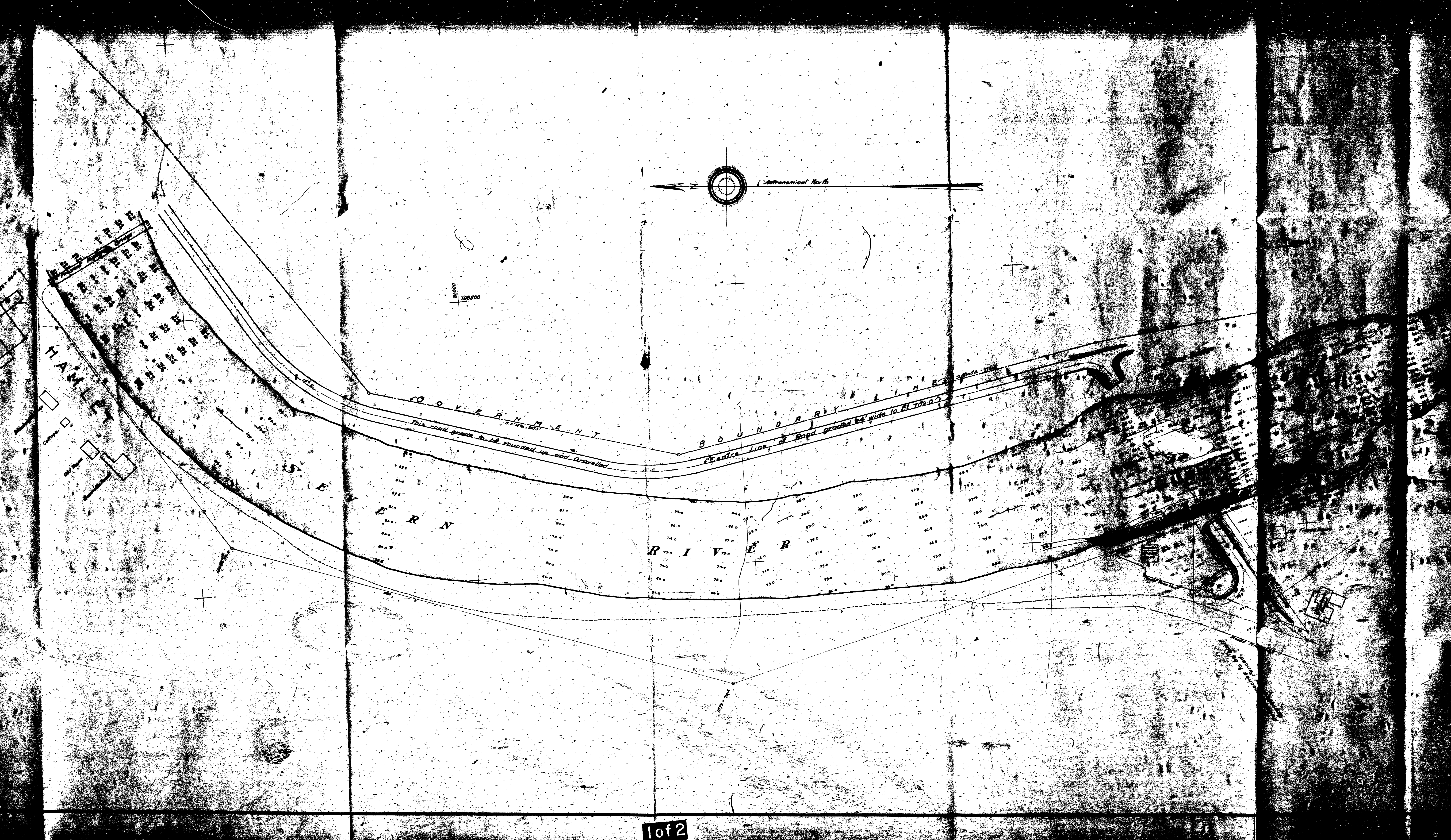
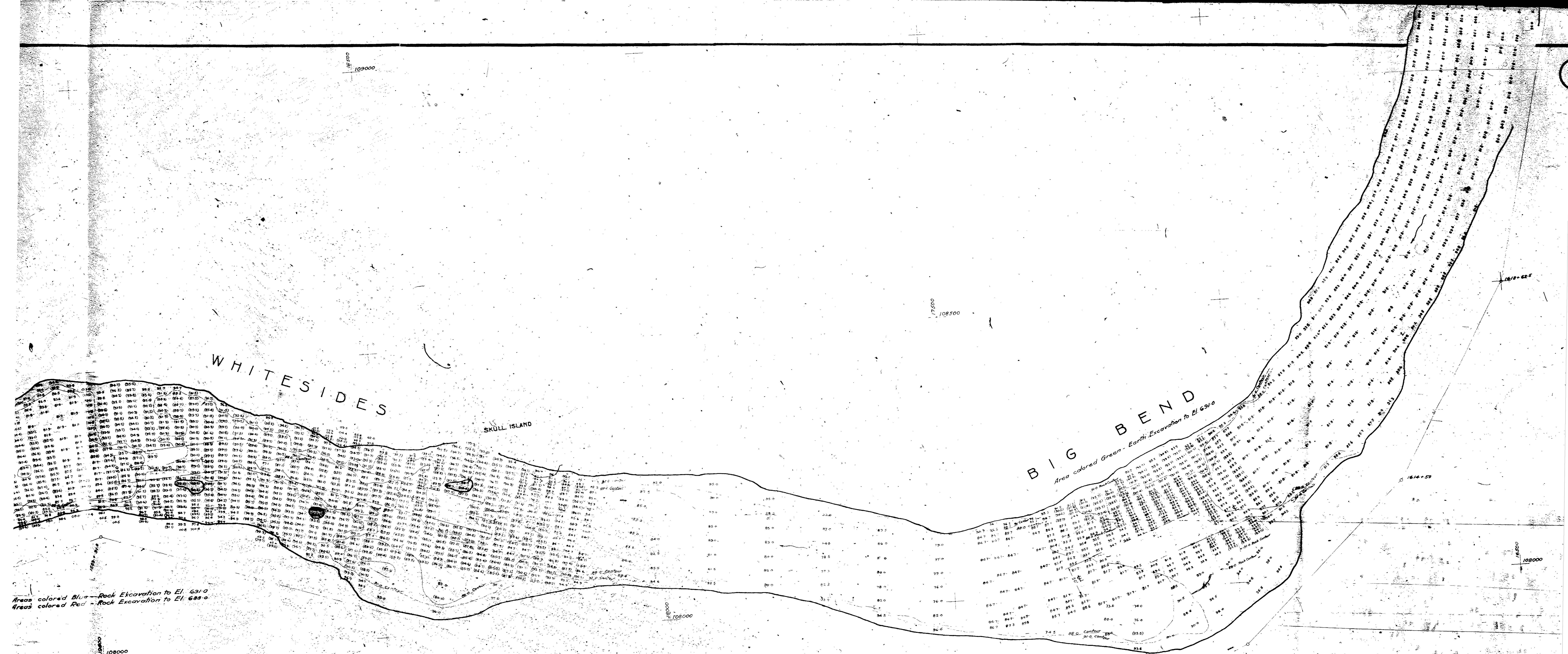


TRENT CANAL
SEVERN DIVISION-SECTION NO. 3
LAYOUT PLAN AND DETAILS OF SUBSTRUCTURE
OF
HAMLET HIGHWAY BRIDGE

Superintending Engineer's Office
Peterborough, April 1906
J. H. H. H. H.
Superintending Engineer



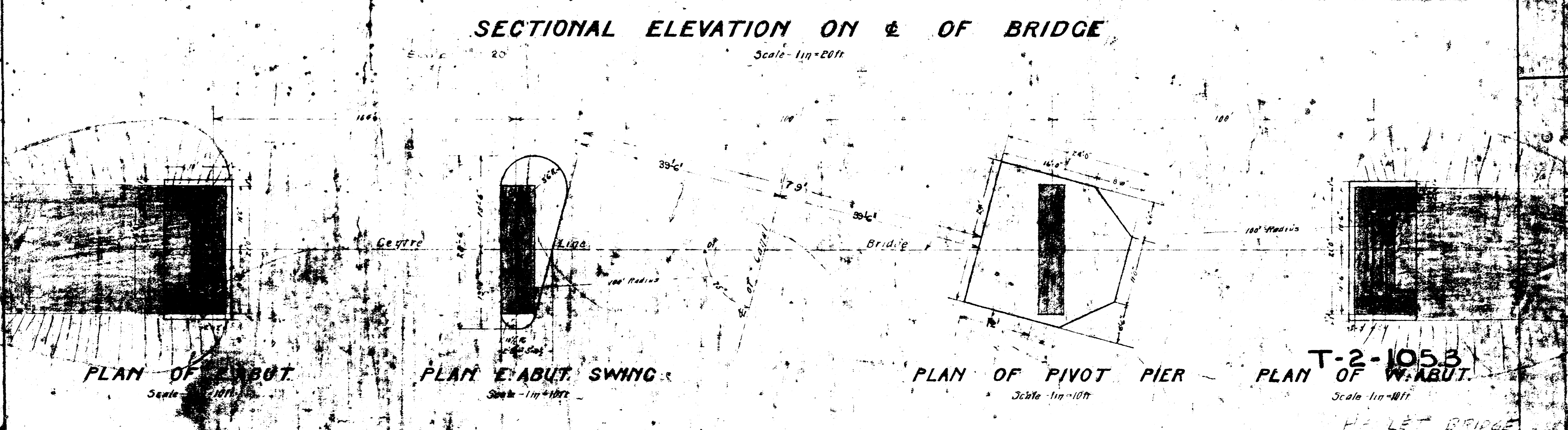
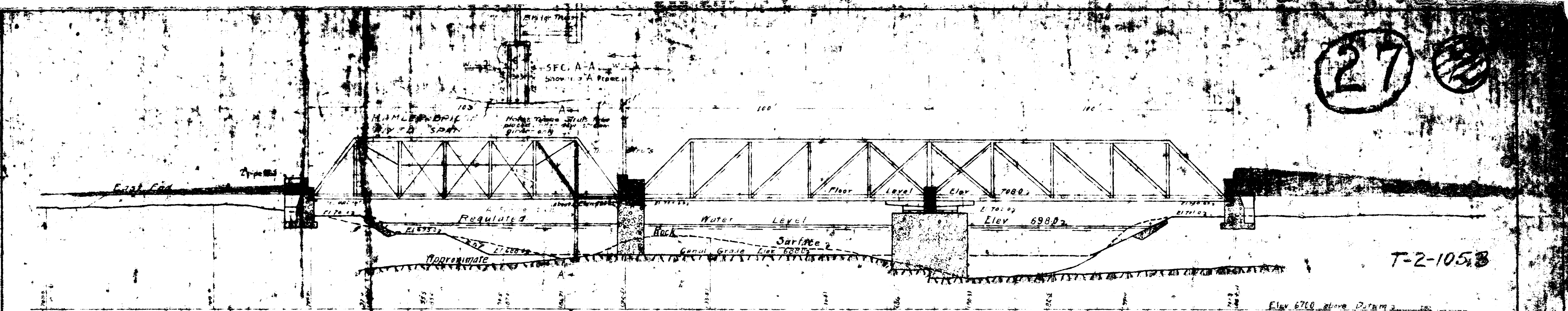
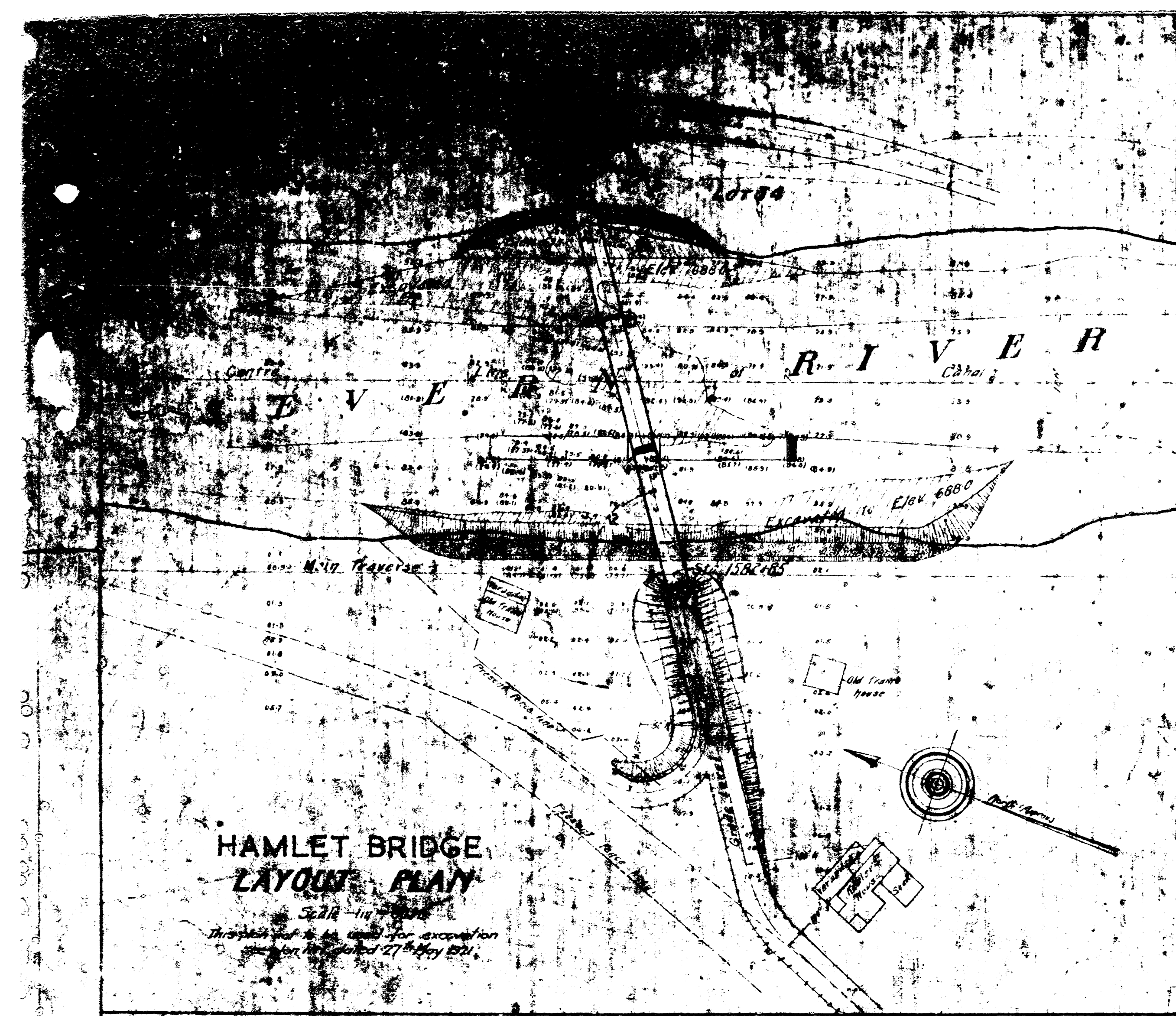


TRENT-CANAL
SEVERN DIVISION-SECTION N^o3
PLAN OF RIVER FROM PRESENT HAMLET BRIDGE
TO
BIG BEND
SHOWING SITE OF NEW BRIDGE, ROADS, ETC.
AND CERTAIN DREDGING REQUIRED

Scale:-1 inch = 60 feet

Superintending Engineer's Office
Peterboro, Ont. May 27th 1921

D. E. Tolson Superintending Engineer

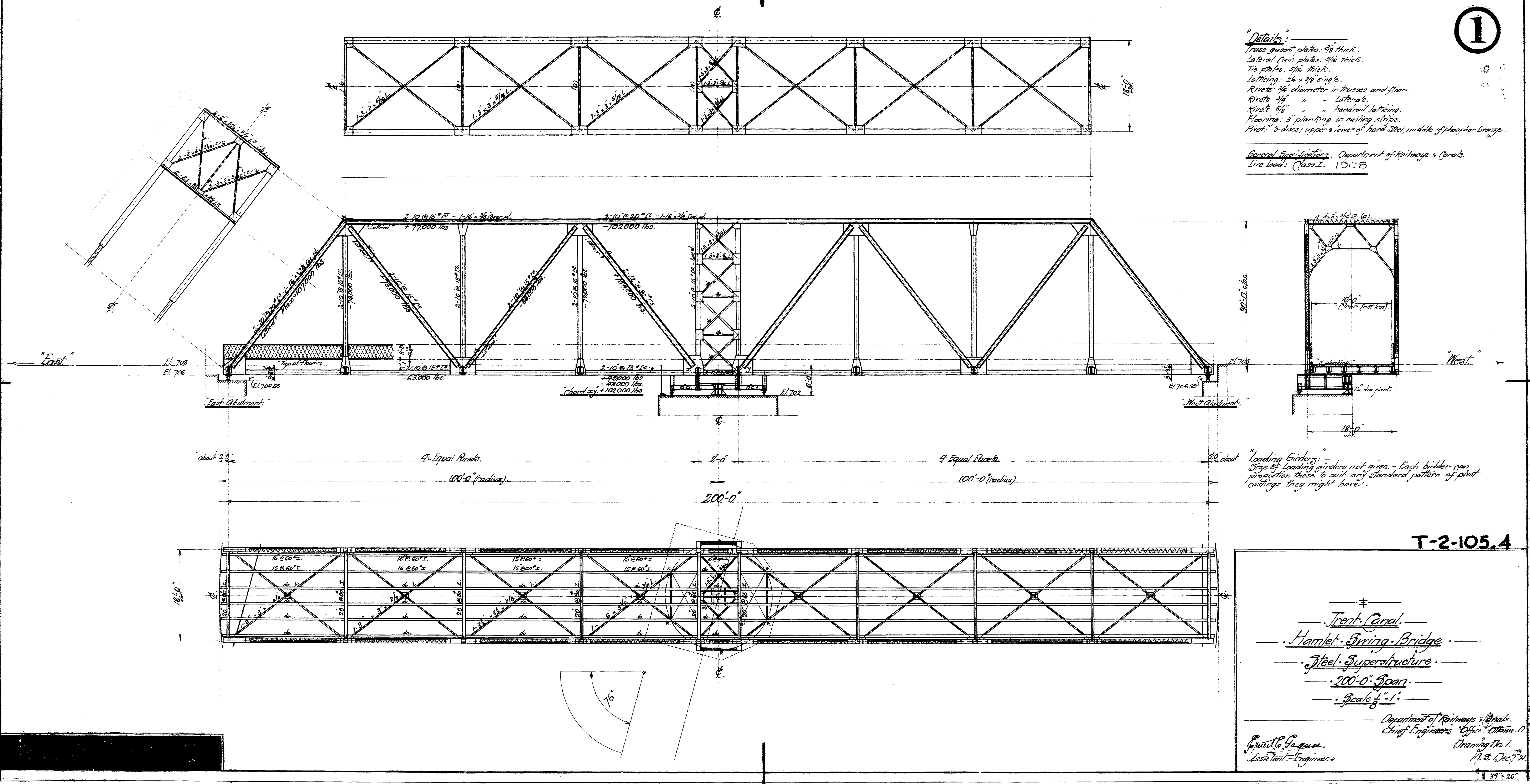


27

T-2-1053
 HAMLET BRIDGE LAYOUT PLAN

"Details:"
 Truss gusset plates: $\frac{3}{8}$ " thick.
 Lateral (ann) plates: $\frac{5}{16}$ " thick.
 Tie plates: $\frac{5}{16}$ " thick.
 Latticing: $2\frac{1}{2} \times \frac{3}{8}$ " single.
 Rivets: $\frac{3}{4}$ " diameter in trusses and floor.
 Rivets: $\frac{3}{4}$ " " " Lateral's.
 Rivets: $\frac{5}{8}$ " " " handrail latticing.
 Flooring: 3" plank on nailing strips.
 Pivot: 3-discs; upper & lower of hard steel, middle of phosphor bronze.

General Specifications, Department of Railways & Canals.
 Live load: Class I. 1908

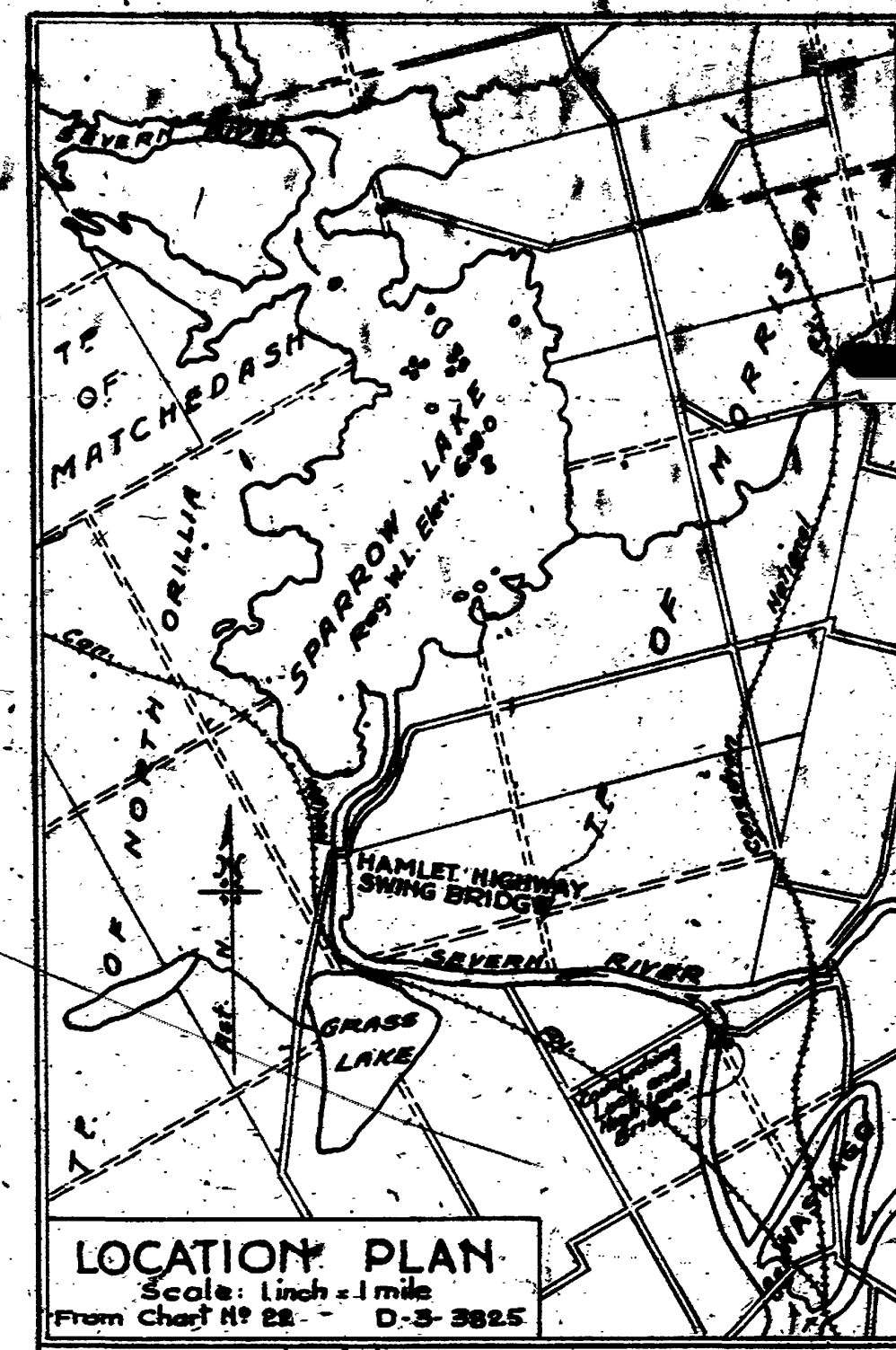
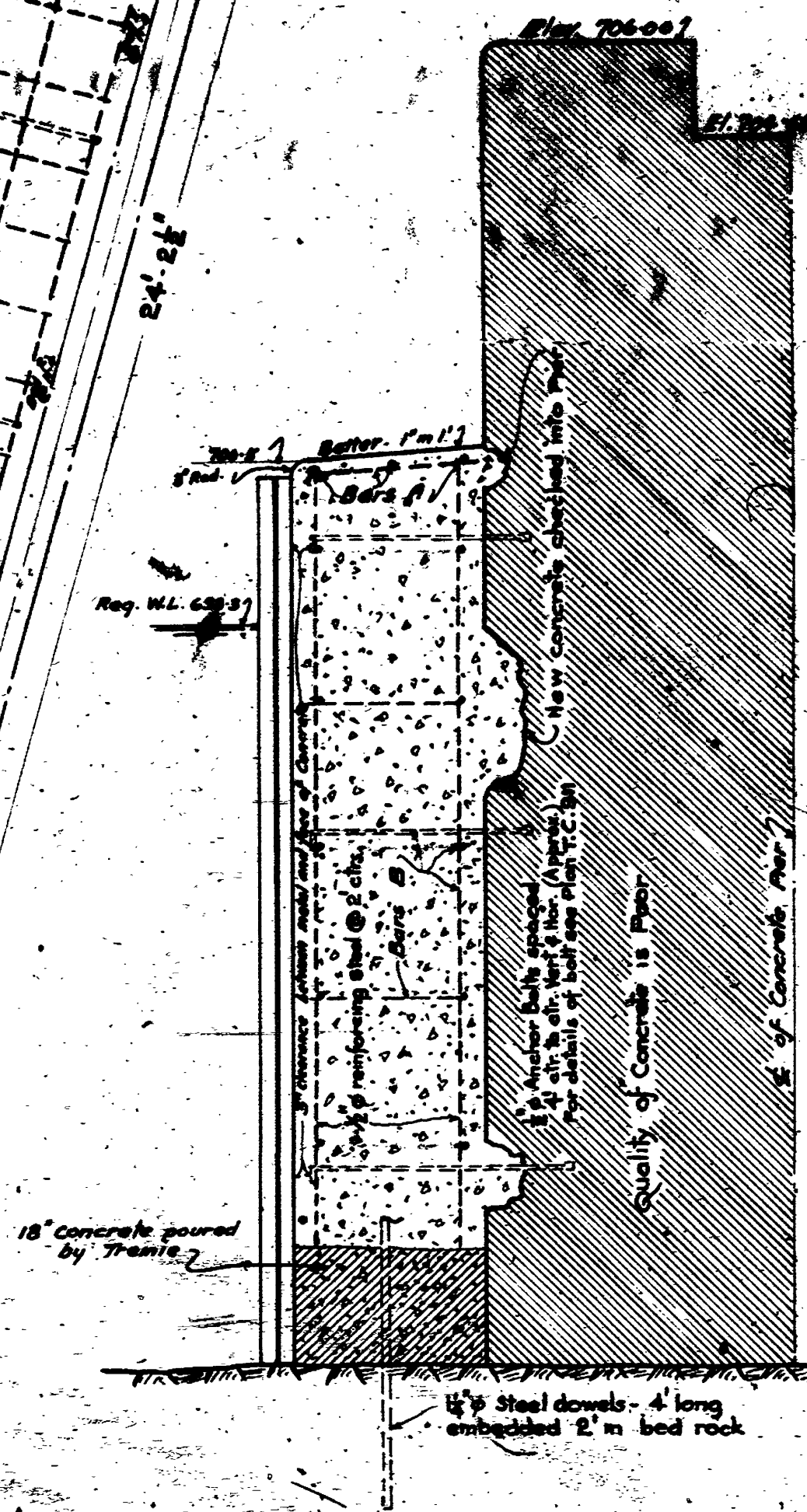
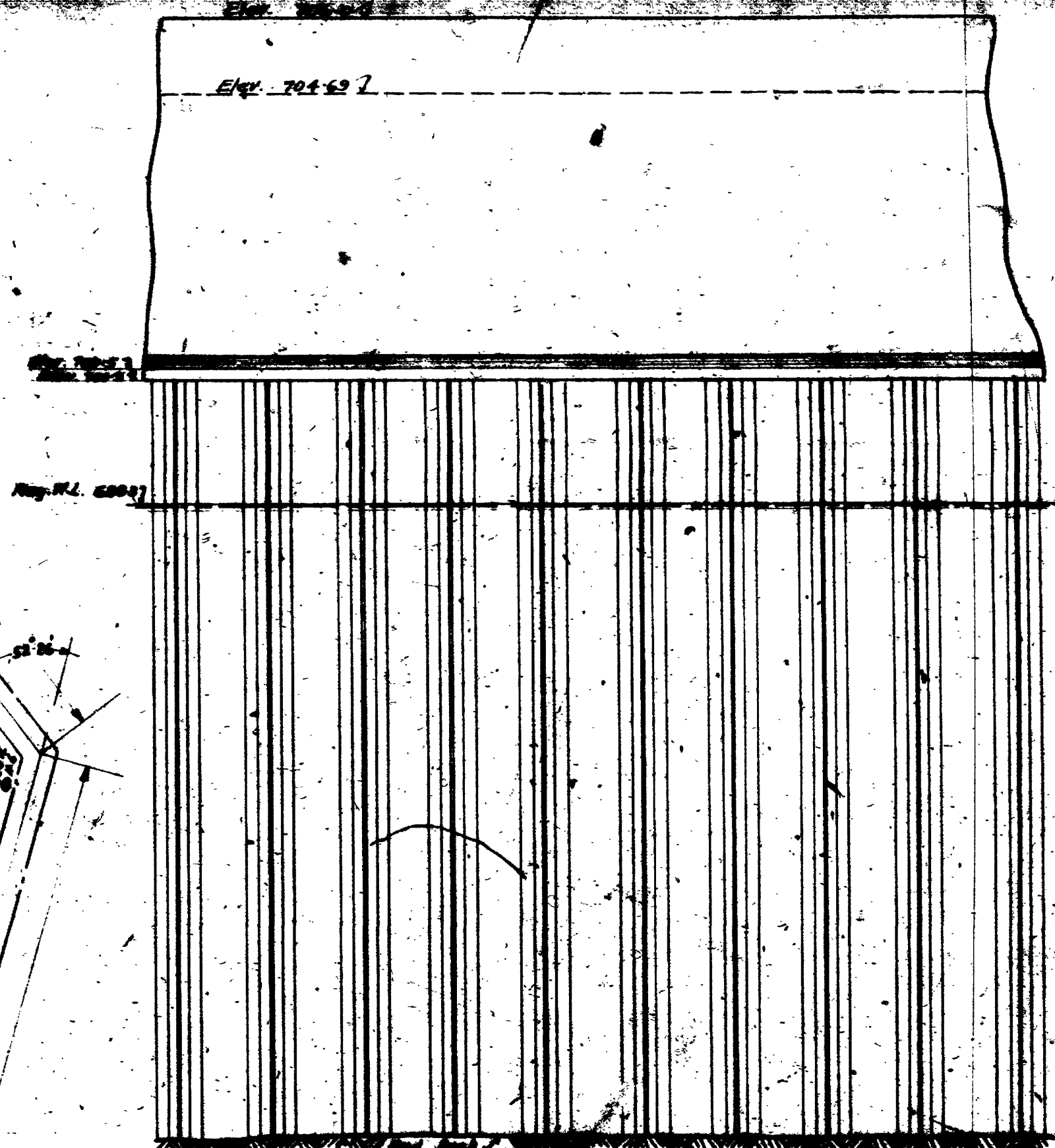


T-2-105.4

Trent Canal.
Hamlet Spring Bridge.
Steel Superstructure.
200'-0" Span.
Scale $\frac{1}{8}$ " = 1'.

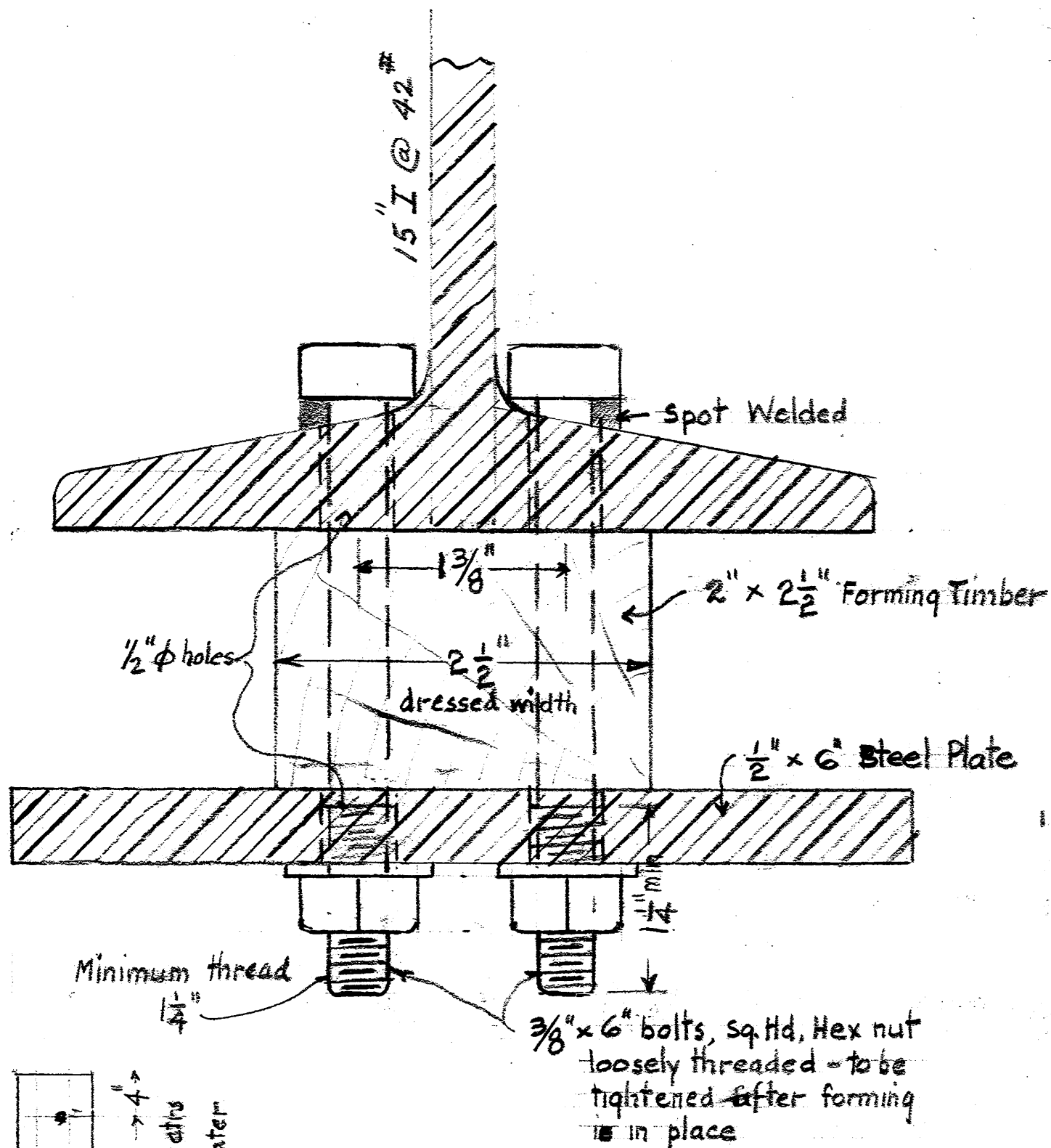
Department of Railways & Canals.
 Chief Engineers' Office, Ottawa, O.
 Drawing No. 1.
 M.S. Dec. 7th.

Grant C. Gagnon.
 Assistant Engineer.

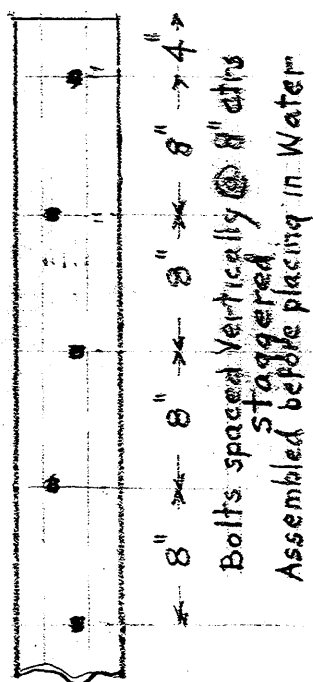
[illegible]

DEPARTMENT OF TRANSPORT
TRENT CANAL
PLAN SHOWING
REPAIRS TO
CONCRETE RIVER PIER
HAMLET HIGHWAY BRIDGE
Scale: 1 inch = 2 feet

General Superintendent of Canals
Peterborough, Ont., July 27th, 1946



SCALE: FULL SIZE



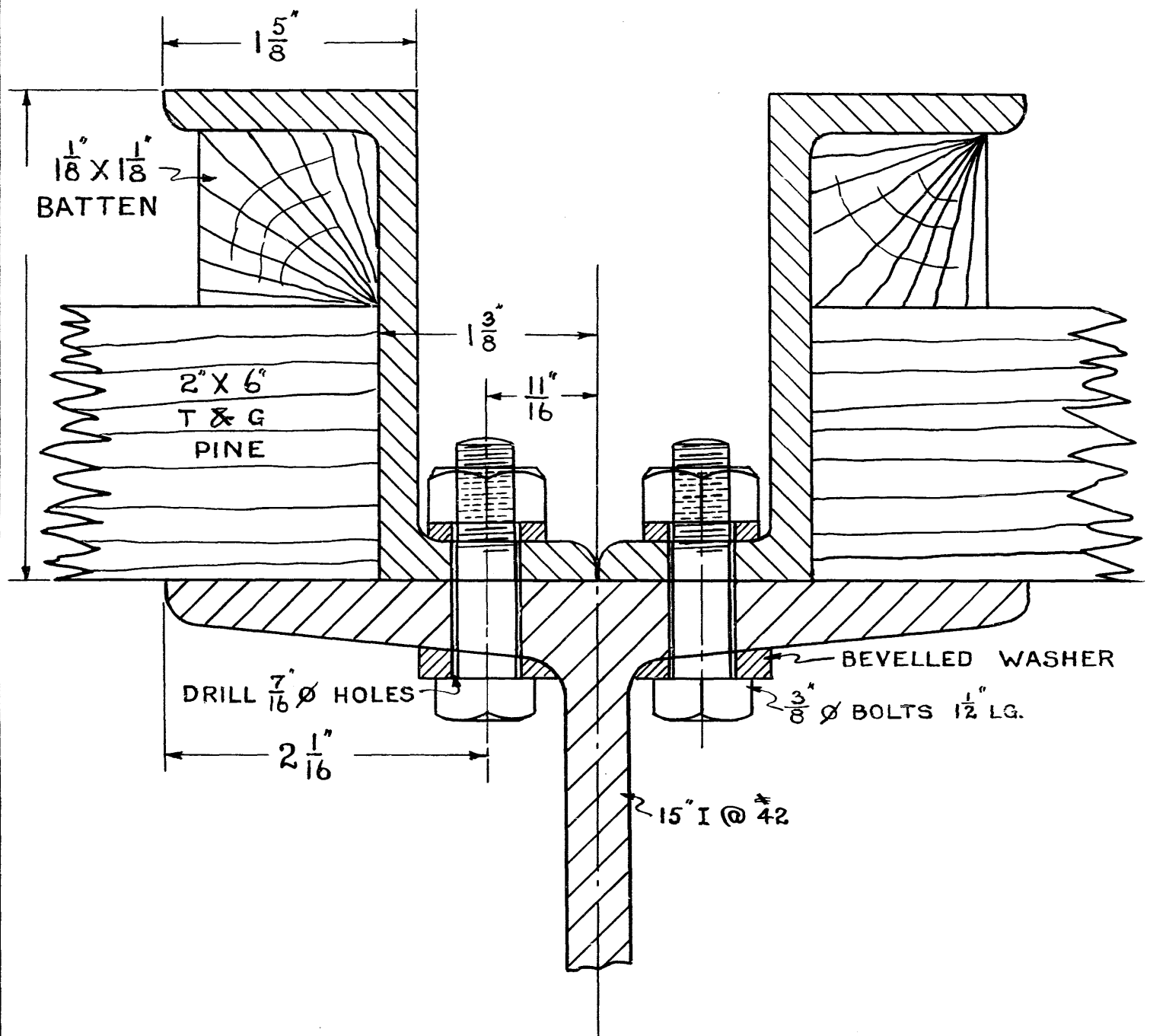
Scale 1" = 1'

DEPT. OF TRANSPORT
TRENT CANAL
REPAIR OF HAMLET BRIDGE RIVER PIER
SUGGESTED METHOD OF
HOLDING FORMING TO 15" I BEAMS

Designed by E.W.G.
Traced by E.W.G.
Checked by R.J.B.
Recommended by
Approved by

Peterborough, Aug. 8th 1947

T-2-238-1
T.C. 1071-A



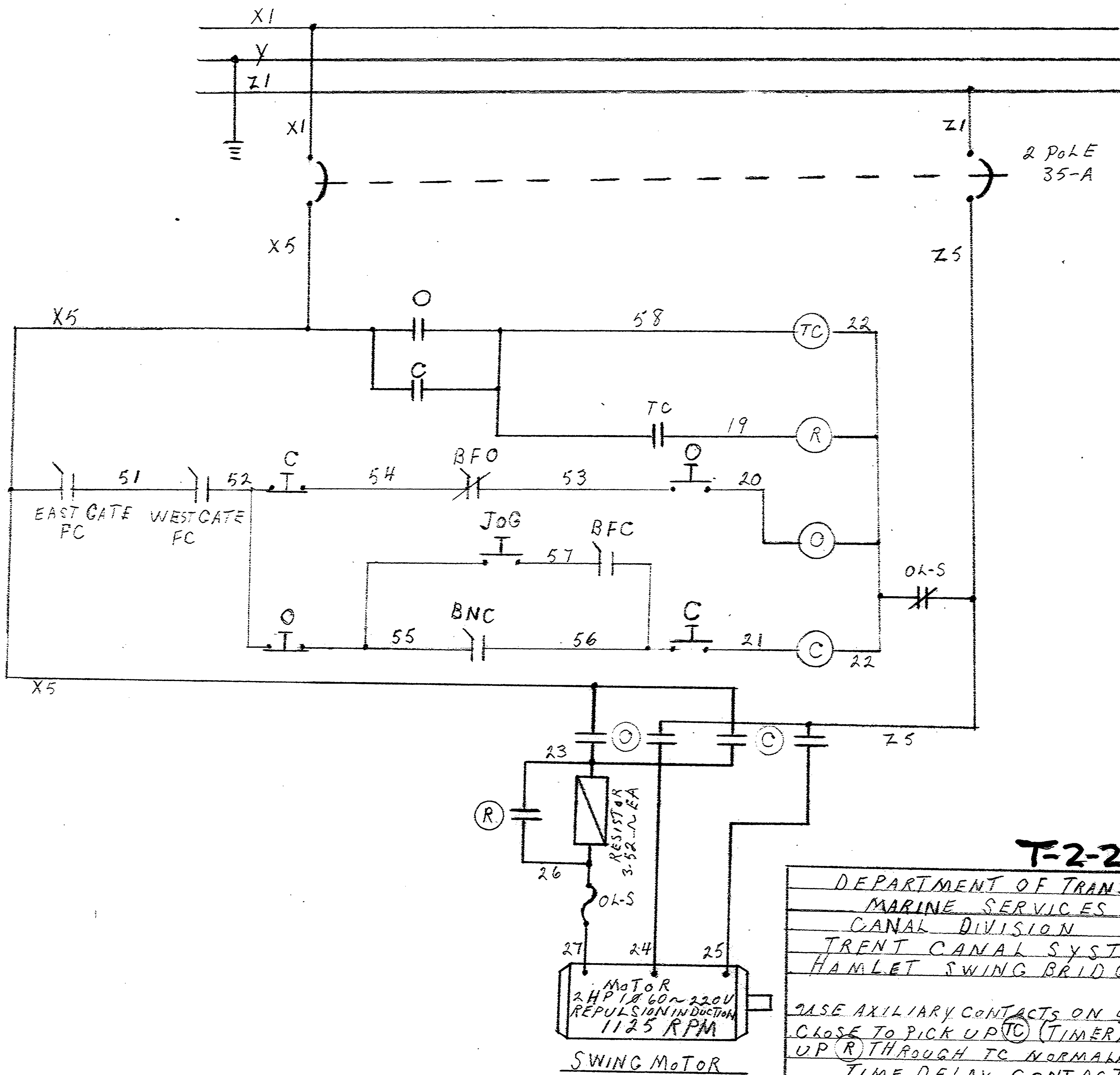
DEPARTMENT OF TRANSPORT
TRENT CANAL
SHOWING
METHOD OF FORMING
ON
HAMLET HIGHWAY BRIDGE

SCALE - FULL SIZE

Plan	Name	Date
Drawn by	H.W.H.	AUG. 10/47
Traced by	H.W.H.	AUG. 13/47
Checked by		

SUPERINTENDING ENGINEER
PETERBORO, ONT. AUG: 13TH 1947

T-2-238.2
T.C.1072-A



T-2-238.3

DEPARTMENT OF TRANSPORT
MARINE SERVICES
CANAL DIVISION
TRENT CANAL SYSTEM
HAMLET SWING BRIDGE

USE AUXILIARY CONTACTS ON OPEN &
CLOSE TO PICK UP TC (TIMER) & PICK
UP R THROUGH TC NORMALLY OPEN.
TIME DELAY CONTACTS

CONTACTS COIL & LIMIT SWITCH EGT
DESIGNATION

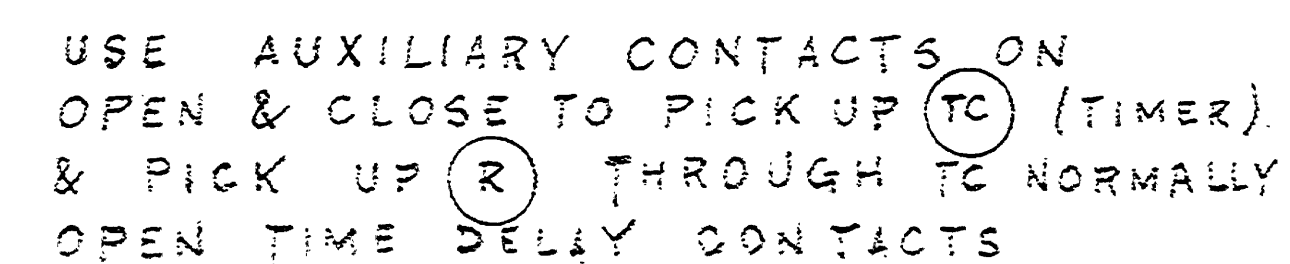
TC	TIME DELAY RELAY GEN ELECT
	CR2820B 110CA3 SERIES A COIL
	220 VOLT 60~
O	BRIDGE OPEN COIL
C	BRIDGE CLOSE COIL
R	RESISTOR CONTACTOR COIL
BFC	BRIDGE FULLY CLOSED
JoG	JoG PUSH BOTTOM STATION
BFO	BRIDGE FULLY OPEN
BNC	BRIDGE NEARLY CLOSED
EGFC	EAST GATE FULLY CLOSED
WGFC	WEST GATE FULLY CLOSED

SEPT/65 REVISION TO DRAWING
ADDED TIME DELAY IN SWING
MOTOR CIRCUIT & REMOVE
RUN PUSH BUTTON

T.C. 333T-B

SEPT/65

DRAWN GEO CUNNINGHAM



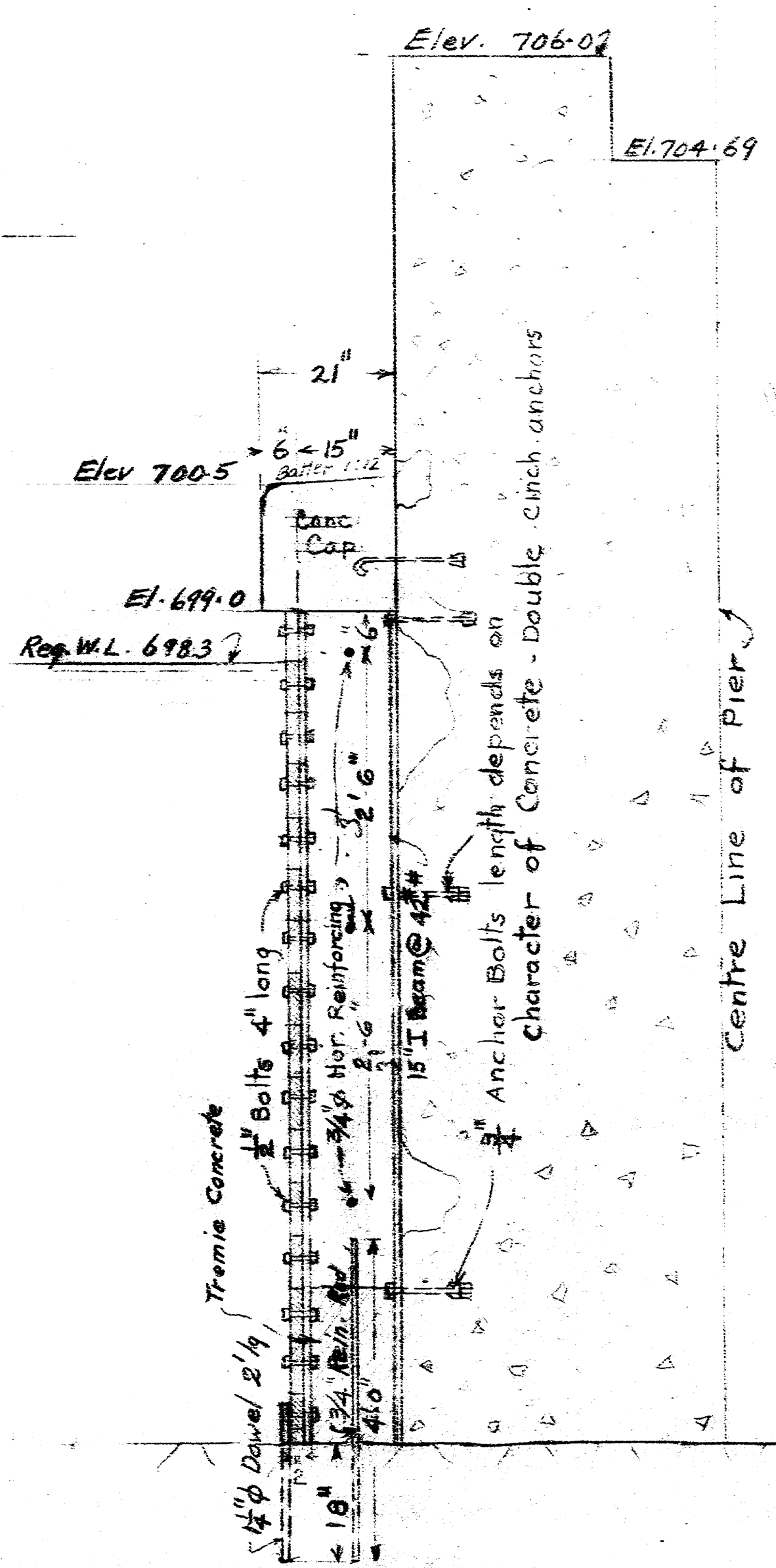
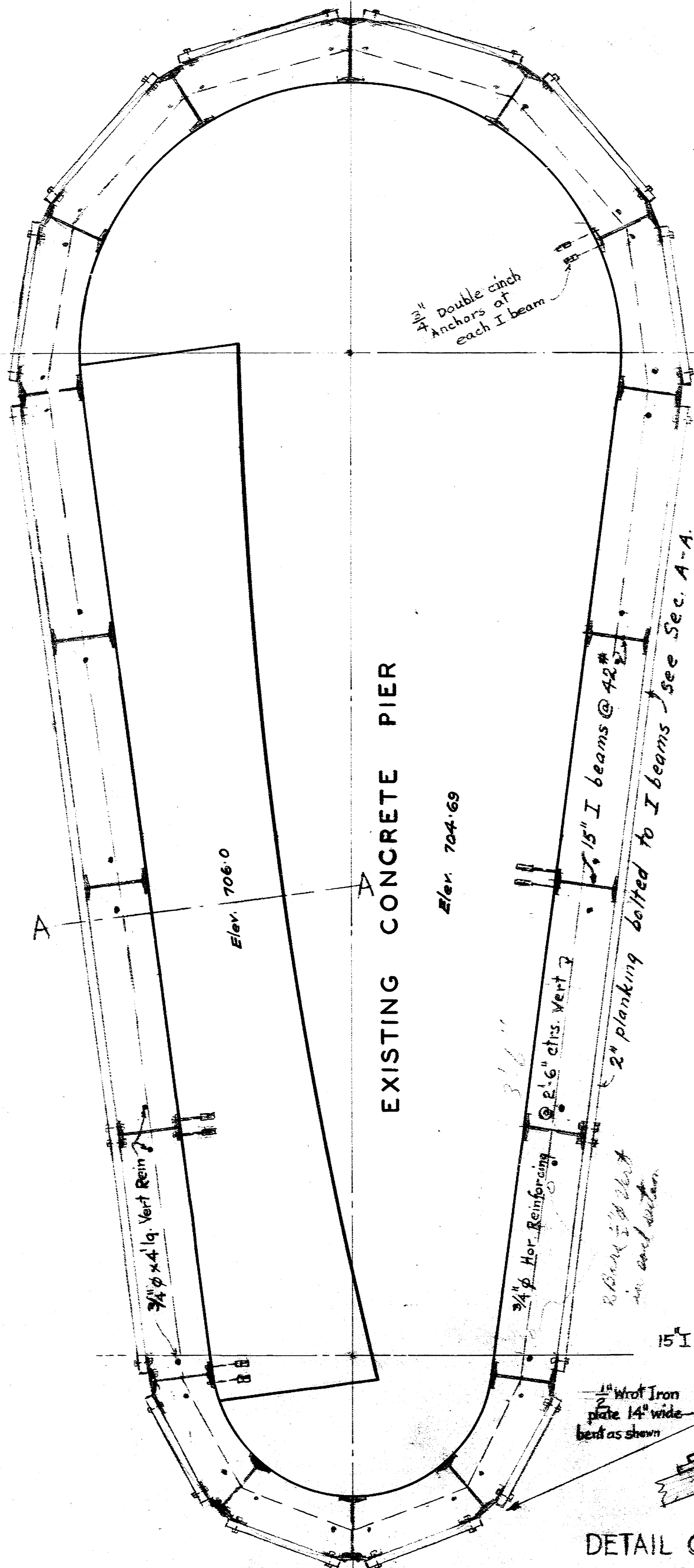
DESIGNATION	
CONTACT COILS, LIMIT SWITCHES, ETC.	
TC	TIME DELAY RELAY GEN. ELECTRIC CR2820B
	HOCA3 SERIES A COIL 220 VOLT 60 ~
O	BRIDGE OPEN COIL
C	BRIDGE CLOSE COIL
R	RESISTOR CONTACTOR COIL
BFC	BRIDGE FULLY CLOSED
JOG	JOG PUSH BUTTON STATION
BFO	BRIDGE FULLY OPEN
BNC	BRIDGE NEARLY CLOSED
EGFC	EAST GATE FULLY CLOSED
WGFC	WEST GATE FULLY CLOSED

DEPARTMENT OF TRANSPORT
MARINE WORKS
TRENT CANAL SYSTEM
SCHEMATIC ELECTRICAL DIAGRAM
HAMLET SWING BRIDGE

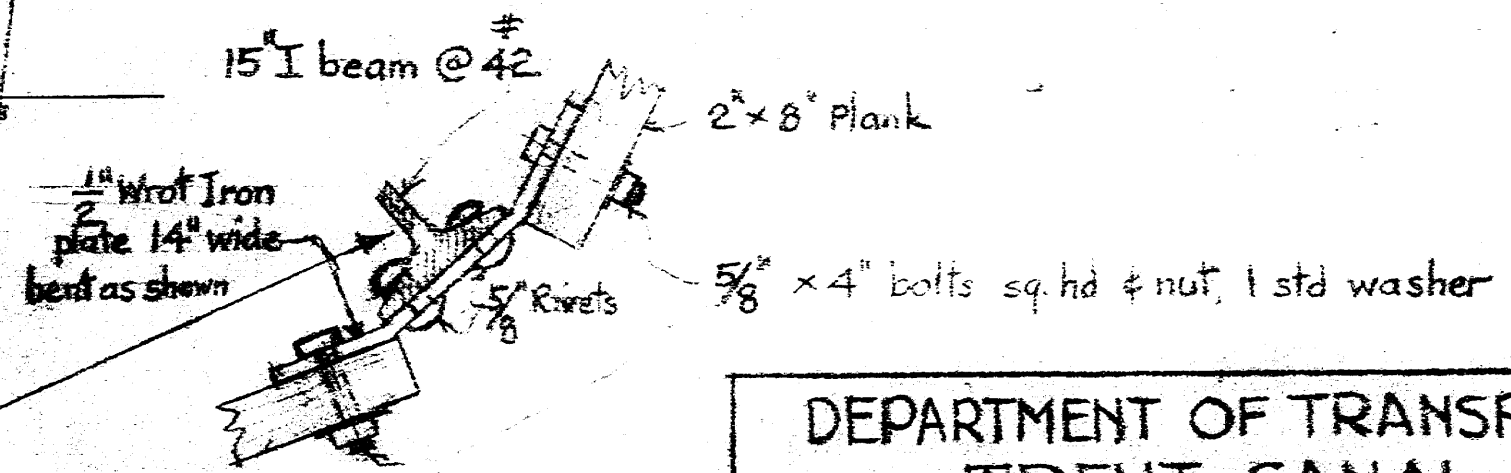
MADE : G.H.C.
TRCD : P.P.
CHKD :
APRD :

