

# TOUGALOO COLLEGE

TOUGALOO, MISSISSIPPI

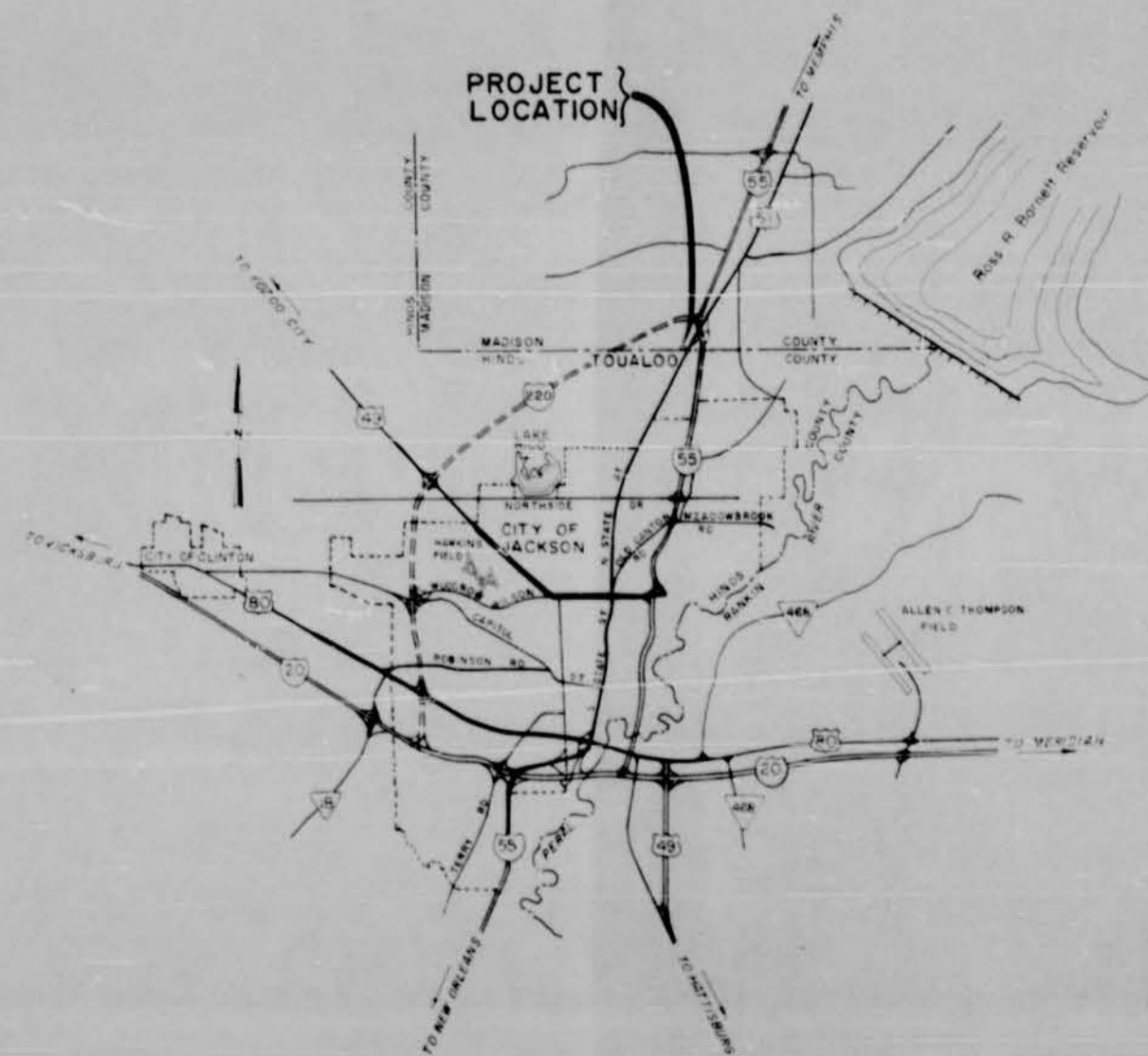
CONSTRUCTION PLANS

FOR

WATER AND SEWER SYSTEMS

ECONOMIC DEVELOPMENT ADMINISTRATION

PROJECT No. 04-1-00573



Prepared By  
**SMITH AND SANDERS, INC.**  
Consulting Engineers  
Jackson, Mississippi

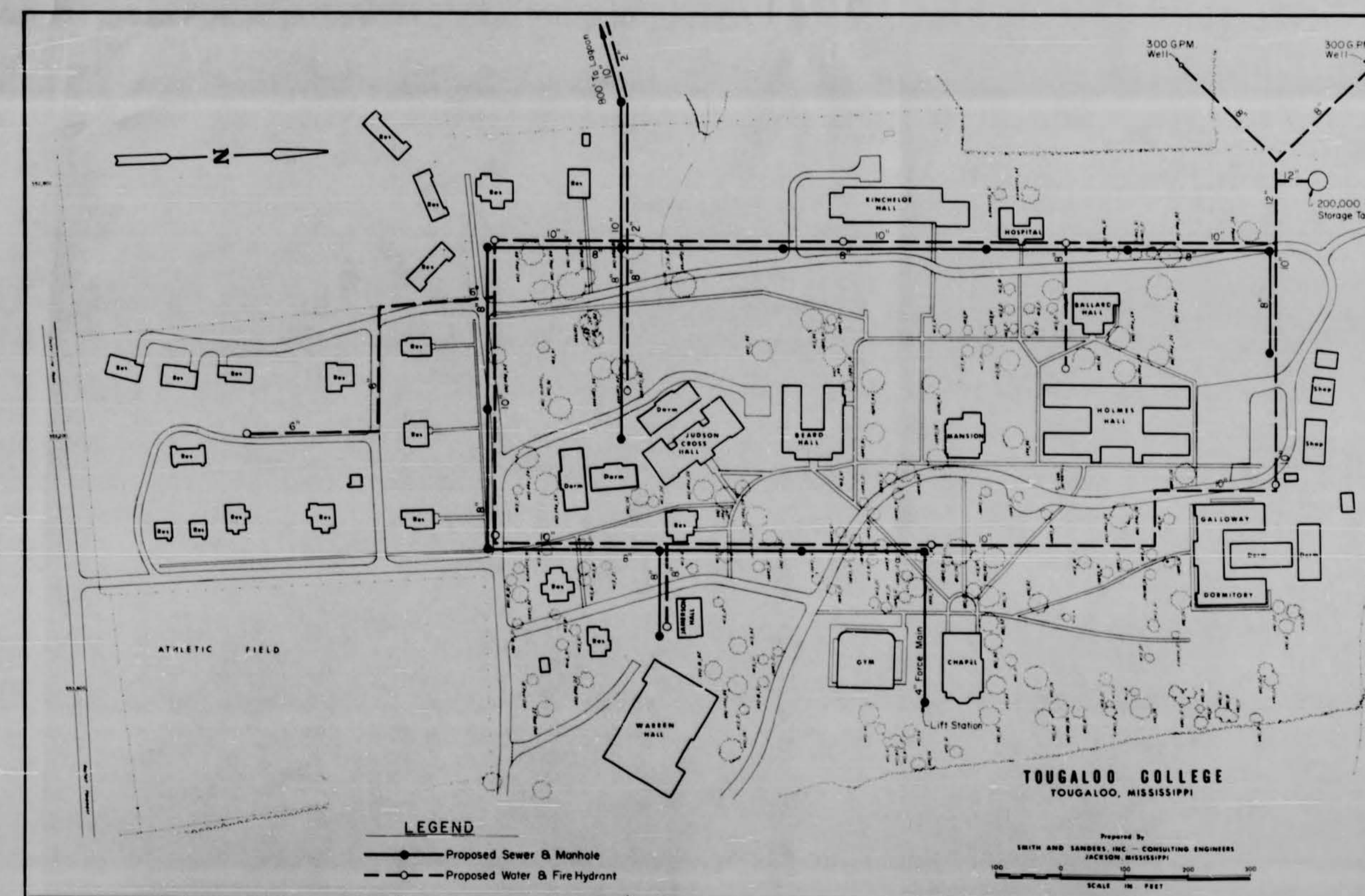
997

1969

APPROVED 2-4-69  
Donnell B. Smith  
Mississippi State Board of Architects, Engineers, and Surveyors

SUMMARY OF QUANTITIES							
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1-A	300 G.P.M. WATER WELL	L.S.	2	3-F	10" GATE VALVE	EA.	5
1-B	DEDUCTIVE ALTERNATE TEST WELL	L.S.	1	3-G	8" GATE VALVE	EA.	3
				3-H	6" GATE VALVE	EA.	1
				3-I	FIRE HYDRANTS	EA.	10
2-A	8" SEWER PIPE (0-6)	L.F.	713	3-J	CONNECTION TO EXISTING WATER LINE	EA.	21
2-B	8" SEWER PIPE (6-8)	L.F.	988	3-K	DEDUCTIVE ALTERNATE #12 COATED WIRE	MF	52
2-C	8" SEWER PIPE (8-10)	L.F.	682	3-L	18" STEEL CASING	L.F.	16
2-D	8" SEWER PIPE (10-12)	L.F.	490				
2-E	8" SEWER PIPE (12-14)	L.F.	90				
2-F	10" SEWER PIPE (0-6)	L.F.	406	4-A	200,000 GALLON ELEVATED STORAGE TANK	L.S.	1
2-G	10" SEWER PIPE (6-8)	L.F.	285	4-B	DEDUCTIVE ALTERNATE REMOVE EXIST TANK	L.S.	1
2-H	10" SEWER PIPE (8-10)	L.F.	50				
2-I	STANDARD MANHOLE (0-6)	EA.	4	5-A	SEWAGE LIFT STATION	L.S.	1
2-J	STANDARD MANHOLE (6-8)	EA.	3				
2-K	STANDARD MANHOLE (8-10)	EA.	2				
2-L	STANDARD MANHOLE (10-12)	EA.	2				
2-M	DROP MANHOLE (0-6)	EA.	—	6-A	CHLORINATION EQUIPMENT	L.S.	1
2-N	DROP MANHOLE (6-8)	EA.	—				
2-O	DROP MANHOLE (8-10)	EA.	3				
2-P	DROP MANHOLE (10-12)	EA.	2	7-A	ELECTRICAL AND CONTROLS	L.S.	1
2-Q	CONNECTION TO EXISTING SEWERS	EA.	28				
3-A	TREE REMOVAL	EA.	38				
3-B	12" WATER PIPE	L.F.	150				
3-C	10" WATER PIPE	L.F.	3420				
3-D	8" WATER PIPE	L.F.	1000				
3-E	6" WATER PIPE	L.F.	600				

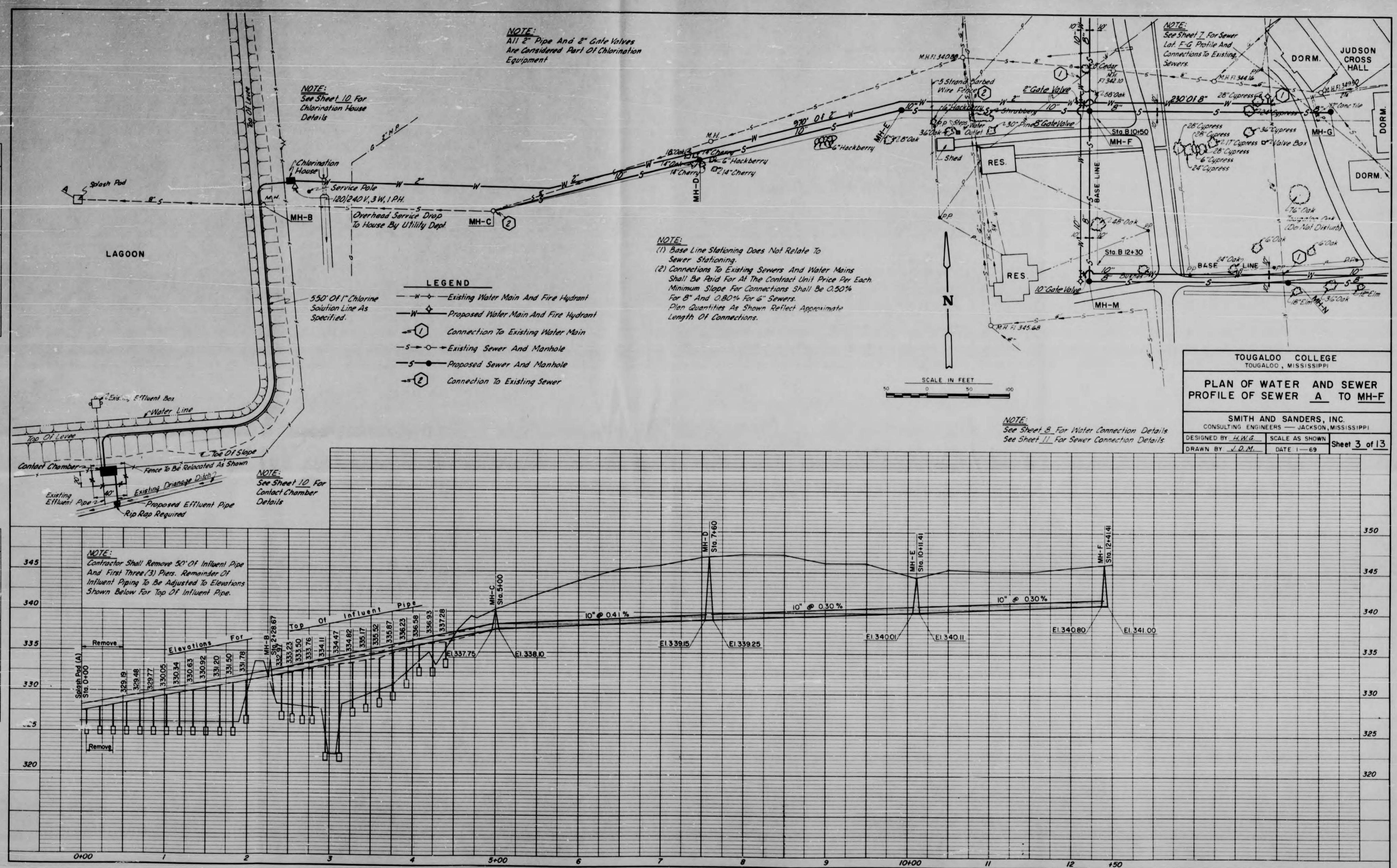
INDEX TO DRAWINGS	
TITLE	SHT. NO.
TITLE AND COVER SHEET	
SUMMARY OF QUANTITIES AND INDEX TO DRAWINGS	2 of 13
PLAN OF WATER AND SEWER, PROFILE OF SEWER A TO MH-F	3 of 13
PLAN OF WATER AND SEWER, PROFILE OF SEWER MH-F TO MH-L	4 of 13
PLAN OF WATER AND SEWER, PROFILE OF SEWER MH-F TO MH-P	5 of 13
PLAN OF WATER AND SEWER, PROFILE OF SEWER MH-P TO MH-S	6 of 13
PLAN OF WATER AND SEWER, PROFILE OF SEWER LATERALS E.G. P-Q, B-S-T	7 of 13
TYPICAL WATER WELL AND MISC WATER DETAILS	8 of 13
WATER STORAGE TANK, PLAN AND ELEVATION	9 of 13
CHLORINATION EQUIPMENT DETAILS	10 of 13
SEWER CONNECTIONS AND SEWAGE LIFT STATION DETAILS	11 of 13
STANDARD MANHOLE DETAILS	12 of 13
ELECTRICAL DETAILS	13 of 13



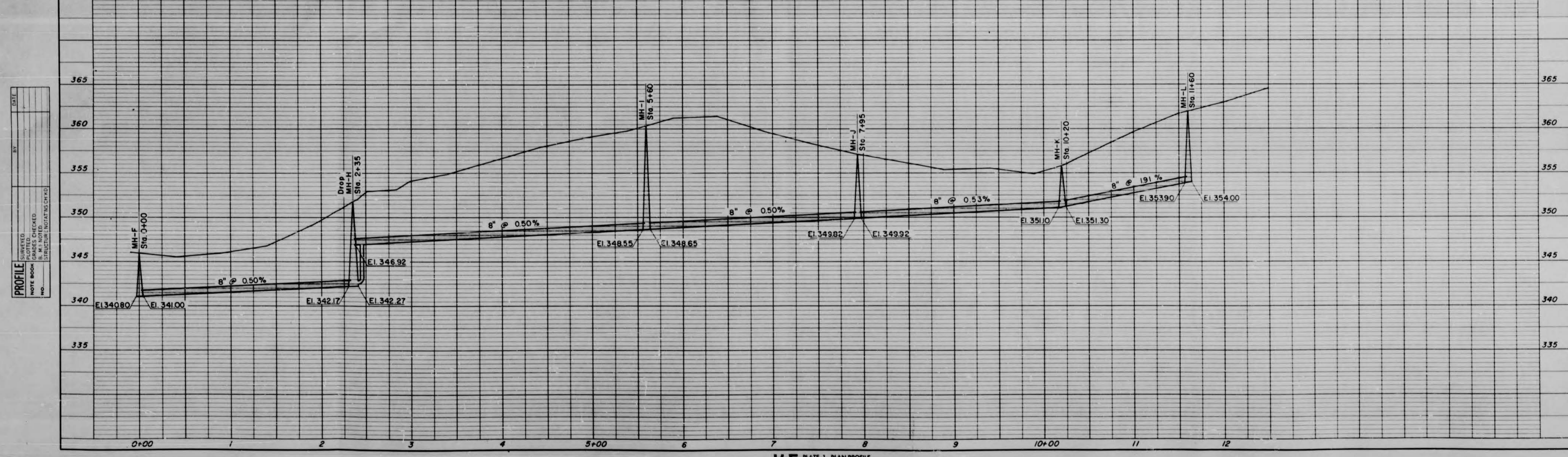
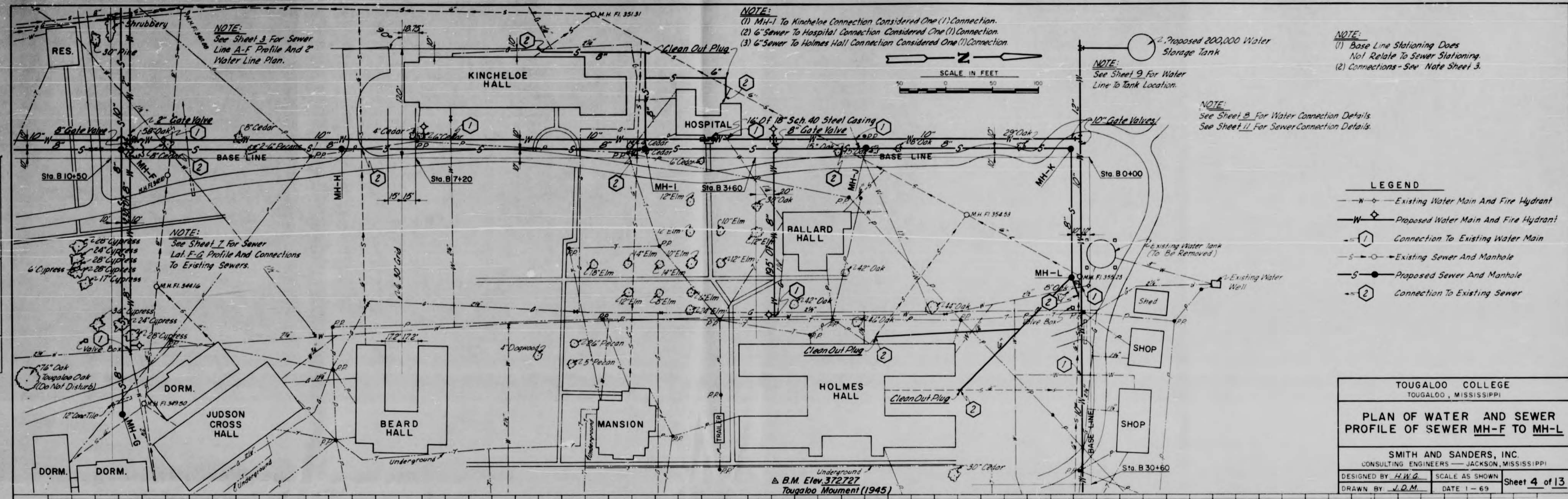
TOUGALOO COLLEGE TOUGALOO, MISSISSIPPI	
SUMMARY OF QUANTITIES AND INDEX TO DRAWINGS	
SMITH AND SANDERS, INC. CONSULTING ENGINEERS — JACKSON, MISSISSIPPI	
DESIGNED BY: <i>W.H.G.</i>	NO SCALE
DRAWN BY: <i>V.D.M.</i>	DATE: 1-69

