPE IDENTIFICATION NUMBER, REFER TO SHEET NO. 7 FOR PIPE IDENTIFICATION LIST.



2 S-9 SECTION
1/2" = 1'-0"

CARSON K. C. MOK
CONSULTING ENGINEER
S-9 8317 SILVER SPRING AVENUE SILVER SPRING, MD. 20910

2 1 0 1 2
FEET

REVISIONS

NO	SYM	BY	DATE	DESCRIPTION

REVISIONS

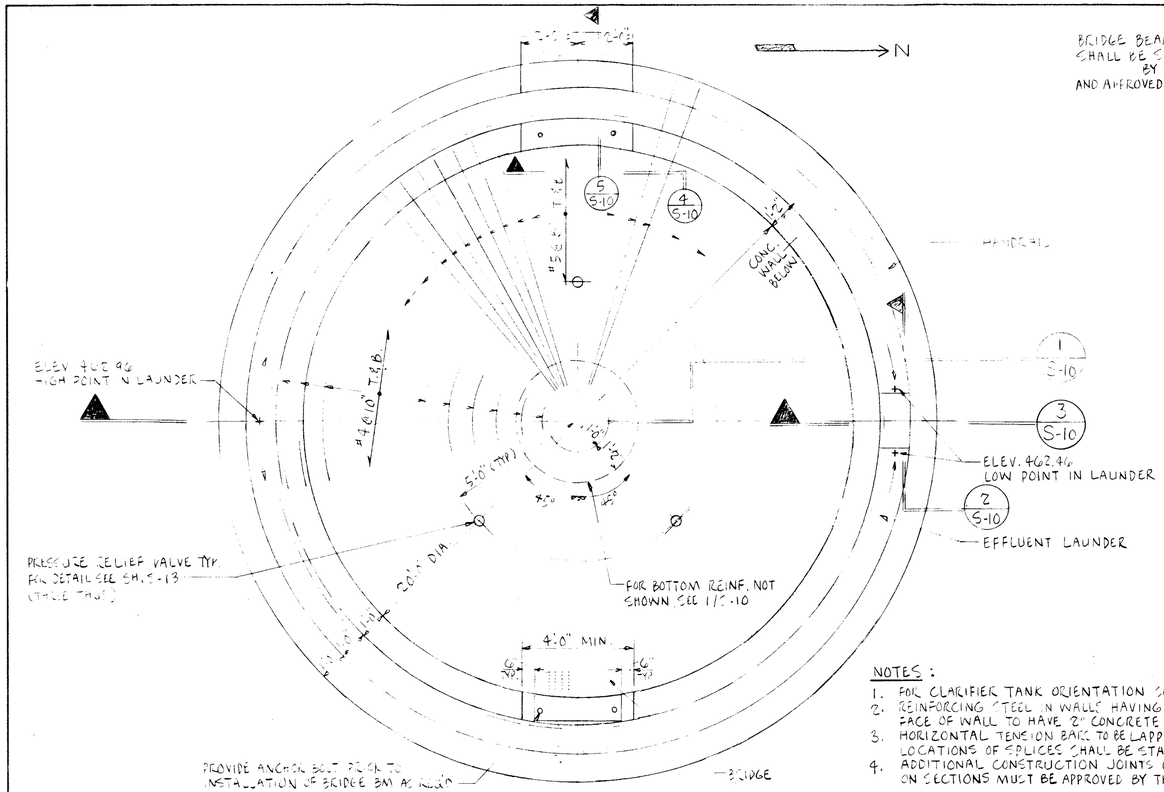
NO	SYM	BY	DATE	DESCRIPTION

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DWN BY	C.M.

FREDERICKSBURG
SEWER AND WATER AUTHORITY
CLARIFIER DISTRIBUTION BOX - STRUCTURAL & PROCESS
PLAN & SECTIONS

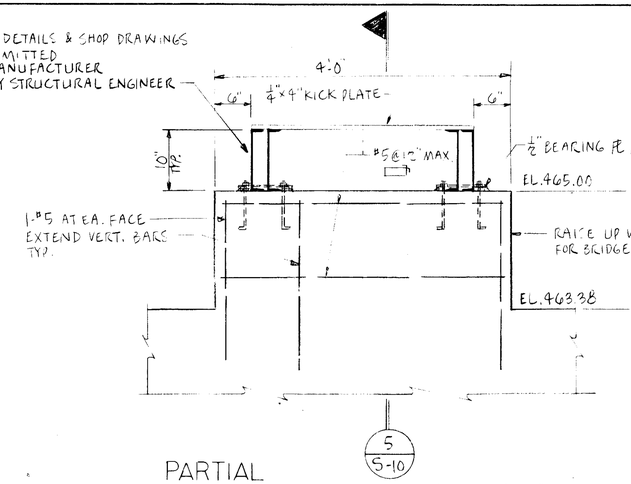
GROUP NUMBER					JOB NO.
A	E	LA	PM	S	60785
					SHT. NO.
					37



PLAN - CLARIFIER TANK NO. 1 & 2

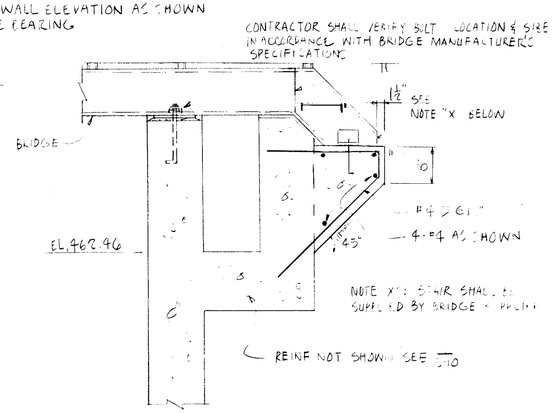
1/8" = 1'-0"

BRIDGE BEAM DETAILS & SHOP DRAWINGS SHALL BE SUBMITTED BY MANUFACTURER AND APPROVED BY STRUCTURAL ENGINEER



4 S-10 PARTIAL ELEVATION AT BRIDGE SUPPORT

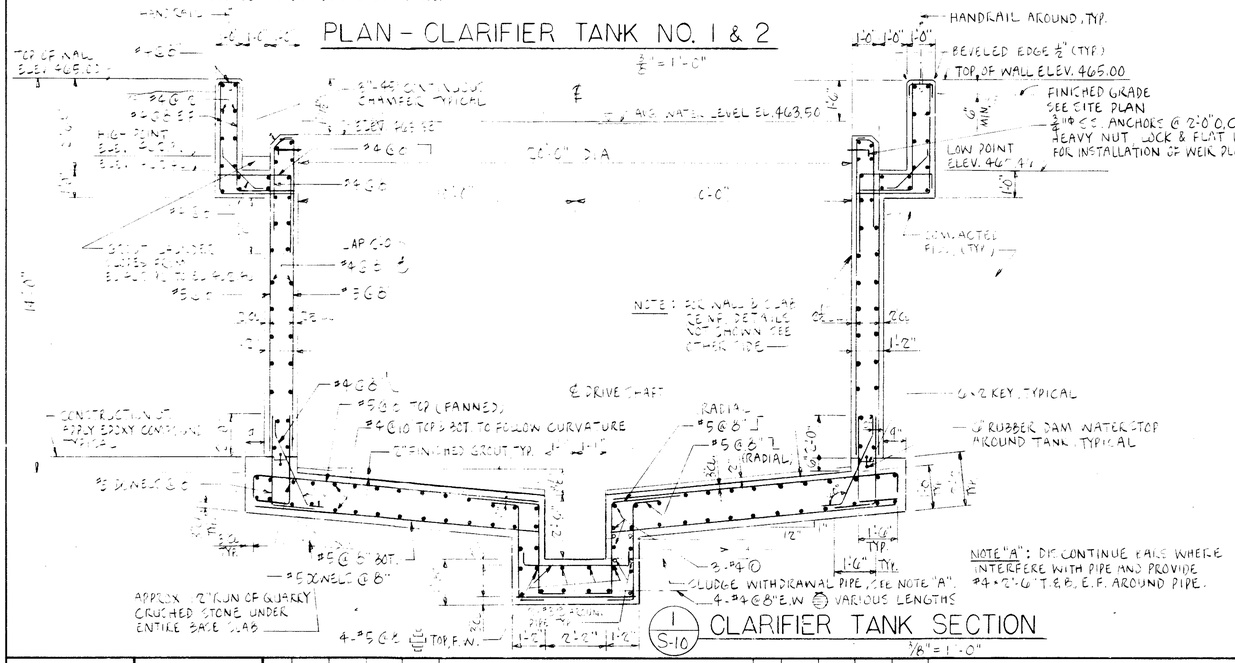
1" = 1'-0"



