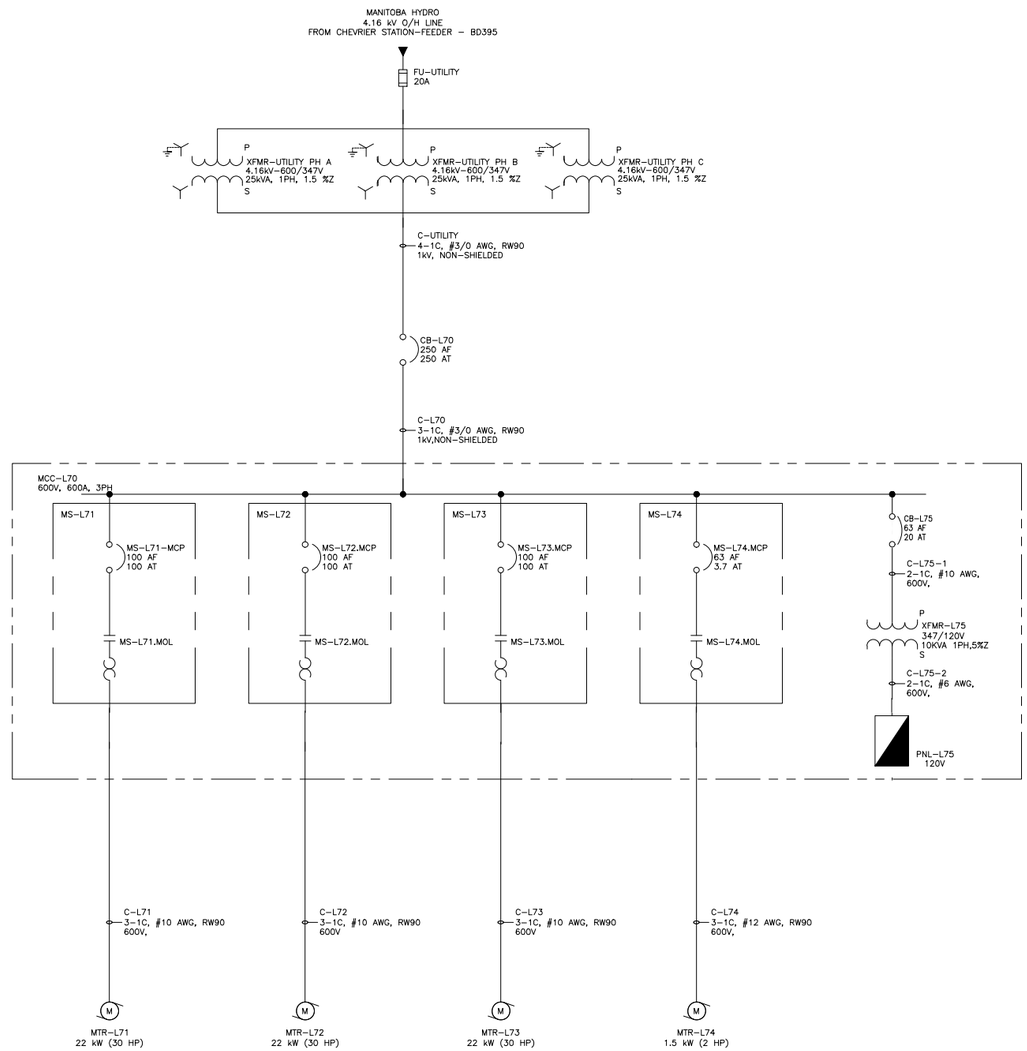


BID OPPORTUNITY: 515–2015
CONTRACT NUMBER: S–1031

REVISION ## CHANGES THE ENGINEER'S DESIGN RESPONSIBILITIES ARE LIMITED TO THE CHANGES INDICATED IN THE CLOUDED WORK	
DESIGNED BY:	CHECKED BY:
DRAWN BY:	APPROVED BY:
DATE: YYYY MM DD	RELEASED FOR CONSTR. DATE: YYYY MM DD

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.

NO.	REVISIONS	DATE (YYYY/MM/DD)	BY
00	ISSUED FOR CITY USE		

CIMA+
T: 519-255-2626
5255, rue King Ouest, Sherbrooke QC J1L 1P8 CANADA

DESIGNED BY	U. ASIF	CHECKED BY	C. KUNTZ
DRAWN BY	A. MENARD	APPROVED BY	
SCALE: HORIZONTAL 1:1 VERTICAL 1:1		RELEASED FOR CONSTRUCTION	
DATE	2020 03 18	DATE	

ENGINEER'S SEAL

PROVINCE OF MANITOBA
LAPOINTE
Member
41572
2020/05/29
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NUMBER
1–0193L–E0001–0001

Winnipeg

THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

TYLEHURST LIFT STATION
ARC FLASH STUDY
SINGLE LINE DIAGRAM
TYLEHURST
WINNIPEG, MANITOBA

CITY DRAWING NUMBER 1–0193L–E0001–0001 | SHEET 1 of 1

PLOT DATE: 2020 03 18
FILE PATH: C:\Users\Benvenuti\Dropbox\cima\Winnipeg\
FILE NAME: 1–0XXL–E0001–0001.dwg

CONSTRUCTION NOTES:

1. REMOVED AND DISPOSE OF CONSTRUCTION MATERIALS FROM SITE DAILY.
2. PROVIDED TEMPORARY SECURITY FENCE AROUND CONSTRUCTION INCLUDING EQUIPMENT AND MATERIALS AT ALL TIMES.

NOTES:

1. THIS DRAWING WAS ONLY A SKETCH BASED ON THE EXISTING DRAWINGS. THE LOCATION OF UNDERGROUND STRUCTURES AND DIMENSIONS ARE NOT EXACT.
2. THE CONTRACTOR WAS RESPONSIBLE FOR CONFIRMING ALL DIMENSIONS AND CONFIRMING, THE LOCATION OF THE BURIED UTILITIES PRIOR TO ASSOCIATED CONSTRUCTION.

FOR INDEX SEE
1-0110A-D0006-001

CONTRACTOR: ROCKY ROAD RECYCLING

RECORD DRAWING
WATER AND WASTE DEPARTMENT

CONSTRUCTION COMPLETION DATE: 18/04/20

SITE PLAN

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

0.0 5.0 10.0 15.0 20.0 25.0

WARNING

IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST:

1) NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.

2) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.

SEE PROVINCIAL REGULATION 210/72 FOR DETAILS

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.

NO.	REVISIONS	DATE	BY
1	REVISED TO RECORD DWG	18/08/15	RS

DESIGNED BY	TS	CHECKED BY	SC
DRAWN BY	RS	APPROVED BY	KZ
SCALE: HORIZONTAL	1:1000	RELEASED FOR CONSTRUCTION	–
VERTICAL	1:1000		
DATE	2019 11 19	DATE	–

PLOT DATE: 2019 11 18

ENGINEER'S SEAL
ORIGINAL MYLAR SIGNED BY S.R.J COURNOYER 19/11/18

CONSULTANT DRAWING NUMBER
–

BID OPPORTUNITY: 802-2017

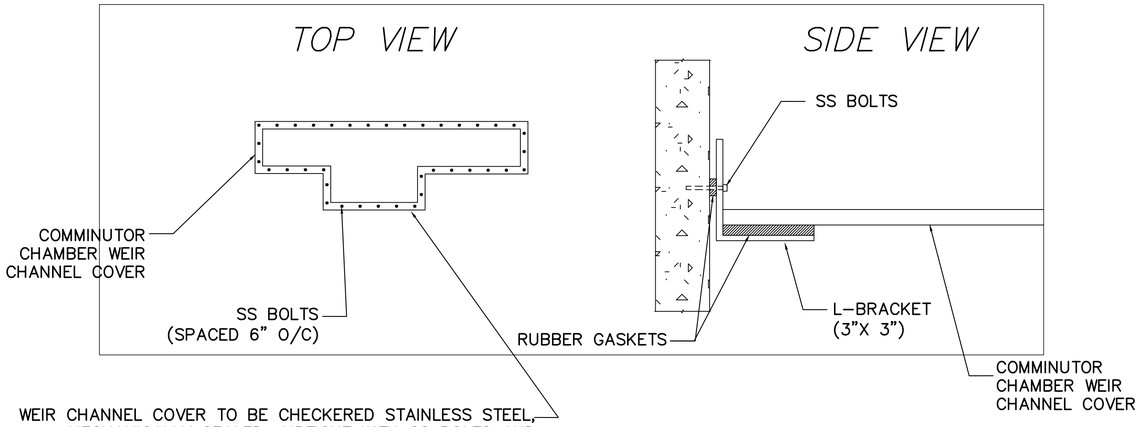
Winnipeg

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

2017 COMMINUTOR CHAMBER PIPING & VALVE UPGRADES SITE PLAN
TYLEHURST LIFT STATION
TYLEHURST STREET AT WOLSELEY AVENUE WEST

SHEET 9 OF 10
CITY DRAWING NUMBER
1-0193L-G0001-001

FILE PATH: R:\DRAWINGS\SEWER\
FILE NAME: 1-0193L-G0001-001.dwg



WEIR CHANNEL COVER TO BE CHECKERED STAINLESS STEEL, MECHANICALLY SEALED, AIRTIGHT WITH SS BOLTS AND RUBBER GASKET APPROVED FOR USE WITH SEWAGE. SS COVER MUST HOLD 250 LBS LIVE LOAD.

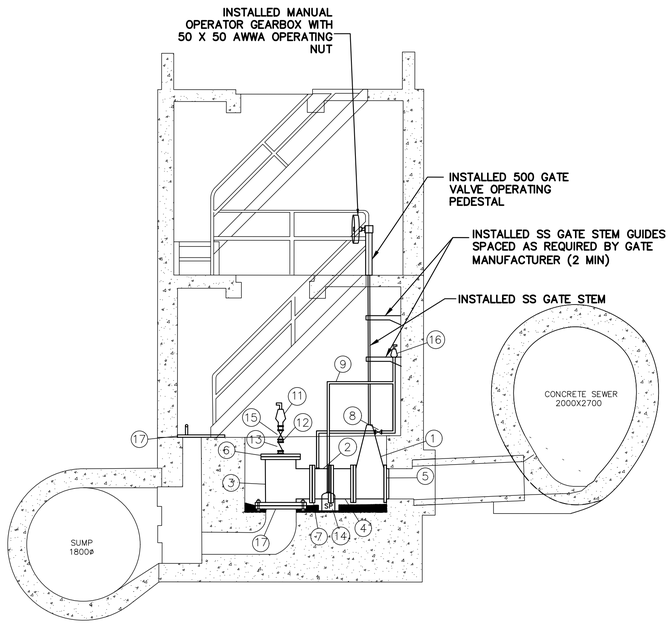
WEIR CHANNEL COVER DETAIL (TYPICAL)
NTS

MATERIALS							
SEWER							
ITEM	DESCRIPTION	MATERIAL	MANUFACTURER	END	LENGTH	QUANTITY	TYPE
1	500ø VALVE/ASSEMBLY	CAST IRON		FL	3462±	1	
2	500ø PIPE	CAST IRON		FL+PE	768±	1	
3	500ø TEE	CAST IRON		FL		1	
4	500ø BEND	CI				1	45°
5	500ø FLANGED WALL THIMBLE	DI				2	
6	500ø BLIND FLANGE	DI				2	
7	500ø UNI-FLANGE	DI				1	
8	38ø GATE VALVE	SS				1	
9	38ø PIPE	ABS				1	
10	38ø CHECK VALVE	SS					
11	75ø ONE WAY AIR VALVE	SS/REINF. NYLON				1	
12	75ø CHECK VALVE	BRASS				1	
13	75ø PIPE	ABS				1	
14	SUMP PUMP					1	110V, MIN 1/3 HP
15	75ø GATE VALVE	BRASS				1	
16	38ø ONE WAY AIR VALVE	SS/REINF. NYLON				1	
17	500ø PIPE FLANGE	DI				1	
18	WET WELL COVER					1	
CONTRACTOR: ROCKY ROAD RECYCLING							

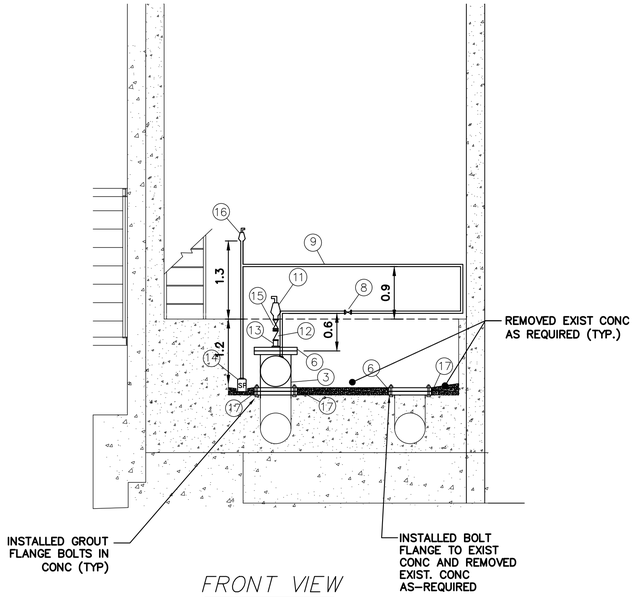
NOTE:
- LENGTHS & DIMENSIONS SHOWN AS ± CONFIRMED BY CONTRACTOR
- * ITEMS SUPPLIED BY CITY
- – CONTRACTOR SUPPLIED CABLES & CONDUIT FROM SUMP PUMPS TO ELECTRICAL OUTLETS IN COMMINUTOR ROOM
- – VALVE PEDESTAL OPERATORS HAVE POSITION INDICATORS.

CONSTRUCTION NOTES:

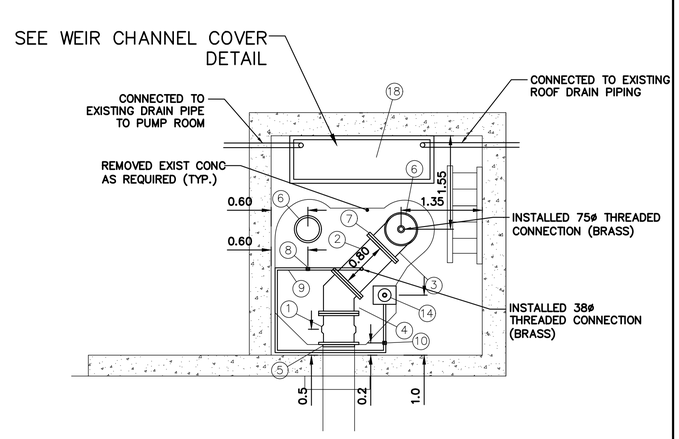
1. ALLOWABLE SHUTDOWN TIME: MAX. 27.0 HRS OR AS DETERMINED BY COLLECTIONS STAFF
2. CRITICAL BASEMENT ELEVATION: 228.600
3. REMOVED EXISTING CONCRETE PIPING, VALVES, FITTINGS, AND OTHER MATERIALS AS REQUIRED. INSTALLED NEW PUMPS, MOTORS, PIPING, VALVES AND FITTINGS AS SHOWN.
4. PROVIDED TEMPORARY BY-PASS PUMPING OF WASTEWATER DURING CONSTRUCTION.
5. INSTALLED MECHANICAL WORKS AS INDICATED AND ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
6. EXCAVATIONS TO BE BACKFILLED WITH CLASS 3 OR CLASS 5 BACKFILLED IN ACCORDANCE WITH CW 2030 AND SD-002.
7. FLANGE NUTS & BOLTS ARE ASTM A307.
8. GASKETS ARE FULL FACED, 3 THICK RED RUBBER.
9. CONTRACTOR TO CONFIRMED ALL DIMENSIONS BEFORE ASSEMBLING PIPE.
10. ALL ANCHOR BOLTS ARE ASTM A276 TYPE 316 SS.



SIDE VIEW
1:2000



FRONT VIEW
1:2000



TOP VIEW
1:2000

CONSTRUCTION COMPLETION DATE: 18/04/20

RECORD DRAWING
WATER AND WASTE DEPARTMENT

FOR INDEX SEE 1-0110A-D0006-001

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

0.0 5.0 10.0 15.0 20.0 25.0

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.

NO.	REVISIONS	DATE	BY
1	REVISED TO RECORD DWG	18/08/15	RS

DESIGNED BY	TS	CHECKED BY	SC
DRAWN BY	RS	APPROVED BY	KZ
SCALE: HORIZONTAL	1:2000	RELEASED FOR CONSTRUCTION	–
SCALE: VERTICAL	1:2000		
DATE	2019 11 19	DATE	–

PLOT DATE: 2019 11 19

ENGINEER'S SEAL
ORIGINAL MYLAR SIGNED BY S.R.J COURNOYER 19/11/18

CONSULTANT DRAWING NUMBER
–

BID OPPORTUNITY: 802-2017

Winnipeg

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

2017 COMMINUTOR CHAMBER PIPING & VALVE UPGRADES

TYLEHURST LIFT STATION
TYLEHURST STREET AT WOLSELEY AVENUE WEST

SHEET 10 OF 10

CITY DRAWING NUMBER
1-0193L-M0001-001

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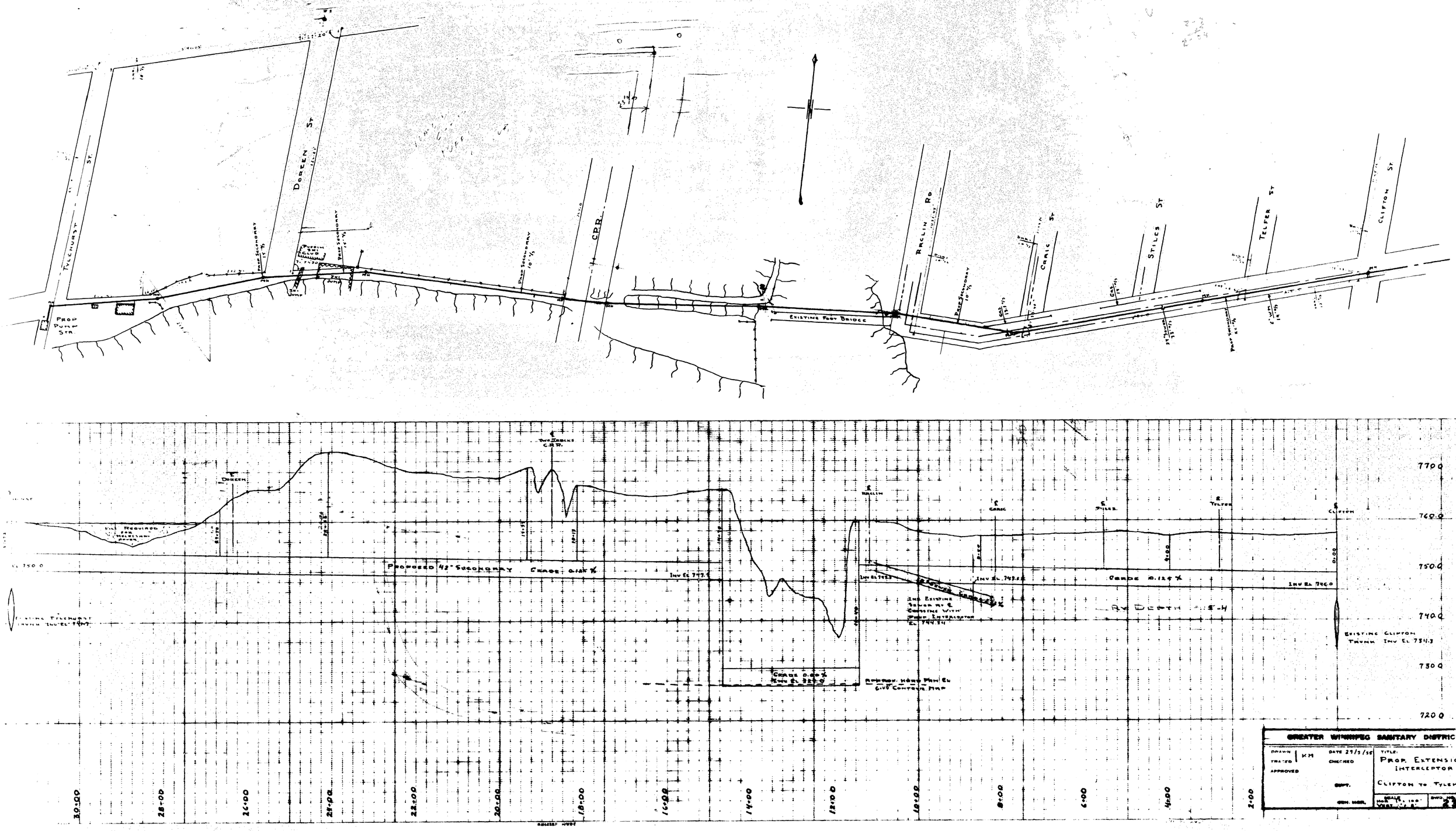


GREATER WINNIPEG SANITARY DISTRICT

DRAWN	KM	DATE 27/3/56	TITLE: PROP. EXTENSION INTERCEPTOR CLIFTON TO TYLEHURST
TRACED		CHECKED	
APPROVED		DEPT.	
		GEN. MGR.	SCALE H. 100' V. 10'	DWG. NO. 232

SEWER CENTRE STREET

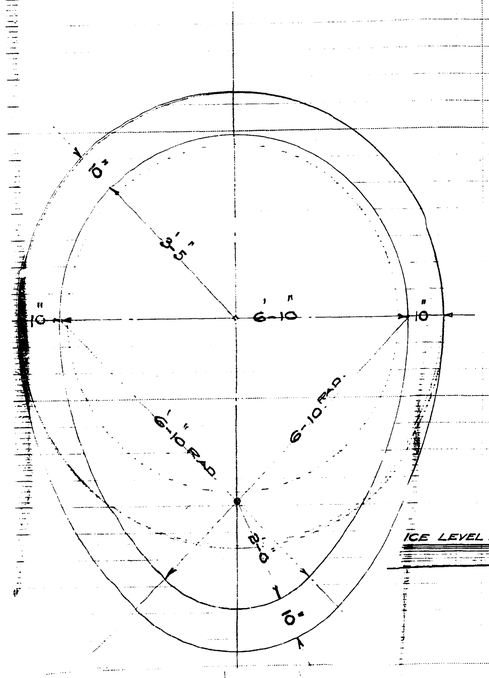
PORTAGE AVENUE TO ASSINIBOINE RIVER.

SCALE 8'VER 40'HOR } = 1 INCH.

City Engineer's Office, Winnipeg, Man. Nov 24th 1910.

H.N. RUTTAN, City Engineer.

3'-15"
12"
3'-27"
5'-3"



CROSS SECTION OF SEWER.
SCALE 1/2" = 1'-0"

8.97 EDGE OF ICE.
10.66
12.36
25.95
26.95
KELLER AVE.
30.52
32.19 M.H
32.89
37.20
CENTRE
39.26
M.H.
38.26
STREET.
38.26

7'-6" DIA. WOOD

INVT. 15.00

10" WALL

8'-10" x 6'-10" CONCRETE SEWER

INVERT

ICE LEVEL EL. 8.97.

GRADE .066 PER 100

3+90

KELLER AVE.

4" CONCRETE WALL

60'

19 | 21 | 110'-0 | LANE | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | LANE | 9

32'-5 | 25' | 25' | 25' | 25' | 25' | 25' | 25' | 25' | 25' | 54'-9

338-184'

670.45 BAR DIMENSION.

332-266

CENTRE STREET

M.H

M.H.

C.B

C.B.

RIVER

ASSINIBOINE

45°

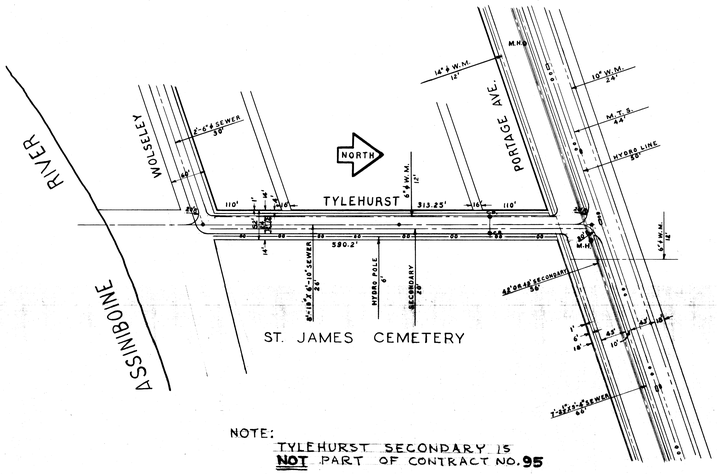
8" BAR 8'

25 50 75 100 125 150 182 207 232 257 282 307 332 22 47 72 97 145 170

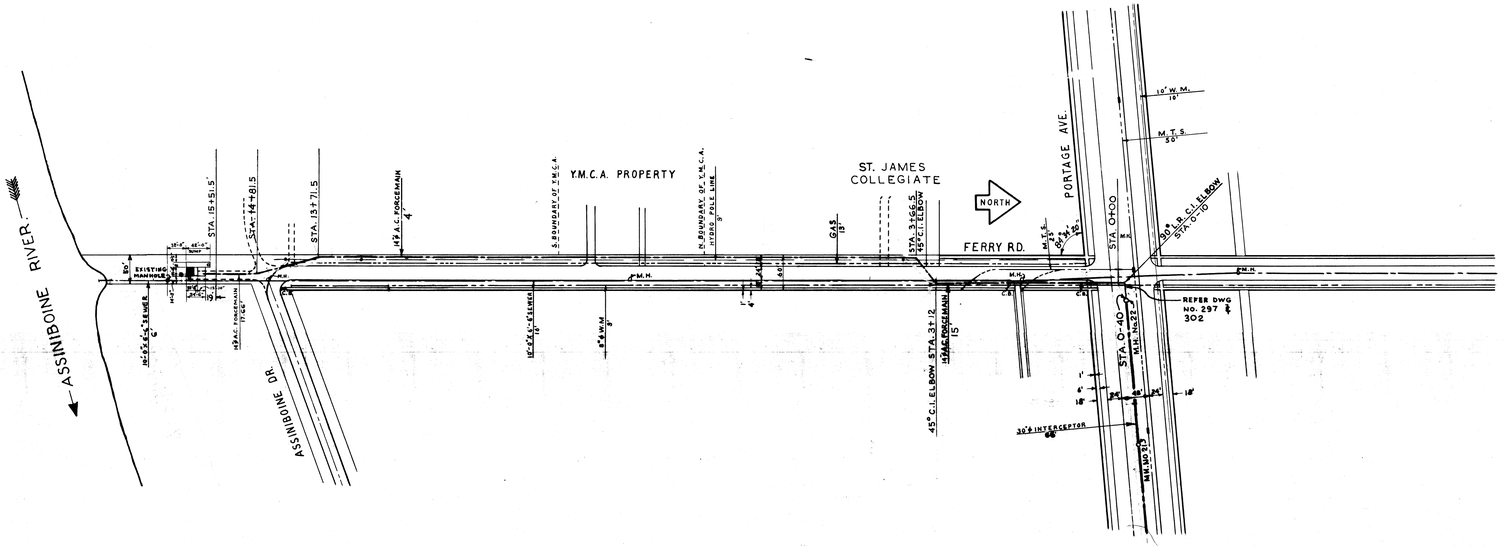
file # FM10023

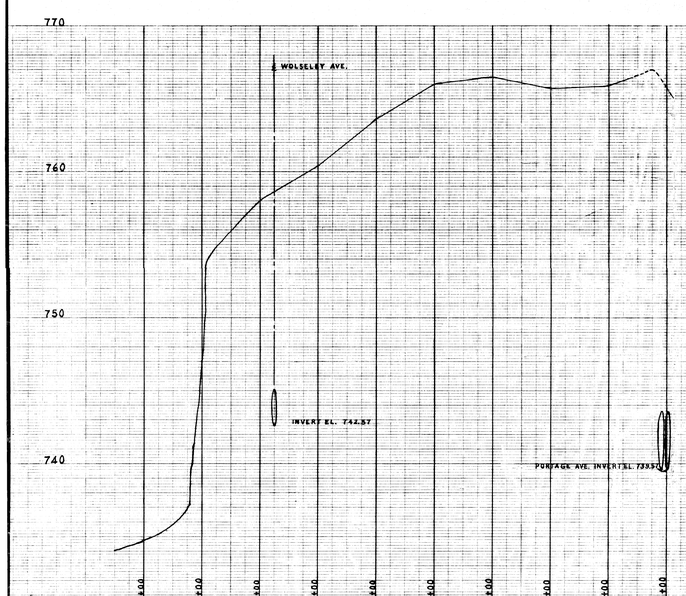
REF. or DRAWING NO. [redacted] 293

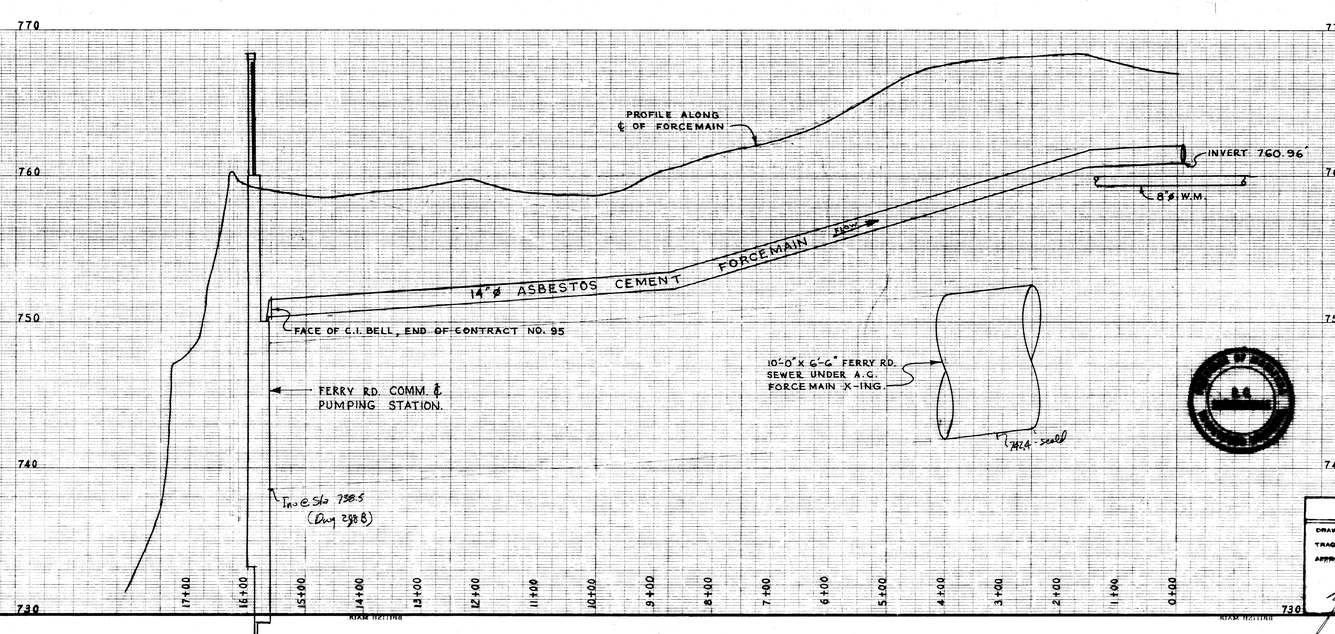
DETAILS



NOTE:
TYLEHURST SECONDARY 15
NOT PART OF CONTRACT NO. **95**







APPROVED FOR CONSTRUCTION
Date JUN 13 1958
Approval of this drawing covers only the design and arrangement of material or equipment and does not in any way relieve the Contractor of any liability or responsibility.

