

CITY OF WINNIPEG  
 OPERATIONAL DIVISION  
 DISTRICT NO. 1  
**APPROVAL FOR SERVICES**  
 AT HIGGINS AVE.  
 CARMEN FACILITIES - CP RAIL  
 CONDITIONS  
 WATER 1 1/2" FROM PRIVATE MAIN  
 W.W.S. 6" TO PRIVATE SEWER (TO MANHOLE)  
 L.D.S. AS PER STREETS & TRANS  
 APPROACH AS PER PLAN  
 GRADES AS PER PLAN  
 REMARKS  
 DATE DEC 1 1992

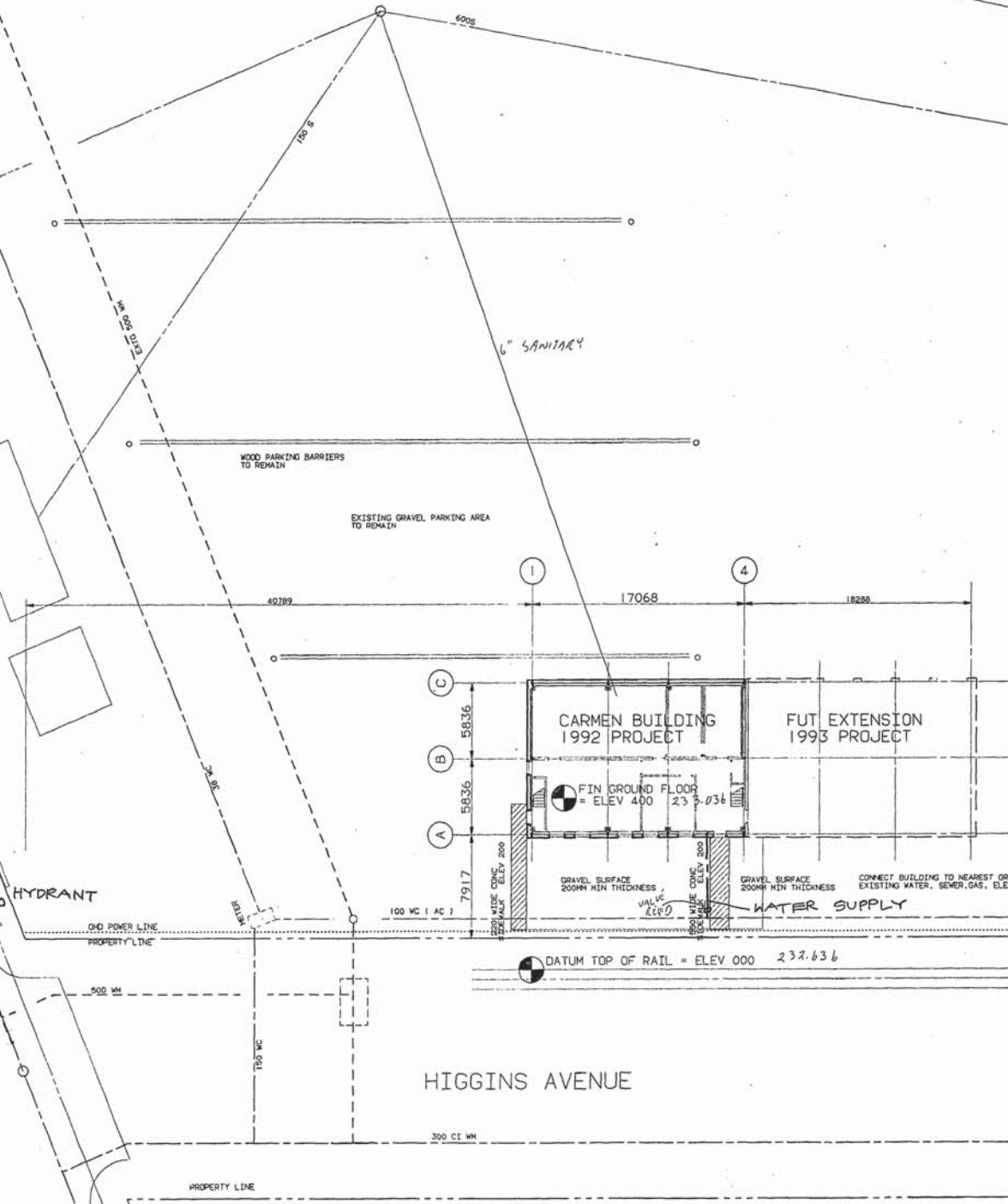
- EXISTING SERVICES TO BE PROTECTED  
 - BUILDING TO BE LOCATED A MINIMUM OF 15 FEET FROM 500mm WATER MAIN

ALL EXISTING SERVICES NOT IN USE MUST BE DISCONNECTED AS PER CITY OF WINNIPEG BY-LAWS

ROOF DRAINAGE - TO DISCHARGE TO PROPERTY VIA DOWN SPOUTS

ALL WORKS TO CONFORM WITH CITY OF WINNIPEG STANDARD CONSTRUCTION SPECIFICATIONS

McHILLIPS STREET



LEGAL DESCRIPTION:  
 WINNIPEG MAIN YARD  
 PORTION OF LOT 35  
 PARISH OF ST. JOHN, UNDER  
 CROWN GRANT NO. 35982

EXTG BUILDING TO REMAIN

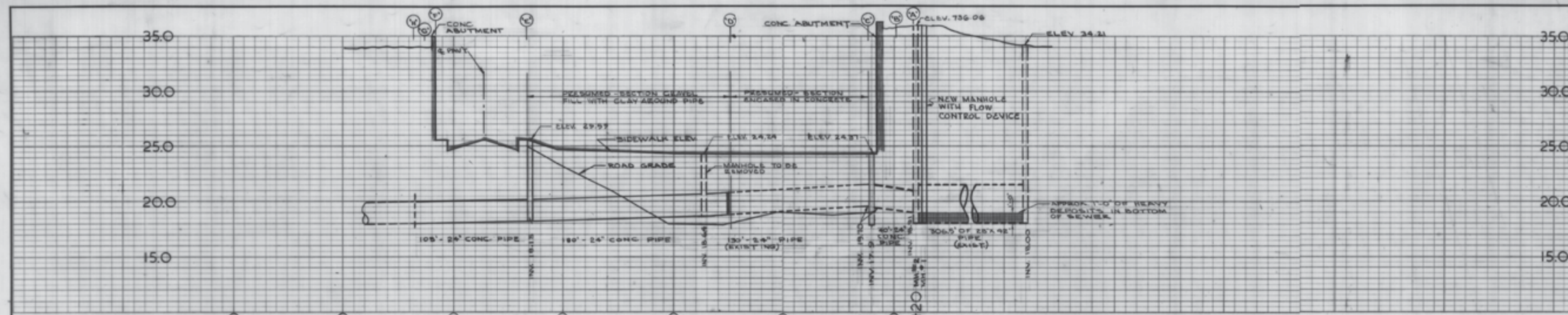


ALL EXISTING UNDERGROUND SERVICES MUST BE MAINTAINED VERIFY EXACT LOCATION AND ELEVATION AT SITE BEFORE COMMENCING WORK

2397

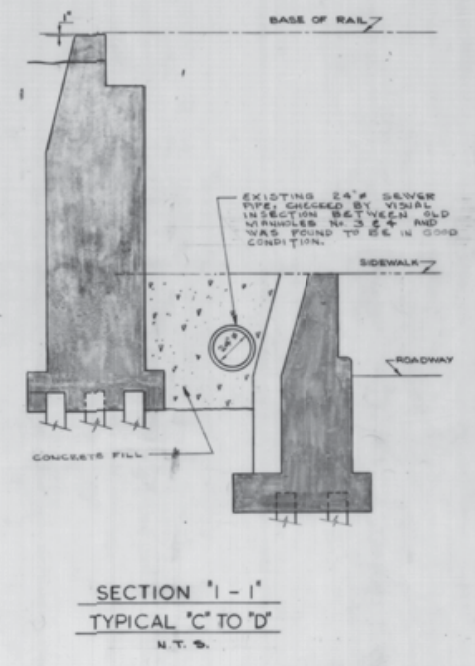
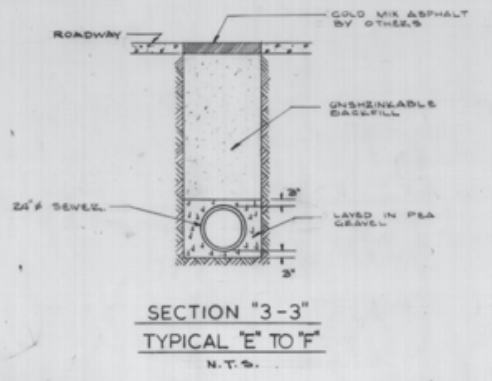
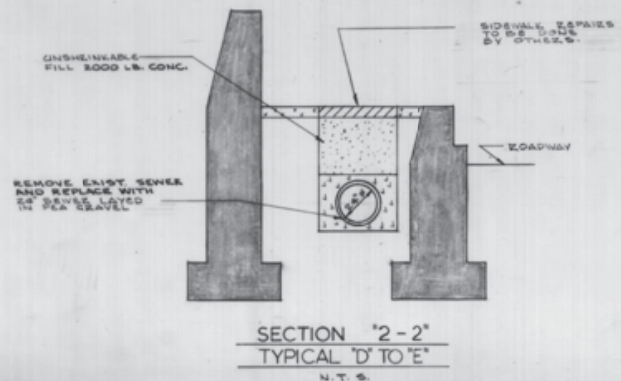
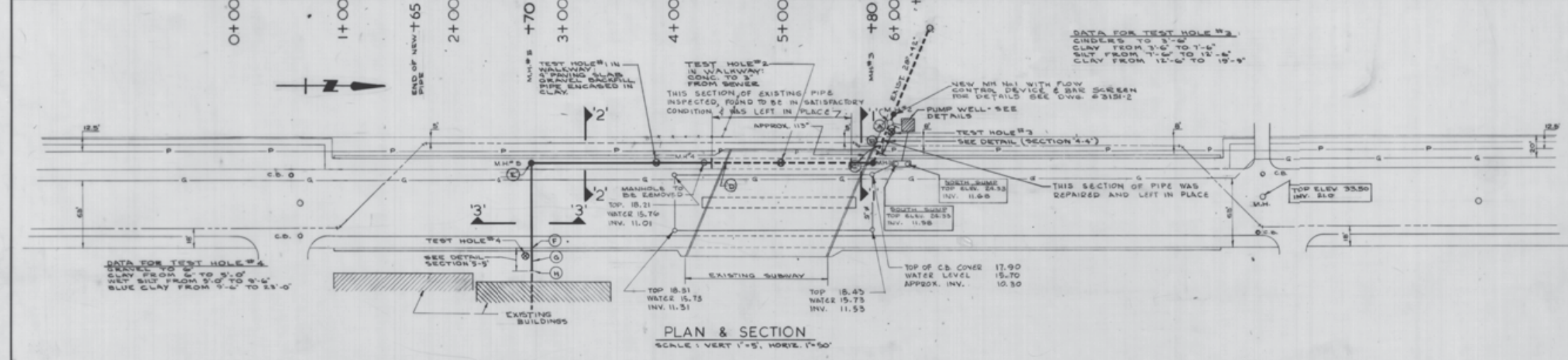
|         |               |                            |                    |  |
|---------|---------------|----------------------------|--------------------|--|
|         |               | <b>CP Rail</b>             |                    | OFFICE OF THE CHIEF ENGINEER - WOOD STATION MONTREAL, QUEBEC |
|         |               | WINNIPEG, MANITOBA         |                    | CP   |
|         |               | CARMEN FACILITIES          |                    | ARCHITECT - ENGINEER   |
|         |               | SITE PLAN 1992 PROJECT     |                    | CP   |
|         |               |                            |                    | DIRECTOR - BUILDINGS   |
| 1031792 | FOR PROPOSALS | OFFICE FILE NO. 700-34-163 | PLAN NO. 67654-A1A | CHIEF ENGINEER   |
| NO.     | DATE          | DESCRIPTION                | BY                 | SCALE: 0.005 DR. CK CH.                                      |





**LEGEND**

- P — POWER LINE (UNDER GROUND)
- G — GAS LINE
- C.B. — CATCH BASIN
- M.H. — MANHOLE
- ⊙ — SOIL TEST HOLE
- — — — — CHAIN LINK FENCE
- — — — — WATERMAIN
- — — — — NEW 24" CONCRETE SEWER PIPE
- EXISTING SEWER



SW-29-1



| AS-BUILT |        |      |
|----------|--------|------|
| DATE     | FB NO. | PAGE |
| APR. 67  | 265    |      |
| REVISED  |        |      |
| MISC. GS |        |      |

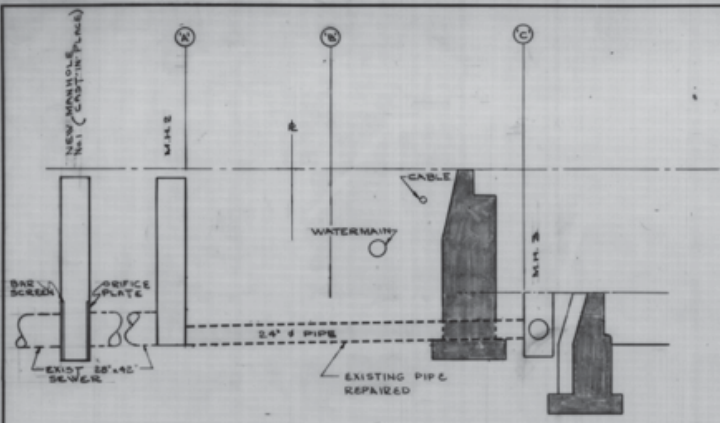
**METROPOLITAN CORPORATION OF GREATER WINNIPEG**  
W. L. WARDROP & ASSOCIATES LTD.  
ENGINEERING CONSULTANTS  
WINNIPEG CANADA PORT ARTHUR

