

**AS-CONSTRUCTED**  
*D. Scott* *T.W. Little* *Nov 24/86*  
 SURVEY ENGINEERING DATE  
 WATERWORKS, WASTE & DISPOSAL DEPARTMENT

NOTE: OUTFALL RECONSTRUCTED TO REPLACE 1200 CMP AND 1050 CMP. SEE DWG. L-1144 FOR CONSTRUCTION DETAILS

NOTE: CHAINAGE ALONG C OF SECONDARY SEWER  
 BENCH MARK: 54-001, ELEV. 231.117, FIELD BOOK: F-615

**METRIC**  
 WHOLE NUMBERS INDICATE MILLIMETRES  
 DECIMALIZED NUMBERS INDICATE METRES

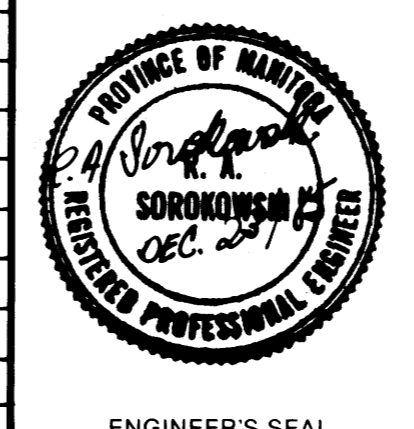
150 mm W.M.		150 mm W.M.		HYDRO		150 mm W.M.		WATERMAIN	
	HYDRANT		VALVE		CONCRETE		LAND DRAINAGE SEWER		WASTE WATER SEWER
	300 mm L.D.S.		300 mm L.D.S.		OILED SURFACE ROADWAY		PROPERTY LINE		SURVEY BAR
	250 mm W.W.S.		250 mm W.W.S.		HYDRO, TELEPHONE POLES		FENCE		GARAGE / HOUSE
	MANHOLE		CATCH BASIN		JUNCTIONS		CULVERT		GAS
	CURB INLET		JUNCTIONS		EXISTING		PROPOSED		EXISTING
	CULVERT		PROPOSED		EXISTING		PROPOSED		EXISTING
	GAS		PROPOSED		EXISTING		PROPOSED		EXISTING
	EXISTING		PROPOSED		EXISTING		PROPOSED		EXISTING

**LOCATION APPROVED UNDERGROUND STRUCTURES**

SYMBOLS FOR UNDERGROUND STRUCTURES DATE

NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION

NO.	1	1050 DIA. & 1200 DIA. OUTFALLS REMOVED - REPLACED WITH 2000 DIA.	FEB. 93	KT
REVISIONS				
DATE				
APP.				



**WORKS & OPERATIONS DIVISION**  
**WATERWORKS, WASTE & DISPOSAL DEPARTMENT**

DESIGNED BY: T.J.W.  
 CHECKED BY: R.A.S.  
 APPROVED BY: *[Signature]*

DRAWN BY: T.M.  
 DATE: NOVEMBER 1985  
 DATE:

**THE CITY OF WINNIPEG**  
 WORKS & OPERATIONS DIVISION

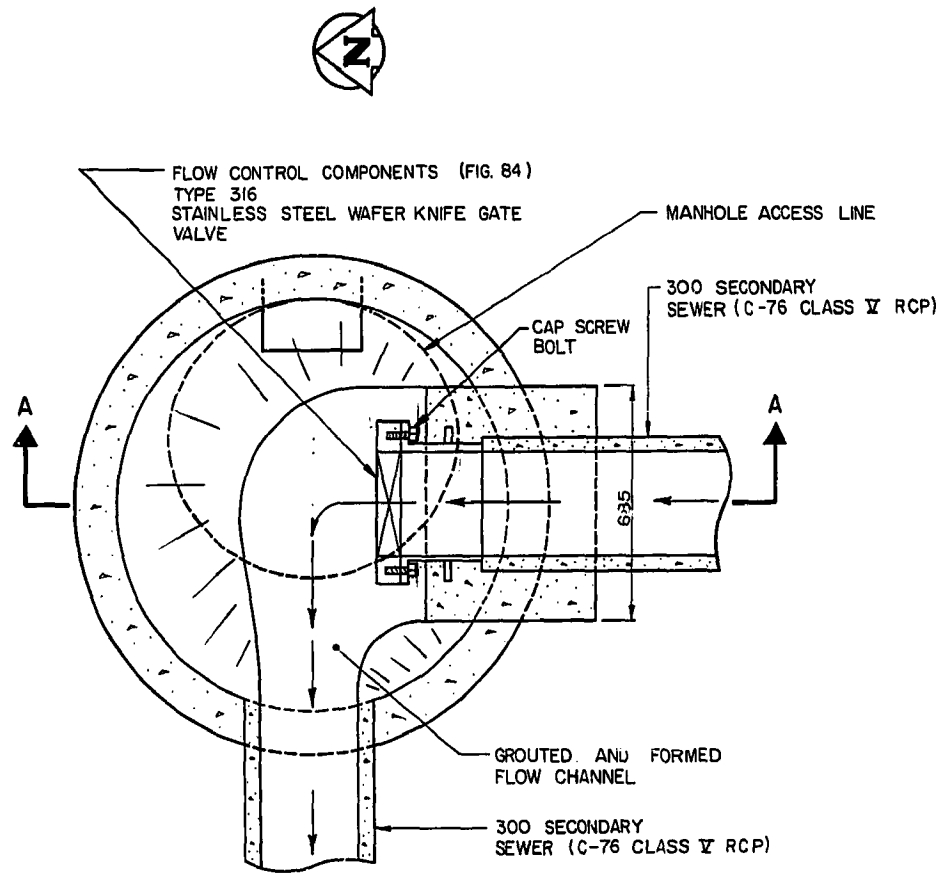
**RELOCATION OF THE METCALFE SECONDARY SEWER**

RELEASED FOR CONSTRUCTION DATE: *[Signature]*

SCALE: HORIZ. 1 : 500  
 VERT. 1 : 50

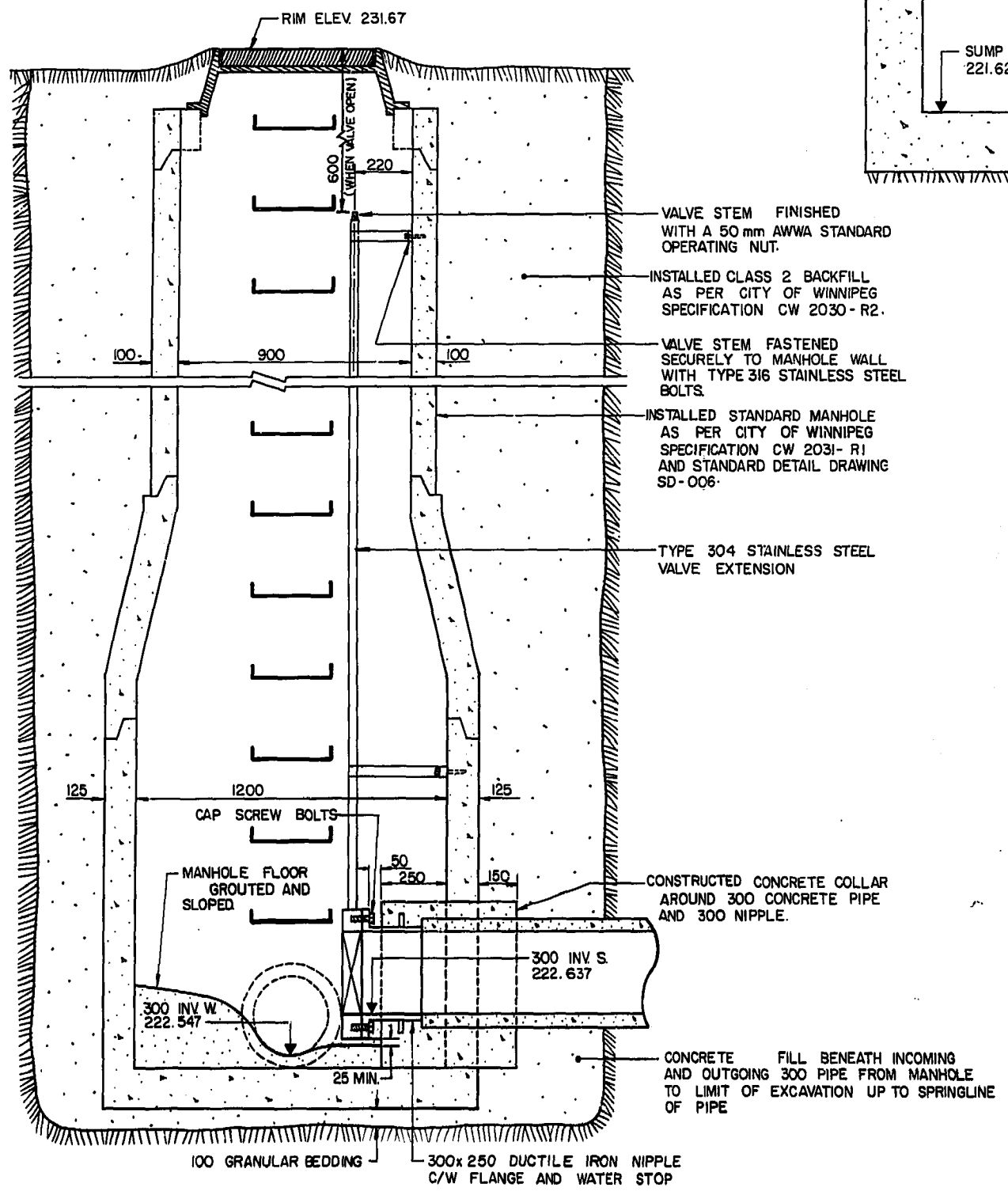
DRAWING NO: **1163**

MICROFILMED NOV 187 file # S S 10166

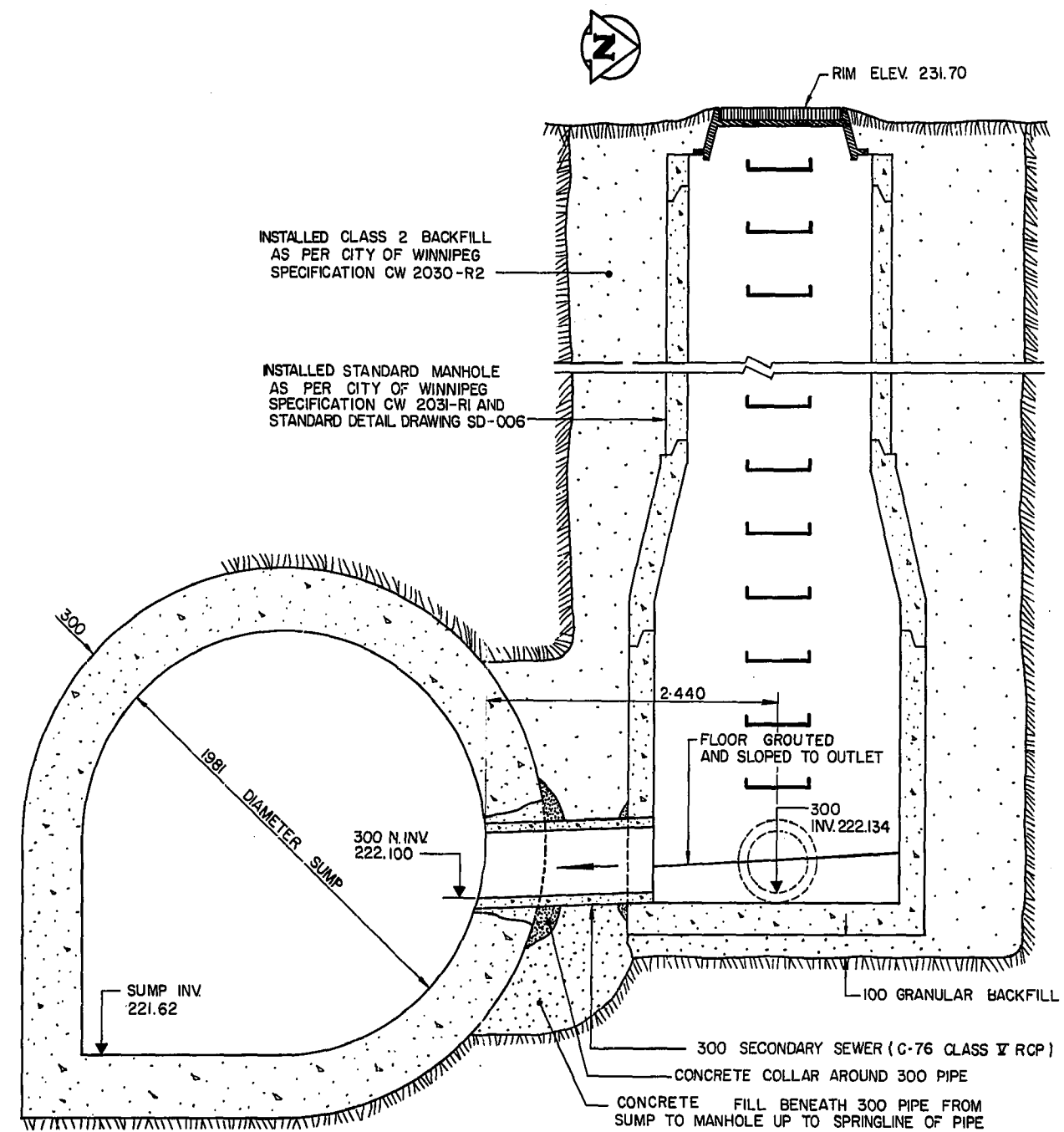


**PLAN VIEW DETAIL "D"**  
SCALE: 1 : 15

**INSTALLATION OF WAFER KNIFE GATE IN MANHOLE**

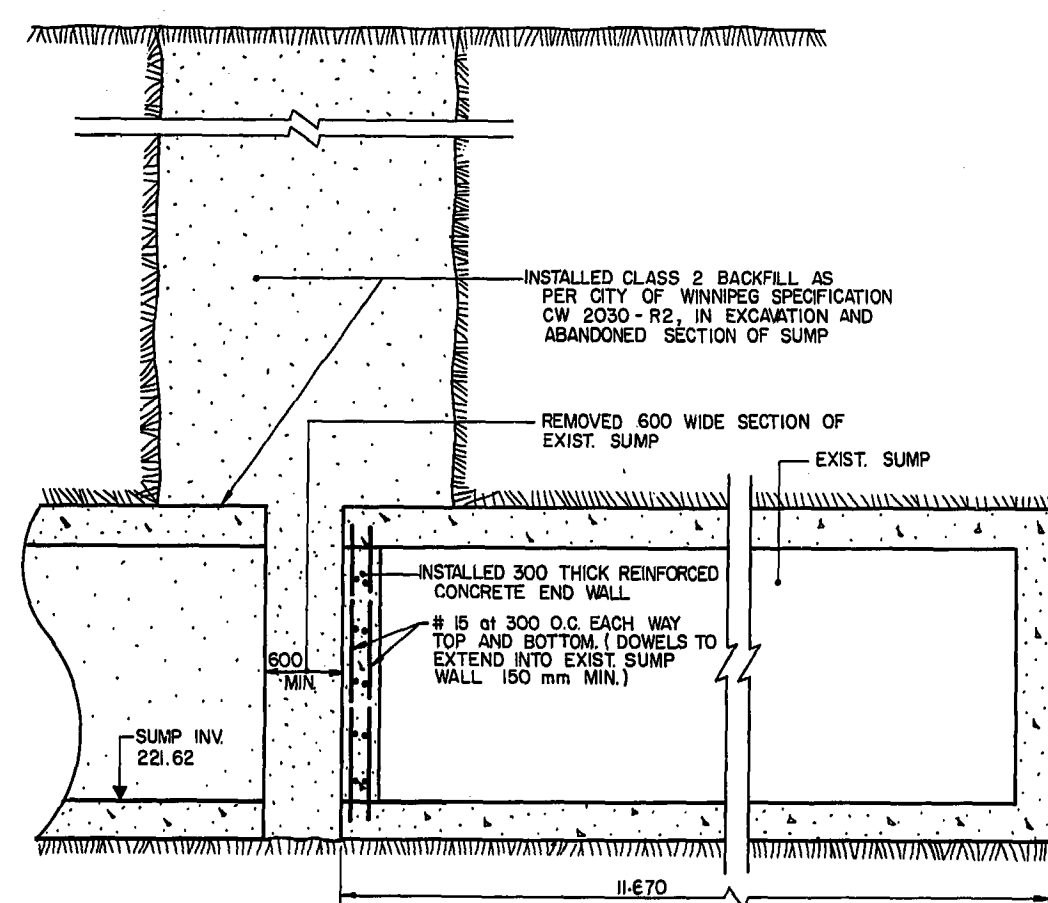


**SECTION A-A**  
SCALE: 1 : 15



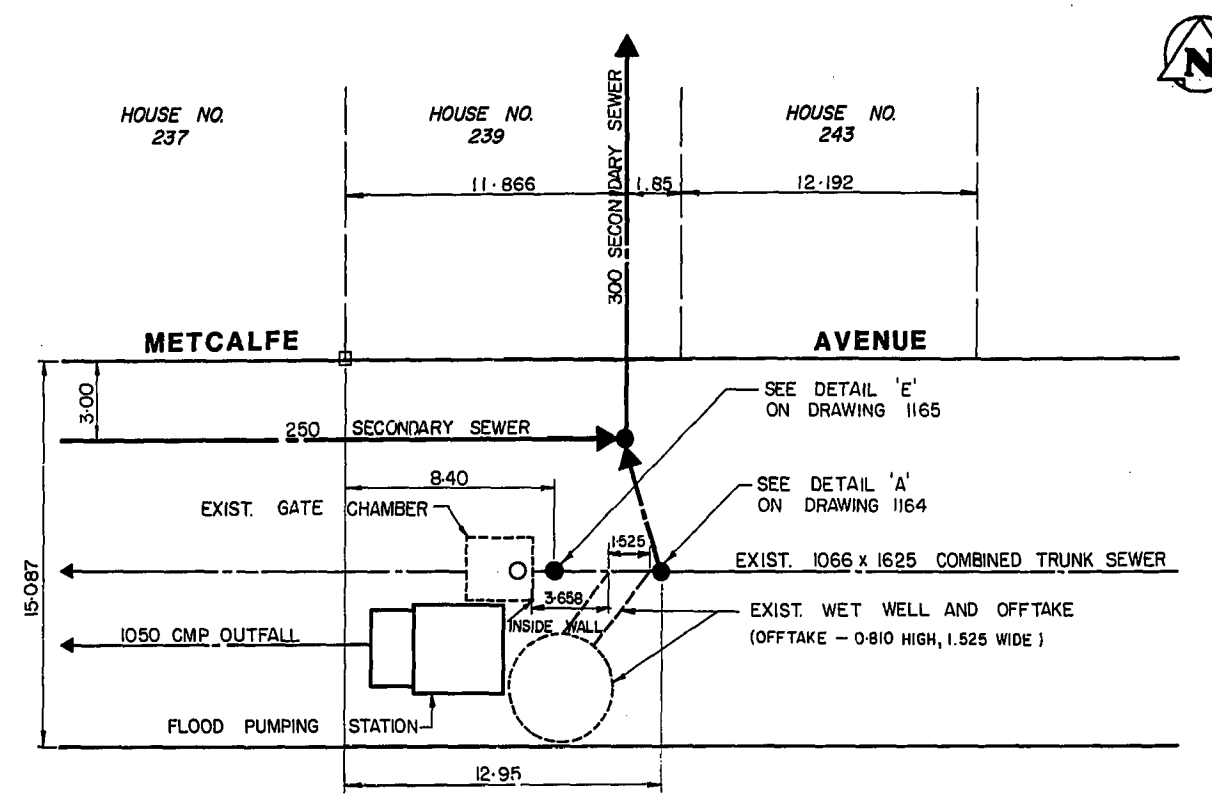
**DETAIL "C"**  
SCALE: 1 : 20

**300 SECONDARY SEWER CONNECTION TO EXISTING SUMP**



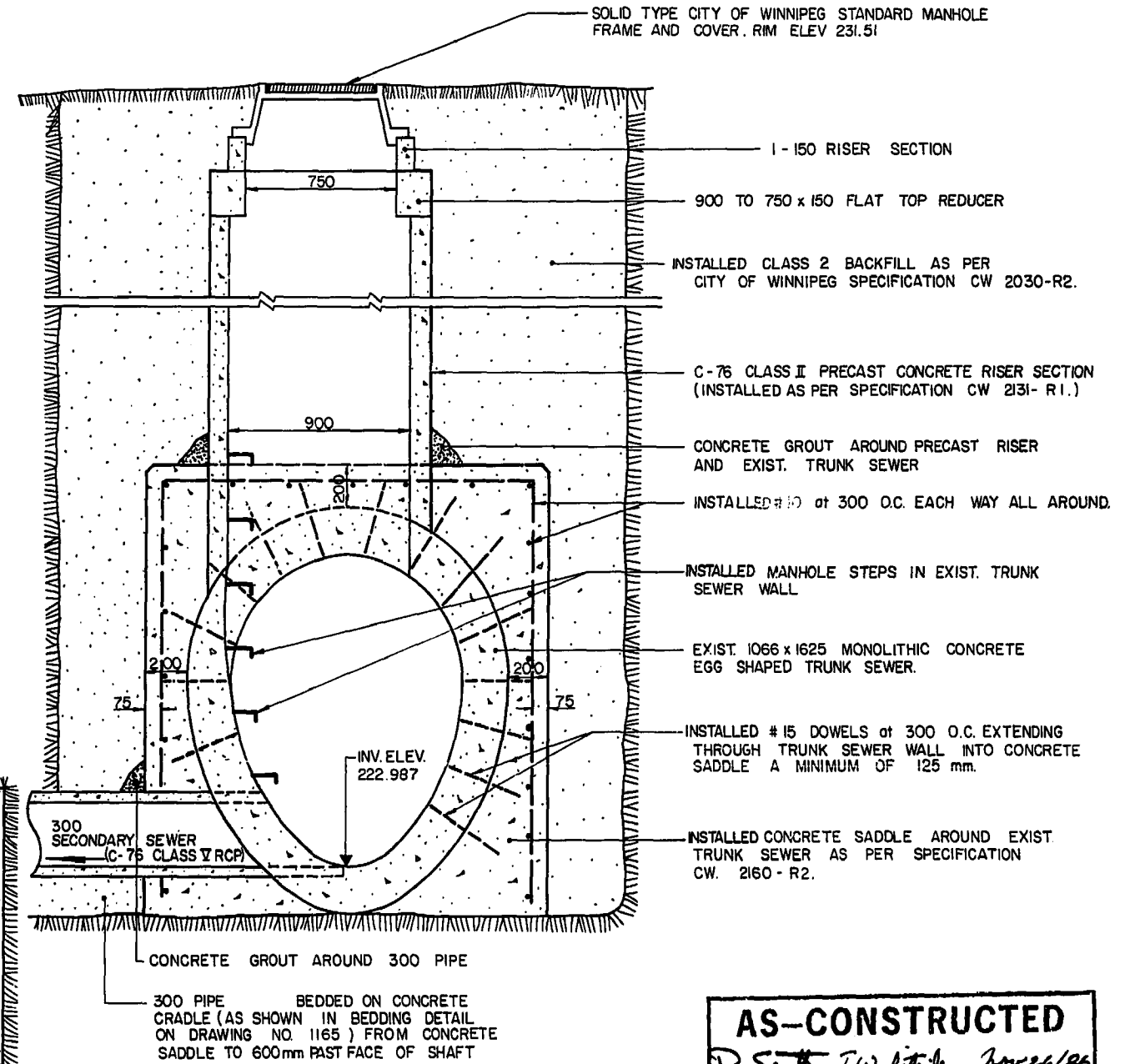
**DETAIL "B"**  
N.T.S.