5 S-10 ¼" = 1'-0"

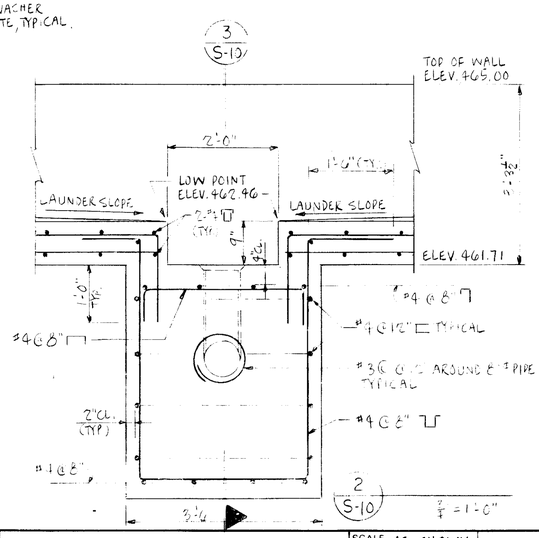
NOTES:

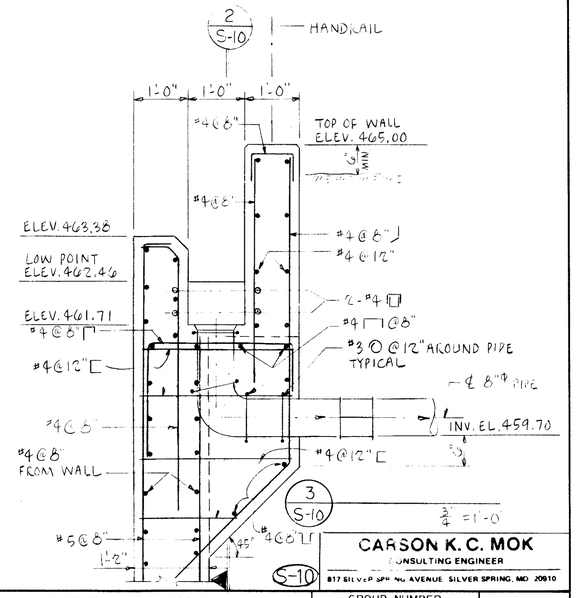
1. FOR CLARIFIER TANK ORIENTATION SEE SHEET NO. 3.
2. REINFORCING STEEL IN WALLS HAVING REINFORCING IN EACH FACE OF WALL TO HAVE 2" CONCRETE PROTECTION.
3. HORIZONTAL TENSION BARS TO BE LAPPED 23" AT SPLICES. LOCATIONS OF SPLICES SHALL BE STAGGERED.
4. ADDITIONAL CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON SECTIONS MUST BE APPROVED BY THE ENGINEER.



1 S-10 CLARIFIER TANK SECTION

3/8" = 1'-0"





CARSON K. C. MOK
CONSULTING ENGINEER
817 SILVER SPRING AVENUE SILVER SPRING, MD 20910

REVISIONS						REVISIONS					
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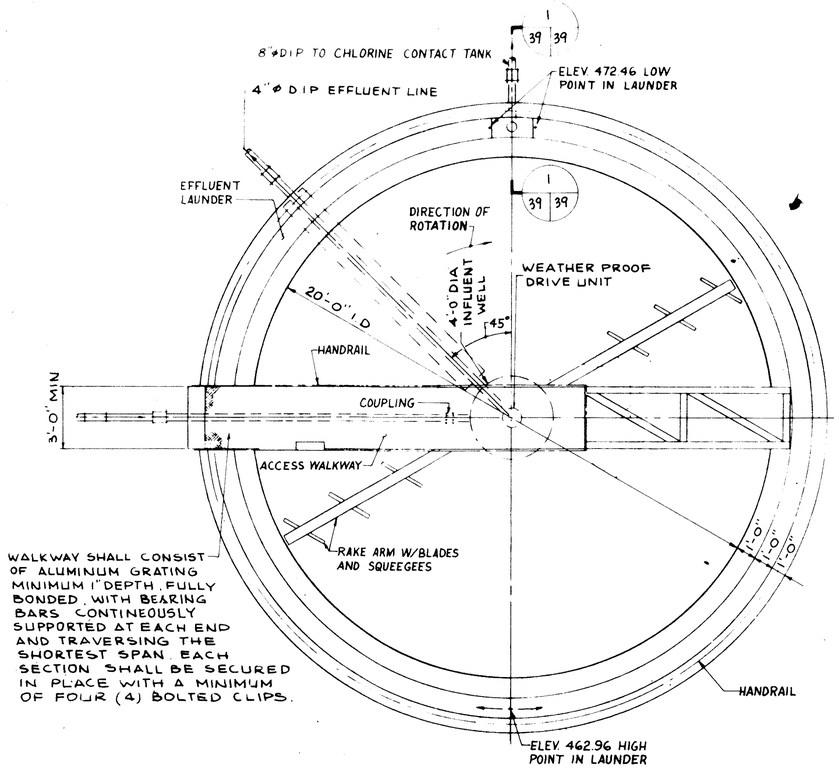
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DATE	7/81
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DES.	C.M.
CHK BY	J.W.S.
DWN BY	C.M.

