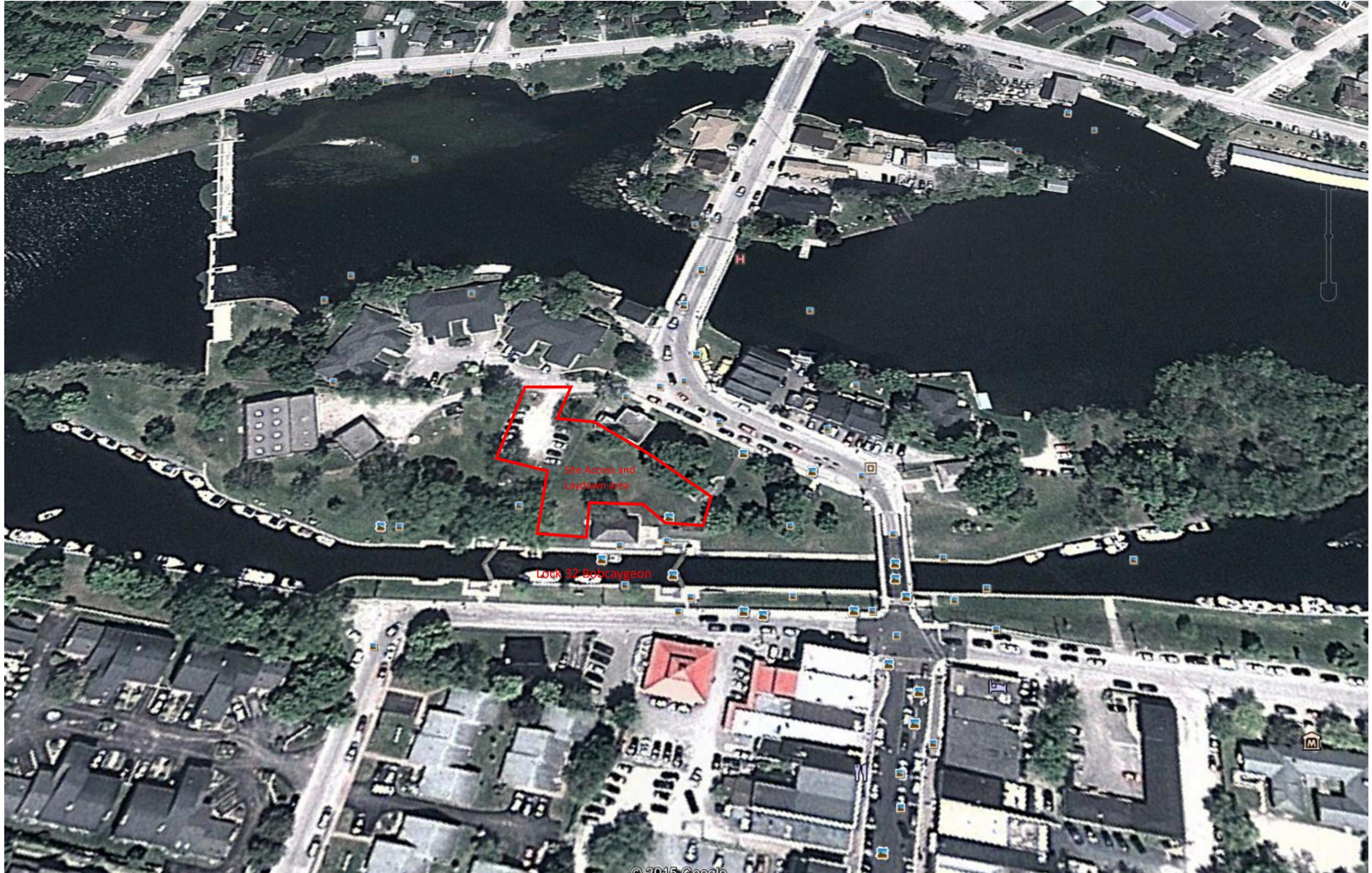
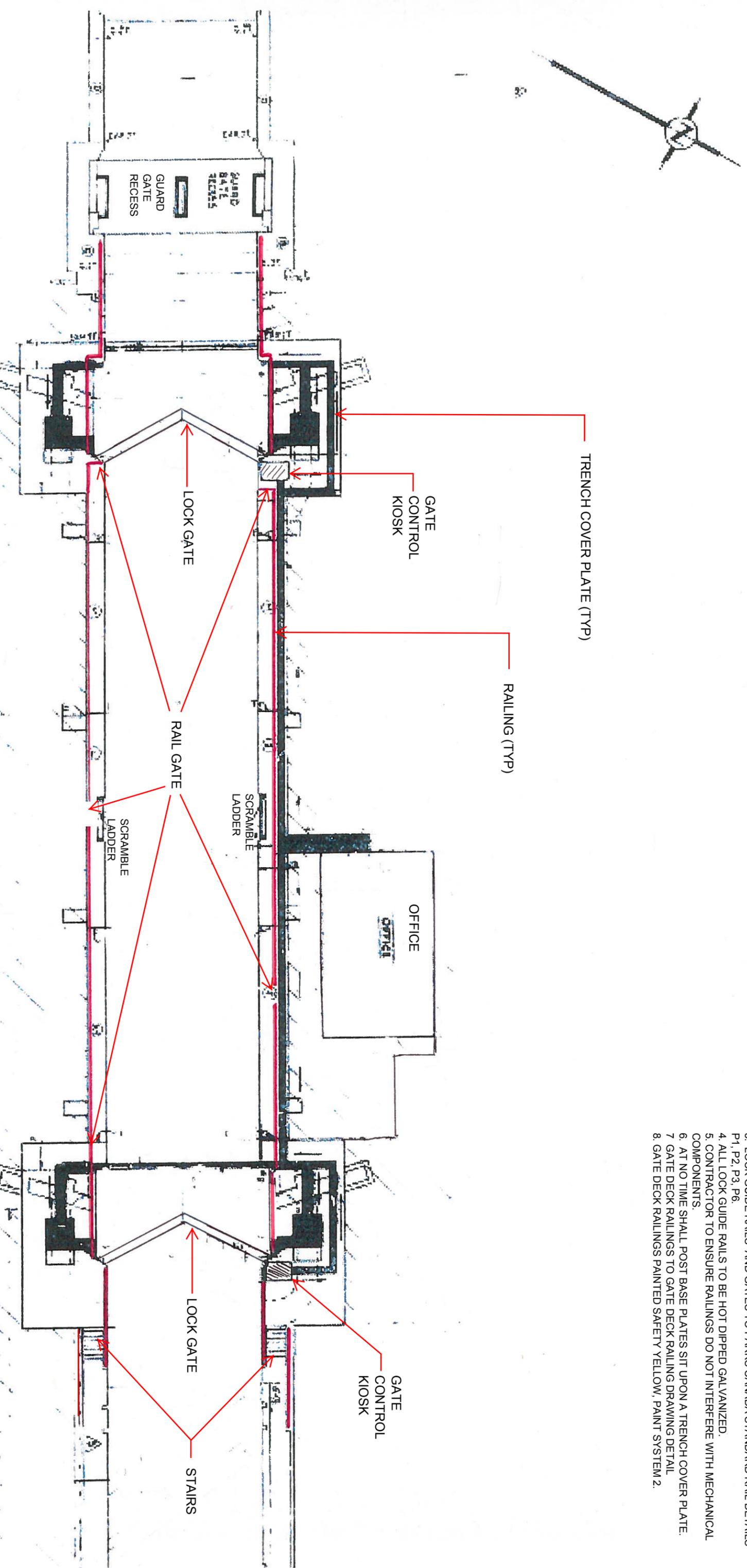


Bobcaygeon Site Access and Staging Area

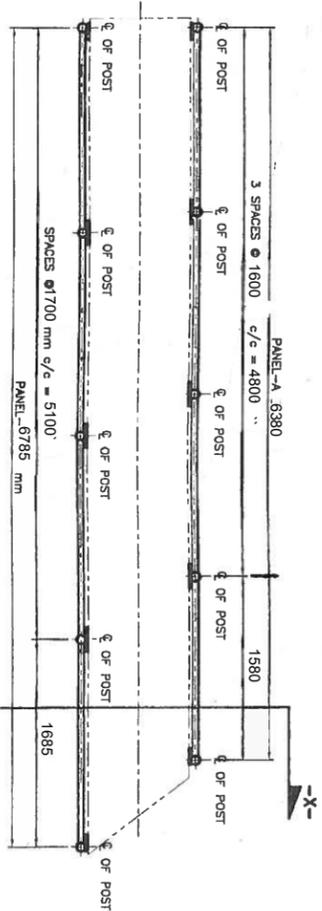


BOBCAYGEON LOCK 32 RAILING GENERAL LAYOUT

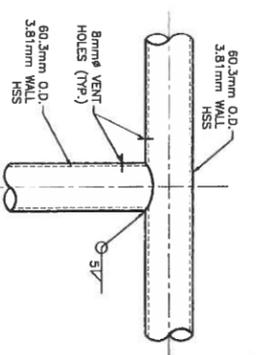


- NOTES:
1. CONTRACTOR TO VERIFY LAYOUT WITH DEPARTMENT REPRESENTATIVE. PRIOR TO FABRICATING RAIL.
 2. CONTRACTOR TO FIELD MEASURE AND SUBMIT SHOP DRAWINGS.
 3. LOCK GUIDE RAILS AND GATES TO PARKS CANADA STANDARD RAIL DETAILS P1, P2, P3, P6.
 4. ALL LOCK GUIDE RAILS TO BE HOT DIPPED GALVANIZED.
 5. CONTRACTOR TO ENSURE RAILINGS DO NOT INTERFERE WITH MECHANICAL COMPONENTS.
 6. AT NO TIME SHALL POST BASE PLATES SIT UPON A TRENCH COVER PLATE.
 7. GATE DECK RAILINGS TO GATE DECK RAILING DRAWING DETAIL
 8. GATE DECK RAILINGS PAINTED SAFETY YELLOW, PAINT SYSTEM 2.

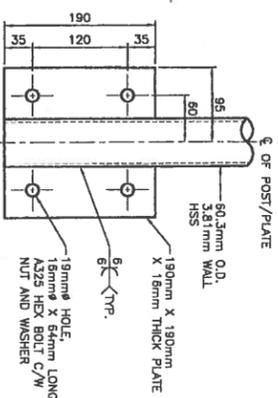
BOBCAYGEON LOCK 32 GATE DECK RAILINGS



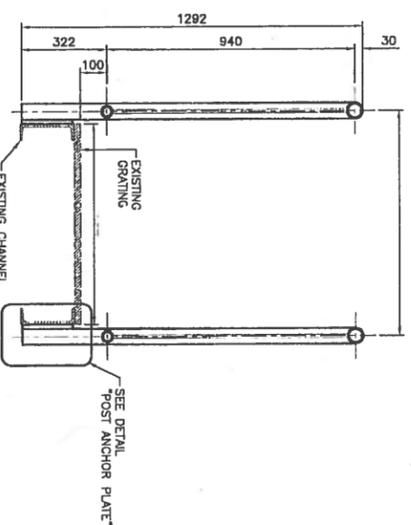
**RIGHT HANDSIDE OF LOCK GATE
PLAN**
RIGHT HAND SIDE OF GATE AS SHOWN
MIRROR FOR LEFT HAND SIDE GATE LAYOUT



TYPICAL JOINT



TYPICAL ANCHOR PLATE

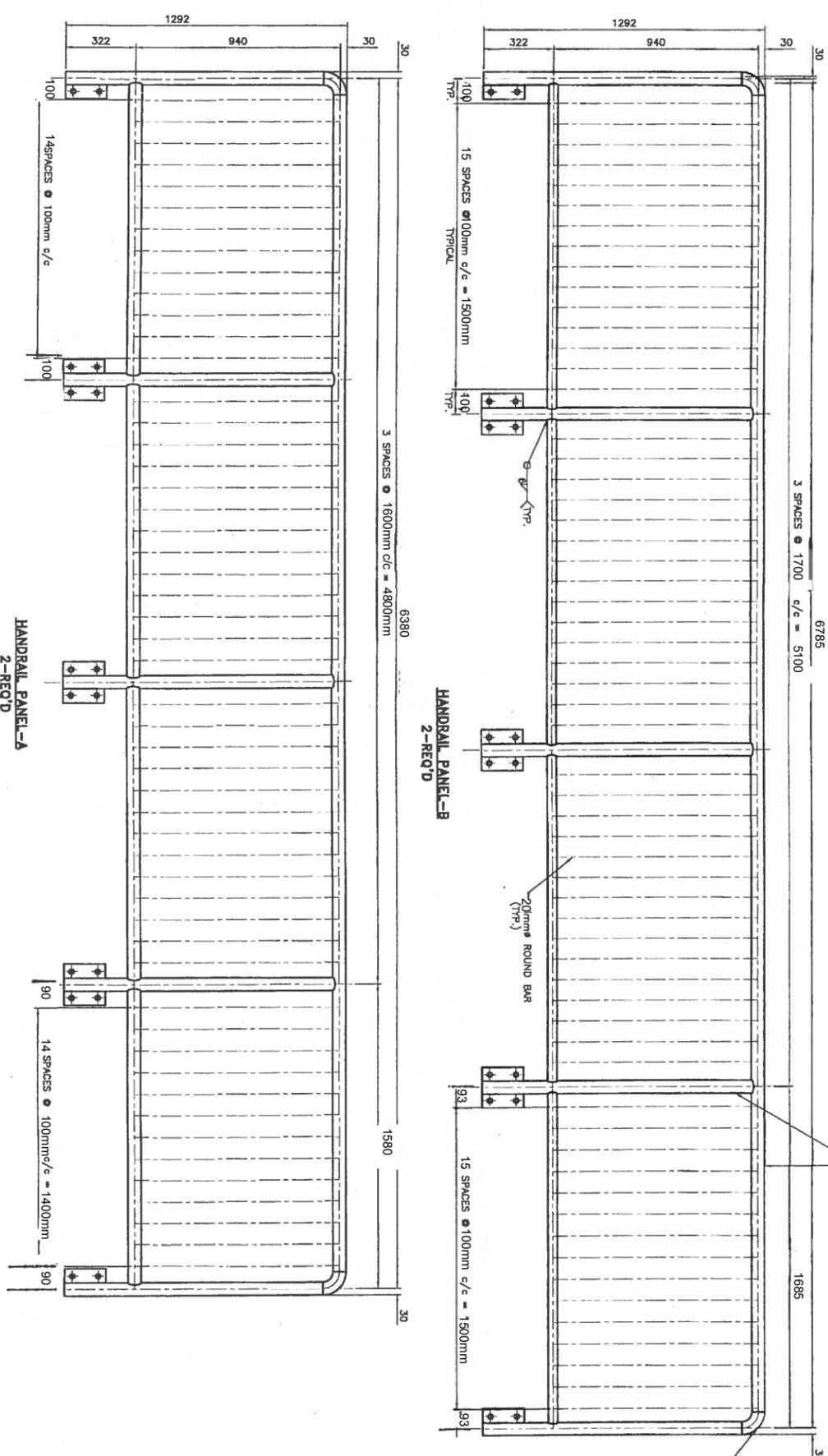


SECTION -X-X-

NOTE TO CONTRACTOR:
1) CONTRACTOR TO CHECK ALL RELEVANT DIMENSIONS AND ELEVATIONS SHOWN ON THE DRAWINGS, AND ADJUST DIMENSIONS AND ELEVATIONS AS REQUIRED TO MATCH EXISTING STRUCTURE/SITE AS APPROVED BY THE ENGINEER.