**SHORTENING OF EXISTING SUMP**



**SITE PLAN**  
N.T.S.

**MANHOLE LOCATIONS ON METCALFE TRUNK SEWER**



**DETAIL "A"** N.T.S.

**SECONDARY SEWER CONNECTION TO EXISTING TRUNK SEWER**

**AS-CONSTRUCTED**  
D. Smith Survey Engineer  
November 1985  
WATERWORKS, WASTE & DISPOSAL DEPARTMENT

8 M ELEV	54-001	FIELD BOOK #615
DESIGNED BY	TJW	CHECKED BY RAB
DRAWN BY	TM	APPROVED BY [Signature]
HOR SCALE	AS SHOWN	RELEASED FOR DISTRIBUTION [Signature]
VERTICAL	AS SHOWN	DATE NOVEMBER 1985
NO. REVISIONS	DATE	BY

**WORKS & OPERATIONS DIVISION**  
WATERWORKS, WASTE & DISPOSAL DEPARTMENT

ENGINEER'S SEAL  
[Professional Engineer Seal]

CONSULTANT DRAWING NO.

**THE CITY OF WINNIPEG**  
WORKS AND OPERATIONS DIVISION

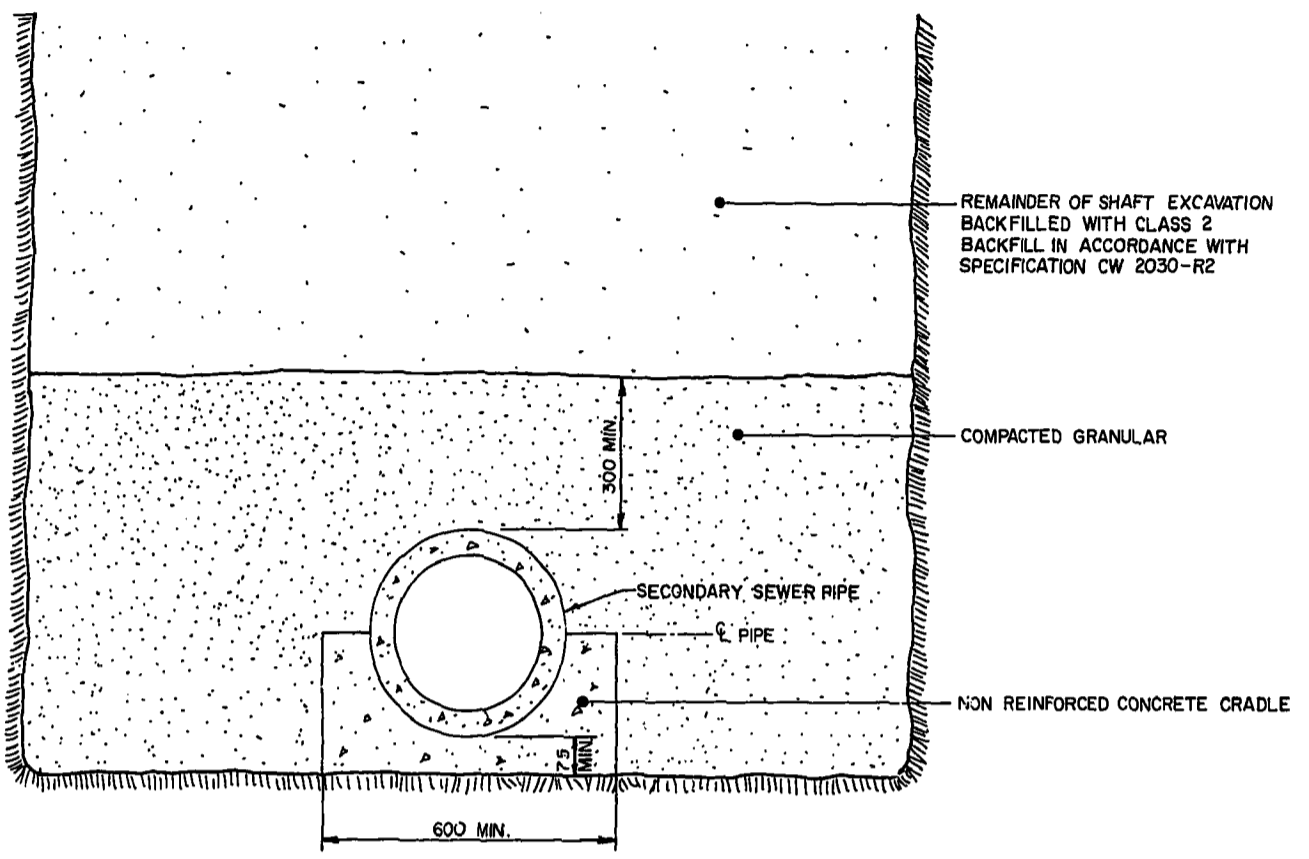
**RELOCATION OF THE METCALFE SECONDARY SEWER**

**DETAIL "A", DETAIL "B", DETAIL "C", DETAIL "D"**

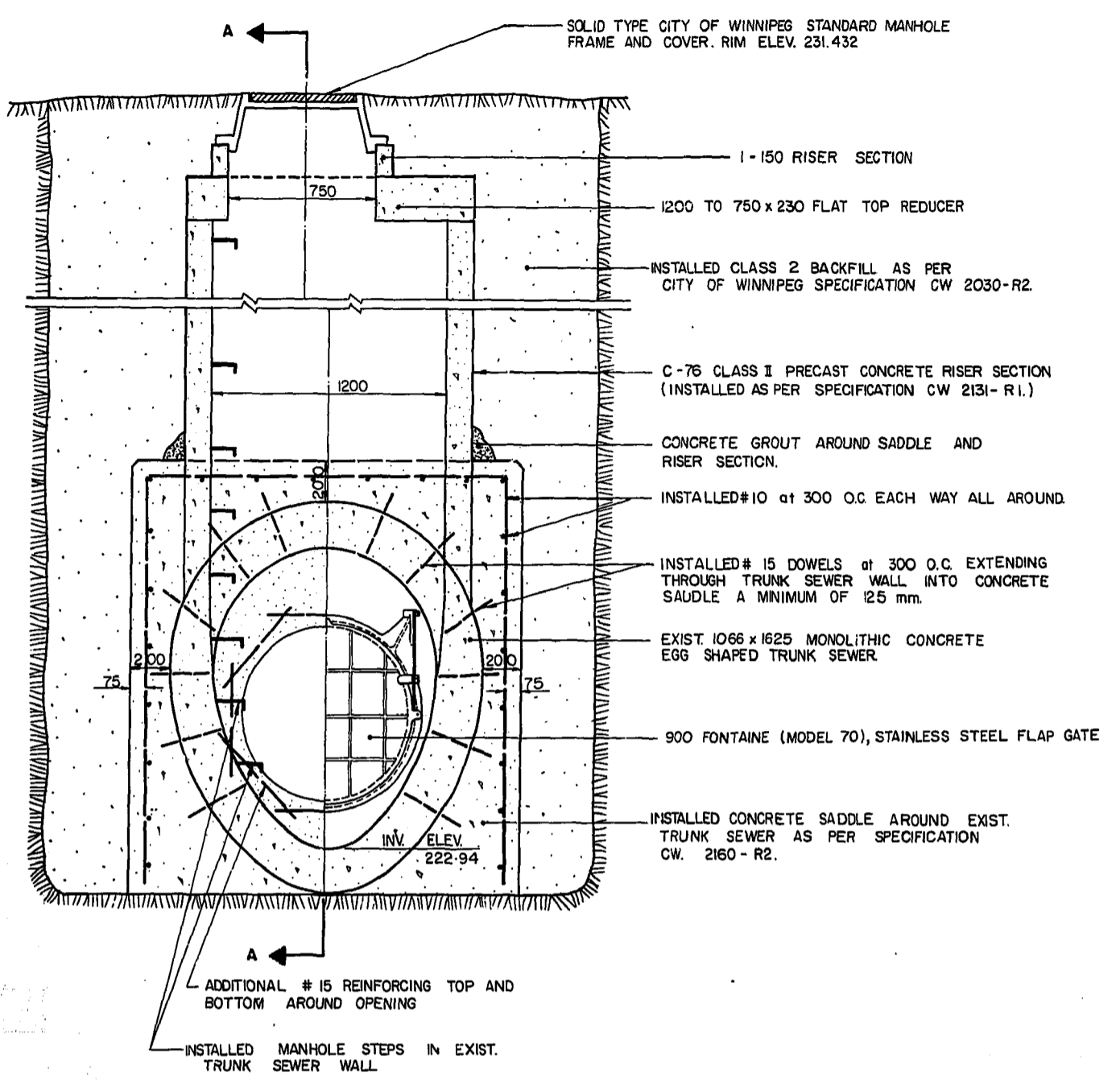
CITY DRAWING NUMBER **1164**  
SHEET 01

**METRIC**  
WHOLE NUMBERS INDICATE MILLIMETRES  
DECIMALIZED NUMBERS INDICATE METRES

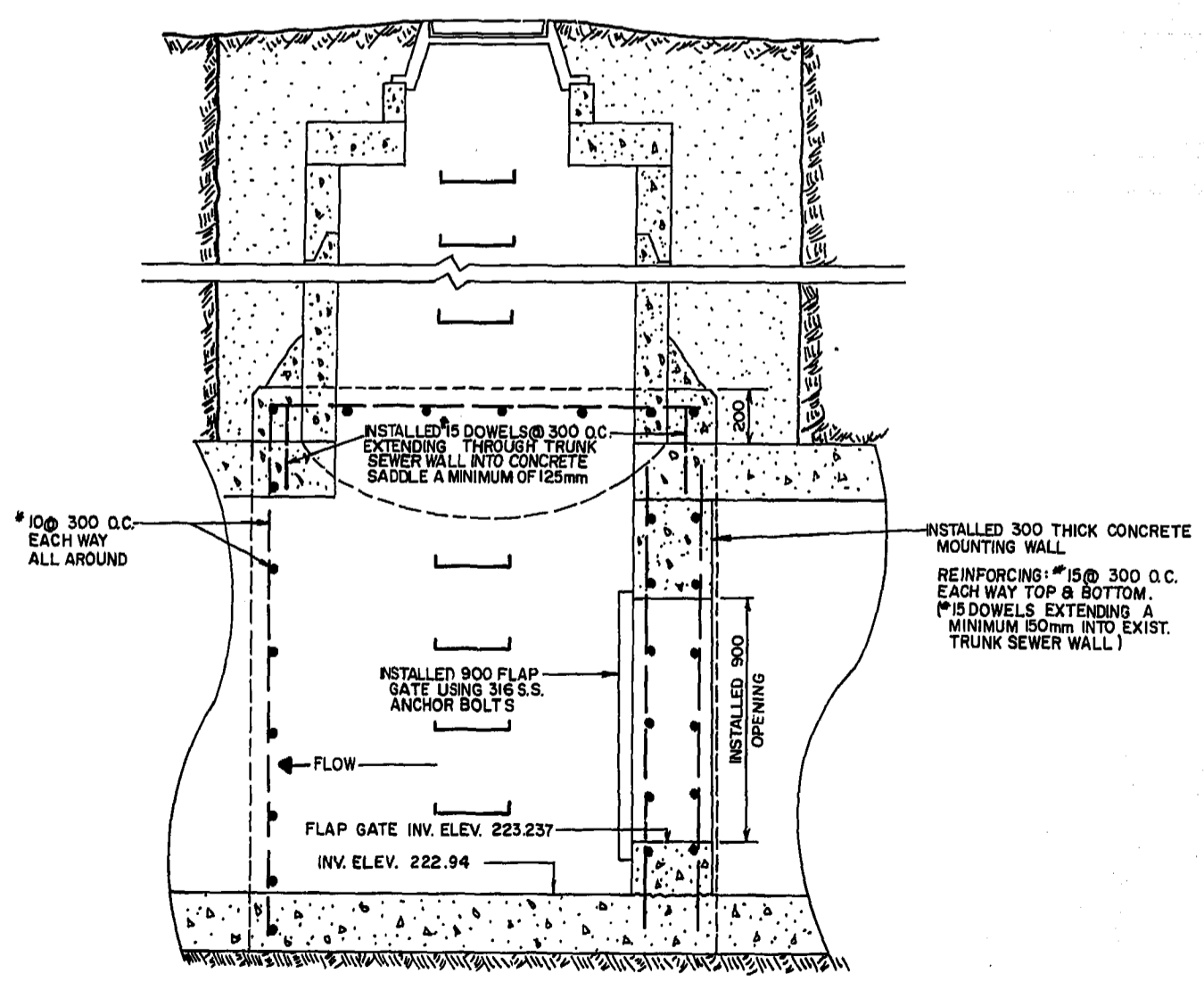
MICROFILMED



**PIPE BEDDING DETAIL IN SHAFT LOCATIONS**  
N.T.S.



**DETAIL "E"**  
N.T.S.  
**FLAP GATE INSTALLATION IN METCALFE TRUNK SEWER**

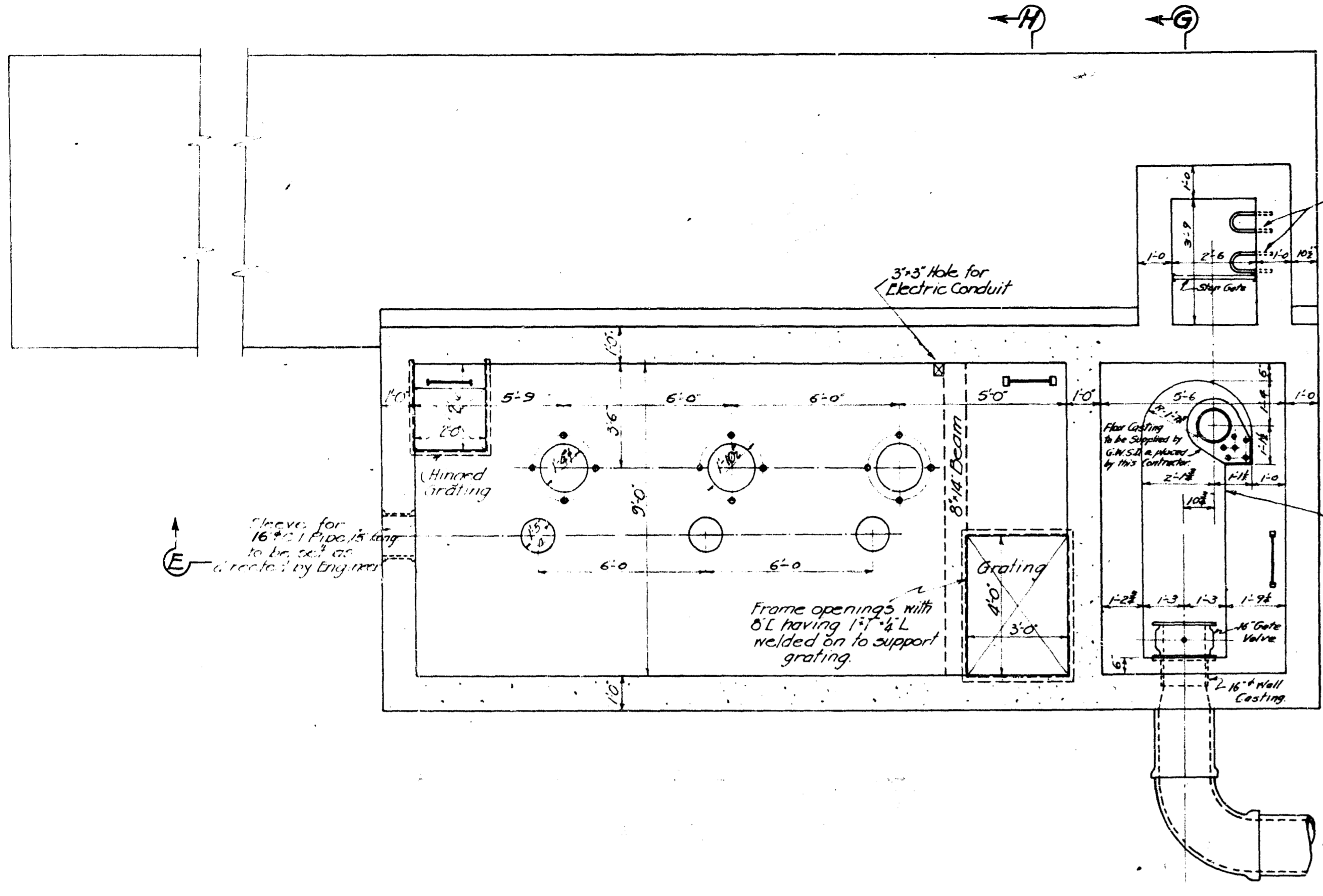


**SECTION A-A**  
N.T.S.

**METRIC**  
WHOLE NUMBERS INDICATE MILLIMETRES  
DECIMALIZED NUMBERS INDICATE METRES

**AS-CONSTRUCTED**  
Survey Engineering Date  
D. Smith R. A. SOROKOWSKI Nov. 26/86  
WATERWORKS, WASTE & DISPOSAL DEPARTMENT

B.M. ELEV. 54-001	FIELD BOOK: F-615	<p><b>THE CITY OF WINNIPEG</b> WORKS AND OPERATIONS DIVISION</p>	<p>CONSULTANT DRAWING NO.</p>	<p><b>RELOCATION OF THE METCALFE SECONDARY SEWER</b> <b>DETAIL "E", BEDDING DETAIL</b></p>	CITY DRAWING NUMBER <b>1165</b>
DESIGNED BY TJW	CHECKED BY RAS				SHEET 01
DRAWN BY TM	APPROVED BY <i>R.A. Sorokowski</i>				
HOR. SCALE VERTICAL	RELEASED FOR CONSTRUCTION DATE				
NO. REVISIONS	DATE BY DATE DECEMBER 85				

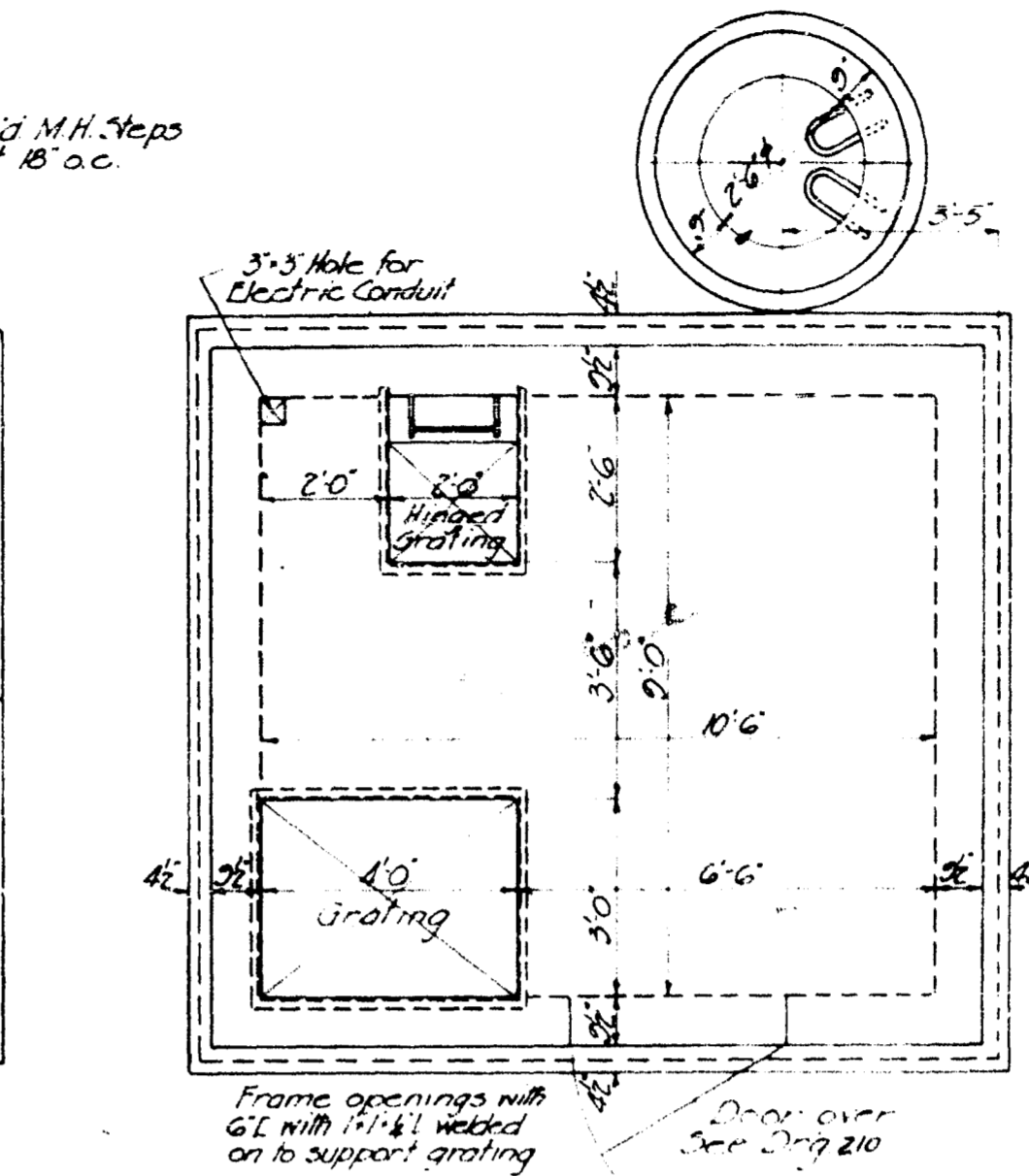
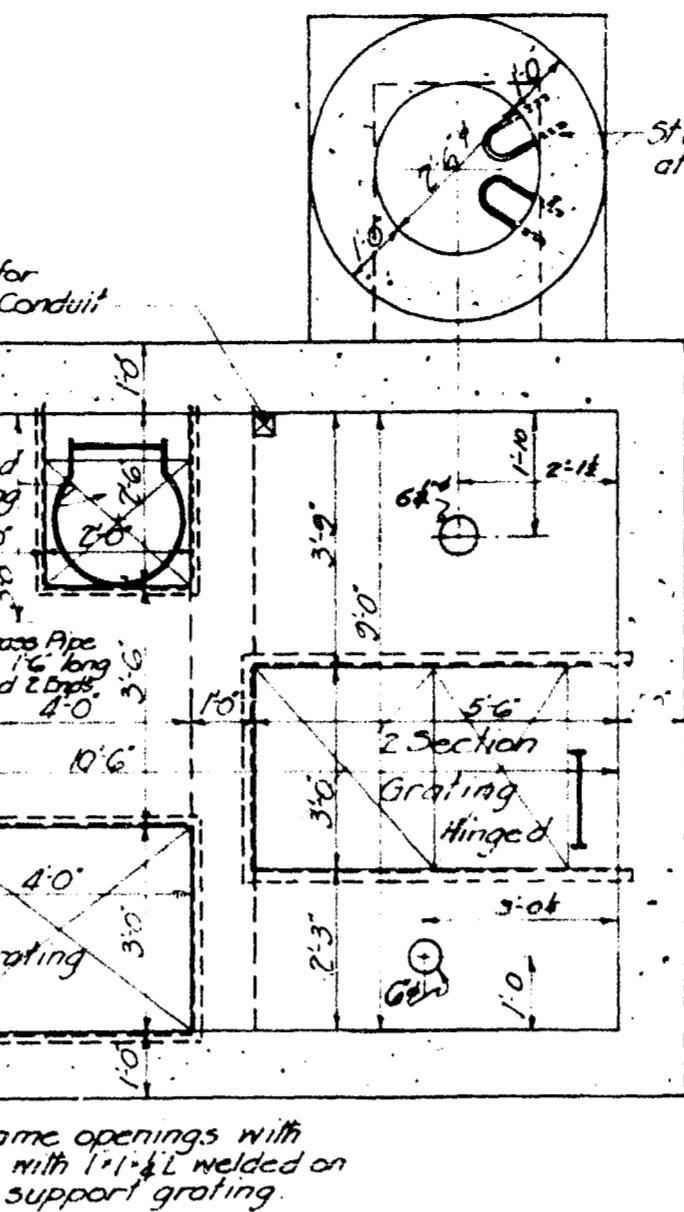


Standard M.H. Steps of 18" oc.