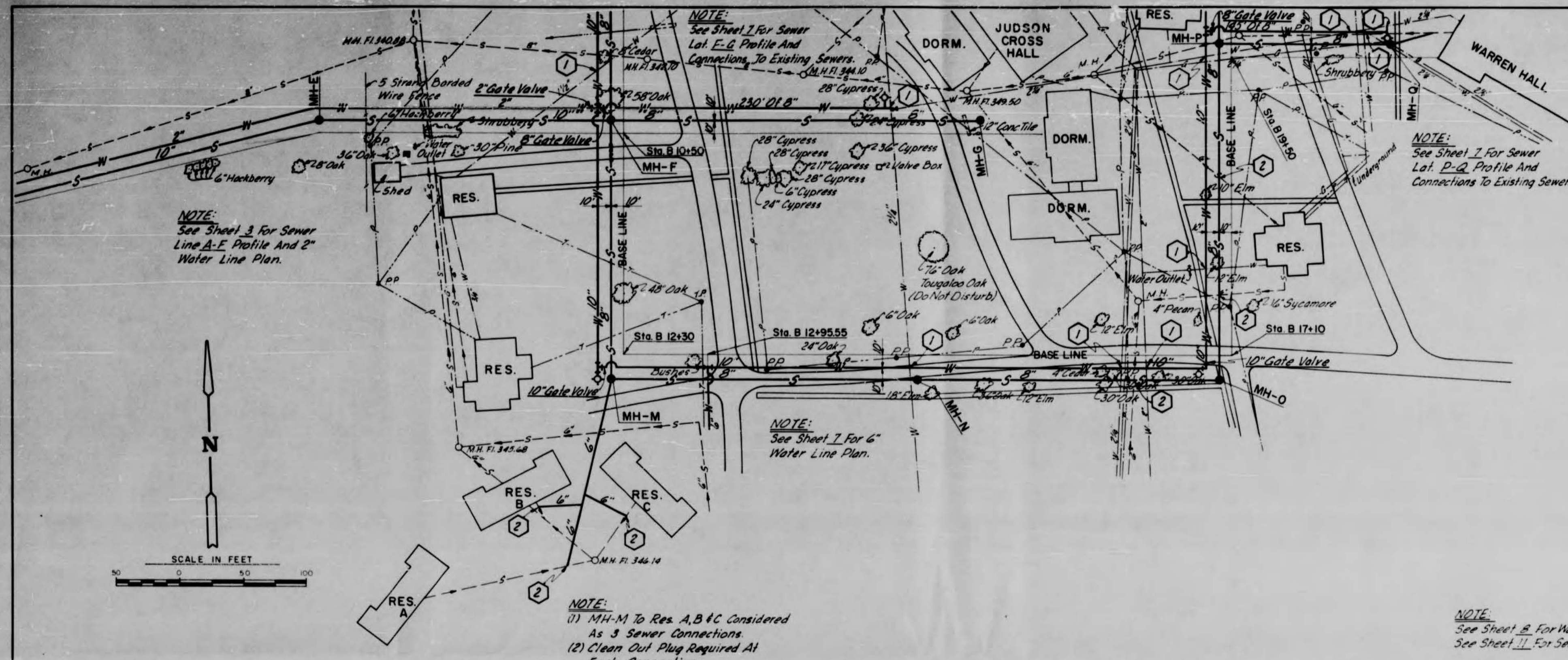
DATE	
BY	
REVISIONS	
NO. 1	AS SHOWN
NO. 2	AS SHOWN
NO. 3	AS SHOWN
NO. 4	AS SHOWN
NO. 5	AS SHOWN
NO. 6	AS SHOWN
NO. 7	AS SHOWN
NO. 8	AS SHOWN
NO. 9	AS SHOWN
NO. 10	AS SHOWN
NO. 11	AS SHOWN
NO. 12	AS SHOWN
NO. 13	AS SHOWN
NO. 14	AS SHOWN
NO. 15	AS SHOWN
NO. 16	AS SHOWN
NO. 17	AS SHOWN
NO. 18	AS SHOWN
NO. 19	AS SHOWN
NO. 20	AS SHOWN

DATE	
BY	
REVISIONS	
NO. 1	AS SHOWN
NO. 2	AS SHOWN
NO. 3	AS SHOWN
NO. 4	AS SHOWN
NO. 5	AS SHOWN
NO. 6	AS SHOWN
NO. 7	AS SHOWN
NO. 8	AS SHOWN
NO. 9	AS SHOWN
NO. 10	AS SHOWN
NO. 11	AS SHOWN
NO. 12	AS SHOWN
NO. 13	AS SHOWN
NO. 14	AS SHOWN
NO. 15	AS SHOWN
NO. 16	AS SHOWN
NO. 17	AS SHOWN
NO. 18	AS SHOWN
NO. 19	AS SHOWN
NO. 20	AS SHOWN



C



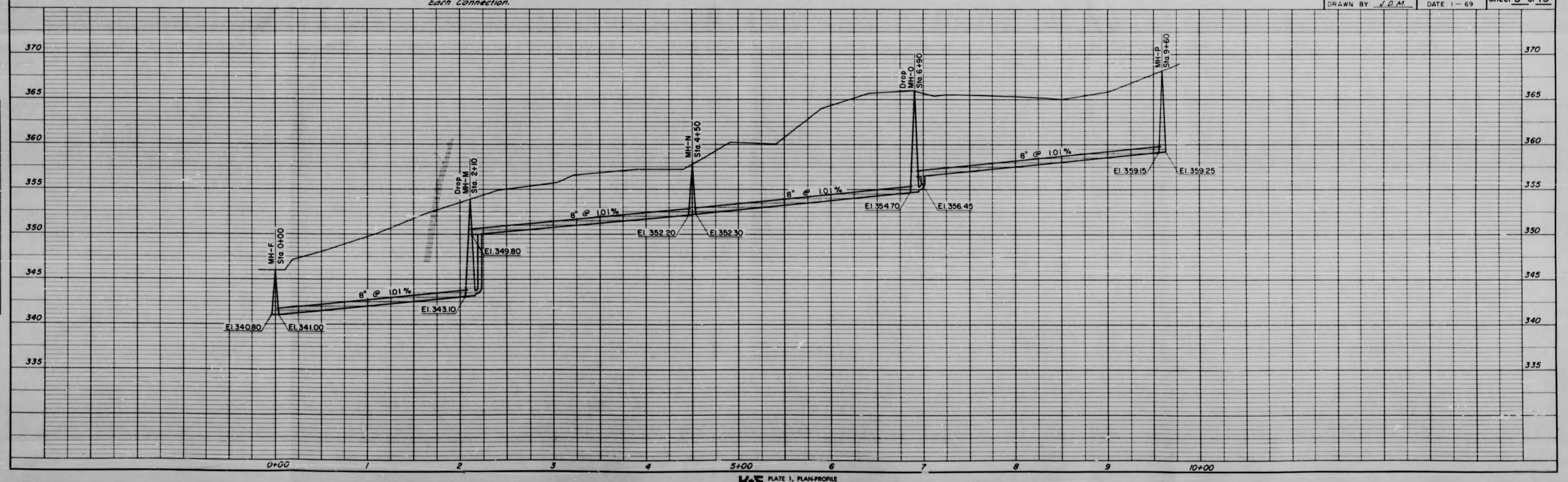


NOTE:  
 (1) Base Line Stationing Does Not Relate To Sewer Stationing.  
 (2) Connections - See Note Sheet 3.

- LEGEND**
- Existing Water Main And Fire Hydrant
  - Proposed Water Main And Fire Hydrant
  - Connection To Existing Water Main
  - Existing Sewer And Manhole
  - Proposed Sewer And Manhole
  - Connection To Existing Sewer

DATE	
BY	
PROJECT	
NOTED	
DATE	
NO. OF MAN CHECKED	
NO.	

DATE	
BY	
PROJECT	
NOTED	
DATE	
NO. OF MAN CHECKED	
NO.	

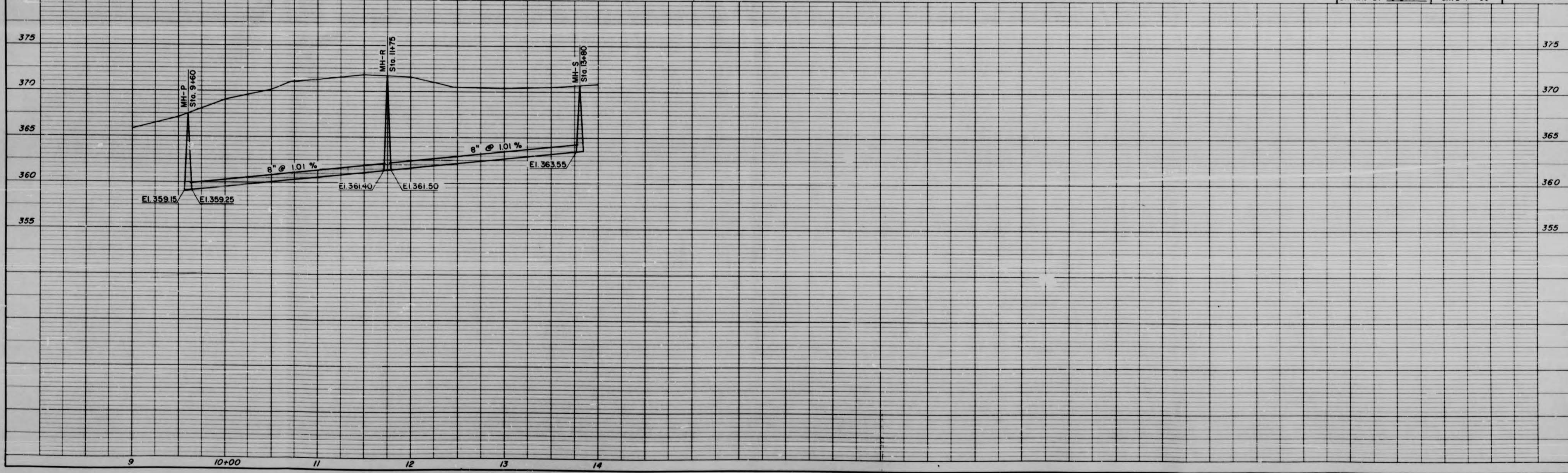
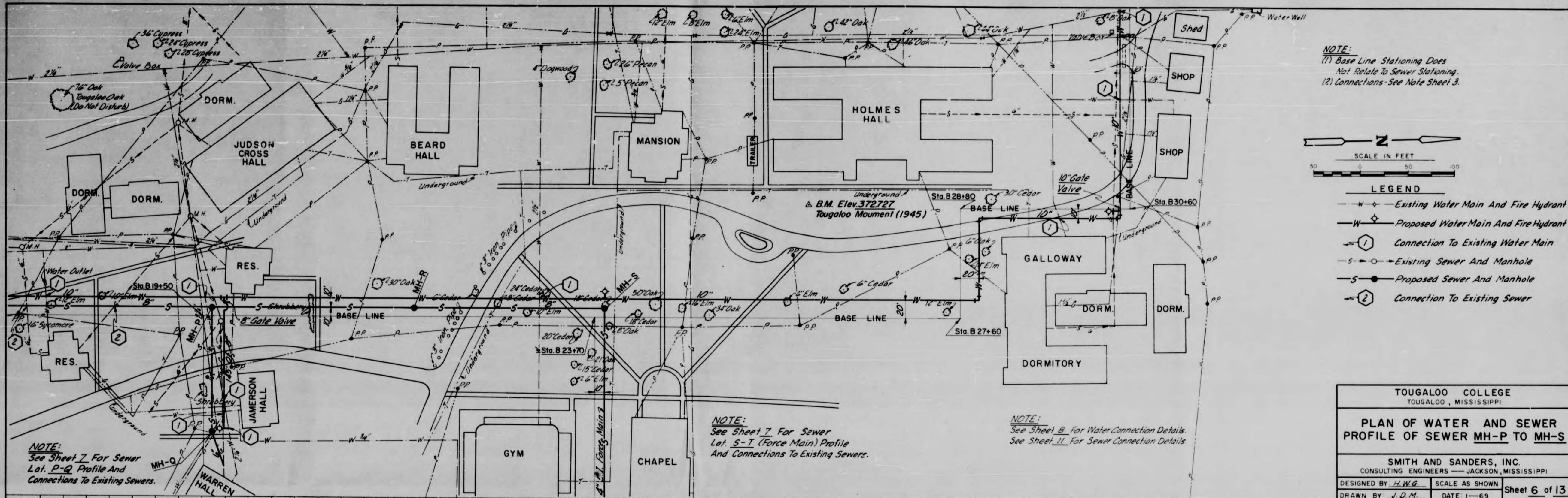


TOUGALOO COLLEGE  
 TOUGALOO, MISSISSIPPI

**PLAN OF WATER AND SEWER  
 PROFILE OF SEWER MH-F TO MH-P**

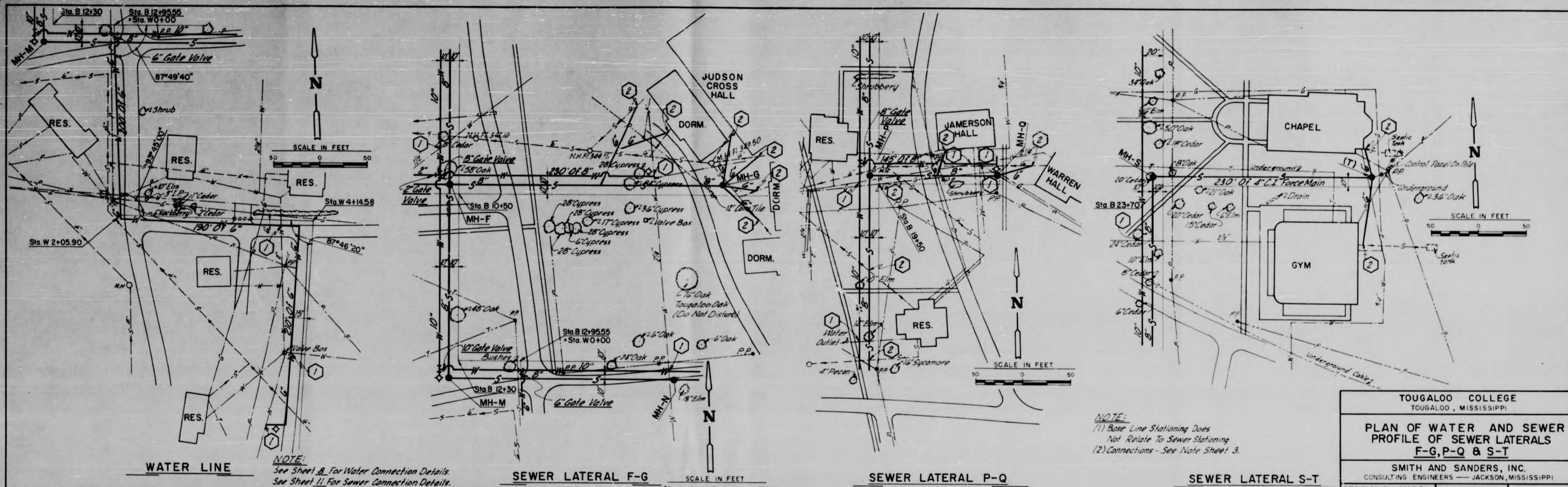
SMITH AND SANDERS, INC.  
 CONSULTING ENGINEERS — JACKSON, MISSISSIPPI

DESIGNED BY L.W.G. SCALE AS SHOWN  
 DRAWN BY J.D.M. DATE 1-69 **Sheet 5 of 13**



PLAN  
 DESIGNED BY J.H.G.  
 CHECKED BY J.D.M.  
 DATE 1-69

PROFILE  
 DESIGNED BY J.H.G.  
 CHECKED BY J.D.M.  
 DATE 1-69



- LEGEND**
- Existing Water Main And Fire Hydrant
  - W- Proposed Water Main And Fire Hydrant
  - Connection To Existing Water Main
  - S- Existing Sewer And Manhole
  - S- Proposed Sewer And Manhole
  - Connection To Existing Sewer

NOTE:  
 See Sheet 8 For Water Connection Details.  
 See Sheet 11 For Sewer Connection Details.

NOTES:  
 (1) Base Line Stationing Does Not Relate To Sewer Stationing  
 (2) Connections - See Note Sheet 3.

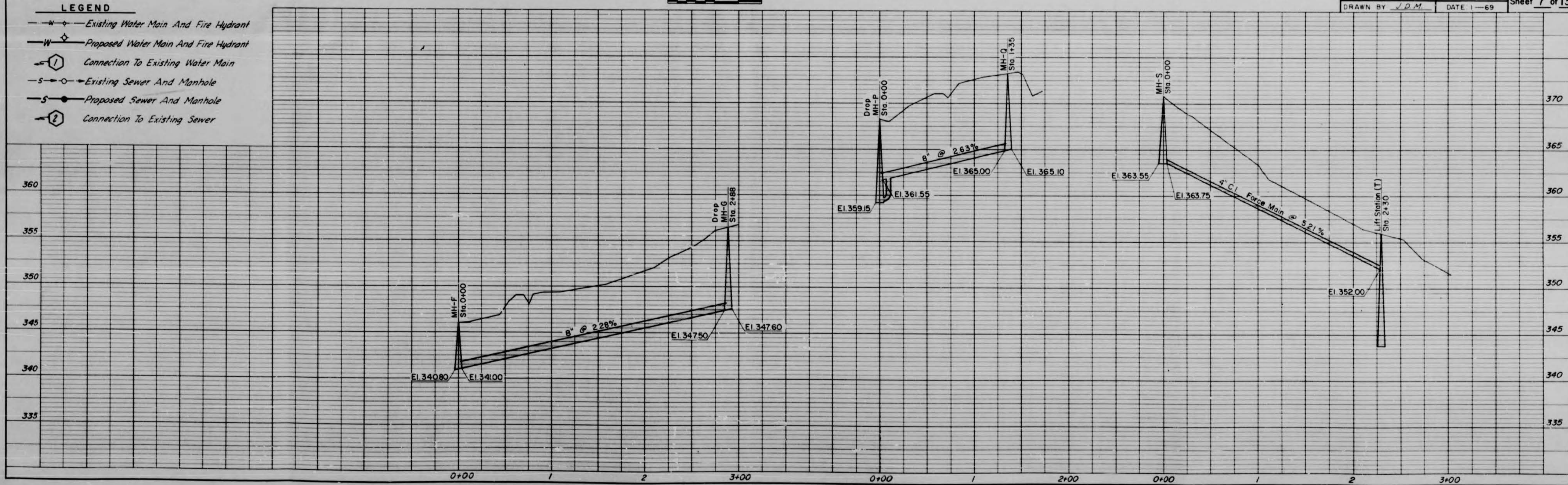
TOUGALOO COLLEGE  
 TOUGALOO, MISSISSIPPI

