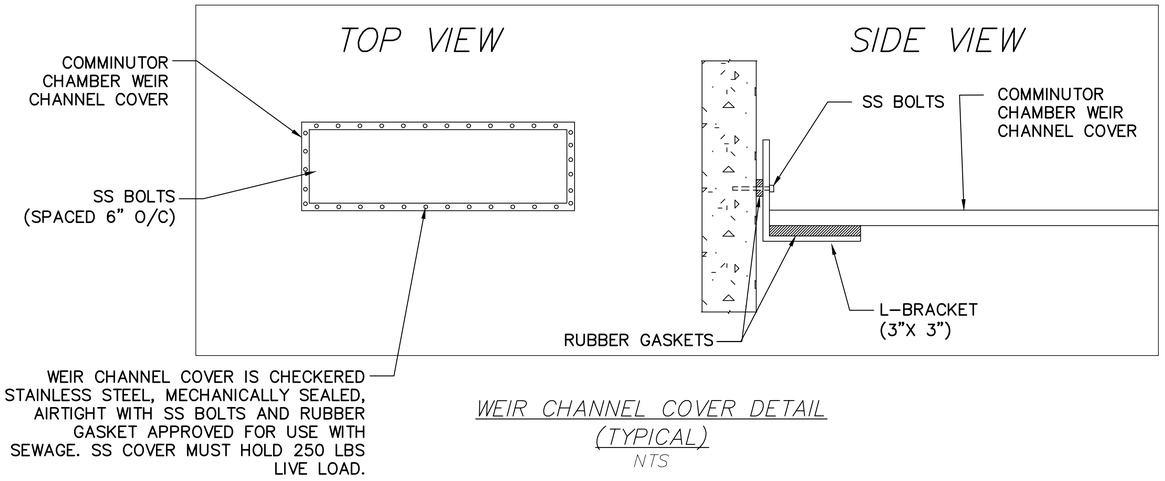


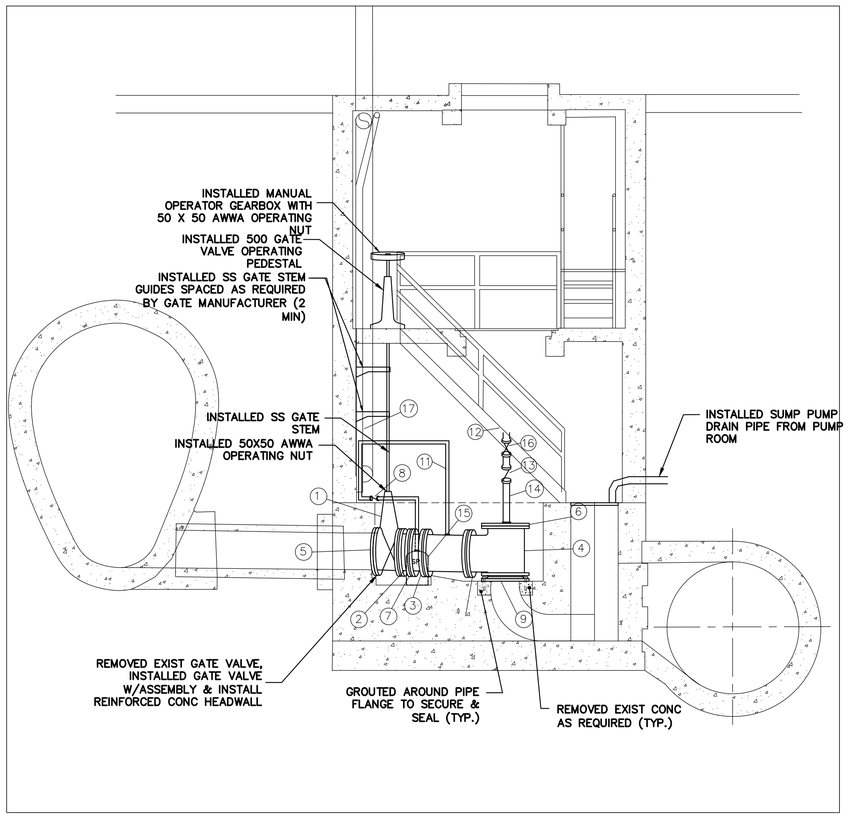
WEIR CHANNEL COVER DETAIL
(TYPICAL)
NTS

MATERIALS							
SEWER							
ITEM	DESCRIPTION	MATERIAL	MANUFACTURER	END	LENGTH	QUANTITY	TYPE
1	500ø VALVE/ASSEMBLY			FL		1	NON RISING STEM
2	500ø PIPE	CAST IRON		FL+PE		1	
3	500ø BEND	CAST IRON		FL		1	22.5°
4	500ø TEE	CAST IRON		FL		1	
5	500ø FLANGED WALL THIMBLE	DI				2	
6	500ø BLIND FLANGE	DI				2	
7	500ø UNI-FLANGE	DI				1	
8	500ø UNI-FLANGE					1	
9	500-375 REDUCER					1	
10	38ø CHECK VALVE					1	
11	38ø PIPE	ABS				1	
12	75ø ONE WAY AIR VALVE					1	
13	75ø CHECK VALVE					1	
14	75ø PIPE	ABS				1	
15	SUMP PUMP					1	
16	75ø GATE VALVE					1	110V, MIN 1/3 HP
17	38ø ONE WAY AIR VALVE					1	
18	ALUMINUM DIAMOND PLATE					1	
CONTRACTOR: ROCKY ROAD RECYCLING							

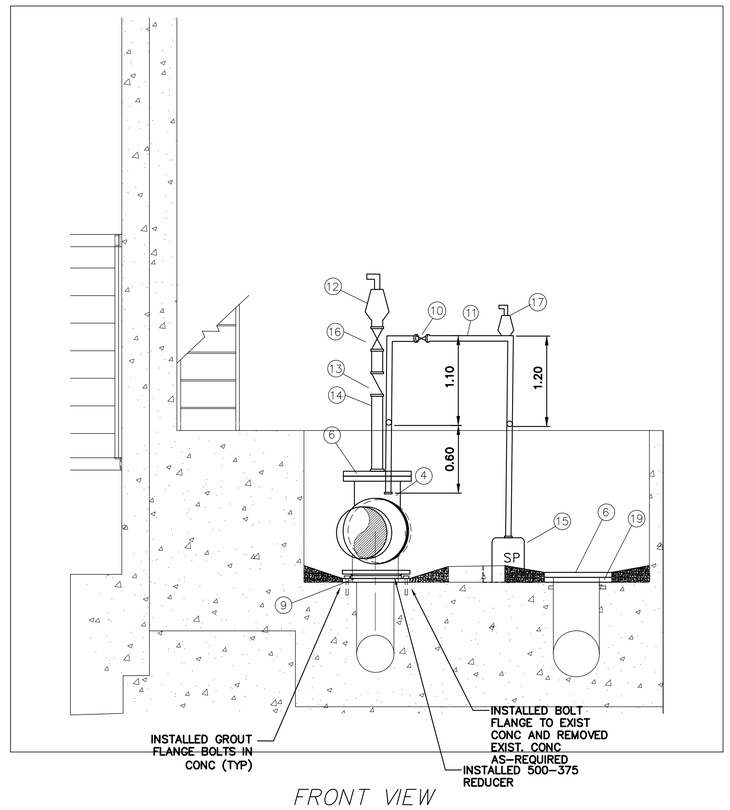
NOTE:
- LENGTHS & DIMENSIONS SHOWN AS ± CONFIRMED BY CONTRACTOR
- * ITEMS SUPPLIED BY CITY
- CONTRACTOR SUPPLIED CABLES & CONDUIT FROM SUMP PUMPS TO ELECTRICAL OUTLETS IN COMMINUTOR ROOM
- VALVE PEDESTAL OPERATORS HAVE POSITION INDICATORS.

CONSTRUCTION NOTES:

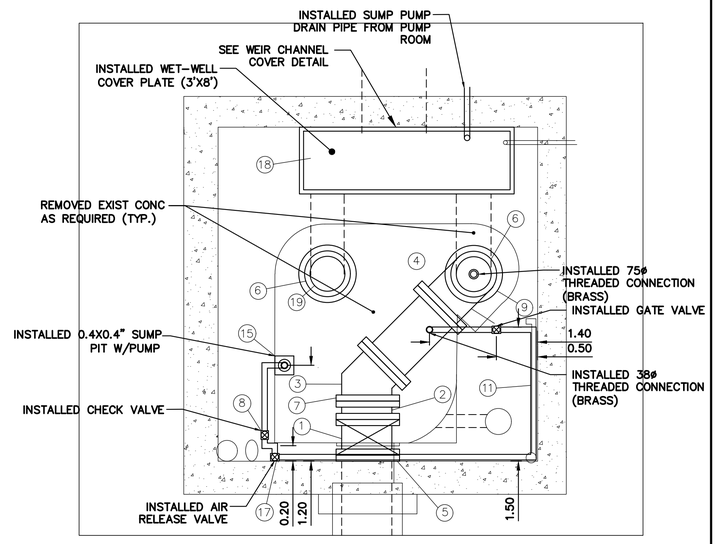
1. ALLOWABLE SHUTDOWN TIME: MAX. 2.5 HRS OR AS DETERMINED BY COLLECTIONS STAFF
2. CRITICAL BASEMENT ELEVATION: 224.414
3. REMOVED EXISTING CONCRETE PIPING, VALVES, FITTINGS, AND OTHER MATERIALS AS REQUIRED. INSTALLED NEW PUMPS, MOTORS, PIPING, VALVES AND FITTINGS AS SHOWN.
4. PROVIDED TEMPORARY BY-PASS PUMPING OF WASTEWATER DURING CONSTRUCTION.
5. INSTALLED MECHANICAL WORKS AS INDICATED AND ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
6. EXCAVATIONS BACKFILLED WITH CLASS 3 OR CLASS 5 BACKFILL 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.
11. PARGING WAS USED WHEN THE FLANGE WAS INSTALLED TO DIVERT THE EXCESS DRAINAGE.



SIDE VIEW
NTS



FRONT VIEW
NTS



TOP VIEW
NTS

FOR INDEX SEE
1-0110A-D0001-001

RECORD DRAWING
WATER AND WASTE DEPARTMENT

CONSTRUCTION COMPLETION
DATE: 17/03/31

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 DRAWING	18/06/05	RS

DESIGNED BY	NC	CHECKED BY	NC
DRAWN BY	RS	APPROVED BY	NC
SCALE: HORIZONTAL	NTS	RELEASED FOR CONSTRUCTION	
VERTICAL	NTS		
DATE	2019 08 14	DATE	

PLOT DATE: 2019 08 14

ENGINEER'S SEAL
ORIGINAL MYLAR SIGNED BY S.R.J. COURNOYER 19/08/07

CONSULTANT DRAWING NUMBER
–

BID OPPORTUNITY: 854-2016

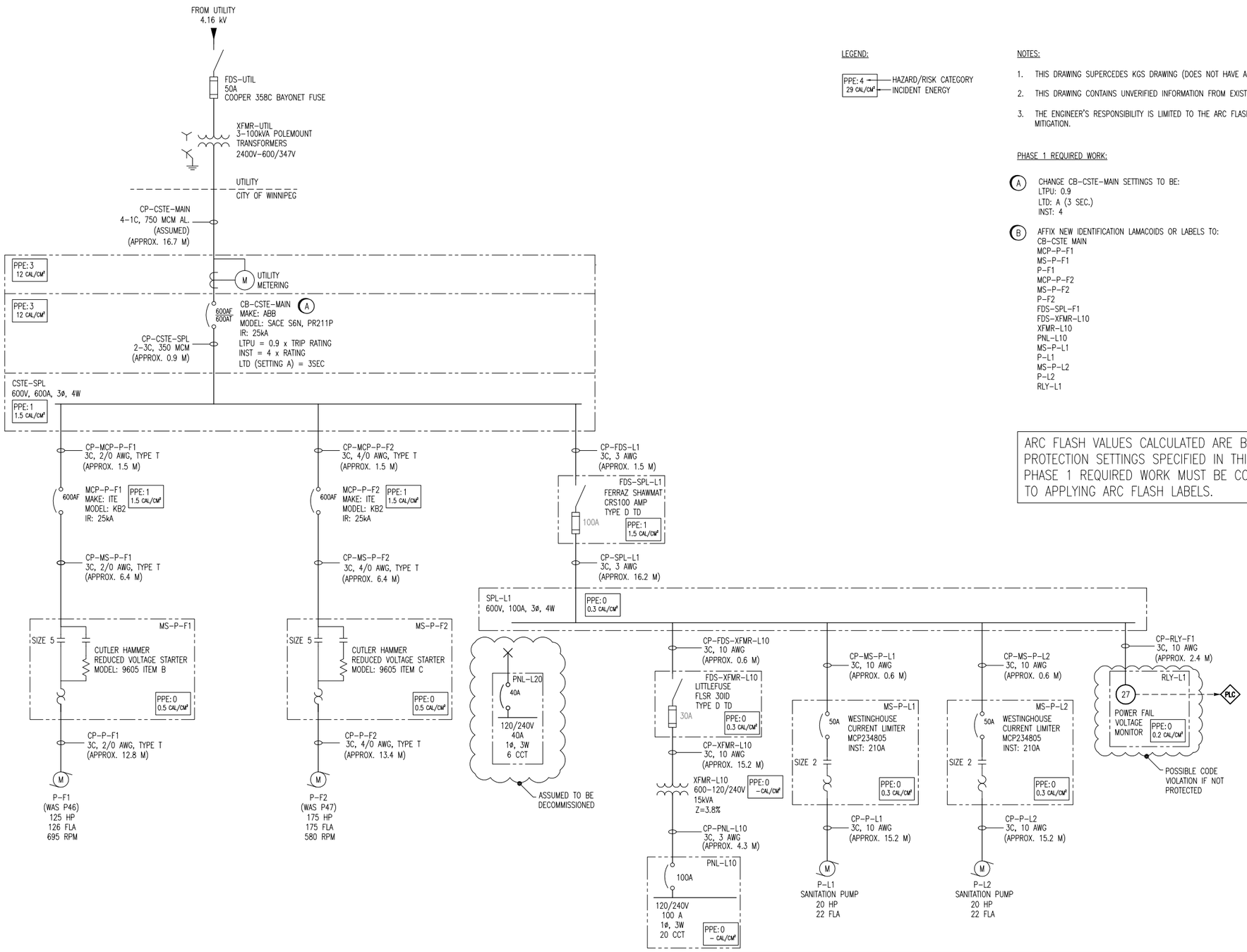
Winnipeg
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

2016 COMMINUTOR CHAMBER PIPING & VALVE UPGRADES
LINDEN LIFT STATION
LINDEN AVENUE @ KILDONAN DRIVE

SHEET 6 OF 8
CITY DRAWING NUMBER
1-0155L-M0001-001

FILE PATH: R:\DRAWINGS\SEWER\
FILE NAME: 1-0155L-M0001-001.dwg

A1 SIZE – 594mm x 841mm



LEGEND:

PPE: 4 — HAZARD/RISK CATEGORY
29 CAL/CM² — INCIDENT ENERGY

NOTES:

1. THIS DRAWING SUPERCEDES KGS DRAWING (DOES NOT HAVE A NUMBER).
2. THIS DRAWING CONTAINS UNVERIFIED INFORMATION FROM EXISTING DOCUMENTATION.
3. THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE ARC FLASH STUDY AND RECOMMENDED MITIGATION.

PHASE 1 REQUIRED WORK:

(A) CHANGE CB-CSTE-MAIN SETTINGS TO BE:
LTPU: 0.9
LTD: A (3 SEC.)
INST: 4

(B) AFFIX NEW IDENTIFICATION LAMACOIDS OR LABELS TO:
CB-CSTE MAIN
MCP-P-F1
MS-P-F1
P-F1
MCP-P-F2
MS-P-F2
P-F2
FDS-SPL-F1
FDS-XFMR-L10
XFMR-L10
PNL-L10
MS-P-L1
P-L1
MS-P-L2
P-L2
RLY-L1

ARC FLASH VALUES CALCULATED ARE BASED ON THE PROTECTION SETTINGS SPECIFIED IN THIS DRAWING. ALL PHASE 1 REQUIRED WORK MUST BE COMPLETED PRIOR TO APPLYING ARC FLASH LABELS.