NOTES:

- 1) PAINT ON SECTOR GATES SHALL BE FINISHED USING PAINT SYSTEM 2.
- 2) PAINT SHALL BE SAFETY YELLOW.
- 1A) ALL OTHER RAILINGS TO BE HOT DIP GALVANIZED AFTER FABRICATION IN CONFORMANCE WITH CSA C-164.
- 2) POSTS SHALL BE VERTICAL. ALL EXPOSED CORNER TO BE ROUND SMOOTH.
- 3) BEAM HOLES ARE TO PERMIT GASES TO ESCAPE DURING GALVANIZING.
- 4) WELDING SHALL CONFORM TO THE LATEST ISSUE OF CSA SPECIFICATION W 59.
- 5) HSS SHALL CONFORM TO CSA STANDARD CAN3-640.21-M92 GRADE 350W CLASS C.
- 6) ALL STEEL CONFORM TO CSA STANDARD G40.21-M92.
- 7) ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.



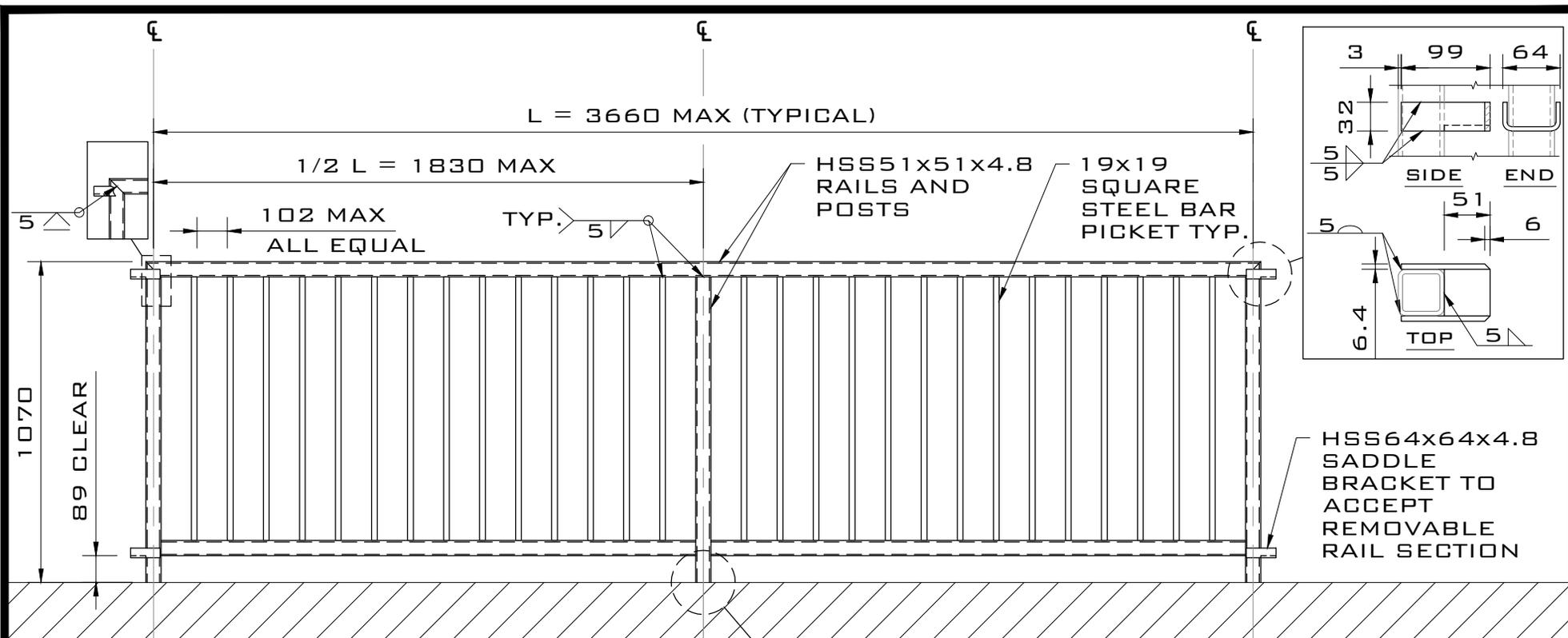
**HANDRAIL PANEL-A
2-REQ'D**

**HANDRAIL PANEL-B
2-REQ'D**

20mm ROUND BAR (TRP)

60.3mm O.D. x 3.81mm WALL HSS (TRP)

90° ELBOW 60.3mm O.D. x 3.81mm WALL (TRP)



GENERAL NOTES

1. THIS DETAIL TYPICALLY APPLIES TO AREAS ACCESSIBLE TO PUBLIC WHERE A FALL GREATER THAN 600mm OR WHERE A FALL INTO A HAZARD SUCH AS A DAM INTAKE OR SPILLWAY EXISTS. GUARD RAILS ARE TYPICALLY INTENDED TO BE INSTALLED AT THE EDGE OF AN IDENTIFIED FALL HAZARD.
2. TYPICALLY A RUN OF GUARD RAIL SHALL CONSIST OF ALTERNATING FIXED AND REMOVABLE SECTIONS.
3. COMPLETE ASSEMBLED SECTION IS TO BE HOT DIPPED GALVANIZED AFTER FABRICATION
4. ALL DIMENSIONS IN MILLIMETERS (mm) UNLESS NOTED OTHERWISE

 Parks Canada



Project Name: STANDARD DETAILS FOR PUBLIC AND OPERATOR

Drawn by: S.Gauthier

Drawing Scale: 1:20



SAFETY INSTALLATIONS ON DAMS

Drawing date: August 19, 2014

Plot Scale: 1:1

Office of the Executive Director, Waterways

Drawing Name: STANDARD PUBLIC STYLE GUARD RAIL

Checked by:

Plot Size: Letter

Parks Canada Agency

FABRICATION DETAILS - FIXED RAIL SECTION

Check date:

Drawing No:

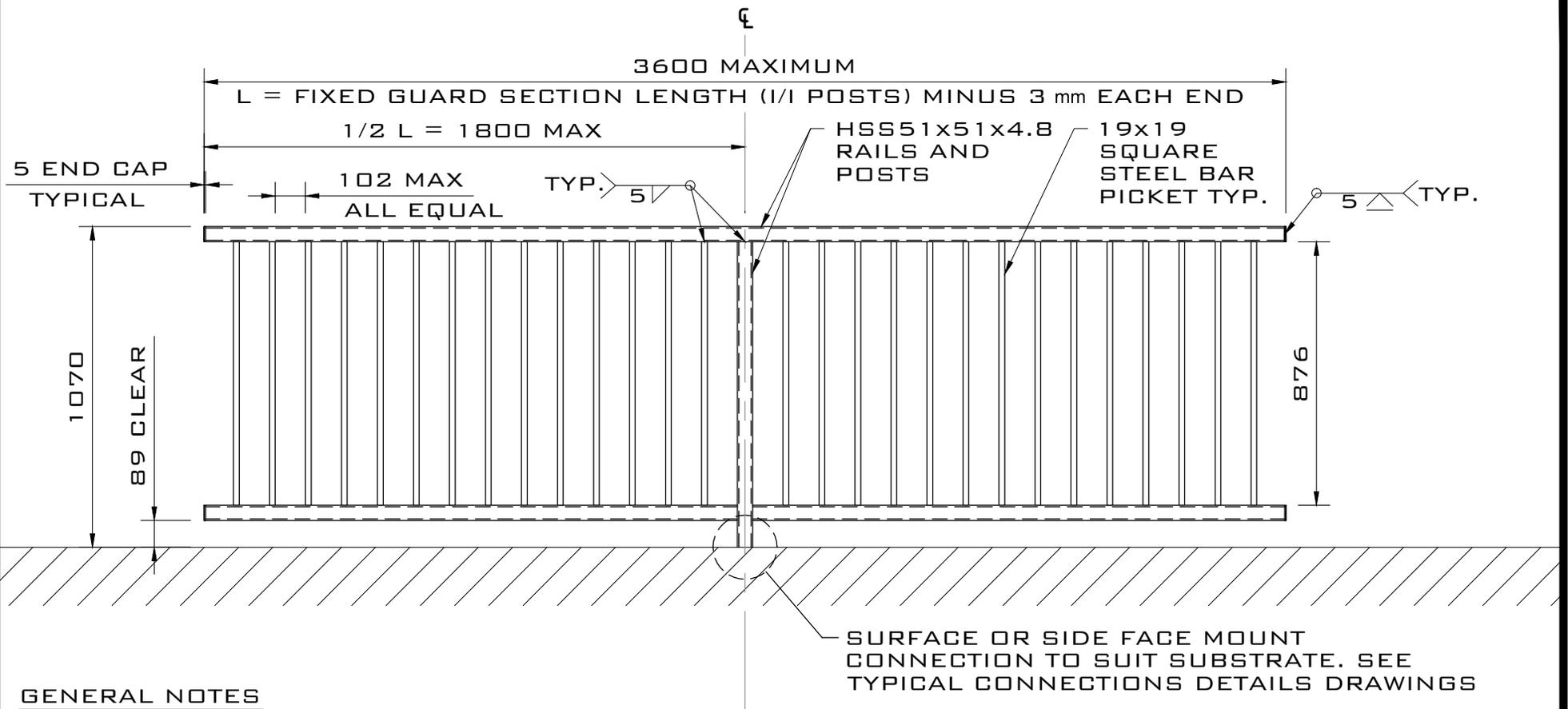
Government of Canada

Approve date:

P1

Approved:

REV.A



GENERAL NOTES

1. THIS DETAIL TYPICALLY APPLIES TO AREAS ACCESSIBLE TO PUBLIC WHERE A FALL GREATER THAN 600mm OR WHERE A FALL INTO A HAZARD SUCH AS A DAM INTAKE OR SPILLWAY EXISTS. GUARD RAILS ARE TYPICALLY INTENDED TO BE INSTALLED AT THE EDGE OF AN IDENTIFIED FALL HAZARD.
2. TYPICALLY A RUN OF GUARD RAIL SHALL CONSIST OF ALTERNATING FIXED AND REMOVABLE SECTIONS.
3. COMPLETE ASSEMBLED SECTION IS TO BE HOT DIPPED GALVANIZED AFTER FABRICATION
4. ALL DIMENSIONS IN MILLIMETERS (mm) UNLESS NOTED OTHERWISE

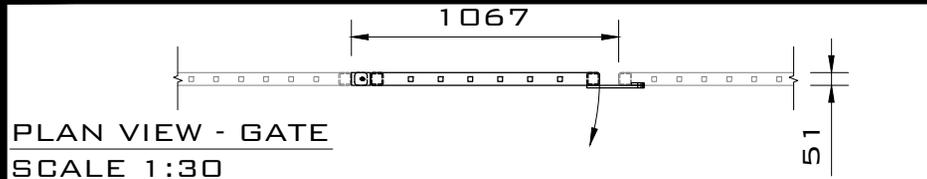
 Parks Canada
 Parcs Canada

 Office of the Executive Director, Waterways
 Parks Canada Agency
 Government of Canada

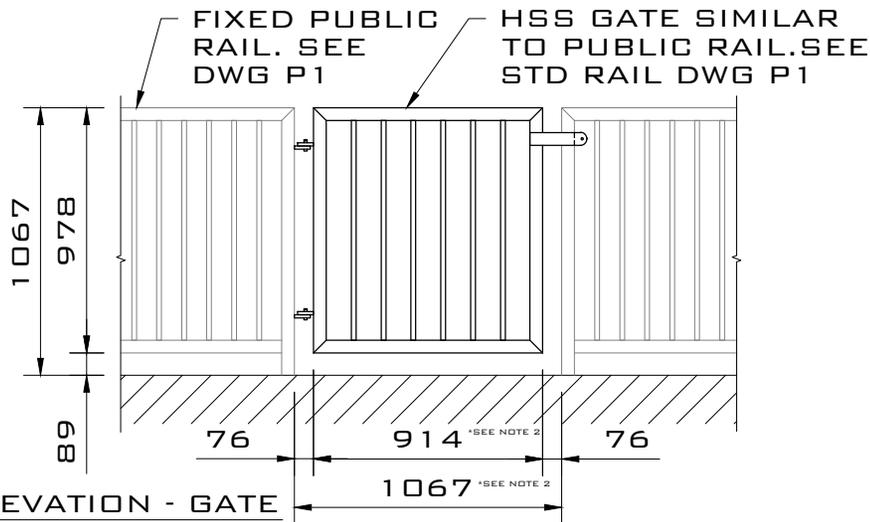
Project Name: **STANDARD DETAILS FOR PUBLIC AND OPERATOR SAFETY INSTALLATIONS ON DAMS**
 Drawing Name: **STANDARD PUBLIC STYLE GUARD RAIL FABRICATION DETAILS - REMOVABLE SECTION**

Drawn by: S.Gauthier
 Drawing date: August 19, 2014
 Checked by:
 Check date:
 Approve date:
 Approved:

Drawing Scale: 1:20
 Plot Scale: 1:1
 Plot Size: Letter
 Drawing No: **P2**
 REV.A