3" x 3" Hole for Electric Conduit

3" x 3" Hole for Electric Conduit

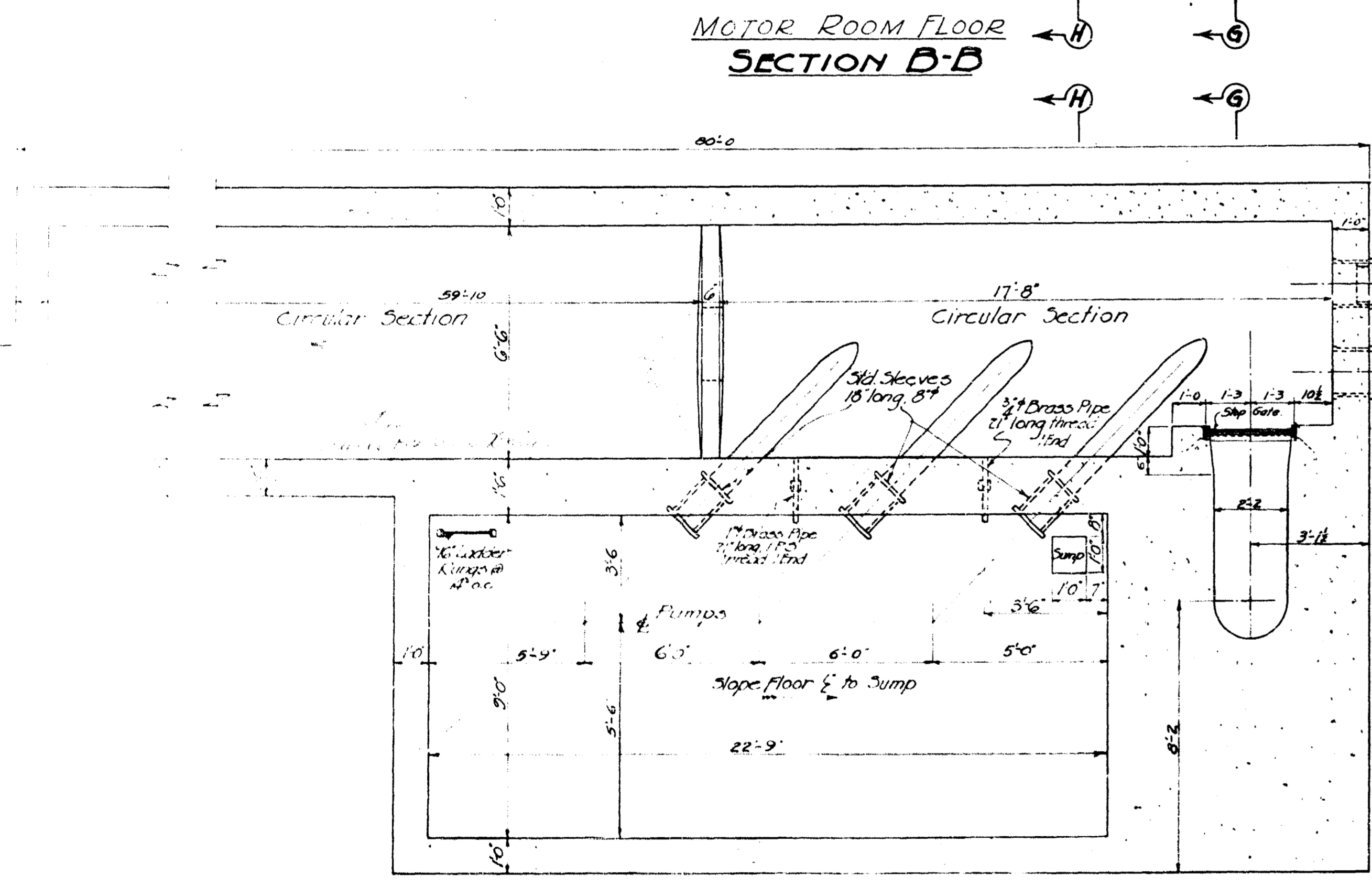
This Chamber to be completed after installation of Control Gate and Compressor Drive Shaft by Contractor.



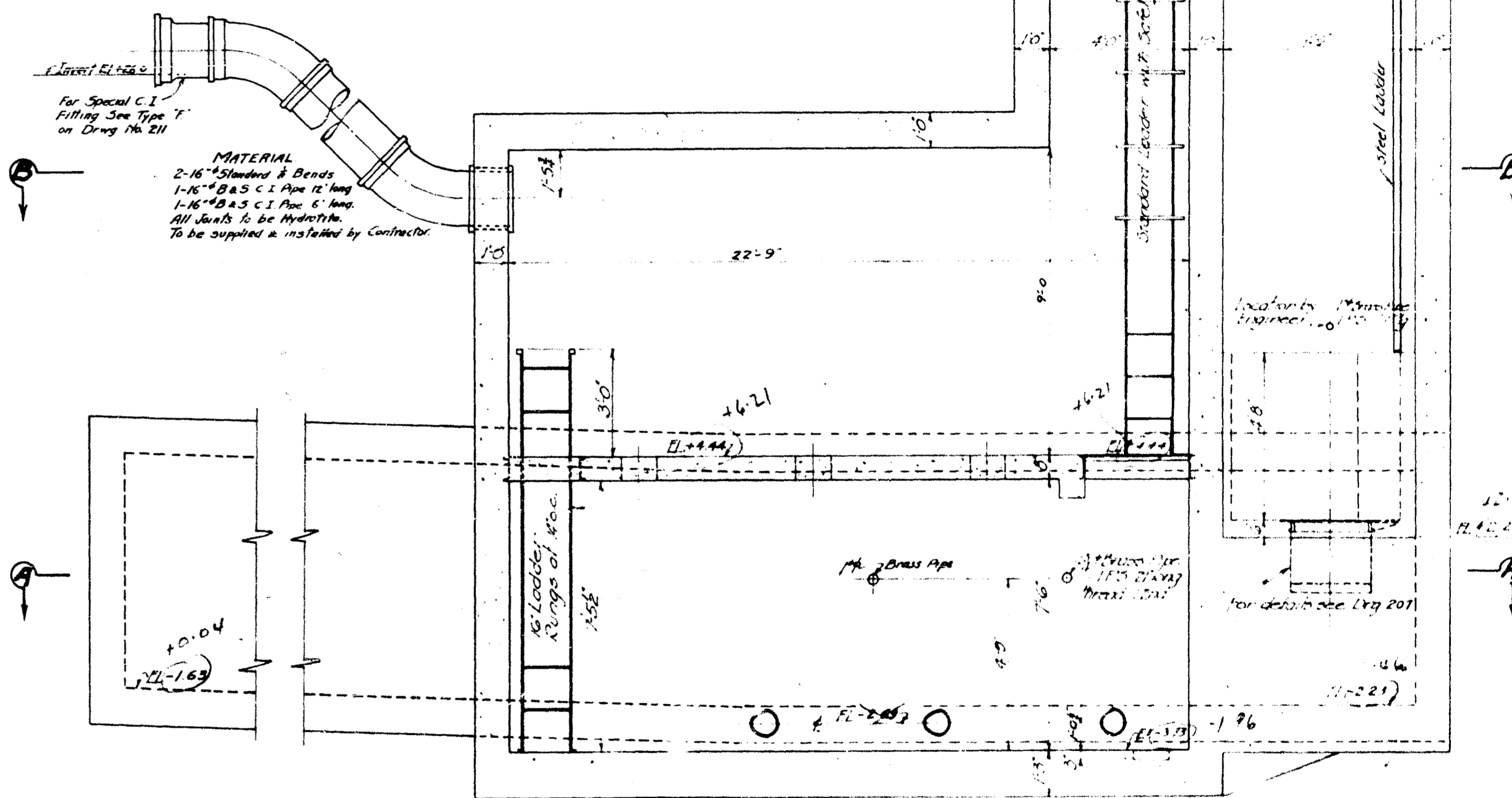
SECTION C-C

SECTION D-D

MOTOR ROOM FLOOR  
SECTION B-B



PUMP CHAMBER FLOOR  
SECTION A-A



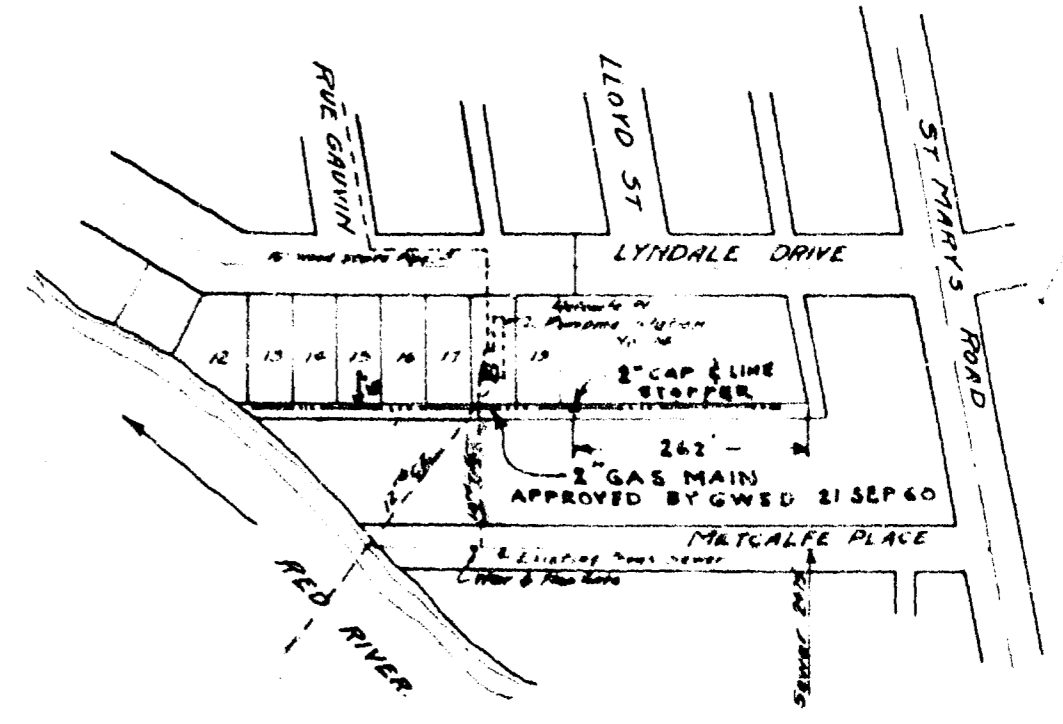
SECTION E-E

NOTE:-  
Material to be supplied and installed by Contractor where shown or listed as directed by Engineer.  
Ladders: Sides 7/8" Flat, 6" apart. Rungs 3/4" at 18" oc.  
Gratings to support 200 lbs per sq ft live load.  
Eyeballs (9) 3/4" Galvanized, with 1/4" Washers.  
Waterpipe connection, 1 piece 3/4" (IPS) 1/2" long brass pipe, threaded ends.  
Reinforcing Steel: Sizes and spacing to be given later by Engineer.  
Reference: For Sections not shown on this sheet see Dwg No 207.  
For Details of Superstructure see Dwg No 210.  
For Details of Structure, Solid Cover & M.H. Frames see Dwg No 211.

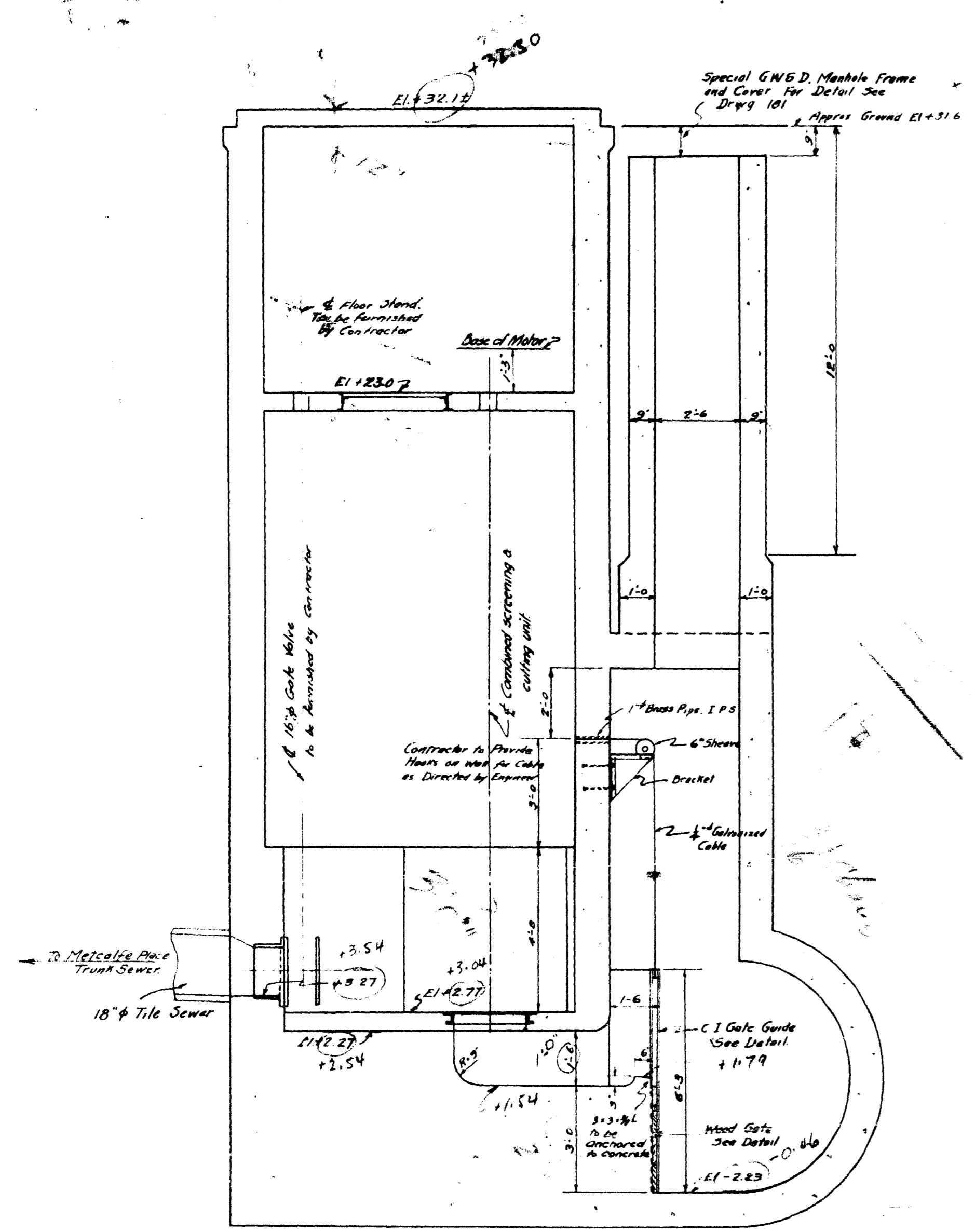
Trawl Ladders on floors.  
Sections not to exact scale.  
1-1/2" Gate Valve and Floor Stand.  
1-1/2" Wall Casting for Gate Valve.  
All pipe sleeves as shown on drawings.  
Wood Step Gate Frame and appurtenances.  
Ejector Connection, 1-1/2" brass pipe, 2 PS, 21" long, threaded one end and Control Mechanism Pipe 1-1/2" brass pipe 1 PS, 21" long, threaded one end and 1-C I flap Gate as shown on Dwg No 207.

APPROVED  
W. B. LEA  
Consulting Engineer

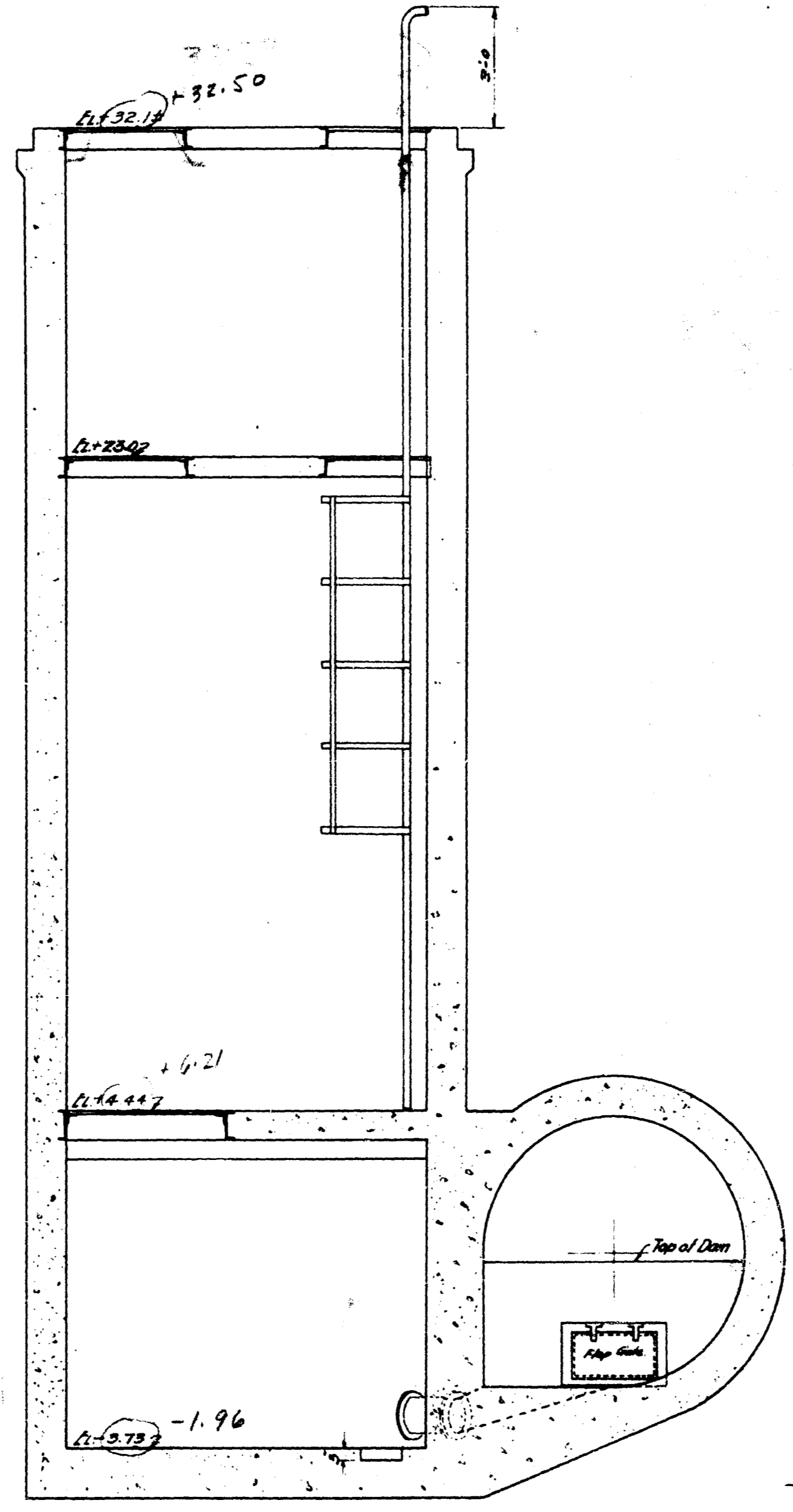
GREATER WINNIPEG SANITARY DISTRICT			
ENGINEER'S NAME	APPROVED	DATE	TITLE
W. B. LEA	[Signature]	[Date]	Consulting Engineer
DESIGNED BY	[Signature]		DR. H. C. A. H. 1911
CHECKED BY	[Signature]		PLAN No 206
APPROVED BY	[Signature]		Contract No. 48
NOTED: This is not to be the Contract Drawing for Construction Drawing, see Dwg. No 206A.			



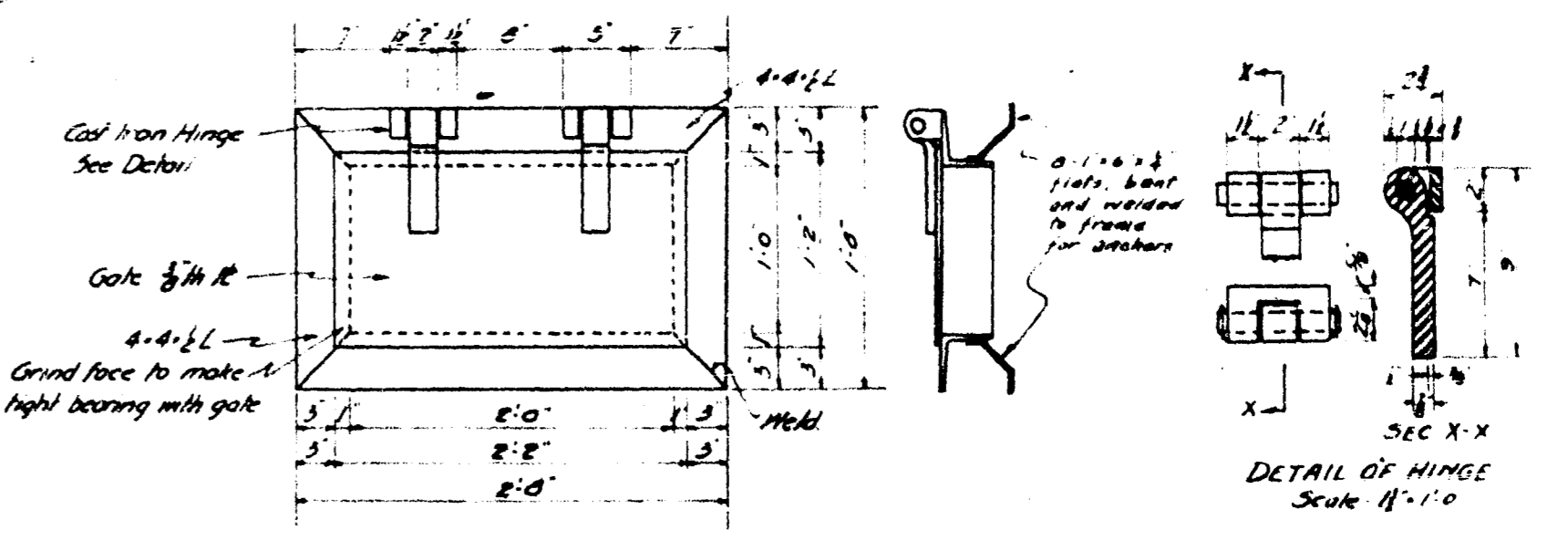
LOCATION PLAN  
Scale 1"=200'