SEPT. 1965	ADDED TIME DELAY IN SWING MOTOR CIRCUIT 2 REMOVED RUN PUSH BUTTON	4 H.C.	CHRD: APRD:
DATE:	REVISION:	MADE:	T.C. 3331-B

T-2-238.4



SECTION THROUGH A-A



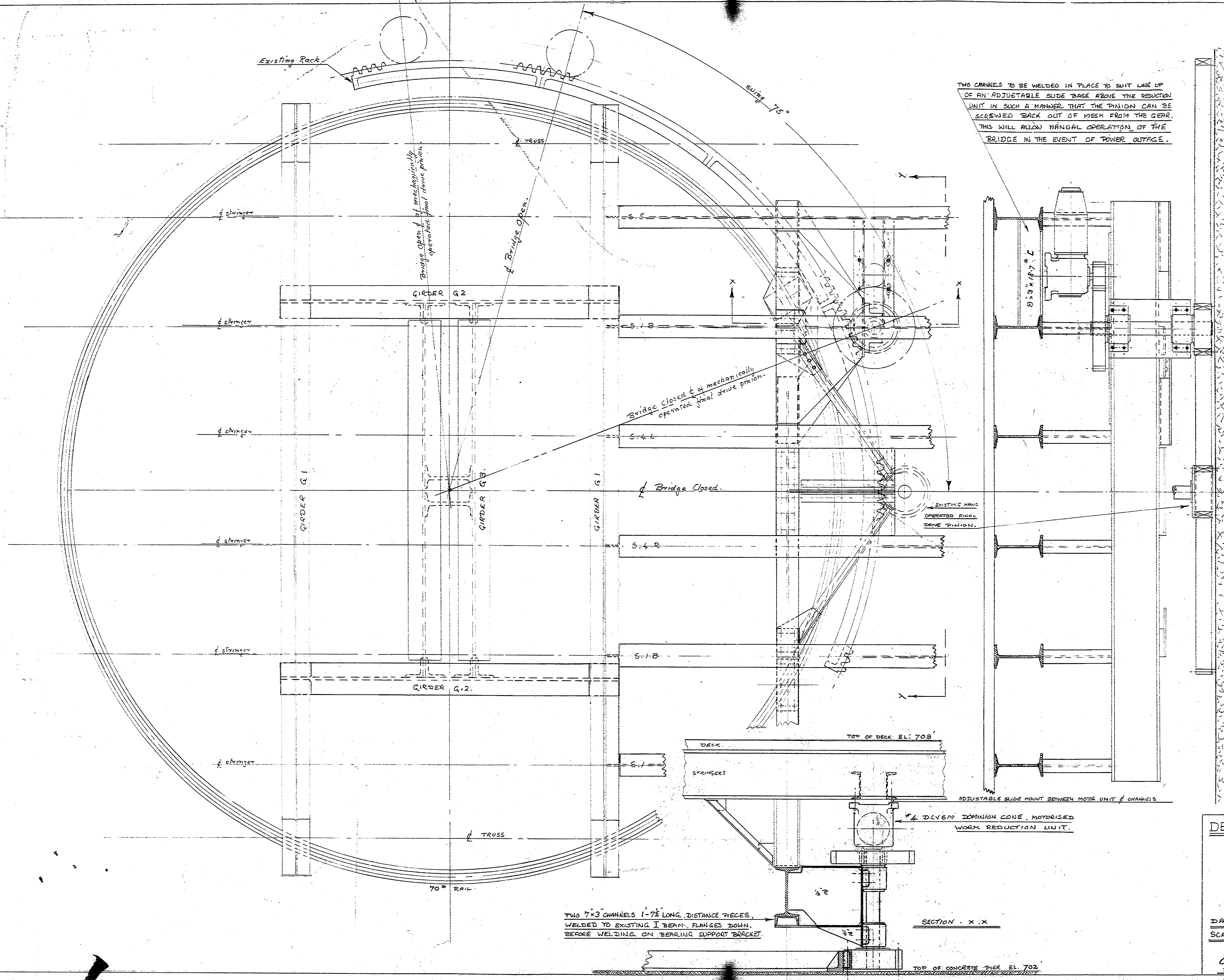
DETAIL OF JOINTS
ON CURVED ENDS
OF PIER
Scale: $\frac{1}{2}" = 1'$

PLAN OF PIER
(concrete cap not shown)

Drawn by *C. W. G.*
Traced by *C. W. G.*
Checked by *C. W. G.*
Recommended by *C. W. G.*
Approved by *C. W. G.*

DEPARTMENT OF TRANSPORT
TRENT CANAL
HAMLET HIGHWAY BRIDGE
SUGGESTED
METHOD OF REPAIR
OF CONCRETE RIVER PIER
Scale $\frac{1}{2}" = 1'$ F-2-238.5
Peterborough
May 23rd. 1947
T.C. 1042-E

*Very close to pier to allow
for concrete to be laid in
the space at top of pier.*



SECTION Y-Y

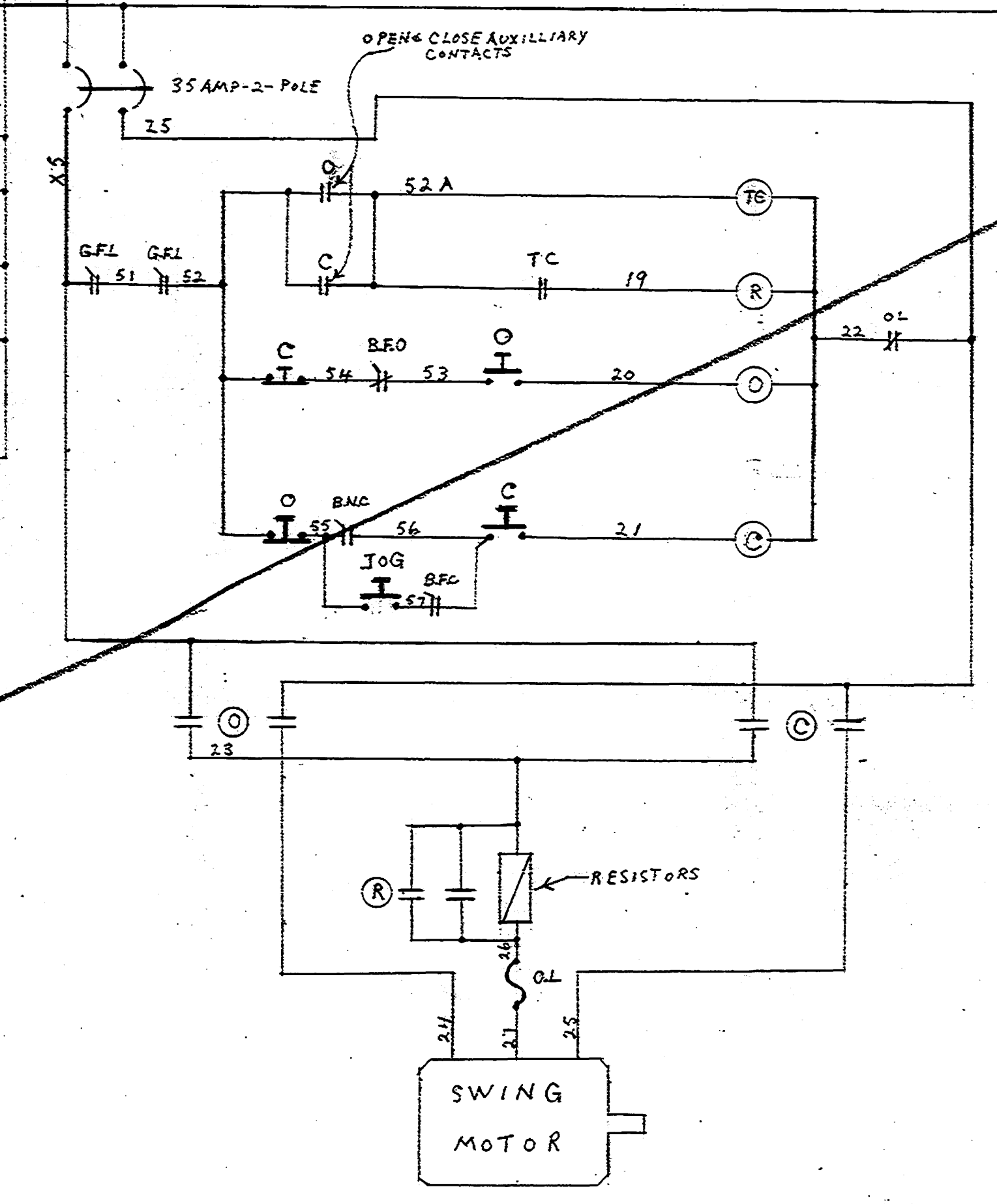
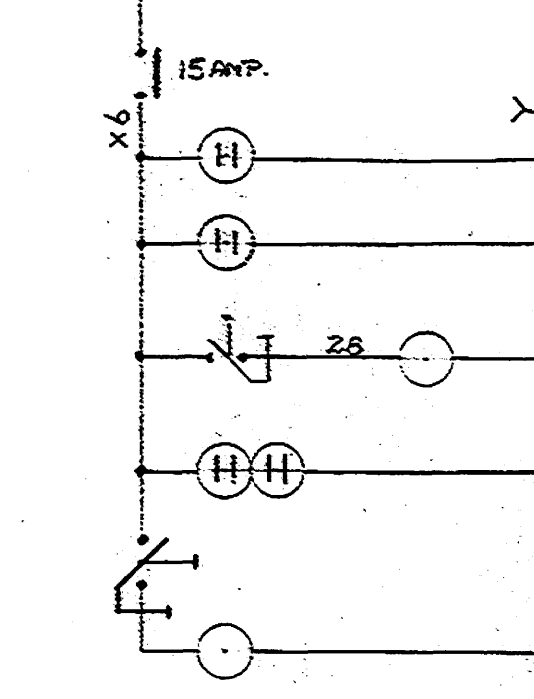
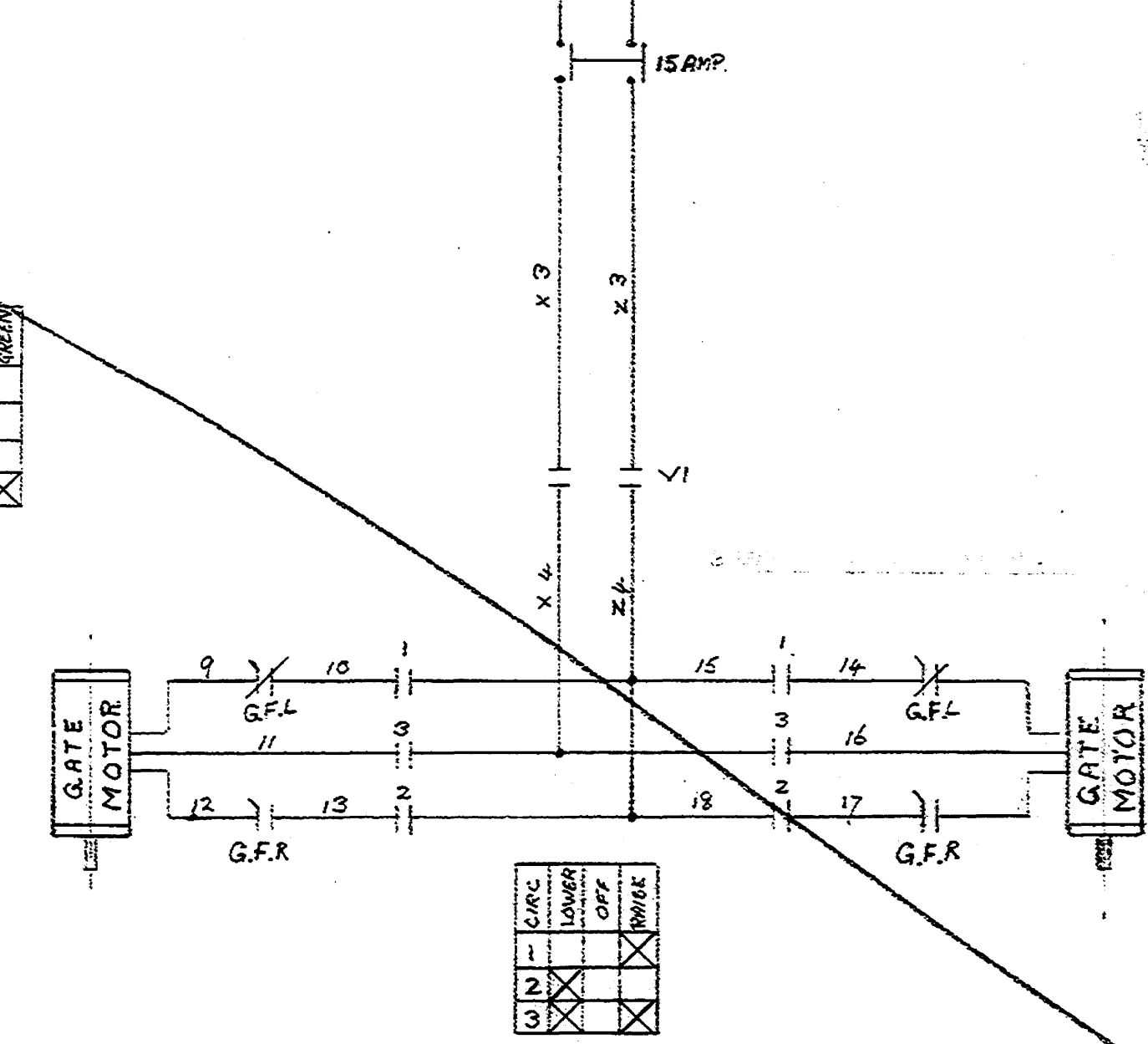
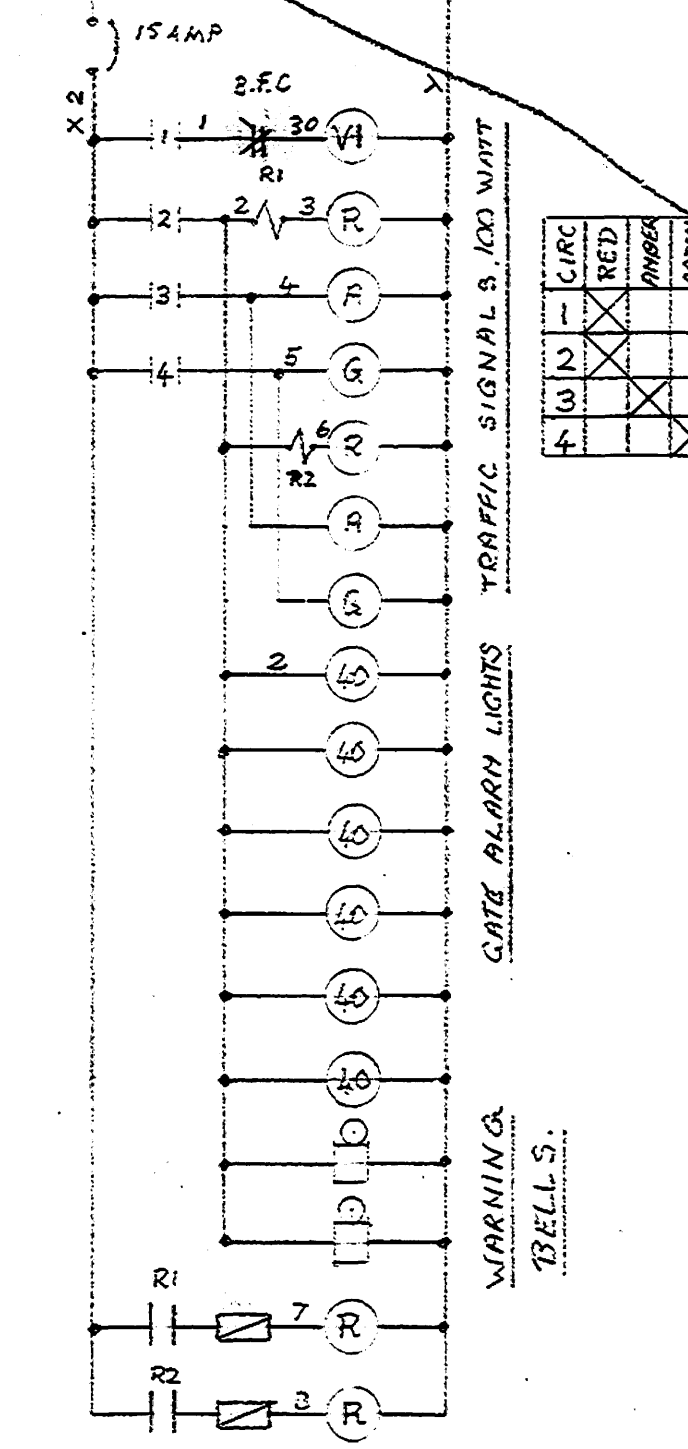
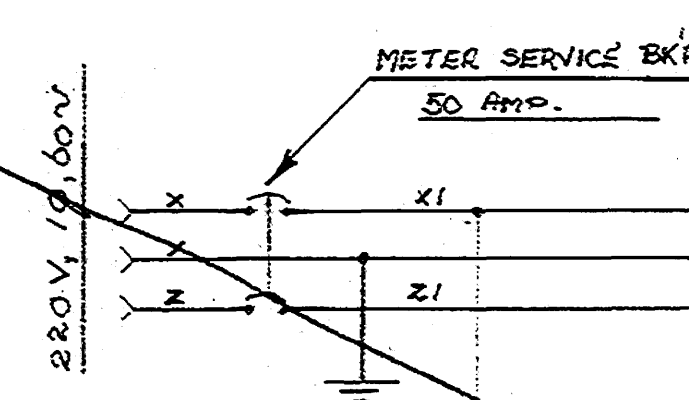
SECTION X-X

DEPARTMENT OF TRANSPORT
MARINE WORKS
TRENT CANAL SYSTEM
HAMLET, BRIDGE NO. 57.
MECHANICAL SWING ARRANGEMENT

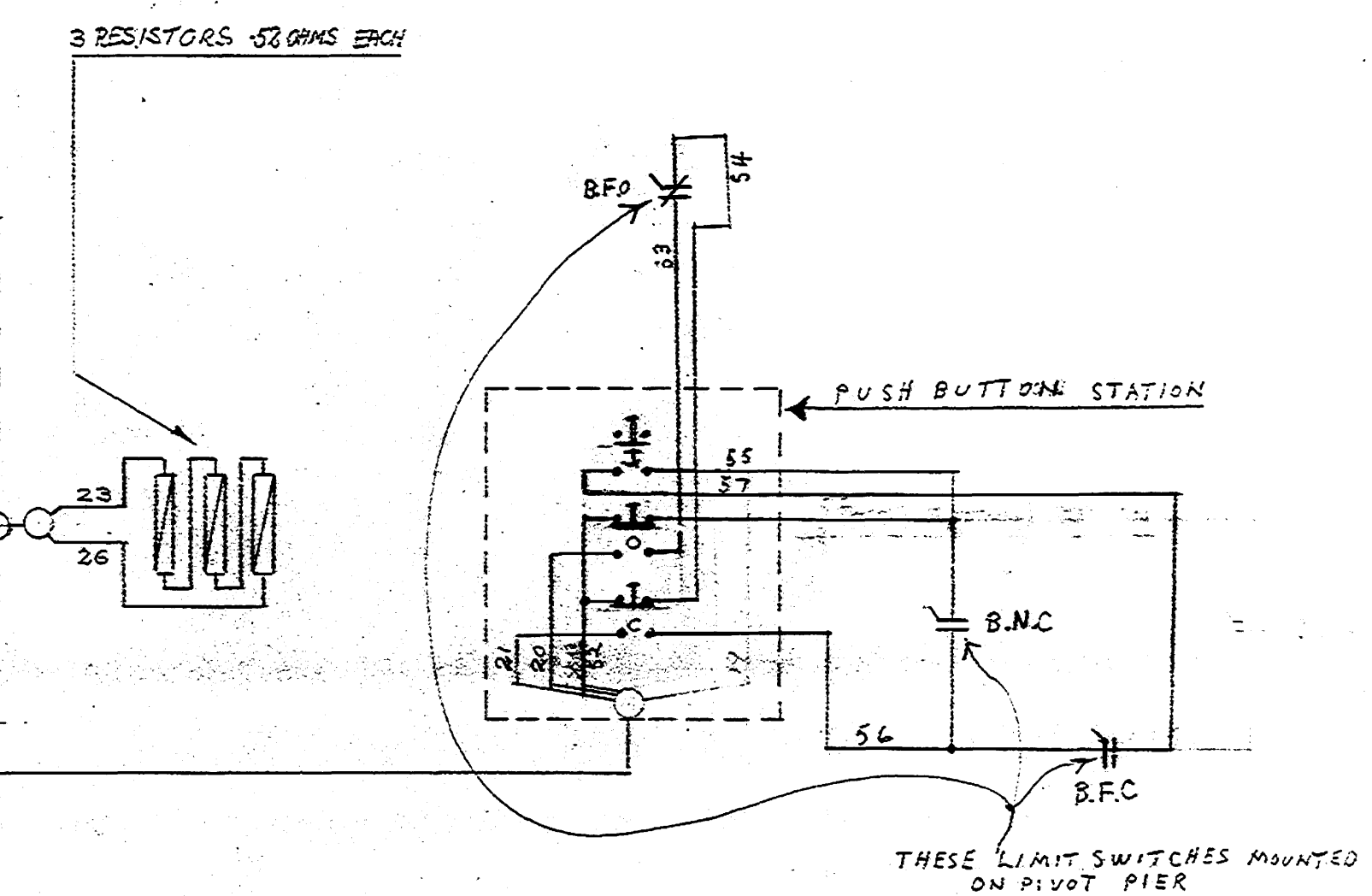
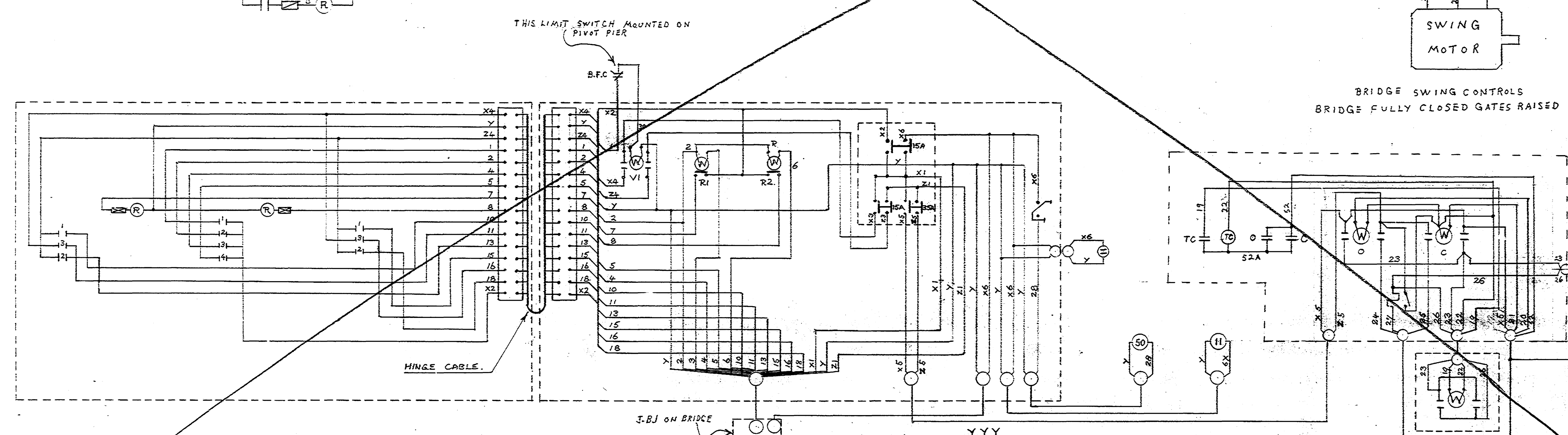
DATE October 10, 1962.
SCALE 1" = 1'-0"

MADE BY F.W.H.T.
TRACED BY F.W.H.T.
CHKD BY L. Grew.
APP'D BY L. Grew.
SUPERINTENDING ENGINEER J.C. 2872-G.

T-2-238-6

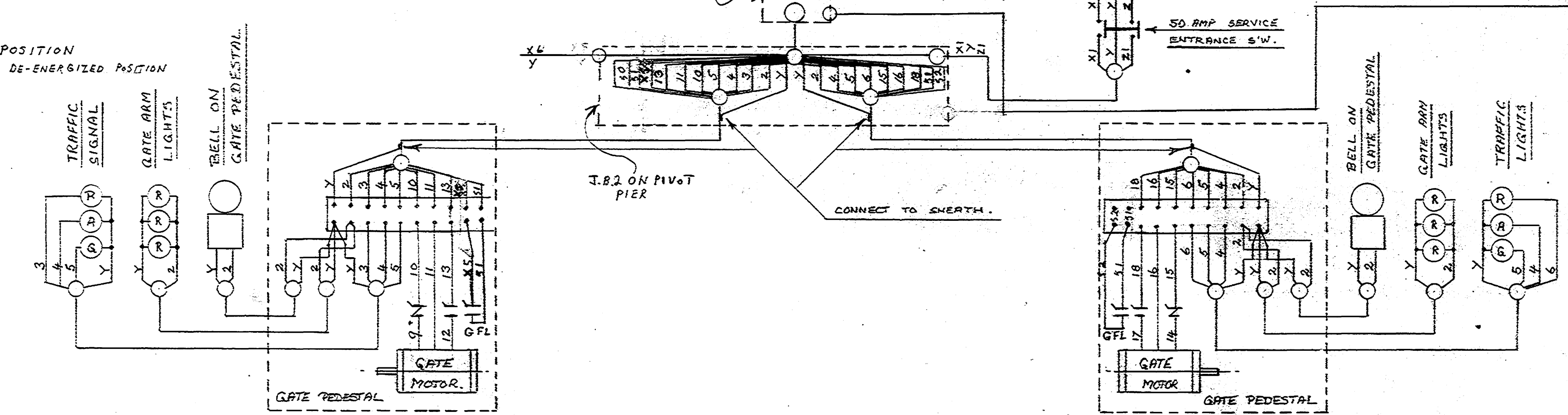


- LEGEND**
- C - CLOSE CONTACTOR COIL
 - O - OPEN CONTACTOR COIL
 - R - START RESISTOR CONTACTOR COIL
 - G.F.L. - GATES FULLY LOWERED LIMIT SWITCH
 - B.F.O. - BRIDGE FULLY OPEN LIMIT SWITCH
 - B.N.C. - BRIDGE NEARLY CLOSED LIMIT SWITCH
 - B.F.C. - BRIDGE FULLY CLOSED LIMIT SWITCH
 - G.F.R. - GATES FULLY RAISED LIMIT SWITCH
 - J - JOG PUSH BUTTON STATION
 - T.C. - TIME DELAY RELAY GEN. ELECT. CR. 2520-B
 - ⋈ - NORMALLY OPEN LIMIT SWITCH CONTACT
 - ⋈ - NORMALLY CLOSED LIMIT SWITCH CONTACT
 - ⋈ - NORMALLY OPEN RELAY CONTACT
 - ⋈ - NORMALLY CLOSED RELAY CONTACT



NOTES

GATES FULLY RAISED BRIDGE FULLY CLOSED
ALL RELAY CONTACTS SHOWN IN DE-ENERGIZED POSITION
ALL MAGNETIC STARTERS & CONTACTORS SHOWN IN DE-ENERGIZED POSITION



OBSOLETE

AS WIRED MAY 15-1963

DEPARTMENT OF TRANSPORT

MARINE WORKS

CANALS DIVISION

TRENT CANAL SYSTEM

HAMLET SWING BRIDGE

SCHEMATIC ELECTRICAL DIAGRAM
& DETAIL WIRING DIAGRAM

SCALE: N.T.S. DATE: 15-5-1963

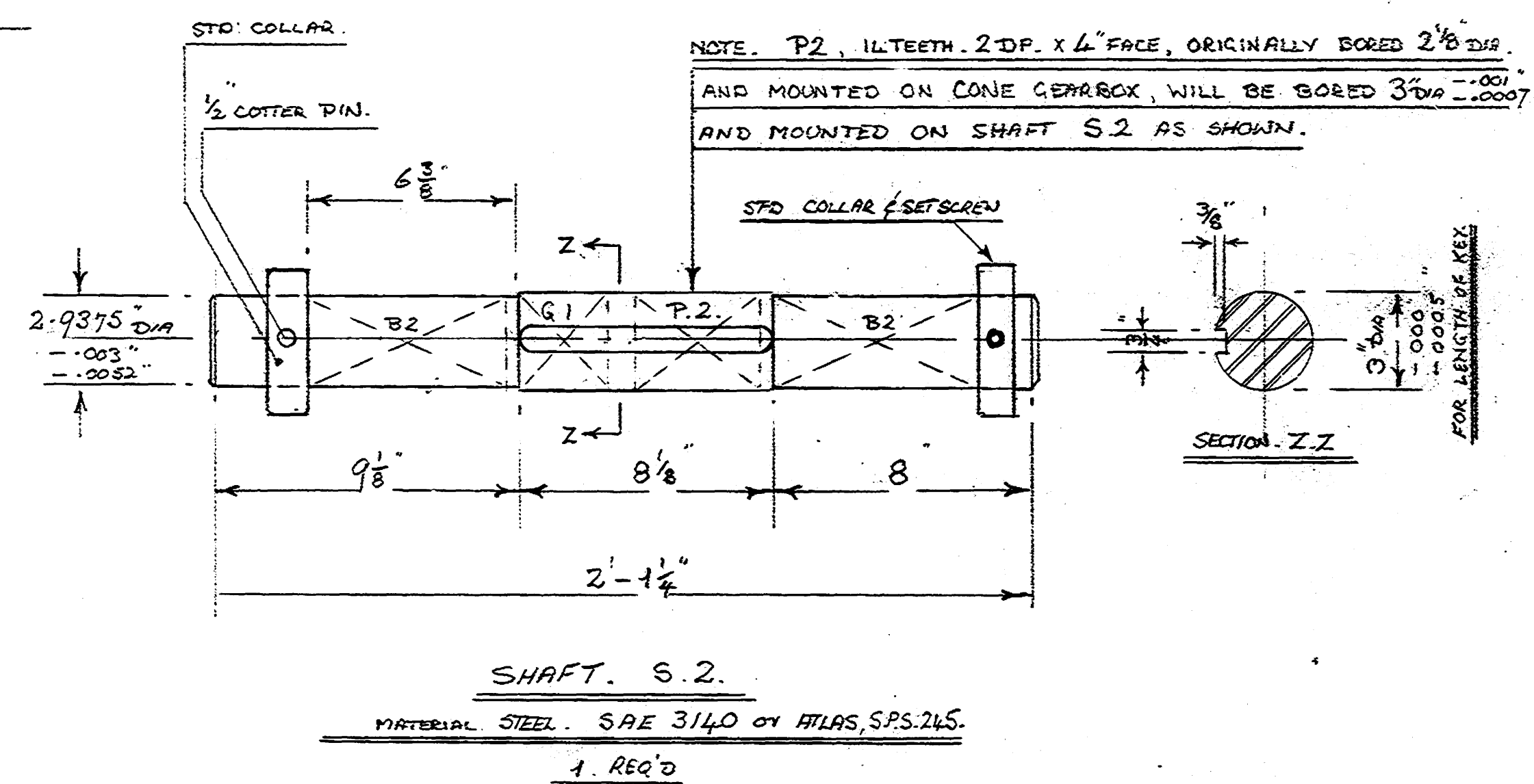
DESIGN: F.W.H.T.

DRAWN: F.W.H.T.

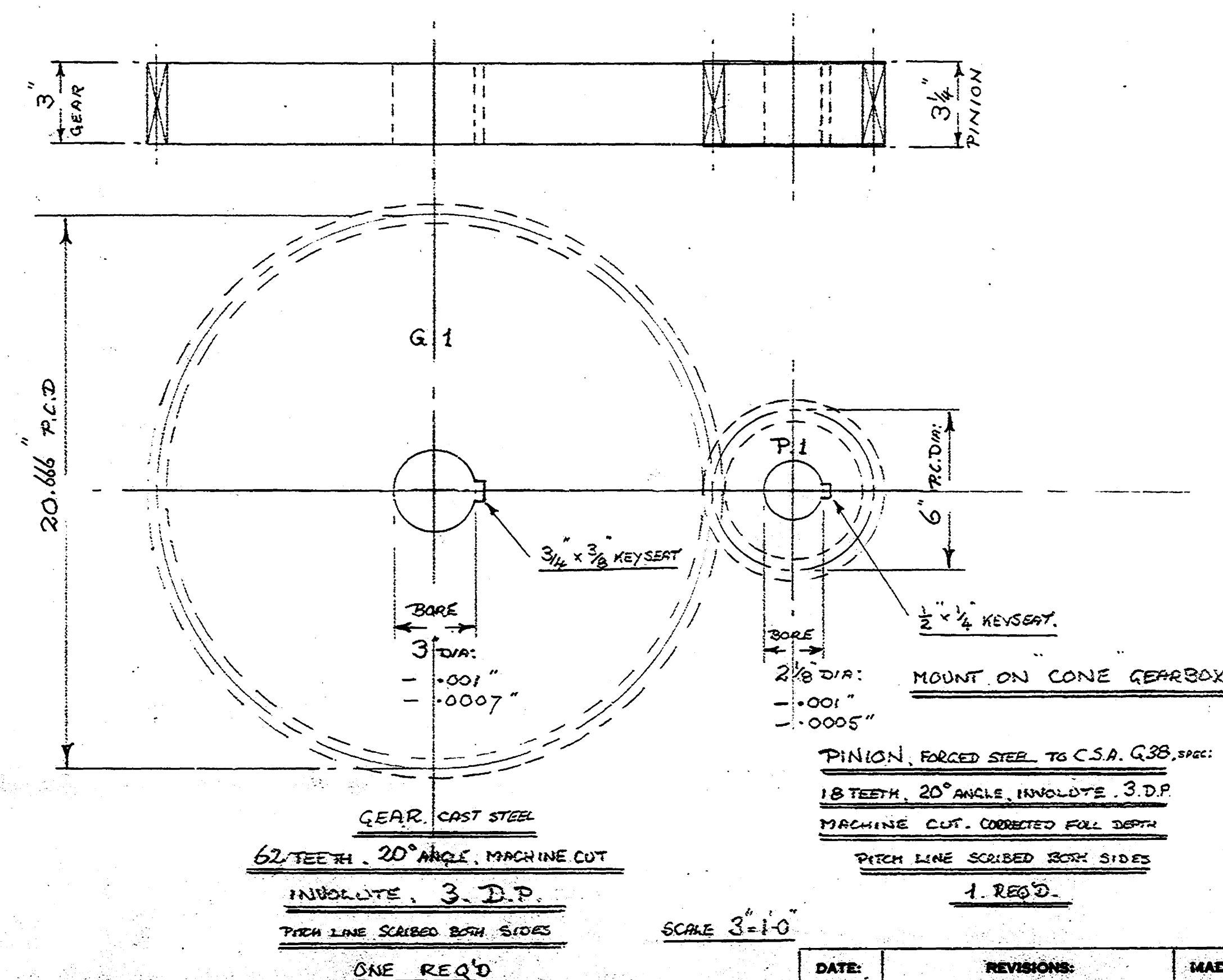
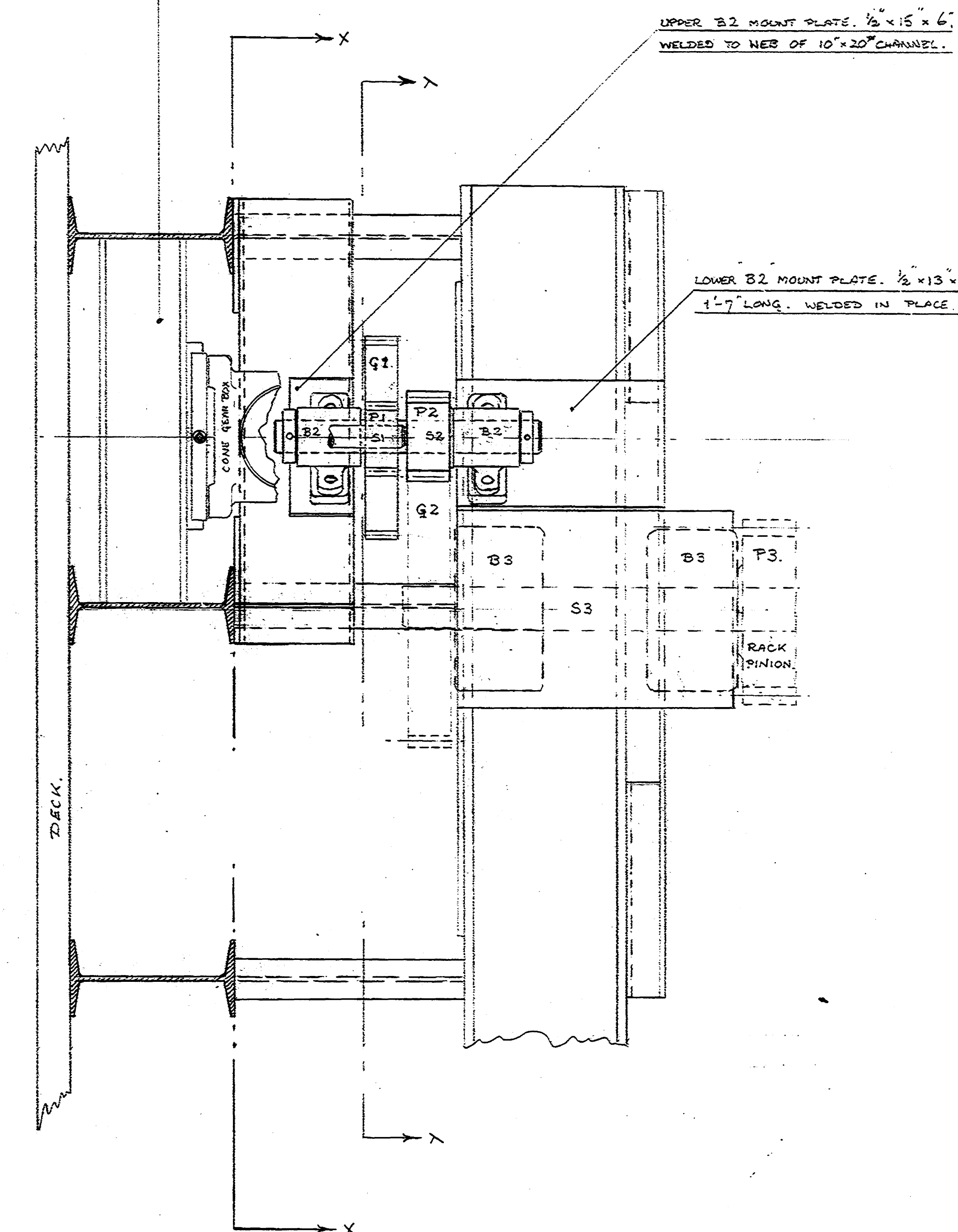
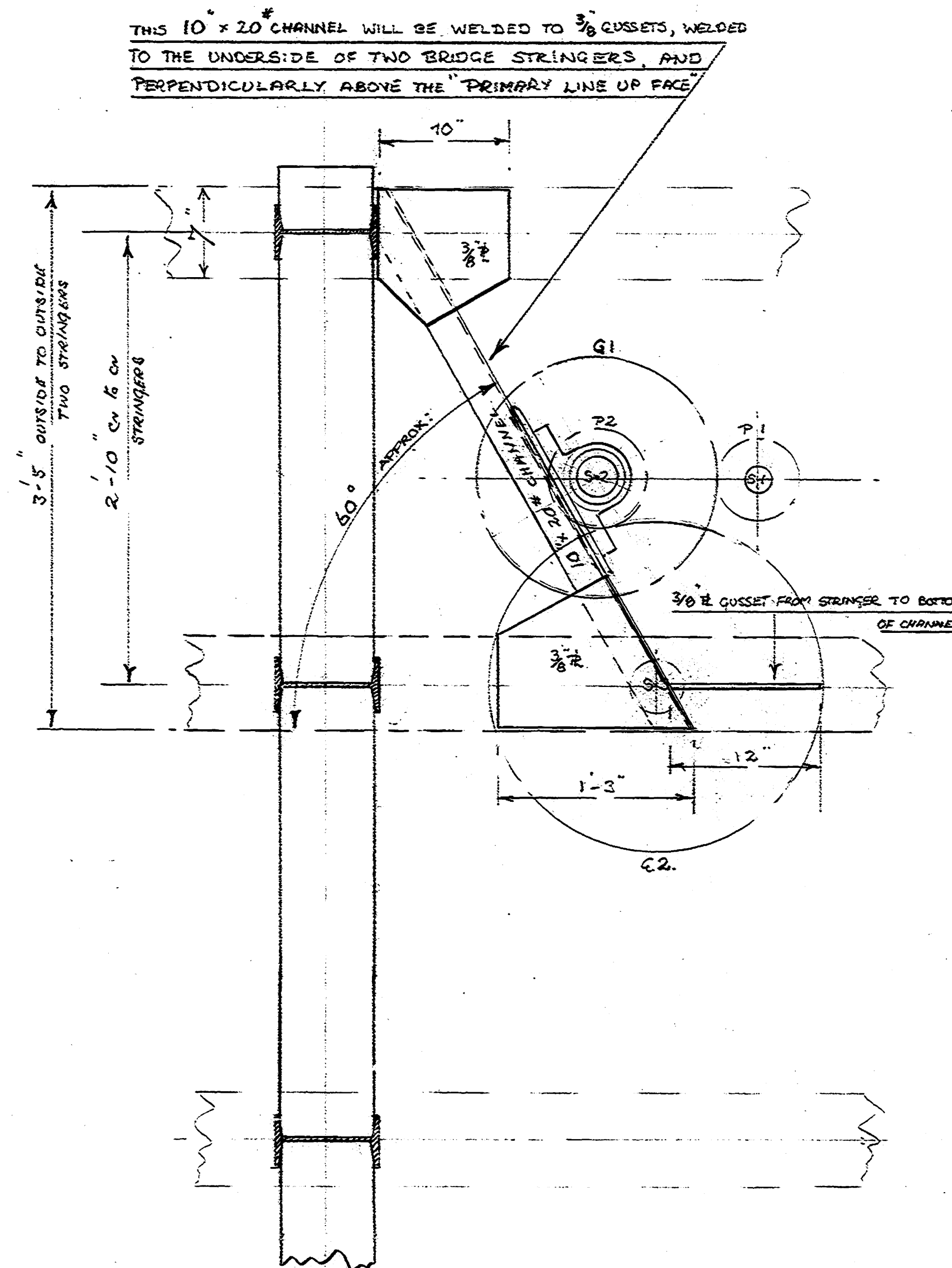
CHECKED:

PART	NUMBER REQ'D	DESCRIPTION	SUPPLY
S3	1	RACK PINION SHAFT	EXISTING
S2	1	2nd SHAFT	MATERIAL, L.P.O. MAKE IN SHOPS
P1	1	1st TRAIN PINION	L.P.O.
P2	1	2nd " "	EXISTING, REBORE TO 3"
P3	1	RACK PINION	"
G1	1	1st TRAIN GEAR	L.P.O.
G2	1	2nd " "	EXISTING
B2	2	2nd BEARINGS L.P.O. * SEE DETAILS BELOW	
B3	1	3rd BEARINGS EXISTING	

* TWO BEARINGS B.2. - 2 1/16" DIA SHAFT SIZE.
DODGE, SPLIT BRONZE BUSHED JOURNAL BEARINGS
CATALOGUE D/60, LIST L142, OR EQUAL.



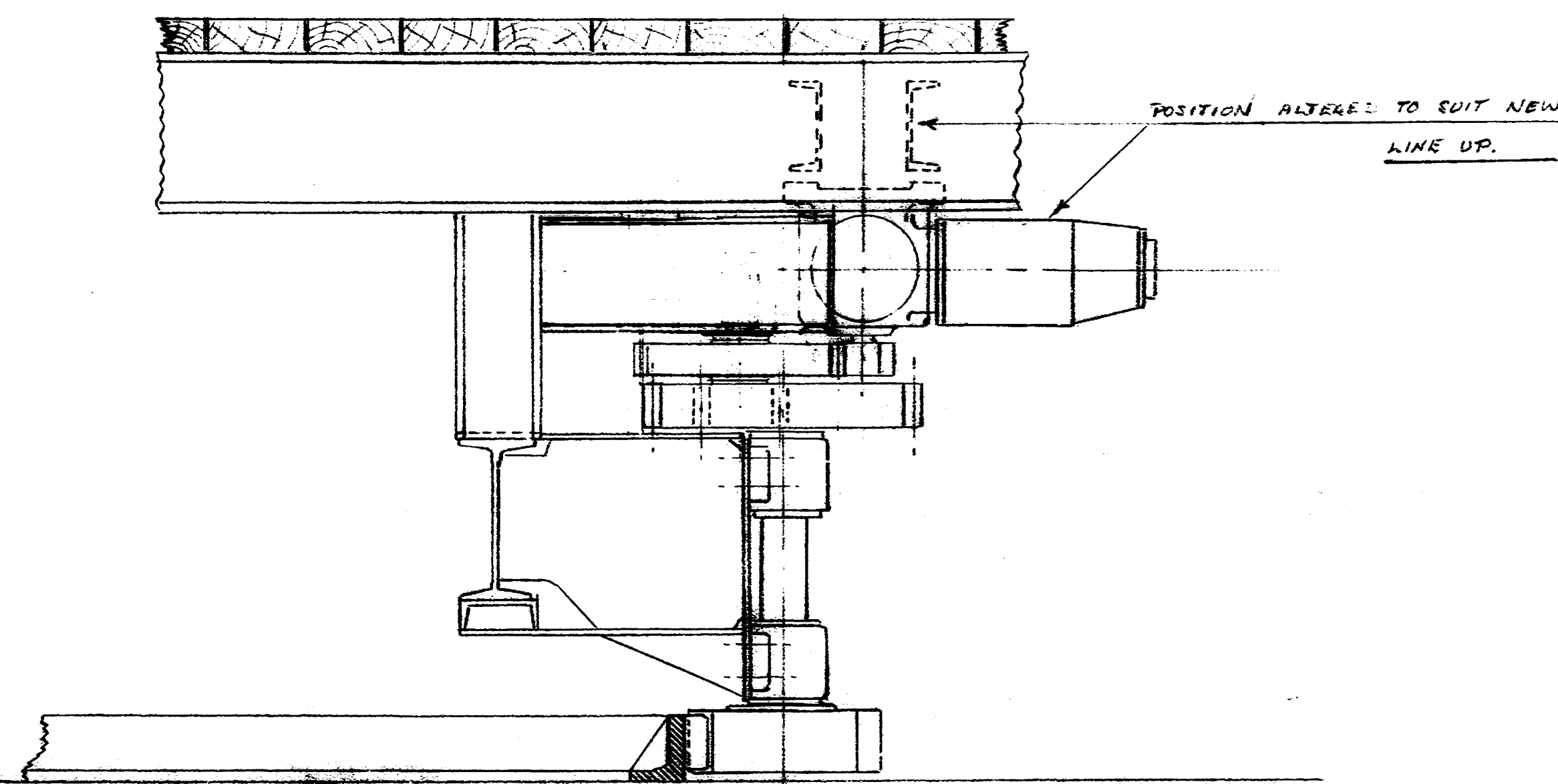
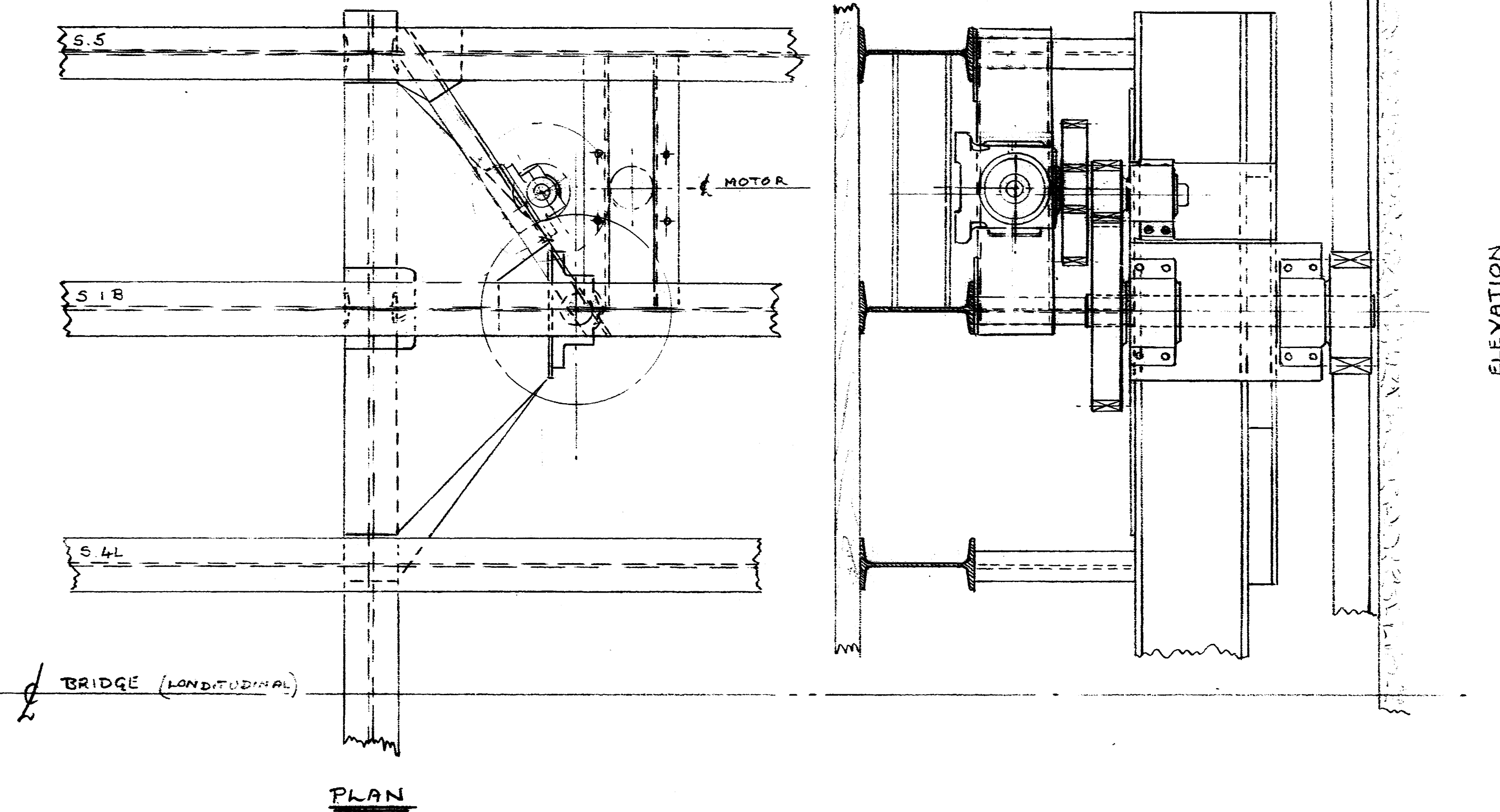
EXISTING 8" CHANNEL SUPPORTS FOR MOTOR MOUNTING TO BE MOVED
TO SUIT NEW POSITION / 90° SWING OF MOTOR.