**ALTERATIONS TO McPHILLIPS ST. DRAINAGE SUBWAY**

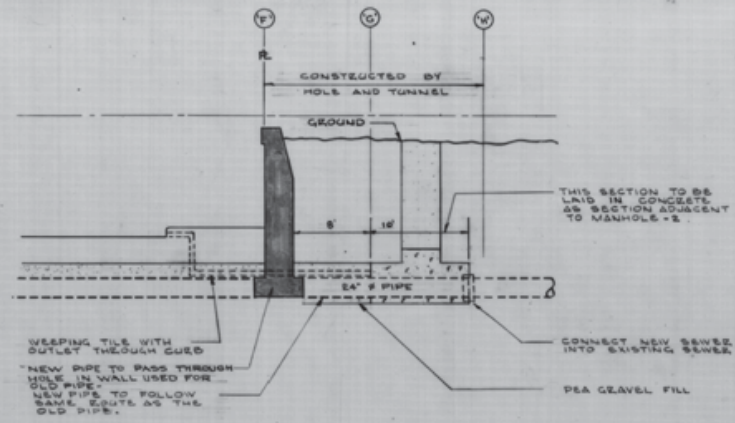
**PLAN AND PROFILE OF 24" CONCRETE SEWER**

|                                |                                 |
|--------------------------------|---------------------------------|
| SCALE: AS SHOWN                | APPROVED BY: <i>[Signature]</i> |
| DESIGNED BY: C.D.H.            | DATE: SEPTEMBER 1965            |
| DRAWN BY: D.L.B.               | PROJECT NO. 63157               |
| CHECKED BY: <i>[Signature]</i> | DRAWING NO. 63157-1             |

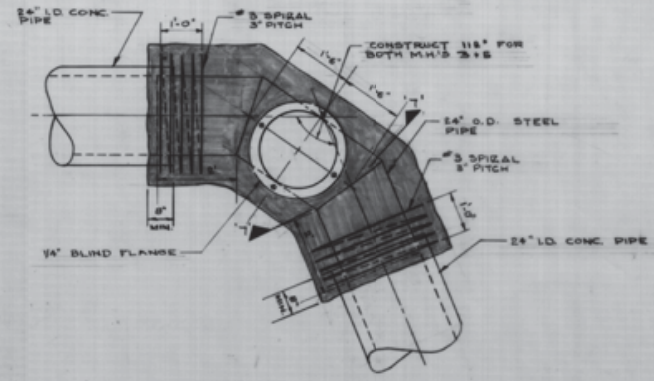




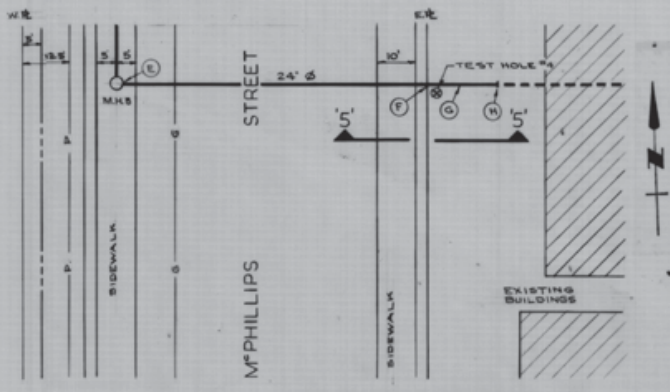
SECTION 4-4 FROM A TO C  
SCALE: 1/8" = 1'-0"



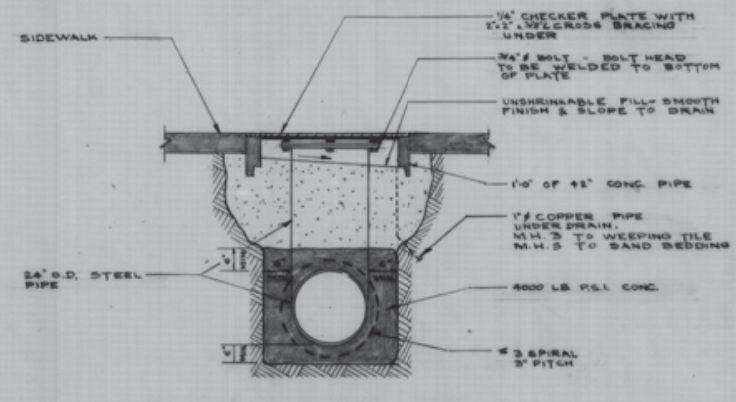
SECTION 5-5 FROM F TO H  
SCALE 1/8" = 1'-0"



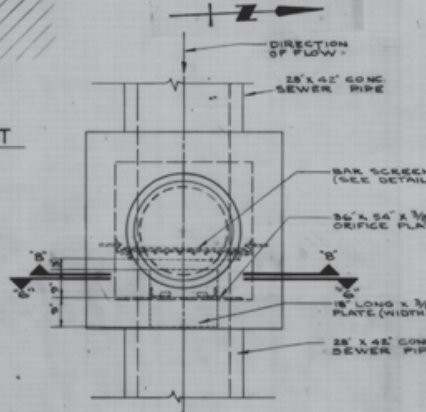
PRESSURE MANHOLE DETAIL (M.H. 3-1)  
1/2" = 1'-0"



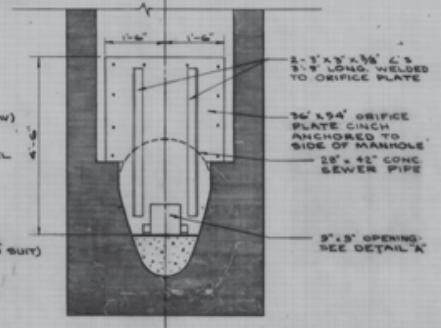
PLAN OF MANHOLE NO. 5 & AREA EAST  
SCALE: 1" = 20'



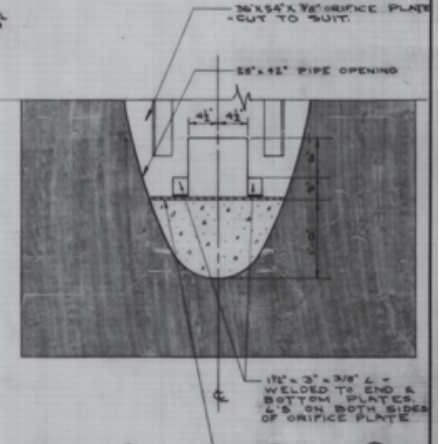
SECTION 7-7  
N.T.S.



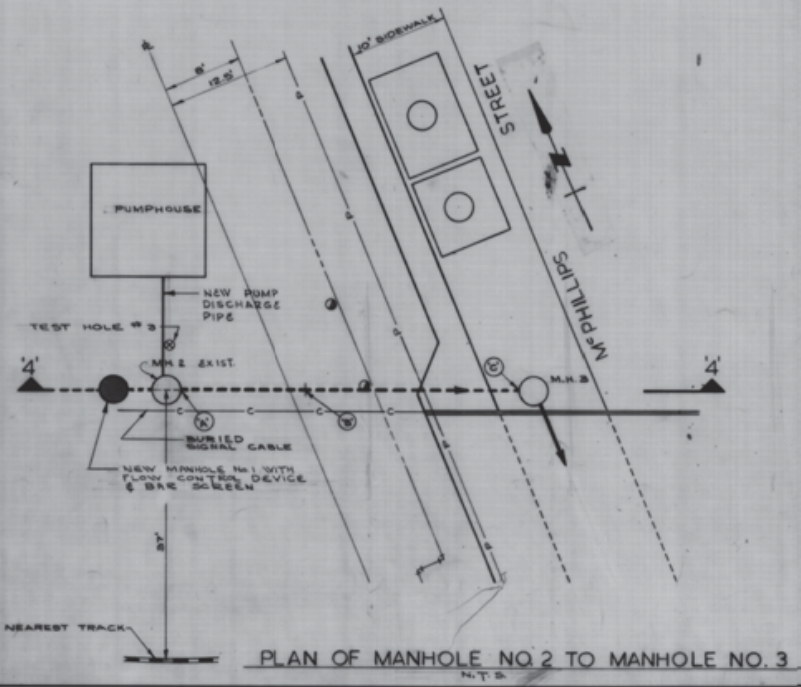
PLAN OF MANHOLE NO. 1  
SCALE: 1/8" = 1'-0"



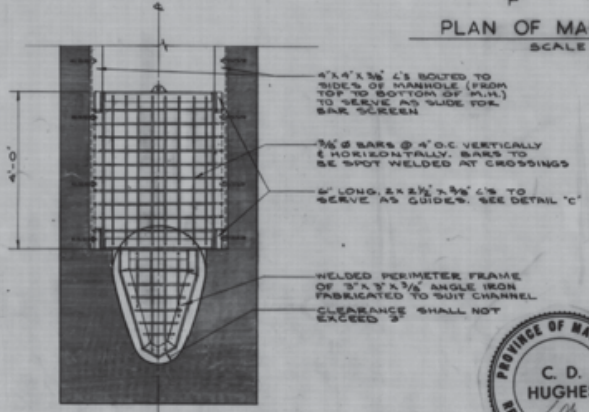
SECTION 6-6  
SCALE: 1/8" = 1'-0"



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

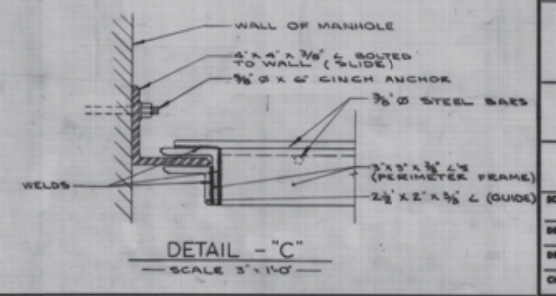


PLAN OF MANHOLE NO. 2 TO MANHOLE NO. 3  
N.T.S.



SECTION 8-8 SHOWING BAR SCREEN  
SCALE: 1/2" = 1'-0"

ORIFICE PLATE DETAILS



DETAIL - C  
SCALE: 3" = 1'-0"



| AS - BUILT |         |      |
|------------|---------|------|
| DATE       | FB. NO. | PAGE |
| APR. 67    | 265     |      |
| REVISED    |         |      |
| MAY 68     |         |      |

**METROPOLITAN CORPORATION OF GREATER WINNIPEG**

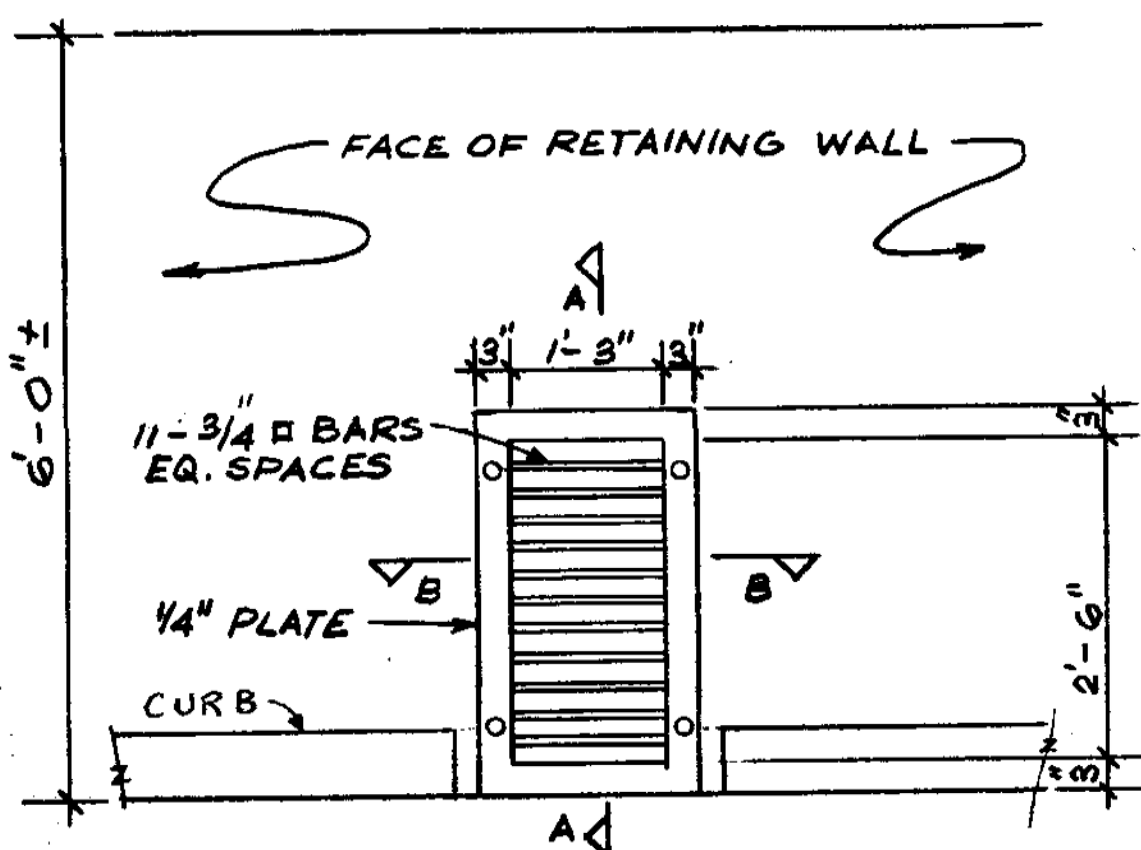
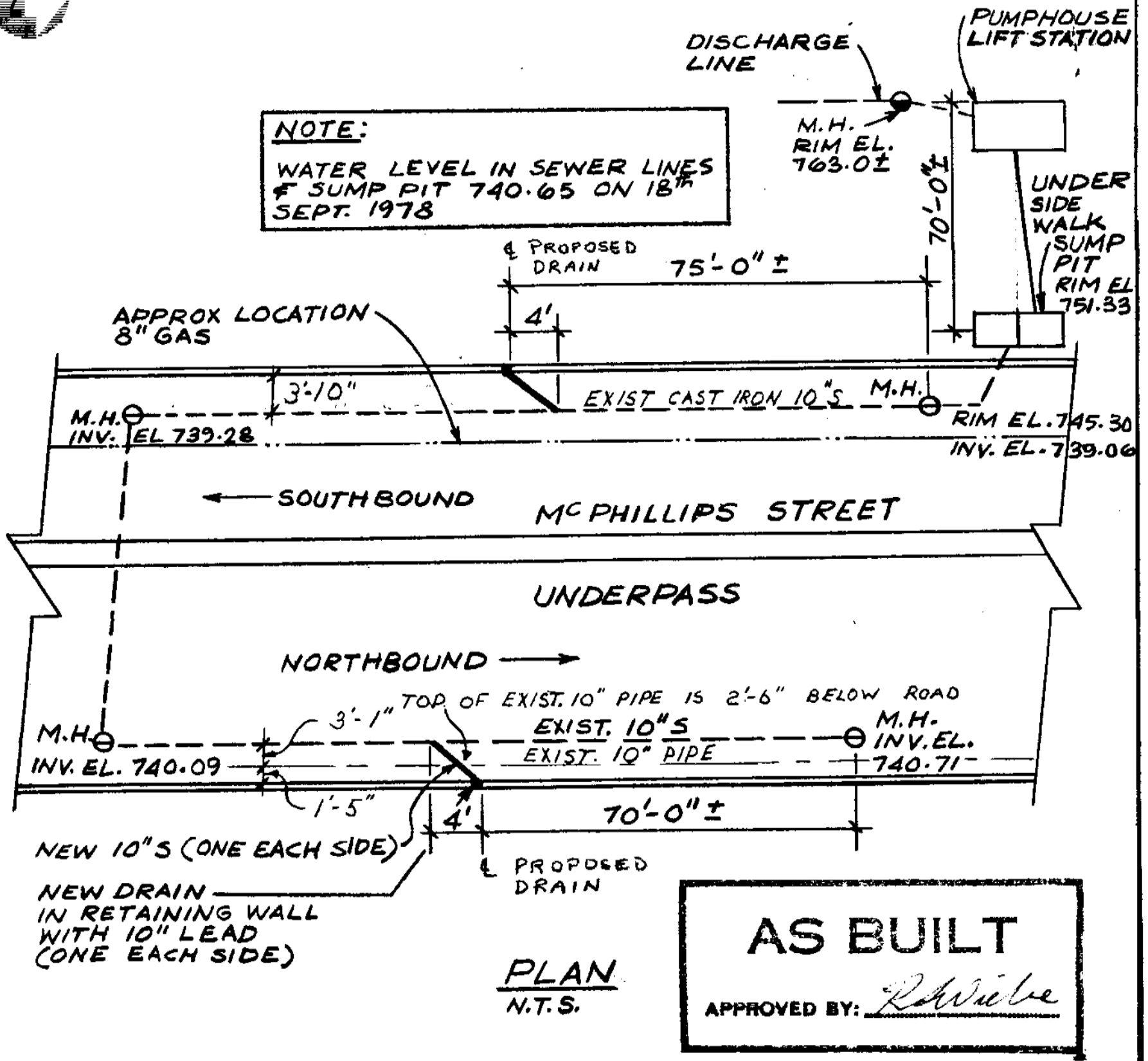
**W. L. WARDROP & ASSOCIATES LTD.**  
ENGINEERING CONSULTANTS  
WINNIPEG, CANADA, PORT ARTHUR

