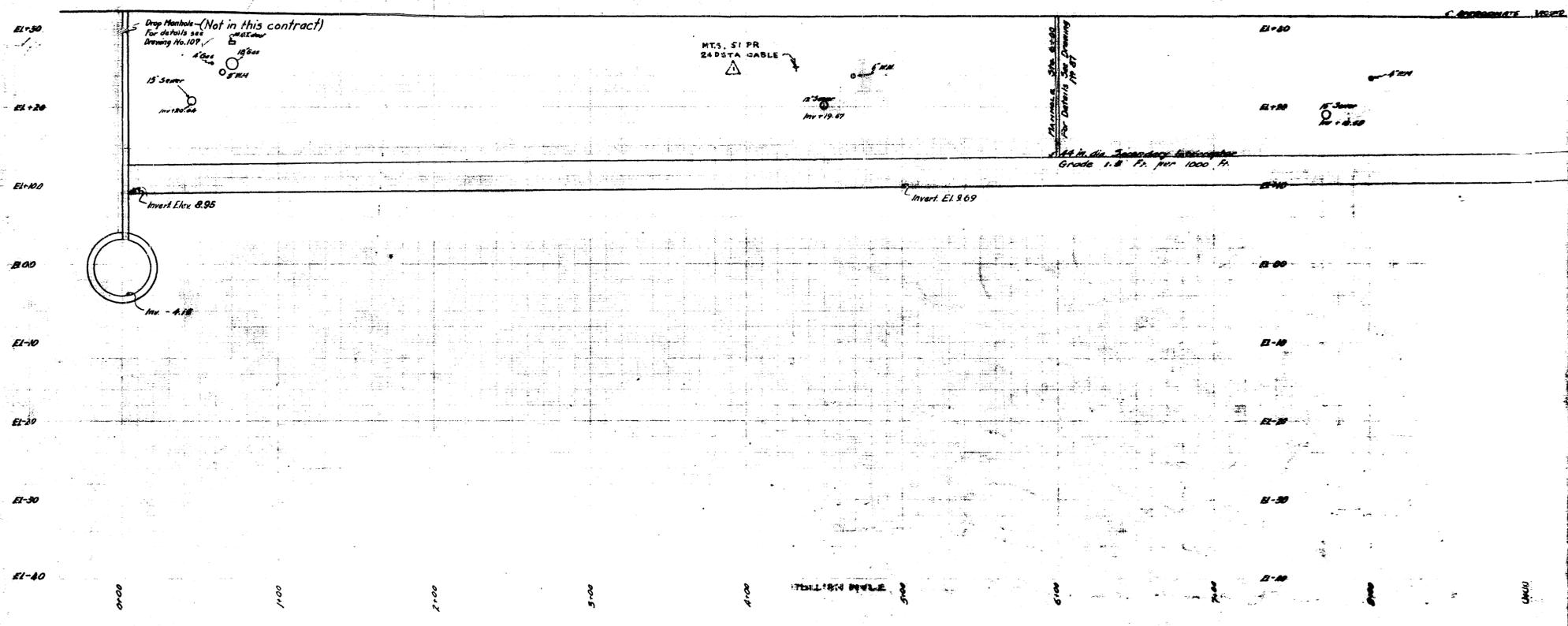
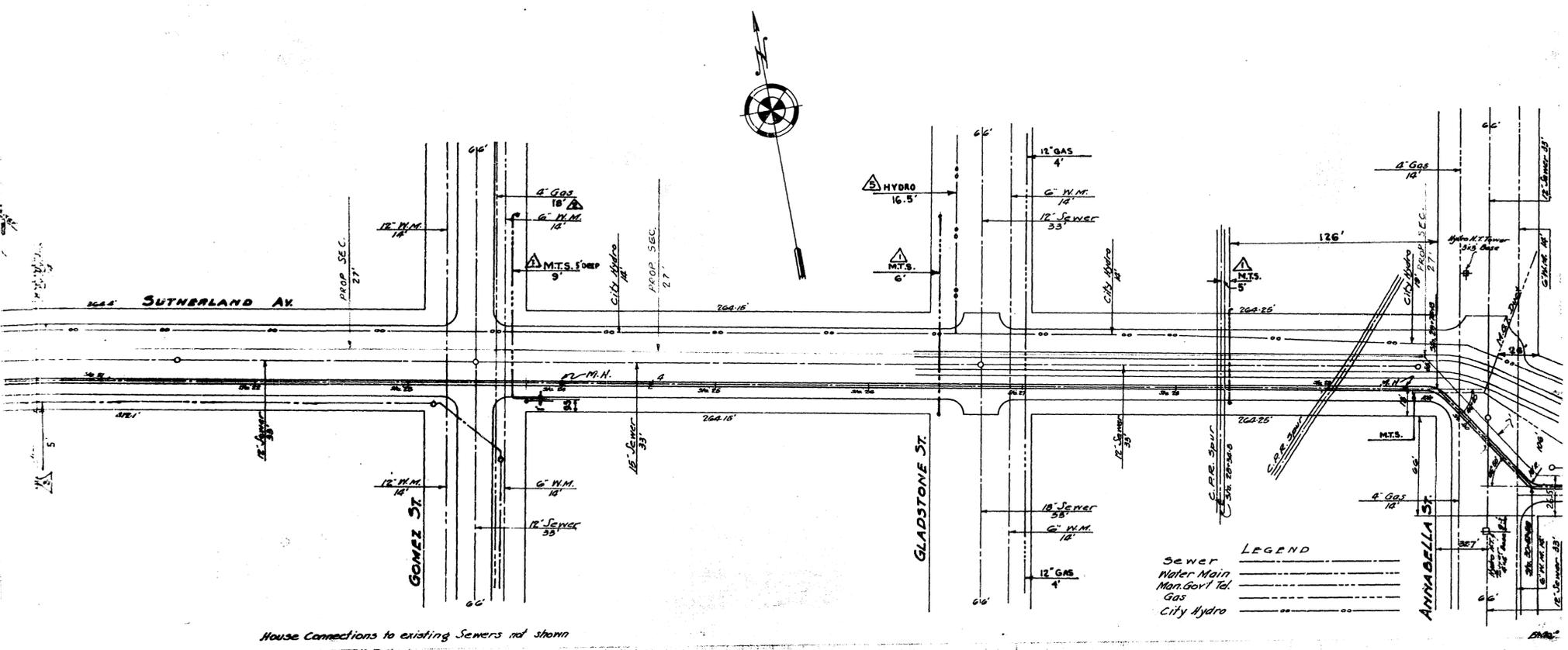


HOUSE CONNECTIONS TO EXISTING SEWERS BY 50MM
 E1+38



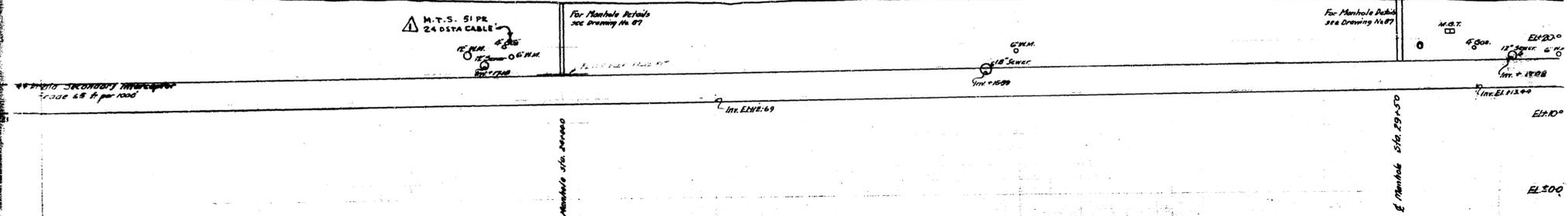


House Connections to existing Sewers not shown

LEGEND

Sewer	---
Water Main	---
Man. Govt. Tel.	---
Gas	---
City Hydro	---

Approximate Ground Elevation



NOTE:
 Where lateral sewers intersect the interceptor, Contractor will be required to make provision for the continuous flow of sewage in said laterals during construction of interceptor and until such time as said interceptor may be put into operation.
 Where watermains interfere with the secondary interceptor, they shall be re-located by the City Waterworks Department at Contractor's expense.
 Where house connections intersect the interceptor, they shall be raised over the interceptor and reconnected to existing sewers at the Contractor's expense.