DEPARTMENT OF TRANSPORT			
MARINE WORKS			
CANALS DIVISION			
TRENT CANAL SYSTEM			
MODIFICATIONS TO HAMLET BRIDGE			
SWING MECHANISM.			
DETAILS.			
SCALE: 1 1/2" = 3' - 1'-0"	DESIGN: F.W.H.T.	DRAWN: F.W.H.T.	CHECKED: J.S.W.
DATE: Nov 23, 1964	REVISIONS:	MADE:	CHCK'D:
SUPERINTENDING ENGINEER			P.C. 3209-G

T-2-238-9

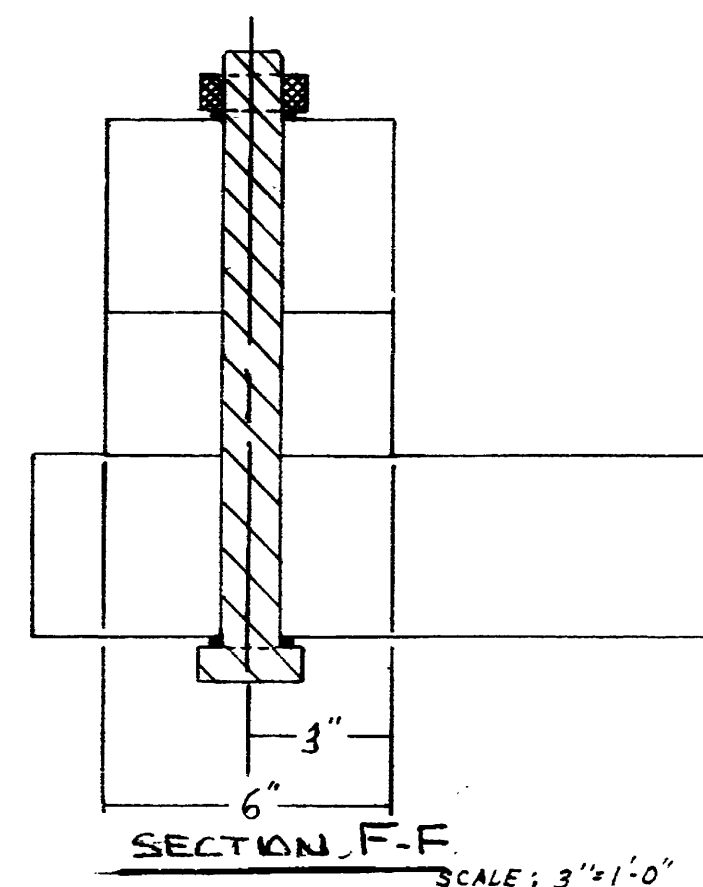
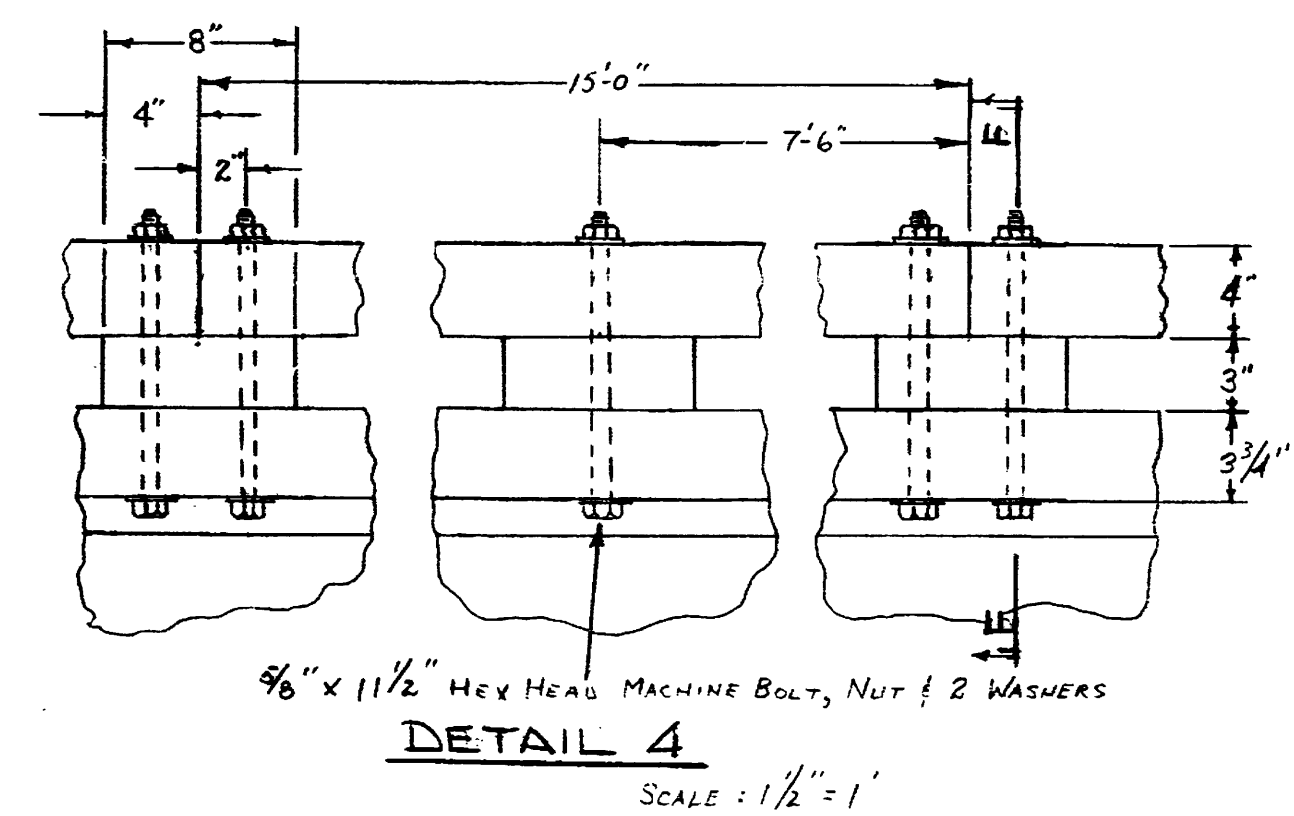
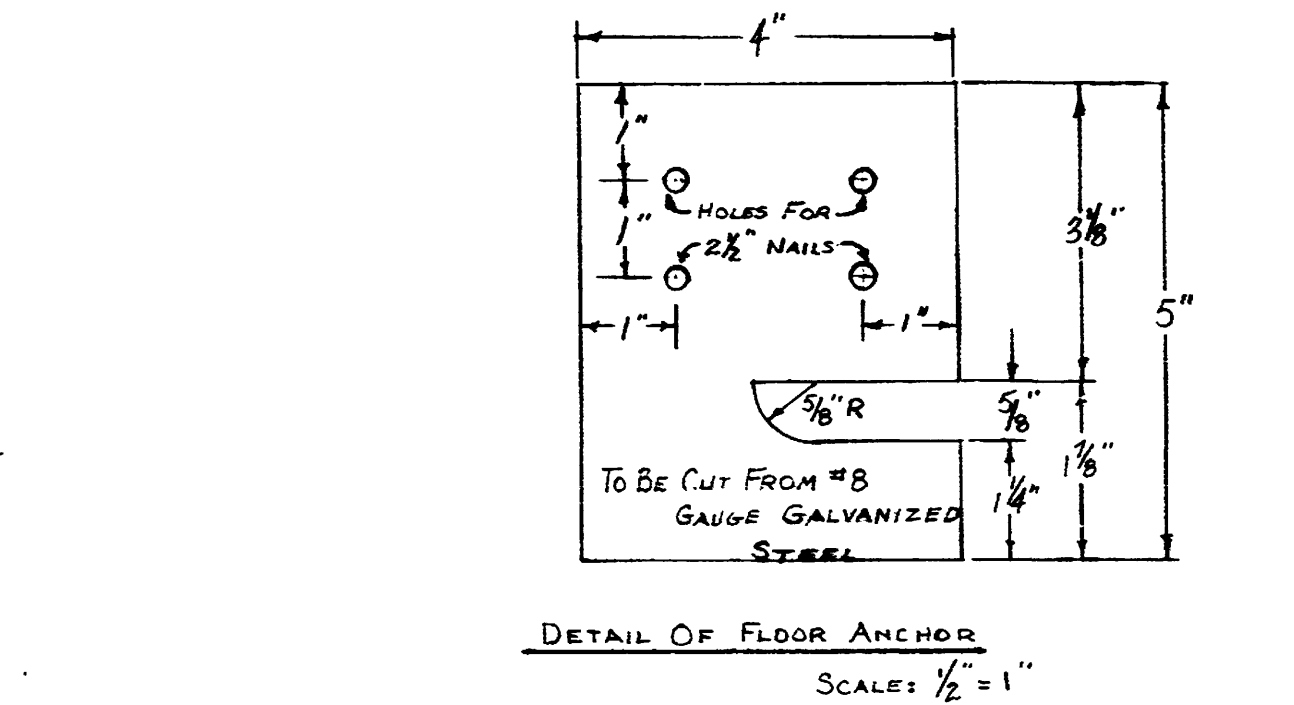
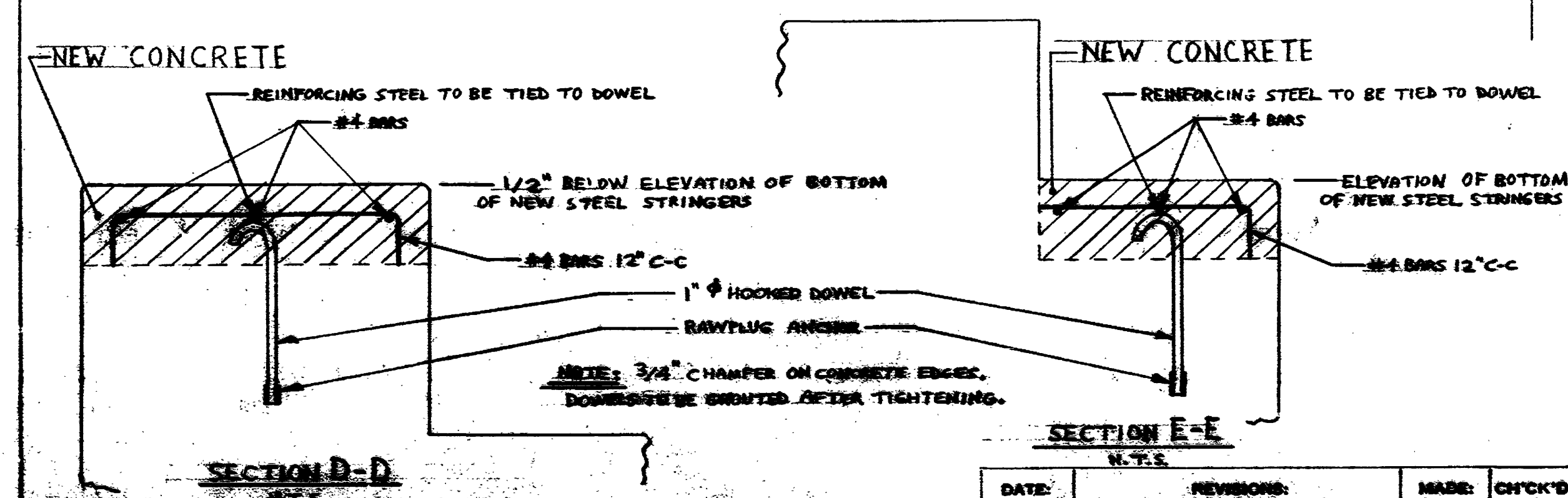
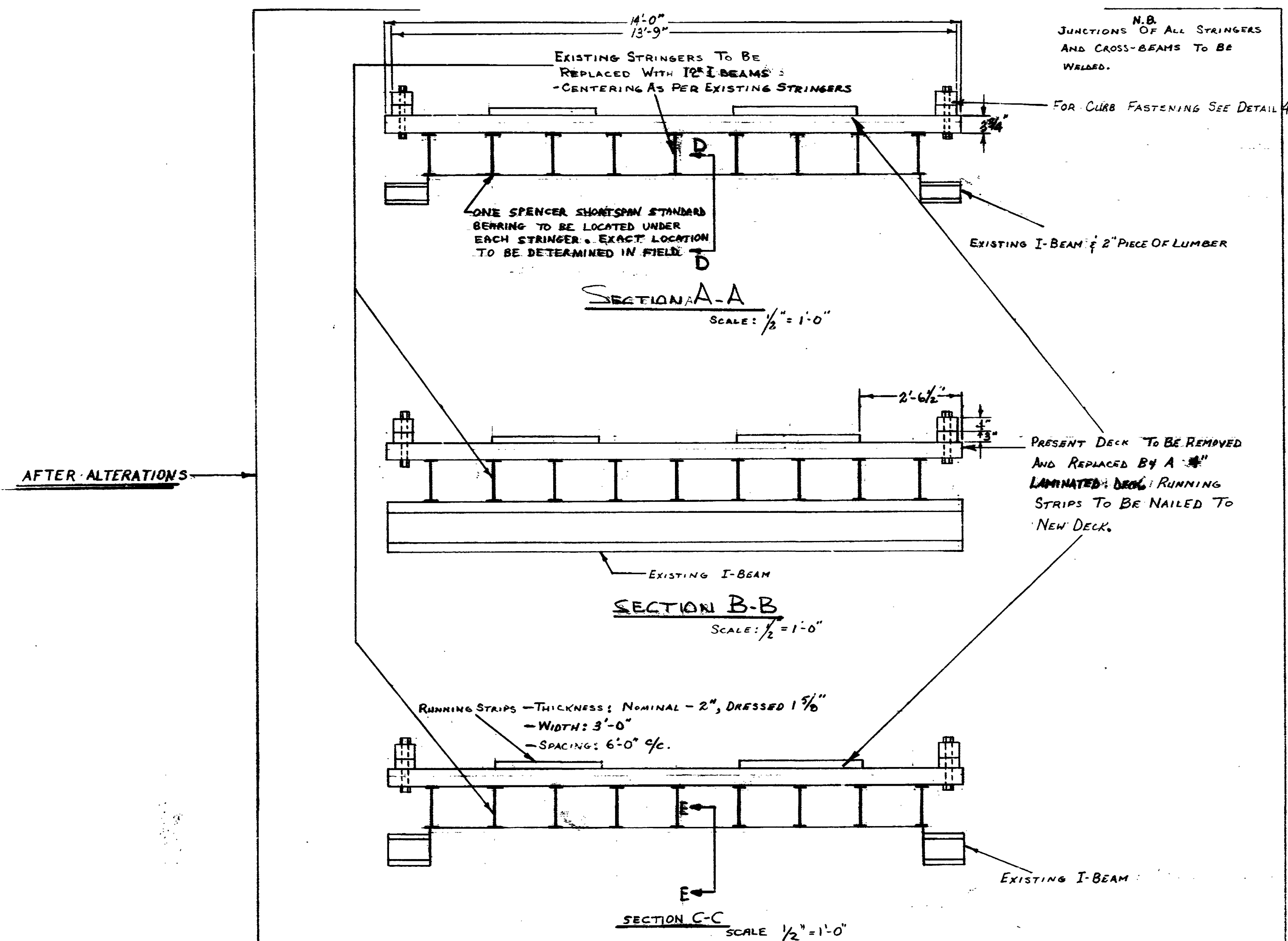
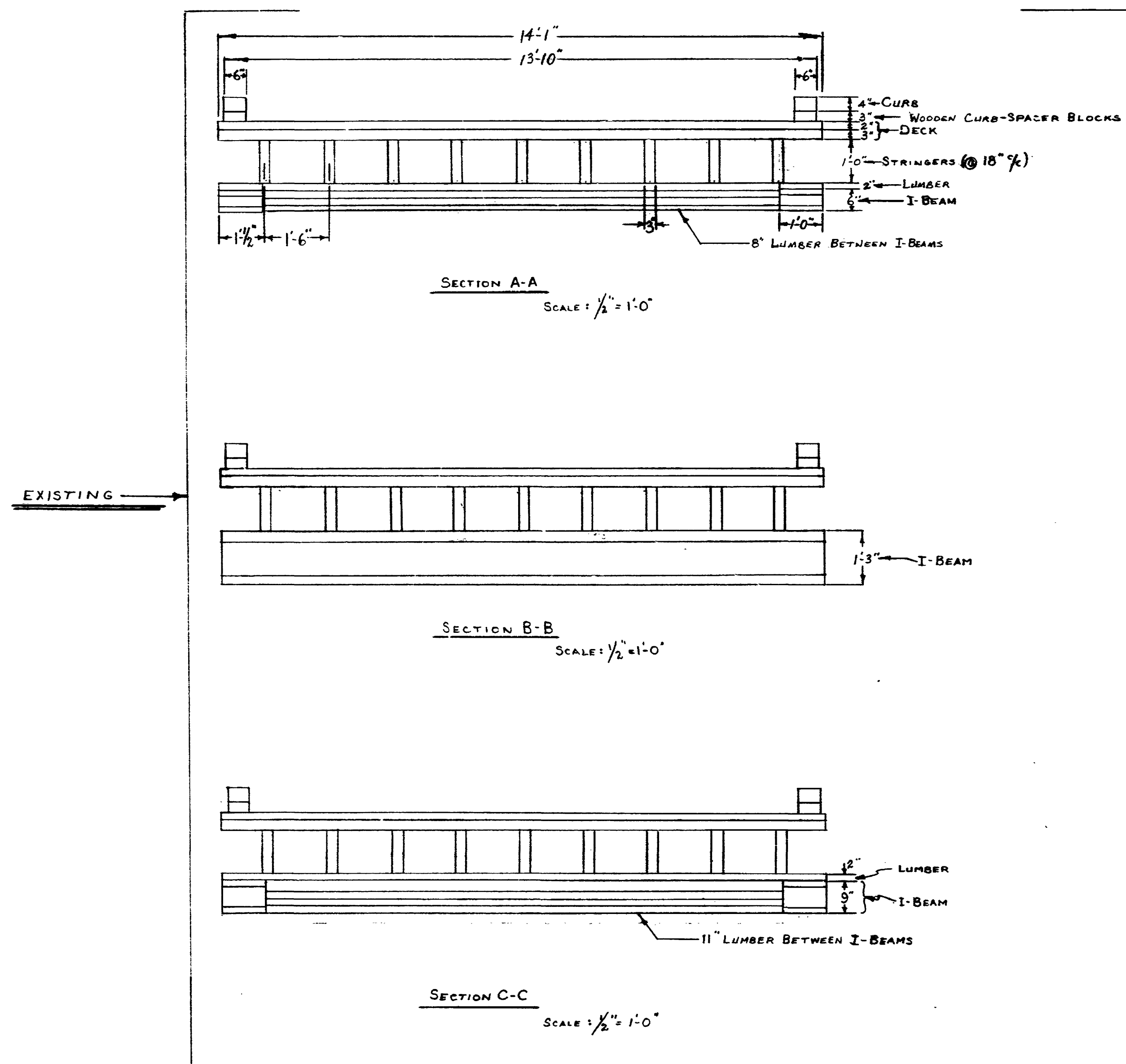
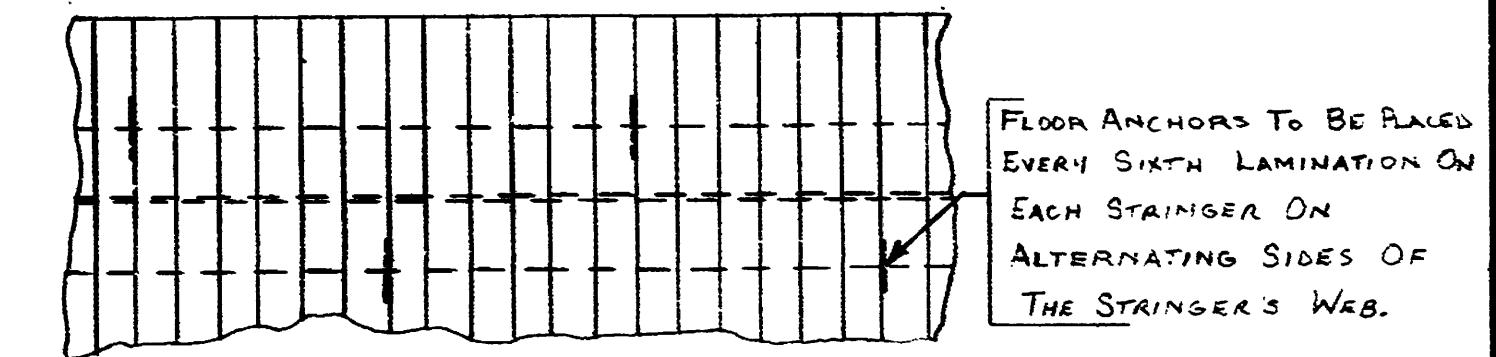
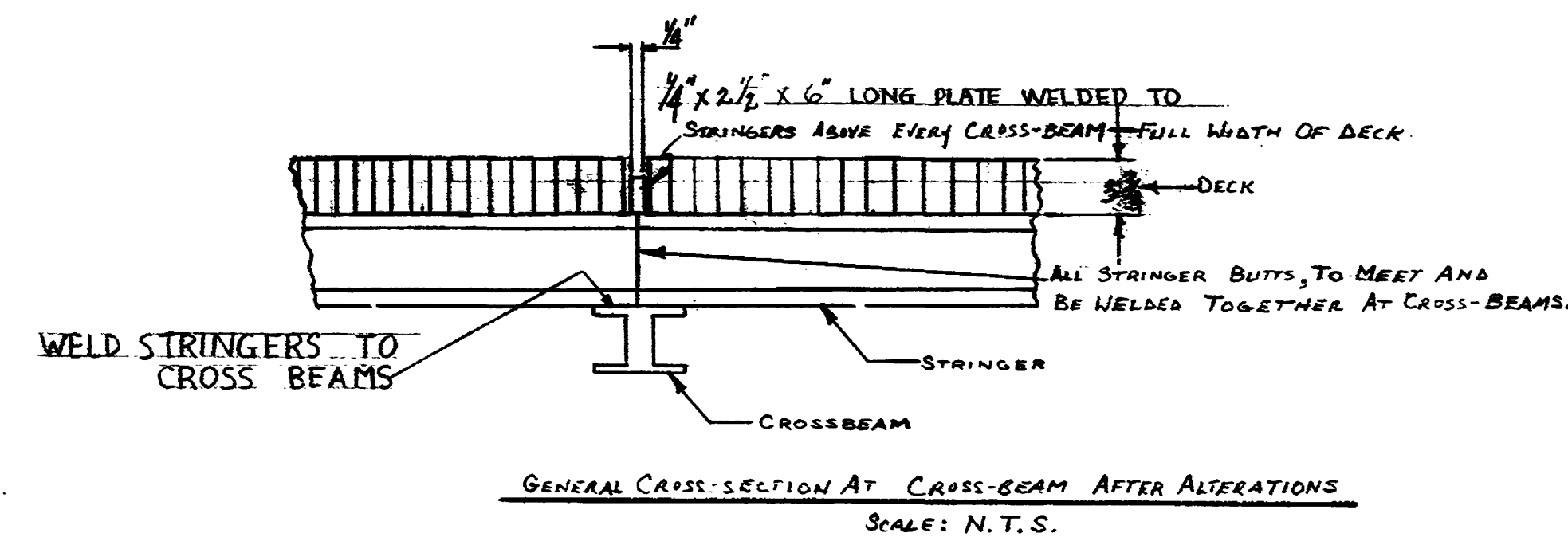
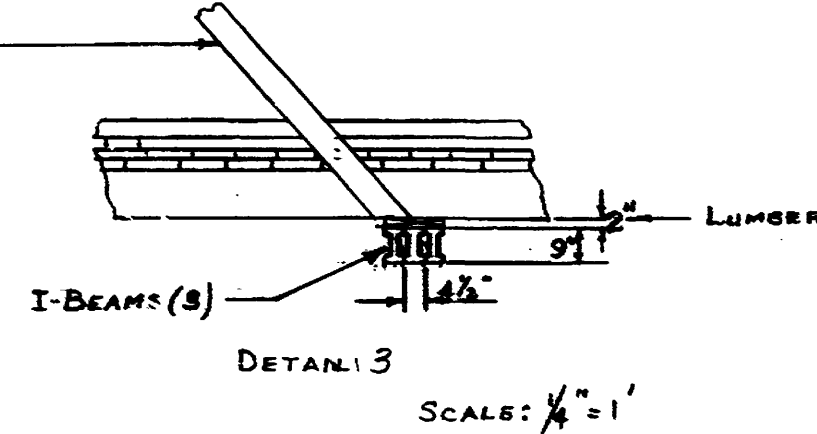
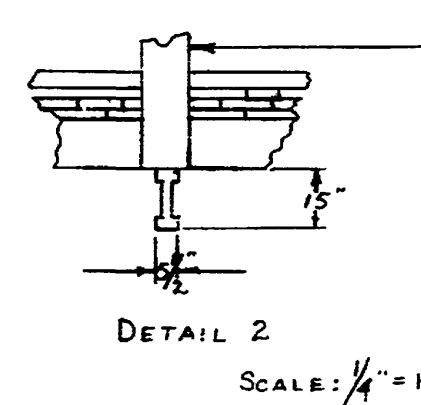
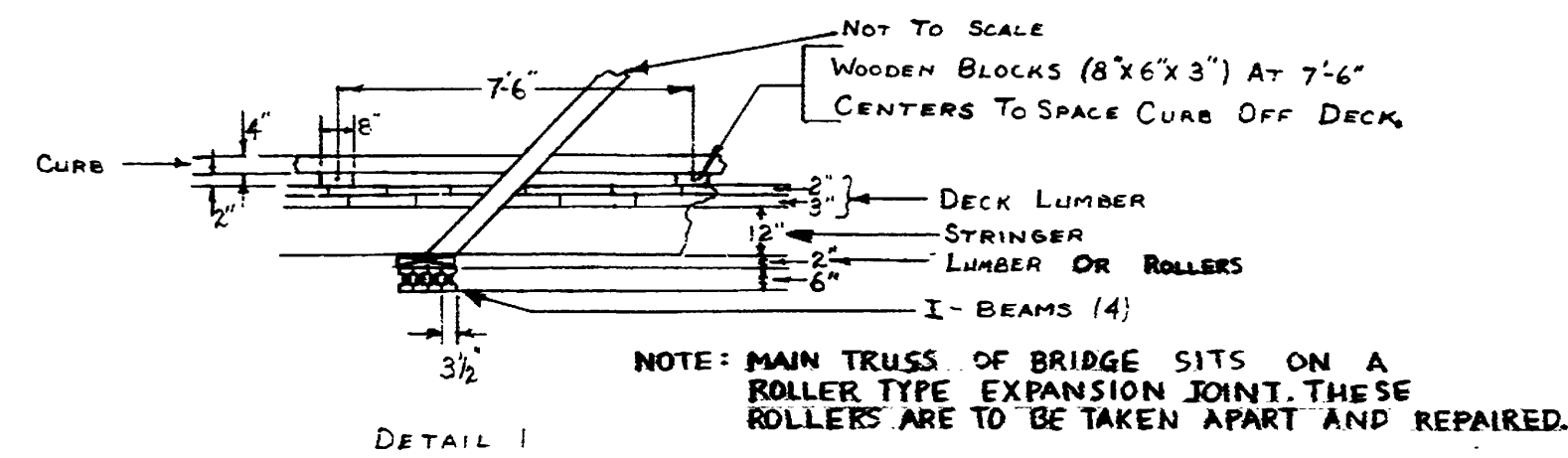
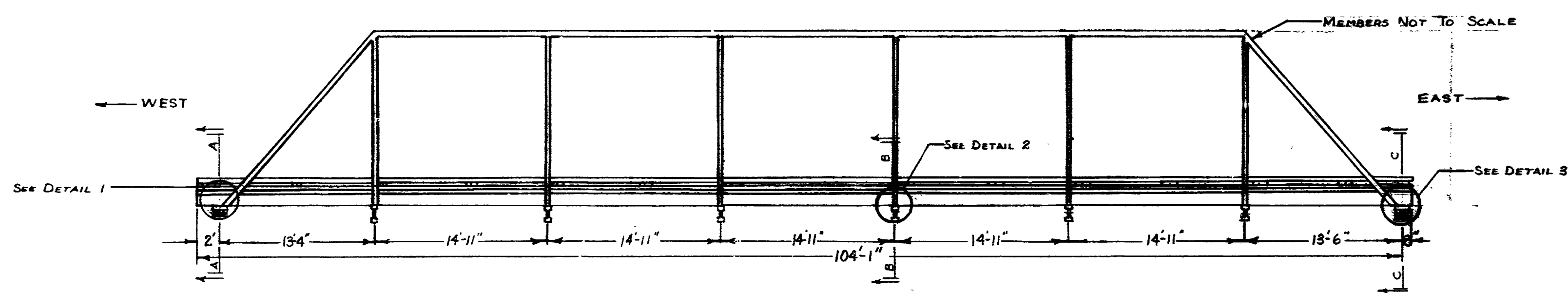
BRIDGE (TRANSVERSE)



DEPARTMENT OF TRANSPORT.
MARINE WORKS
CANALS DIVISION
TRENT CANAL SYSTEM
MODIFICATIONS TO HAMLET BRIDGE
SWING MECHANISM
PRELIMINARY LAYOUT

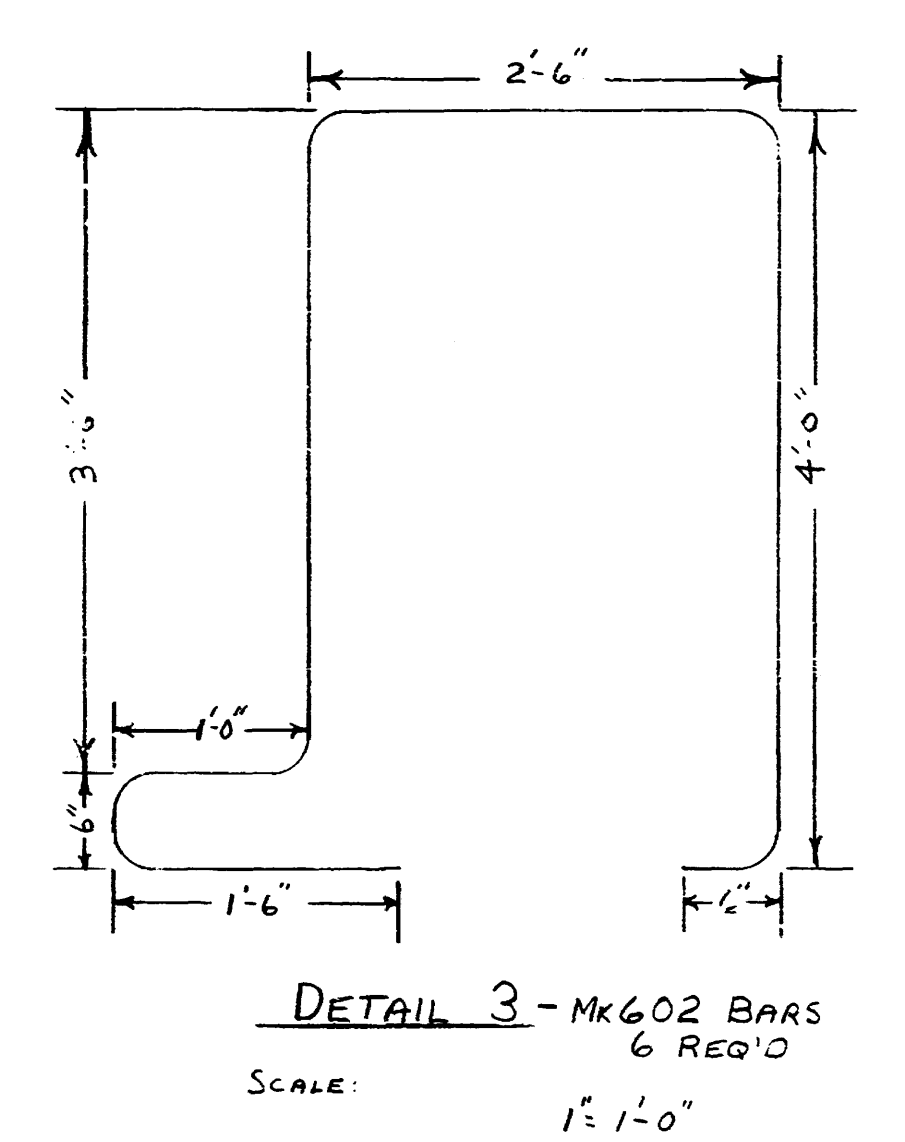
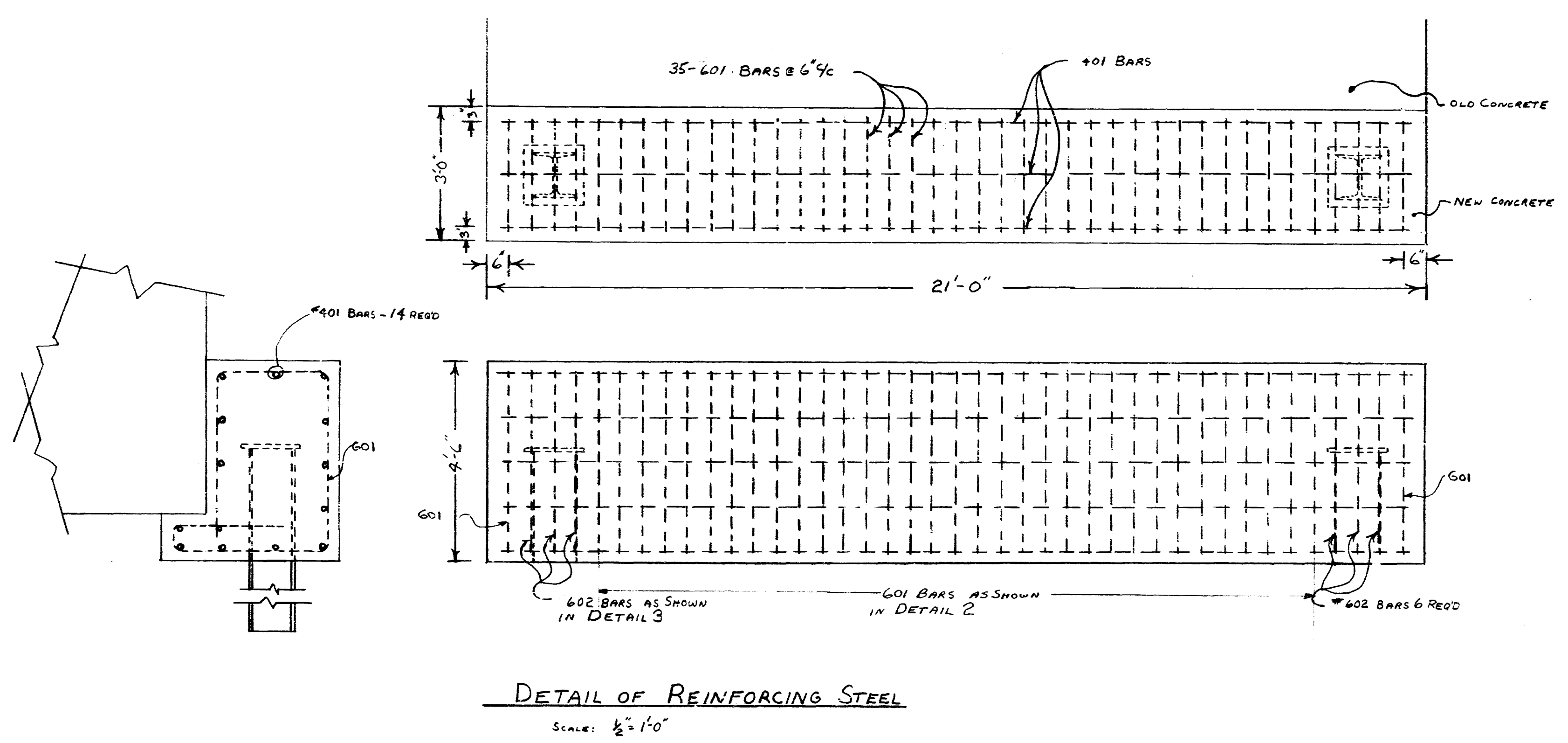
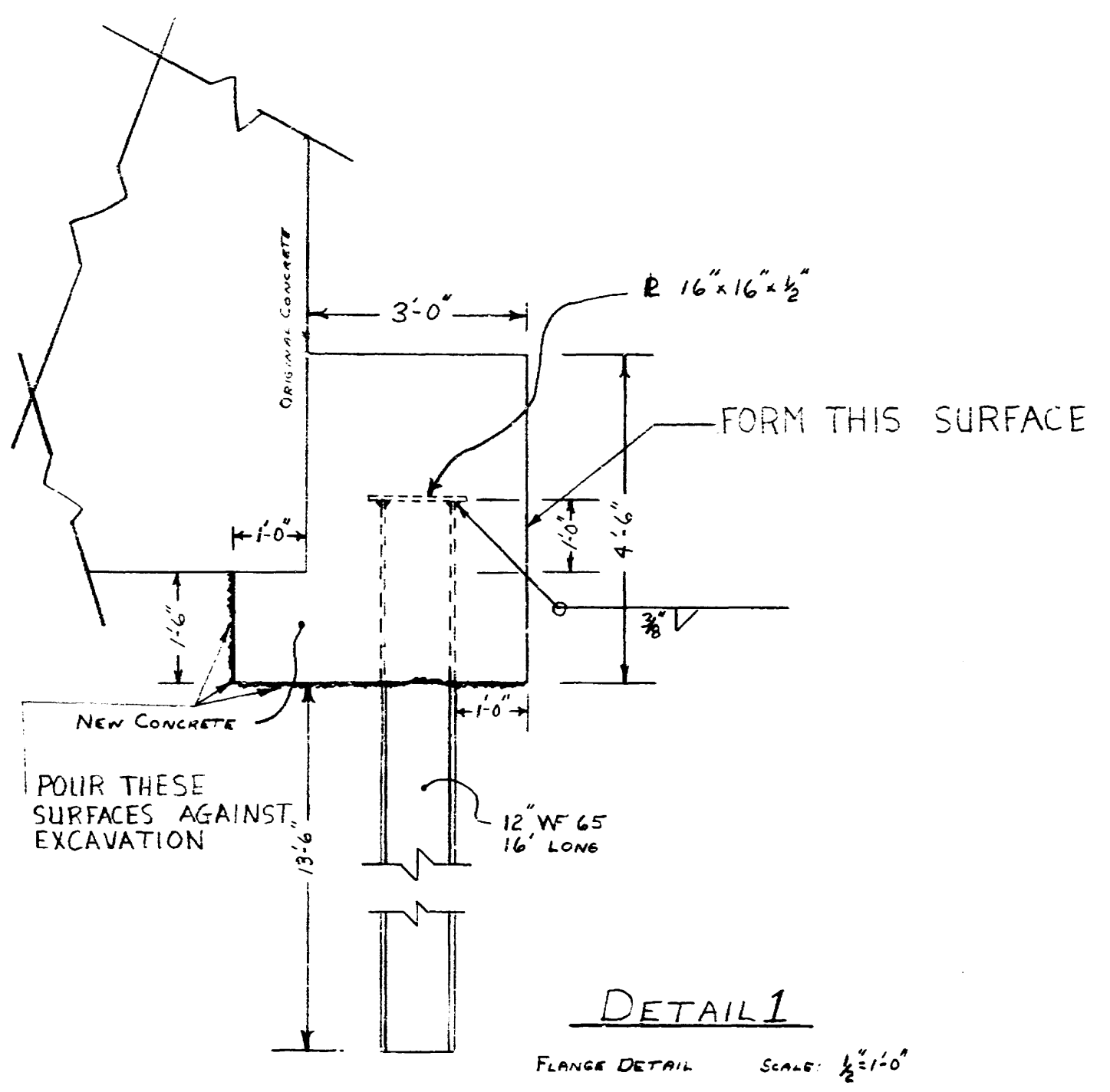
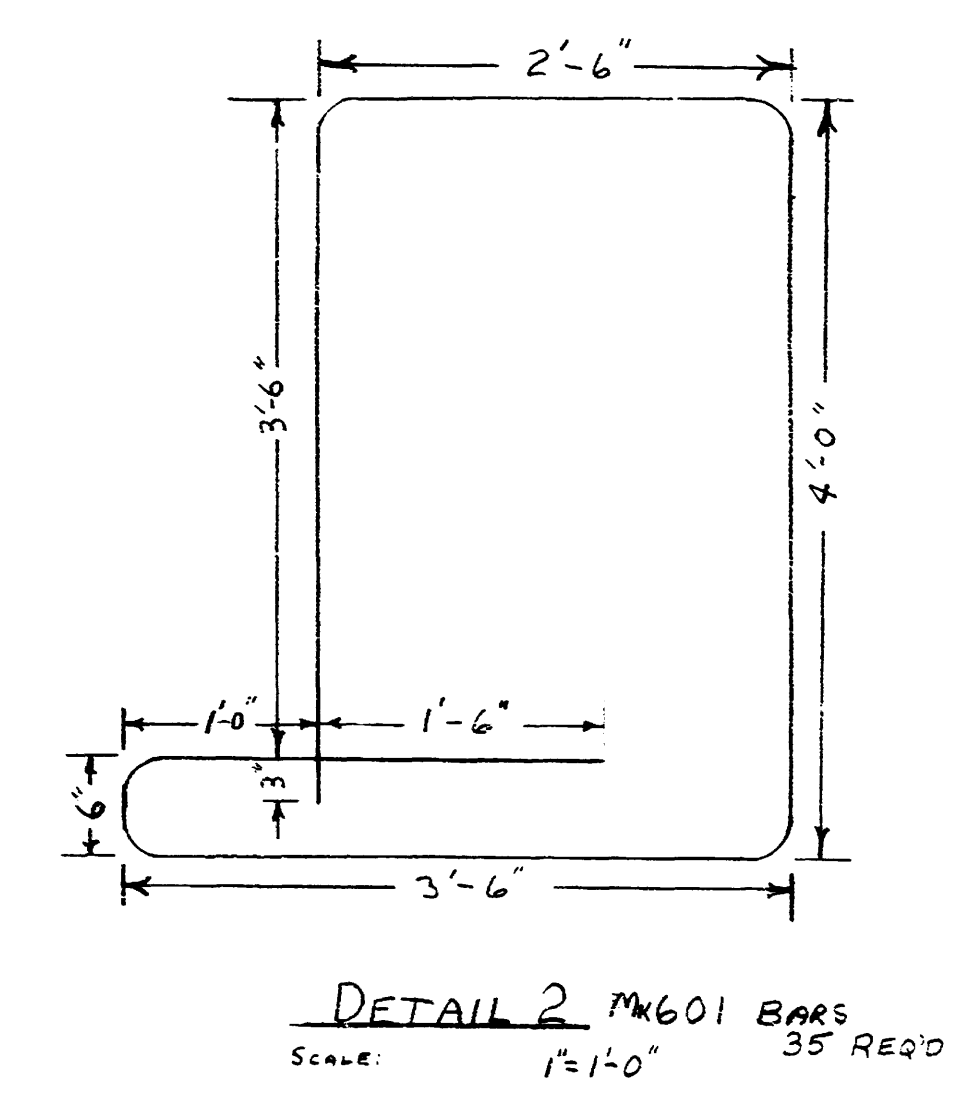
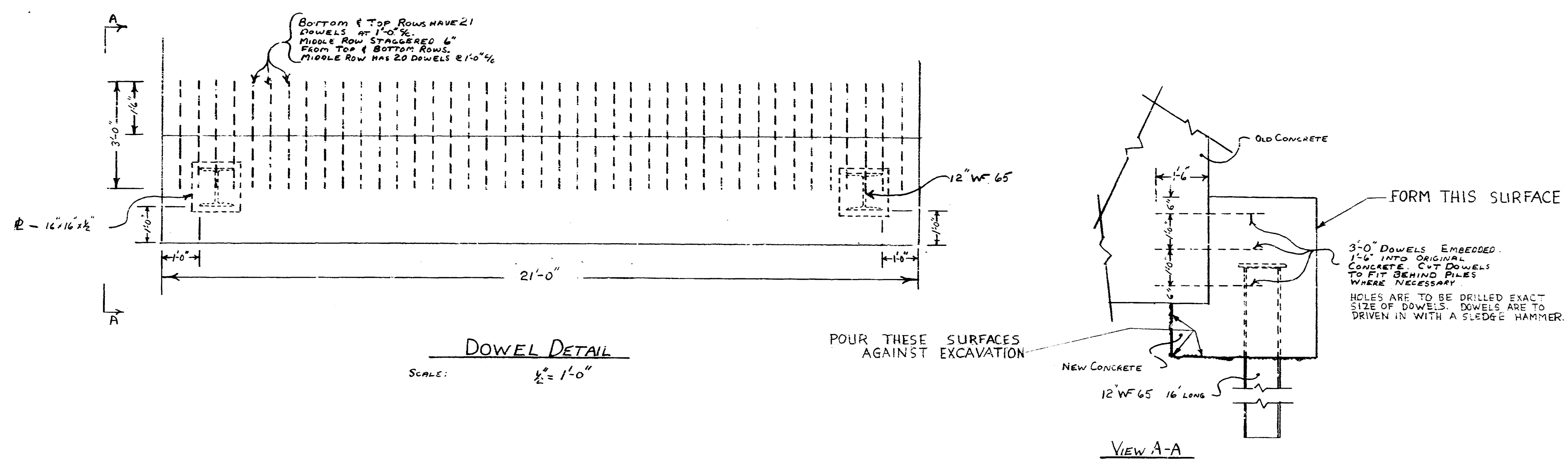
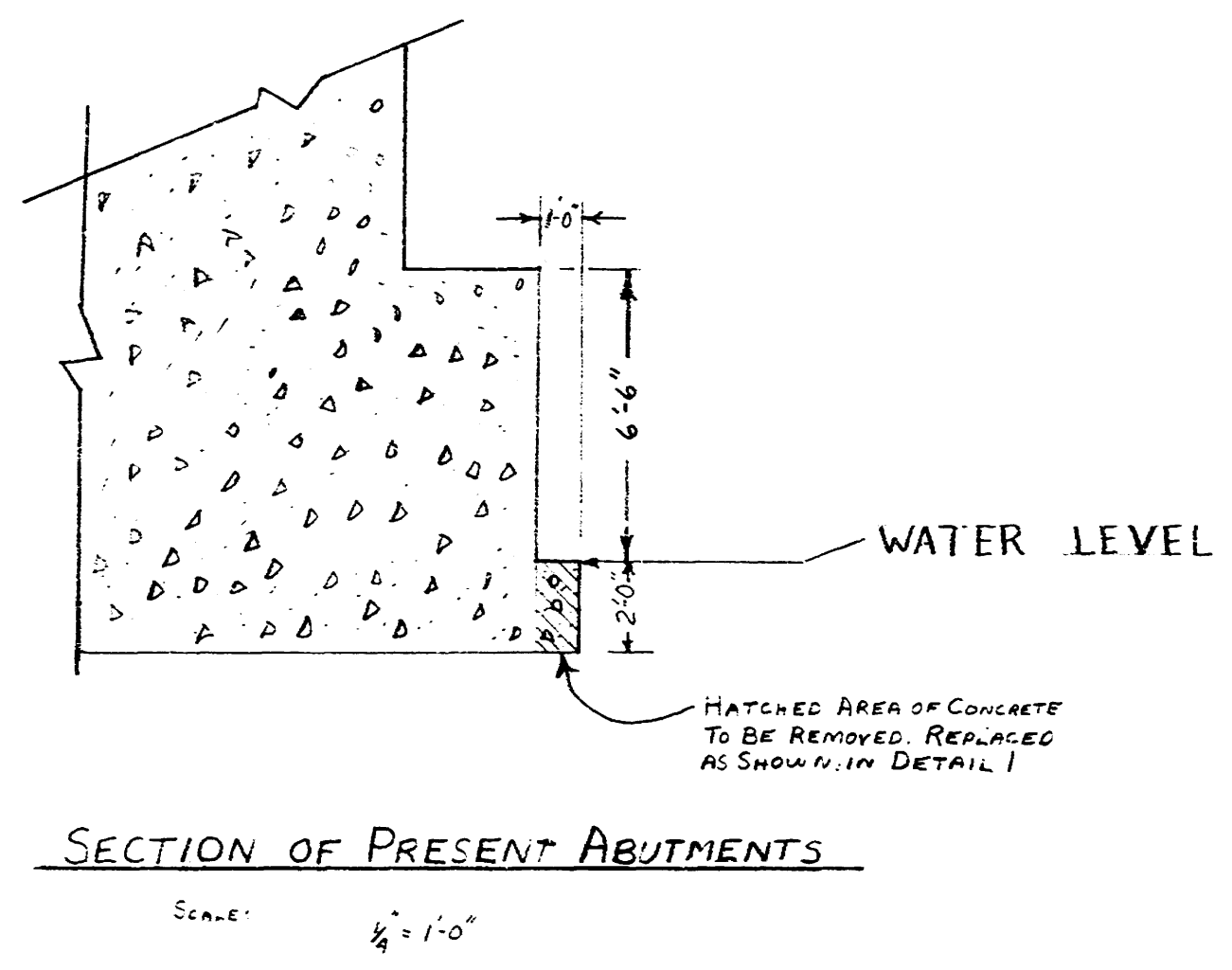
SCALE 1"=1'-0"
DESIGN S.W.H.T.
DRAWN S.W.H.T.
CHECKED [Signature]
DATE Nov 23, 1964
SUPERINTENDING ENGINEER T.C. 3210-G.

T-2-238-10



DEPARTMENT OF TRANSPORT			
MARINE WORKS			
CANALS DIVISION			
TRENT CANAL SYSTEM			
BRIDGE 37			
HAMLET BRIDGE			
DECK AND ABUTMENT ALTERATIONS TO FIXED SPAN			
SCALE: As Shown	DATE: Jan. 1970		
DESIGN: D.L.H.	CHECKED: C.J.S.		
DRAWN: D.L.H.		MADE: C.H.K.D.	
CHECKED: C.J.S.		MADE: C.H.K.D.	
DATE: N.T.S.		REVISIONS:	
SECTION: E-E		SCALE: N.T.S.	
SECTION: D-D		SCALE: N.T.S.	

T2-23841



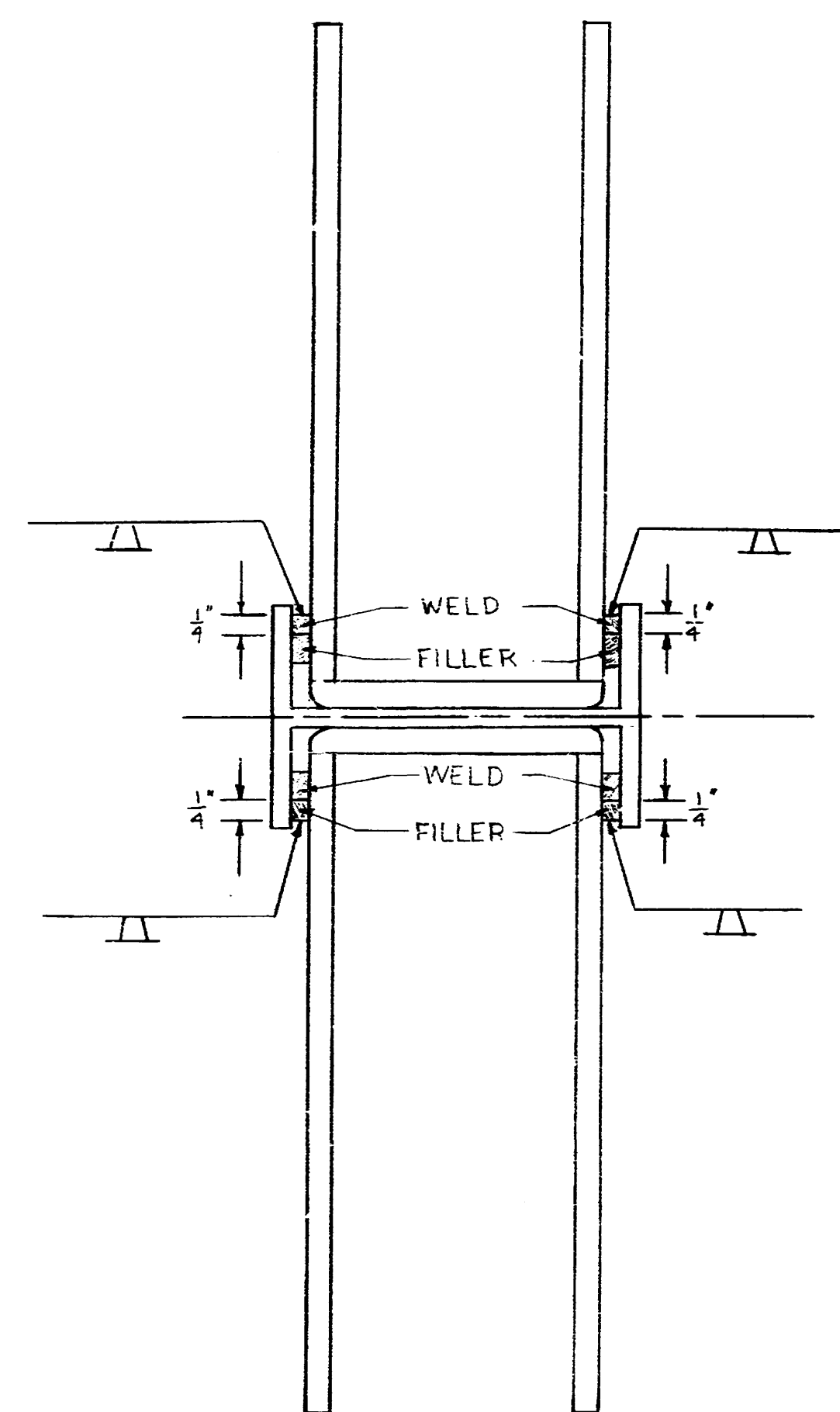
REINFORCING STEEL:
316 LINEAL FEET OF N#4 BAR REQ'D MK401 CUT TO SUIT

NOTE:
DETAILS AS SHOWN FOR ONE
ABUTMENT ONLY. OTHER
ABUTMENT IS THE SAME
DOUBLE ALL QUANTITIES

DEPARTMENT OF TRANSPORT			
MARINE WORKS			
CANALS DIVISION			
TRENT CANAL SYSTEM			
METHOD OF UNDERPINNING ABUTMENTS			
HAMLET BRIDGE			
SCALE: As Shown	DESIGN: SAS	DRAWN: JKD	CHECKED: SAS
DATE:	REVISIONS:	MADE:	CH'CK'D:
			DATE: SEPT. 3, 1970
			TC-3940-G

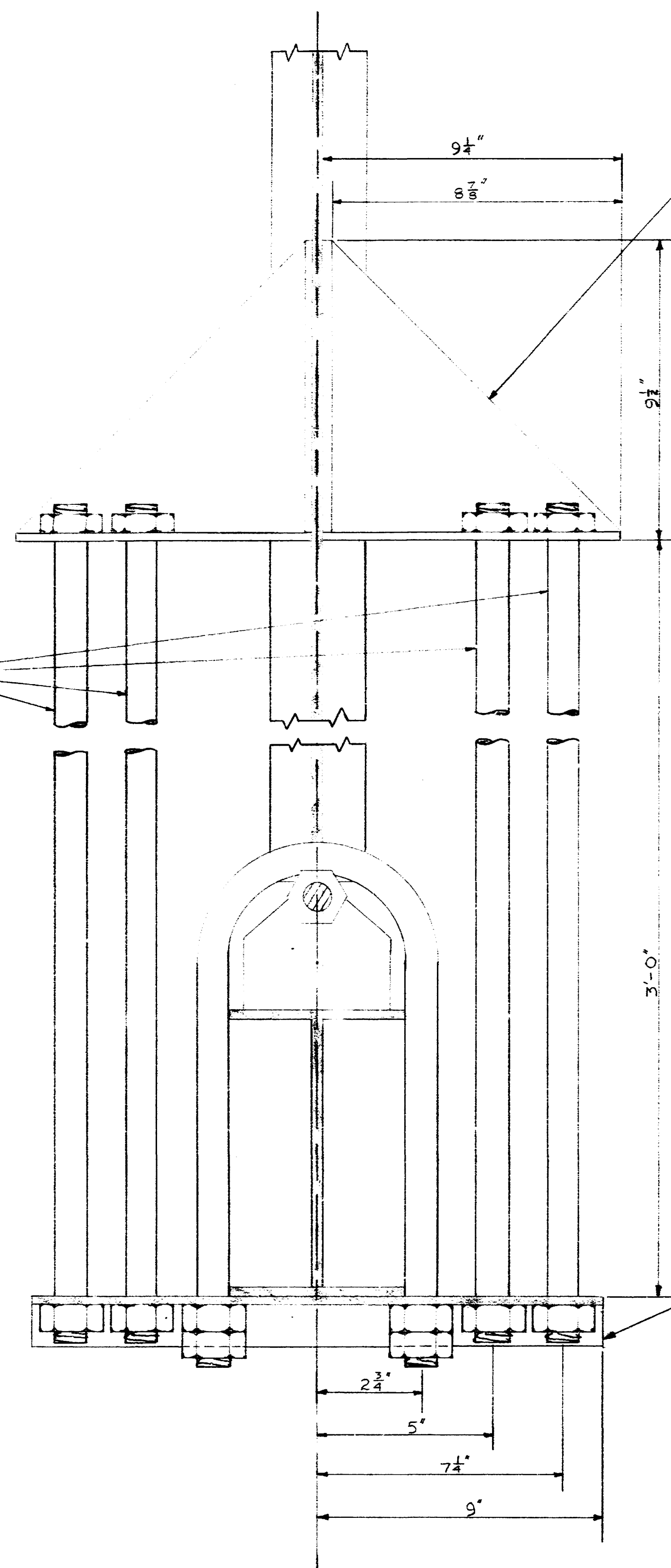
[Signature]
SUPERINTENDING ENGINEER

T-2-238-12



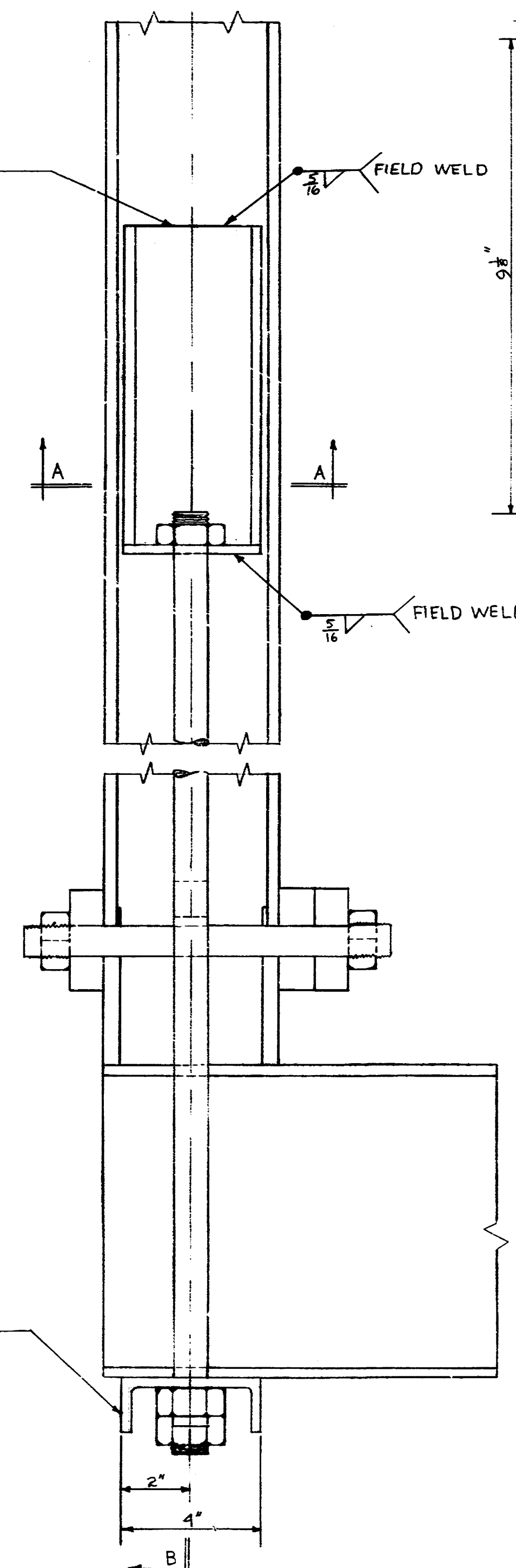
SECTION A-A
SCALE: 6"=1'-0"

1" ϕ STEEL RODS



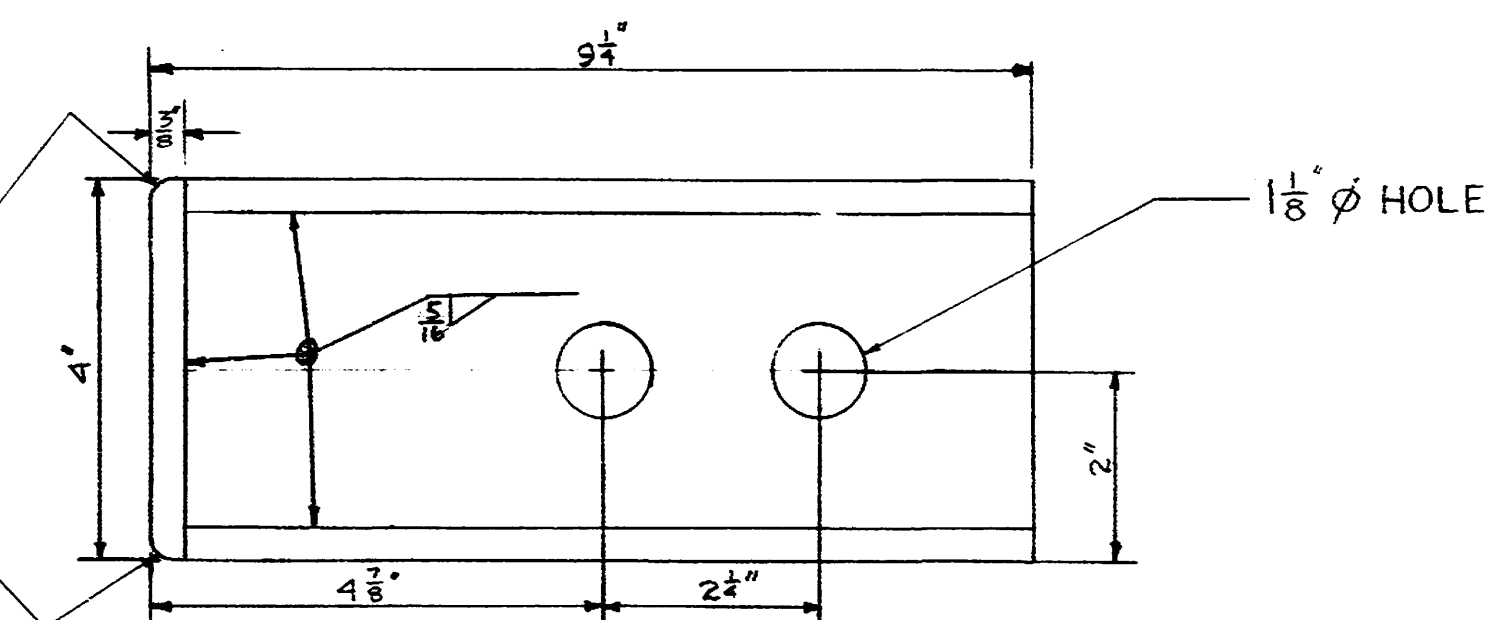
SECTION B-B
SCALE: 4"=1'-0"

TOP BRACKET - DETAIL 1
3/8" PLATE STEEL

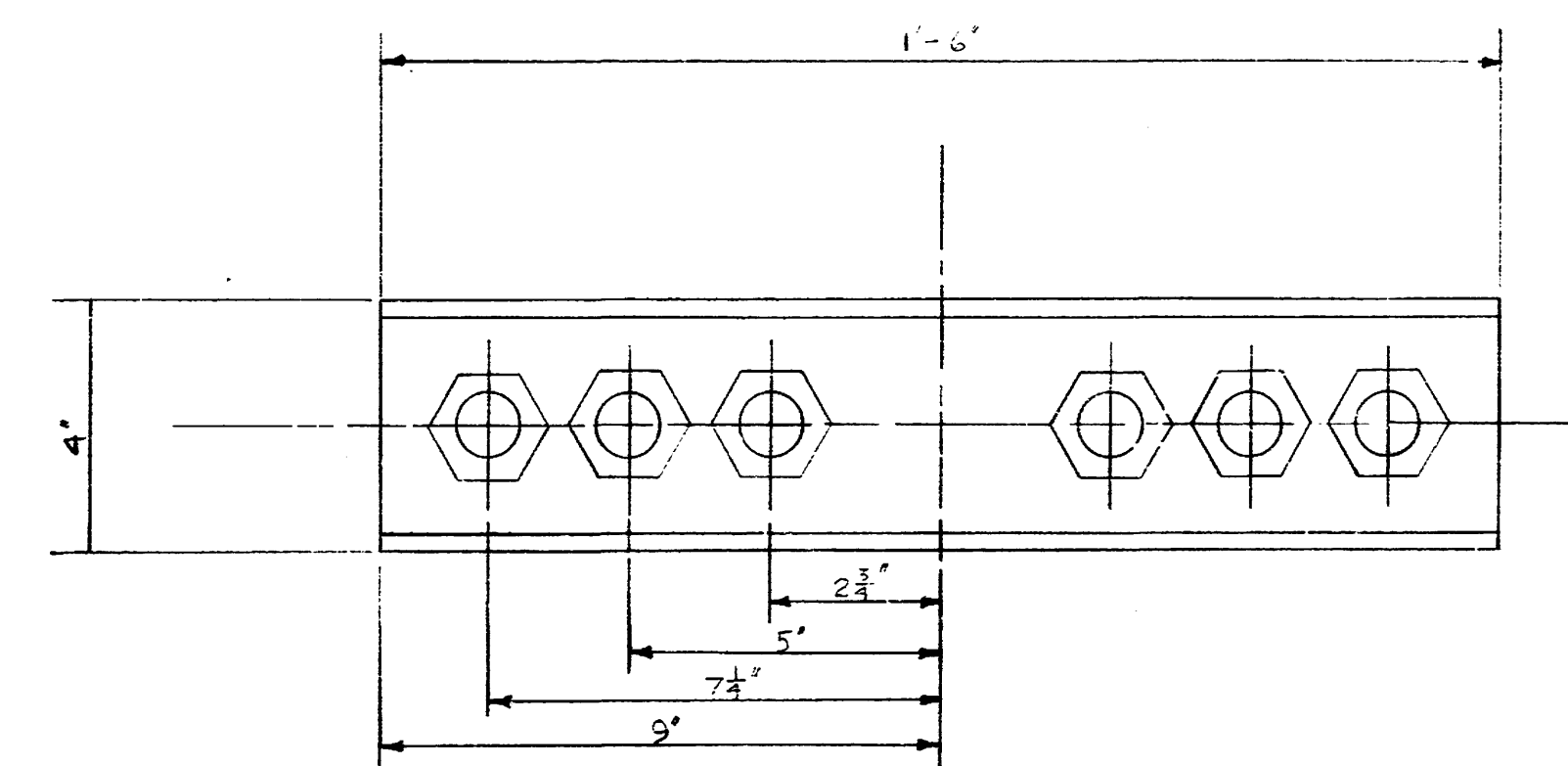


SIDE ELEVATION
SCALE: 4"=1'-0"

GRIND CORNERS
TO FIT WEB



TOP BRACKET - DETAIL 1
SCALE: 6"=1'-0"



BOTTOM BRACKET - DETAIL 2
SCALE: 4"=1'-0"

DEPARTMENT OF TRANSPORT

MARINE WORKS
CANALS DIVISION
TRENT CANAL SYSTEM

HAMLET BRIDGE:

BRACKET TO BE USED DURING AND
AFTER STRAIGHTENING BENT
VERTICAL MEMBER.

