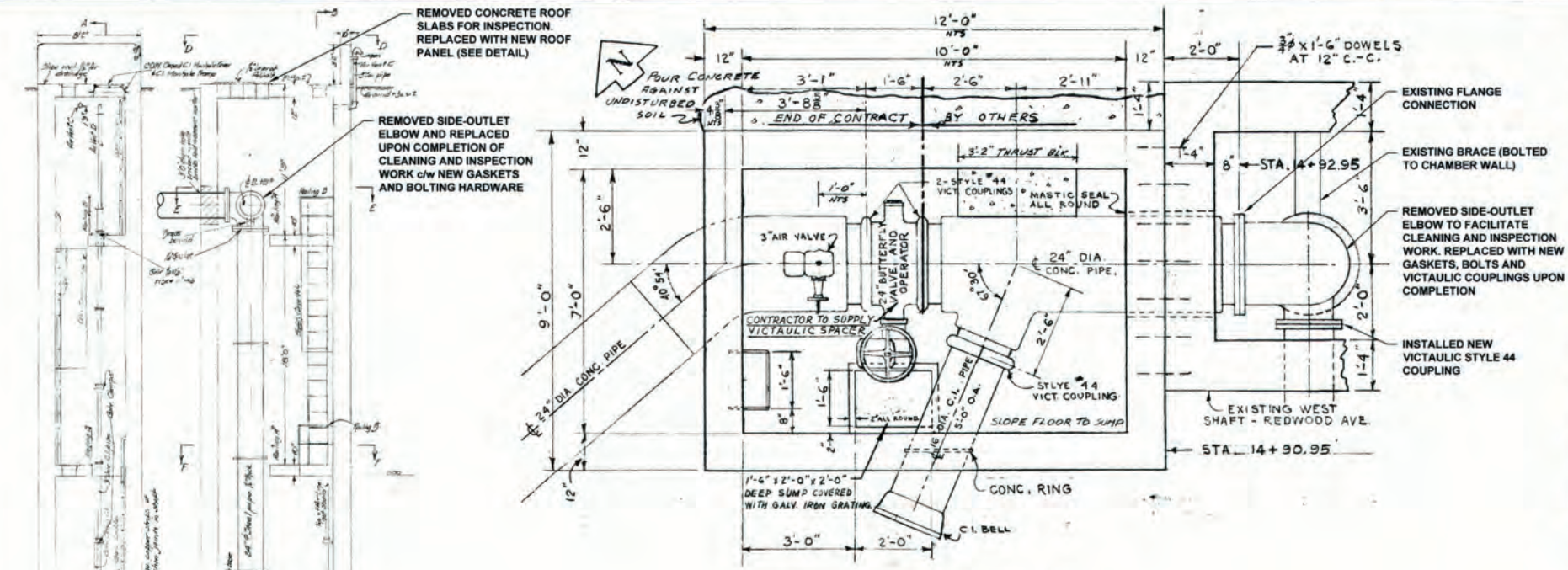


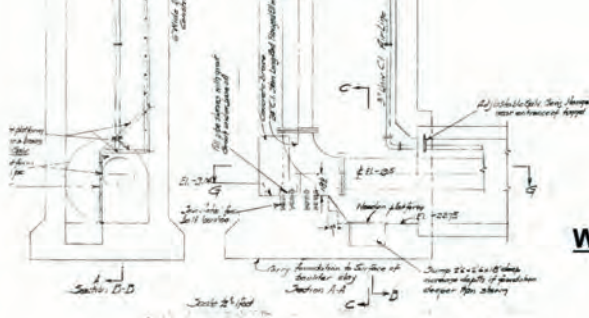
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PL03: 10272020-4 24-30-19

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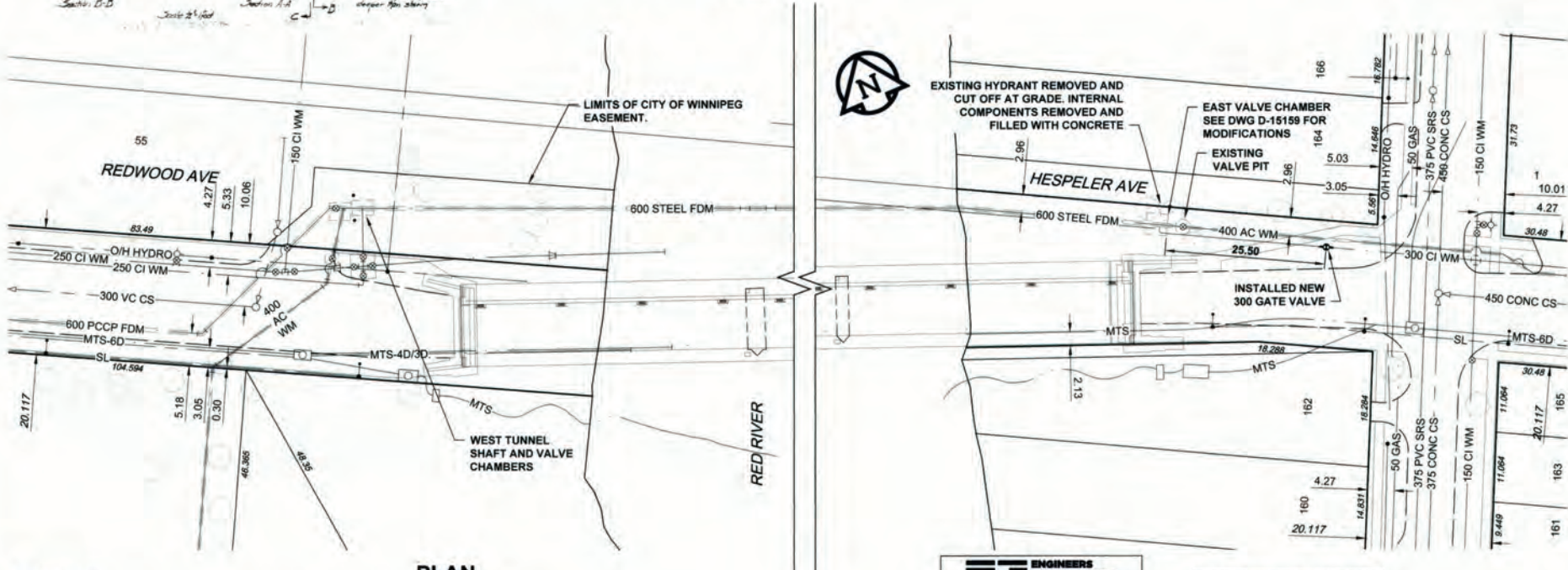
WEST CHAMBER PLAN Scale 1:25