**ALTERATIONS TO M<sup>PHILLIPS</sup> ST. SUBWAY DRAINAGE**

**PLANS, SECTIONS AND DETAILS**

|                             |                                   |
|-----------------------------|-----------------------------------|
| SCALE: AS SHOWN             | APPROVED BY: <i>W. L. Wardrop</i> |
| DESIGNED BY: C. D. H.       | DATE: SEPTEMBER 1965              |
| DRAWN BY: D. L. B.          | PROJECT NO. 63157                 |
| CHECKED BY: <i>L. B. B.</i> | DRAWING NO. 63157-2               |

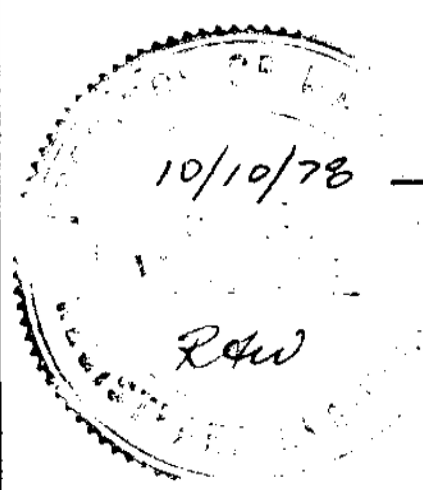




**DRAIN ELEVATION**  
(2 THUS)

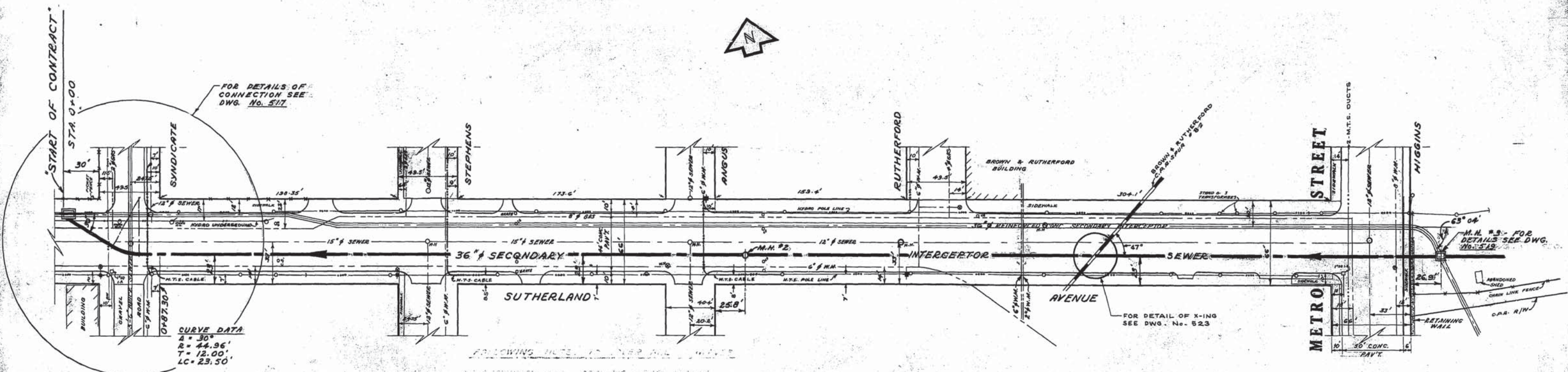
**B-5173-1**

NOTE: DRAIN GRATE TO BE HOT DIP GALVANIZED



|  |   |                               |
|--|---|-------------------------------|
|  <b>Consulting Engineers &amp; Planners</b> | <b>TITLE</b><br>MC PHILLIPS ST. UNDERPASS<br>U212 | <b>PROJECT NO.</b><br>8285-05 |
|  | <b>PROJECT</b>                                    | <b>DETAIL NO.</b>             |



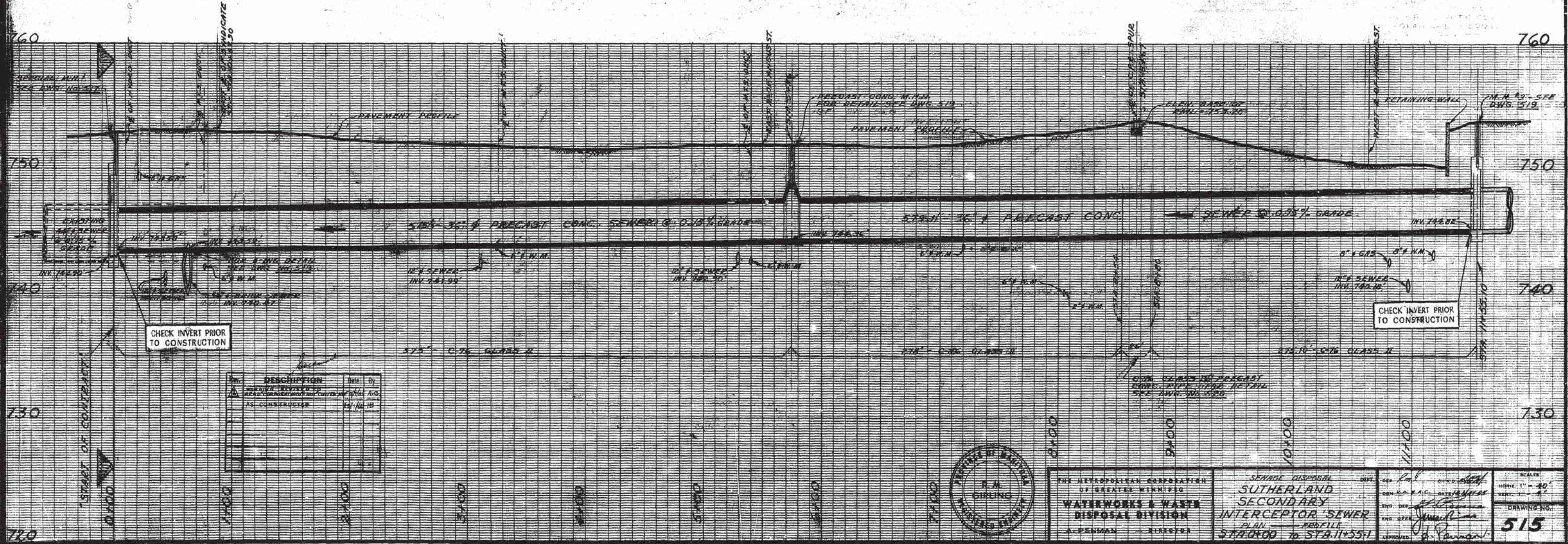


FOLLOWING NOTES APPLY TO THIS DRAWING

1. ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN FEET AND INCHES.

2. THE LOCATION OF ALL UTILITIES SHOWN IS BASED ON THE BEST AVAILABLE INFORMATION. THE EXACT LOCATION OF ALL UTILITIES SHOULD BE CHECKED PRIOR TO CONSTRUCTION.

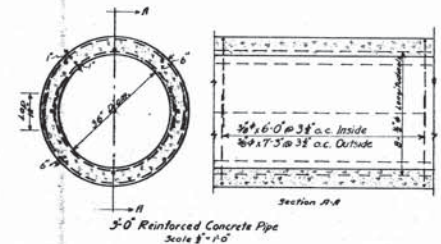
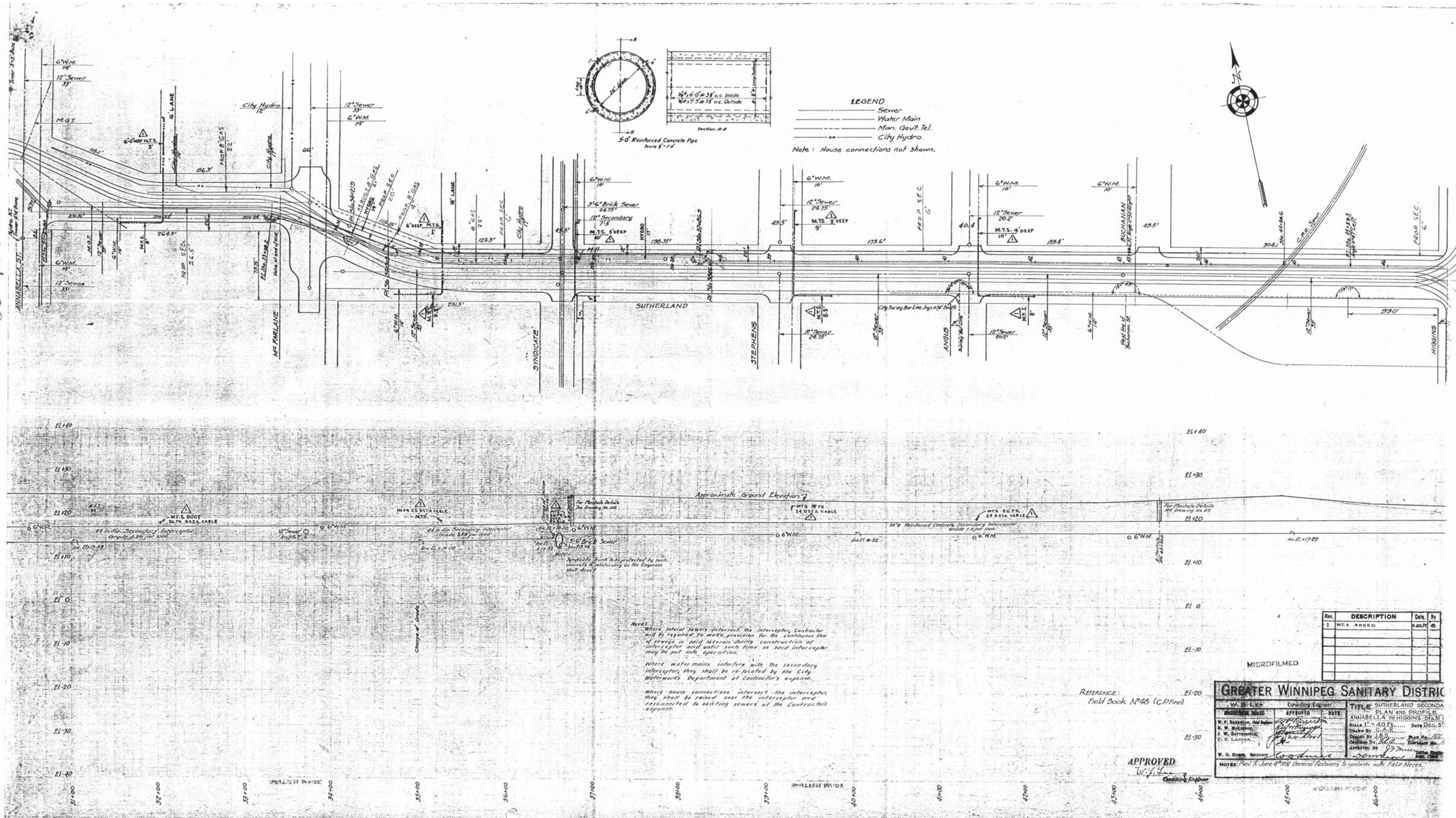
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON BEST INFORMATION AVAILABLE, BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN AND EXACT LOCATION OF ALL UNDERGROUND INCLUDING SERVICE CONNECTIONS MUST BE CHECKED WITH UTILITIES CONCERNED BEFORE PROCEEDING WITH CONSTRUCTION.





file #  
SS 10021

101



**LEGEND**  
 --- Sewer  
 --- Water Main  
 --- Man. Gov't. Tel.  
 --- City Hydro.  
 Note: House connections not shown.