Micro-Filmed 1985

GREATER WINNIPEG SANITARY DISTRICT

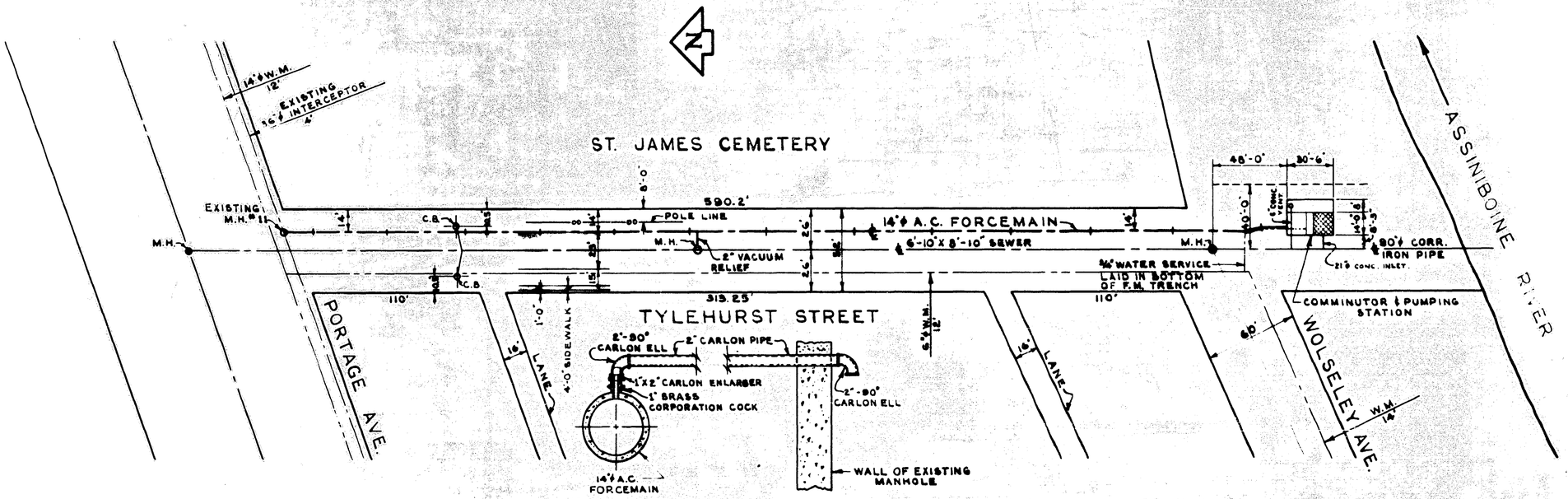
DRAWN BY H.B & S.K DATE - NOV. 12/57
TRACED CHECKED G.R.B
APPROVED
SUPT.
GEN. MGR.

TITLE:
PLAN PROFILE OF TYLEHURST & FERRY RD.

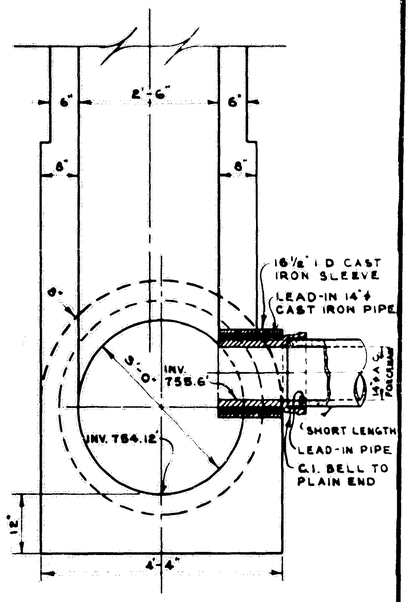
SCALE HOR. - 1"=100' VERT. - 1"=8'
DWG. NO. 293

AS CONSTRUCTED 27 NOV 59 HB.

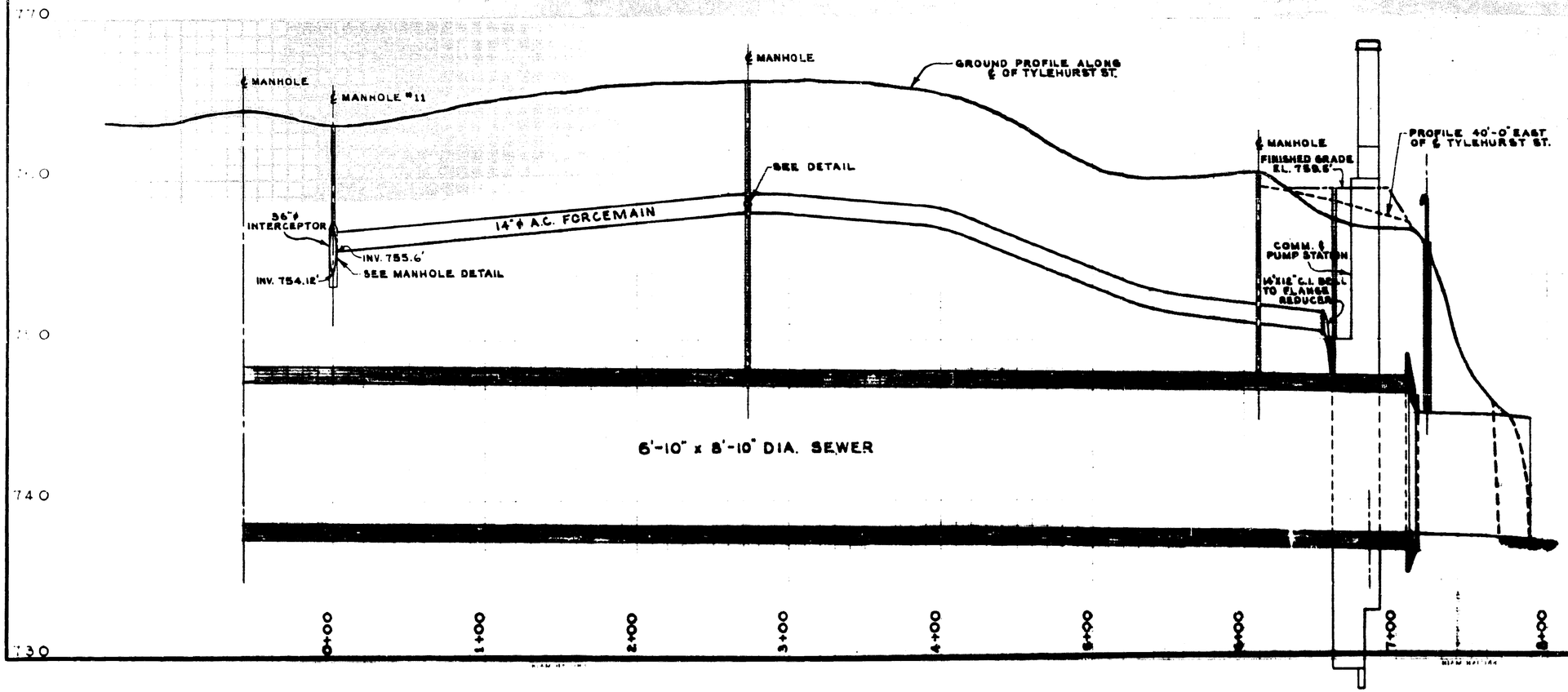
306



DETAIL OF VACUUM RELIEF
LOOKING SOUTH
SCALE - 3/4 INCH = 1 FOOT



DETAIL OF MANHOLE NO. 11
LOOKING EAST
SCALE - 3/4 INCH = 1 FOOT



GREATER WINNIPEG WATER & SANITARY DISTRICT

APPROVED FOR CONSTRUCTION

A/E _____ Date JAN [illegible]

Approval of this drawing covers only the general design and arrangement of material or equipment and does not in any way relieve the Contractor of any liability or responsibility for the satisfactory operation of this equipment.

PROVINCE OF MANITOBA
R. C. SOMMERVILLE
REGISTERED ENGINEER

REVISIONS			
NO	DESCRIPTION	DATE	BY

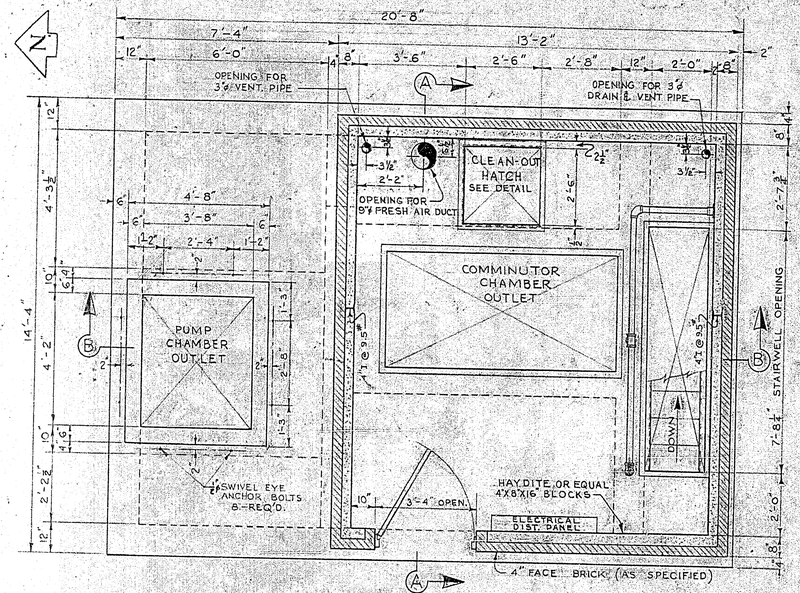
GREATER WINNIPEG SANITARY DISTRICT
SECONDARY SEWERS

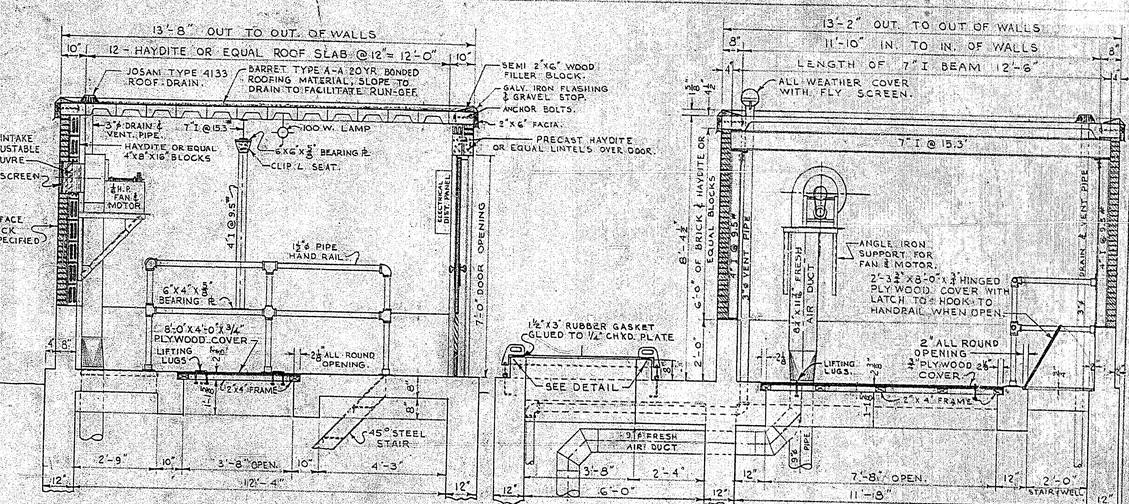
TITLE
TYLEHURST COMM. & PUMP STA.
PLAN PROFILE OF 14"ϕ
FORCEMAIN

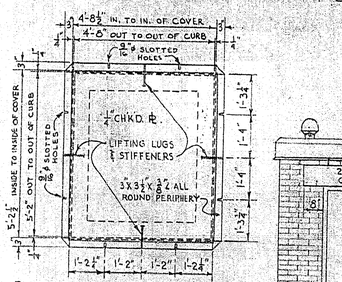
DESIGNED BY	DRAWN BY	TRACED BY	CHECKED BY
	G.E.S.	G.E.D.	
DEPUTY & ENGINEER	DATE 24 NOV 58		
CHIEF ENGINEER	SCALES HOR. 1"=40' VERT. 1"=4' OTHERS AS NOTED		

DRAWING NO
306

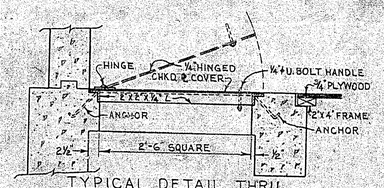
307



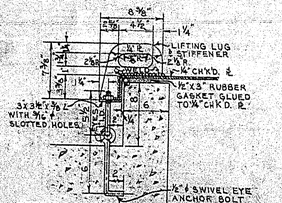




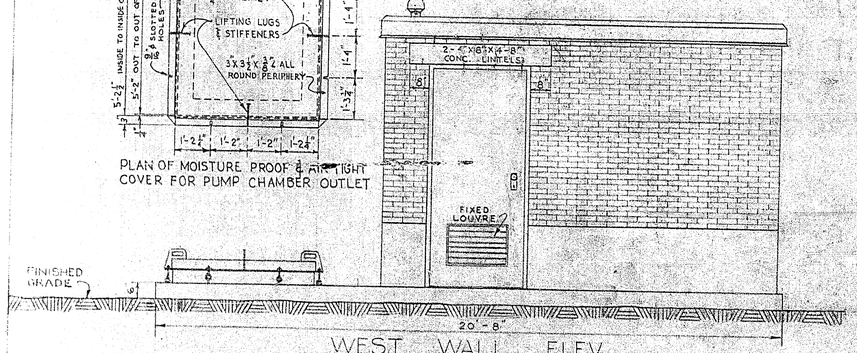
PLAN OF MOISTURE PROOF & AIR TIGHT COVER FOR PUMP CHAMBER OUTLET



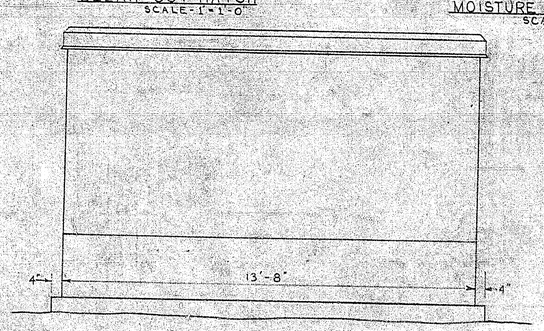
TYPICAL DETAIL THRU CLEAN-OUT HATCH
SCALE-1"-1'-0"



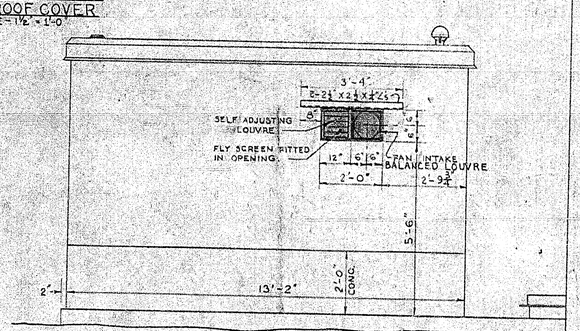
TYPICAL SECTION THRU MOISTURE PROOF COVER
SCALE-1½"-1'-0"



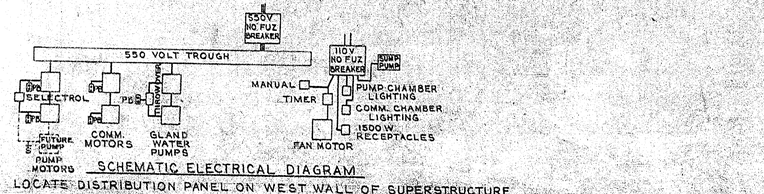
WEST WALL ELEV.



SOUTH WALL ELEV.
NORTH WALL SIMILAR



EAST WALL ELEV.



SCHEMATIC ELECTRICAL DIAGRAM
LOCATE DISTRIBUTION PANEL ON WEST WALL OF SUPERSTRUCTURE

GREATER WINNIPEG WATER & SANITARY DISTRICT

APPROVED FOR CONSTRUCTION
Date JAN 14 1959
Approval of this drawing covers only the general design and arrangement of material or equipment and does not in any way relieves the Contractor of any liability or responsibility for the satisfactory operation of this installation.

PROVINCE OF MANITOBA
R. C. SOMMERVILLE
REGISTERED ENGINEER

REVISIONS	
NO.	DESCRIPTION

GREATER WINNIPEG SANITARY DISTRICT
SECONDARY SEWERS

TITLE:
SUPERSTRUCTURE, TYLEHURST - COMMINUTOR & PUMPING STATION

APPROVED BY	DESIGNED BY	CHECKED BY	DRAWING NO.
SUPT. A. Penway	M.C.S. Ltd.	GEB	307
CHIEF ENGINEER	DRAWN BY H. BURMAN	DATE 7 NOV 1958	
	SCALES 1/8"-1'-0"		

KODAK SAFETY

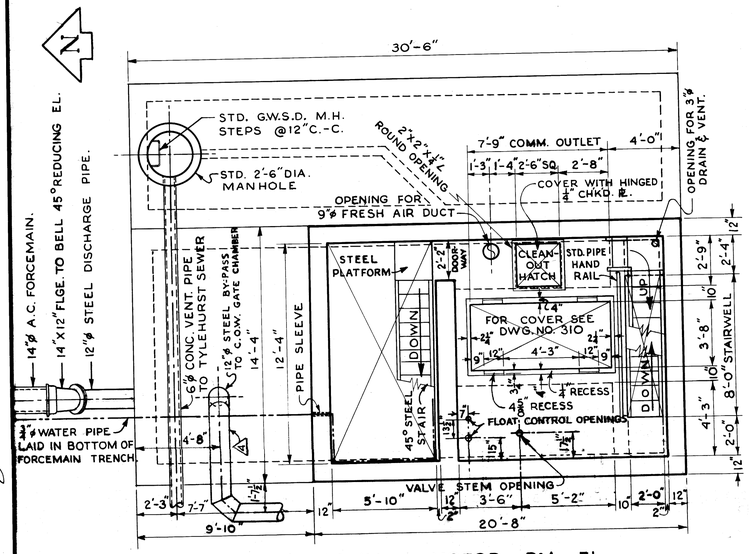
308

Ref. or Drawing No. 308

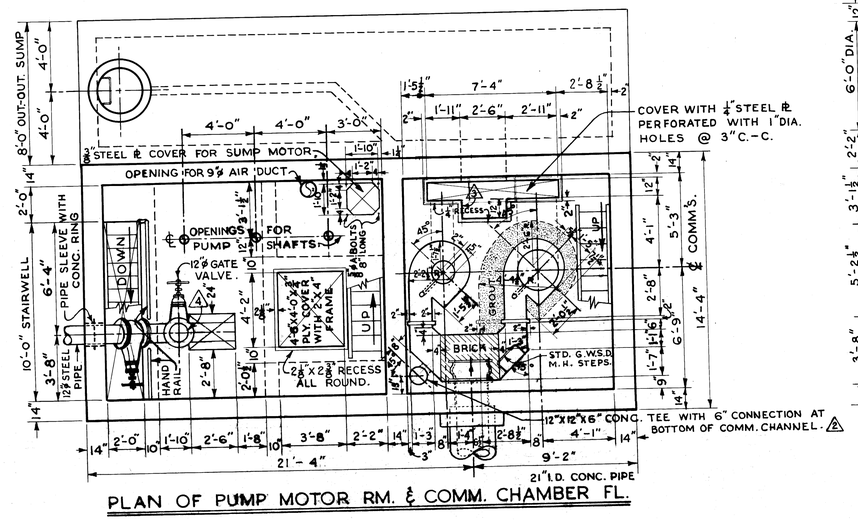
Details

Job # 10064

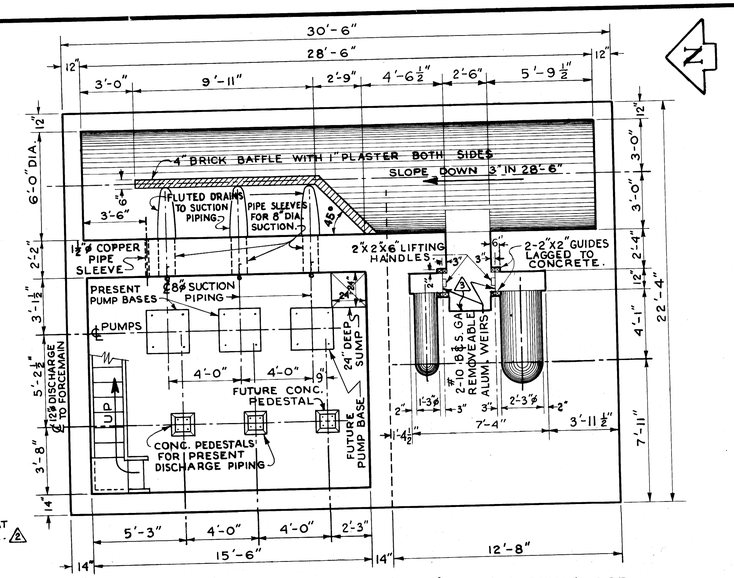
NOTE:
ALL PIPE SLEEVES TO BE SEALED WITH BITUMASTIC COMPOUND TO PROVIDE WATER-TIGHT SEAL.



PLAN OF COMM. MOTOR RM. FL.



PLAN OF PUMP MOTOR RM. & COMM. CHAMBER FL.



PLAN OF SUMP, PUMP CHAMBER & COMM. DISCHARGE

NOTE:
FOR SUPERSTRUCTURE DETAILS SEE DWG. NO. 307.

X-SEC. THRU PUMP CHAMBER
LOOKING NORTH

LONGITUDINAL SEC.
LOOKING EAST

X-SEC. THRU. COMM. CHAMBER. LOOKING SOUTH.

NOTE:
CHECK SEWER INVERT IN FIELD PRIOR TO CONST.

FOR UPGRADING SEE DWGS. 1203 & 1214

NOTE:
ALL STAIRS 45° PREFABRICATED STEEL.
CONSTRUCTION TO SUIT FIELD DIMENSIONS.
STD. PIPE HANDRAIL PROVIDED AS SHOWN.

FOR INFORMATION ONLY
* - TO SUIT PUMPS SUPPLIED.

GREATER WINNIPEG WATER & SANITARY DISTRICT
APPROVED FOR CONSTRUCTION
Date JAN 14 1959
Approval of this drawing covers only the general design and arrangement of material or equipment and does not in any way relieve the Contractor of any liability or responsibility for the satisfactory operation of this installation.

PROVINCE OF MANITOBA
R. C. SOMMERVILLE
REGISTERED ENGINEER

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	COMM. SETTING REVERSED	4 FEB 59	HB.
2	FLOAT CONTROL RELOCATED	5 FEB 59	HB.
3	DOWN STREAM WEIR CHANNEL ENLARGED	19 FEB 59	HB.
4	12"¾ STEEL BY PASS PIPE TO C.O.W. GATE CHAMBER ADDED	24 FEB 59	HB
5	PUMP DIMENSIONS ADDED	25 FEB 59	HB.
6	WEIR RAISED	24 JULY 90	HBD

GREATER WINNIPEG SANITARY DISTRICT
SECONDARY SEWERS

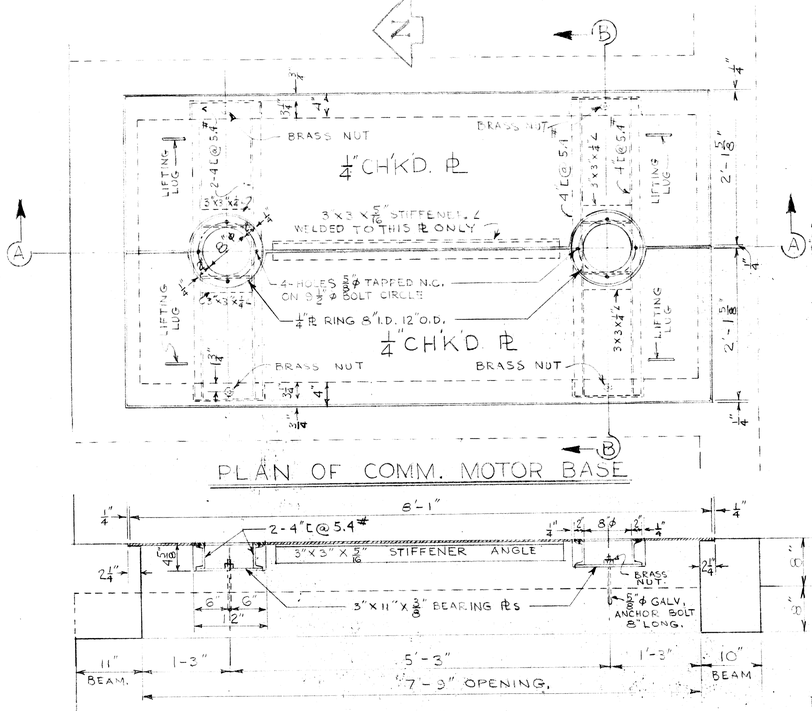
TITLE:
TYLEHURST COMM. & PUMP STA.
GENERAL LAYOUT OF
SUBSTRUCTURE

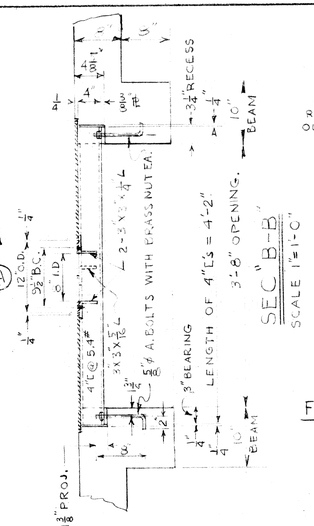
APPROVED BY	DESIGNED BY	CHECKED BY	DRAWING NO.
SUPT. A. Bowman	G.E. BURNS	GEB	308
CHIEF ENGINEER	DRAWN BY H. BUXMAN	DATE 23 NOV. 58	
	SCALES 1/4"=1'-0"		

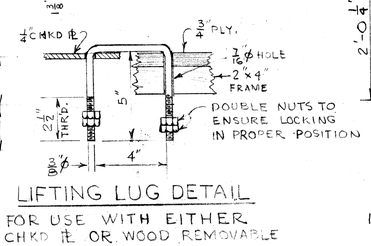
H-D 134

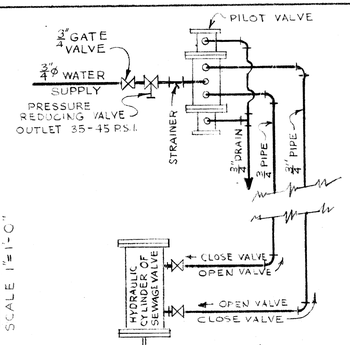
Micro-Filmed 1965

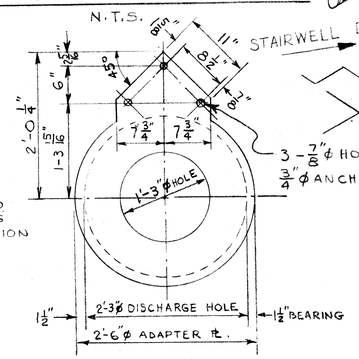
File # SP10066
310
REF. or DRAWING No.
DETAILS

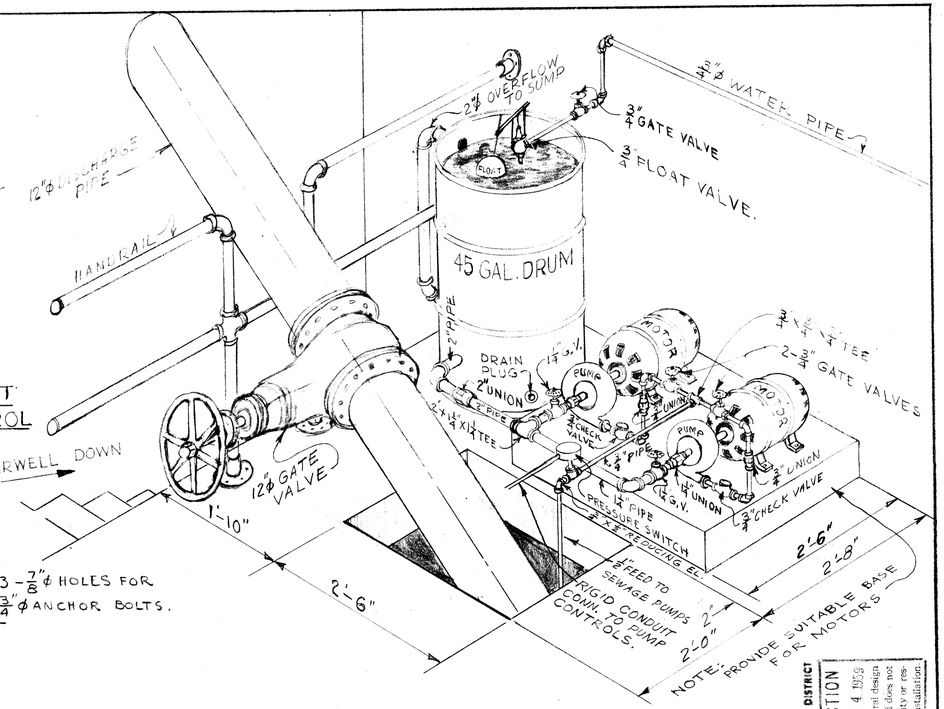




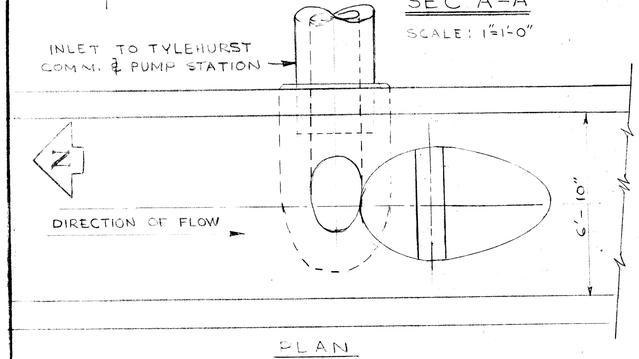


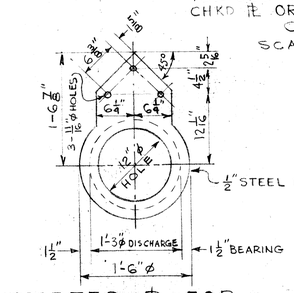


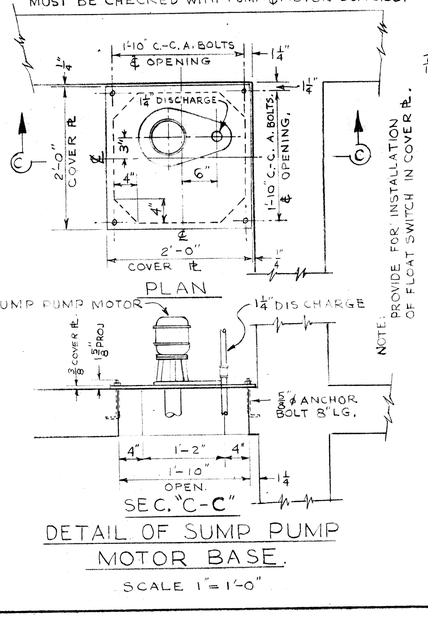


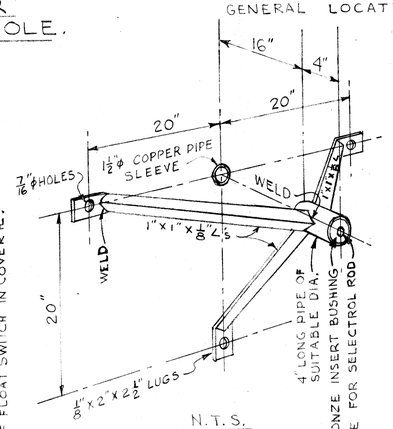


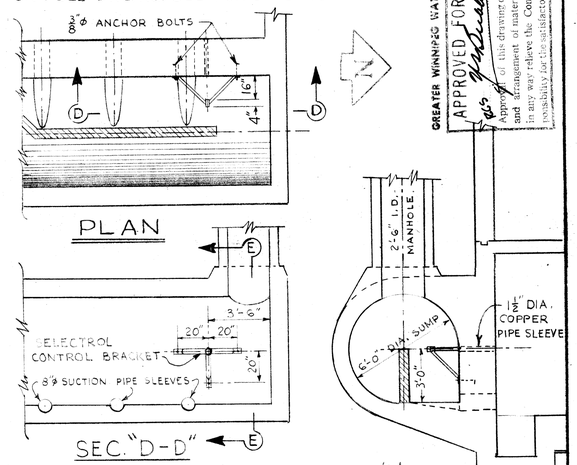
NOTE:
THIS VIEW IS NOT PROPERLY SHOWN IN RESPECT TO ACTUAL LOCATION BUT IT DOES PROVIDE PERTINENT DETAIL & GENERAL LOCATION. SEE DWG. NO. 309 FOR SPECIFIC LOCALITY.