SCALE: AS SHOWN. DATE: OCT. 13/70

DESIGN: W.H.C.

DRAWN: W.H.C.

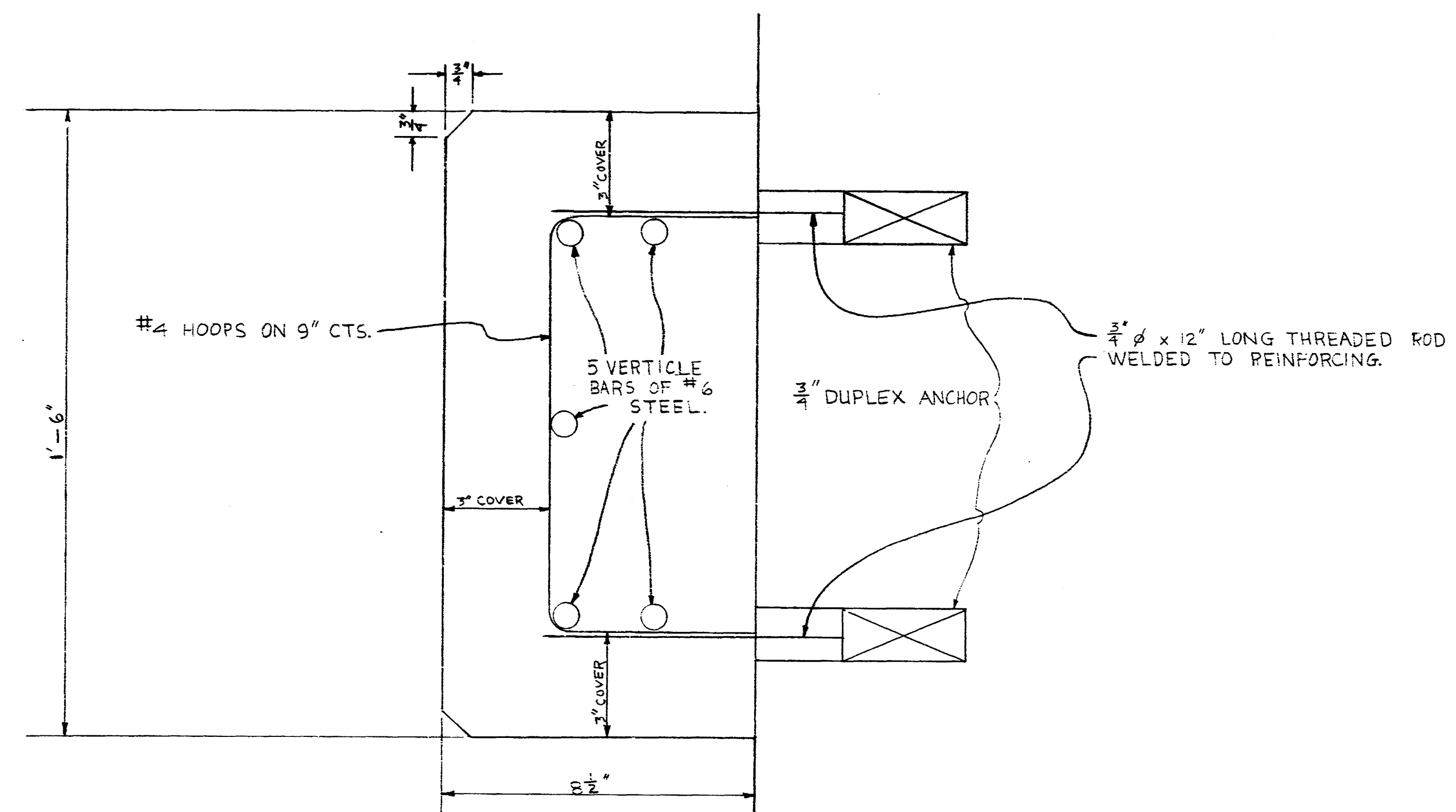
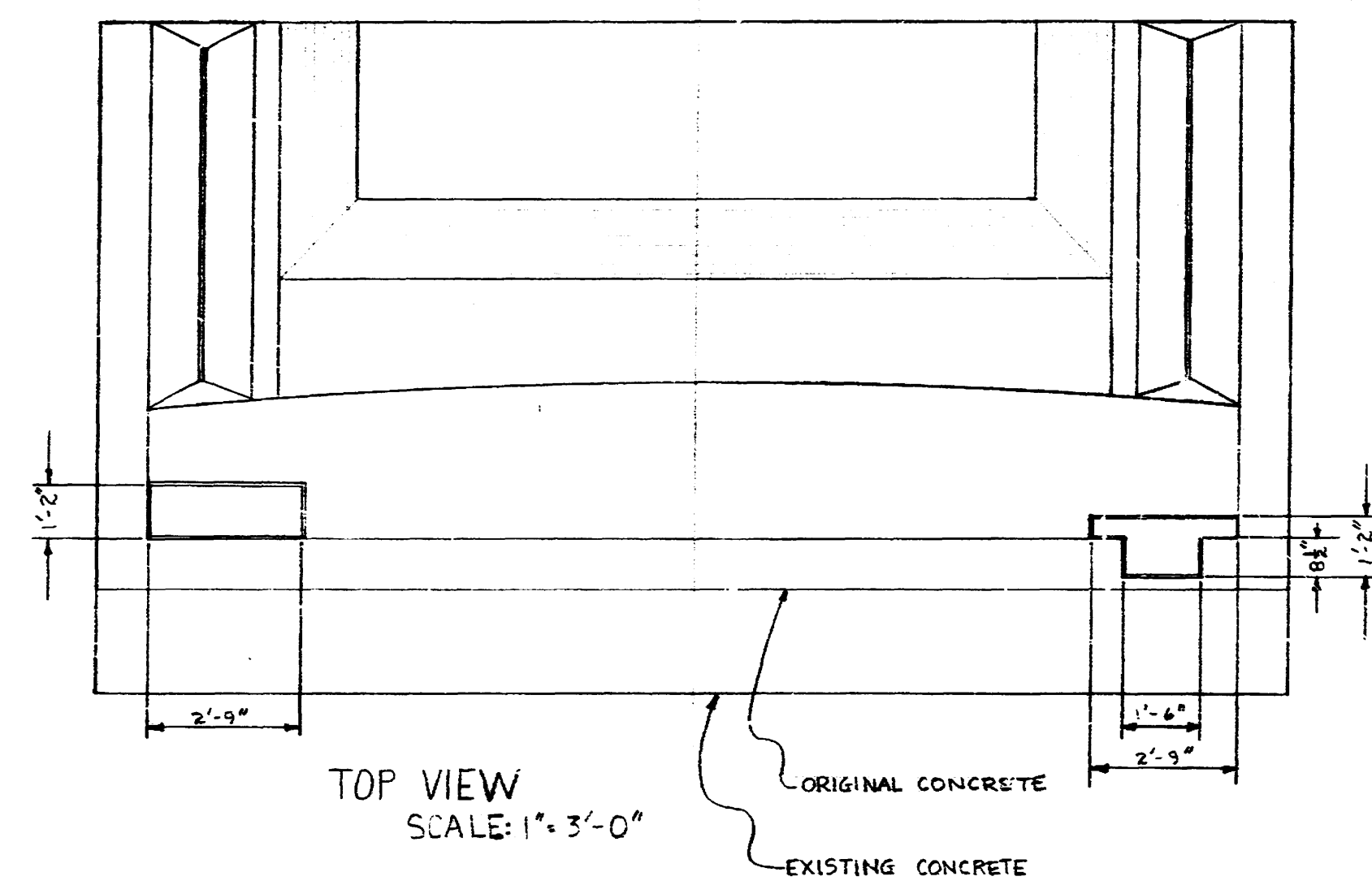
CHECKED:

SUPERINTENDING ENGINEER

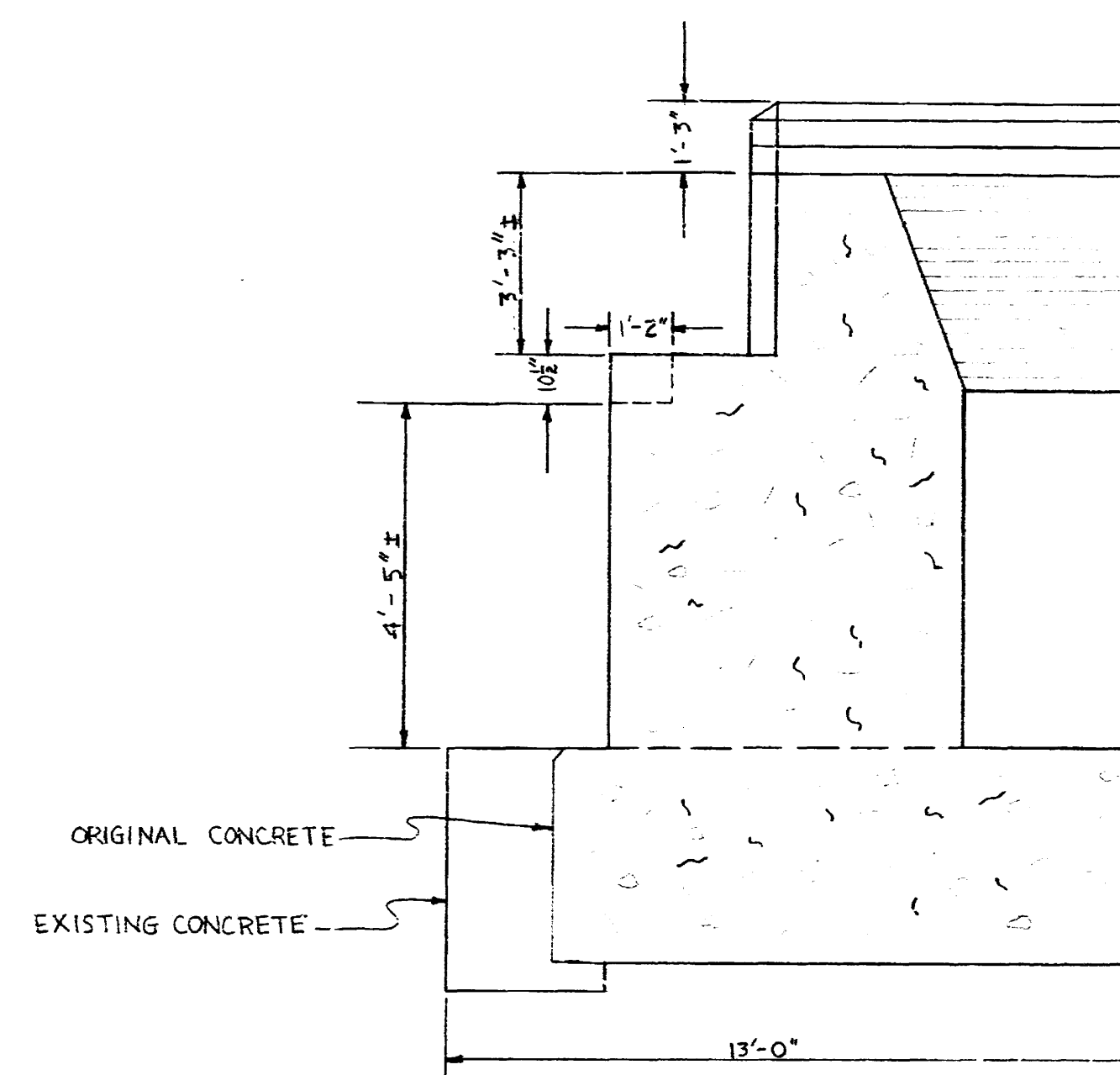
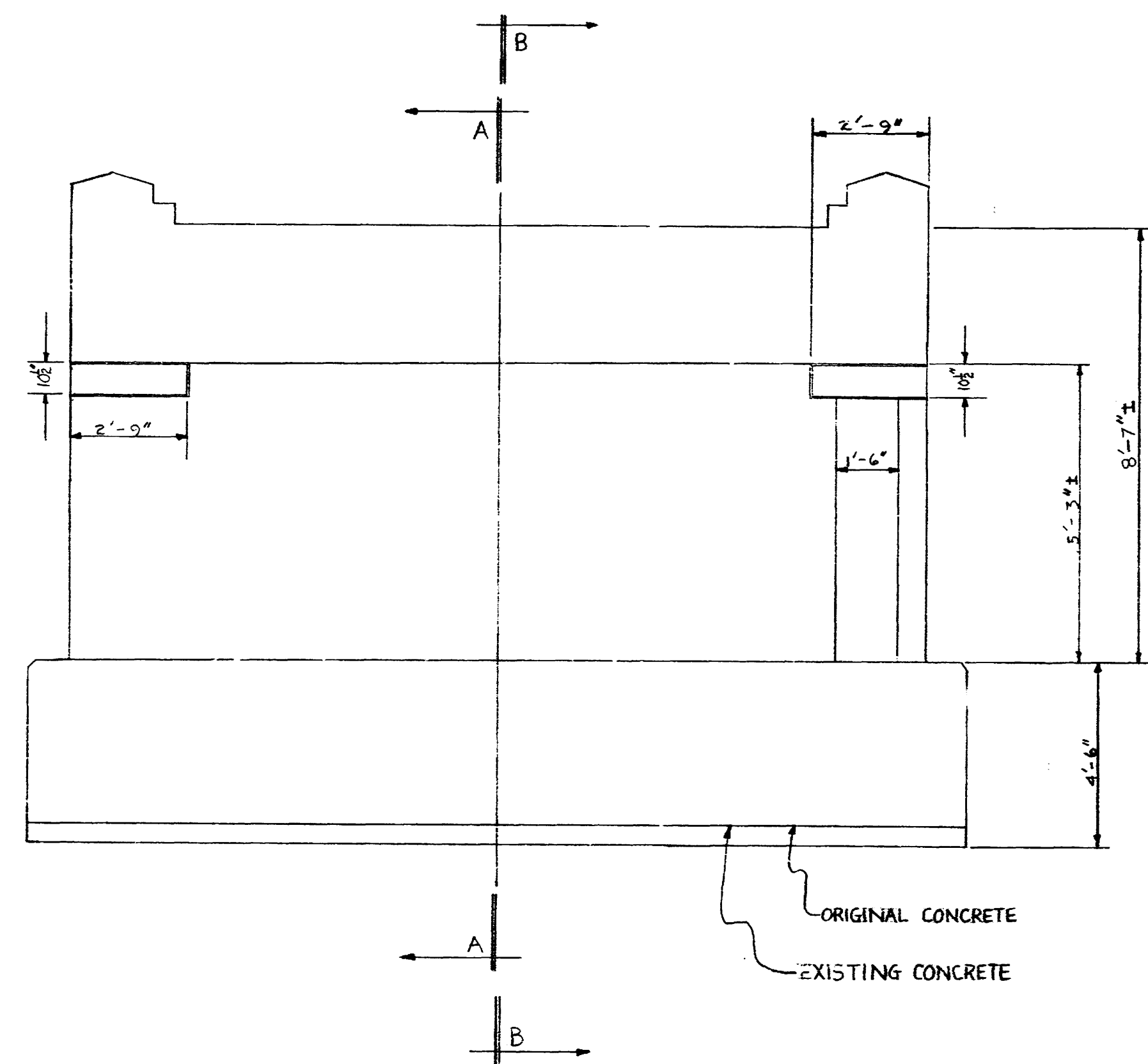
T.C. 3948-G

DATE: REVISIONS: MADE: CH'CK'D:

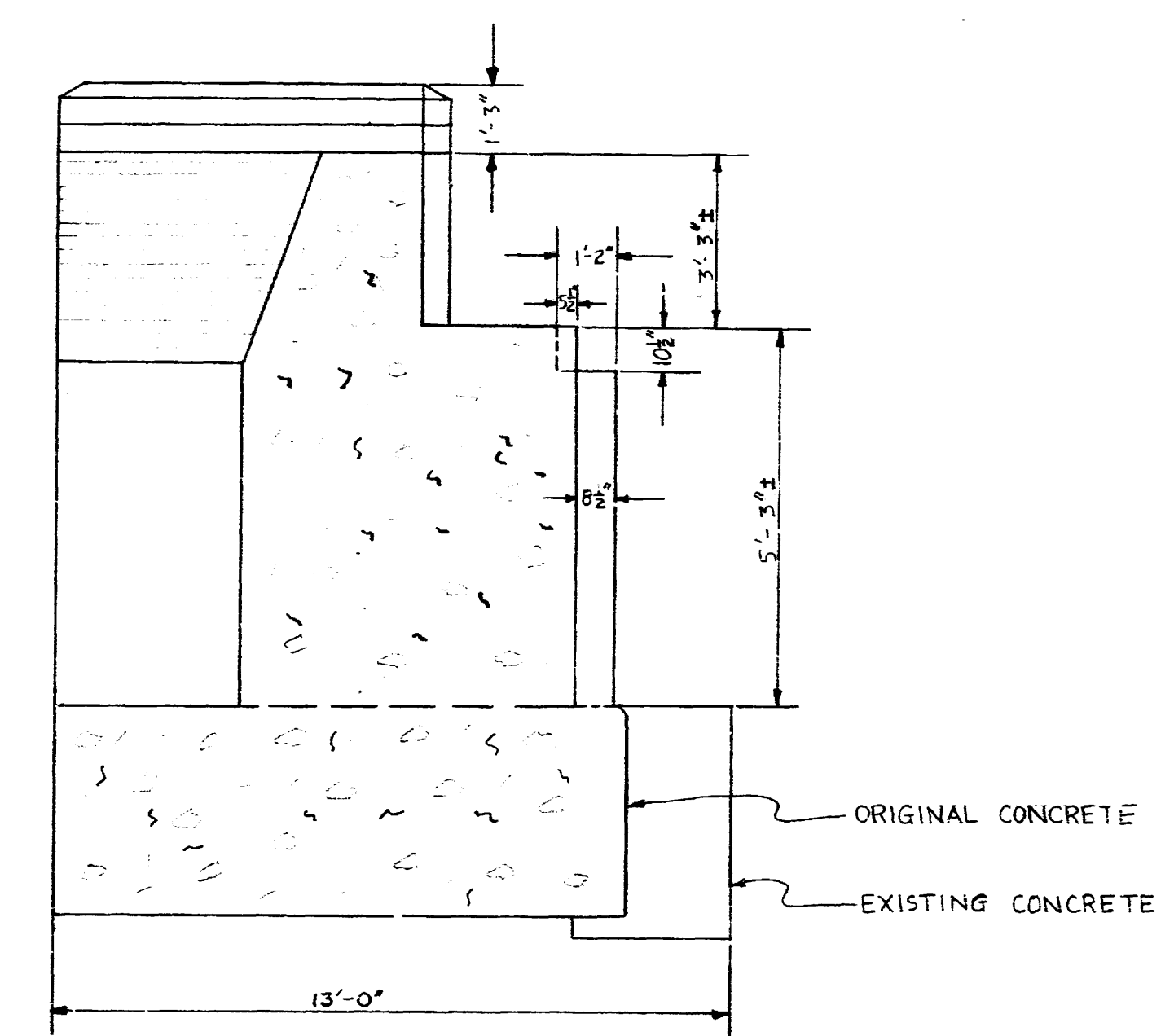
T-2-238.13



DETAIL 1: DETAILS OF REINFORCING STEEL
IN NEW CONCRETE.

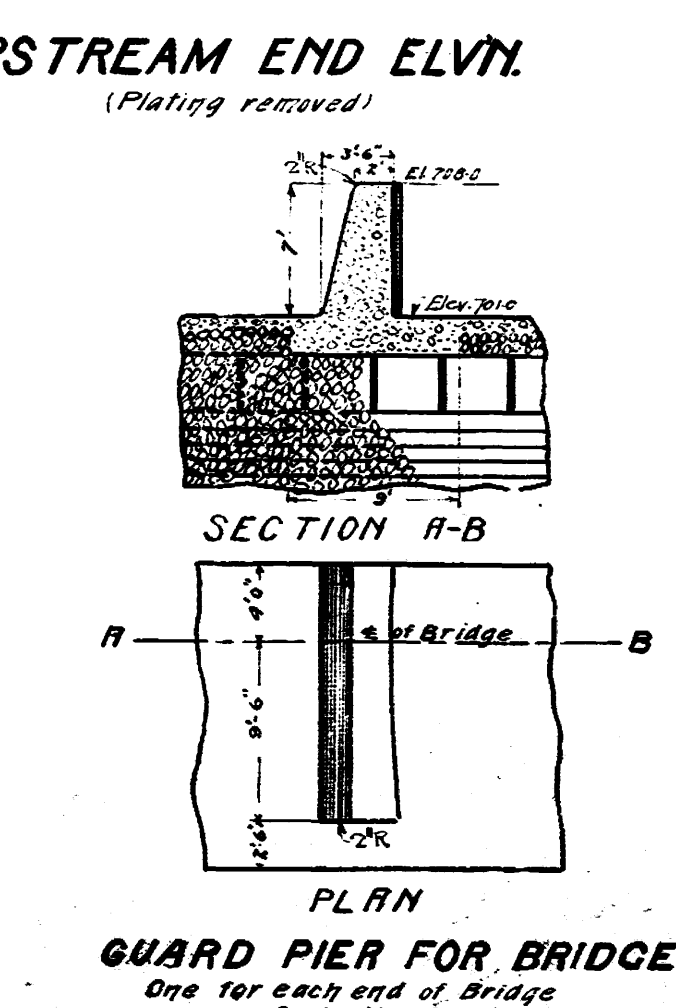
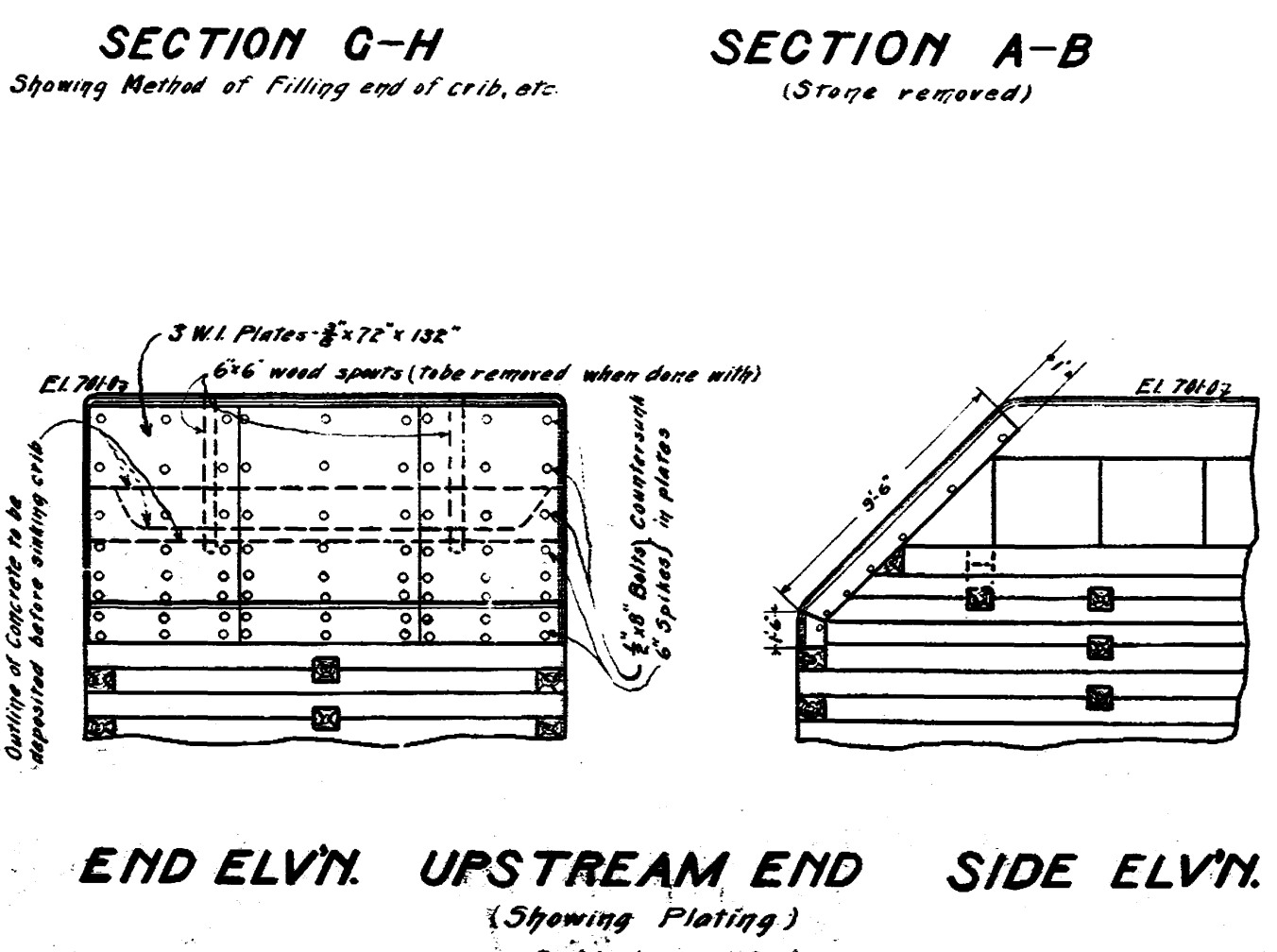
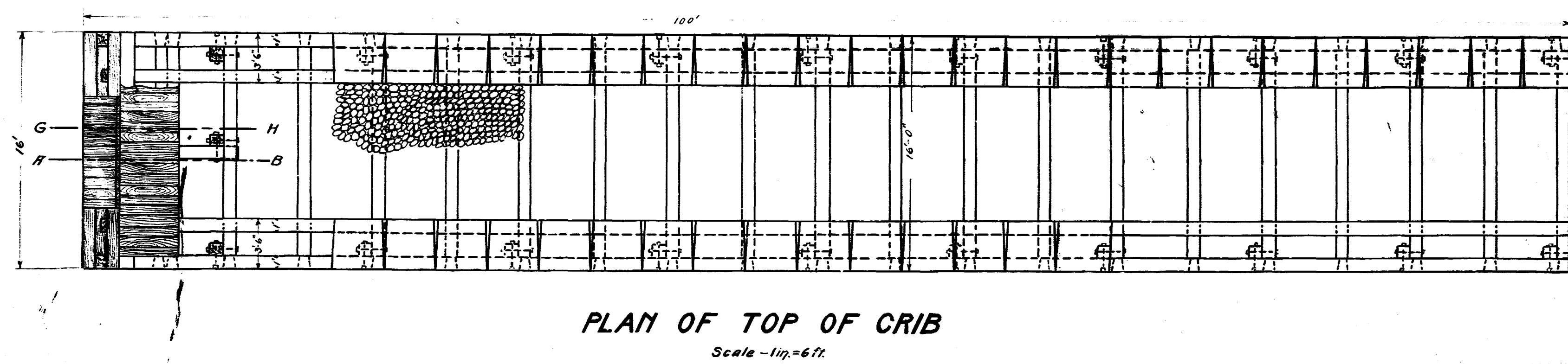
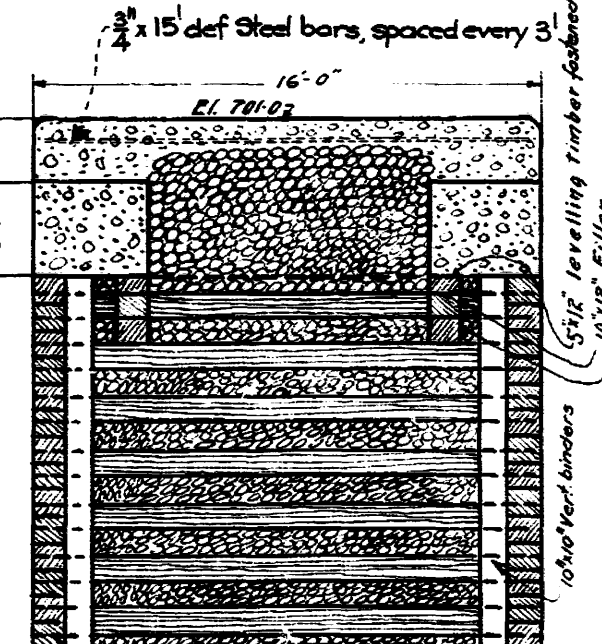
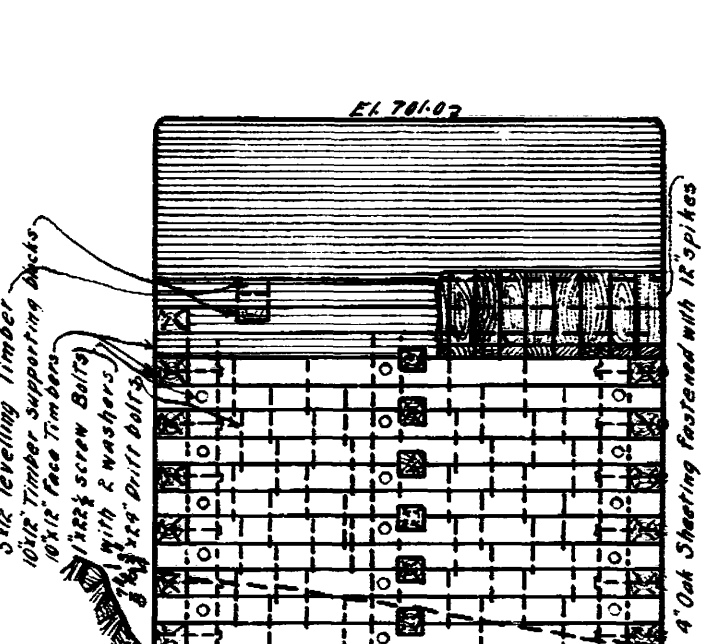
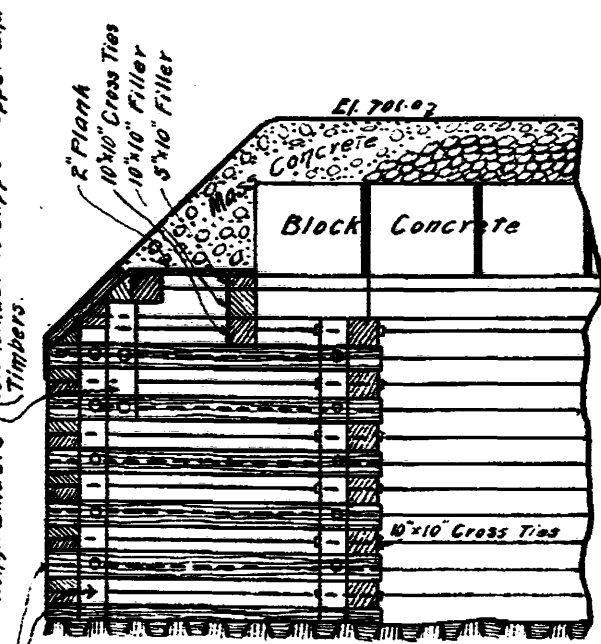
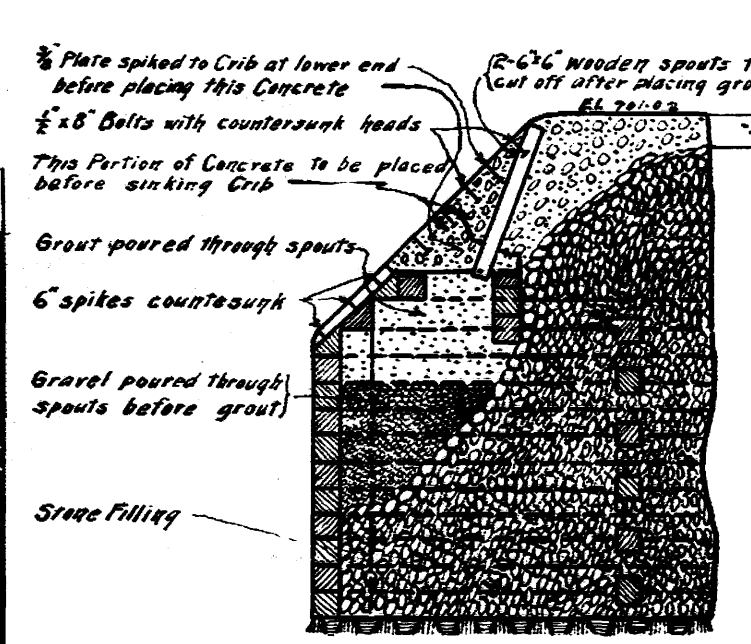
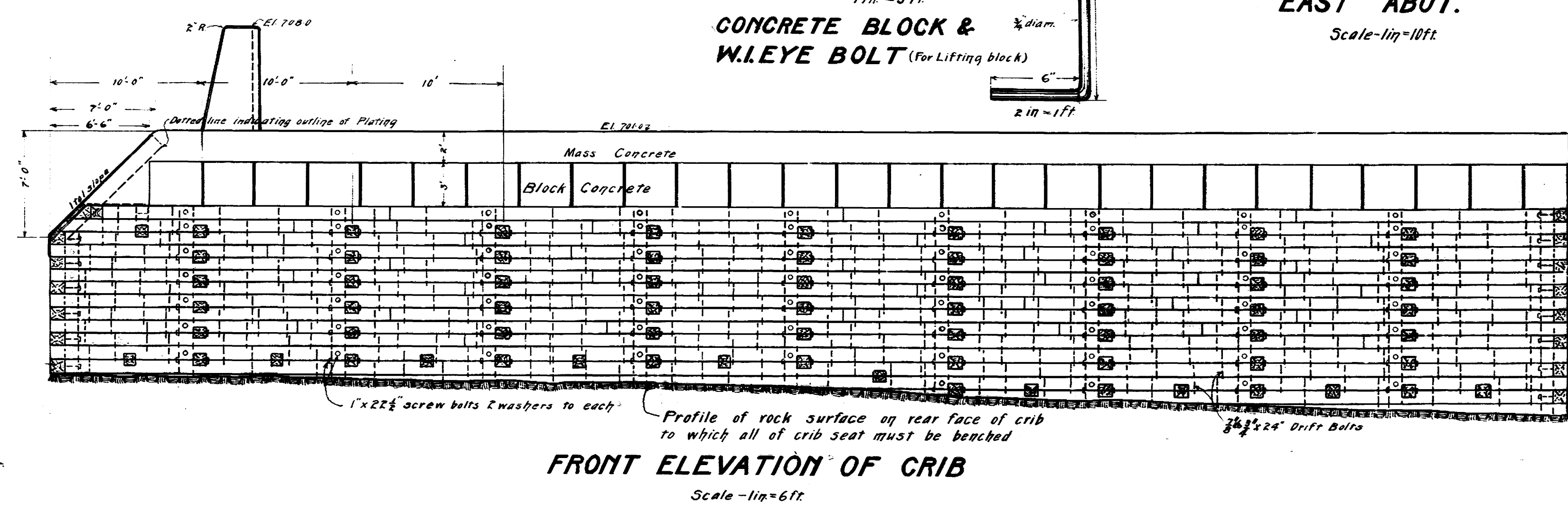
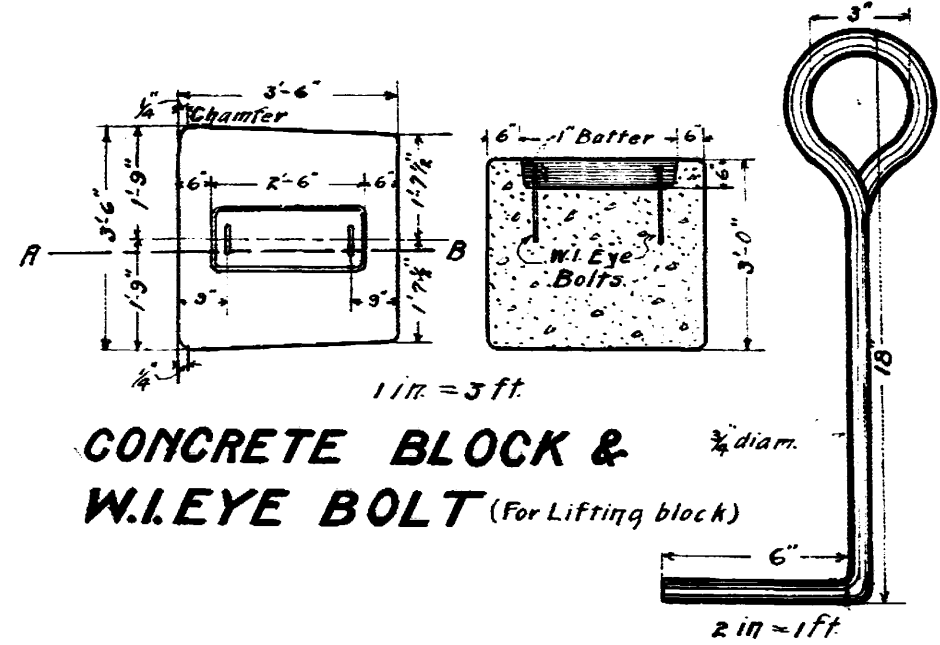
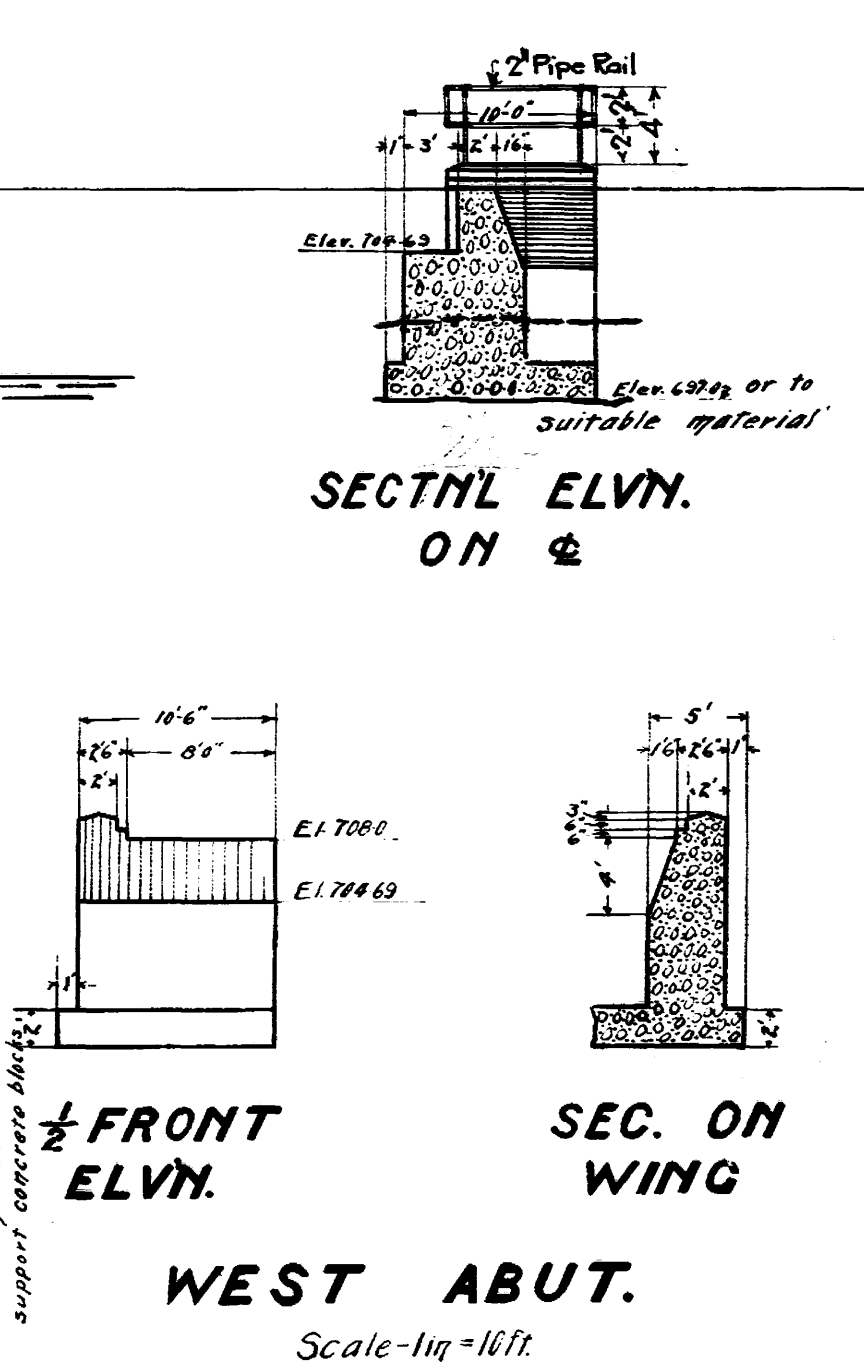
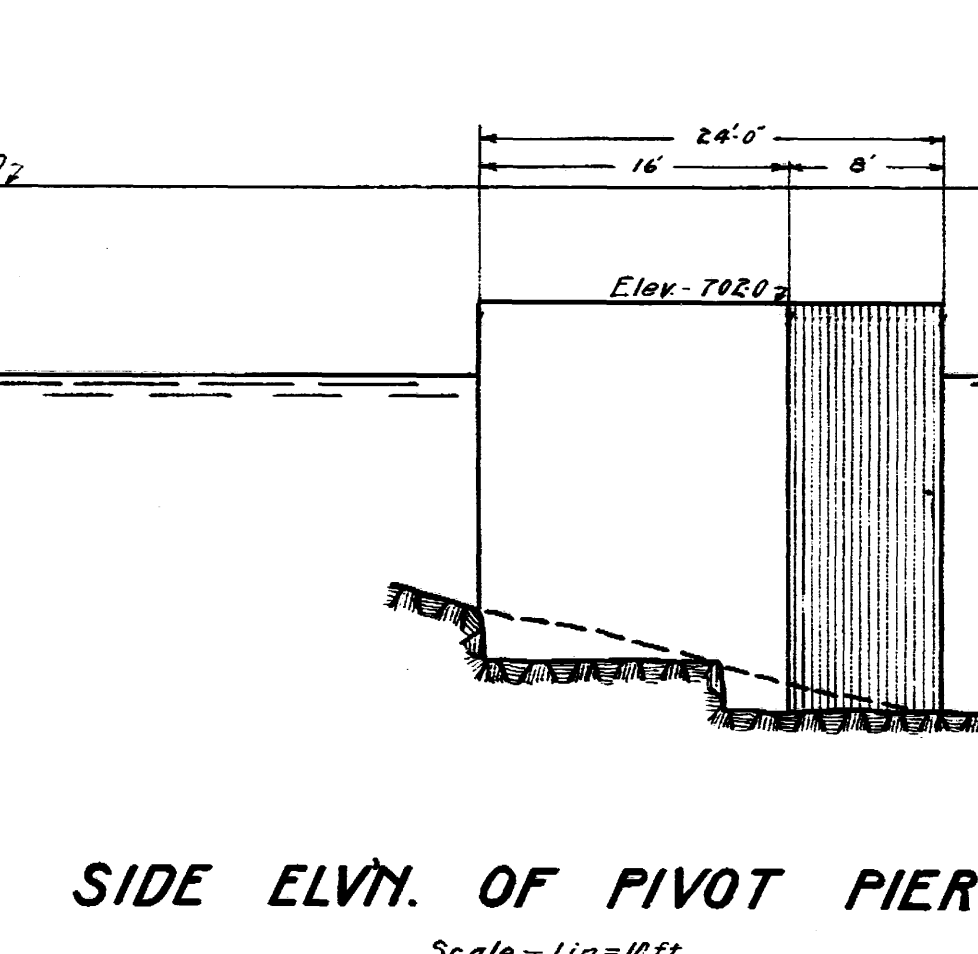
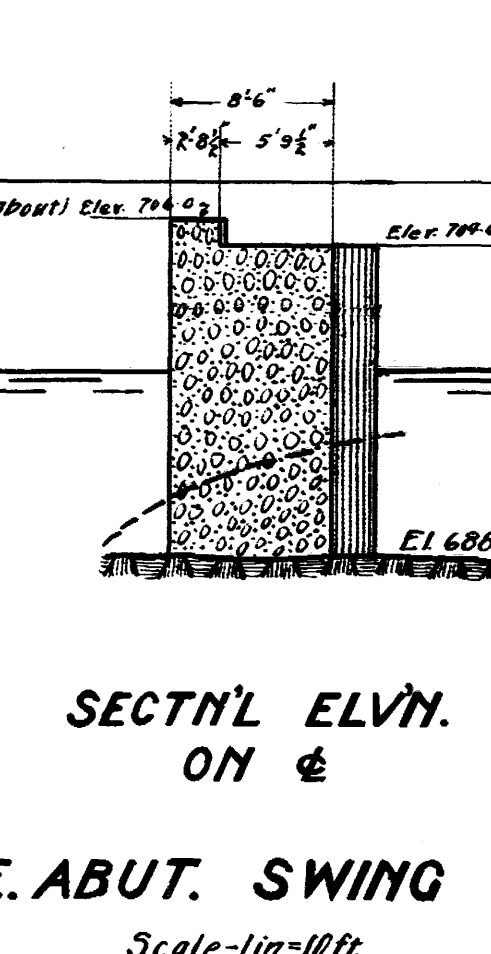
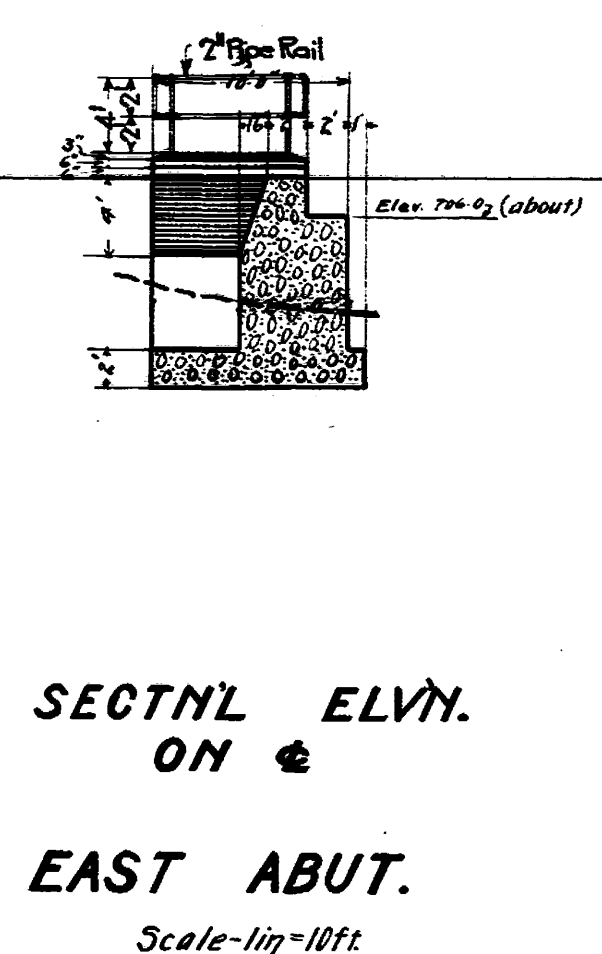
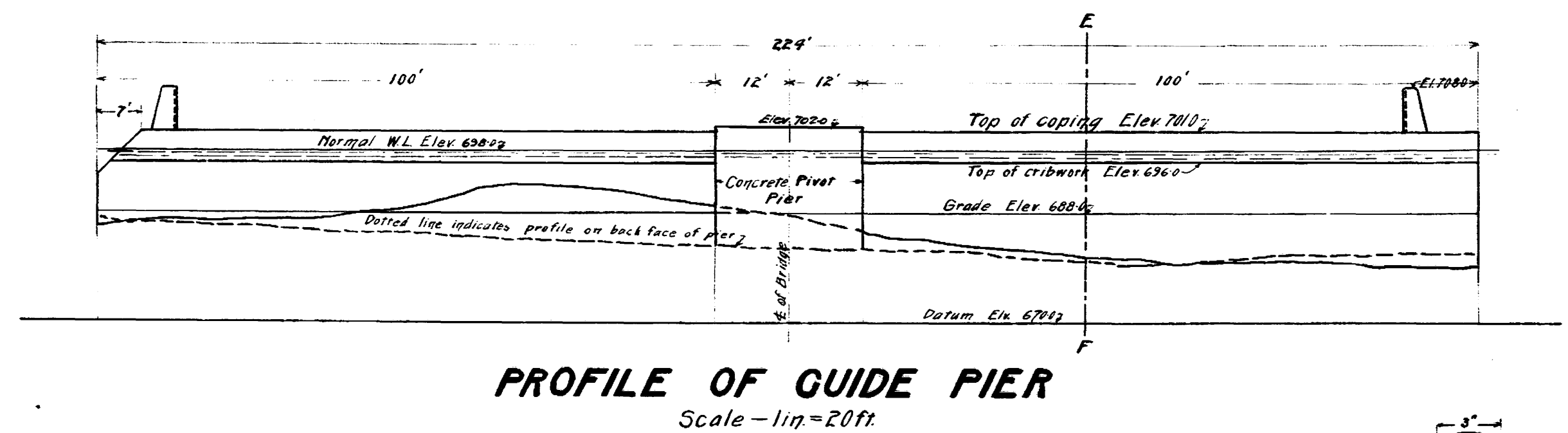
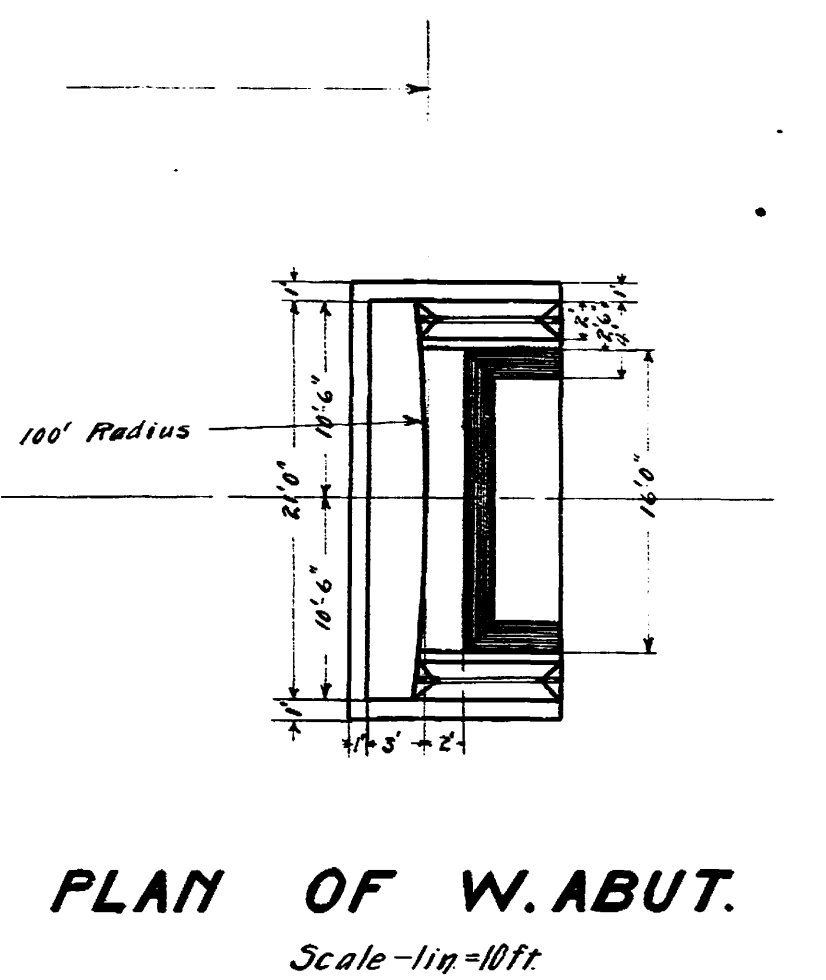
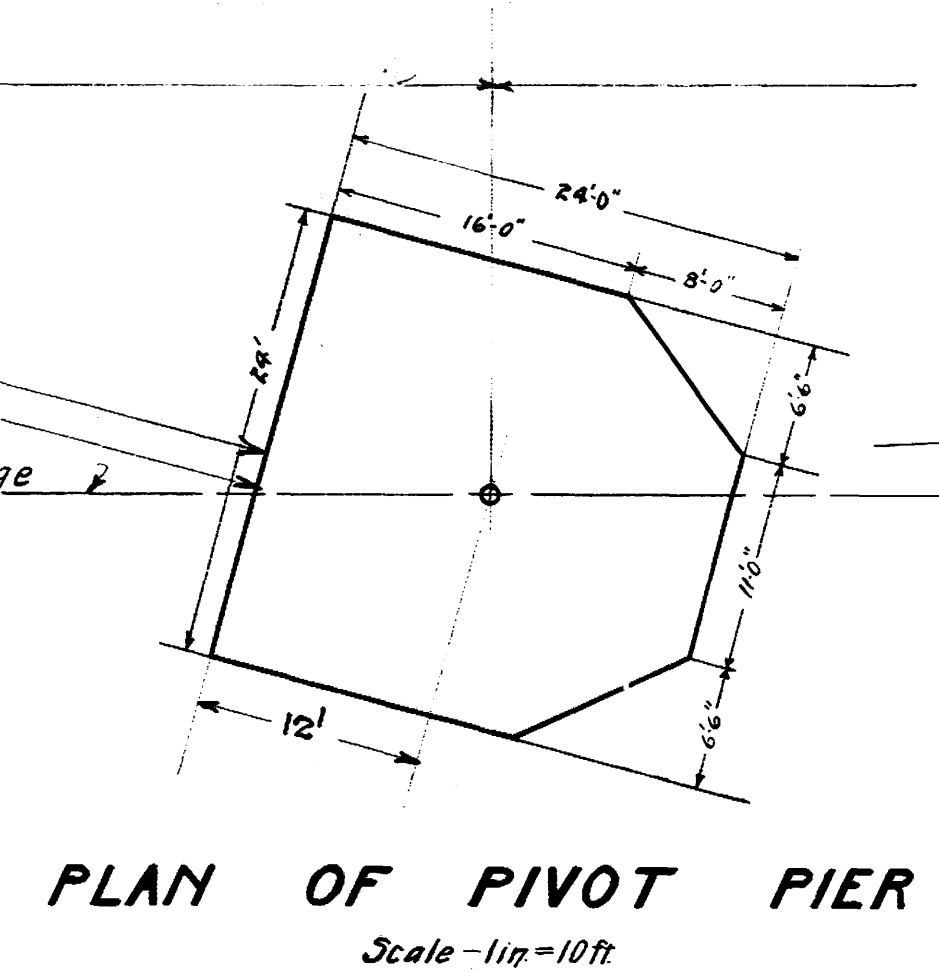
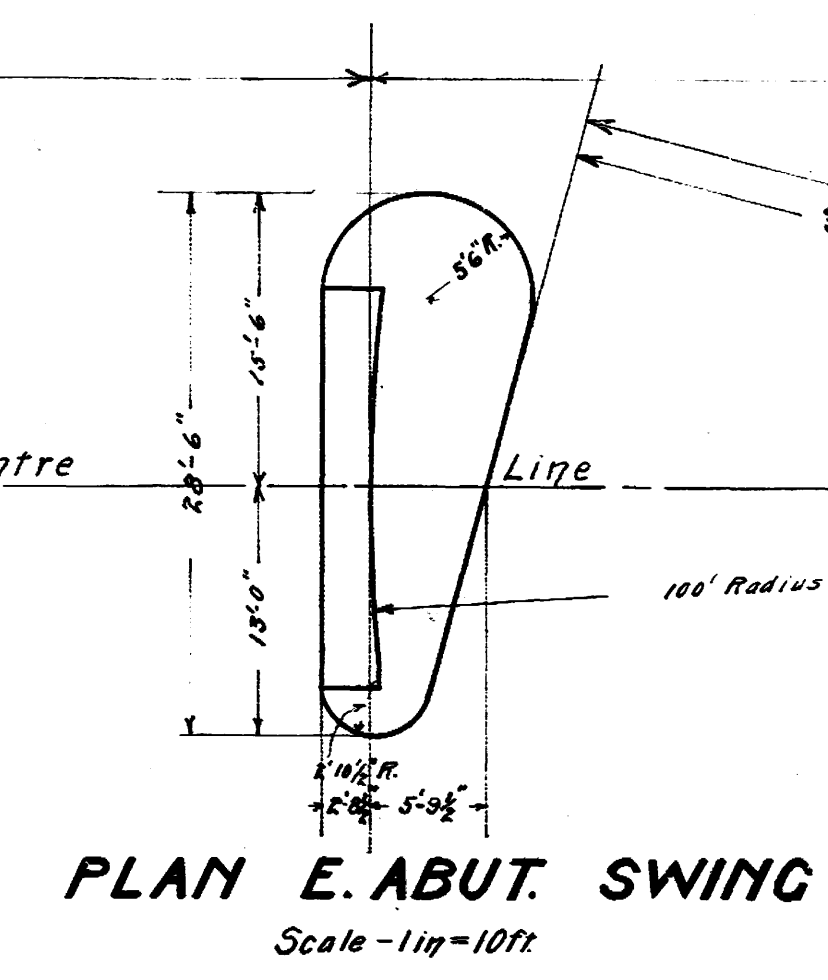
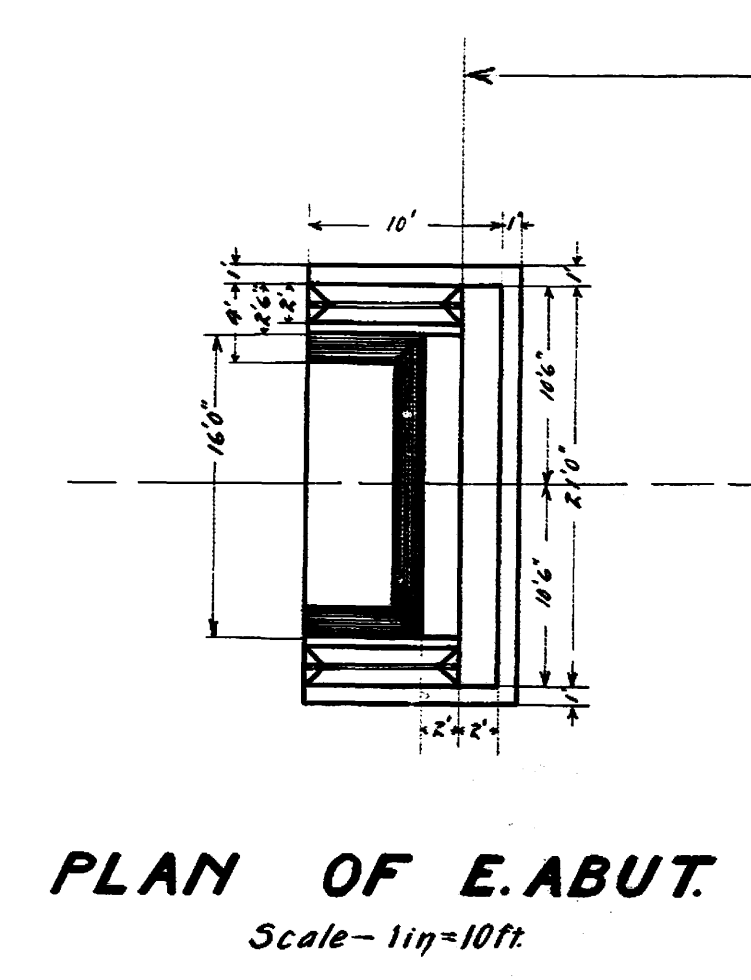
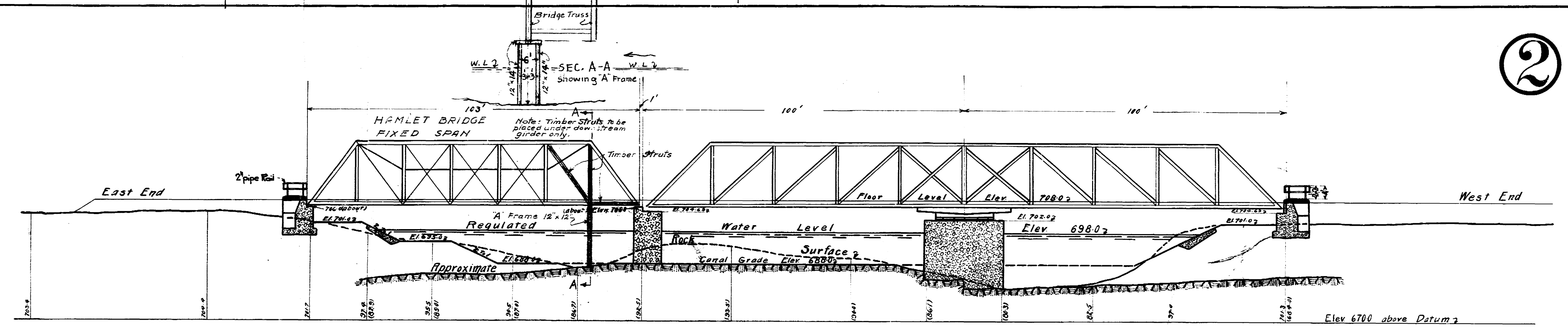
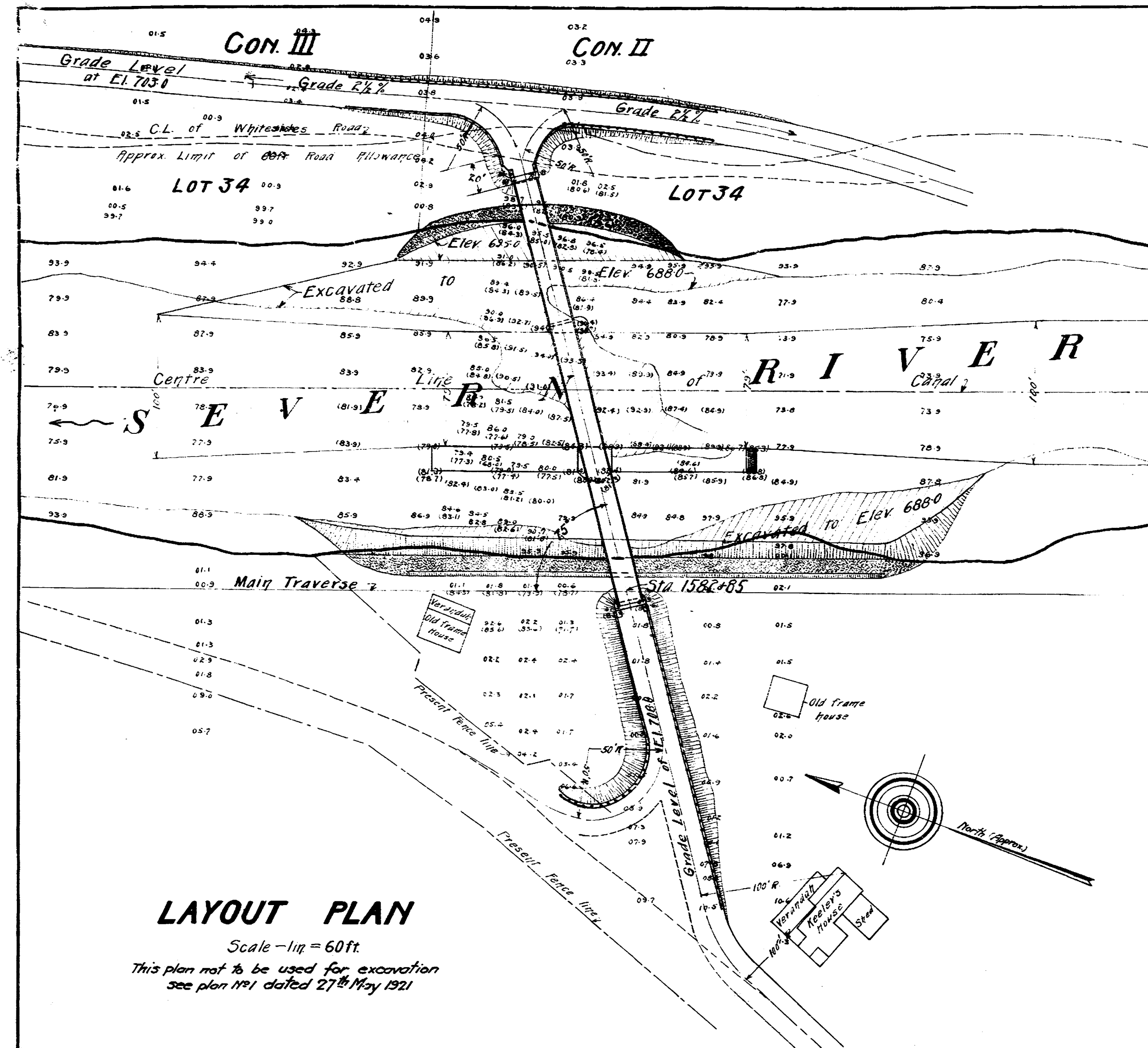