FREDERICKSBURG SEWER AND WATER AUTHORITY

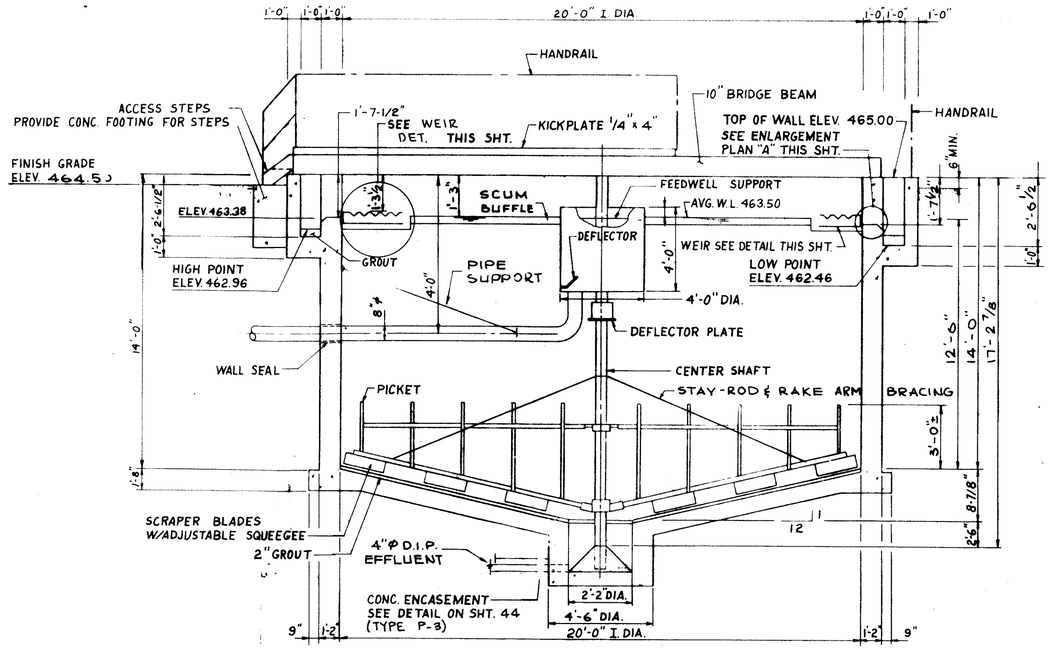
CLARIFIERS - STRUCTURAL

PLAN, SECTIONS & DETAILS

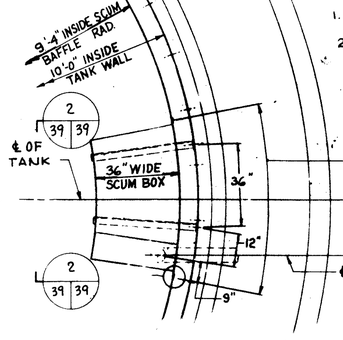
GROUP NUMBER					JOB NO.
A	E	LA	PM	S	60785
					SHT. NO.
					38



PLAN
N.T.S.

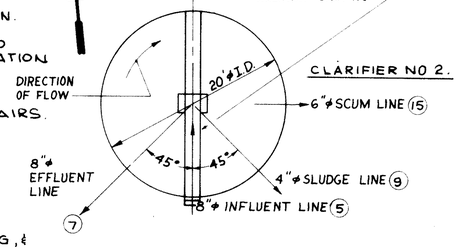


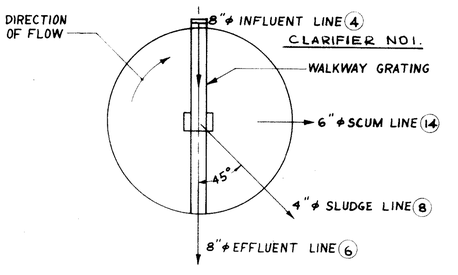
TYPICAL DETAIL
N.T.S.



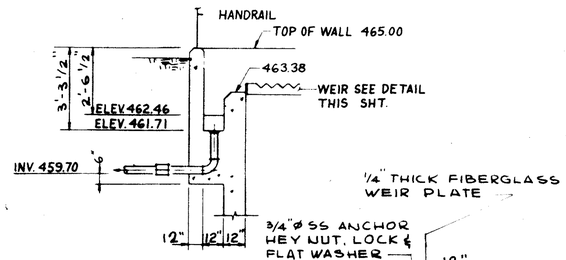
SCUM TROUGH ENLARGEMENT PLAN
N.T.S.

1. REFER TO SHEET NO. 38 FOR STRUCTURAL DESIGN.
2. (1) YARD PIPING IDENTIFICATION NUMBER REFER TO SHEET NO. 7 FOR YARD PIPING IDENTIFICATION LIST.
3. REFER TO SHEET NO. 6 FOR DETAIL CONCRETE FOOTING FOR ACCESS STAIRS.
4. REFER TO SHEET NO. 6 FOR DETAILS OF HANDRAILS.
5. MANUFACTURER SHALL PROVIDE SUPPORT BRIDGE AND ANCHORAGE., ACCESS STEPS AND ANCHORAGE TO CONCRETE FOOTING, & TANK PERIMETER RAILING SHALL BE SUPPLIED BY GENERAL CONTRACTOR.



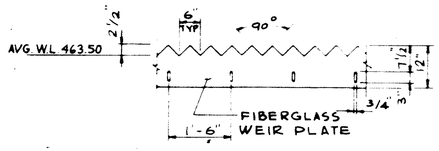


ORIENTATION PLAN
N.T.S.

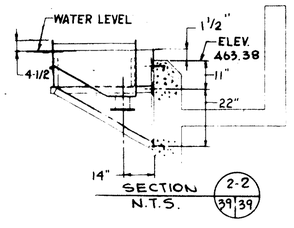


SECTION 1-1
N.T.S.

ENLARGEMENT PLAN "A"
N.T.S.



WEIR DETAIL
N.T.S.



SECTION 2-2
N.T.S.