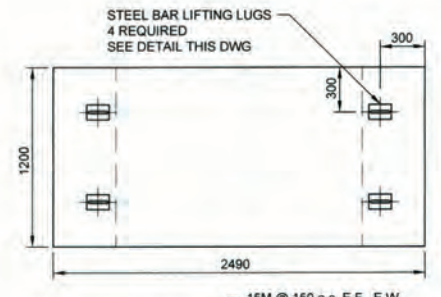
WEST CHAMBER SECTION Scale 1:75



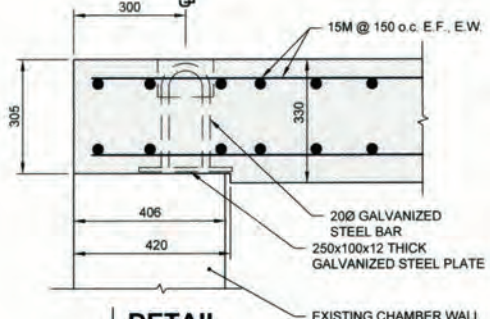
SITE PLAN Scale 1:1500



PLAN Scale 1:500



DETAIL REMOVABLE CONCRETE ROOF PANEL PLAN & SECTION SCALE 1:25



DETAIL REMOVABLE ROOF PANEL LIFTING LUGS (4 REQUIRED) SCALE 1:10



KEY PLAN

NOTES:
SEE NEXT SHEET, DWG D-15159 FOR SEQUENCE OF WORK, CONSTRUCTION NOTES & MATERIAL LIST

ENGINEERS GEOSCIENTISTS MANITOBA
Certificate of Authorization
AECOM Canada Ltd.
No. 4671 Date: 2/2/20

CONSTRUCTION COMPLETION DATE:
NOVEMBER 8, 2019

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

VALVES ARE COUNTER-CLOCKWISE TO CLOSE (RED OPERATING NUT)

RECORD DRAWING

BID OPPORTUNITY NO. 492-2018

150 WM	WATERMAIN	150 WM	○	CURB STOP	+
○	HYDRANT	+	○	REDUCER	+
○	VALVE	+	○	COUPLING	+
300 LDS	LAND DRAINAGE SEWER	300 LDS	○	ANODE	+
250 WWS	WASTE WATER SEWER	250 WWS	○	HYDRO	+
○	MANHOLE	●	○	MTS	+
○	CATCH BASIN	■	○	GAS	+
○	CURB INLET	▲	○	TESTHOLE	+
○	CULVERT	▬	○	LAMP STANDARD	+
▬	PIPE ABANDONMENTS	▬	○	TREE	+
+	SURVEY BAR	+			
○	EXISTING	▬	○	EXISTING	▬
▬	LEGEND - PLAN	▬	○	LEGEND - PLAN	▬
○	NEW	▬	○	NEW	▬
▬	EXISTING	▬	○	EXISTING	▬
▬	LEGEND - PROFILE	▬	○	LEGEND - PROFILE	▬
○	NEW	▬	○	NEW	▬

LOCATION APPROVED
UNDERGROUND STRUCTURES
SUPR LIG STRUCTURES DATE COMMITTEE
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.

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0	ISSUED FOR CONSTRUCTION	18/06/01	KLC
NO	REVISIONS	YYMMDD	BY

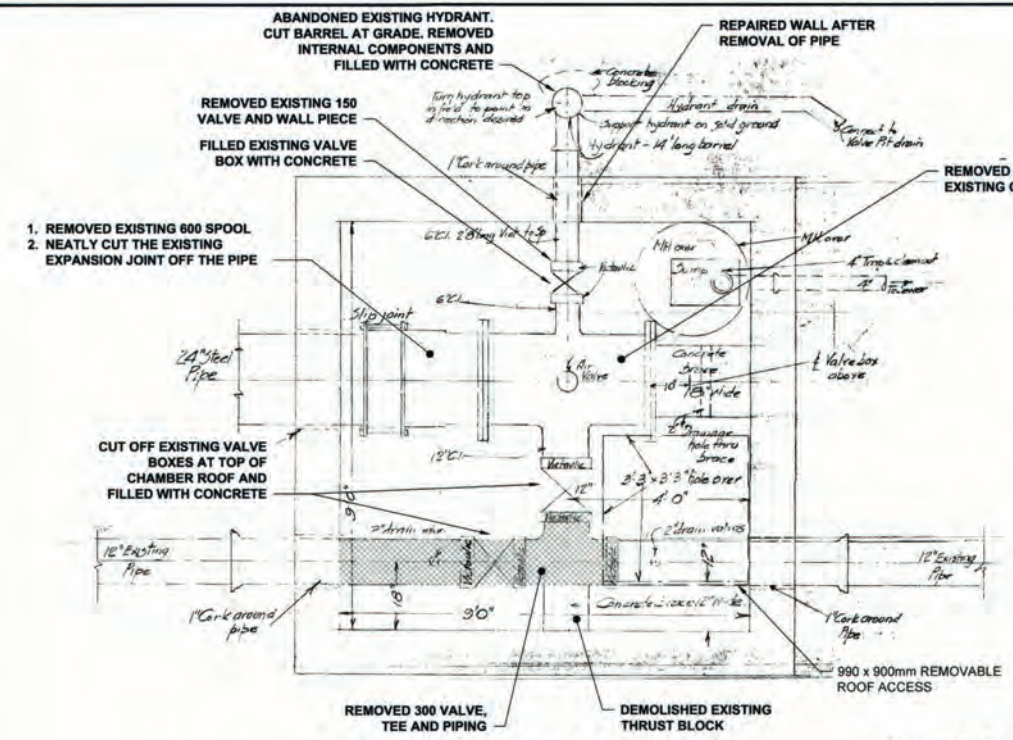
AECOM

DESIGNED BY: NJK
DRAWN BY: KLC
CHECKED BY: [Signature]
APPROVED BY: [Signature]
HOR SCALE: AS NOTED
VERT SCALE: N/A
RELEASED FOR CONSTRUCTION
DATE: [Blank]

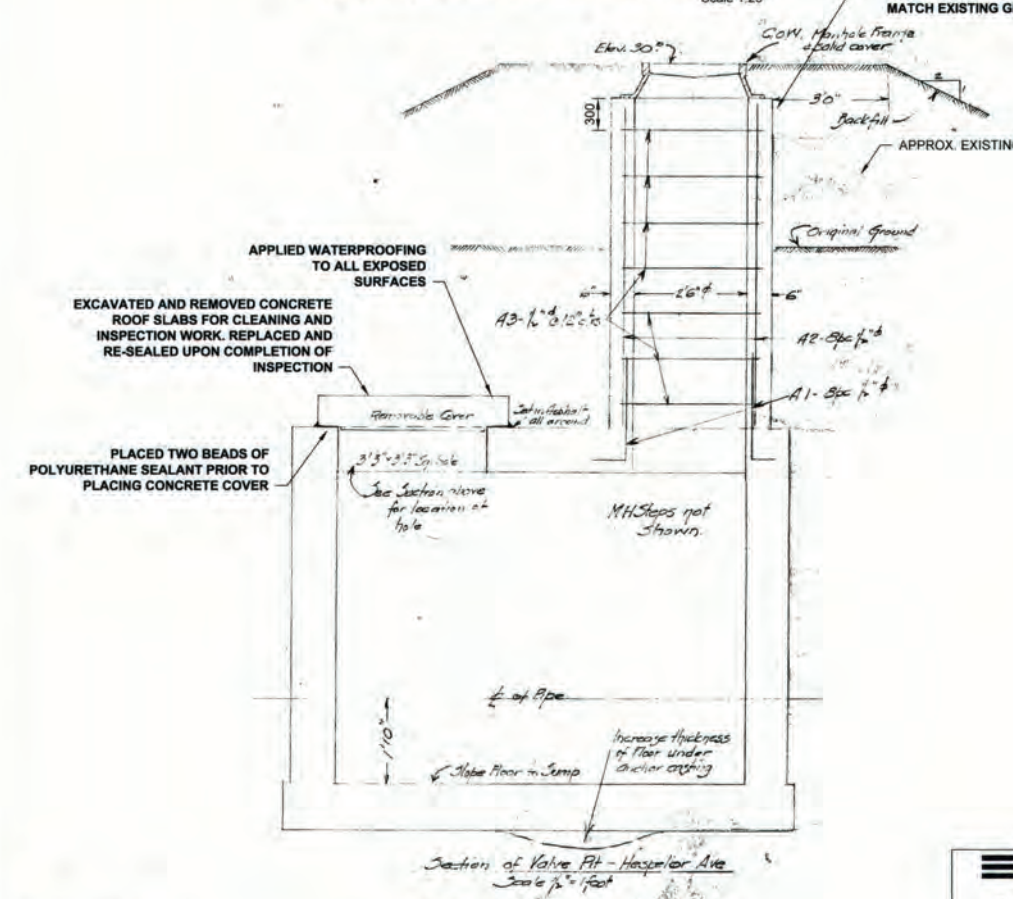
PROFESSIONAL'S SEAL
PROVINCE OF MANITOBA
AID BRAUN
Member
24453
REGISTERED PROFESSIONAL ENGINEER
CONSULTANT DRAWING NO.
60549028-SHT-30-0000-C-1001

THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT
PROVISION OF PIPELINE ACCESS MODIFICATIONS, CLEANING AND SUPPORT SERVICES FOR RIVER CROSSING INSPECTIONS - PHASE TWO
SITE 1
KILDONAN - REDWOOD FEEDER MAIN - WEST CHAMBER
SHEET 2 OF 8
CITY DRAWING NUMBER
D-15158
REV 1

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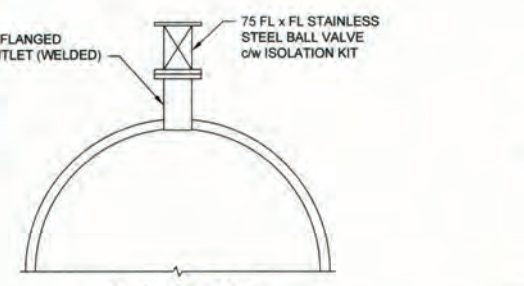


EAST CHAMBER PLAN (EXISTING)
Scale 1:25

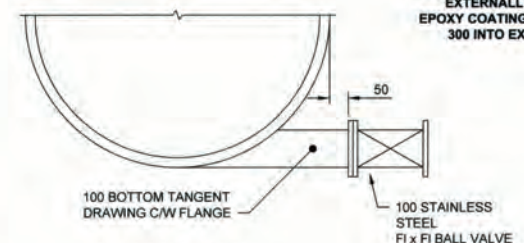


EAST CHAMBER SECTION
Scale 1:25

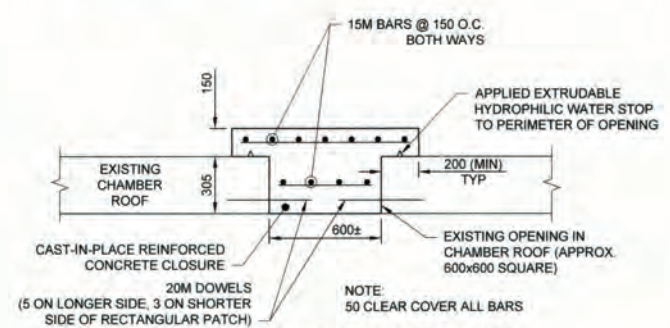
**ENGINEERS
GEOSCIENTISTS
MANITOBA**
 Certificate of Authorization
 AECOM Canada Ltd.
 No. 4671 Date: Jan 8/20