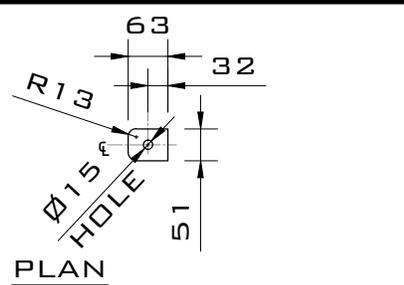
PLAN VIEW - GATE
SCALE 1:30



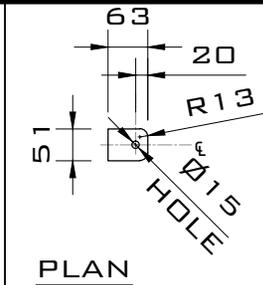
ELEVATION - GATE
SCALE 1:30

GENERAL NOTES

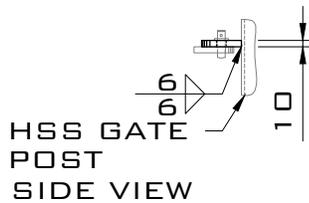
1. THIS GATE IS INTENDED TO BE COMPATIBLE WITH PUBLIC STYLE GUARD RAILS. WHERE GATES ARE TO BE INSTALLED ON GUARDRAIL RUNS, EFFORT SHALL BE MADE TO MATCH PICKET SPACING OF ADJACENT RAILS.
2. THE TYPICAL GATE WIDTH OF 914 mm OR 1067 mm CLEAR OPENING BETWEEN POSTS SHOWN IS CONSIDERED IDEAL AND IS ALSO A MAXIMUM. WHERE GATE WIDTH MUST BE REDUCED 610 mm SHALL BE TAKEN AS A MINIMUM.
3. COMPLETE ASSEMBLED SECTION IS TO BE HOT DIPPED GALVANIZED AFTER FABRICATION
4. ALL DIMENSIONS IN MILLIMETERS (mm) UNLESS NOTED OTHERWISE



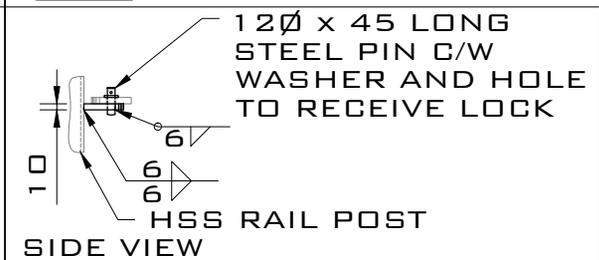
PLAN



PLAN



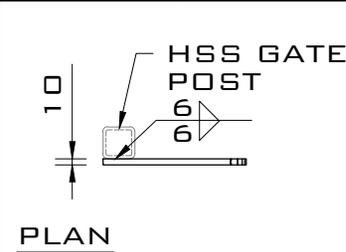
HSS GATE POST
SIDE VIEW



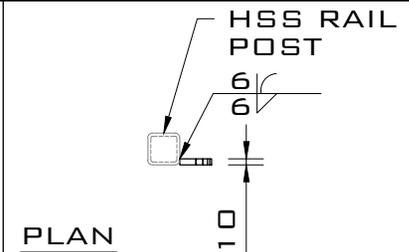
HSS RAIL POST
SIDE VIEW

TOP HINGE PLATE
SCALE 1:12

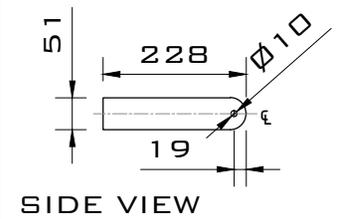
BOTTOM HINGE PLATE
SCALE 1:12



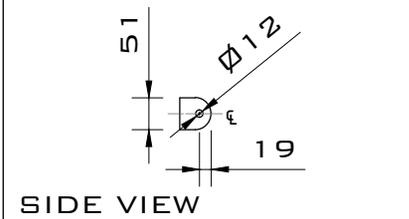
PLAN



PLAN



SIDE VIEW



SIDE VIEW

GATE LATCH PLATE
SCALE 1:12

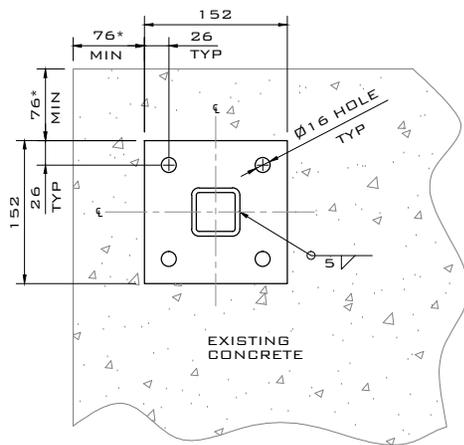
RAIL LATCH PLATE
SCALE 1:12

Parks Canada
 Office of the Executive Director, Waterways
 Parks Canada Agency
 Government of Canada

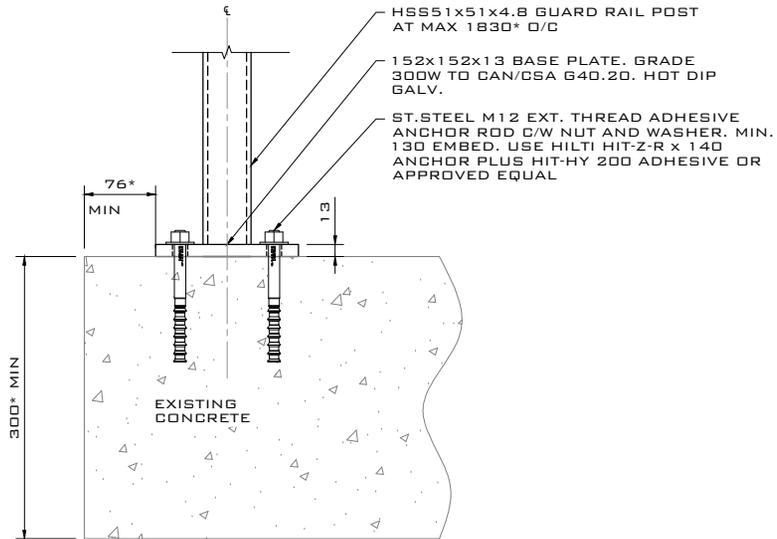
Project Name: **STANDARD DETAILS FOR PUBLIC AND OPERATOR SAFETY INSTALLATIONS ON DAMS**
 Drawing Name: **STANDARD PUBLIC STYLE GUARD RAIL FABRICATION DETAILS - ACCESS GATE**

Drawn by: S.Gauthier
 Drawing date: August 20, 2014
 Checked by:
 Check date:
 Approve date:
 Approved:

Drawing Scale: 1:30 UNO
 Plot Scale: 1:1
 Plot Size: Letter
 Drawing No: **P3**
 REV.A



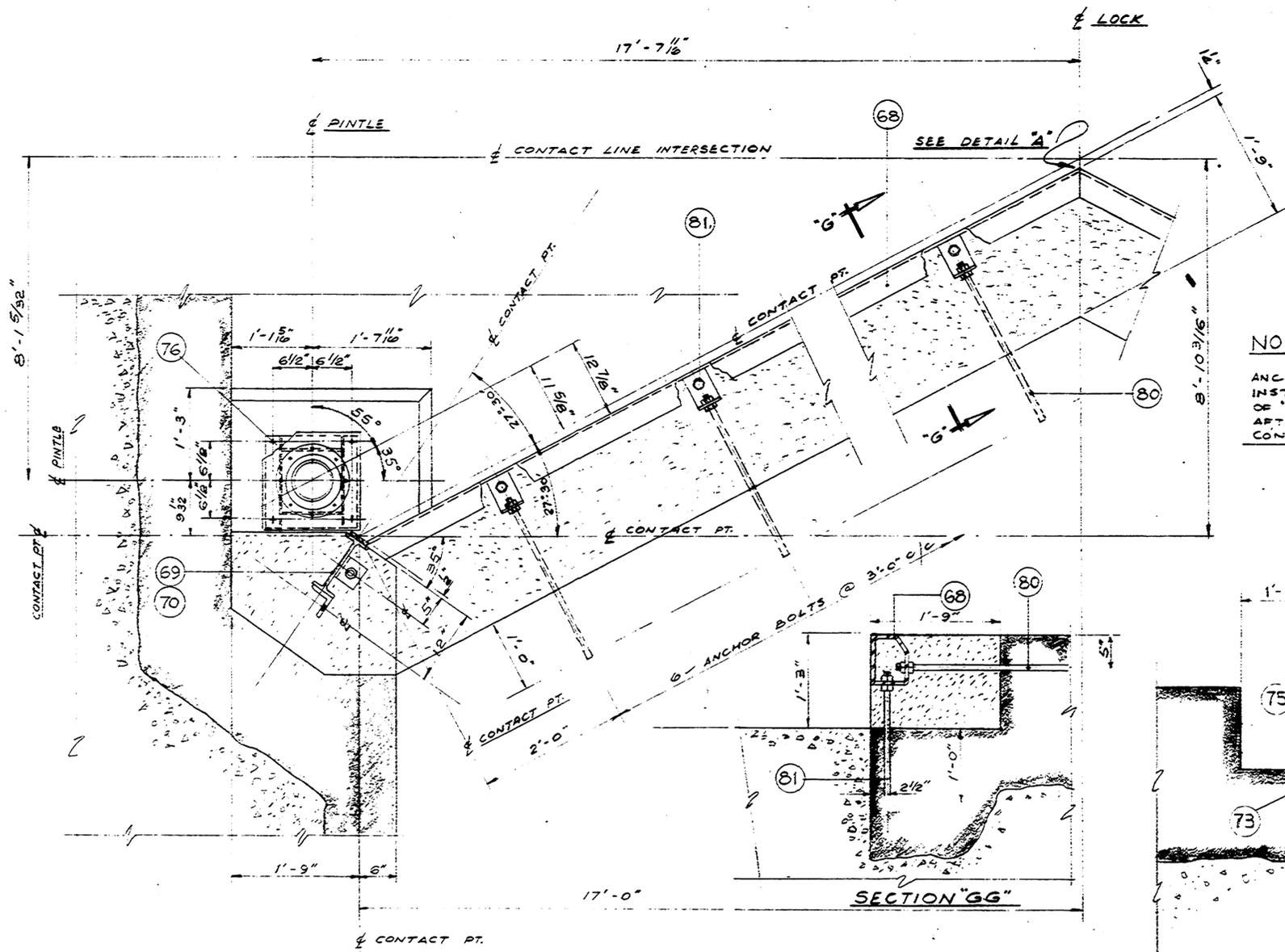
PLAN VIEW



ELEVATION VIEW

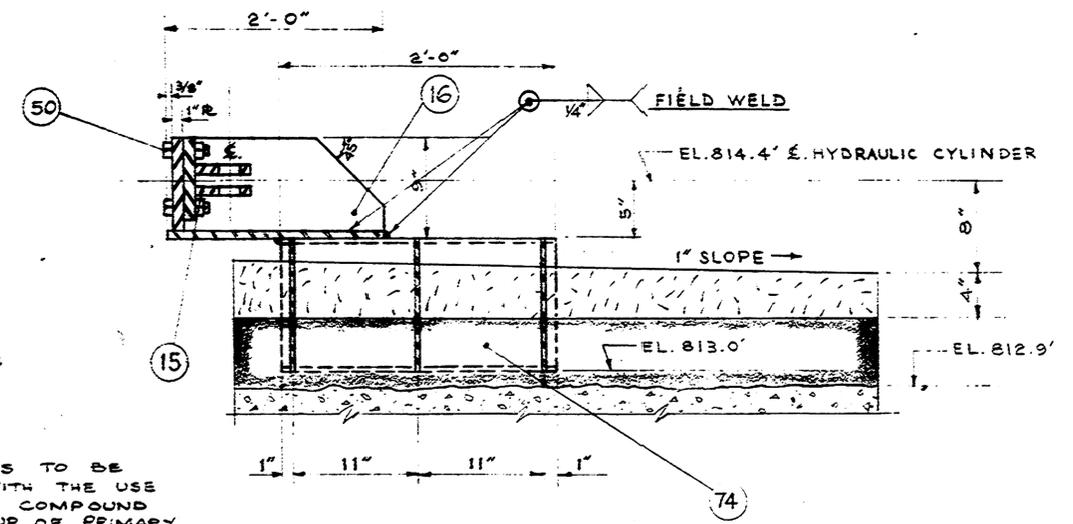
GENERAL NOTES:

- 1) ALL DIMENSIONS GIVEN ARE IN MILLIMETERS (mm) UNLESS NOTED OTHERWISE
- 2) BASE PLATES SHALL BE LEVELED TO PLUMB GUARD RAIL POSTS AS REQUIRED. WHERE SHIM AMOUNT EXCEEDS 13 mm, USE OF LEVELING NUT AND A BED OF NON-SHRINKABLE GROUT OF THICKNESS MIN 25 mm TO MAX 32mm SHALL BE USED AT UNDERSIDE OF PLATE. SLOPE SIDES OF GROUT BED AT 1:1 DOWN TO SURFACE. REFER TO SLOPED SURFACE MOUNT CONNECTION DETAIL FOR SLOPED SURFACE INSTALLATIONS SUCH AS STAIR RAILS, ETC.
- 3) DIMENSIONS ATTACHED TO AN ASTERISK (*) ARE CONSIDERED MINIMUM DESIGN CONSTRAINTS. SHOULD THESE DIMENSIONS NOT BE SATISFIED CONTACT AN ENGINEER TO CONFIRM FEASIBILITY OF CONNECTION.
- 4) INSPECT SURFACE PRIOR TO INSTALLATION. WHERE SURFACE CONCRETE IS CRACKED OR SCALED IN EXCESS OF 6 mm DEPTH THE SURFACE MUST BE REPAIRED PRIOR TO BASE PLATE INSTALLATION. REFER TO TYPICAL LOCAL CONCRETE REPAIR DETAILS AND/OR CONTACT AN ENGINEER



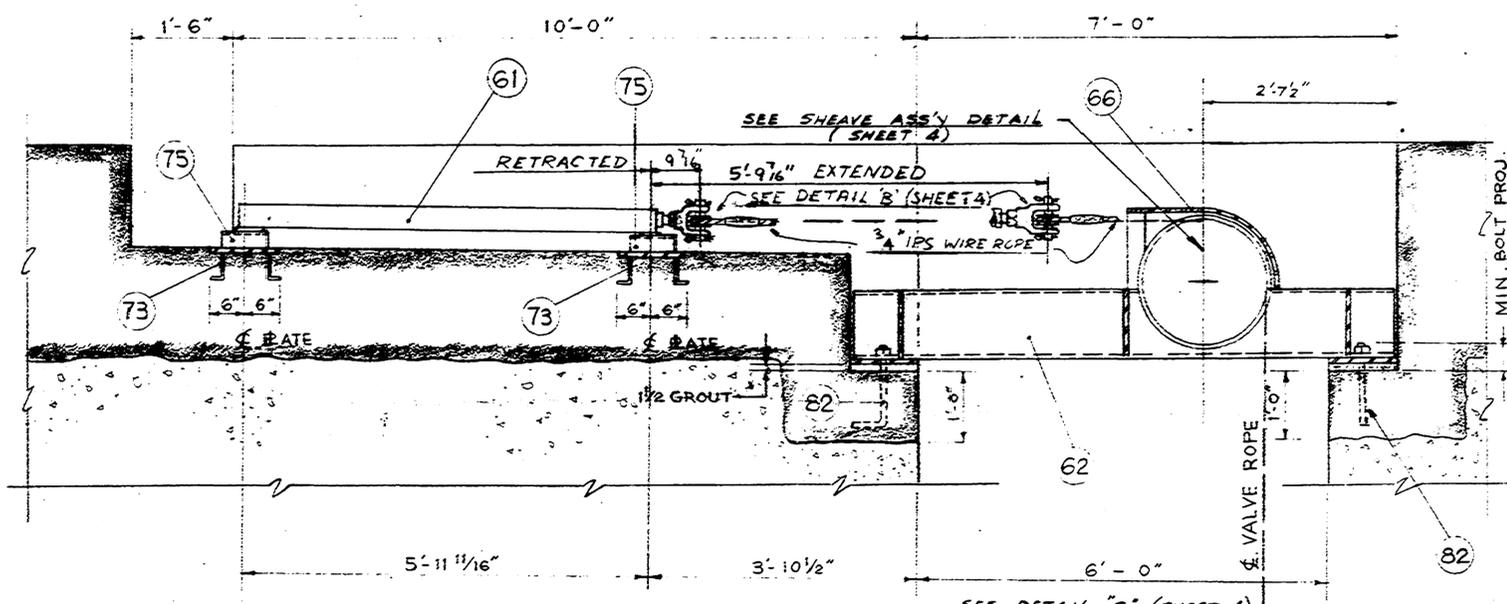
SECTION 'FF'