REVISIONS

NO.	SYM	BY	DATE	DESCRIPTION

REVISIONS

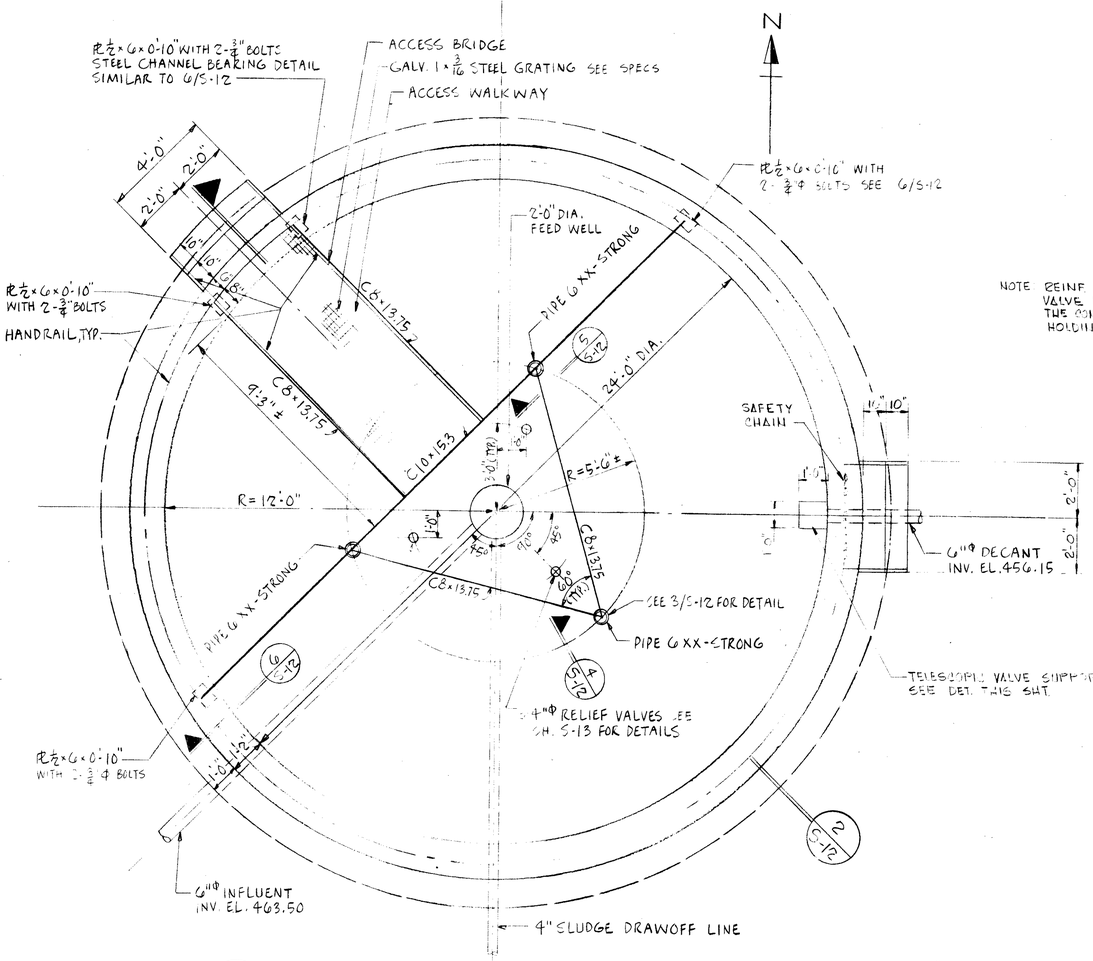
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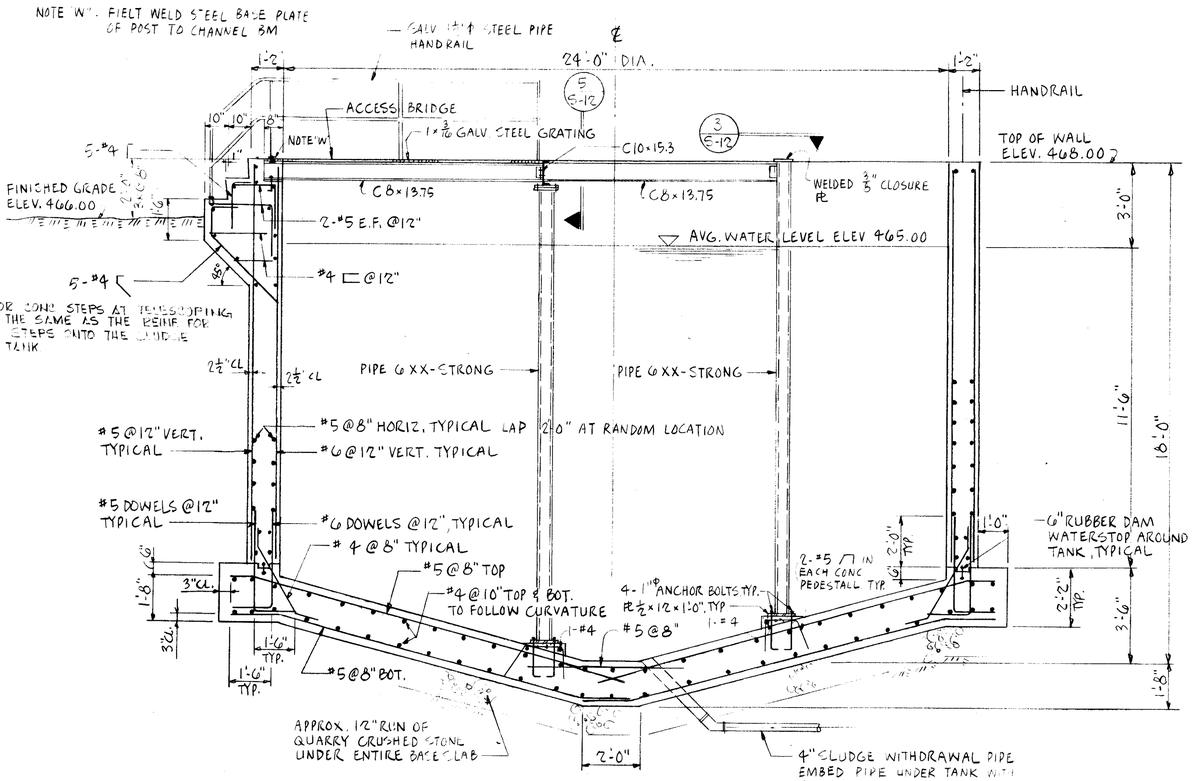
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ENG.	J.W.S.
DES	D.D.Q.
CHK BY	D.D.Q.
DWN BY	W.S.R.

FREDERICKSBURG
SEWER AND WATER AUTHORITY
CLARIFIERS -PROCESS
PLAN, SECTIONS & DETAILS

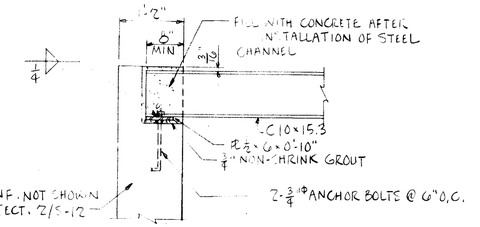
GROUP NUMBER					JOB NO.
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					SHT. NO.
					39



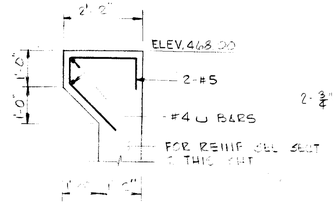
1/S-12 SLUDGE HOLDING TANK - PLAN
3/8" = 1'-0"



2/S-12 CROSS SECTION
3/8" = 1'-0"

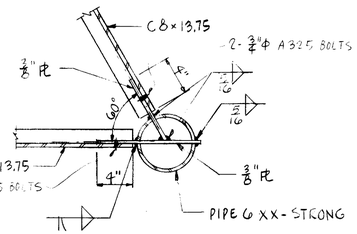


6/S-12 SECTION
3/4" = 1'-0"

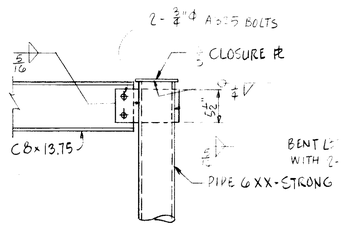


TELESCOPIC VALVE SUPPORT DETAIL
1½" = 1'-0"

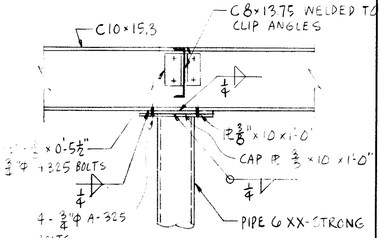
NOTE: FASTEN FLOOR STAND TO TELESCOPIC VALVE SUPPORT WITH 5/8"Φ x 12" HOOKED ANCHOR BOLT. (NUMBER AS REQUIRED BY MANUFACTURER)



3/S-12 DETAIL
1½" = 1'-0"



4/S-12 DETAIL
1" = 1'-0"



5/S-12 DETAIL
1" = 1'-0"

(S-12)