APEGM
Certificate of Authorization
SNC-Lavalin Inc.
No. 4489

NO.	REVISIONS	DATE	DESIGN	CHECK
00	ISSUED FOR CITY USE	2010/09/03	DR	TC

SNC·LAVALIN
SNC-LAVALIN INC.
148 Nature Park Way
Winnipeg, MB, Canada R3P 0X7
204-786-8080

DESIGNED BY: D. RAMJEET	CHECKED BY: T. CHURCH
DRAWN BY: D. RAMJEET	APPROVED BY: C. REIMER
SCALE: NTS	RELEASED FOR CONSTRUCTION BY:
DATE: 2010/09/03	DATE:
CONSULTANT NO.:	

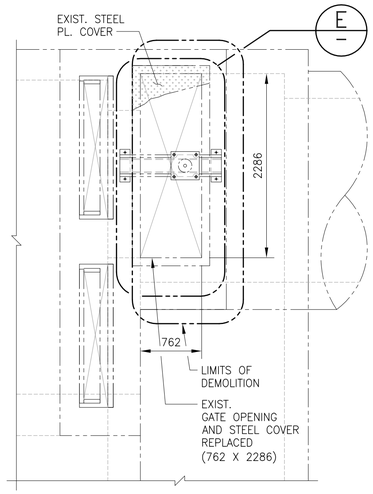
ENGINEER'S SEAL

ORIGINAL DRAWING
SEALED BY:
C.J. REIMER
SNC-LAVALIN
Member No. 21968
2010/09/07
Rev. 00

Winnipeg
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

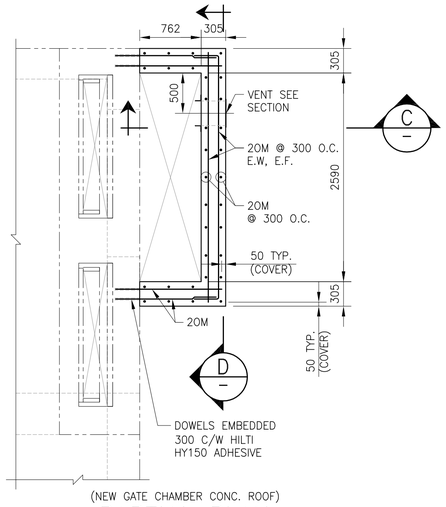
LINDEN FLOOD PUMPING AND WASTEWATER LIFT STATIONS
ARC FLASH STUDY
SINGLE LINE DIAGRAM

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0155A-E0001	001	00	A1



PLAN – EL. 231.25

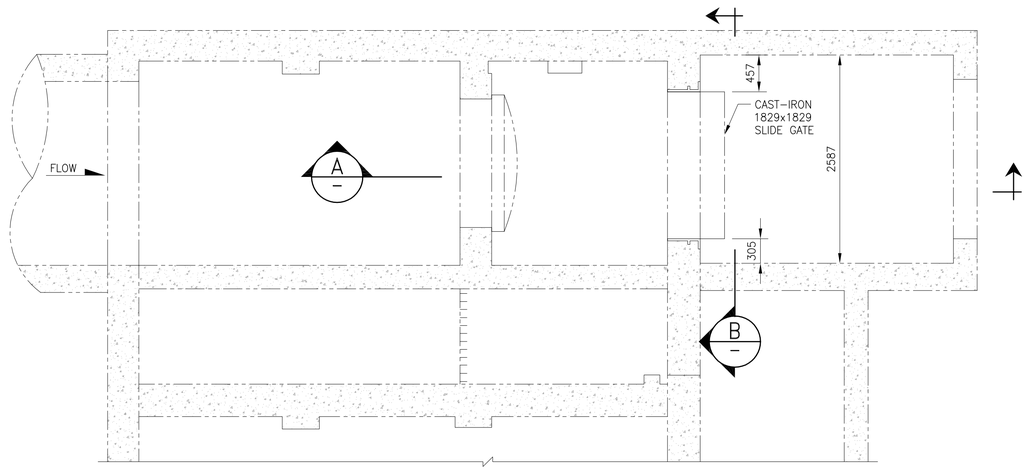
SCALE: 1:40



(NEW GATE CHAMBER CONC. ROOF)

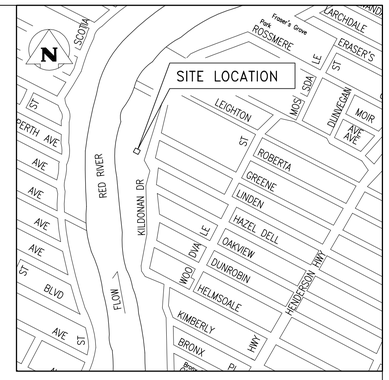
PARTIAL PLAN

SCALE: 1:40



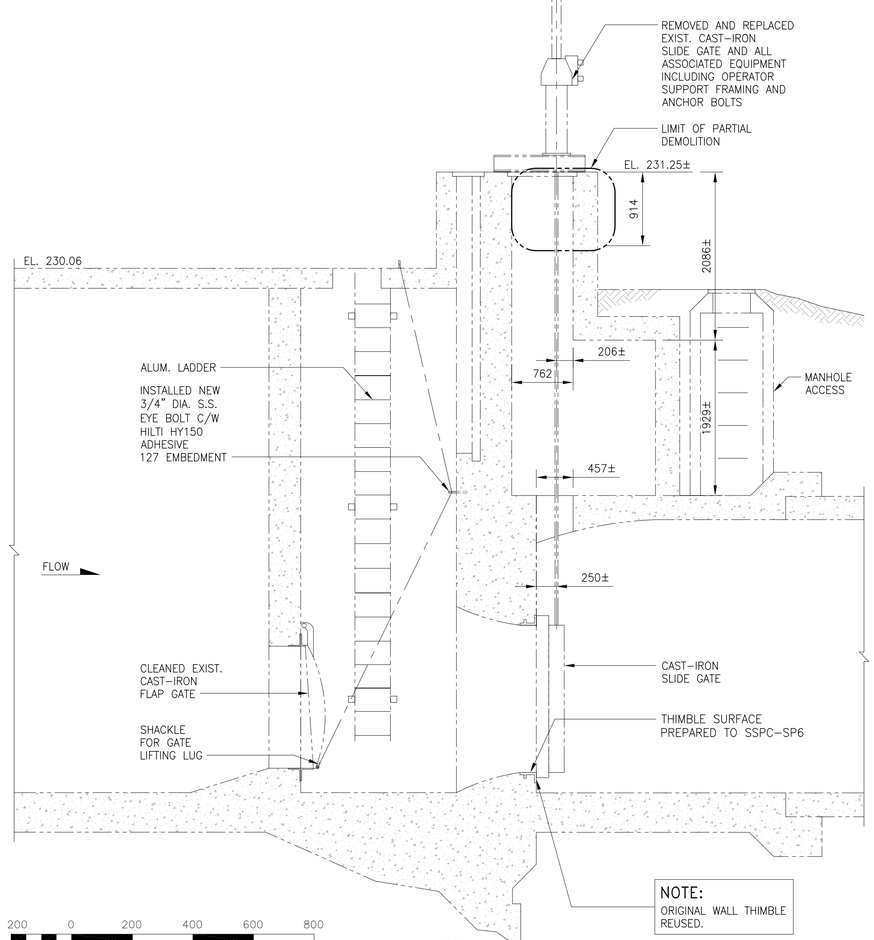
PLAN – GATE CHAMBER FLOOR

SCALE: 1:40



SITE PLAN

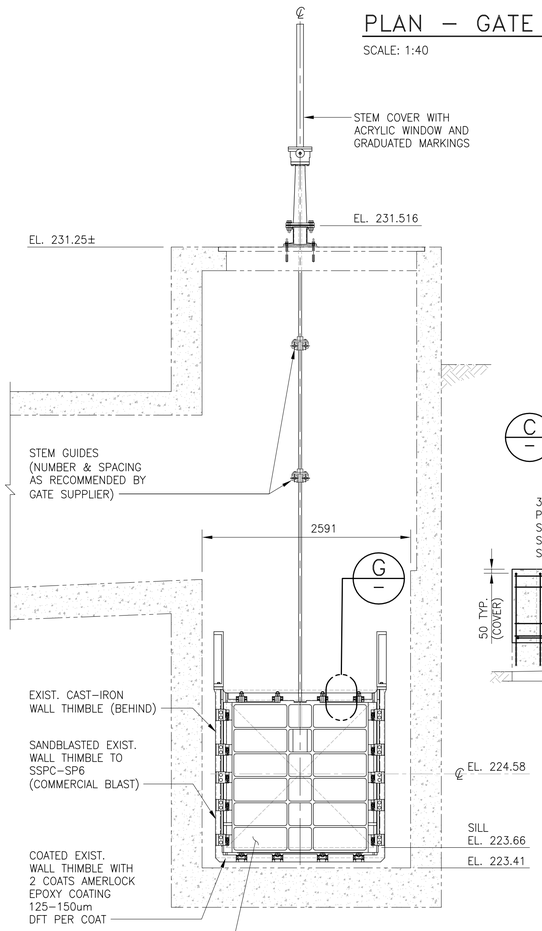
N.T.S.



NOTE:
ORIGINAL WALL THIMBLE REUSED.

A SECTION

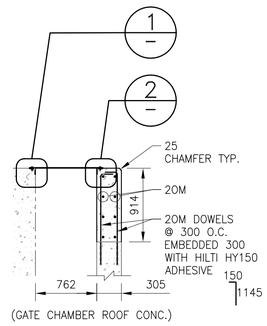
SCALE: 1:40



CAST IRON SLIDE GATE:
(DESIGNED BY GATE SUPPLIER)
SIZE: 1829 X 1829 (72" X 72")
SEATING HEAD: 6.54m (21.4 ft)

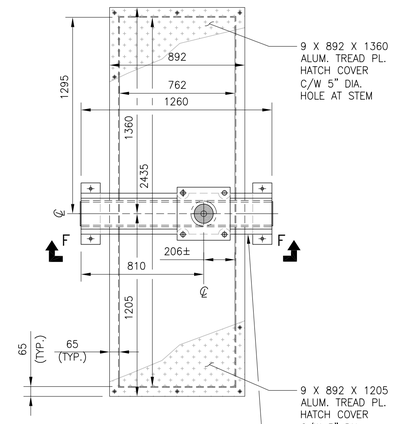
B SECTION

SCALE: 1:40



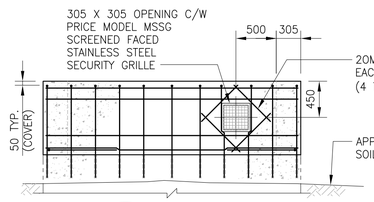
C PARTIAL SECTION

SCALE: 1:40



E DETAIL

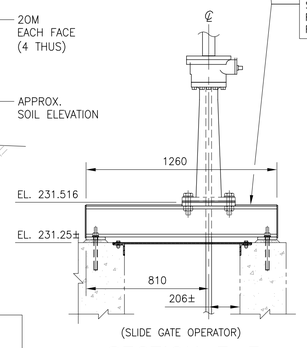
SCALE: 1:20



D SECTION

SCALE: 1:40

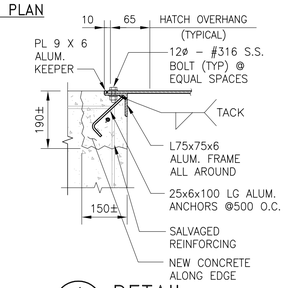
OPERATOR SUPPORT STEEL DESIGNED BY SLIDE GATE SUPPLIER REFER TO SHOP DWGS. FOR DETAILS.



(SLIDE GATE OPERATOR)

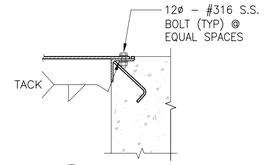
SECTION F–F

SCALE: 1:20



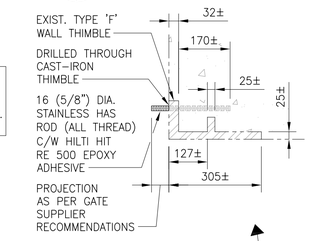
1 DETAIL

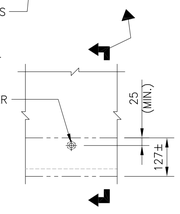
SCALE: 1:10



2 DETAIL

SCALE: 1:10





(TYPICAL ANCHOR BOLT DETAIL)

G DETAIL

SCALE: 1:10

NOTES:

1. ALUMINUM IN ACCORDANCE WITH CAN/CSA S517 (LATEST).
2. ALL ALUMINUM IN CONTACT WITH CONCRETE OR CAST INTO CONCRETE PAINTED WITH A BITUMINOUS ISOLATION COATING.

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

200 0 200 400 600 800
SCALE: 1:10 METRIC (A1)
1:20 METRIC (A3)

800 0 800 1600 2400 3200
SCALE: 1:20 METRIC (A1)
1:40 METRIC (A3)

1600 0 1600 2400 3200 4000
SCALE: 1:40 METRIC (A1)
1:80 METRIC (A3)

RECORD DRAWING

WATER & WASTE DEPARTMENT

BID OPPORTUNITY NO. 213–2013
PROJECT COMPLETION DATE : 5 FEBRUARY 2016
CONTRACTOR : NELSON RIVER CONSTRUCTION LTD.

APEGM
Certificate of Authorization
KGS Group
No. 245

B.M. ELEV. N/A	FIELD BOOK #: N/A		
POSTED TO LBIS			
0A	ISSUED FOR RECORD DRAWING REVIEW	01/02/17	
0	ISSUED FOR CONSTRUCTION	18/03/13	CMS
NO.	REVISIONS	DATE	BY

KGS GROUP CONSULTING ENGINEERS

DESIGNED BY KRD	CHECKED BY
DRAWN BY FBV	APPROVED BY
HDR. SCALE / VERTICAL AS NOTED	RELEASED FOR CONSTRUCTION
DATE 2013-02-01	DATE

ENGINEER'S SEAL

TENDER No. 213-2013
FILENAME:1-0155F-S0001-001.dwg
PLOT DATE: 2017/02/01

Winnipeg

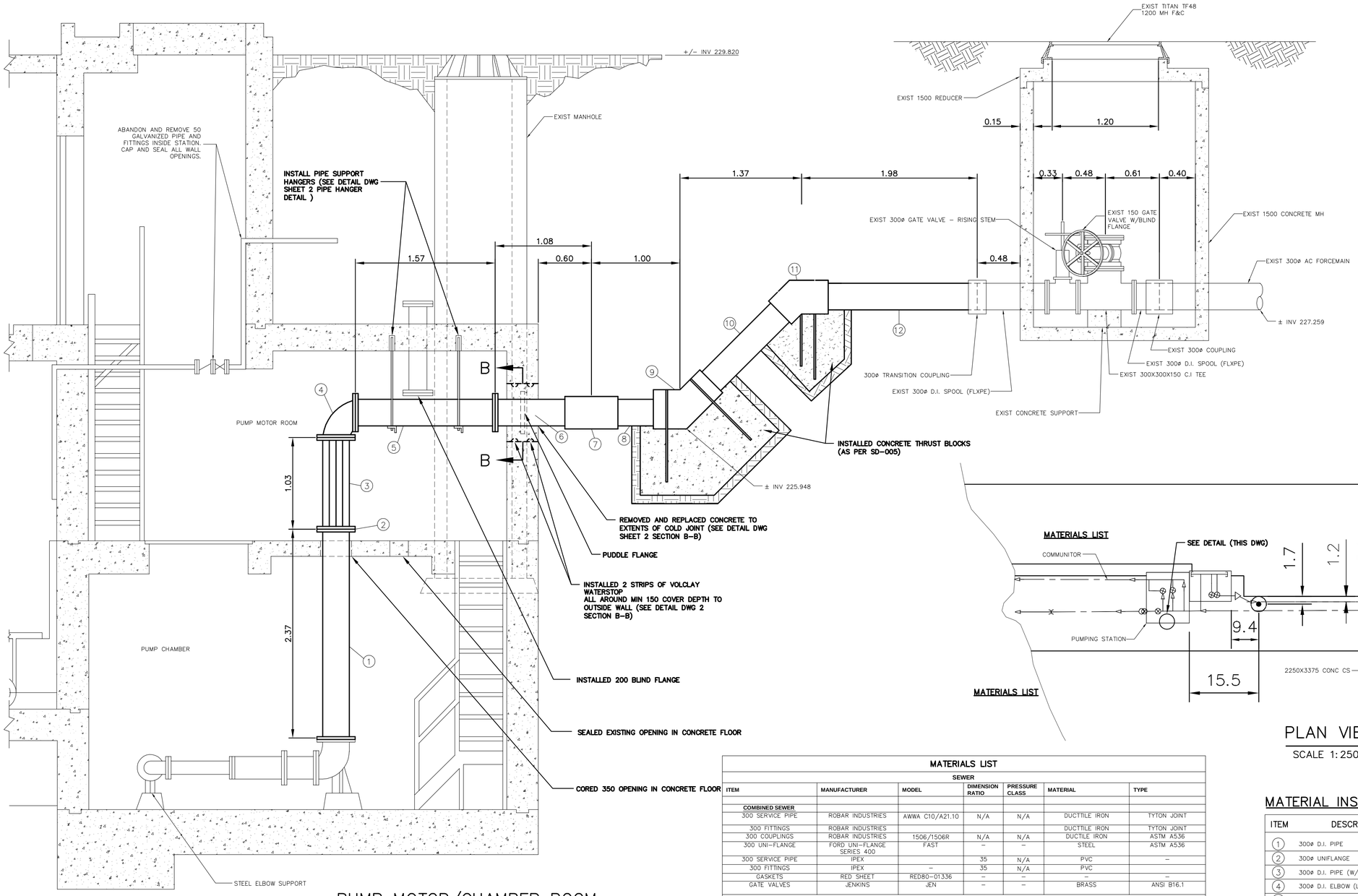
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

LINDEN PUMPING STATION
SLIDE GATE REFURBISHMENT
STRUCTURAL
PLAN, SECTIONS & DETAILS

SHEET 1 OF 1

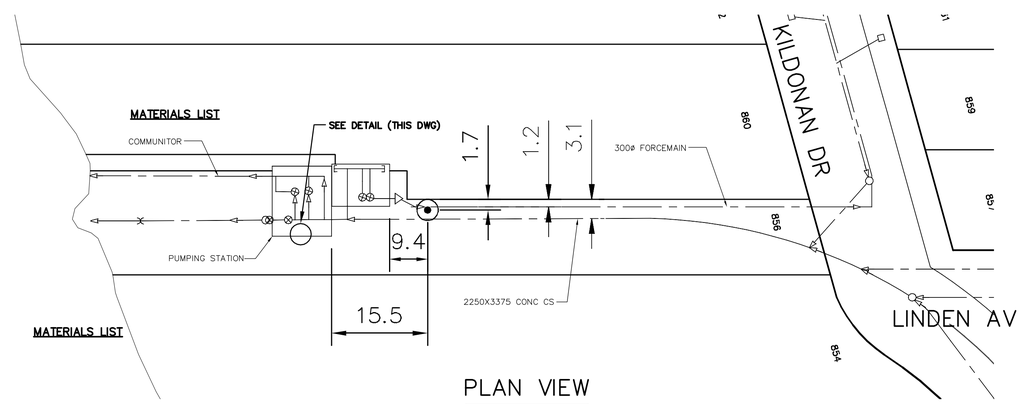
CITY DRAWING NUMBER
1-0155F-S0001-001

FileName: P:\Projects\2012\12-0107-019\Dwg\Struct\1-0155F-S0001-001.dwg – Tab: 1-0155F-S0001-001 Plotted By: FValencia 02/01/2017 [Wed 11:29am]



PUMP MOTOR/CHAMBER ROOM

SCALE 1:250



PLAN VIEW

SCALE 1:250

MATERIALS LIST

SEWER						
ITEM	MANUFACTURER	MODEL	DIMENSION RATIO	PRESSURE CLASS	MATERIAL	TYPE
COMBINED SEWER						
300 SERVICE PIPE	ROBAR INDUSTRIES	AWWA C10/A21.10	N/A	N/A	DUCTTILE IRON	TYTON JOINT
300 FITTINGS	ROBAR INDUSTRIES				DUCTTILE IRON	TYTON JOINT
300 COUPLINGS	ROBAR INDUSTRIES	1506/1506R	N/A	N/A	DUCTILE IRON	ASTM A536
300 UNI-FLANGE	FORD UNI-FLANGE SERIES 400	FAST	–	–	STEEL	ASTM A536
300 SERVICE PIPE	IPEX		35	N/A	PVC	–
300 FITTINGS	IPEX	–	35	N/A	PVC	
GASKETS	RED SHEET	RED80-01336	–	–	–	–
GATE VALVES	JENKINS	JEN	–	–	BRASS	ANSI B16.1
CONTRACTOR: NELSON RIVER CONSTRUCTION INC.						

