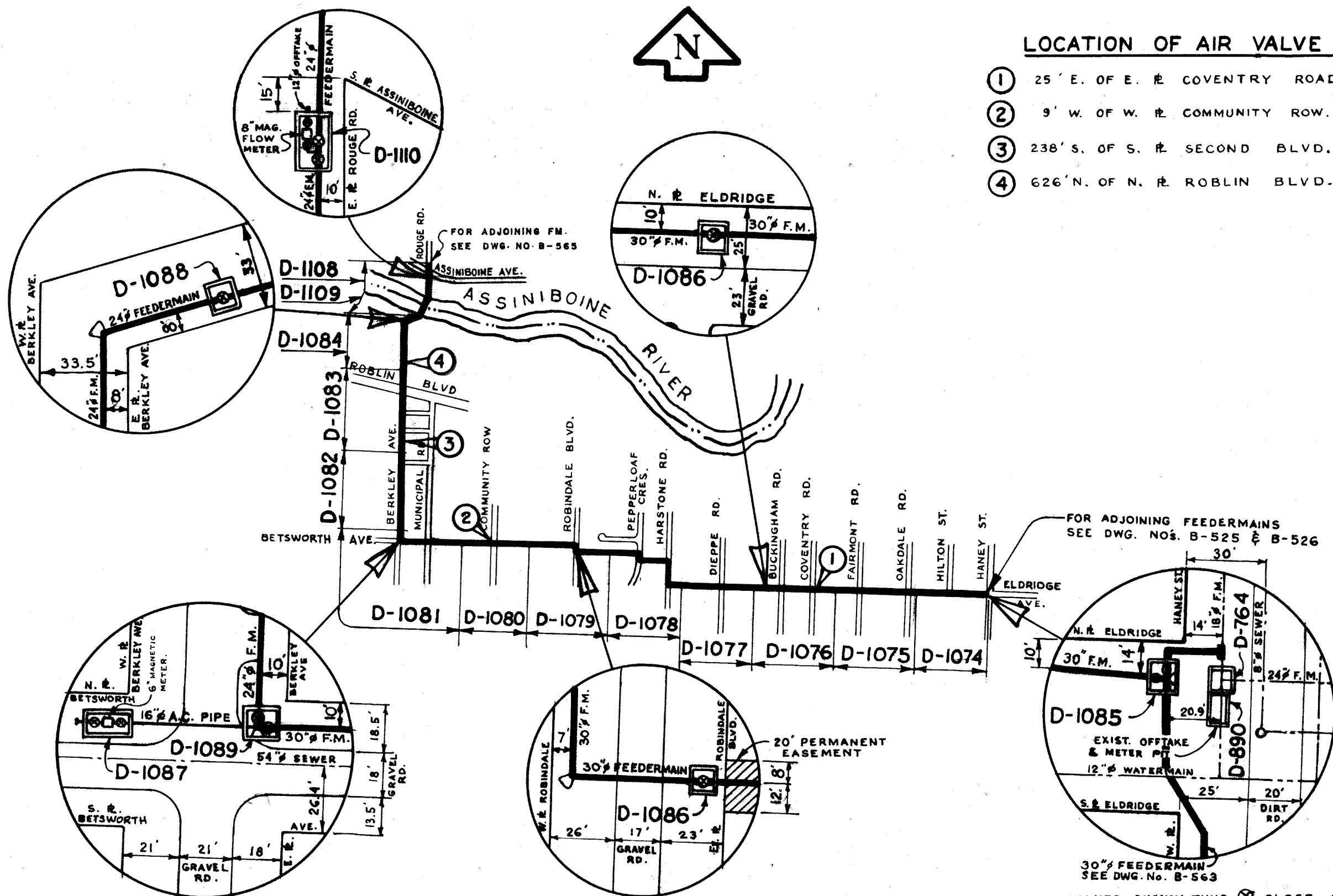


APPENDIX 'A'

RECORD DRAWINGS



2	REVISED TO DATE	24.9.82	TM.
1	REVISED TO DATE	MAR 71	HB
NO.	DESCRIPTION	DATE	BY
REVISIONS			

THE CITY OF WINNIPEG
**WATERWORKS WASTE &
DISPOSAL DEPT.**
DIRECTOR - A. PENMAN

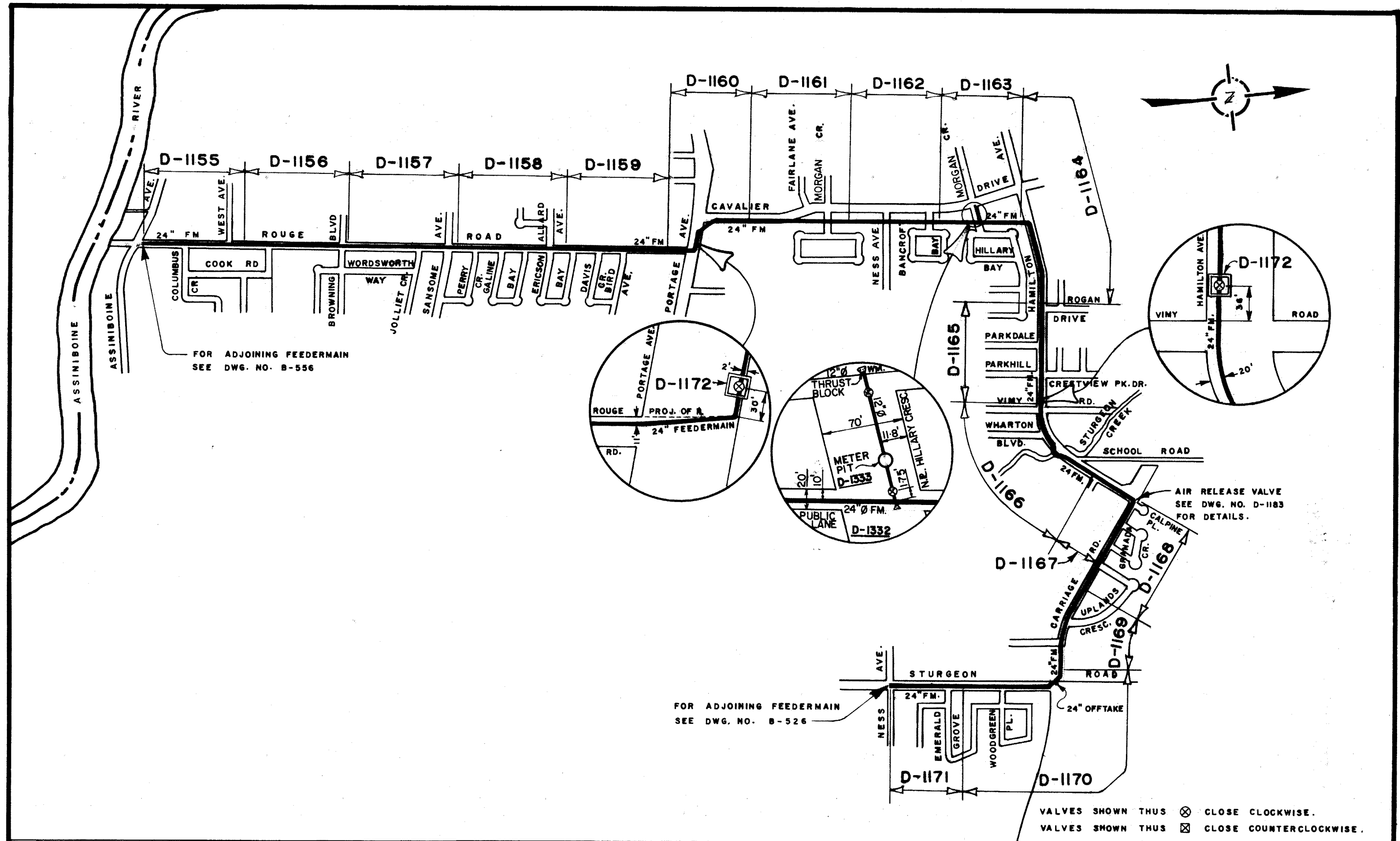
WATERWORKS DEPT
CHARLESWOOD ASSINIBOIA FEEDERMAIN
VALVE & METER PIT LOCATIONS

DES. W. S. B. CHKD. *OK*
DRN. HB DATE OCT 65
DEPT. CHKD. *[Signature]*
APPROVED *[Signature]*