REVISIONS

NO	SYM	BY	DATE	DESCRIPTION

REVISIONS

NO	SYM	BY	DATE	DESCRIPTION

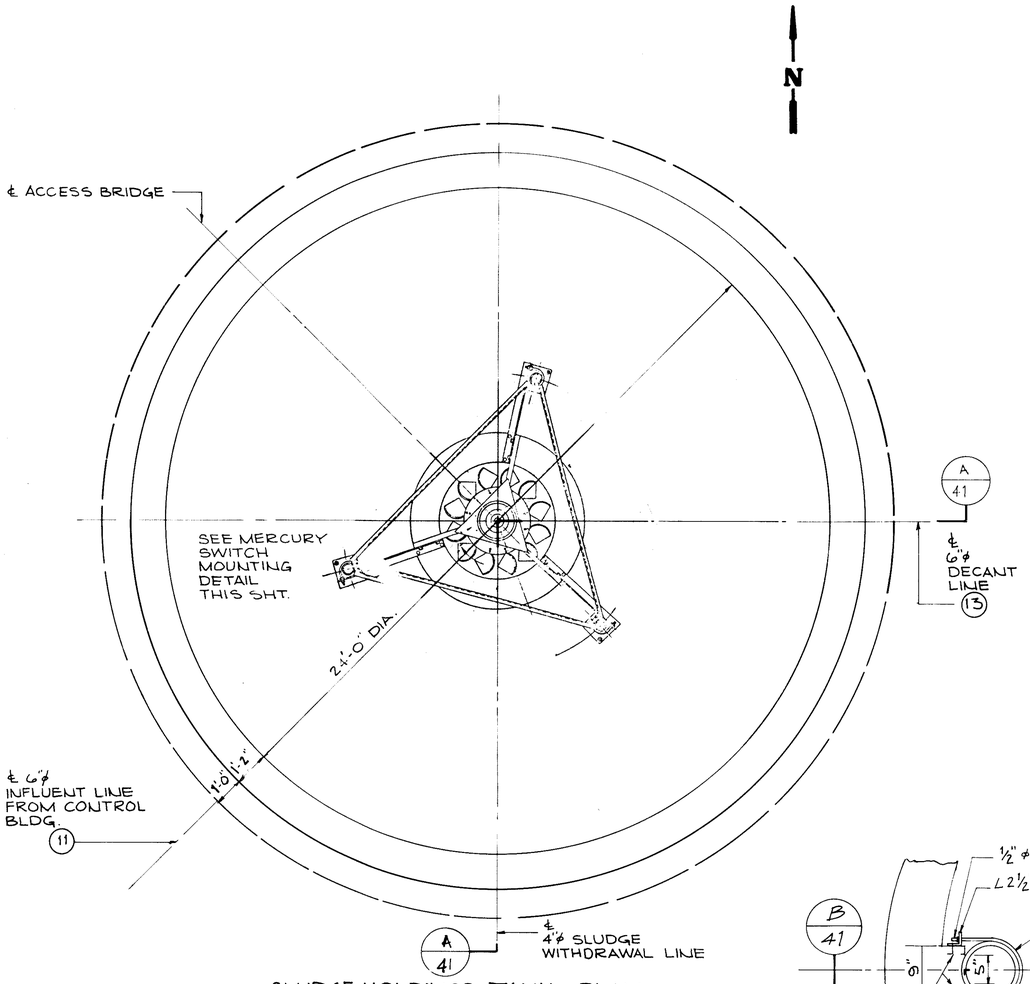
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Consulting Engineers & Planners
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SCALE	AS SHOWN
DATE	7/81
ENG	
DES.	
CHK BY	
DWN BY	

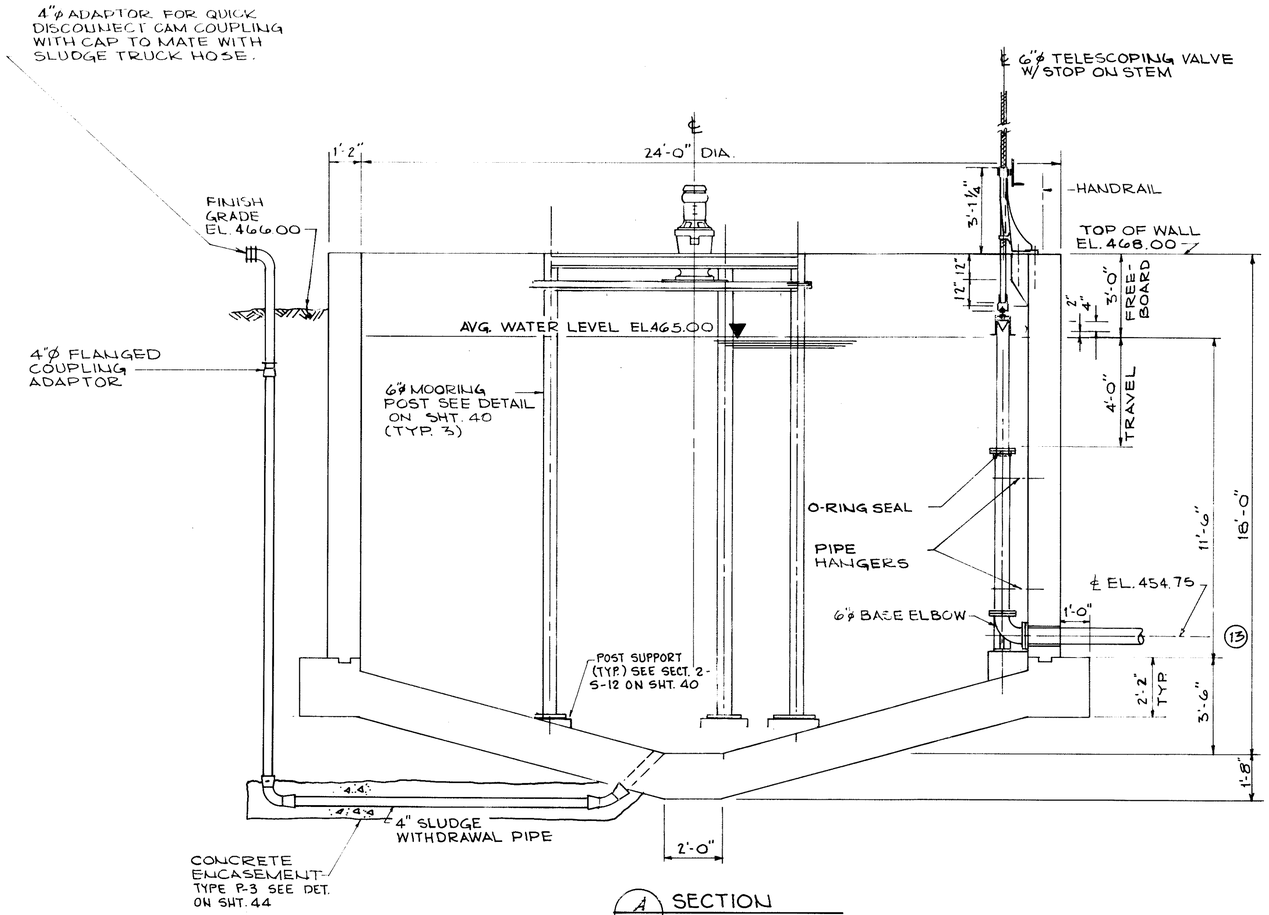
FREDERICKSBURG
SEWER AND WATER AUTHORITY
SLUDGE HOLDING TANK -STRUCTURAL

PLAN, SECTIONS & DETAILS

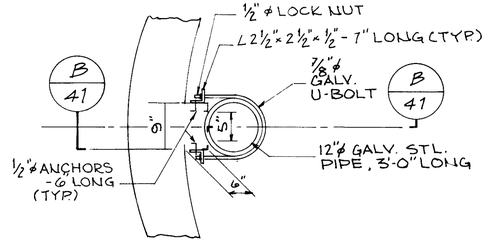
GROUP NUMBER					JOB NO.
A	E	LA	PM	S	60785
					SHT. NO.
					40



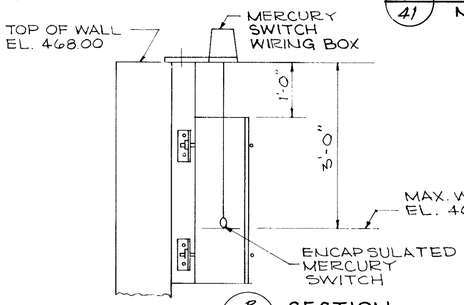
SLUDGE HOLDINGS TANK - PLAN
N.T.S.



A 41 SECTION
N.T.S.



PLAN
N.T.S.



B 41 SECTION
N.T.S.

MERCURY SWITCH MOUNTING DETAIL
N.T.S.

NOTE:
1-ID PIPE IDENTIFICATION NUMBER, REFER TO SHEET NO. 7 FOR PIPE IDENTIFICATION LIST.

REVISIONS					REVISIONS				
NO.	SYM.	BY	DATE	DESCRIPTION	NO.	SYM.	BY	DATE	DESCRIPTION

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WILLIAMSBURG, VA. CHARLESTON, W.VA.

SCALE	N.T.S.
DATE	7/81
ENG.	J.W.S.
DES.	D.D.Q.
CHK BY	D.D.Q.
DWN BY	W.S.R. JR.