SECTION 'GG'

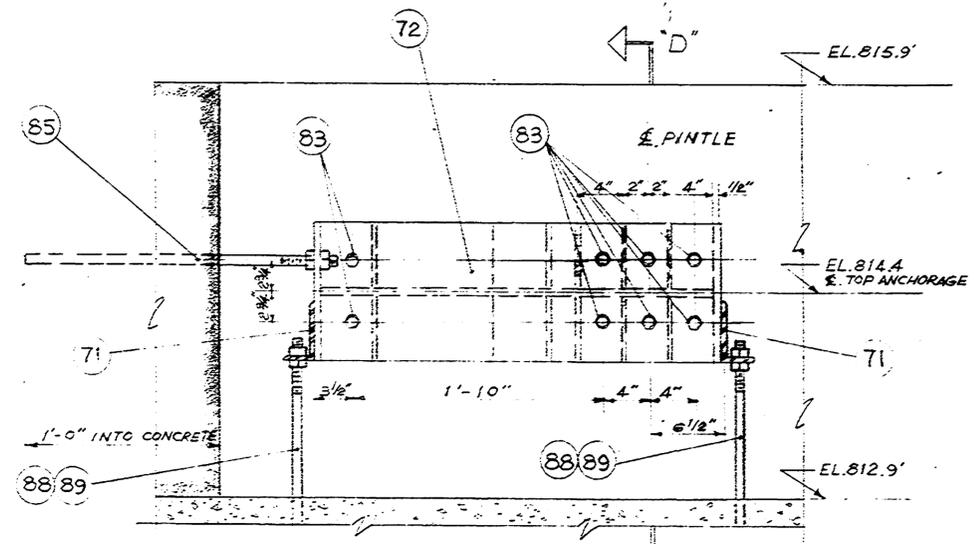


SECTION 'HH'

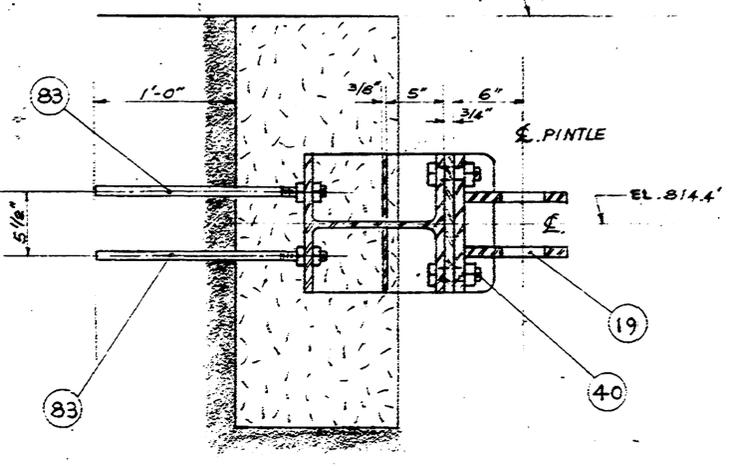
NOTE:
ANCHOR BOLTS TO BE INSTALLED WITH THE USE OF "ROCLOC" COMPOUND AFTER SET UP OF PRIMARY CONCRETE.



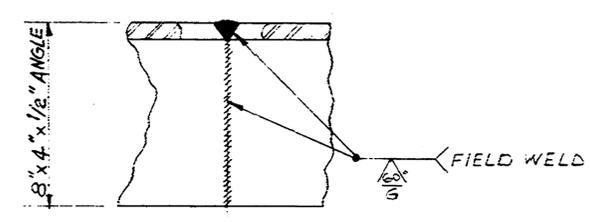
SECTION 'AA'



SECTION 'CC'



SECTION 'DD'



DETAIL 'A'

NOTES:
1. REFER TO DRAWINGS 3-50 SHEET 2 AND 5 FOR FURTHER DETAILS AND MATERIAL LIST.

LEGEND

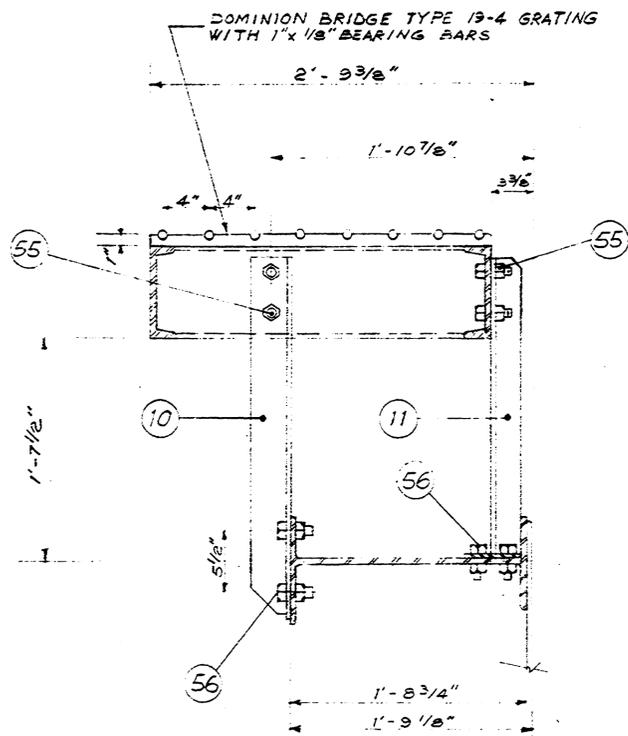
 EXISTING CONCRETE (SECTION)
 FIRST POUR CONCRETE (SECTION)
 SECOND POUR CONCRETE (SECTION)

REV. NO.	DATE	REVISIONS	MADE BY
C	MAY 68	ANG. BOLT INSTAL. REV.	Y.S.
B	2/5/68	SECTION A-A REVISED	WD
A	APR. 4/68	REVISED IN ACCORDANCE WITH DPT	M.J.

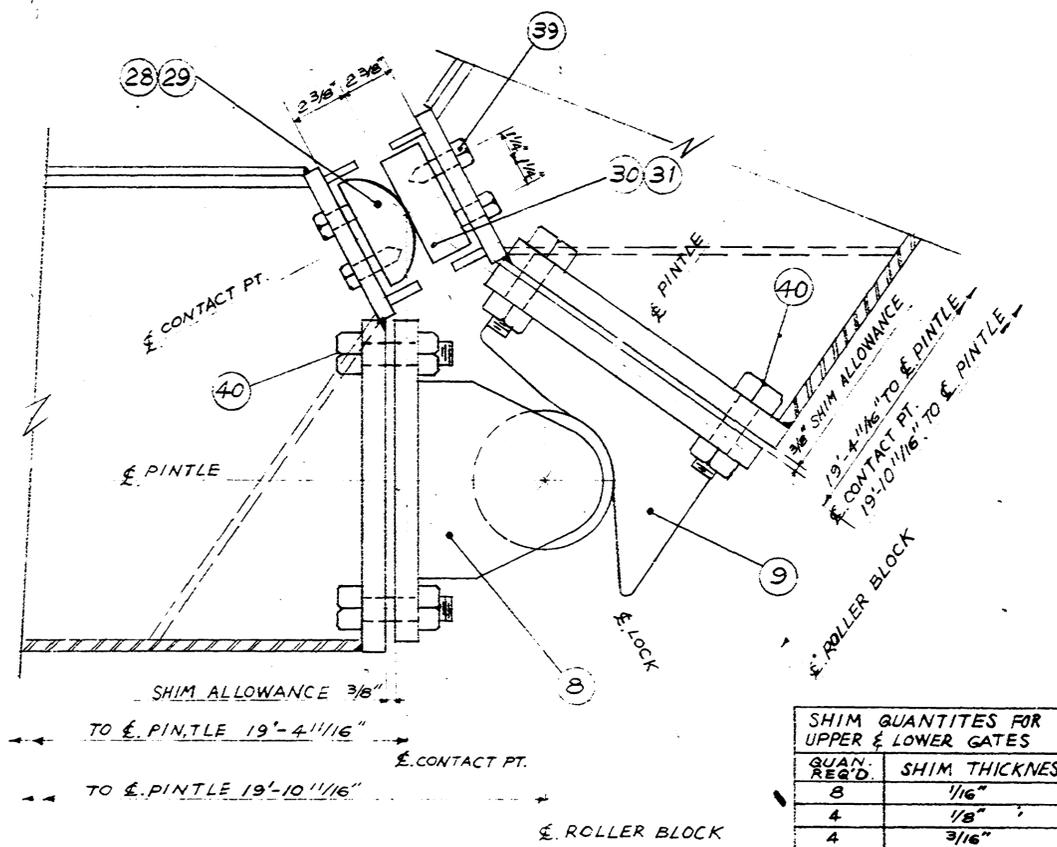
RULIFF GRASS CONSTRUCTION CO. LTD.
(TOWER DIVISION) - THORNHILL, ONTARIO

EMBEDMENT DETAILS
 LOCK NO 32 BOBCAYCEON
 DEPARTMENT OF TRANSPORT
 MARINE WORKS CANAL DIVISION

DRAWN BY: M.J. DATE: FEB/68 CHECKED BY: C.L. DATE: FEB/68
 PROJ. APP. DATE: SCALE: DRAWING NUMBER: 3-50 SHEET NO 3



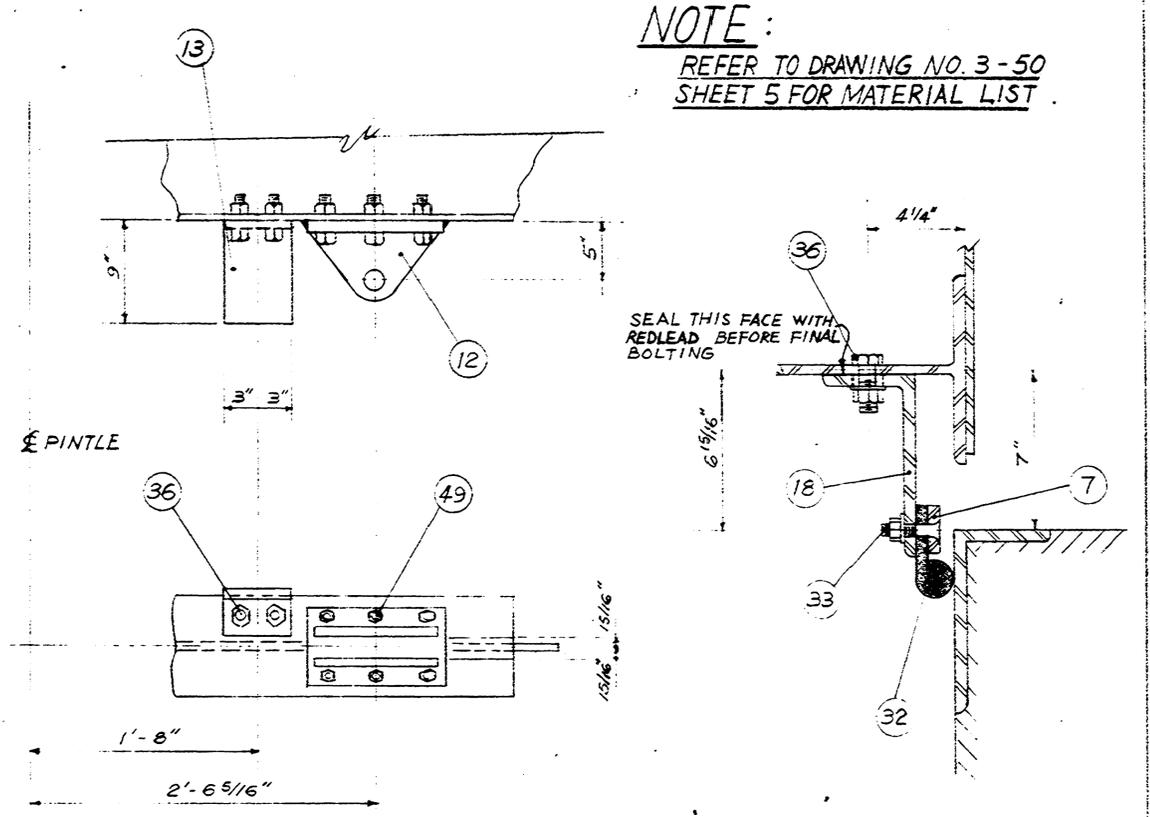
TYPICAL WALKWAY SUPPORT DETAIL
SCALE: 1/2" = 1'-0"



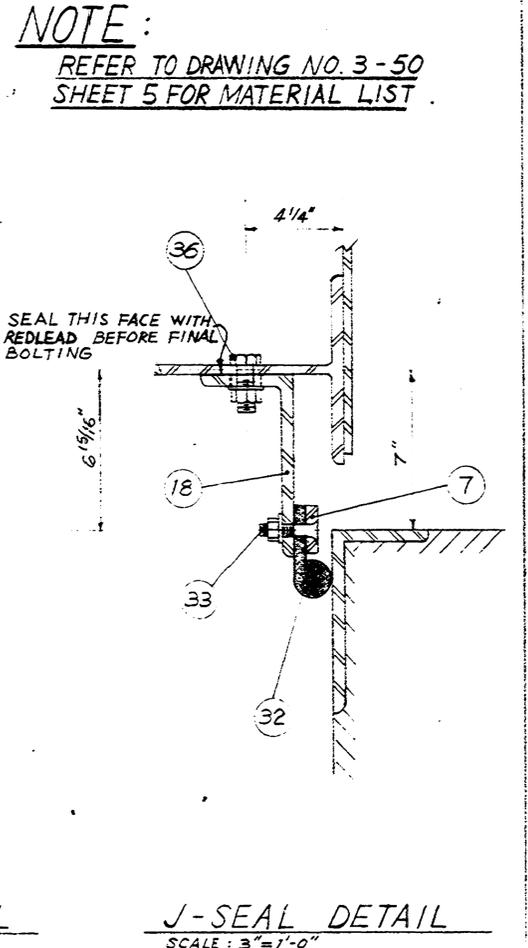
SHIM QUANTITIES FOR UPPER & LOWER GATES

QUAN. REQ'D.	SHIM THICKNESS
8	1/16"
4	1/8"
4	3/16"
4	1/4"