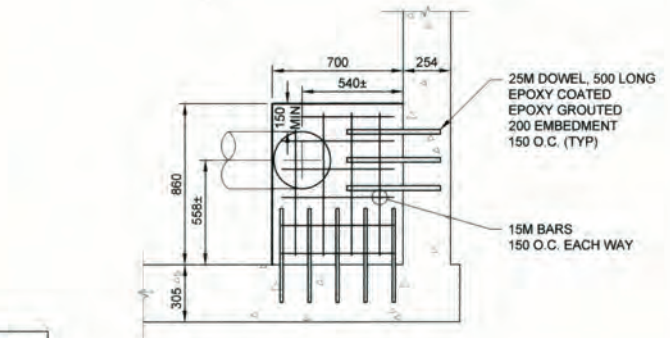
1 | DETAIL
BLOW OFF ASSEMBLY
Scale 1:10



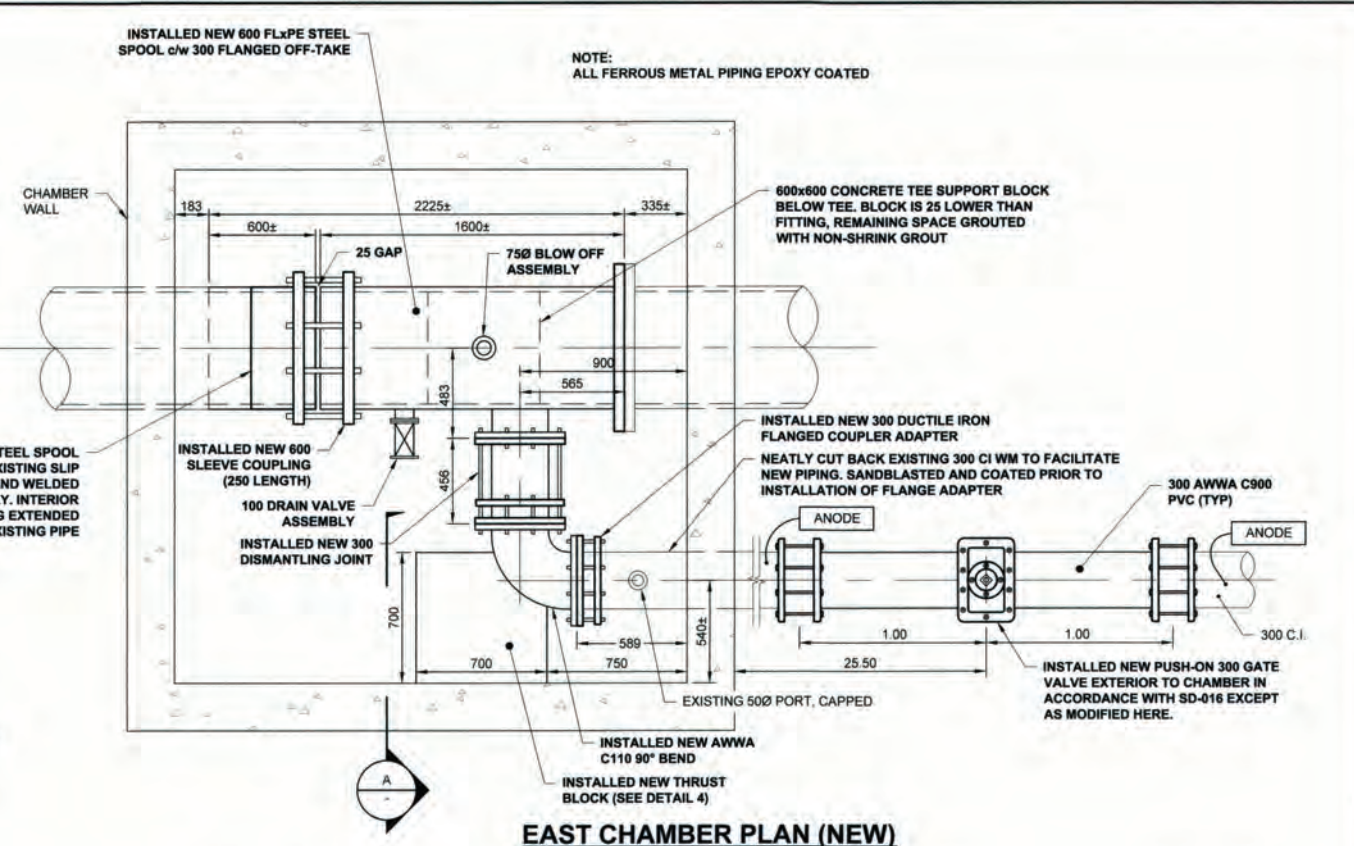
2 | DETAIL
DRAIN ASSEMBLY
Scale 1:10



3 | ROOF CLOSURE DETAIL
Scale 1:20



4 | THRUST BLOCK DETAIL
SECTION A
SCALE 1:20



EAST CHAMBER PLAN (NEW)
Scale 1:20

MATERIAL LIST	MANUFACTURER	MATERIAL SPECIFICATION	SPECIAL FEATURES
600 STEEL SPOOL PIECE	ABCO	ASTM A53, AWWA C200 FIELD WELDED TO AWWA C206-17 INT/EXT EPOXY COATED TO AWWA C210-15	
600 STEEL SLEEVE COUPLING	ROBAR INDUSTRIES LTD	ASTM A36 End rings: ASTM A576, Grade 1020 / A36 NRB gaskets: ASTM D2000, NSF 61 Approved Fasteners: AWWA C111 Coatings: Fusion bonded epoxy coated per AWWA C-213, NSF 61 Approved	
600 STEEL FL-PE SPOOL PIECE	ABCO	ASTM A53, AWWA C200 75 mm flanged outlet - ASTM A105 (flanges to ANSI B16.5) 100 mm flanged off-take - ASTM A105 (flanges to ANSI B16.5) 300 mm flanged off-take - ASTM A105 (flanges to AWWA C207-18) Interior and exterior of spool piece epoxy coated to AWWA C210-15	
300 DUCTILE IRON DISMANTLING JOINT	ROBAR INDUSTRIES LTD	AWWA C219 Flanged body: ASTM A536-05 65-45-12 End ring: ASTM A536 60-40-18 Gasket: SBR per ASTM D2000 Tie rods: ASTM A193 B8M Class 2	"BLUE BRUTE" DR-18
300 90-DEGREE CAST IRON ELBOW	METALFIT INC	Coating: fusion bonded epoxy per AWWA C213, NSF 61 Approved ANSI/AWWA C110/A21 10	
300 DUCTILE IRON FLANGE COUPLER ADAPTER	ROBAR INDUSTRIES LTD	ANSI B16.1, ASTM A 536 ASTM A536 Grade 65-45-12, AWWA C219 End ring: Cast ductile iron per ASTM A536 Grade 65-45-12 Coating: fusion bonded epoxy per AWWA C213, NSF 61 Approved	RESILIENT WEDGE GATE VALVE CW TO OPEN (RED TOP) 24 LB ZINC ANODE FBE COATED D.I. SLEEVE & END RINGS TYPE 30455 NUTS, BOLTS, WASHERS AND DI-ELECTRIC WASHERS CASING MARKED "TITAN" & "VB4" LID MARKED "TITAN" & "W"
PVC PIPE (300)	IPEX INC	AWWA C900 CSA B137.3 AWWA C509 MODEL A-2360-40	PVC DR-18
300 GATE VALVE	MUELLER		
ANODES - ZINC	BREN TECHNOLOGIES INC	ASTM B418	
300 IRON COUPLING	ROMAC INDUSTRIES INC	ASTM A 536 GRADE 65-45-12 AWWA C219, AWWA C213 MODEL "MACRO"	
VALVE BOX UPPER CASING	TITAN FOUNDRY LTD.	C.I. - ASTM A-48 CLASS 30B CONFORMS TO AP-001 CONFORMS TO AP-002	
VALVE STEM EXTENSION	TITAN FOUNDRY LTD.		
VALVE BOX LOWER CASING	IPEX INC	AWWA C900 CSA B137.3 CONFORMS TO AP-001 ANSI B16.34 CLASS 150 ANSI B16.34 CLASS 150	
100 STAINLESS STEEL BALL VALVE	M.A. STEWART & SONS LTD		
75 STAINLESS STEEL BALL VALVE	M.A. STEWART & SONS LTD		
CONTRACTOR:	J-CON CIVIL LTD		
CONSTRUCTION PERIOD:	SEPT. 14, 2018 to NOV. 8, 2019		
		CONSTRUCTION COMPLETION DATE: NOVEMBER 8, 2019	

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

EXISTING	LEGEND - PLAN	NEW	EXISTING	LEGEND - PLAN	NEW	EXISTING	LEGEND - PROFILE	NEW
○	HYDRANT	◆	○	HYDRANT	◆	○	HYDRANT	◆
⊙	VALVE	⊙	⊙	VALVE	⊙	⊙	VALVE	⊙
300 LDS	LAND DRAINAGE SEWER	300 LDS	300 LDS	LAND DRAINAGE SEWER	300 LDS	250 WWS	WASTE WATER SEWER	250 WWS
250 WWS	WASTE WATER SEWER	250 WWS	250 WWS	WASTE WATER SEWER	250 WWS	250 WWS	WASTE WATER SEWER	250 WWS
○	MANHOLE	●	○	MANHOLE	●	○	MANHOLE	●
△	CATCH BASIN	▲	△	CATCH BASIN	▲	△	CATCH BASIN	▲
□	CURB INLET	■	□	CURB INLET	■	□	CURB INLET	■
▭	CULVERT	▭	▭	CULVERT	▭	▭	CULVERT	▭
—	PIPE ABANDONMENTS	—	—	PIPE ABANDONMENTS	—	—	PIPE ABANDONMENTS	—
+	SURVEY BAR	+	+	SURVEY BAR	+	+	SURVEY BAR	+
—	CURB STOP	—	—	CURB STOP	—	—	CURB STOP	—
—	REDUCER	—	—	REDUCER	—	—	REDUCER	—
—	COUPLING	—	—	COUPLING	—	—	COUPLING	—
—	ANODE	—	—	ANODE	—	—	ANODE	—
—	HYDRO	—	—	HYDRO	—	—	HYDRO	—
—	MTS	—	—	MTS	—	—	MTS	—
—	GAS	—	—	GAS	—	—	GAS	—
—	TESTHOLE	—	—	TESTHOLE	—	—	TESTHOLE	—
—	LAMP STANDARD	—	—	LAMP STANDARD	—	—	LAMP STANDARD	—
—	TREE	—	—	TREE	—	—	TREE	—