REV.	DESCRIPTION	Date	By
1	M.T.S. ADDED	JULY 19	HB
2	OFFSETS CORRECTED	JULY 19	HB
3	30\"/>		

GREATER WINNIPEG SANITARY DISTRICT

W. S. LEA, Consulting Engineer

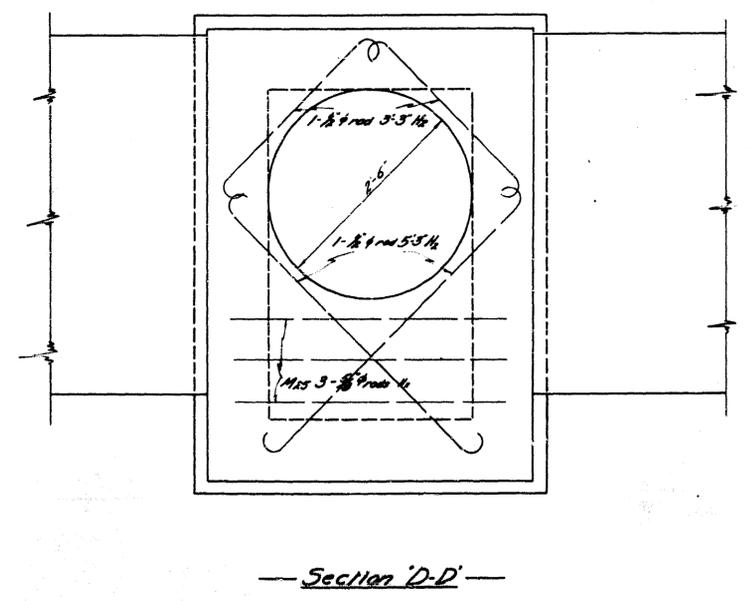
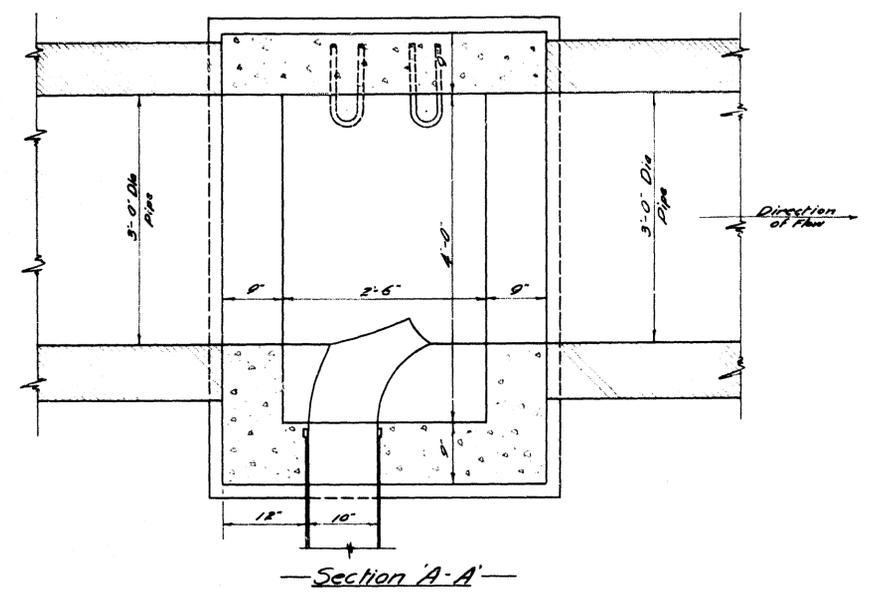
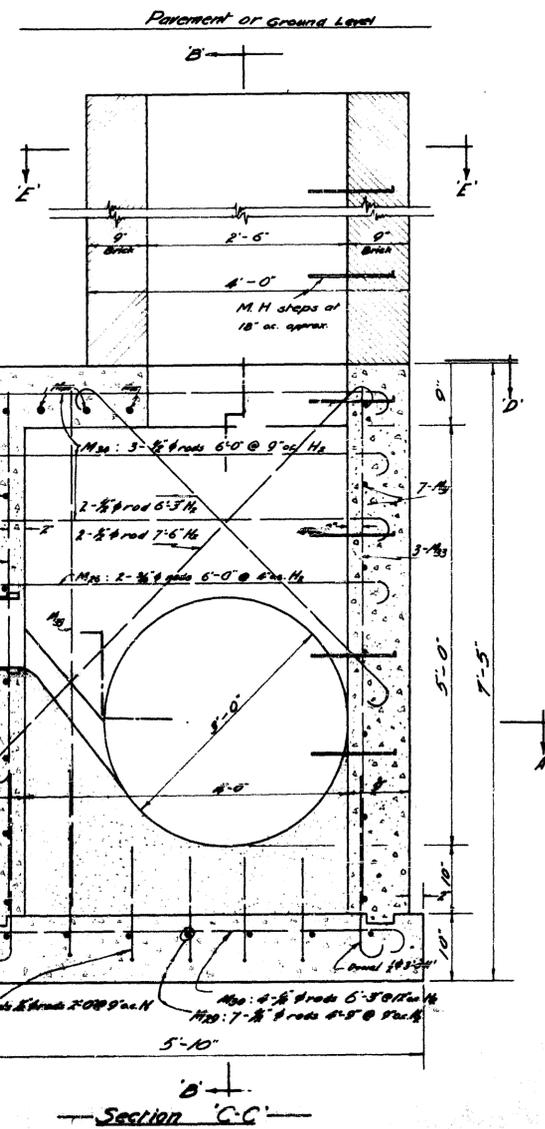
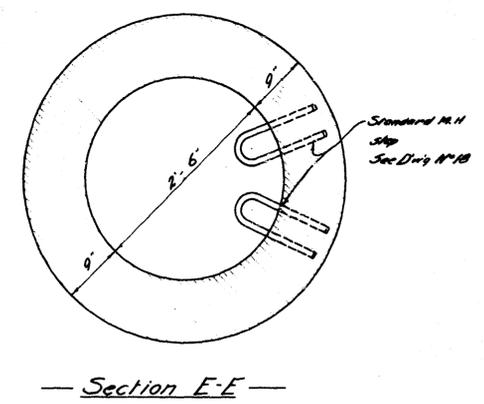
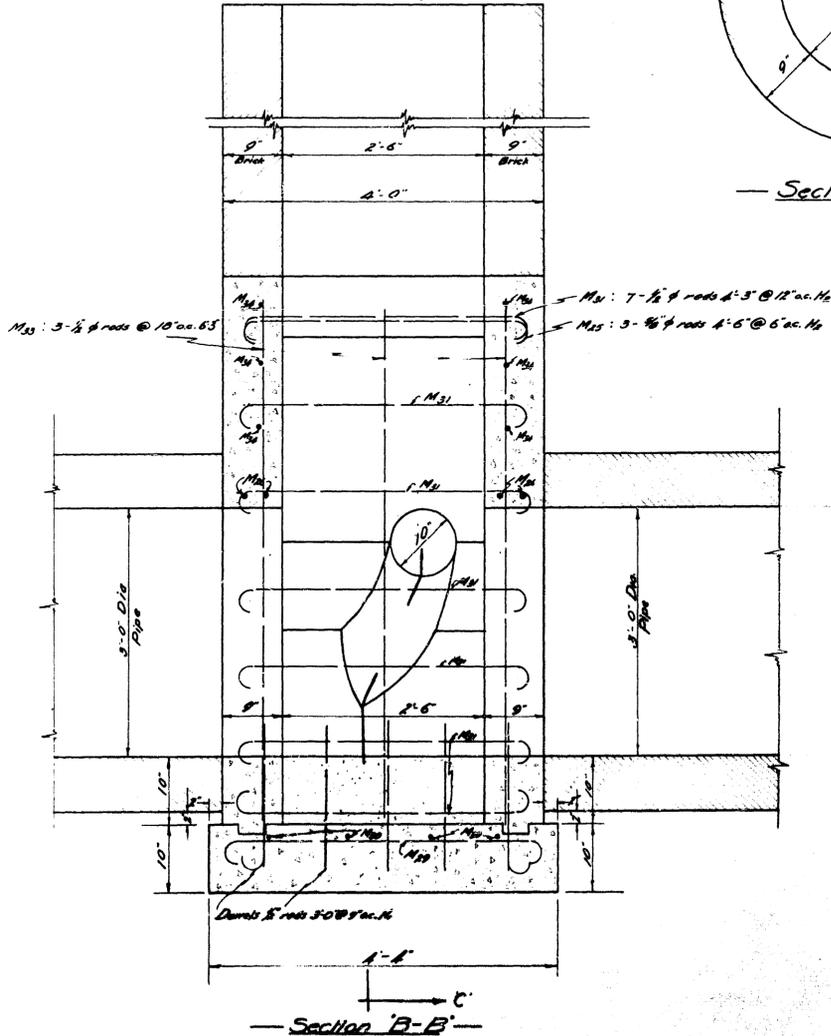
TITLE: SUTHERLAND ST. SEWERAGE

PLAN & PROFILE
 ARGYLE TO ANNABELLE 34.94 & 30
 SCALE: HOR. 1"=40.00' DATE: DEC. 7, 1923.

Drawn By: J. B. S.
 Checked By: J. B. S.
 Approved By: J. B. S.

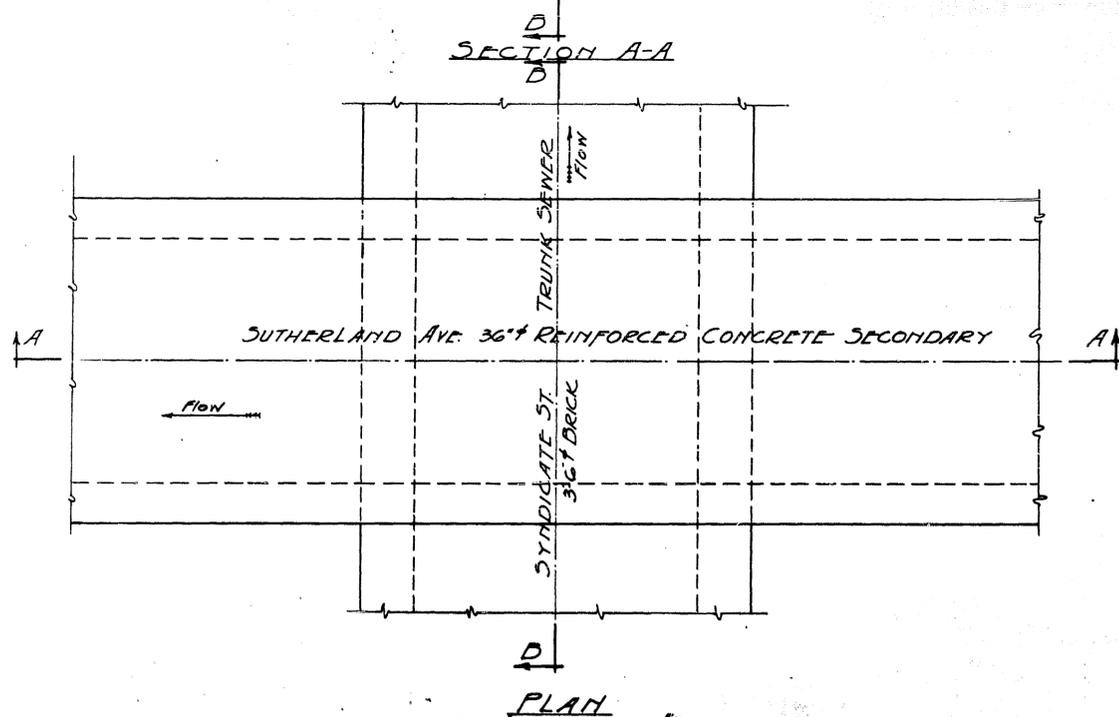
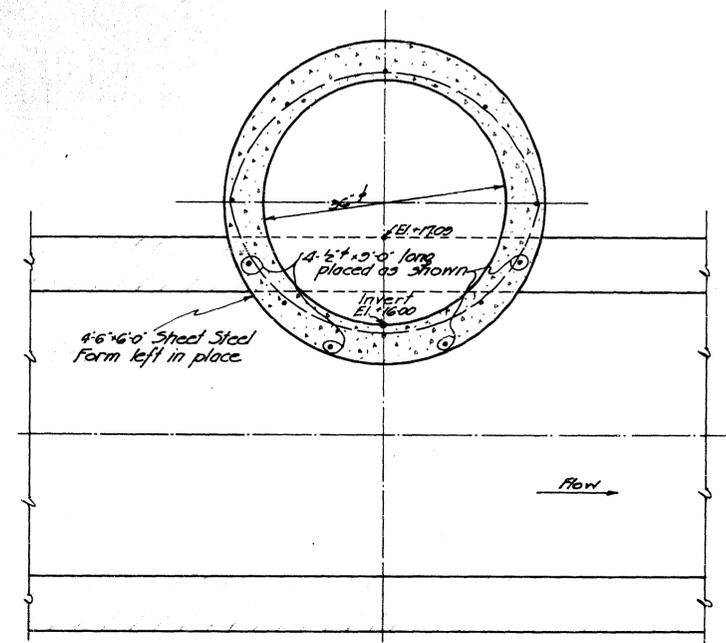
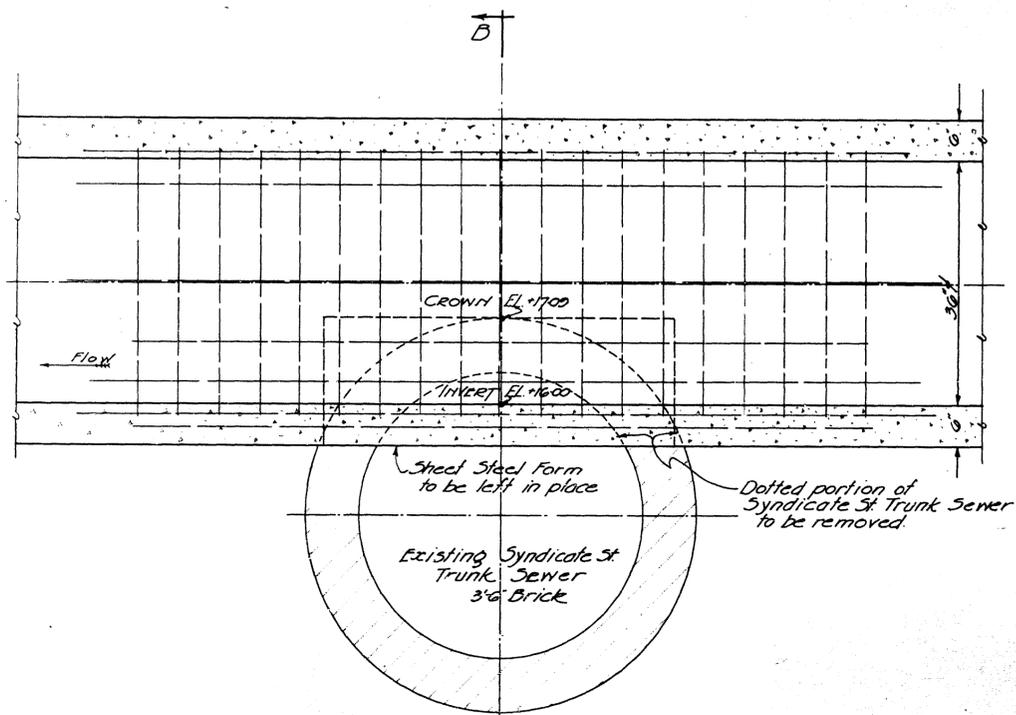
2140 2240 2340 2440 2540 2640 2740 2840 2940 3040