Notes:  
 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 water mains interfere with the secondary interceptors, they shall be re-laid 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.

REFERENCE:  
 Field Book N°48 (C.P. Form)

APPROVED  
 W. J. L. Lica  
 Consulting Engineer

| REV. | DESCRIPTION  | DATE   | BY |
|------|--------------|--------|----|
| 1    | M.T.S. ADDED | AUG 15 | IS |
|      |              |        |    |
|      |              |        |    |
|      |              |        |    |

MICROFILMED

**GREATER WINNIPEG SANITARY DISTRICT**

W. J. L. LICA Consulting Engineer

**TITLE: SUTHERLAND - SECONDARY INTERCEPTOR PLAN AND PROFILE**

ANNABELLA TO HIGGINS STREET

Scale: 1" = 40 FT. Date: Dec. 5, 1928

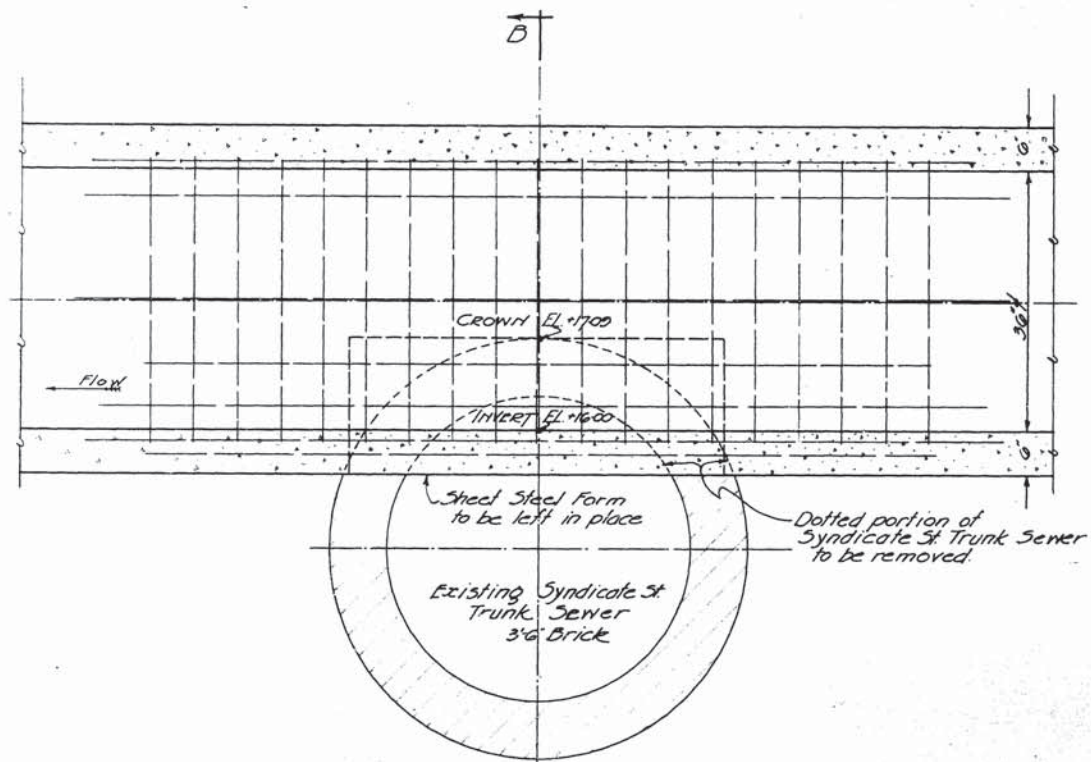
Checked By: [Signature] Date: [ ]

Approved By: [Signature] Date: [ ]

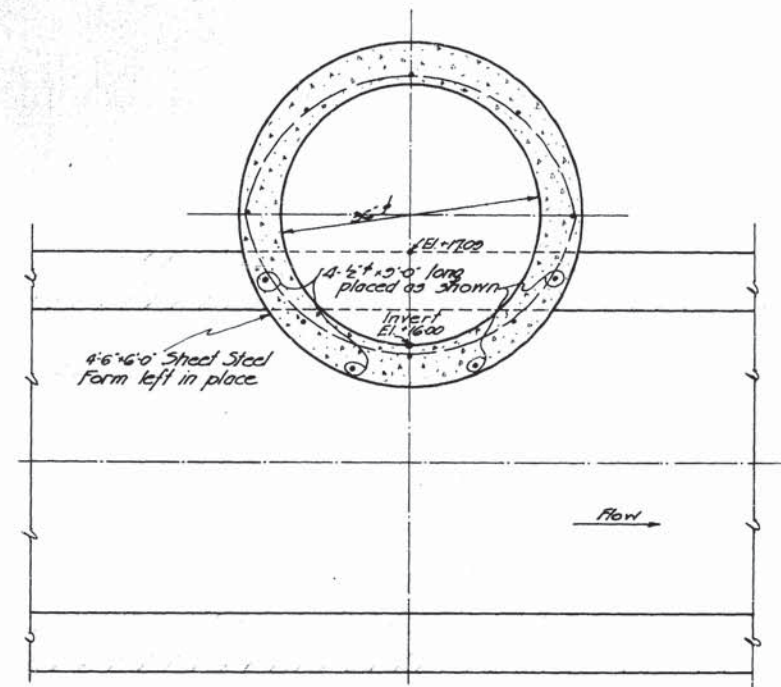
W. D. Bump, Secretary

Notes: See A. June 4, 1928, General Orders to confirm with Field Notes.

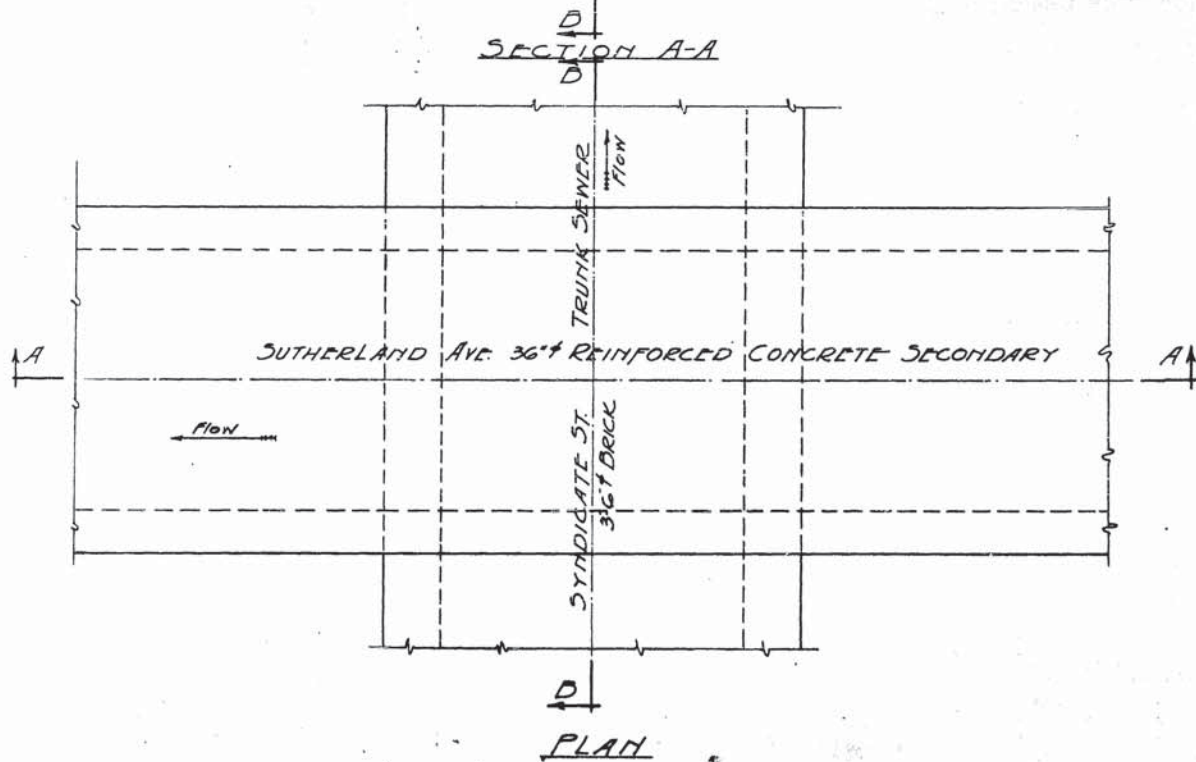




SECTION A-A



SECTION B-B



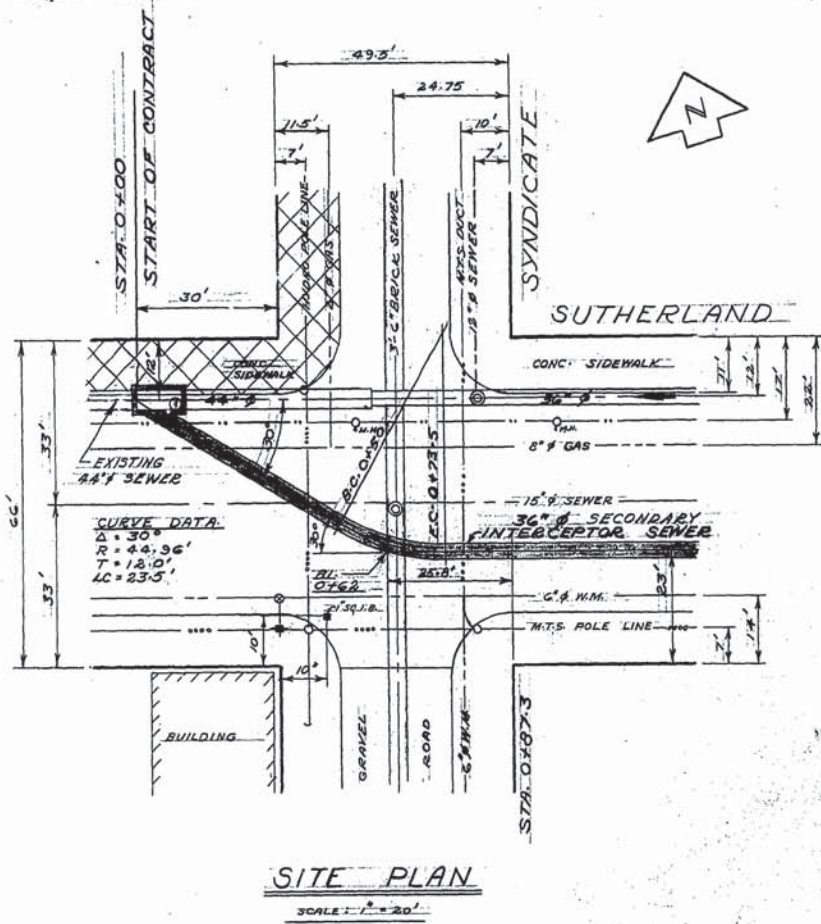
PLAN

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

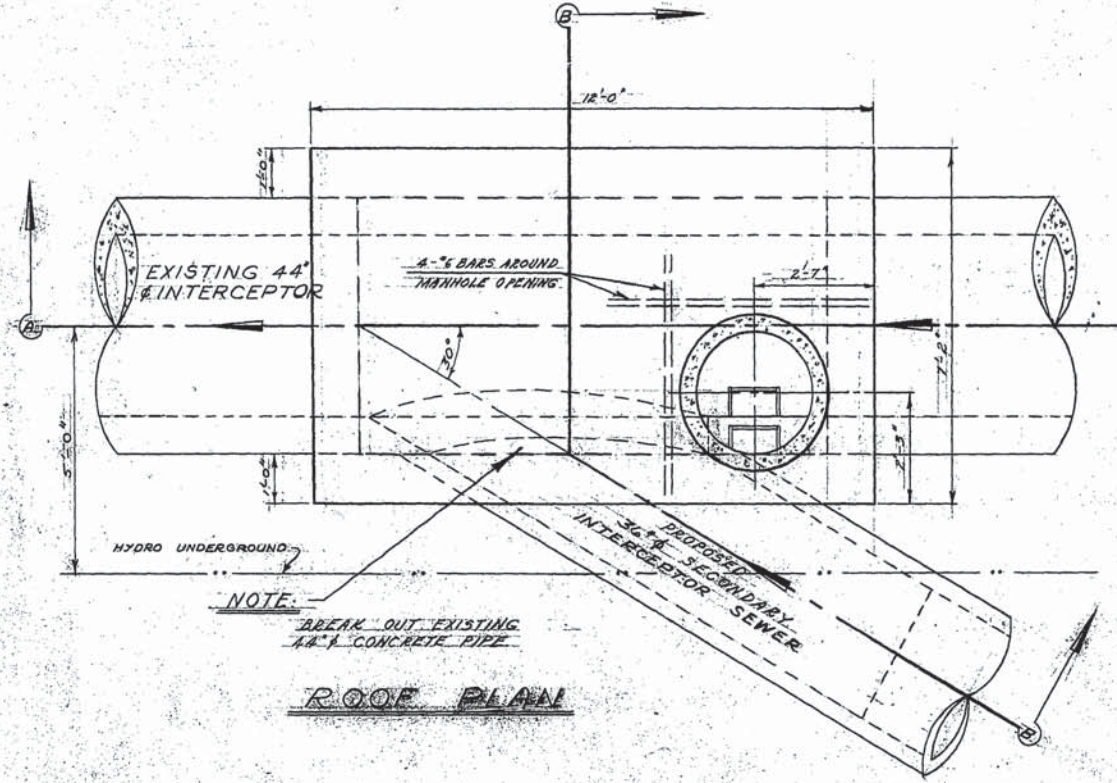
APPROVED

|   |   |                      |
|---|---|----------------------|
| <b>GREATER WINNIPEG SANITARY DISTRICT</b> |   |                      |
| PROJECT NO. _____<br>DATE _____           | TITLE<br>SUTHERLAND SECONDARY<br>CROSSING SEWER | SCALE<br>1" = 10'-0" |
| DRAWN BY<br>CHECKED BY<br>APPROVED BY     | DATE<br>1928                                    | SHEET NO.<br>142     |