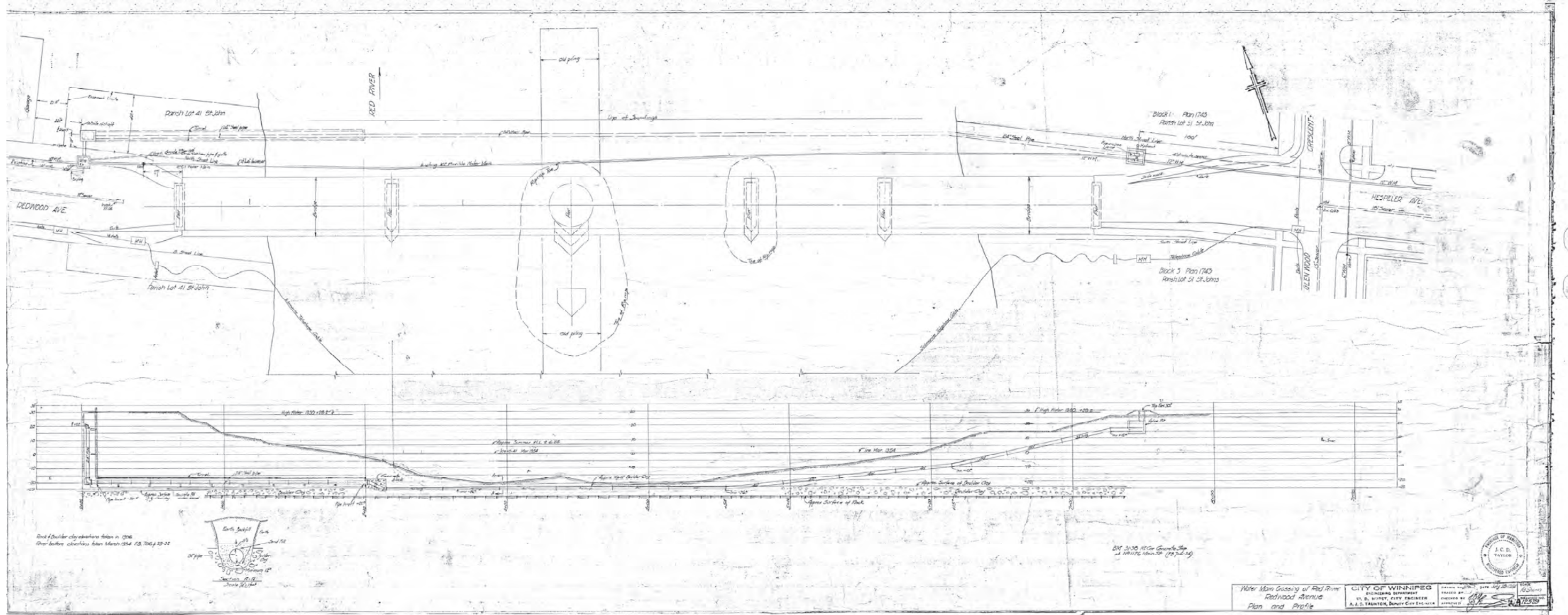
LOCATION APPROVED
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 SUPR. U/G STRUCTURES DATE COMMITTEE
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NO.	REVISIONS	DATE	BY
1	ISSUED FOR RECORD	19/11/28	KLC
0	ISSUED FOR CONSTRUCTION	18/06/01	KLC

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

PROFESSIONAL'S SEAL
 A.D. BRAUN
 Member
 24459
 REGISTERED PROFESSIONAL
 CONSULTANT DRAWING NO.
 60549028-SHT-30-0000-C-1001

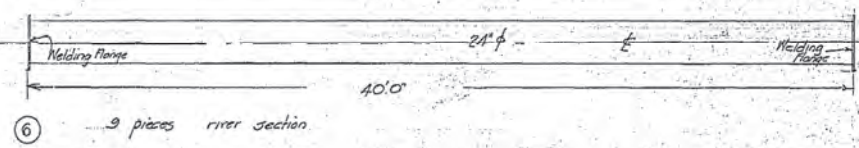
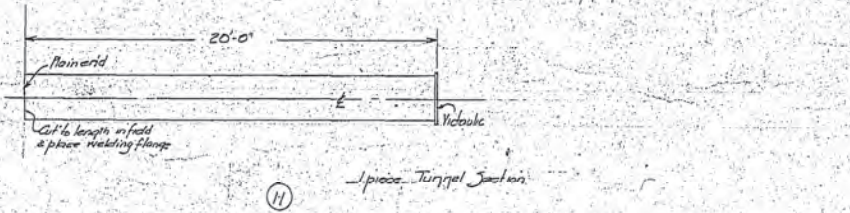
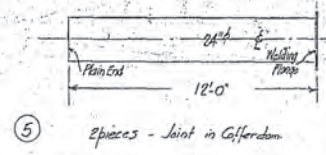
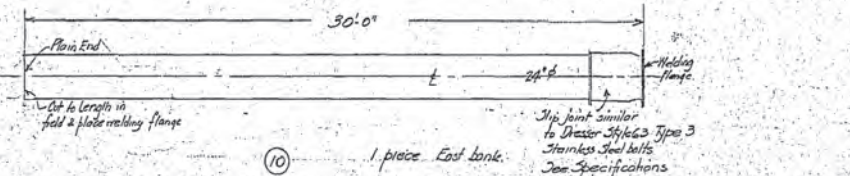
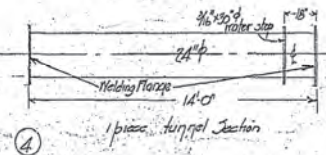
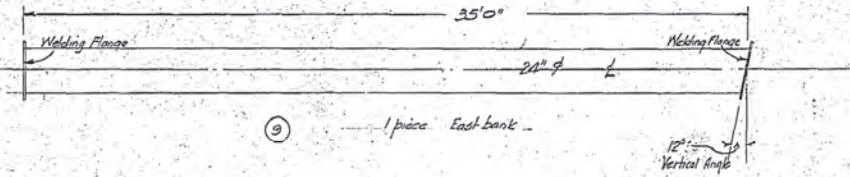
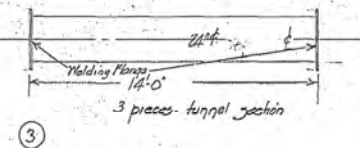
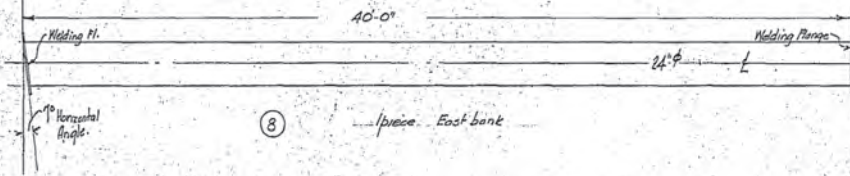
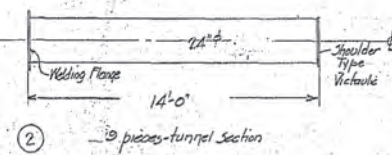
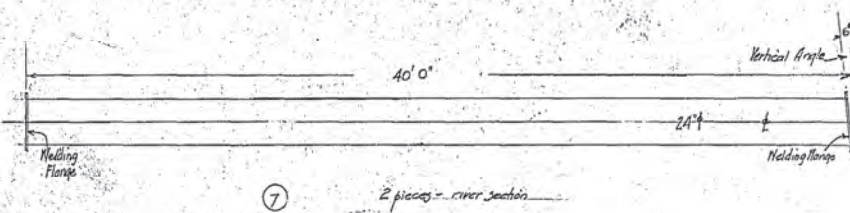
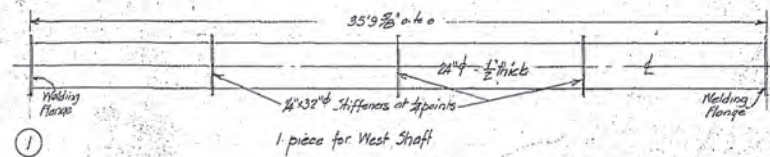
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
 PROVISION OF PIPELINE ACCESS MODIFICATIONS,
 CLEANING AND SUPPORT SERVICES FOR
 RIVER CROSSING INSPECTIONS - PHASE TWO
 SHEET 3 OF 8
 CITY DRAWING NUMBER
D-15159
 REV 1
 KILDONAN - REDWOOD
 FEEDER MAIN - EAST CHAMBER