SCALE
1" = 1500'
DRAWING NO.
B-556

MICROFILMED 1973

MICROFILMED JANUARY 1977



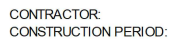
1	REVISED TO DATE	24.09.82 TM.
NO.	DESCRIPTION	DATE BY
	REVISIONS	

THE CITY OF WINNIPEG
WATERWORKS WASTE AND DISPOSAL DEPARTMENT
 DIRECTOR - A. PENMAN

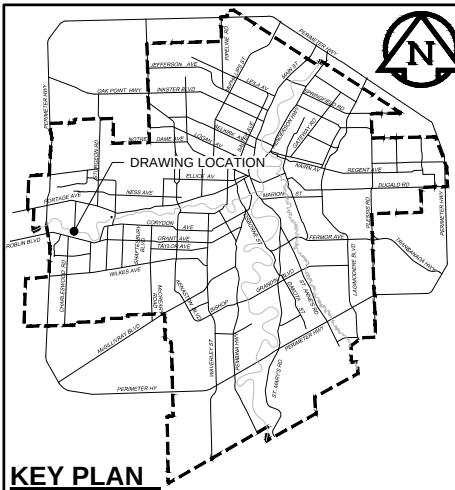
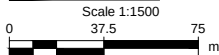
WATERWORKS DEPT.
ROUGE ROAD FEEDERMAIN
VALVE & METER PIT LOCATIONS

DRN. 18 CHK'D. *A* DATE MAR 71
 DESIGN ENG. *Rm. Gilling*
 ENG. OF OPS. *[Signature]*
 CHIEF ENG. *PC Samuelsen*

SCALE
 1" = 1000'
 & N.T.S.
 DRAWING NO.
B-565



CONTRACTOR: J-CON CIVIL LTD
CONSTRUCTION PERIOD: SEPT. 14, 2018 to NOV. 8, 2019



SPECIAL FEATURES
CLASS D

MATERIAL SPECIFICATION
 AWWA C207
 ANSI/AWWA C110/A21.10
 ANSI B16.1, ASTM A 536
 ASME/ANSI B16.1 Class 125
 Fusion bonded epoxy coating in accordance
 with AWWA C116
 Meets AWWA C207 & C219
 Barrel: ASTM A36
 End rings: ASTM A576, Grade 1020 / A36
 Gaskets: NBR per ASTM D2000
 Fusion epoxy coated per AWWA C213
 ASTM B418
 AWWA C217

24 LB ZINC ANODE
INCLUDES:
LOW TEMPERATURE PETROLATUM TAPE
VOID-FILLING MASTIC FILLER
PETROLATUM PASTE PRIMER
PROTECTIVE OUTERWRAP

RECORD DRAWING

BID OPPORTUNITY NO. 492-2018

LOCATION APPROVED

UNDERGROUND STRUCTURES

SUPR. 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.	

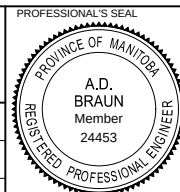
2	ISSUED FOR RECORD	19/11/28	KLC
1	REVISED GAS MAIN ALIGNMENT	18/08/02	KLC
0	ISSUED FOR CONSTRUCTION	18/06/01	KLC
NO.	REVISIONS	YY/MM/DD	BY

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

AECOM

DESIGNED BY	NJK	CHECKED BY	MG
DRAWN BY	KLC	APPROVED BY	
HOR. SCALE	AS NOTED	RELEASED FOR CONSTRUCTION	
VERT. SCALE	N/A		
DATE		DATE	



CONSULTANT DRAWING NO.
60549028-SHT-30-0000-C-1002



PROVISION OF PIPELINE ACCESS MODIFICATIONS, CLEANING AND SUPPORT SERVICES FOR RIVER CROSSING INSPECTIONS - PHASE TWO	SH
	CI

SITE 2

CHARLESWOOD - ASSINIBOIA
FEEDER MAIN

SHEET 4 OF 8
CITY DRAWING NUMBER
D-15160

MUNICIPALITY OF
ASSINIBOIA

PRIVATE
PROPERTY

P.I. STA. 4+14

ROAD

43°08'

LIMIT OF
GRADING
& SEEDING
(MINIMUM)

24" FEEDERMAIN

RIVER

ASSINIBOINE



P.I. STA. 7+50.27

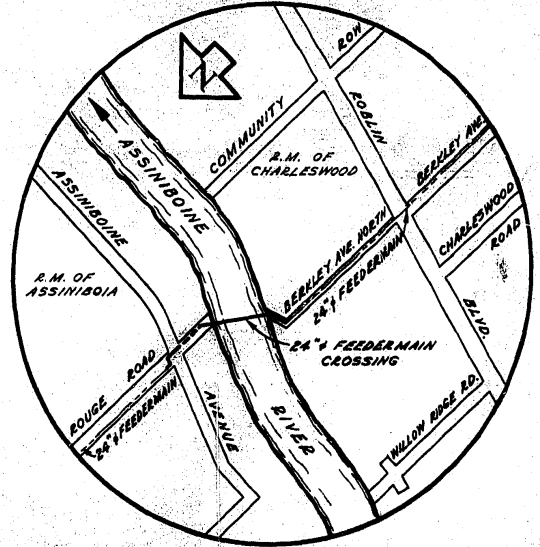
MUNICIPALITY OF
CHARLESWOOD

Deposited in the Winnipeg Land Titles Office this
15th day of September A.D. 1964 at 12:38 P.M.
as Railway Deposit No 830.

Signed C.H. Evans
Dep. District Registrar

I hereby certify that this is a true and correct
copy of the plan of which it purports to be a
copy and which is deposited in the Winnipeg
Land Titles Office as Railway Deposit No 830.

C.H. Evans
Dep. District Registrar



SITE PLAN

SCALE - N.T.S.

STA. 9+49.63
END OF CONTRACT

770

770

RIVERBANK IMPROVEMENT

GROUND PROFILE

WATER ELEV. 750.04 (JULY 6, 1964)

ICE ELEV. 750.12 (JAN. 22, 1964)