Pavement or Ground Level
 Greater Winnipeg Sanitary District Standard
 manhole cover, frame and mud basket
 See Dwg No 18



Notes:
 One manhole as shown at Syndicate and Sutherland
 One similar manhole opposite turn at Grace St & Point Douglas

GREATER WINNIPEG SANITARY DISTRICT
 HIGHLAND SECONDARY
 PROJECT NO. 105
 DRAWING NO. 105
 DATE DEC 31, 1922
 CHECKED BY: [Signature]
 DESIGNED BY: [Signature]
 APPROVED BY: [Signature]
 107-10-10



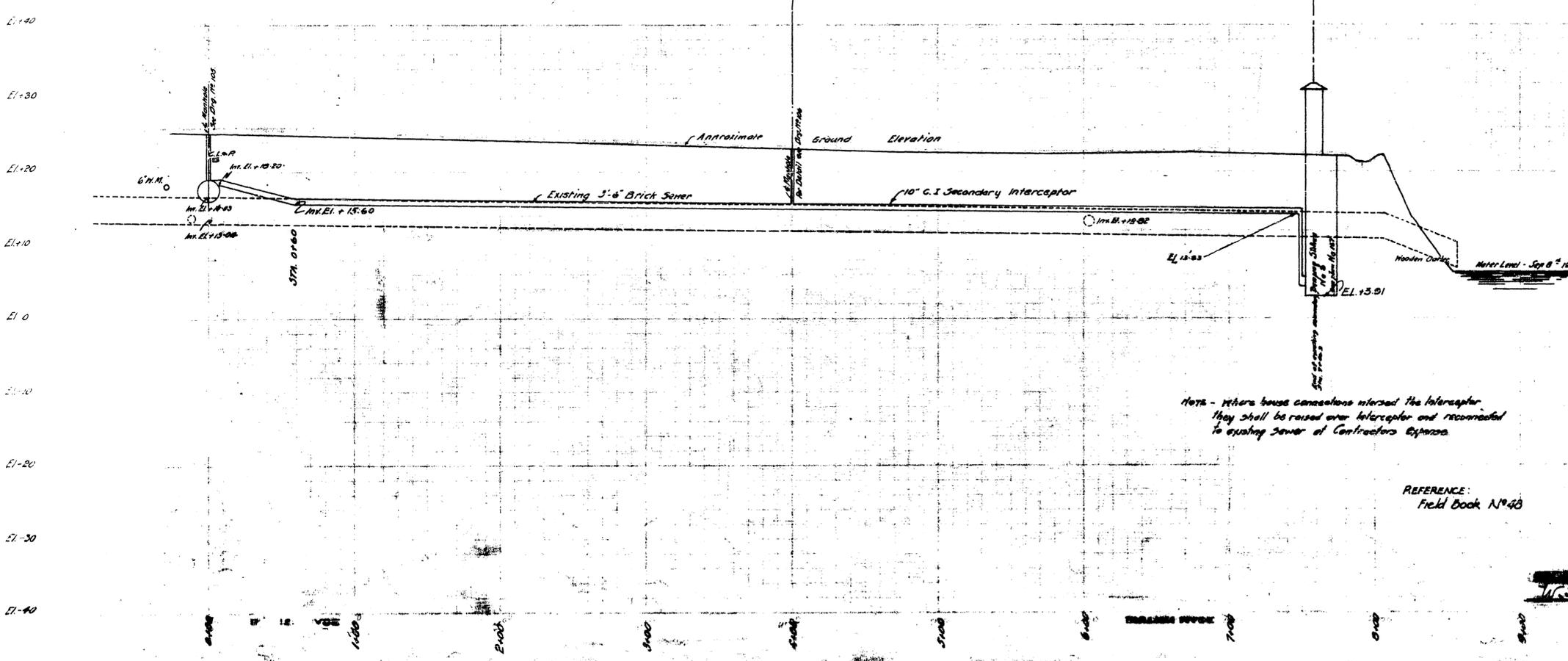
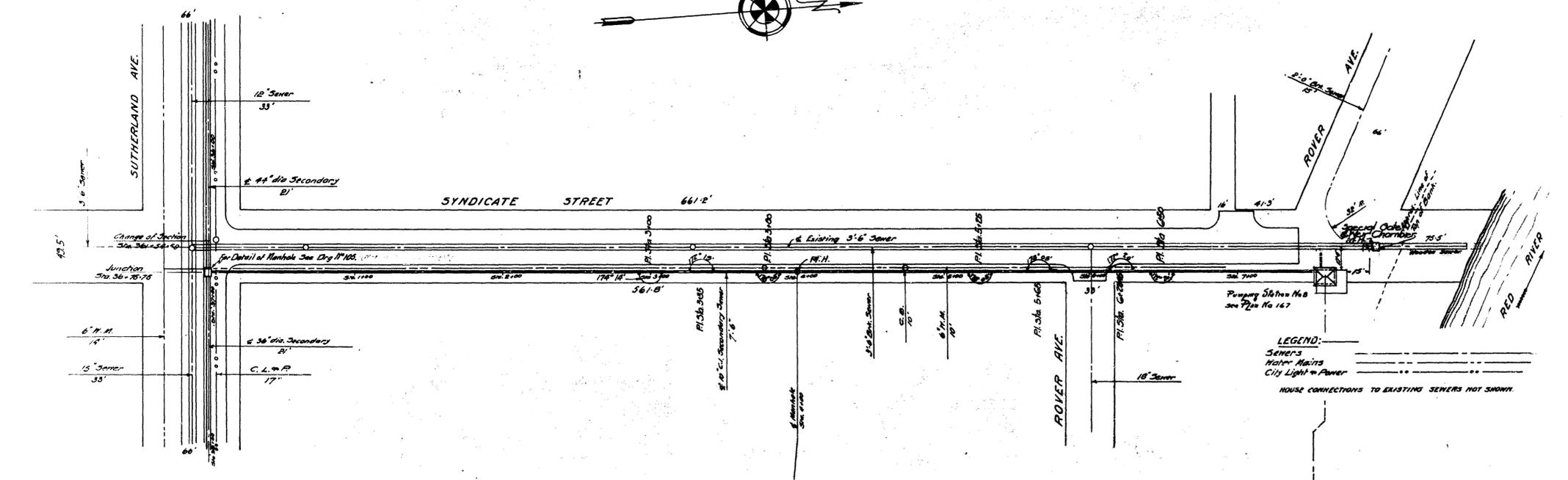
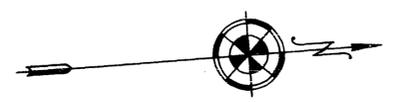
SECTION B-B

PLAN

Reinforcing shown but not called for on this drawing, is typical for this Secondary Sewer.

APPROVED

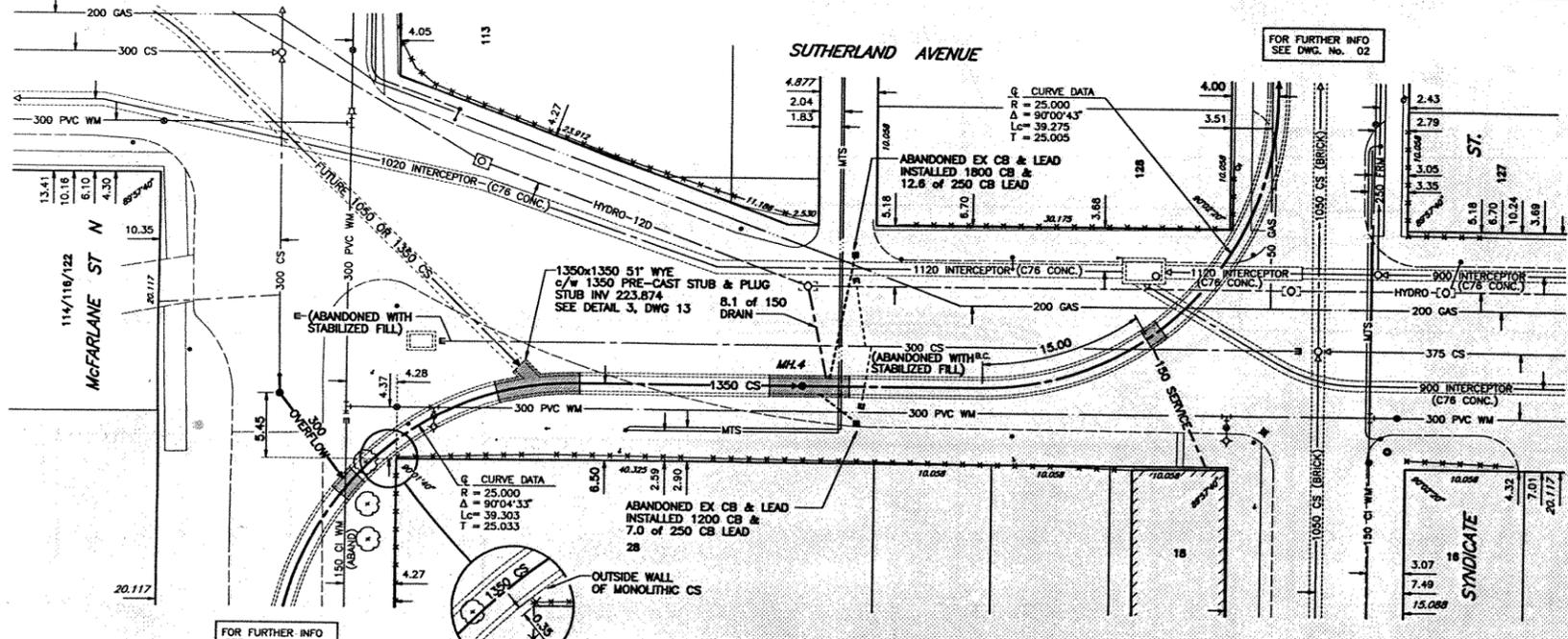
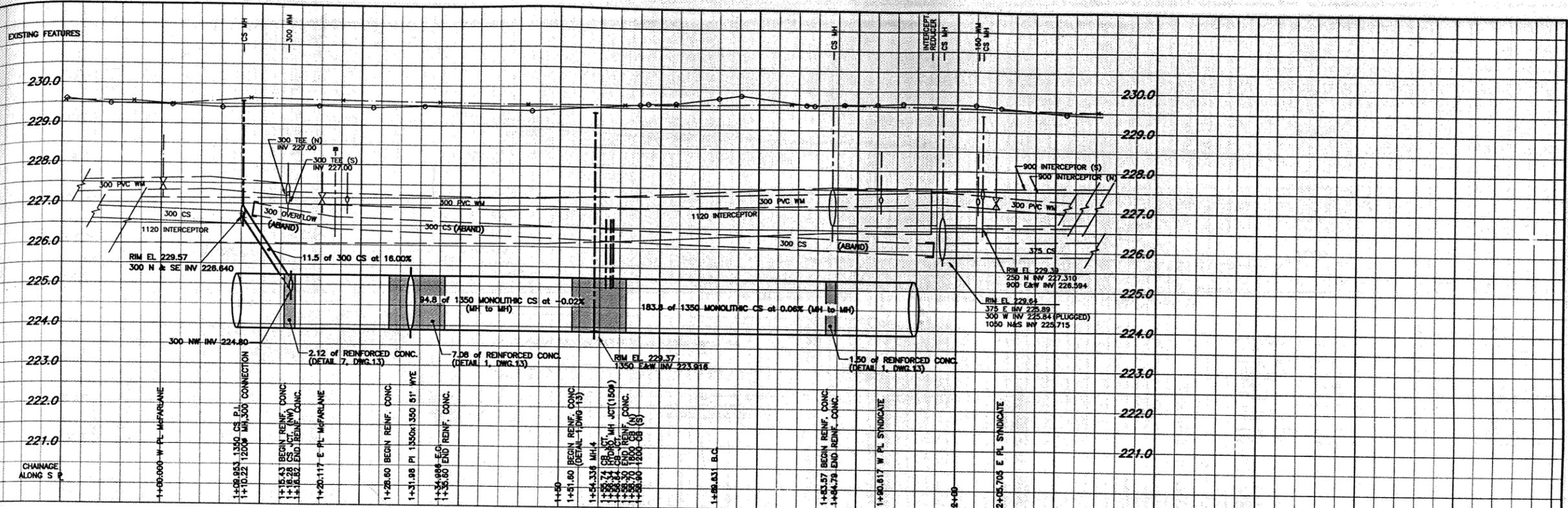
GREATER WINNIPEG SANITARY DISTRICT		TITLE: <i>SUTHERLAND SECONDARY</i> PROJECT: <i>36\"/> </i>
DESIGNED BY: <i>[Signature]</i> CHECKED BY: <i>[Signature]</i> DATE: <i>[Date]</i>	SCALE: <i>1\"/> </i>	SHEET NO: <i>142</i> TOTAL SHEETS: <i>15</i>
APPROVED BY: <i>[Signature]</i> TITLE: <i>[Title]</i>		