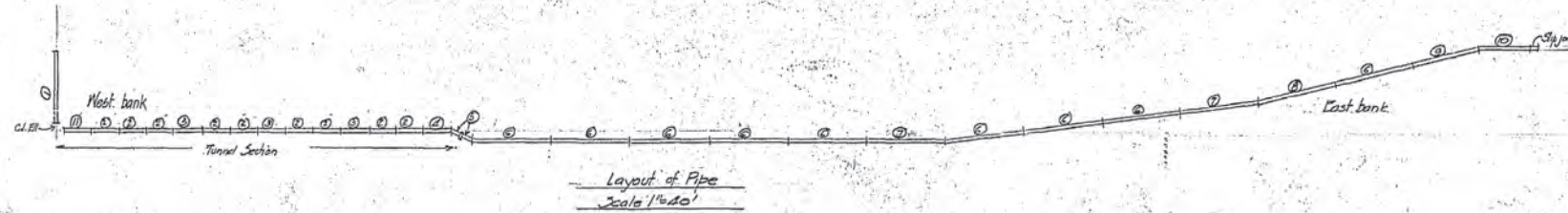
Water Main Crossing of Red River
 Redwood Avenue
 Plan and Profile

CITY OF WINNIPEG
 ENGINEERING DEPARTMENT
 BY: D. HUNTER, CIVIL ENGINEER
 A. J. S. TAYLOR, SENIOR CIVIL ENGINEER

DATE: July 1924
 DRAWN BY: J.C.D.
 CHECKED BY: J.C.D.
 APPROVED BY: J.C.D.

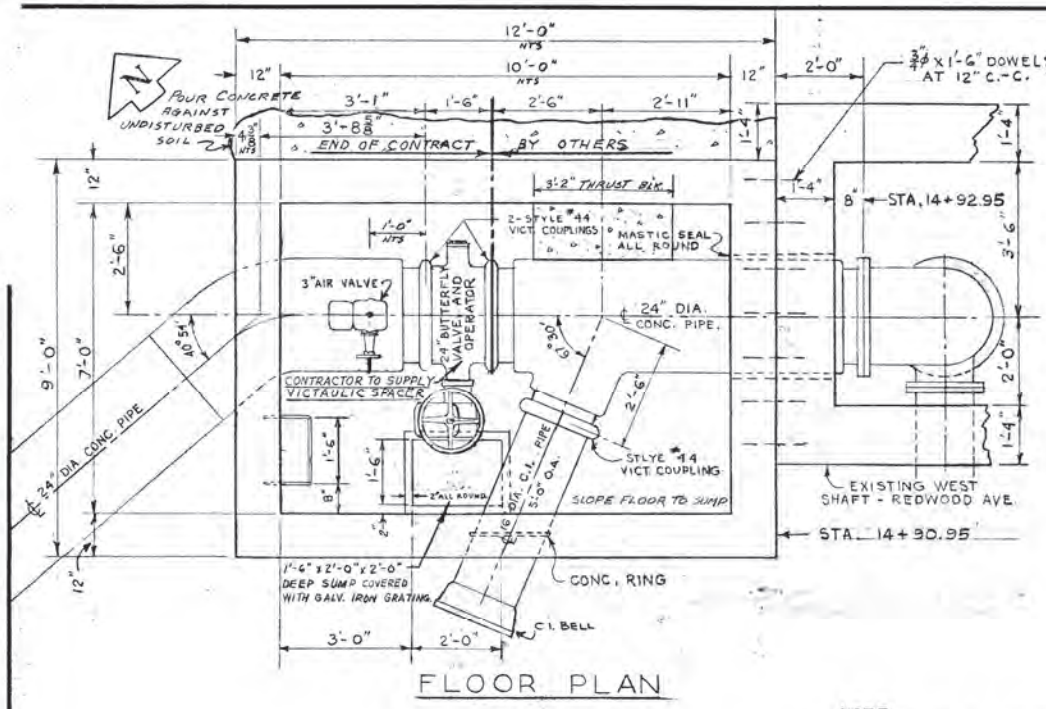


Pipes - Steel pipe not less than 0.3125 inches thick, except piece ① which is spiral welded not less than 0.5 inches thick. See specifications.
 Pipe coating - see specifications.
 4. Square welding flanges 2a.

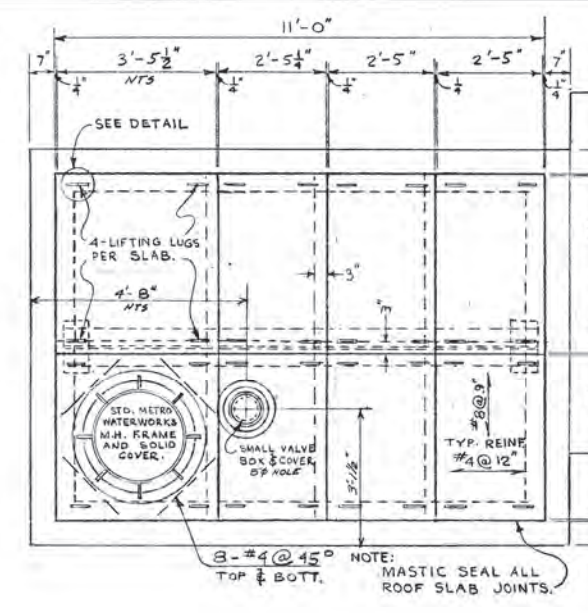


Water Main Crossing of Red River
 Redwood Avenue
 Steel Pipe Details

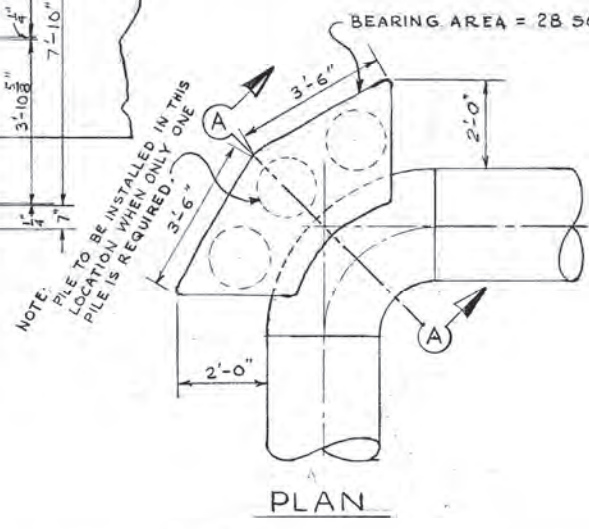
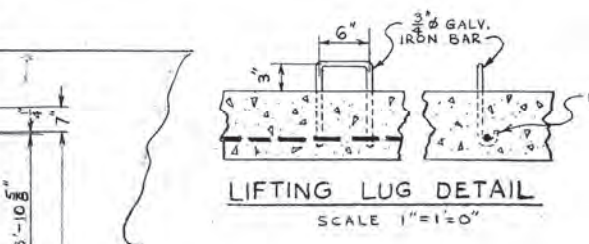
CITY OF WINNIPEG		SCALE
ENGINEERING DEPARTMENT	DRAWN BY	1/4" = 1'-0"
W. D. HURST, CITY ENGINEER	CHECKED BY	DRAWING NO.
A. S. S. TAUNTON, DEPUTY CITY ENGINEER	APPROVED	12530