24" STEEL PIPE
1/2" WALL THICKNESS

CHANGE OF GRADE
STA. 5+00
ELEV. 746.80

CHANGE OF GRADE
STA. 4+14
ELEV. 746.80

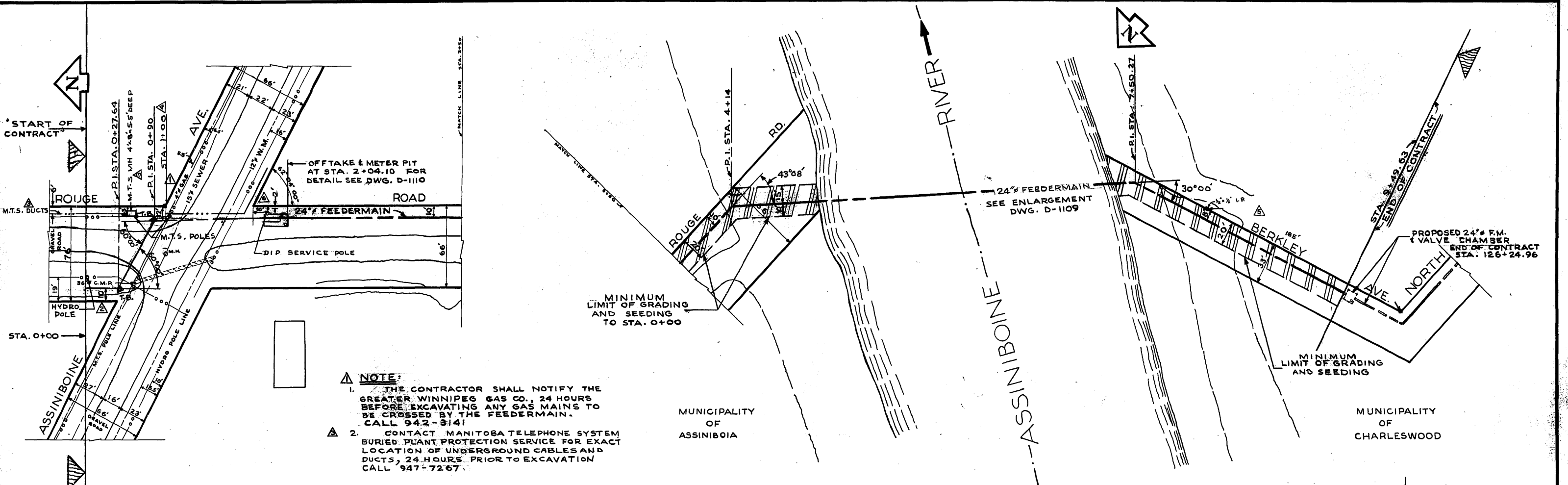
CHANGE OF GRADE
STA. 5+00
ELEV. 746.80

CHANGE OF GRADE
STA. 6+00
ELEV. 746.80

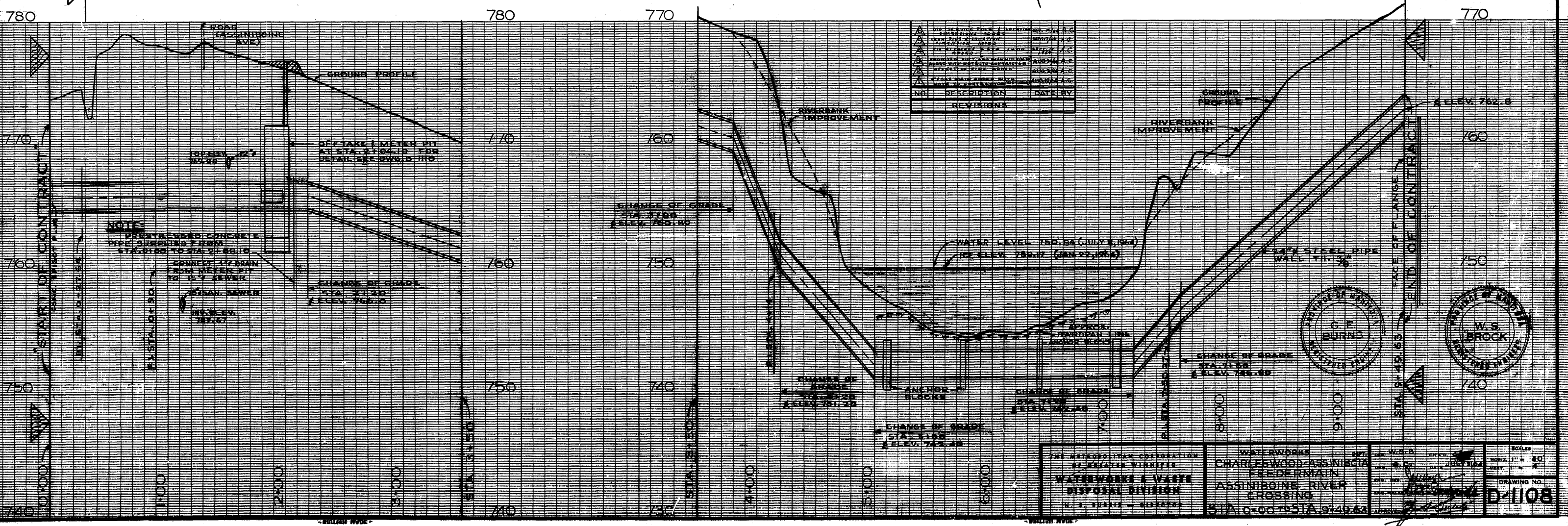
THE METROPOLITAN CORPORATION
OF THE CITY OF WINNIPEG
WATERWORKS & WASTE
DISPOSAL DIVISION
N. E. EVERTS - DIRECTOR

WATERWORKS
CHARLESWOOD-ASSINIBOIA
FEEDERMAIN
ASSINIBOINE RIVER
CROSSING
STA. 3+50 TO STA. 9+49.63

DRAWING NO.
D-1109



- NOTE:**
1. THE CONTRACTOR SHALL NOTIFY THE GREATER WINNIPEG GAS CO., 24 HOURS BEFORE EXCAVATING ANY GAS MAINS TO BE CROSSED BY THE FEEDERMAIN. CALL 942-3141
 2. CONTACT MANITOBA TELEPHONE SYSTEM BURIED PLANT PROTECTION SERVICE FOR EXACT LOCATION OF UNDERGROUND CABLES AND DUCTS, 24 HOURS PRIOR TO EXCAVATION CALL 947-7267



NO.	DESCRIPTION	DATE	BY
1	REVISIONS		

THE METROPOLITAN CORPORATION
OF GREATER WINNIPEG
WATERWORKS & WASTE
DISPOSAL DIVISION
N. J. BURKE - CHIEF ENGINEER

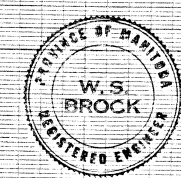
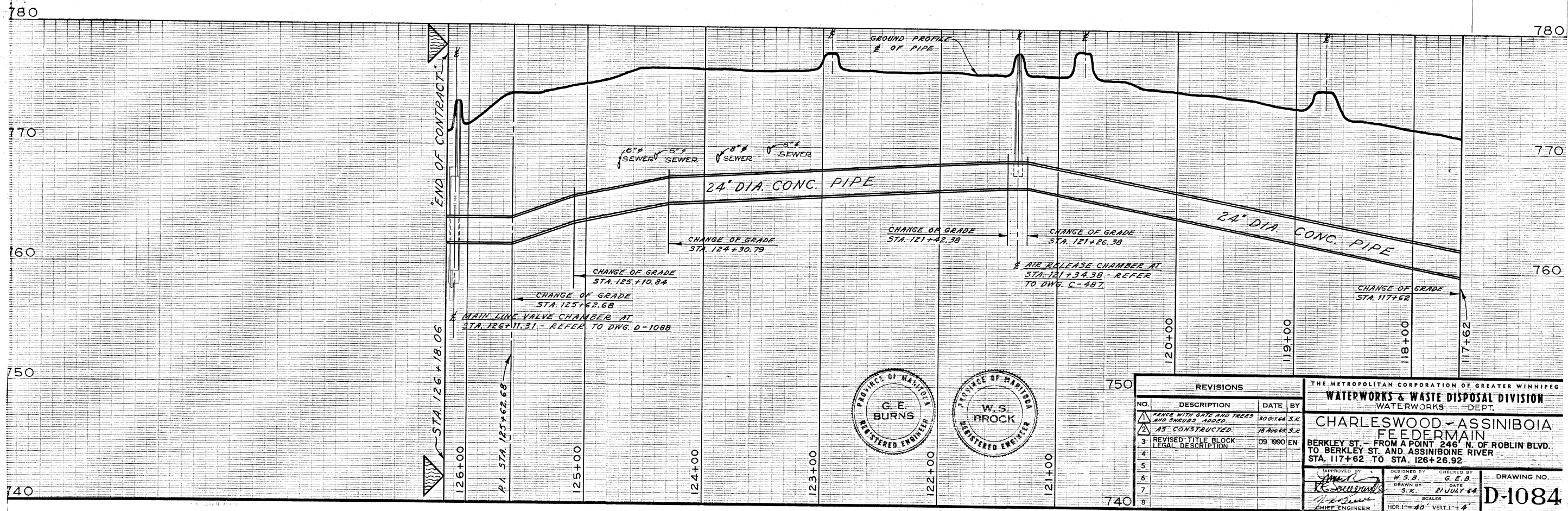
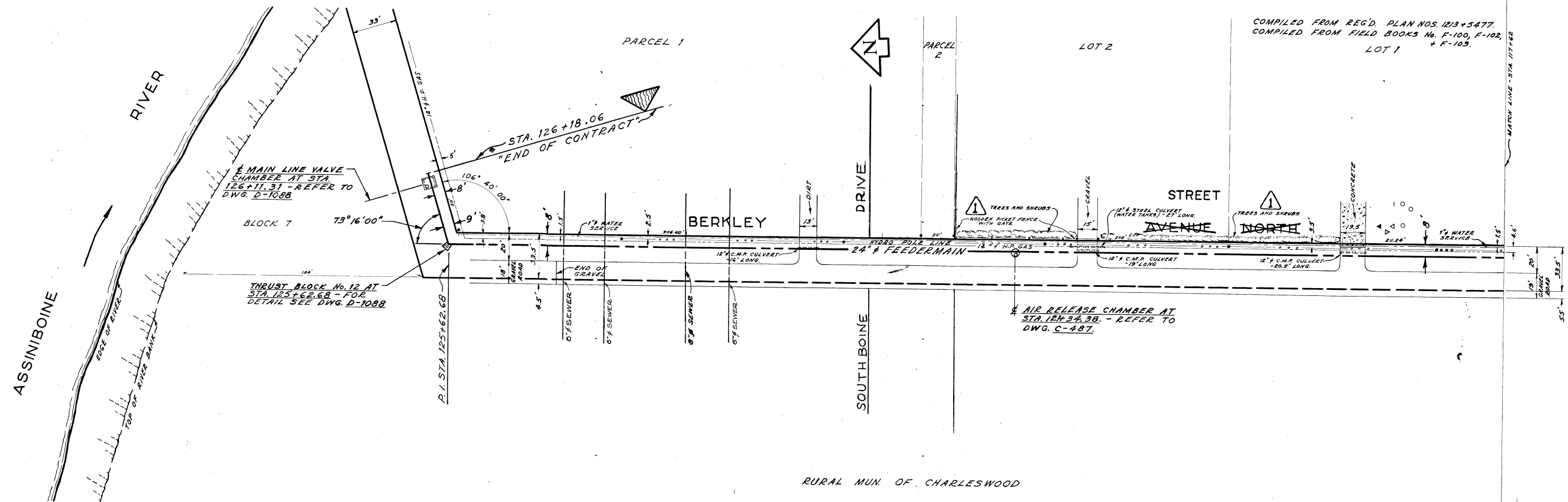
WATERWORKS
CHARLESWOOD-ASSINIBOIA
FEEDERMAIN
ASSINIBOINE RIVER
CROSSING
STA. 0+00 TO STA. 126+24.96