NOTE - Where house connections intersect the interceptor they shall be raised over the interceptor and reconnected to existing sewer at Contractors expense.

REFERENCE:
Field Book N°48

GREATER WINNIPEG SANITARY DISTRICT	
W. S. LE Sewerage Engineer	TITLE: SYNDICATE SECONDARY
APPROVED: [Signature]	DATE: [Date]
BY: [Signature]	SCALE: 1/4" = 10'-0"
BY: [Signature]	DATE: [Date]
BY: [Signature]	BY: [Signature]
BY: [Signature]	APPROVED BY: [Signature]
REVISED: 10-27-37	



MATERIAL LIST

ITEM	MANUFACTURER	MATERIAL SPECIFICATION	SPECIAL FEATURES
SEWER PIPE 1350mm COMBINED SEWER PIPE	SUPRETEC INC.	38 Mpa	MONOLITHIC NON-REINFORCED CONCRETE
300mm COMBINED SEWER PIPE	IPEX INC.	ASTM D3034 CSA B182.2	RING-TITE PVC SDR 35
250mm C.B. LEAD	IPEX INC.	ASTM B182.2 ASTM C-478	RING-TITE PVC SDR 35
MANHOLES CATCHBASIN MANHOLE & CATCHBASIN ASBESTOS RINGS	SUPRETEC INC. SUPRETEC INC. SUPRETEC INC.	200 GAS 375 CS	PRECAST CONCRETE PRECAST CONCRETE 75mm I.B.T. (30mm TO 125mm) CONCRETE ABRASTING RINGS
MANHOLE/CATCHBASIN JOINT GASKETS MANHOLE FRAMES & COVERS	SUPRETEC INC. TITAN FOUNDRY	ASTM A-48 CLASS 30B T-109-10E	JOINT SEALANT
MANHOLE RINGS CATCHBASIN FRAMES & COVERS	SUPRETEC INC. TITAN FOUNDRY	BARRIER T-109-10B T-109-10E	SUPRETEC MANHOLE STEPS CONFORMS TO SP-108
BUILDING CONNECTIONS 150mm SEWER CONNECTION PIPE SEWER CONNECTION FITTINGS	IPEX INC. GPK PRODUCTS INC.	ASTM D3034 ASTM D3024 CSA B182.2	"RING-TITE" PVC SDR 35 PVC SEWER FITTINGS
ROAD ITEM CONCRETE REINFORCING STEEL ASPHALT	MANUFACTURER / SUPPLIER SUPRETEC INC. CONIN STEEL CO. LTD. ROSLAND CONSTRUCTION LTD.		
CONTRACTOR CONSTRUCTION FIELD BOOK NO.:	ROSLAND CONSTRUCTION LTD. SEPT. 1995 - JULY, 1996 96004		

SEWER SERVICE INFORMATION

ADDRESS	SIZE	PL	TIE	JUNCTION TIE	INVERT	LENGTH	RISER	REMARKS
					# PROF.	# MAIN	# MAIN	
18 SUTHERLAND AVE.	150	P	W	34.38 E OF 1ST W. V. OF SYNDICATE STR.	27.65	11.28	6.78	SERVICE REFERRED TO NEW MAIN

METRIC
WHOLE NUMBERS INDICATE MILLIMETERS
DECIMAL NUMBERS INDICATE METERS

RECORD DRAWING
P.D. No. 95-120

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
WATERMAIN	150 mm WM	HYDRO	150 mm WM	WATERMAIN	300 mm WM	LAND DRAINAGE SEWER	300 mm LDR
HYDRANT	+	MTS	+	HYDRANT	+	WASTE WATER SEWER	300 mm WWS
VALVE	o	GAS	+	VALVE	o		
LAND DRAINAGE SEWER	300 mm LDR	CONCRETE	+	LAND DRAINAGE SEWER	300 mm LDR		
WASTE WATER SEWER	300 mm WWS	ASPHALT	+	WASTE WATER SEWER	300 mm WWS		
MANHOLE	o	CURB STOP	+	MANHOLE	o		
CATCH BASIN	o	REDUCER	+	CATCH BASIN	o		
CURB INLET	o	COUPLING	+	CURB INLET	o		
CULVERT	o	ANODE	+	CULVERT	o		
SURVEY BAR	o			SURVEY BAR	o		
LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PROFILE	PROPOSED

LOCATION APPROVED
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.	REVISIONS	DATE	BY
1	REVISED TO RECORD DWG/REPLIOTED	28 AUG 95	WAG

UMA UMA Engineering Ltd.
Engineers & Planners
1479 Buffalo Place, Winnipeg, Manitoba, Canada R3T 1L7

DESIGNED BY: MCM/CCM
CHECKED BY: B. Moore
DRAWN BY: MCM/MAG
APPROVED BY: B. Moore
HOR. SCALE: 1:250
VERTICAL: 1:50
RELEASED FOR CONSTRUCTION



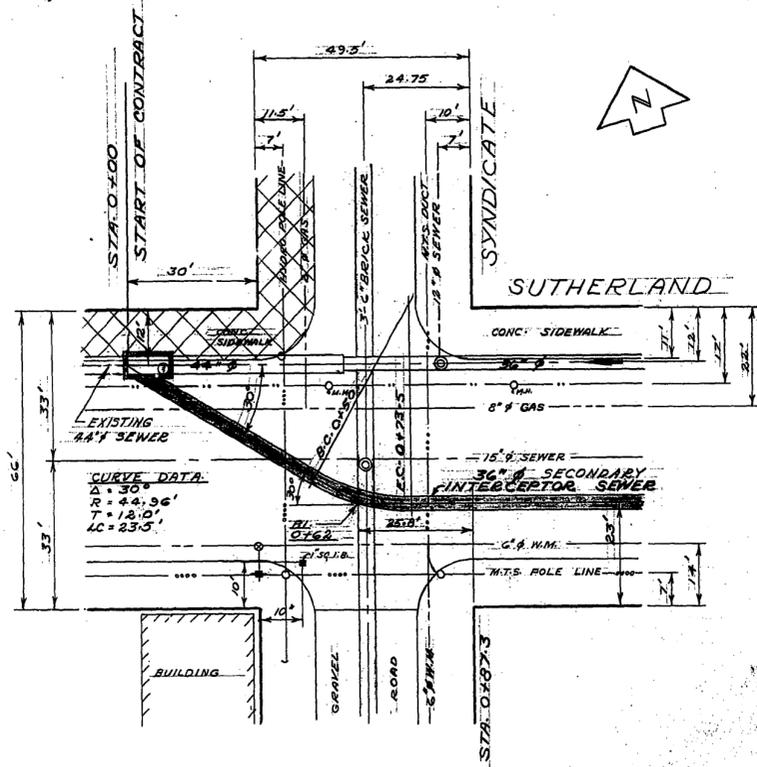
THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
WATER AND WASTE DEPARTMENT

INTEGRATION OF THE BOYLE & SYNDICATE
COMBINED SEWER DISTRICTS

SUTHERLAND AVENUE
MCFARLANE ST.
TO SYNDICATE ST.

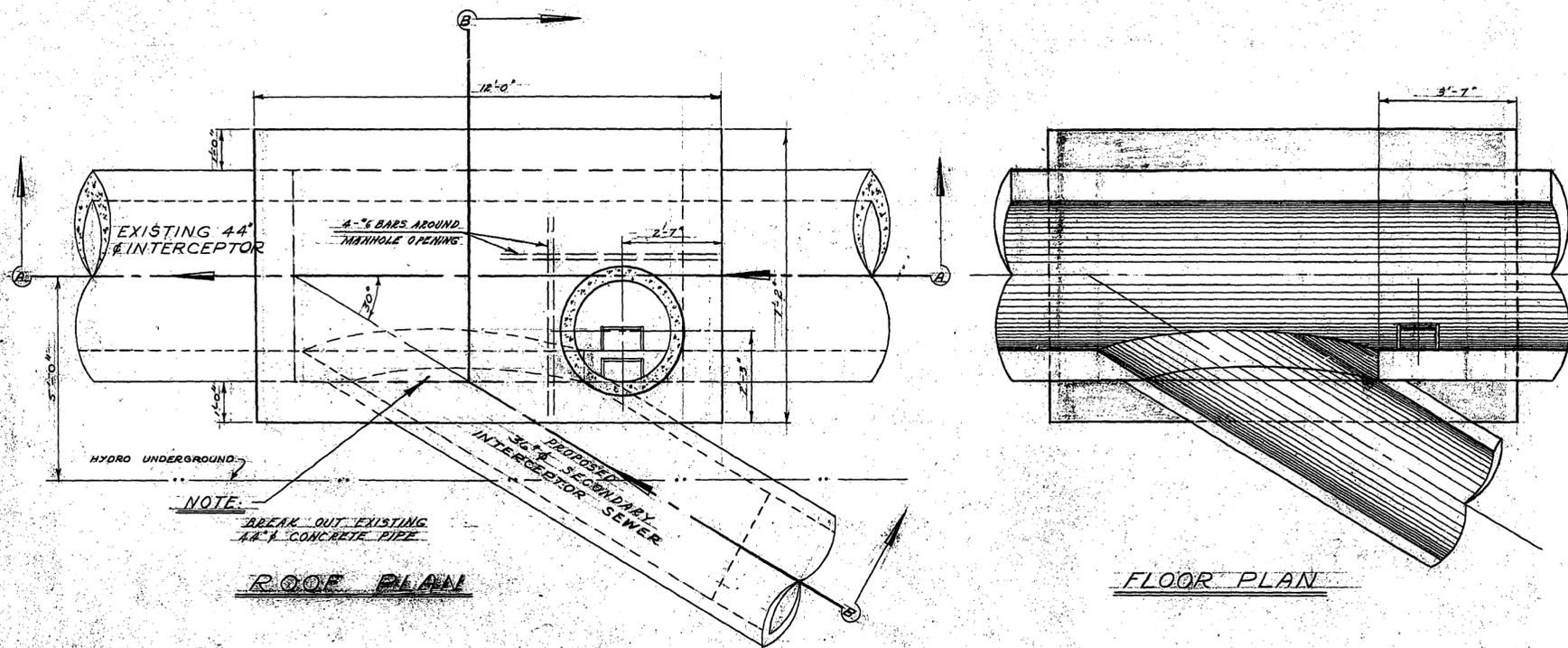
SHEET 3 OF 20
CITY DRAWING NUMBER
4199 REV A