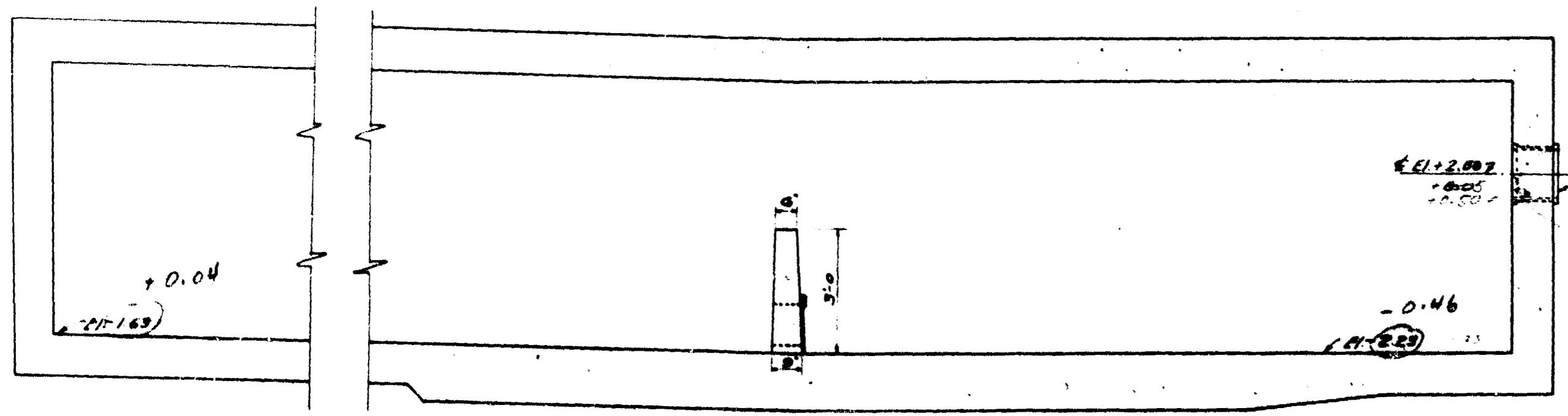
SEC. G-G



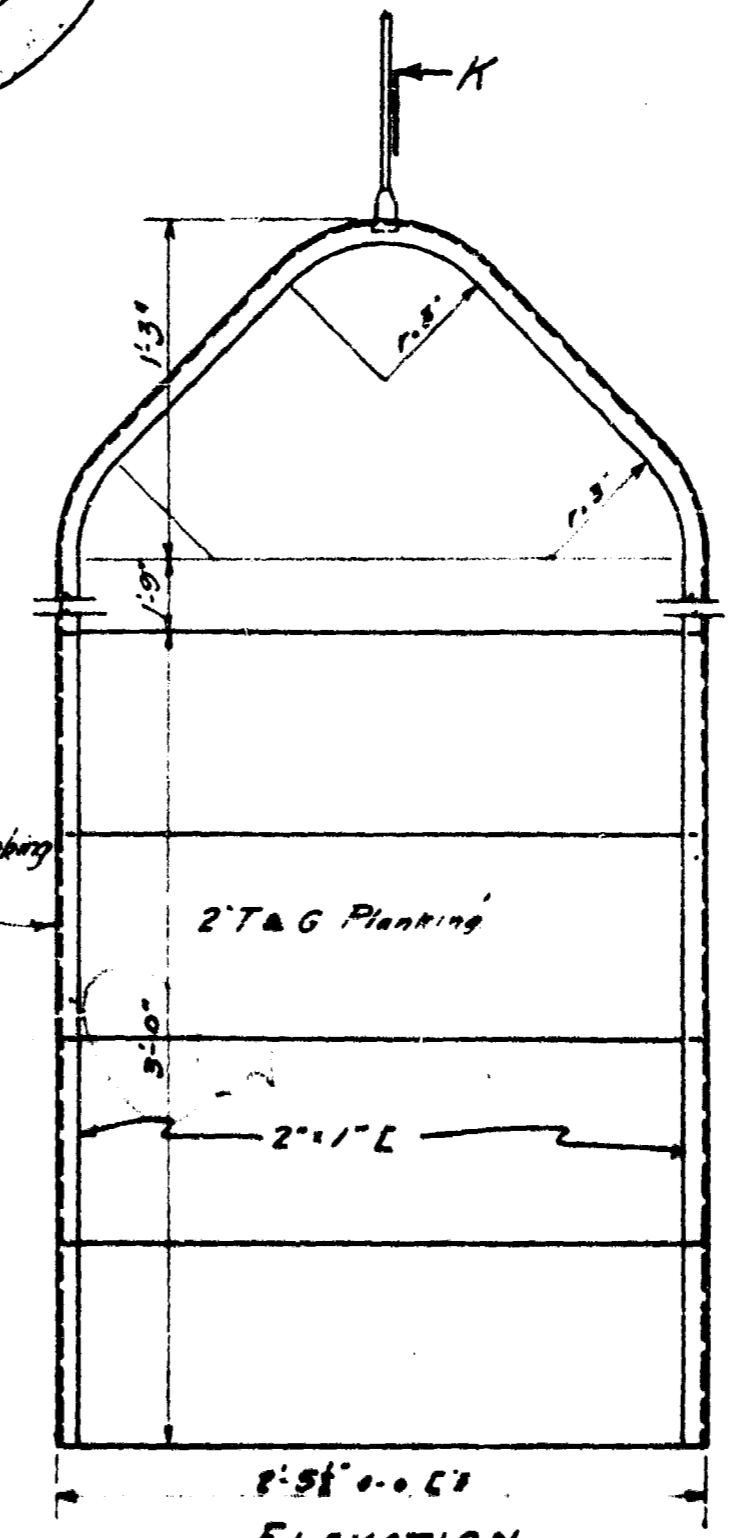
SEC. H-H



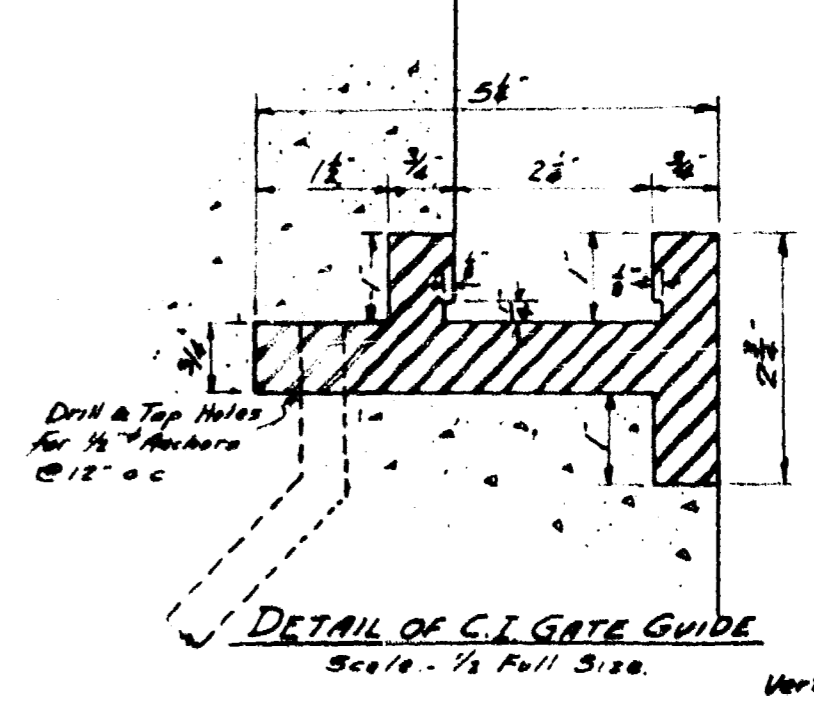
DETAIL OF FLAP GATE FOR SUMP  
Scale 1"=1'-0"



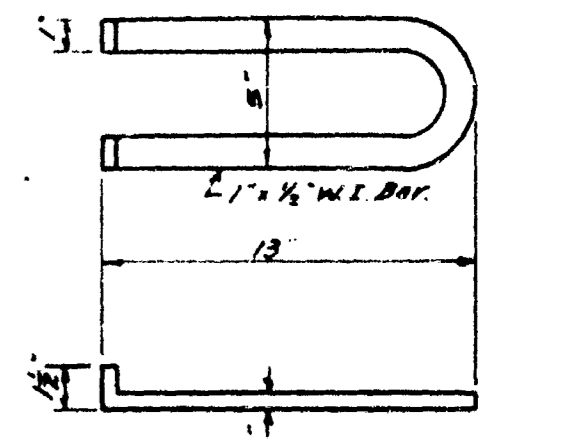
SEC. F-F



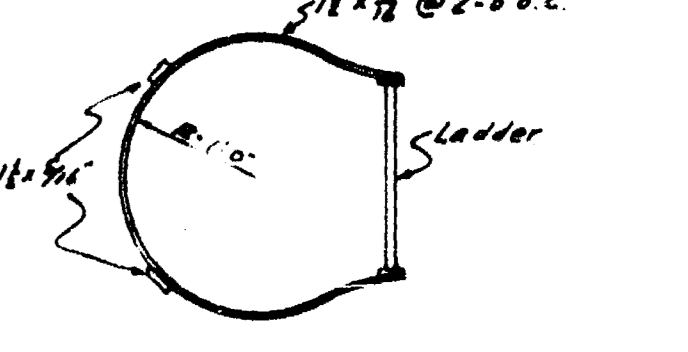
DETAIL OF WOOD STOP GATE  
Scale 1"=1'-0"



DETAIL OF C.I. GATE GUIDE  
Scale - 1/2 Full Size



SEWER MANHOLE STEP



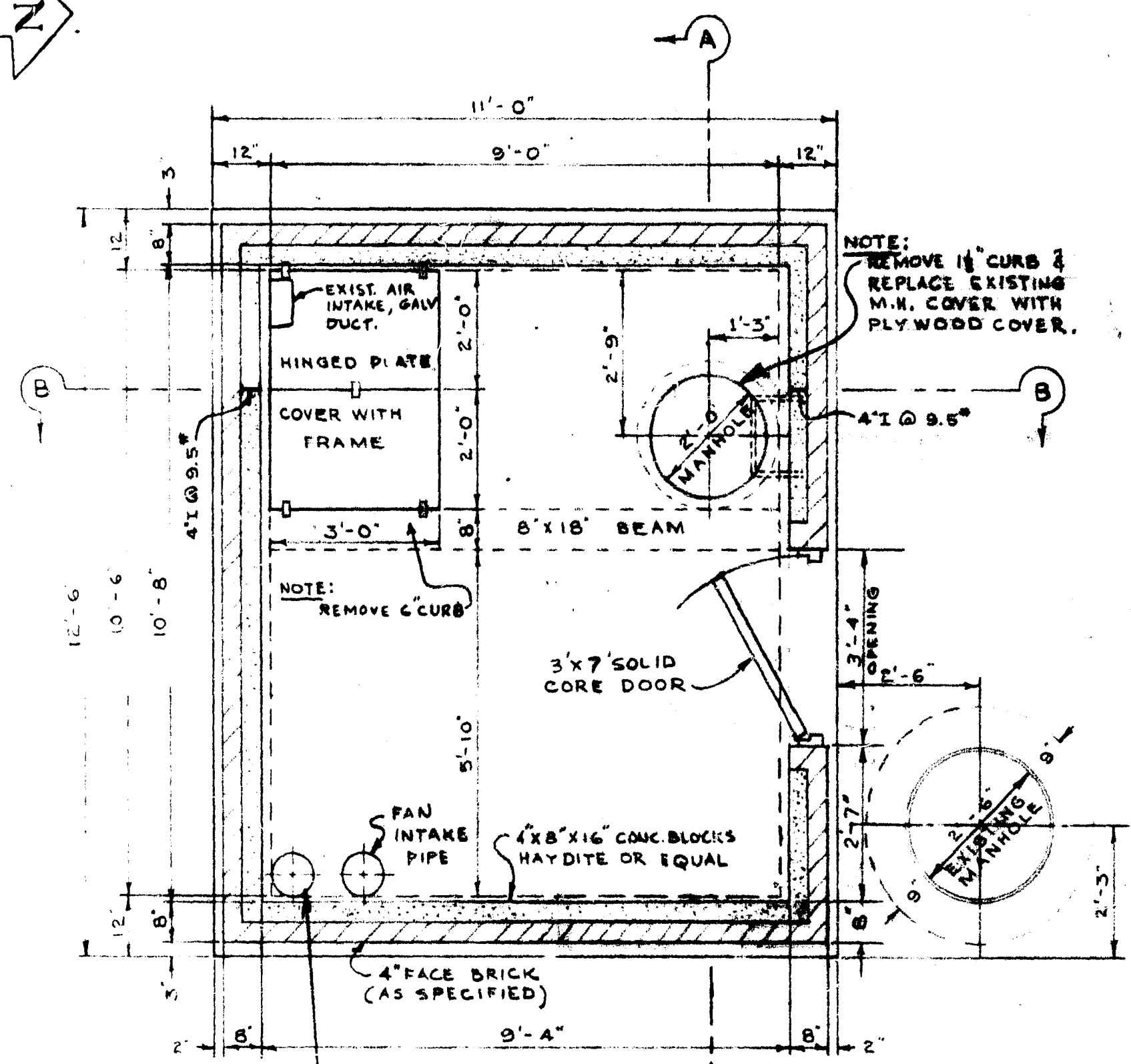
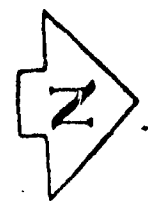
DETAIL OF SAFETY GUARD ON LADDER INTO MOTOR CHAMBER



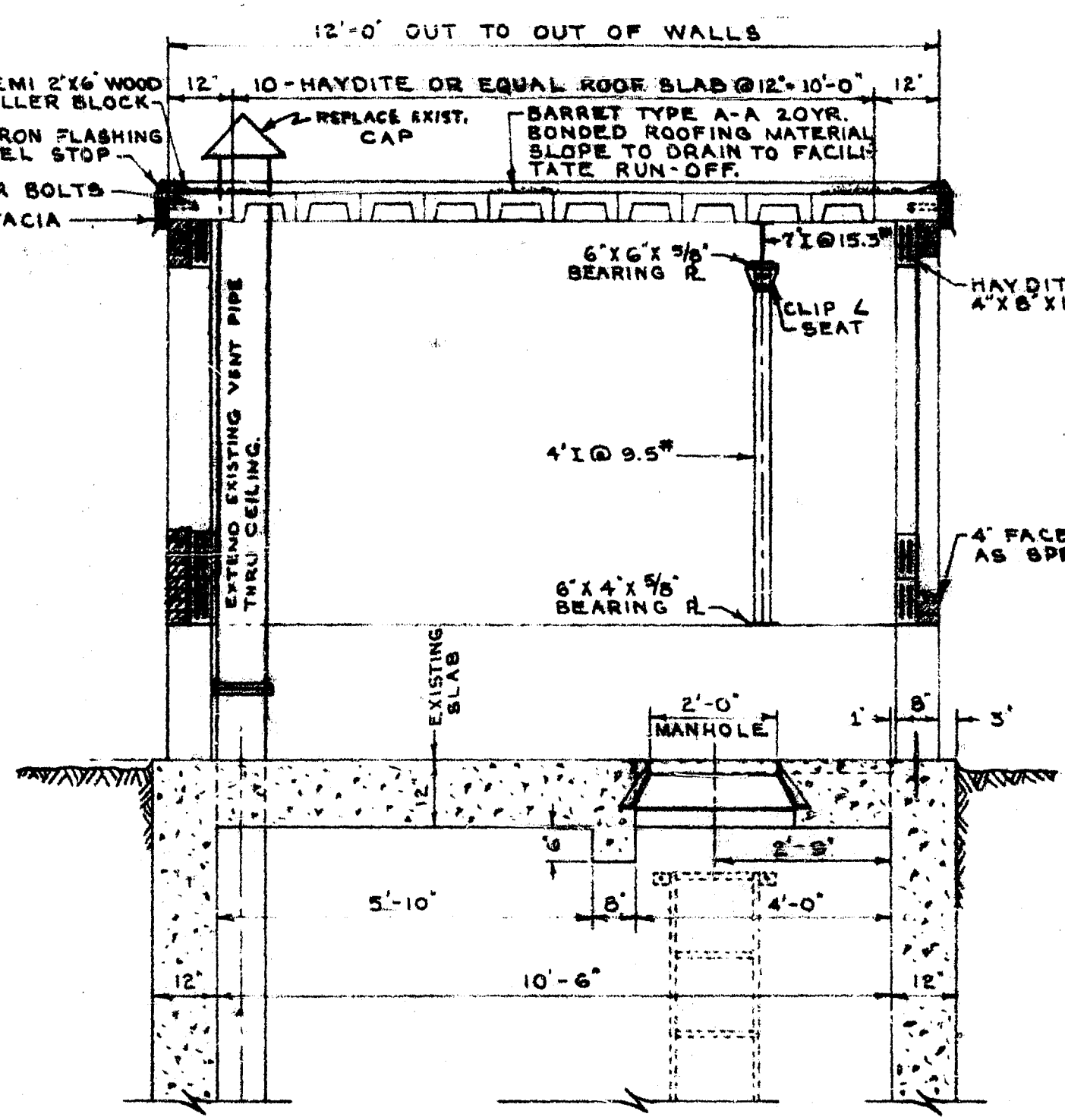
SEC. K-K

APPROVED

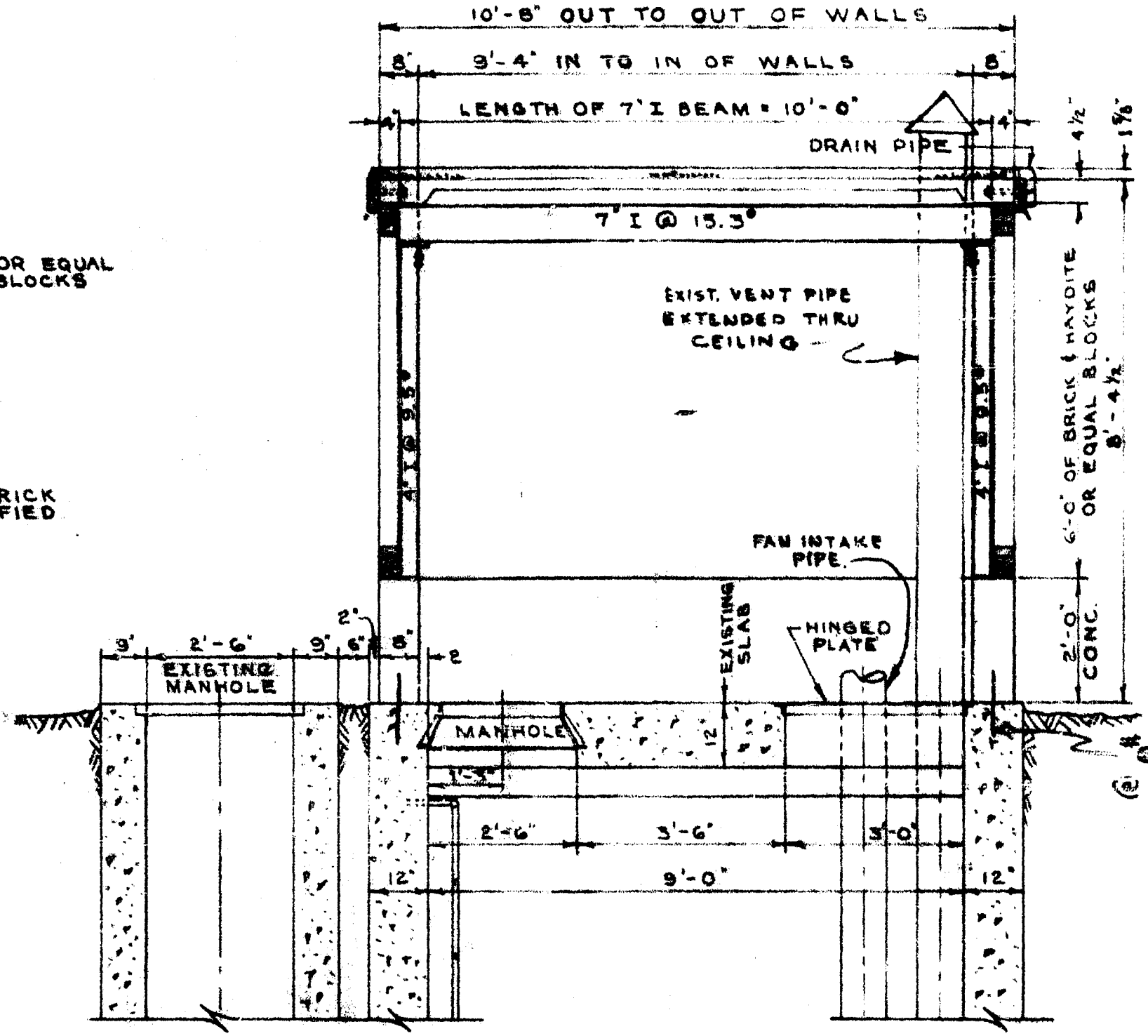
GREATER WINNIPEG SANITARY DISTRICT			
W. S. LEA Consulting Engineer	APPROVED	DATE	TITLE MATCHLES PLACE LIFTING STATION No. 14 Sheet 1 of 2
W. F. BRIDGMAN MECHANICAL ENGINEER	<i>[Signature]</i>		SCALE 3/16" = 1'-0" (SEE NOTE) DATE Feb 6, 1931
J. W. BATHURST C. E. LANTIER	<i>[Signature]</i>		DRAWN BY: <i>[Signature]</i> P. No. 207 CHECKED BY: R. R. DISTRICT No. 49 APPROVED IN: <i>[Signature]</i>
NOTES: May 15, 1931. This is the Contract Drawing for Construction Drawing see D. 1711, 1712, 1713, 1714, 1715, 1716, 1717, 1718, 1719, 1720, 1721, 1722, 1723, 1724, 1725, 1726, 1727, 1728, 1729, 1730, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739, 1740, 1741, 1742, 1743, 1744, 1745, 1746, 1747, 1748, 1749, 1750, 1751, 1752, 1753, 1754, 1755, 1756, 1757, 1758, 1759, 1760, 1761, 1762, 1763, 1764, 1765, 1766, 1767, 1768, 1769, 1770, 1771, 1772, 1773, 1774, 1775, 1776, 1777, 1778, 1779, 1780, 1781, 1782, 1783, 1784, 1785, 1786, 1787, 1788, 1789, 1790, 1791, 1792, 1793, 1794, 1795, 1796, 1797, 1798, 1799, 1800.			



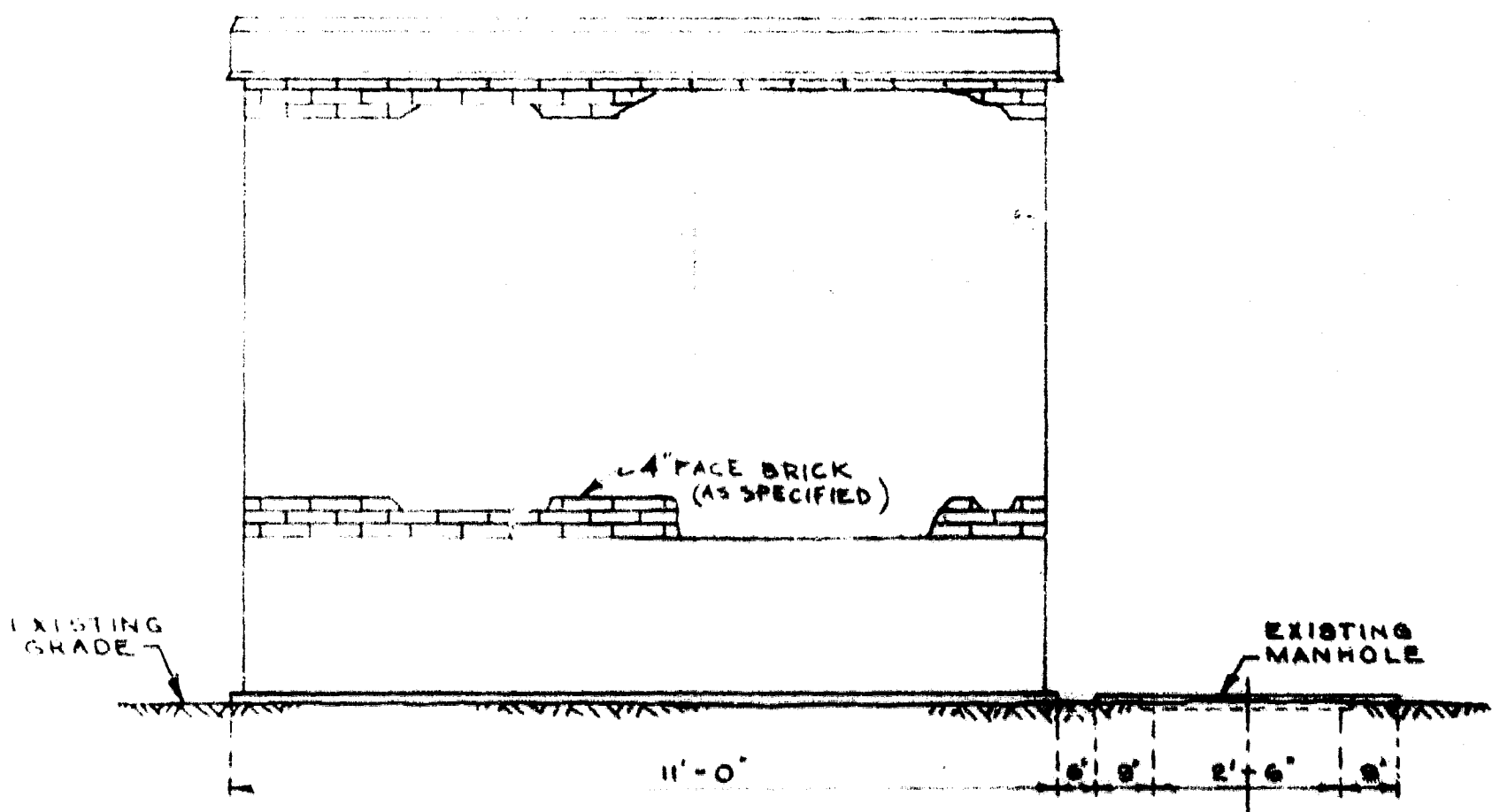
PLAN



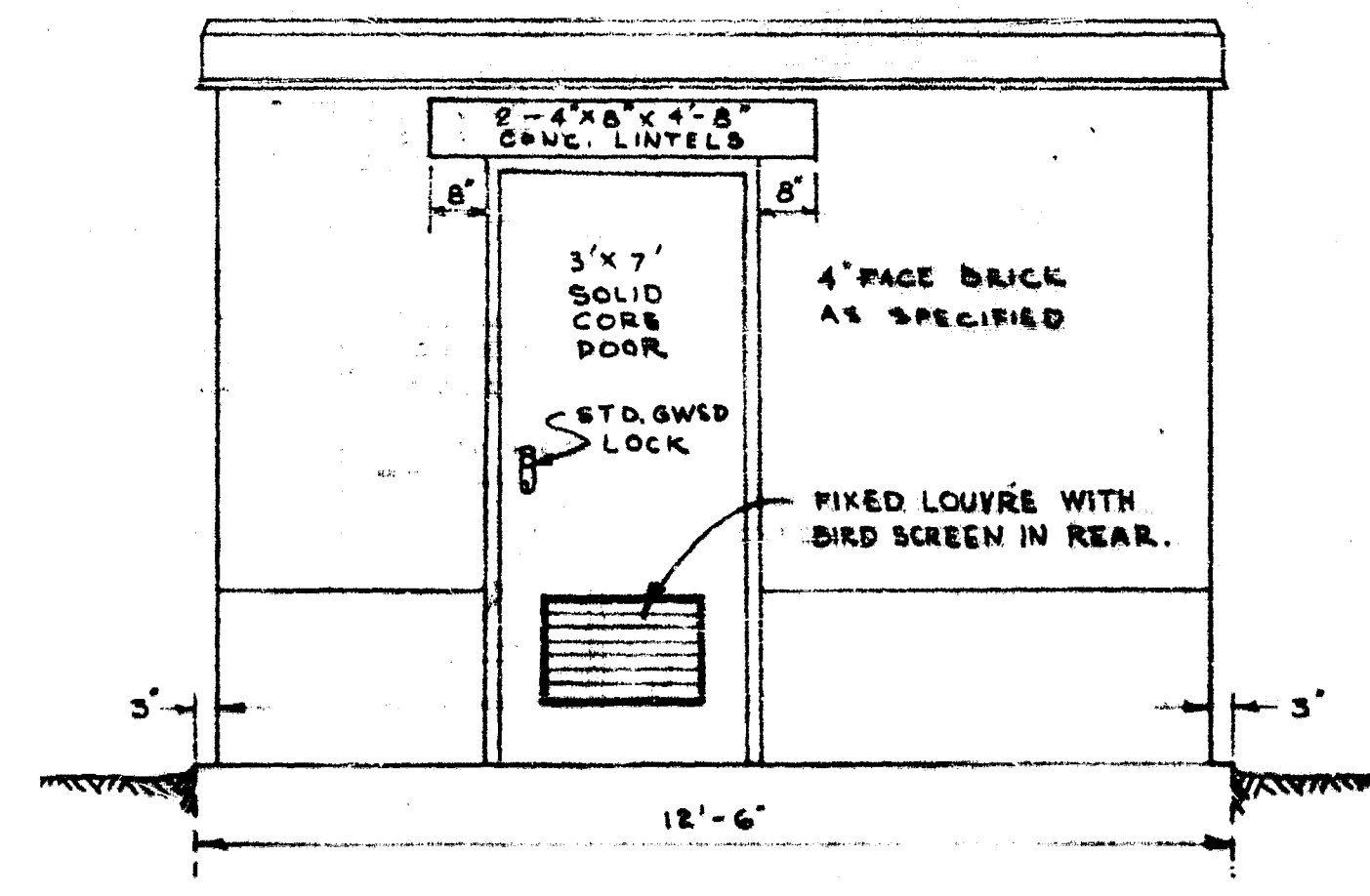
SEC 'A-A'