DATE: JULY 21, 1956
BY: J. W. BURKE
CHECKED: J. W. BURKE
APPROVED: J. W. BURKE

SCALE: 1" = 40'
HORIZ. 1" = 40'
VERT. 1" = 10'

DRAWING NO. D-1108

D-1084

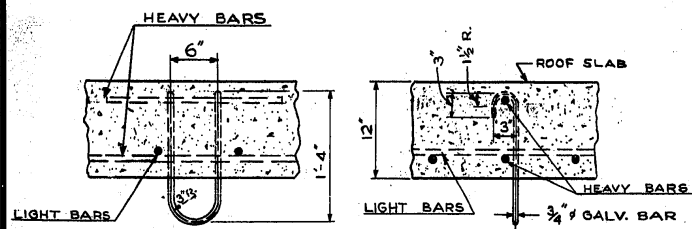


REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	REVISIONS		
2	REVISIONS		
3	REVISIONS		
4	REVISIONS		
5	REVISIONS		
6	REVISIONS		
7	REVISIONS		
8	REVISIONS		

THE METROPOLITAN CORPORATION OF GREATER WINNIPEG	
WATERWORKS & WASTE DISPOSAL DIVISION	
WATERWORKS DEPT.	
CHARLESWOOD-ASSINIBOIA FEEDERMAIN	
BERKLEY ST. - FROM A POINT 246' N. OF ROBLIN BLVD. TO BERKLEY ST. AND ASSINIBOINE RIVER	
STA. 117+62 TO STA. 126+26.92	
DESIGNED BY W. S. B.	CHECKED BY G. E. B.
DRAWN BY S. K.	DATE 21 JULY 68
CHIEF ENGINEER	DRAWING NO. D-1084



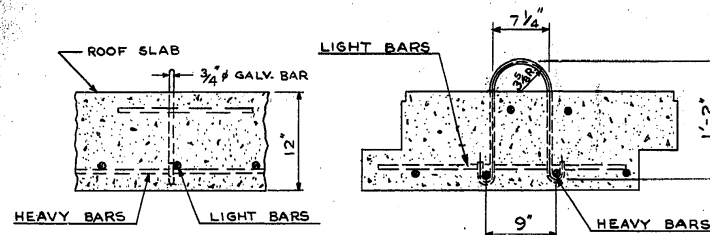
D-1084



CROSS-SECTION LONG-SECTION

DETAIL OF U-BOLT HOOK

SCALE: 1"=1'-0"



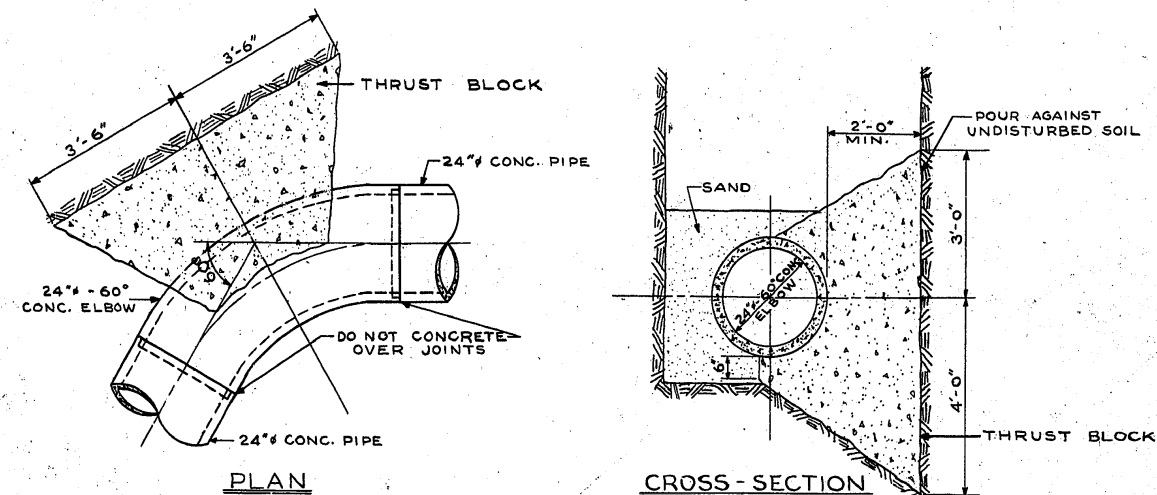
CROSS-SECTION LONG-SECTION

DETAIL OF LIFTING LUG

SCALE: 1"=1'-0"

NOTES: (REFERING TO METER PIT AT STA. 2+04.10 - SEE DWG. D-1110)

1. ALL PRECAST CHAMBER SLABS ARE TO BE NUMBERED ON THE UNDERSIDE IN THE ORDER BY WHICH THEY CAN BE REMOVED. CAST IN TYPICAL HOUSE NUMBERS.
2. PLACE BUILDING PAPER BETWEEN VALVES AND CONCRETE SADDLES, BETWEEN ELBOWS AND CONCRETE SADDLES AND BETWEEN CONCRETE BASE AND METER.
3. ALL EXTERIOR AND INTERIOR CORNERS, INCLUDING PRECAST SLABS, TO BE CHAMFERED AS SPECIFIED IN THE SPECIFICATIONS.
4. THE VICTAULIC COUPLINGS TO BE STYLE # 44.
5. FITTINGS REQUIRED FOR EACH 8" C.I. SHORT WITH 3" OUTLETS.
 - ON TOP OF 8" SHORT
 - 3" NIPPLE (SCREW TO SCREW-ON-FLANGE)
 - 3" C.I. GATE VALVE FLANGED WITH BRONZE TRIM
 - ON BOTTOM OF 8" SHORT
 - 3" NIPPLE (SCREW TO SCREW-ON-FLANGE)
 - 3" GATE VALVE FLANGED WITH BRONZE TRIM
 - 3" 90° GALV. BASE ELBOW (FLANGE TO SCREW)-DIRECT ELBOW TOWARDS MANHOLE OPENING.
6. FITTINGS REQUIRED FOR ITEMS B. AND E.
 - ON TOP OF 24" PIPE
 - 2" NIPPLE (SCREW TO SCREW-ON-FLANGE) - SUPPLIED WITH PIPE.
 - 2" C.I. GATE VALVE FLANGED WITH BRONZE TRIM
 - ON BOTTOM OF 24" PIPE
 - 3" NIPPLE (SCREW TO SCREW-ON-FLANGE) - SUPPLIED WITH PIPE.
 - 3" C.I. GATE VALVE FLANGED WITH BRONZE TRIM
 - 3" 90° GALV. BASE ELBOW (FLANGE TO SCREW) - DIRECT ELBOW TOWARDS MANHOLE OPENING.
7. ALL FITTINGS TO BE MADE OF BRONZE UNLESS SPECIFIED OTHERWISE.
8. SEE DWG. C-480 FOR ELECTRICAL REQUIREMENTS.