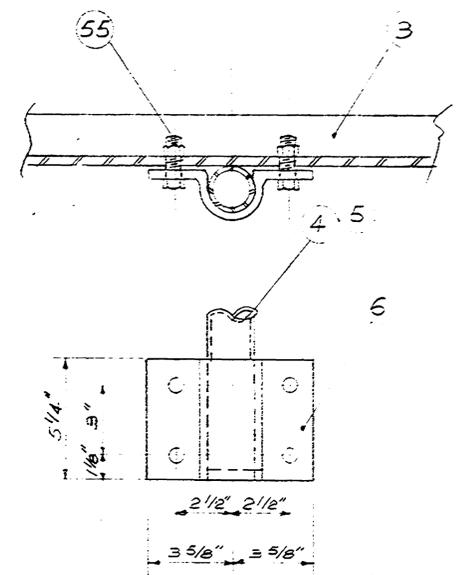
ROLLER BLOCK ASSEMBLY DETAIL
SCALE: 3" = 1'-0"



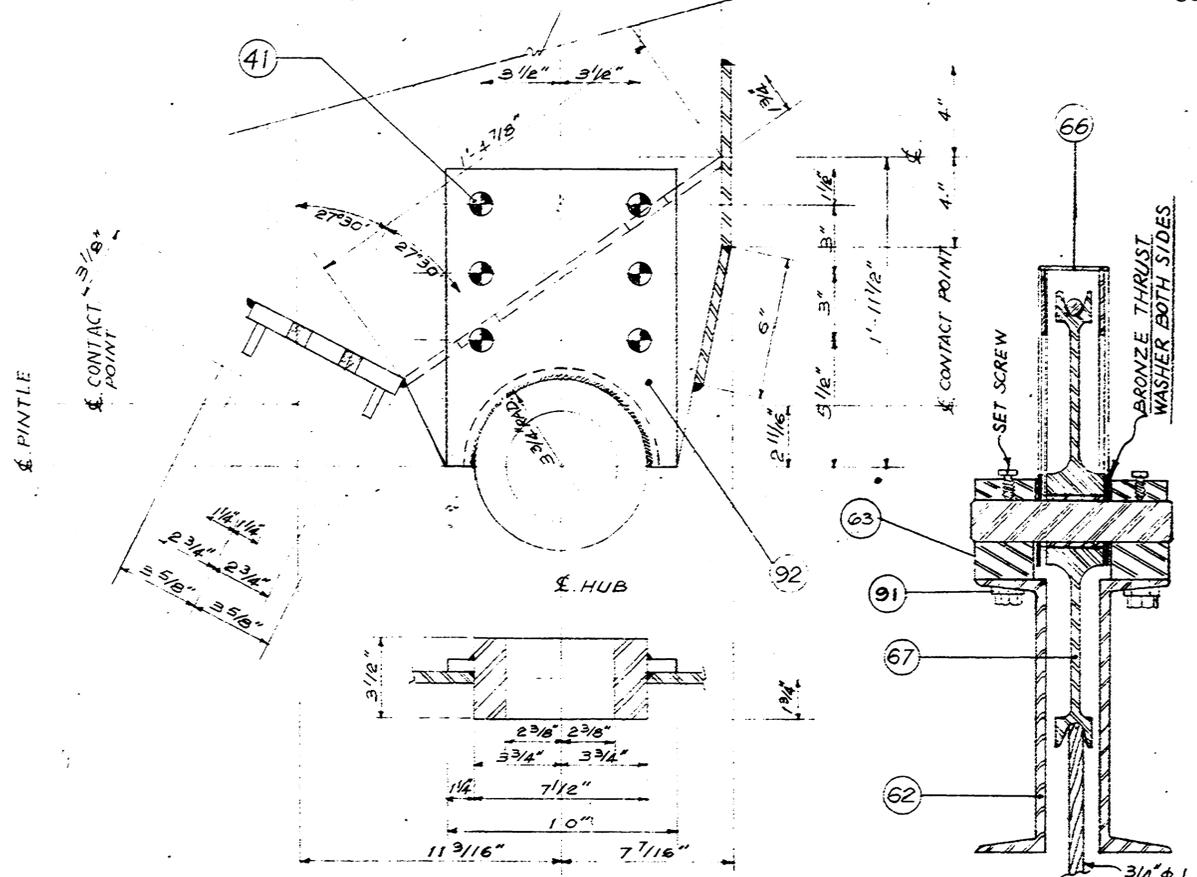
GATE CYLINDER BRACKET DETAIL
SCALE: 1 1/2" = 1'-0"



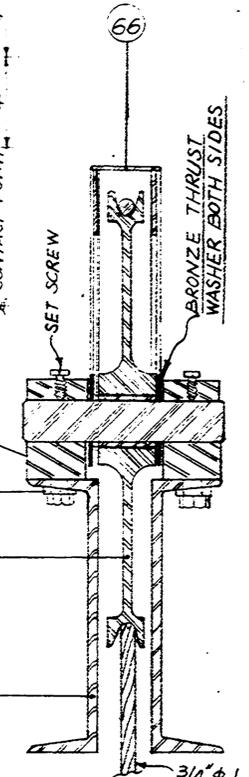
J-SEAL DETAIL
SCALE: 3" = 1'-0"



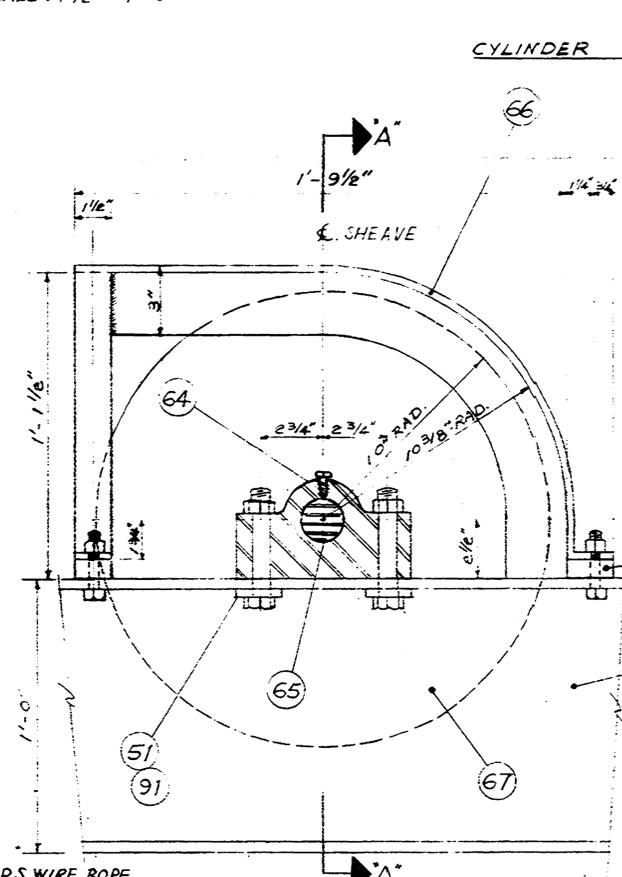
HANDRAIL CONNECTION DETAIL
SCALE: 3" = 1'-0"



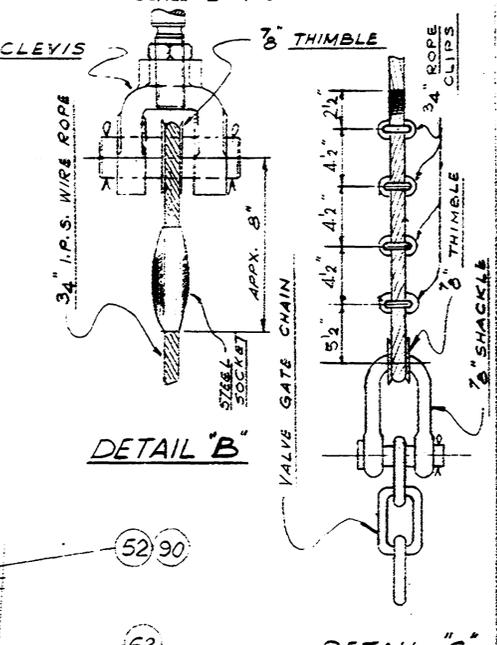
TOP HINGE HUB DETAIL
SCALE: 3" = 1'-0"



SECTION "A-A"
SCALE: 3" = 1'-0"



SHEAVE ASSEMBLY DETAIL
SCALE: 3" = 1'-0"



DETAIL "B"

REV.	DATE	REVISIONS	MADE BY
B	2/5/68	DETAILS B & C REVISED	W DOWNAR
A	1/8/68	REVISED IN ACCORDANCE WITH DEPARTMENT OF TRANSPORT	J. MA

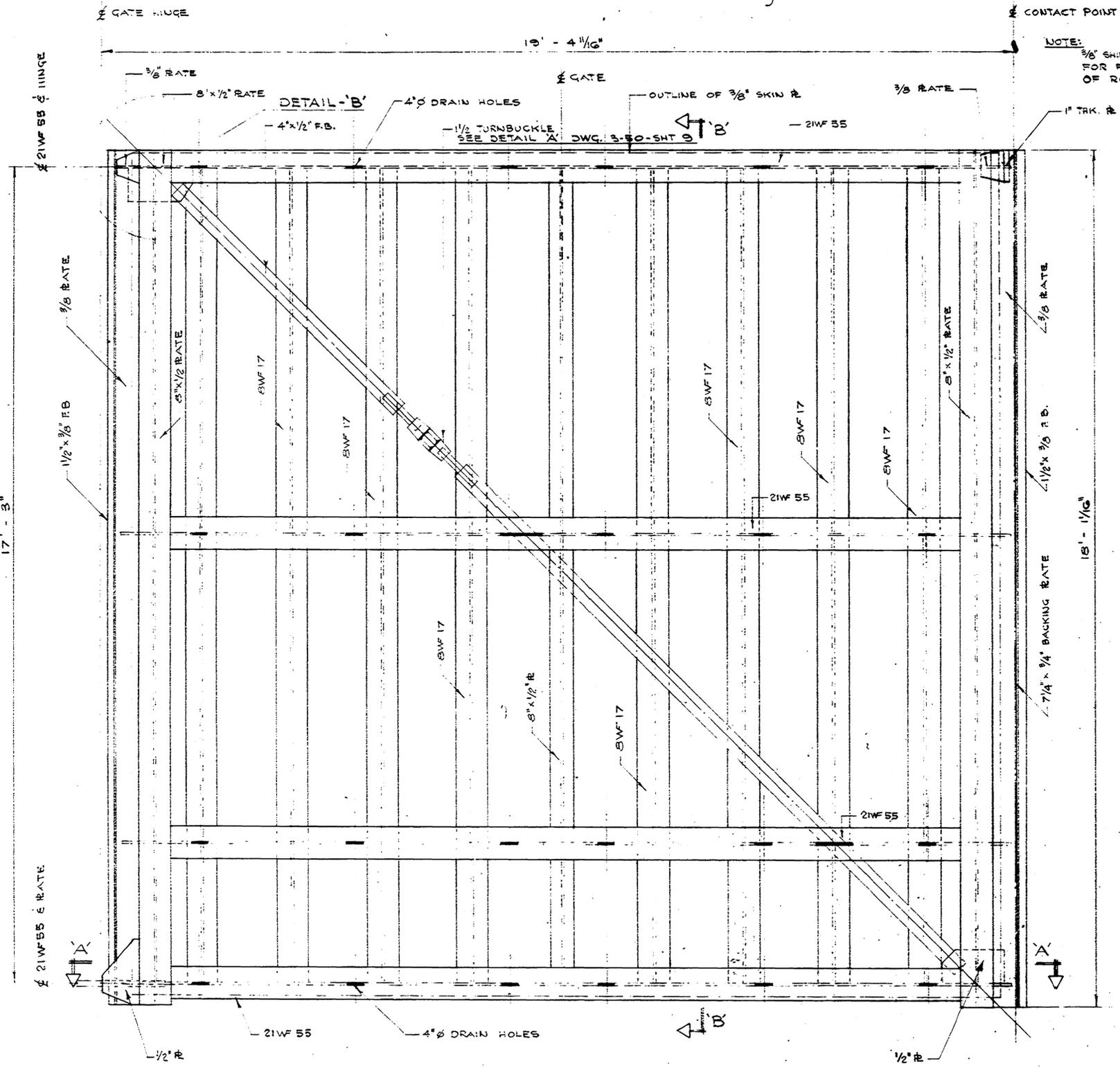
DETAIL "C"

REV.	DATE	REVISIONS	MADE BY
B	2/5/68	DETAILS B & C REVISED	W DOWNAR
A	1/8/68	REVISED IN ACCORDANCE WITH DEPARTMENT OF TRANSPORT	J. MA

GATE ASSEMBLY DETAILS
LOCK NO 32 BOBCAYGEON
DEPARTMENT OF TRANSPORT
MARINE WORKS CANAL DIVISION
M. J. FEB/68 O. L. FEB/68 3-50
AS NOTED SHEET NO 4

T-23-108.4

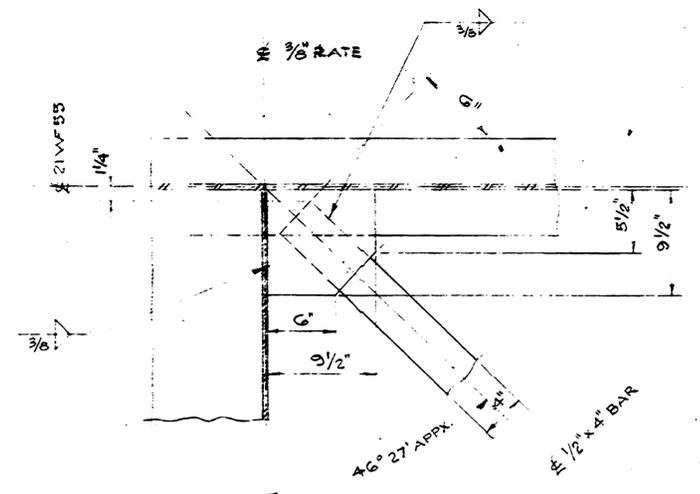
NOTE:
 1. 3"x4" ANGLE FOR LIMIT SWITCH TO BE BOLTED TO GATE IN FIELD } SEE DWG. NO 3-50
 2. CYLINDER BRACKET TO BE BOLTED TO GATE IN FIELD } SHEET NO 5