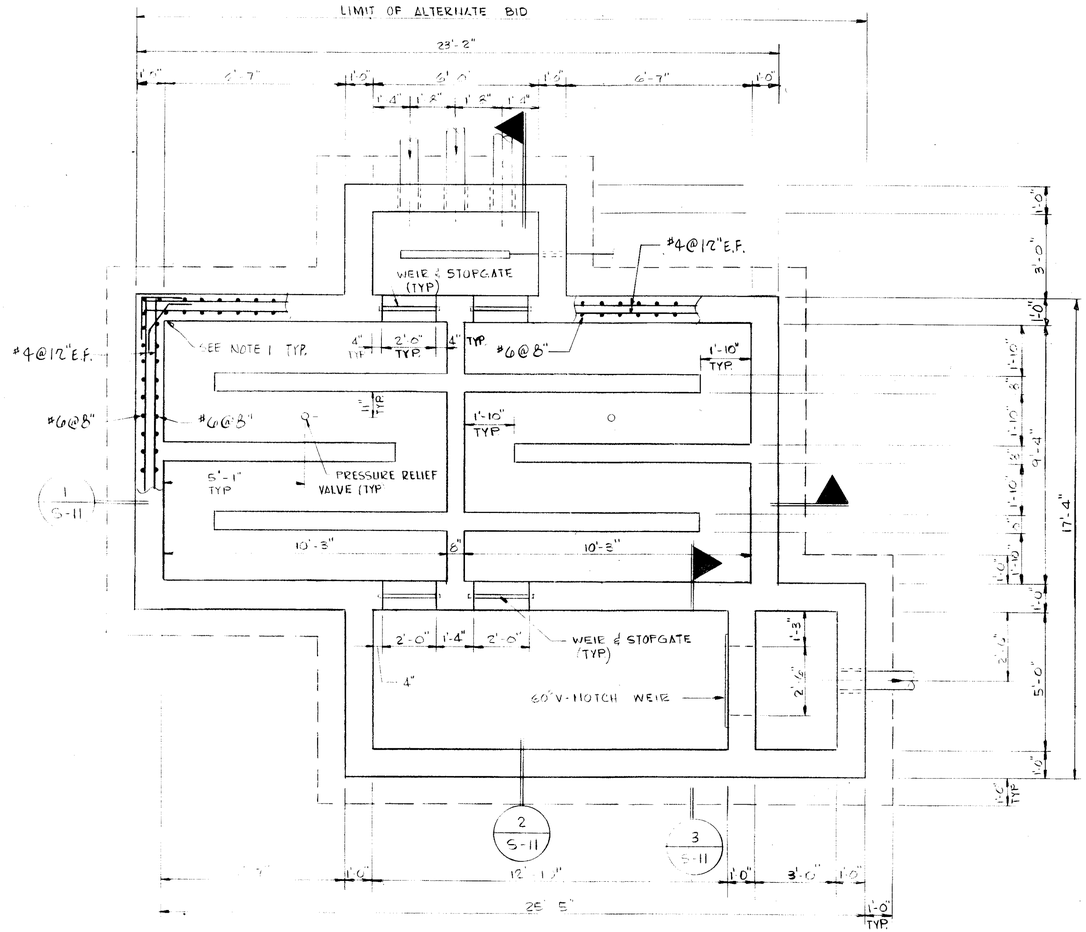
FREDERICKSBURG
SEWER AND WATER AUTHORITY

SLUDGE HOLDING TANK - PROCESS PLAN, SECTIONS & DETAILS

JOB NUMBER: A F A PM

JOB NO 60785

SHT NO 41

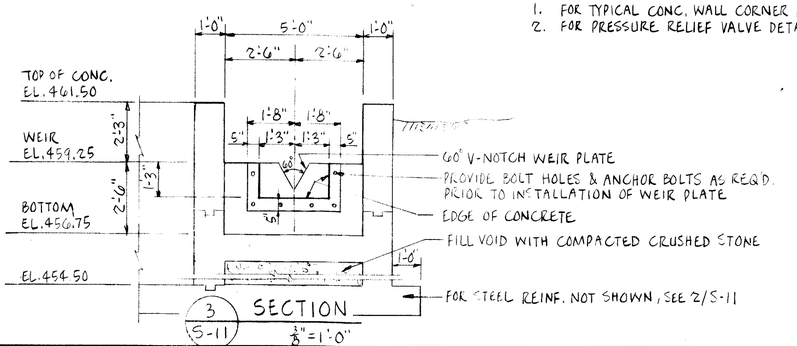


CHLORINE CONTACT TANK - PLAN

3/8" = 1'-0"

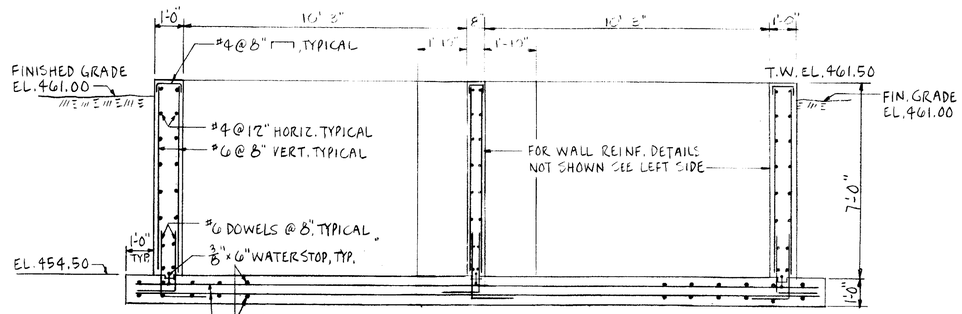
NOTES:

1. FOR TYPICAL CONC. WALL CORNER DETAILS SEE 5/S-13 & 6/S-13.
2. FOR PRESSURE RELIEF VALVE DETAIL SEE S-13 SHT NO. 25



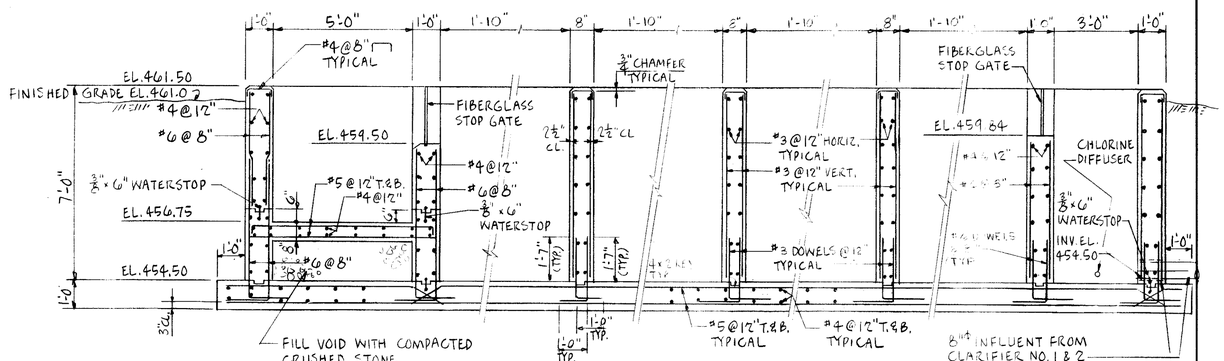
3/S-11 SECTION

3/8" = 1'-0"



1/S-11 CROSS SECTION

3/8" = 1'-0"