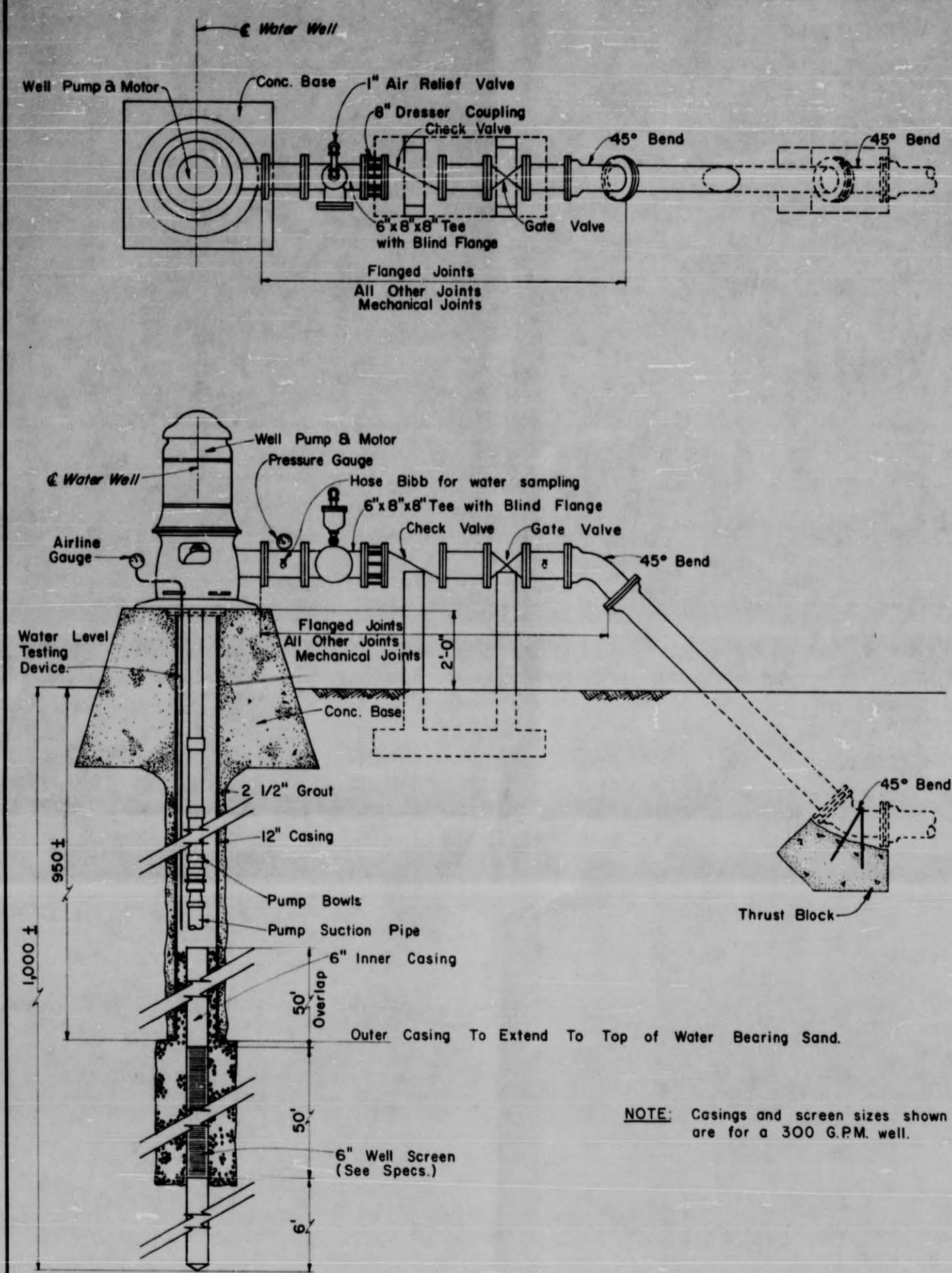
**PLAN OF WATER AND SEWER PROFILE OF SEWER LATERALS F-G, P-Q & S-T**

SMITH AND SANDERS, INC.  
 CONSULTING ENGINEERS - JACKSON, MISSISSIPPI

DESIGNED BY J.H.G. SCALE AS SHOWN  
 DRAWN BY J.D.M. DATE 1-69

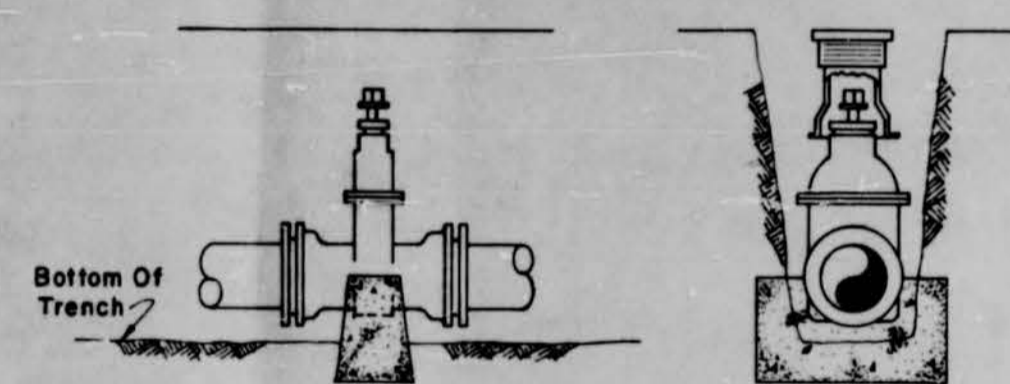
Sheet 7 of 13



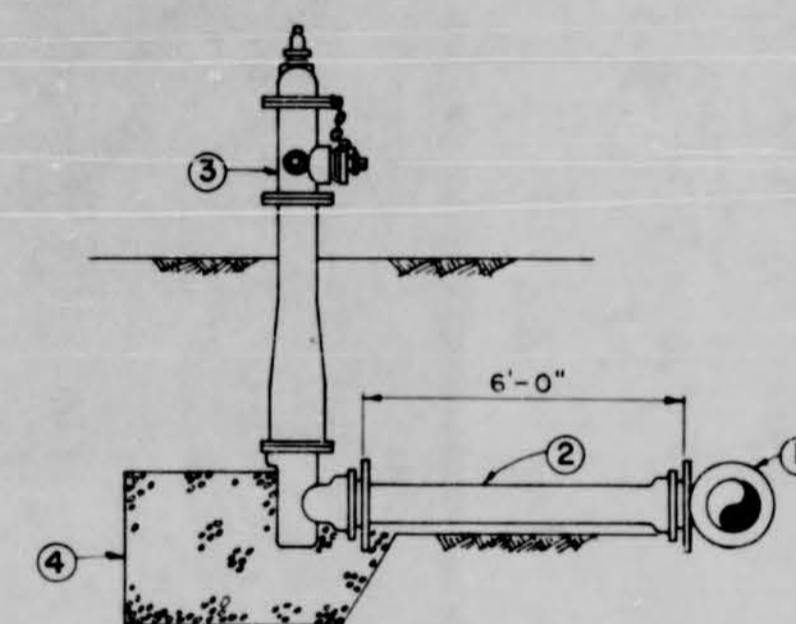


TYPICAL WATER WELL

NOTE: Casings and screen sizes shown are for a 300 G.P.M. well.

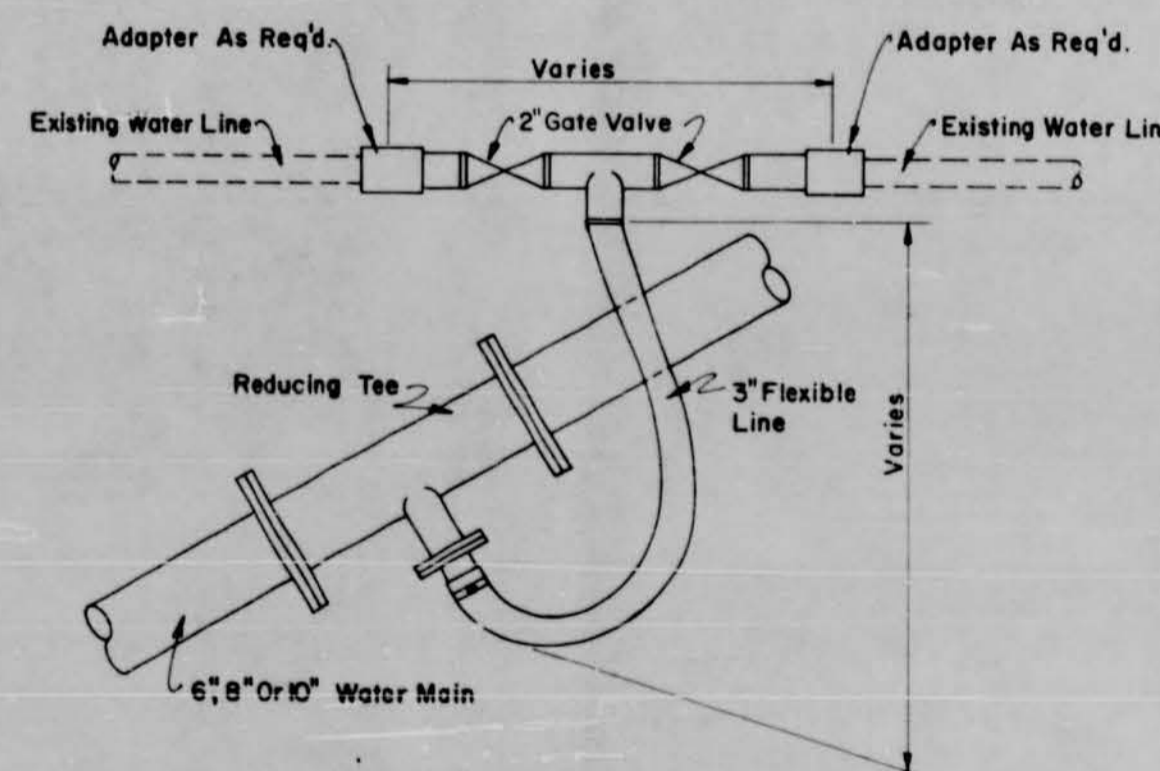


TYPICAL VALVE INSTALLATION

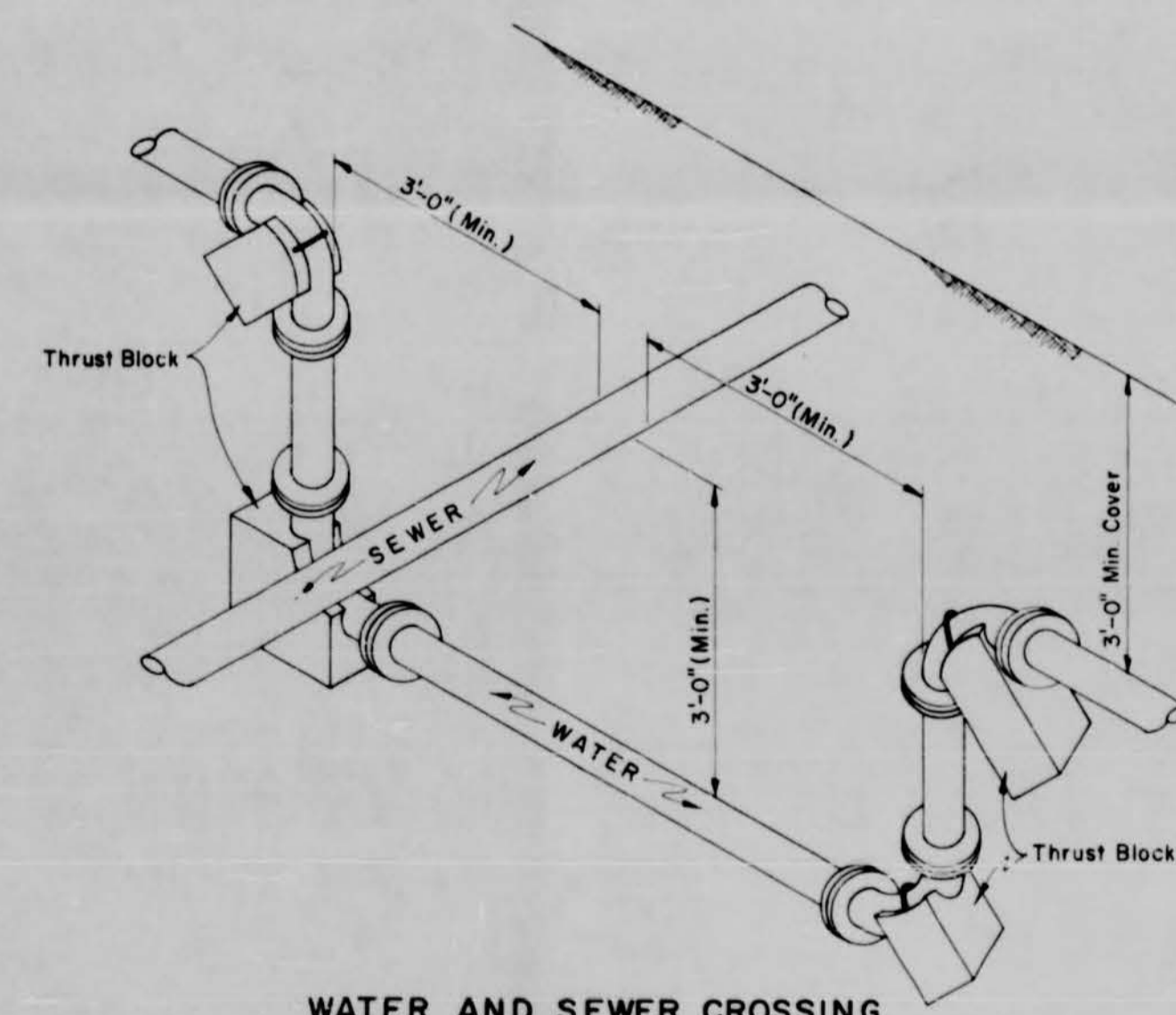


ITEM	DESCRIPTION	SIZE
1	TEE-MECH. JOINT ANCHORING	8 or 10 x 6
2	ANCHORING PIPE	6
3	FIRE HYDRANT - CLOW - F 2640	
4	WASHED GRAVEL	AS REQ'D.

TYPICAL FIRE HYDRANT INSTALLATION



TYPICAL CONNECTION TO EXISTING WATER LINE



WATER AND SEWER CROSSING

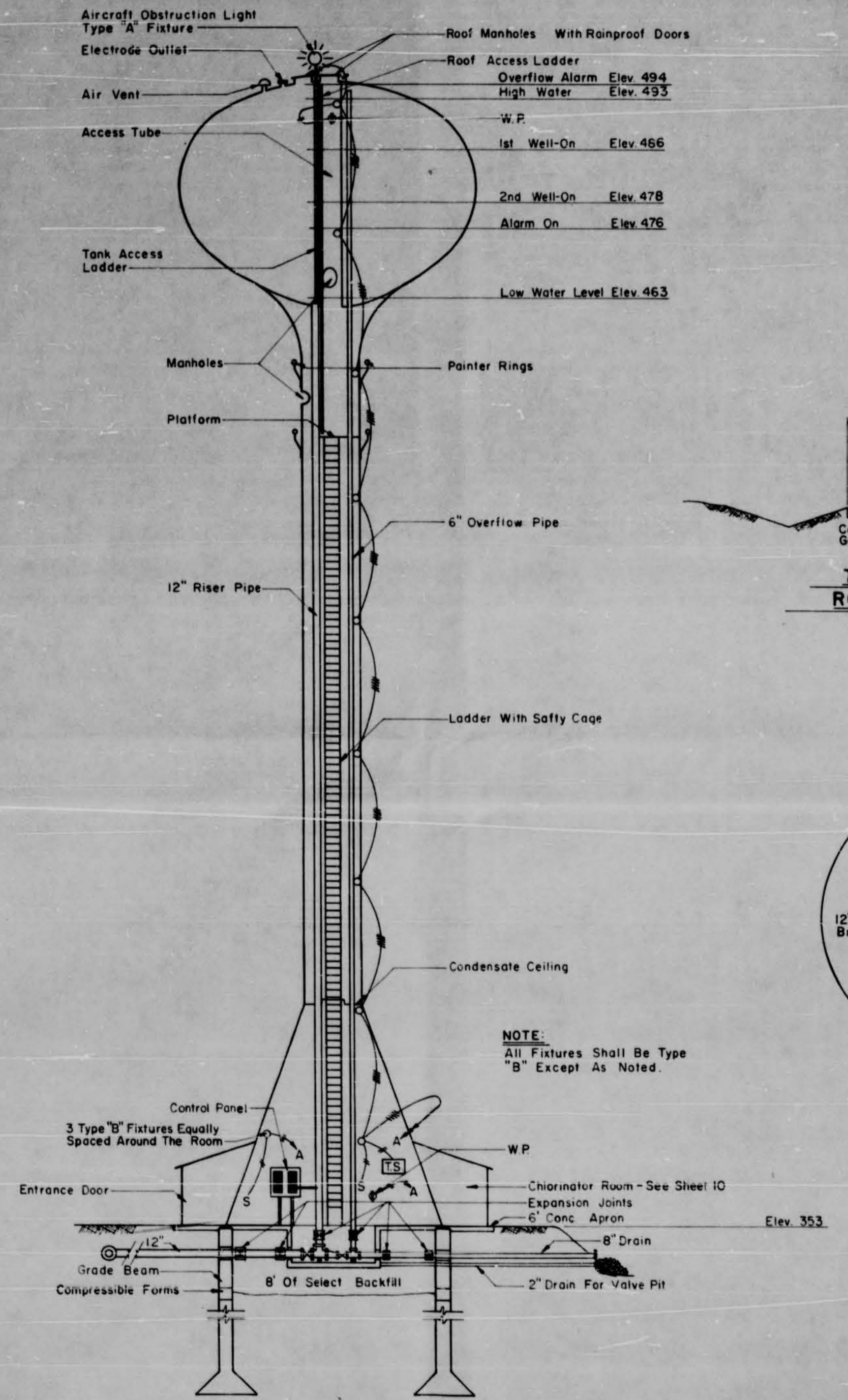
TOUGALOO COLLEGE  
TOUGALOO, MISSISSIPPI

TYPICAL WATER WELL  
AND MISC. WATER DETAILS

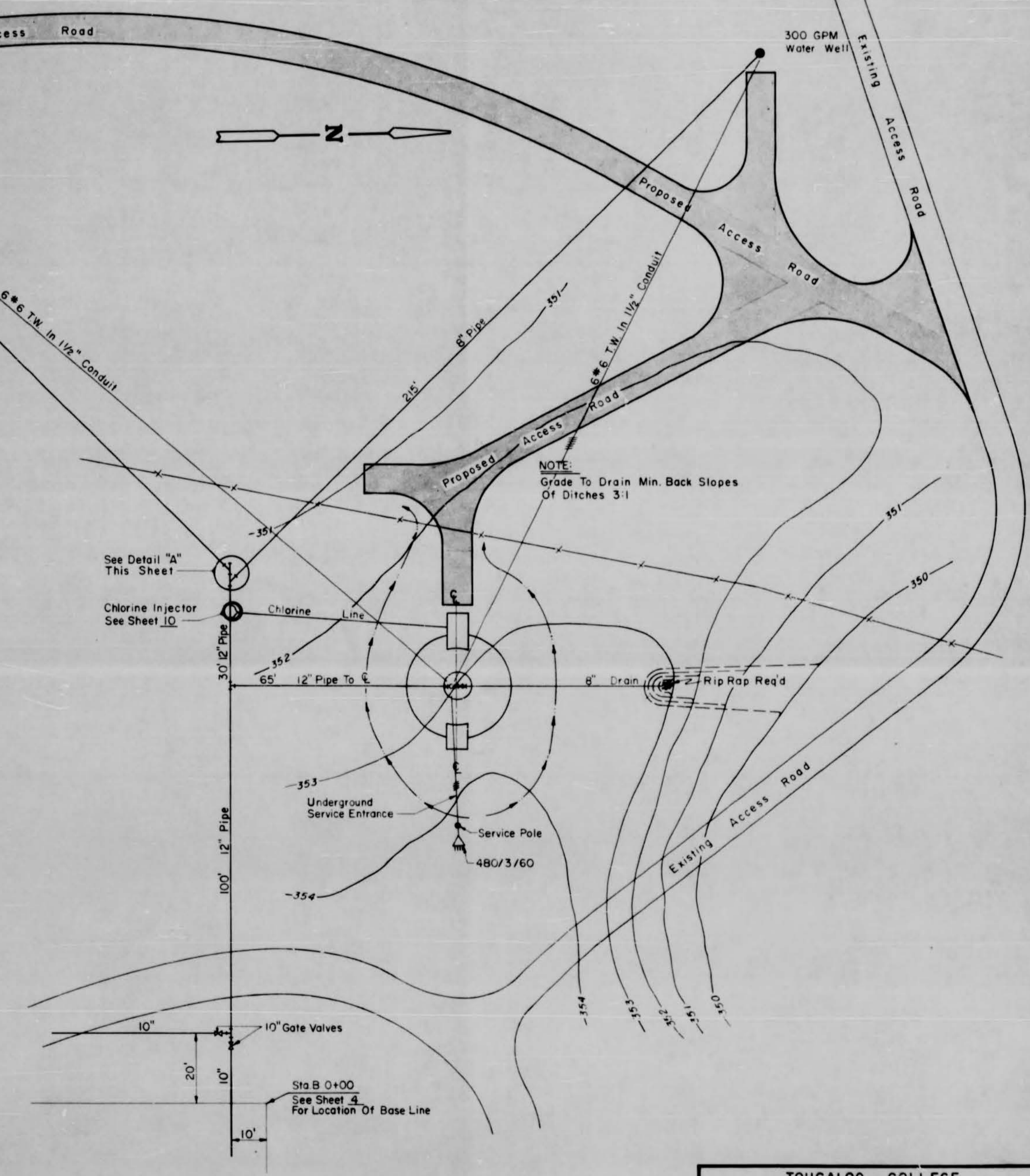
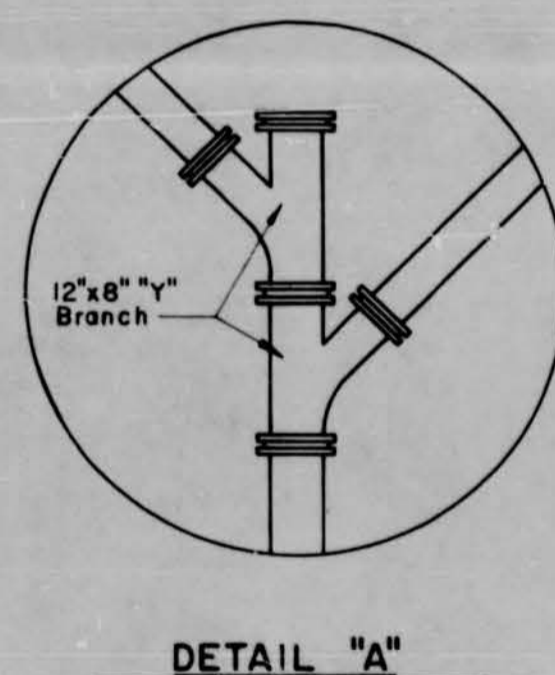
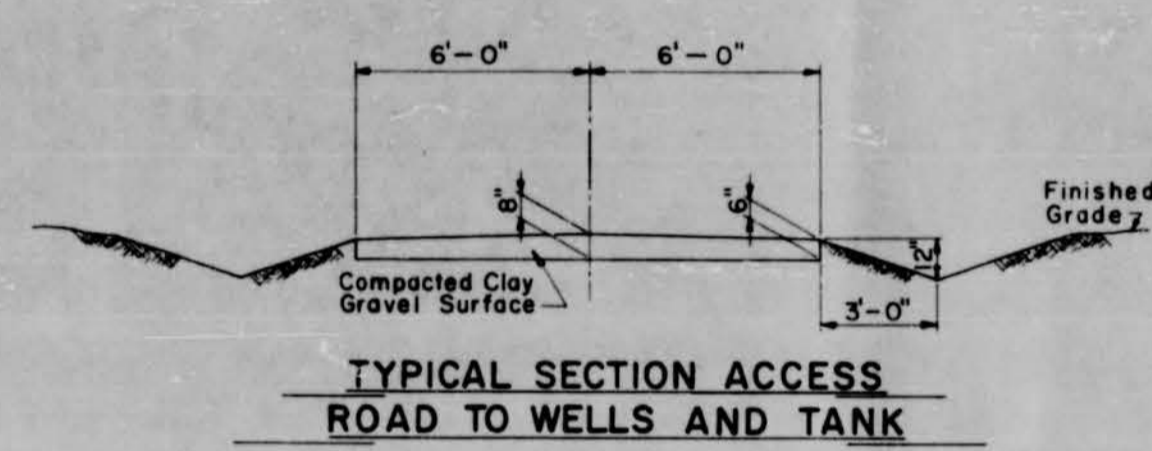
SMITH AND SANDERS, INC.  
CONSULTING ENGINEERS - JACKSON, MISSISSIPPI