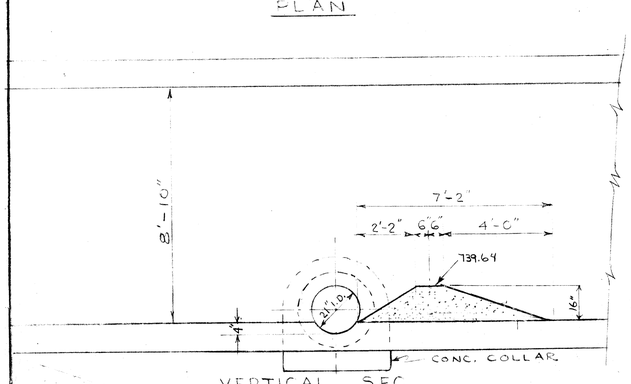


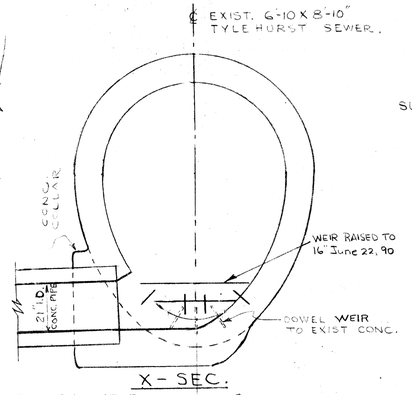












REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	WEIR REVISION	07/90	MD

PROVINCE OF MANITOBA
R. C. SOMMERVILLE
REGISTERED ENGINEER

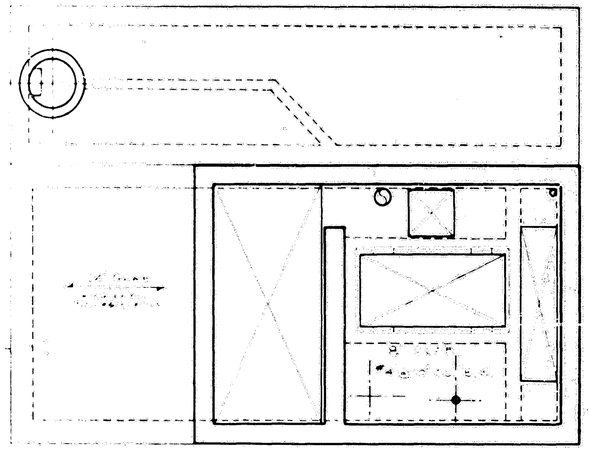
GREATER WINNIPEG SANITARY DISTRICT
SECONDARY SEWERS

TITLE:
MISC. DETAILS
TYLEHURST - COMMINUTOR & PUMPING STATION.

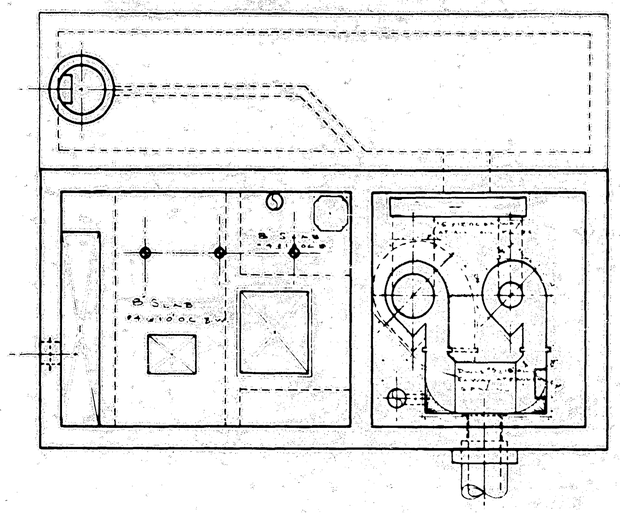
APPROVED BY	DESIGNED BY STANDARDS	CHECKED BY GEB
SUPT. D. Newman	DRAWN BY H. BUKMAN	DATE 2 DEC 58
CHIEF ENGINEER	SCALE AS NOTED.	DRAWING NO. 310

GREATER WINNIPEG WATER & SANITARY DISTRICT
APPROVED FOR CONSTRUCTION
Date JAN 14 1959
Approval of this drawing covers only the general design and arrangement of material or equipment and does not in any way relieve the Contractor of any liability or responsibility for the satisfactory operation of the installation.

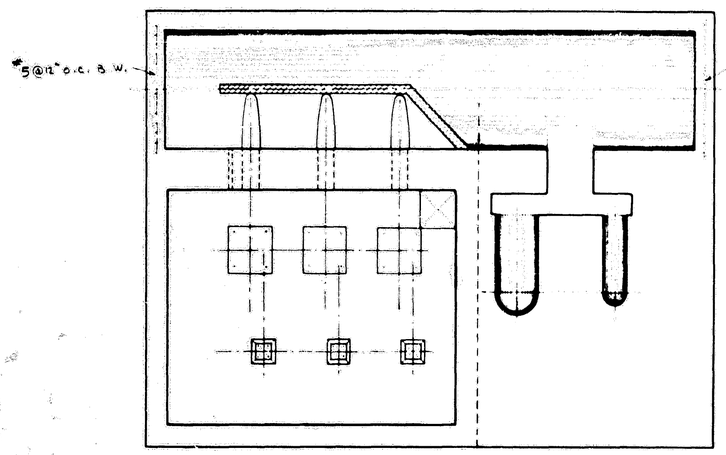
Micro-Film 1965



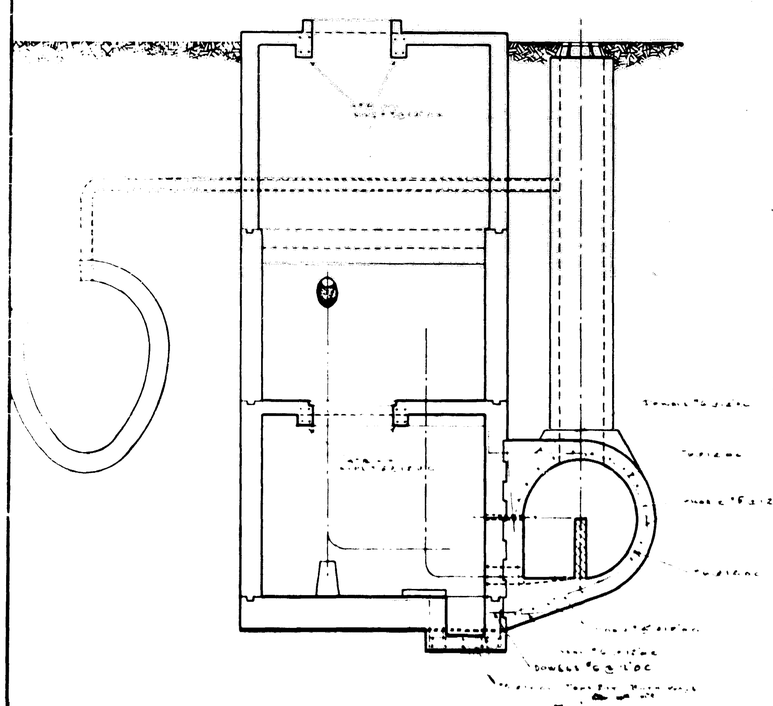
PLAN OF COMM. MOTOR RM. FL.



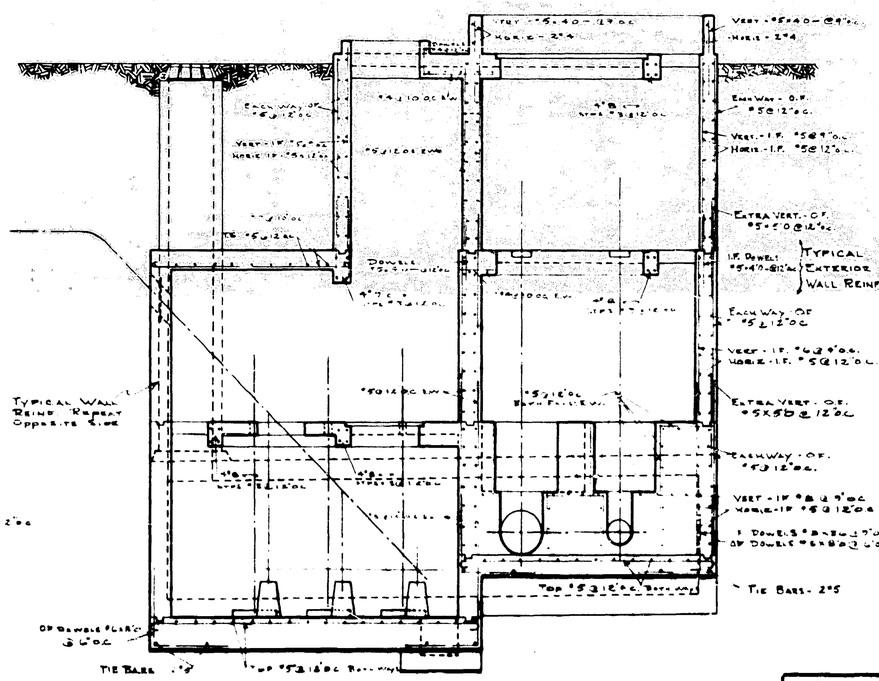
PLAN OF PUMP MOTOR RM. & COMM. CHAMBER FL.



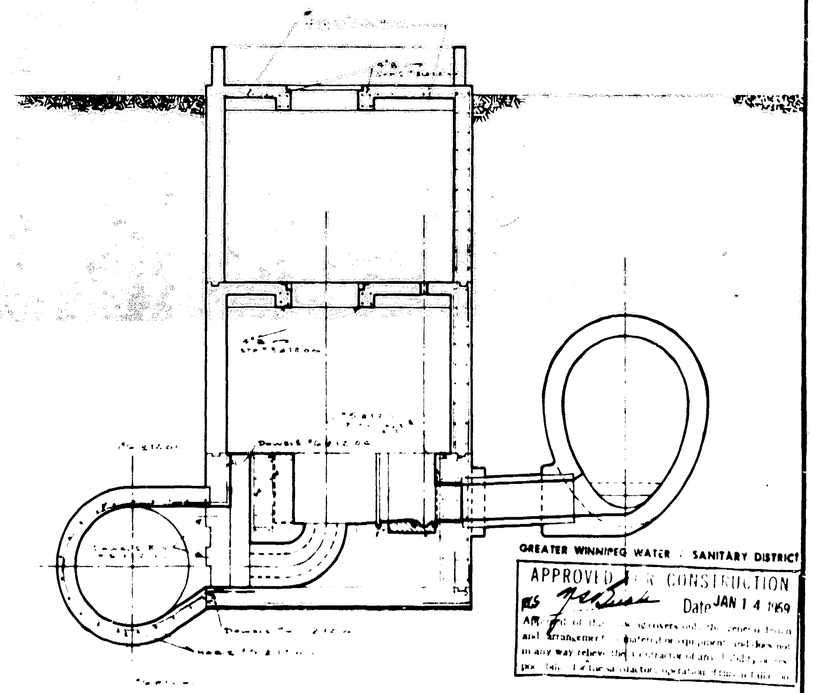
PLAN OF SUMP, PUMP CHAMBER & COMM. DISCHARGE



X-SEC. THRU PUMP CHAMBER
LOOKING NORTH



LONGITUDINAL SEC.
LOOKING EAST



X-SEC. THRU. COMM. CHAMBER LOOKING SOUTH

COWIN & CO. LTD.
REINFORCED CONCRETE ENGINEERS
WINNIPEG, MAN

PROVINCE OF MANITOBA
D. D. ELLIOTT
REGISTERED ENGINEER

REVISIONS			
NO	DESCRIPTION	DATE	BY

GREATER WINNIPEG SANITARY DISTRICT
SECONDARY SEWERS

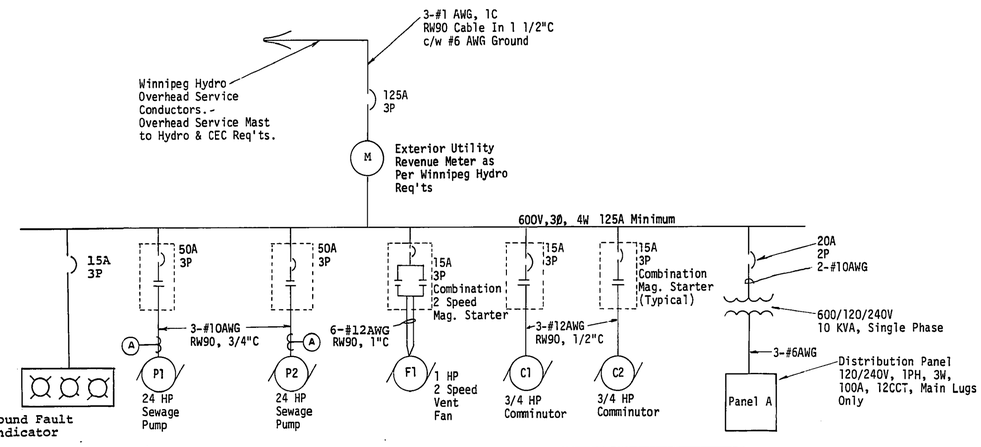
TYLEHURST COMM. & PUMP. STA.
REINFORCING STEEL

CHIEF ENGINEER

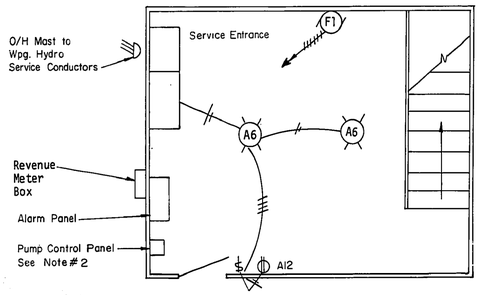
DRAWING NO. 311

HUGHES-OWENS 313 1101
REF. or DRAWING No. 1203
DETAILS
file # SP 10330

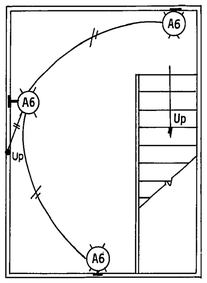
SINGLE LINE DIAGRAM
NTS



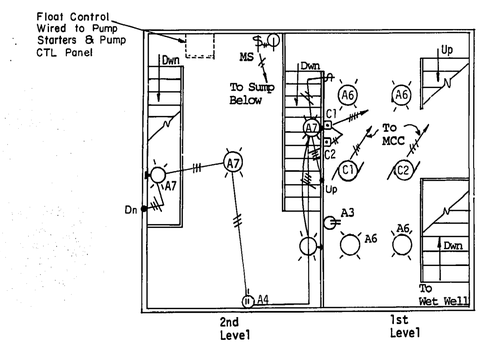
MOTOR SCHEDULE												
MTR. NO.	DESCRIPTION	LOCATION	H.P.	VOLTS	STARTER & ACCESSORIES MAN	MAG	P.L.	CTL	ETM	CCT	STARTER LOC'N	REMARKS
P1	Sewage Pump	3rd Level Pump Well	24	600V,3Ø	-			HOA		Dist'n	MCC	Lock-Off-Stop Pushbutton at Motor. Final Motor Connection via Type SOW Flexible Cable. Ammeter CT mounted on B Phase Conductor (Center) only. Ammeter on Front Door of Starter.
P2	Sewage Pump	3rd Level Pump Well	24	600V, 3Ø	-			HOA		Dist'n	MCC	
F1	Ventilation Fan, 2 Speed	Main Level	1	600V, 3Ø	-			High Off Low	-	Dist'n	MCC	Final motor connection via flex. armoured conduit c/w PVC Jacket.
C1	Comminutor	1st Level	3/4	600V,3Ø	-			On Off	-	Dist'n	MCC	Lock-Off-Stop Pushbutton at Motor
C2	Comminutor	1st Level	3/4	600V,3Ø				On Off	-	Dist'n	MCC	
-	Sump Pump	3rd Level Pump Well	1/2	120V,1Ø	-	-	-	-	-	A2	At Pump	Pump & Float Controls Single Receptacle



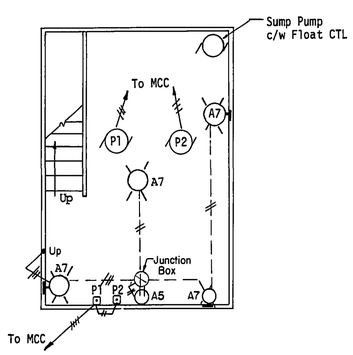
MAIN LEVEL PLAN
N.T.S.



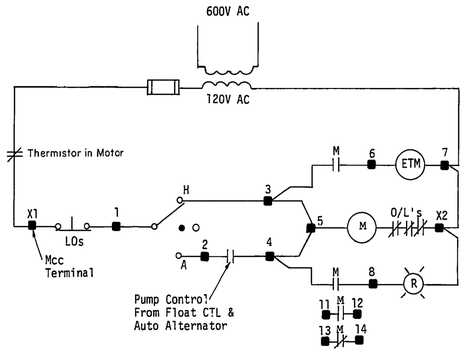
WET WELL PLAN (AT 2nd LEVEL)
N.T.S.



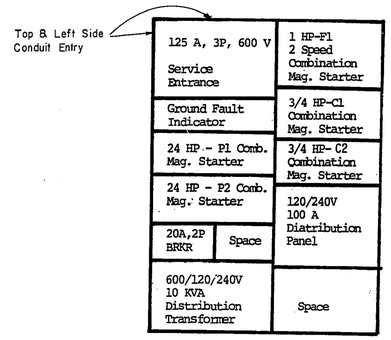
1st AND 2nd LEVEL PLAN
N.T.S.



3rd LEVEL PLAN (PUMP WELL)
N.T.S.



SEWAGE PUMP CONTROL CIRCUIT
N.T.S.



SERVICE ENTRANCE/MCC LAYOUT
N.T.S.

DISTRIBUTION PANEL A 120 / 240 V, 1Ø, 3W, 100A, MAIN LUGS ONLY					
CCT No.	DESCRIPTION	TRIP AMPS	TRIP AMPS	DESCRIPTION	CCT No.
1	Remote Alarm Signal Panel	15A	15A	Sump Pump	2
3	Recep. - Main & 1st Level	15A	15A	Recep. 2nd Level	4
5	Recep. 3rd Level	15A	15A	Lighting Main & 1st Level	6
7	Lighting 2nd & 3rd Level	15A	15A	Pump CTL Panel	8
9	Spare	15A	15A	Spare	10
11	Spare	15A	15A	Recep. First Level	12

PANEL SCHEDULE
N.T.S.

NOTES

1. All Equipment Identified with Lamicoid Name Plates
2. Owner Provided Solid State Alternator (Healy Ruff Model No. 961000-018-9126A) to Contractor for Installation
3. Incandescent Light Fixtures are Vapour Tight c/w Globe and Guard. 200 W Extended Service Bulbs for all new Fixtures.

LEGEND

- Wall Mounted Incandescent Light Fixture
- Ceiling Mounted Incandescent Light Fixture
- Duplex Receptacle
- Single Receptacle
- Single Pole Switch
- LOS Pushbutton
- Motor Outlet
- Wiring Run - 2 Wires in Conduit, Surface Mounted

AS-CONSTRUCTED
SURVEY ENGINEERING DATE SEPT 10/88
WATERWORKS, WASTE & DISPOSAL DEPARTMENT

file # SP10330

B.M. ELEV.			
1	REV'D TO AS BUILT	JUL 88	EN
NO	REVISIONS	DATE	BY

WORKS & OPERATIONS DIVISION
WATERWORKS, WASTE & DISPOSAL DEPARTMENT

DESIGNED BY EMR	CHECKED BY EMR
DRAWN BY MBD	APPROVED BY RMG
HOR SCALE N.T.S. VERTICAL	RELEASED FOR CONSTRUCTION
DATE SEPT.19,1986	DATE April 30, 1987

ENGINEER'S SEAL: PROVINCE OF MANITOBA 29/07/87 E. M. PYCZKOWSKI REGISTERED ENGINEER
CONSULTANT DRAWING NO.

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION

TYLEHURST PUMPING STATION (ELECTRICAL UPGRADING)

CITY DRAWING NUMBER
SHEET OF
1203

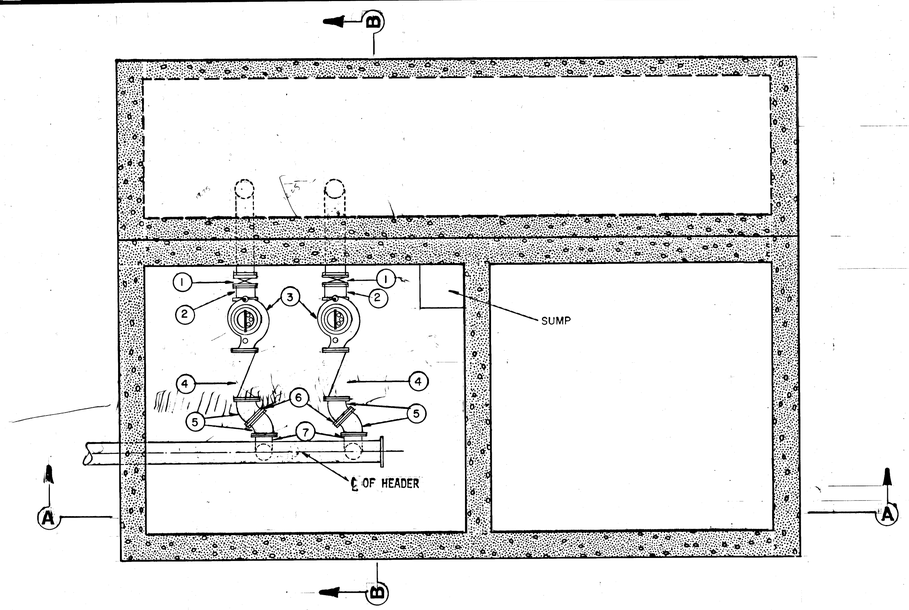
WO 101-84

Hughes-Owens (Manitoba) 1985 Ltd.

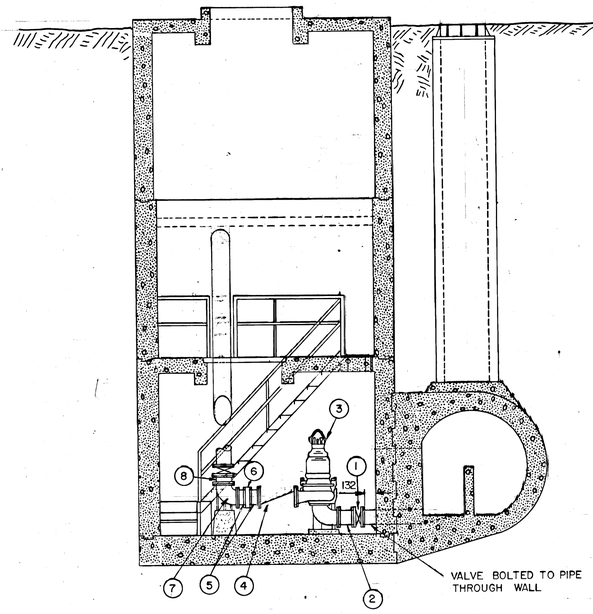
file # SP 10342
1214

REF. OR DRAWING NO.

DETAILS

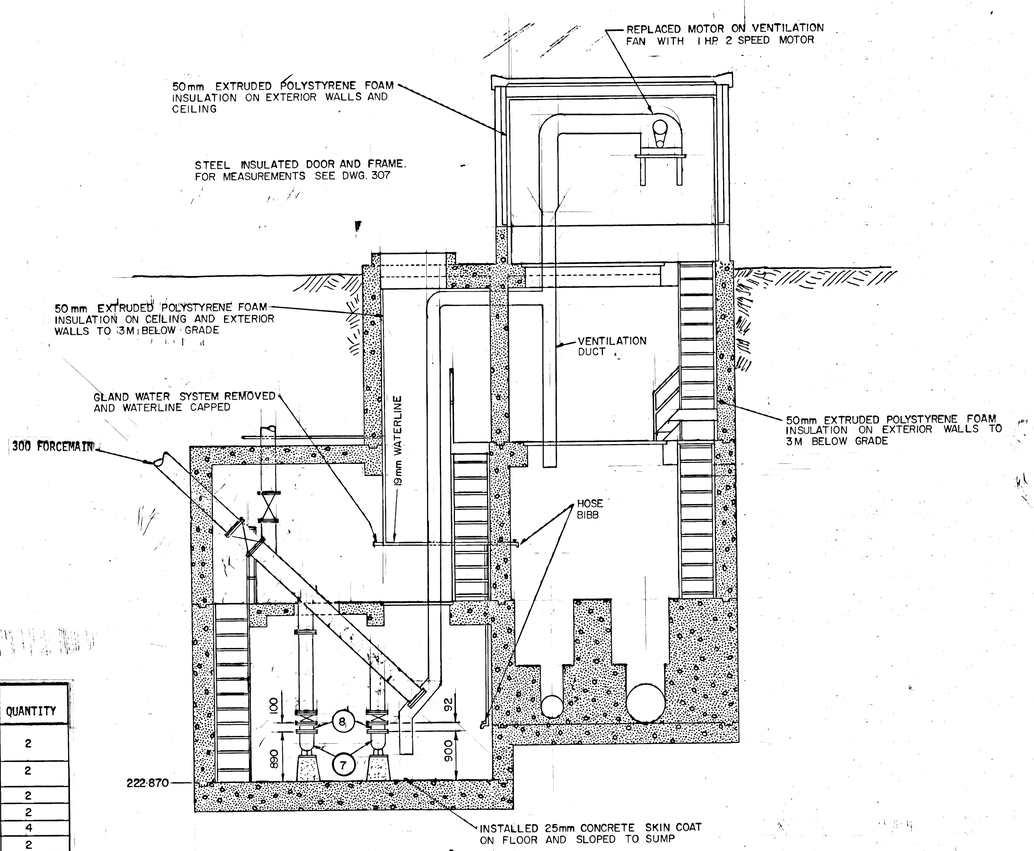


FLOOR PLAN OF PUMP ROOM
SCALE 1:40



SECTION B-B
SCALE 1:50

ITEM	DESCRIPTION	LENGTH mm	DIAMETER mm	QUANTITY
1	WAFER KNIFE GATE VALVE 9600 BN, FLANGED - CRANE McAVITY SS		200	2
2	FILLER PIPE C/W SERIES 400 UNI-FLANGE	285	200	2
3	PUMPEX PUMPS - FLANGED		200	2
4	FULL BODY CHECK VALVE - FLANGED	496	200	2
5	45° BEND - FLANGED		200	4
6	SPACER - FLANGED	25	200	2
7	90° BASE ELBOW - FLANGED		200	2
8	FILLER PIPE - FLANGED		200	2



SECTION A-A
SCALE 1:50

FOR MEASUREMENT NOT SHOWN ON THIS DRAWING SEE DRAWING 307, 308 AND 309

AS-CONSTRUCTED
SURVEY ENGINEERING TECH. SERVICES DATE 14/11/88
WATERWORKS, WASTE & DISPOSAL DEPARTMENT

NO.	REVISIONS	DATE	BY
1	REV'D TO AS BUILT	JUL 88	EN

B.M. ELEV.

WORKS & OPERATIONS DIVISION
WATERWORKS, WASTE & DISPOSAL DEPARTMENT

DESIGNED BY J.E.	CHECKED BY RMG
DRAWN BY M.B.D.	APPROVED BY RMG
HOR. SCALE: AS NOTED VERTICAL: AS NOTED	RELEASED FOR CONSTRUCTION
DATE FEBRUARY 23, 1987	DATE April 30, 1987

ENGINEER'S SEAL: PROVINCE OF MANITOBA R.M. GIRLING REGISTERED ENGINEER

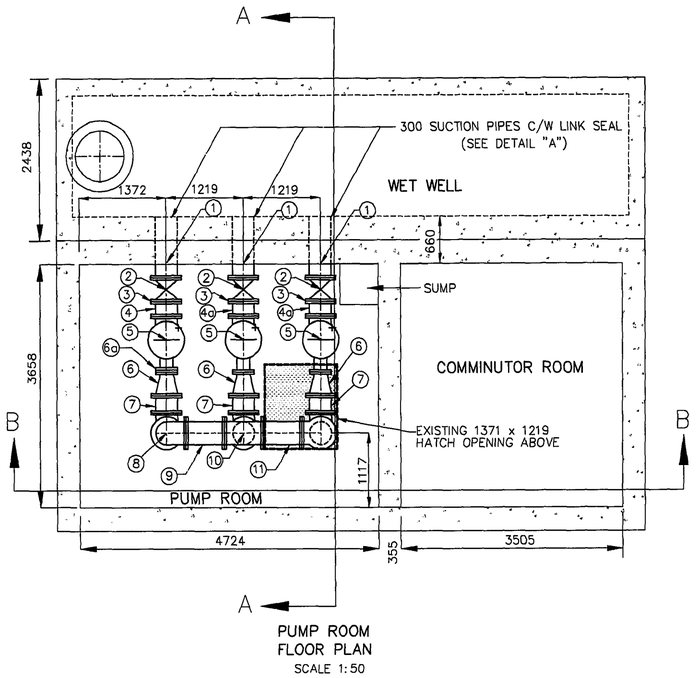
CONSULTANT DRAWING NO.