SECTION A-A
SCALE: 1"=3'-0"



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

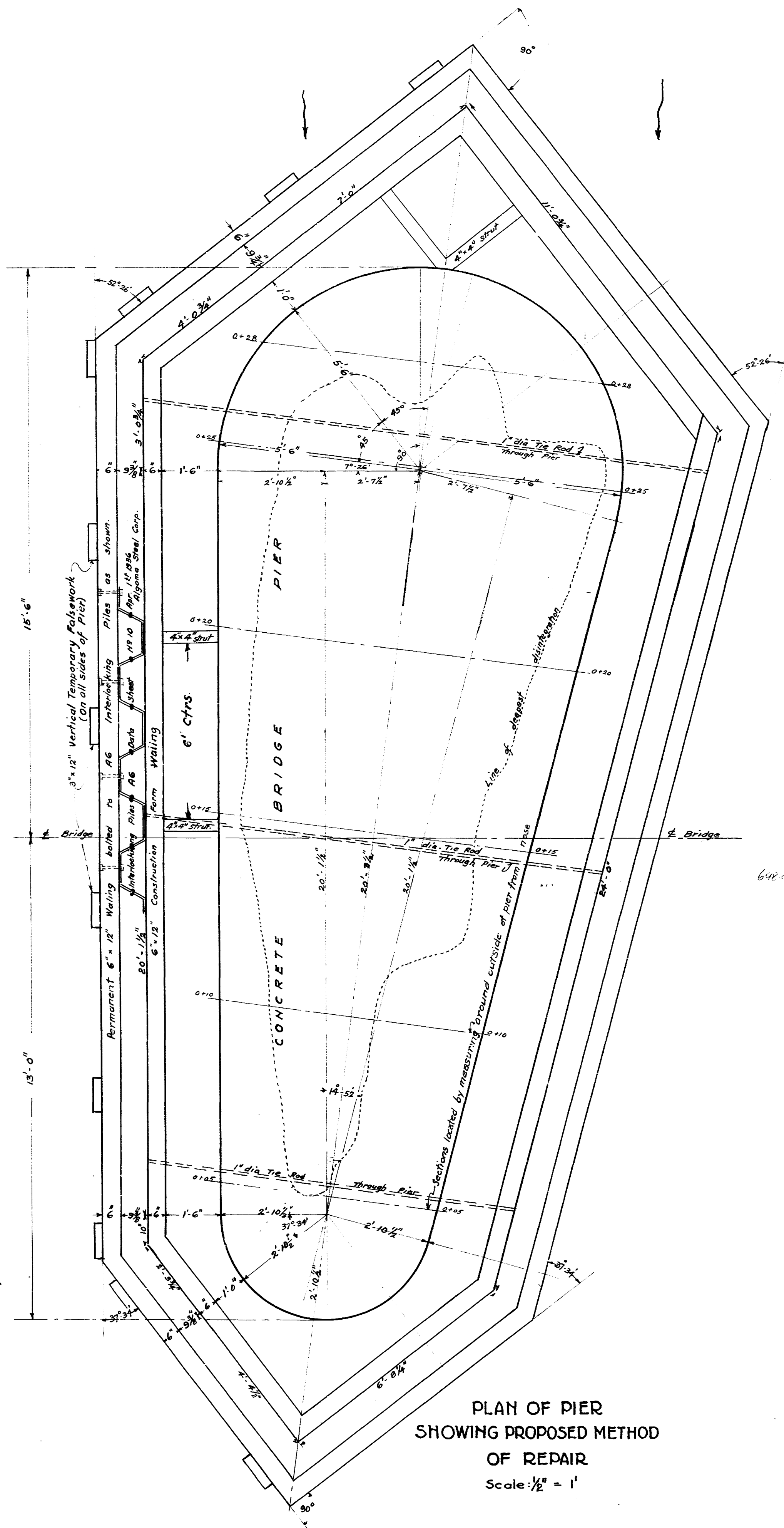
DEPARTMENT OF TRANSPORT	
MARINE WORKS	
CANALS DIVISION	
TRENT CANAL SYSTEM	
HAMLET BRIDGE	
ALTERATIONS TO CONCRETE ON WEST PIER.	
SCALE: AS SHOWN	DATE: OCT. 19 /70
DESIGN:	
DRAWN: W.H.C.	
CHECKED:	
SUPERINTENDING ENGINEER	T.C. 3950-G



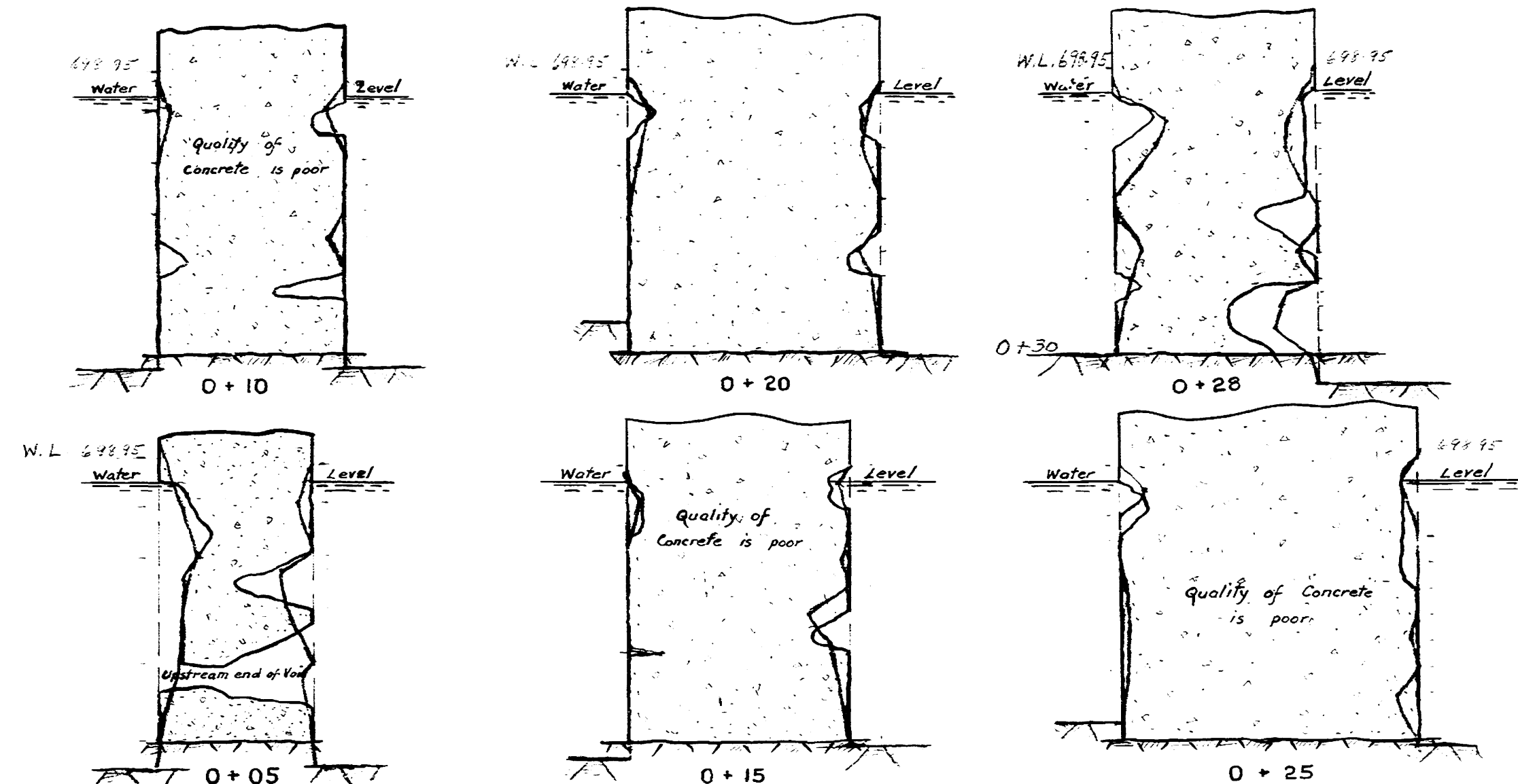
**TRENT CANAL
SEVERN DIVISION SECTION N°3
LAYOUT PLAN
AND
DETAILS OF SUBSTRUCTURE
OF
HAMLET HIGHWAY BRIDGE
(AMENDED PLAN)**

Superintending Engineer's Office
14th July, Peterboro, Ont.
1915
D.T. Cason
Superintending Engineer
Peterboro, Ont. 27th May, 1921

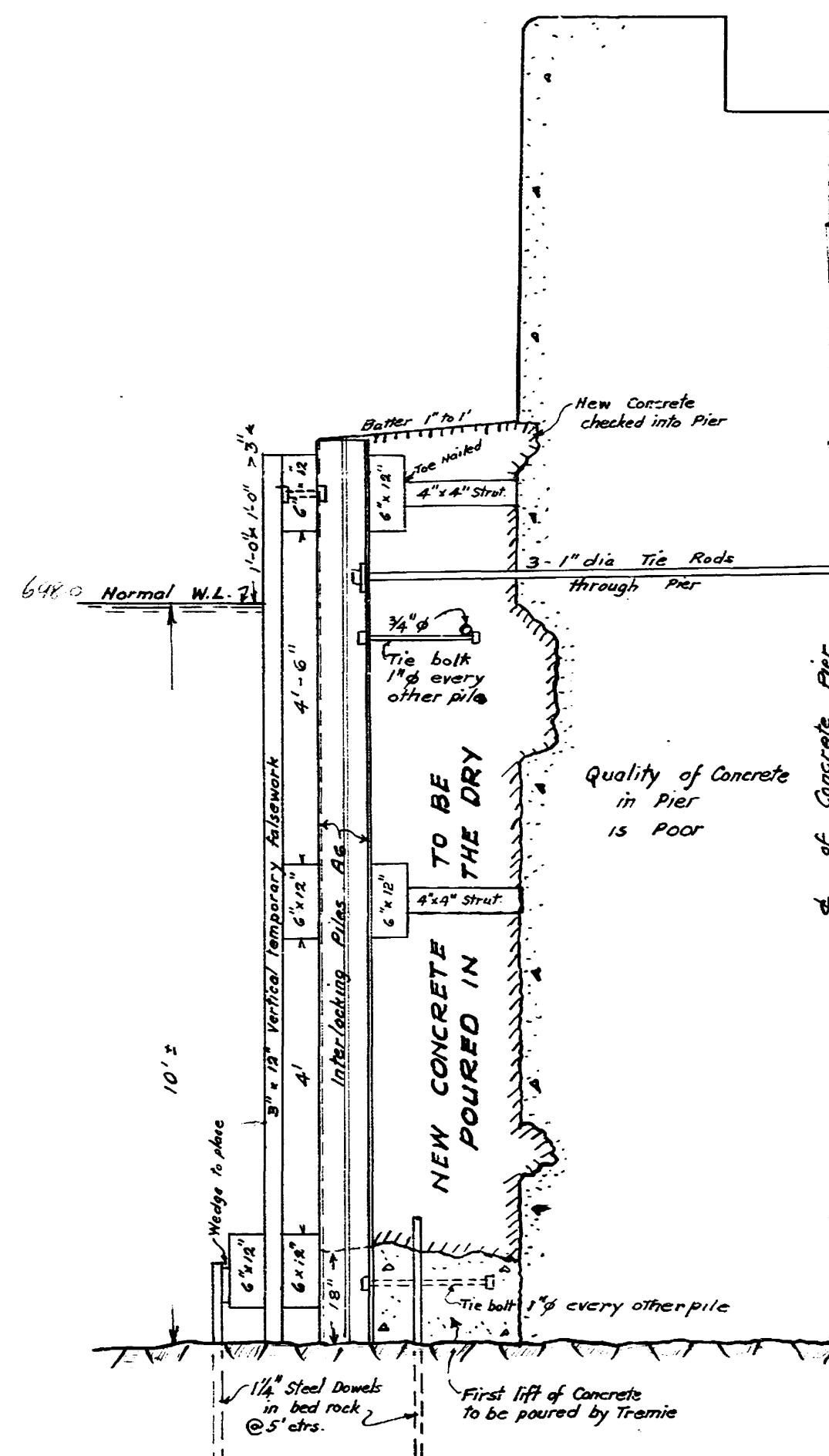
W.G.M. July 1915



PLAN OF PIER
SHOWING PROPOSED METHOD
OF REPAIR
Scale: $\frac{1}{2}'' = 1'$

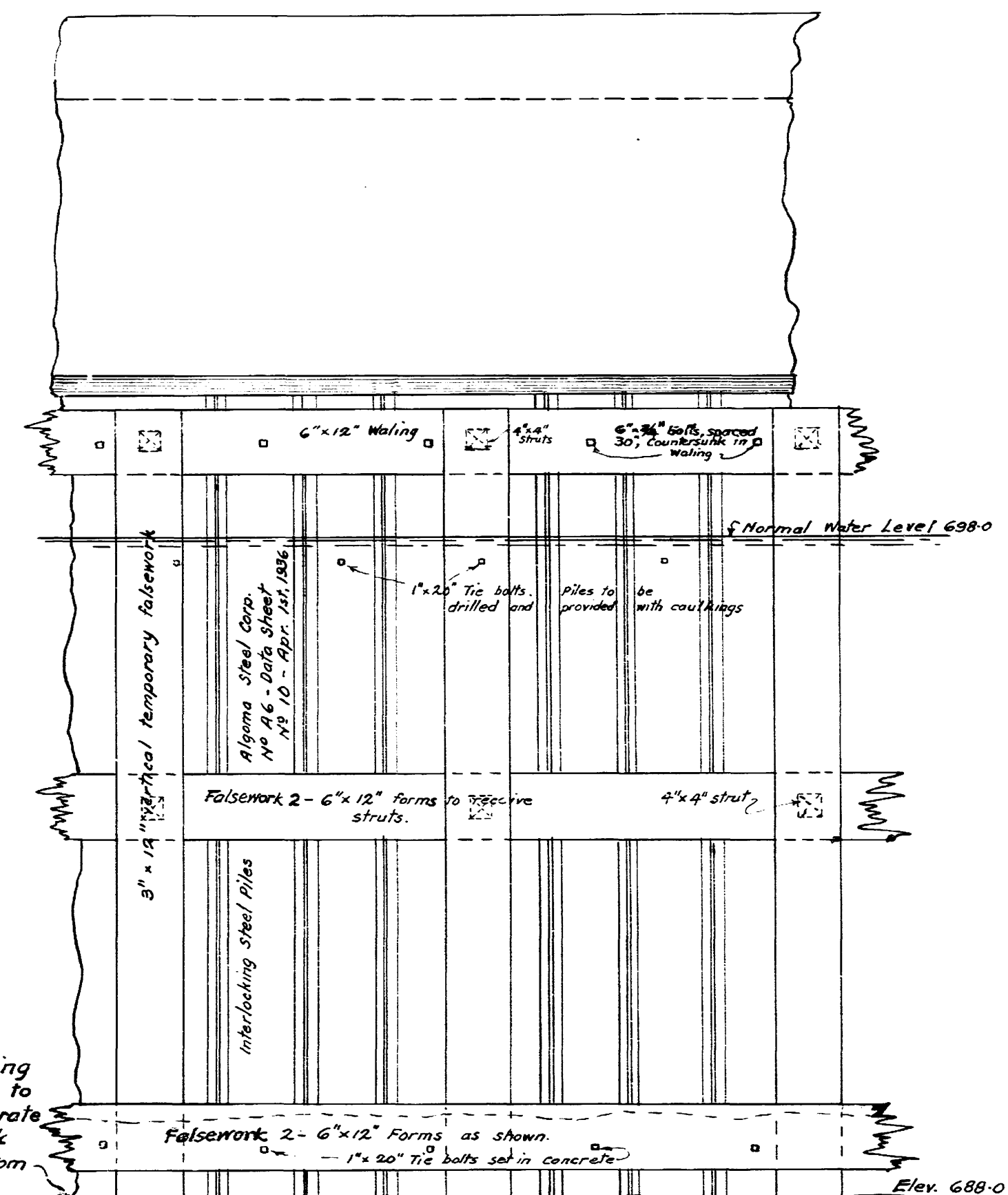


SECTIONS THROUGH PIER SHOWING DISINTEGRATION
Scale: $1'' = 5'$



HALF-SECTION THROUGH PIER SHOWING PROPOSED
REPAIR NEAR CENTRE LINE OF BRIDGE
Scale: $\frac{1}{2}'' = 1'$

Note:-Algoma B-5 Piling could apparently be substituted safely in place of A-6 Piling.



PART-ELEVATION OF TEMPORARY FALSE-WORK AND SHEET PILING IN PLACE
WITH $6'' \times 12''$ WALING
Scale: $\frac{1}{2}'' = 1'$

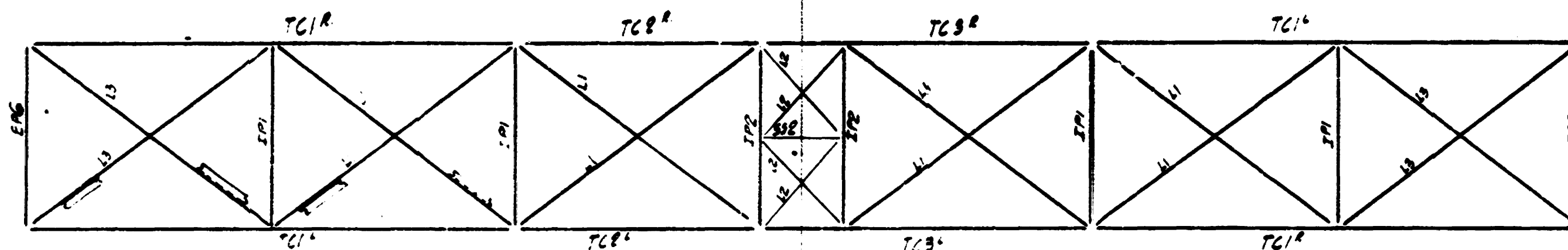
DEPARTMENT OF TRANSPORT
TRENT CANAL
PRELIMINARY PLAN OF REPAIRS TO THE
RIVER PIER
OF HAMLET HIGHWAY BRIDGE
Scales as indicated

Peterborough, Aug. 31st, 1945

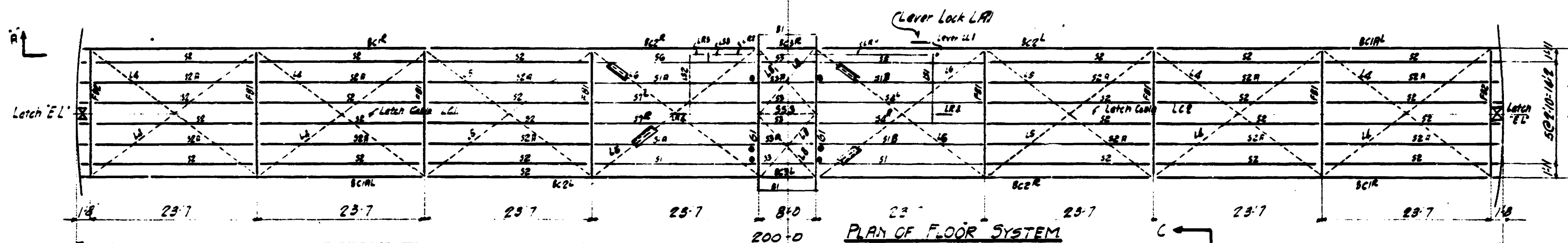
T. C. 940

C-5-2883(a)
T-2-238.17

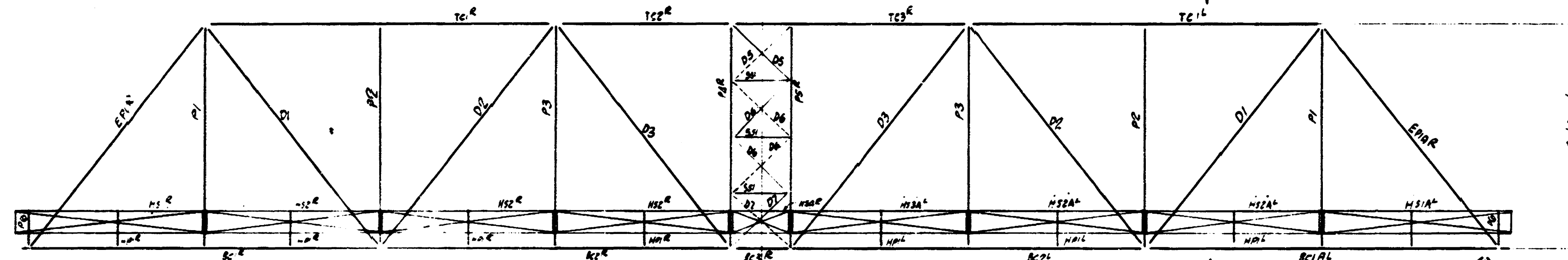
See also Plan C-5-2883



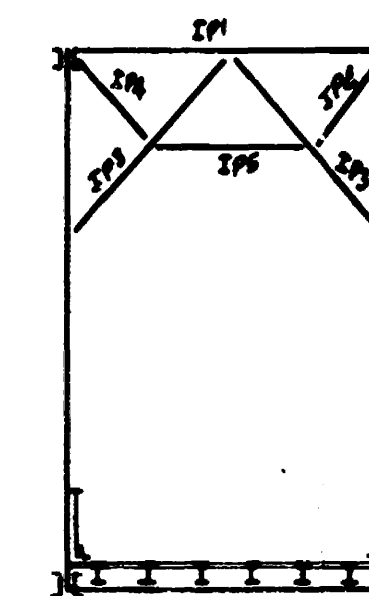
TOP CHORD PLAN



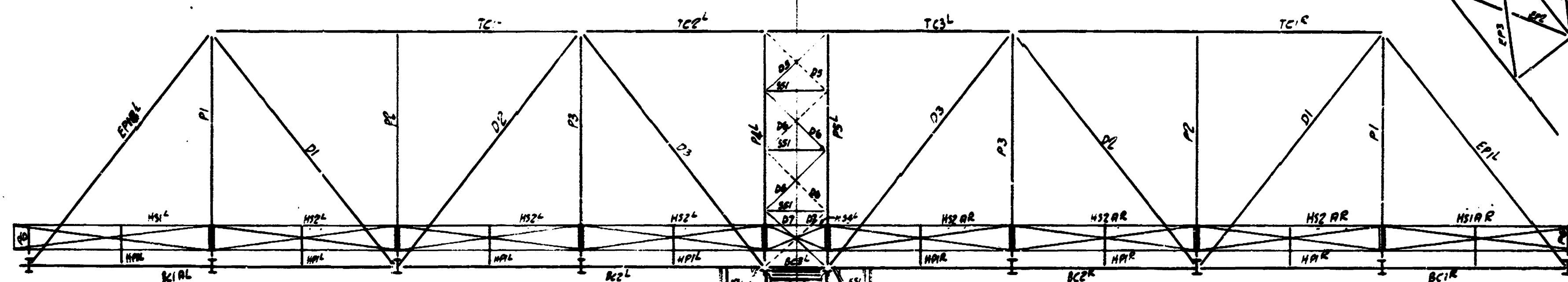
PLAN OF FLOOR SYSTEM



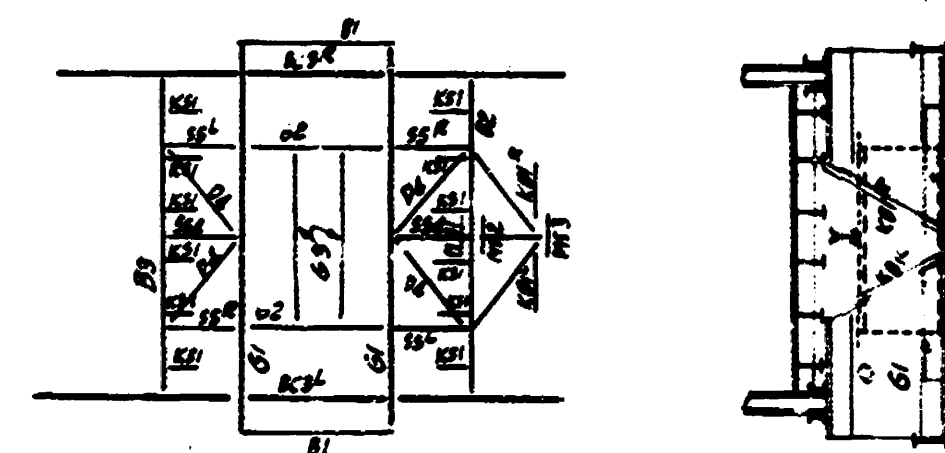
SECTION A-A



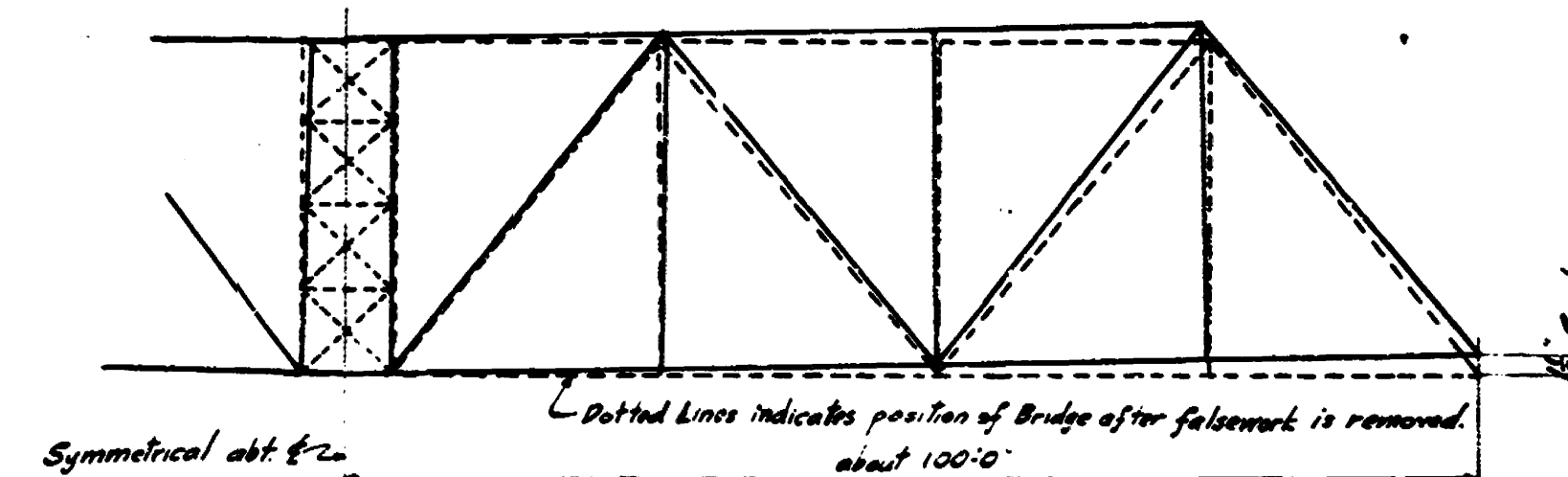
SECTION C-C



ELEVATION



PLAN OF MACHINERY SUPPORTS

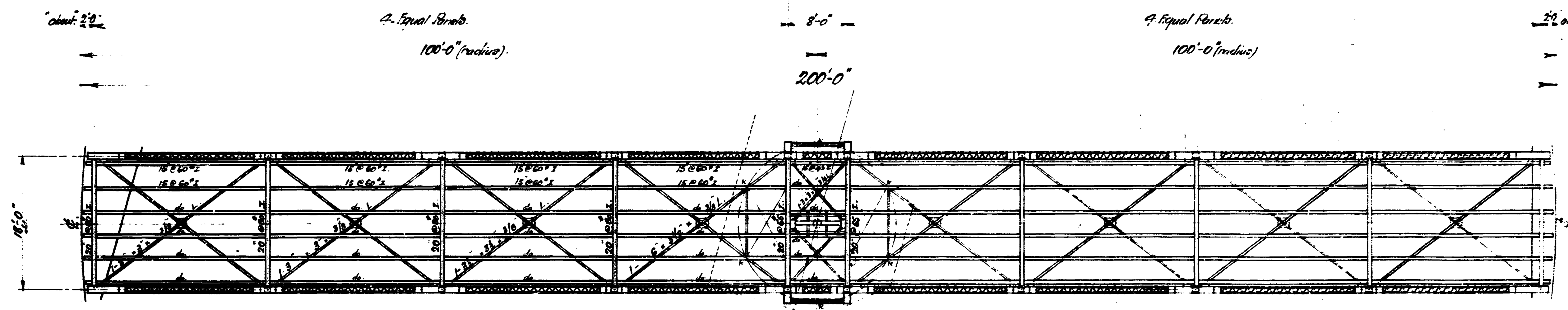
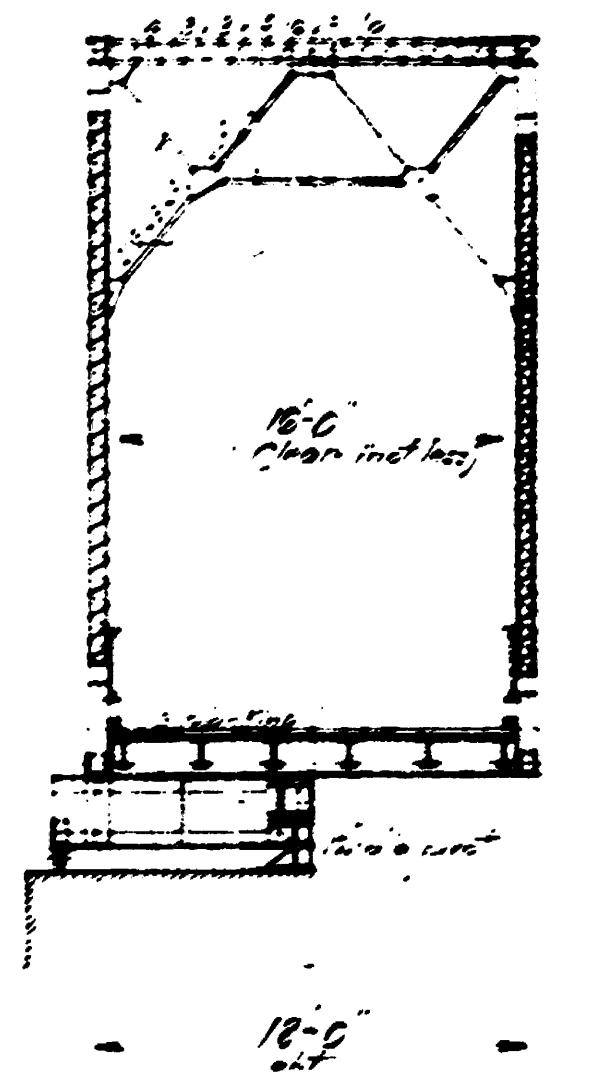
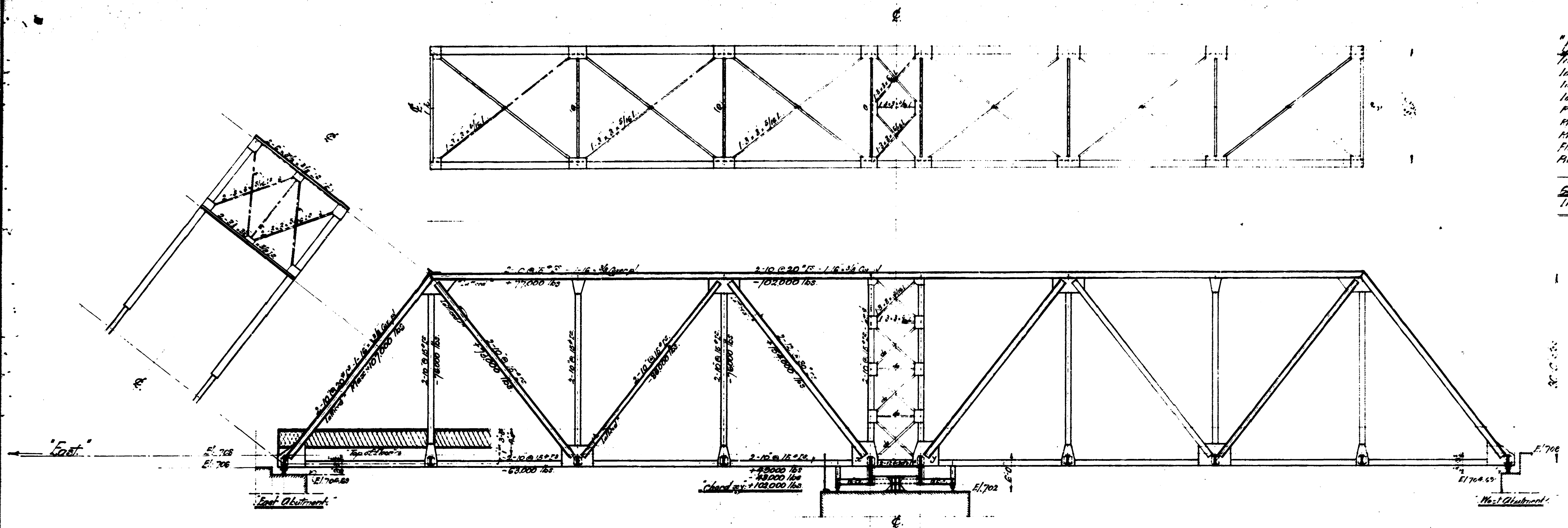


CAMBER DIAGRAM

DEPARTMENT OF RAILWAYS & CANALS		
200 Ft. Highway Swing Span		
over Trent Canal near Hamlet, Ont.		
ERECTION DIAGRAM		
STANDARD STEEL CONSTRUCTION CO. Limited		
WELLAND, - ONTARIO		
Des. R.N.J.	Date Feb. 28-22	CONT. 1687
Trd.		
Chk. J.S.	5-24-22	Diag. D.

Details:
 Truss gusset plates $\frac{1}{2}$ thick.
 Lateral cross plates $\frac{1}{2}$ thick.
 Tie plates $\frac{1}{4}$ thick.
 Lathing $2\frac{1}{2}$ x $\frac{1}{2}$ single.
 Rivets $\frac{3}{4}$ diameter in trusses and floor.
 Rivets $\frac{3}{4}$ " " lateral.
 Rivets $\frac{1}{2}$ " " handrail lathing.
 Flooring: 3" planing on nailing strips.
 Deck: 3" disc. upper & lower of hard steel, inside of deck plates loose.

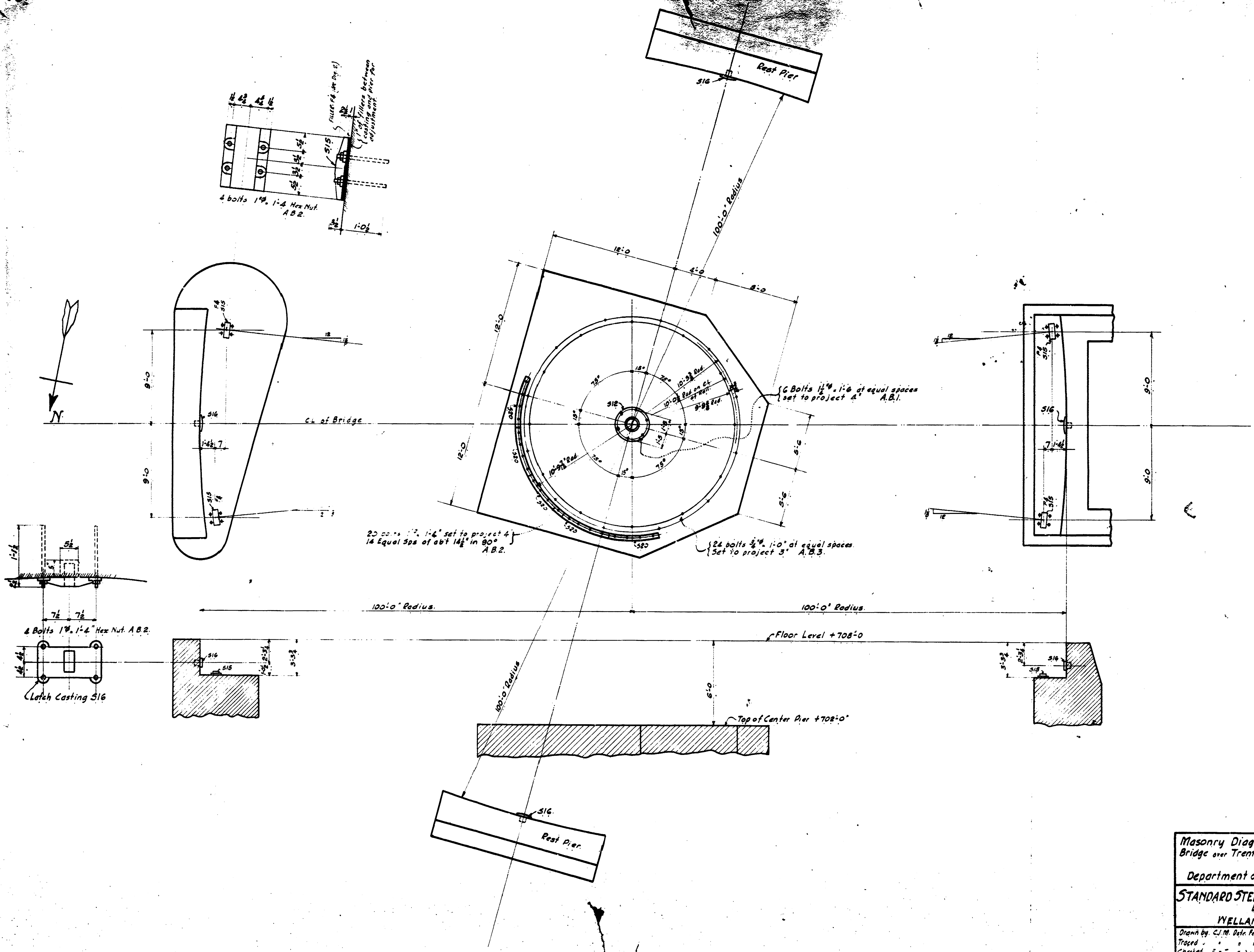
General Specification: Department of Railways & Canals.
 Live load: Class I.



Loading Girders:
 Size of loading girders not given - Each girder can
 provision these to suit any standard pattern of
 railings they might have.

Trent Canal
Hamlet Spring Bridge
Steel Superstructure
200'-0" Span
Scale $\frac{1}{8}$ " = 1'

Department of Railways & Canals.
 Chief Engineer's Office, Ottawa, O.
 Bruce G. Gagnier,
 Assistant Engineer.
 Drawing No. 1.
 M.S. Dec. 1901.

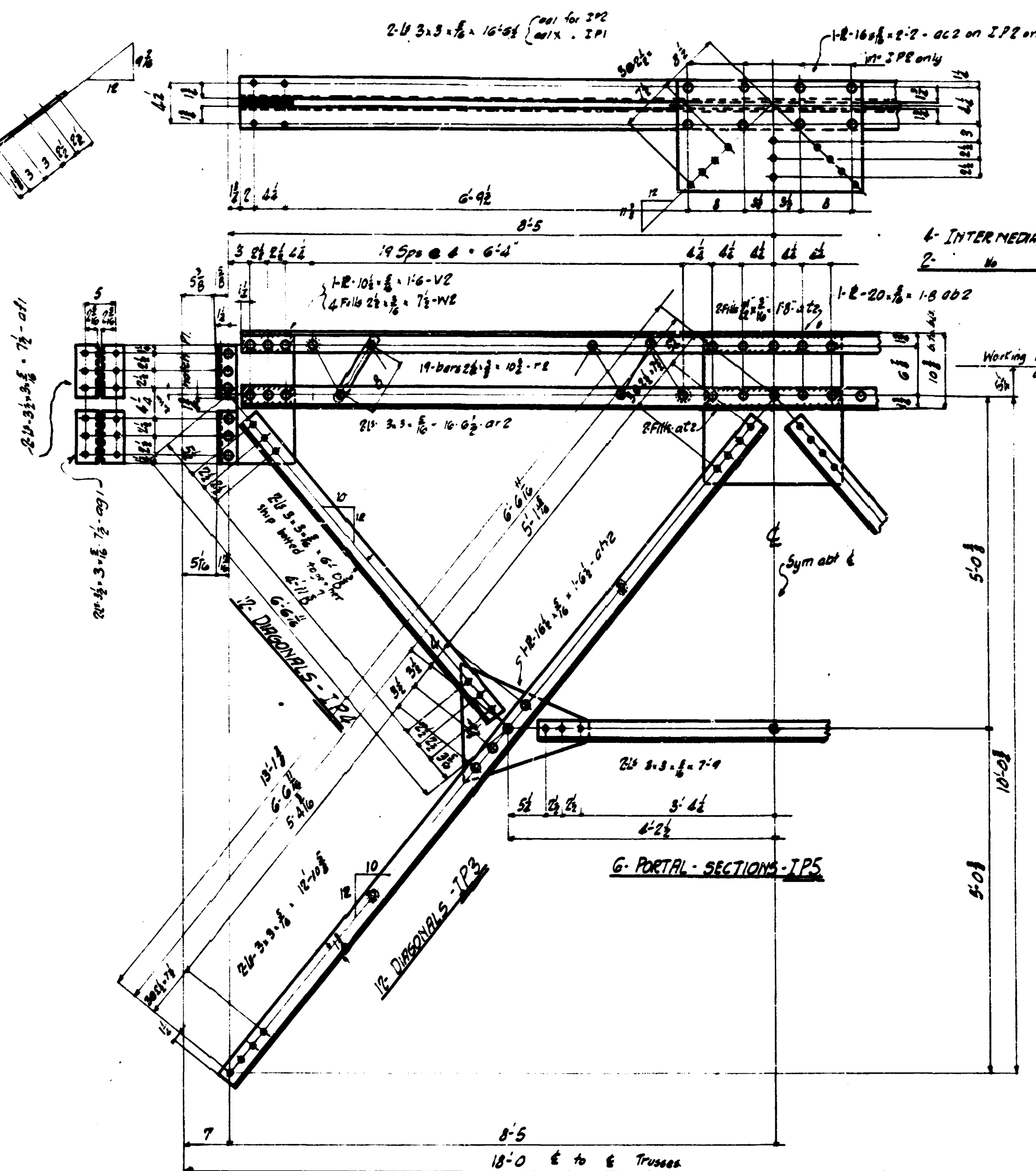
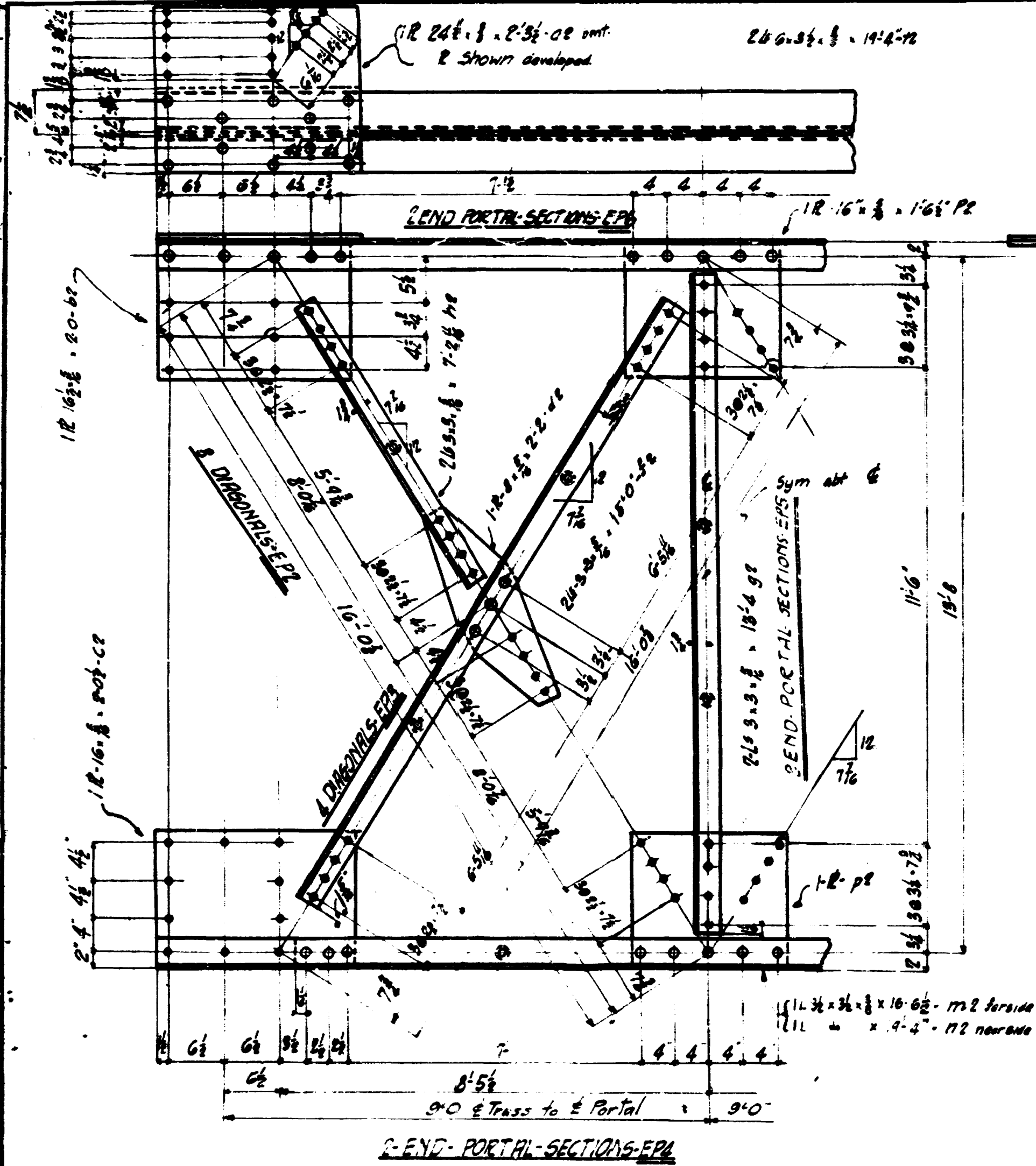


Masonry Diagram for 200ft Swing Bridge over Trent Canal at Hamlet, Ont. for Department of Railways & Canals.