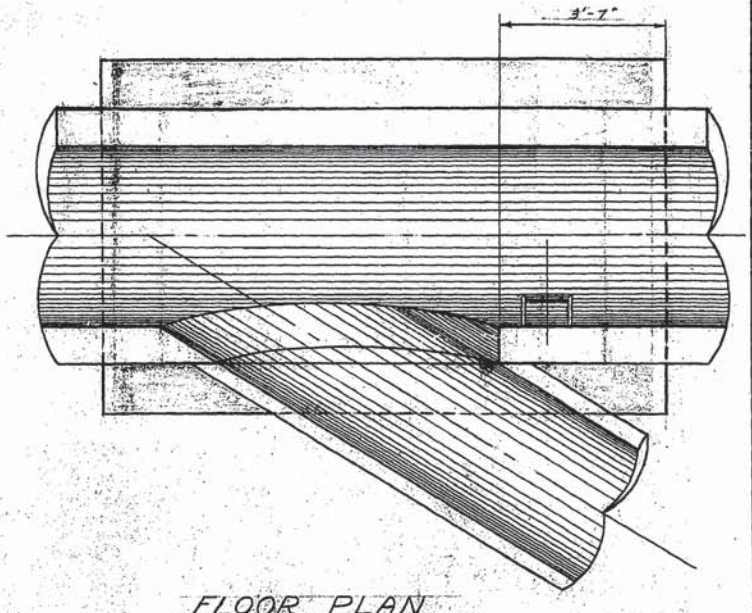




**SITE PLAN**  
SCALE: 1" = 20'



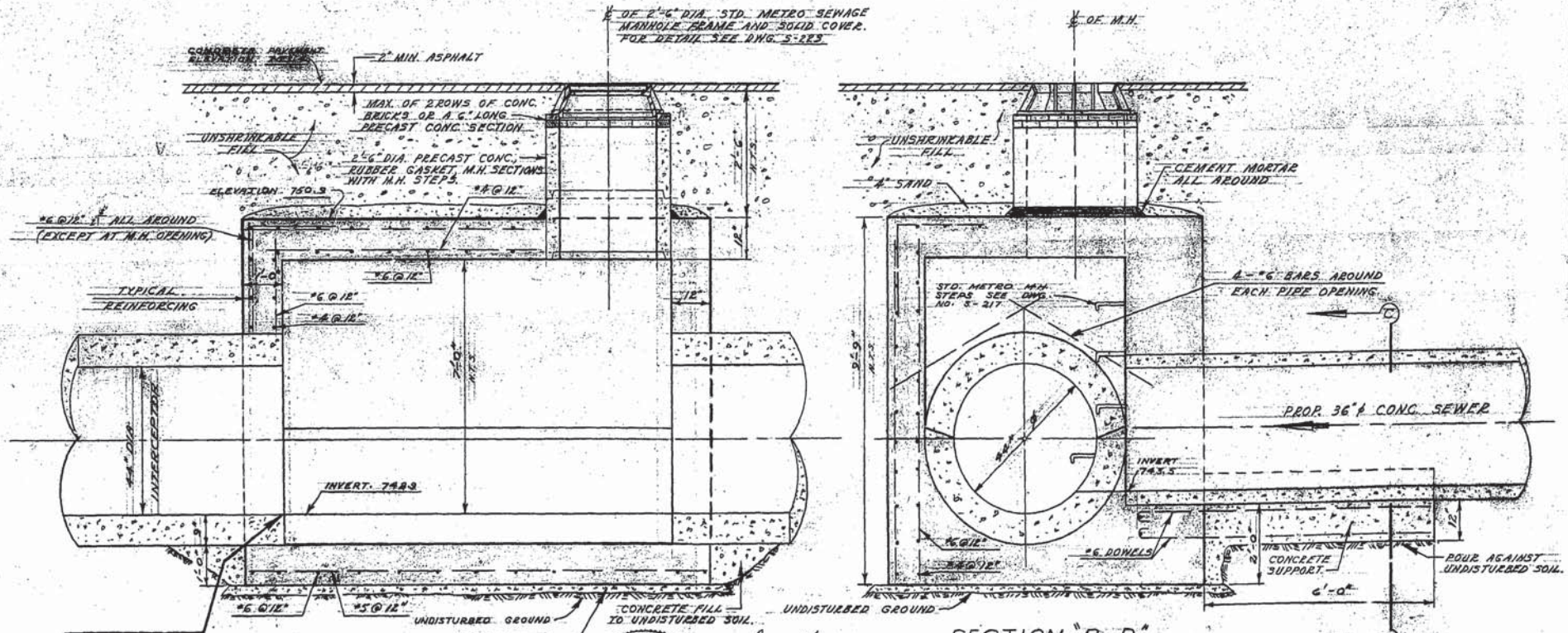
**ROOF PLAN**



**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+55.1 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.

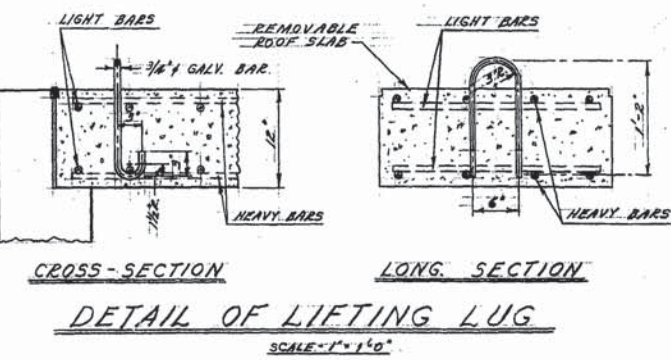


CHECK INVERT PRIOR TO CONSTRUCTION

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

**SECTION B-B**  
AS CONSTRUCTED 25 JAN. 66

**SECTION C-C**



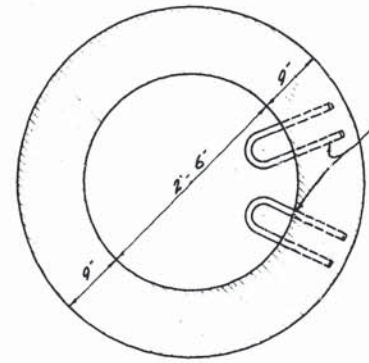
**DETAIL OF LIFTING LUG**  
SCALE: 1" = 1'-0"



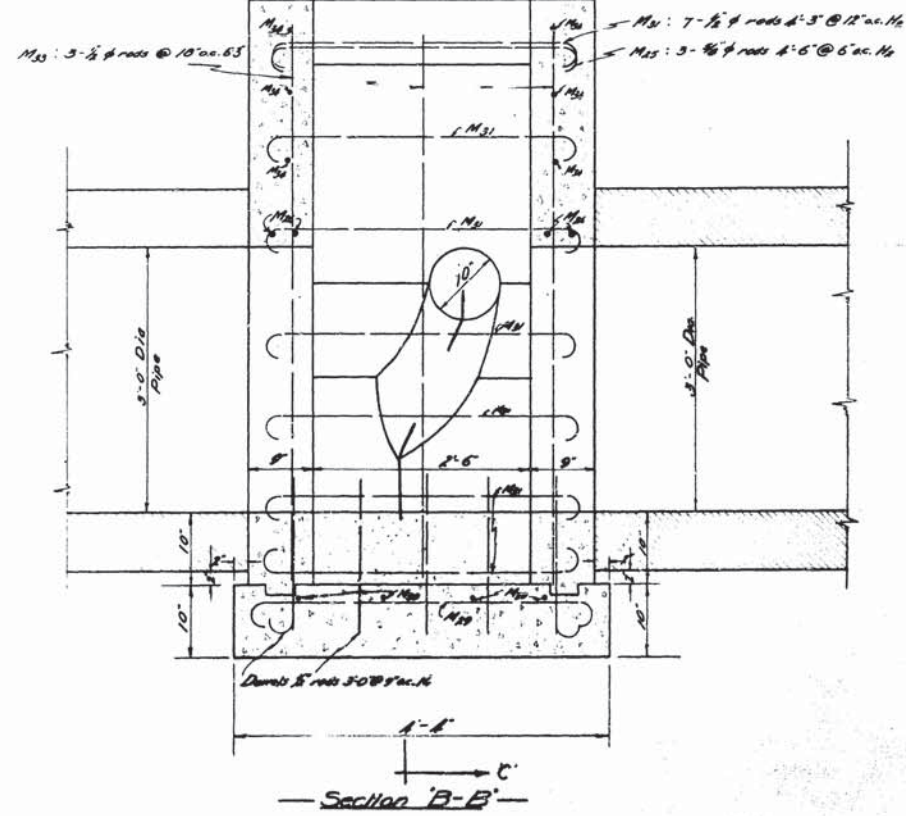
|   |   |  |   |
|---|---|--|---|
| THE METROPOLITAN CORPORATION<br>OF GREATER WINNIPEG<br><b>WATERWORKS &amp; WASTE<br/>                 DISPOSAL DIVISION</b><br>A. PENMAN - DIRECTOR | SEWERAGE DISPOSAL<br>SUTHERLAND SECONDARY<br>INTERCEPTOR SEWER<br>DETAIL OF<br><b>SPECIAL MANHOLE</b><br>AT STA. 0+00 | DEPT. DER. <i>R.M. Girling</i><br>DRN. E.D. & S.K. DATE <i>1/15/66</i><br>ENG. DES. <i>R.M. Girling</i><br>ENG. OPR. <i>A. Penman</i><br>APPROVED <i>A. Penman</i> | SCALE:<br>1" = 1'-0"<br>DRAWING NO.<br><b>517</b> |
|   | APPROVED <i>A. Penman</i>   |  | DATE 25 JAN. 66                                   |