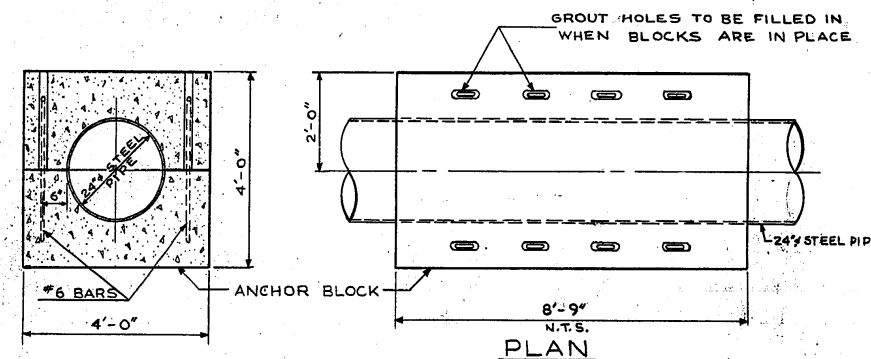


DETAIL OF THRUST BLOCKS NOS. 1 & 2 FOR 24" CONC. PIPE - 60° ELBOW

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

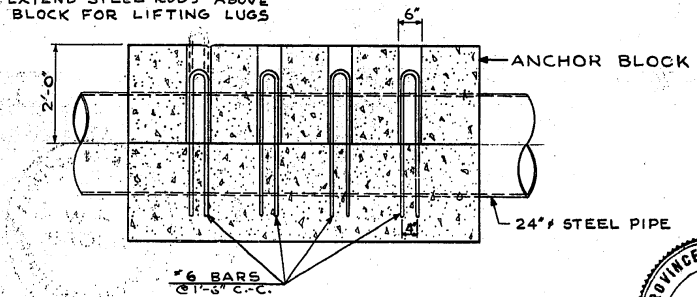
LIST OF THRUST BLOCKS FOR 24" CONC. PIPE			
NO.	LOCATION	ANGLE	BEARING AREA
1	60° ELBOW AT P.I. STA.	60°00'00"	7'-0" x 7'-0"
2	60° ELBOW AT P.I. STA.	60°00'00"	7'-0" x 7'-0"
3	END OF CONTRACT STA. 9+49.63		7'-0" x 7'-0"

LIST OF ANCHOR BLOCKS FOR 24" STEEL PIPE		
NO.	LOCATION	LENGTH
1	STA. 5+05	8'-9"
2	STA. 5+70	8'-9"
3	STA. 6+45	8'-9"
4	STA. 7+15	8'-9"



CROSS-SECTION

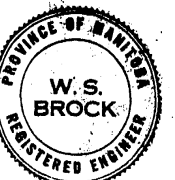
OPTIONAL - EXTEND STEEL RODS ABOVE BLOCK FOR LIFTING LUGS



LONG-SECTION

TYPICAL
DETAIL OF ANCHOR BLOCKS
- FOR 24" STEEL PIPE

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

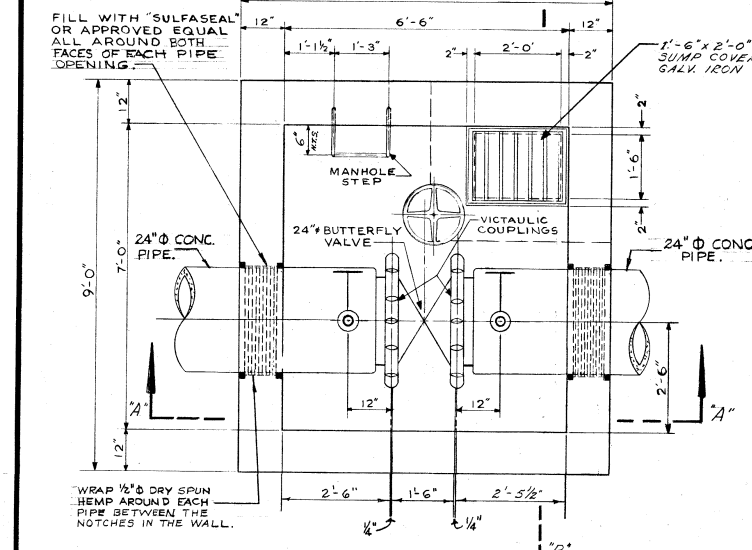
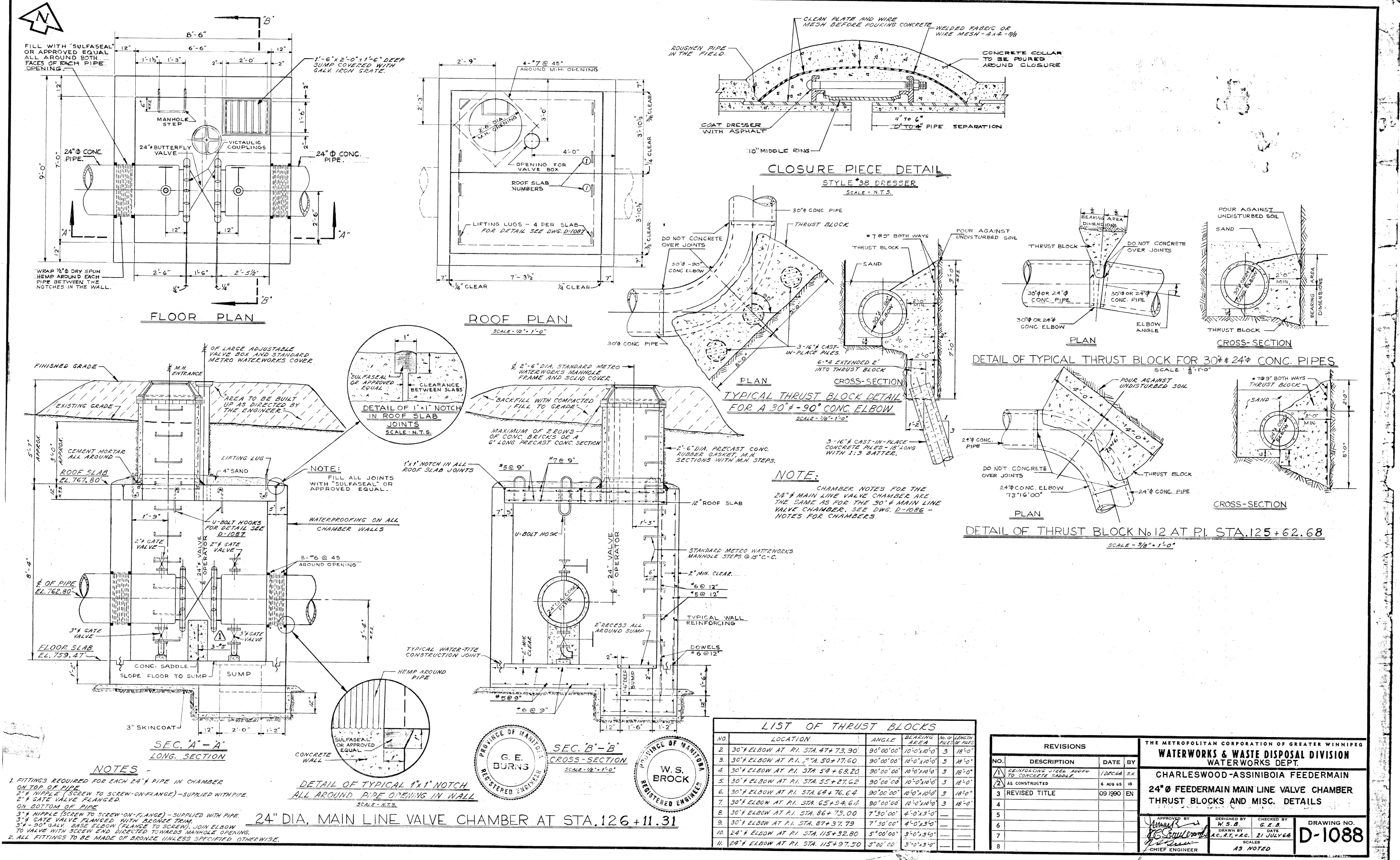