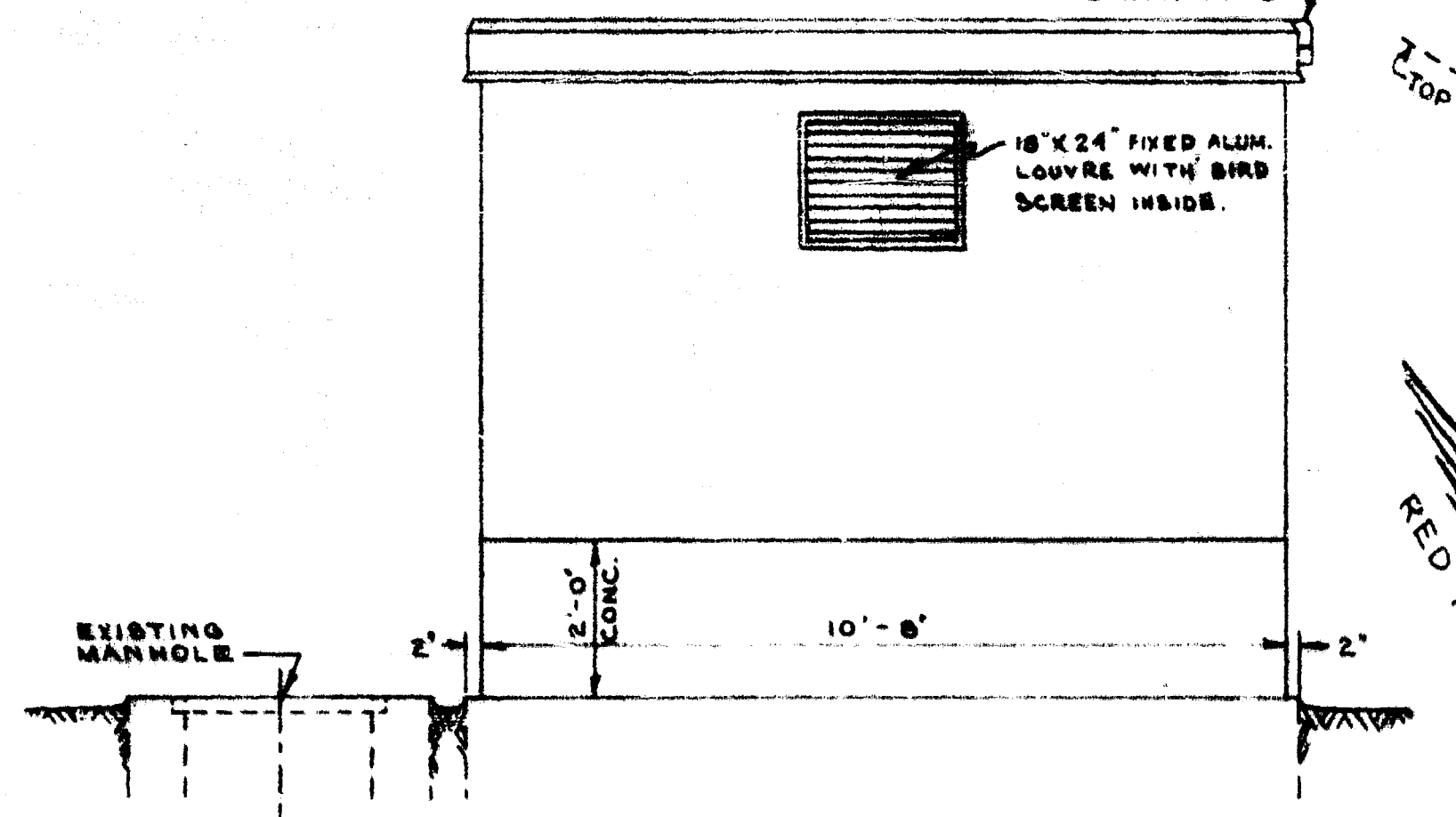
SEC. 'B-B'



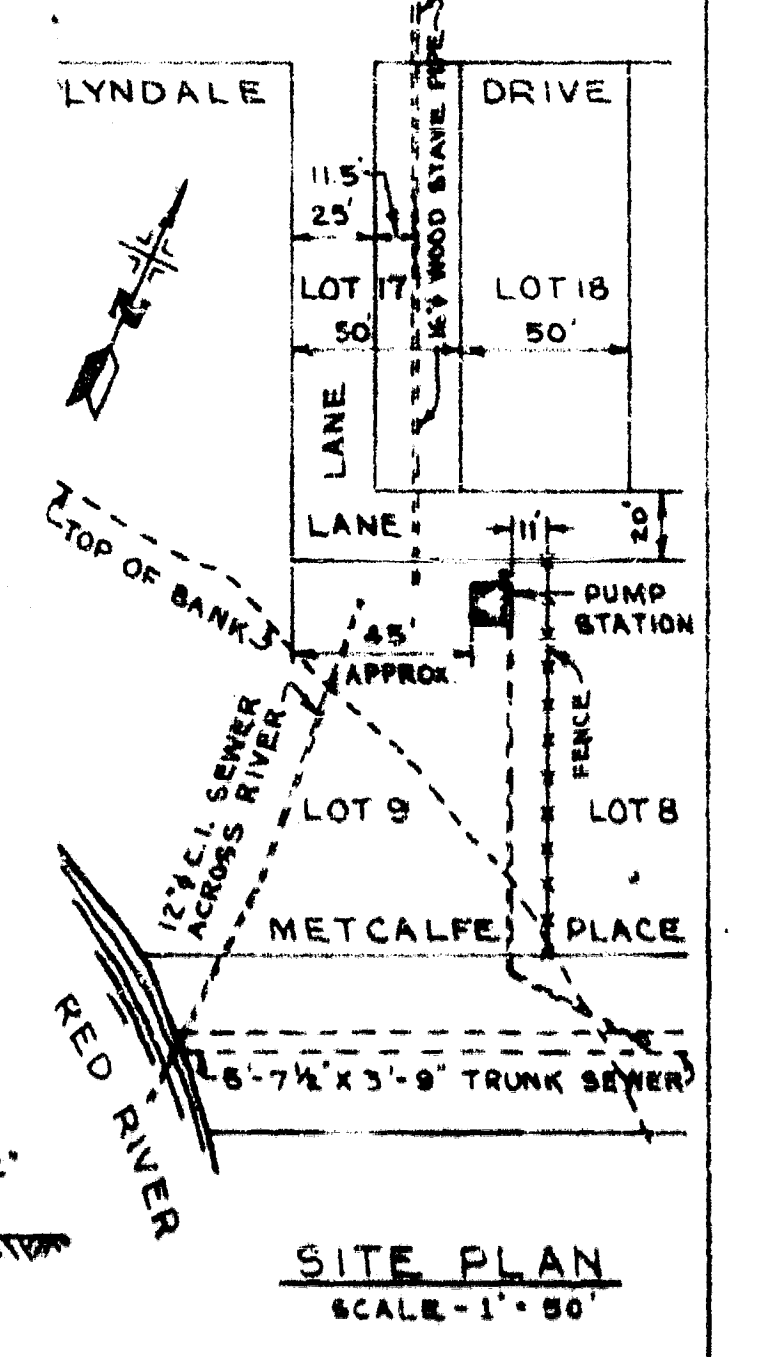
EAST WALL ELEV.



SOUTH WALL ELEV.  
NORTH WALL SIMILAR



WEST WALL ELEV.



SITE PLAN  
SCALE - 1" = 50'



NOTE: REPLACE EXISTING M.H. COVER WITH 2" PLYWOOD COVER AS NOTED.

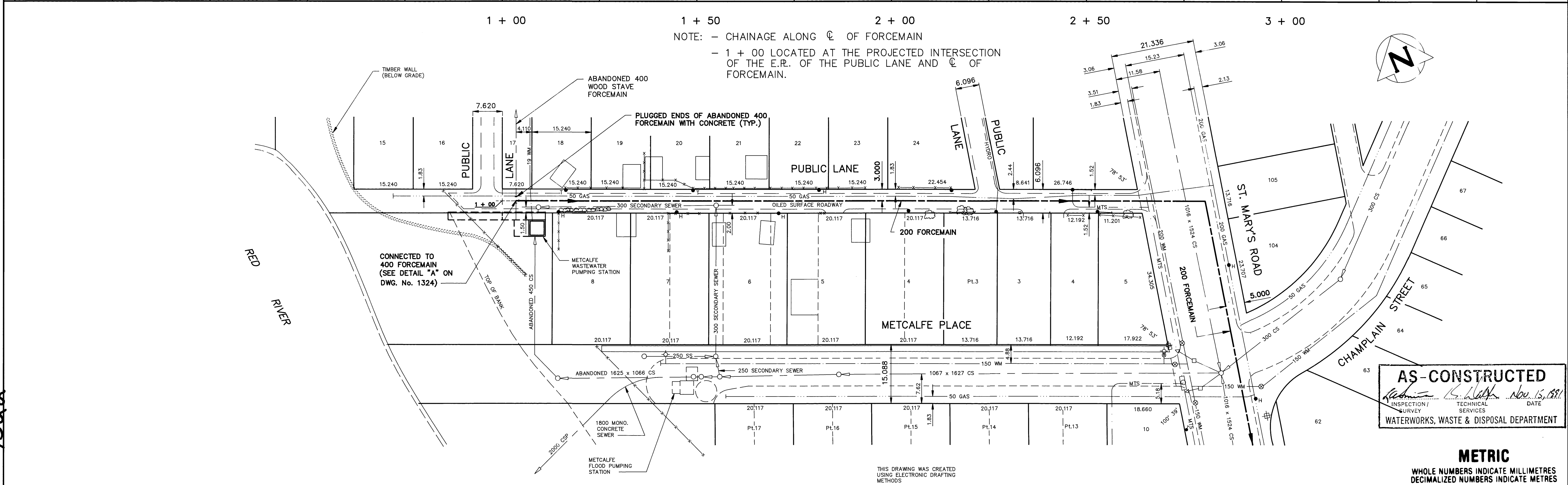
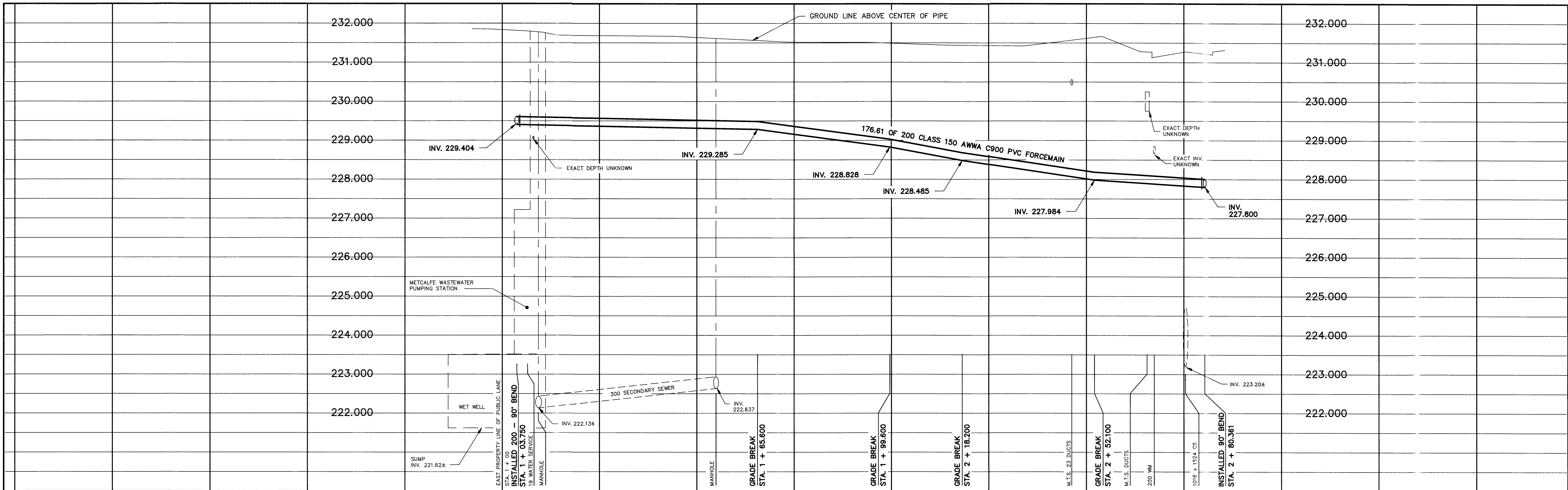
REVISIONS			GREATER WINNIPEG SANITARY DISTRICT SECONDARY SEWERS	
NO.	DESCRIPTION	DATE BY	APPROVED BY	DRAWING NO.

TITLE:  
**SUPERSTRUCTURE  
METCALFE PLACE  
PUMPING STATION**

APPROVED BY: [Signature] DATE: [Date]  
DRAWN BY: [Signature] DATE: [Date]  
CHECKED BY: [Signature] DATE: [Date]

SCALE: 1/2" INCH = 1' FOOT

**354**



**AS-CONSTRUCTED**  
 INSPECTION SURVEY  
 TECHNICAL SERVICES  
 DATE: Nov. 15, 1991  
 WATERWORKS, WASTE & DISPOSAL DEPARTMENT

**METRIC**  
 WHOLE NUMBERS INDICATE MILLIMETRES  
 DECIMALIZED NUMBERS INDICATE METRES

200 WM	WATERMAIN	200 WM	HYDRO	150 WM	WATERMAIN	150 WM
⊕	HYDRANT	⊕	MTS	⊕	HYDRANT	⊕
⊗	VALVE	⊗	50 GAS	⊗	VALVE	⊗
---	FORCEMAIN	---	PROPERTY LINE	---	FORCEMAIN	---
---	SECONDARY SEWER	---	SURVEY BAR	---	SECONDARY SEWER	---
---	COMBINED SEWER	---	FENCE	---	GROUND LINE	---
○	MANHOLE	○	POLE - HYDRO, MTS	○	BEND	○
□	CATCH BASIN	□	TRAFFIC SIGNAL	□		□
▽	CURB INLET	▽	CORP. STOP	▽		▽
---	EDGE OF CURB	---	LIGHT STANDARD	---		---
---	EDGE OF LANE	---	TREE	---		---
---	EXISTING	---	LEGEND-PLAN	---	LEGEND-PROFILE	---
---	LEGEND-PLAN	---	EXISTING	---	PROPOSED	---

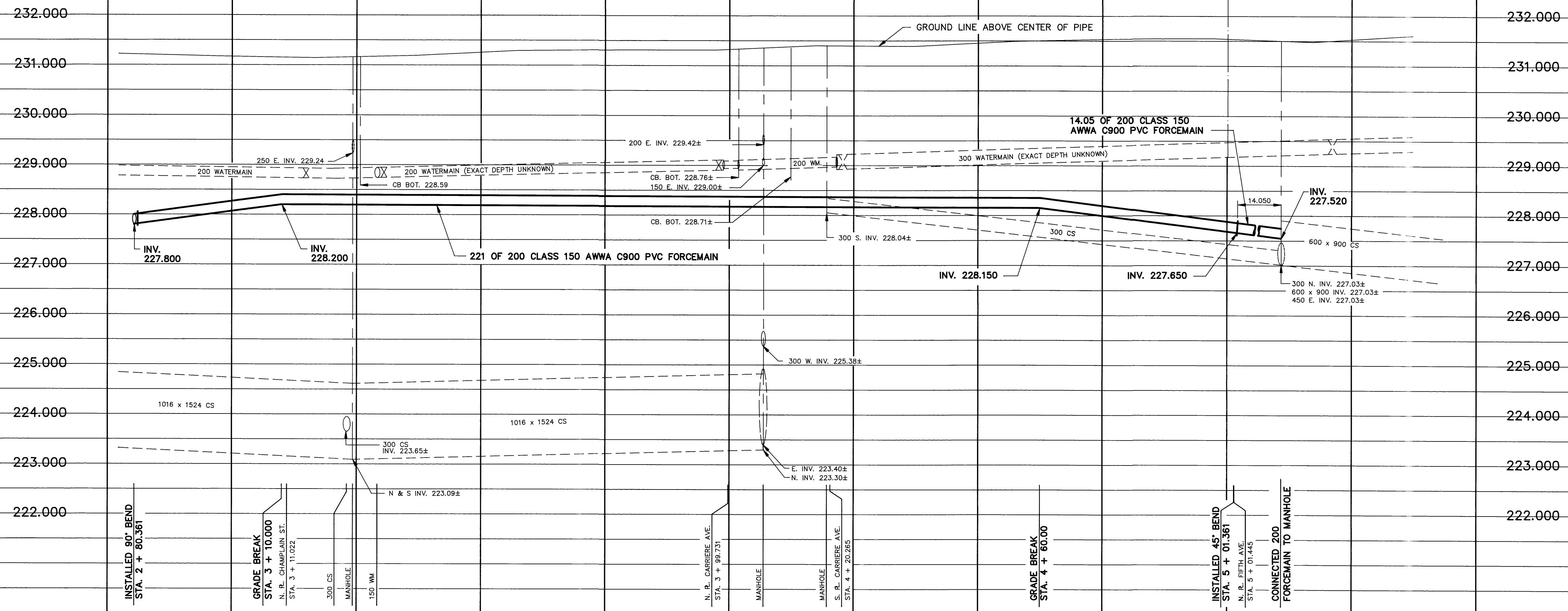
**LOCATION APPROVED**  
 UNDERGROUND STRUCTURES  
 SUPV. U/G STRUCTURES COMMITTEE DATE  
 NOTE:  
 LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

B.M. ELEV. 54 - 001 231.117  
 FIELD BOOK: # 615  
 DESIGNED BY TJW  
 DRAWN BY REF  
 HOR. SCALE 1 : 500  
 VERTICAL 1 : 50  
 1 REVISED TO AS-BUILT 91.10.02 TM  
 NO. REVISIONS DATE BY

**WORKS & OPERATIONS DIVISION**  
**WATERWORKS, WASTE & DISPOSAL DEPARTMENT**  
 ENGINEER'S SEAL  
 R. A. SOROKOWSKI  
 REGISTERED PROFESSIONAL ENGINEER  
 DESIGNED BY TJW  
 CHECKED BY JE / KD  
 APPROVED BY [Signature]  
 RELEASED FOR CONSTRUCTION [Signature]  
 DATE AUGUST 16, 1990

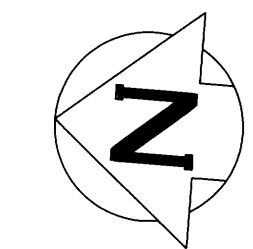
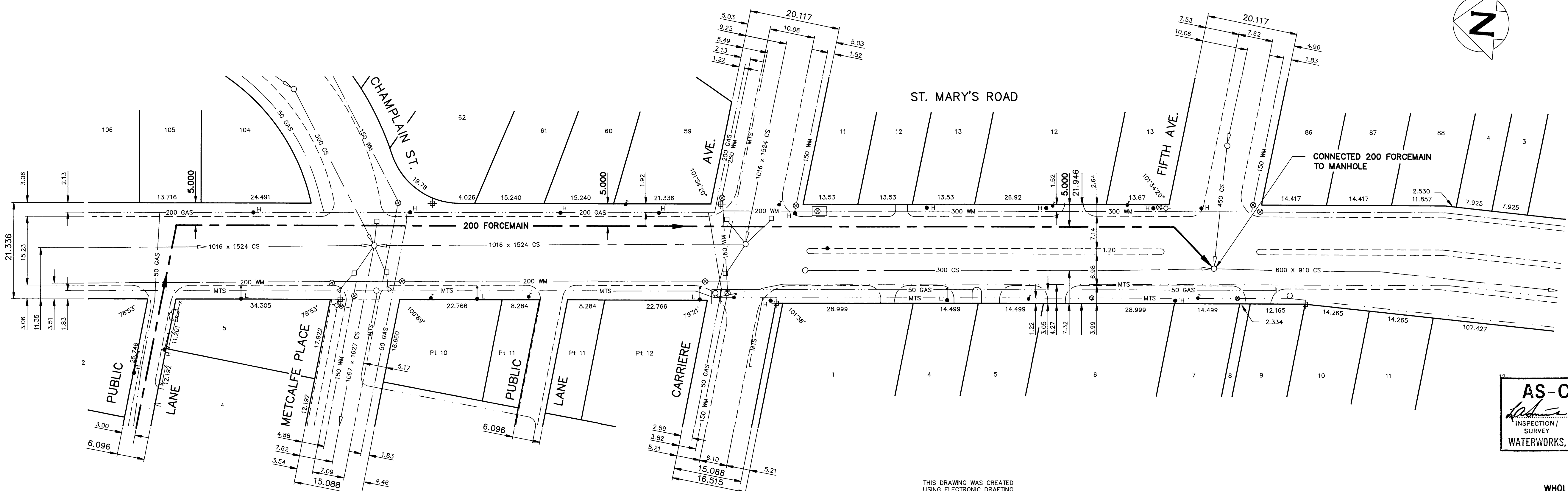
**THE CITY OF WINNIPEG**  
**WORKS AND OPERATIONS DIVISION**  
**WATERWORKS WASTE AND DISPOSAL DEPARTMENT**  
 RELOCATION OF THE METCALFE WASTEWATER PUMPING STATION FORCEMAIN (ALONG PUBLIC LANE NORTH OF METCALFE PLACE)  
 CITY DRAWING NUMBER SHEET 1 OF 3  
**1322**  
 CONSULTANT DRAWING NO.  
 PLOT DATE: 1991 11 06

file # FM1012



2 + 50      3 + 00      3 + 50      4 + 00      4 + 50      5 + 00      5 + 50

NOTE: - CHAINAGE ALONG C OF FORCEMAIN



**AS-CONSTRUCTED**  
 INSPECTION / SURVEY DATE  
 TECHNICAL SERVICES DATE  
 WATERWORKS, WASTE & DISPOSAL DEPARTMENT

**METRIC**  
 WHOLE NUMBERS INDICATE MILLIMETRES  
 DECIMALIZED NUMBERS INDICATE METRES

200 WM	WATERMAIN	200 WM	HYDRO	200 WM	WATERMAIN	150 WM
	HYDRANT		MTS		HYDRANT	
	VALVE		CONCRETE		VALVE	
	FORCEMAIN		PROPERTY LINE		FORCEMAIN	
	SECONDARY SEWER		SURVEY BAR		COMBINED SEWER	
	COMBINED SEWER		FENCE		GROUND LINE	
	MANHOLE		POLE - HYDRO, MTS		BEND	
	CATCH BASIN		TRAFFIC SIGNAL			
	CURB INLET		CORP. STOP			
	EDGE OF CURB		LIGHT STANDARD			
	GAS		TREE			
	LEGEND-PLAN		LEGEND-PLAN			
	PROPOSED		PROPOSED			
	EXISTING		EXISTING			
	LEGEND-PLAN		LEGEND-PROFILE			
	PROPOSED		PROPOSED			
	EXISTING		EXISTING			

**LOCATION APPROVED**  
 UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE DATE

NOTE:  
 LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

B.M. ELEV. 54 - 001 231.117 FIELD BOOK: # 615

NO.	REVISIONS	DATE	BY
1	REVISED TO AS-BUILT	91.10.02	TM

**WORKS & OPERATIONS DIVISION**  
 WATERWORKS, WASTE & DISPOSAL DEPARTMENT

DESIGNED BY TJW CHECKED BY JE / KD  
 DRAWN BY REF APPROVED BY [Signature]  
 HOR. SCALE 1 : 500 RELEASED FOR CONSTRUCTION [Signature]  
 VERTICAL SCALE 1 : 50 DATE JULY 1990 DATE AUGUST 16, 1990

ENGINEER'S SEAL  
**PROVINCE OF MANITOBA**  
**R. A. SOROKOWSKI**  
 REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO.