DESIGNED BY: HWG NO SCALE  
DRAWN BY: LDM DATE: 1-69 Sheet 8 of 13



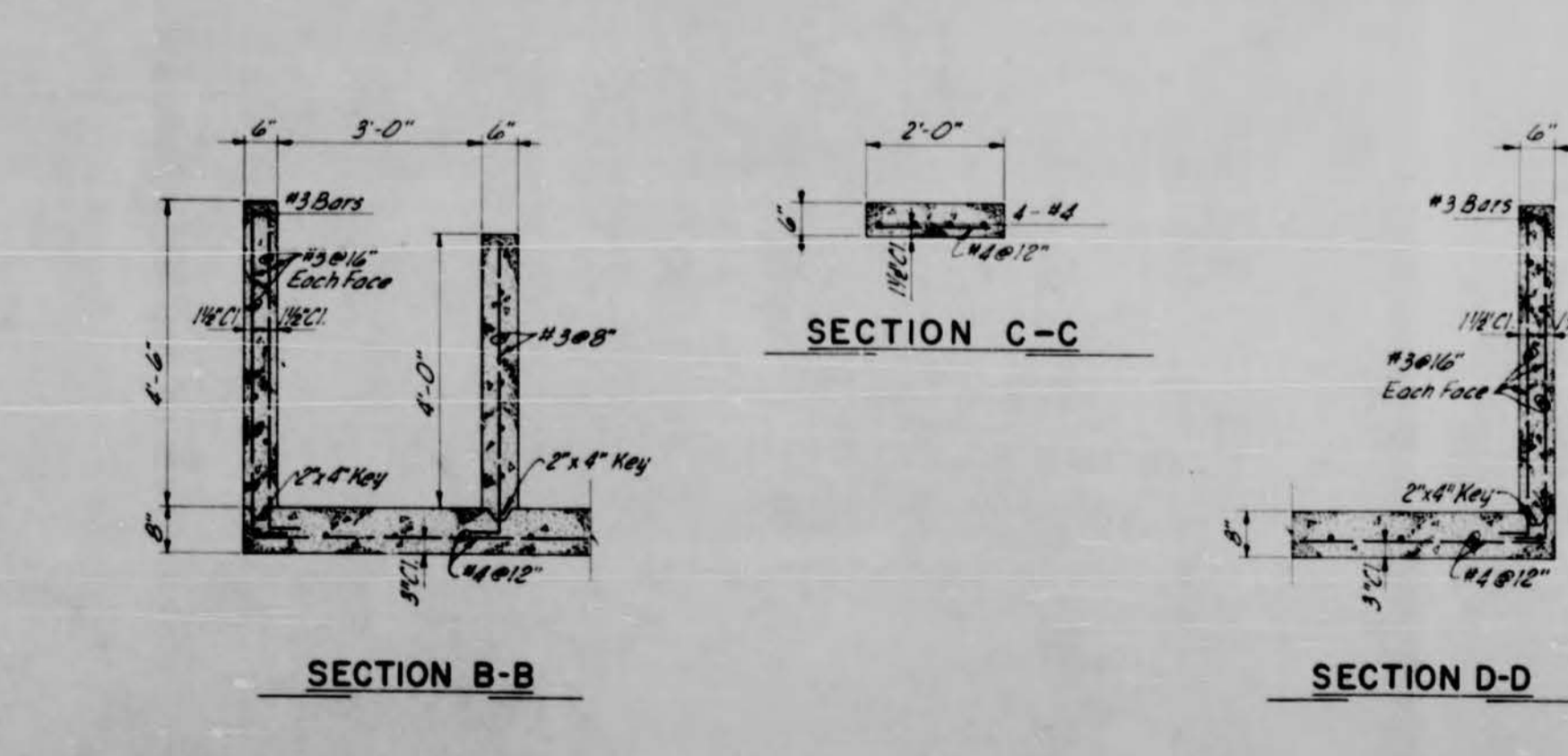
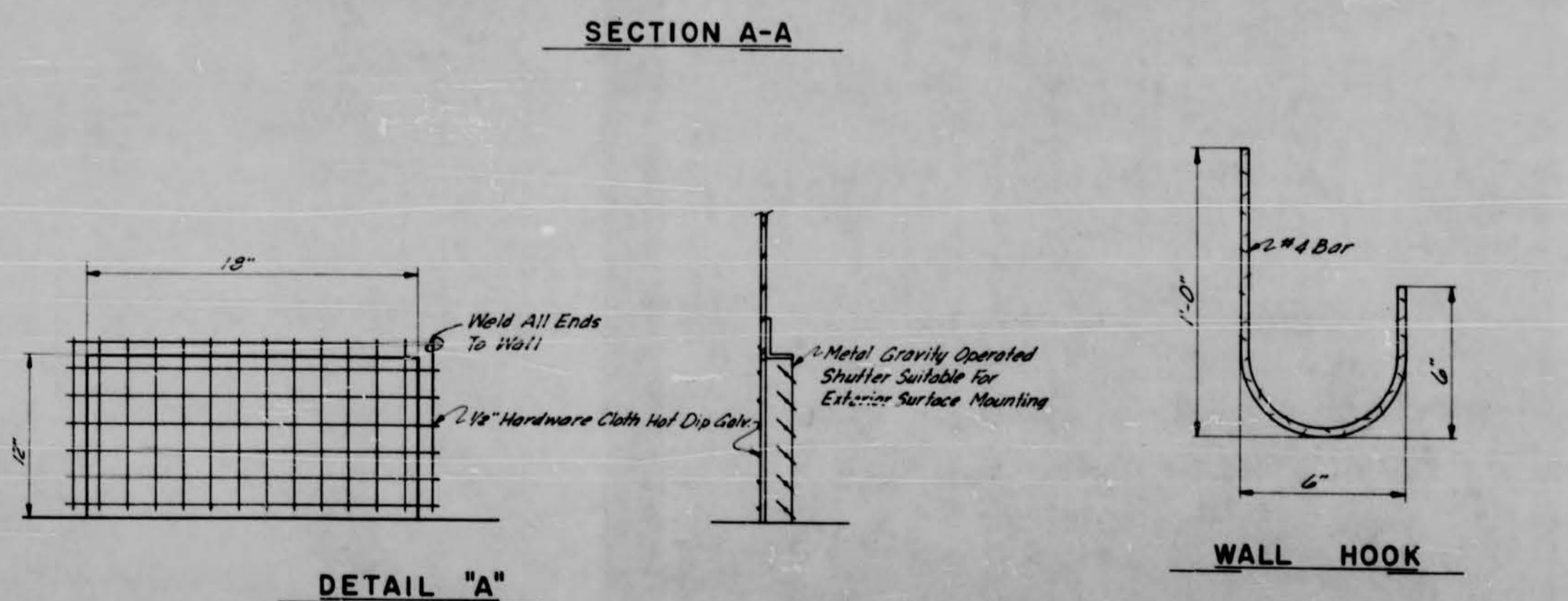
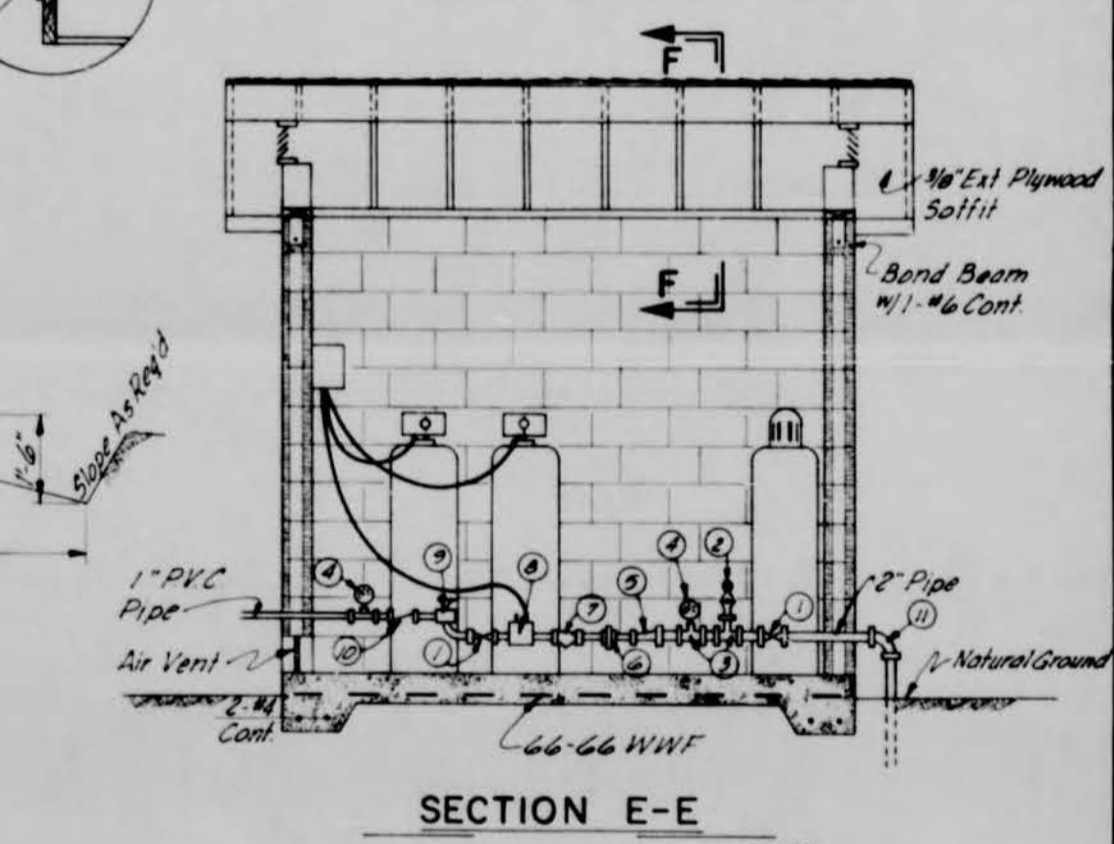
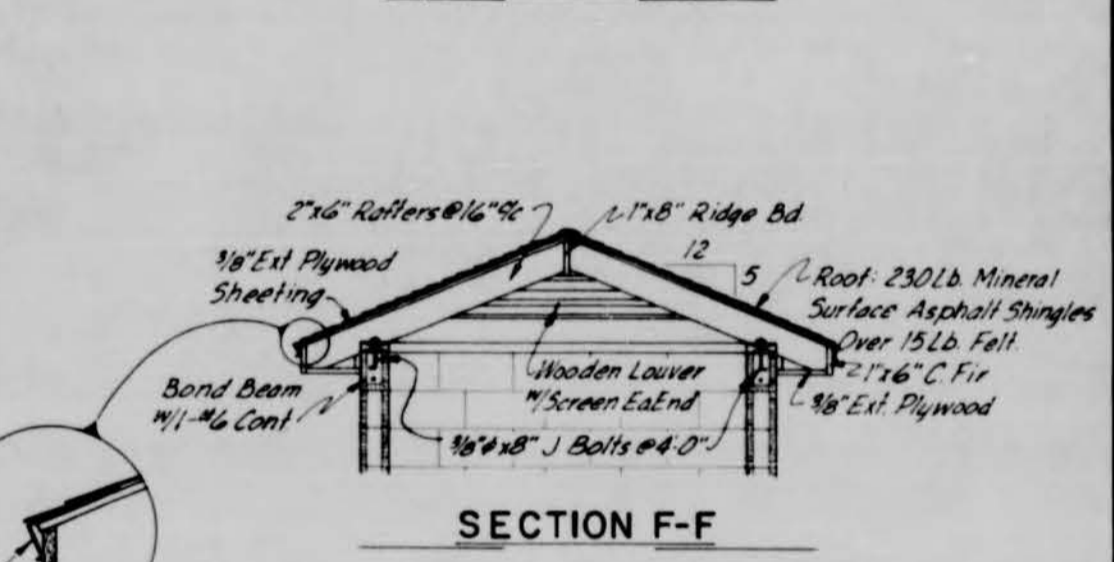
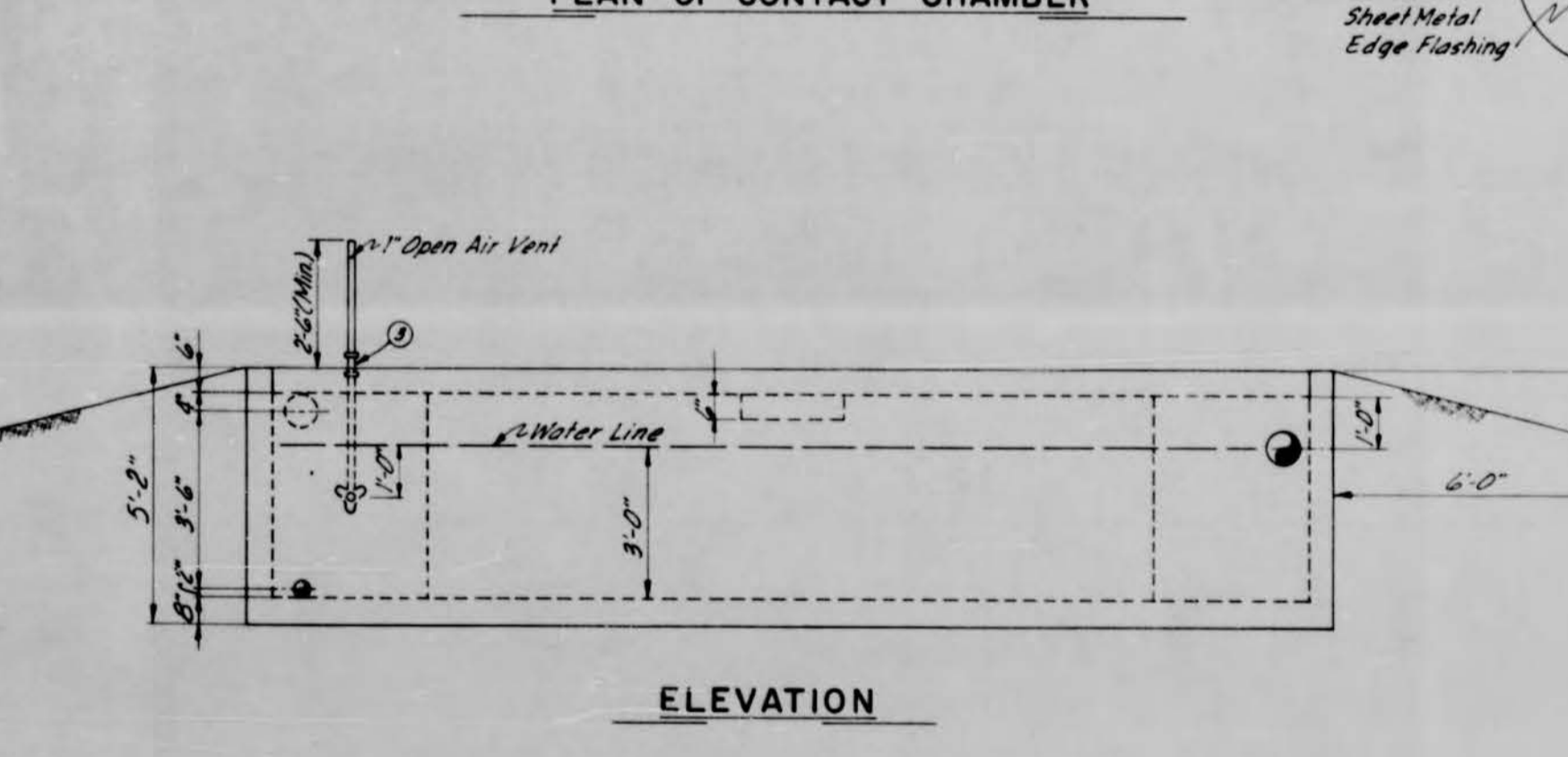
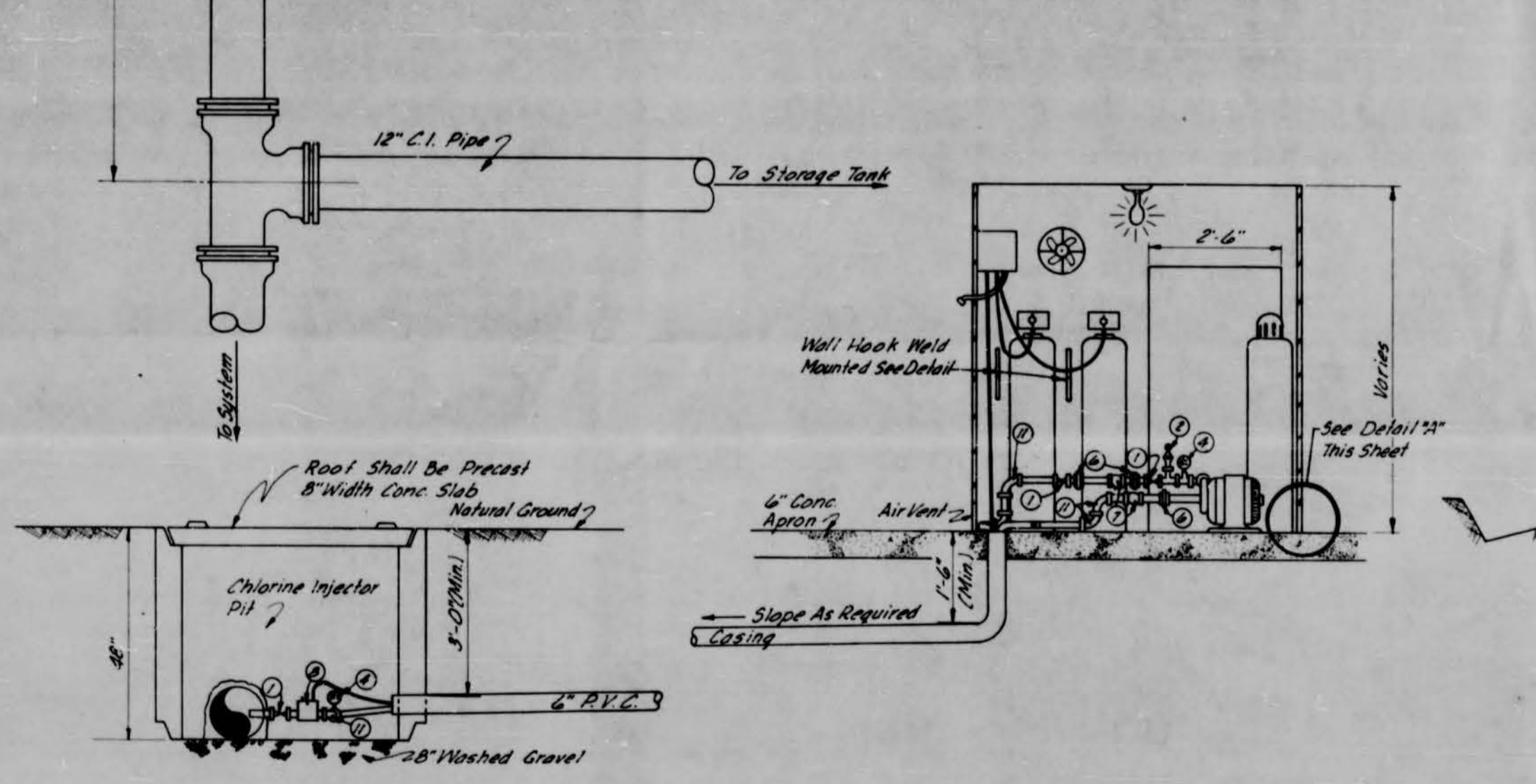
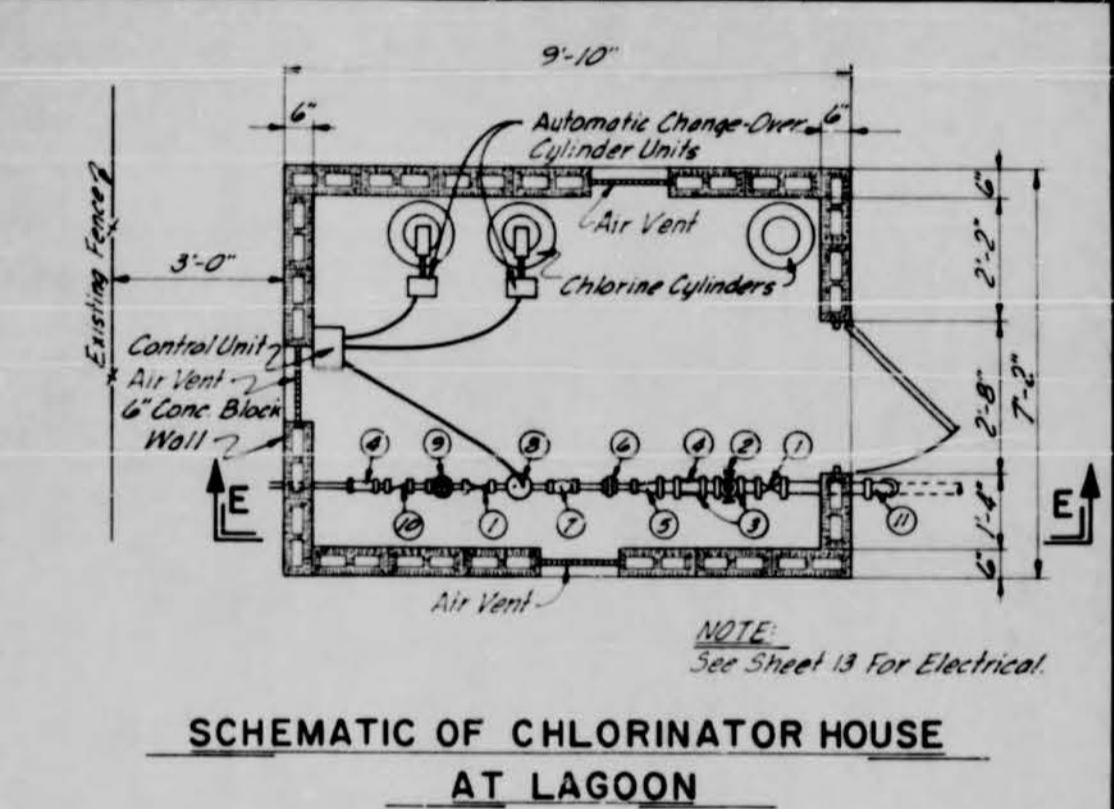
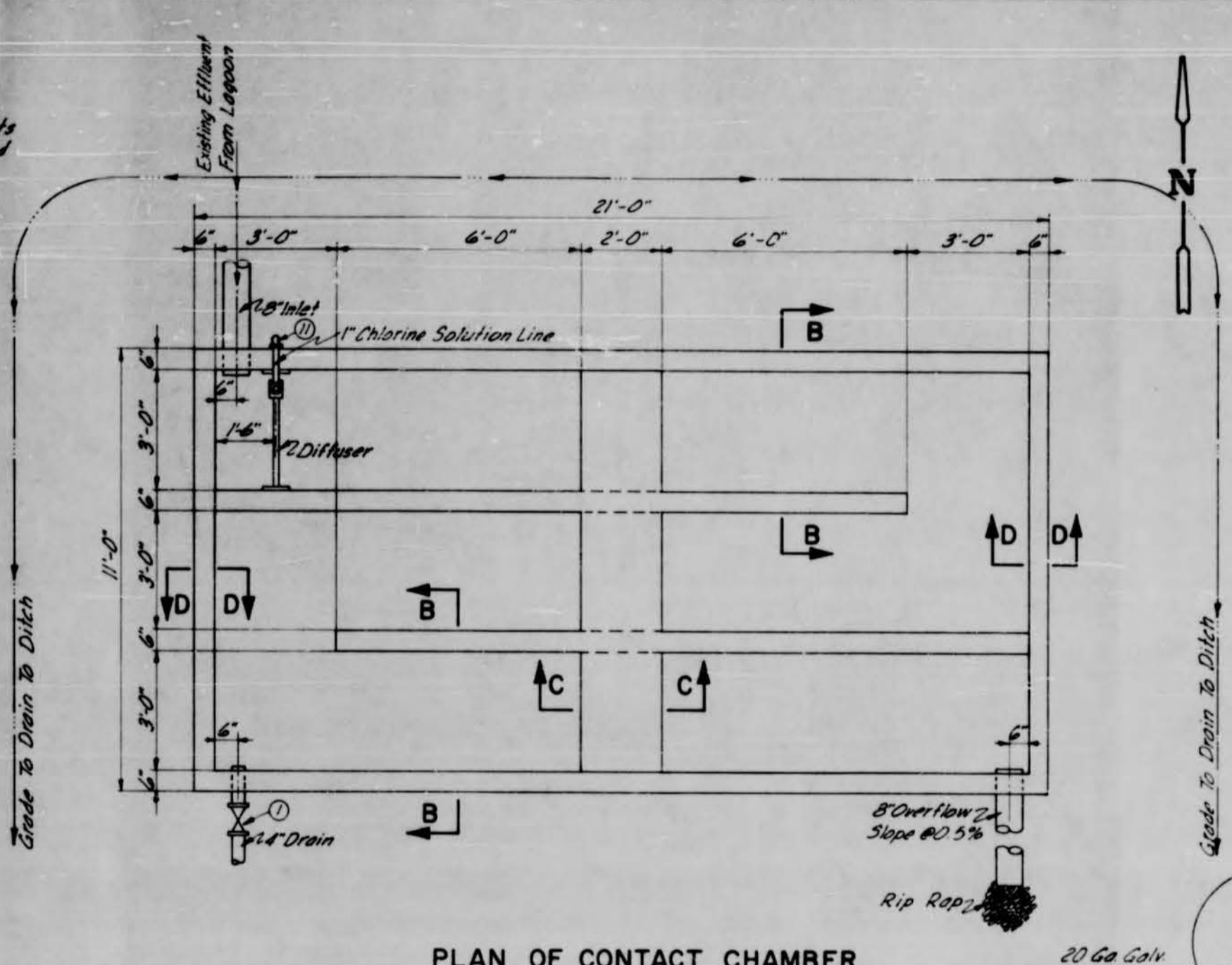
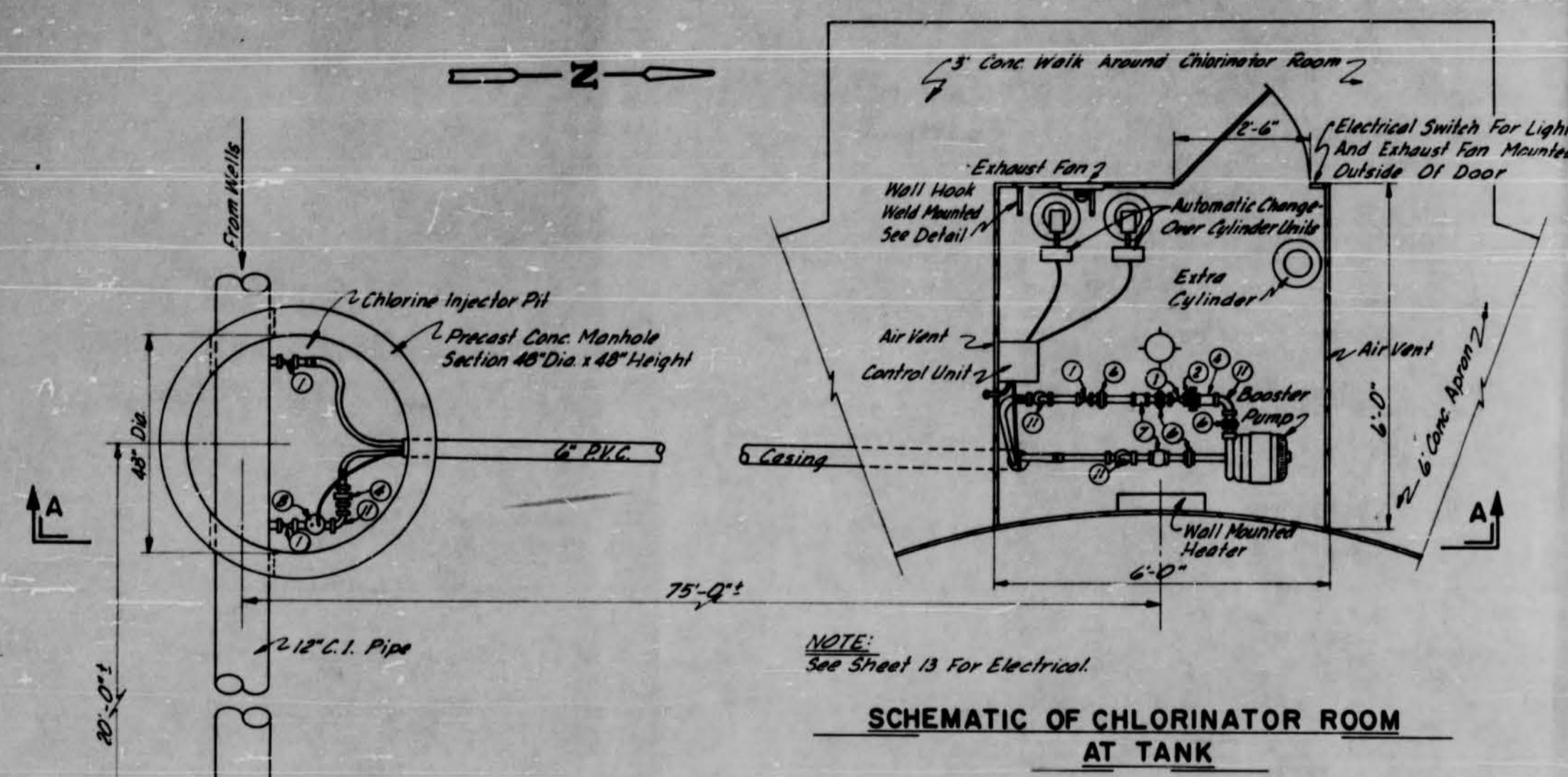