THE METROPOLITAN CORPORATION
OF GREATER WINNIPEG
**WATERWORKS & WASTE
DISPOSAL DIVISION**
N. S. BUBBIS - DIRECTOR

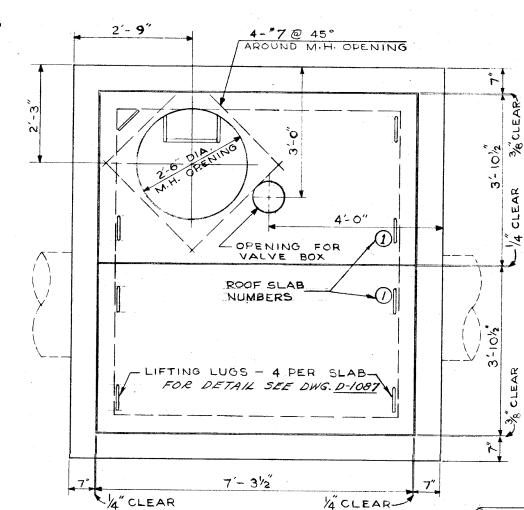
WATERWORKS
CHARLESWOOD- ASSINIBOIA
FEEDERMAIN
ASSINIBOINE RIVER
CROSSING
THRUST AND ANCHOR BLOCKS
& MISCELLANEOUS DETAILS

DES. W. S. B. CH'K'D. GEB
DRN. A.C. DATE: JULY 31/64
ENG. DES. J. J. J.
ENG. WATERWORKS J. J. J.
APPROVED J. J. J.

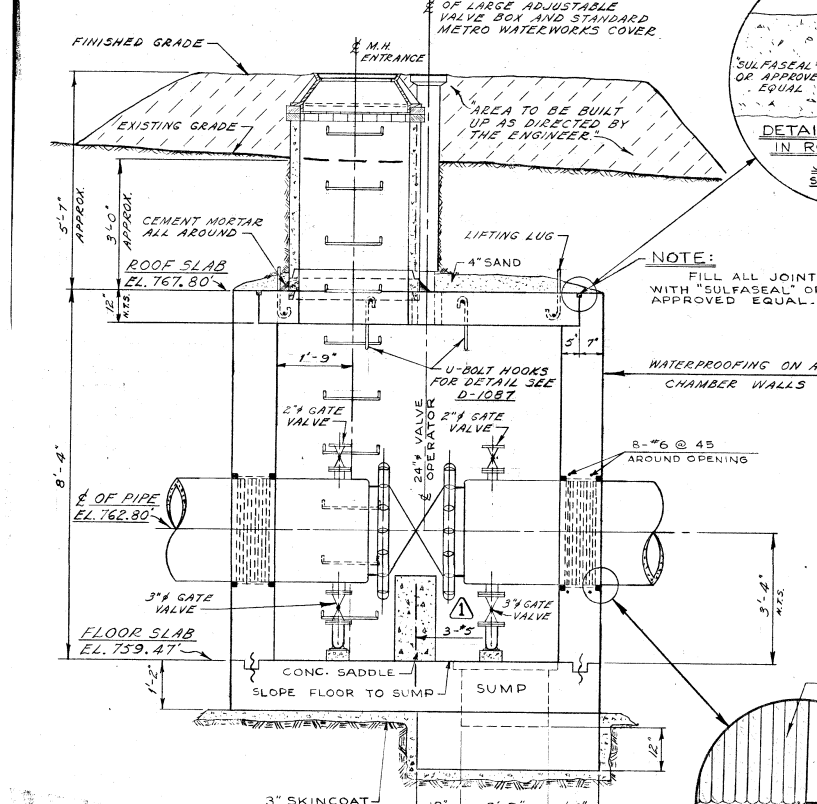
SCALES
HORIZ. 1" = 4'S
VERT. 1" = NOTED
DRAWING NO.
D-1111



FLOOR PLAN



ROOF PLAN

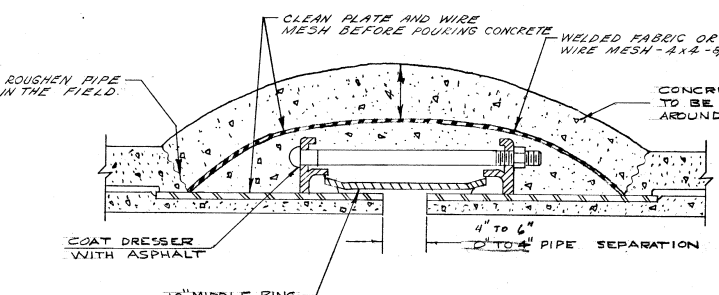


SEC. A-A
LONG. SECTION

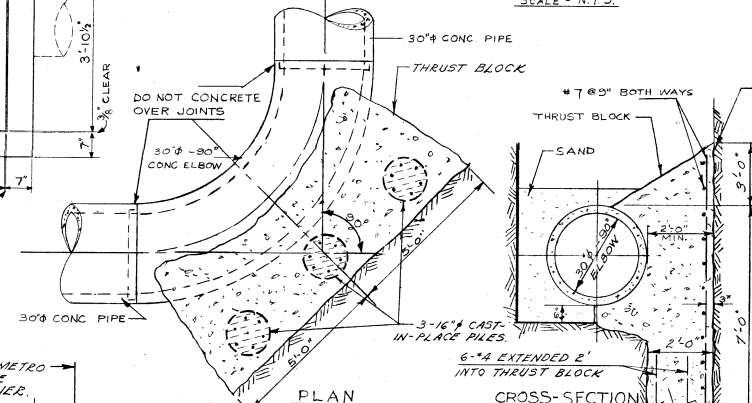
- NOTES**
1. FITTINGS REQUIRED FOR EACH 24" PIPE IN CHAMBER ON TOP OF PIPE.
 2. 2" NIPPLE (SCREW TO SCREW-ON-FLANGE) - SUPPLIED WITH PIPE.
 3. 2" GATE VALVE FLANGED.
 4. ON BOTTOM OF PIPE.
 5. 3" NIPPLE (SCREW TO SCREW-ON-FLANGE) - SUPPLIED WITH PIPE.
 6. 3" GATE VALVE FLANGED WITH BRONZE TRIM.
 7. 3" 90° GALV. BASE ELBOW (FLANGE TO SCREW) JOIN ELBOW TO VALVE WITH SCREW END DIRECTED TOWARDS MANHOLE OPENING.
 8. ALL FITTINGS TO BE MADE OF BRONZE UNLESS SPECIFIED OTHERWISE.

DETAIL OF TYPICAL 1"x1" NOTCH
ALL AROUND PIPE OPENING IN WALL
SCALE - N.T.S.

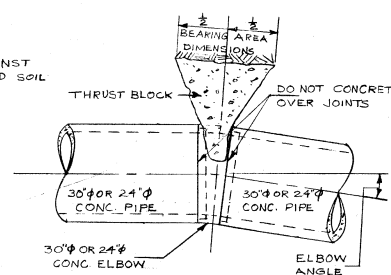
24" DIA. MAIN LINE VALVE CHAMBER AT STA. 126+11.31



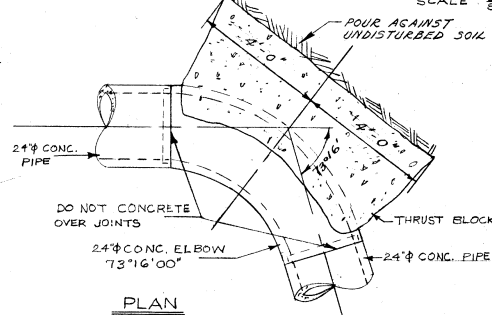
CLOSURE PIECE DETAIL
STYLE #38 DRESSER
SCALE - N.T.S.