MATERIAL INSTALLATION LIST

ITEM	DESCRIPTION	ENDS	LENGTH	QUANTITY
1	300ø D.I. PIPE	FL X FL	2.37	1
2	300ø UNIFLANGE	–	–	1
3	300ø D.I. PIPE (W/ READY RODS)	FL X PE	1.03	1
4	300ø D.I. ELBOW (LONG RADIUS)	FL X FL	–	1
5	300ø D.I. PIPE	FL X FL	1.57	1
6	300ø S.S. PIPE SCH. 40 (W/ PUDDLE FLANGE)	FL X PE	1.08	1
7	300ø TRANSITION COUPLING	–	–	1
8	300ø PVC PIPE (C900)	–	1.00	1
9	300ø PVC 45° BEND (C900)	–	–	1
10	300ø PVC PIPE (C900)	–	1.37	1
11	300ø PVC 45° BEND (C900)	–	–	1
12	300ø PVC PIPE (C900)	–	1.98	1

CONSTRUCTION COMPLETION DATE: 14/04/22

RECORD DRAWING
WATER AND WASTE DEPARTMENT

NOTE:

CONTRACTOR TO CONFIRM ALL DIMENSIONS AND FIELD MEASUREMENTS PRIOR TO FABRICATION AND INSTALLATION OF MATERIALS.

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.

CONSTRUCTION COMPLETION DATE: 2014 04 22

NO.	REVISIONS	DATE	BY
1	ASBUILT DRAWING	14/01/17	RS

DESIGNED BY	DEB	CHECKED BY	KZ
DRAWN BY	MA/CJH	APPROVED BY	KZ
SCALE: HORIZONTAL	1:250	RELEASED FOR CONSTRUCTION	
VERTICAL	1:50		
DATE	2015 06 11	DATE	JAN 17, 2014

ENGINEER'S SEAL

ORIGINAL SIGNED BY K.R ZUREK 15/05/27

BID OPPORTUNITY: 61-2014
FILE NAME:
PLOT DATE: JAN 17, 2014

Winnipeg

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

2013 PUMPING UNIT AND BUILDING UPGRADES TO THE
LINDEN PUMPING STATION

SHEET 1 OF 2

CITY DRAWING NUMBER
10730

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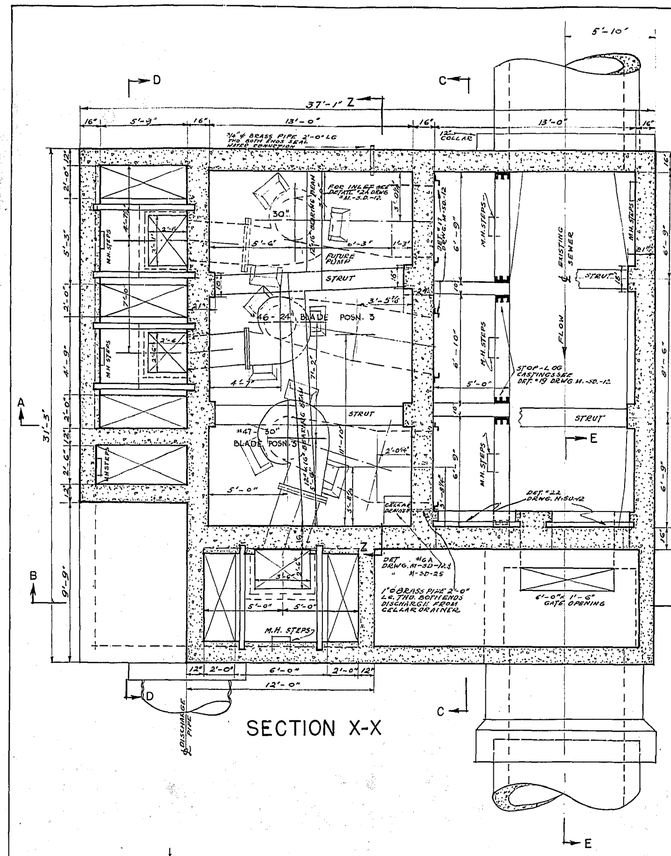
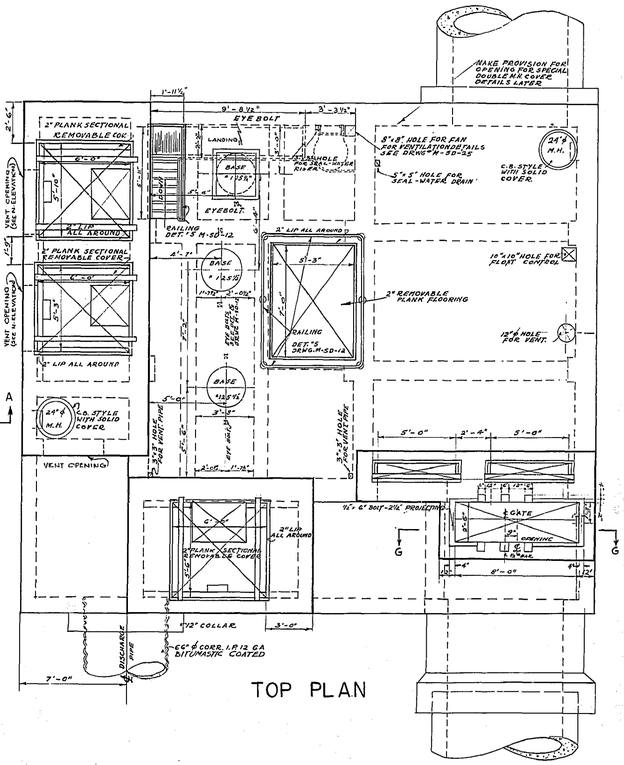
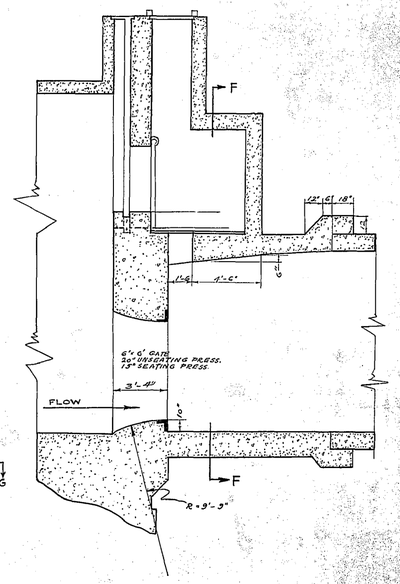
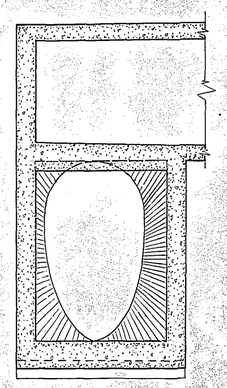
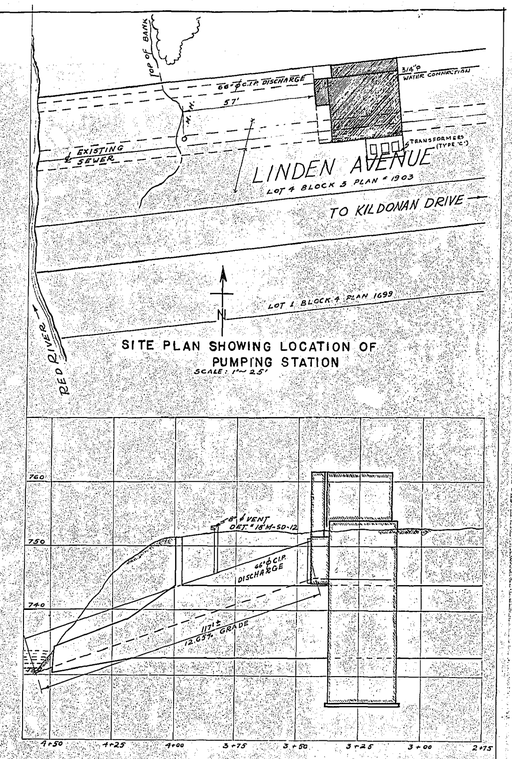
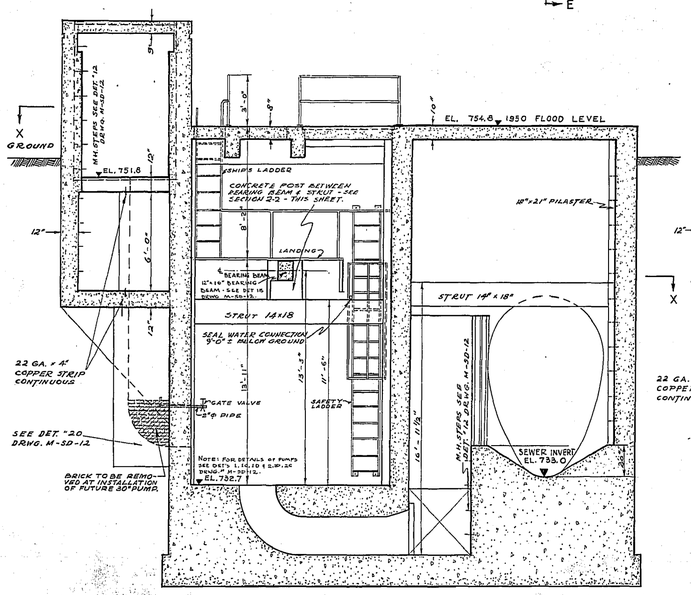


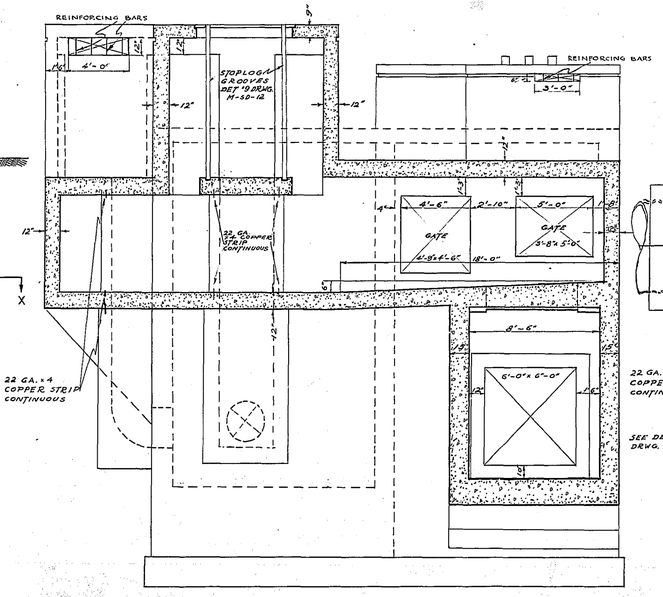


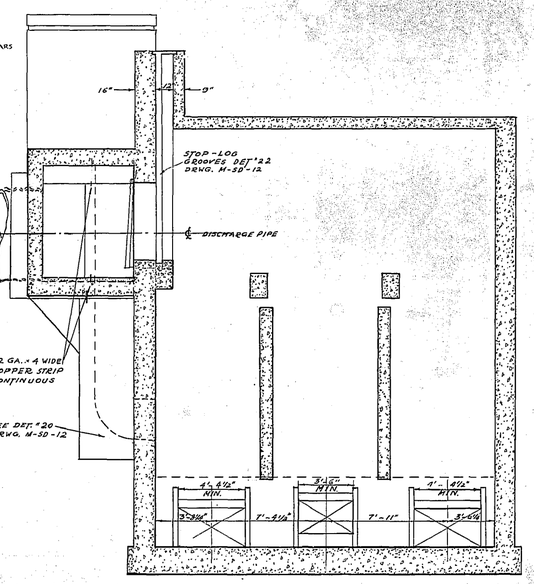


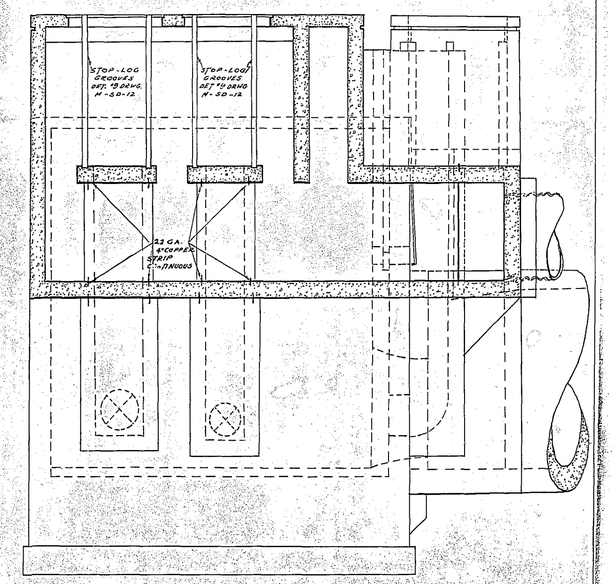


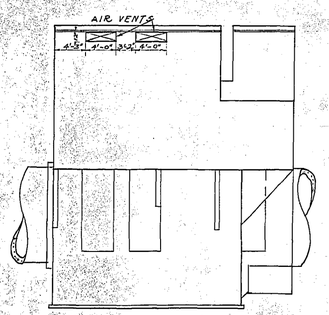


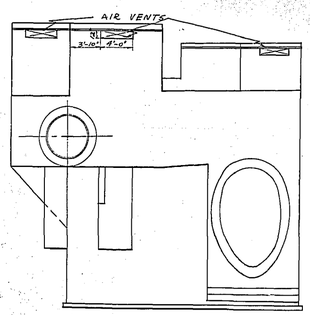


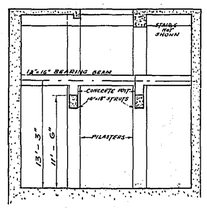


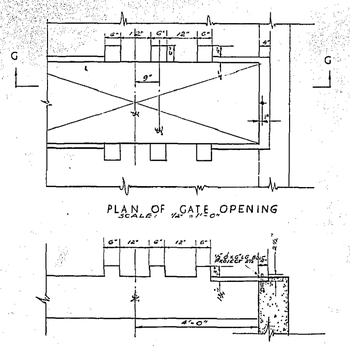


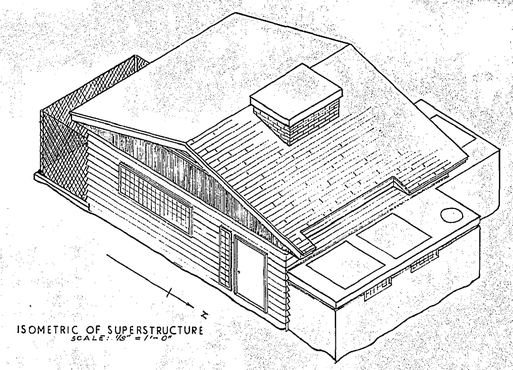










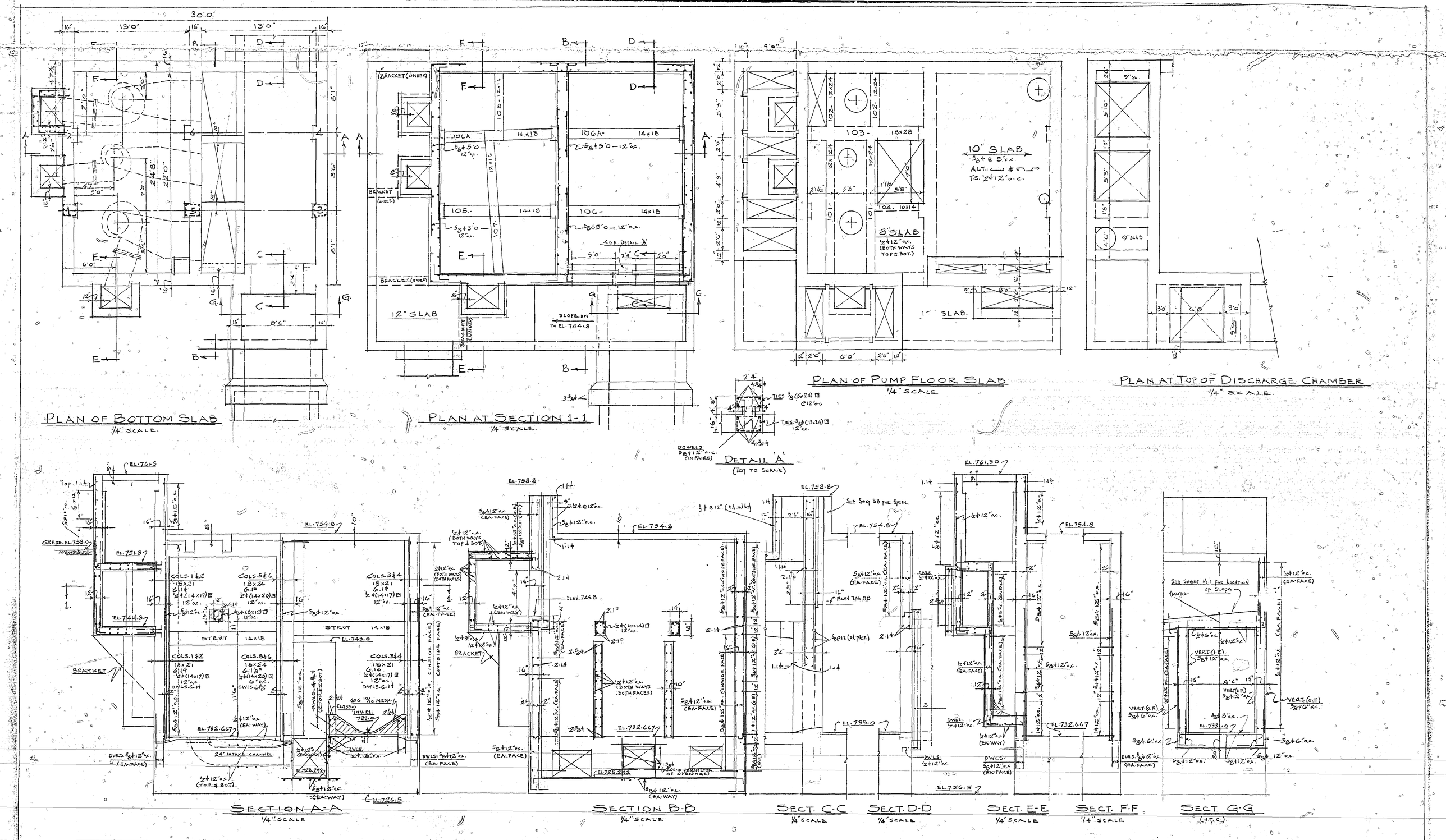


GREATER WINNIPEG DYKING BOARD
221 OSBORNE ST. N. WINNIPEG MANITOBA

LINDEN AVE. PUMPING STATION

SCALE 1/8"=1'-0" & AS SHOWN		SHEET NO. 1 OF 2 SHEETS
DESIGNED BY J.T.	DATE: JAN 31/51	
DRAWN BY M.L.J.	DATE: FEB 5/51	APPROVED: CHIEF ENGINEER.
TRACED BY E.O.	DATE: [illegible] 51.	
CHECKED BY [illegible]	DATE: NOV. 51	DRG. NO. 3-SD-2.