CONSULTANT DRAWING NO. 03
41-02-0265-287-04



SITE PLAN

SCALE: 1" = 20'

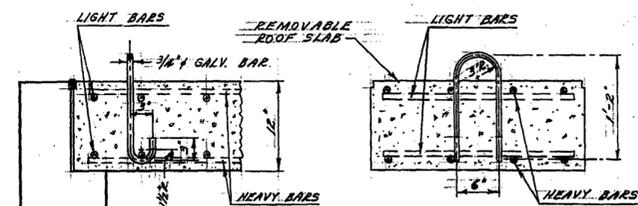


ROOF PLAN

FLOOR PLAN

NOTES

1. MANHOLE WALLS AND ROOF TO BE CONSTRUCTED WHILE EXISTING SEWER IN OPERATION.
2. SHUT DOWN OF EXISTING 44" SEWER AND FINAL BREAKING OUT OF 44" PIPE TO BE ONE OF THE LAST CONSTRUCTION ITEMS TO BE COMPLETED.
3. DURATION OF SHUT DOWN SHALL BE KEPT TO A VERY MINIMUM.
4. SHUT DOWN OF EXISTING SEWER AND CONNECTION TO BE CO-ORDINATED WITH CONNECTION AT STA. 11+35.1 AND CONNECTION OF EXISTING MANHOLE ON POINT DOUGLAS AVE.
5. ALL CONCRETE TO HAVE COMPRESSIVE STRENGTHS AND SLUMPS AS OUTLINED FOR STRUCTURES IN THE SPECIFICATIONS.
6. MINIMUM COVER ON REINFORCING BARS TO BE 2" FROM OUTSIDE WALL WHERE FORMED AND 3" WHERE CONCRETE IS POURED AGAINST EARTH FACE.
7. No. 6 DOWELS, EACH FACE AT ALL CONSTRUCTION JOINTS.

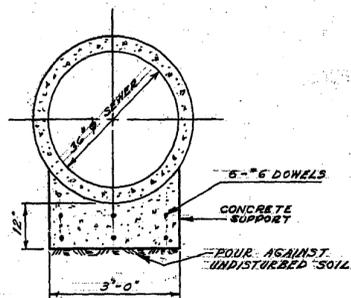


CROSS-SECTION

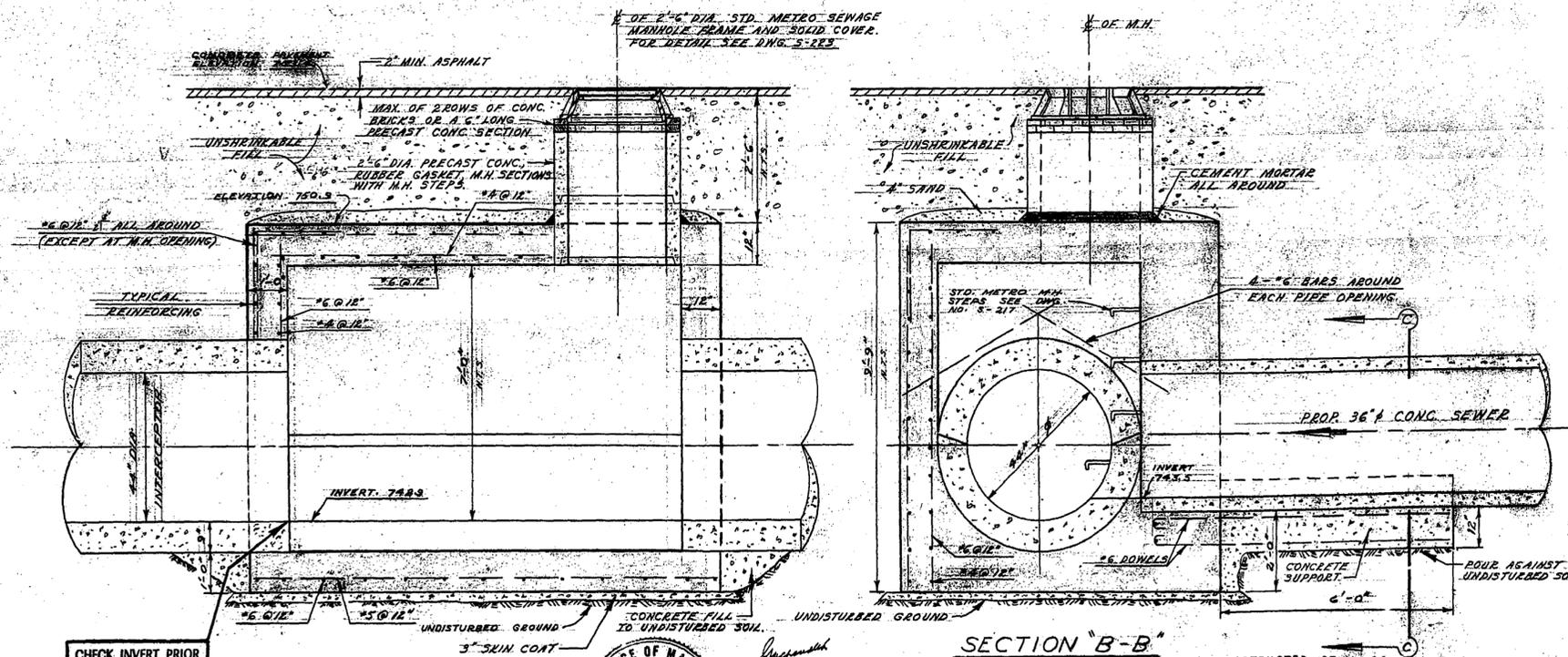
LONG SECTION

DETAIL OF LIFTING LUG

SCALE: 1" = 1'-0"



SECTION 'C-C'



CHECK INVERT PRIOR TO CONSTRUCTION

SECTION 'A-A'

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

SECTION 'B-B'