TYPICAL THRUST BLOCK DETAIL
FOR A 30°-90° CONC. ELBOW
SCALE - 3/8" = 1'-0"



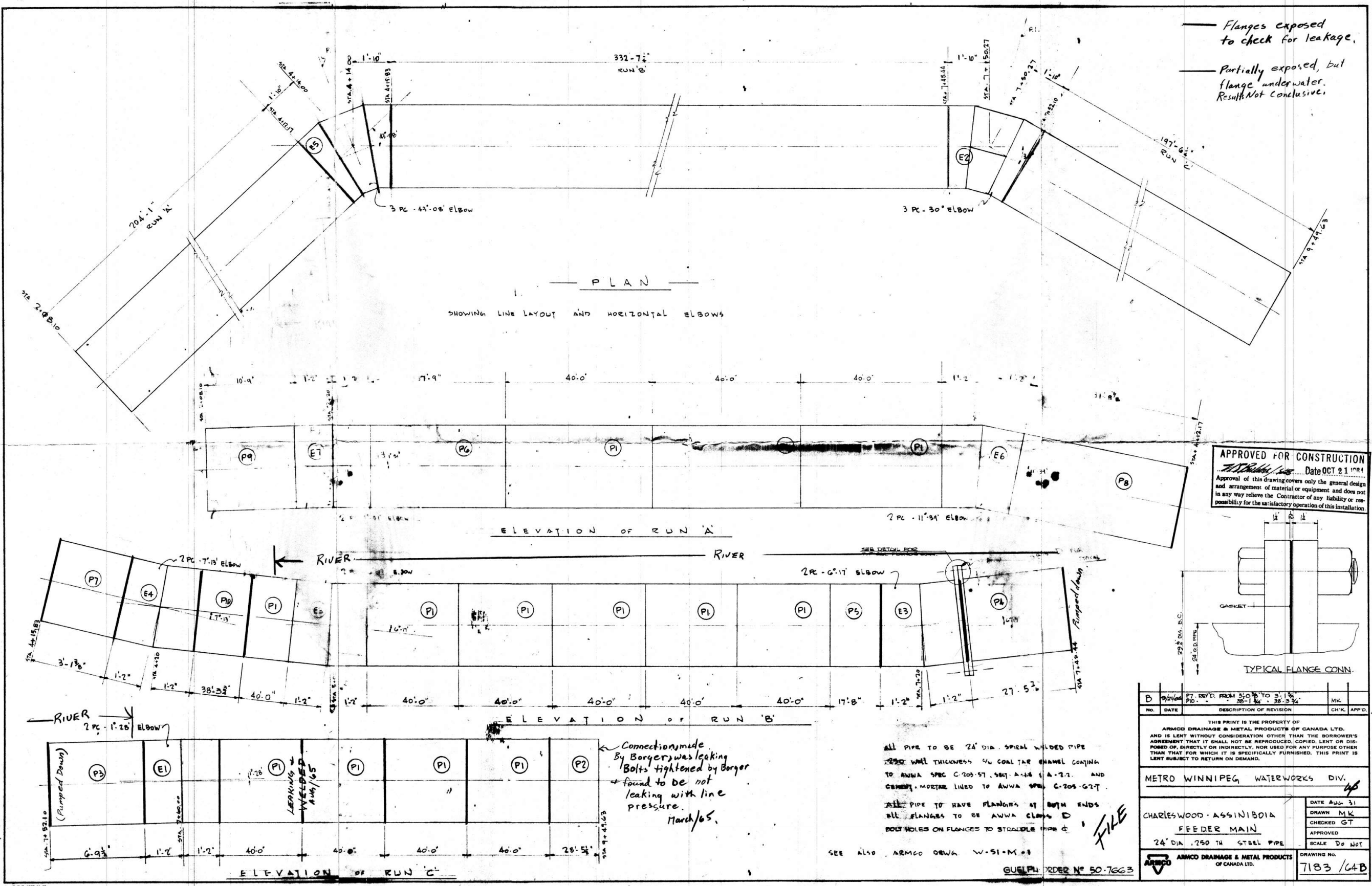
DETAIL OF TYPICAL THRUST BLOCK FOR 30" & 24" CONC. PIPES
SCALE - 3/8" = 1'-0"



DETAIL OF THRUST BLOCK No. 12 AT P.I. STA. 125+62.68
SCALE - 3/8" = 1'-0"

LIST OF THRUST BLOCKS					
NO.	LOCATION	ANGLE	BEARING AREA	NO. OF PILES	LENGTH
1.	30° ELBOW AT P.I. STA. 47+73.90	90° 00' 00"	10'-0" x 10'-0"	3	18'-0"
2.	30° ELBOW AT P.I. STA. 50+17.60	90° 00' 00"	10'-0" x 10'-0"	3	18'-0"
3.	30° ELBOW AT P.I. STA. 54+68.20	90° 00' 00"	10'-0" x 10'-0"	3	18'-0"
4.	30° ELBOW AT P.I. STA. 55+27.62	90° 00' 00"	10'-0" x 10'-0"	3	18'-0"
5.	30° ELBOW AT P.I. STA. 64+76.64	90° 00' 00"	10'-0" x 10'-0"	3	18'-0"
6.	30° ELBOW AT P.I. STA. 65+94.64	90° 00' 00"	10'-0" x 10'-0"	3	18'-0"
7.	30° ELBOW AT P.I. STA. 86+73.00	7° 30' 00"	4'-0" x 3'-0"	—	—
8.	30° ELBOW AT P.I. STA. 87+37.79	7° 30' 00"	4'-0" x 3'-0"	—	—
9.	24" ELBOW AT P.I. STA. 115+32.80	5° 00' 00"	3'-0" x 3'-0"	—	—
10.	24" ELBOW AT P.I. STA. 115+97.50	5° 00' 00"	3'-0" x 3'-0"	—	—