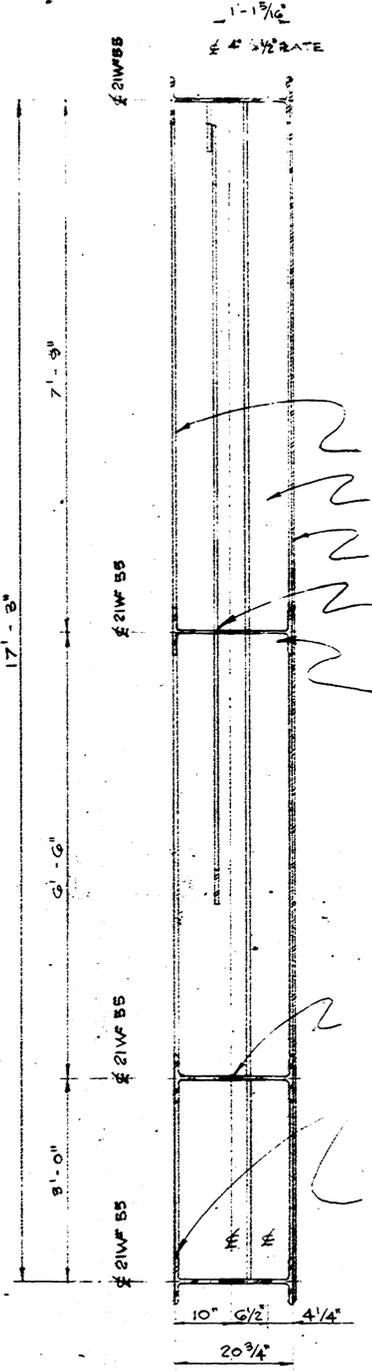
ELEVATION OF GATE

MATL: AS NOTED
 MARK N° 10A QUAN. REQ'D. IAS DRAWN
 MARK N° 10B QUAN. REQ'D. IOPR HAND

NOTE:
 3/8" SHIM ALLOWANCE FOR FIELD POSITIONING OF ROLLER BLOCK



TYPICAL AT TOP & BOTTOM CONNECTIONS



SECTION 'B-B'

GENERAL NOTES

- ALL MATERIAL USED IN THE MANUFACTURE OF THE ABOVE COMPONENTS SHALL CONFORM TO A.S.T.M. SPECIFICATION A36 FOR STRUCTURAL STEEL
- BLAST CLEANING SHALL BE CARRIED OUT AFTER FABRICATION IN ACCORDANCE WITH C.G.S.B. SPECIFICATION 3-GP-404
- PAINTING OF METAL SURFACES SHALL BE CARRIED IN FULL ACCORDANCE WITH D.O.T. SPECIFICATIONS, SECTION 10.02 (2)

NOTE:

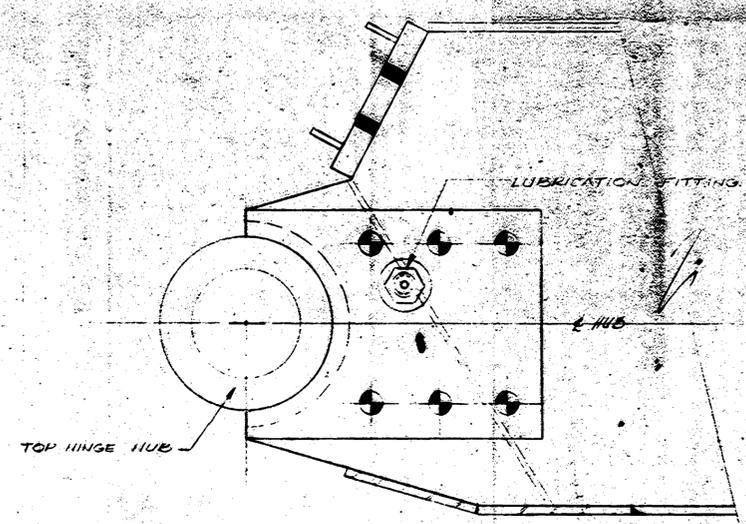
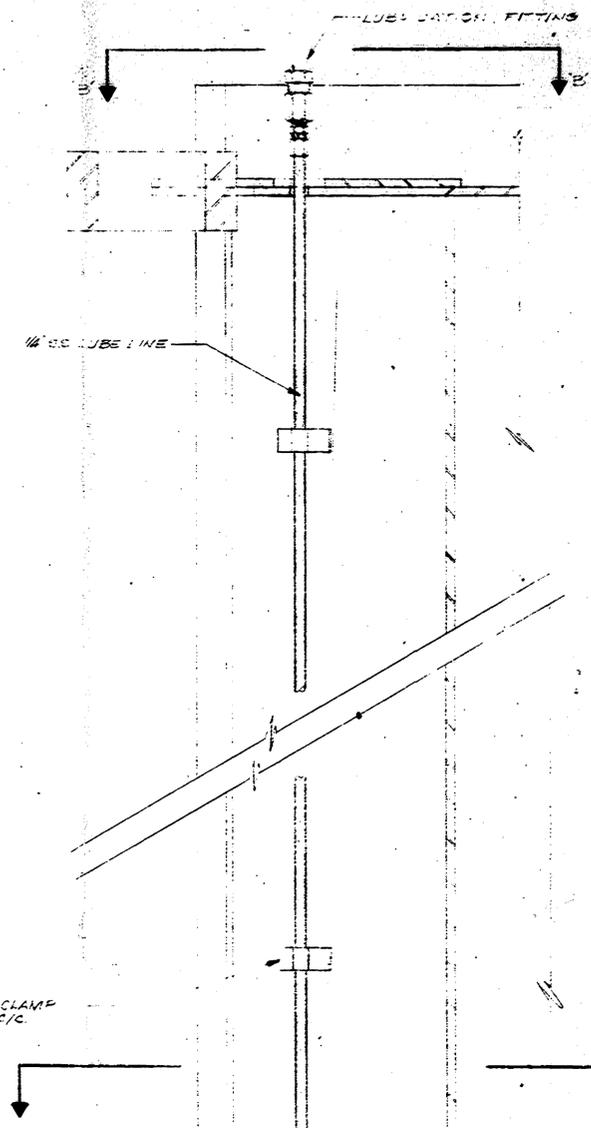
- PLAN VIEW & SECTIONAL VIEW 'A-A' OF LOWER GATE IDENTICAL TO THOSE SHOWN ON DWG. 3-50 SHEET 3 UPPER GATE.
- FOR FURTHER DIMENSIONAL & WELDING DETAILS REFER TO DWG'S. 3-50 SHEETS NO 3.11 & 12

4" HOLES (TYP)
 FOR WELDING SEE DETAIL 'D'

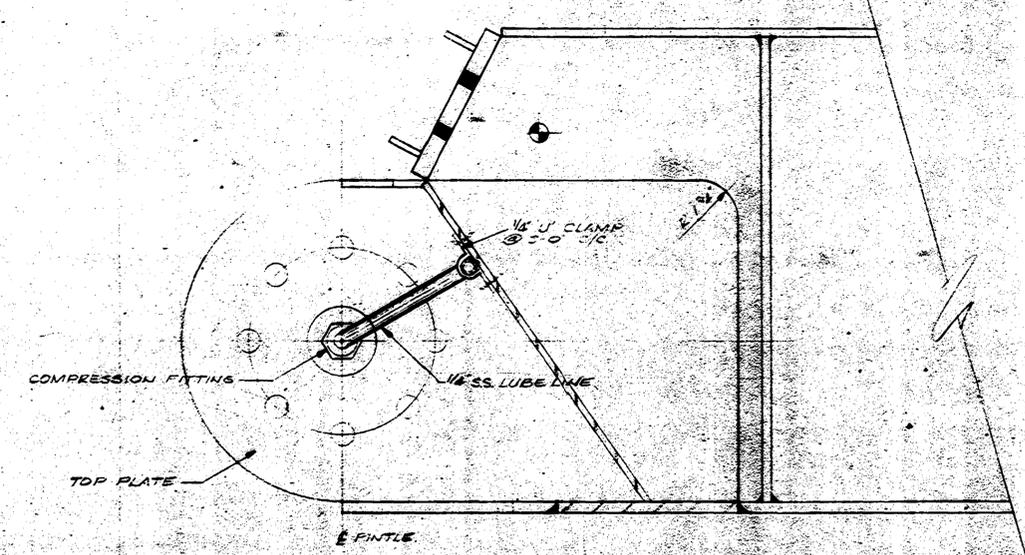
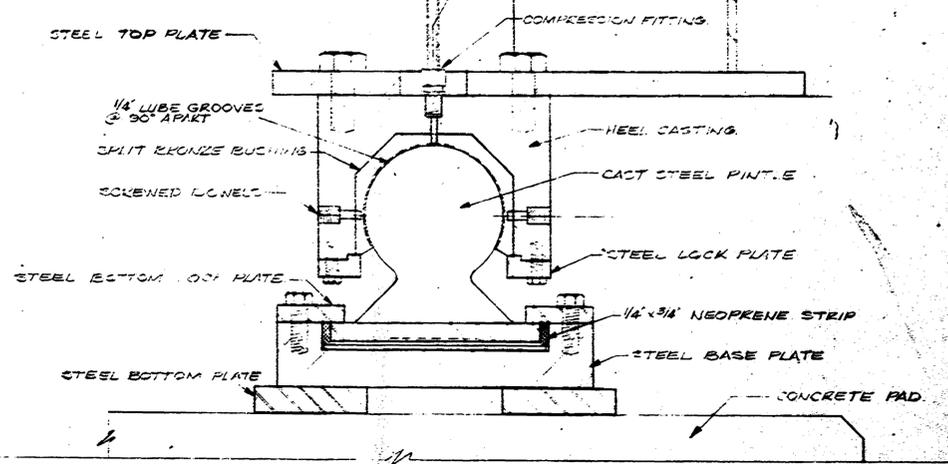
REV N°	DATE	REVISION	MADE BY
A	DEC./67	REVISED IN ACCORD. WITH D.O.T.	V.S.

RULIFF GRASS CONSTRUCTION CO. LTD.
 (TOWER DIVISION) - THORNHILL-ONTARIO
 LOWER GATE FABRICATION DETAILS
 LOCK N°32 BOBCAYGEON
 DEPARTMENT OF TRANSPORT
 MARINE WORKS CANALS DIVISION

DRAWN BY	DATE	CHECKED BY	DATE	DRAWING NUMBER
23	23 Nov/67	D.L.	Nov/1967	3-50
ENG. APP.	DATE	SCALE		SHEET N° 10



PART PLAN 'B-B'

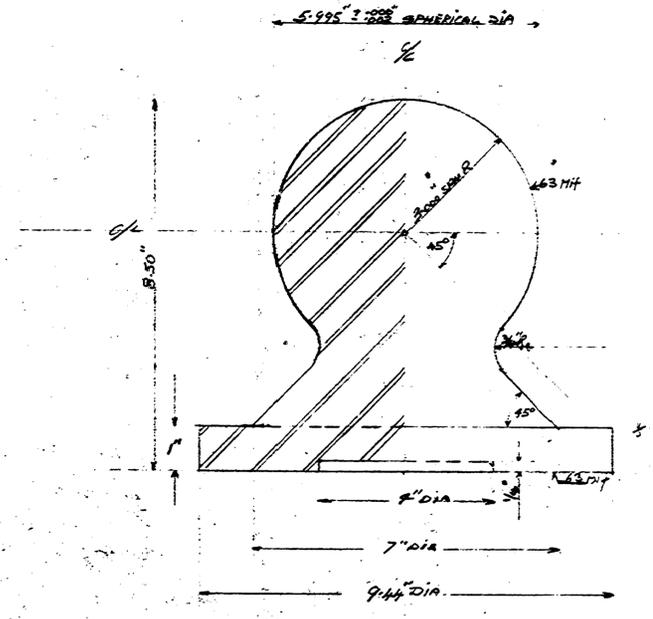
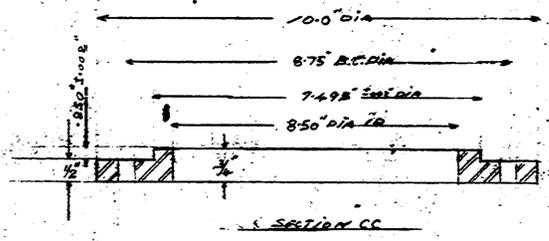
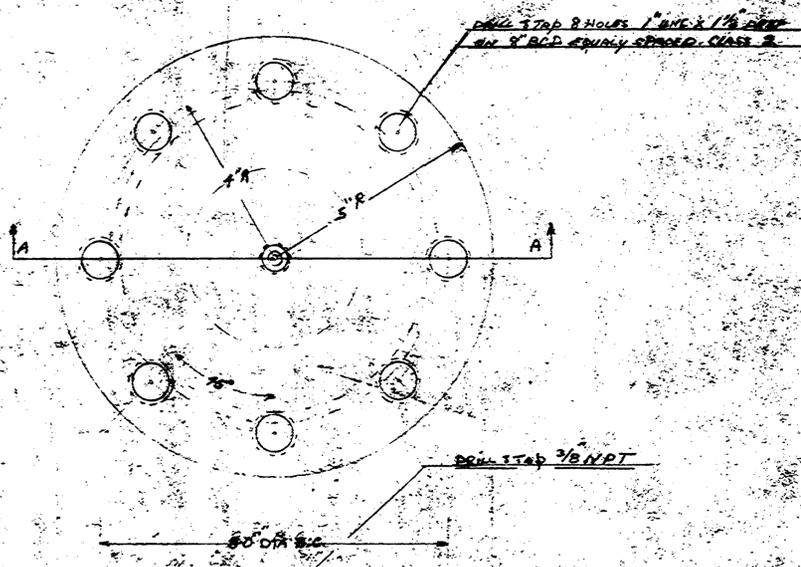


SECTION A-A

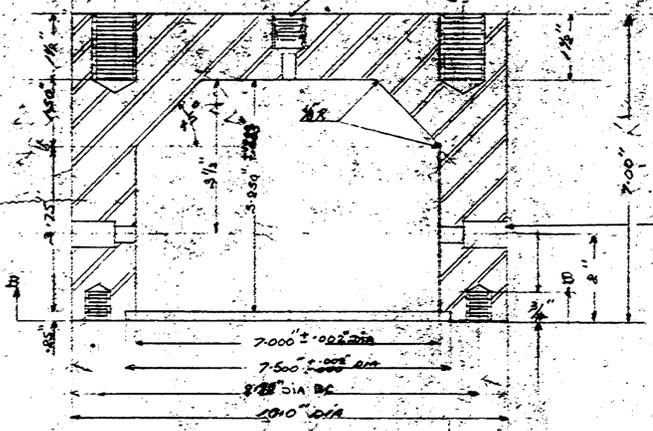
LUBRICATION LINE LAYOUT.
 UPPER & LOWER GATE SIM.
 MATERIAL: 1/4" STAINLESS STEEL LINE, FIXED TO
 STEEL & VIA 1/4" U CLAMPS @ 3'-0" C/C.