**THE CITY OF WINNIPEG**  
 WORKS AND OPERATIONS DIVISION  
 WATERWORKS WASTE AND DISPOSAL DEPARTMENT

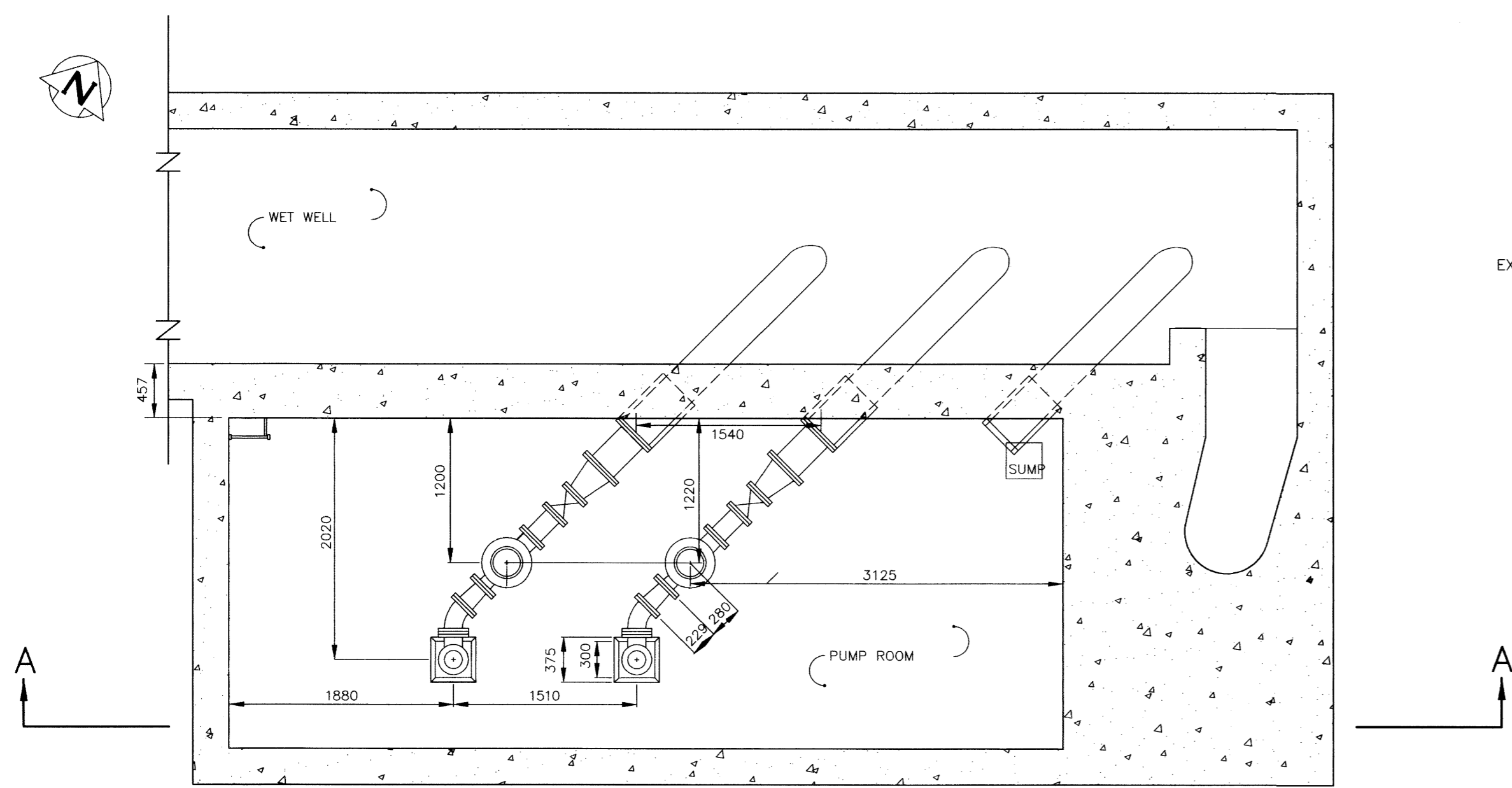
RELOCATION OF THE METCALFE WASTEWATER PUMPING STATION FORCEMAIN TO FIFTH AVENUE (ALONG ST. MARY'S ROAD)

CITY DRAWING NUMBER SHEET 2 OF 3 **1323**

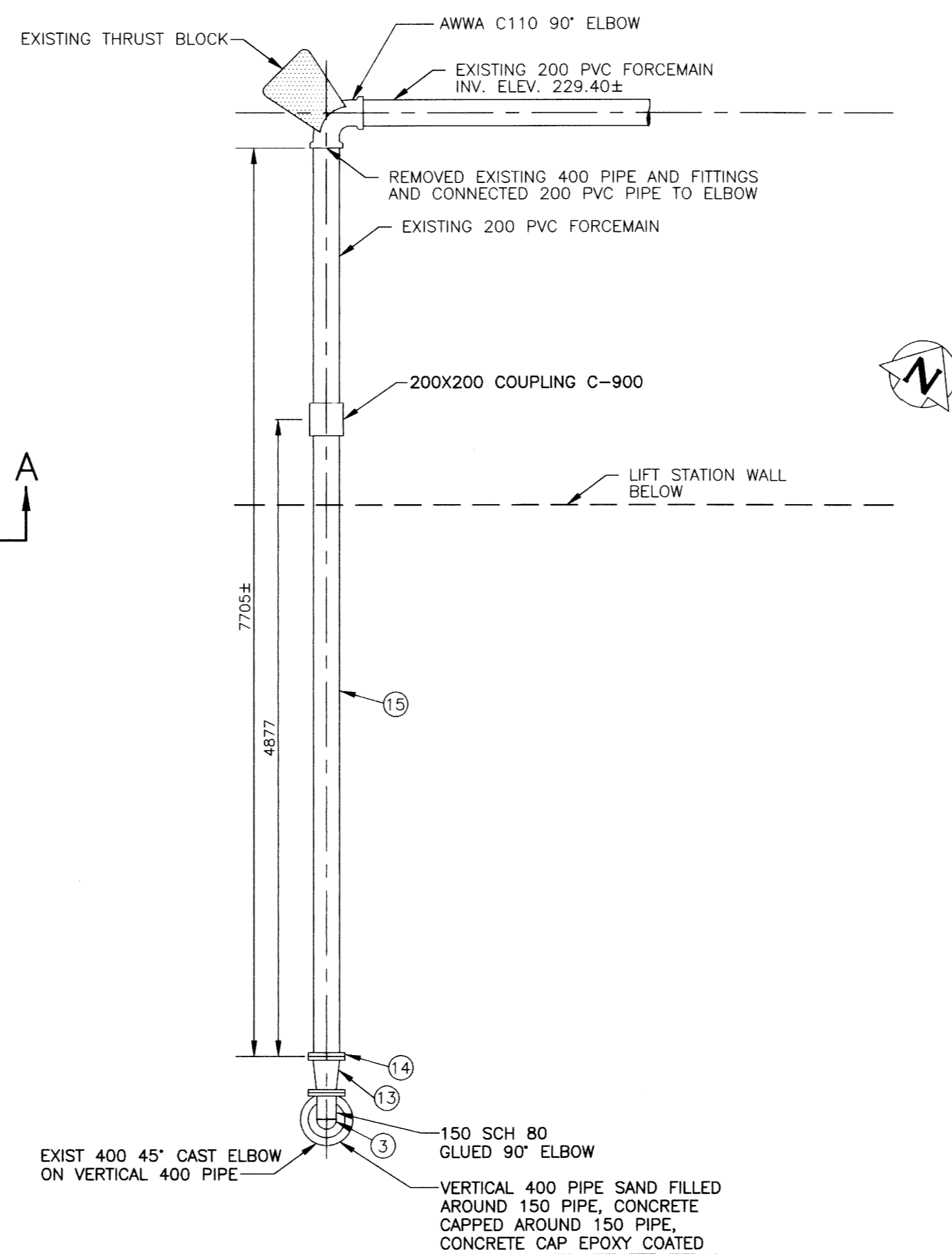
PLOT DATE: 1991 11 06

# FMA1014

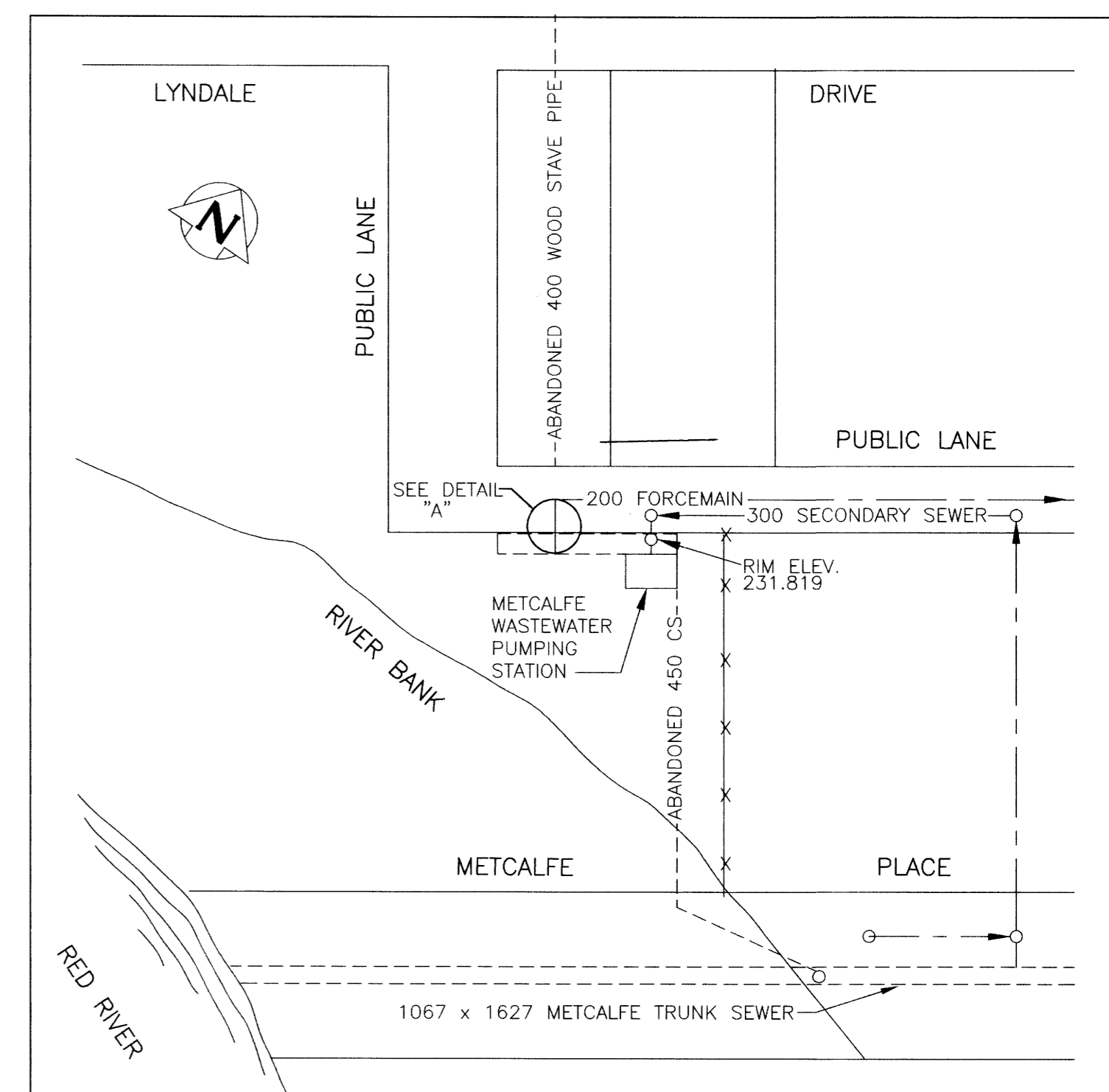




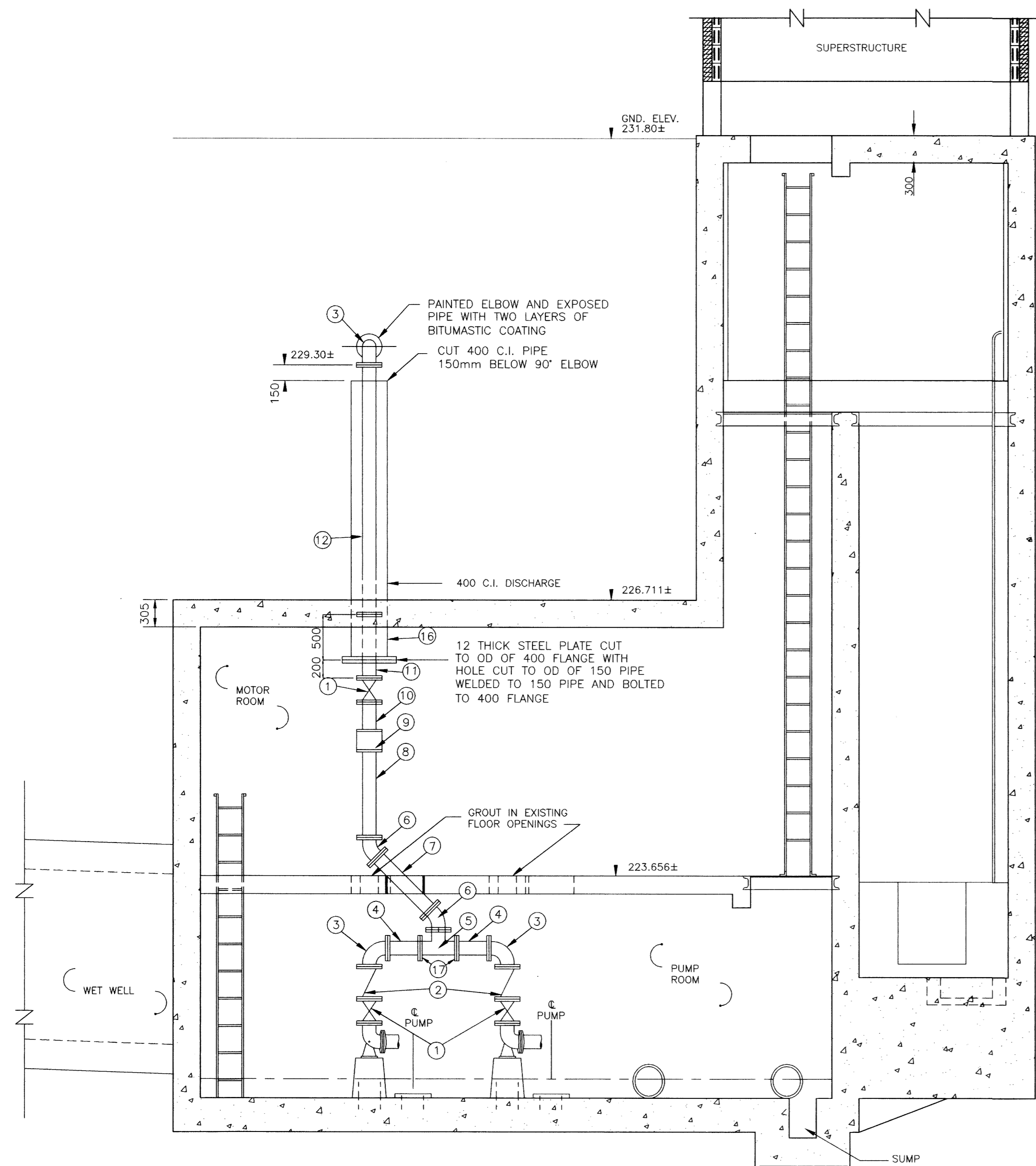
PLAN VIEW - PUMP ROOM  
SCALE 1:40



PLAN VIEW DETAIL "A" - ELEV 229.600  
SCALE 1:40



SITE PLAN  
SCALE 1:500



SECTION A - A  
SCALE 1:40

LIST OF MATERIALS				
ITEM	DESCRIPTION	ENDS	LENGTH	QUANTITY
1	150 GATE VALVE	FLANGED	-	3
2	150 CHECK VALVE	FLANGED	-	2
3	150 90° ELBOW	FLANGED	-	3
4	150 FILLER PIPE	FLANGED	±356.5	2
5	150X150X150 TEE	FLANGED	-	1
6	150 45° BEND	FLANGED	-	2
7	150 FILLER PIPE	FLANGED	±824	1
8	150 FILLER PIPE	FLANGED	±970.5	1
9	150 POLYSONIC FLOW METER	FLANGED	-	1
10	150 FILLER PIPE FLANGED X PLAIN	FLANGED	±325	1
11	150 FILLER PIPE	FLANGED	±700	1
12	150 FILLER PIPE	FLANGED	±2752	1
13	150-200 INCREASER	FLANGED	-	1
14	200 UNI-FLANGE OR APPROVED EQUAL	FLANGED	-	1
15	200 CLASS 150 AWWA C900 PVC PIPE	FLANGED	±7705	1
16	400 C.I. PIPE EXISTING	FLANGED	-	1
17	150 UNI FLANGE OR APPROVED EQUAL	FLANGED	-	2

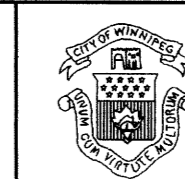
- NOTES
- LENGTHS SHOWN FOR PIPING ARE FACE TO FACE AND DO NOT INCLUDE GASKET THICKNESS.
  - GASKETS SHALL BE 3 mm THICK, FULL FACED, CLOTH INSERTED RUBBER.
  - LENGTHS SHOWN AS ± SHALL BE FIELD MEASURED BEFORE BEING CUT AND INSTALLED.
  - ALL FASTENERS TO BE TYPE 316 STAINLESS STEEL.
  - CONTRACTOR TO REMOVE EXISTING PIPING AND SUPPLY ALL NEW MATERIALS EXCEPT WHERE SHOWN AS EXISTING.
  - ALL PIPE TO BE CLASS 52 DUCTILE IRON OR SCHEDULE 40 STEEL.
  - ALL FLANGED FITTINGS SHALL CONFORM TO AWWA C110.
  - ALL FLANGES SHALL BE WELDED INSIDE AND OUT IN ACCORDANCE WITH AWWA C 207.
  - ALL ANCHOR BOLTS TO BE KWIK BOLT STUD ANCHOR OR APPROVED EQUAL.