STANDARD STEEL CONSTRUCTION CO
Limited.
WELLAND, ONTARIO.

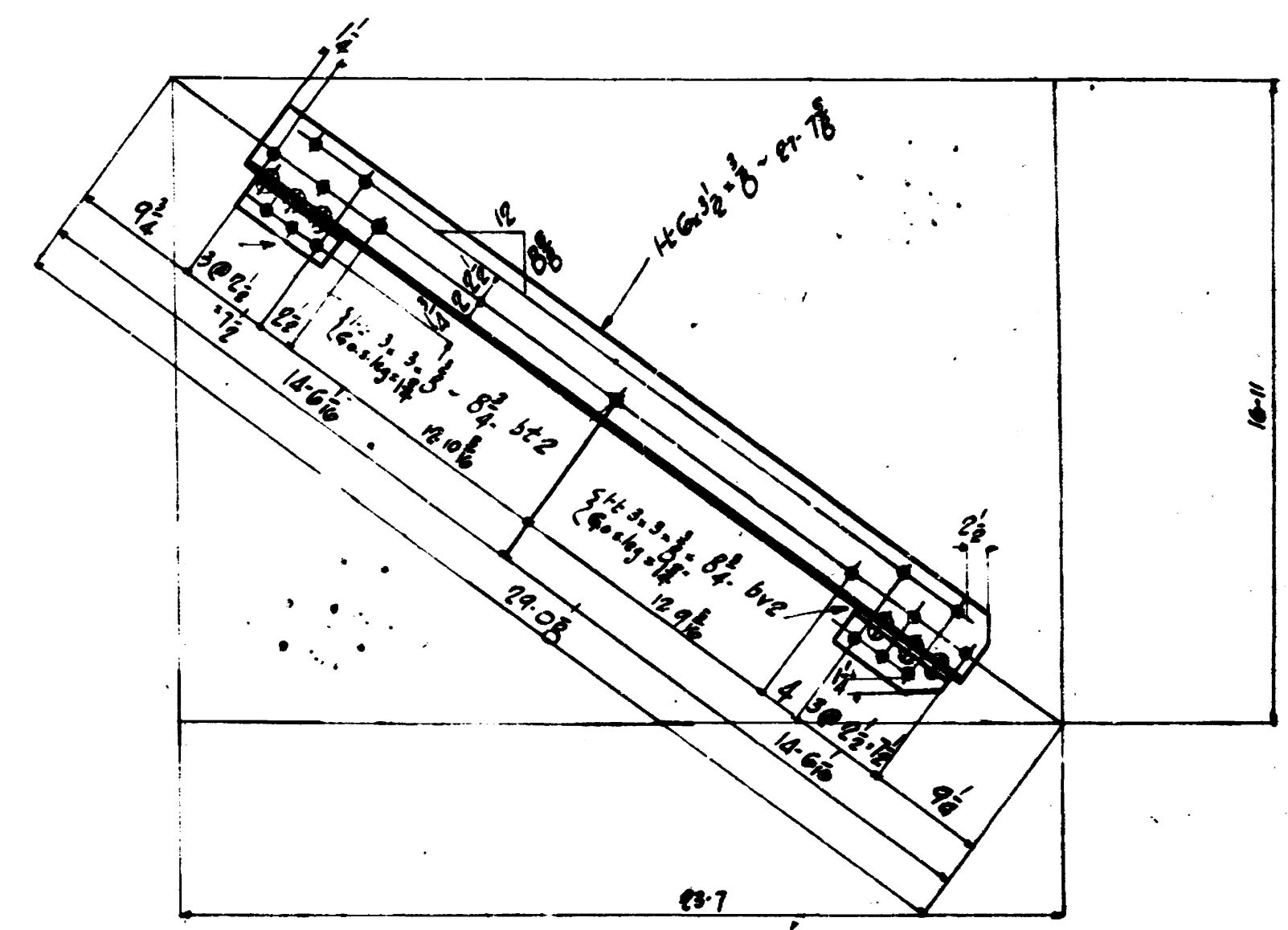
Drawn by C.J.M. Date Feb 17-22
Traced
Checked

CONT 1687
Diagram IV

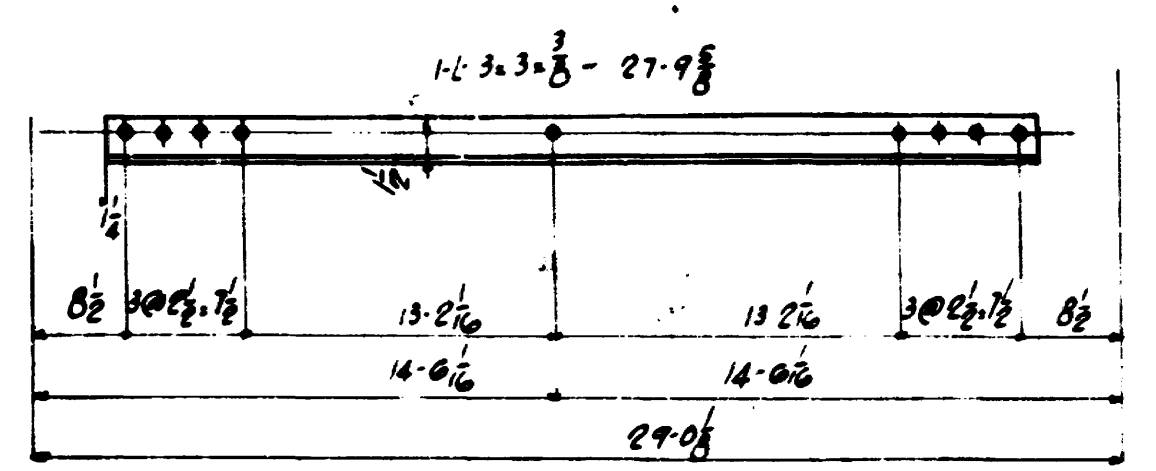


7/8	30 2 1/2	15 3/8	15 3/8	30 2 1/2	7/8	For L1
5/8	30 2 1/2	15 3/8	15 3/8	30 2 1/2	5/8	For L2
3/4	30 2 1/2	15 3/8	15 3/8	30 2 1/2	3/4	For L3
24 0 1/2						For L1
11 7/8						L2
24 0 1/2						L3

$HL-3 \times 3 \times \frac{3}{8}$: $\begin{cases} 28'-0" \text{ for L1} \\ 10'-5 1/2" \text{ for L2} \\ 27'-7" \text{ for L3} \end{cases}$
 8- LATERALS - L1
 4- " - L2
 4- " - L3



4 LATERALS - L6

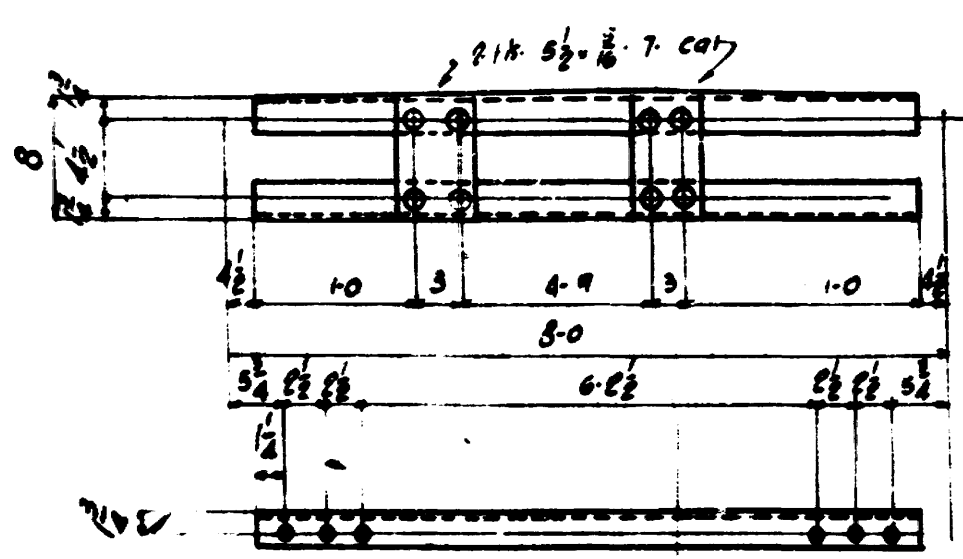


8- LATERALS - L1

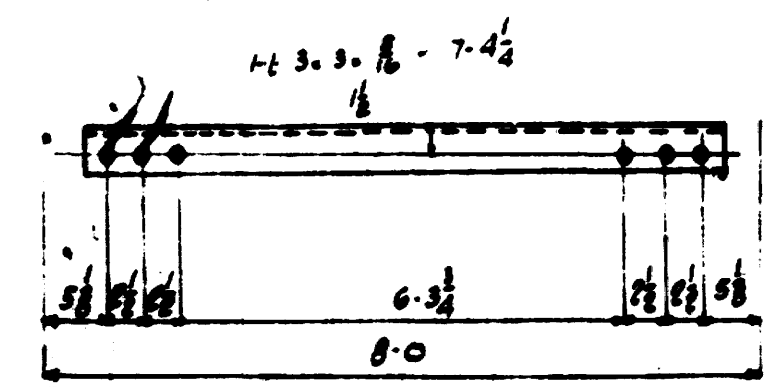
1/2	2 1/2	8-2	2 1/2	9	D5
9	2 1/2	8-7	2 1/2	9	D6
1 1/2	2 1/2	7-10 1/2	2 1/2	9	D7
10-11					

$HL-3 \times 3 \times \frac{3}{8}$: $\begin{cases} 4'-2 1/2" \text{ for D5} \\ 4'-7 1/2" \text{ for D6} \\ 8'-11" \text{ for D7} \end{cases}$

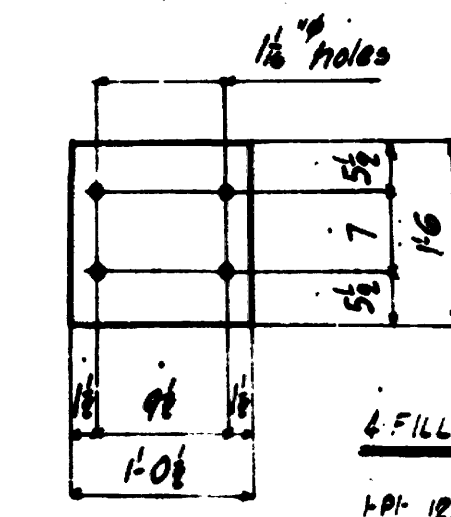
4- DIAGONALS - D5
 8- " - D6
 4- " - D7



6- STRUTS - S51



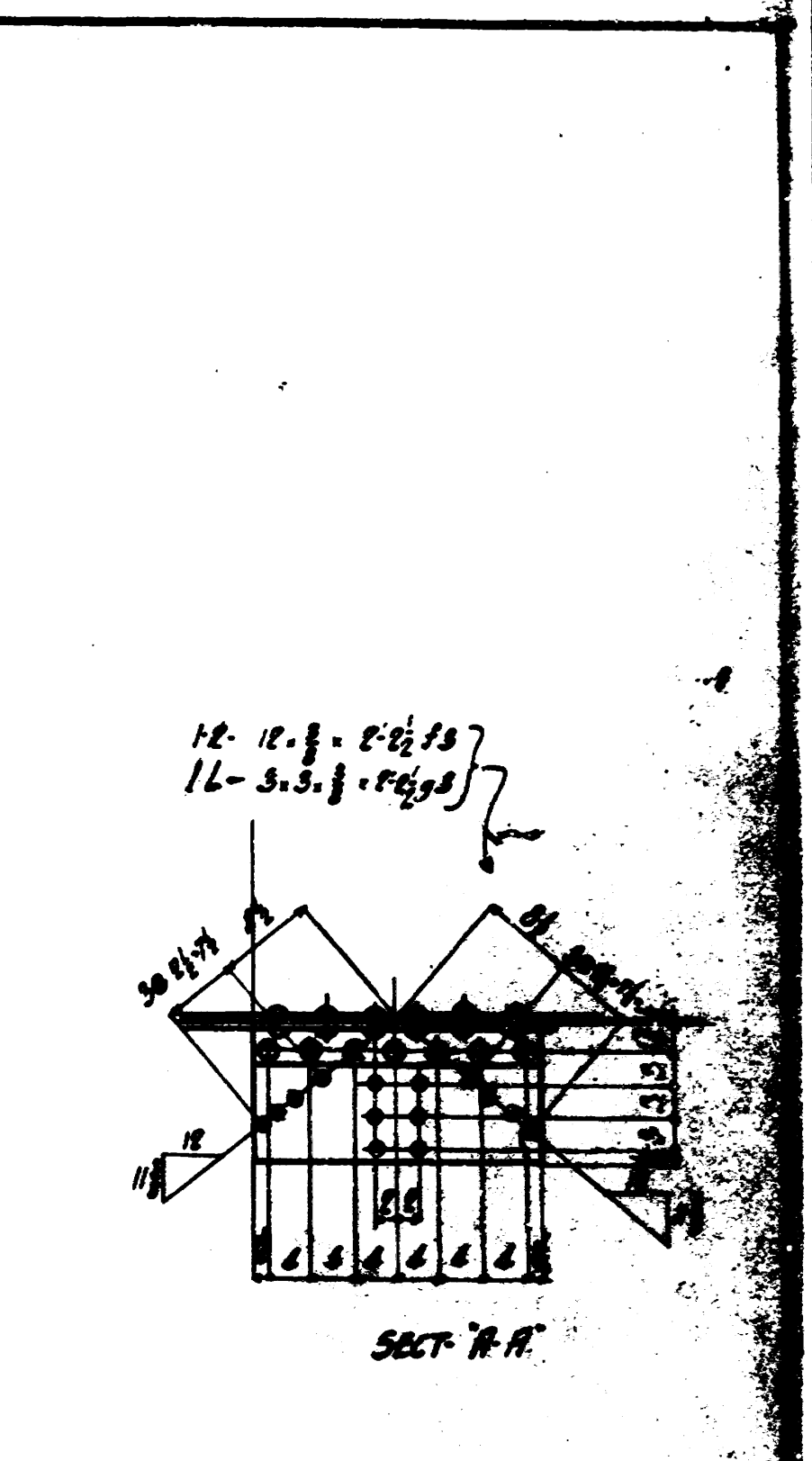
1- STRUT - S52



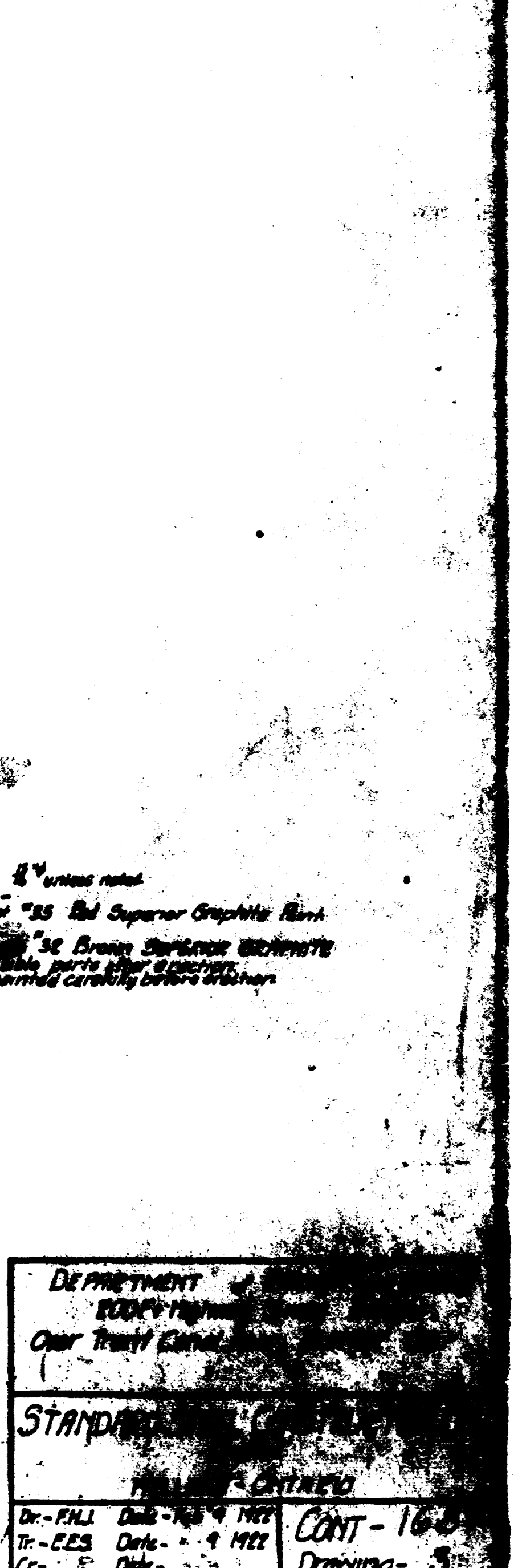
4- FILLERS - F4 : $\begin{cases} 1'-0" \times 1'-0" \\ 1'-0" \times 1'-0" \\ 1'-0" \times 1'-0" \\ 1'-0" \times 1'-0" \end{cases}$ bolt to Castor Post S15 for shipment

Note:
 Rivets 3/4"
 Open Holes 1/2"
 Shop Paint -
 One coat "35 Red Superior Graphite
 Field Paint -
 Two Coats "35 Brown Superior Graphite
 Parts inaccessible after erection shall be painted carefully before erection

DEPARTMENT OF THE ARMY
 200th Highway Bridge
 Over Brown River
 STANDARD DRAWING
 10-222
 3-5-57



2- GIRDERS-GI

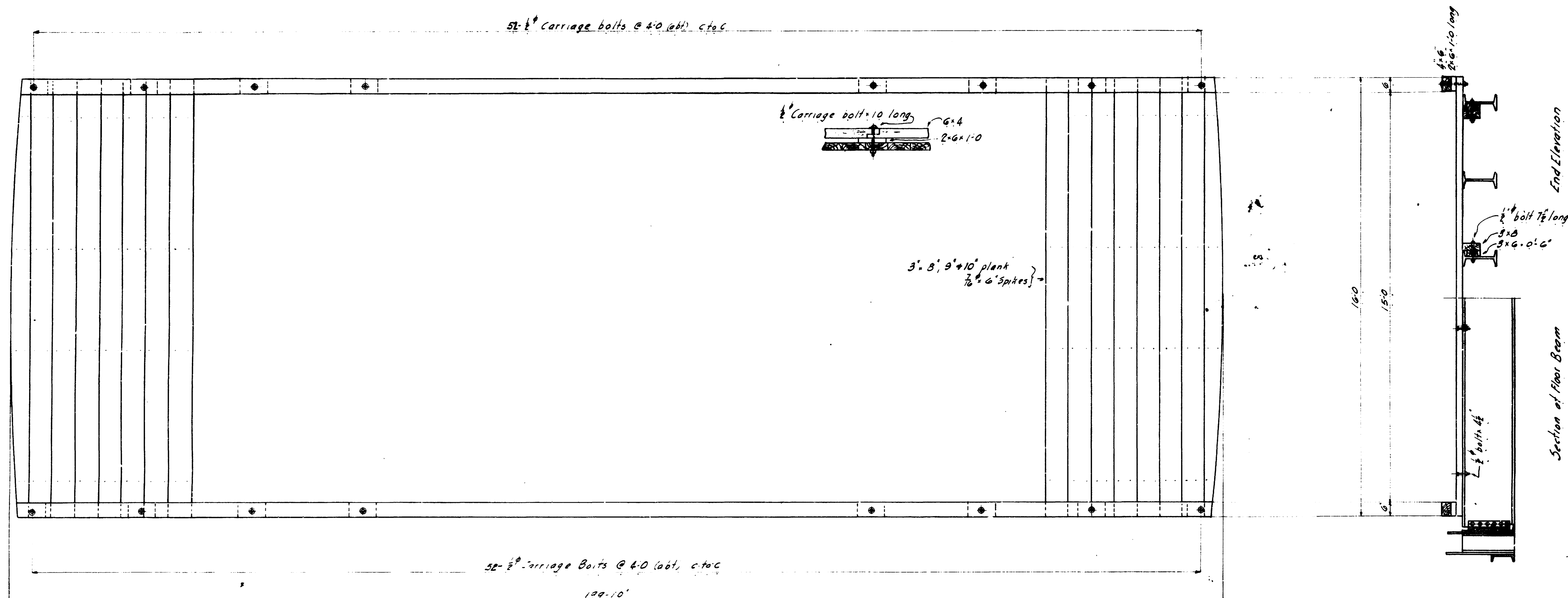


Machinery Details for 200 ft Swing
Bridge over Trent Canal at Hamlet, Ont.
for
Department of Railways & Canals.

STANDARD STEEL CONSTRUCTION CO.
Limited.
WYLLAND, ONTARIO.

Drawn by C.I.M. Date Feb 16-22
Traced " " " " " " " "

CONT. 1687
Drawn by A



List of Bolts
 110 Carriage Bolts $\frac{1}{2}$ " x 0'-10" - Wheel Guards
 84- " $\frac{1}{2}$ " x 0'-4 $\frac{1}{2}$ " - Plank to Floor Beams
 410 " $\frac{1}{2}$ " x 0'-7 $\frac{1}{2}$ " - Nailers to Stringers
 2300 Spikes $\frac{7}{16}$ " x 0'-6"
 800 Machine Washers $\frac{1}{16}$ " hole

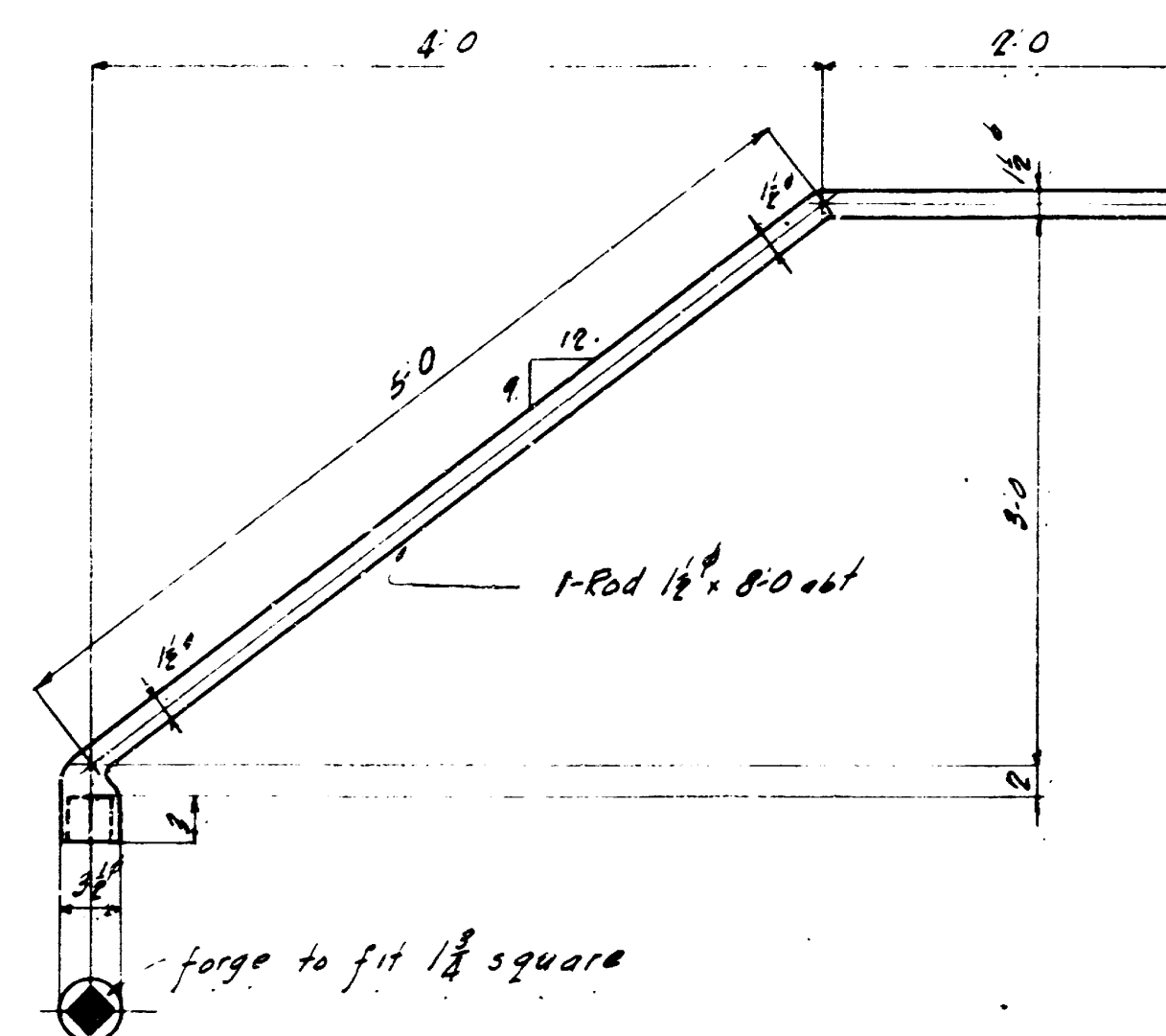
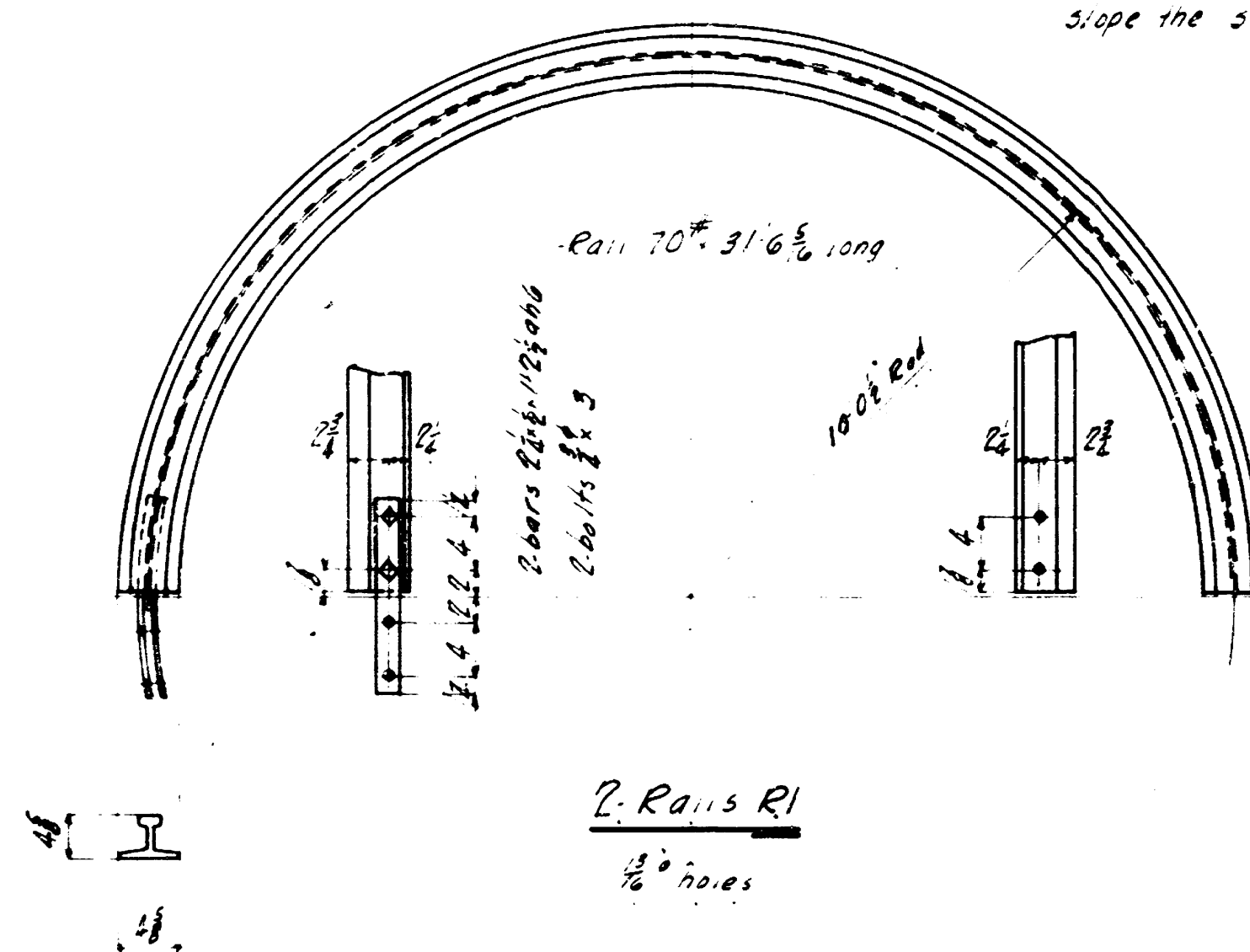
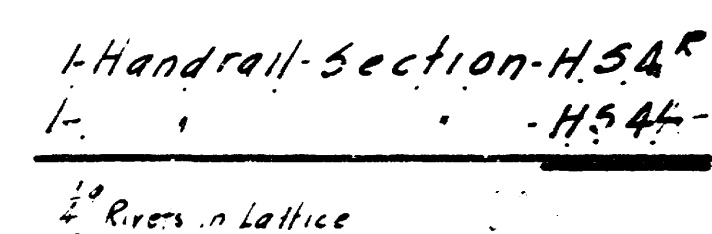
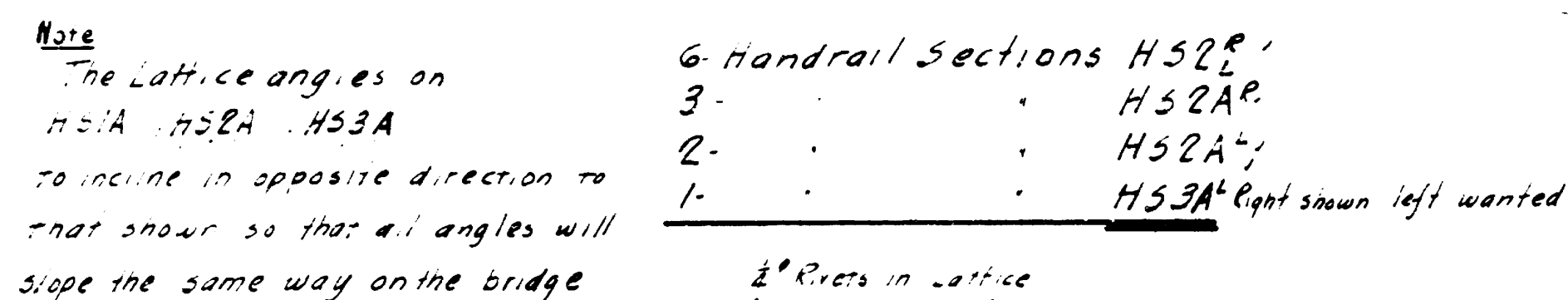
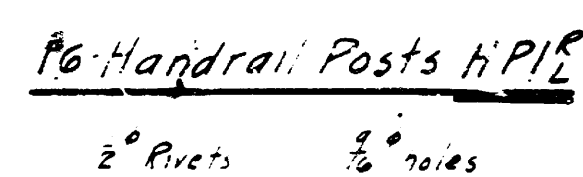
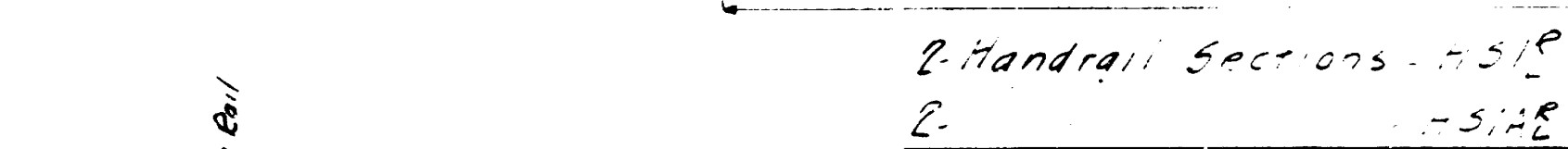
All wood Douglas Fir, White or Southern Pine.
 275 Pcs 3" x 9" x 16'-0" (furnish equivalent area in 8", 9" and 10" widths)
 28 " 4" x 6" x 16'-0" wheel guard.
 104 " 2" x 6" x 1'-0" risers under wheel guard.
 52 " 3" x 8" x 16'-0" nailing strips.
 110 " 3" x 6" x 0'-6" fillers between nailing strips & stringers.

Detail of Floor
 200 Ft. Swing Bridge over
 Trent Canal
 near Hamlet Ont.

STANDARD STEEL CONSTRUCTION CO.
 Limited
 Welland Ontario

Dr. Date Feb 17-1922
 Tr. Date
 ch. Date

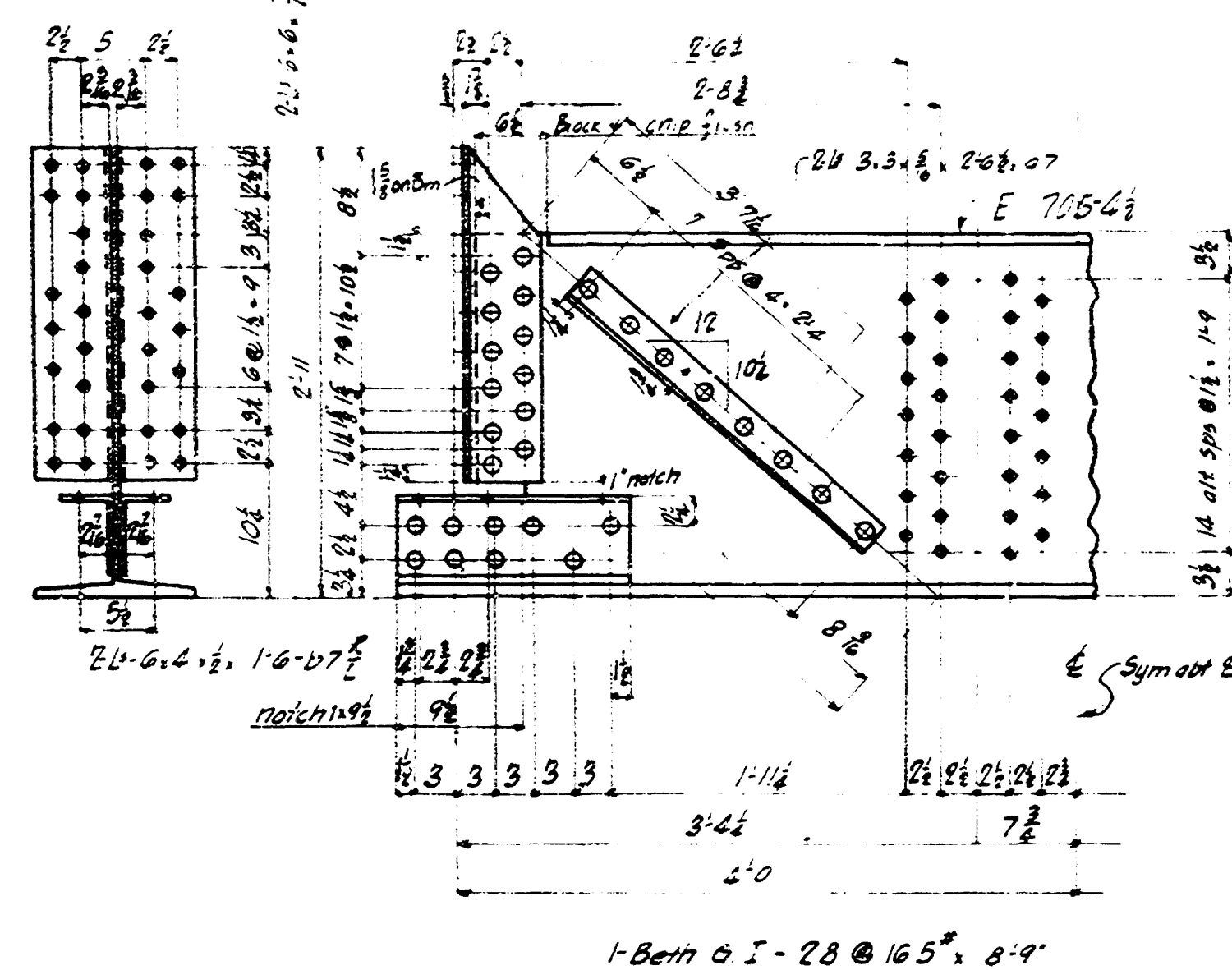
CONT 1687
 Drawing 5



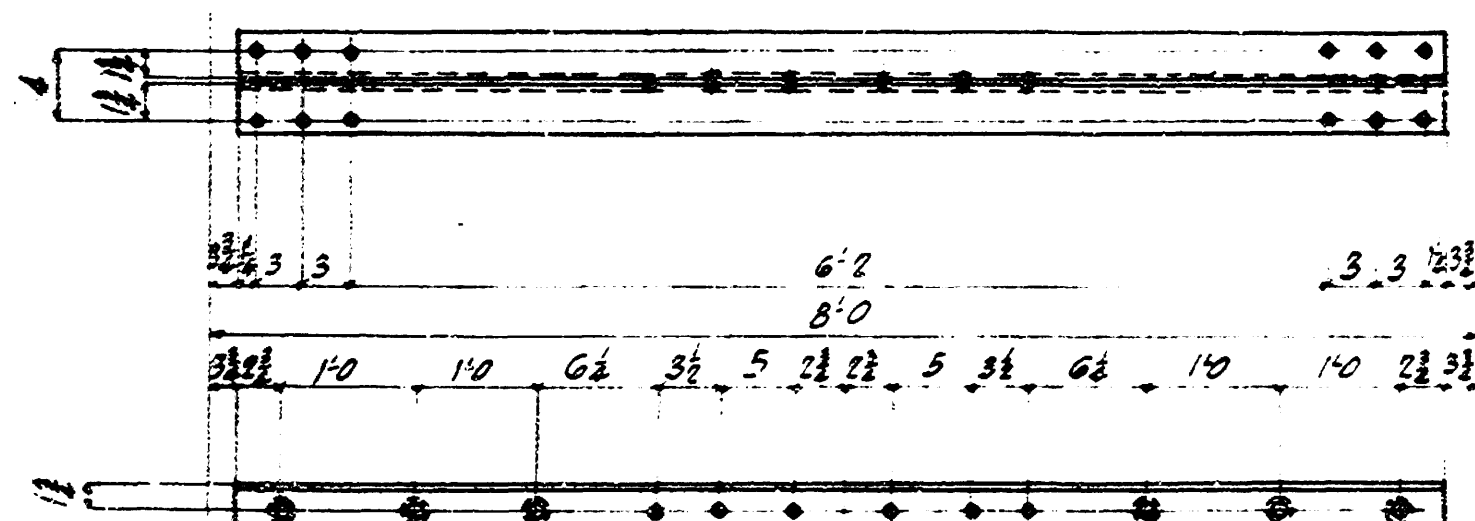
1- Turning Lever TL!

Note
Rivets: as noted
Holes: : :
Shop Paint: One coat #35 Red Superior Graphite
Field Paint: Two coat #32 Brown Superior Graphite
All inaccessible parts after erection shall be
painted carefully before erection

Handrail etc for 200 ft Swing Bridge over Trent Canal near Sparrow Lake	
STANDARD STEEL CONSTRUCTION Limited Welland Ontario	
Dr. Proj. Date Feb. 21-22 Tr. Proj. Date 1922 Ch. File. Date Mar. 2-22	CONTINUED Drawing 6

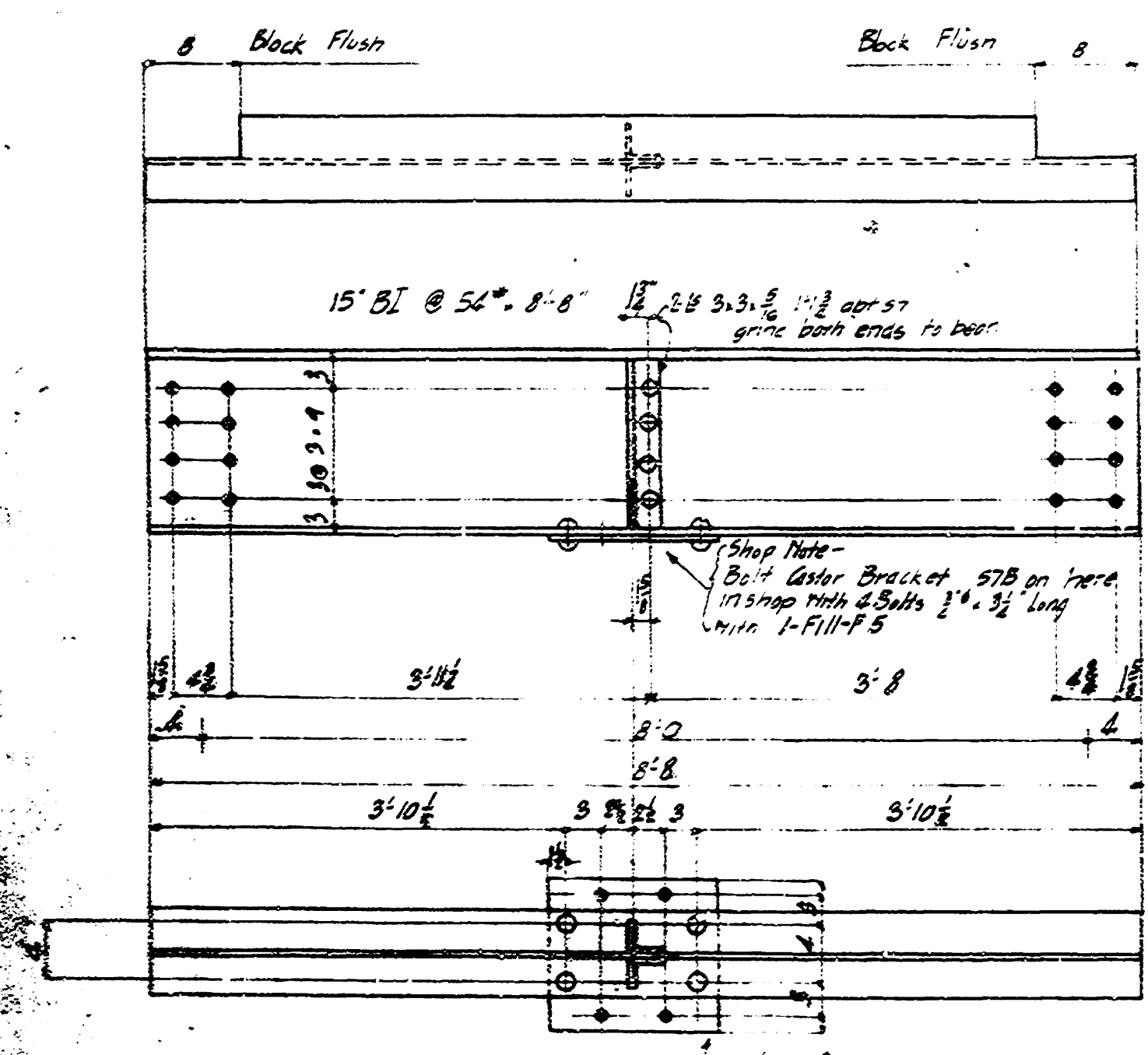


2 GIRDERS - G2

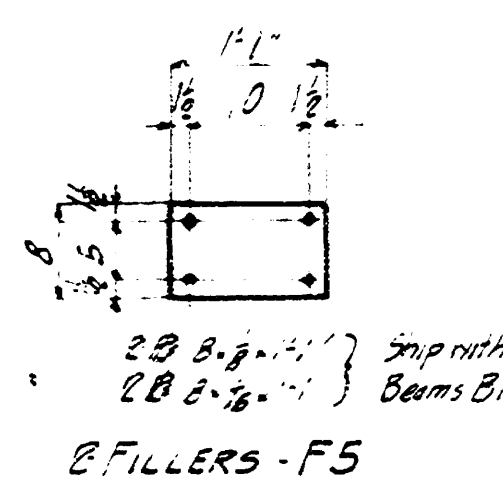


2 FILLERS - F5

1-STRUT - S53



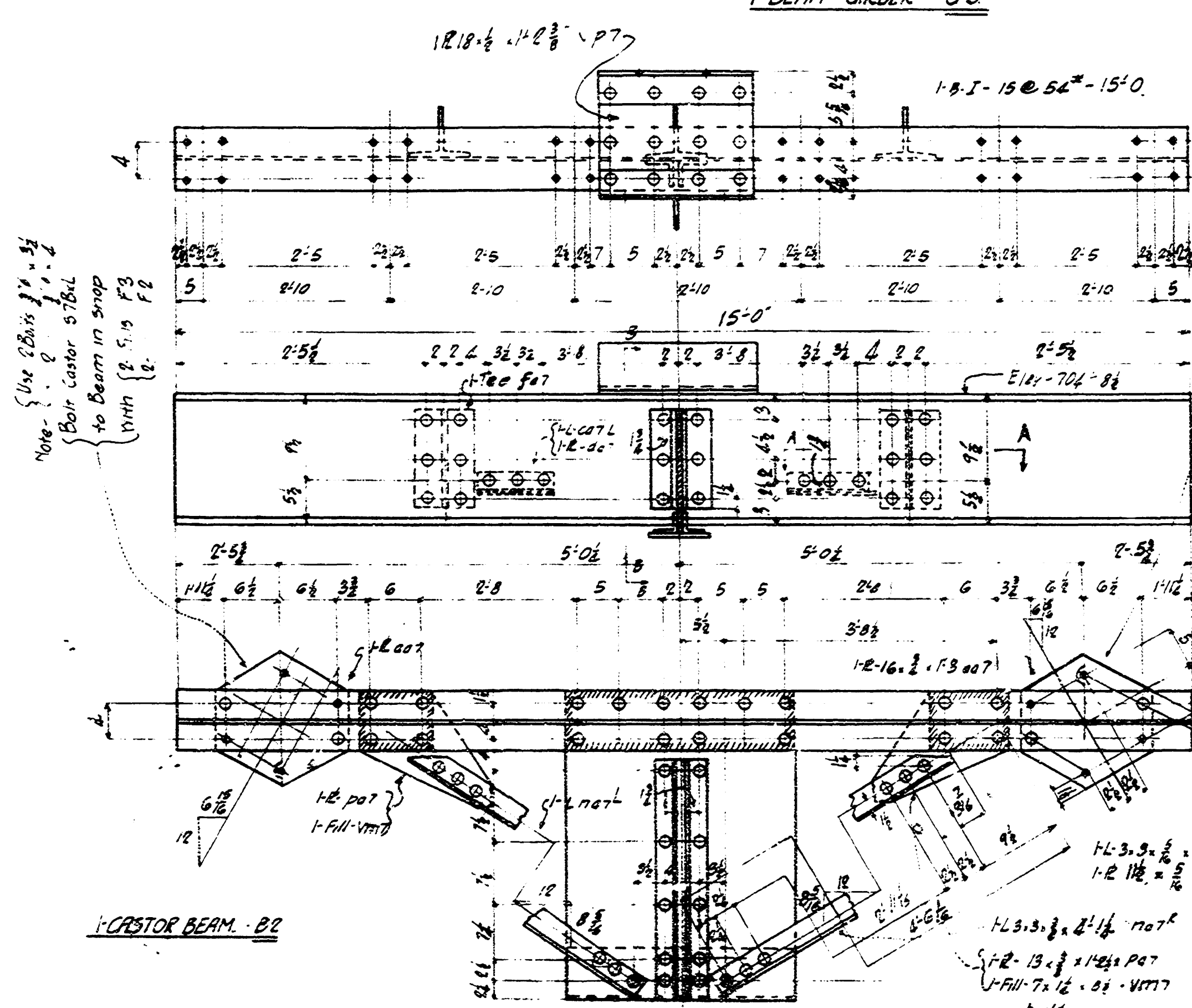
2 BEAMS - B1



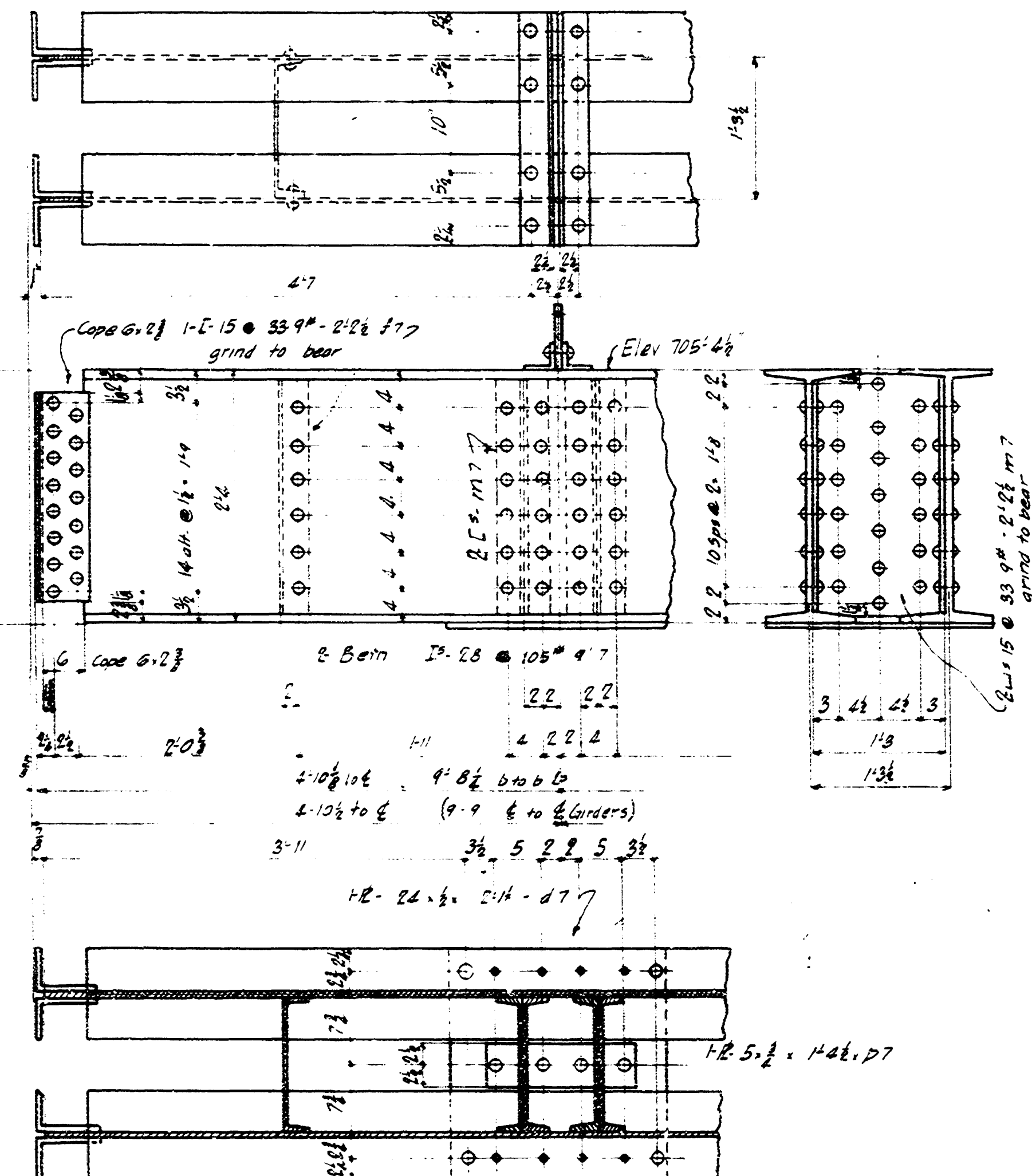
2 FILLERS - F5

Note: Use 24 3/4 x 3/8 @ 14" for F5
Bolt Castor 57B on here in shop with 4 bolts 1" x 3" long with 1-FILL-F5