REVISED PLAN



REVISION	DATE	DESCRIPTION	BY	CK
1	22 FEB 51	REVISED TO CONFORM WITH SK#1.	B.J.	
2	MAR 26/51	WALLS AT SLICE OPENINGS & AT SLUICE GATE OPENING ADDED (SHOWING BS-SC-SG-BOTTOM SLAB & SHEET 11)	E.J.W.	
3	APR 10	ELEVATIONS OF GATES ADDED TO AGREE WITH REVISIONS MADE AS SHOWN ON SHEET #1 (DLG 3-SD-2)	E.J.W.	

GREATER WINNIPEG DYKING BOARD
221 OSBORNE ST. N. WINNIPEG, MANITOBA

LINDEN AVE. PUMPING STATION

SCALE: AS SHOWN

SHEET No. 2 OF 2 SHEETS

DESIGNED BY ____ DATE ____

DRAWN BY ____ DATE ____

TRACED BY ____ DATE ____

CHECKED BY ____ DATE ____

APPROVED ____

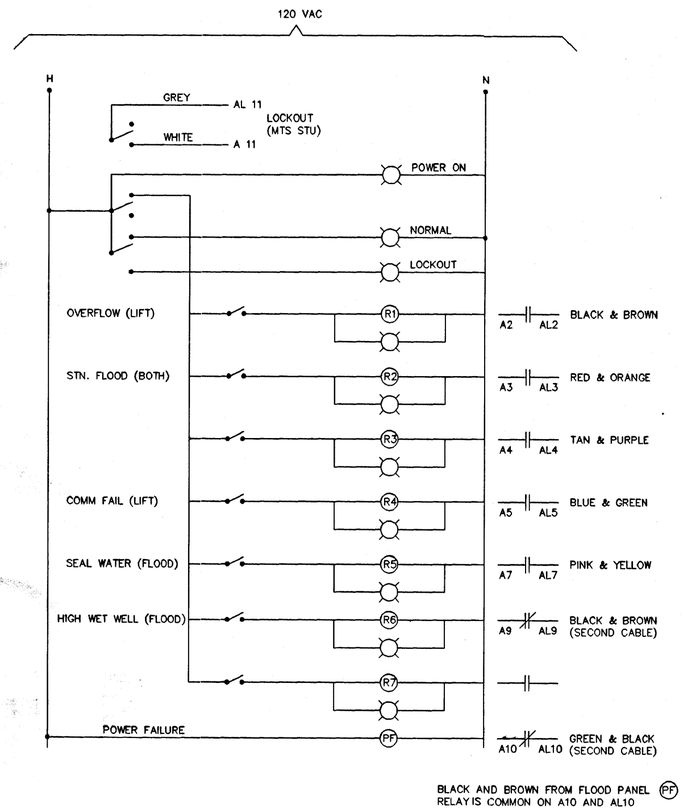
DRG. No. 3-SD-2

COWIN & COLLIS
RESIDENCE CONSULTING ENGINEERS
WINNIPEG, MAN.

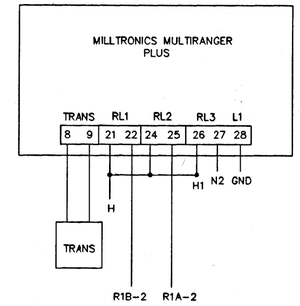
file # FP10124

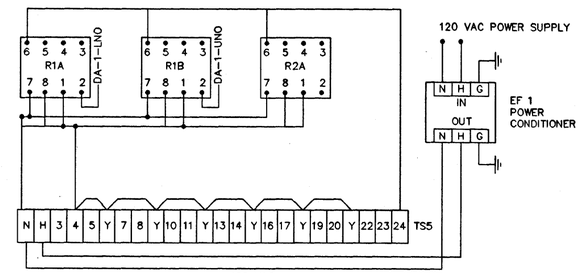
REF. or DRAWING No. 49-FS-Q-1

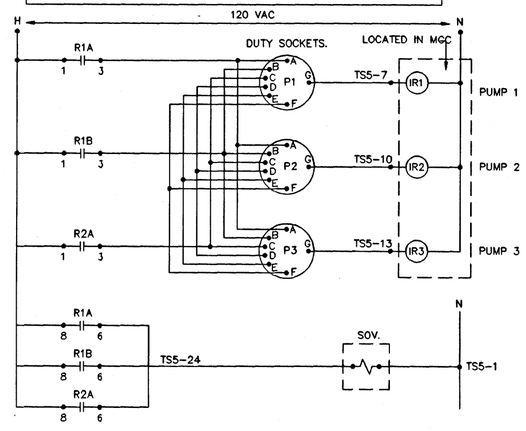
DETAILS



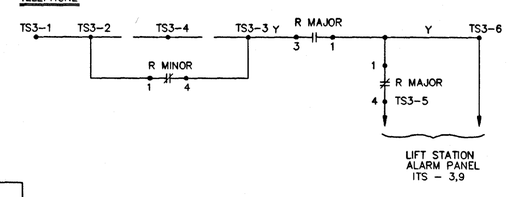
BLACK AND BROWN FROM FLOOD PANEL (PF) RELAY IS COMMON ON A10 AND AL10







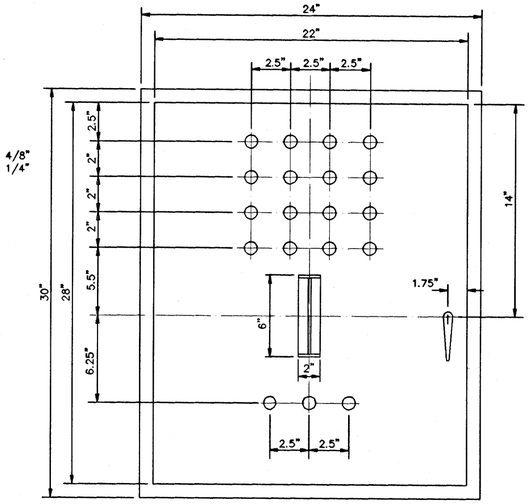
TELEPHONE



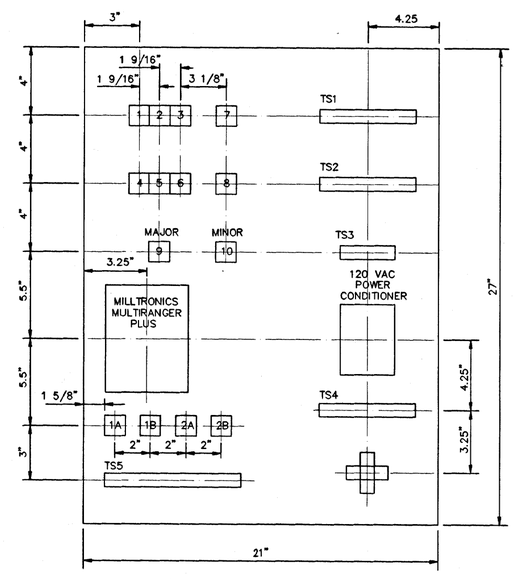
NOTE:

HOLE DIMENSIONS

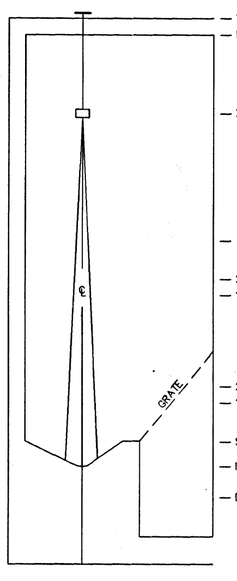
1. LIGHTS - 11/16"
2. PUSH BUTTONS - 15/32"
3. SWITCH - 15/32"
4. DUTY SOCKETS - 19 PIN - 1 4/8"
   - 14 PIN - 1 1/4"
5. METER 1 3/4" X 5 5/8"



CONTROL PANEL DOOR
(FRONT VIEW)



REMOVABLE INTERIOR PANEL
(FRONT VIEW)



	ELEVATION ABOVE DATUM	ELEVATION ABOVE INVERT
— TOP OF SLAB		21'-7"
— BOTTOM OF SLAB		20'-9"
— XDUCER FACE	750.0	17'-0"
—	741.5	
— 2nd. ON	739.0	6'-0"
— 1st. ON	738.0	5'-0"
— 2nd. OFF	737.0	4'-0'
— 1st. OFF	736.0	3'-0"
— SPILL	735.0	2'-0"
— INVERT	733.0	0
— DATUM	727.57	

NOTE: MULTIRANGER READS IN FEET FROM INVERT

MULTIRANGER PLUS SETTINGS

P-1-3	P-11-de8
P-2-1	P-12-6
P-3-17.5	P-13-4
P-4-10	P-23-0
P-5-1.0	P-65-15
P-6-2	P-74-2
P-7-2	P-75-1
P-8-de8	
P-9-5	
P-10-3	

NOTES:

REFERENCE WINNIPEG DYKING BOARD DWG. # 3-SD-2

INVERT - ELEV. 733.0
SPILL - ELEV. 735.0
FLOOD ALARM - ELEV. 741.5
LTX SPAN - ELEV. 733.0-743.0

CONTROL POINTS:

DUTY	ON	OFF
DUTY-1	50% - 12.8mA	30% - 8.8mA
DUTY-2	60% - 13.6mA	40% - 10.4mA

ABBREVIATIONS:

HW - HIGH WELL FLYGT BALL
SW - SEAL WATER PRESSURE SWITCH
LT - LOW TEMP. DRY WELL THERMOSTAT
SF - STATION FLOOD FLYGT BALL
SOV - SOLENOID VALVE
IR - INTERPOSING RELAY
AR - AUXILLIARY RELAY
MC - MOTOR CONTACTOR
ETM - ELAPSED TIME METER
TVSS - TRANSIENT VOLTAGE SURGE SUPPRESSOR

B.M. ELEV.

NO.	REVISIONS	DATE	BY
2.	REVISED TO DATE	94.04.18	WKT
1.	REVISED ON AUTOCAD	94.01.15	TM

DESIGNED BY D.METANCZUK
CHECKED BY D.METANCZUK
DRAWN BY T.MANGAL
APPROVED BY
HOR. SCALE N.T.S.
VERTICAL
RELEASED FOR CONSTRUCTION
DATE JANUARY 1994
DATE

ENGINEER'S SEAL

PLOT DATE: 1994.04.18
CAD VERSION: AUTOCAD12

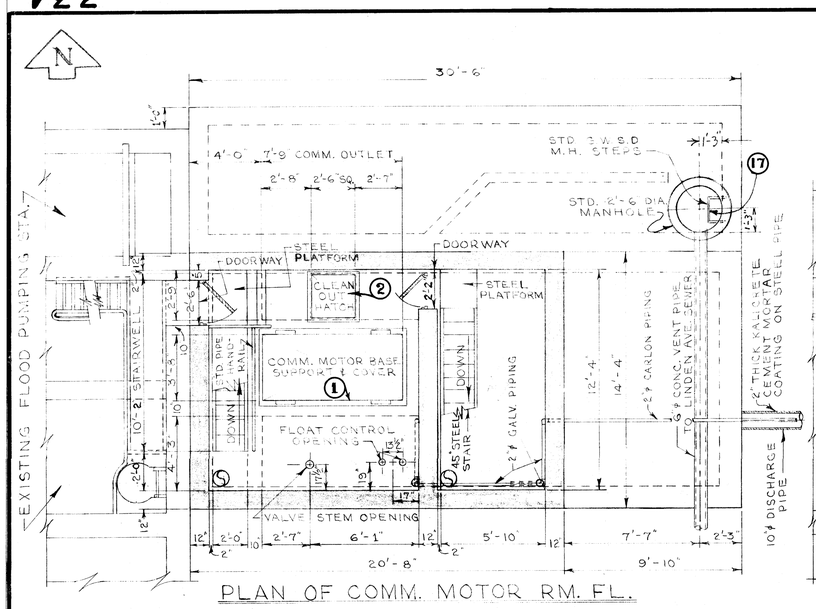
THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
WATERWORKS WASTE AND DISPOSAL DEPARTMENT

LINDEN FLOOD STATION
AUTOMATIC LEVEL CONTROL
AND ALARM SYSTEM

WIRING DIAGRAM AND PANEL LAYOUT

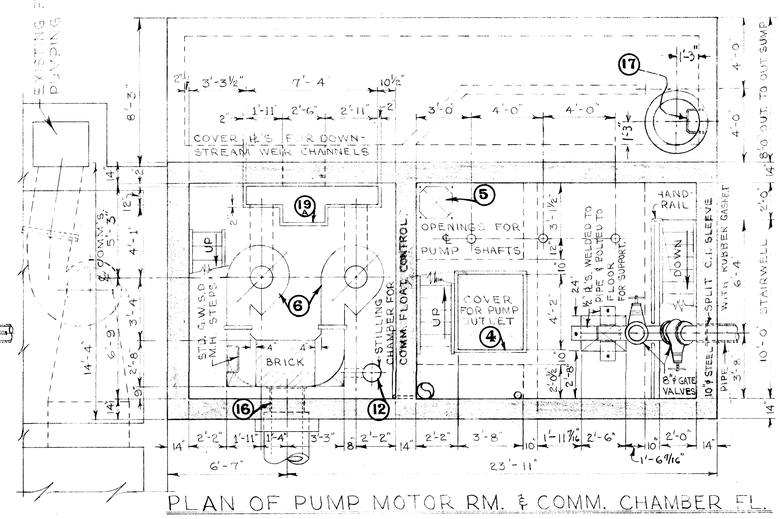
CITY DRAWING NUMBER
SHEET OF
49-FS-Q-1

file # FP10124

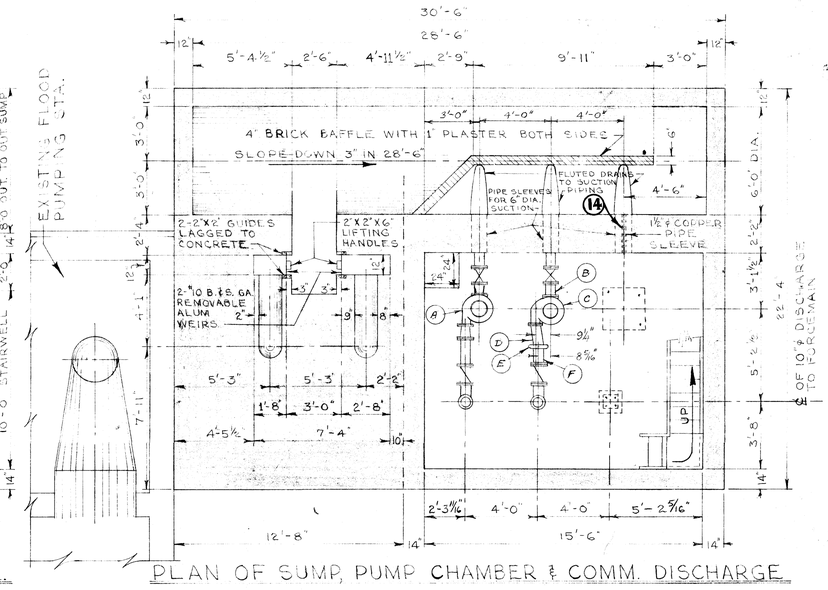


PLAN OF COMM. MOTOR RM. FL.

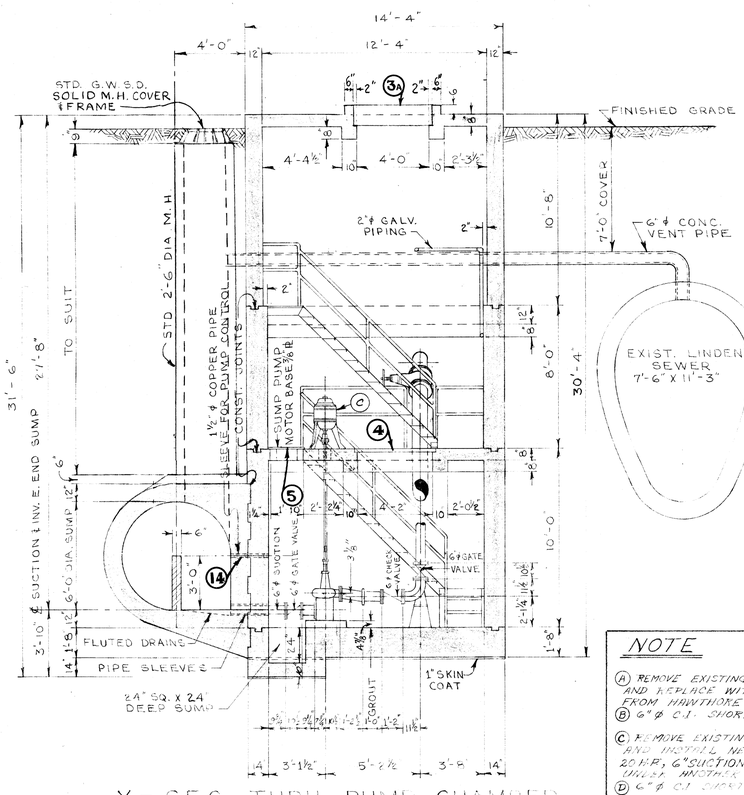
NOTE:
ALL PIPE SLEEVES TO BE SEALED WITH BITUMASTIC COMPOUND TO PROVIDE WATER-TIGHT SEAL.