**200,000 GALLON WATERSPHEROID TANK**  
Schematic Drawing



**PLAN OF WATER WELLS & STORAGE TANK**

TOUGALOO COLLEGE TOUGALOO, MISSISSIPPI	
WATER STORAGE TANK PLAN AND ELEVATION	
SMITH AND SANDERS, INC. CONSULTING ENGINEERS — JACKSON, MISSISSIPPI	
DESIGNED BY: <i>HVG</i>	NO SCALE
DRAWN BY: <i>JDM</i>	DATE: 1-69



**LEGEND**

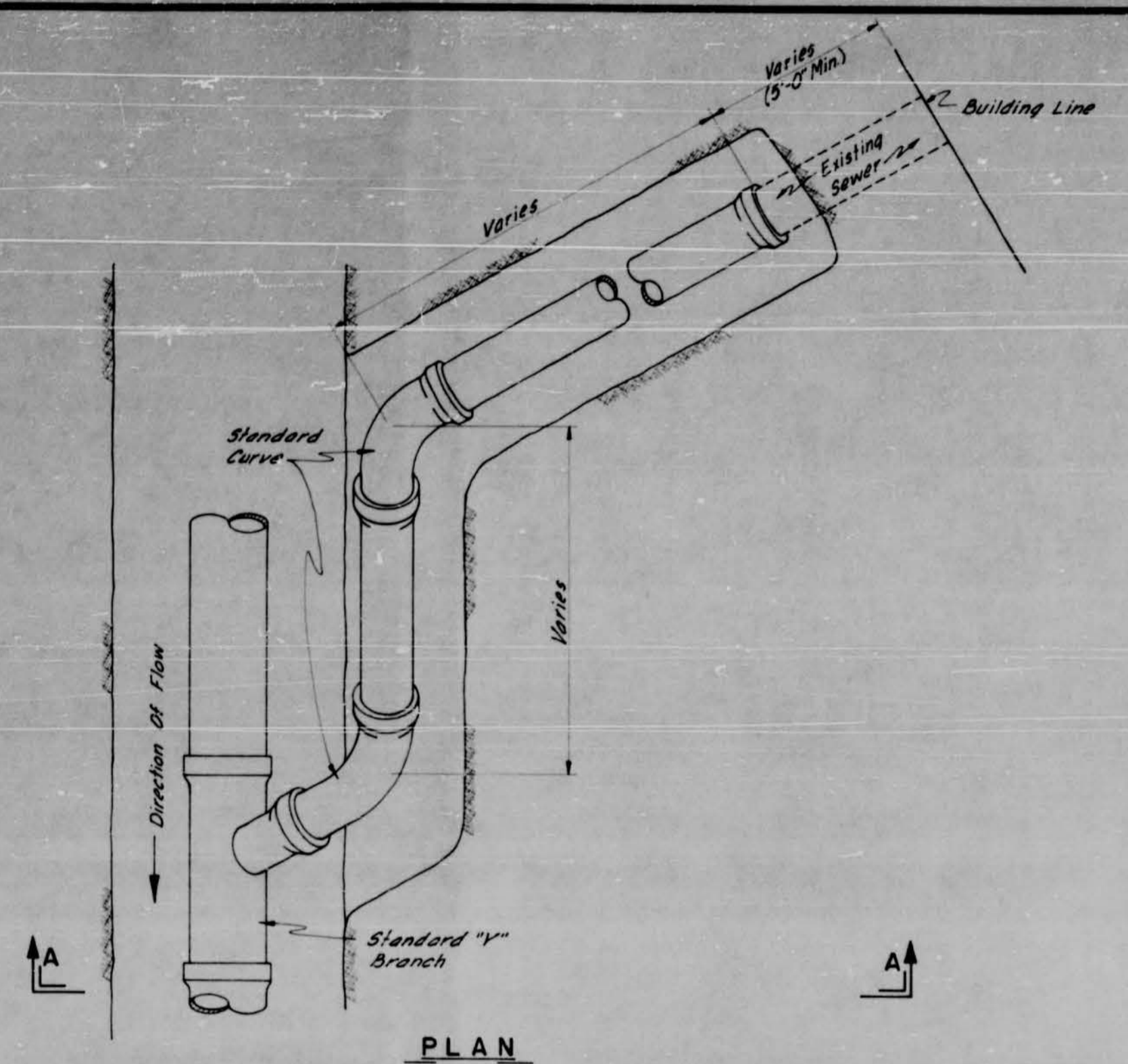
- ① - Gate Valve
- ② - Valve
- ③ - Tee
- ④ - Pressure Gauge
- ⑤ - Reducer
- ⑥ - Union
- ⑦ - Strainer
- ⑧ - Injector
- ⑨ - Vacuum Breaker
- ⑩ - Check Valve
- ⑪ - Elbow 90°

**TOUGALOO COLLEGE**  
TOUGALOO, MISSISSIPPI

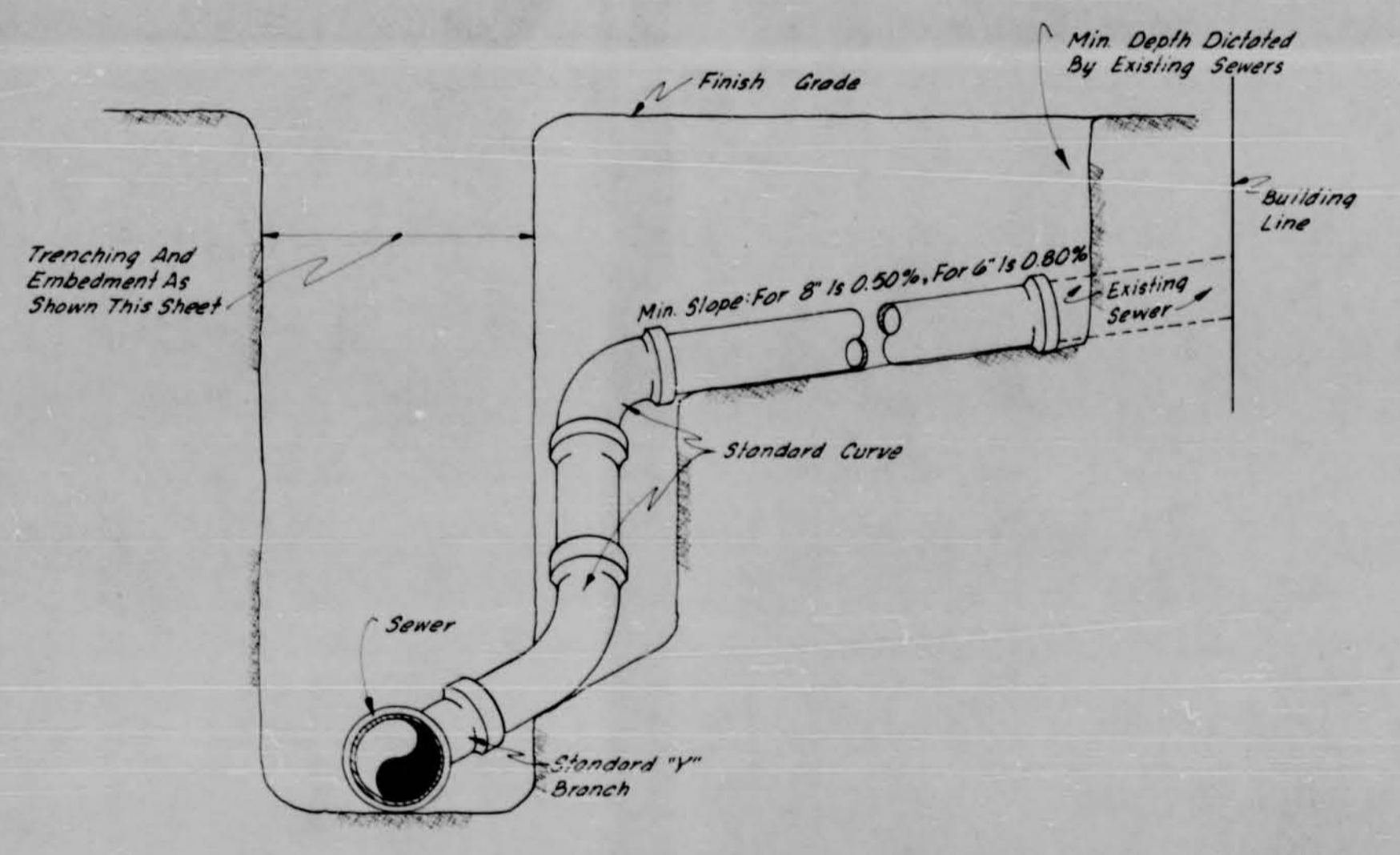
**CHLORINATION EQUIPMENT**  
**DETAILS**

**SMITH AND SANDERS, INC.**  
CONSULTING ENGINEERS - JACKSON, MISSISSIPPI

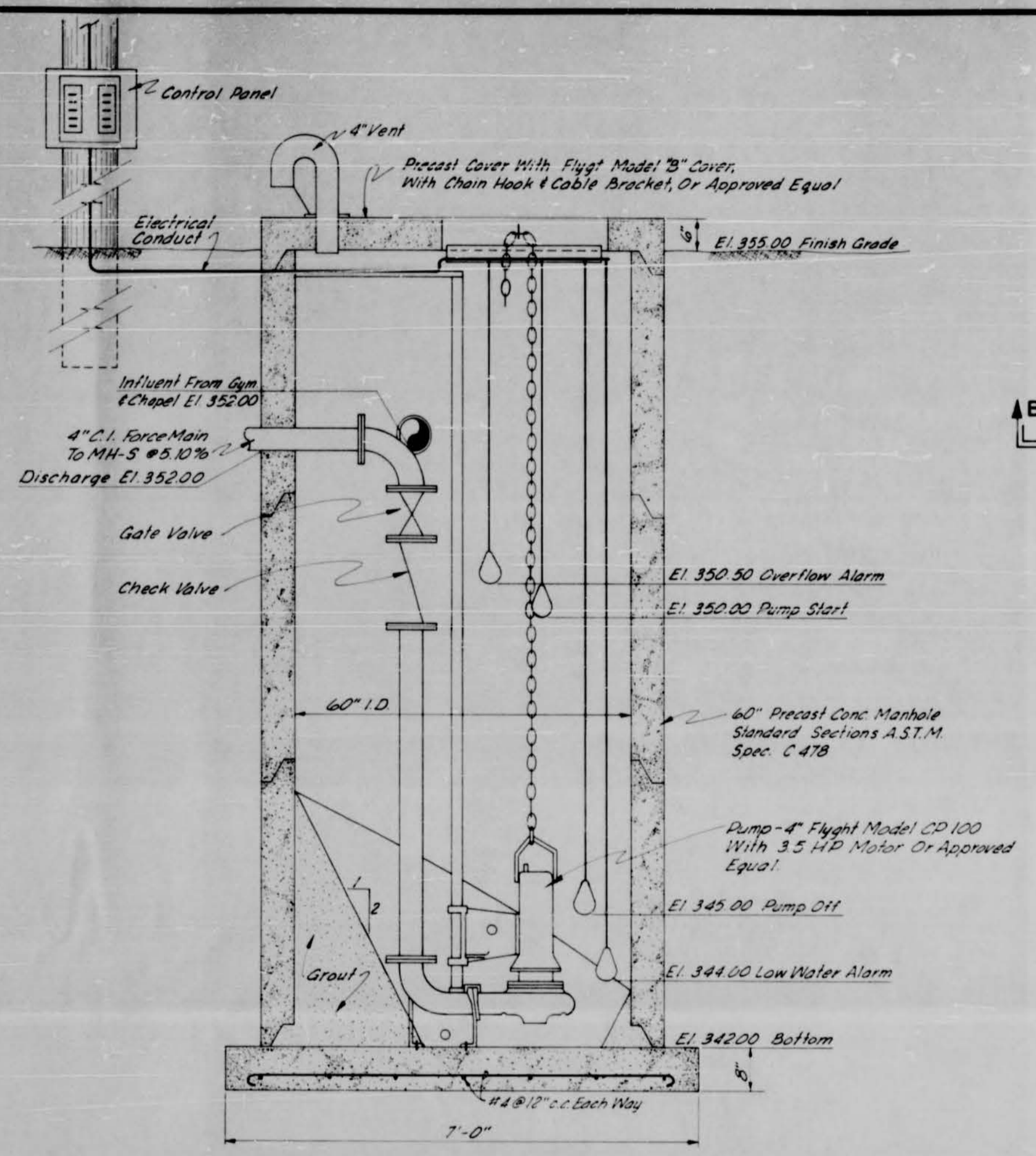
DESIGNED BY: *H.B.S.* NOSCALE  
DRAWN BY: *J.L.H.* DATE: 1-69 Sheet 10 of 13