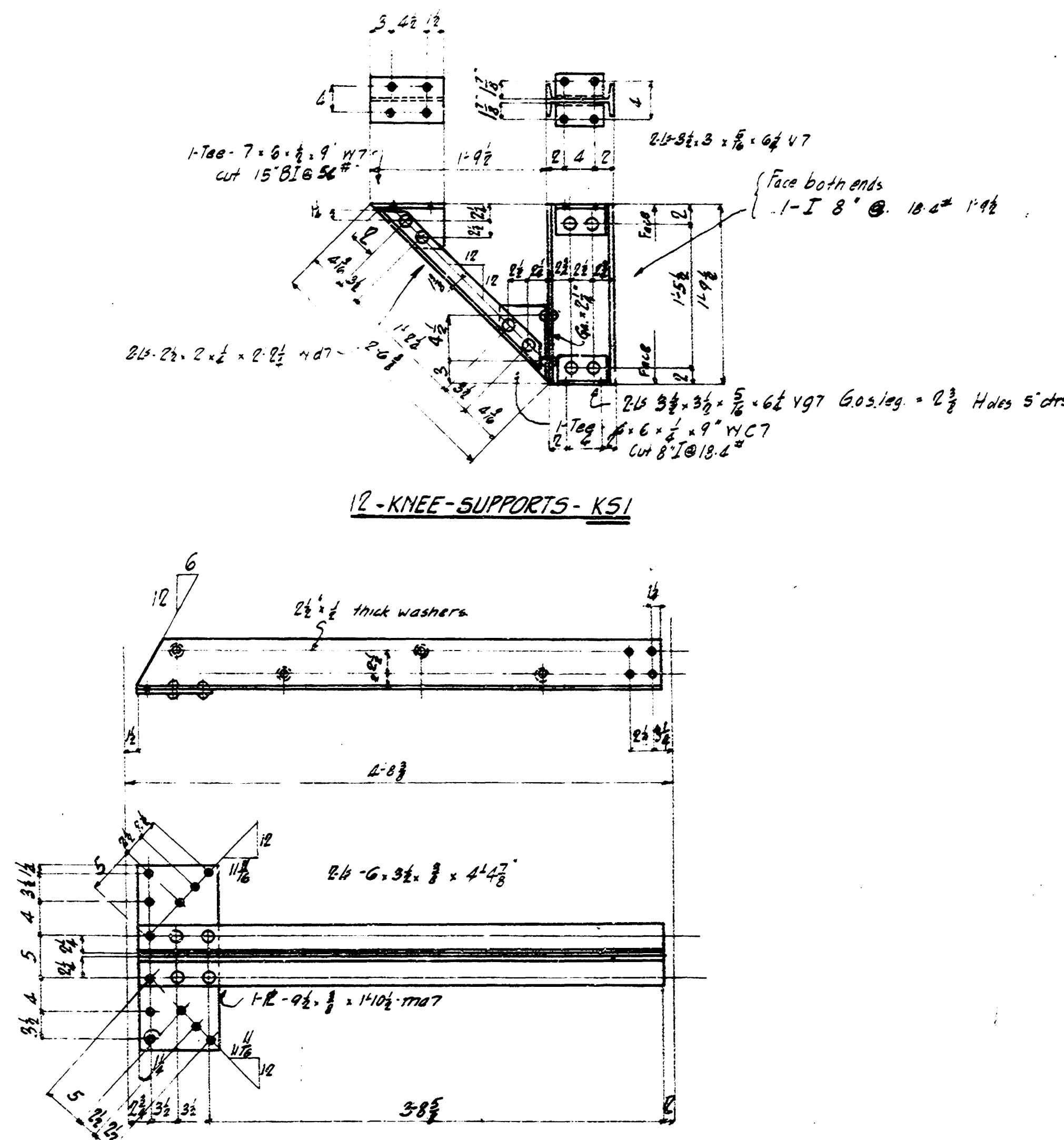
1-CASTOR BEAM - B2



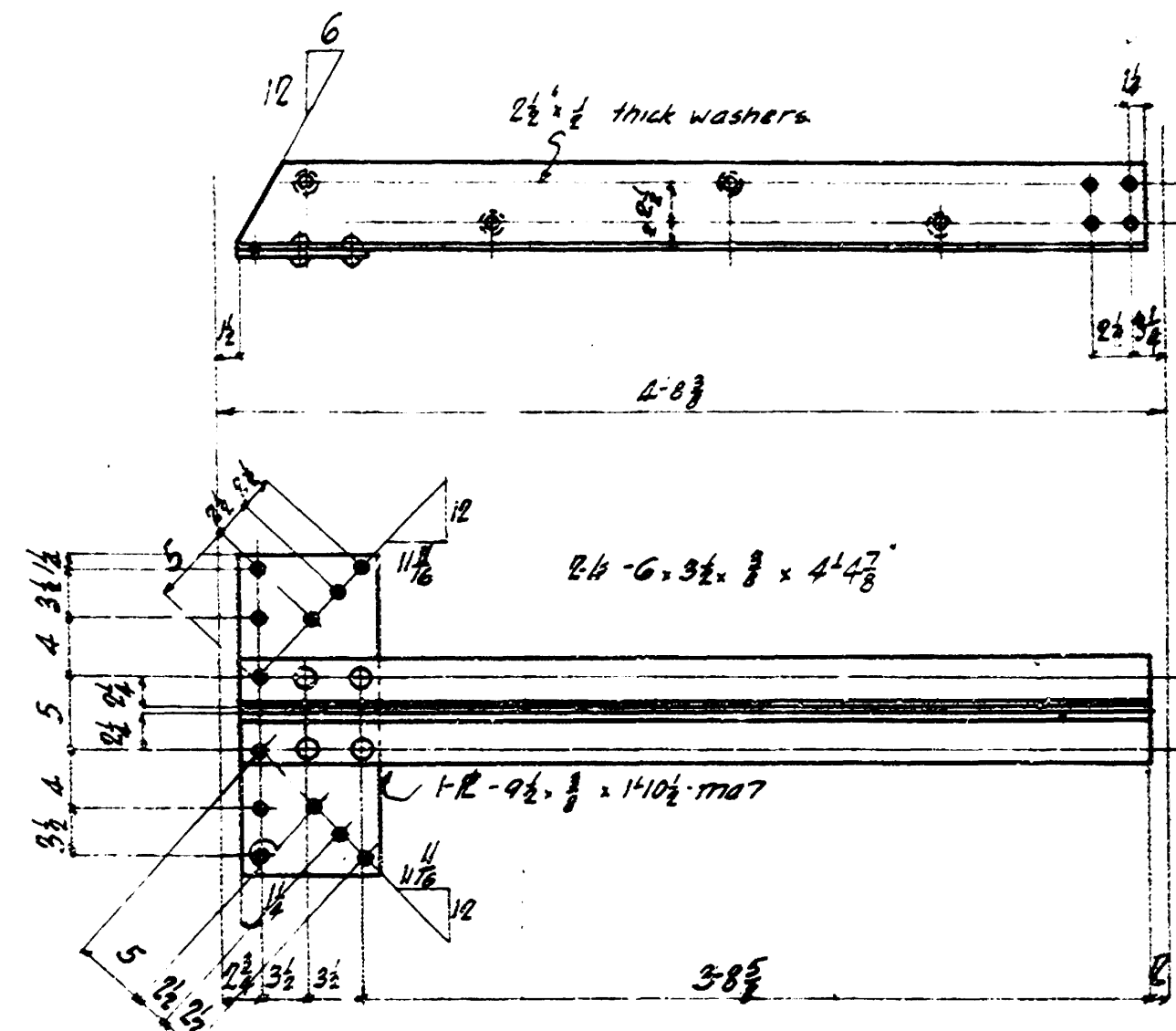
1-BEAM GIRDER - G3



1-BEAM GIRDER - G3

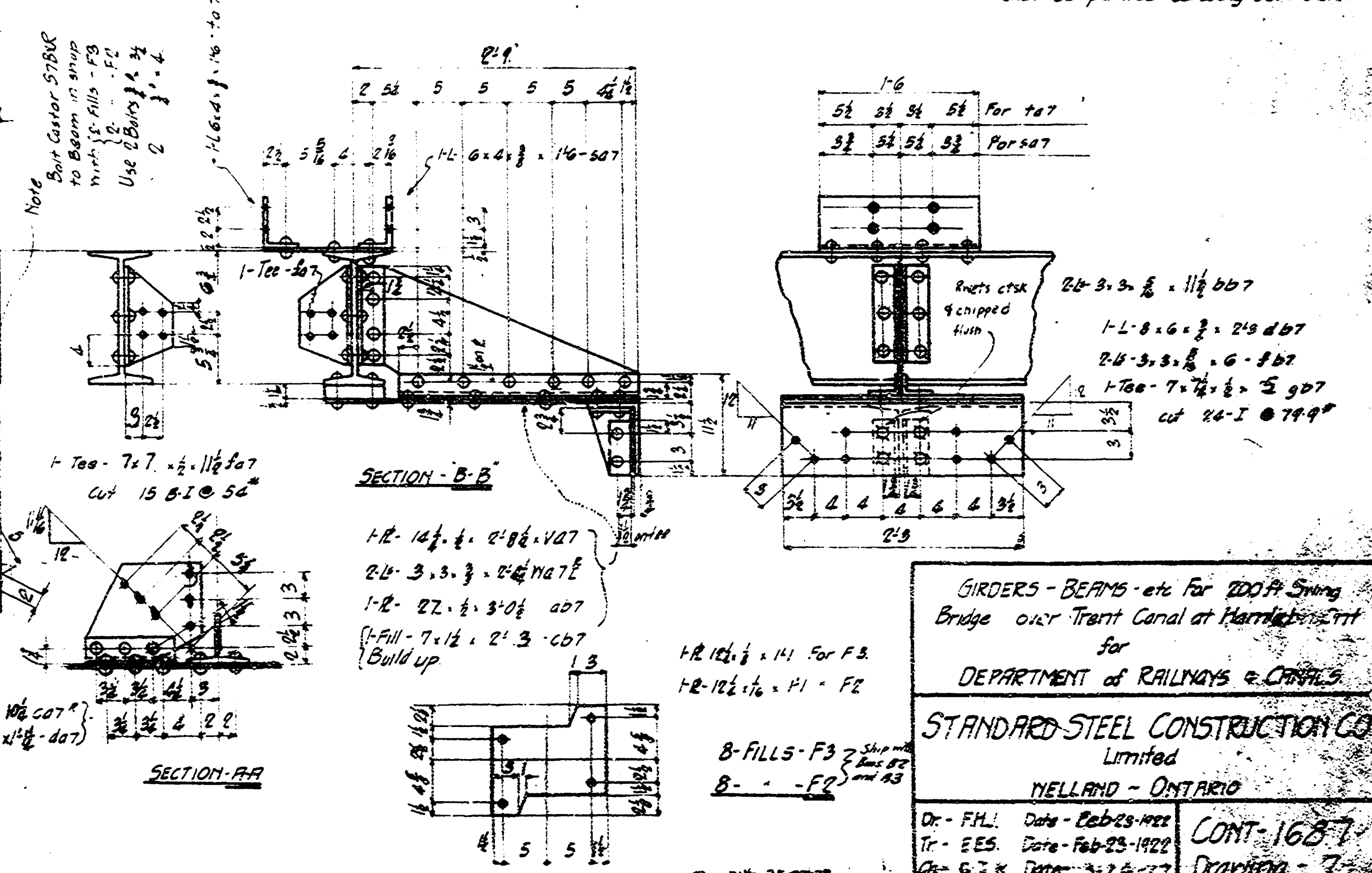


12-KNEE-SUPPORTS - K51



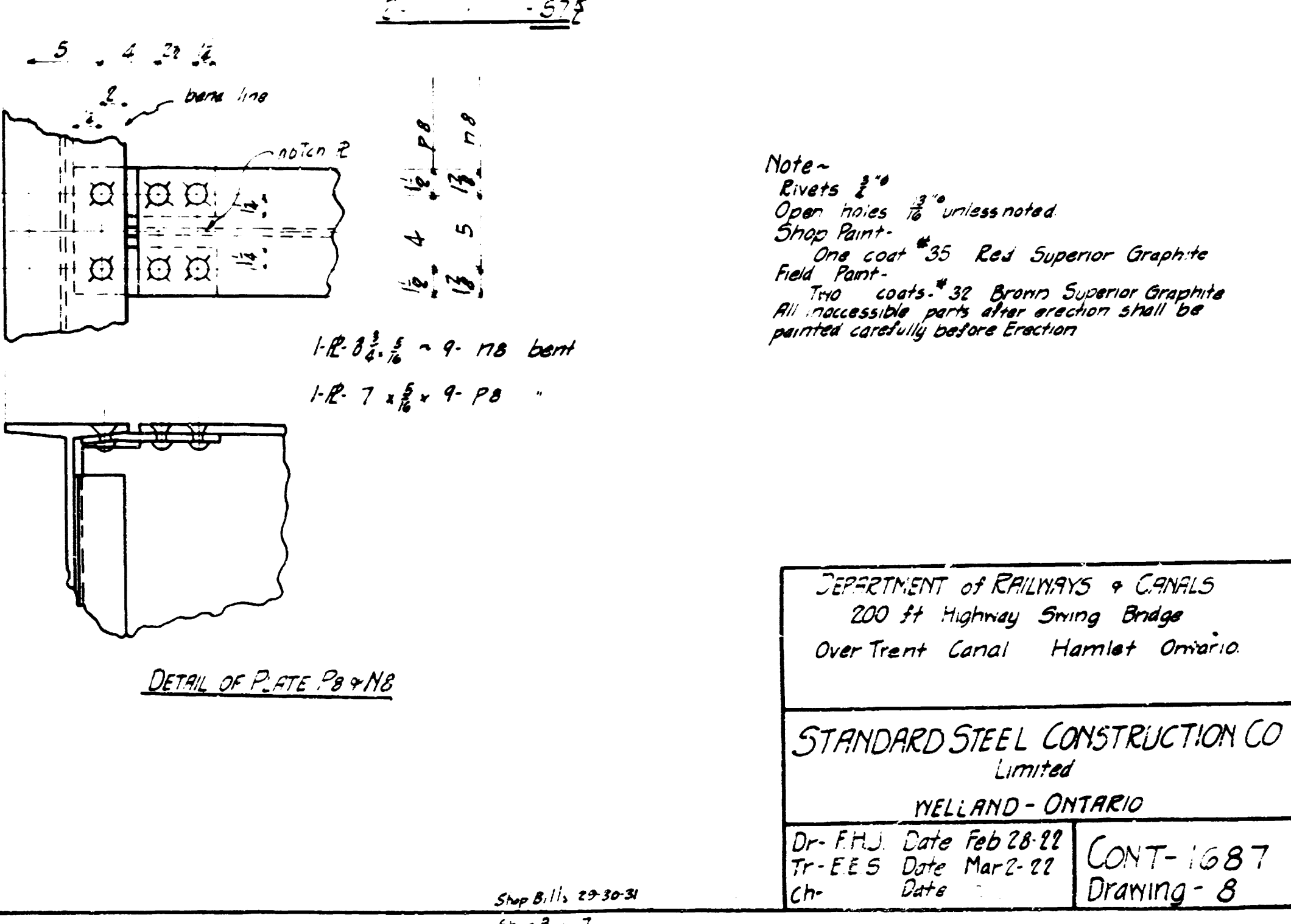
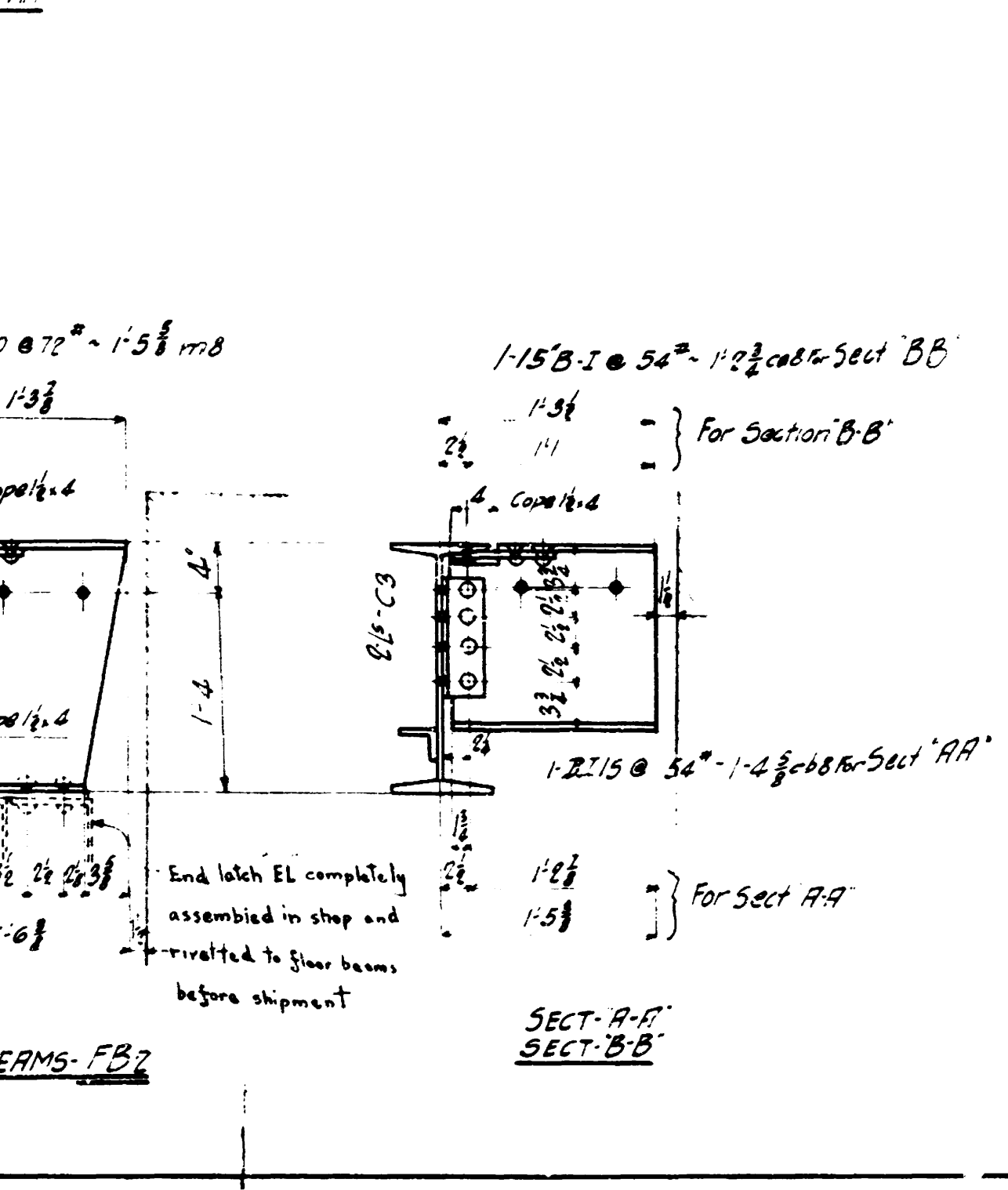
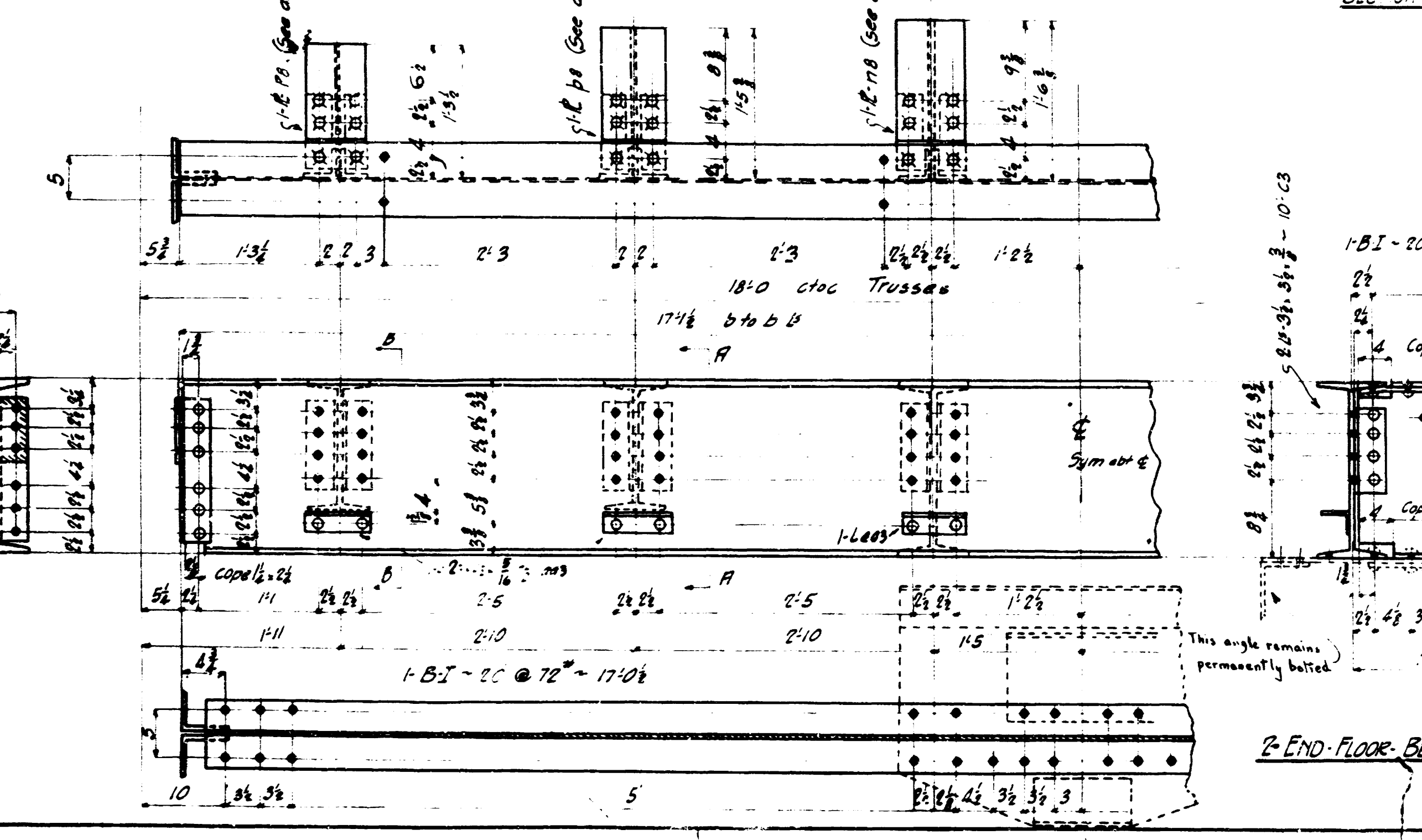
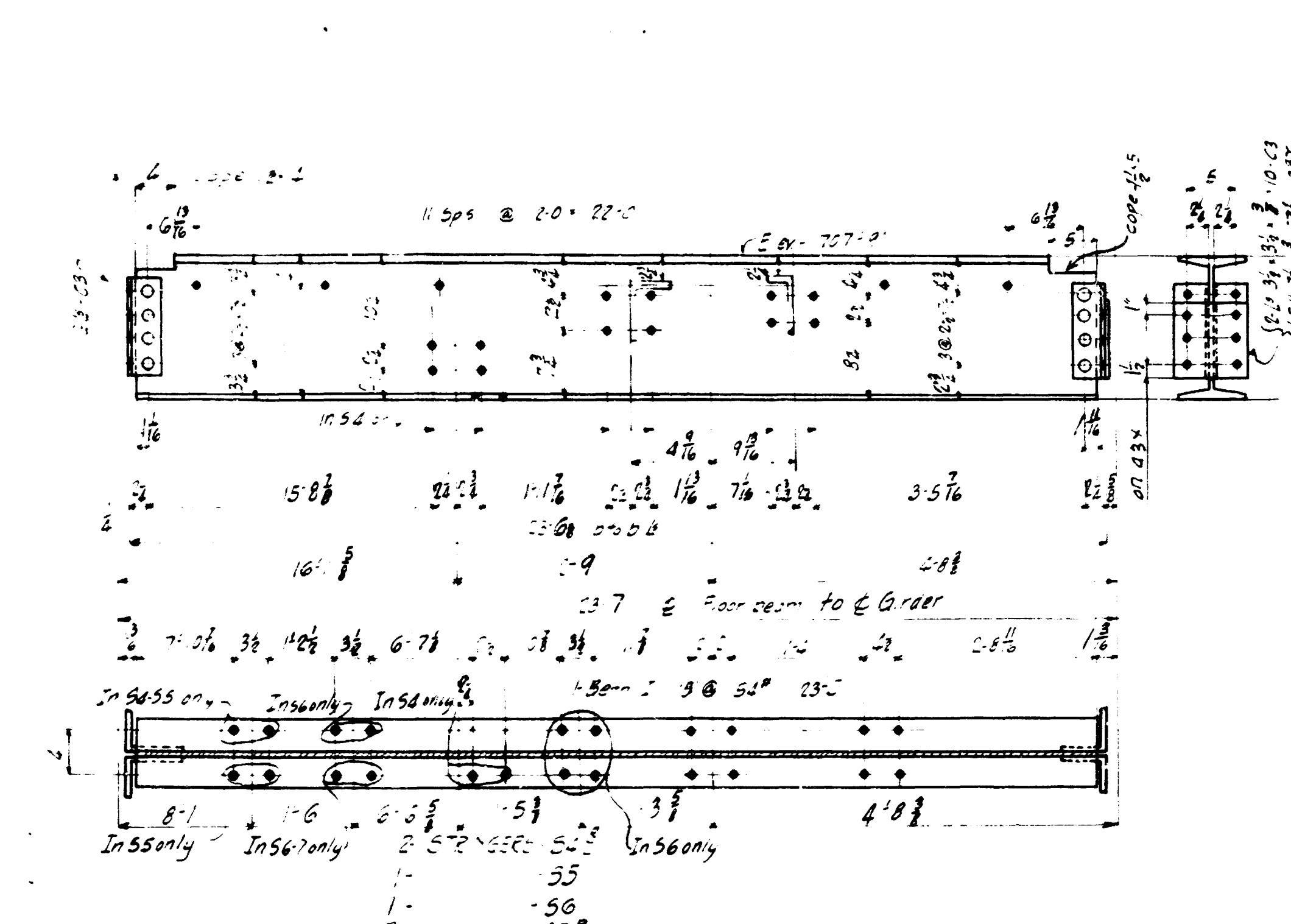
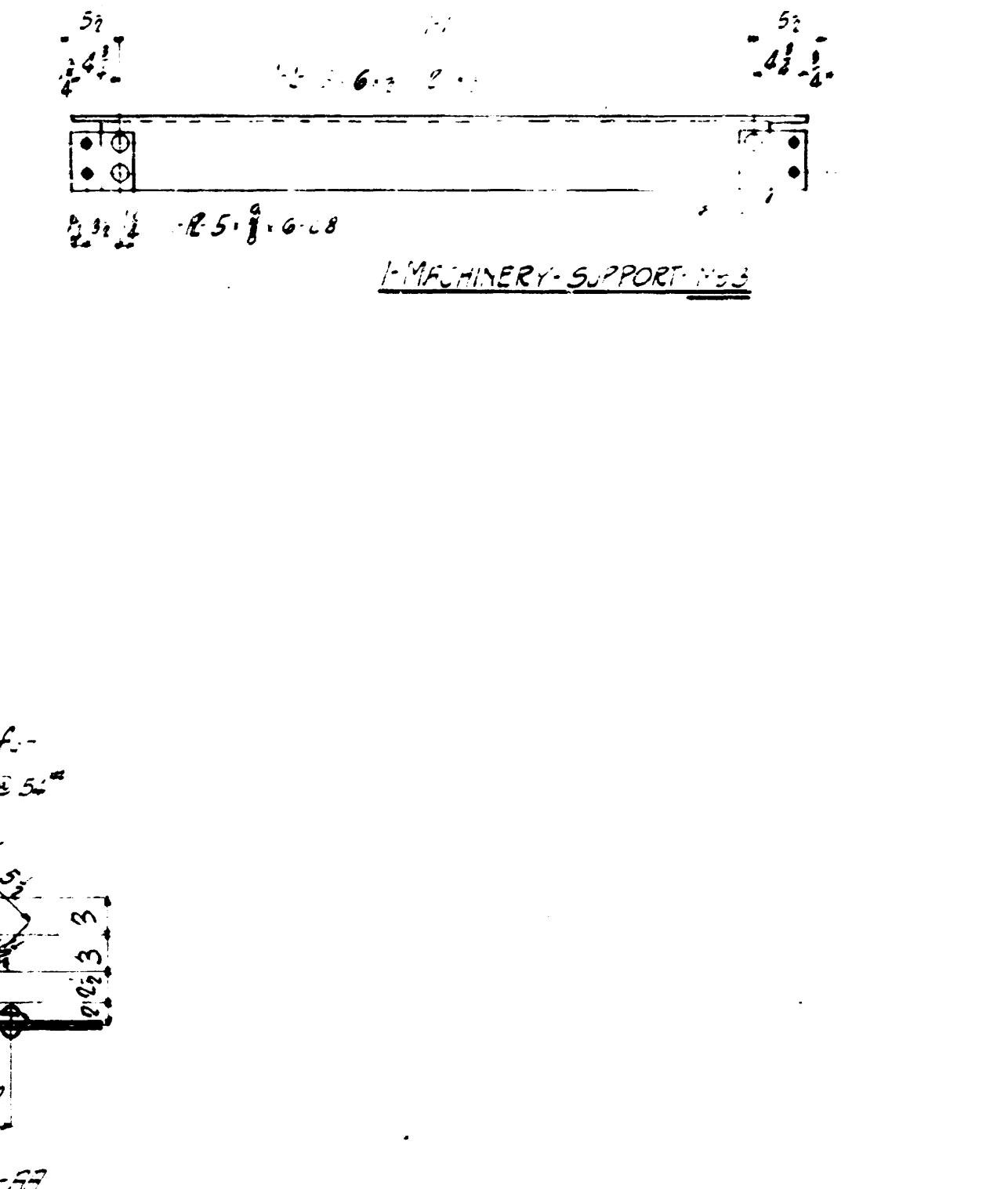
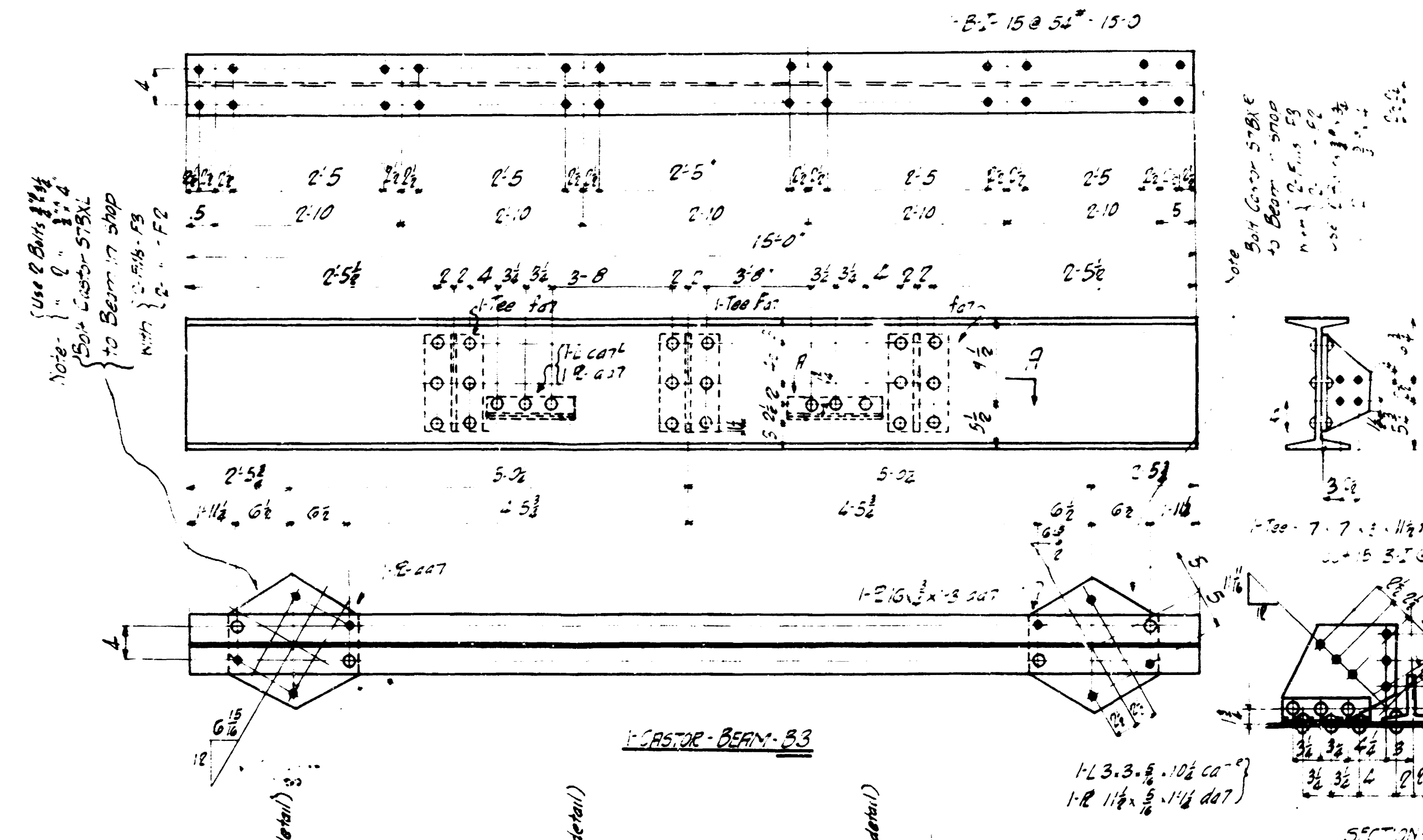
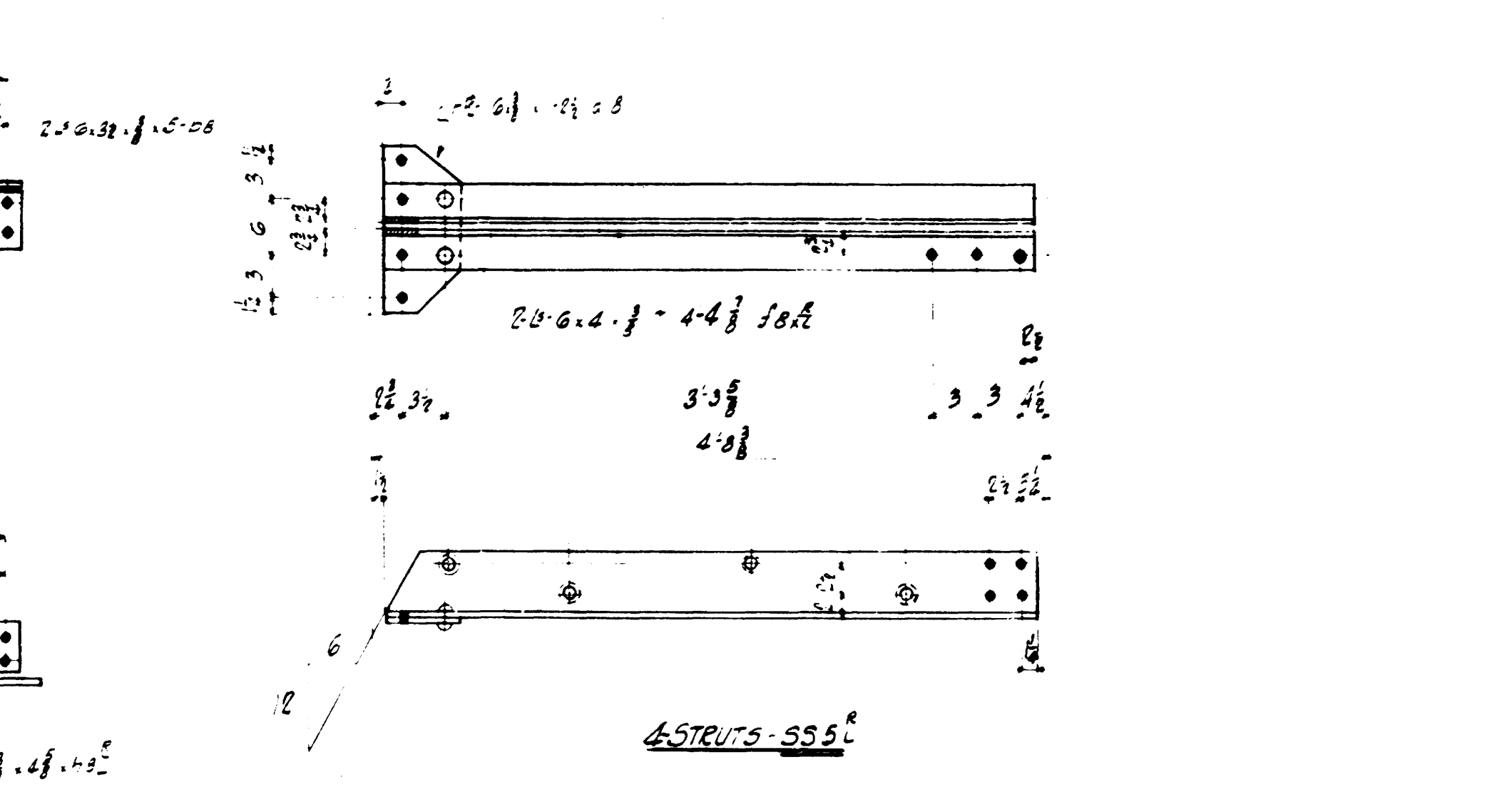
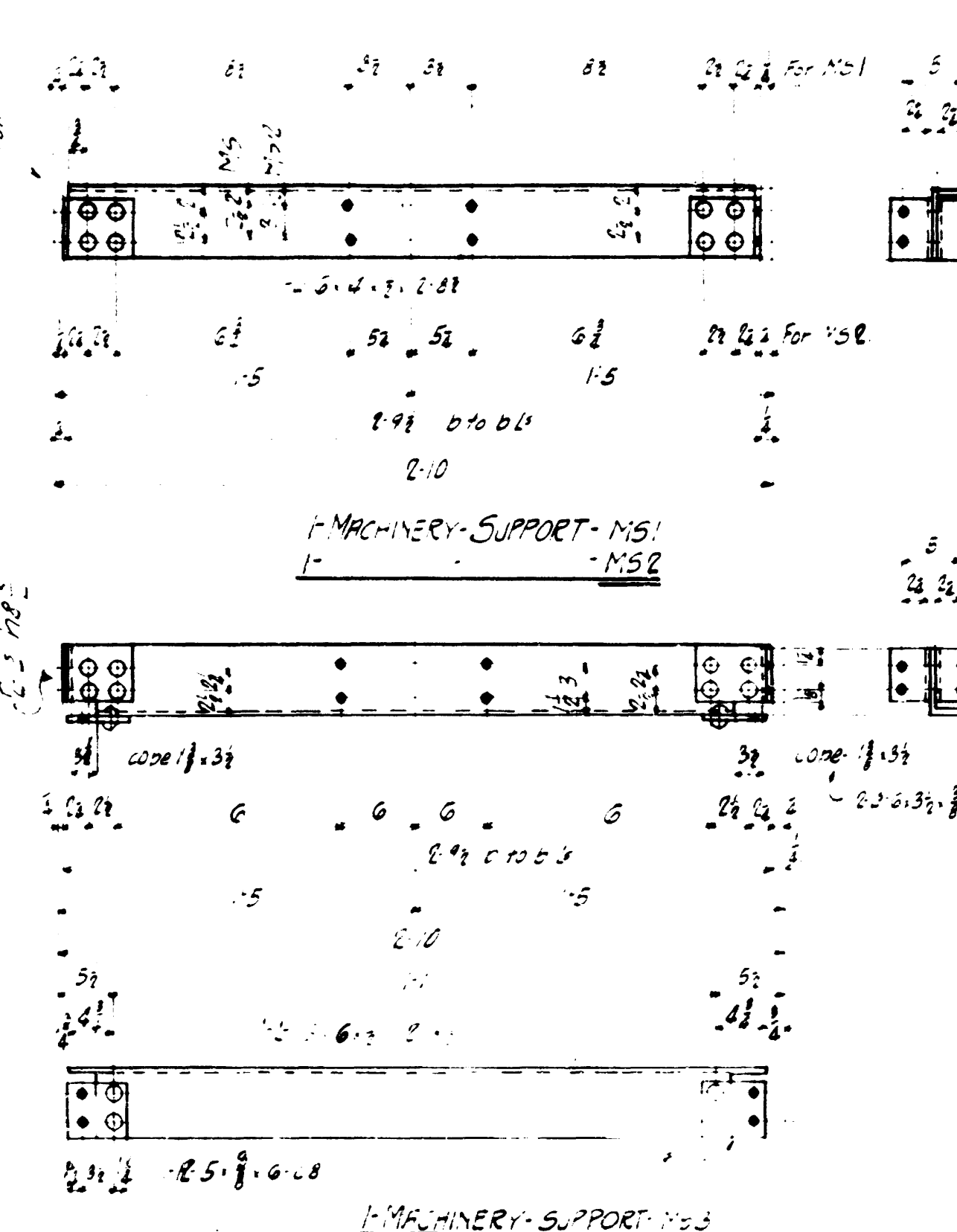
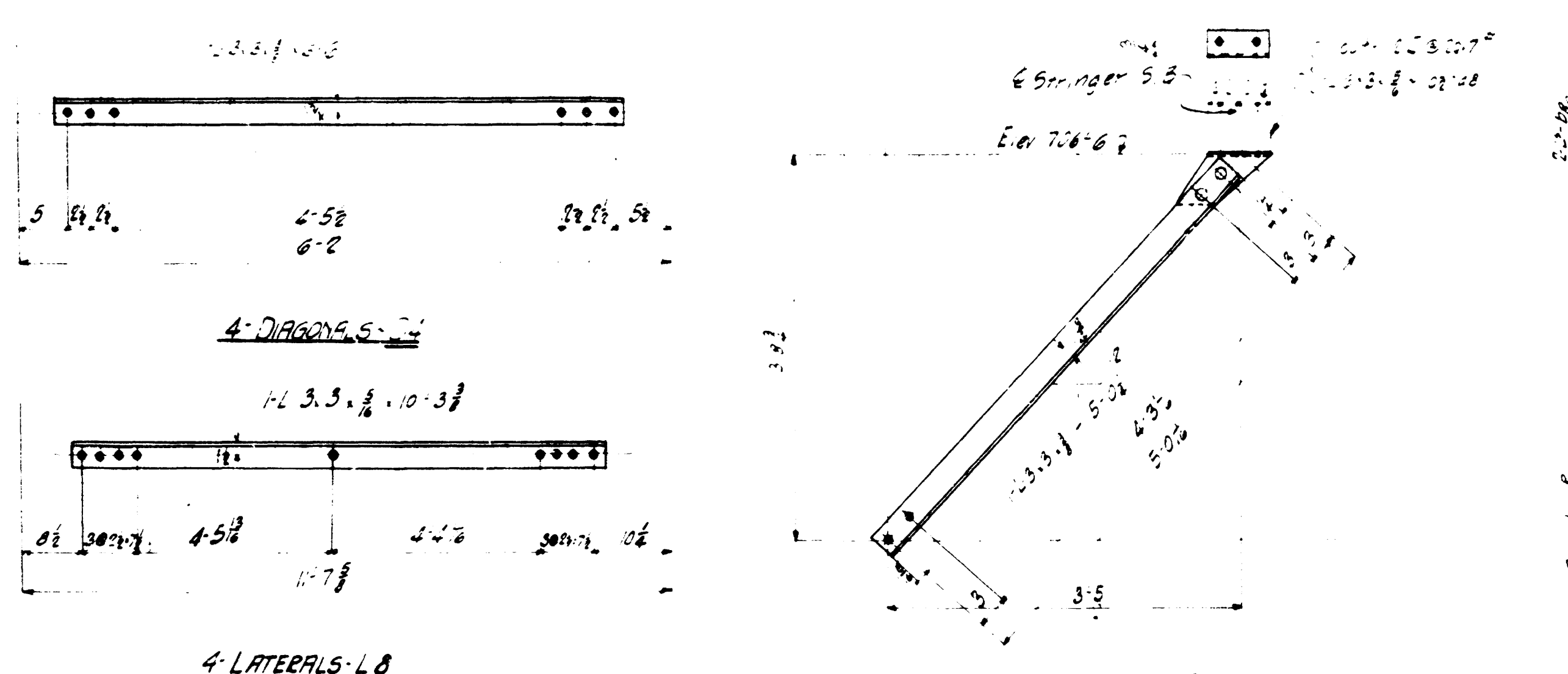
2-STRUTS - S54

Note:
Rivets 3/4"
Open holes 1/2" unless noted
Shop Paint -
One coat 35" Red-Superior Graphite
Field Paint -
Two coats 98 Brown Superior Graphite
In inaccessible parts after erection
shall be painted carefully before erection.

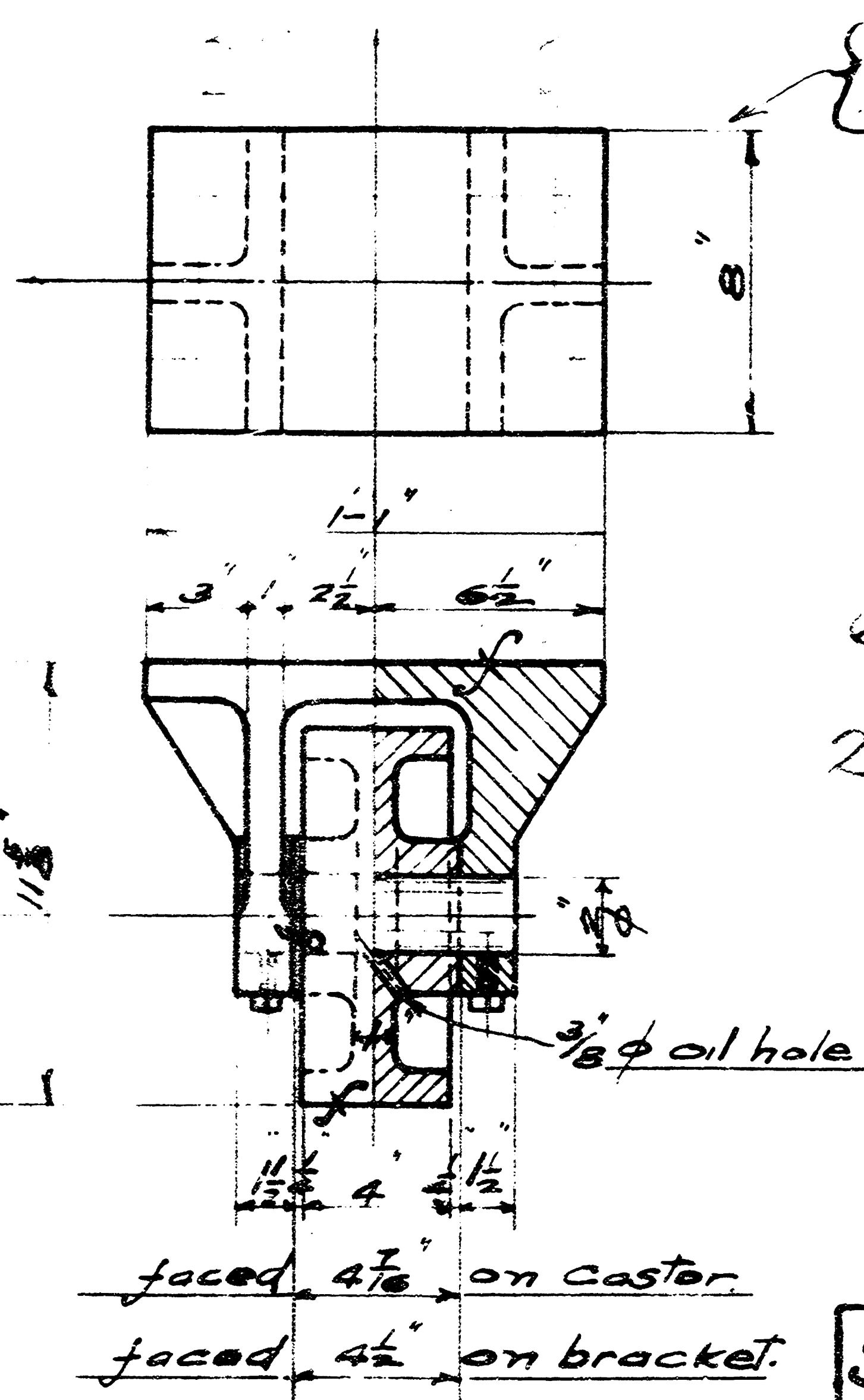
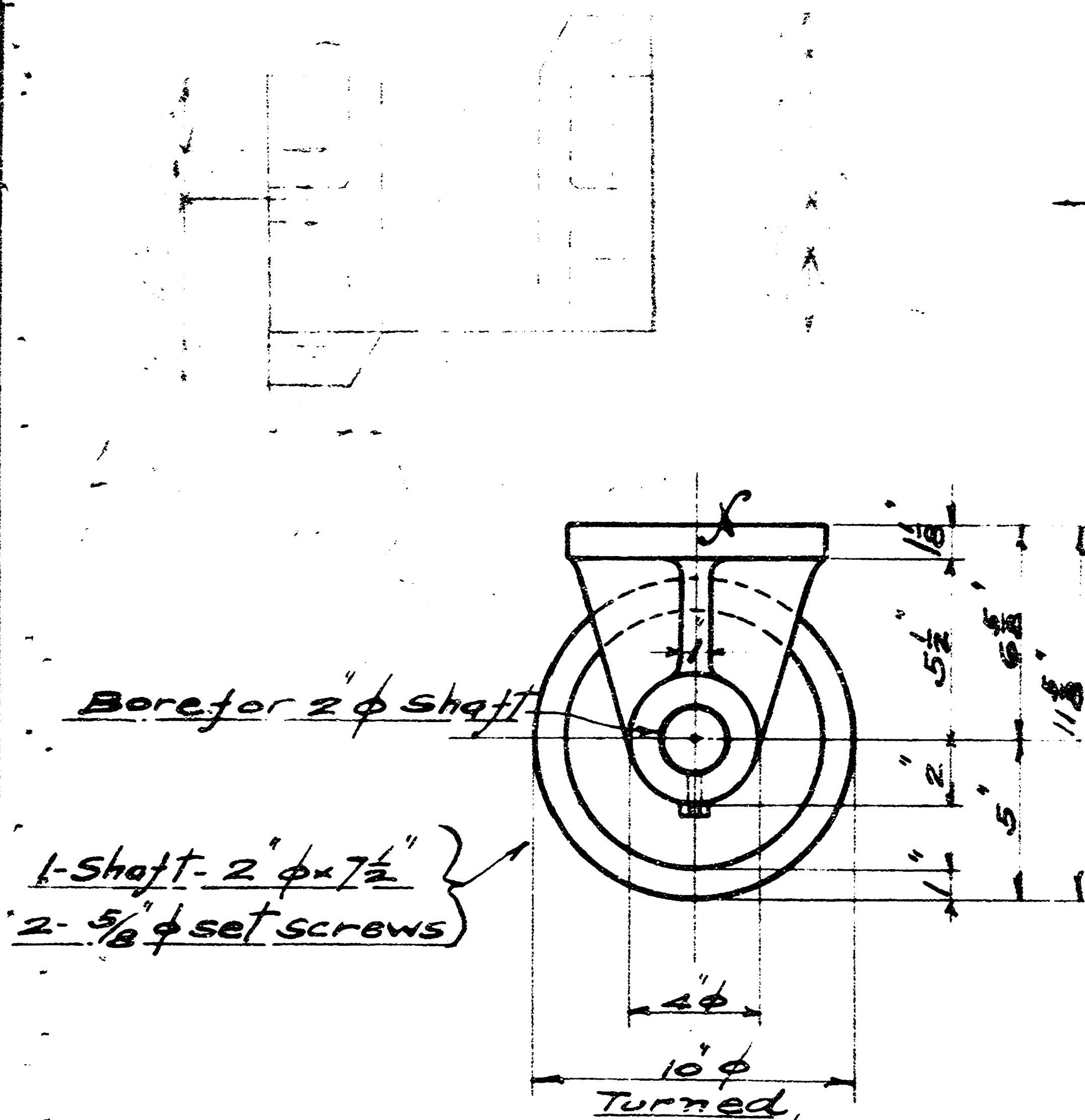


1-BEAM GIRDER - G3

GIRDERS - BEAMS - etc for 200 ft Span
Bridge over Trent Canal at Hamilton, Ont.
for
DEPARTMENT of RAILWAYS & CANALS
STANDARD STEEL CONSTRUCTION CO.
Limited
MILLARD - ONTARIO
Dr. F.H. Date: Feb 23-1922
Tr. E.E. Date: Feb 23-1922
Ca. G.C. Date: Feb 23-1922
CONT-1687
Drawing - 7



DEPARTMENT of RAILWAYS & CANALS 200 ft Highway Swing Bridge Over Trent Canal Hamlet Ontario		
STANDARD STEEL CONSTRUCTION CO Limited WELLAND-ONTARIO		
Dr. F.H.J.	Date Feb 28-22	CONT-1687 Drawing-8
Tr. E.E.S.	Date Mar 2-22	
Ch.	Date	



6 4-Castors-S7A.

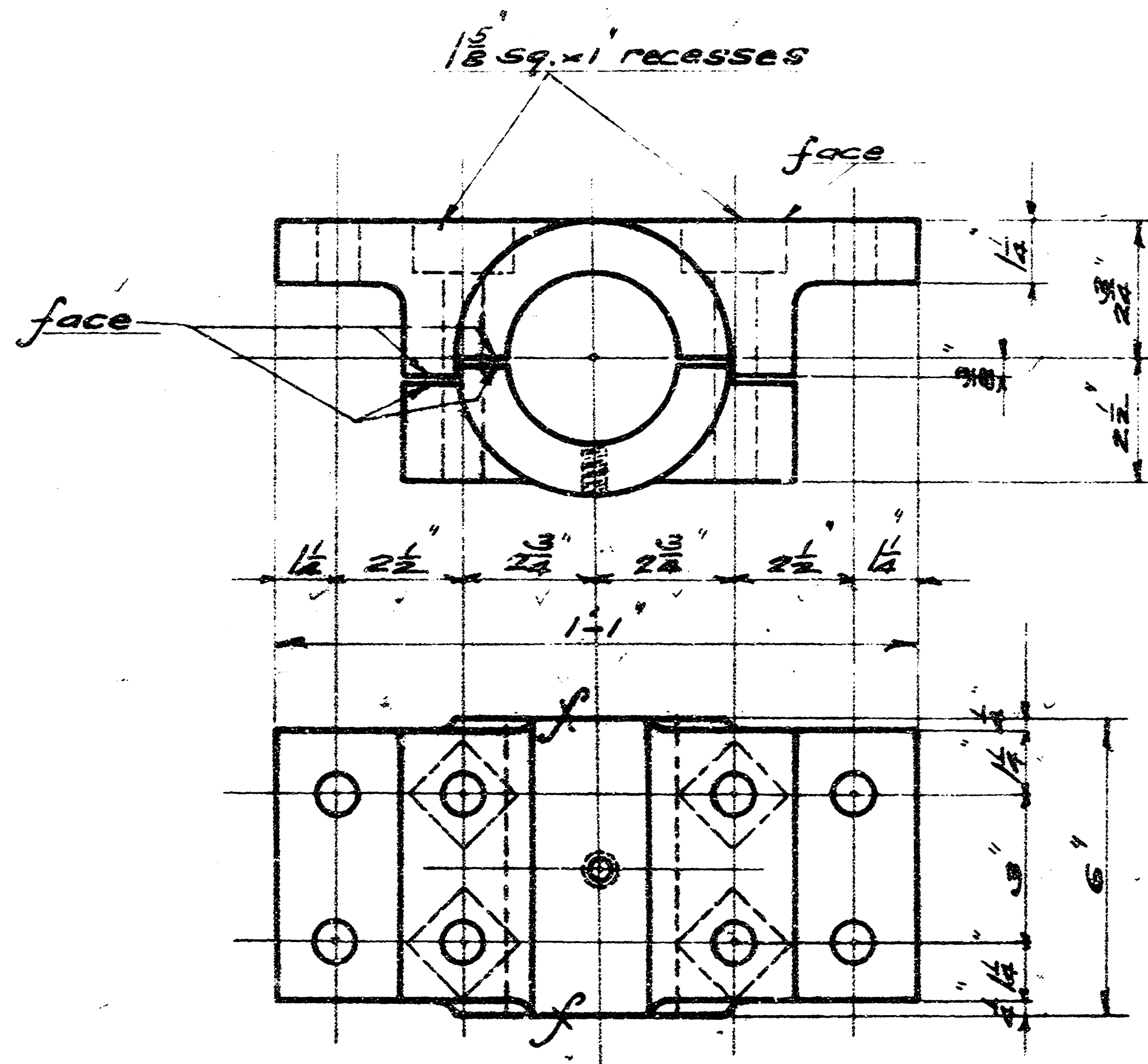
2 4-Castor Brackets-S7B.

Cast Iron.

STANDARD STEEL CONSTRUCTION CO.
Limited,
Port Robinson-Ontario.

Drawn by F.L. 4-May-22-19
checked by H.W.A.
Approved by

CONT. 1687-2
Std. S7.



2 - Bearing Bases - S8.

2 - Bearing Caps - S8A.

Cast Iron.

Drill for $\frac{3}{4}$ ϕ bolts.

$\frac{3}{16}$ brass liners

Drill $\frac{1}{8}$ tap for $\frac{3}{8}$ grease cup.

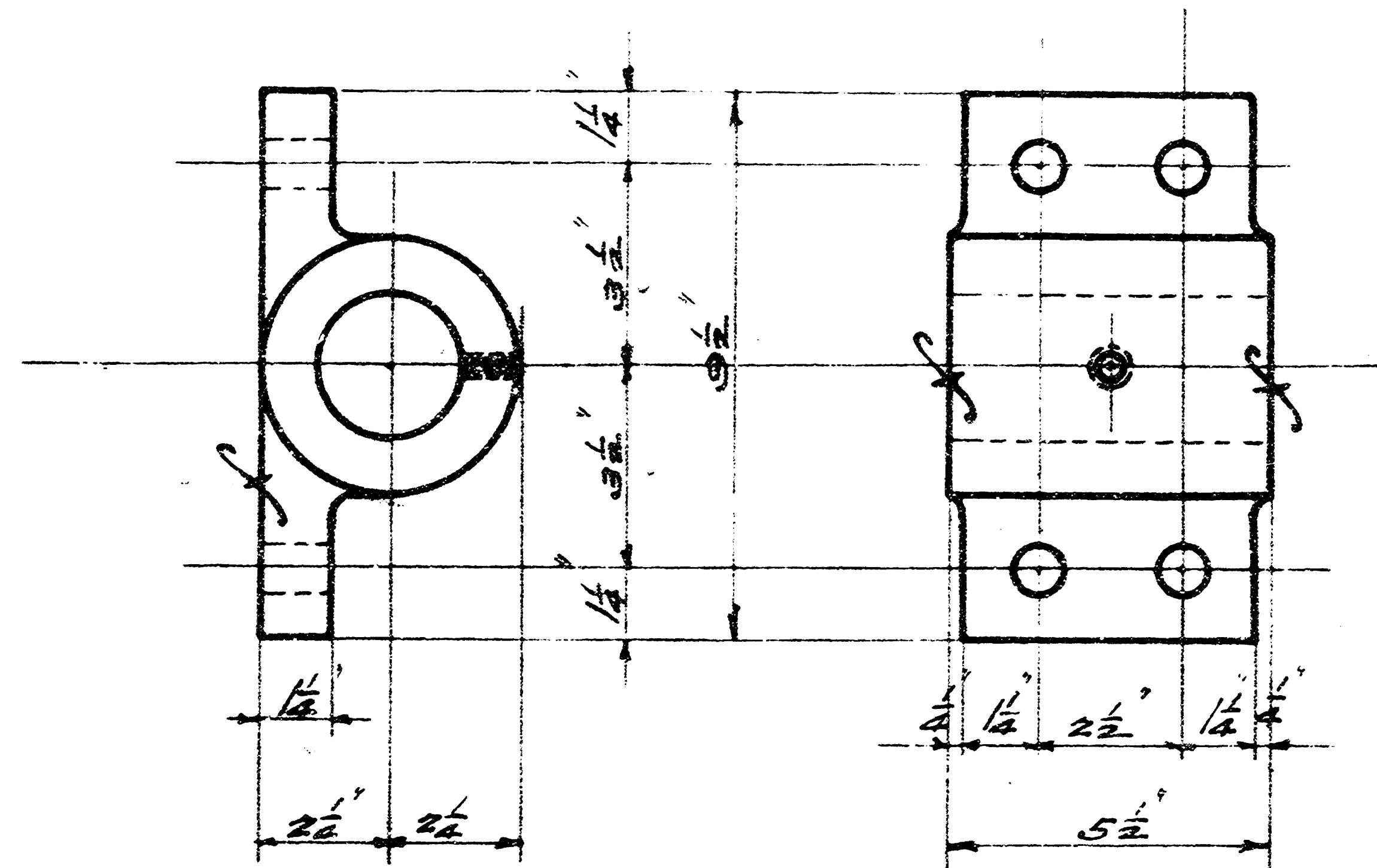
Bore for $3 \frac{7}{16}$ ϕ shaft.