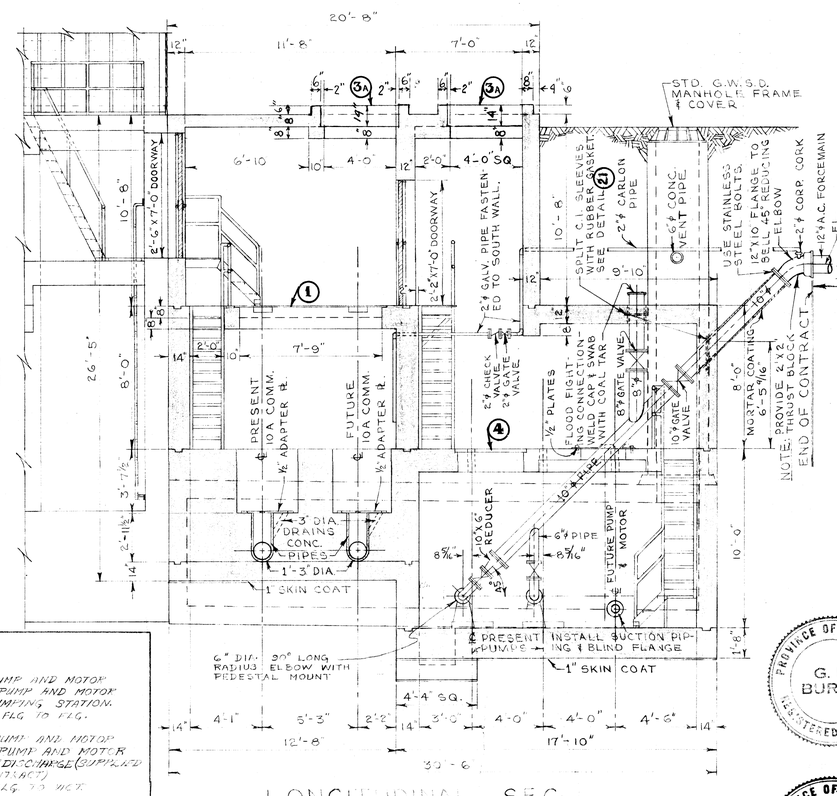
PLAN OF PUMP MOTOR RM. & COMM. CHAMBER FL.



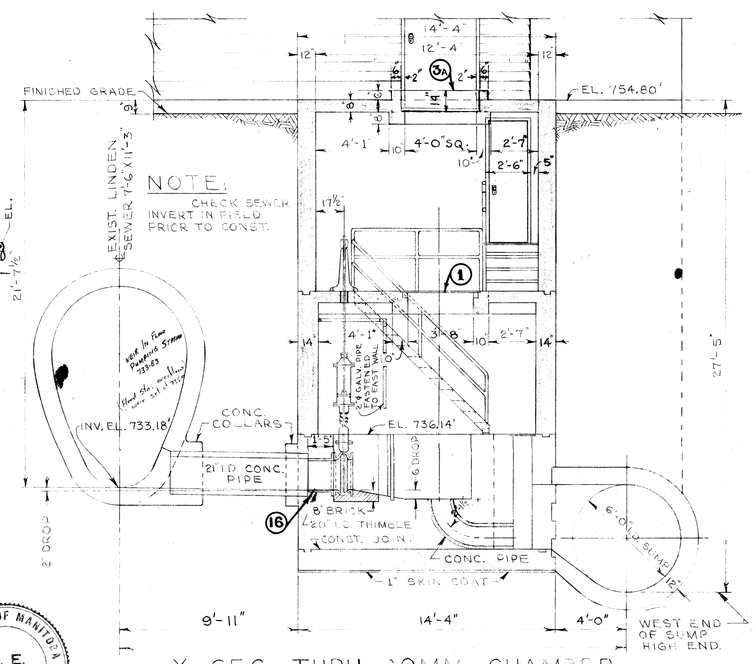
PLAN OF SUMP, PUMP CHAMBER & COMM. DISCHARGE



X-SEC. THRU PUMP CHAMBER
LOOKING EAST



LONGITUDINAL SEC.
LOOKING NORTH



X-SEC. THRU COMM. CHAMBER
LOOKING WEST

SEC. "B"

NOTE

(A) REMOVE EXISTING PUMP AND MOTOR AND REPLACE WITH PUMP AND MOTOR FROM HAWTHORE PUMPING STATION.
(B) 6" ϕ C.I. SHORT. FLG. TO FLG.
(C) REMOVE EXISTING PUMP AND MOTOR AND INSTALL NEW PUMP AND MOTOR 20 H.P., 6" SUCTION, 6" DISCHARGE (SUPPLIED UNDER ANOTHER CONTRACT)
(D) 6" ϕ C.I. SHORT. FLG. TO VICT.
(E) 6" ϕ VICTAULIC COUPLING STYLE #44
(F) 6" ϕ C.I. SHORT VICT. TO FLG.

NOTE:
(NO.) — NUMBERS REFER TO DETAIL DWGS.

PROVINCE OF MANITOBA
G. E. BURNS
REGISTERED ENGINEER

PROVINCE OF MANITOBA
R. C. SOMMERVILLE
REGISTERED ENGINEER

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	PUMP DIMENSIONS ADDED.	6 JAN. 60	S.K.
2	PUMPS AND PIPING REPLACED	JUNE 77	V.D.

GREATER WINNIPEG SANITARY DISTRICT
SECONDARY SEWERS

TITLE:
LINDEN COMM. & PUMPING STA.
GENERAL LAYOUT OF
SUBSTRUCTURE

APPROVED BY: SUPT. / CHIEF ENGINEER
DESIGNED BY G.E. BURNS — CHECKED BY G.E.B.
DRAWN BY S.K. — DATE 30 OCT. 59.
SCALES 1/4" INCH = 1' FT.
DRAWING NO. 334

Micro-Filmed 1965

Ref. or Drawing No. 334
DETAILS

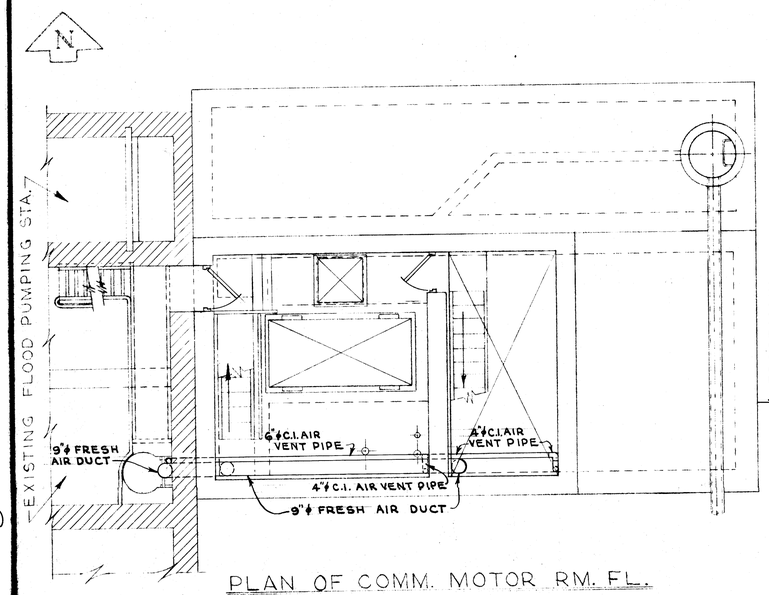
File # SD 10018

335

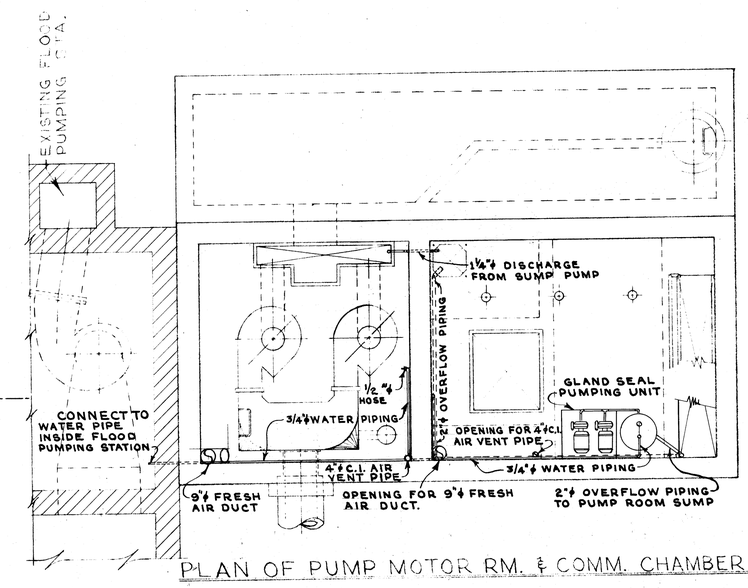
Lot # SD 10019

REF. or DRAWING No. 335

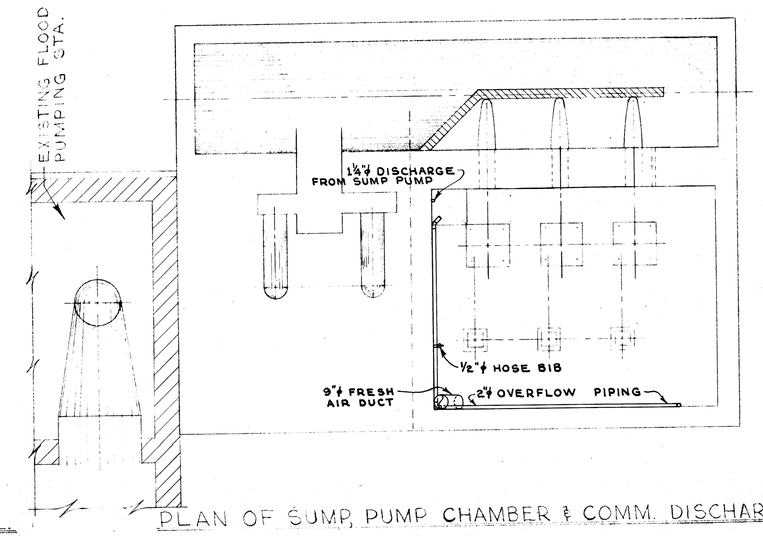
DETAILS



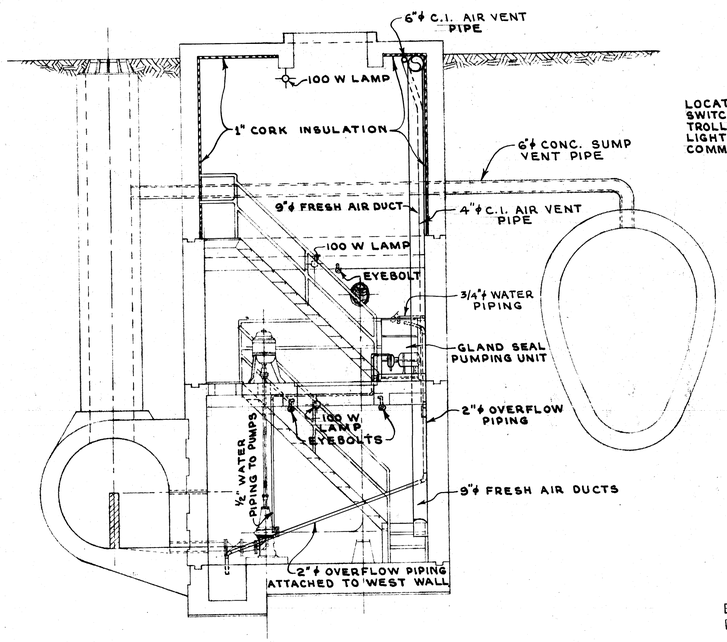
PLAN OF COMM. MOTOR RM. FL.



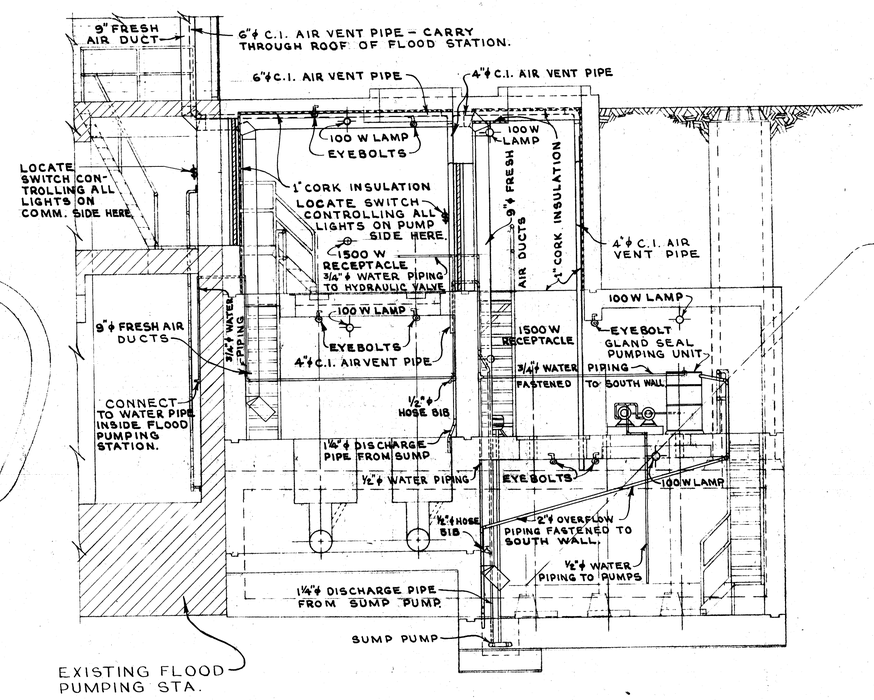
PLAN OF PUMP MOTOR RM. & COMM. CHAMBER FL.



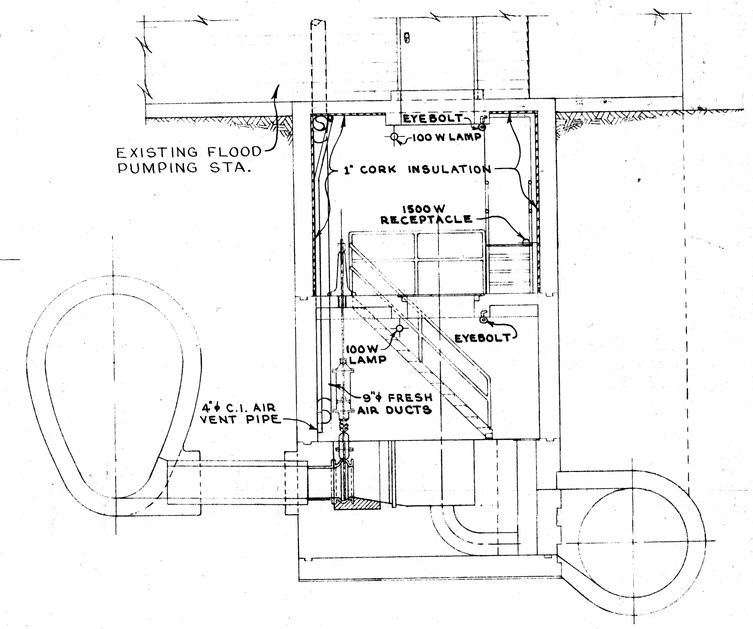
PLAN OF SUMP, PUMP CHAMBER & COMM. DISCHARGE



X - SEC. THRU PUMP CHAMBER
LOOKING EAST



LONGITUDINAL SEC.
LOOKING NORTH



X-SEC. THRU COMM. CHAMBER
LOOKING WEST

SEC."B"

NOTES:
1. STRAP ALL PIPING TO WALLS AND CEILING AT 6'-0" INTERVALS.
2. PROVIDE SLIDE DAMPERS AT END OF ALL COLD AIR DUCTS.
3. REFER TO DWG. No. 336 FOR SCHEMATIC ELECTRICAL DIAGRAM.