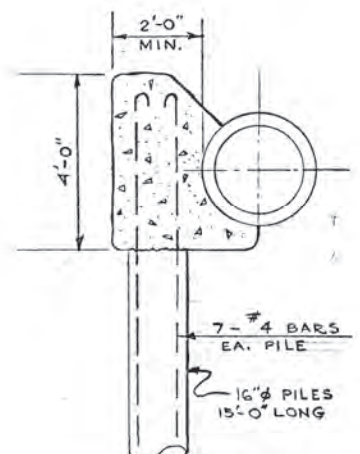
FLOOR PLAN



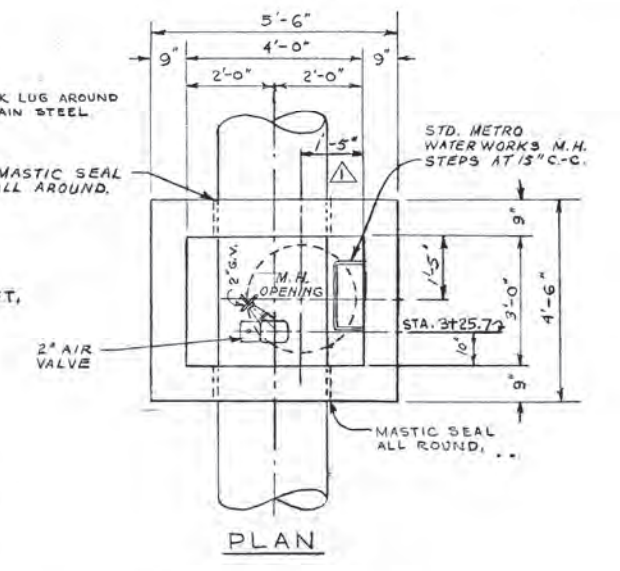
ROOF PLAN



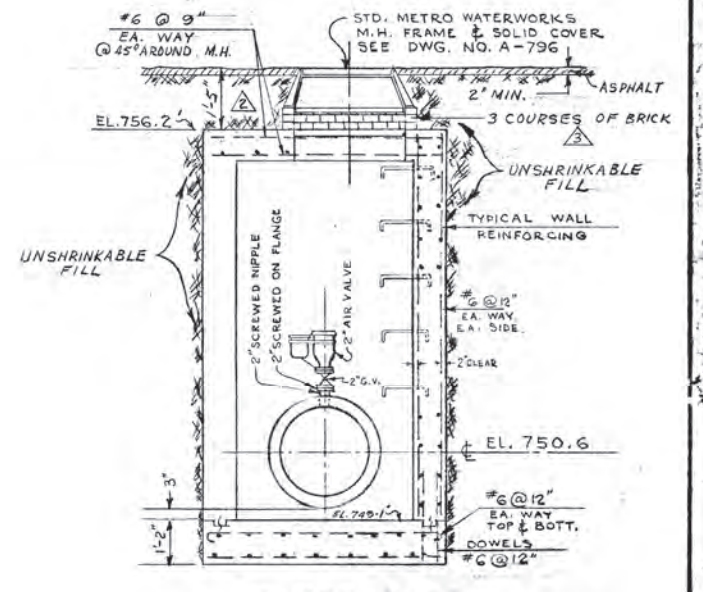
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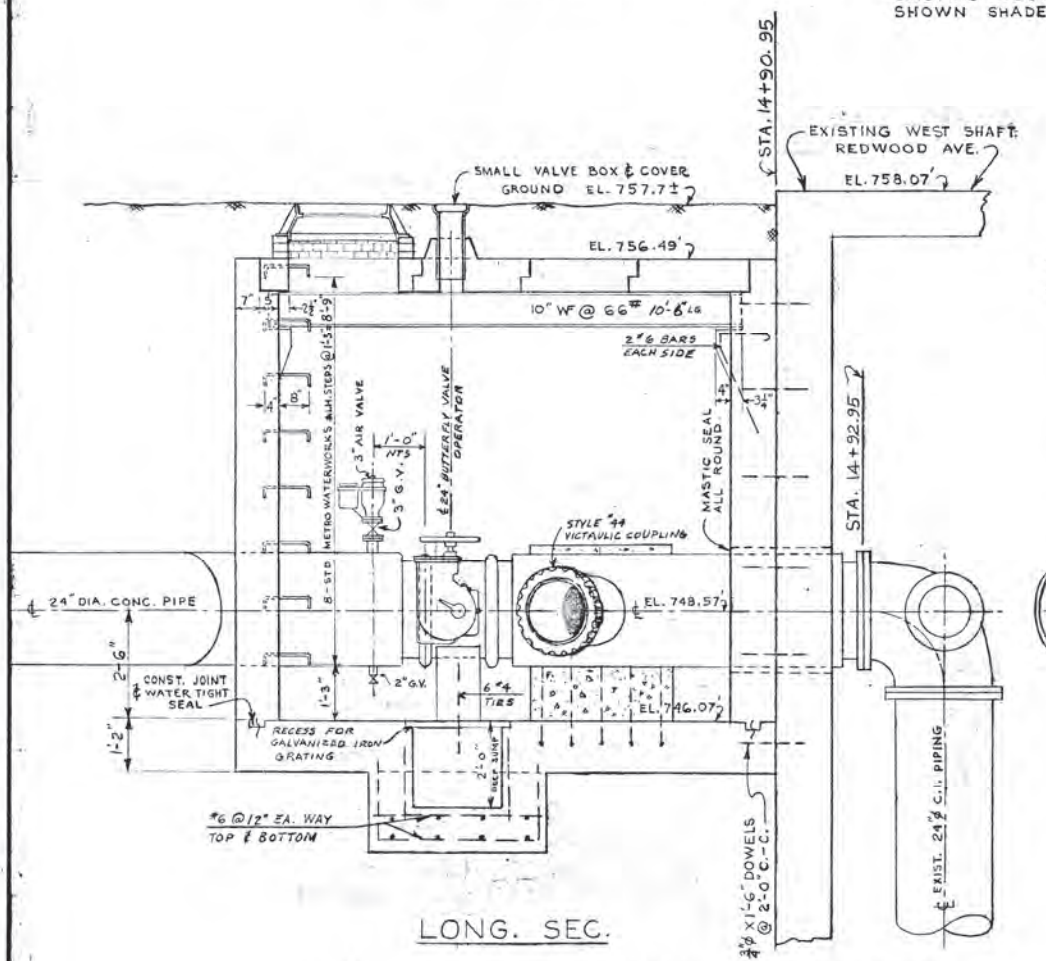
SEC. A-A
TYP. THRUST BLOCK
DETAIL