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION

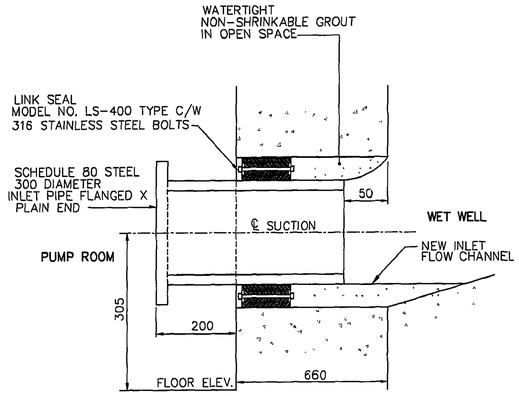
TYLEHURST PUMPING STATION UPGRADING
(MECHANICAL)

CITY DRAWING NUMBER
SHEET OF
1214

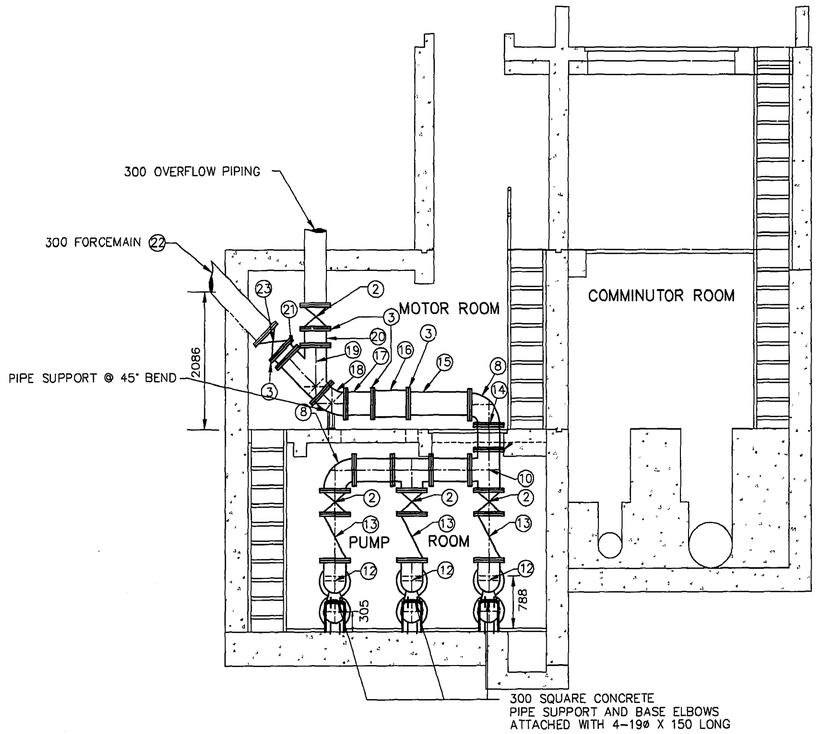
file # SP 10,342



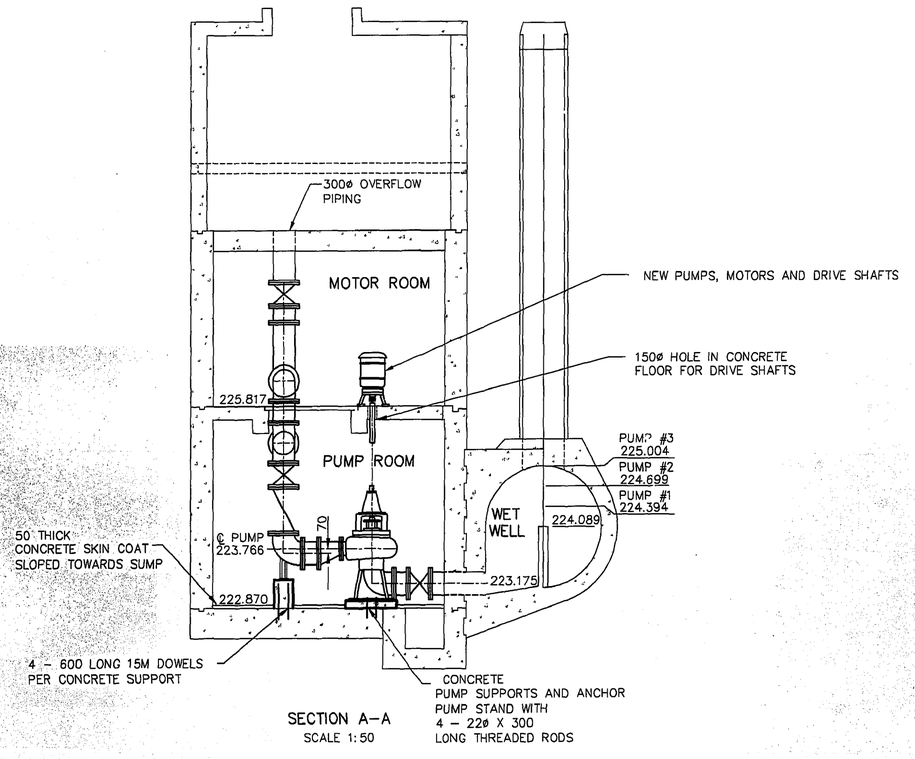
PUMP ROOM
FLOOR PLAN
SCALE 1:50



SUCTION PIPING DETAIL "A"
N.T.S.



SECTION B-B
SCALE 1:50



SECTION A-A
SCALE 1:50

NO.	EQUIPMENT	QUANTITY	LENGTH	ENDS	NO.	EQUIPMENT	QUANTITY	LENGTH	ENDS
1.	300 INLET PIPE	3	863	PLAIN X FLANGED	12.	300 90° BASE ELBOW	3		FLANGED
2.	300 GATE VALVE (RISING STEM)	7	353	FLANGED	13.	300 BALL CHECK VALVE	3	700	FLANGED
3.	300 UNIFLANGE	7			14	300 FILLER PIPE	1	325	FLANGED
4.	300 FILLER PIPE	1	225	PLAIN X FLANGED	15	300 FILLER PIPE	1	972	PLAIN X FLANGED
4a.	300 FILLER PIPE	2	237	PLAIN X FLANGED	16.	300 FLOW METER	1		
5.	INGERSOLL DRESSER PUMPS	3			17.	300 FILLER PIPE	1	520	PLAIN X FLANGED
6.	200-300 ECCENTRIC INCREASER	3	356	FLANGED	18.	300 45 ° BEND	1		FLANGED
6a.	200 FILLER PIECE	1	014	FLANGED	19.	300 LATERAL WYE	1		FLANGED
7.	300 FILLER PIPE	3	255	FLANGED	20.	300 FILLER PIPE	1	284	PLAIN X FLANGED
8.	300 90° ELBOW	2		FLANGED	21.	300 FILLER PIPE	1	137	PLAIN X FLANGED
9.	300 FILLER PIPE	1	607	FLANGED	22	300 FORCEMAIN			
10.	300 TEE	2	610	FLANGED	23.	300 GATE VALVE (NON RISING STEM)	1	355	FLANGED
11.	300 FILLER PIPE	1	605	FLANGED					

AS-CONSTRUCTED

Fabian K. Walker 99.06.11

CONTRACT ADMINISTRATION | DRAFTING & GRAPHIC SERVICES | DATE

WATER AND WASTE DEPARTMENT

NOTES:

1. LENGTHS SHOWN FOR PIPING ARE FACE TO FACE AND DO NOT INCLUDE GASKET THICKNESS.
2. GASKETS ARE 3 mm THICK, FULL FACED, CLOTH INSERTED RUBBER.
3. ALL FLANGE NUTS AND BOLTS ARE HIGH STRENGTH STEEL.
4. ALL PIPE IS SCHEDULE 80 STEEL
5. ALL FLANGED FITTINGS CONFORM TO AWWA C110
6. ALL FLANGES SHALL BE WELDED INSIDE AND OUT IN ACCORDANCE WITH AWWA C-207 CLASS D.
7. ALL ANCHOR BOLTS TYPE 316 S.S. KWIK BOLT STUD ANCHOR
8. BONDING AGENT IS ACRYL-STIX

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

B.M. ELEV.

NO.	REVISIONS	DATE	BY
1	AS-CONSTRUCTED	05/99	GMZ

CITY OF WINNIPEG
WATER AND WASTE
ENGINEERING DIVISION

DESIGNED BY DGS	CHECKED BY TW
DRAWN BY MBD	APPROVED BY RL
HOR. SCALE AS NOTED	RELEASED FOR CONSTRUCTION
VERTICAL	
DATE JANUARY 11, 1997	DATE JAN. 19, 1998

ENGINEER'S SEAL
PROVINCE OF MANITOBA
ORIGINAL STAMPED BY
R.D. LOUDFOOT P.ENG.
98/01/19
REGISTERED PROFESSIONAL ENGINEER

PLOT DATE: JANUARY 13, 1998
C:\DRAWINGS\WASTEWTR\FLOPUMP\4289

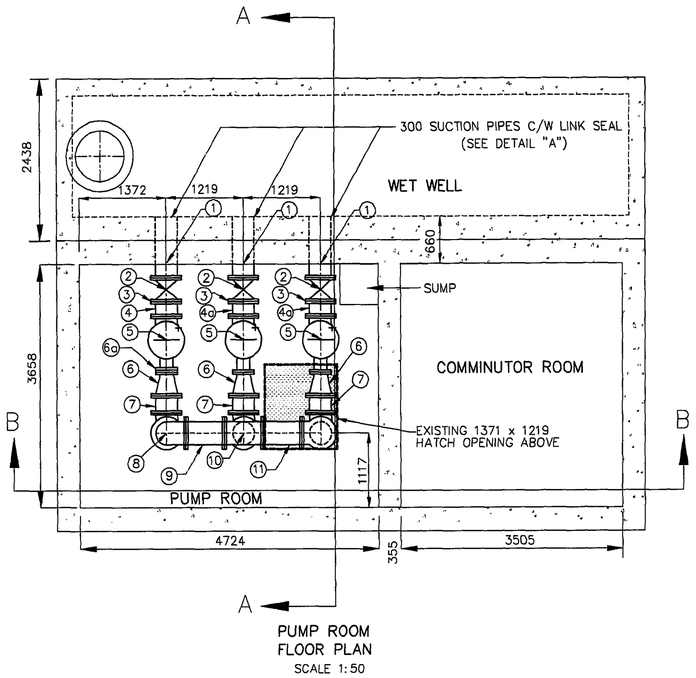
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

TYLEHURST WASTEWATER
PUMPING STATION UPGRADING

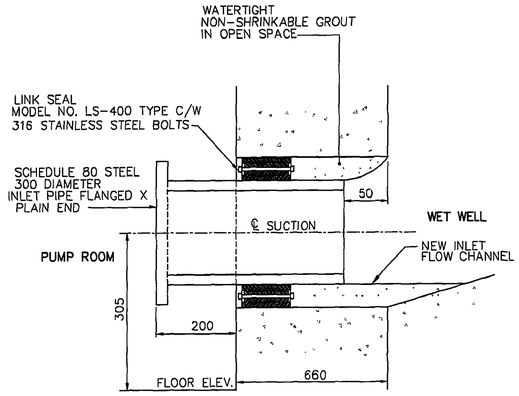
PLAN AND SECTIONS

SHEET OF

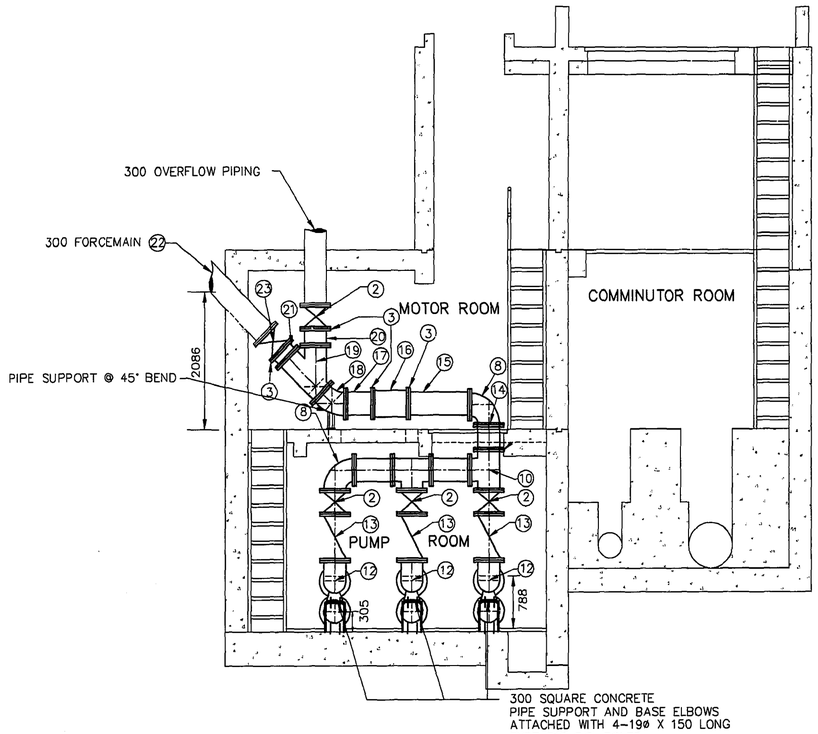
CITY DRAWING NUMBER 4289



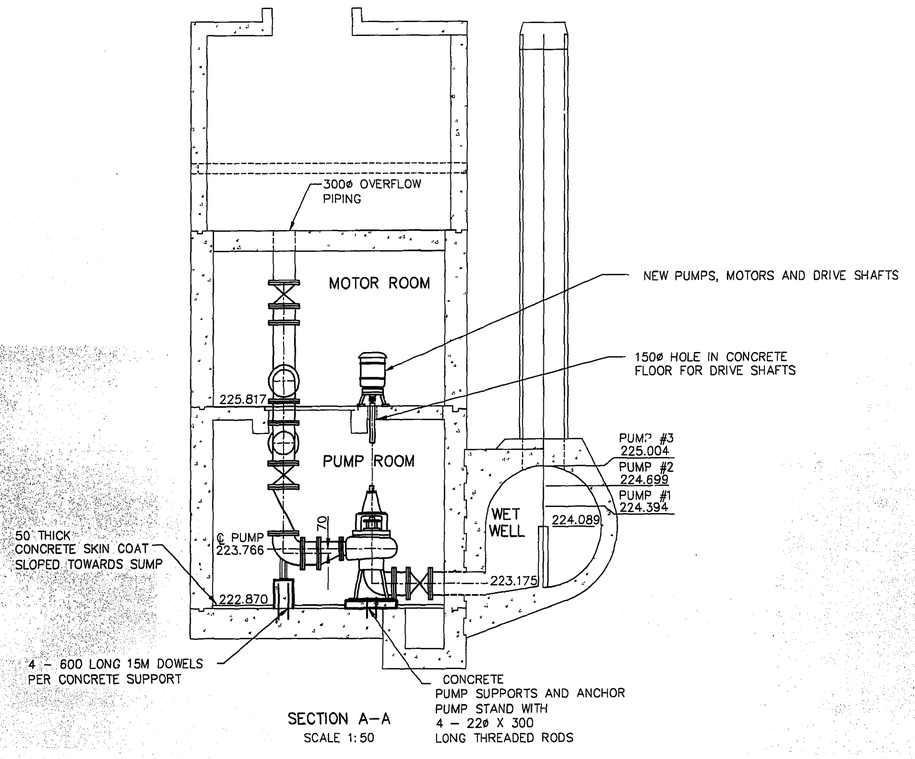
PUMP ROOM
FLOOR PLAN
SCALE 1:50



SUCTION PIPING DETAIL "A"
N.T.S.



SECTION B-B
SCALE 1:50



SECTION A-A
SCALE 1:50

NO.	EQUIPMENT	QUANTITY	LENGTH	ENDS	NO.	EQUIPMENT	QUANTITY	LENGTH	ENDS
1.	300 INLET PIPE	3	863	PLAIN X FLANGED	12.	300 90° BASE ELBOW	3		FLANGED
2.	300 GATE VALVE (RISING STEM)	7	353	FLANGED	13.	300 BALL CHECK VALVE	3	700	FLANGED
3.	300 UNIFLANGE	7			14	300 FILLER PIPE	1	325	FLANGED
4.	300 FILLER PIPE	1	225	PLAIN X FLANGED	15	300 FILLER PIPE	1	972	PLAIN X FLANGED
4a.	300 FILLER PIPE	2	237	PLAIN X FLANGED	16.	300 FLOW METER	1		
5.	INGERSOLL DRESSER PUMPS	3			17.	300 FILLER PIPE	1	520	PLAIN X FLANGED
6.	200-300 ECCENTRIC INCREASER	3	356	FLANGED	18.	300 45 ° BEND	1		FLANGED
6a.	200 FILLER PIECE	1	014	FLANGED	19.	300 LATERAL WYE	1		FLANGED
7.	300 FILLER PIPE	3	255	FLANGED	20.	300 FILLER PIPE	1	284	PLAIN X FLANGED
8.	300 90° ELBOW	2		FLANGED	21.	300 FILLER PIPE	1	137	PLAIN X FLANGED
9.	300 FILLER PIPE	1	607	FLANGED	22	300 FORCEMAIN			
10.	300 TEE	2	610	FLANGED	23.	300 GATE VALVE (NON RISING STEM)	1	355	FLANGED
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AS-CONSTRUCTED

Fabian K. Walker 99.06.11

CONTRACT ADMINISTRATION | DRAFTING & GRAPHIC SERVICES | DATE

WATER AND WASTE DEPARTMENT

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METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

B.M. ELEV.

NO.	REVISIONS	DATE	BY
1	AS-CONSTRUCTED	05/99	GMZ

CITY OF WINNIPEG
WATER AND WASTE
ENGINEERING DIVISION

DESIGNED BY DGS	CHECKED BY TW
DRAWN BY MBD	APPROVED BY RL
HOR. SCALE AS NOTED	RELEASED FOR CONSTRUCTION
VERTICAL	
DATE JANUARY 11, 1997	DATE JAN. 19, 1998

ENGINEER'S SEAL
PROVINCE OF MANITOBA
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R.D. LOUDFOOT P.ENG.
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PLOT DATE: JANUARY 13, 1998
C:\DRAWINGS\WASTEWTR\FLOPUMP\4289

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

TYLEHURST WASTEWATER
PUMPING STATION UPGRADING

PLAN AND SECTIONS

SHEET OF

CITY DRAWING NUMBER 4289

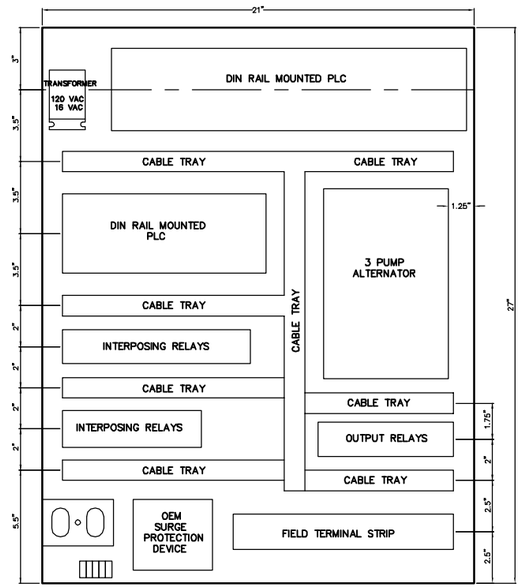
ALARM WIRING TEMPLATE

		PLC ADDRESS	
ALARM INPUT 1	LOCKOUT	10001	BLUE
ALARM INPUT 2	OVERFLOW	10002	BLUE/WHITE
ALARM INPUT 3	STATION FLOOD	10003	BLUE/RED
ALARM INPUT 4	LOW INSTR. AIR	10004	BLUE/BLACK
ALARM INPUT 5	LOW TEMP.	10005	RED
ALARM INPUT 6	LOSS OF SEAL WATER	10006	RED/BLACK
ALARM INPUT 7	GENERATOR RUN	10007	RED/WHITE
ALARM INPUT 8	POWER FAILURE	10008	ORANGE
ALARM INPUT 9	FLOOD STATION HIGH WET WELL	10009	ORANGE/RED
ALARM INPUT 10	FLOOD STATION FLOOD	10010	ORANGE/BLACK
ALARM INPUT 11	GENERATOR FAIL	10011	BLACK
ALARM INPUT 12	WET WELL UPPER	10012	BLACK/WHITE
ALARM INPUT 13	COM/PUMP FAILURE	10013	BLACK/RED
ALARM INPUT 14			GREEN
ALARM INPUT 15			GREEN/BLACK
ALARM INPUT 16			GREEN/WHITE

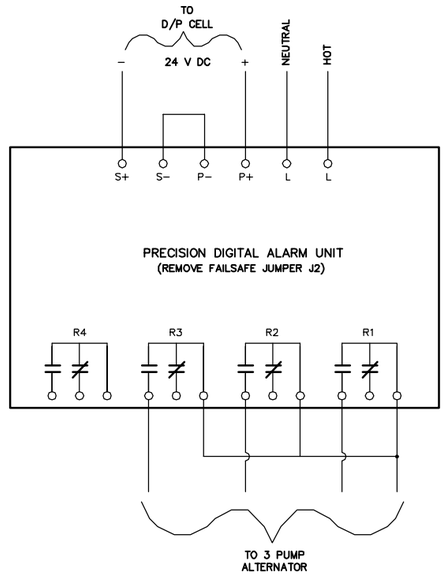
Any other types of alarms are to be wired to alarm inputs 14 through 16.
Otherwise call the Metershop for further instructions.

ANALOG WIRING		PLC ADDRESS
INPUT 1	LIFT LEVEL	30001
INPUT 2	FLOOD LEVEL	30002
INPUT 3	FLOW	30003

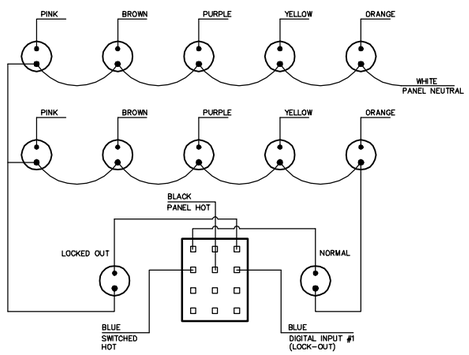
BACK PANEL LAYOUT

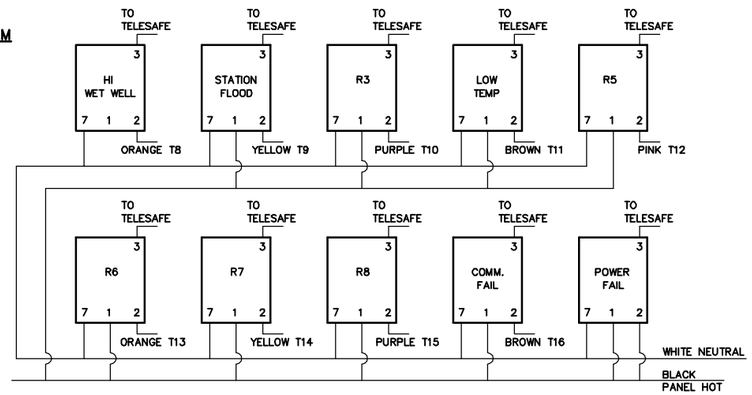


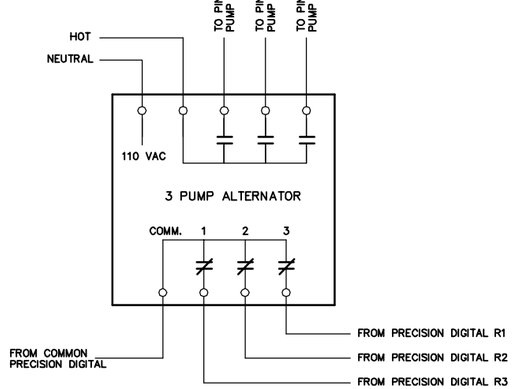
ELECTRICAL DISTRIBUTION LAYOUT

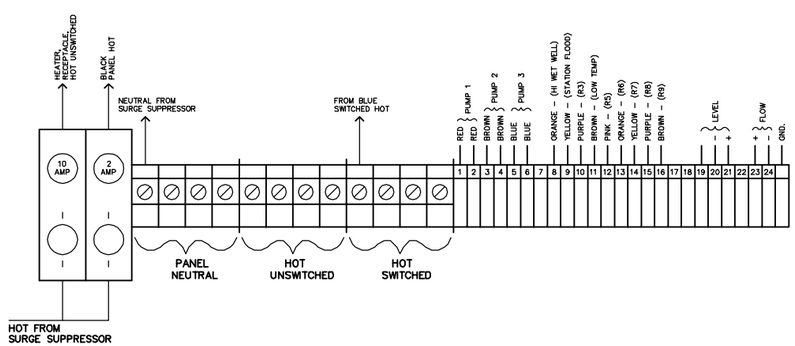


WIRING DIAGRAM

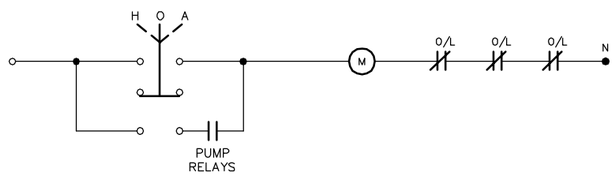


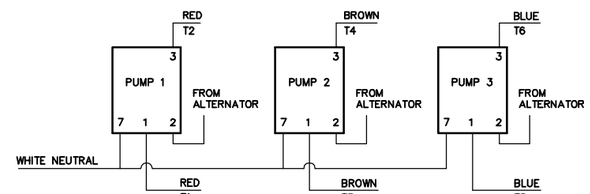






TYPICAL MOTOR STARTER





B.M. ELEV.	FIELD BOOK #		
POSTED TO LBIS			
NO.	REVISIONS	DATE	BY

CITY OF WINNIPEG
WATER AND WASTE
ENGINEERING DIVISION

DESIGNED BY	BS	CHECKED BY	BS
DRAWN BY	TM	APPROVED BY	
HOR. SCALE / VERTICAL	N.T.S.	RELEASED FOR CONSTRUCTION	
DATE	1998 02 27	DATE	

ENGINEER'S SEAL

PLOT DATE: 1998 02 27

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

TYLEHURST LIFT STATION

ELECTRICAL AND CONTROL

SHEET OF

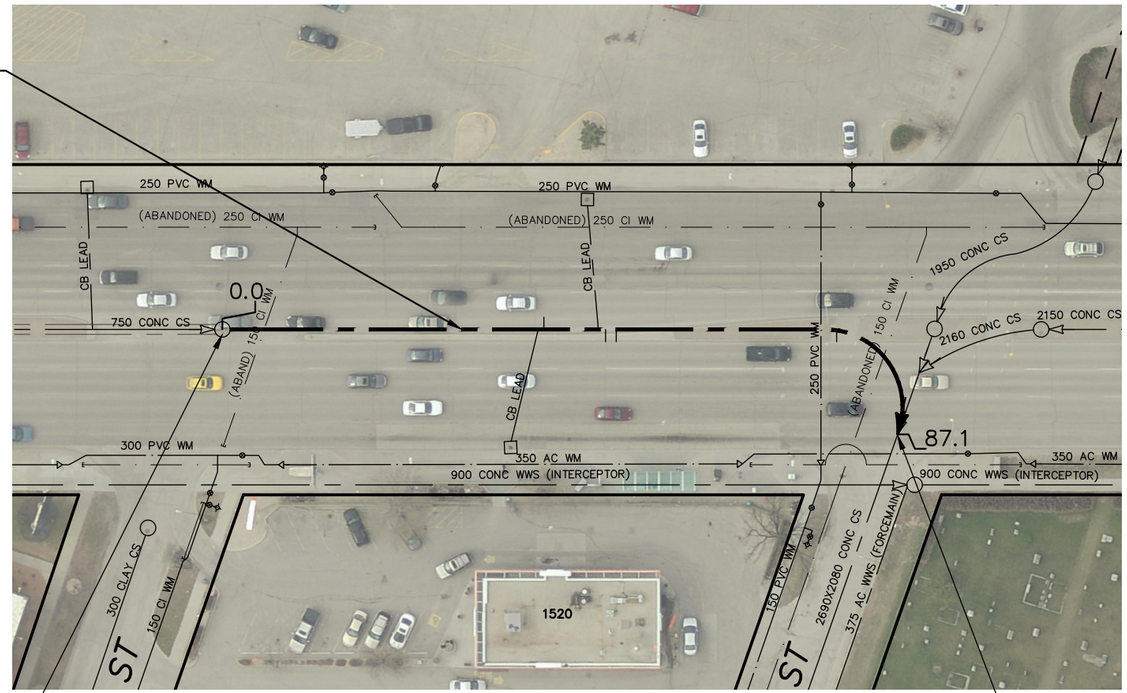
CITY DRAWING NUMBER

4318

O:\DRAWINGS\WASTEWTR\SEWPUMP\04318.DWG

PORTAGE AVENUE

87.1 OF 750 CONC CS LINED WITH 18.0mm LINER (S-MA20011400)



S-MH20010391
RIM 233.92
INV E 226.78
INV W 226.78

S-TE20003568

SEWER JUNCTION INFORMATION FROM SEWER VIDEO INSPECTION SEWER ID S-MA20011400		
DISTANCE FROM MH ID S-MH20010391		
DISTANCE	DIAMETER	CLOCK
39.1	150	2
46.6	150	10
47.9	300	10
74.7	150	10

MATERIALS LIST						
CIPP LINING						
ITEM	MANUFACTURER	MODEL	DIMENSION RATIO	PRESSURE CLASS	MATERIAL	TYPE
TUBE	APPLIED FELTS	NATIONAL LINER			POLYURETHANE COATED FELT	
RESIN	ALPHA OWENS CORNING	L758-LTL-14 102T			ENHANCED POLYESTER	
CONTRACTOR: CAPITAL SEWER SERVICES						

CONSTRUCTION COMPLETION DATE: 2019/10/01

FOR INDEX SEE 12358

RECORD DRAWING

WATER AND WASTE DEPARTMENT

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

0.0 10.0 20.0 30.0 40.0

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.