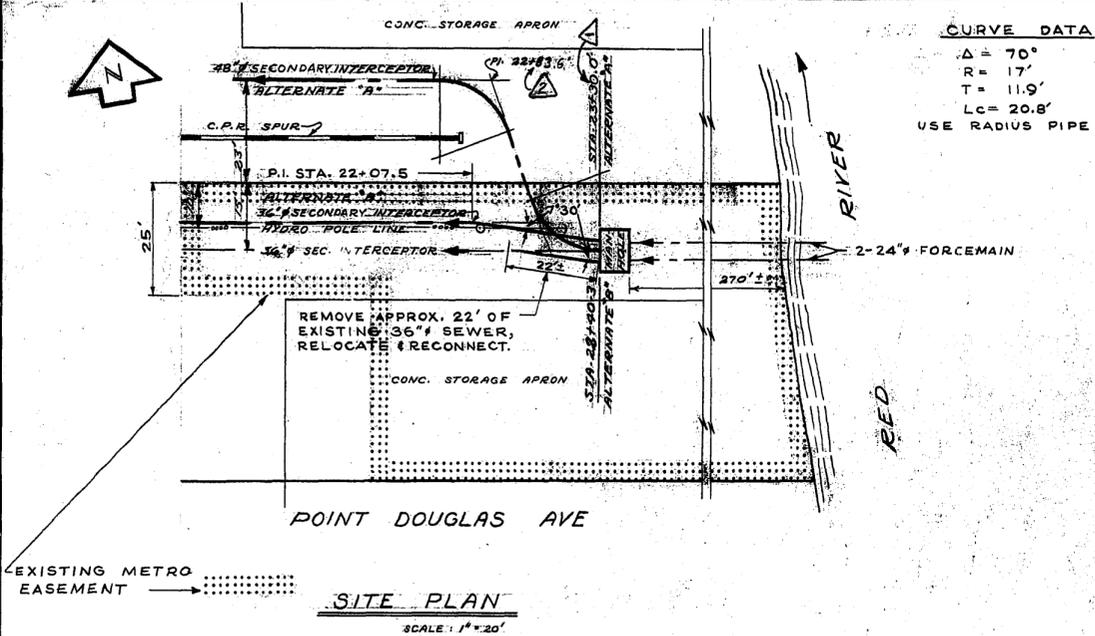
AS CONSTRUCTED 25 JAN. 66



THE METROPOLITAN CORPORATION OF GREATER WINNIPEG
WATERWORKS & WASTE DISPOSAL DIVISION
 A. PENMAN - DIRECTOR

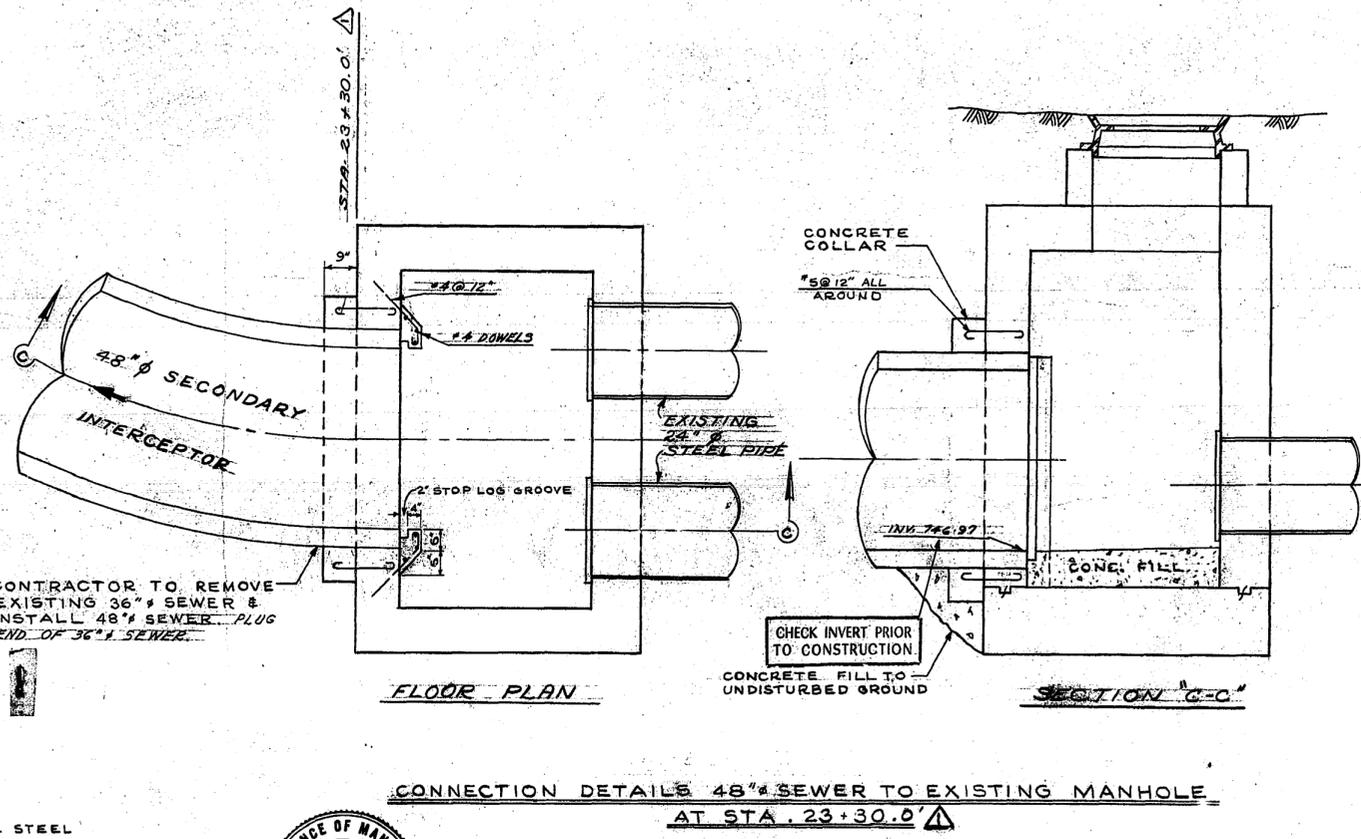
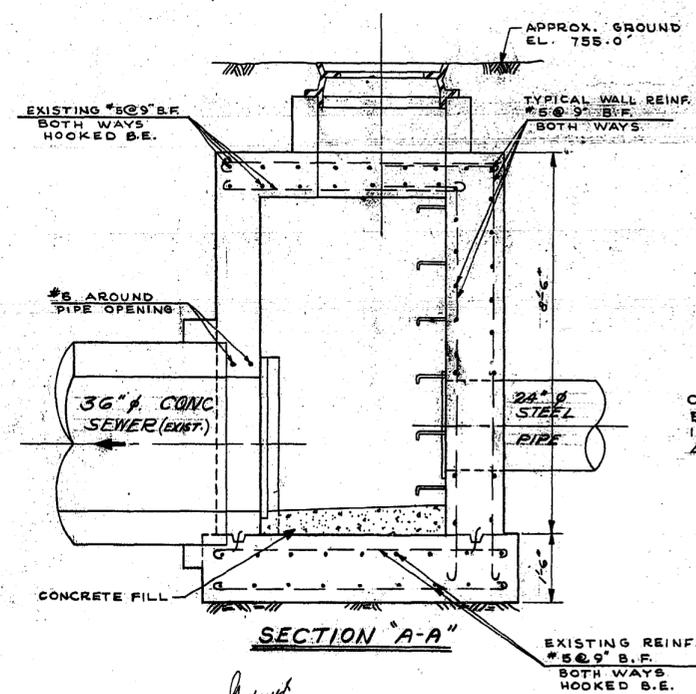
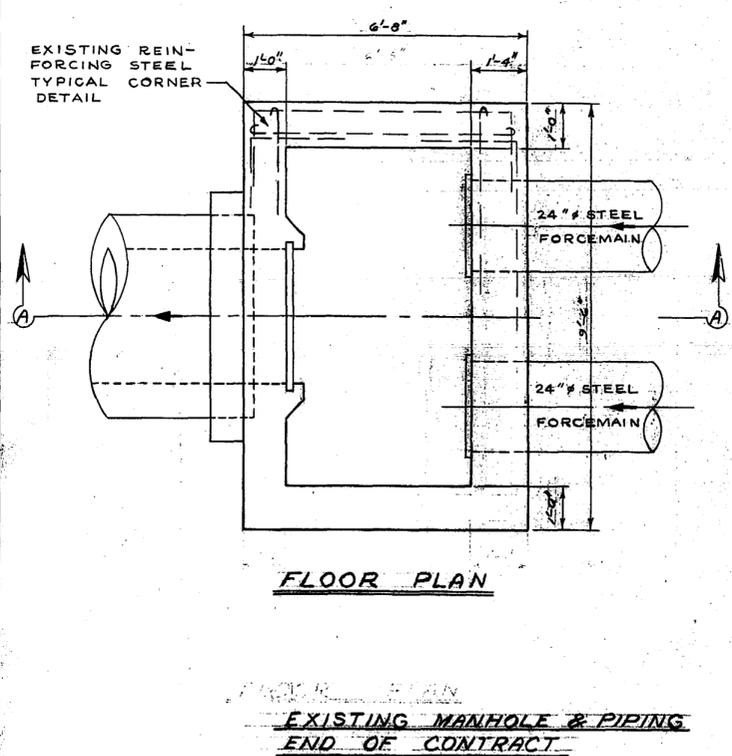
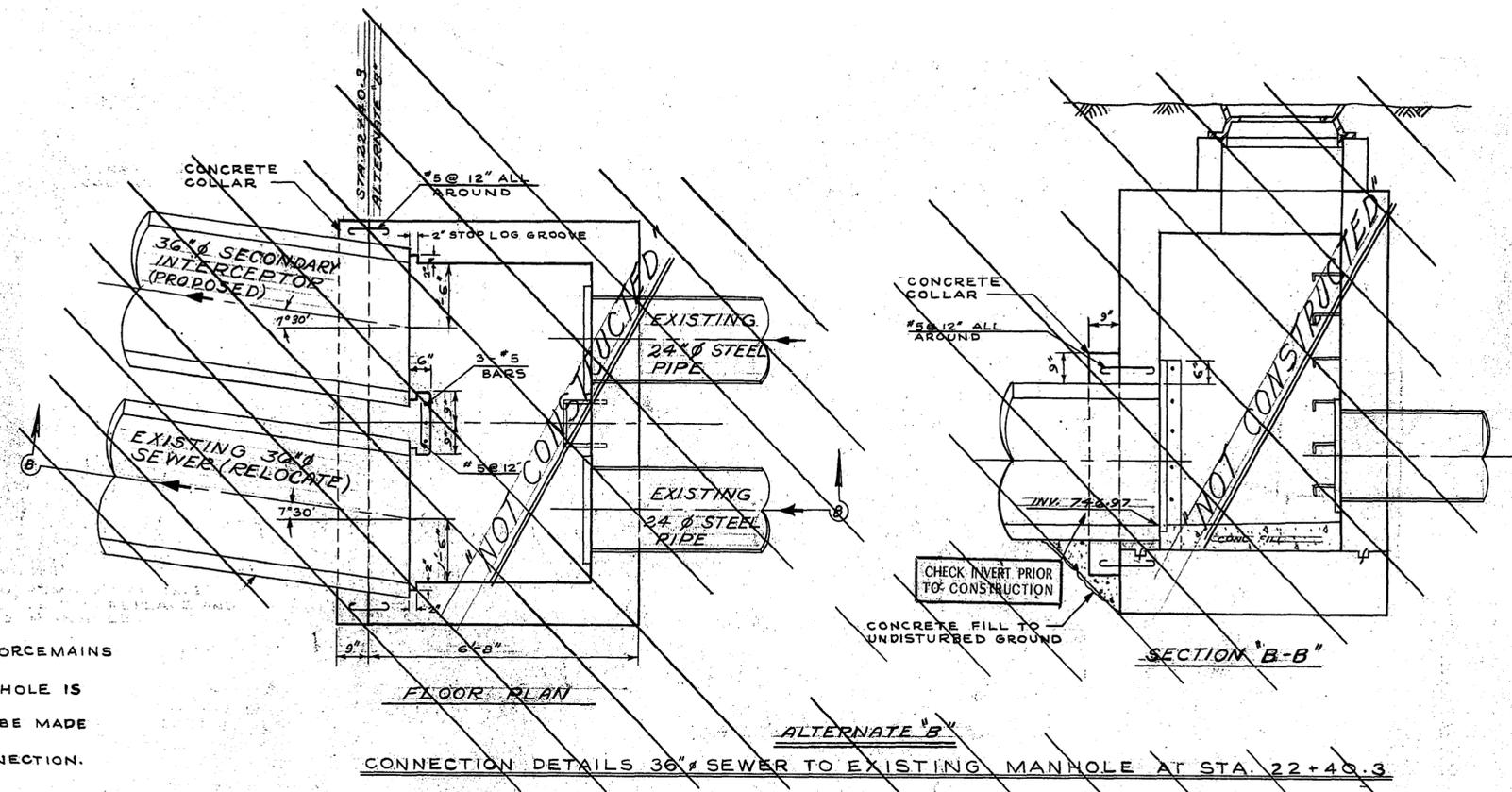
SEWERAGE DISPOSAL DEPT.
SUTHERLAND SECONDARY INTERCEPTOR SEWER
 DETAIL OF SPECIAL MANHOLE AT STA. 0+00
 ENGR. DESIGNED BY: J. Penman
 APPROVED: J. Penman

SCALE: AS NOTED
 DRAWING NO. **517**



NOTES:

1. THE CONTRACTOR MAY ARRANGE WITH THE CORPORATION'S STAFF TO HAVE THE EXISTING FORCEMAINS SHUT DOWN IN ORDER TO MAKE CONNECTION TO MANHOLE.
2. THE CONTRACTOR SHALL SCHEDULE HIS WORK SO THAT CONNECTION TO THE EXISTING MANHOLE IS ONE OF THE LAST CONSTRUCTION ITEMS TO BE COMPLETED.
3. TIMING OF SHUT DOWN AND CONNECTION WILL BE CO-ORDINATED WITH THE CONNECTIONS TO BE MADE AT STA. 0+00 AND STA. 11+55.
4. EXISTING REINFORCING STEEL TO BE EXPOSED AND LAPPED TO NEW BARS WHEN MAKING CONNECTION.
5. NEW REINFORCING TO BE SAME AS EXISTING.