METRIC  
WHOLE NUMBERS INDICATE MILLIMETRES  
DECIMALIZED NUMBERS INDICATE METRES

AS-CONSTRUCTED

*Robina* *K. Valter* 99.07.22  
CONTRACT ADMINISTRATION DRAFTING & GRAPHIC SERVICES DATE  
WATER AND WASTE DEPARTMENT

B.M. ELEV.					
CITY OF WINNIPEG WATER AND WASTE ENGINEERING DIVISION			ENGINEER'S SEAL		
DESIGNED BY	TW	CHECKED BY	TW/JE		
DRAWN BY	EN/MTS/WKT	APPROVED BY			
2) FORCEMAIN ALTERATIONS AS-BUILT & TITLE CHANGED	09-98 WKT	HOR. SCALE	AS SHOWN		
1) AS-CONSTRUCTED	08-93 MBD	VERTICAL			
NO. REVISIONS	DATE BY	DATE	1992 09 15		
		DATE	SEPT.15, 1992		



THE CITY OF WINNIPEG  
WATER AND WASTE DEPARTMENT

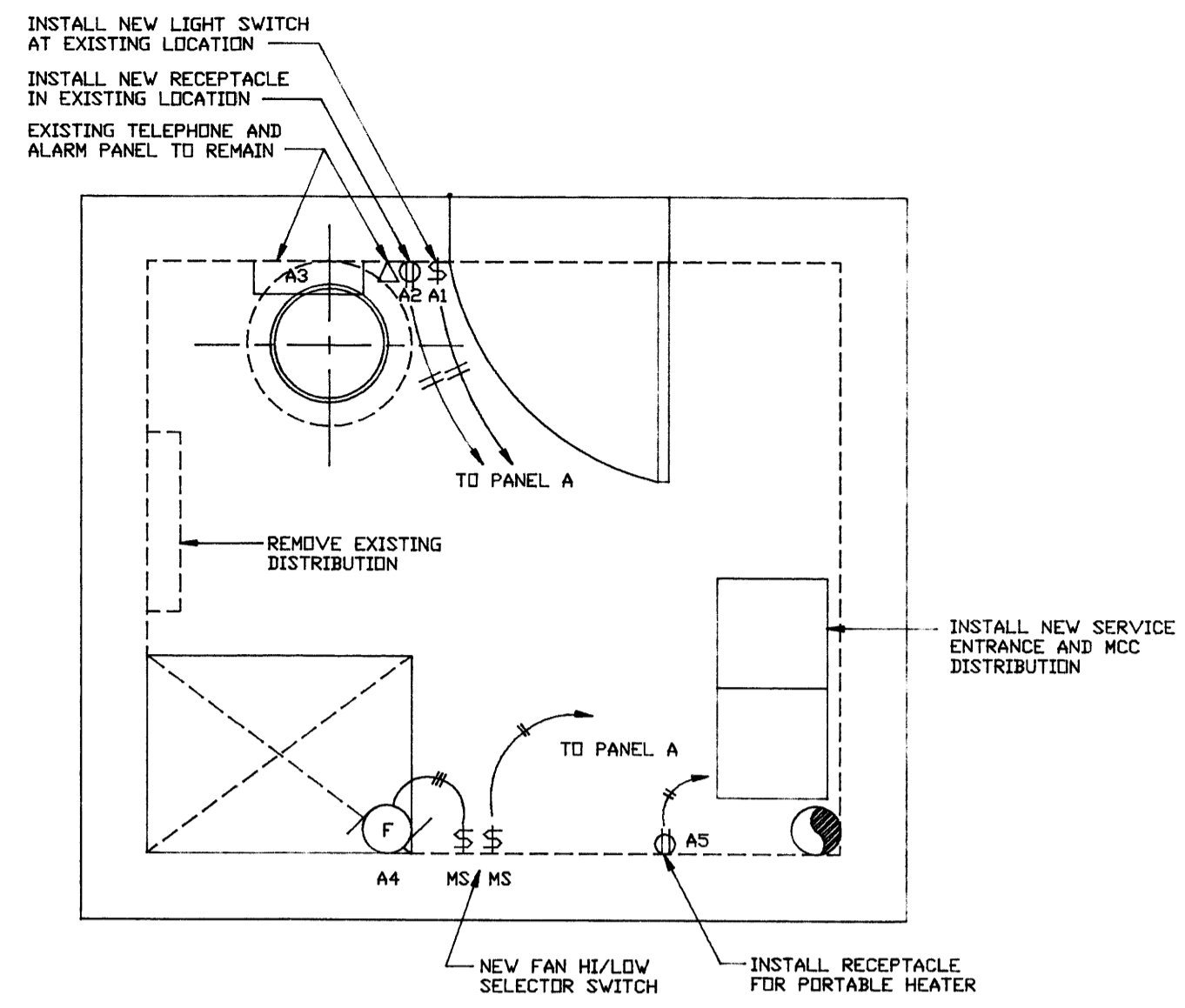
METCALFE WASTEWATER PUMPING  
STATION UPGRADING

SHEET 1 OF 1  
CITY DRAWING NUMBER

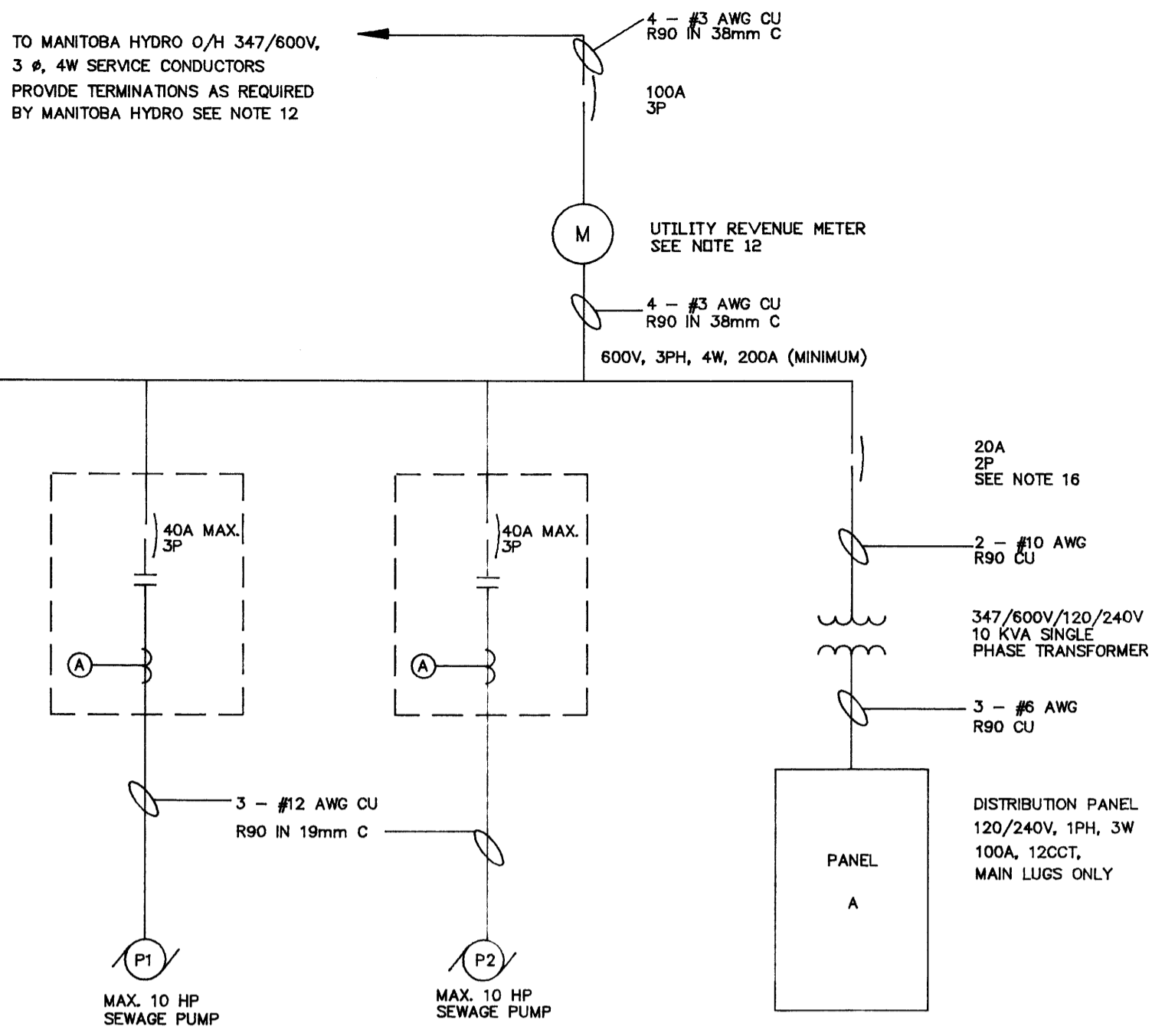
PLAN, SECTIONS, AND  
FORCEMAIN ALTERATIONS

1339

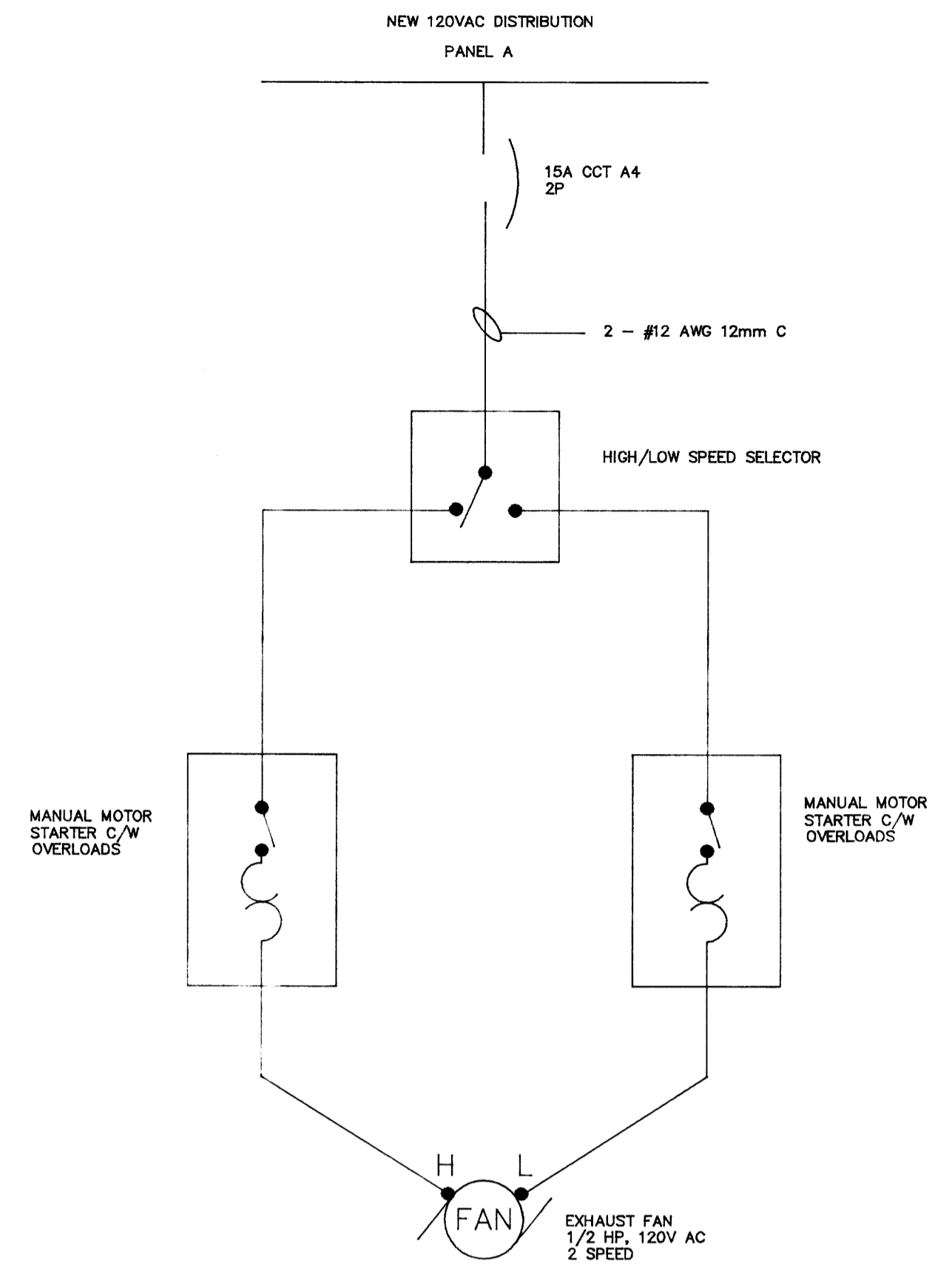
1339



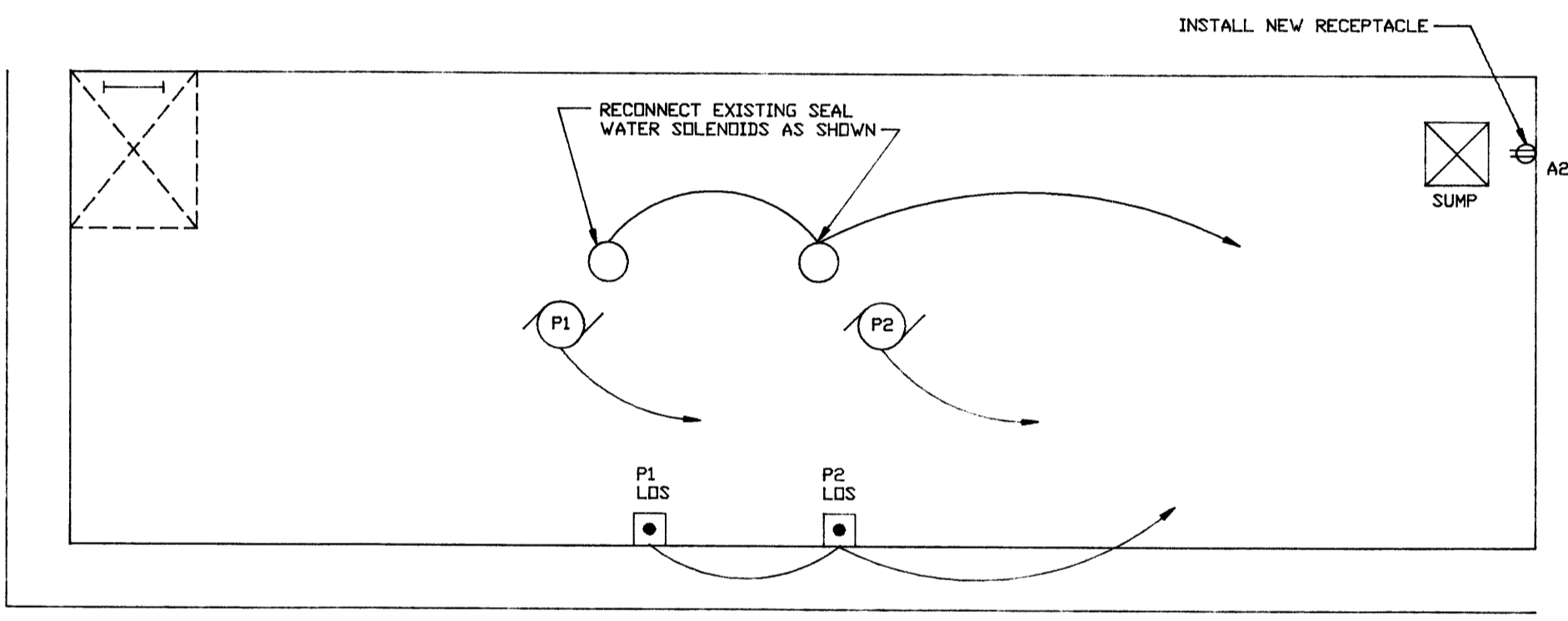
**MAIN FLOOR PLAN** (SEE NOTE 13)  
SCALE 1/30



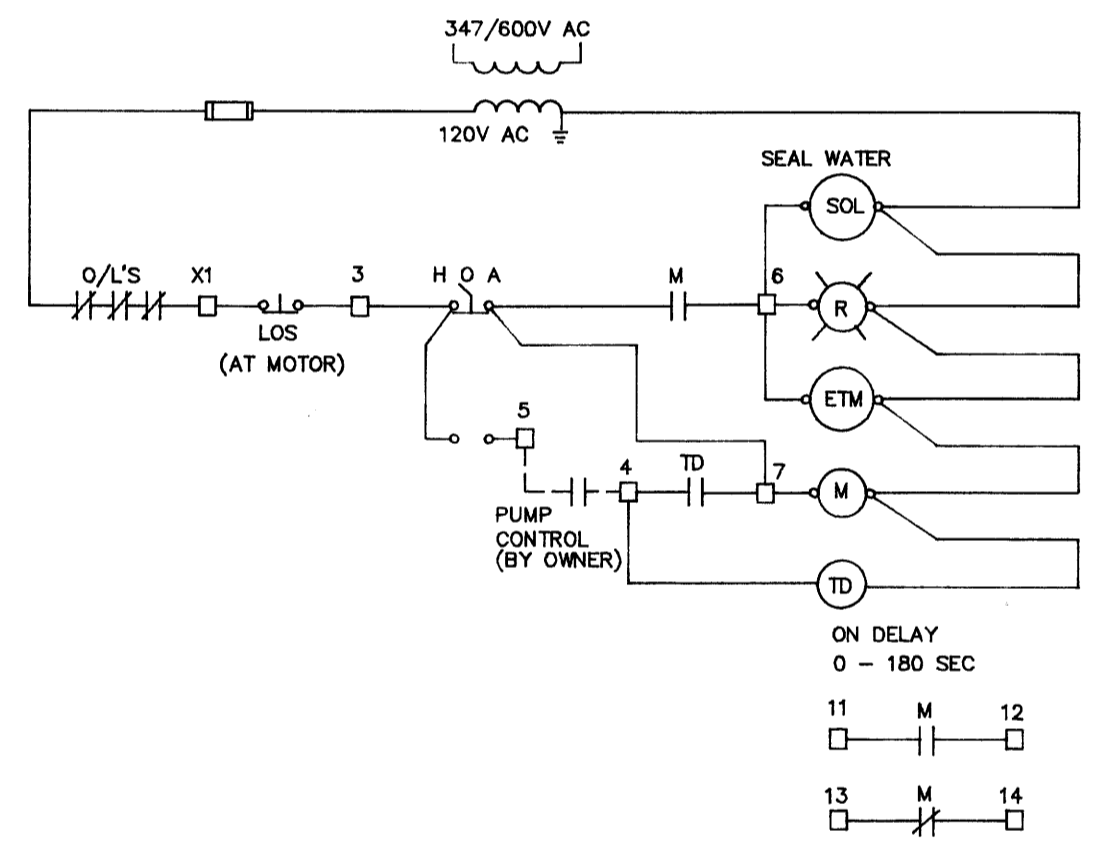
**SINGLE LINE DIAGRAM**  
N.T.S.



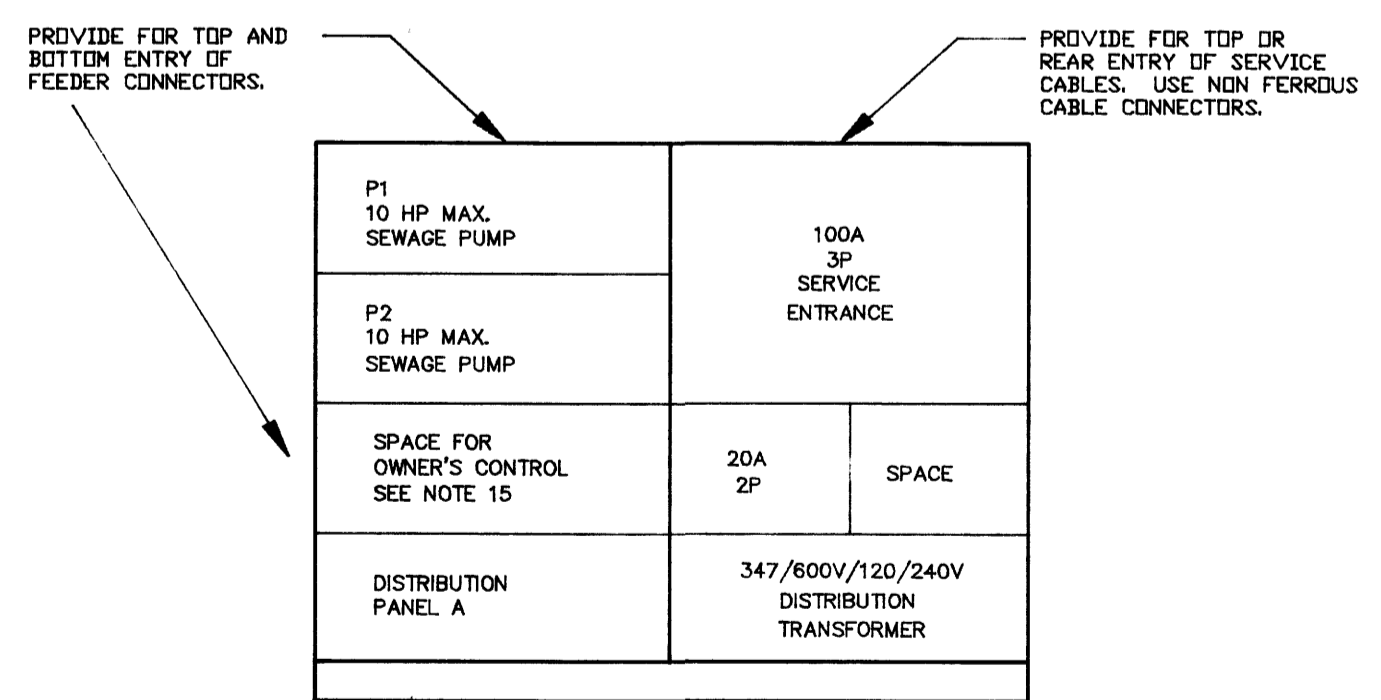
**EXHAUST FAN WIRING**  
N.T.S.



**PUMP ROOM FLOOR PLAN** (SEE NOTE 13)  
SCALE 1/30



**SEWAGE PUMP CONTROL CIRCUIT**



**SERVICE ENTRANCE/MCC LAYOUT**

**Notes:**

- ALL NEW EQUIPMENT TO BE IDENTIFIED WITH LAMICOID NAME PLATES.
- ARRANGE AND PAY FOR ALL PERMITS AND FEES REQUIRED FOR THIS PORTION OF THE WORK INCLUDING ALL INSPECTIONS BY LOCAL AUTHORITY.
- PROVIDE GROUND SYSTEM TO MEET OEC REQUIREMENTS. GROUND TO SUPPLY SIDE OF WATER SERVICE OR PROVIDE GROUND GRID UTILIZING 3/4" X 10' COPPER CLAD STEEL GROUND ROD. USE NEW INSULATED GROUND CONDUCTOR.
- ALL EQUIPMENT USED SHALL HAVE CSA APPROVAL OR HAVE APPROVAL FROM LOCAL AUTHORITY.
- ALL WIRING SHALL BE COPPER. REFER TO SPECIFICATION.
- ALL EQUIPMENT REMOVED IS TO BE TURNED OVER TO OWNER.
- COORDINATE ALL WORK WITH OTHER TRADES. CONFIRM ALL EQUIPMENT SIZES AND LOCATIONS PRIOR TO START OF WORK.
- SEAL ALL CONDUITS LEAVING MCC TO AVOID MOISTURE MIGRATION INTO MCC.
- REFER TO ARCHITECTURAL DRAWING AND/OR VISIT SITE TO CONFIRM ALL DIMENSIONS & SITE CONDITION. DO NOT SCALE THESE DRAWINGS.
- CABLE CONNECTIONS TO MOTORS TO USE WATER TIGHT FITTINGS.
- PROVIDE NEW WIRE AND CONDUIT CONNECTION TO NEW MOTORS. FINAL MOTOR CONNECTION TO BE VIA "GAB TREE" MOUNT LOCK OFF STOP (LOS) PUSHBUTTONS ON WALL ADJACENT TO MOTORS AS SHOWN.
- COORDINATE INSTALLATION OF SERVICE WITH MANITOBA HYDRO. CONFIRM REQUIREMENTS AND LOCATION FOR SERVICE CONDUCTOR TERMINATIONS AND REVENUE METER. EXISTING DISTRIBUTION IS TO BE REMOVED.
- EXISTING EQUIPMENT NOT SHOWN IS TO REMAIN AS IS. PROVIDE ELECTRICAL CONNECTIONS AS REQUIRED TO NEW DISTRIBUTION TO PROPERLY POWER THIS EQUIPMENT.
- EXISTING TELEPHONE SERVICE IS TO BE RECONNECTED TO EXISTING TELEPHONE AND ALARM PANEL. PROVIDE NEW ENTRY INTO STATION AND NECESSARY TERMINATION EQUIPMENT. SEAL ALL CONDUIT ENTRIES INTO BUILDING. ARRANGE AND COORDINATE SERVICE MODIFICATIONS WITH MTS.
- PUMP CONTROL SYSTEM FOR PUMPS P1 AND P2 IS TO BE SUPPLIED AND INSTALLED BY OWNER. CONTRACTOR TO PROVIDE SPACE AS SHOWN IN MCC FOR MOUNTING OF AUTO ALTERNATOR AND CONTROL CONNECTIONS BY OWNER.
- SINGLE PHASE DISTRIBUTION CONNECTION BY CONTRACTOR TO ENSURE THAT PROPER PHASE WIRES ARE UTILIZED. MANITOBA HYDRO SERVICE UTILIZES A WYE ARRANGEMENT. MEASURE PHASE CONDUCTOR VOLTAGES TO CONFIRM PROPER CONNECTION AND DEMONSTRATE TO OWNER PRIOR TO BEING ENERGIZED.
- MAINTAIN PUMP STATION OPERATION DURING CONSTRUCTION. COORDINATE WITH OWNER.