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

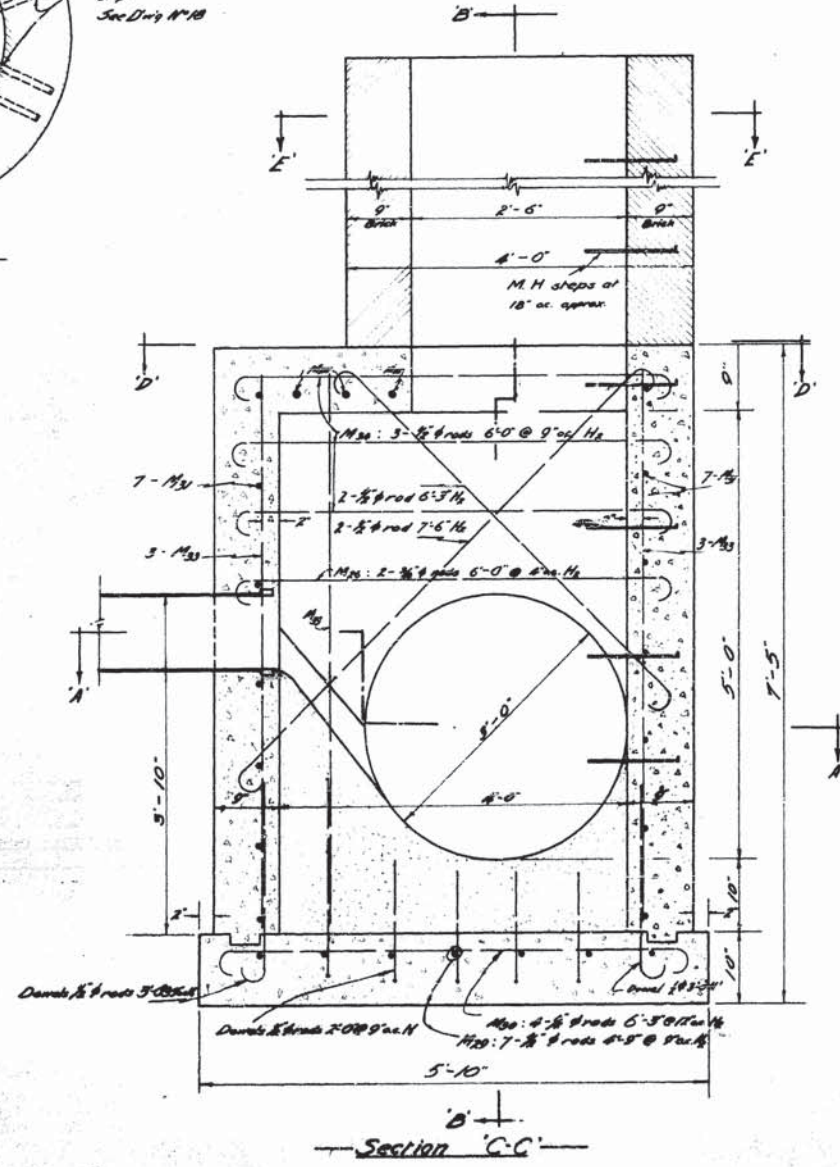


Section E-E

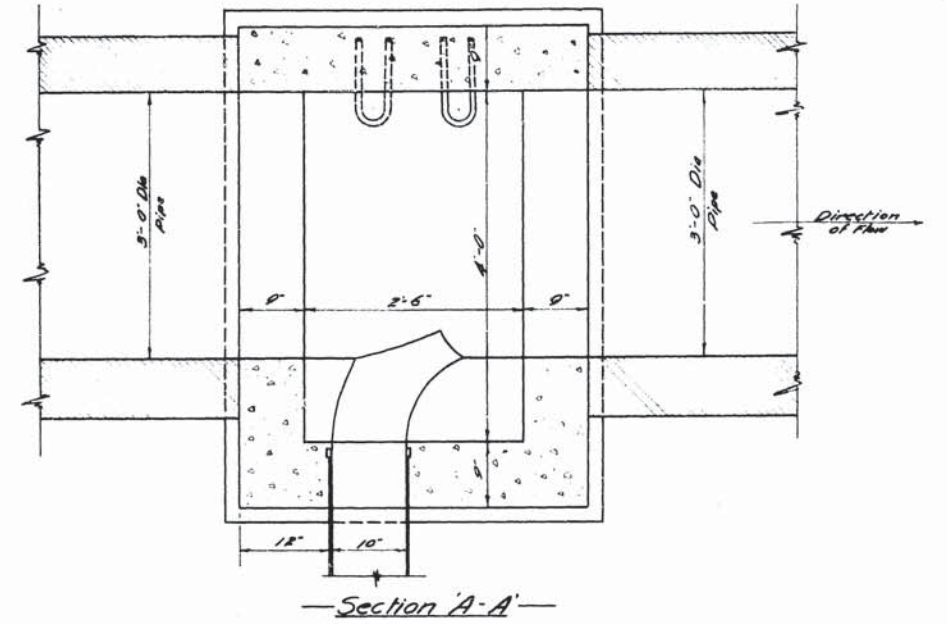


Section B-B

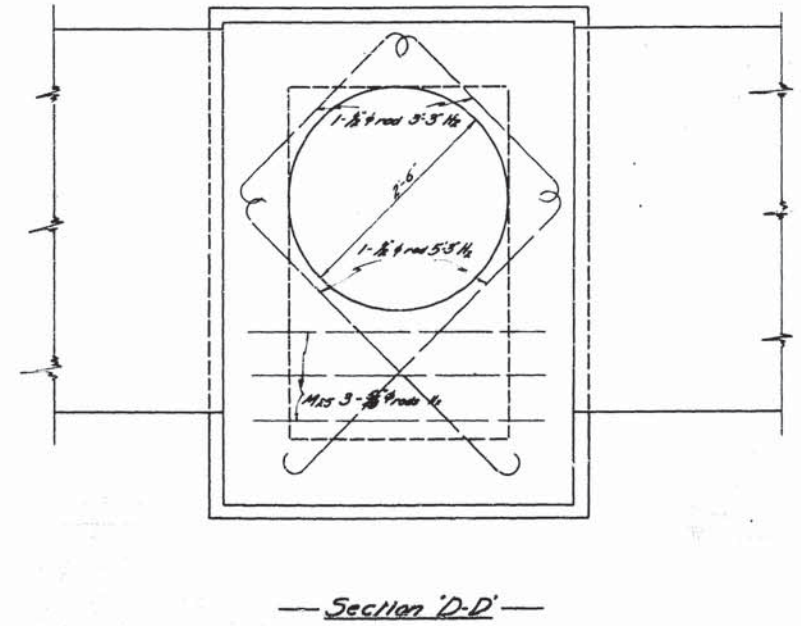
Pavement or Ground Level



Section C-C



Section A-A



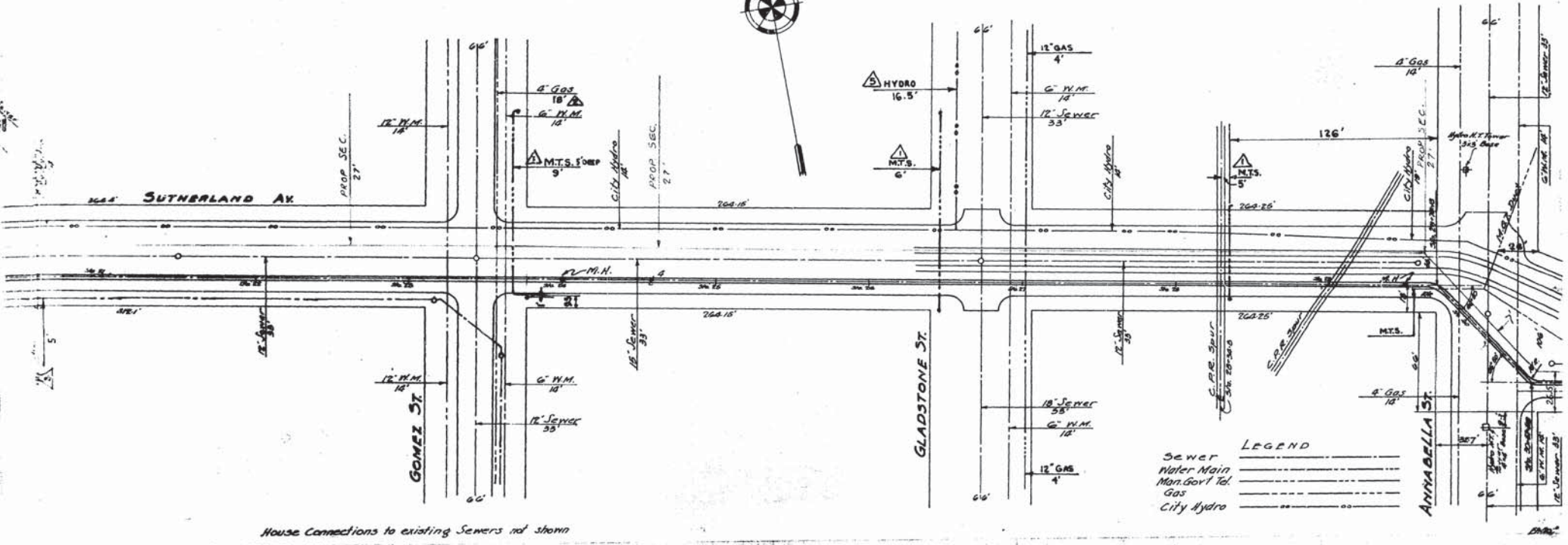
Section D-D

Note:  
 One manhole as shown at Syndicate and Sutherland  
 One similar manhole opposite bank at Grace St & Port Douglas

FOR WINNIPEG SANITARY DISTRICT

|              |                   |
|--------------|-------------------|
| PROJECT      | MIDLAND SECONDARY |
| DATE         | 1914              |
| DESIGNED BY  | W. H. D. ...      |
| CHECKED BY   | ...               |
| SCALE        | 1" = 1'-0"        |
| FIG. NO.     | 105               |
| CUSTOMER NO. | ...               |



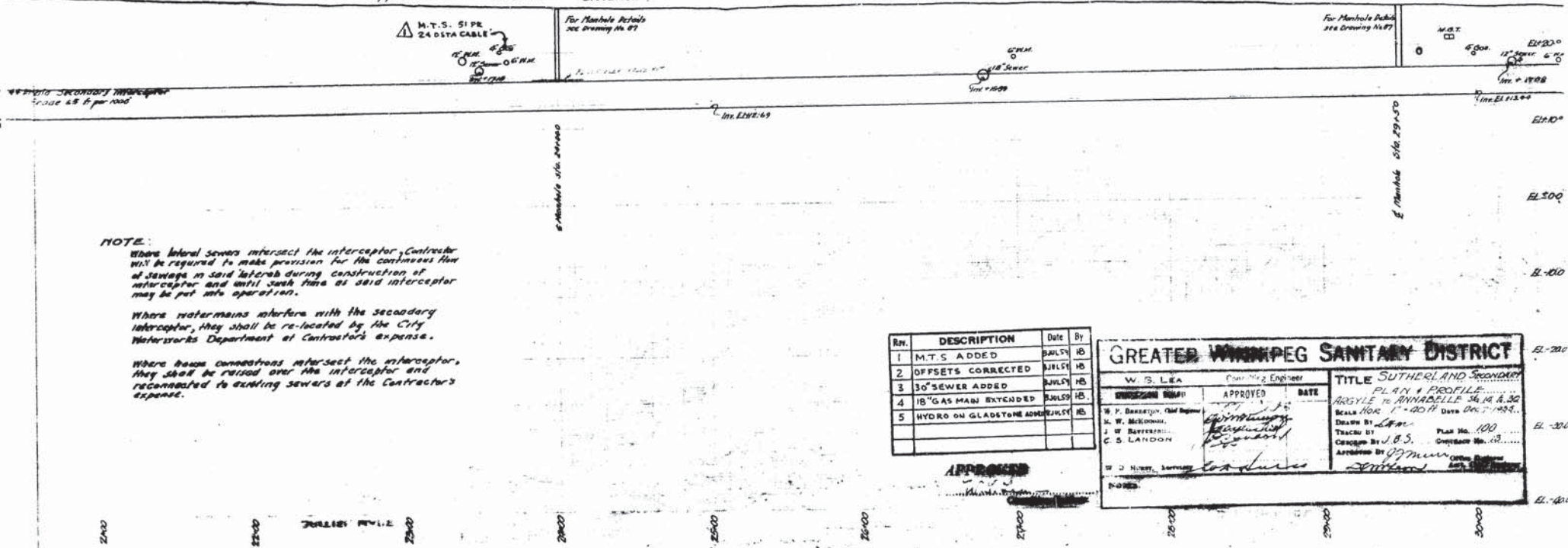


House Connections to existing Sewers not shown

**SEWER LEGEND**

|     |               |
|-----|---------------|
| --- | Sewer         |
| --- | Water Main    |
| --- | Non-Grav. Id. |
| --- | 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 water mains 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 15 | HB |
| 2    | OFFSETS CORRECTED        | JULY 15 | HB |
| 3    | 30" SEWER ADDED          | JULY 15 | HB |
| 4    | 18" GAS MAIN EXTENDED    | JULY 15 | HB |
| 5    | HYDRO ON GLADSTONE ADDED | JULY 15 | HB |

**GREATER WINNIPEG SANITARY DISTRICT**

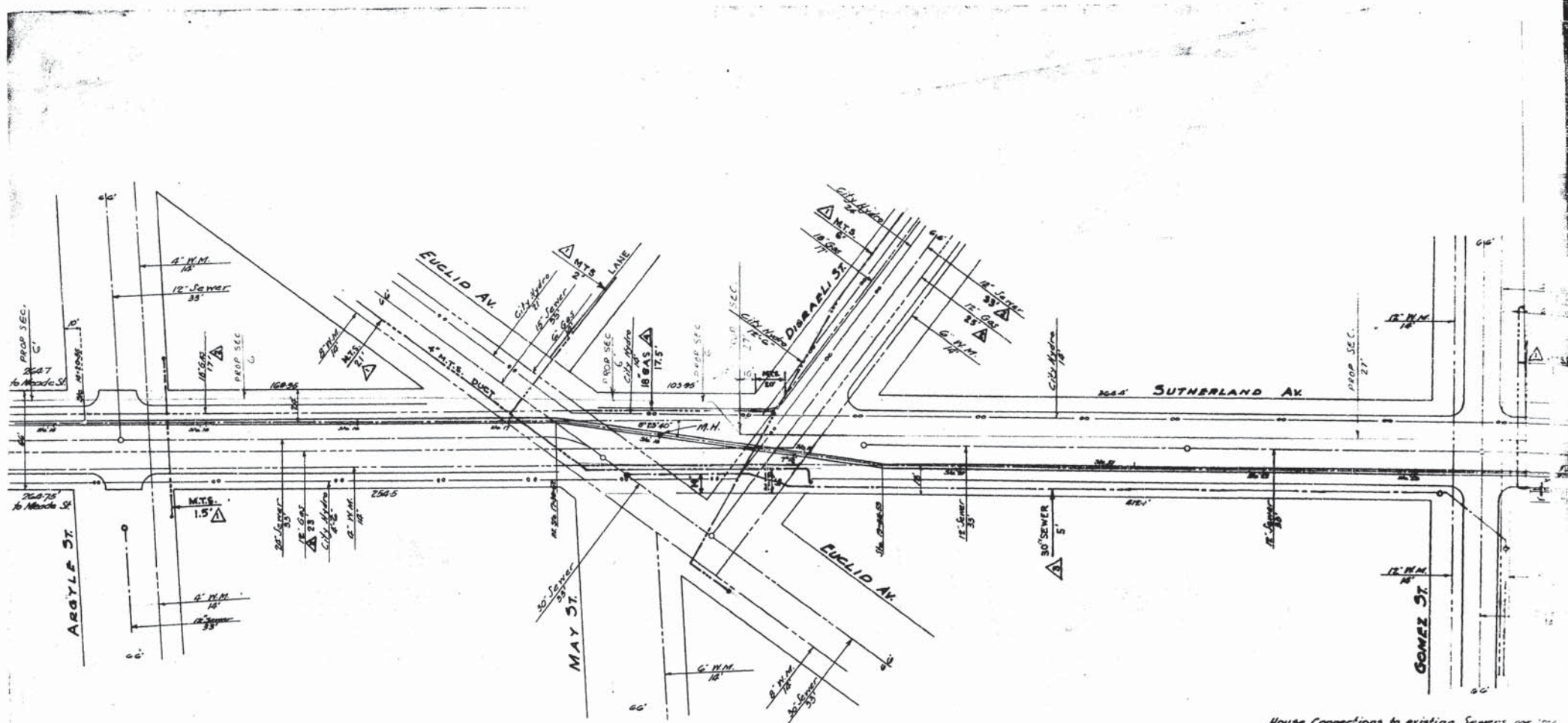
W. S. LEA, Chief Engineer

**TITLE: SUTHERLAND SECONDARY**  
**PLAN & PROFILE**  
 ARSLEY TO ANNABELLA 34.14 & 30  
 BELLA HOR. 17-40.11 DATA DATED 1953.