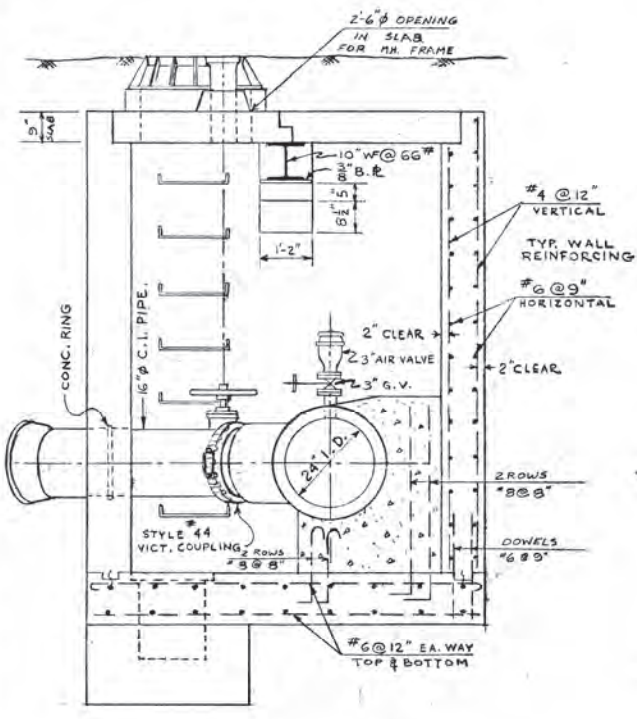
PLAN



X-SEC.
AIR VALVE CHAMBER
AT REDWOOD AVE & CHARLES ST.
STA. 3+48.70



LONG. SEC.



X-SEC.

VALVE CHAMBER
AT REDWOOD AVE & RED RIVER
STA. 14+90.95

NOTE:
EXISTING WEST SHAFT
SHOWN SHADED.

REVISED AS BUILT
FEB. 1, 1962

REVISIONS				THE METROPOLITAN CORPORATION OF GREATER WINNIPEG WATERWORKS BRANCH	
NO.	DESCRIPTION	DATE	BY	DESIGNED BY	CHECKED BY
1	DIMENSIONS TO LOCATE M.H. OF AIR VALVE CHAMBER CHANGED TO 1'-5" CLEARANCE TO TOP OF COVER	3 MAR. 61	S.K.	J.M. MACBRIDE	H. BUXMAN
2	SPICKS ADDED TO M.H. ENTRANCE UNSHRINKABLE FILL NOTED ADDED	3 MAR. 61	S.K.	J.M. MACBRIDE	H. BUXMAN
3	AS BUILT	1 FEB. 62	K.T.	J.M. MACBRIDE	H. BUXMAN
4	TITLE CHANGED	23.05.19	K.T.	J.M. MACBRIDE	H. BUXMAN



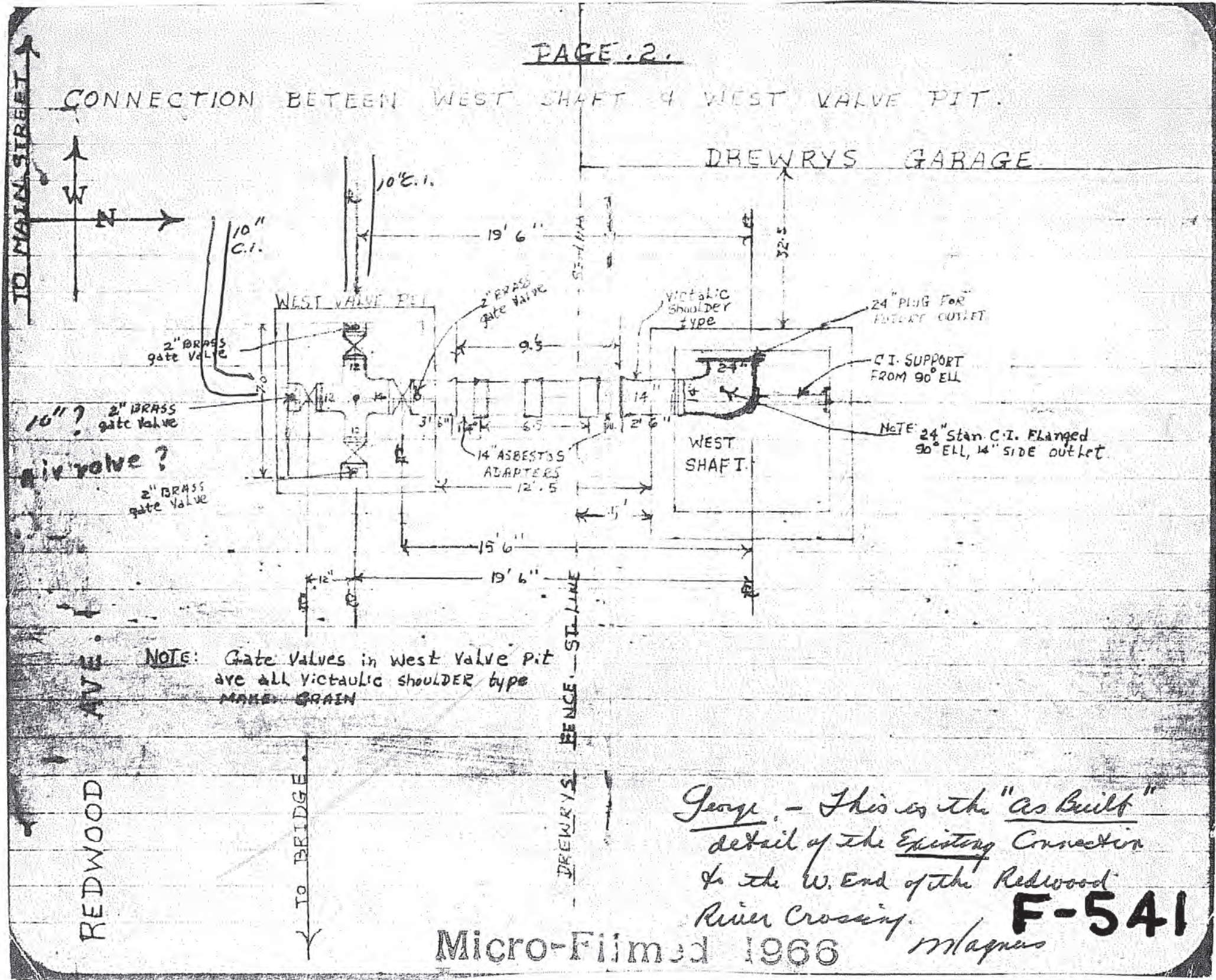
APPROVED BY: *[Signature]* CHIEF ENGINEER
 DESIGNED BY: J.M. MACBRIDE
 DRAWN BY: H. BUXMAN
 DATE: 24 FEB 61
 SCALES: 1/2"=1'-0" AS NOTED
 DRAWING NO. **D-885**

D-0885



FEB 1965

CONNECTION BETWEEN WEST SHAFT & WEST VALVE PIT.



NOTE: Gate valves in West Valve pit are all Victaulic shoulder type MAKE GRAIN

George - This is the "as built" detail of the Existing Connection to the W. End of the Redwood River Crossing.

F-541

Micro-Filmed 1966

Magnus