NO.	REVISIONS	DATE	BY
1	REVISED TO RECORD DRAWING	2020/10/26	AOM

DESIGNED BY	SC	CHECKED BY	SC
DRAWN BY	MA	APPROVED BY	KZ
SCALE: HORIZONTAL / VERTICAL	1:750	RELEASED FOR CONSTRUCTION	
DATE	2021 04 27	DATE	

PLOT DATE: 2014 10 08

ENGINEER'S SEAL

ORIGINAL MYLAR SIGNED BY S.R.J. COURNOYER 2021-03-11

CONSULTANT DRAWING NUMBER
-

BID OPPORTUNITY: 946-2014
CONTRACT NUMBER: 12

FILE PATH: R:\DRAWINGS\SEWER\
FILE NAME: 10853.dwg

Winnipeg

THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

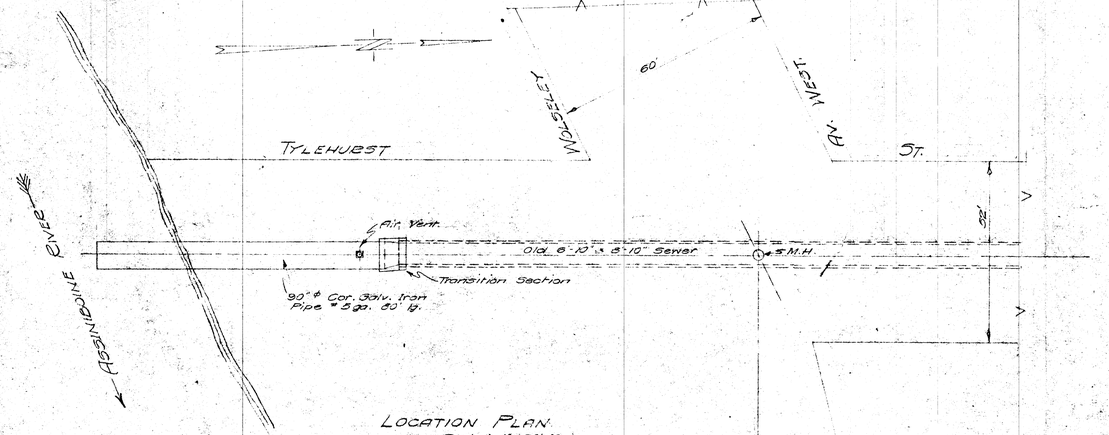
2014 SEWER RENEWALS
BY CIPP LINING - CONTRACT 12

PORTAGE AVENUE

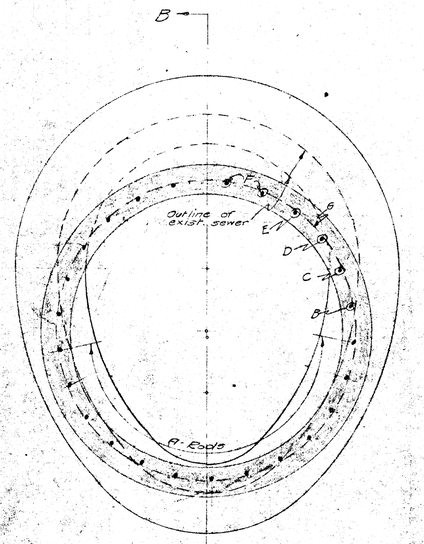
MH AT RICHMOND STREET TO
NODE AT TYLEHURST STREET (S OF CL)

SHEET 43 OF 68

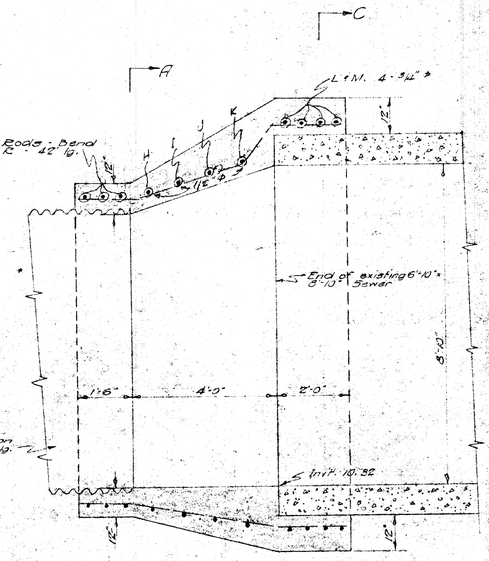
CITY DRAWING NUMBER
10853



LOCATION PLAN.
Scale : 1" = 20'-0"



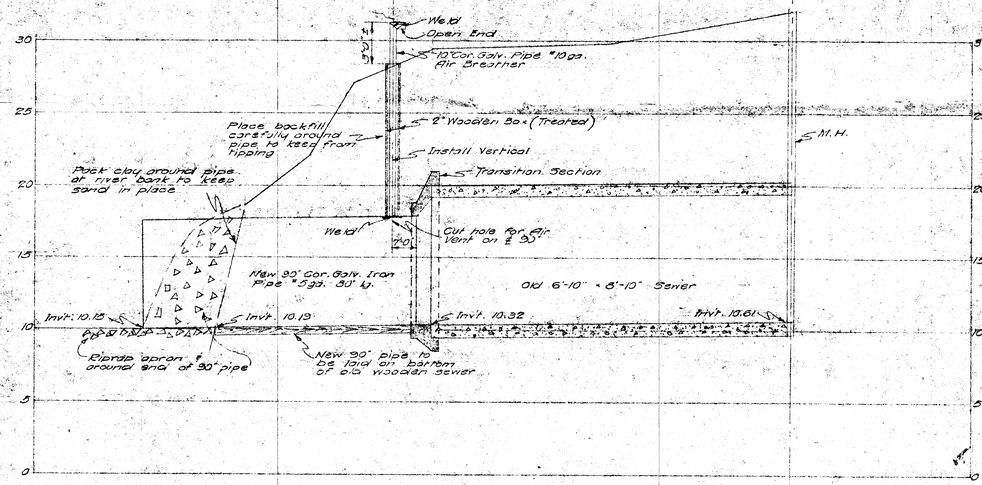
SECTION A-A



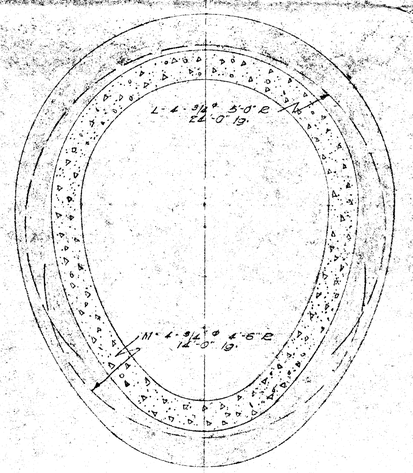
Scale : ½" = 1'-0"

SECTION B-B

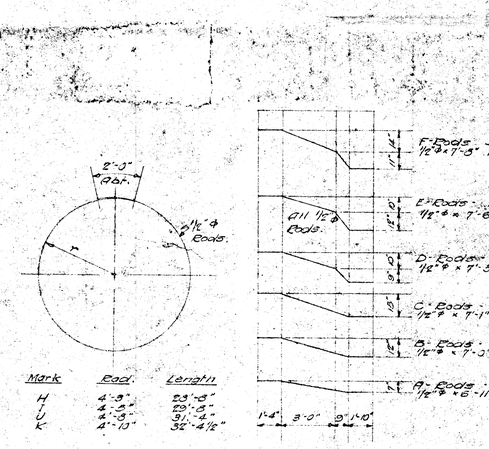
DETAIL OF CONCRETE TRANSITION SECTION



PROFILE
Scale : Hor. 1" = 20'-0"
Vert. 1" = 5'-0"



SECTION C-C.



Mark	Rad.	Length
H	4'-3"	53'-6"
J	4'-3"	59'-6"
U	4'-3"	31'-4"
K	4'-10"	32'-4½"

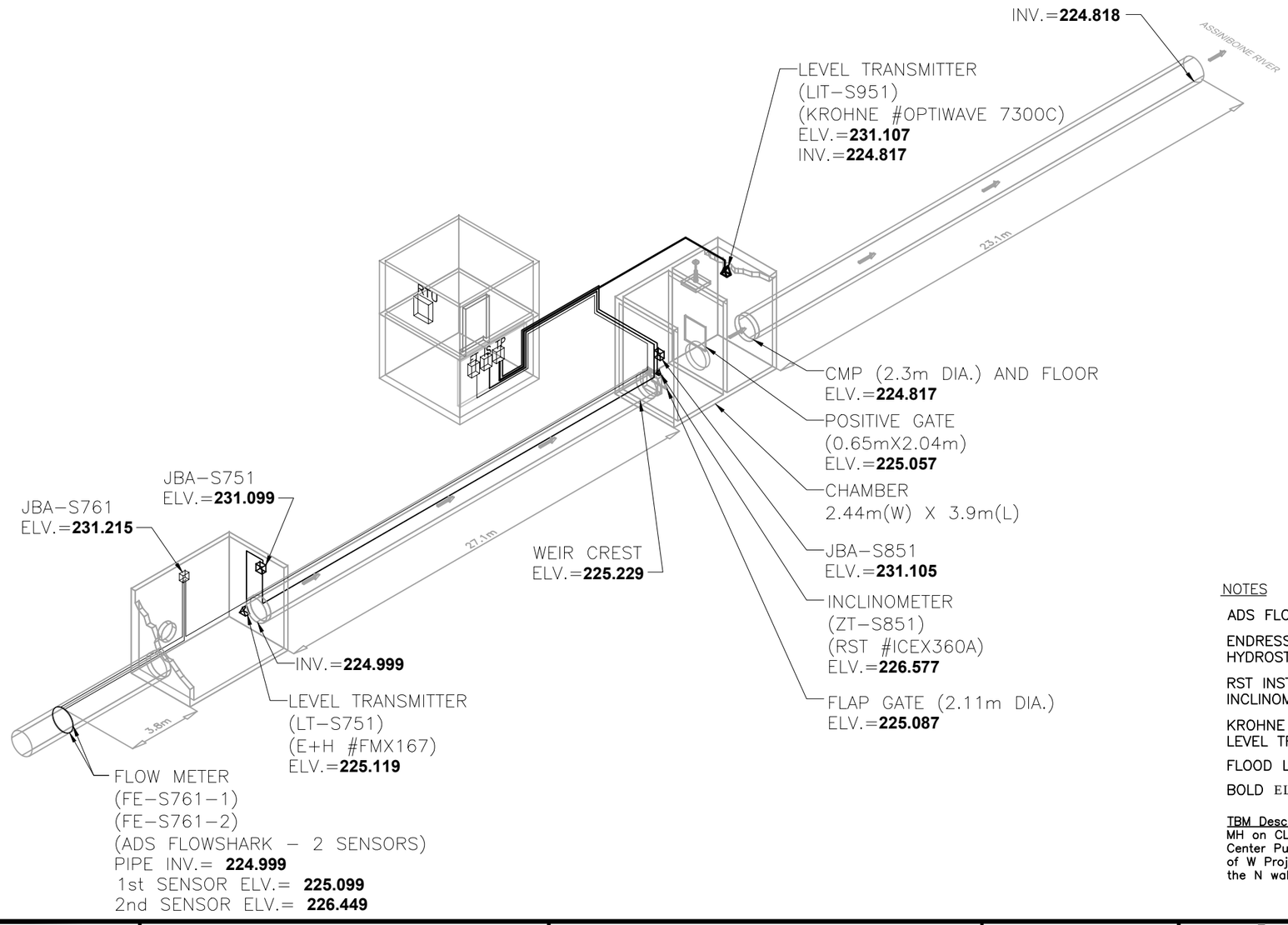
DETAIL OF REINFORCING RODS
Scale - ½" = 1'-0"

RENEWAL OF TYLEHURST ST.
TRUNK SEWER OUTLET INTO
ASSINIBOINE RIVER.

CITY OF WINNIPEG
ENGINEERING DEPARTMENT
W. D. HURST, CITY ENGINEER
A. J. S. TAUNTON, DEPUTY CITY ENGINEER

DRAWN BY B. DATE 11-5-32.
TRACED BY
CHECKED BY
APPROVED

SCALE As Noted
DRAWING NO. 14637



LEGEND

RTU–	REMOTE TERMINAL UNIT PANEL
DP –	POWER DISTRIBUTION PANEL
TP –	TERMINATION PANEL
IS –	INTRINSIC SAFETY BARRIER PANEL
JB –	JUNCTION BOX
—	INSTRUMENTION CABLE
FT –	FLOW METER TRANSMITTER
⬭ –	FLOW METER SENSOR
▽ –	LEVEL TRANSMITTER, INCLINOMETER

NOTES

ADS FLOWSHARK #20A1E FLOW METER

ENDRESS+HAUSER #FMX 167 HYDROSTATIC LEVEL TRANSMITTER

RST INSTRUMENTS #ICEX360A INCLINOMETER

KROHNE #OPTIWAVE 7300C RADAR LEVEL TRANSMITTER

FLOOD LEVEL = 229.04

BOLD ELEVATIONS FROM STANTEC

TBM Description, Elevation = 231.65
MH on CL of Tylerhurst and Woseley, Center Punch on N Rim of MH, 3.3m W of W Projected Wall and 20.4m N of the N wall of STN

WARNING

IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST:

1) NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.

2) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.

SEE PROVINCIAL REGULATION 140/92 FOR DETAILS

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

APEGM
Certificate of Authorization
Stantec Consulting Ltd.
No. 1301

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.

NO.	REVISIONS	DATE	BY
C	AS-BUILT DRAWING	15.04.16	J.C.
B	ISSUED FOR CLIENT REVIEW	15.02.11	J.C.
A	ISSUED FOR CLIENT REVIEW	14.01.15	J.C.

Stantec Consulting Ltd.
905 Waverley Street, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY	S.T.	CHECKED BY	J.C.
DRAWN BY	K.B.	APPROVED BY	J.C.
HOR. SCALE: VERTICAL:	N.T.S.	RELEASED FOR CONSTRUCTION:	
DATE	2013.12.04	DATE	

ENGINEER'S SEAL

CONSULTANT DRAWING NO.
E-0501

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

CSO OUTFALL MONITORING

TYLEHURST

3D ISOMETRIC PLAN

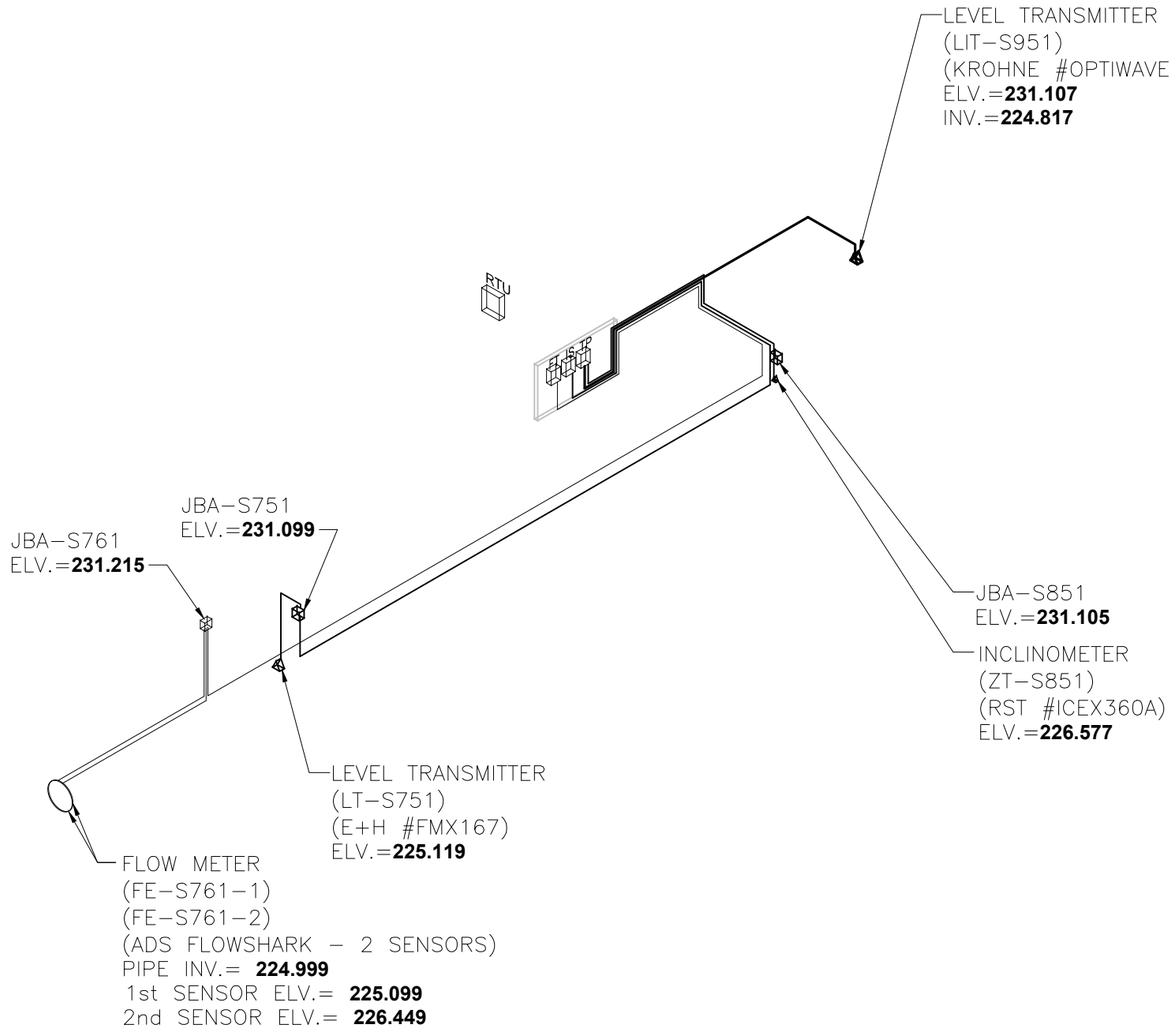
SHEET 1 OF 2

CAD FILE DRAWING NUMBER
14720e-0501-tyl.dwg

CITY DRAWING NUMBER
I-0193-A-A0202-001-00

\\CD1201-F02\work_group\1112\active\111214720\0300_drawing\0302_sheet_files\08_electrical\Phase 1 And Phase 2 New Drawings\Phase 1 Drawings\Tylehurst\14720e-0501-tyl.dwg
2015/04/16 9:57 AM By: Betker, Kyle

\\CD1201-F02\work_group\1112\active\111214720\0300_drawing\0302_sheet_files\08_electrical\Phase 1 And Phase 2 New Drawings\Phase 1 Drawings\Tylehurst\14720e-0501-tyl.dwg
2015/04/16 9:58 AM By: Betker, Kyle



LEGEND

RTU	–	REMOTE TERMINAL UNIT PANEL
DP	–	POWER DISTRIBUTION PANEL
TP	–	TERMINATION PANEL
IS	–	INTRINSIC SAFETY BARRIER PANEL
JB	–	JUNCTION BOX
———	–	INSTRUMENTION CABLE
FT	–	FLOW METER TRANSMITTER
⬭	–	FLOW METER SENSOR
▽	–	LEVEL TRANSMITTER, INCLINOMETER

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ENDRESS+HAUSER #FMX 167
HYDROSTATIC LEVEL TRANSMITTER

RST INSTRUMENTS #ICEX360A
INCLINOMETER

KROHNE #OPTIWAVE 7300C RADAR
LEVEL TRANSMITTER

FLOOD LEVEL = 229.04

BOLD ELEVATIONS FROM STANTEC

TBM Description, Elevation = 231.65
MH on CL of Tylerhurst and Woseley, Center Punch on N Rim of MH, 3.3m W of W Projected Wall and 20.4m N of the N wall of STN

WARNING

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2) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.

SEE PROVINCIAL REGULATION 140/92 FOR DETAILS

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

APEGM
Certificate of Authorization
Stantec Consulting Ltd.
No. 1301

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE — DATE

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B.M.
ELEV.

NO.	REVISIONS	DATE	BY
C	AS-BUILT DRAWING	15.04.16	J.C.
B	ISSUED FOR CLIENT REVIEW	15.02.11	J.C.
A	ISSUED FOR CLIENT REVIEW	14.01.15	J.C.

Stantec Consulting Ltd.
905 Waverley Street, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY	S.T.	CHECKED BY	J.C.
DRAWN BY	K.B.	APPROVED BY	J.C.
HOR. SCALE: VERTICAL:	N.T.S.	RELEASED FOR CONSTRUCTION:	
DATE	2013.12.04	DATE	

ENGINEER'S SEAL

CONSULTANT DRAWING NO.
E-0501

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

CSO OUTFALL MONITORING

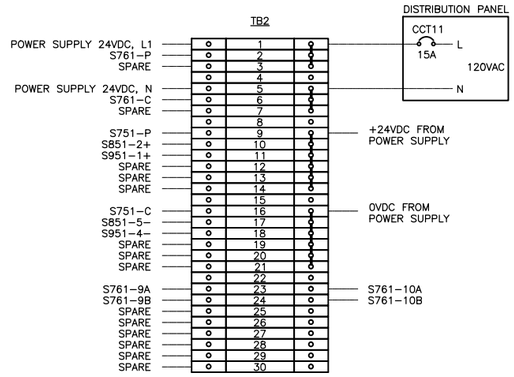
TYLEHURST

3D ISOMETRIC PLAN

SHEET 2 OF 2

CAD FILE DRAWING NUMBER
14720e-0501-tyl.dwg

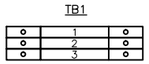
CITY DRAWING NUMBER
I-0193-A-A0202-002-00



NOTES

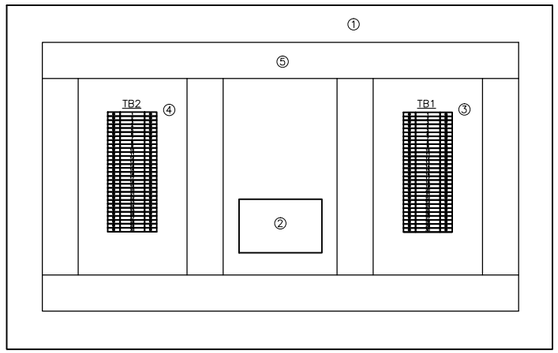
1) TERMINAL BLOCKS WEIDMULLER #WDU4
2) FUSED TERMINAL BLOCKS WEIDMULLER #WSI6:
   TERMINAL BLOCK 1, C/W FUSE 1A
   TERMINAL BLOCK 2, C/W FUSE 1A
   TERMINAL BLOCK 3, C/W FUSE 1A
   TERMINAL BLOCK 9, C/W FUSE 500mA
   TERMINAL BLOCK 10, C/W FUSE 500mA
   TERMINAL BLOCK 11, C/W FUSE 500mA
   TERMINAL BLOCK 12, C/W FUSE 500mA
   TERMINAL BLOCK 13, C/W FUSE 500mA
   TERMINAL BLOCK 14, C/W FUSE 500mA
3) JUMPERS: 1-3; 5-7; 9-14; 16-21

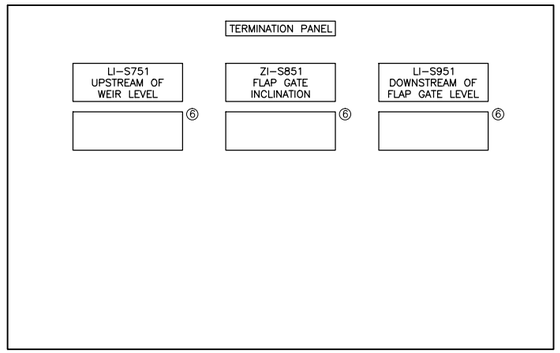
TB2 STRIP DETAIL



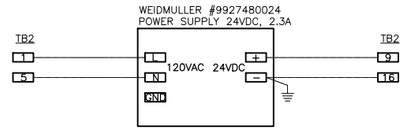
1) FUSED TERMINAL BLOCKS WEIDMULLER #WSI6, C/W 500mA FUSE
2) FEED-THROUGH TERMINAL BLOCKS WEIDMULLER #WDU4
3) FEED-THROUGH TERMINAL BLOCKS WEIDMULLER #WDU4
4) REPEAT FOR ALL AIs AND AOs.

TB1 STRIP DETAIL





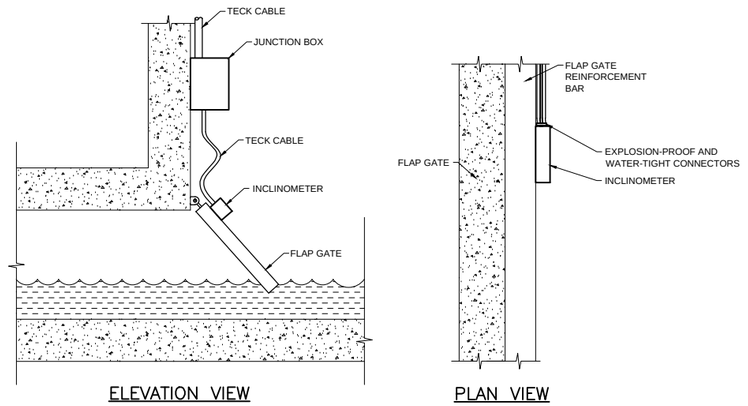
TERMINATION PANEL DETAIL



POWER SUPPLY 24VDC WIRING DETAIL

LEGEND

1) HOFFMAN #CSD20248 TYPE 12 ENCLOSURE C/W PANEL #CP2420
2) WEIDMULLER #9927480024 POWER SUPPLY 24VDC, 2.3A
3) TB1 TERMINAL BLOCKS STRIP. SEE DETAIL.
4) TB2 TERMINAL BLOCKS STRIP. SEE DETAIL.
5) PANDUIT #E1X2LG6 WIRE DUCT C/W COVER #C1LG6
6) SIEMENS #7ML5741 DIGITAL INDICATOR



ELEVATION VIEW

PLAN VIEW

GENERAL NOTES

1) CABLE SHALL BE SECURED ON THE FLAP GATE CHAMBER WALL AND FLAP GATE
2) EXTRA CABLE SHALL BE PROVIDED TO RELIEVE CABLE STRESS AT THE JUNCTION OF THE FLAP GATE AND THE CHAMBER WALL
3) INSTRUMENT AND JUNCTION BOX MOUNTING BRACKET NEED TO BE ADJUSTED ACCORDING TO FLAP GATE DESIGN
4) EXPLOSION-PROOF CONNECTOR SHALL BE SEALED WITH EPOXY TO PREVENT GAS MIGRATION

RST INSTRUMENTS INCLINOMETER INSTALLATION DETAIL

No.	INSTRUMENT TAG	DESCRIPTION	MANUFACTURER	MODEL	PLC I/O TYPE	POWER SUPPLY	LOCATION
1	FIT-S761	ULTRASONIC FLOW METER	ADS FLOWSHARK	20A1E	3X AI, 1XDI	120VAC	UPSTREAM OF WEIR
2	LT-S751	HYDROSTATIC LEVEL TRANSMITTER	ENDRESS+HAUSER	FMX167	1X AI	24VDC	UPSTREAM OF WEIR
3	ZT-S851	INCLINATION TRANSMITTER	RST INSTRUMENTS	ICEX360A	1X AI	24VDC	FLAP GATE
4	LIT-S951	RADAR LEVEL TRANSMITTER	KROHNE	OPTIWAVE 7300C	1X AI	24VDC	DOWNSTREAM OF FLAP GATE

INSTRUMENT LIST

No.	CABLE TAG	FROM	TO	DESCRIPTION	MANUFACTURER	CATALOG No.	NOTE
1	CA-S761-2	JBA-S761	FIT-S761	#16 AWG, 4-TRIAD, TWISTED, SHIELDED	TEXCAN	C3-9336-1604-19	SENSOR CABLE
2	CA-S761-3	FIT-S761	TERMINATION PANEL	#16 AWG, 4-PAIR, TWISTED, SHIELDED	TEXCAN	C3-9326-1604-19	3X AI TO RTU
3	CA-S761-4	FIT-S761	TERMINATION PANEL	#16 AWG, 2-PAIR, TWISTED, SHIELDED	TEXCAN	C3-9326-1602-19	1X DI TO RTU
4	C-S761-5	FIT-S761	TERMINATION PANEL	#14 AWG, 2C, TECK 90	TEXCAN	05001-01-010	POWER 120VAC
5	CA-S751-1	LT-S751	JBA-S751	#16 AWG, 2-PAIR, TWISTED, SHIELDED	TEXCAN	C3-9326-1602-19	4-20mA
6	CA-S751-2	JBA-S751	LY-S751	#16 AWG, 2-PAIR, TWISTED, SHIELDED	TEXCAN	C3-9326-1602-19	4-20mA
7	CA-S751-3	LY-S751	TERMINATION PANEL	#16 AWG, 2-PAIR, TWISTED, SHIELDED	TEXCAN	C3-9326-1602-19	4-20mA
8	CA-S851-1	ZT-S851	JBA-S851	#16 AWG, 2-PAIR, TWISTED, SHIELDED	TEXCAN	C3-9326-1602-19	4-20mA
9	CA-S851-2	JBA-S851	TERMINATION PANEL	#16 AWG, 2-PAIR, TWISTED, SHIELDED	TEXCAN	C3-9326-1602-19	4-20mA
10	CA-S951-1	LIT-S951	TERMINATION PANEL	#16 AWG, 2-PAIR, TWISTED, SHIELDED	TEXCAN	C3-9326-1602-19	4-20mA
11	C-TP1	DISTRIBUTION PANEL	TERMINATION PANEL	#12 AWG, 2C, TECK 90	TEXCAN	05002-01-010	POWER 120VAC

CABLE LIST

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ELEV.

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B	ISSUED FOR CONSTRUCTION	14.06.27	J.C.
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HOR. SCALE:	N.T.S.	RELEASED FOR CONSTRUCTION:	
VERTICAL:			
DATE	2014.01.28	DATE	

ENGINEER'S SEAL

CONSULTANT DRAWING NO.
E-0502

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

CSO OUTFALL MONITORING
TYLEHURST
TERMINATION PANEL LAYOUT
INSTRUMENT LIST, CABLE LIST

SHEET 1 OF 1
CAD FILE DRAWING NUMBER
14720e-0502-tyl.dwg
CITY DRAWING NUMBER
I-0193-A-A0203-001-00

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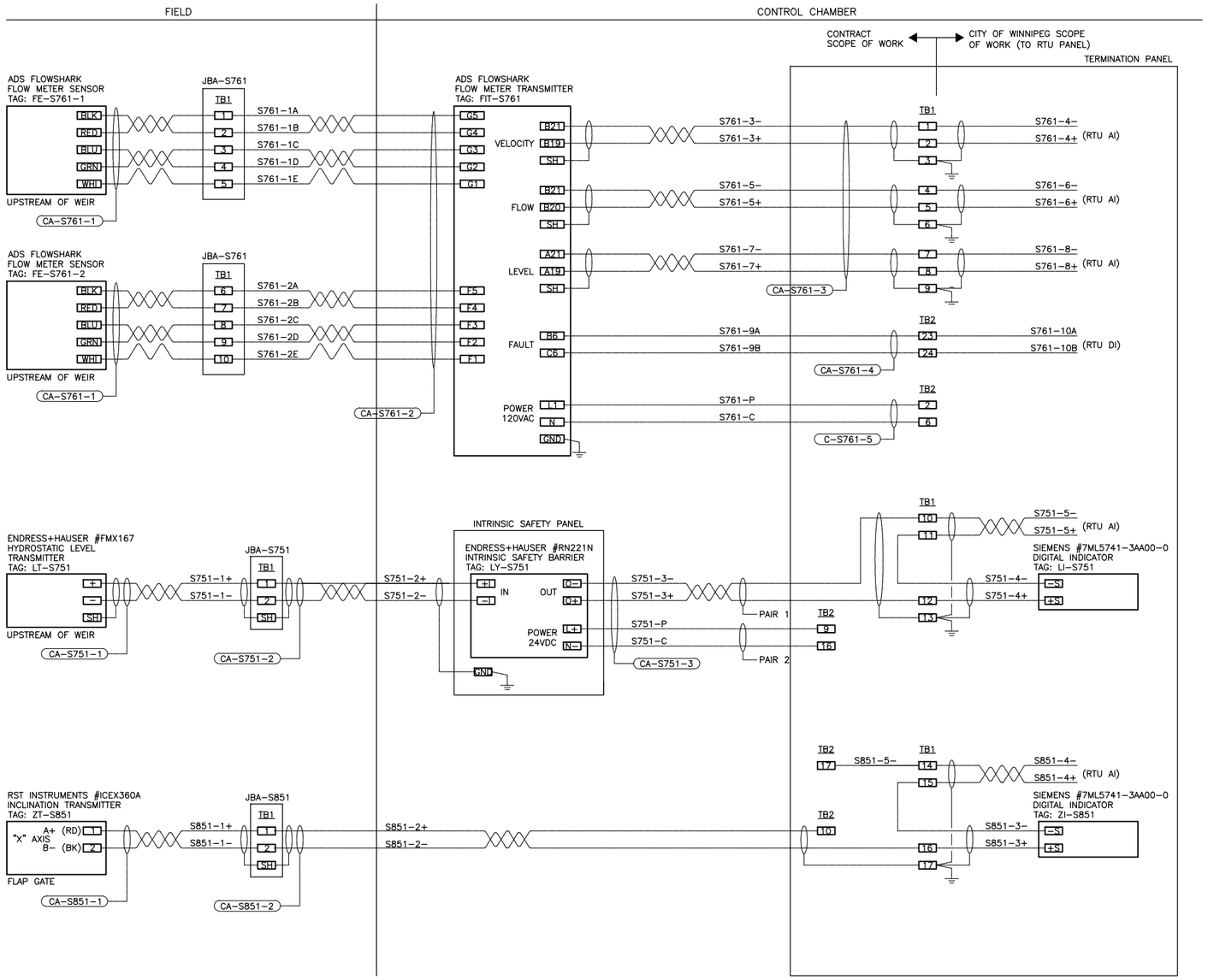
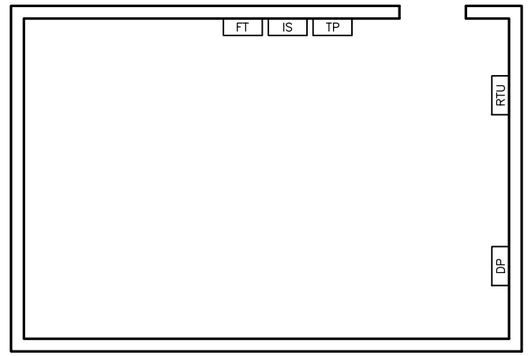
XX / 779





ELECTRICAL ROOM FLOOR PLAN

LEGEND

RTU – NEW RTU PANEL

TP – NEW TERMINATION PANEL

IS – NEW INTRINSIC SAFETY PANEL

DP – EXISTING DISTRIBUTION PANEL 120VAC

FT – NEW FLOW METER TRANSMITTER

NOTES

1) INSTALL TWO FULL SHEETS OF PLYWOOD AND MOUNT ON BACKBOARD RTU PANEL, TP PANEL, INTRINSIC SAFETY PANEL AND FLOW METER TRANSMITTER.