PROVINCE OF MANITOBA G. E. BURNS REGISTERED ENGINEER

PROVINCE OF MANITOBA R. C. SOMMERVILLE REGISTERED ENGINEER

REVISIONS			
NO.	DESCRIPTION	DATE	BY

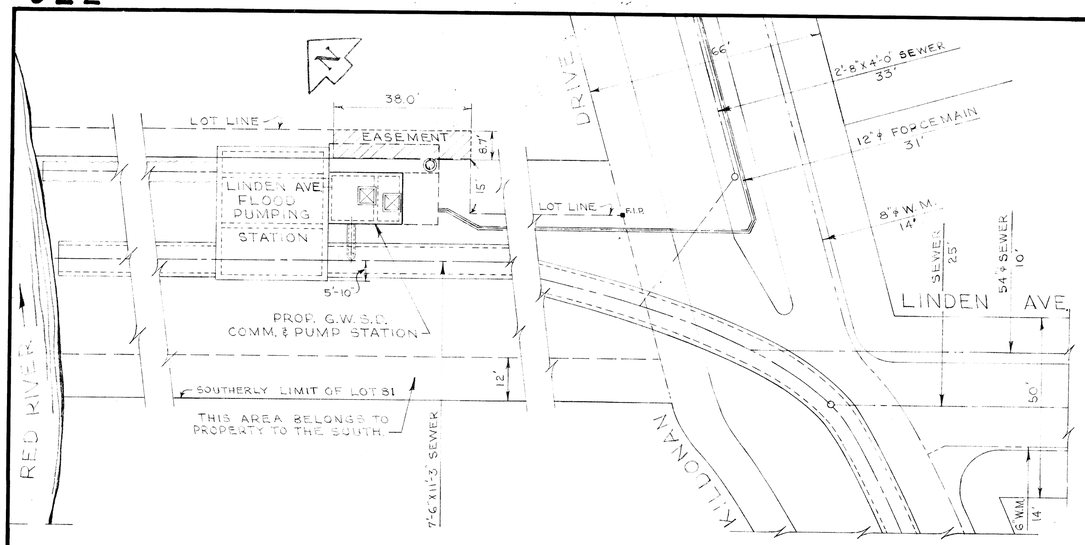
GREATER WINNIPEG SANITARY DISTRICT
SECONDARY SEWERS

TITLE:
LINDEN COMM. & PUMPING STA.
ELECTRICAL, VENTILATION,
PIPING & EYEBOLT INSTALLATION

APPROVED BY	DESIGNED BY G.E. BURNS	CHECKED BY RCS	DRAWING NO.
SUPT. A. Penman	DRAWN BY S.K.	DATE 26 OCT. 59	335
CHIEF ENGINEER N.S. Bubbis	SCALES 1/4" INCH = 1' FT.		

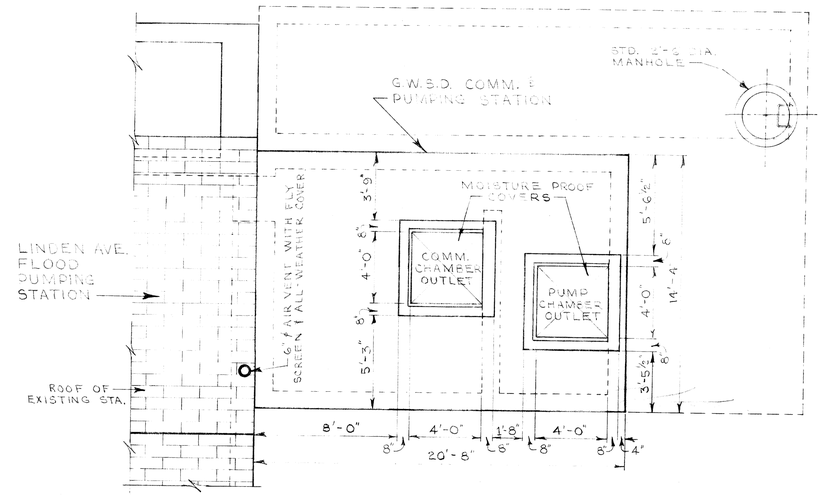
Micro-Filmed 1965

336



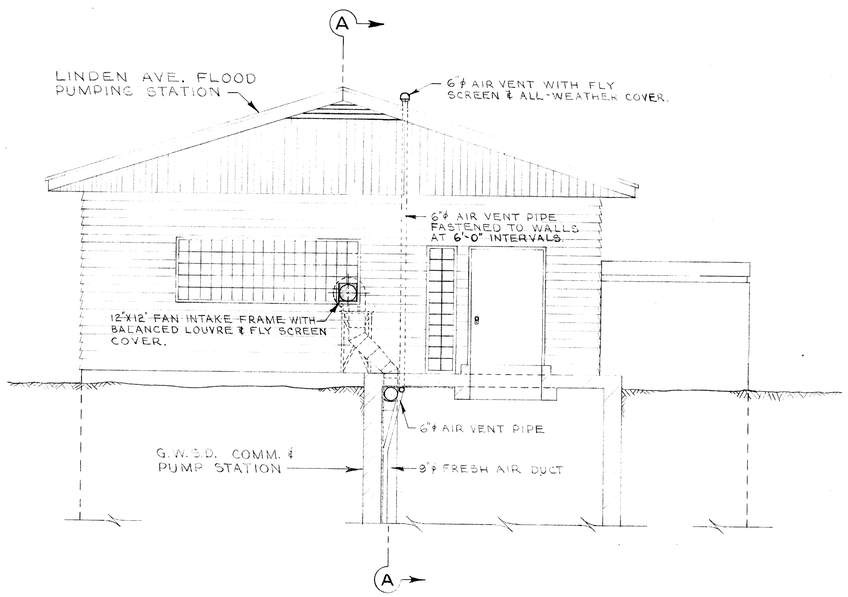
SITE PLAN

SCALE - 1" = 20'



TOP VIEW OF COMM. & PUMPING STATION

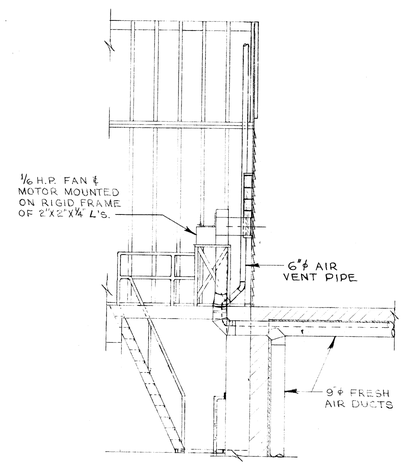
SCALE - 1/4" = 1'-0"



ELEV. OF EAST FACE OF FLOOD PUMPING STA. AND X-SEC. THRU COMM. CHAMBER

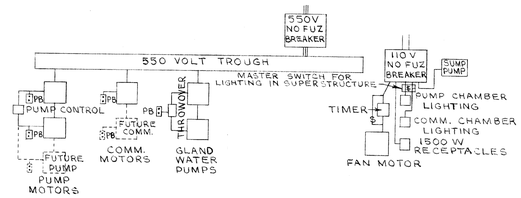
LOOKING WEST

SCALE - 1/4" = 1'-0"



SEC. "A-A"

SCALE - 1/4" = 1'-0"



LOCATE DISTRIBUTION PANEL ON NORTH WALL OF LINDEN AVE. FLOOD PUMPING STATION SUPERSTRUCTURE.

SCHEMATIC ELECTRICAL DIAGRAM

SEC. "B"

PROVINCE OF MANITOBA — R. C. SOMMERVILLE — REGISTERED ENGINEER

PROVINCE OF MANITOBA — G. E. BURNS — REGISTERED ENGINEER

REVISIONS			
NO.	DESCRIPTION	DATE	BY

GREATER WINNIPEG SANITARY D
SECONDARY SEWERS

TITLE:
LINDEN COMM. & PUMPING
SITE PLAN & MISC. DETAIL

APPROVED BY	DESIGNED BY G.E. BURNS	CHECKED BY G.E.B.	DRAWING
SUPT. A. Parmar	DRAWN BY S.K.	DATE 28 OCT. 59.	33
CHIEF ENGINEER	SCALES AS NOTED		

336

Micro-Filmed 19

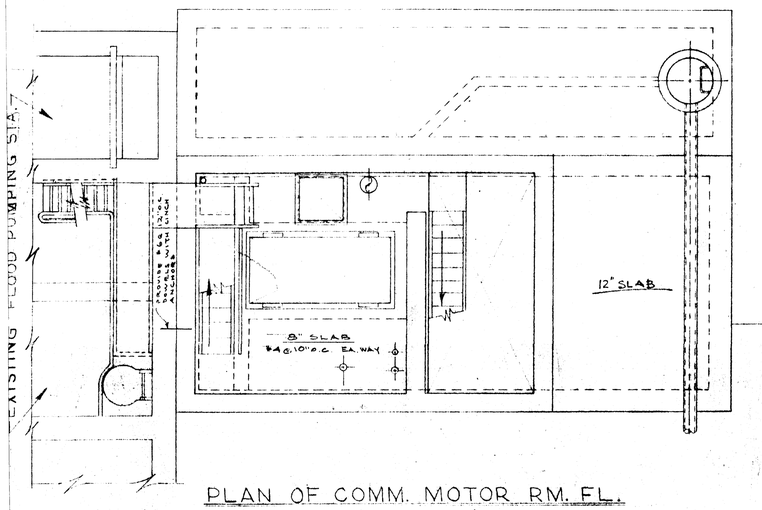
REF. or DRAWING No. DETAILS

file # SD 10080

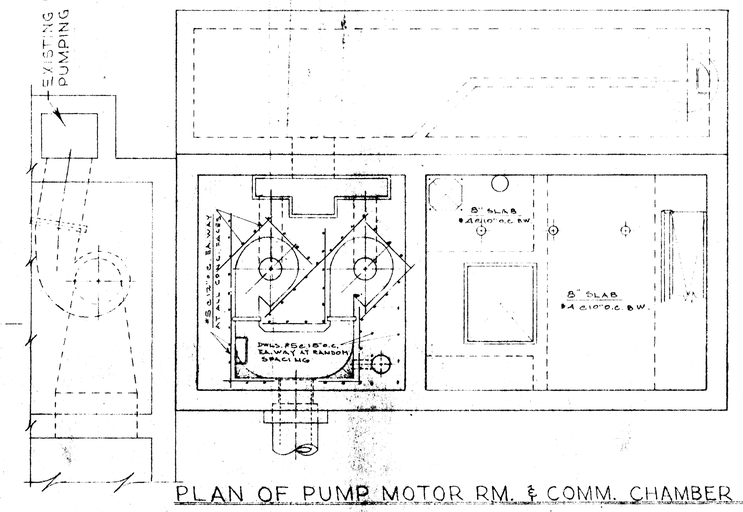
file # SP10081

REF. OF DRAWING NO. 337

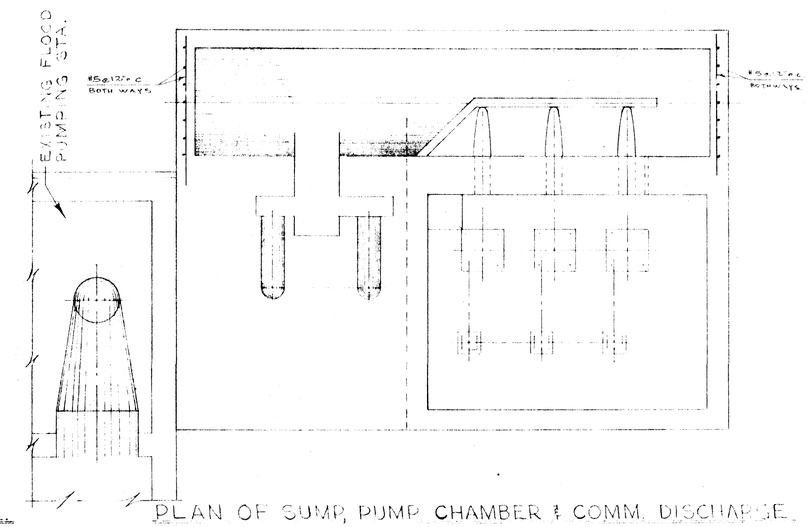
DETAILS



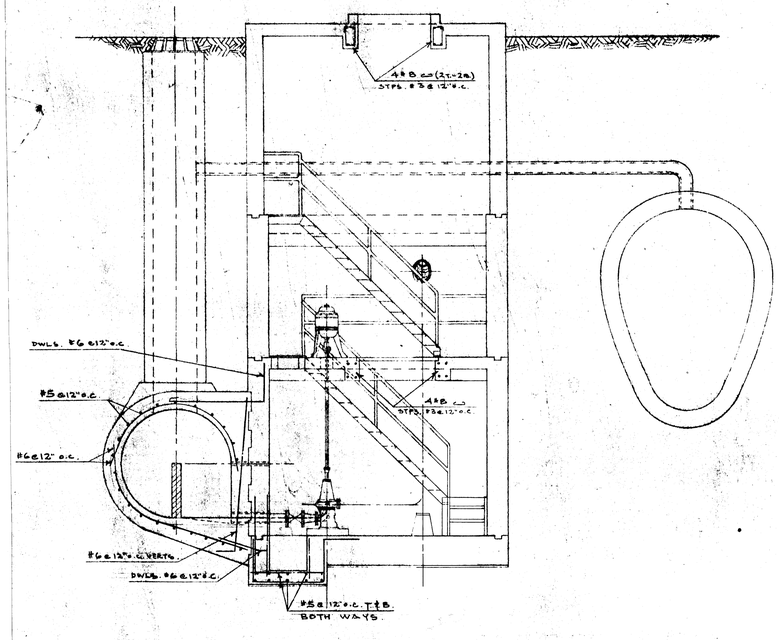
PLAN OF COMM. MOTOR RM. FL.



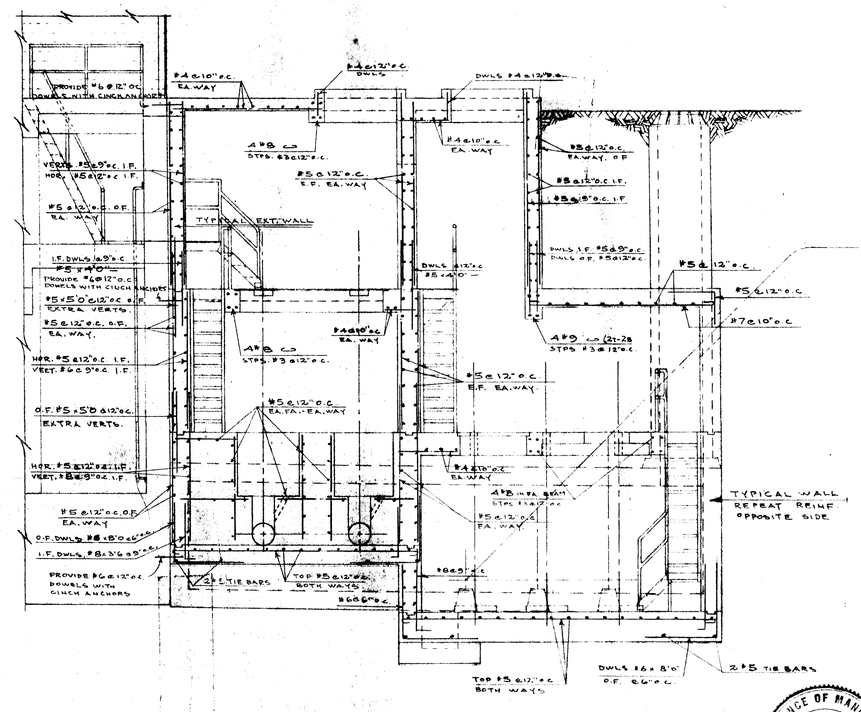
PLAN OF PUMP MOTOR RM. & COMM. CHAMBER FL.



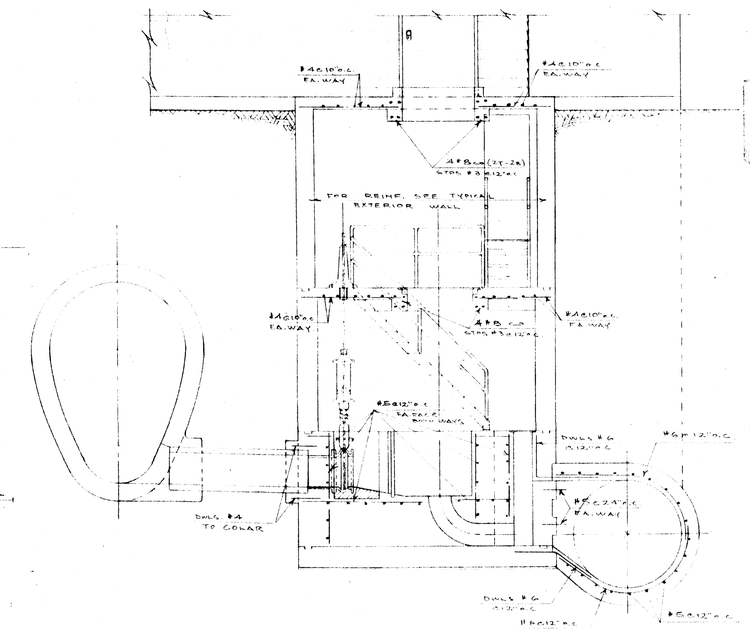
PLAN OF SUMP, PUMP CHAMBER & COMM. DISCHARGE



X - SEC. THRU PUMP CHAMBER
LOOKING EAST



LONGITUDINAL SEC.
LOOKING NORTH



X - SEC. THRU COMM. CHAMBER
LOOKING WEST

PROVINCE OF MANITOBA
WALLACE R. McQUADE
REGISTERED ENGINEER

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

REVISIONS			
NO.	DESCRIPTION	DATE	BY

GREATER WINNIPEG SANITARY DISTRICT
SECONDARY SEWERS

LINDEN COMM. & PUMPING STA.
REINFORCING DETAILS

APPROVED
SUPT.
N.S. Bubb
CHIEF ENG.