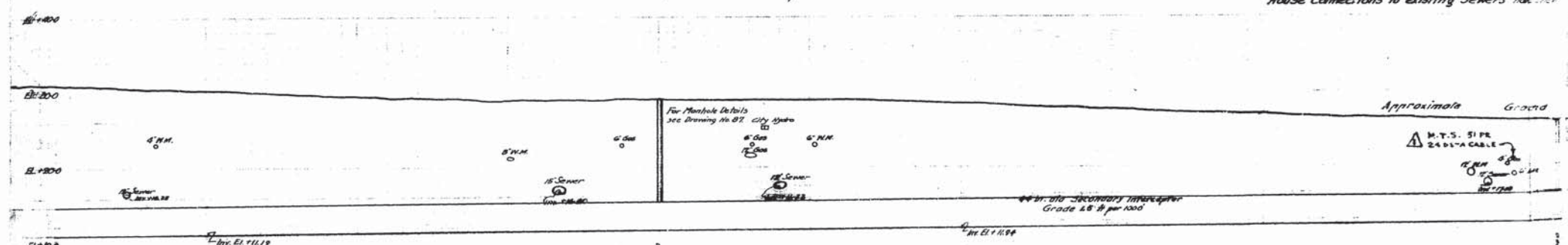
DESIGN BY: [Signature]  
 CHECKED BY: J.B.S.  
 APPROVED BY: [Signature]

2240 2250 2260 2270 2280 2290 2300 2310 2320 2330 2340 2350 2360 2370 2380 2390 2400





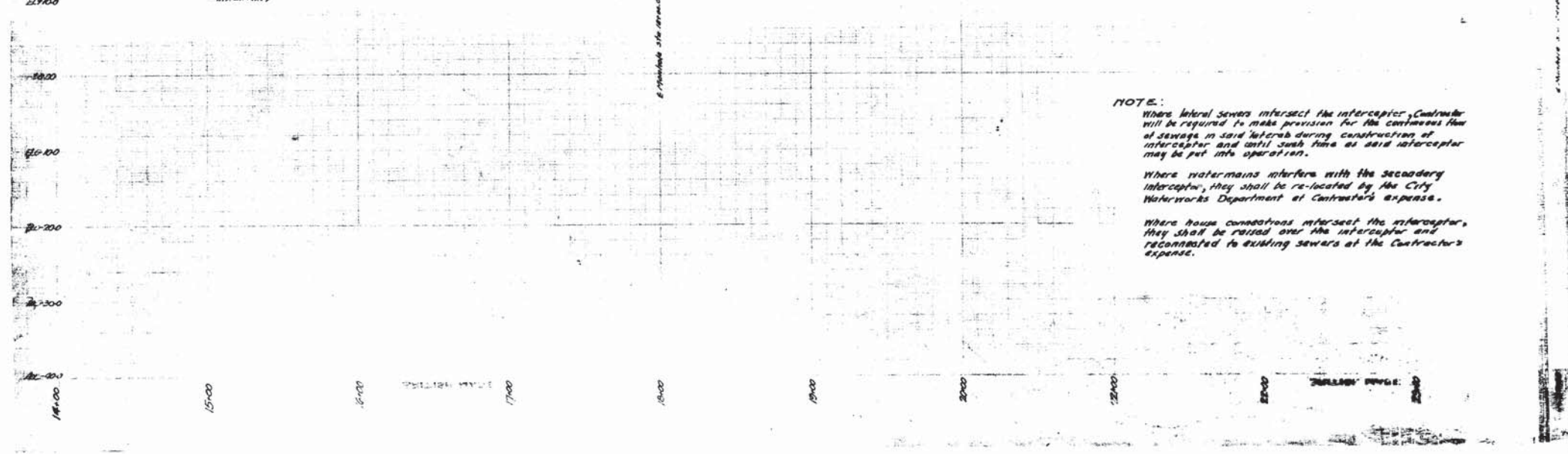
House Connections to existing Sewers not shown



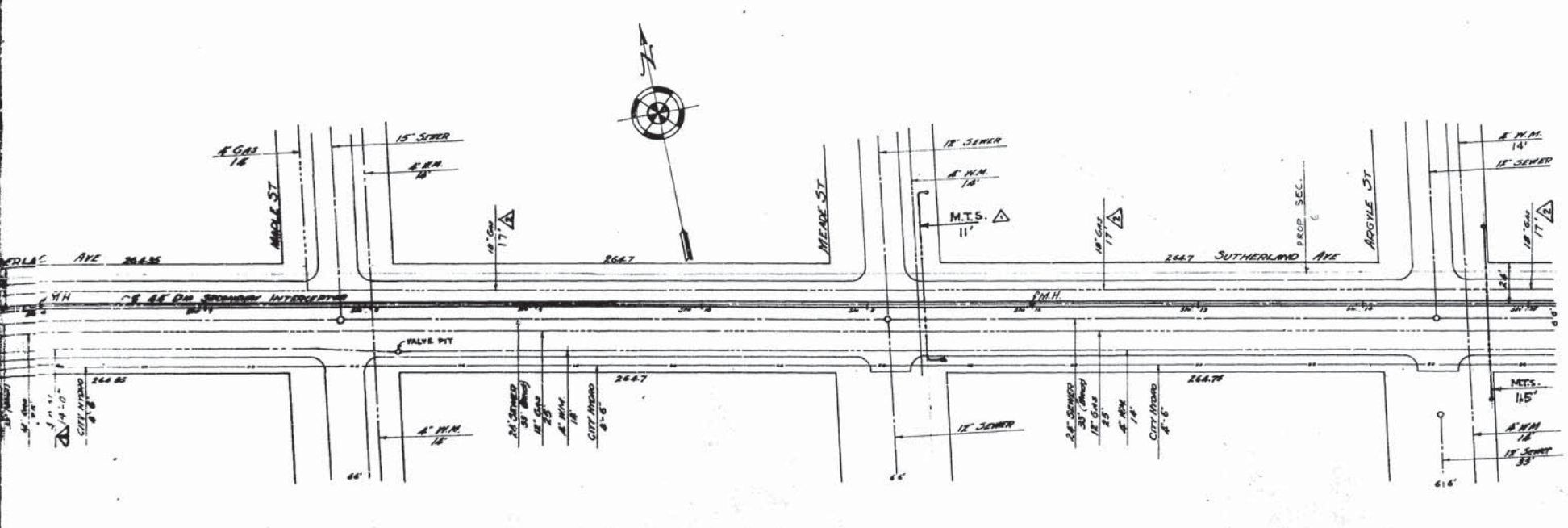
For Manhole Details  
 see Drawing No. 87  
 City of New York  
 Waterworks Department

Approximate Ground  
 M.T.S. PIPE  
 24" x 12" CABLE  
 12" M.H.  
 18" M.H.  
 30" M.H.

**NOTE:**  
 Where lateral sewers intersect the interceptor, Contractor will be required to make provision for the continuous flow of sewage in said lateral during construction of interceptor and until such time as said interceptor may be put into operation.  
 Where water mains 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.



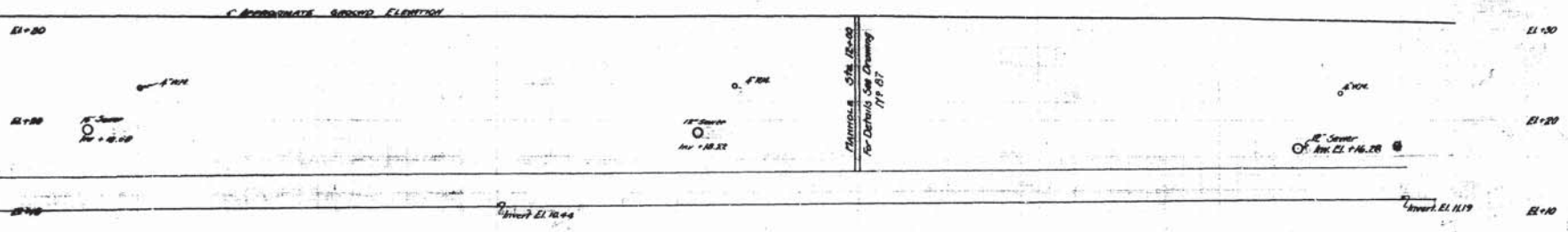




**LEGEND:**  
 Sewer \_\_\_\_\_  
 Water Main \_\_\_\_\_  
 Man Gas Tol. \_\_\_\_\_  
 Gas \_\_\_\_\_  
 City Hydro \_\_\_\_\_

HOUSE CONNECTIONS TO EXISTING SEWER NOT SHOWN  
 E1-20

CORRECTED GRADE ELEVATION

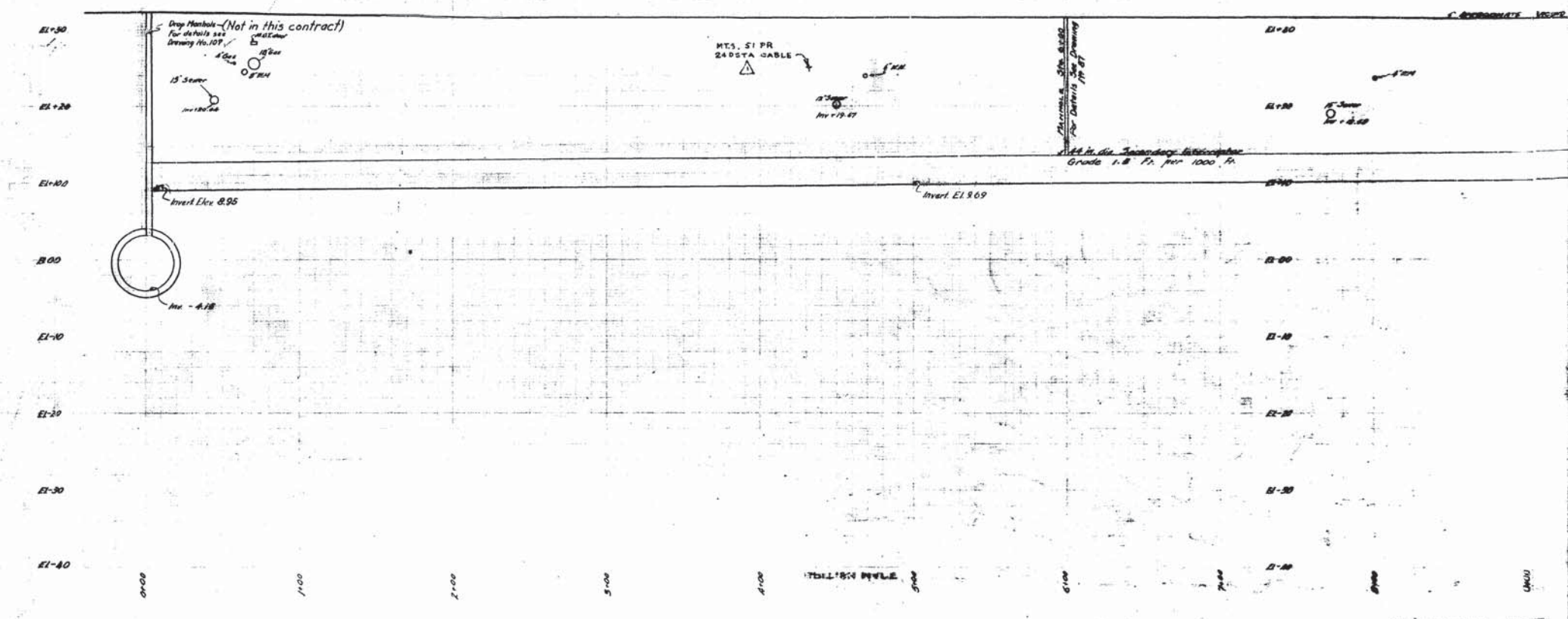
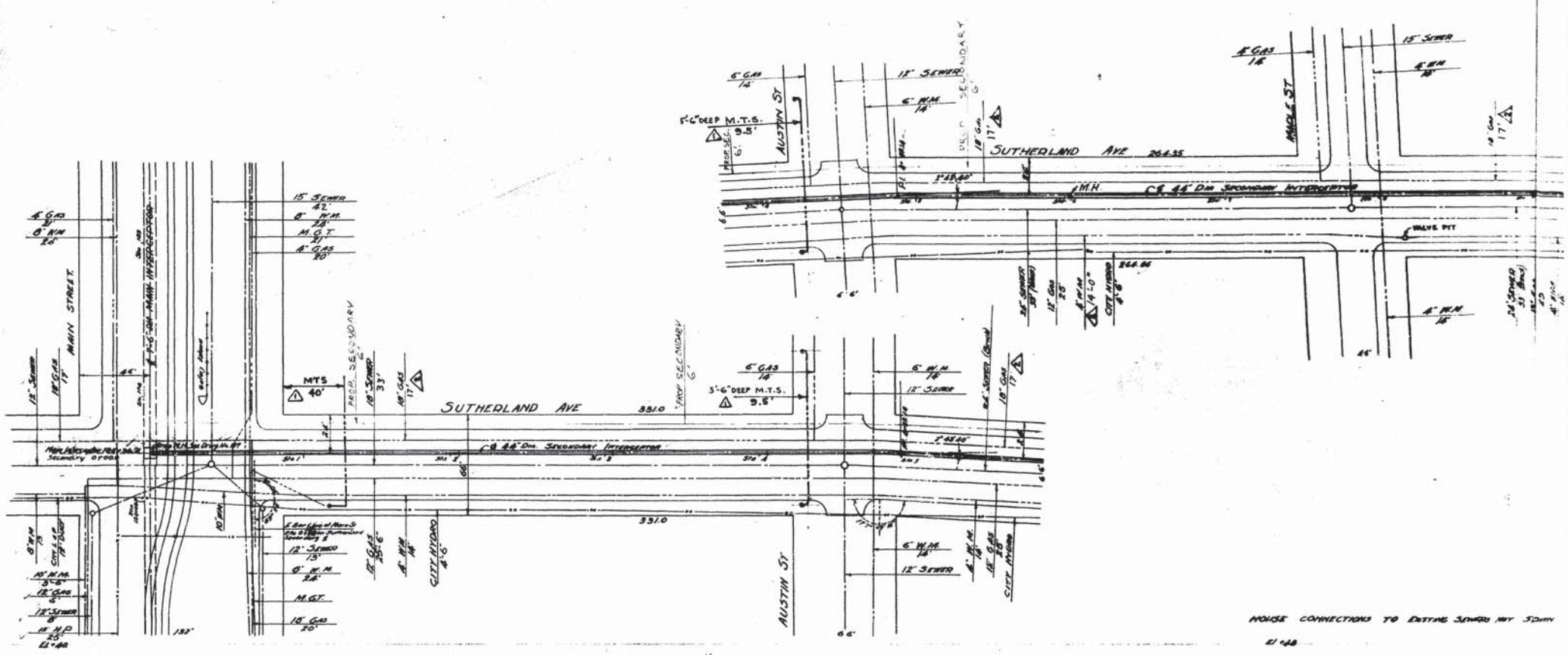