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DESIGNED BY: S.T. | CHECKED BY: B.J.
DRAWN BY: S.T. | APPROVED BY: B.J.
HOR. SCALE: N.T.S. | VERTICAL:
RELEASED FOR CONSTRUCTION:
DATE 2014.01.28 | DATE

ENGINEER'S SEAL

CONSULTANT DRAWING NO.
E-0503

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

CSO OUTFALL MONITORING

TYLEHURST

ELECTRICAL ROOM LAYOUT

LOOP WIRING DIAGRAMS

SHEET 1 OF 2
CAD FILE DRAWING NUMBER: 14720e-0503-tyl.dwg
CITY DRAWING NUMBER: I-0193-A-A0204-001-00

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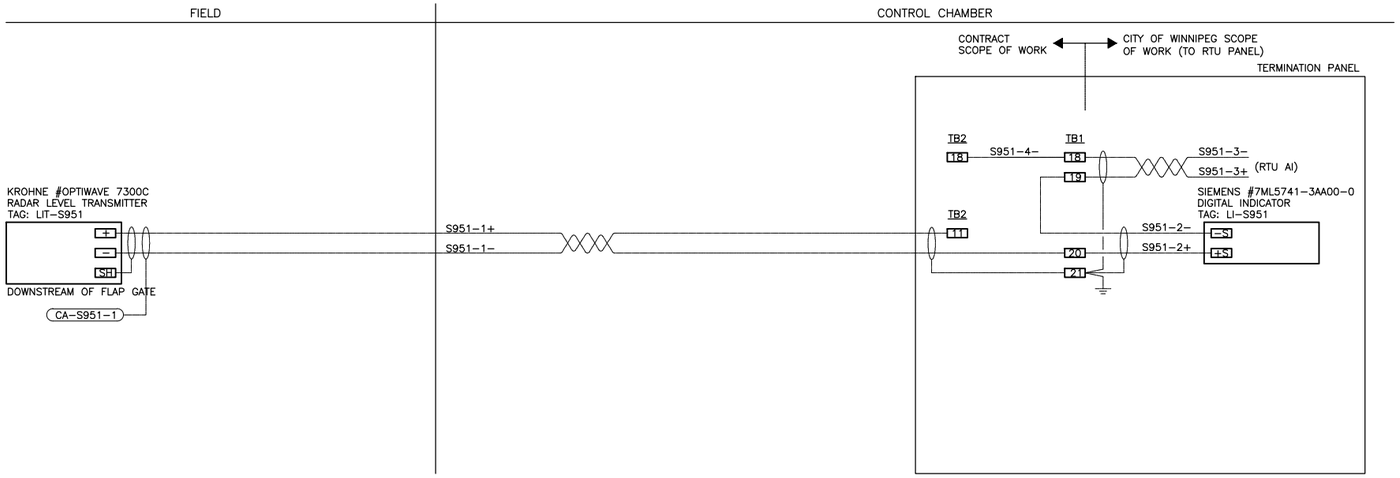
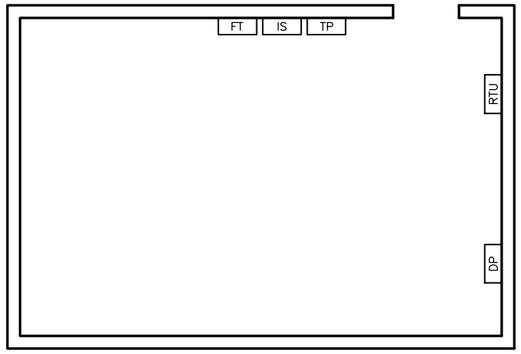
2015/09/10 10:24 AM By: Betker, Kyle





ELECTRICAL ROOM FLOOR PLAN

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DATE	2014.01.28	DATE	

ENGINEER'S SEAL

CONSULTANT DRAWING NO.
E-0503

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

CSO OUTFALL MONITORING

TYLEHURST

ELECTRICAL ROOM LAYOUT

LOOP WIRING DIAGRAMS

SHEET 2 OF 2

CAD FILE DRAWING NUMBER
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CITY DRAWING NUMBER
I-0193-A-A0204-002-00

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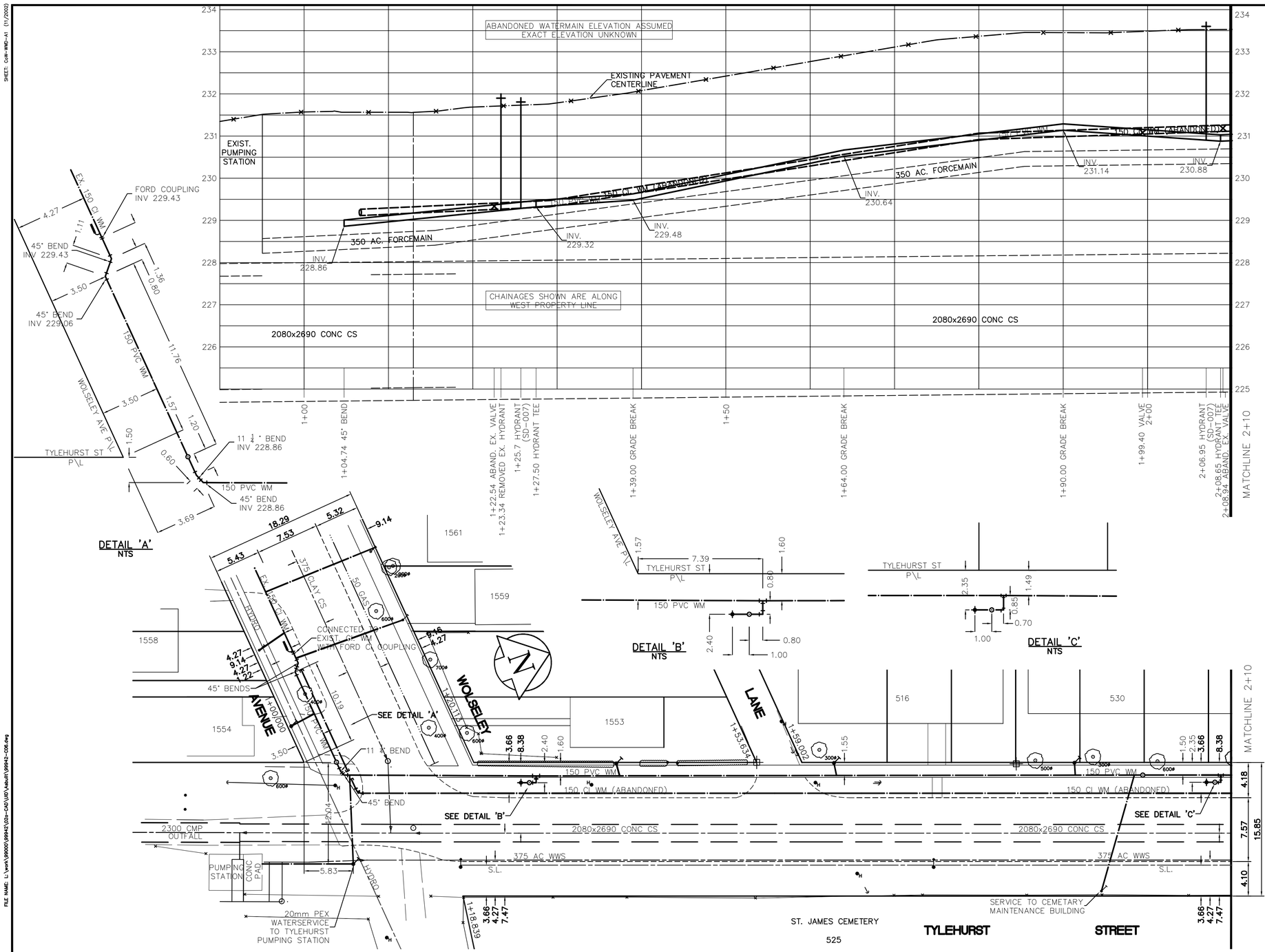
2015/09/10 10:24 AM By: Betker, Kyle

SHEET: CoW-WWD-A1 (1/2002)



CONSTRUCTION NOTES

1. INSTALLED WATERMAIN BY TRENCHLESS METHODS.
2. ALL MATERIALS CONFORM TO THE CITY OF WINNIPEG STANDARD CONSTRUCTION SPECIFICATIONS.
3. INSTALLED ALL HYDRANTS WITH FLANGE ELEVATION 50mm–150mm ABOVE FINISHED GRADE.
4. REPLACED ALL EXISTING LEAD SERVICES FROM THE PROPOSED WATERMAIN TO PROPERTY LINE.
5. ALL VALVES ARE RED TOP (COUNTER CLOCKWISE TO CLOSE).
6. BACKFILL UNDER OR WITHIN 1.0m OF PAVEMENTS, INCLUDING SIDEWALKS IS CLASS 3 BACKFILL EXCEPT AS NOTED. BACKFILL IN BOULEVARDS IS CLASS 5 BACKFILL.

MATERIAL LIST

WATERMAIN:
150mm PVC WM IPEX BLUE BRUTE DR–18
150mm GATE VALVE – CLOW
VALVE BOX – WDVB W/ IPEX VALVE BOX BOTTOM
HYDRANT – CLOW, CONCORD

FITTINGS:
150x150x150mm PVC TEE – IPEX C907
150mm PVC BENDS – IPEX C907
150mm CI COUPLING – FORD

WATER SERVICES:
19mm COPPER WOLVERINE TYPE K
19mm UNION – FORD
19mm CORPORATION STOP – FORD
19mm CURB STOP – FORD
38mm COPPER WOLVERINE TYPE K
38mm CORPORATION STOP – FORD
38mm CONNECTION SADDLE – FORD
19mm PEX TUBING – REHAU MUNICIPEX (FOR TYLEHURST PUMP STATION ONLY)
CURB BOX – WDVB – MINNEAPOLIS STYLE
ANODE – 24lb. INTERPROVINCIAL CORROSION CONTROL

CONTRACTOR:
KODIAK CONSTRUCTION INC.

EARTH TECH
Earth Tech (Canada) Inc. Wpg. MB. 204.477.5381
AS CONSTRUCTED
SIG.....DATE.....

APEGM
Certificate of Authorization
Earth Tech Canada Inc.
No. 730 Expiry: April 30, 2008

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES
0 10m 20m
SCALE

PROJECT COMPLETION DATE: NOVEMBER 13, 2007

ADDRESS		NATURE OF SERVICE	SIZE	MATERIAL	DISTANCE SC TO PROPERTY	POSITION OF SC (curb stop)		STREET OR HOUSE LINE	STREET REFER	POSITION OF CC (corp)		STREET OR HOUSE LINE	STREET REFER	COMMENTS:
499	TYLERHURST ST	COMMERCIAL	19 mm	PEX	13.0m N of N BLDG WALL	Long: 13.4 m E	of WL	TYLERHURST	Long: 4.3 m N	of SL	WOLSELEY (PROJECTED FROM WEST)			RENEWED TO PL W/ 20mm PEX
						Short: 1.1 m E	of WL	PUMPING STATION	Short: 0.5 m S	of SC				TYLEHURST PUMPING STATION
1559	WOLSELEY AVE	RESIDENTIAL	19 mm	COPPER	0.6 m	Long: 18.9 m W	of WL	TYLERHURST	Long: 11.6 m W	of WL	TYLERHURST			RECONNECTED
						Short: 0.6 m W	of EL	HOUSE	Short: 1.2 m W	of SC				
1554	WOLSELEY AVE	RESIDENTIAL	19 mm	COPPER	0.4 m	Long: 4.5 m W	of WL	TYLERHURST	Long: 4.7 m W	of WL	TYLERHURST			RENEWED TO PROPERTY
						Short: 3.5 m W	of EL	HOUSE	Short: 0.2 m W	of SC				
1553	WOLSELEY AVE	RESIDENTIAL	19 mm	COPPER	0.1 m	Long: 16.9 m N	of NL	WOLSELEY	Long: 17.3 m N	of NL	WOLSELEY			RENEWED TO PROPERTY
						Short: 5.5 m N	of SL	HOUSE	Short: 0.4 m N	of SC				

ADDRESS		NATURE OF SERVICE	SIZE	MATERIAL	DISTANCE SC TO PROPERTY	POSITION OF SC (curb stop)		STREET OR HOUSE LINE	STREET REFER	POSITION OF CC (corp)		STREET OR HOUSE LINE	STREET REFER	COMMENTS:
530	TYLERHURST ST	RESIDENTIAL	38 mm	COPPER	0.0 m	Long: 71.2 m N	of NL	WOLSELEY	Long: 71.3 m N	of NL	WOLSELEY			RENEWED TO PROPERTY
						Short: 5.5 m N	of SL	BLDG	Short: 0.1 m N	of SC				
516	TYLERHURST ST	RESIDENTIAL	38 mm	COPPER	0.1 m	Long: 42.7 m N	of NL	WOLSELEY	Long: 43.0 m N	of NL	WOLSELEY			RENEWED TO PROPERTY
						Short: 4.2 m N	of SL	BLDG	Short: 0.3 m N	of SC				
525	TYLERHURST ST	COMMERCIAL	19 mm	COPPER	0.6 m	Long: 67.1 m N	of NL	WOLSELEY (PROJECTED FROM WEST)	Long: 78.3 m N	of NL	WOLSELEY			RECONNECTED - UNION 1.7m TO CC
						Short: 8.7 m N	of SL	BLDG - 530 TYLEHURST	Short: 3.9 m N	of SC				(CEMETARY BUILDING SERVICE)

150 mm W.M.	WATERMAIN	150 mm W.M.		HYDRO		150 mm W.M.	WATERMAIN		
◇	HYDRANT	+		TELEPHONE			HYDRANT	+	
⊗	VALVE	⊙		CONCRETE			VALVE	X	
300mm L.D.S.	LAND DRAINAGE SEWER	300mm L.D.S.		ASPHALT		300mm L.D.S.	LAND DRAINAGE SEWER	300mm L.D.S.	
250mm W.W.S.	WASTEWATER SEWER	250mm W.W.S.		PROPERTY LINE		250mm W.W.S.	WASTE WATER SEWER	250mm W.W.S.	
○	MANHOLE	●		SURVEY BAR		–×–×–	℄ PROFILE		
□	CATCH BASIN	■		CURB STOP					
▽	CURB INLET	▼		TREE					
	JUNCTIONS			ANODE					
	CULVERT			CONCRETE SIDEWALK					
	GAS			FENCE					
EXISTING	LEGEND – PLAN	PROPOSED	EXISTING	LEGEND – PLAN	PROPOSED	EXISTING	LEGEND – PROFILE	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. 37–007 S.E. corner Portage Ave. & Tylehurst St., Brass plug in 8.5m Conc. pile, 2.35m N. of chainlink fence & 0.7m E. of same fence produced from the S. (enclosing St. James Anglican Cemetery) or 2.4m S. of S. edge & on line of W. edge of Conc. base of traffic light standard on S.E. Cor. Portage Ave. & Tylehurst St.
ELEV. 233.618

NO.	REVISIONS	DATE	BY
1	AS CONSTRUCTED	2008/01/30	JCP
B	ISSUED FOR TENDER	2007/05/31	GSK
A	ISSUED FOR REVIEW	2006/05/26	GSK

EARTH TECH
A tyco INTERNATIONAL LTD. COMPANY
Earth Tech (Canada) Inc. Winnipeg, Manitoba 204.477.5381

DESIGNED BY	GSK, GDL	CHECKED BY	GSK
DRAWN BY	GDL	APPROVED BY	
HOR. SCALE: 1:250 VERTICAL SCALE: 1:50		RELEASED FOR CONSTRUCTION BY: K. ZUREK	
DATE	2007/04/11	DATE	2007/05/31

ENGINEER'S SEAL
PROVINCE OF MANITOBA
ORIGINAL SIGNED BY K.W. FITCHETT 29/05/2007
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO.
99942–C06

THE CITY OF WINNIPEG
Winnipeg WATER AND WASTE DEPARTMENT

2007 WATERMAIN RENEWALS
CONTRACT 6

SHEET OF
6 8

TYLEHURST STREET
WOLSELEY AVENUE TO PORTAGE AVENUE
WOLSELEY AVENUE TO STA. 2+10

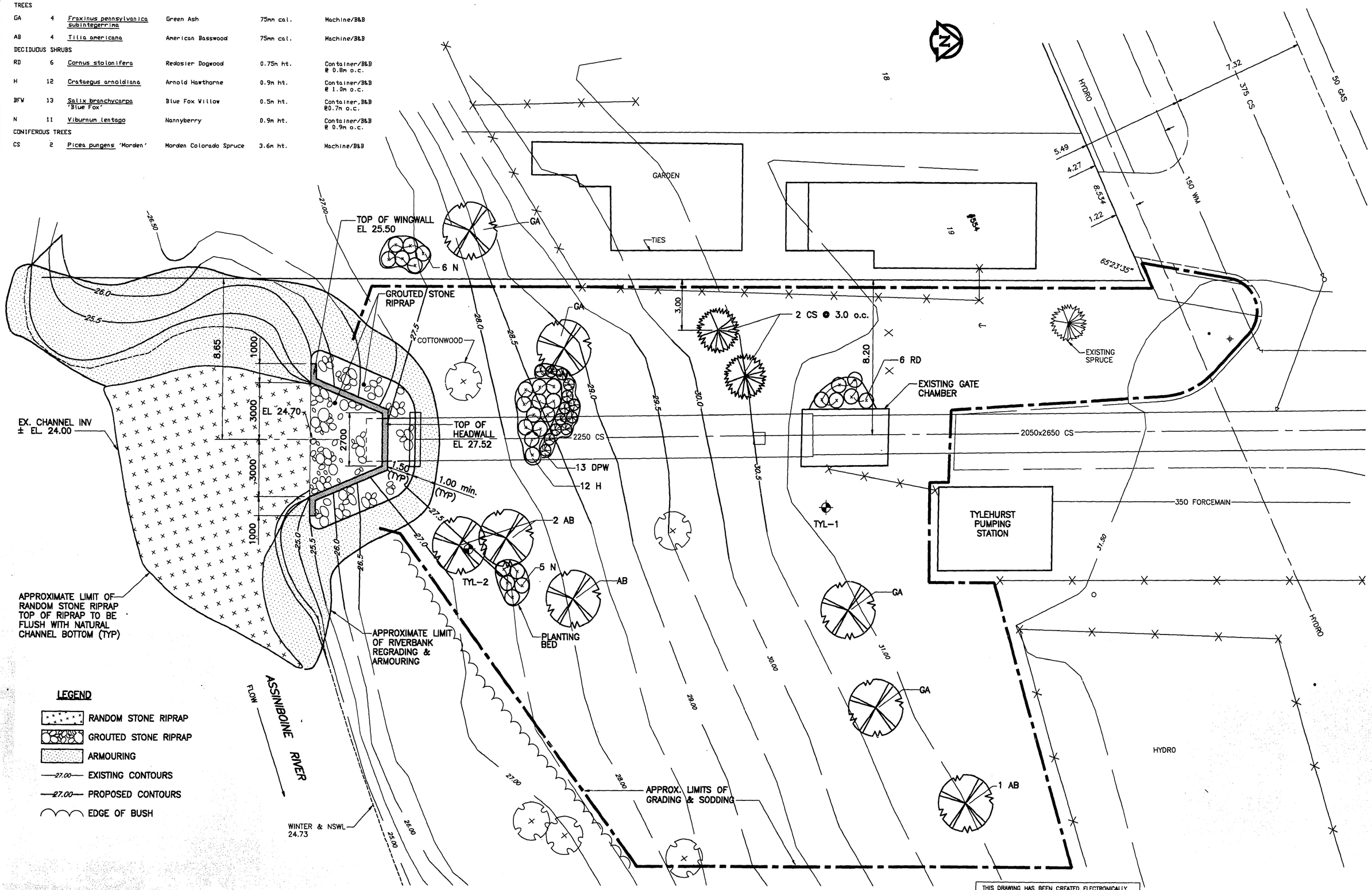
CITY DRAWING NUMBER
D–9176

FILE NAME: L:\work\99000\v99942\03a–CAD\UD\Tylehurst\99942–C06.dwg
LAYOUT NAME: D–9176
PLOTTED BY: jon.pedersen
Sep 25, 2008 – 1:50pm

INV

PLANT LIST

CODE	NO.	BOTANICAL NAME	COMMON NAME	SIZE/HT.	NOTES
TREES					
GA	4	Fraxinus pennsylvanica subintegerrima	Green Ash	75mm cal.	Machine/B&B
AB	4	Tilia americana	American Basswood	75mm cal.	Machine/B&B
DECIDUOUS SHRUBS					
RD	6	Cornus stolonifera	Redosier Dogwood	0.75m ht.	Container/B&B @ 0.8m o.c.
H	12	Crataegus arnoldiana	Arnold Hawthorne	0.9m ht.	Container/B&B @ 1.0m o.c.
BFW	13	Salix branchycarpa 'Blue Fox'	Blue Fox Willow	0.5m ht.	Container, B&B @0.7m o.c.
N	11	Viburnum lentago	Nannyberry	0.9m ht.	Container/B&B @ 0.9m o.c.
CONIFEROUS TREES					
CS	2	Picea pungens 'Morden'	Morden Colorado Spruce	3.6m ht.	Machine/B&B



LEGEND

- RANDOM STONE RIPRAP
- GROUTED STONE RIPRAP
- ARMOURING
- 27.00 EXISTING CONTOURS
- 27.00 PROPOSED CONTOURS
- EDGE OF BUSH

MATERIAL LIST

ITEM	MANUFACTURER/SUPPLIER
STEEL BARRICADES, SIGN & FLAT BAND COUPLER	SHOPOST IRON WORKS (1989) LTD.
CONCRETE	SUPERCRETE
REINFORCING STEEL	COWIN STEEL CO. LTD.
LIMESTONE AND FIELD ROCK FOR RIP-RAP	BISON ROCK & ASPHALT PRODUCTS LTD.

CONTRACTOR: NELSON RIVER CONSTRUCTION (1984) INC.
CONSTRUCTION PERIOD: FEB - JULY 1991
FIELD BOOK No: 89106

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPR. U/G STRUCTURES COMMITTEE _____ DATE _____

NOTE:
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B.M. G.B.M. #37-039
ELEV. 231.724

NO.	REVISIONS	DATE	BY
C	REV TO RECORD DWG/REPLOTTED	03Sep91	BC
B	ADDED 2 TRESS AS PER C.O.W.		
	PARKS COMMENTS/REPLOTTED	21Feb91	DML
A	REVISED LANDSCAPING/REPLOTTED	22Jan91	DML

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

DESIGNED BY	CCM,DH	CHECKED BY	
DRAWN BY	BC,WJd	APPROVED BY	
HOR. SCALE:	1:100	RELEASED FOR CONSTRUCTION	
VERTICAL:	-		
DATE	Oct 23/91	DATE	

ENGINEER'S SEAL
PROVINCE OF MANITOBA
21 Oct. 91
C.C. MACEY
CCM.
REGISTERED ENGINEER

CONSULTANT DRAWING NO.
41-02-3484-039-01

THIS DRAWING HAS BEEN CREATED ELECTRONICALLY USING COMPUTER AIDED DESIGN AND DRAFTING TECHNIQUES AND EMPLOYING TOTAL STATION SURVEY TECHNOLOGY TO CAPTURE EXISTING FEATURES

RECORD DRAWING

P.D. No. 91-16

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
OPERATIONS DEPARTMENT - DISTRICT 1

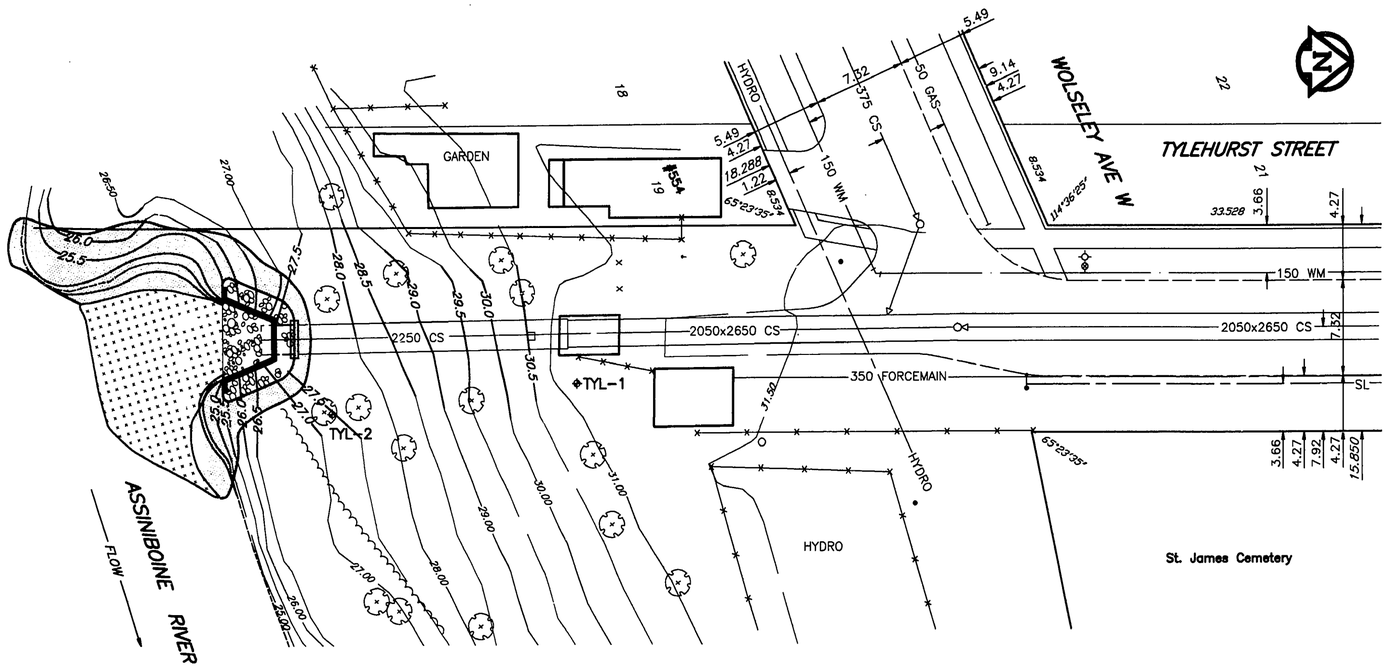
TYLEHURST STREET OUTFALL

SITE PLAN AND PROPOSED UPGRADING

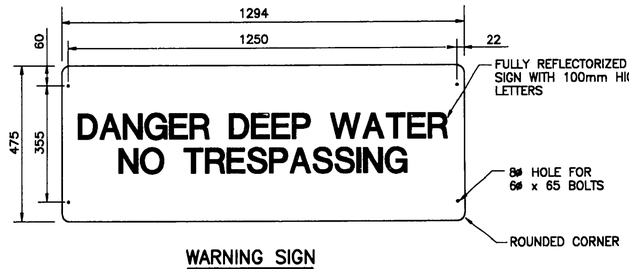
CITY DRAWING NUMBER LD [redacted]
SHEET 1 OF 2
REV. 01 C

(STYL-LAN.dwg)

FILE # DU10103 LD-1585



LOCATION PLAN
SCALE 1:250



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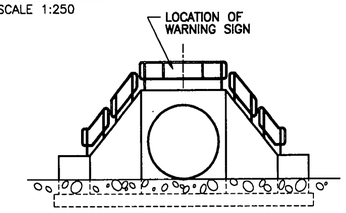
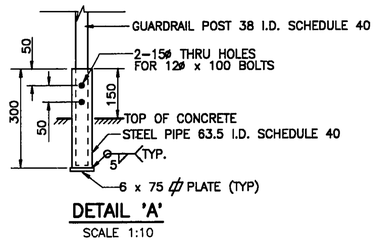
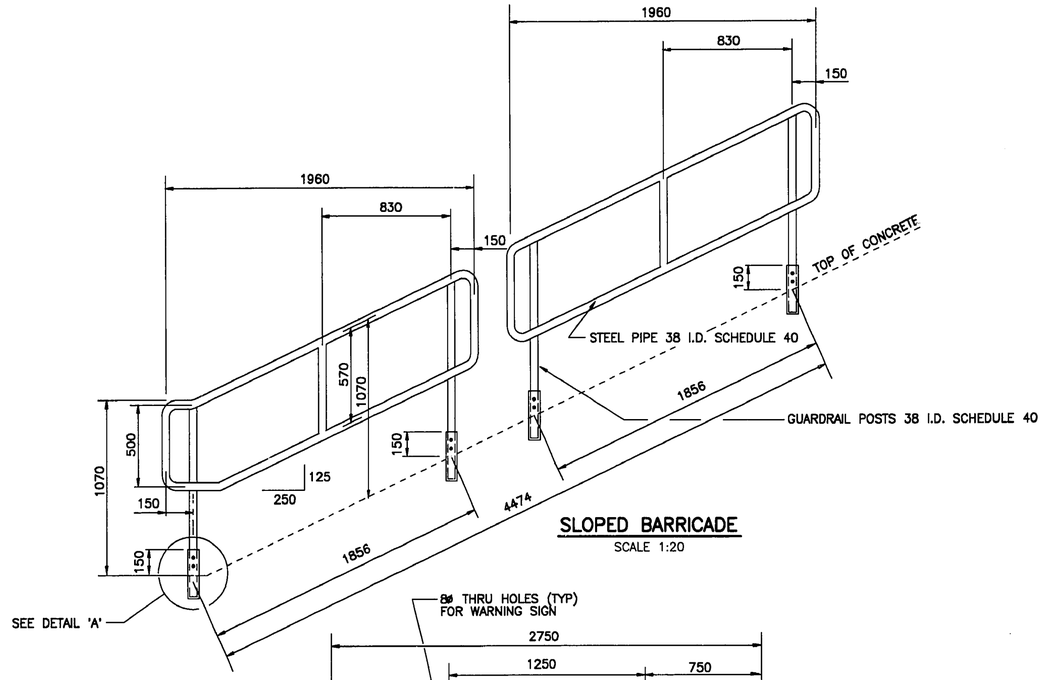