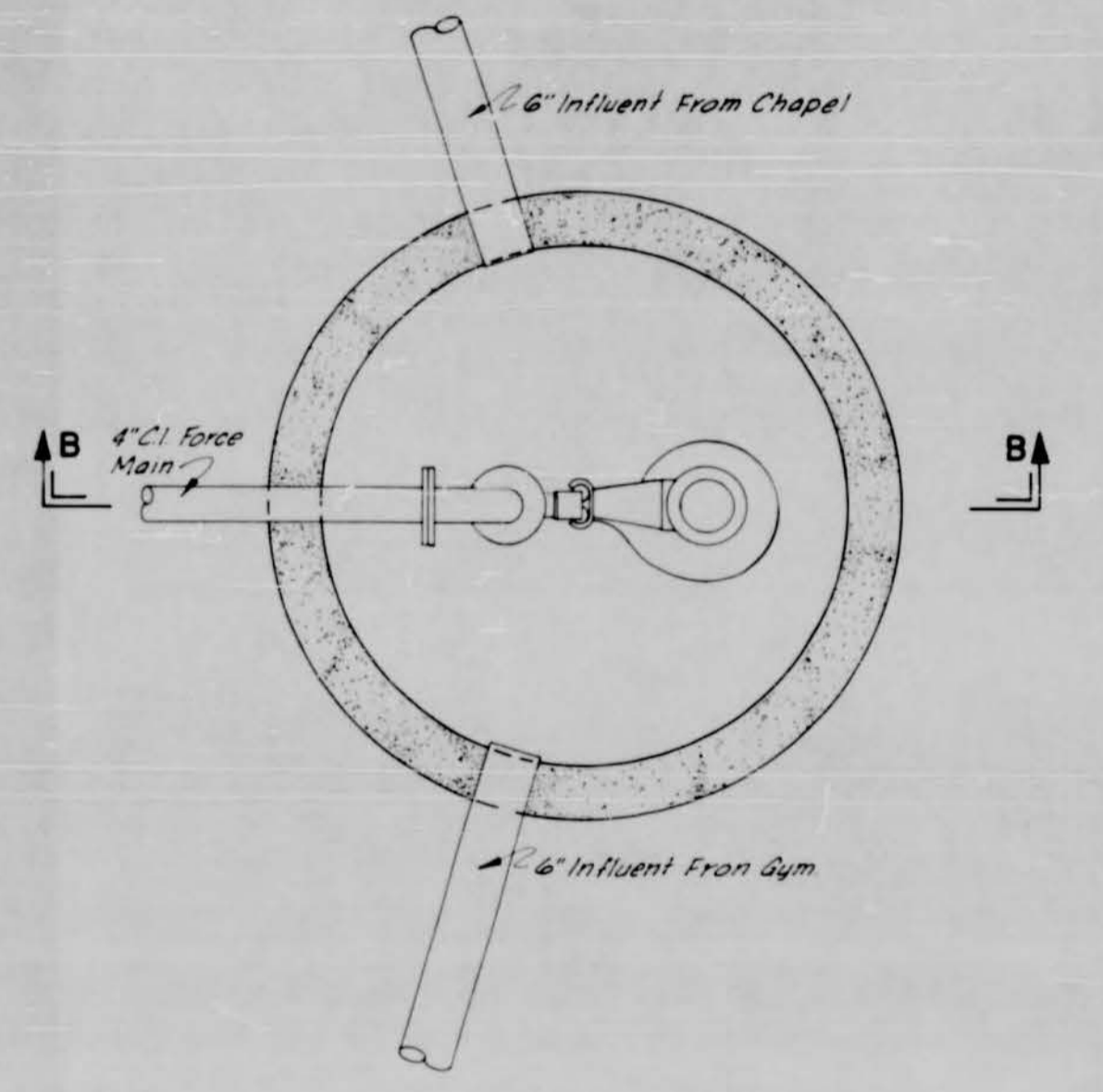
PLAN



SECTION A-A  
TYPICAL SEWER CONNECTION  
NO SCALE



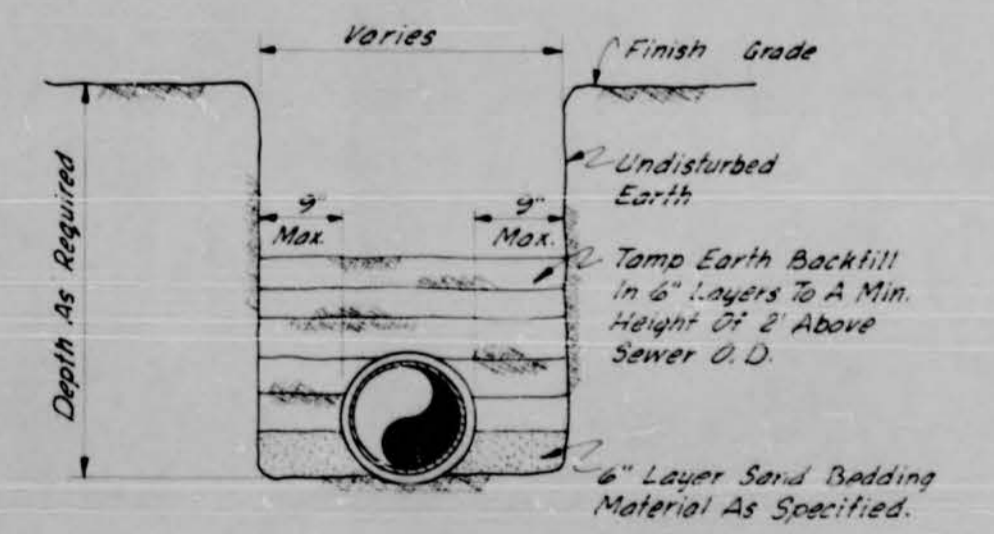
SECTION B-B



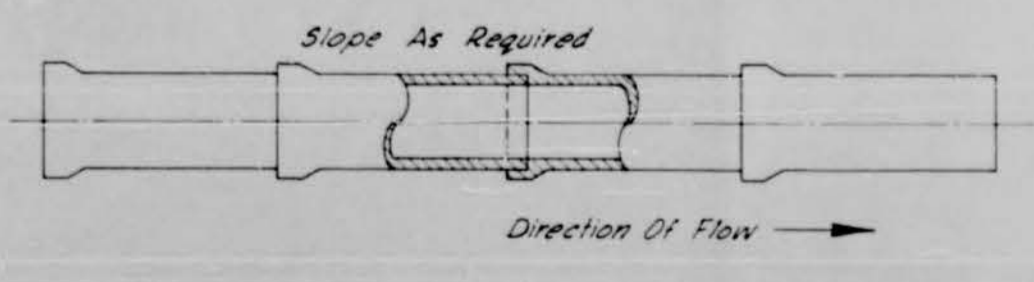
PART PLAN

NOTE:  
(1) See Sheet 1 For Sewage Lift Station Location.  
(2) Sewage Lift Station To Be Furnished With A Spare Pump And Motor.

SEWAGE LIFT STATION  
NO SCALE

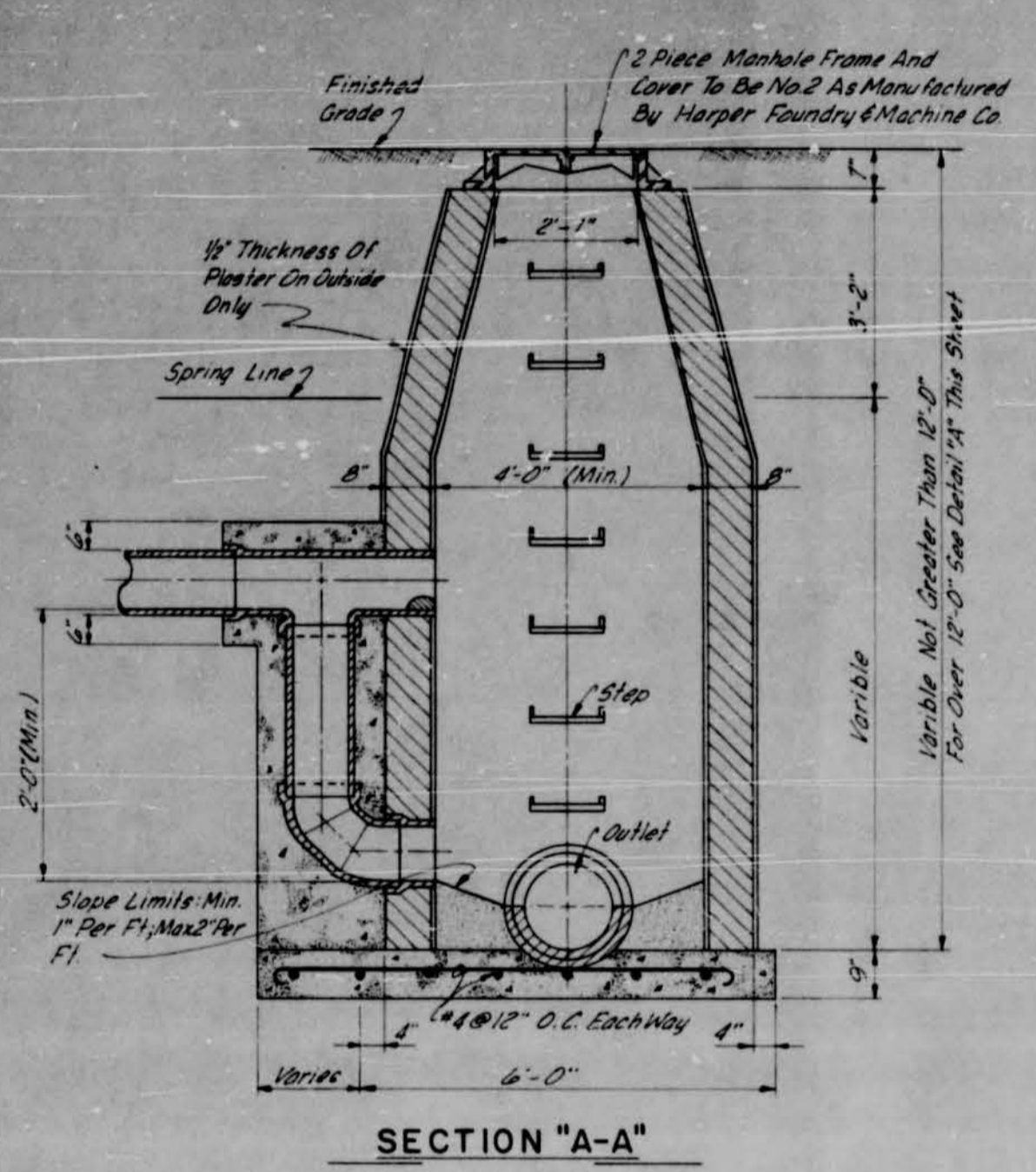


TYPICAL SEWER EMBEDMENT  
NO SCALE

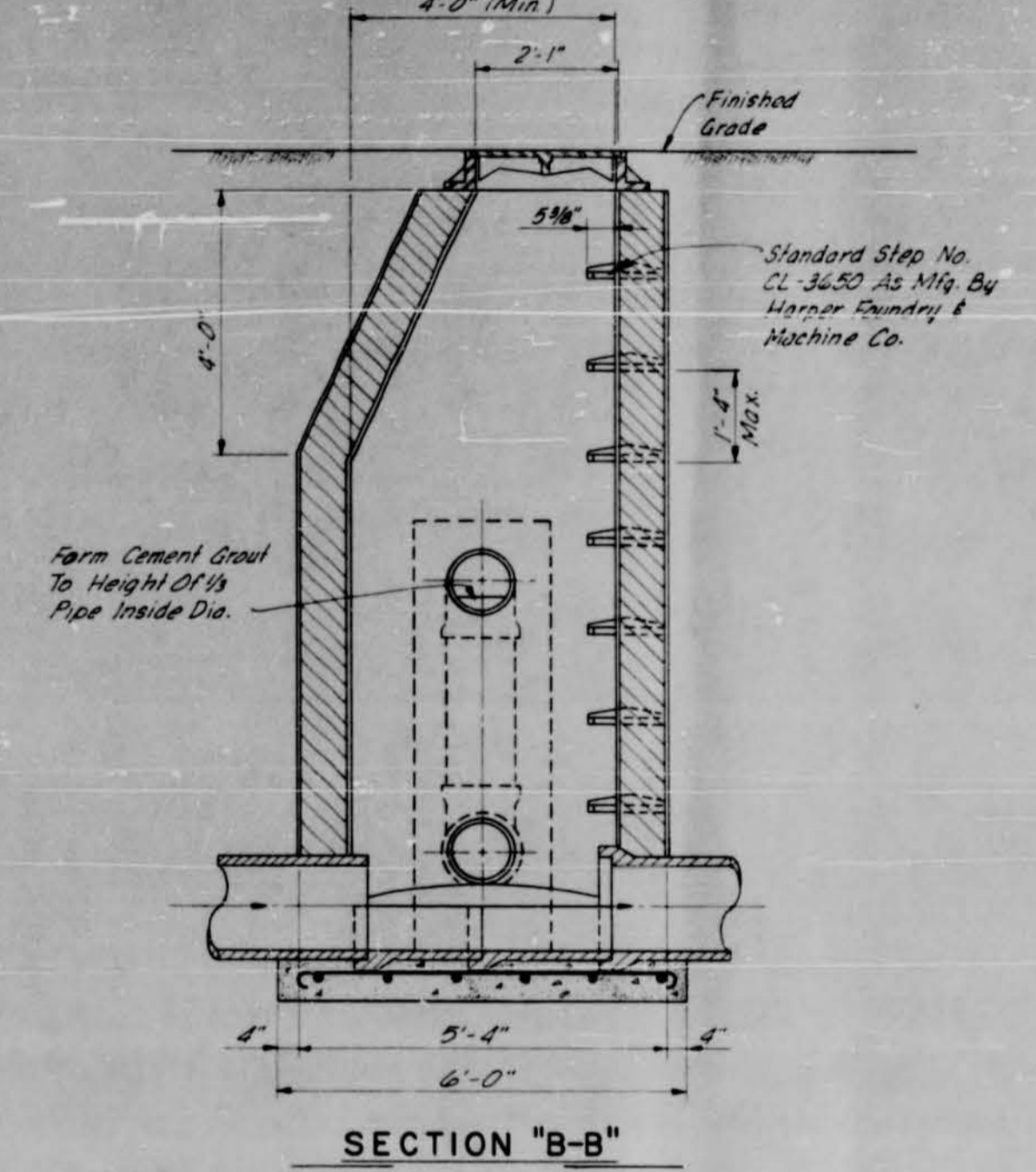


TYPICAL SEWER CONSTRUCTION  
NO SCALE

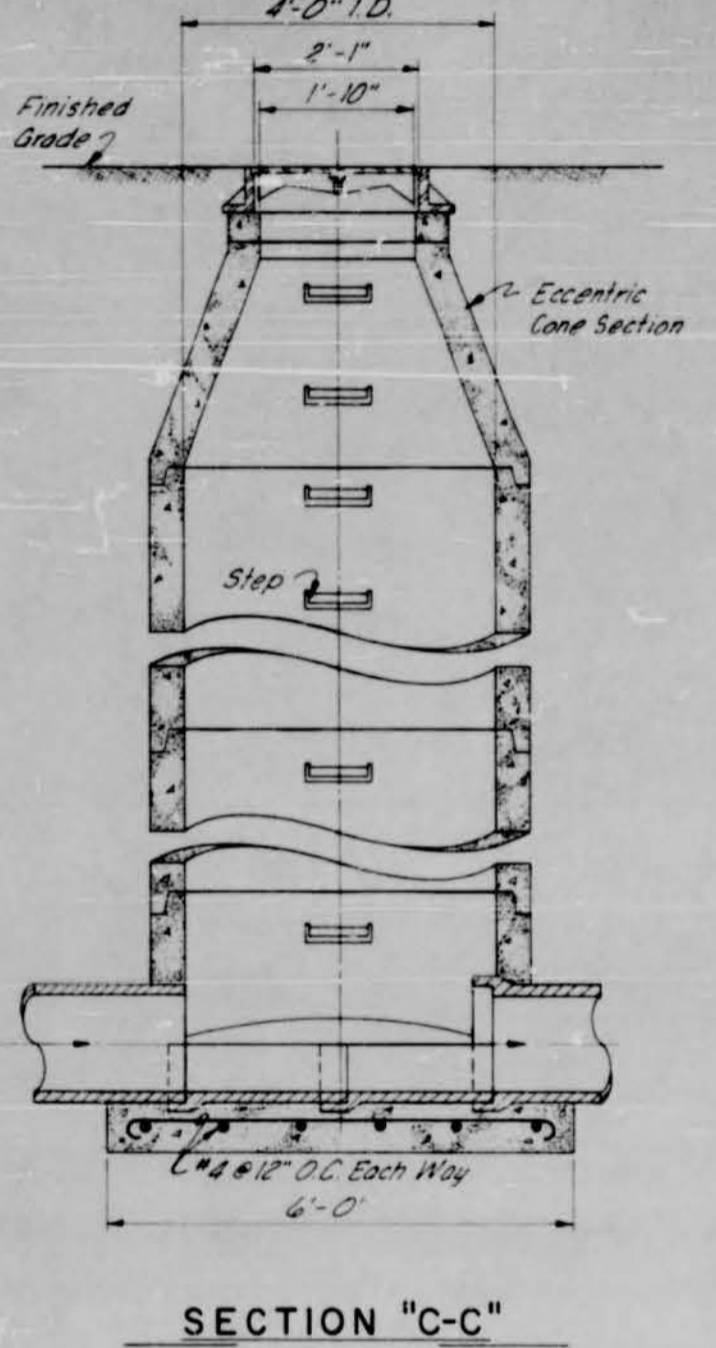
TOUGALOO COLLEGE TOUGALOO, MISSISSIPPI	
SEWER CONNECTIONS AND SEWAGE LIFT STATION DETAILS	
SMITH AND SANDERS, INC. CONSULTING ENGINEERS - JACKSON, MISSISSIPPI	
DESIGNED BY: HMG	NO SCALE
DRAWN BY: JDM	DATE: 1-69
Sheet 11 of 13	



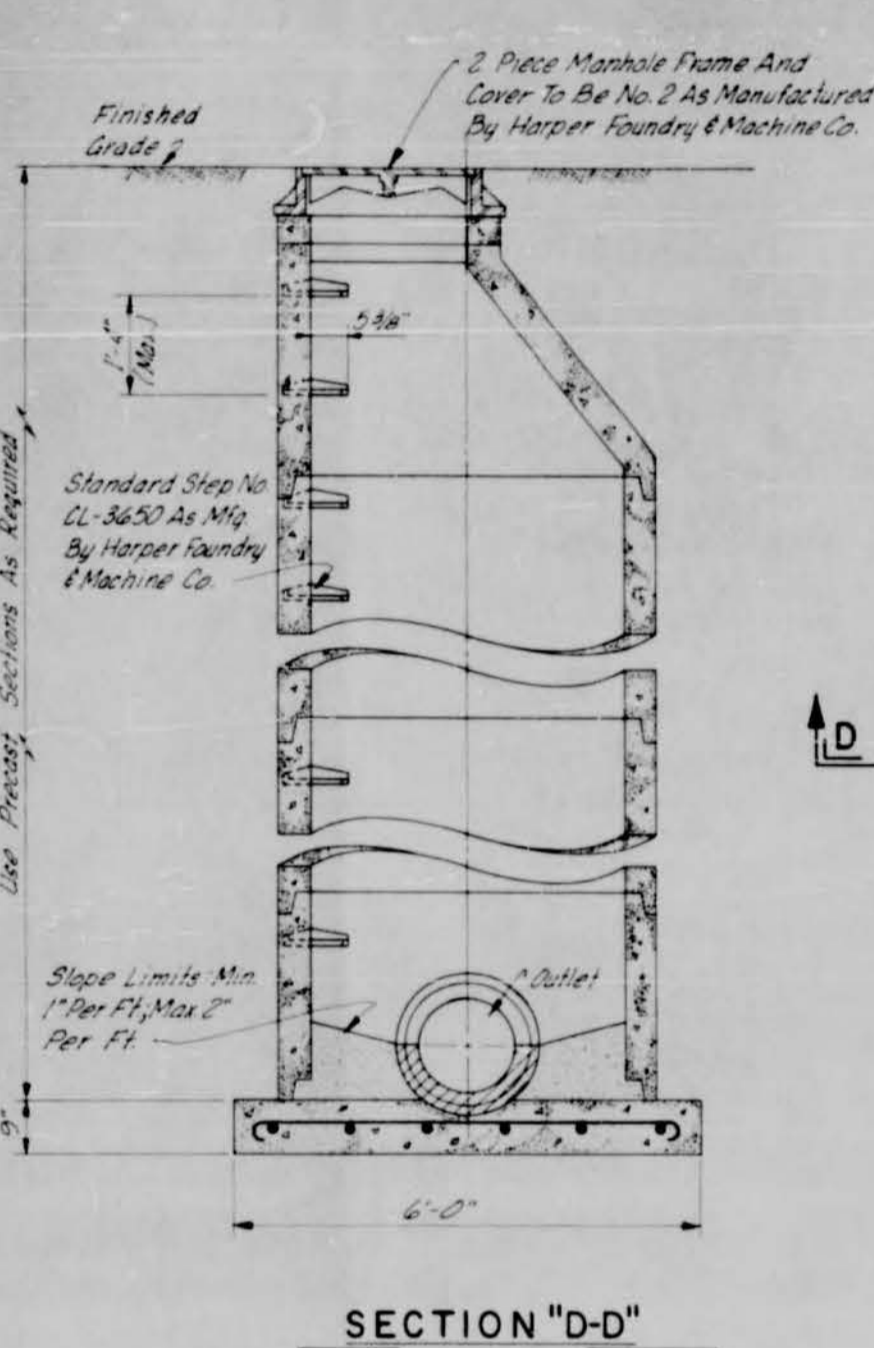
SECTION "A-A"