2/S-11 CROSS SECTION

NTS

CARSON K. C. MOK
CONSULTING ENGINEER
817 SILVER SPRING AVENUE SILVER SPRING, MD. 20910

3 2 1 0 1 2 3
FEET

S-11

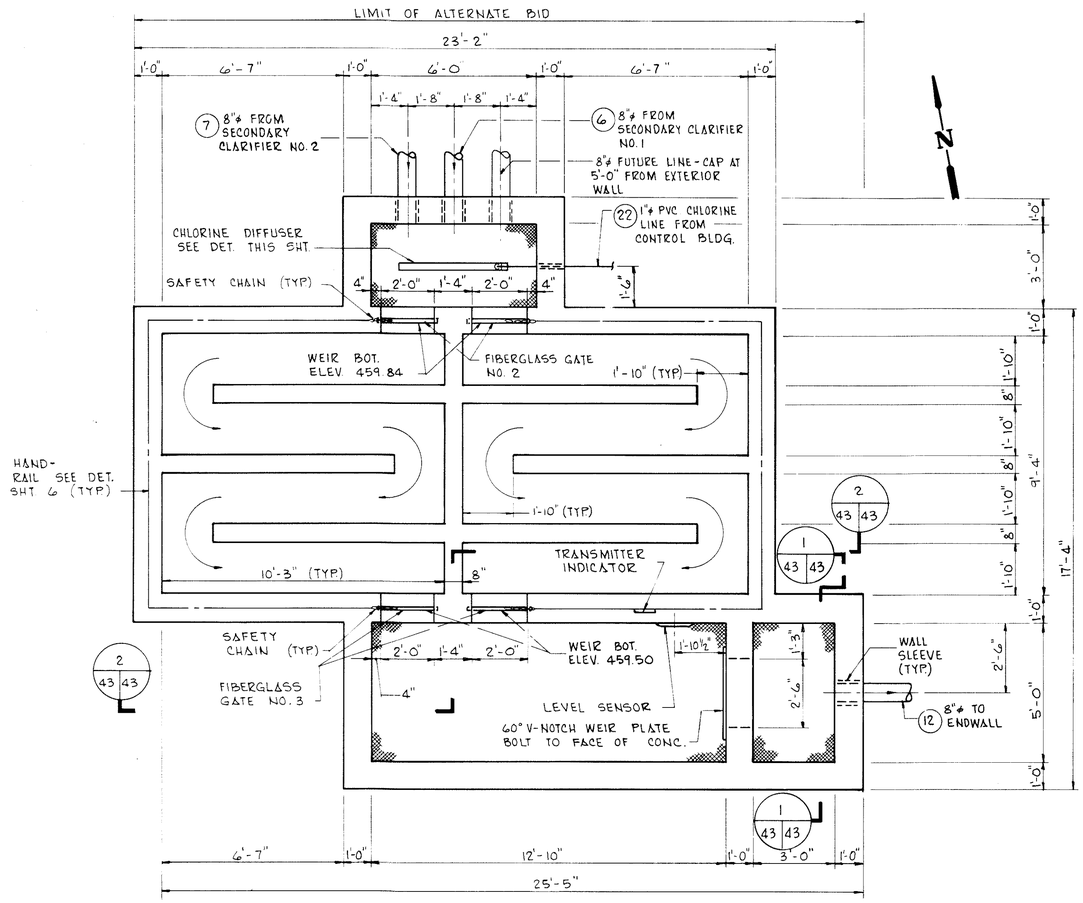
REVISIONS					REVISIONS				
NO	SYM	BY	DATE	DESCRIPTION	NO	SYM	BY	DATE	DESCRIPTION

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WILLIAMSBURG, VA. CHARLESTON, W.VA.

SCALE	AS SHOWN
DATE	7/81
ENG.	
DES.	
CHK BY	
DWN BY	

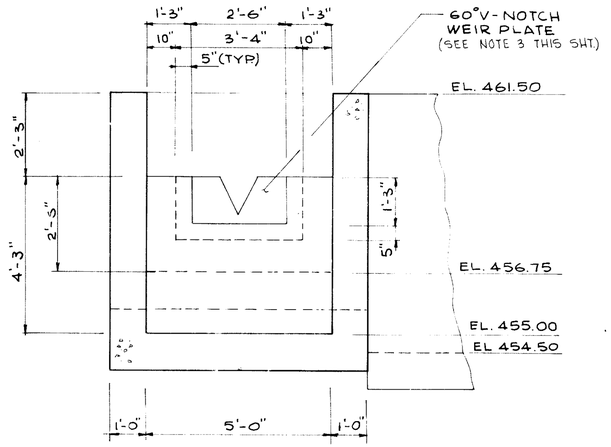
FREDERICKSBURG
SEWER AND WATER AUTHORITY
CHLORINE CONTACT TANK - STRUCTURAL
PLAN, & SECTIONS

GROUP NUMBER					JOB NO.
A	E	LA	PM	S	60785
					SHT. NO.
					42



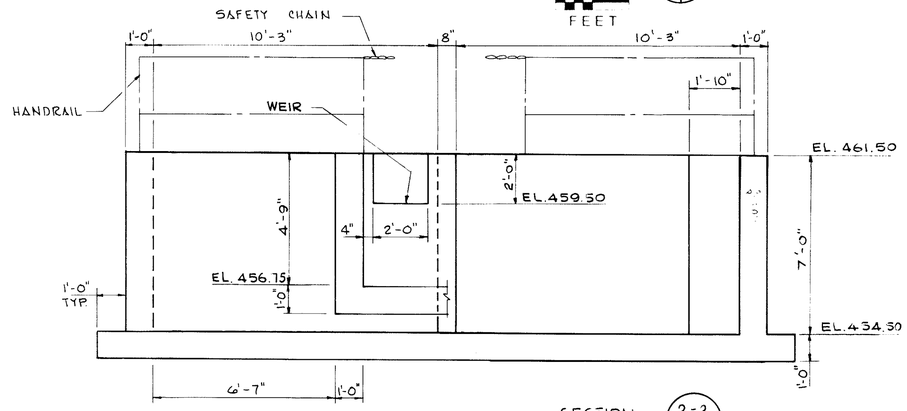
PLAN

1 0 1
FEET



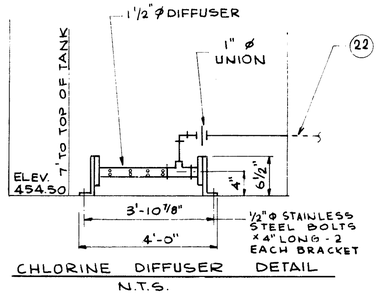
SECTION 1-1 (43 43)

1 0 1
FEET



SECTION 2-2 (43 43)

1 0 1
FEET



CHLORINE DIFFUSER DETAIL

N.T.S.

NOTES:

1. ① PIPE IDENTIFICATION NUMBER, REFER TO SHEET NO. 7 FOR PIPE IDENTIFICATION LIST.
2. FOR DETAILS FIBERGLASS GATES, REFER TO SHEET NO. 44
3. FOR DETAILS 60° V-NOTCH WEIR PLATE REFER TO SHEET NO. 44
4. FOR STRUCTURAL DESIGN REFER TO SHEET NO. 42.

REVISIONS						REVISIONS					
NO.	SYM	BY	DATE	DESCRIPTION		NO	SYM	BY	DATE	DESCRIPTION	

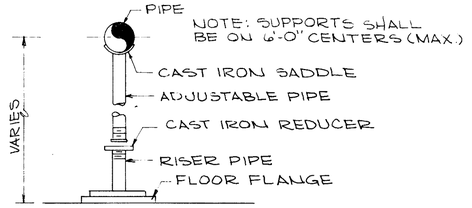
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SCALE	AS SHOWN
DATE	7/81
ENG.	J.W.S.
DES.	D.D.Q.
CHK BY	D.D.Q.
DWN BY	N.K.