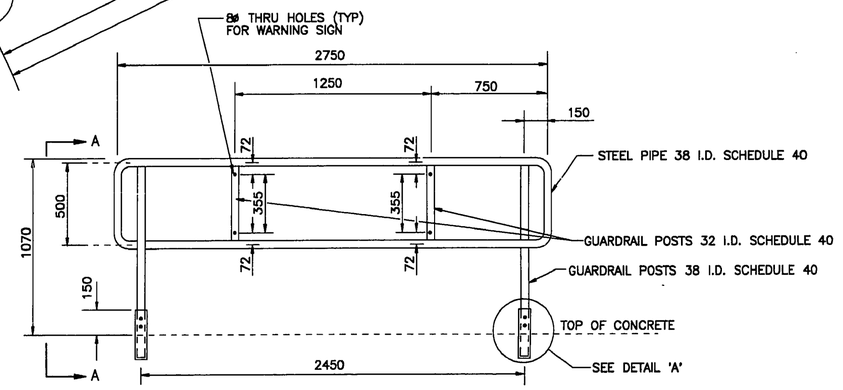
END VIEW
SCALE 1:100



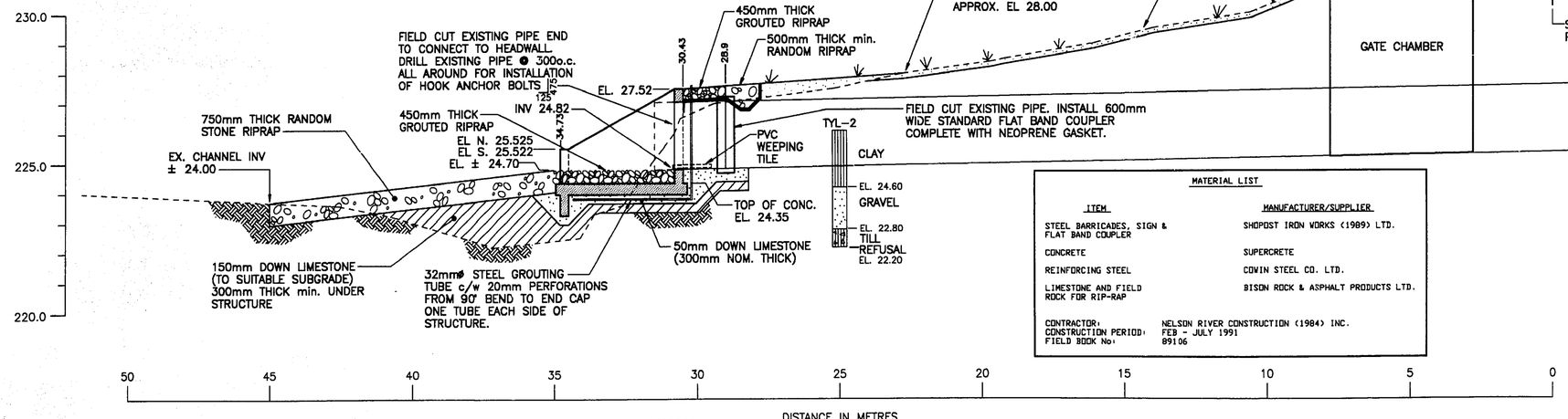
DETAIL 'A'
SCALE 1:10



SLOPED BARRICADE
SCALE 1:20



LEVEL BARRICADE
SCALE 1:20

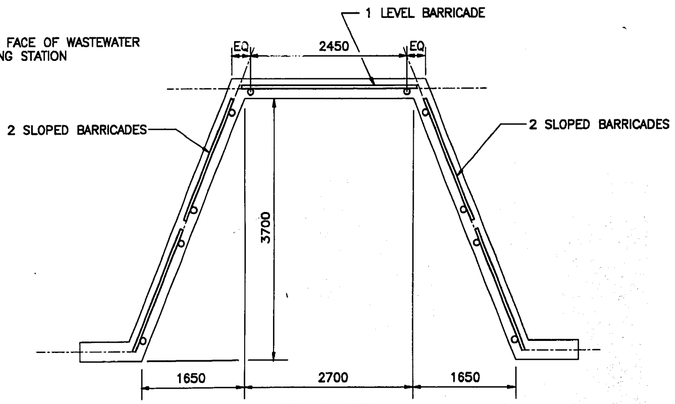


ELEVATION
SCALE 1:100

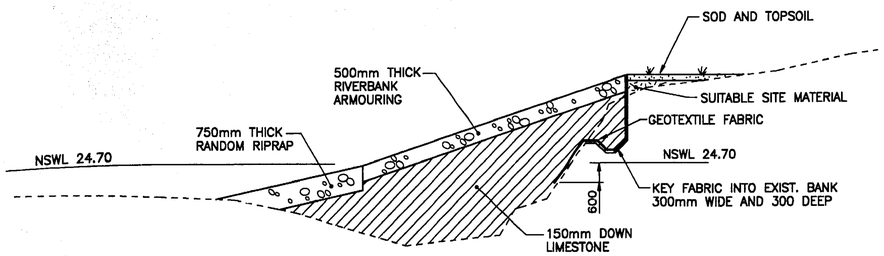
MATERIAL LIST

ITEM	MANUFACTURER/SUPPLIER
STEEL BARRICADES, SIGN & FLAT BAND COUPLER	SHOPOST IRON WORKS (1989) LTD.
CONCRETE	SUPERCRETE
REINFORCING STEEL	COWIN STEEL CO. LTD.
LIMESTONE AND FIELD ROCK FOR RIP-RAP	BISON ROCK & ASPHALT PRODUCTS LTD.

CONTRACTOR: NELSON RIVER CONSTRUCTION (1984) INC.
CONSTRUCTION PERIOD: FEB - JULY 1991
FIELD BOOK No: 89106



PLAN VIEW
SCALE 1:50



RIVERBANK ARMOURING
SCALE N.T.S.

THIS DRAWING HAS BEEN CREATED ELECTRONICALLY USING COMPUTER AIDED DESIGN AND DRAFTING TECHNIQUES AND EMPLOYING TOTAL STATION SURVEY TECHNOLOGY TO CAPTURE EXISTING FEATURES

RECORD DRAWING

P.D. No. 91-16

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPR. U/G STRUCTURES COMMITTEE — DATE

NOTE:
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B.M. G.B.M. #37-039
ELEV. 231.724

NO.	REVISIONS	DATE	BY
B	REV TO RECORD DWG/REPLOTTED	18Oct91	BC
A	REVISED BARRICADE/REPLOTTED	22Jan91	DML

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

DESIGNED BY	CCM	CHECKED BY	
DRAWN BY	DML	APPROVED BY	
HOR. SCALE:	AS NOTED	RELEASED FOR CONSTRUCTION	
VERTICAL:	–		
DATE	Oct 22/91	DATE	

ENGINEER'S SEAL: PROVINCE OF MANITOBA — C.C. MACEY — REGISTERED ENGINEER

CONSULTANT DRAWING NO. 41-02-3484-039-01

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
OPERATIONS DEPARTMENT - DISTRICT 1

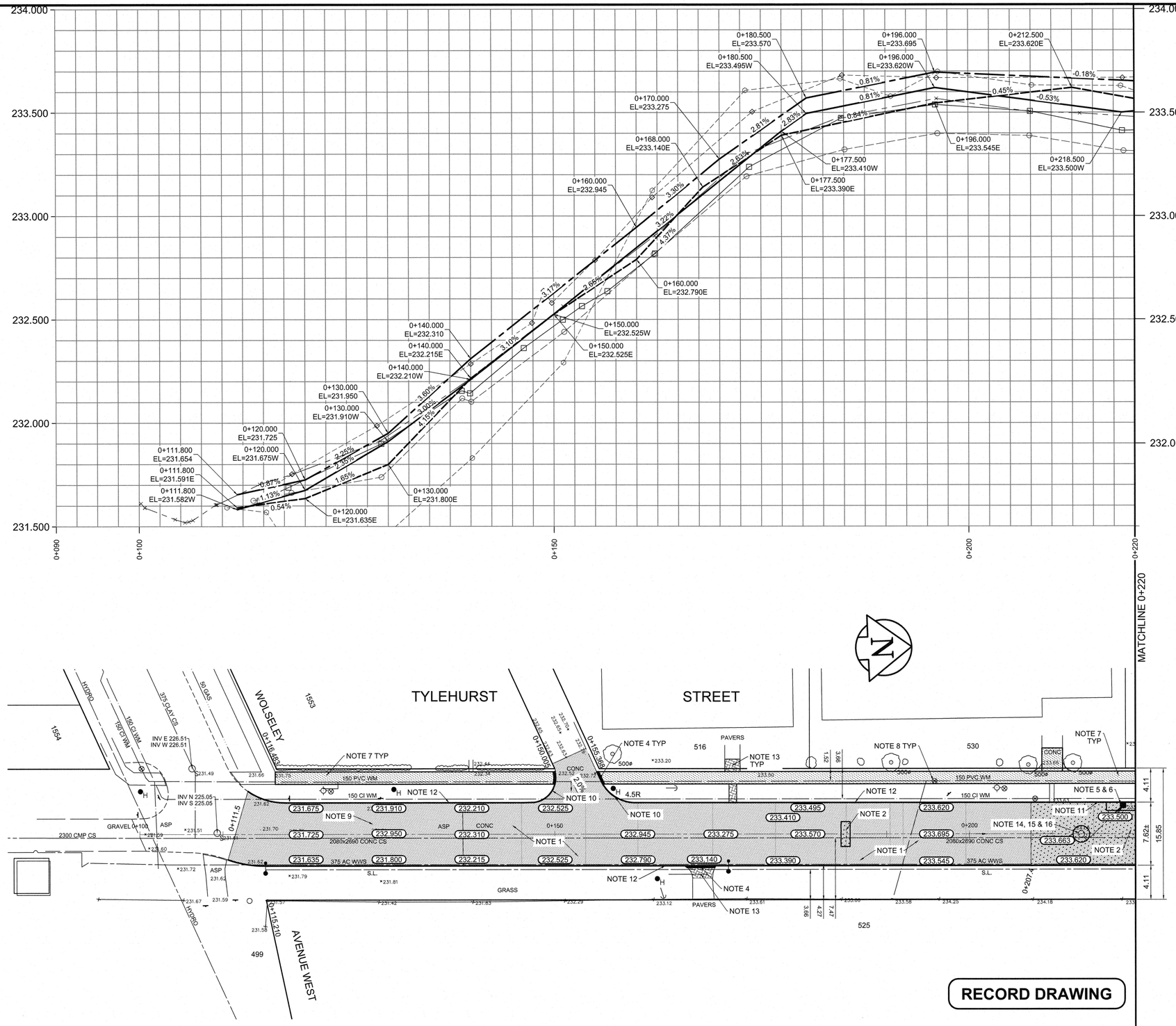
TYLEHURST STREET OUTFALL

CROSS-SECTIONS AND DETAILS

CITY DRAWING NUMBER LD-[redacted]6/2
SHEET 2 OF 2
REV. 02 B

($TYL-PRO.dwg)

FILE # OU10104 LD-1586



MATERIALS LIST (SURFACE WORKS)	
TYPE	**MANUFACTURER**
CONCRETE	BUILDING PRODUCTS
ASPHALT	ASPHALTEC
LIMESTONE 20mm & 50mm DOWN	INLAND
GLASS GRID	GLASGRID PAVEMENT REINFORCEMENT SYSTEMS

MATERIALS LIST (UNDERGROUND)	
TYPE	**MANUFACTURER**
PVC LDS PIPE	ROYAL
TEES & BENDS	PLASTIC TRENDS
COUPLINGS	MISSION
FRAMES, COVERS & RISERS	TITAN
CATCH BASINS	LAFARGE

REFERENCE NOTES

A. PAVEMENT DIMENSIONS ARE TO BACK OF CURB
B. BASELINE IS CENTRE LINE RIGHT-OF-WAY
C. PROPERTY LINES OBTAINED FROM CITY OF WINNIPEG L.B.I.S., AND NO SCALE FACTOR WAS APPLIED
D. REFER TO AECOM FIELD BOOK NO. 4930

CONSTRUCTION NOTES

1. PLACED NEW ASPHALTIC PAVEMENT TYPE 1A (AVG THICKNESS 85mm)
2. REMOVED EXISTING CONCRETE PAVEMENT AND CONSTRUCTED NEW 150mm REINFORCED CONCRETE PAVEMENT c/w 50mm ASPHALT OVERLAY
3. REMOVED EXISTING CONCRETE PAVEMENT AND CONSTRUCTED NEW 150mm REINFORCED CONCRETE PAVEMENT
4. CONSTRUCTED RAMP CURB (10mm HT. INTEGRAL)
5. REMOVED EXISTING CATCH BASIN
6. INSTALLED NEW CURB AND GUTTER INLET c/w CATCH BASIN (SD-024) AND CONNECTED NEW LEAD TO EXISTING LEAD
7. RENEWED EXISTING 100mm CONCRETE SIDEWALK
8. ADJUSTED EXISTING WATER VALVE TO GRADE
9. PLANED EXISTING ASPHALTIC PAVEMENT
10. REMOVED EXISTING BARRIER CURB AND CONSTRUCTED MODIFIED BARRIER CURB (100mm HT. DOWELLED)
11. CONSTRUCTED NEW BARRIER CURB (100mm HT. SEPARATE)
12. CONSTRUCTED NEW BARRIER CURB (100mm HT. DOWELLED)
13. ADJUSTED EXISTING PAVING STONES
14. ADJUSTED EXISTING CATCHBASIN/MANHOLE TO GRADE
15. REMOVED EXISTING FRAME AND COVER AND INSTALLED NEW FRAME AND SOLID COVER
16. INSTALLED NEW CAST IRON RISER RING

RECORD DRAWING

APEGM Certificate of Authorization
AECOM Canada Ltd.
No. 4671 Date: Feb 14/17

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

150 mm W.M.	WATERMAIN	150 mm W.M.		HYDRO			Ç PROFILE	
	HYDRANT			M.T.S.			OUTSIDE GUTTER	
	VALVE			CONCRETE			INSIDE GUTTER	
300mm L.D.S.	LAND DRAINAGE SEWER	300mm L.D.S.		ASPHALT			N/W PROPERTY LINE	
250mm W.W.S.	WASTEWATER SEWER	250mm W.W.S.		PROPERTY LINE			S/E PROPERTY LINE	
	MANHOLE			SURVEY BAR				
	CATCH BASIN		235.750	ELEVATION	35.750			
	CATCH PIT		500ø	TREE				
	JUNCTIONS			SIDEWALK RAMP				
	CULVERT			CONCRETE SIDEWALK				
	GAS			FENCE				
EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PROFILE	PROPOSED

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE — DATE

NOTE:
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B.M. 37 - 007 ELEV. 233.618 — SE cnr Portage & Tylehurst, Brass cap in pile, 2.35m N of chainlink fence & 0.7m E of same fence (produced from S) of St James Anglican Cemetery

NO.	REVISIONS	DATE	BY
2	ISSUED FOR RECORD	01/24/17	BC
1	ISSUED FOR CONSTRUCTION	04/13/16	BC
0	ISSUED FOR TENDER	03/16/16	BC
A	ISSUED FOR REVIEW	02/12/16	BC

AECOM

DESIGNED BY	JC/SS	CHECKED BY	BC/KWR
DRAWN BY	JC/SS	APPROVED BY	
HOR. SCALE:	1:250	RELEASED FOR CONSTRUCTION BY:	
VERTICAL:	1:10		
DATE		DATE	

ENGINEER'S SEAL
PROVINCE OF MANITOBA
K.W. RAE
REGISTERED PROFESSIONAL ENGINEER
Feb 14/17

CONSULTANT DRAWING NO.
AT-06

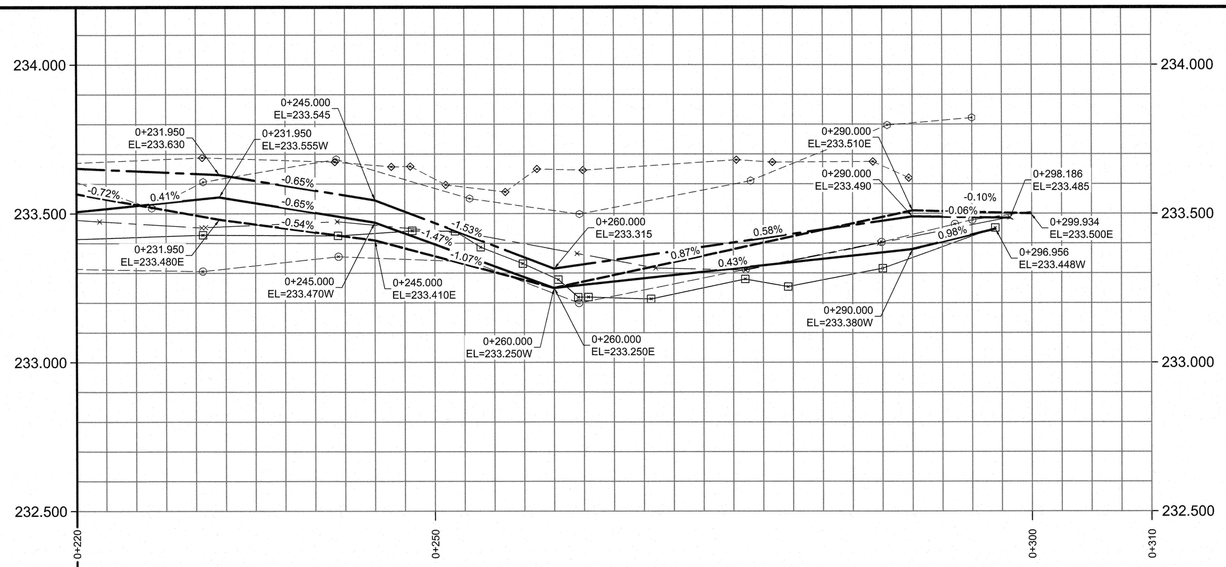
Winnipeg
THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

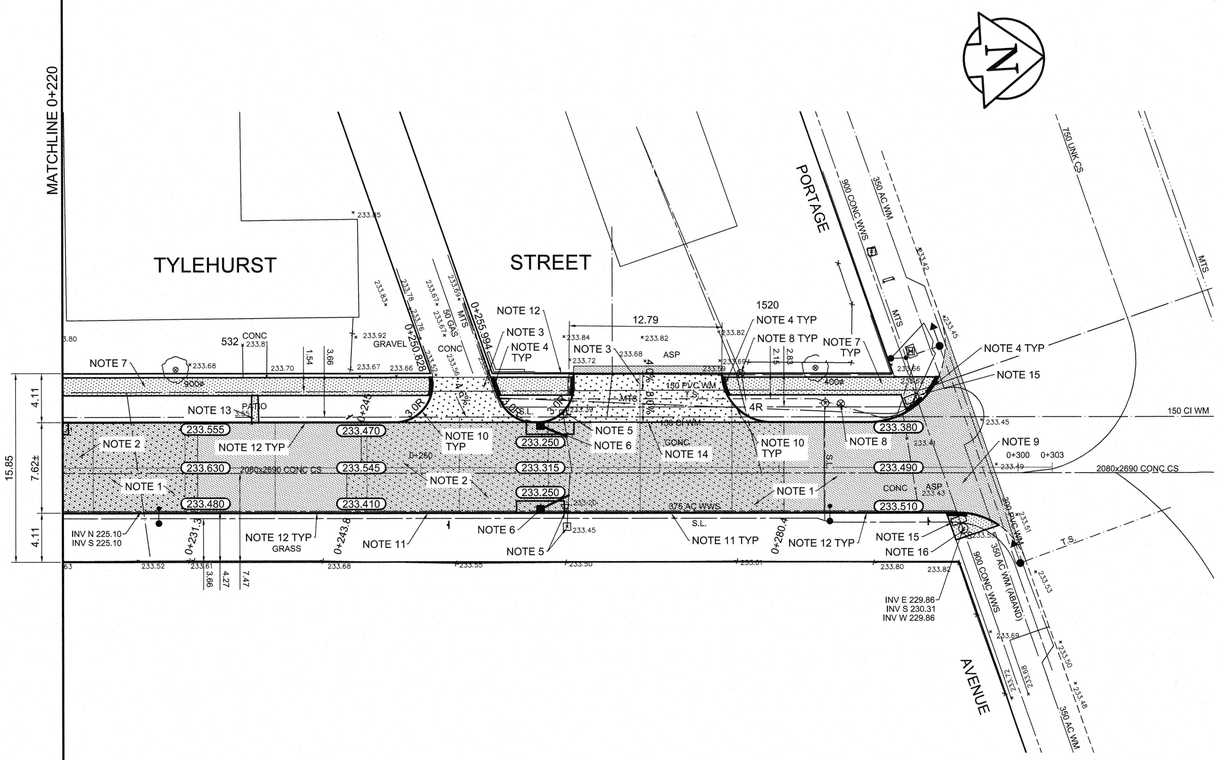
2016 LOCAL STREET RENEWAL PROGRAM

CITY DRAWING NUMBER

SHEET 06 OF 19

TYLEHURST STREET - WOLSELEY AVE WEST TO PORTAGE AVE
REHABILITATION
WOLSELEY AVENUE WEST TO STATION 0+220





MATERIALS LIST (SURFACE WORKS)	
TYPE	**MANUFACTURER**
CONCRETE	BUILDING PRODUCTS
ASPHALT	ASPHALTEC
LIMESTONE 20mm & 50mm DOWN	INLAND
GLASS GRID	GLASGRID PAVEMENT REINFORCEMENT SYSTEMS

MATERIALS LIST (UNDERGROUND)	
TYPE	**MANUFACTURER**
PVC LDS PIPE	ROYAL
TEES & BENDS	PLASTIC TRENDS
COUPLINGS	MISSION
FRAMES, COVERS & RISERS	TITAN
CATCH BASINS	LAFARGE

REFERENCE NOTES

A. PAVEMENT DIMENSIONS ARE TO BACK OF CURB
B. BASELINE IS CENTRE LINE RIGHT-OF-WAY
C. PROPERTY LINES OBTAINED FROM CITY OF WINNIPEG L.B.I.S., AND NO SCALE FACTOR WAS APPLIED
D. REFER TO AECOM FIELD BOOK NO. 4930

CONSTRUCTION NOTES

1. PLACED NEW ASPHALTIC PAVEMENT TYPE 1A (AVG. THICKNESS 85mm)
2. REMOVED EXISTING CONCRETE PAVEMENT AND CONSTRUCTED NEW 150mm REINFORCED CONCRETE PAVEMENT c/w 85mm ASPHALT OVERLAY
3. REMOVED EXISTING CONCRETE PAVEMENT AND CONSTRUCTED NEW 150mm REINFORCED CONCRETE PAVEMENT
4. CONSTRUCTED RAMP CURB (10mm HT. INTEGRAL)
5. REMOVED EXISTING CATCH BASIN
6. INSTALLED NEW CURB AND GUTTER INLET c/w CATCH BASIN (SD-024) AND CONNECTED NEW LEAD TO EXISTING LEAD
7. RENEWED EXISTING 100mm CONCRETE SIDEWALK
8. ADJUSTED EXISTING WATER VALVE TO GRADE
9. PLANED EXISTING ASPHALTIC PAVEMENT
10. CONSTRUCTED NEW MODIFIED BARRIER CURB (100mm HT. SEPARATE)
11. CONSTRUCTED NEW BARRIER CURB (100mm HT. SEPARATE)
12. CONSTRUCTED NEW BARRIER CURB (100mm HT. DOWELLED)
13. ADJUSTED EXISTING PATIO BLOCKS
14. CONSTRUCTED NEW LIP CURB (40mm HT. INTEGRAL)
15. INSTALLED DETECTABLE SURFACE WARNING TILE
16. ADJUSTED EXISTING MANHOLE/CATCH BASIN FRAME TO GRADE

APEGM
Certificate of Authorization
AECOM Canada Ltd.
No. 4671 Date: 2024/11/7

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

RECORD DRAWING

150 mm W.M.	WATERMAIN	150 mm W.M.		HYDRO			℄ PROFILE	
◇	HYDRANT	✦		M.T.S.			OUTSIDE GUTTER	
⊗	VALVE	⊗		CONCRETE			INSIDE GUTTER	
300mm L.D.S.	LAND DRAINAGE SEWER	300mm L.D.S.		ASPHALT		◇	N/W PROPERTY LINE	
250mm W.W.S.	WASTEWATER SEWER	250mm W.W.S.		PROPERTY LINE		⊙	S/E PROPERTY LINE	
○	MANHOLE	●	⊕	SURVEY BAR				
□	CATCH BASIN	■	235.750	ELEVATION	35.750			
▽	CATCH PIT	▼	500ø	TREE				
	JUNCTIONS			SIDEWALK RAMP				
	CULVERT			CONCRETE SIDEWALK				
	GAS			FENCE				
EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PROFILE	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. 37 - 007 SE cnr Portage & Tylehurst. Brass cap in pile, 2.35m N of chainlink fence & 0.7m E of same fence
ELEV. 233.618 (produced from S) of St James Anglican Cemetery

NO.	REVISIONS	DATE	BY
2	ISSUED FOR RECORD	01/24/17	BC
1	ISSUED FOR CONSTRUCTION	04/13/16	BC
0	ISSUED FOR TENDER	03/16/16	BC
A	ISSUED FOR REVIEW	02/12/16	BC

AECOM

DESIGNED BY	JC/SS	CHECKED BY	BC/KWR
DRAWN BY	JC/SS	APPROVED BY	
HOR. SCALE:	1:250	RELEASED FOR CONSTRUCTION BY:	
VERTICAL:	1:10		
DATE		DATE	

ENGINEER'S SEAL
PROVINCE OF MANITOBA
K.W. RAE
REGISTERED PROFESSIONAL ENGINEER
2024/11/7

CONSULTANT DRAWING NO.
AT-07

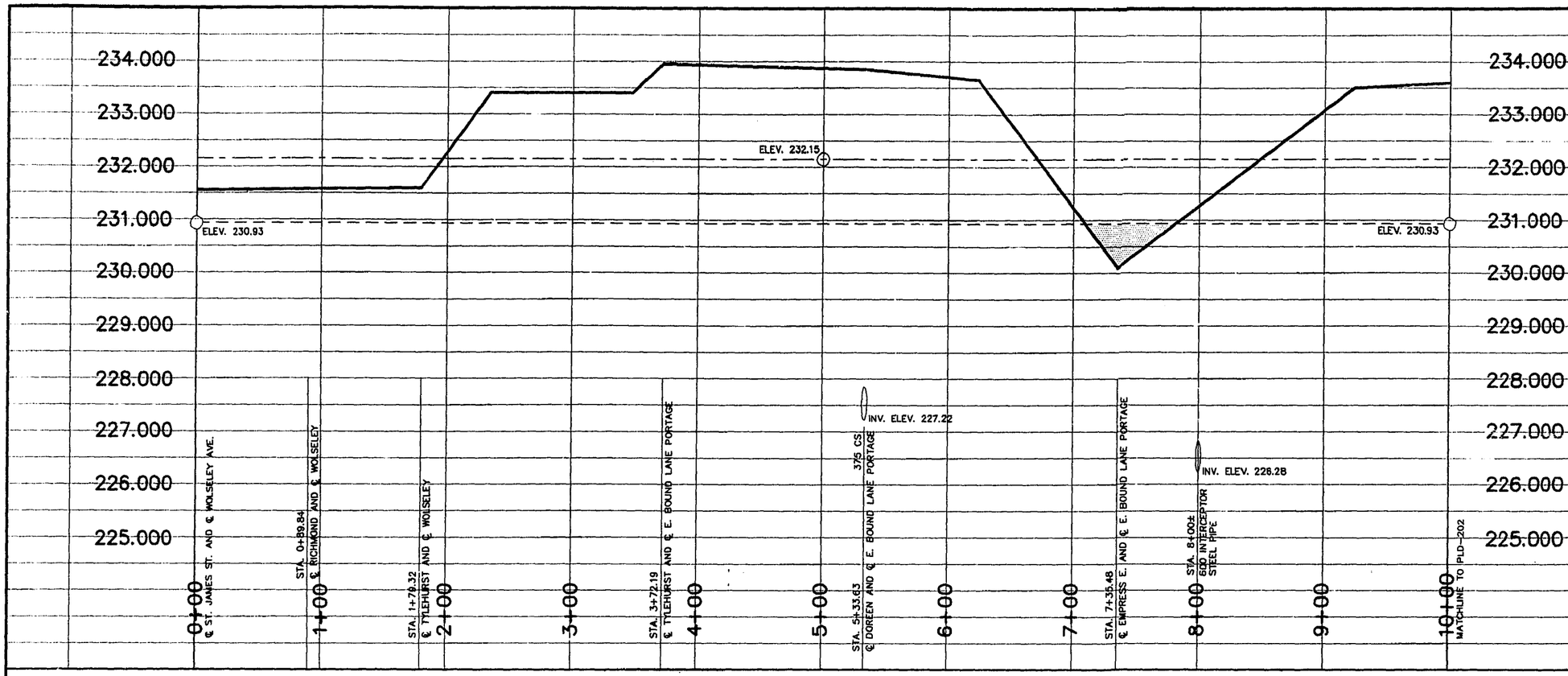
Winnipeg
THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

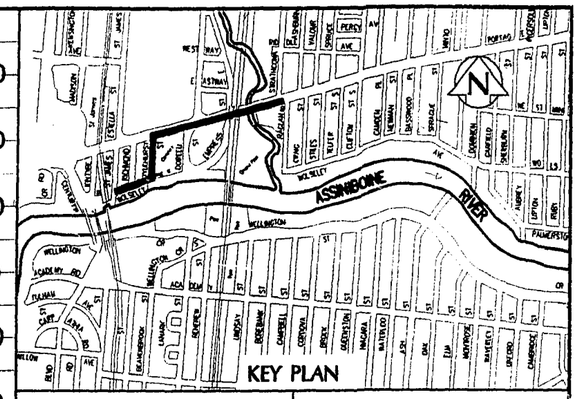
2016 LOCAL STREET RENEWAL PROGRAM

CITY DRAWING NUMBER

SHEET 07 OF 19

TYLEHURST STREET- WOLSELEY AVENUE WEST TO PORTAGE AVENUE
REHABILITATION
STATION 0+220 TO PORTAGE AVENUE





LEGEND—PROFILE	SYMBOL
PRIMARY DYKE LEVEL (PDL)	
FLOOD PROTECTION LEVEL (FPL)	
PLD DYKE	
DEFICIENCIES BELOW FPL	

LEGEND—PLAN	SYMBOL
MANHOLE	
CATCHBASIN	
CURB INLET	
SEWERS (COMBINED, FORCEMAIN, LAND DRAINAGE, STORM RELIEF AND WASTEWATER)	

FLOOD PROTECTION LEVEL	229.94
RIVER CROSS SECTION NO.	108
RIM ELEVATION	231.2

VOLUME OF "COMPACTED" MATERIAL REQUIRED TO RAISE PRIMARY DYKE TO THE FOLLOWING JAMES AVE. STAGES. THE VOLUMES ARE CUMULATIVE AND CALCULATED USING 2:1 SIDESLOPES

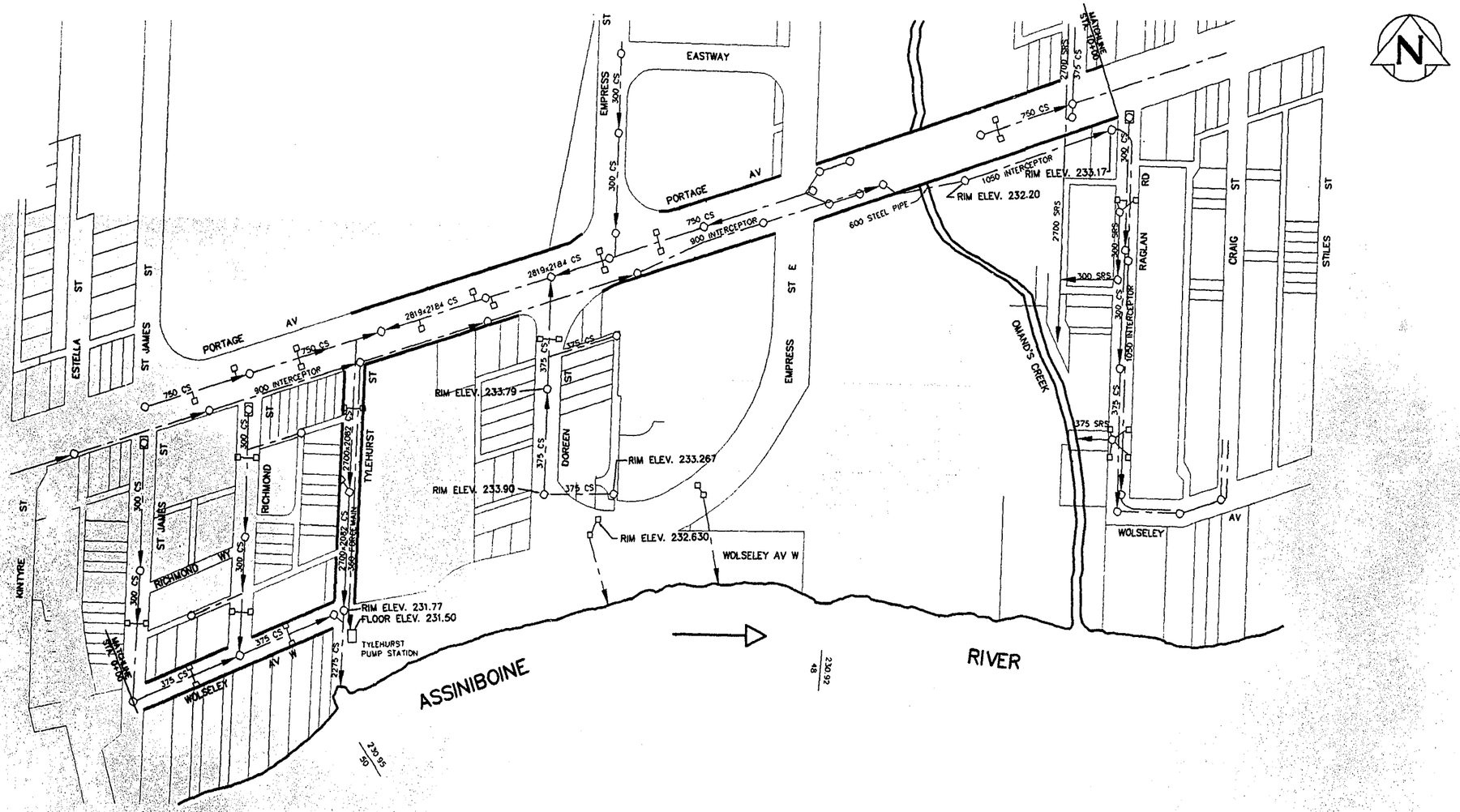
	JAMES' STAGE (ft.)	GEODETIC ELEVATION (m)	CUMULATIVE VOLUME (m3)
PDL	31.83	232.15	1760
	31.00	231.90	1330
	30.00	231.59	770
	29.00	231.29	510
	28.00	230.98	310
FPL	27.67	230.93	270
	27.00	230.68	140
	26.00	230.37	10
	25.00	230.07	0
	24.00	229.76	0
	23.00	229.46	0
	22.00	229.15	0
	21.00	228.85	0
	20.00	228.54	0

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZIED NUMBERS INDICATE METRES

NOTES:
1. DOES NOT NECESSARILY REPRESENT UP-TO-DATE AND/OR COMPLETELY ACCURATE AS-BUILT INFORMATION
2. ALL CHAINAGES ARE ALONG CENTRE LINE OF RIGHT-OF-WAY
3. USE THE FOLLOWING SCALES FOR THE APPROPRIATE DRAWING SIZE

	"A1" SIZE	"C" SIZE
HORIZONTAL	1:2000	1:3000
VERTICAL	1:50	1:75



NO.	REVISIONS	DATE	BY

THE CITY OF WINNIPEG
WATER AND WASTE DEPARMENT

PRIMARY LINE OF DEFENCE SERIES 200

ON WOLSELEY, TYLEHURST, AND PORTAGE AVE.
FROM ℄ OF ST. JAMES AT WOLSELEY AVE. TO RAGLAN ST.