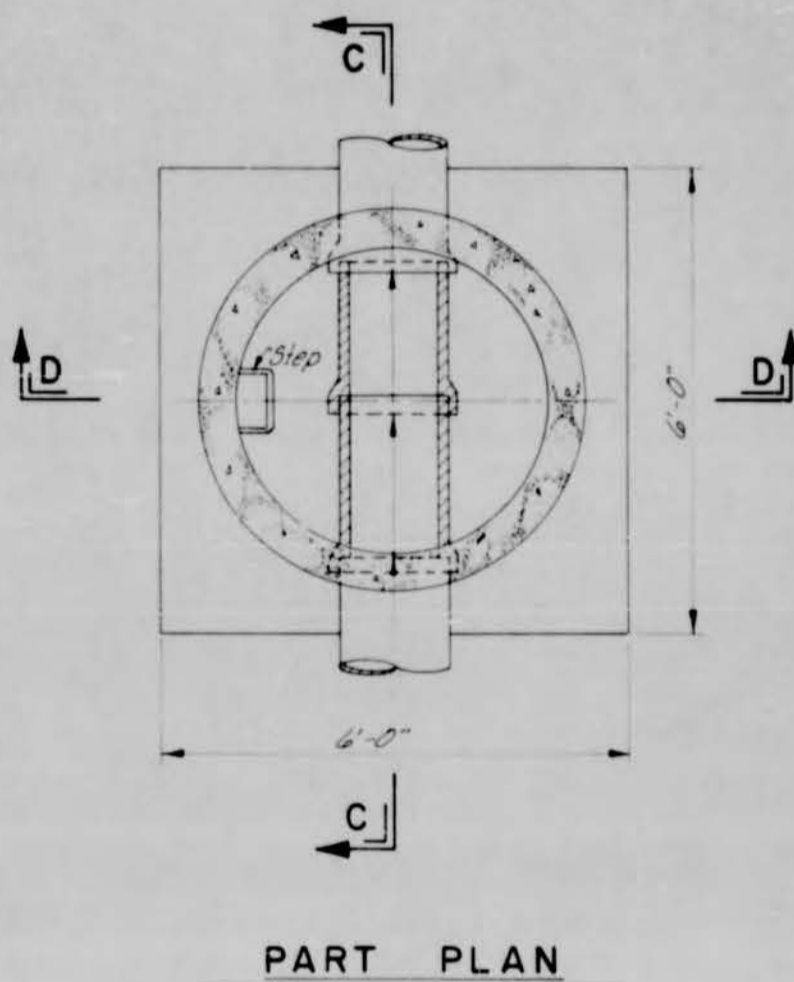
SECTION "B-B"



SECTION "C-C"



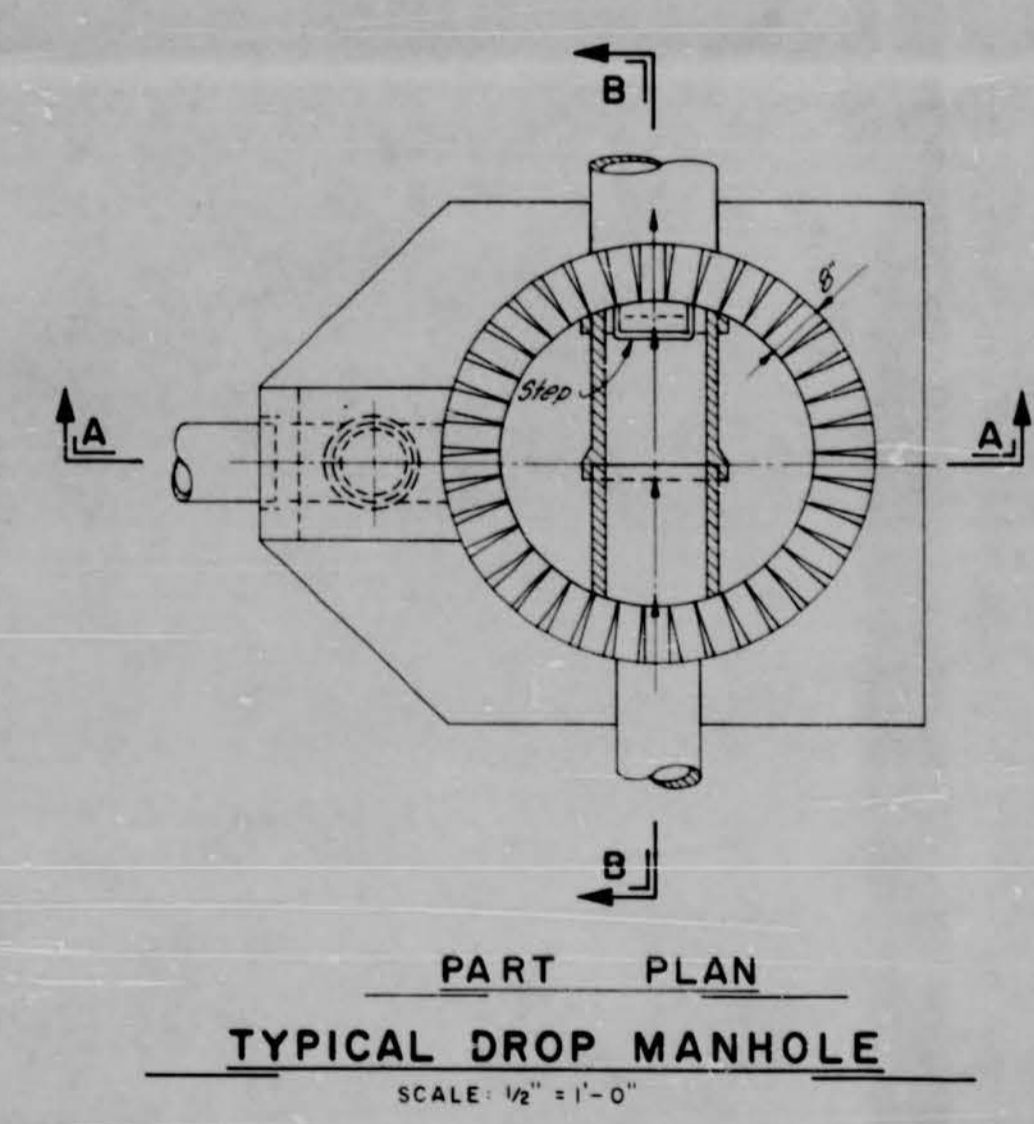
SECTION "D-D"



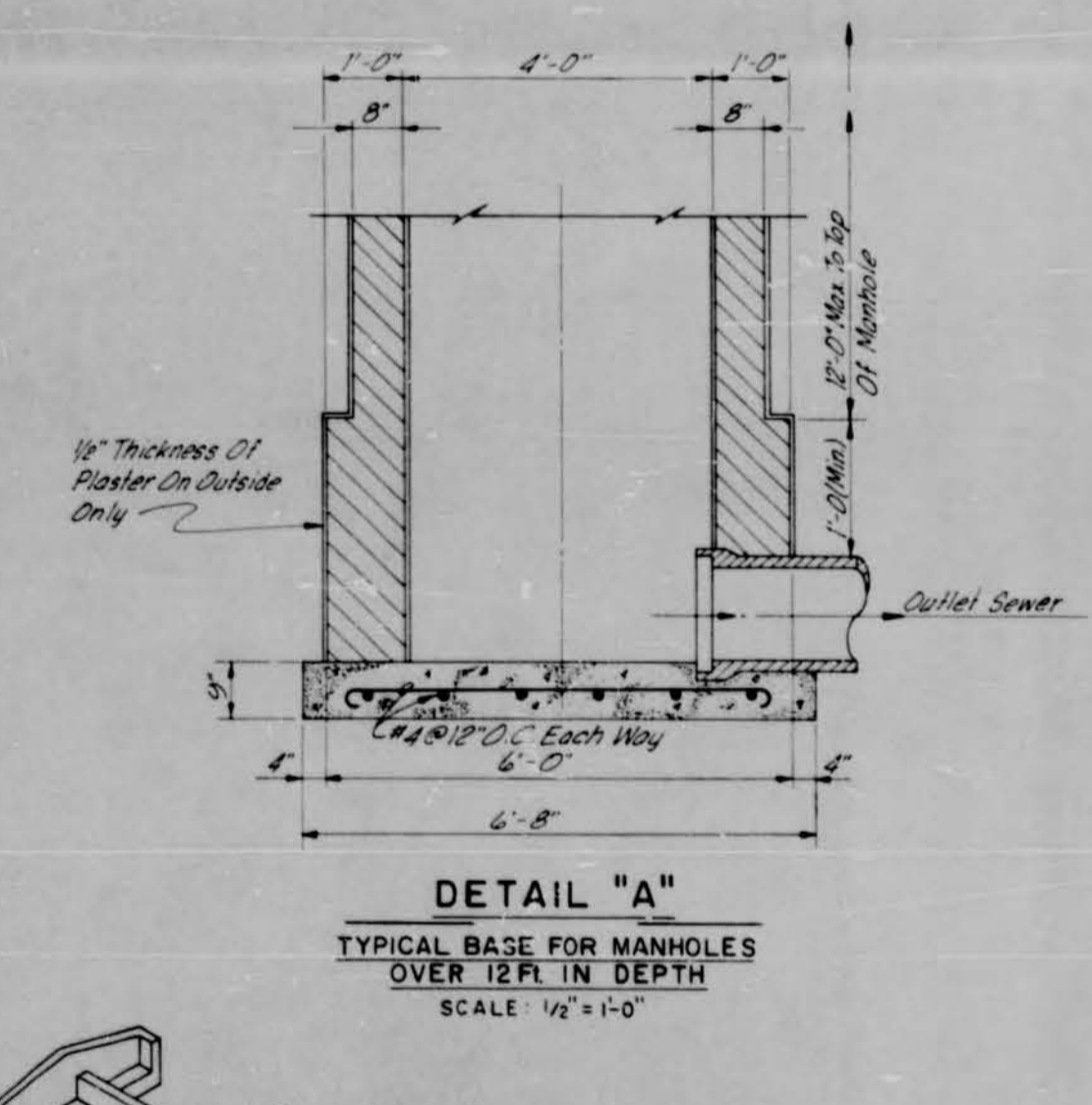
PART PLAN

TYPICAL PRECAST CONCRETE MANHOLE

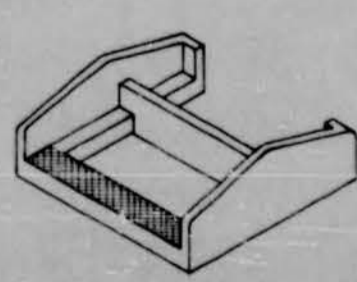
SCALE 1/2" = 1'-0"



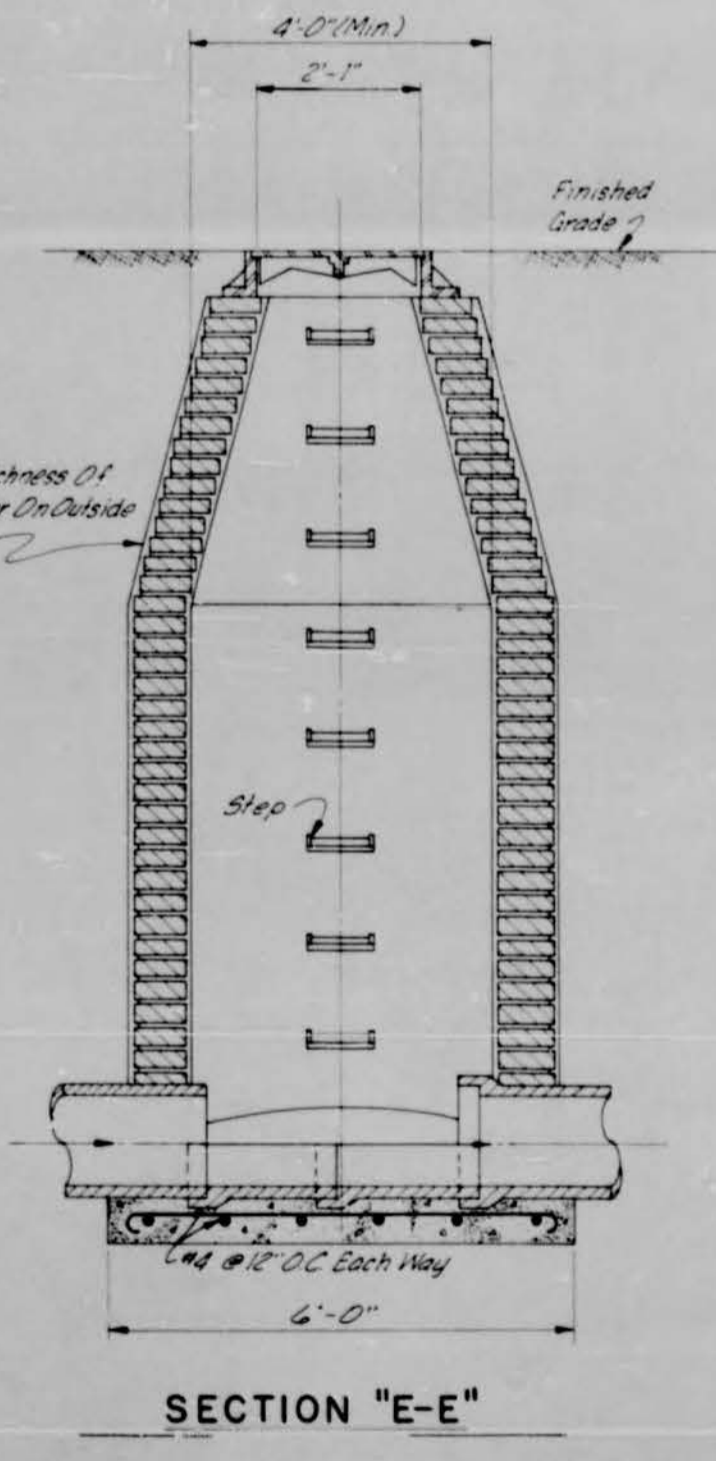
PART PLAN  
TYPICAL DROP MANHOLE  
SCALE 1/2" = 1'-0"



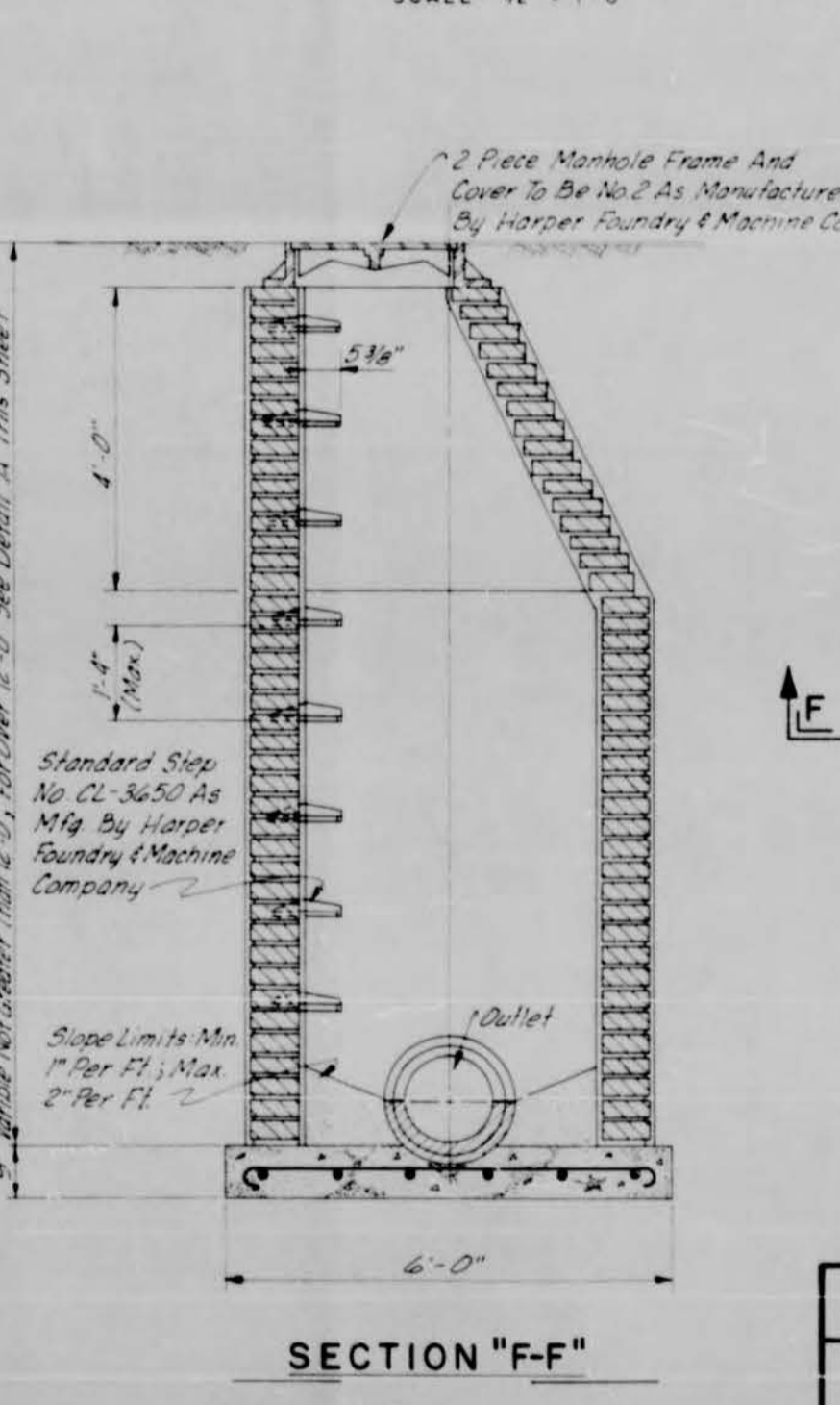
DETAIL "A"  
TYPICAL BASE FOR MANHOLES  
OVER 12 FT. IN DEPTH  
SCALE 1/2" = 1'-0"



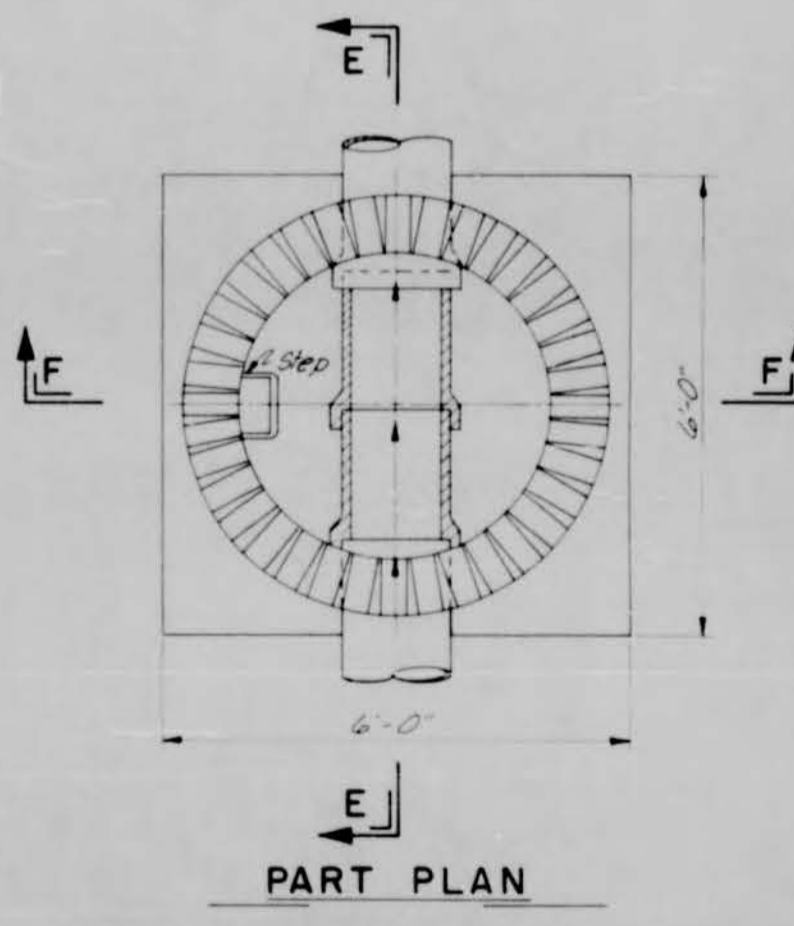
TYPICAL CAST IRON STEP  
NO. CL-3650 AS MFG. BY HARPER FOUNDRY AND MACHINE COMPANY  
NO SCALE



SECTION "E-E"



SECTION "F-F"