RULIFF GRASS CONSTRUCTION CO. LTD.				THORNHILL-ONTARIO	
UPPER & LOWER GATES FAB DETAILS					
LOCK N° 32 BOBCAYGEON					
DEPARTMENT of TRANSPORT					
MARINE WORKS			CANAL DIVISION		
DRAWN BY	DATE	CHECKED BY	DATE	DRAWING NUMBER	
A.O.H.	05/68	D. Lindsay	05/68	3-50	
ENG. APP.	DATE	SCALE		SHEET N° 18	

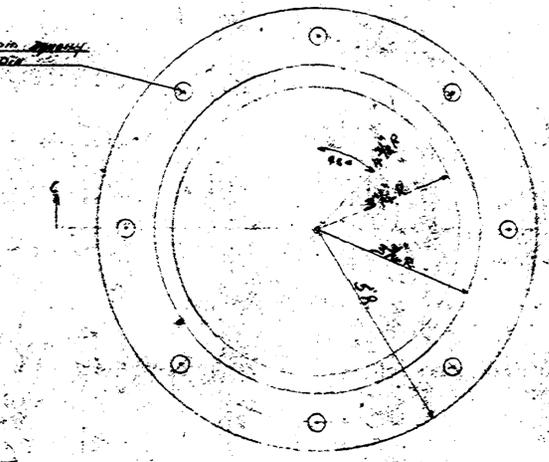
T-23-108.17



PIN TIE. SAE STEEL ASTM A-217 GRADE H.C.-4. SEE NOTE
 4-REQ 125 MIT A.O. EXCEPT WHERE NOTED
 PART. N° 9742-1/D
 NOTE: BY COMMENT THIS PART MADE FROM SAE 4140 STEEL

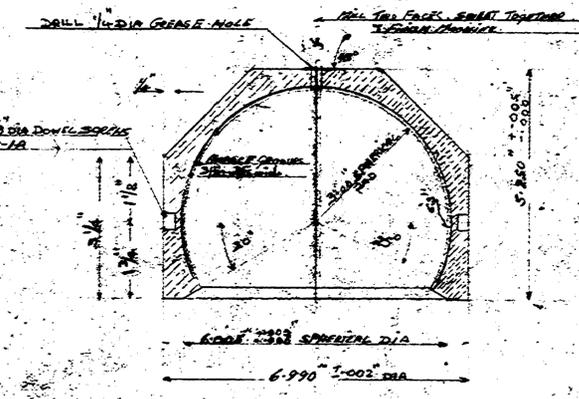


DRILL TAP 8 HOLES 1/4\"/>



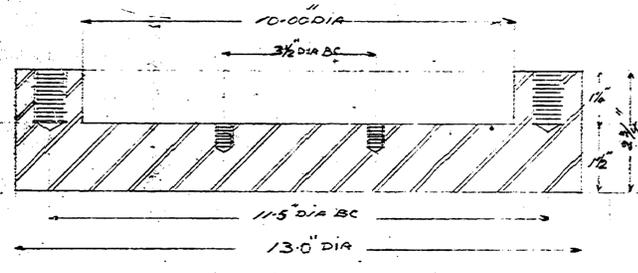
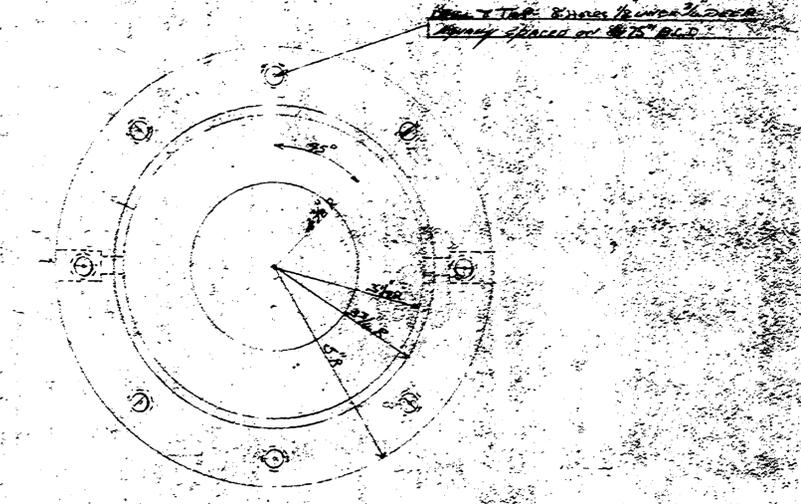
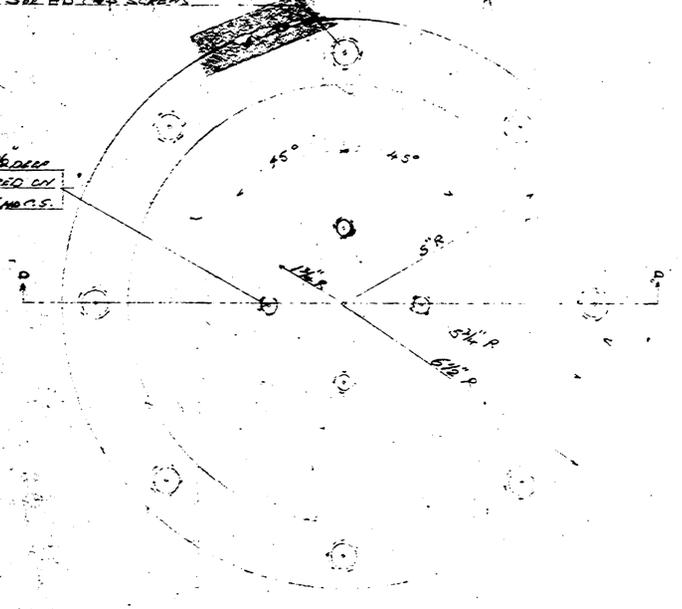
LOCK SCREW PART. N° 9742-1/B 4-REQ 6-4-4 C-1045 M.S. PLT
 125 MIT A.O.

DRILL TAP 5/8\"/>



DRILL TAP 1/4\"/>

BRONZE SAE 660 ALLOY SAE BUSHING
 PART. N° 9742-1/C 8-REQ 125 MIT A.O. EXCEPT WHERE NOTED
 FOR DETAIL SEE DOC 9742-6



BASE PLATE. SAE 4140 M.S. PLT
 PART. N° 9742-1/E 4-REQ 125 MIT A.O.

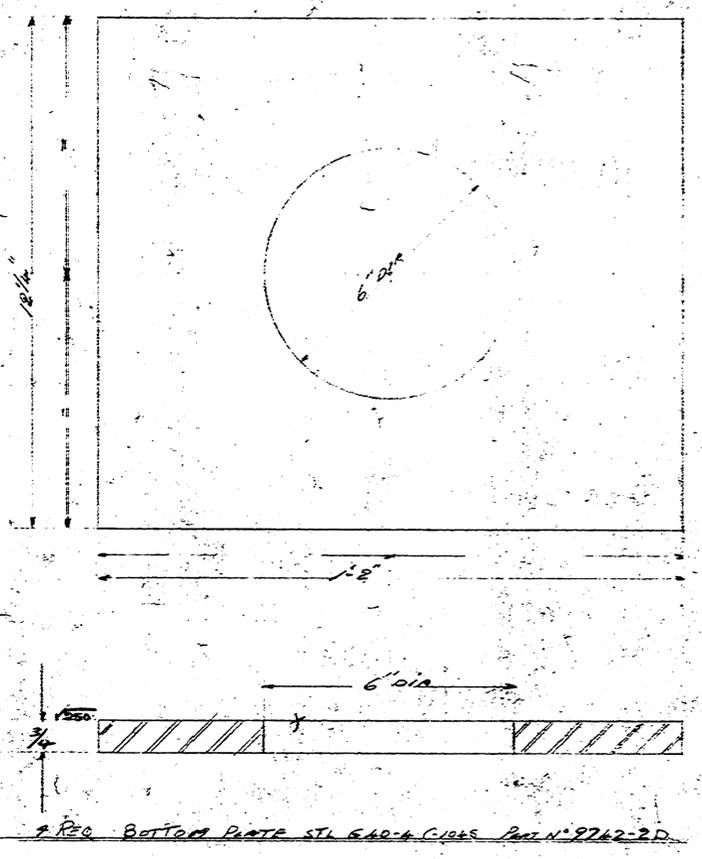
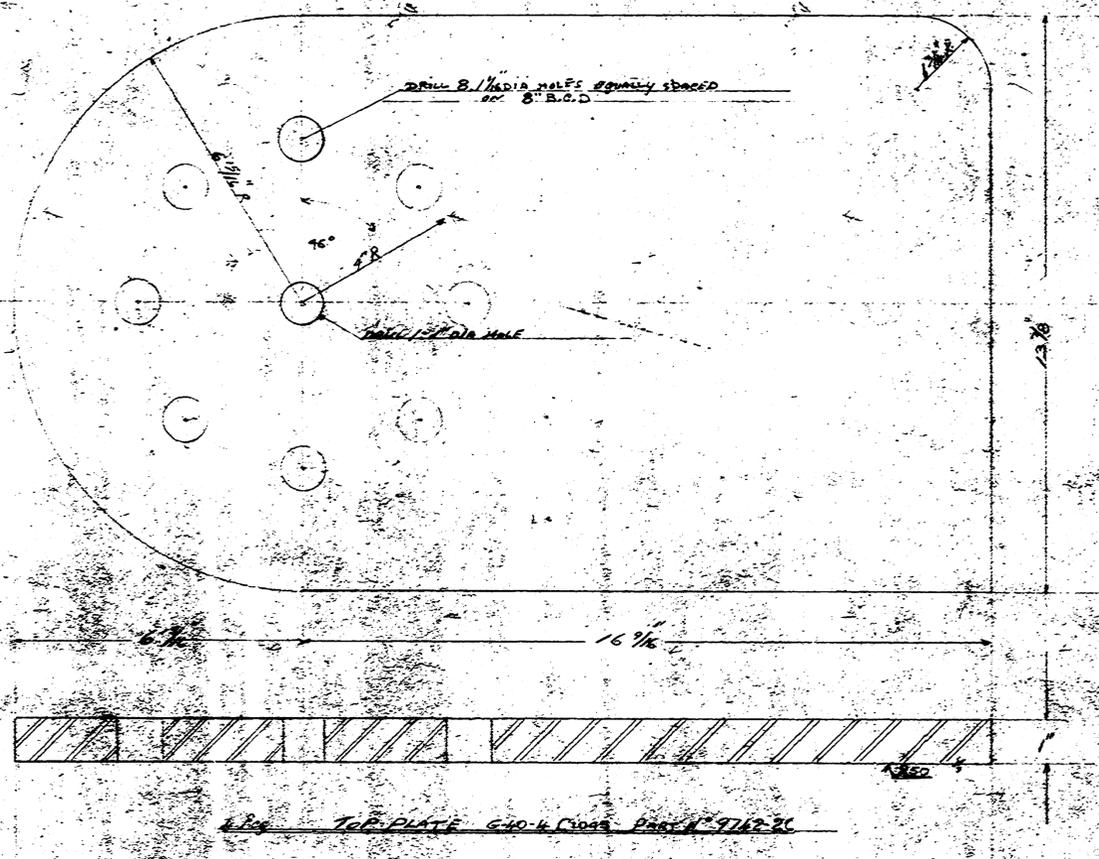
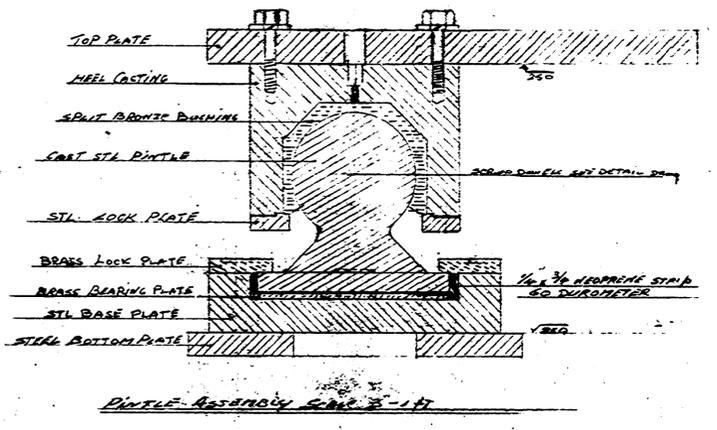
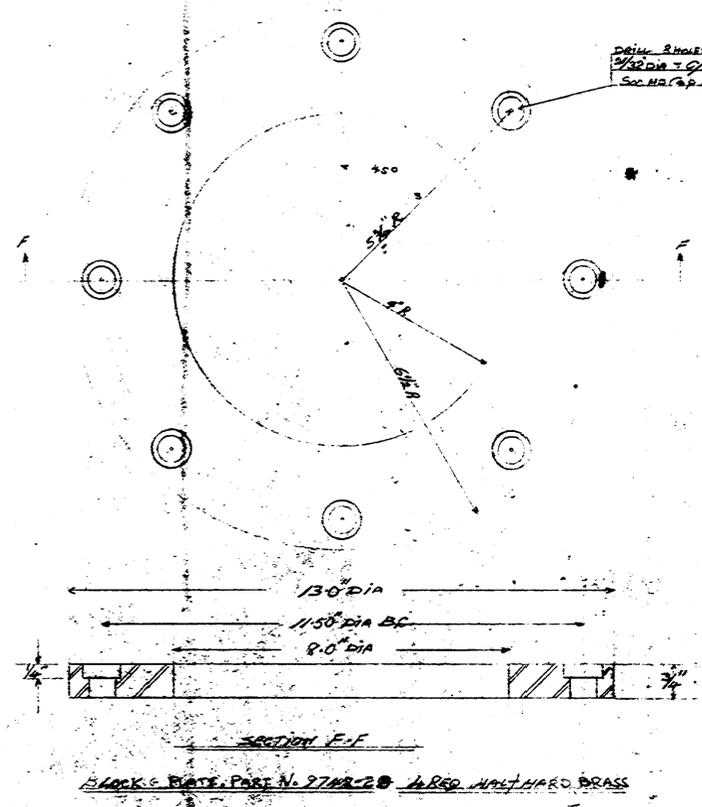
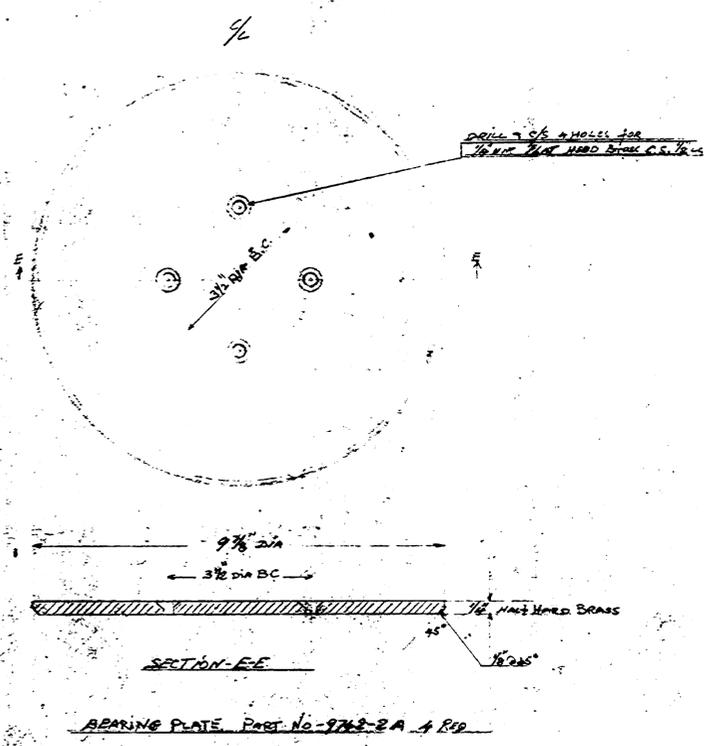
MEEZ CASTING: ASTM A-27 GRADE 60-30
 PART. N° 9742-1/A 4-REQ 125 MIT A.O.