DISTRIBUTION PANEL A 120/240V, 1PH, 3W, 100A MAIN LUGS					
CCT. NO.	DESCRIPTION	TRIP AMPS	TRIP AMPS	DESCRIPTION	CCT. NO.
1	LIGHTS	15A	15A	RECEPTACLES	2
3	ALARM PANEL	15A	15A	EXHAUST FAN	4
5	PORTABLE HEATER RECEPTACLE	15A	15A	LOWER LEVEL LIGHTS	6
7	SPARE	15A	15A	SEAL WATER SOLENOID	8
9	SPARE	15A	15A	SPARE	10
11	SPARE	15A	15A	SPARE	12

**PANEL SCHEDULE**

LEGEND	
SYMBOL	DESCRIPTION
	INCANDESCENT FIXTURE
	SINGLE POLE SWITCH
	MOTOR
	DUPLEX RECEPTACLE
	PUSHBUTTON (LOS)
	WIRING RUN - 2 WIRES IN CONDUIT SURFACE MOUNTED

B.M. ELEV.					
DESIGNED BY	T.W.	CHECKED BY	T. WHITESIDE		
DRAWN BY	EN	APPROVED BY			
HOR. SCALE	AS SHOWN	RELEASED FOR CONSTRUCTION			
VERTICAL					
NO. REVISIONS		DATE	DECEMBER 1990	DATE	

ENGINEER'S SEAL

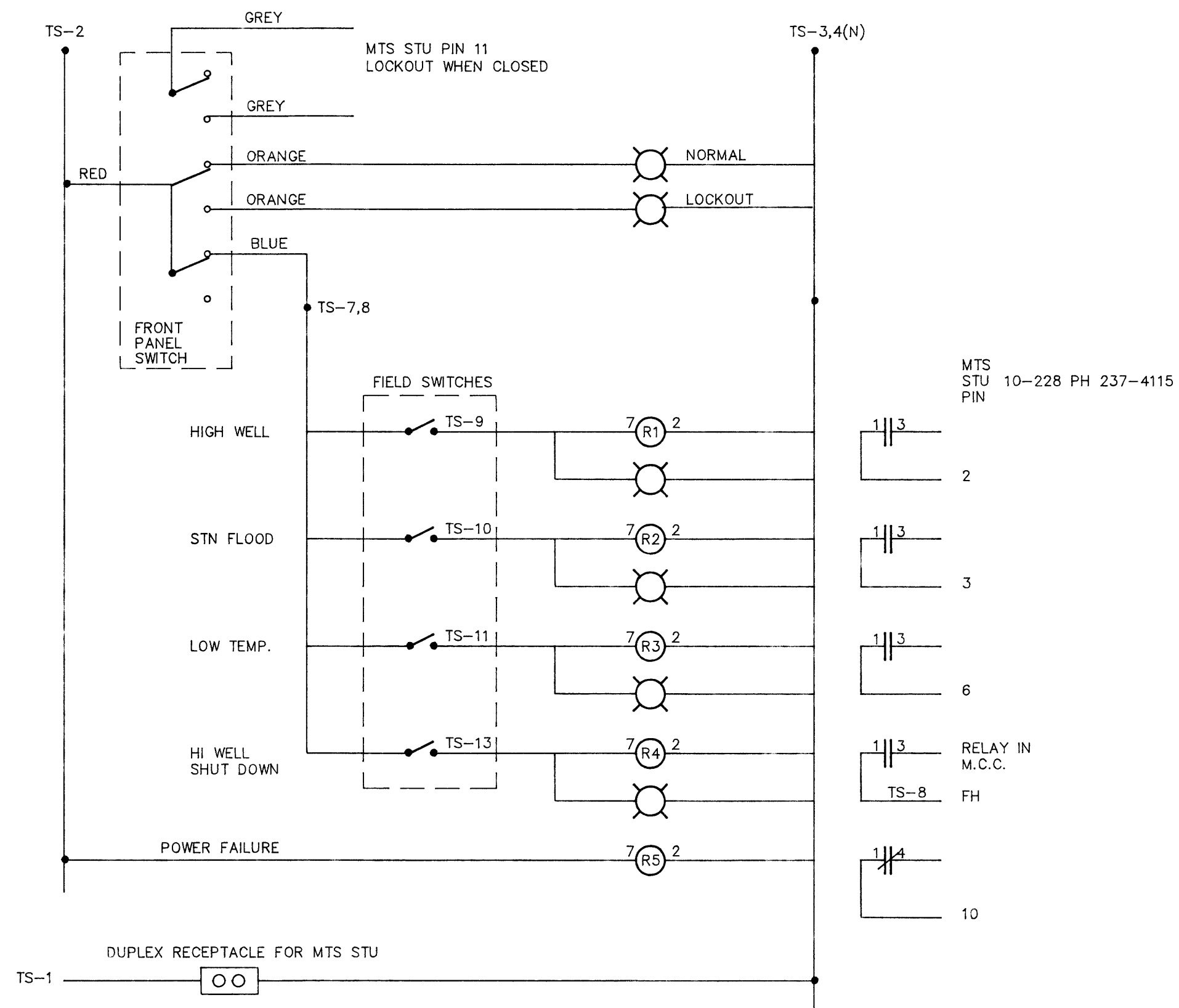
**THE CITY OF WINNIPEG**  
WORKS AND OPERATIONS DIVISION  
WATERWORKS WASTE AND DISPOSAL DEPARTMENT

**METCALFE LIFT STATION**  
UPGRADING  
ELECTRICAL

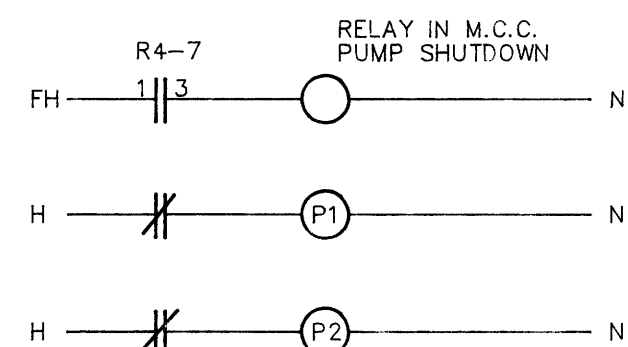
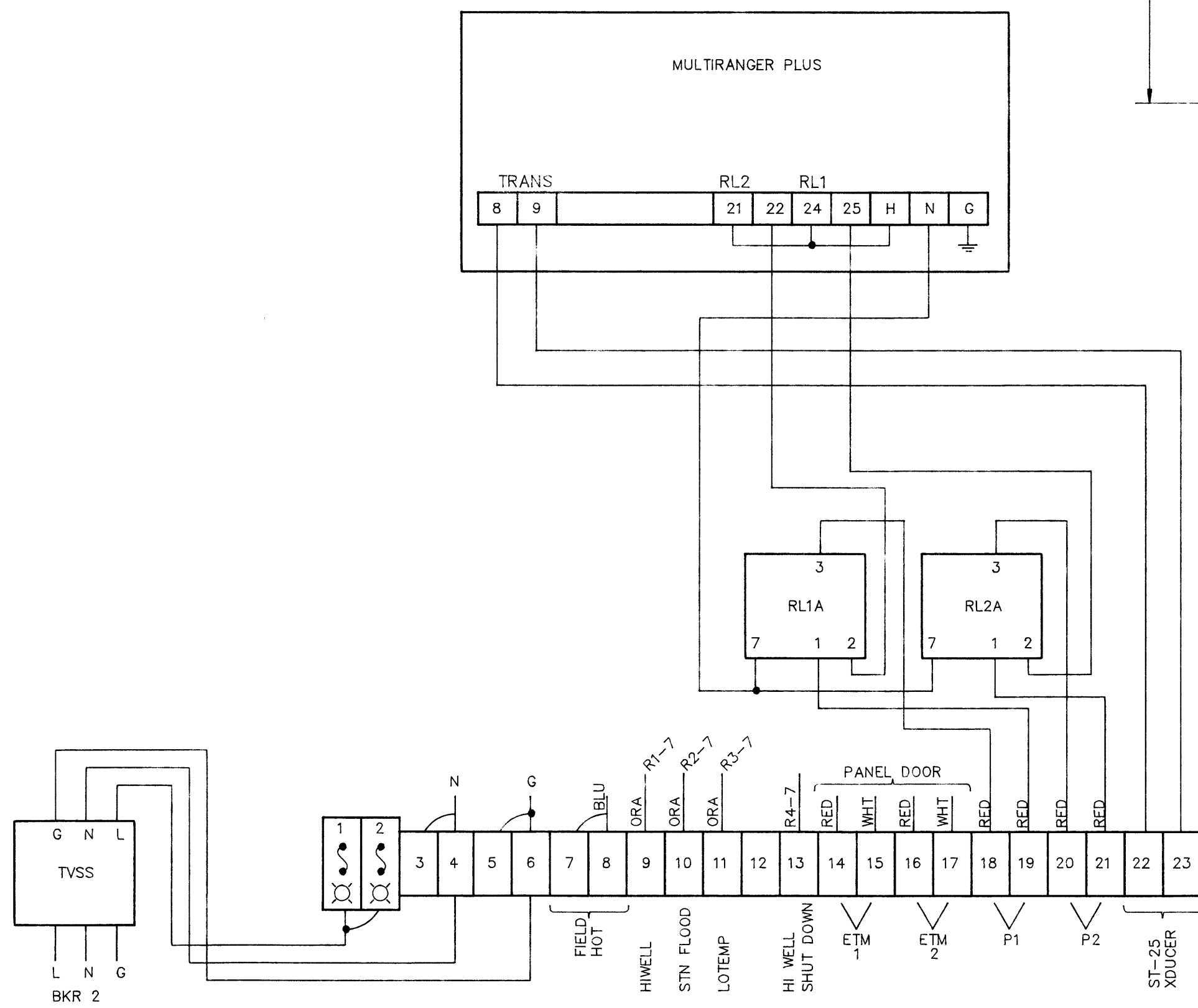
CITY DRAWING NUMBER  
SHEET 2 OF 2  
1340

CONSULTANT DRAWING NO.

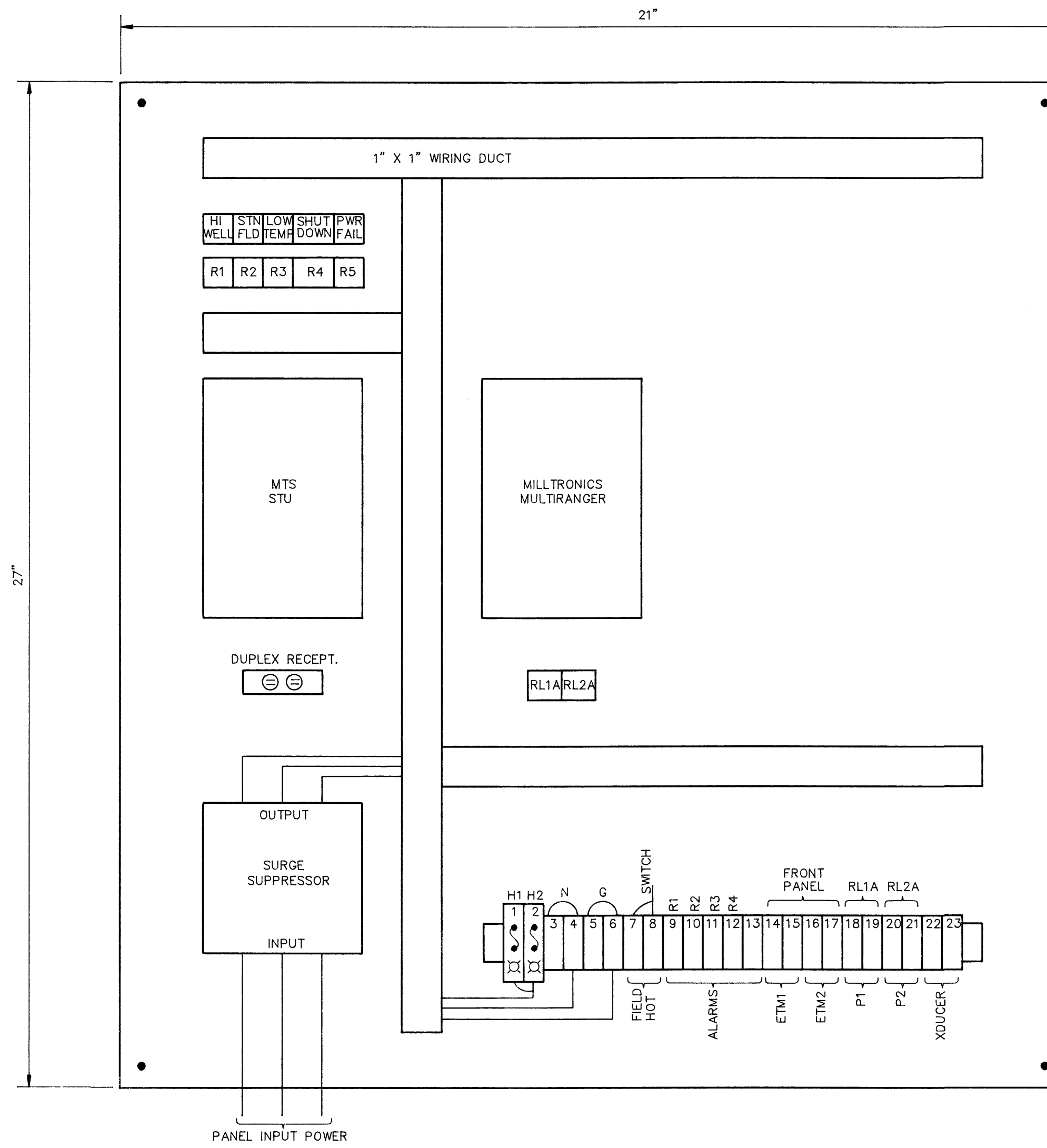
**ALARM SCHEMATIC**



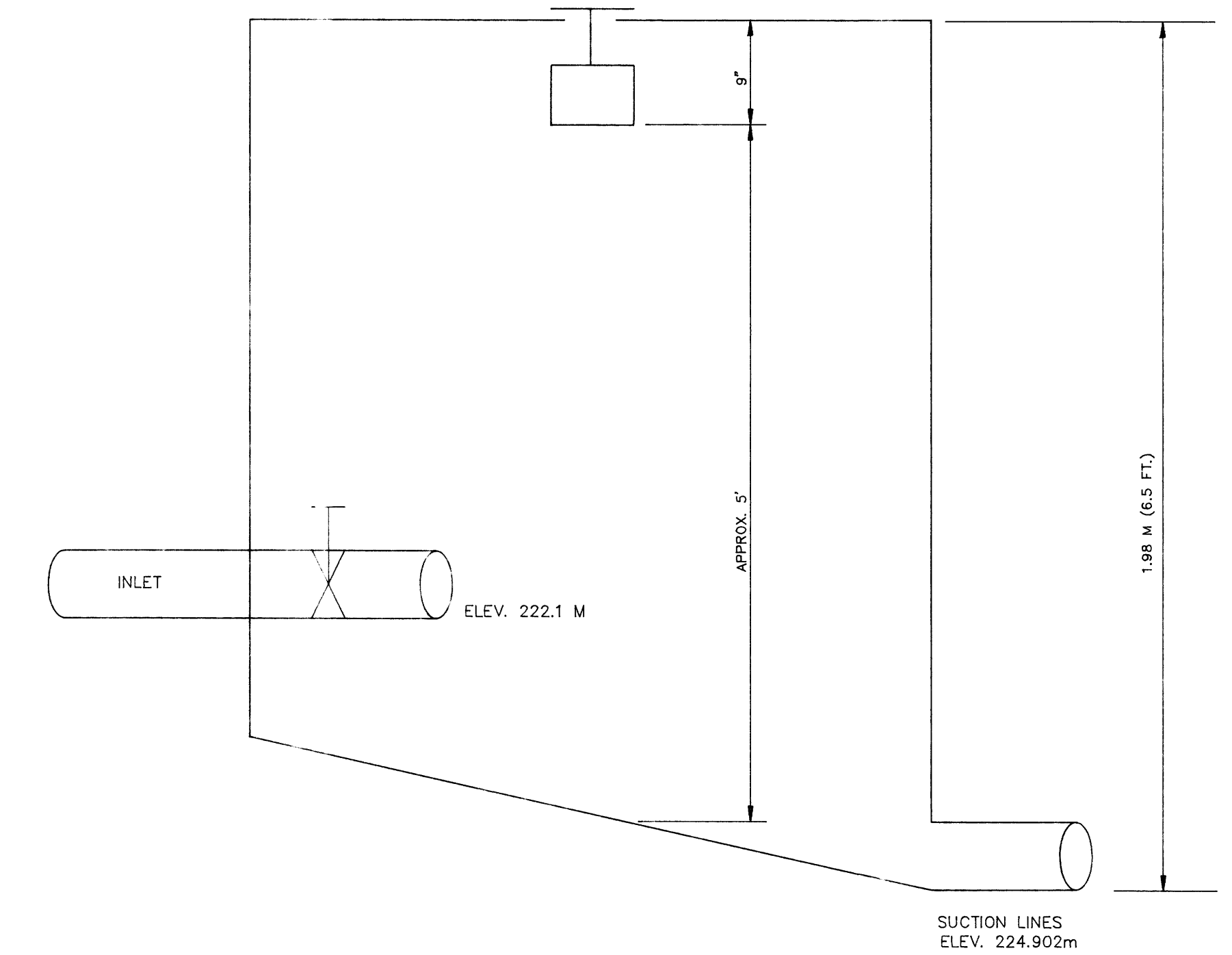
**WIRING DIAGRAM**



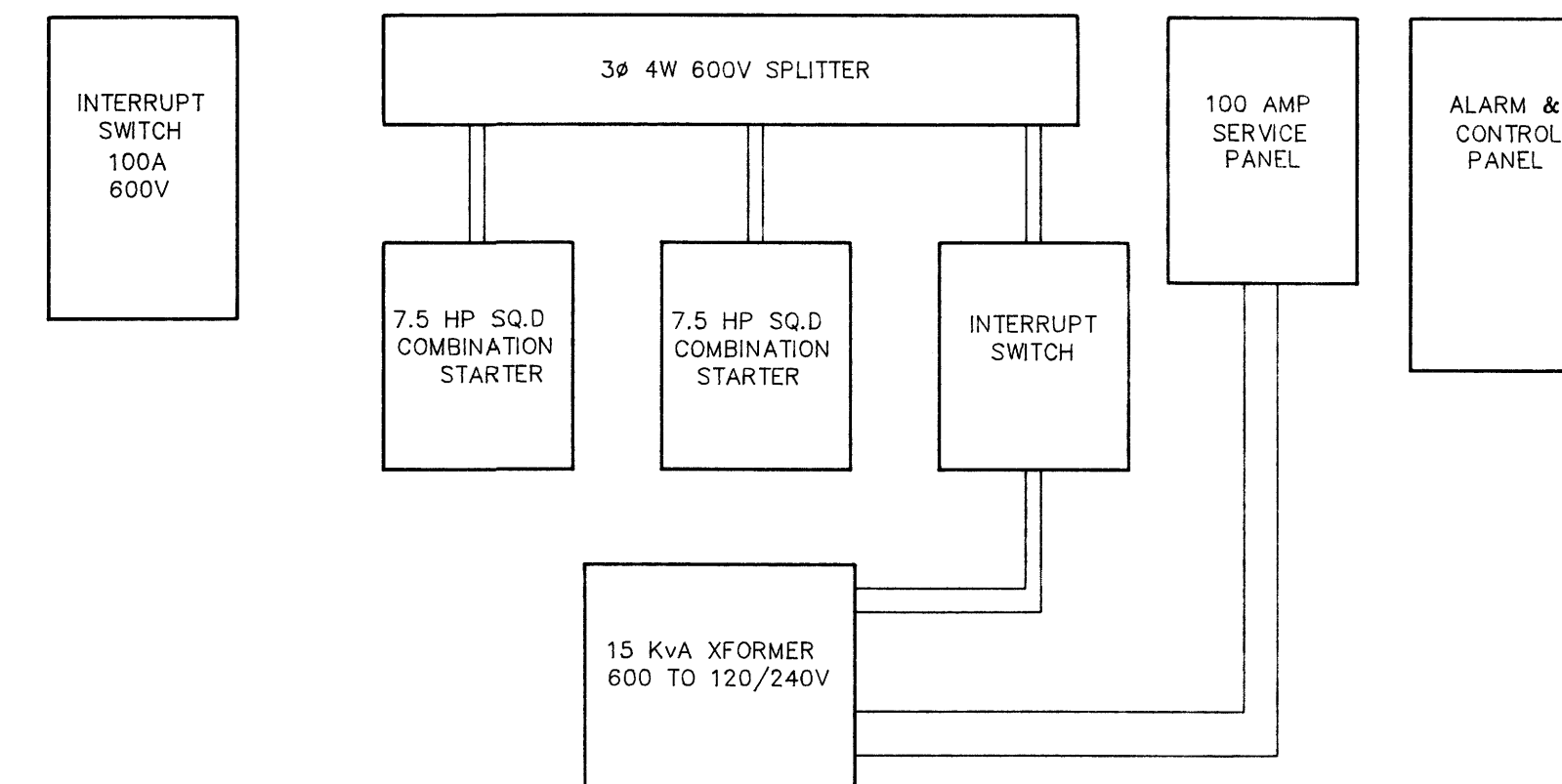
**BACK PANEL LAYOUT**



**SUMP DIAGRAM**



**ELECTRICAL DISTRIBUTION LAYOUT**

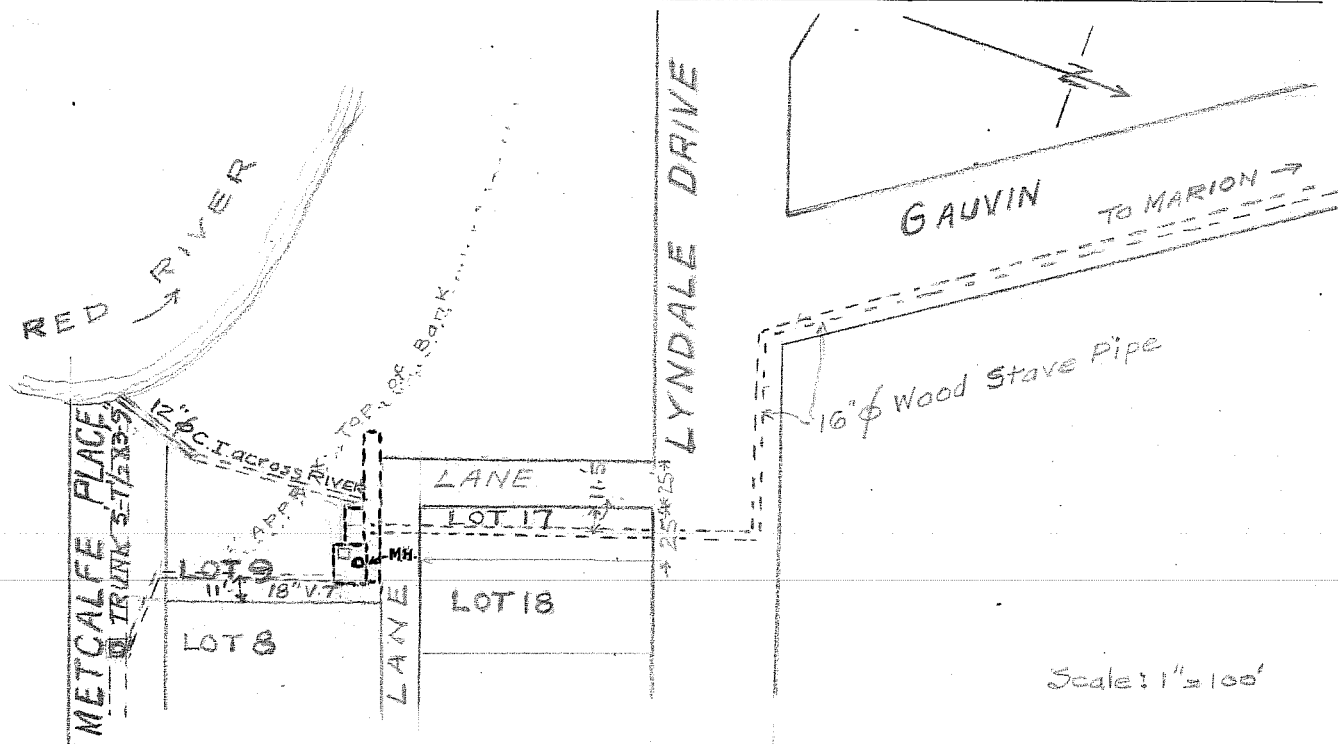


1409

B.M. ELEV.		ENGINEER'S SEAL		<p>THE CITY OF WINNIPEG WORKS AND OPERATIONS DIVISION WATERWORKS WASTE AND DISPOSAL DEPARTMENT</p>
DESIGNED BY M. JEGUES		CHECKED BY M. JEGUES		
DRAWN BY M.B. DAHL		APPROVED BY		CITY DRAWING NUMBER
HOR. SCALE VERTICAL N.T.S.		RELEASED FOR CONSTRUCTION		1409
NO. REVISIONS		DATE		CONSULTANT DRAWING NO.
DATE SEPTEMBER 1992		DATE		

file # SP10409 PLOT DATE SEPTEMBER 03, 1992

ADMIN CONNECTION WITH



LOCATION: UNDERGROUND ON G.W.S.D. PROPERTY. LOT 9 D.G.S. 101 ST BONIFACE PLAN 73  
 ACCESS TO PUMP ROOM AND COMMINUTOR CHAMBER BY COMMON M.H.  
 G.W.S.D. ALSO OWNS LOT 17 (25 FT) BLK. 56 D.G.S. 93-100 ST. BON. PLAN 385