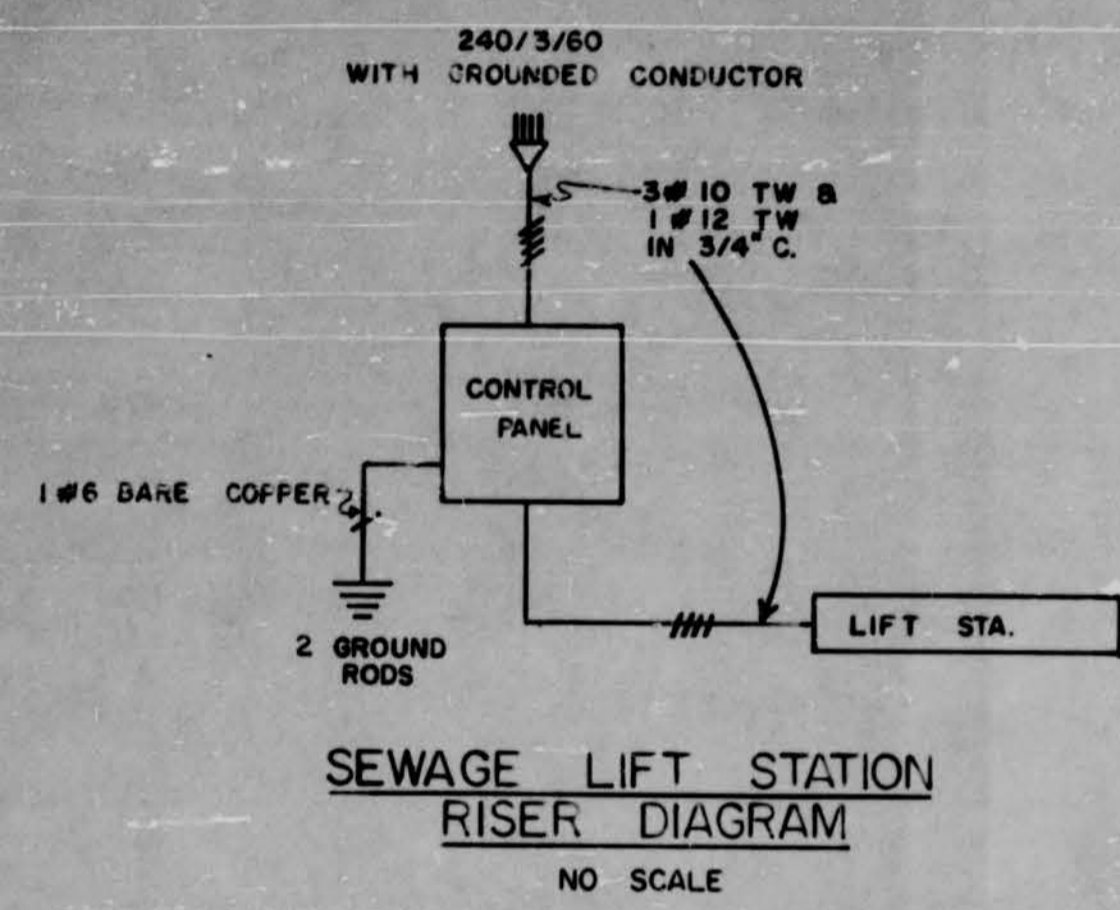


PART PLAN

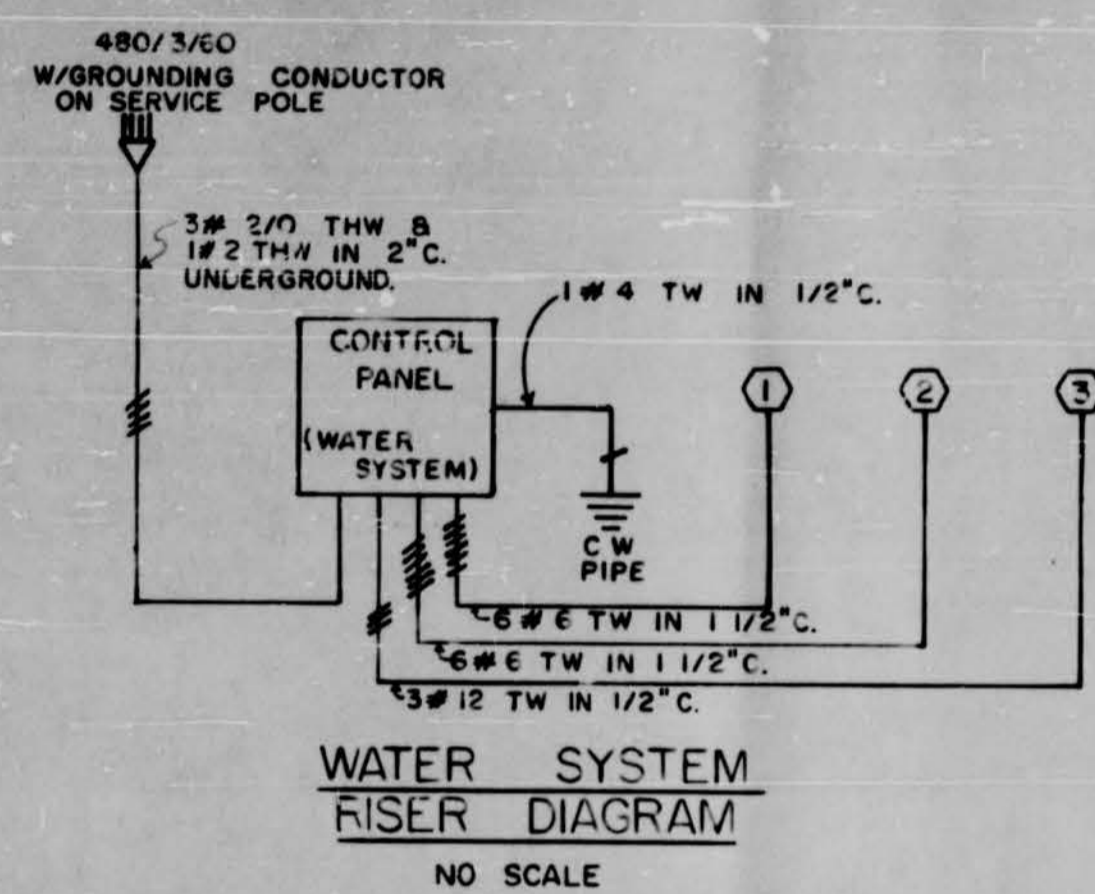
TYPICAL BRICK MASONRY MANHOLE

SCALE 1/2" = 1'-0"

TOUGALOO COLLEGE TOUGALOO, MISSISSIPPI	
STANDARD MANHOLE DETAILS	
SMITH AND SANDERS, INC. CONSULTING ENGINEERS — JACKSON, MISSISSIPPI	
DESIGNED BY J.B.B.	SCALE AS SHOWN
DRAWN BY J.D.M.	DATE 1-69
	Sheet 12 of 13

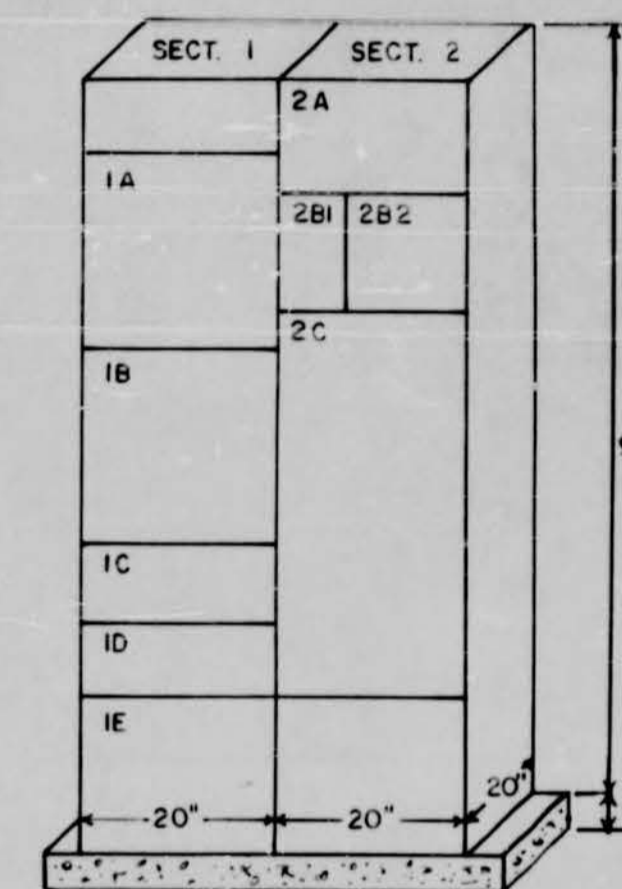


SEWAGE LIFT STATION  
RISER DIAGRAM  
NO SCALE

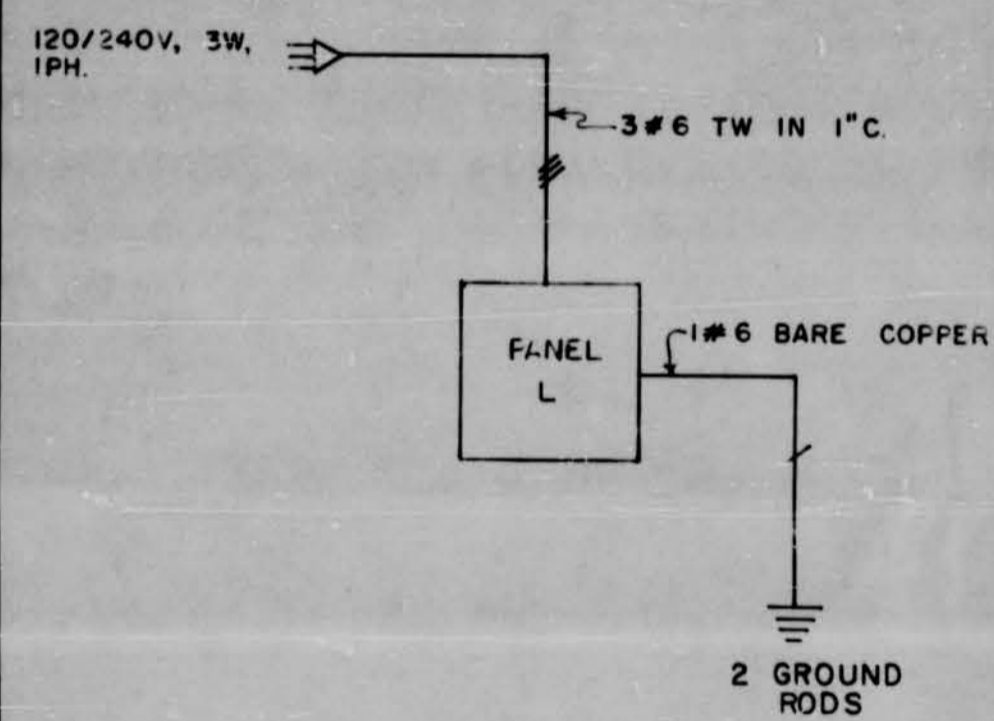


WATER SYSTEM  
RISER DIAGRAM  
NO SCALE

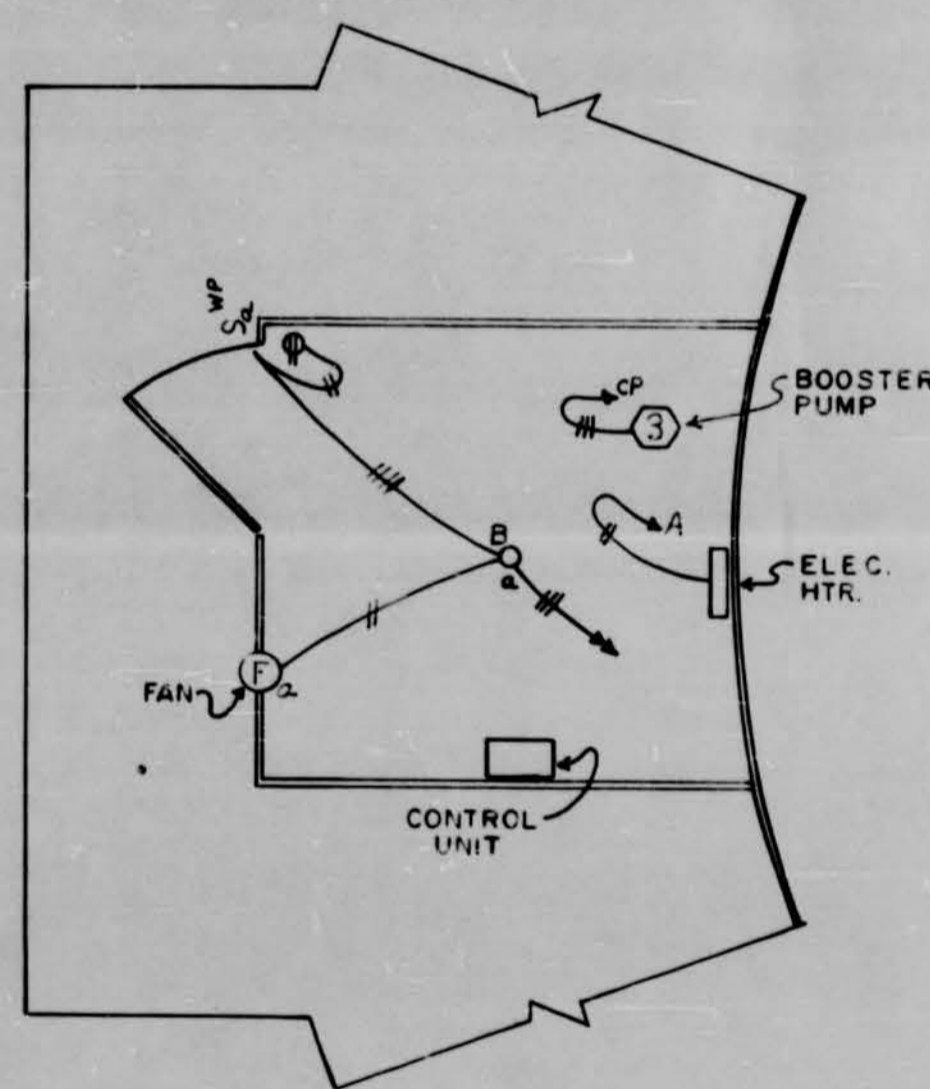
CUBICLE NO.	DESCRIPTION
1A	WATER WELL NO. 1: 50 HP, CIRCUIT BREAKER COMBINATION PART-WINDING STARTER, 100A, 3P, TYPE FA, 2 BPW ①
1B	WATER WELL NO. 2: 50 HP, CIRCUIT BREAKER COMBINATION PART-WINDING STARTER, 100A, 3P, TYPE FA, 2 BPW ②
1C	BOOSTER PUMP: 1 HP, CIRCUIT BREAKER COMBINATION ACROSS-THE-LINE STARTER, 15A, 3P, TYPE EH, 0 BPV ③
1D	SPACE
1E	TRANSFORMER, 7 1/2 KVA, 1PH, 480-120/240 VOLTS, DRY TYPE.
2A	INDICATING CLOCK.
2B1	PRIMARY CIRCUIT BREAKER FOR THE TRANSFORMER: 30A, 2P, TYPE EH.
2B2	PANELBOARD "A": NLAB, 50A, 2P, MAIN BREAKER, 50A BUSES, 10-20/1 & 2-20/2 BRANCH BREAKERS.
2C	CONTROLS.



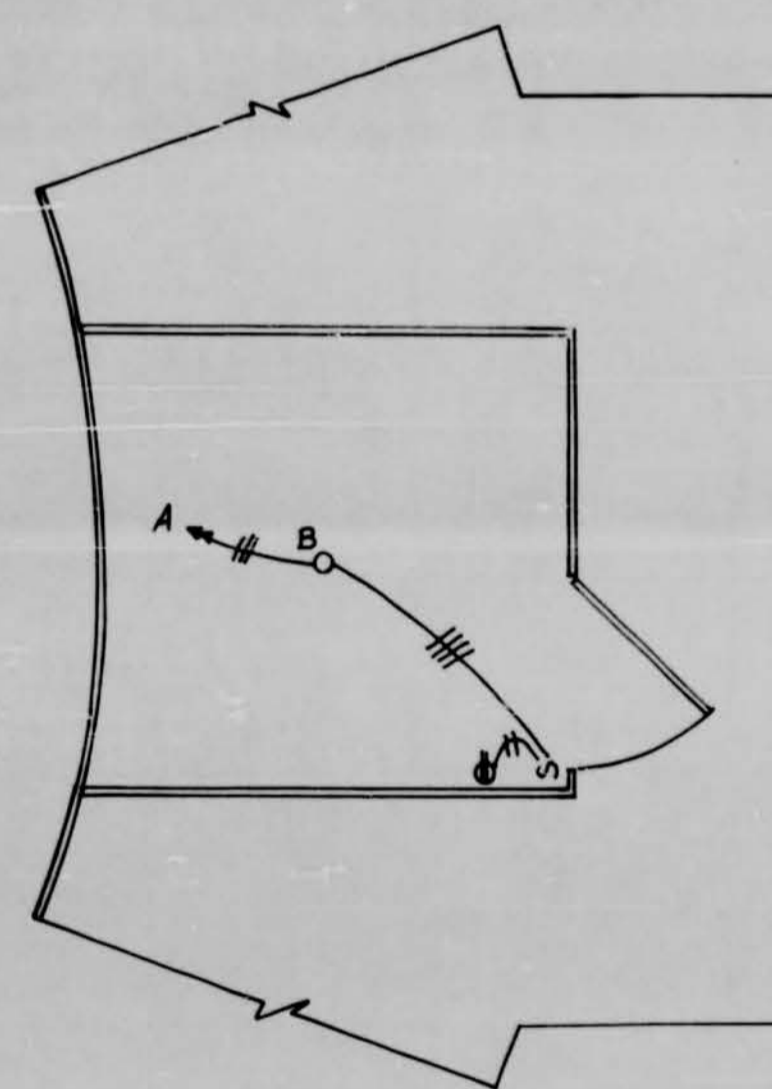
WATER SYSTEM CONTROL PANEL  
LAYOUT  
NO SCALE



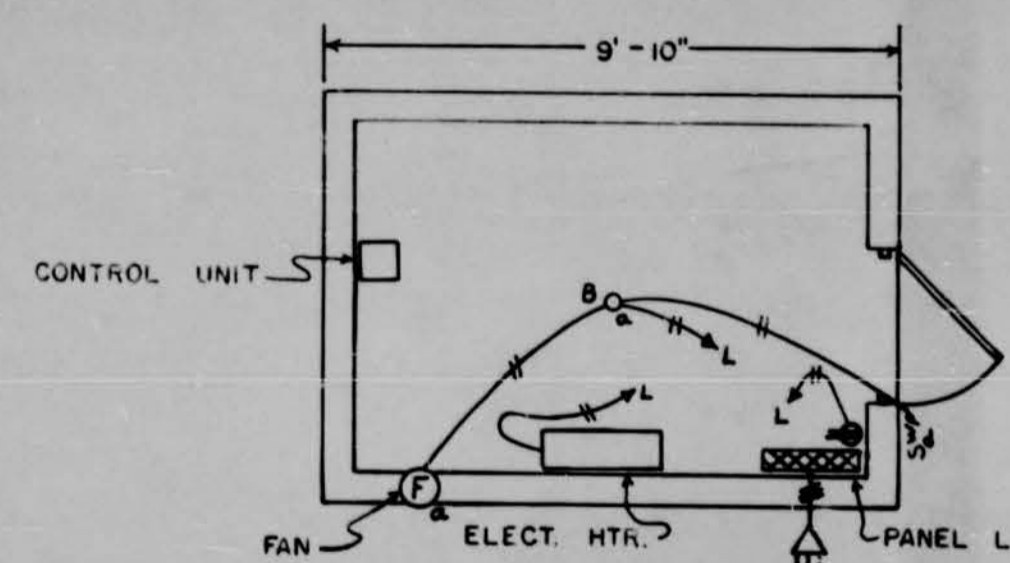
RISER DIAGRAM FOR CHLORINATION HOUSE  
AT LAGOON  
NO SCALE



CHLORINATOR ROOM AT TANK  
SCALE 1" = 2'



ENTRANCE ROOM TO BASE OF  
WATER TANK  
SCALE 1" = 2'



CHLORINATION HOUSE AT LAGOON  
NO SCALE

PANEL L: TYPE NLAB 50/2 MAIN SKR.; 6-20/1 & 1-20/2 BR. BRKS.

SCHEDULE

SCHEDULE OF MECHANICAL EQUIPMENT

- ① WATER WELL NO. 1 50 HP
- ② WATER WELL NO. 2 50 HP
- ③ BOOSTER PUMP 1 HP

LIGHTING FIXTURE SCHEDULE

TYPE	MOUNTING	FIXTURES	LAMPS
A	TANK	GENERAL ELECTRIC C947G013 W/RED LEIS	2-100
B	SURFACE	P 8 S T7	100
CC	SURFACE	PERFECTITE VC-61-G (GREEN GLASS)	100
CK	SURFACE	PERFECTITE VC-61-R (RED GLASS)	100

RECEPTACLES

- Ⓛ DUPLEX RECEPTACLE, GROUNDABLE -15A, 125V, AH5252
- Ⓜ DUPLEX RECEPTACLE, GROUNDABLE, WEATHERPROOF -15A, 125V, AH5252 WP.

TIME SWITCH: SANGAMO WZ-21.

TOUGALOO COLLEGE TOUGALOO, MISSISSIPPI		
ELECTRICAL DETAILS		
SMITH AND SANDERS, INC. CONSULTING ENGINEERS - JACKSON, MISS.		
DESIGNED BY REB.	AS NOTED	SHEET 13 OF 13
DRAWN BY WH.	DATE 1-69	