SECTION E-E

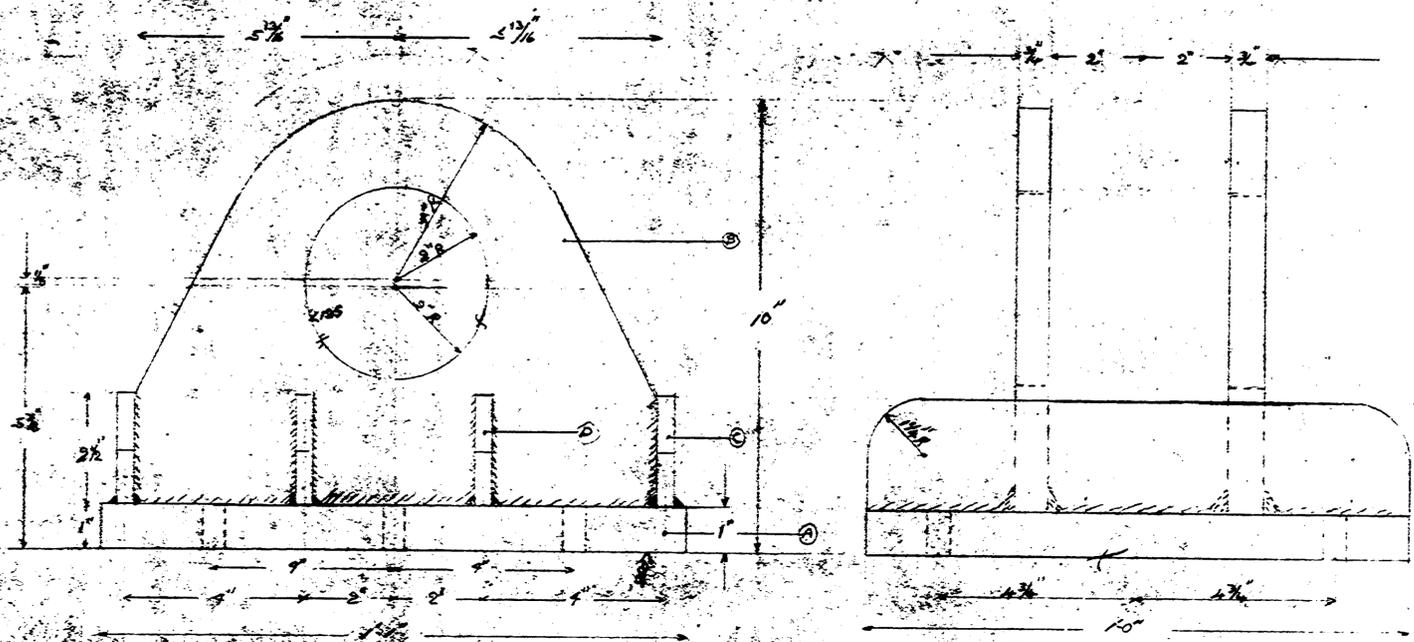
DAVIDSON MACHINE SHOPS LTD
 123 MANVILLE ROAD - SCARBOROUGH - ONT
 TRACTOR LOCK SYSTEM. BOBCOR LOCK N° 32
 PIN TIE DETAILS
 SCALE - HALF SIZE
 DRAWN T.E. 1/4/67
 9742-1

PINLE ASSY NOT LIST DRG ONT MAN

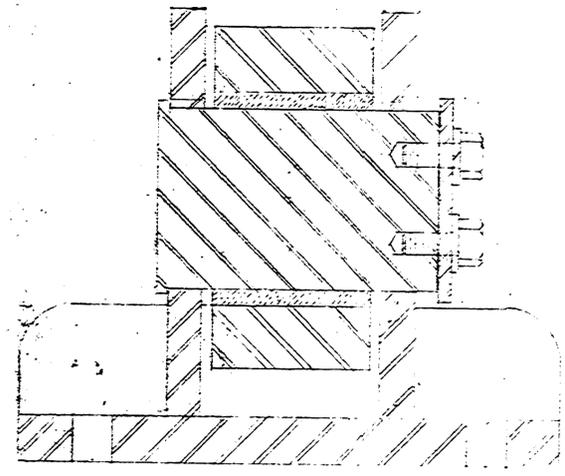
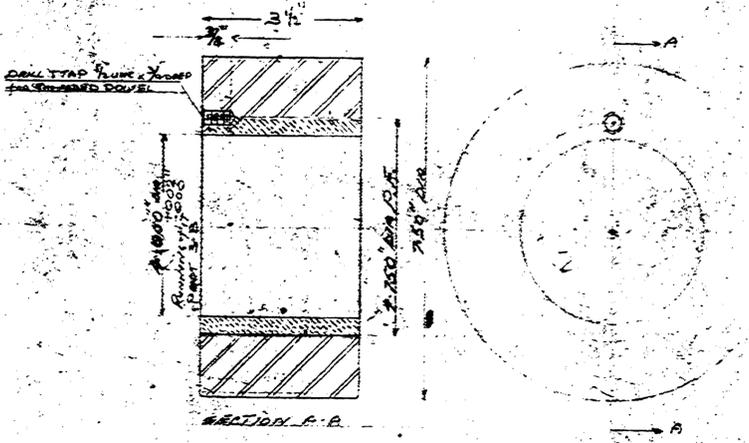
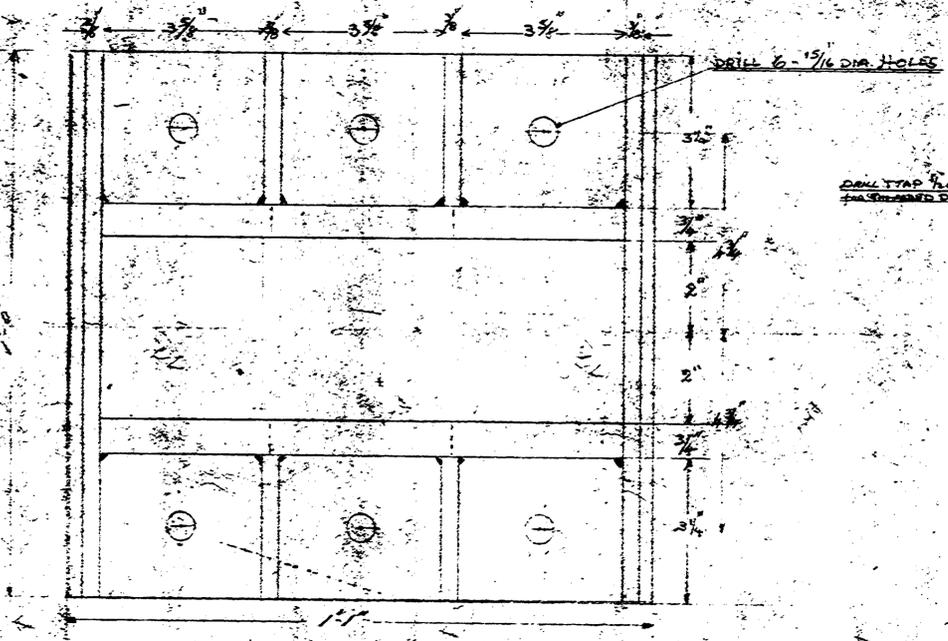
ITEM	N° REQ	DESCRIPTION	DRG NO
1	1	TOP PLATE STL GRD 4 CIPES	1742-2C
2	1	HEEL CASTING	1742-2
3	1	SPRIT BRONZE BUSHING	1742-1C
4	1	PISTLE 3/8" STL ASTM A27 SPACED 50-30	1742-1A
5	1	LOCK PLATE WALT HARD BRASS	1742-2B
6	1	BEARING PLATE WALT HARD BRASS	1742-2A
7	1	STEEL BASE PLATE WALT HARD BRASS	1742-1B
8	1	BOTTOM PLATE	1742-2D
9	8	1/4" X 2 1/2" X 1/8" BRASS ASTA WALT	
10	2	3/4" X 1/4" GAL. S-PHUN BRASS	
11	8	1" SP. 404 WALT BRASS	
12	8	3/16" X 1 1/2" GAL. S-PHUN BRASS	
13	4	1/4" X 3/4" WALT HARD BRASS	
14	1	1/4" X 3/4" WALT HARD BRASS	



T-23-110.2
 DAVIDSON MACHINE SHOPS LTD
 123 MANVILLE ROAD - SCARR CNT
 TRENT CANAL SYSTEM
 BOBCOGEON LOCK N° 32
 PISTLE ASSY & DETAILS
 SCALE 3/8" = 1" FT
 DRAWN T.F. 6/7/67 DRG. 9742-2



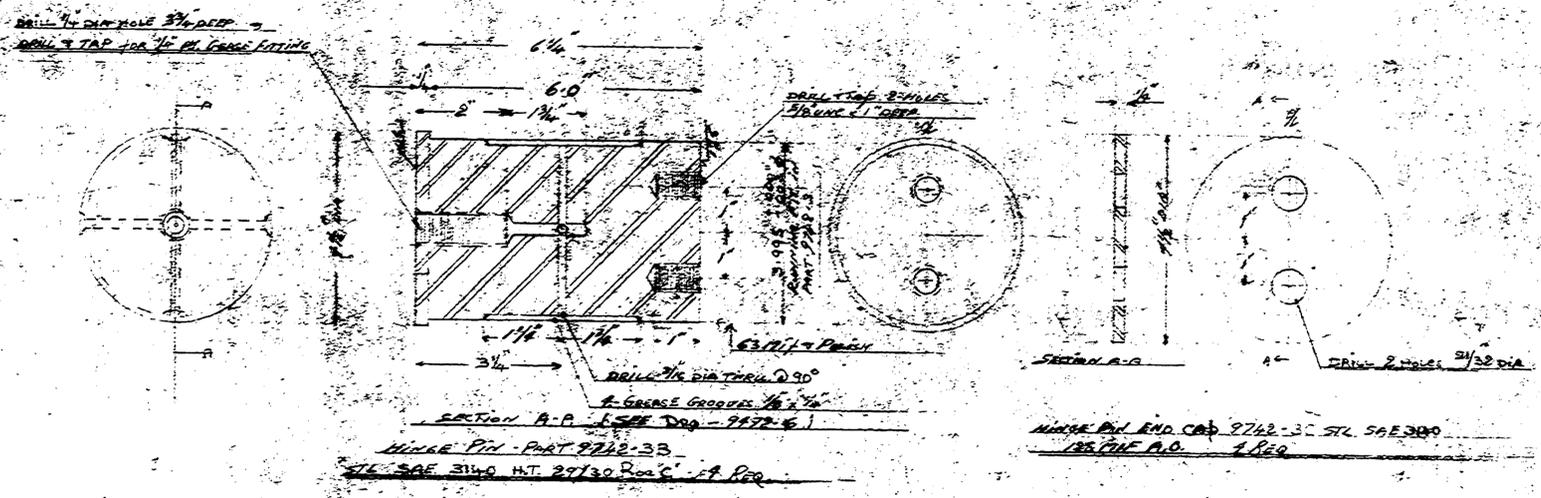
TOP HINGE MAT PER ASSY		
PART	QTY	DESCRIPTION
9742-3A	1	HINGE BRACKET WELDED GUNWELD
" A	1	1 1/8" x 12" x 1/2" STL CSA 5-40-4
" B	2	3/4" x 9" x 1 1/2"
" C	2	3/4" x 2 1/2" x 12"
" D	4	3/8" x 2 1/2" x 3 1/4"
9742-3B	1	PIN 1/2" DIA x 6 1/2" STL SAE 3140, H.T.
" 3C	1	END 1/2" DIA x 3/8"
" 3D	1	ROLLER 7/8" DIA x 3 1/4"
"	1	BUSHING 1 1/2" x 1 1/2" x 1 1/2" ASTH BUT AM/SC
"	4	3/8" UNC x 1 1/4" HEX HD CAP SCREW
"	4	3/8" SPRING LOCK WASHERS
"	1	1/4" NPT BUTON HD GREASE FITTING



TOP HINGE BRACKET - WELDED GUNWELD PART N° 9742-3A
 STRESS RELIEVE - SAND BLAST - STL CSA 5-40-4
 1/4" WELD 1/4" x 1/4"

HINGE BRACKET ROLLER 4 REQ PART N° 9742-3D
 STL SAE 3140 BUSHING BRONZE ASTH BUT AM/SC

TOP HINGE ASSEMBLY



DAVIDSON MACHINE SHOPS LTD
 123 MANVILLE ROAD - SCARBOROUGH - ONT
 TRENT CANAL SYSTEM
 BOBCAGEON LOCK N° 32
 TOP HINGE ASSEMBLY AND DETAILS
 SCALE 6" = 1 FT
 DESIGNED BY T. FOXALL NOV 1967 DRAWING N° 9742-3
 T-23-110.3