NO.	DESCRIPTION	DATE	BY
1	AS CONSTRUCTED	9 MAY 64	S.L.
2	PI. REVISED FROM 22+55.7 TO 22+83.6	21 SEP 65	MB
1	STA. REVISED FROM 23+02.1 TO 23+30.0	21 SEP 65	MB

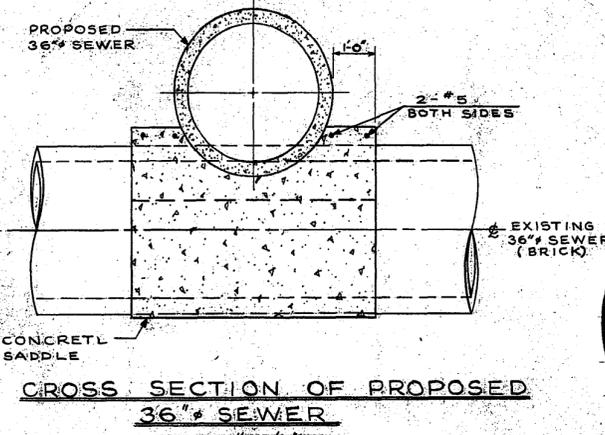
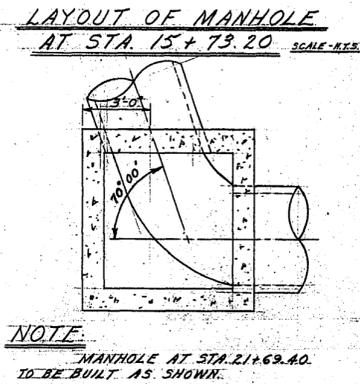
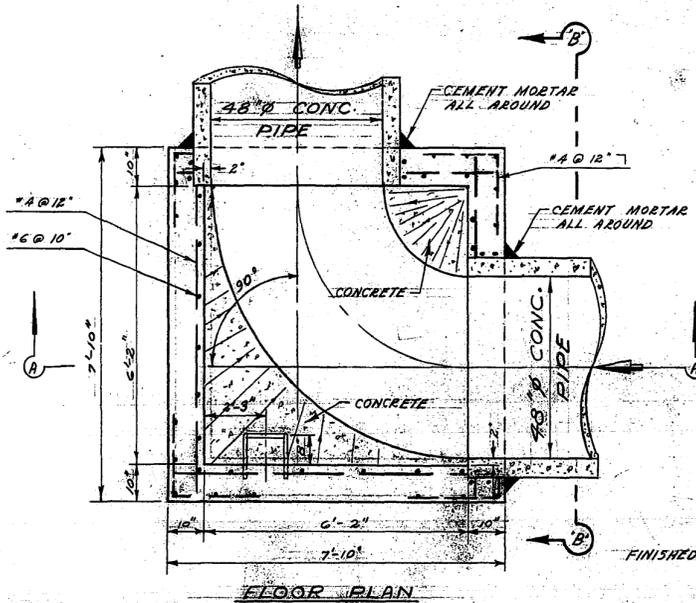
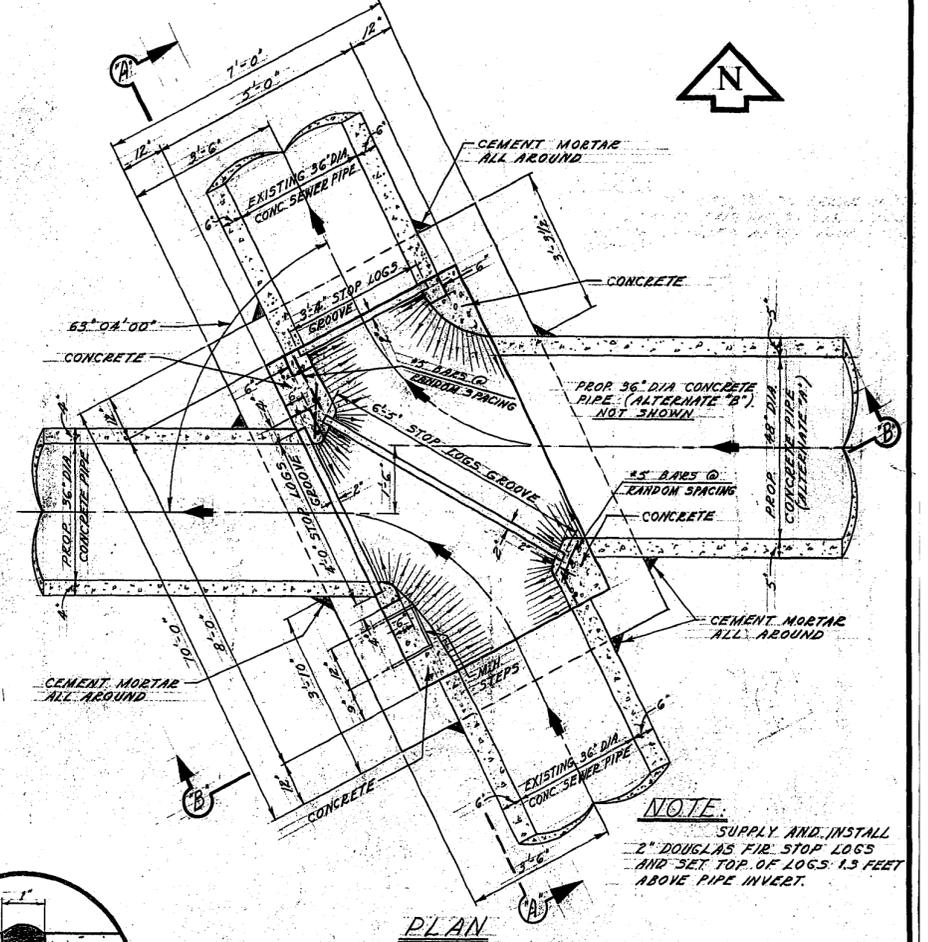
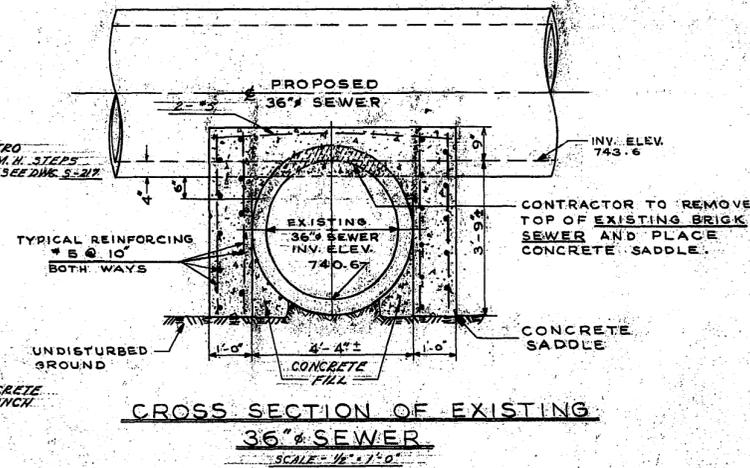
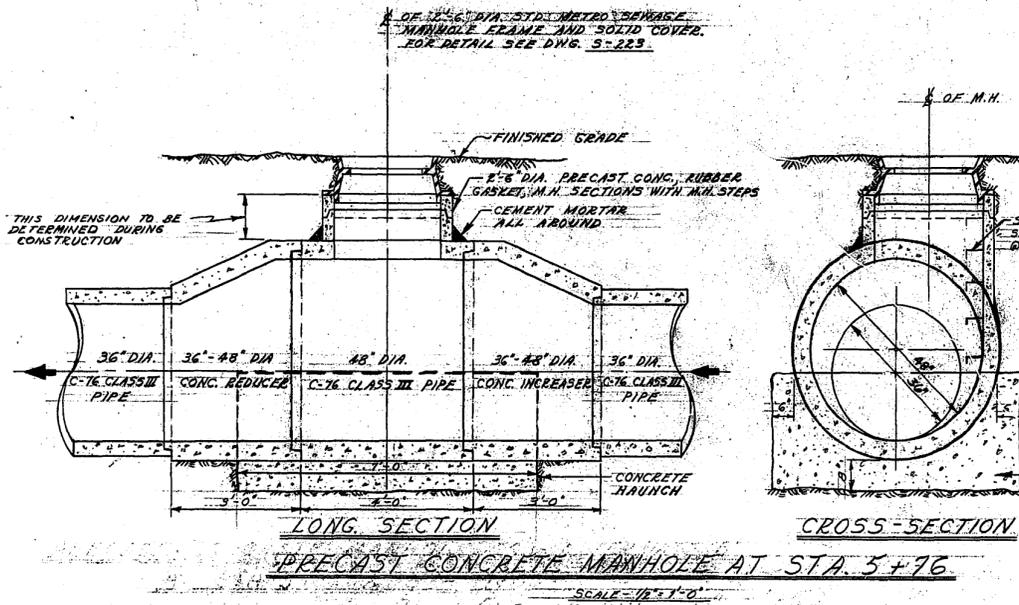


THE METROPOLITAN CORPORATION OF GREATER WINNIPEG
WATERWORKS & WASTE DISPOSAL DIVISION
 T.A. PENNMAN - DIRECTOR

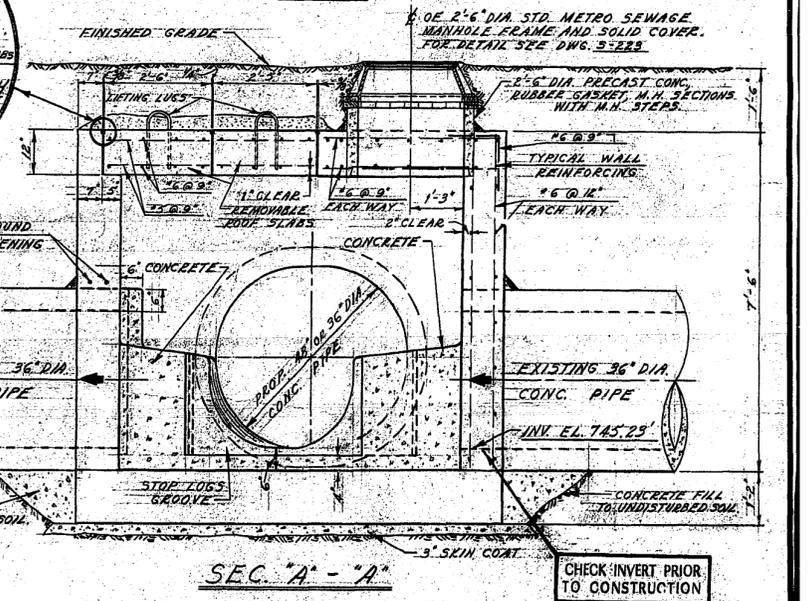
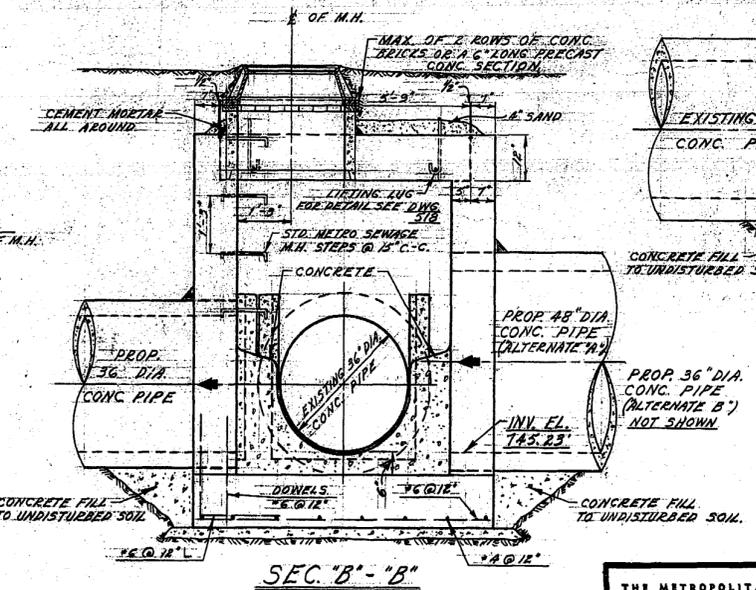
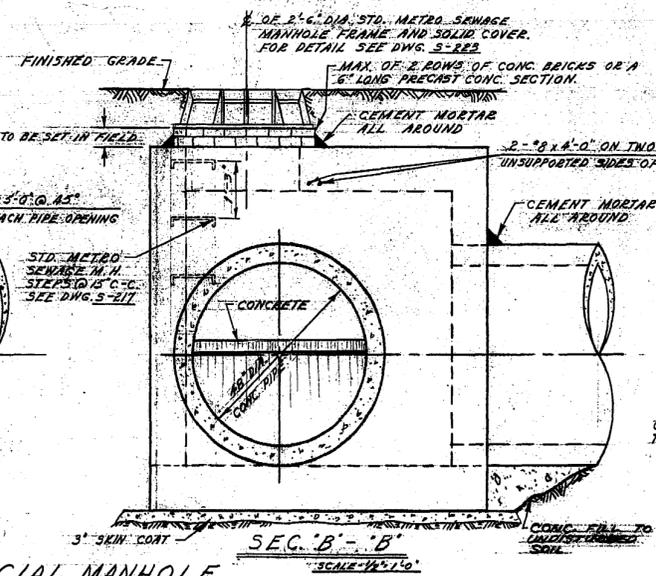
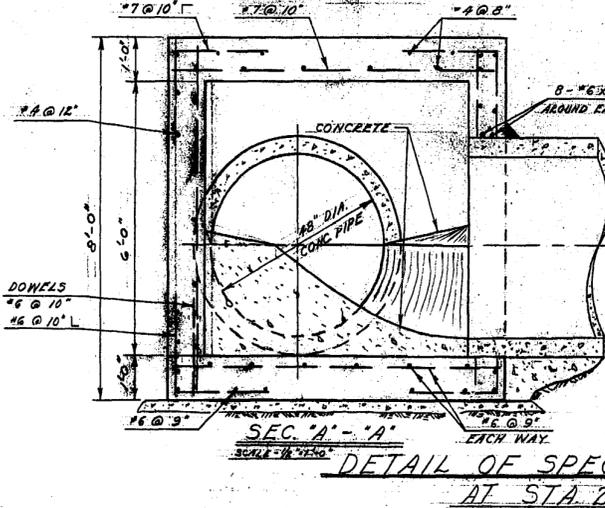
SEWAGE DISPOSAL DEPT.
 SUTHERLAND SECONDARY INTERCEPTOR SEWER
 CONNECTION DETAIL TO EXISTING MANHOLE