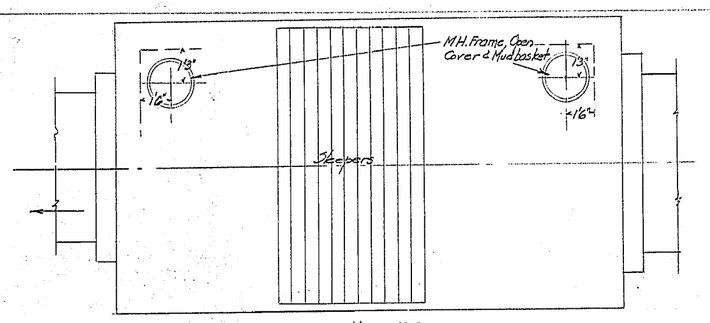
NOTE :
ALL SURVEY BASED ON THE LATEST CITY OF WINNIPEG GEODETIC BENCHMARK DATUM, AVAILABLE AT THE TIME.

CAD VERSION: AUTOCAD 14
CAD FILE: PLD-201.DWG

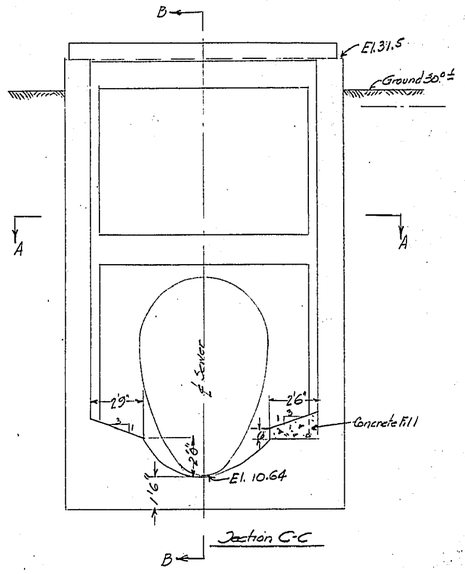
ENGINEER'S SEAL
PROVINCE OF MANITOBA
D.D. McNEIL
Aug 2/00
REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY	A.E.D.
DRAWN BY	W.K.T.
CHECKED BY	K.M.D.
HOR. SCALE	SEE NOTE #3
VERTICAL	ABOVE
DATE	2000 03 31

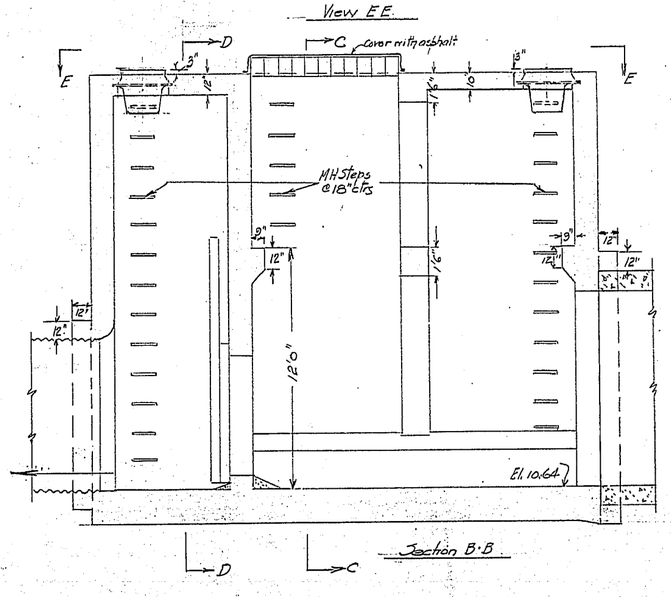
PLOT DATE: 2000 03 31
SHEET 1 OF 8
CITY DRAWING NUMBER
PLD-201



View E-E



Section C-C



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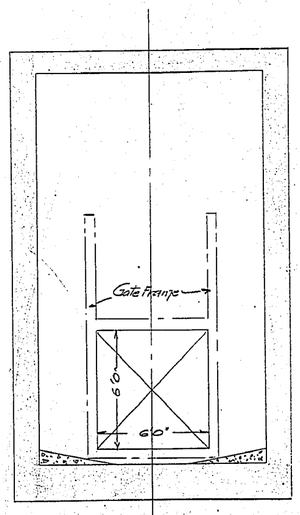

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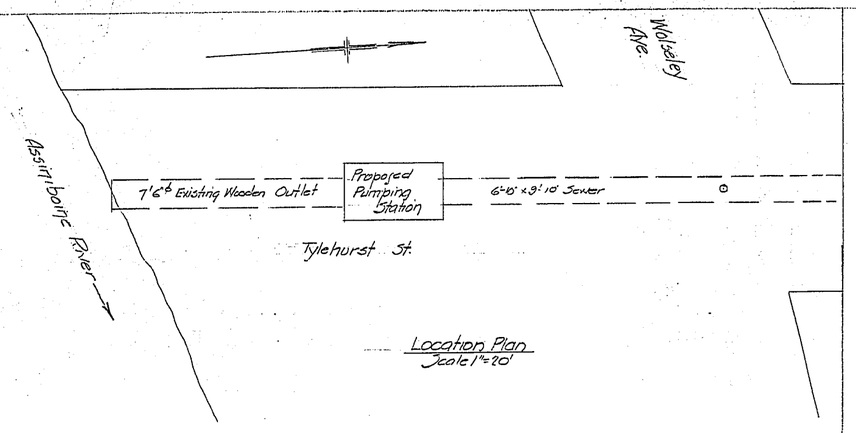
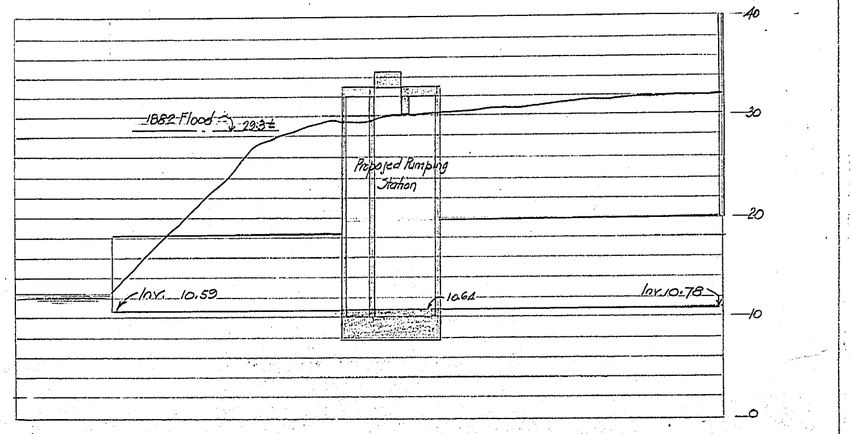
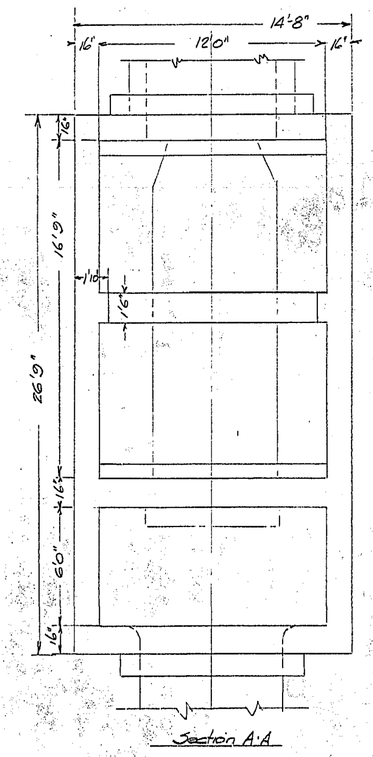


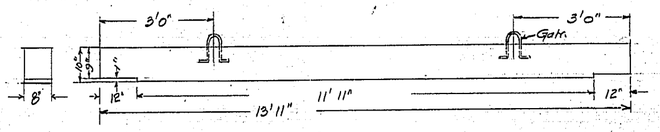
Location Plan
Scale 1"=20'



Profile
Hor. Scale 1"=20'
Ver. Scale 1"=4'



Section A-A



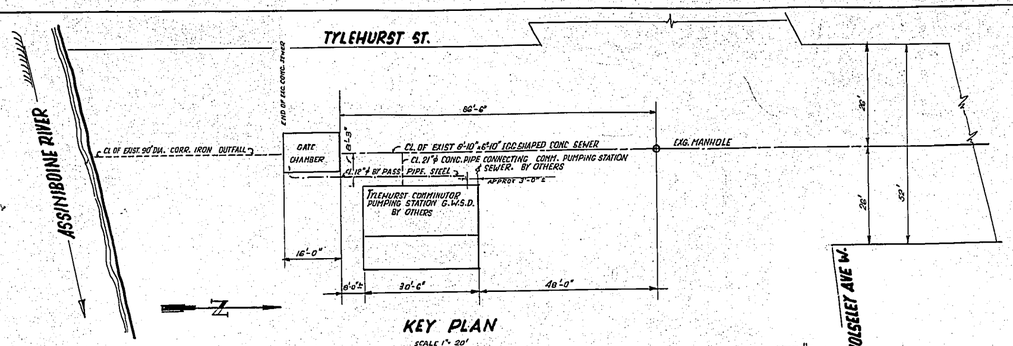
Sleepers:
11 required - Scale ½"=1 foot

Future pumps 1-25cfs & 1-35cfs

Shop drawing of details. Otto Simonsen

Pumping Station Tylehurst Street	CITY OF WINNIPEG ENGINEERING DEPARTMENT W. D. HURST, CITY ENGINEER [illegible], DEPUTY CITY ENGINEER	DRAWN BY ..... DATE Oct 9/1951 SCALE 1/4"=1 foot TRACED BY ..... CHECKED BY ..... APPROVED 687-A

R-127

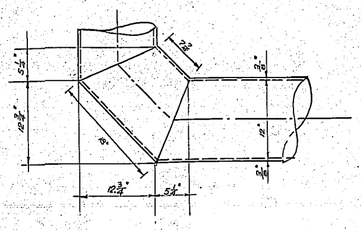


NOTES

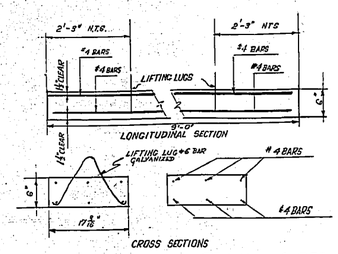
GATES WILL BE SUPPLIED BY OTHERS AND GENERAL CONTRACTOR WILL INSTALL GATES UNDER THE SUPPLIERS SUPERVISION

EXISTING CONCRETE

CONCRETE

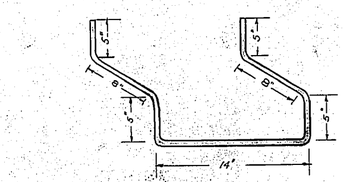


DETAILS OF BY PASS PIPE ELBOWS 2 REQ.
SCALE 1"=1'-0"

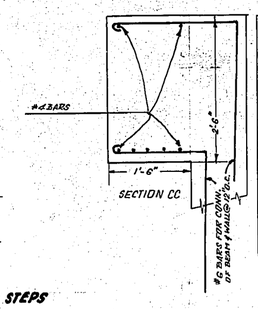


DETAILS OF SLEEPERS 4 REQ
SCALE ¾"=1'-0"

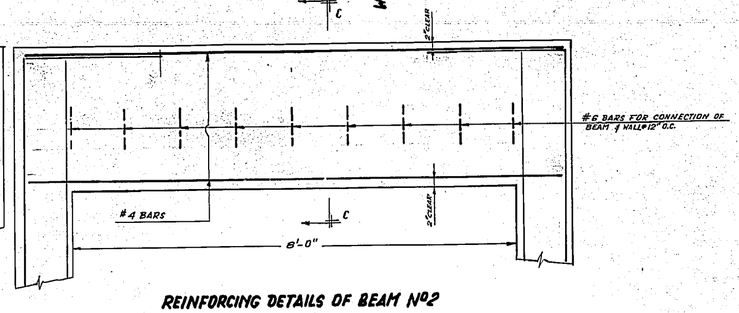
HORIZONTAL & VERTICAL ELBOWS ARE IDENTICAL



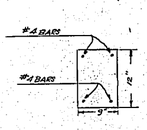
DETAILS OF GALVANIZED MH STEPS
NOT TO SCALE
MATERIAL: ½" REINFORCING BAR DEFORMED & GALVANIZED



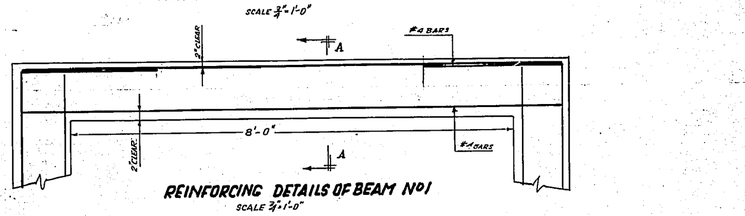
SECTION CC



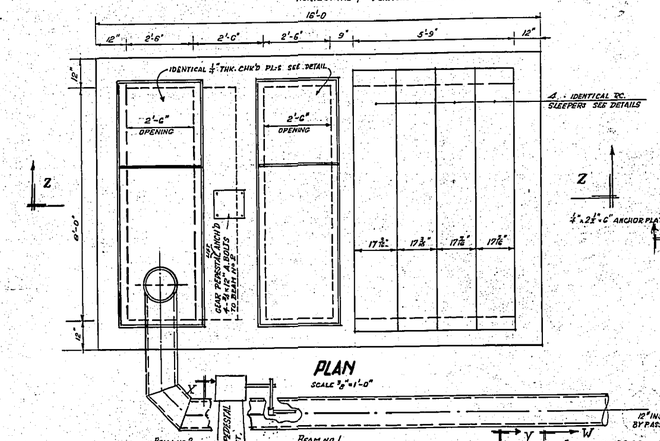
REINFORCING DETAILS OF BEAM NO 2
SCALE ¾"=1'-0"

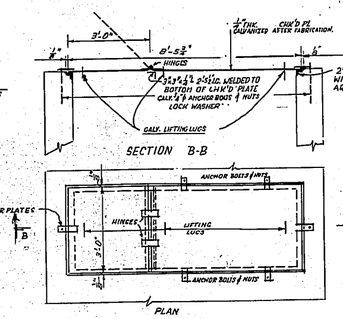


SECTION AA

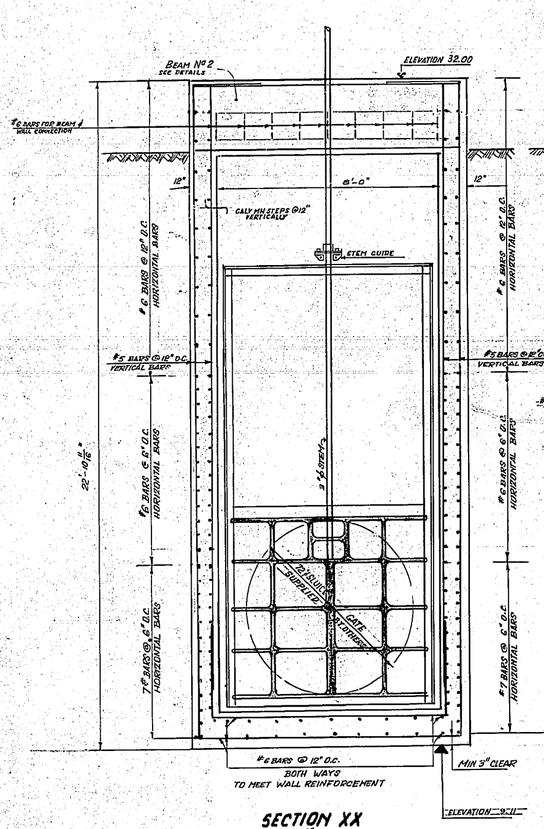


REINFORCING DETAILS OF BEAM NO 1
SCALE ¾"=1'-0"

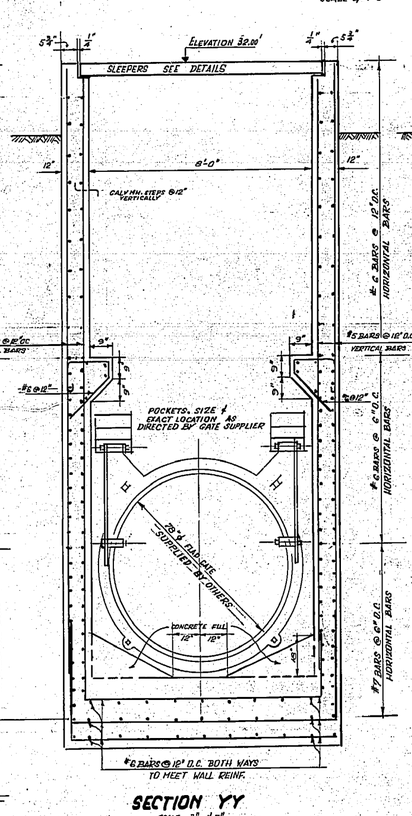




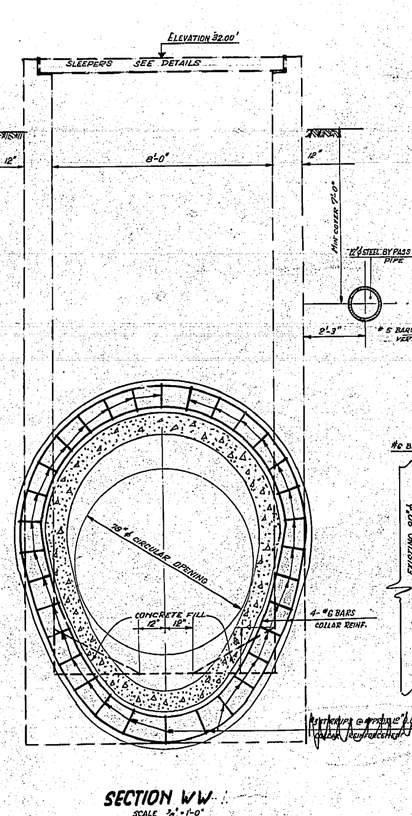
DETAIL OF FLOOR PLATES 2 REQ
SCALE ¾"=1'-0"



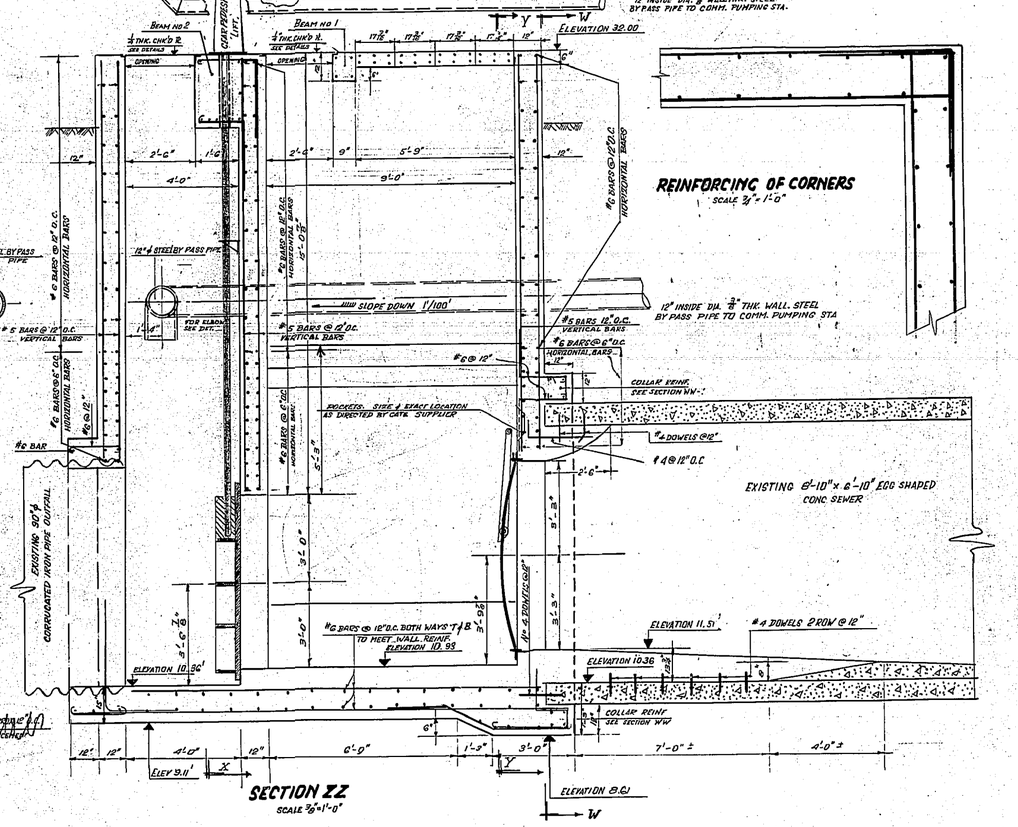
SECTION XX
SCALE ¾"=1'-0"



SECTION YY
SCALE ¾"=1'-0"

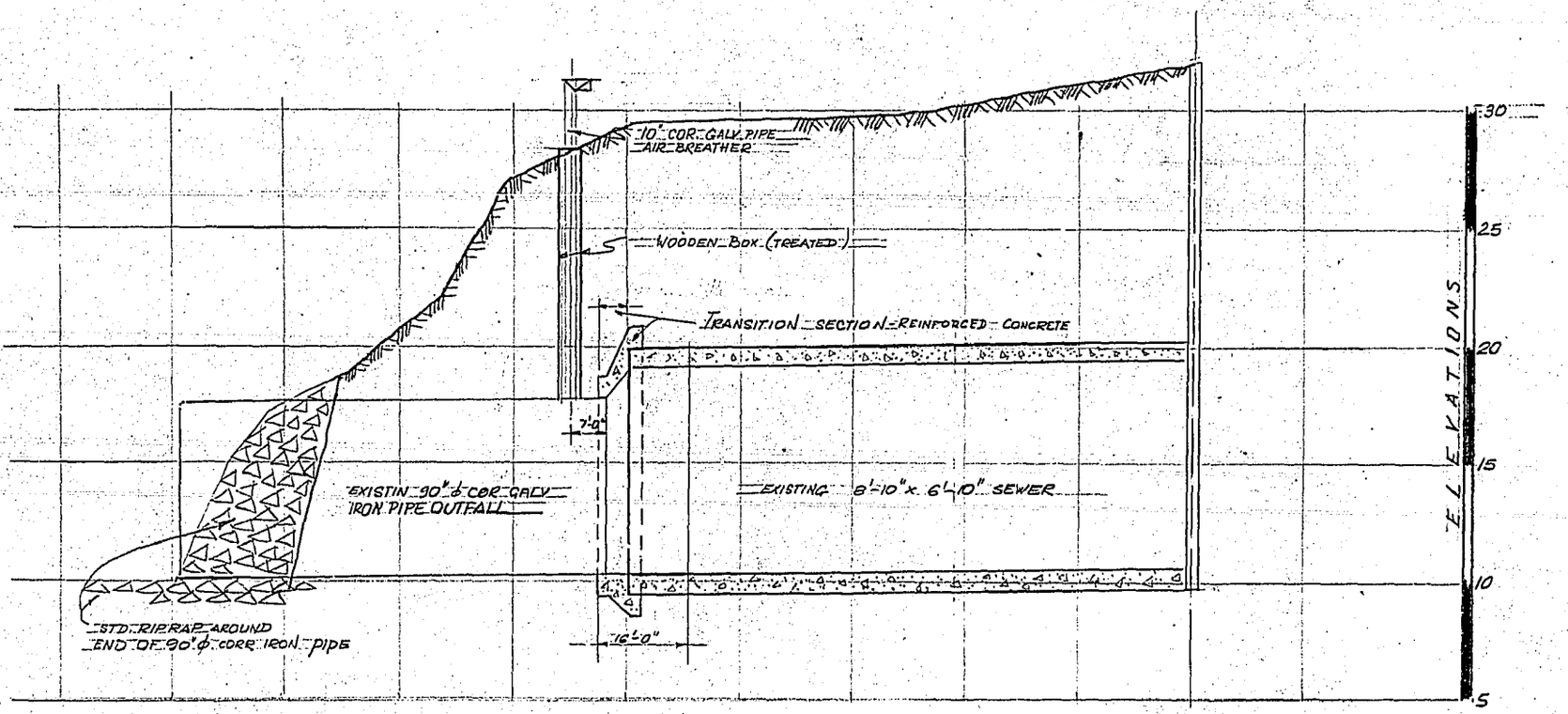


SECTION WW
SCALE ¾"=1'-0"
SHOWING COLLAR REINF



SECTION ZZ
SCALE ¾"=1'-0"

TYLEHURST GATE CHAMBER	CITY OF WINNIPEG ENGINEERING DEPARTMENT W. D. HURST, CITY ENGINEER J. B. STRICKLAND, DEPUTY CITY ENGINEER	DRAWN BY A.S.T. DATE FEBR 11 TRACED BY A.S.T. FEBR 11 CHECKED BY [illegible] APPROVED BY [illegible]	SCALE AS NOTED DRAW. R.216



PROFILE SHOWING EXISTING TYLEHURST SEWER AT OUTFALL. SHADED PORTION TO BE REMOVED FOR INSTALLATION OF GATE CHAMBER.

SCALE: HORIZONTAL 1" = 20'-0"
VERTICAL 1" = 5'-0"

FOR KEY PLAN & CONSTR. DETAILS OF GATE CHAMBER SEE DWG Nº R. 216.

12 Feb 59
Not Used
J.W.S.

TYLEHURST TRUNK SEWER OUTFALL SECTION TO BE REMOVED FOR GATE CHAMBER	CITY OF WINNIPEG ENGINEERING DEPARTMENT W. D. HURST, CITY ENGINEER J. B. STRYKOWSKI, DEPUTY CITY ENGINEER	DRAWN BY A.S.T. DATE JAN. 27/59 TRACED BY CHECKED BY J.W.S. 6 Feb 59 APPROVED BY	SCALE AS NOTED DRAWING NO. R.216.-1

8·97 EDGE OF ICE
10.66
12.36
26.66
28.96
28.86
31.26
32.86
37.26
39.26
38.76

WOLSELEY ~~KELLER~~ AVE

TYLEHURST CENTRE ST

7·6" DIA WOOD

8·10 x 6 10' CON SEWER

INV 10·57

ICE LEVEL 8·97

INV·10·69

GRADE ·077 PER 100

INV·10·95

8 7 6 5 4 3

HOR 40'
SCALES VER 8' = 1 INCH.

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 LOCATIONS OF ALL UNDERGROUND INCLUDING SERVICE CONNECTIONS MUST BE CHECKED WITH THE UTILITY CONCERNED BEFORE PROCEEDING WITH 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 LOCATIONS OF ALL UNDERGROUND INCLUDING SERVICE CONNECTIONS MUST BE CHECKED WITH THE UTILITY CONCERNED BEFORE PROCEEDING WITH CONSTRUCTION.

26746
31706
66663
26804 Cut off Nov 21/60
27101
66073
27360 Cut off June 25/60

ASSINIBOINE RIVER

19 WOLSELEY AVE 60' 21 TYLEHURST CENTRE 110'0" 16' LANE 20 19 18 17 16 15 14 13 STREET

Hydrant 54

32.5 25 25

163.5 25 55.5 75 102 128 153.5 183 211 256 272 55.2 308 331 341.8

PAGE 128

102 72 25 55.5 75 102 128 153.5 183 211 256 272 308 331

33604