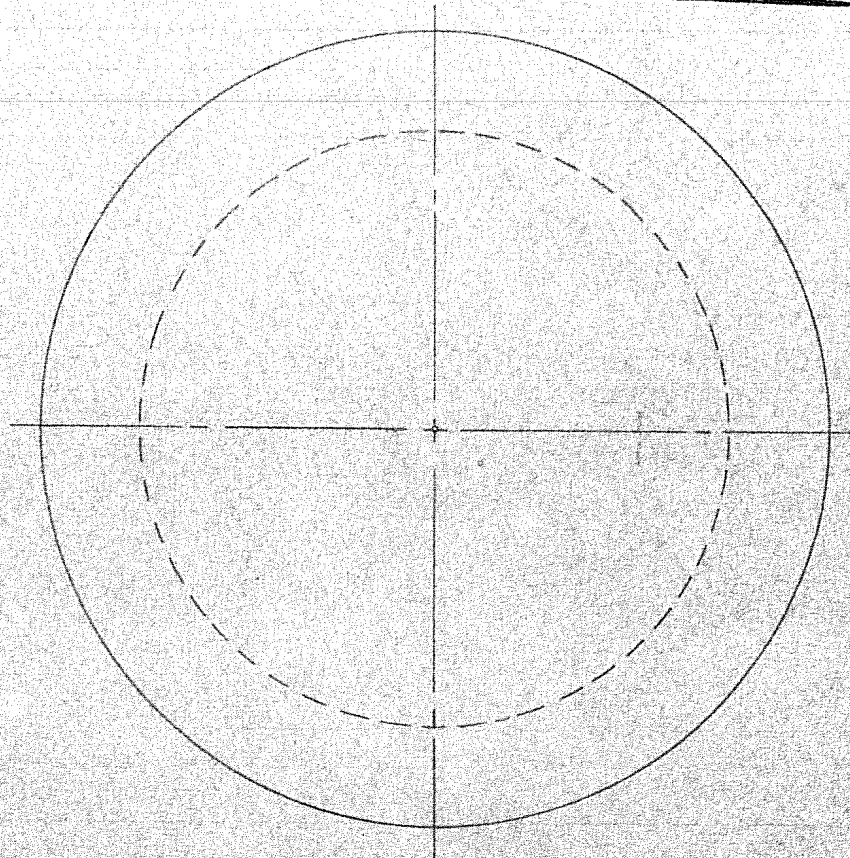
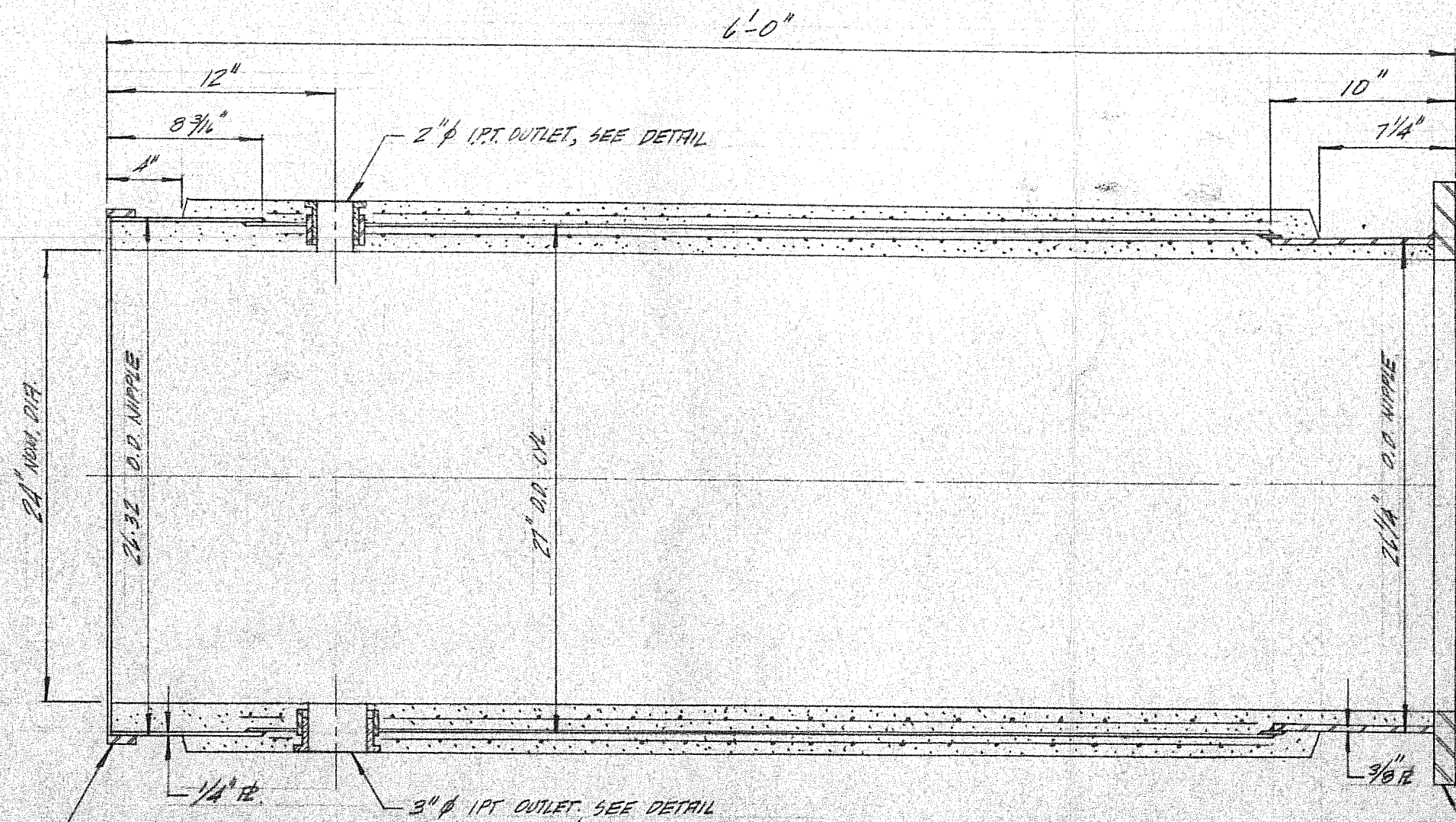
REVISIONS				THE METROPOLITAN CORPORATION OF GREATER WINNIPEG WATERWORKS & WASTE DISPOSAL DIVISION WATERWORKS DEPT. CHARLESWOOD-ASSINIBOIA FEEDERMAIN 24" FEEDERMAIN MAIN LINE VALVE CHAMBER THRUST BLOCKS AND MISC. DETAILS			
NO.	DESCRIPTION	DATE	BY	APPROVED BY	DESIGNED BY	CHECKED BY	DRAWING NO.
1.	REINFORCING STEEL ADDED TO CONCRETE SADDLE	1/20/64	S.E.		W.S.B.	G.E.B.	D-1088
2.	AS CONSTRUCTED	6 AUG 65	HB		AC, R.T., P.C.	DATE 21 JULY 64	
3.	REVISED TITLE	09 1990	EN				
4.							
5.							
6.							
7.							
8.							



APPROVED FOR CONSTRUCTION

Date NOV. 20, 1964

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



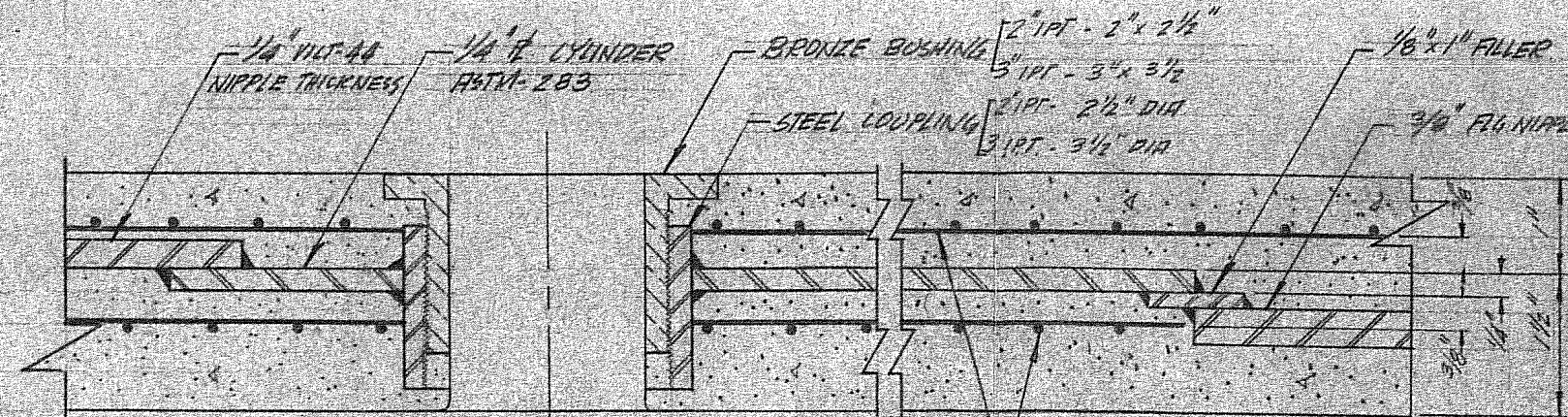
VILT-44 END, FOR DETAIL
SEE DWG. NO. T-1015

24" DIA. STD. R. SL. FLG. BOLT HOLES
TO STRADDLE L'S FOR DETAIL SEE DWG. NO. T-1020
4" GASKET, STAINLESS STEEL NUTS & BOLTS

NOTE:

1. FINISH L-301 TYPE "B" SPECIAL
2. USE KALIBRETE TYPE 5 LEMENT

REVIEWED AS PER APP'D DWG.
NOV. 16/64



WALL SECTION SHOWING WELDING DETAILS & IPT. OUTLET
SCALE 1/2" = 1"

Canada Iron PIPE DIVISION

24" DIA. SHORT PIPE W/ VILT-44 TO FLG. & BL. FLG. ENDS

METRO WINNIPEG

CA-23

SCALE: 1/2" = 1'-0"	DWN. BY: <i>HL</i>	DWG. NO.	REV.
DATE: NOV. 3/64	CHK'D BY: <i>IN</i>	T-54012-26	A.
I.O. T-54022	APP'D BY: <i>HL</i>		

MY-55-A 100 P.S.I.
NK. NO. PRESSURE