DES. *R.M.G.* CHK'D. *MB*
 ENG. DRG. *J. Penman*
 ENG. OPER. *J. Penman*
 APPROVED *J. Penman*

SCALE: AS SHOWN
 DRAWING NO. **518**



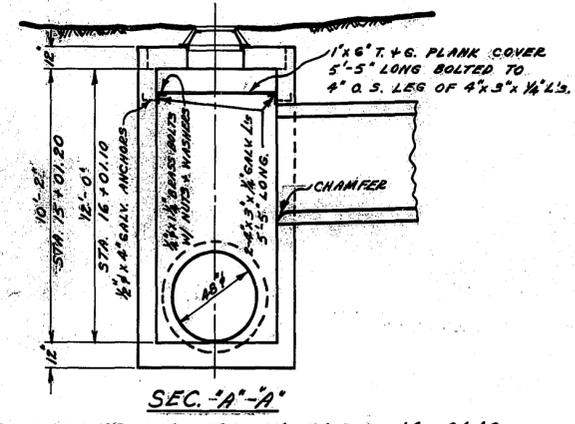
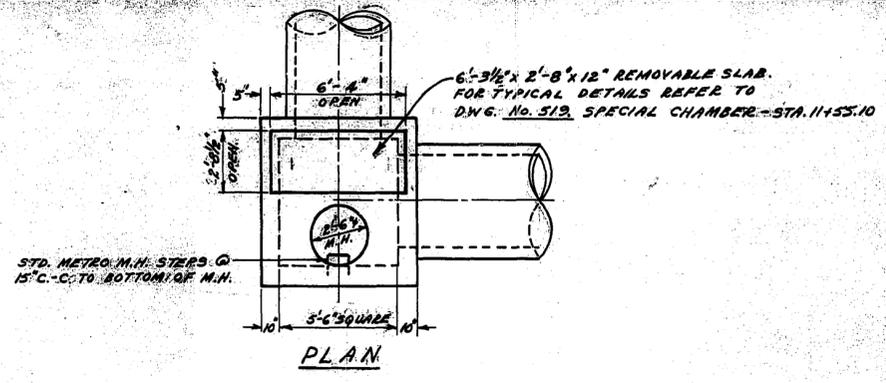
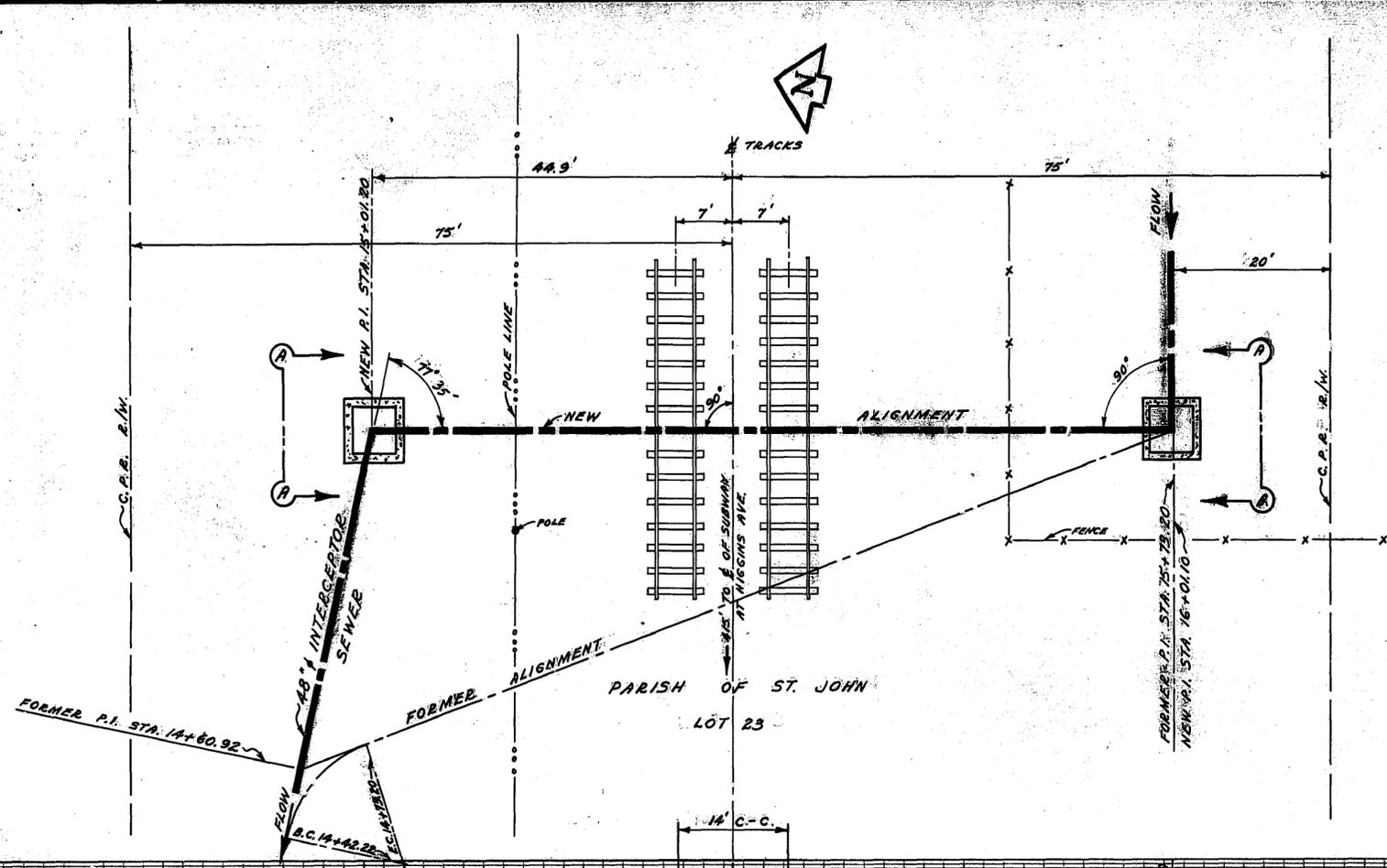
DETAIL SEWER X-ING AT STA. 0+62



THE METROPOLITAN CORPORATION OF GREATER WINNIPEG
WATERWORKS & WASTE DISPOSAL DIVISION
 A. PENMAN — DIRECTOR

SEWAGE DISPOSAL DEPT.
SUTHERLAND SECONDARY INTERCEPTOR SEWER SPECIAL CHAMBER, MANHOLES & MISC. DETAILS

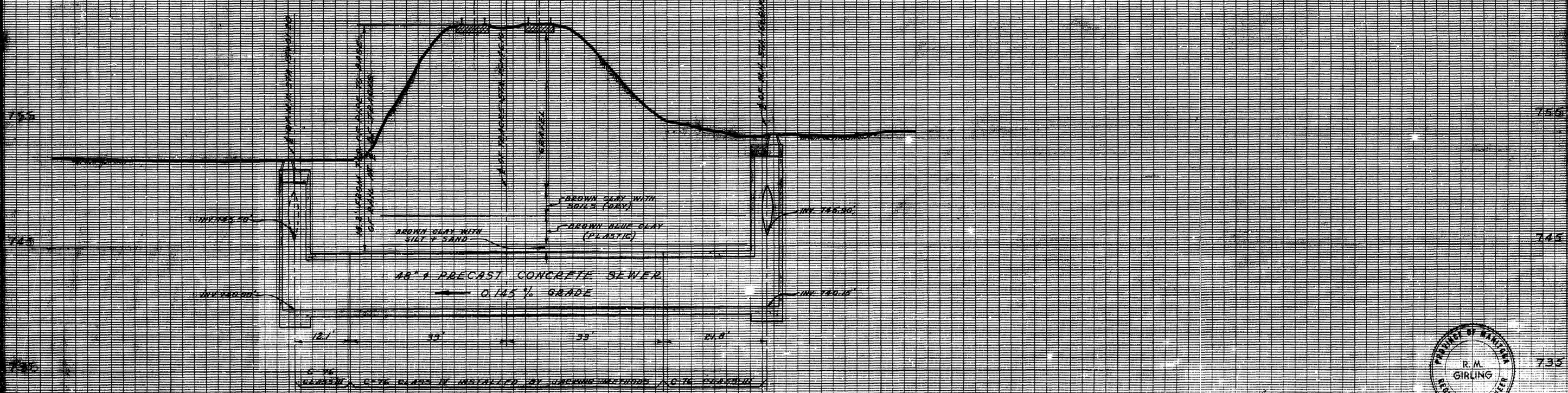
AS CONSTRUCTED 25 JAN. 66 1B
 SCALE: 1/2" = 1'-0"
 DRAWING NO. **519**



MANHOLES AT STA. 15+01.2 + 16+01.10
 FOR CONC. + REINF. DETAILS REFER TO DWG. No. 519
 DETAIL OF SPECIAL M.H. @ STA. 15+23.20 + 21+63.40

765

765



THE METROPOLITAN CORPORATION OF GREATER WINNIPEG WATERWORKS & WASTE DISPOSAL DIVISION A. DENHAM - DIRECTOR		SEWAGE DISPOSAL SUTHERLAND SECONDARY INTERCEPTOR SEWER REVISED X-ING UNDER CPR MILE 12485 KEEWATIN SUBD.	SCALE HORIZ. 1" = 10' VERT. 1" = 4' DRAWING NO. 521
---	--	---	--