REVISED 7 JULY 1959 1B

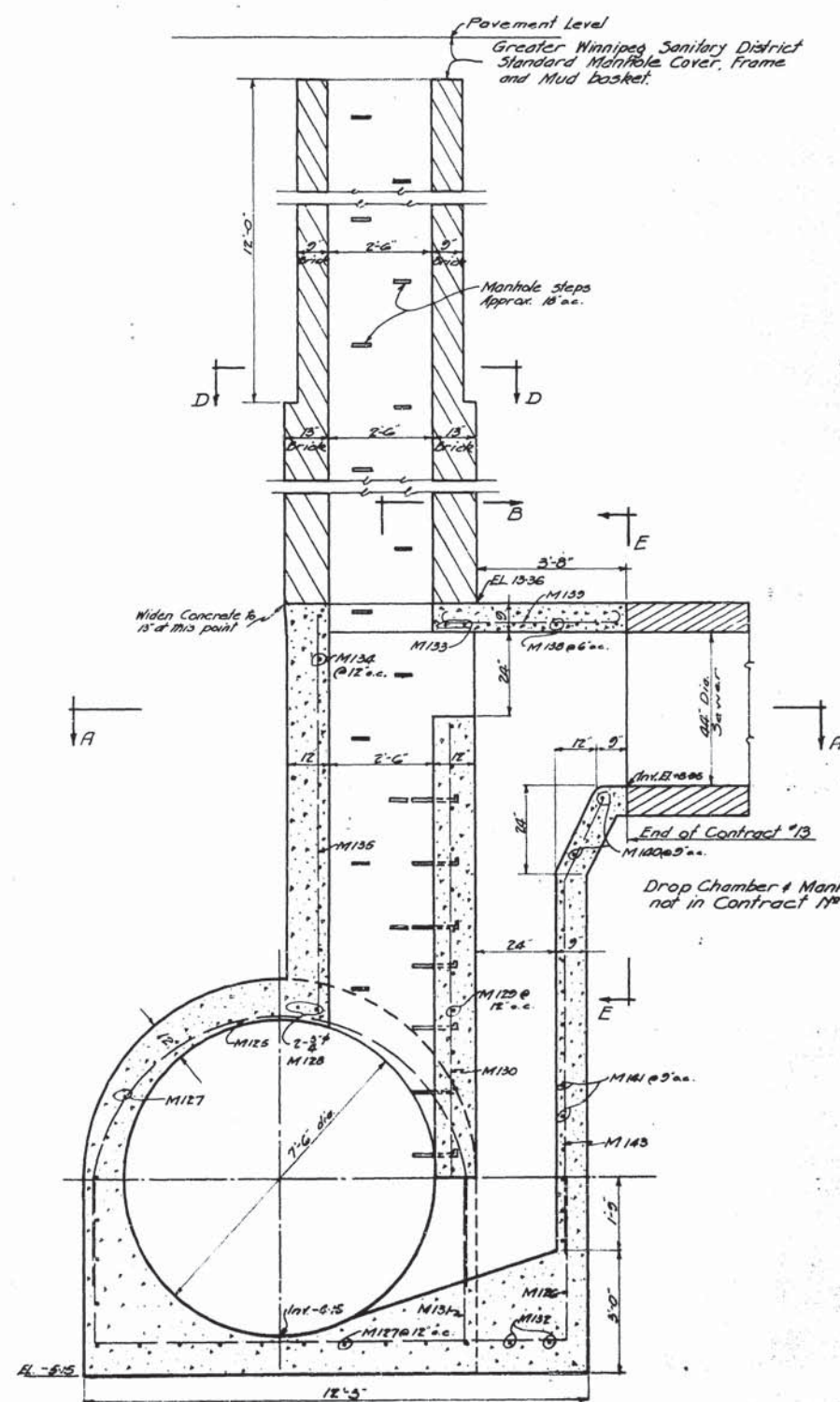
| Rev. | DESCRIPTION      | Date     | By |
|------|------------------|----------|----|
| 1    | M.T.S. ADDED     | 10/15/59 | HS |
| 2    | OFFSET CORRECTED | 10/15/59 | HS |
|      |                  |          |    |
|      |                  |          |    |

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| <b>GREATER WINNIPEG SANITARY DISTRICT</b> |  |
| W. S. LEA<br>City Engineer                | TITLE: SUTHERLAND SEWERARY<br>PLAN & PROFILE |
| W. F. Bannerman, Chief Clerk              | Approved: 10/15/59                           |
| E. W. McEwen, Chief Engineer              | Checked: 10/15/59                            |
| J. W. Barrington, Chief Inspector         | Checked: 10/15/59                            |
| C. S. London, Chief Sanitary Engineer     | Checked: 10/15/59                            |
| W. S. Leach, Secretary                    | Checked: 10/15/59                            |

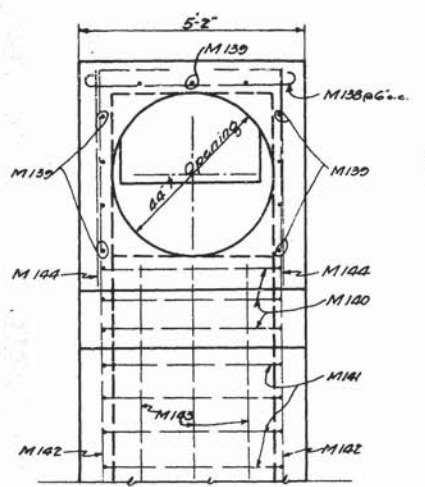




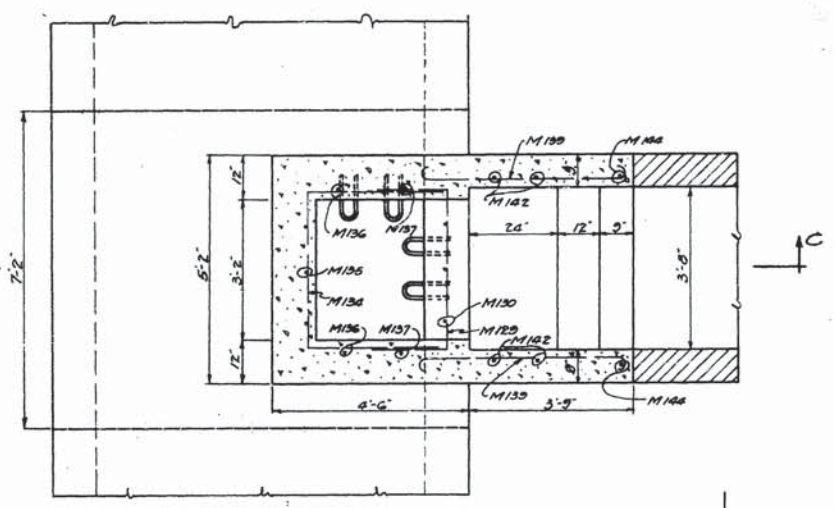




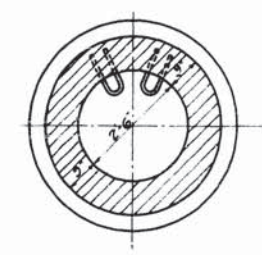
SECTION C-C



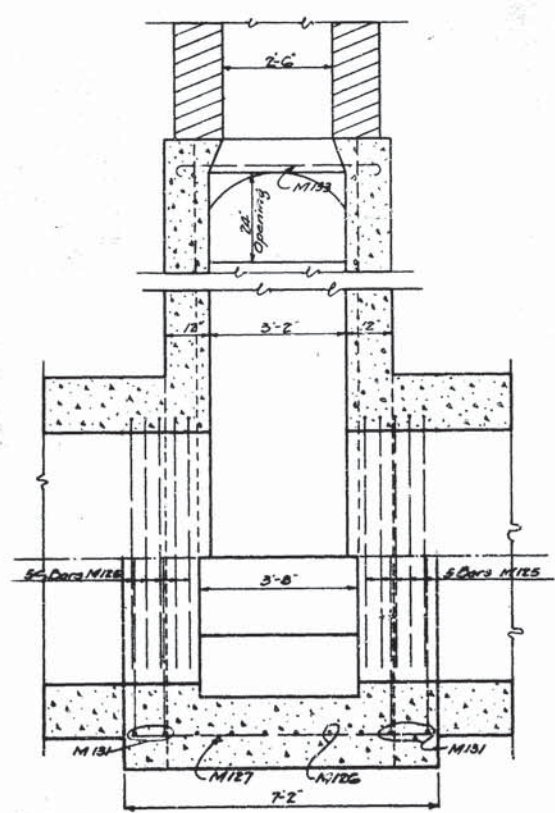
SECTION E-E



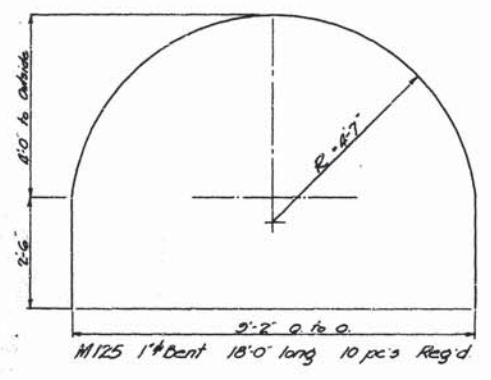
SECTION A-A



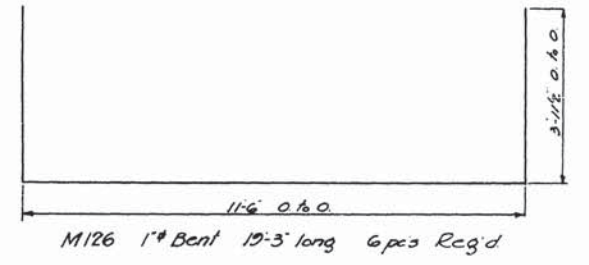
SECTION D-D



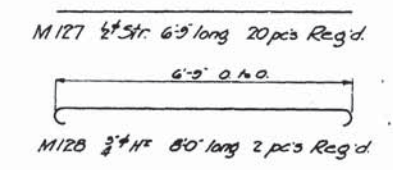
SECTION B-B



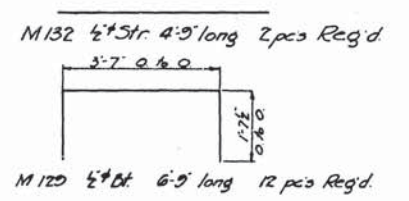
M125 1" Bent 18'-0" long 10 pcs Reg'd



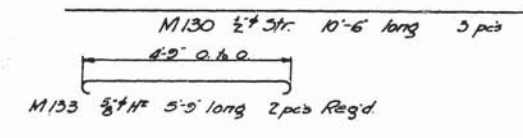
M126 1" Bent 19'-3" long 6 pcs Reg'd



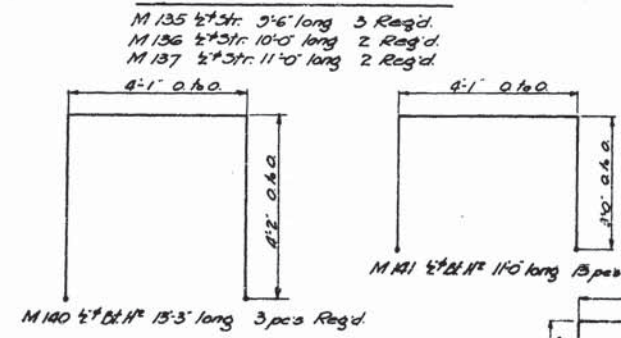
M127 1/2" Str. 6'-5" long 20 pcs Reg'd  
M128 3/4" Str. 8'-0" long 2 pcs Reg'd



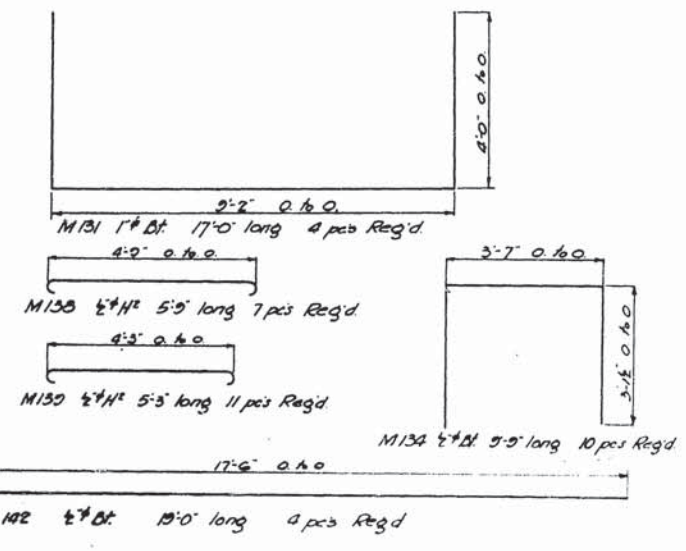
M132 1/2" Str. 4'-9" long 2 pcs Reg'd  
M129 1/2" Str. 6'-5" long 12 pcs Reg'd



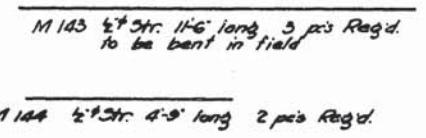
M130 1/2" Str. 10'-6" long 3 pcs  
M133 3/4" Str. 5'-5" long 2 pcs Reg'd



M135 1/2" Str. 9'-6" long 3 Reg'd  
M136 1/2" Str. 10'-0" long 2 Reg'd  
M137 1/2" Str. 11'-0" long 2 Reg'd  
M141 1/2" Str. 11'-0" long 13 pcs Reg'd  
M140 1/2" Str. 13'-3" long 3 pcs Reg'd



M131 1" Str. 17'-0" long 4 pcs Reg'd  
M138 1/2" Str. 5'-5" long 7 pcs Reg'd  
M139 1/2" Str. 5'-5" long 11 pcs Reg'd  
M134 1/2" Str. 5'-5" long 10 pcs Reg'd  
M142 1/2" Str. 15'-0" long 4 pcs Reg'd



M143 1/2" Str. 11'-6" long 3 pcs Reg'd  
to be bent in field  
M144 1/2" Str. 4'-9" long 2 pcs Reg'd

APPROVED

|  |  |  |
|--|--|--|
| <b>GREATER WINNIPEG SANITARY DISTRICT</b><br>B. L. F. A. <small>Chief Engineer</small><br>ENGINEER'S BOARD<br>W. P. Bessley <small>Chairman</small><br>J. W. McKinnon<br>J. A. Bayne<br>C. S. London |  | TITLE: SUTHERLAND SECONDARY<br>NO. 12 OF DROP CHAMBER<br>AT MAIN INTERCEPTOR.<br>DATE: 1910<br>DRAWN BY: J. S. A.<br>107<br>APPROVED BY: J. S. A.<br>W. D. L. <small>Chief Inspector</small><br>H. G. <small>Asst. Chief Inspector</small> |
|--|--|--|