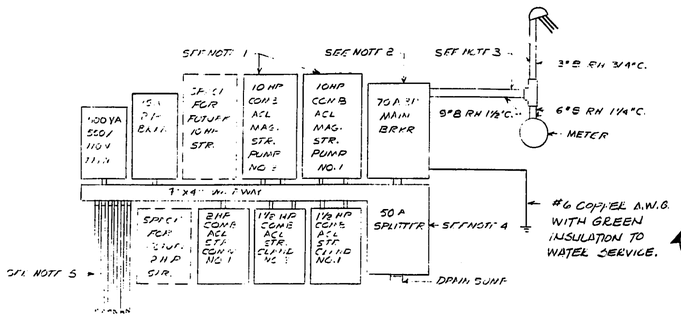
CHECKED BY GEB
DATE NOV. 59

DRAWING NO 337

Filmed 1965

NOTE:
ALL SHADED PIPING & EQUIPMENT REPRESENTS NEW OR AS NOTED

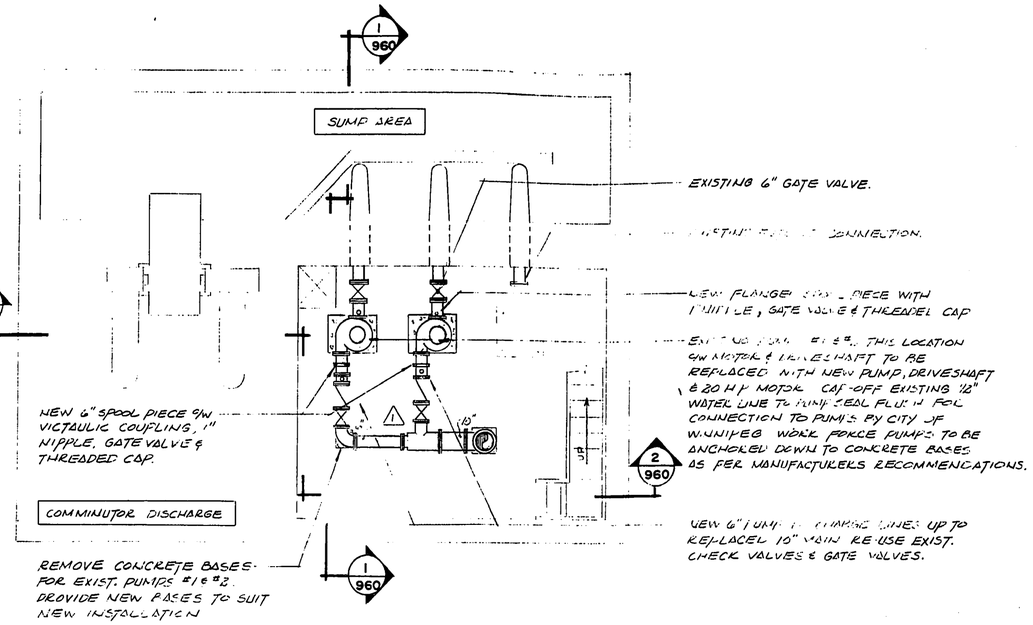
N



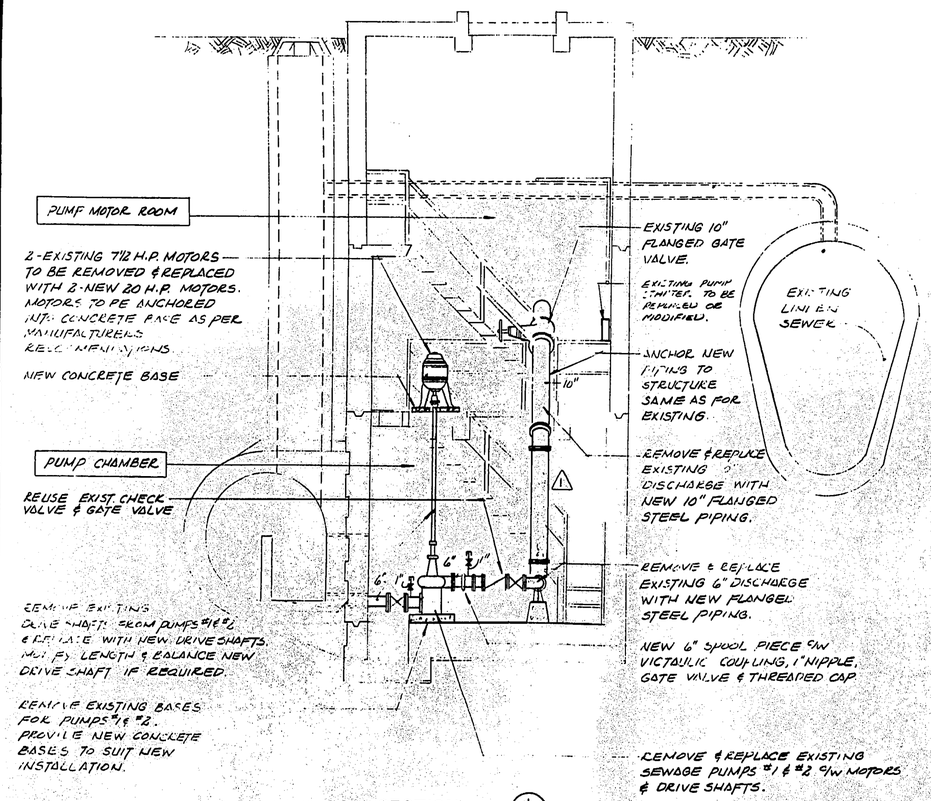
550/3Ø DISTRIBUTION DETAIL
N.T.S.

NOTES:

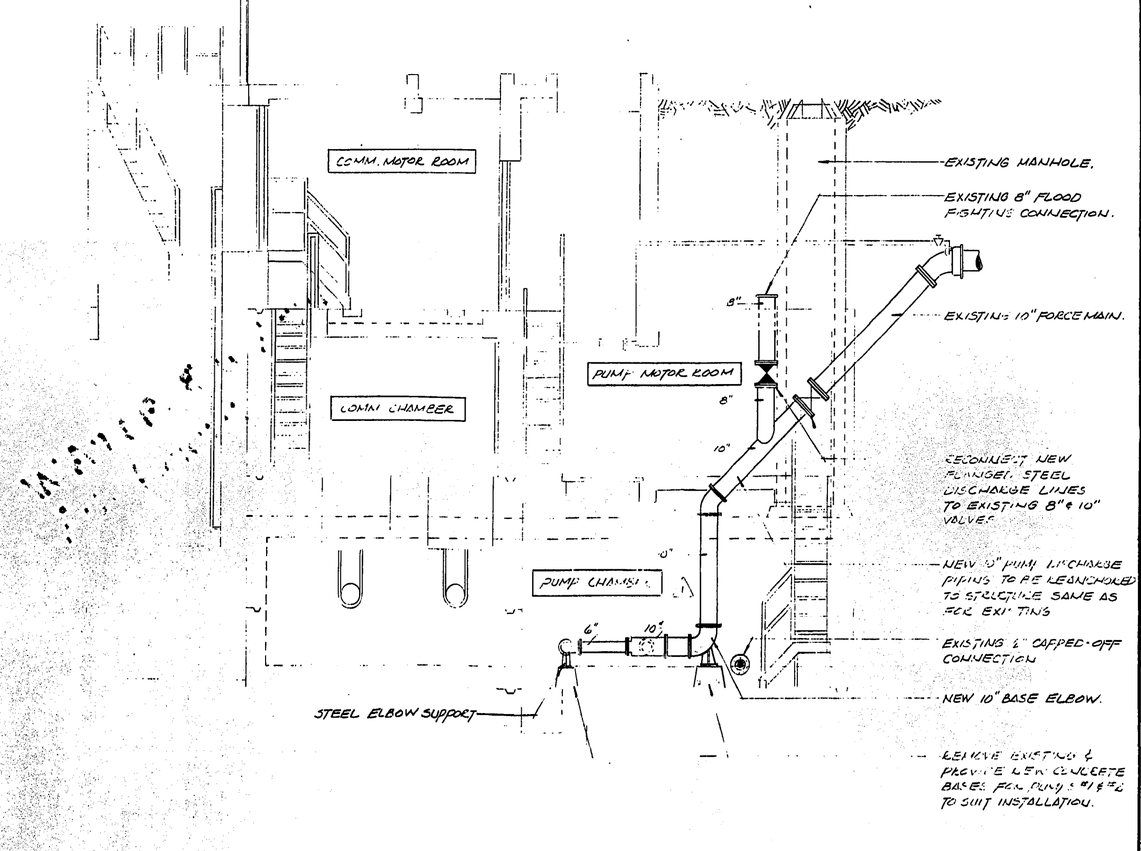
1. EXISTING SIZE 1 STARTERS TO BE REMOVED & REPLACED WITH SIZE 2 STARTERS OF SAME ENCLOSURE TYPE.
2. EXISTING 70A-3P MAIN BREAKER TO BE REMOVED & REPLACED WITH A 100A-3P MAIN BREAKER.
3. EXISTING 3#8, 6#8 & 9#8 RH CABLES TO BE REMOVED & REPLACED WITH 3#6, 6#6 & 9#6 R 90 CABLES RESPECTIVELY. UTILIZE EXISTING CONDUIT IF POSSIBLE.
4. EXISTING 50A SPLITTER TO BE REPLACED WITH OR MODIFIED TO A 100A SPLITTER.
5. EXISTING #14 WIRE PUMP FEEDERS TO BE REMOVED & REPLACED WITH #10 WIRE.
6. ALL GROUND WIRING TO BE GREEN INSULATED TYPE COPPER.
7. CONTROL WIRING TO BE MINIMUM SIZE #14 COPPER A.W.G.



PLAN OF SUMP, PUMP CHAMBER & COMM. DISCHARGE
SCALE 1/4" = 1'-0"



SECTION 1/960
SCALE 1/4" = 1'-0"



SECTION 2/960
SCALE 1/4" = 1'-0"

No	REVISIONS	DATE	APP.
1	PUMP DISCHARGE PIPING REVISIONS	MAR. 9/81	G.O.

FIELD BOOK(S) NO.
LAND SURVEY PLAN(S) NO.
B. M.
SURVEYED BY
DATE

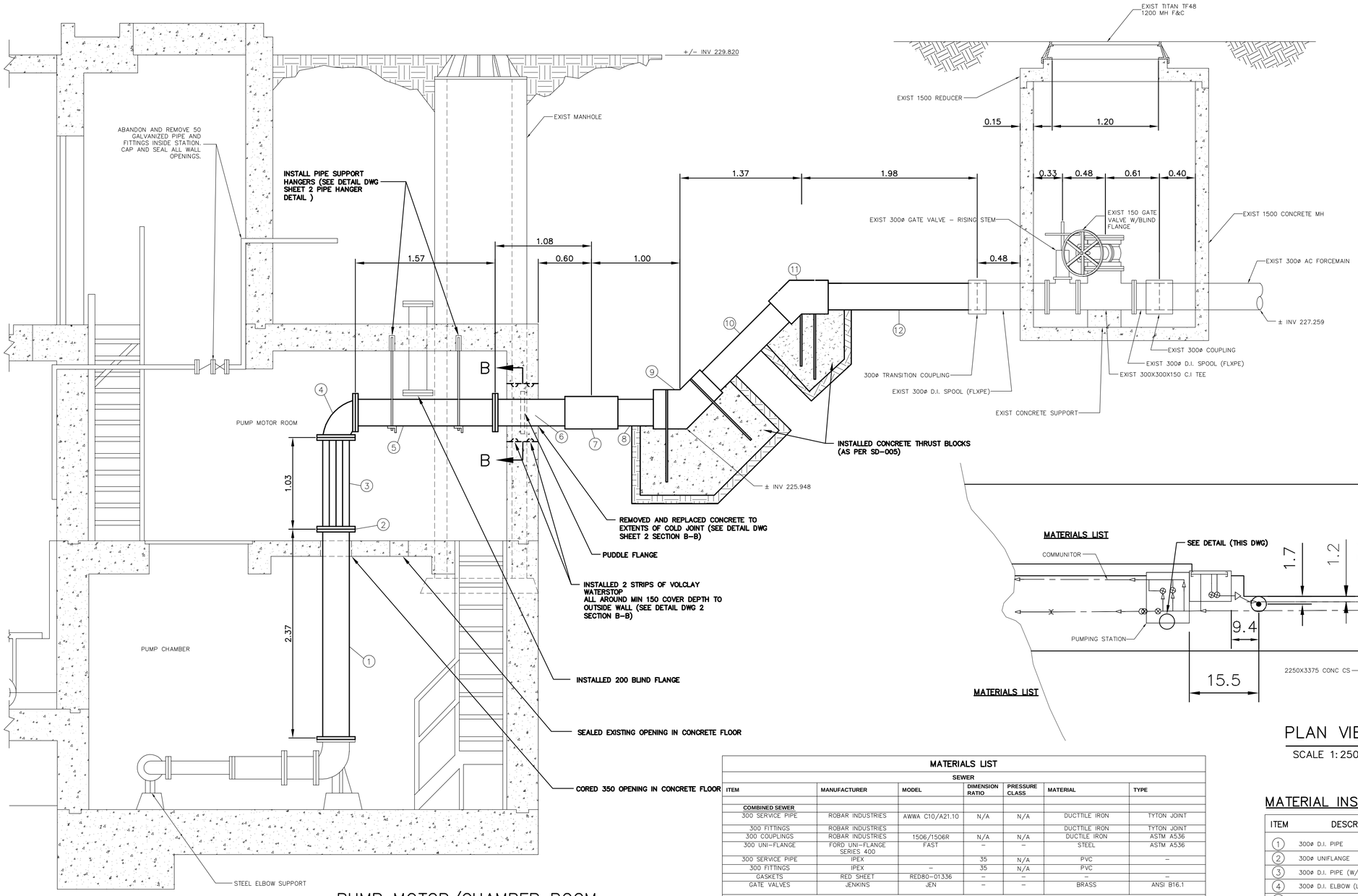
THE CITY OF WINNIPEG
WORKS & OPERATIONS DEPARTMENT
WATERWORKS, WASTE & DISPOSAL DIVISION

LINDEN PUMPING STATION PUMP REPLACEMENT

DESIGNED BY	DRAWN BY B.G.
CHECKED BY R.M.S.	DATE JULY/78
APPROVED BY G.O.	
SCALE AS NOTED	DRAWING NO. 960

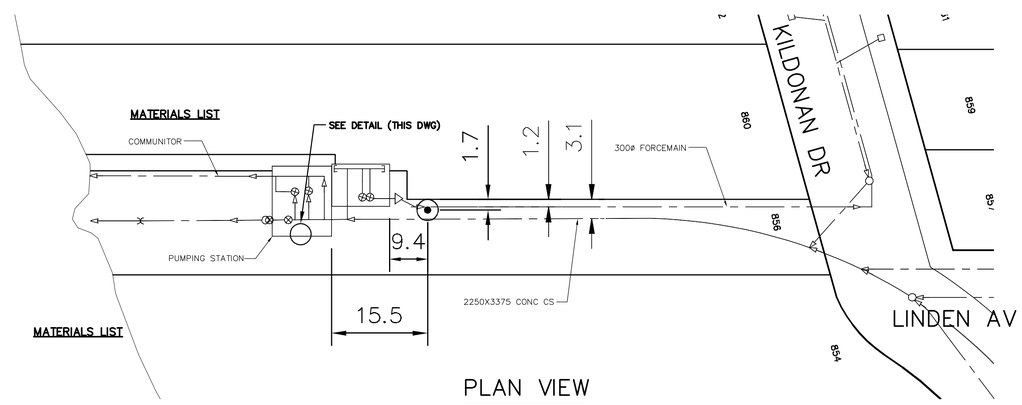
17-9-79

Scouten Mitchell Sigurdson
Consulting Engineers
Scouten Mitchell Sigurdson and Associates Limited
300-297 Smith Street, Winnipeg, Manitoba R3C 1L3 Telephone (204) 942-3111



PUMP MOTOR/CHAMBER ROOM

SCALE 1:250



PLAN VIEW

SCALE 1:250

MATERIALS LIST

SEWER						
ITEM	MANUFACTURER	MODEL	DIMENSION RATIO	PRESSURE CLASS	MATERIAL	TYPE
COMBINED SEWER						
300 SERVICE PIPE	ROBAR INDUSTRIES	AWWA C10/A21.10	N/A	N/A	DUCTTILE IRON	TYTON JOINT
300 FITTINGS	ROBAR INDUSTRIES				DUCTTILE IRON	TYTON JOINT
300 COUPLINGS	ROBAR INDUSTRIES	1506/1506R	N/A	N/A	DUCTILE IRON	ASTM A536
300 UNI-FLANGE	FORD UNI-FLANGE SERIES 400	FAST	–	–	STEEL	ASTM A536
300 SERVICE PIPE	IPEX		35	N/A	PVC	–
300 FITTINGS	IPEX	–	35	N/A	PVC	
GASKETS	RED SHEET	RED80-01336	–	–	–	–
GATE VALVES	JENKINS	JEN	–	–	BRASS	ANSI B16.1
CONTRACTOR: NELSON RIVER CONSTRUCTION INC.						

MATERIAL INSTALLATION LIST

ITEM	DESCRIPTION	ENDS	LENGTH	QUANTITY
1	300ø D.I. PIPE	FL X FL	2.37	1
2	300ø UNIFLANGE	–	–	1
3	300ø D.I. PIPE (W/ READY RODS)	FL X PE	1.03	1
4	300ø D.I. ELBOW (LONG RADIUS)	FL X FL	–	1
5	300ø D.I. PIPE	FL X FL	1.57	1
6	300ø S.S. PIPE SCH. 40 (W/ PUDDLE FLANGE)	FL X PE	1.08	1
7	300ø TRANSITION COUPLING	–	–	1
8	300ø PVC PIPE (C900)	–	1.00	1
9	300ø PVC 45° BEND (C900)	–	–	1
10	300ø PVC PIPE (C900)	–	1.37	1
11	300ø PVC 45° BEND (C900)	–	–	1
12	300ø PVC PIPE (C900)	–	1.98	1

CONSTRUCTION COMPLETION DATE: 14/04/22

RECORD DRAWING
WATER AND WASTE DEPARTMENT

NOTE:

CONTRACTOR TO CONFIRM ALL DIMENSIONS AND FIELD MEASUREMENTS PRIOR TO FABRICATION AND INSTALLATION OF MATERIALS.

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.