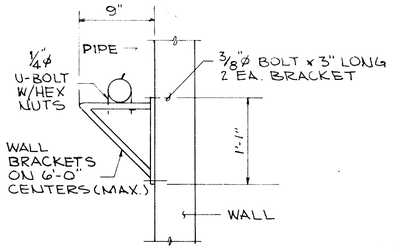
FREDERICK-SEUBO
SEWER AND WATER AUTHORITY

CHLORINE CONTACT TANK - PROCESS
PLAN, SECTIONS & DETAILS

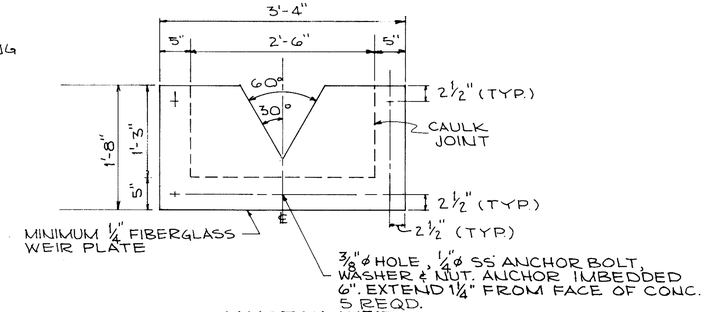
JOB NO. 80785
SHT. NO. 43



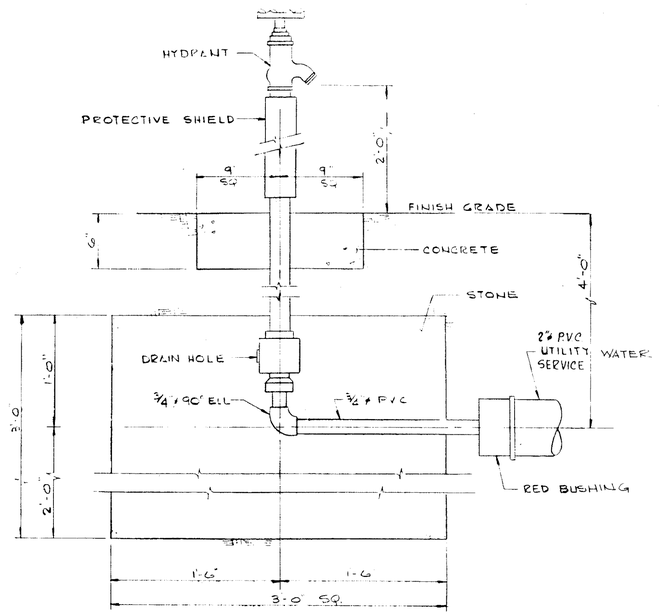
PIPE SUPPORT DETAIL
TYPE P-1
N.T.S.



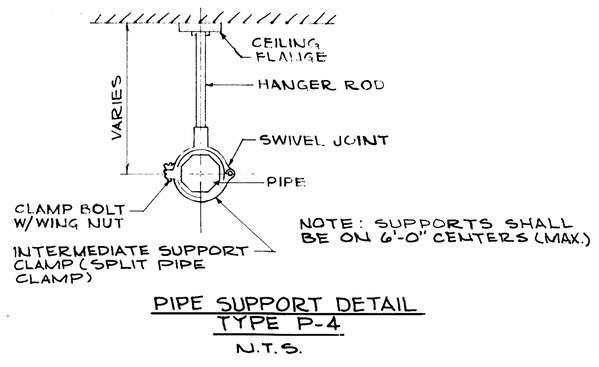
PIPE SUPPORT DETAIL
TYPE P-2
N.T.S.



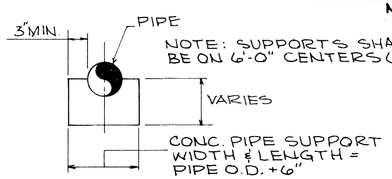
60° V-NOTCH WEIR
N.T.S.



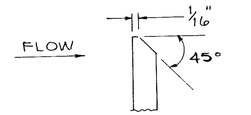
YARD HYDRANT DETAIL
N.T.S.



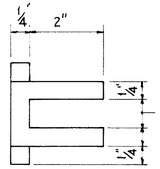
PIPE SUPPORT DETAIL
TYPE P-4
N.T.S.

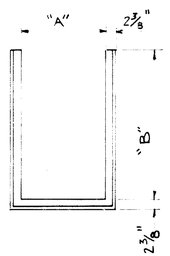


PIPE SUPPORT DETAIL
TYPE P-3
N.T.S.

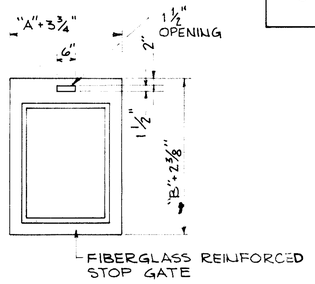


DETAIL EDGE WEIR
N.T.S.





GUIDE FRAME
N.T.S.

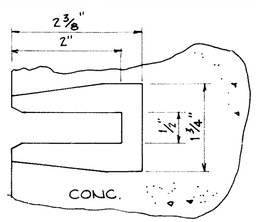


STOP GATE
N.T.S.

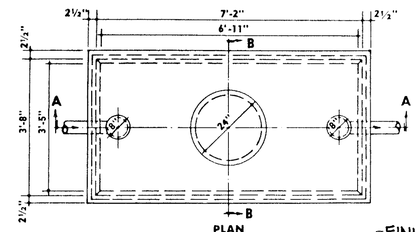
STOP GATE DETAILS
N.T.S.

STOP GATE SCHEDULE

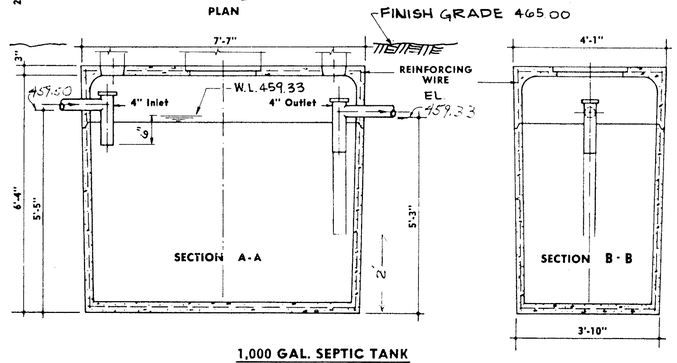
GATE	NUMBER OF GATES	OPENING W	OPENING H	GATE W	GATE H	TYPE FRAME	LOCATION
1	3	2'-0"	1'-6"	2'-3 1/2"	1'-7 3/4"	FRAME EMBEDDED	CLARIFIER DIST. BOX
2	2	2'-0"	1'-8"	2'-3 1/2"	1'-9 3/4"	"	CCT INFLUENT WEIR
3	2	2'-0"	2'-0"	2'-3 1/2"	2'-1 3/4"	FRAME EMBEDDED	CCT INFLUENT WEIR



IMBEDDED FRAME
N.T.S.



NOTE: EXTEND ACCESS MH. & RODDING CLEANOUTS FULL SIZE TO FINISH GRADE ELEV. 465.00 & PROVIDE CAST IRON FRAME & COVER.



1,000 GAL. SEPTIC TANK
SCUM PIT
N.T.S.

REVISIONS

NO	SYM	BY	DATE	DESCRIPTION

REVISIONS

NO	SYM	BY	DATE	DESCRIPTION

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SCALE	AS SHOWN
DATE	7/81
ENG.	JWS
DES.	D.D.Q.
CHK BY	D.D.Q.
DWN BY	W.S.R.

FREDERICKSBURG
SEWER AND WATER AUTHORITY

MISCELLANIOUS DETAILS

GROUP NUMBER					JOB NO.
A	E	CA	PM	S	60785
					SHT. NO.
					44