CONSTRUCTION COMPLETION DATE: 2014 04 22

NO.	REVISIONS	DATE	BY
1	ASBUILT DRAWING	14/01/17	RS

DESIGNED BY	DEB	CHECKED BY	KZ
DRAWN BY	MA/CJH	APPROVED BY	KZ
SCALE: HORIZONTAL	1:250	RELEASED FOR CONSTRUCTION	
VERTICAL	1:50		
DATE	2015 06 11	DATE	JAN 17, 2014

ENGINEER'S SEAL

ORIGINAL SIGNED BY K.R ZUREK 15/05/27

BID OPPORTUNITY: 61-2014
FILE NAME:
PLOT DATE: JAN 17, 2014

Winnipeg

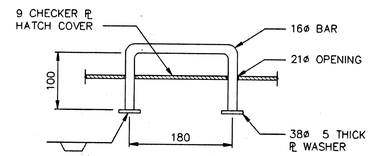
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

2013 PUMPING UNIT AND BUILDING UPGRADES TO THE
LINDEN PUMPING STATION

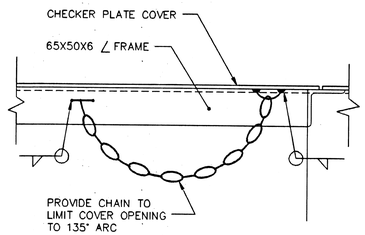
SHEET 1 OF 2

CITY DRAWING NUMBER
10730

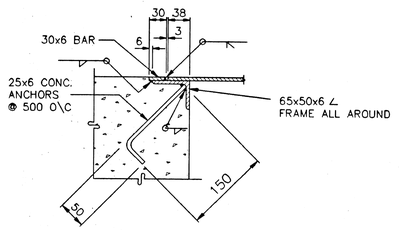
FILE PATH: R:\DRAWINGS\PUMPING STATIONS\SEWER\LINDEN PUMPING STATION\RECORD\
FILE NAME: LINDENPUMPCORY.dwg



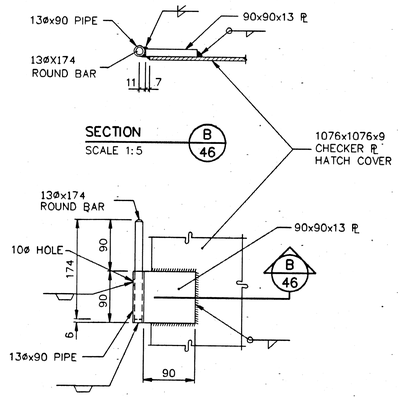
DETAIL 2/46
SCALE 1:5



SECTION A/46
N.T.S.

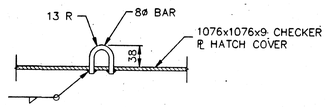


SECTION D/46
SCALE 1:5

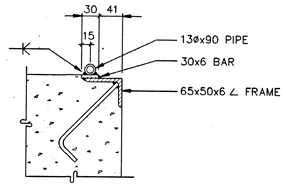


SECTION B/46
SCALE 1:5

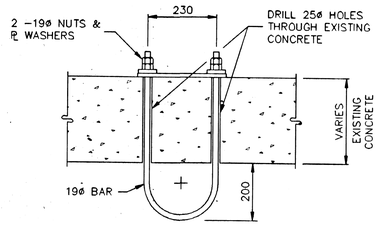
DETAIL 4/46
SCALE 1:5



DETAIL 3/46
SCALE 1:5

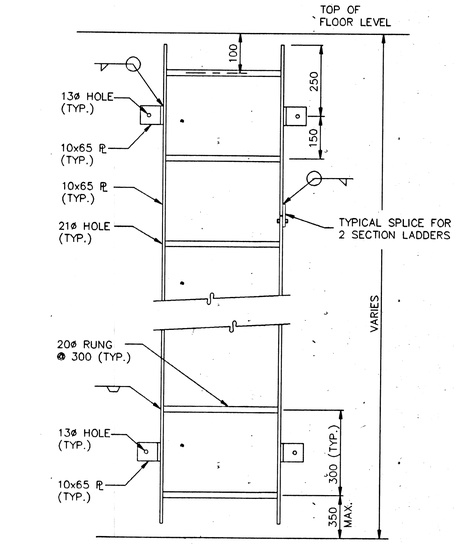


SECTION C/46
SCALE 1:5

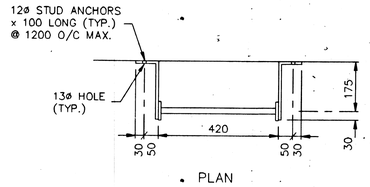


NOTE:
INSTALLED LIFT HOOKS IN EXIST. CONCRETE (4 REQ'D)
REMOVED AFTER CONSTRUCTION

DETAIL 5/46
SCALE 1:10

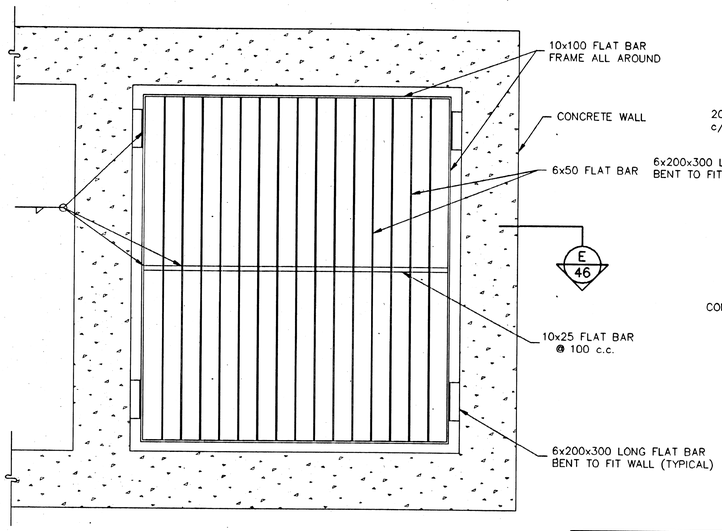


ELEVATION

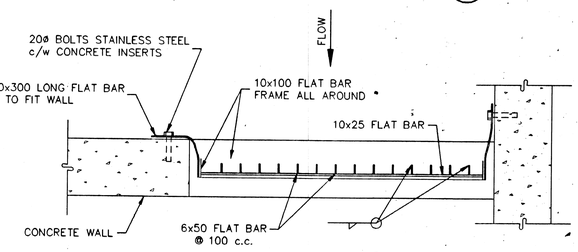


PLAN

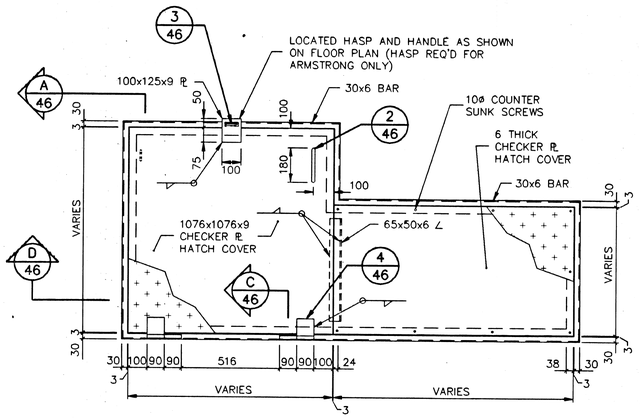
LADDER DETAIL 6/46
SCALE 1:10



TYPICAL SCREEN DETAIL 6/46
SCALE 1:15



SECTION E/46
SCALE 1:15



HINGED HATCH FIXED HATCH

TYPICAL HATCH DETAIL 1/46
SCALE 1:15

NOTE:
WHERE HATCH IS LARGER THAN 1076x1076 INSTALLED 100x100x6 BRACES UNDER HATCH EVERY 600 APART

NOTES:

1. ACCESS HATCH FRAME AND COVER AND LADDERS ALUMINUM.
2. APPLIED ISOLATION COATING TO ALUMINUM SURFACES TO BE EMBEDDED IN CONCRETE.
3. STRUCTURAL STEEL: CSA G40.21, TYPE 300W.
4. ANCHOR BOLTS: HILTI AS NOTED.
5. GALVANIZE ALL STEEL MISCELLANEOUS METAL AFTER FABRICATION.
6. SUBMITTED SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION.

REVISED AS CONSTRUCTED
DATE 2/3/95 BY G.D.
CHECKED BY F.R.

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. PD 93-197

NO.	REVISIONS	DATE	BY
1	REVISED TO ASBUILT	2/3/95	G.D.

I.D.ENGINEERING CANADA INC.
Professional Engineers
WINNIPEG, MANITOBA

DESIGNED BY A.D.M.	CHECKED BY A.D.M.
DRAWN BY G.D.	APPROVED BY A.D.M.
HOR. SCALE: VERTICAL: AS SHOWN	RELEASED FOR CONSTRUCTION:
DATE NOV. 26, 1993	DATE

ENGINEER'S SEAL
PROVINCE OF MANITOBA
A.D. MYSKA
Dec 10/93
REGISTERED ENGINEER

CONSULTANT DRAWING NO.
WW-46-510

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

NEWTON, LINDEN, ARMSTRONG AND MISSION FLOOD CONTROL UPGRADING PROJECT

MISCELLANEOUS METAL DETAILS

CITY DRAWING NUMBER
SHEET 10 OF 10
LD-1302

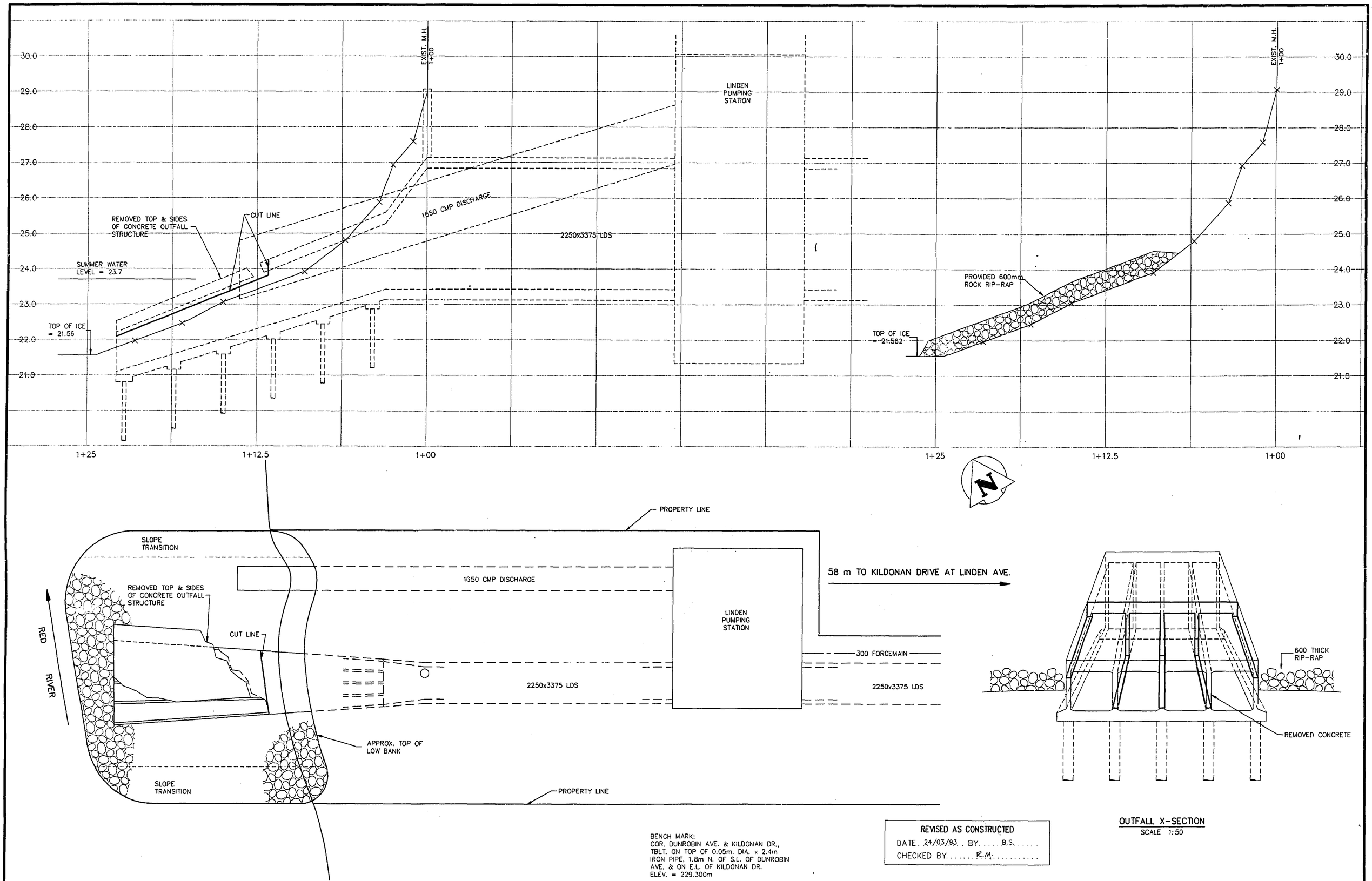
FILE # FP10411

AZON CANADA 3130110300

REF. OR DRAWING NO. LD 1302 FILE No. FP10411

DETAILS

AZON CANADA 3130110300



OUTFALL X-SECTION
SCALE 1:50

BENCH MARK:
COR. DUNROBIN AVE. & KILDONAN DR.,
TBLT. ON TOP OF 0.05m. DIA. x 2.4m
IRON PIPE, 1.8m N. OF S.L. OF DUNROBIN
AVE. & ON E.L. OF KILDONAN DR.
ELEV. = 229.300m

REVISED AS CONSTRUCTED
DATE 24/03/93 BY B.S.
CHECKED BY R.M.

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

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. 12-049
ELEV. 229.300m

NO.	REVISIONS	DATE	BY
1	REVISED TO ASBUILTS	24/3/93	B.S.

IDE I.D.ENGINEERING CANADA INC.
Professional Engineers
WINNIPEG , MANITOBA

DESIGNED BY	A.D.M.	CHECKED BY	A.D.M.
DRAWN BY	G.L.	APPROVED BY	D.G.M.
HOR. SCALE:	1:125	RELEASED FOR CONSTRUCTION:	
VERTICAL:	1:50		
DATE	FEB. 5, 1993	DATE	

ENGINEER'S SEAL
PROVINCE OF MANITOBA
ORIGINAL STAMPED BY A.D. MYSKA P. ENG. 09/02/93
REGISTERED ENGINEER

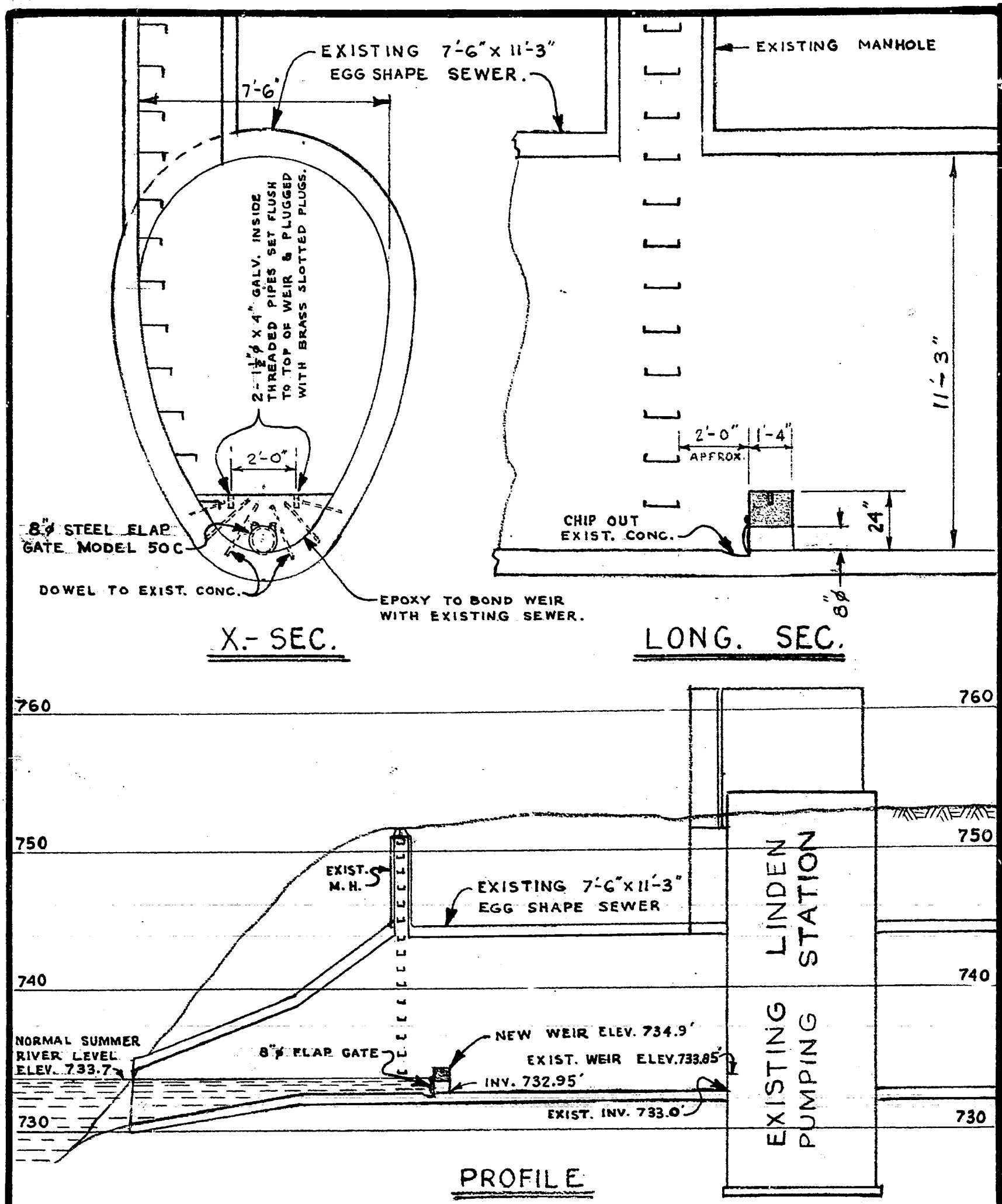
CONSULTANT DRAWING NO.
D4-28-490

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
NORTH EAST DISTRICT

LINDEN AVENUE OUTFALL
CONCRETE REMOVAL AND RIP-RAP

CITY DRAWING NUMBER
SHEET OF
NE-1294

ACAD 10 CUB D:\ACAD\LINDEN.DWG 09/02/93 2:31pm
DWG : LINDEN.DWG



THE METROPOLITAN CORPORATION OF GREATER WINNIPEG

WATER WORKS & WASTE DISPOSAL DIVISIONS

DIRECTOR – A. PENMAN

SEWAGE DISPOSAL DEPARTMENT

WEIR & FLAP GATE FOR LINDEN OUTFALL

DES. C.C. CH'KD. [illegible]

DRN. HB DATE 8 DEC 65

ENG.

APPROVED

SCALES ¼" = 1'-0" & 1" = 10'

DRAWING NO. **S-314**