4 machine bolts $\frac{3}{4} \times 5 \frac{1}{4}$ Lg. Sq hd. & hex nut.

STANDARD STEEL CONSTRUCTION Co.
Limited,
Port Robinson - Ontario.

Drawn by FLH. May-22-19
Checked by - HWA
App'd by -

CONT. 1087-2
Std-S8



Bore for $2\frac{7}{16}$ " ϕ shaft.
 Drill for $\frac{3}{8}$ " ϕ bolts.
 Drill $\frac{1}{8}$ " top for $\frac{3}{8}$ " Grease
 Cup.

2-4-BEARINGS-S9.

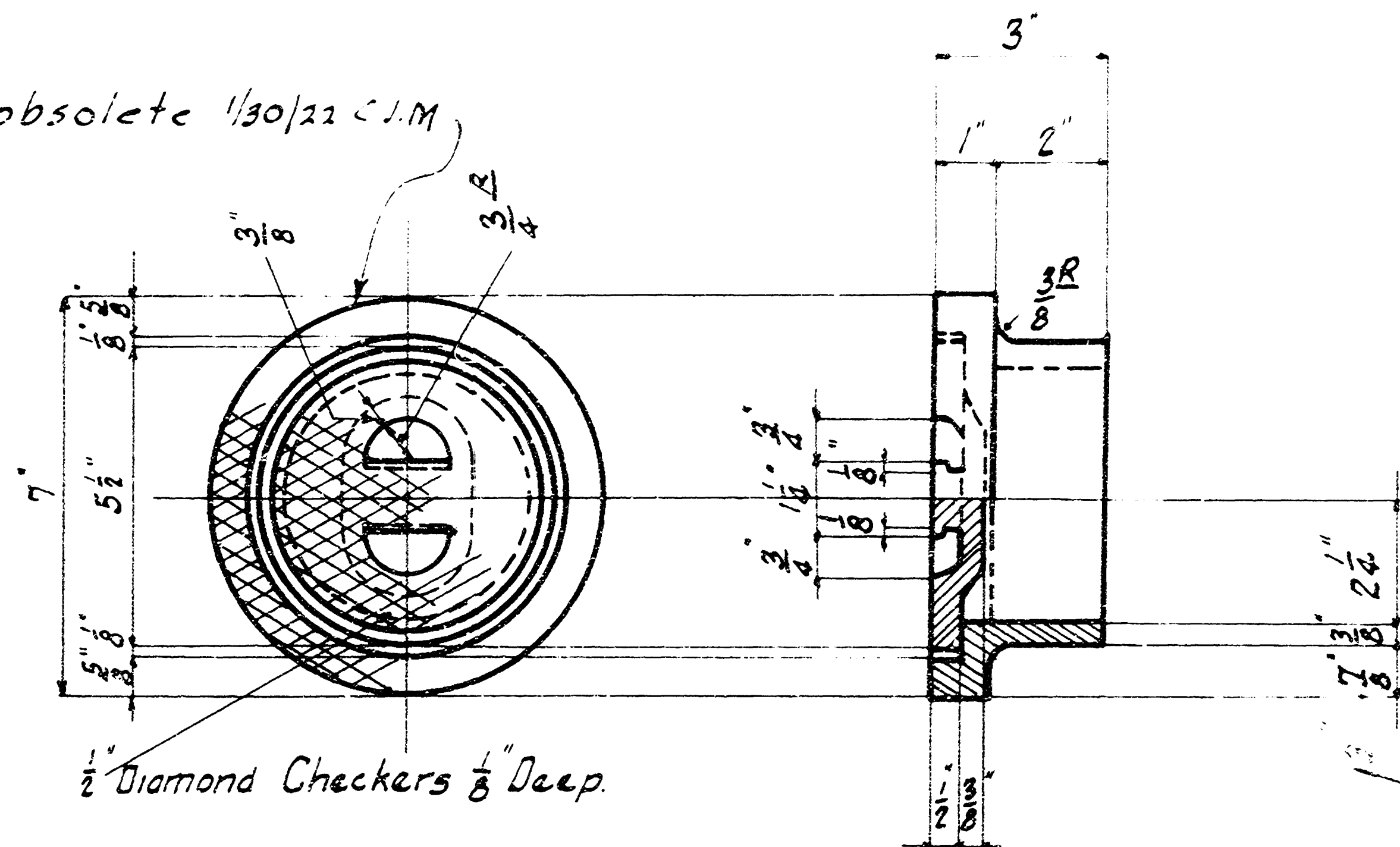
CAST IRON.

STANDARD STEEL CONSTRUCTION CO.
 Limited.
 Port Robinson-Ontario.

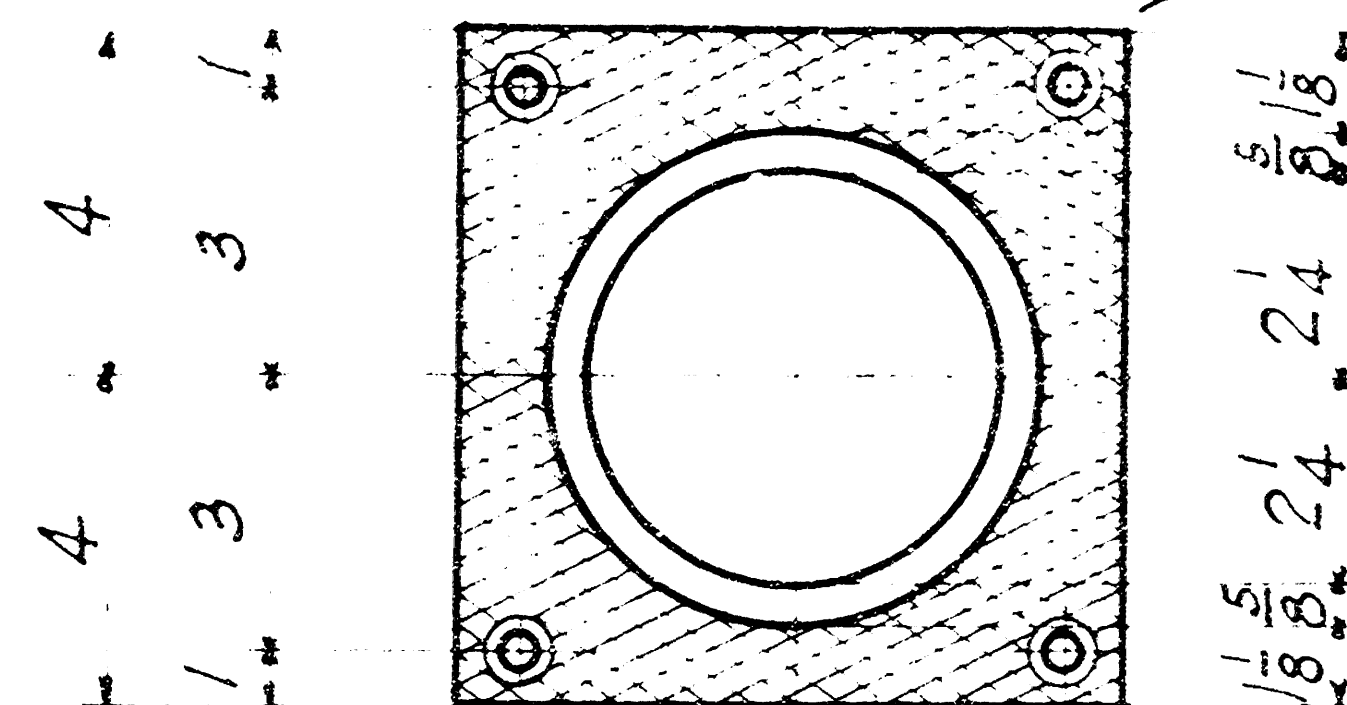
Drawn by-FLH-MAY-22-19.
 checked by
 APP.

CONT. 1687-2
 Std-S9.

Round pattern obsolete 1/30/22 C.J.M.



1 3 3 1
Drill $\frac{9}{16}$ " ϕ csk holes for $\frac{1}{2}$ " bolts



Change S11 (Round Pattern)
to 8" sq. as shown above.

2 - C1 - WELLS S11.

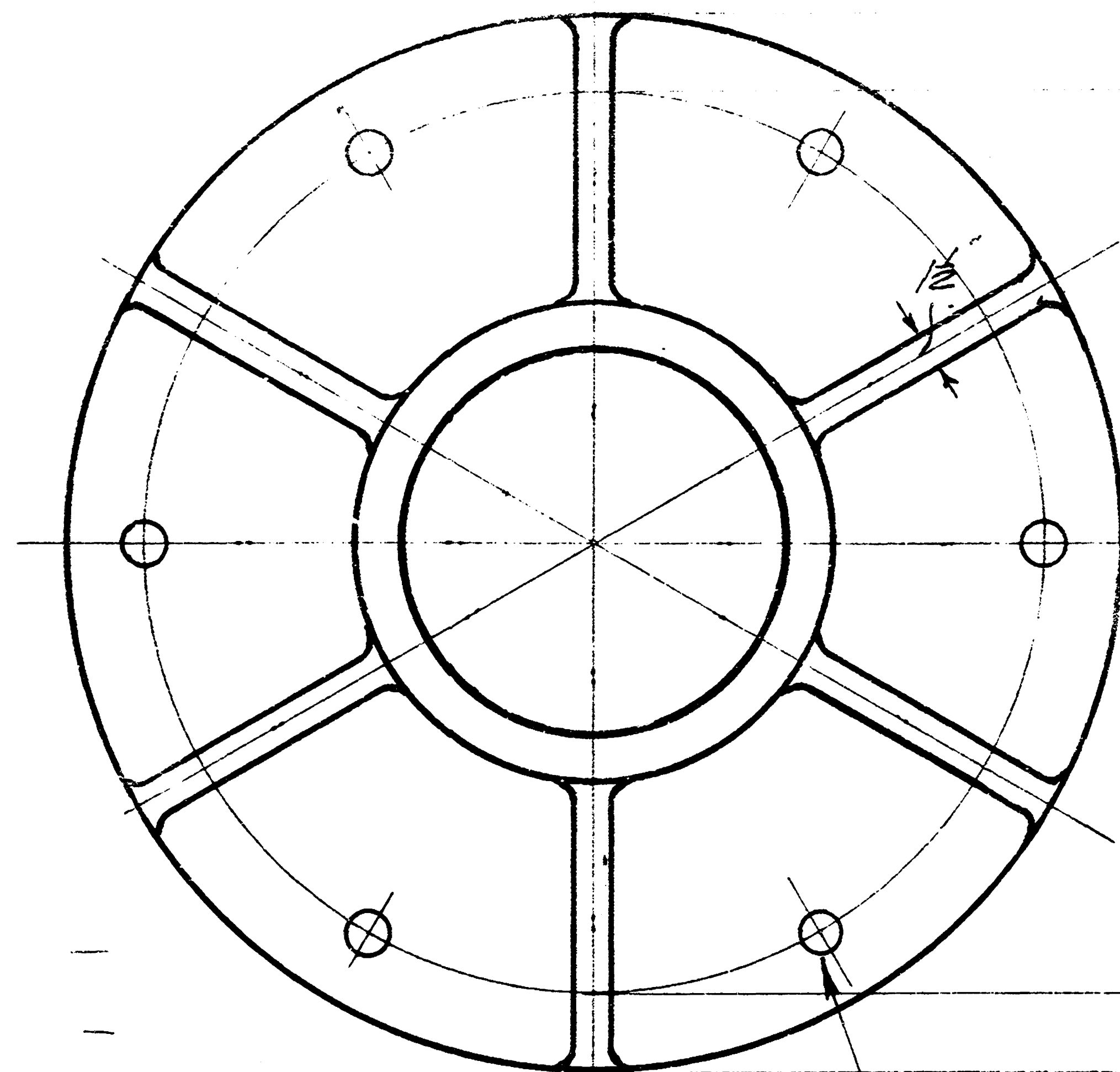
2 - CAPS - S11A

STANDARD STEEL CONSTRUCTION CO
LIMITED
WELLAND ONTARIO

Drn-by - E.E.S. Date - 1-16-22
Trc-by - E.E.S. " - 1-16-22
Chk-by - " "

CONT - 16 1/2 2
STD - S11

Rev. 1/30/22 C.J.M.

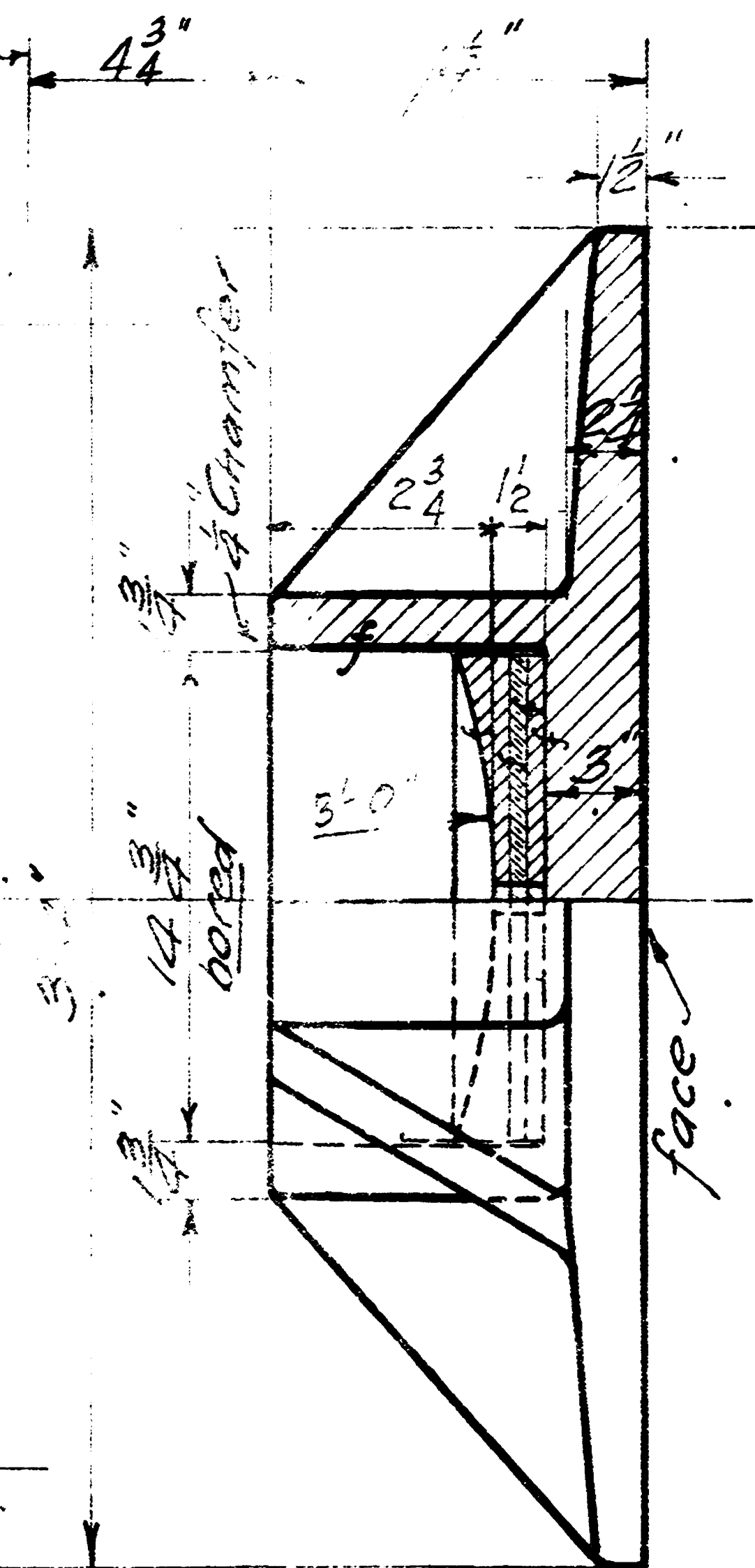


Top of 513

2'-10"

3"

1 1/2" Cored Holes

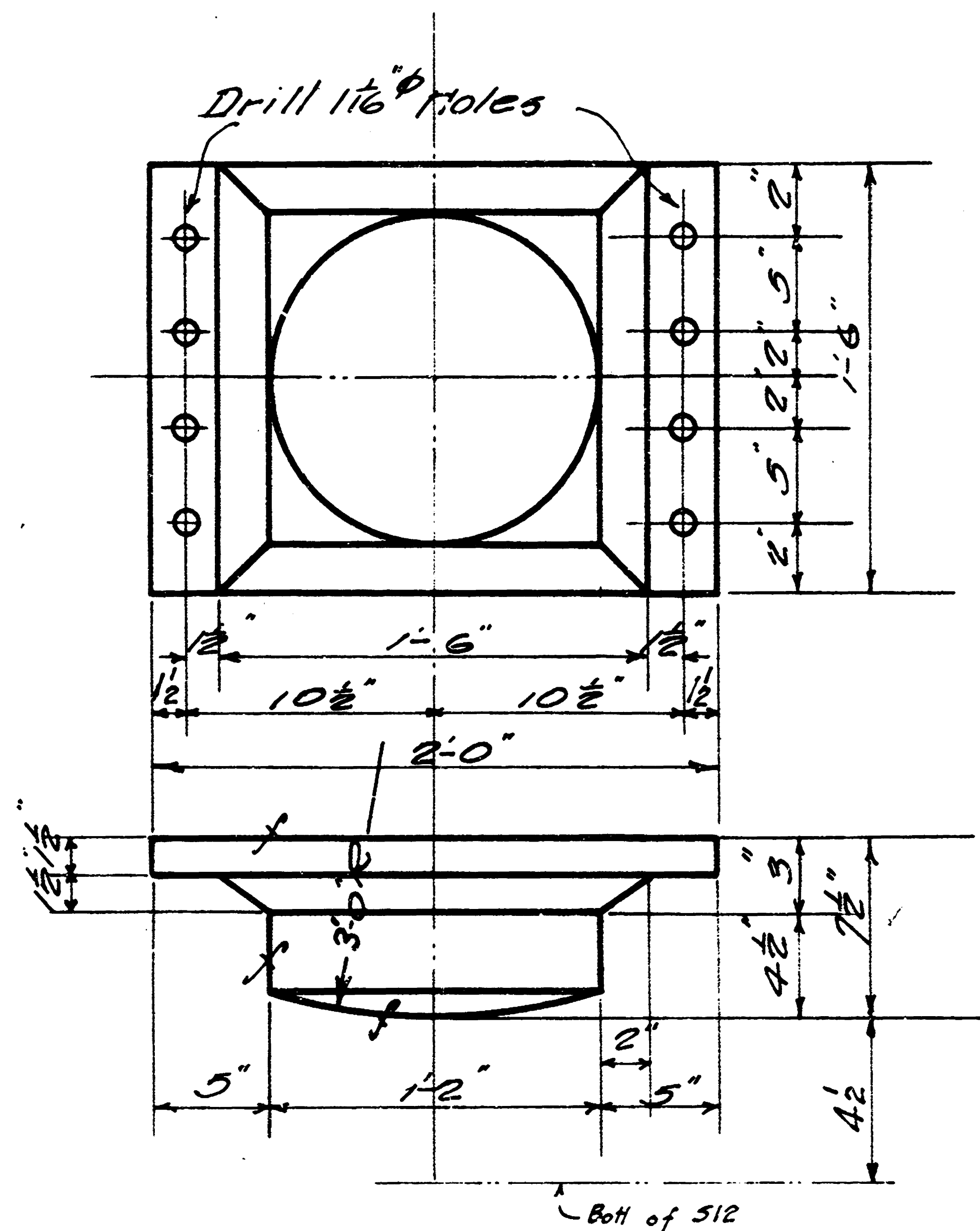


- 1-Steel Disc - 14 3/8" x 1/2" thick (from 5/8" Plate)
 - 1-Bronze Disc - 14 3/8" x 1/2" thick (cast 5/8" thick)
 - 1 Steel Disc - 14 3/8" x 1/2" thick at centre (Use 1/2" Plate)
- All discs finished all over, and have 3/4" tap in centre.

Shop Note: This hole must be in all discs.

1-Centre Pivot - 512
Cast Iron

STANDARD STEEL CONSTRUCTION CO Limited Port Robinson - Ontario	
Drawn by _____ Checked by _____ App _____	CONT 1687-2 Std 512.



1- Centre Pivot 513
Cast Iron.

STANDARD STEEL CONSTRUCTION CO
Limited

Port Robinson-Ontario.

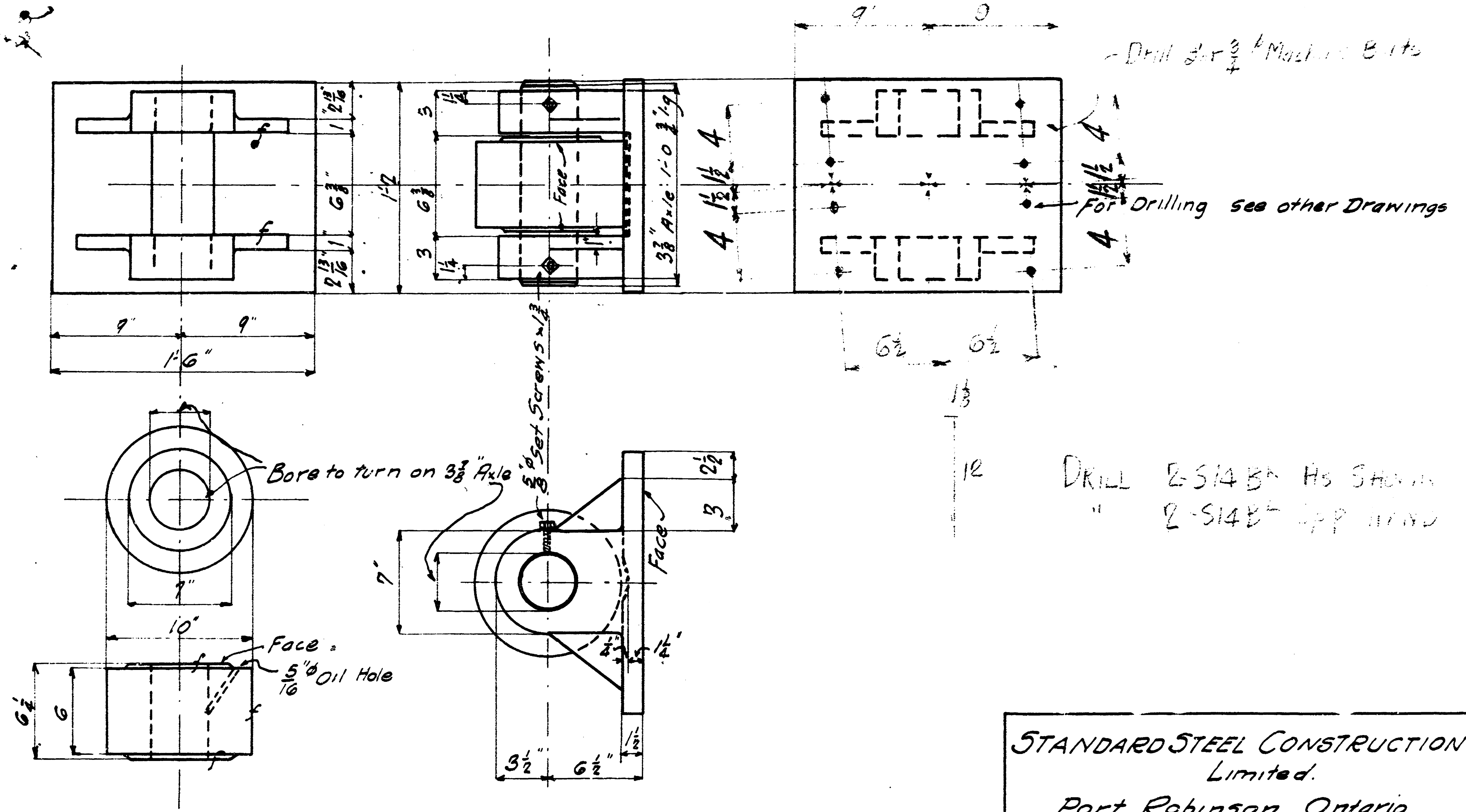
Drawn by E.H. Darling, Jan 19/22

Checked by E.H. Darling

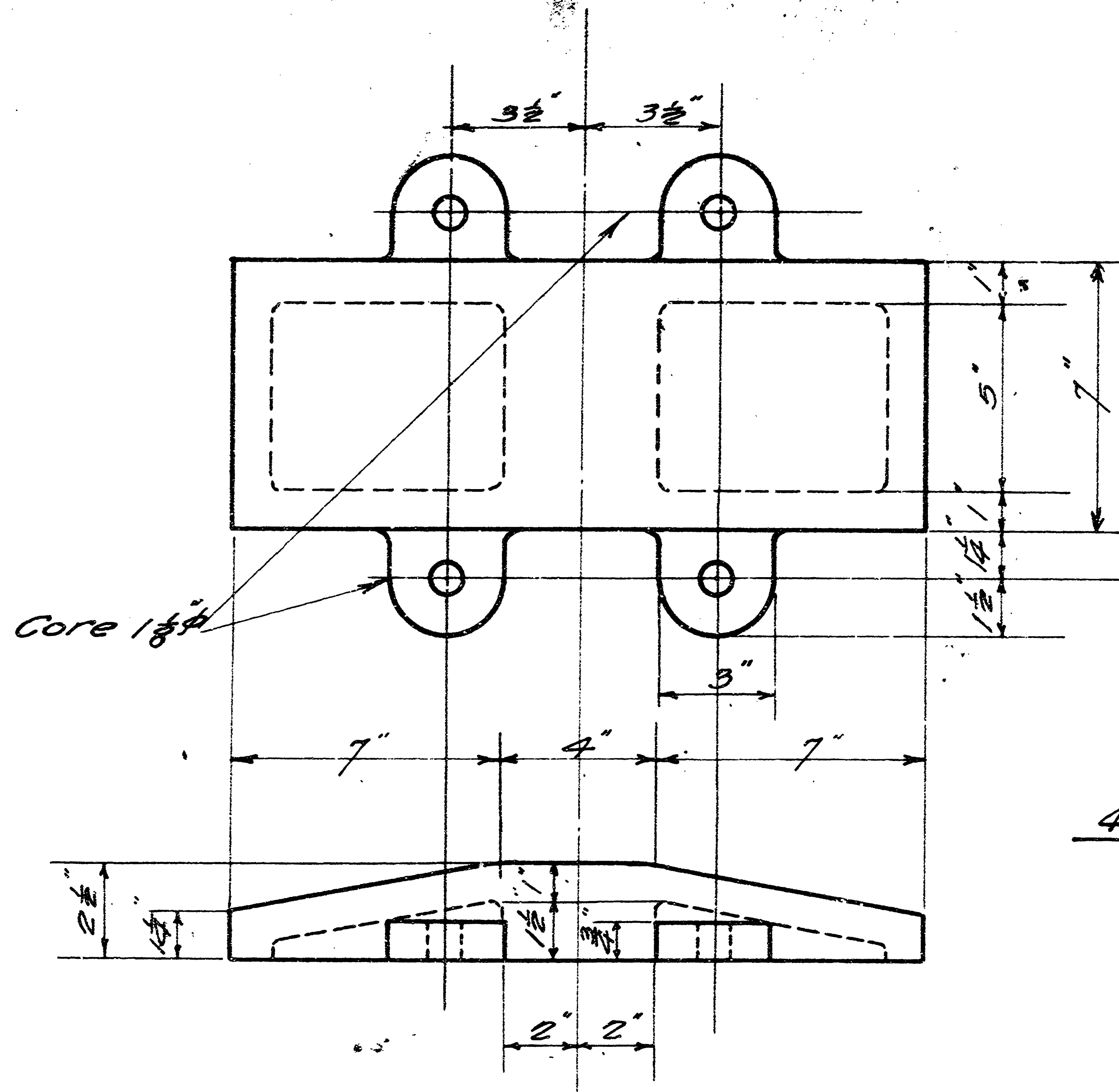
App'd by

CONT-1687-2

Std.-513



STANDARD STEEL CONSTRUCTION CO. Limited.	
Port Robinson, Ontario.	
Drawn by E.H. Darling Jan 1912	CONT-1687-2
Checked by	S + d - 514
App	

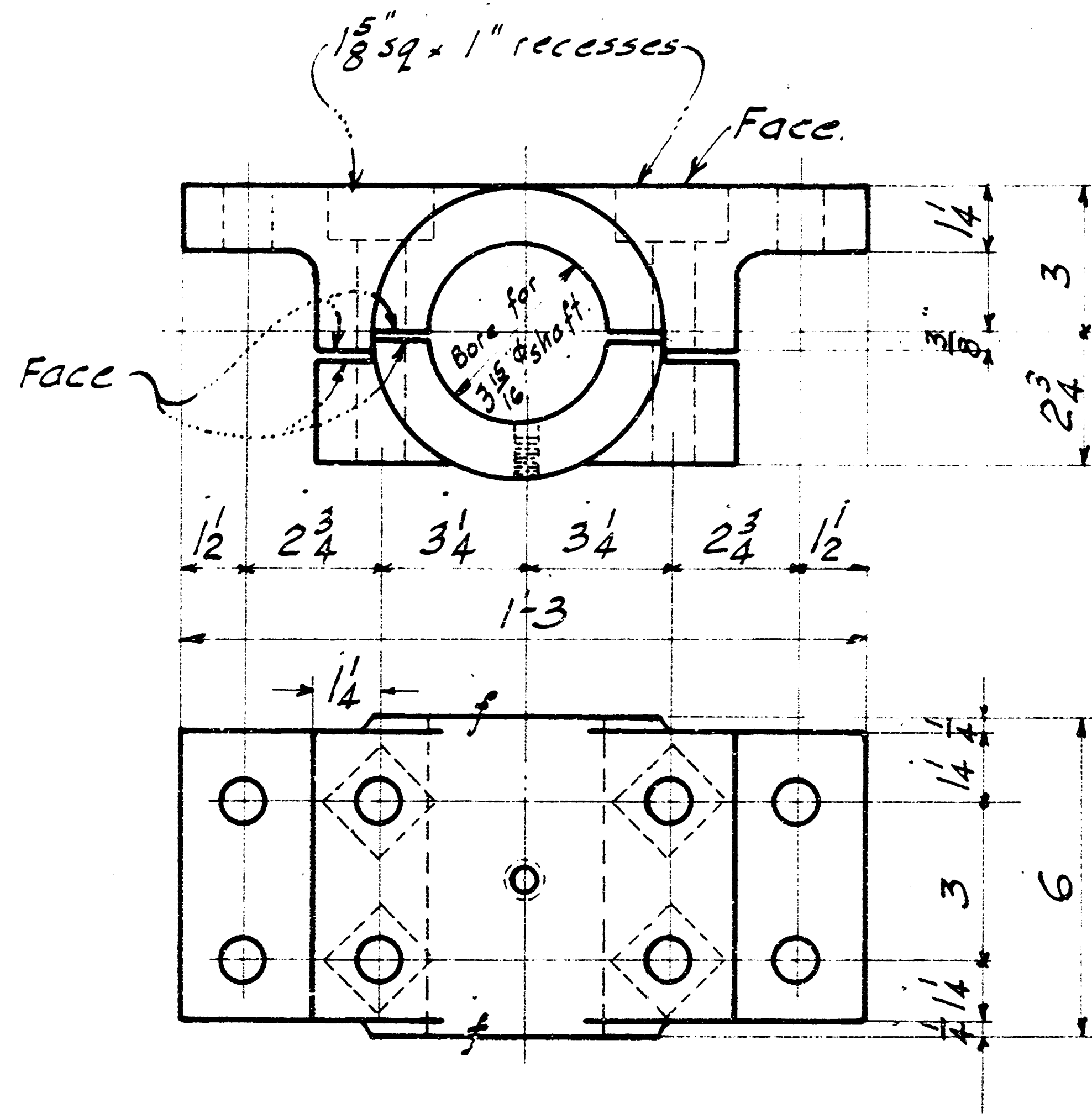


4 Castor Rests-515
Cast-Iron

STANDARD STEEL CONSTRUCTION CO.
 Limited
 Port Robinson Ontario.

Drawn by
 checked by
 App

Cont.
 Std.-515



Drill holes for 3/4" ϕ bolts.

3/16" steel liners

Drill and tap for 3/8" Grease Cup.

Bore for 3 15/16" ϕ shaft.

4 Machine Bolts 3/4" ϕ x 5 3/4" lg. Sq hd + hex nut.

2-BEARING BASES-S18

2- " CAPS-S18A

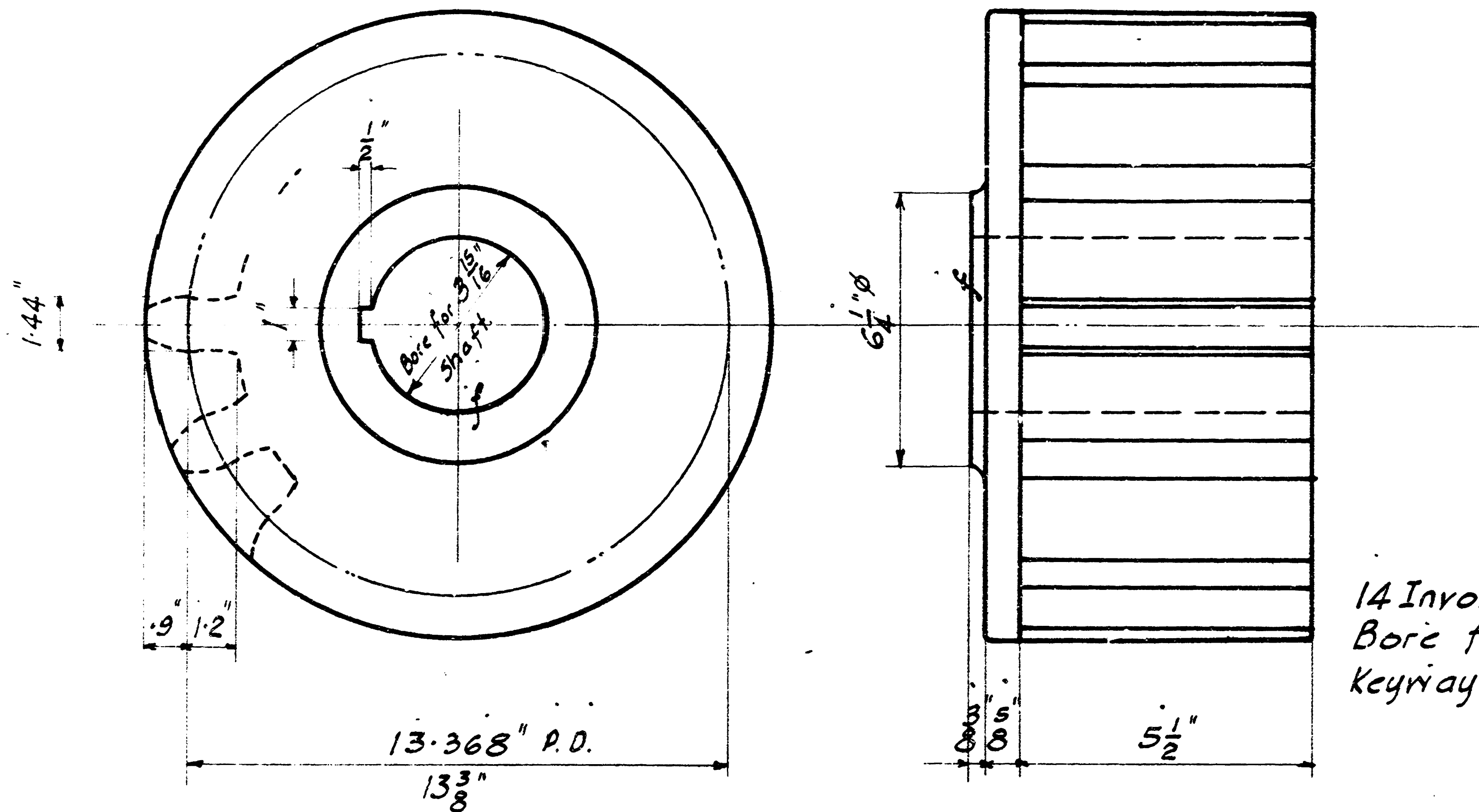
Cast Iron

STANDARD STEEL CONSTRUCTION CO.
Limited

Welland - Ontario.

Drawn by C.J.M. Feb. 13-22
Checked by C.J.R. 2-14-22
App'd ..

CONT. OF
ST'D. S18

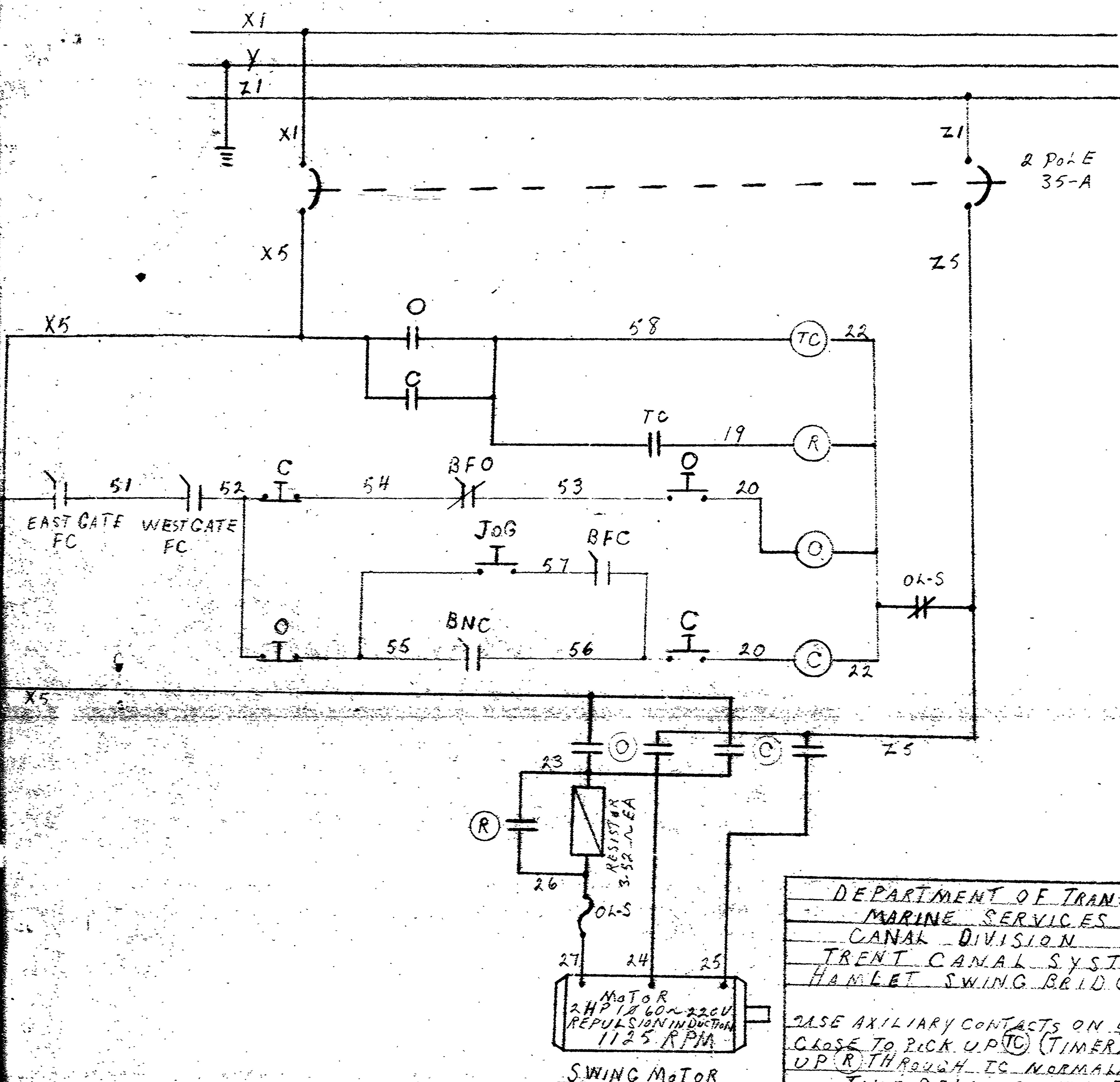


1-PINION-S19
Cast Iron

STANDARD STEEL CONSTRUCTION CO.
Limited
Welland- Ontario.

Drawn by E.J.M Feb. 13/22
Check'd C.J.R. 2-14-22
App'd

CONT. 1687-2
STD S19



DEPARTMENT OF TRANSPORT
MARINE SERVICES
CANAL DIVISION
TRENT CANAL SYSTEM
HAMLET SWING BRIDGE

USE AUXILIARY CONTACTS ON OPEN & CLOSE TO PICK UP TC (TIMER) & PICK UP R THROUGH TC NORMALLY OPEN TIME DELAY CONTACTS

CONTACTS COIL & LIMIT SWITCH ECT DESIGNATION

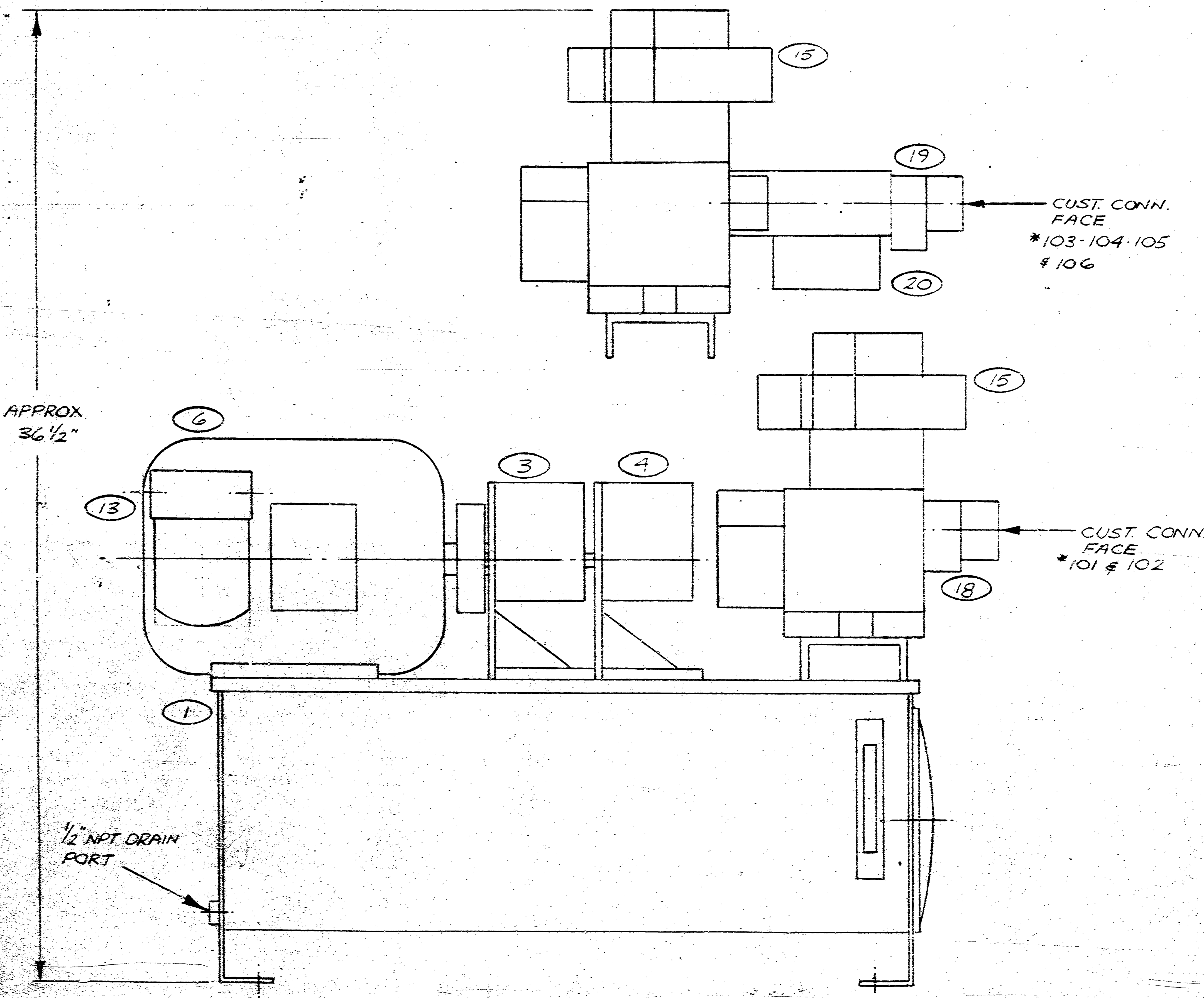
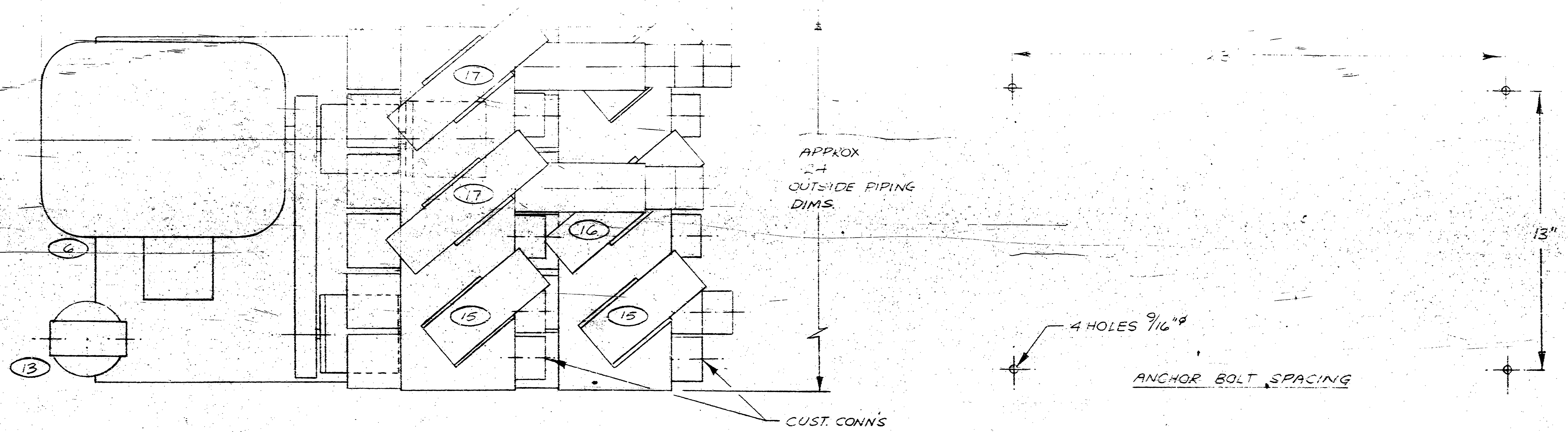
TC TIME DELAY RELAY GEN ELECT CR28208/110CA3 SERIES A COIL 220 VOLT 60~

O BRIDGE OPEN COIL
C BRIDGE CLOSE COIL
R RESISTOR CONTACTOR COIL
BFC BRIDGE FULLY CLOSED
JOG JOG PUSH BUTTON STATION
BFO BRIDGE FULLY OPEN
BNC BRIDGE NEARLY CLOSED
EGFC EAST GATE FULLY CLOSED
WGFC WEST GATE FULLY CLOSED

T.C. 3331-B
SEPT/65
DRAWN GEO GUNNINGHAM
T-2-2008.24

SEPT/65 REVISION TO DRAWING
ADDED TIME DELAY IN SWING
MOTOR CIRCUIT & REMOVE
RUN PUSH BUTTON

ITEM	QTY.	DESCRIPTION
------	------	-------------

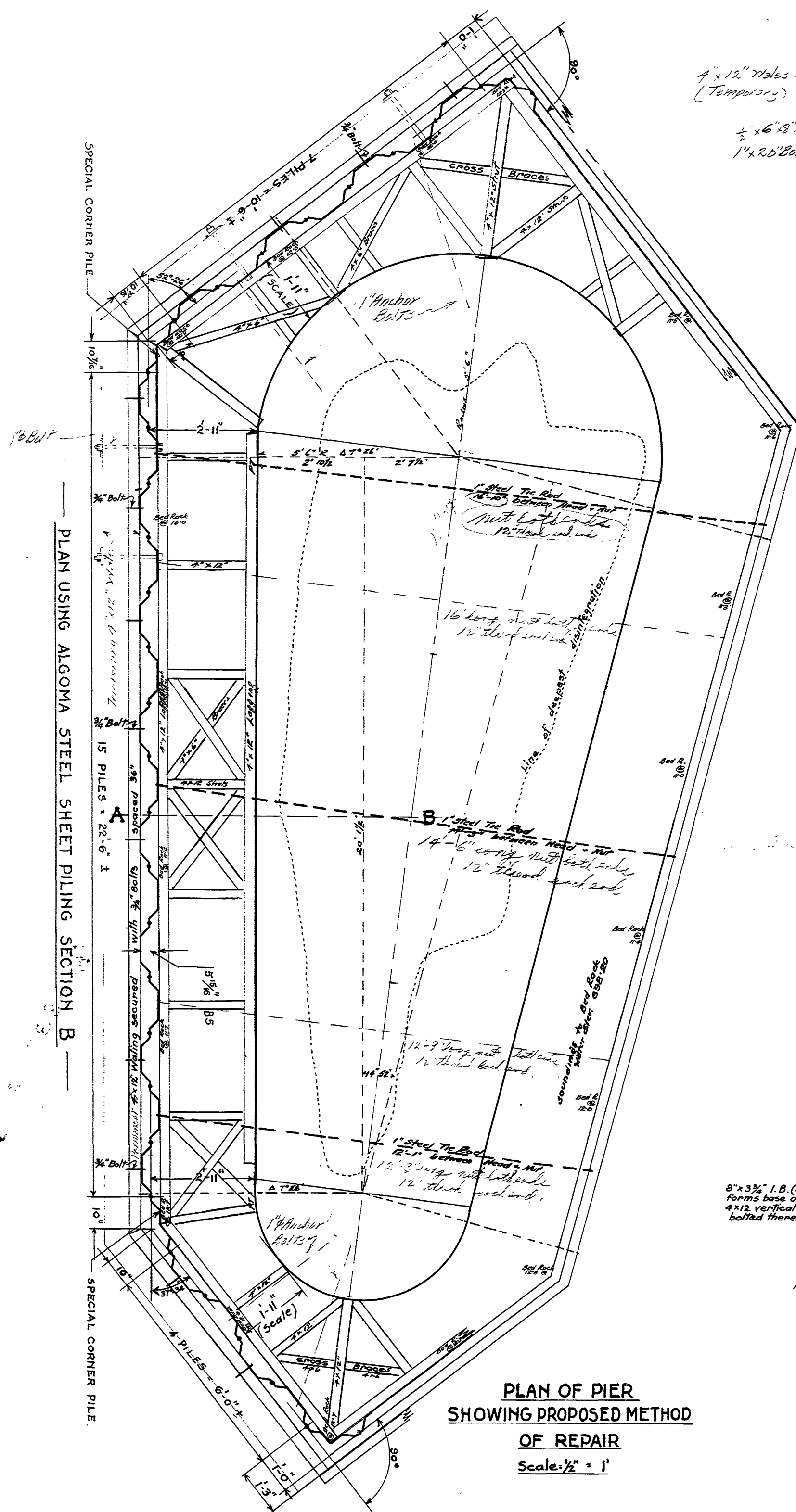


- NOTE
- 1) FLUID - PETROLEUM BASE OIL
 - 2) REFERENCE - DOT DWG NO. TC4019-G
 - 3) TAG CUST. CONN'S & COMPONENTS
 - 4) RESERVOIR TO BE SEALED
 - 5) ○ FOR ITEM NOS SEE HYDRAULIC SCHEMATIC DWG. NO. S-0311-C & BILL OF MAT'L NO. S-0311-BM-1

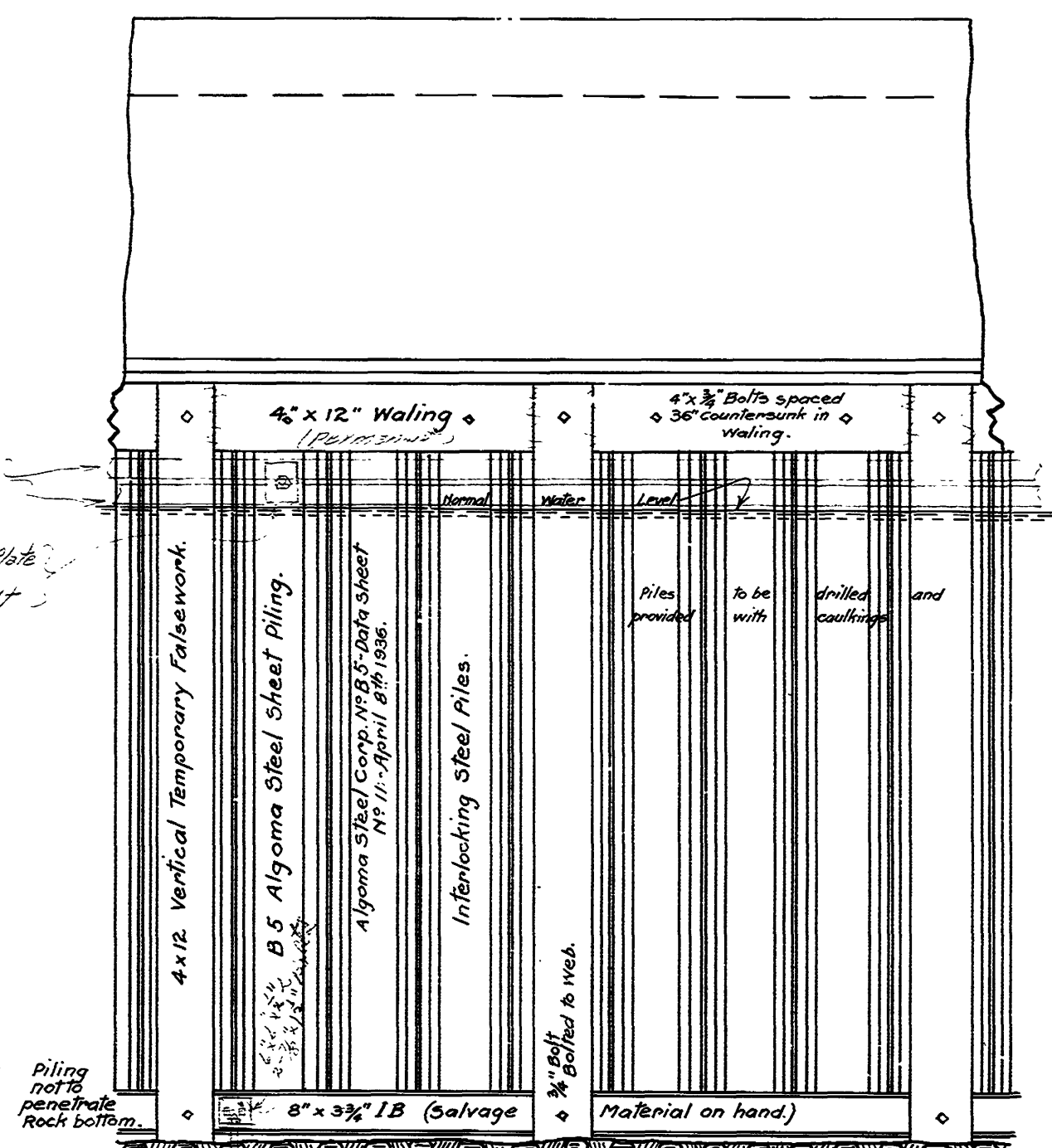
RACINE HYDRAULICS (CANADA) LTD.
SEPIA

1	A-13-3-81	24-8-71	T-20080	9/9/71	TOXI-2408-1	220/11/60
QTY.	QUOTE NO.	DATE	SERIAL NO.	DATE	P/O	VOLTAGE
CUSTOMER DEPARTMENT OF TRANSPORT						
RACINE HYDRAULICS (CANADA) LIMITED						
TITLE GENERAL ARRANGEMENT FOR BRIDGE SWING & JACKING SYSTEM						
NO.	SCALE 1/4"=1"	DRN. JC	CHK.	DWG. NO. A-0311-C		
	DATE OCT-18-71	DATE				

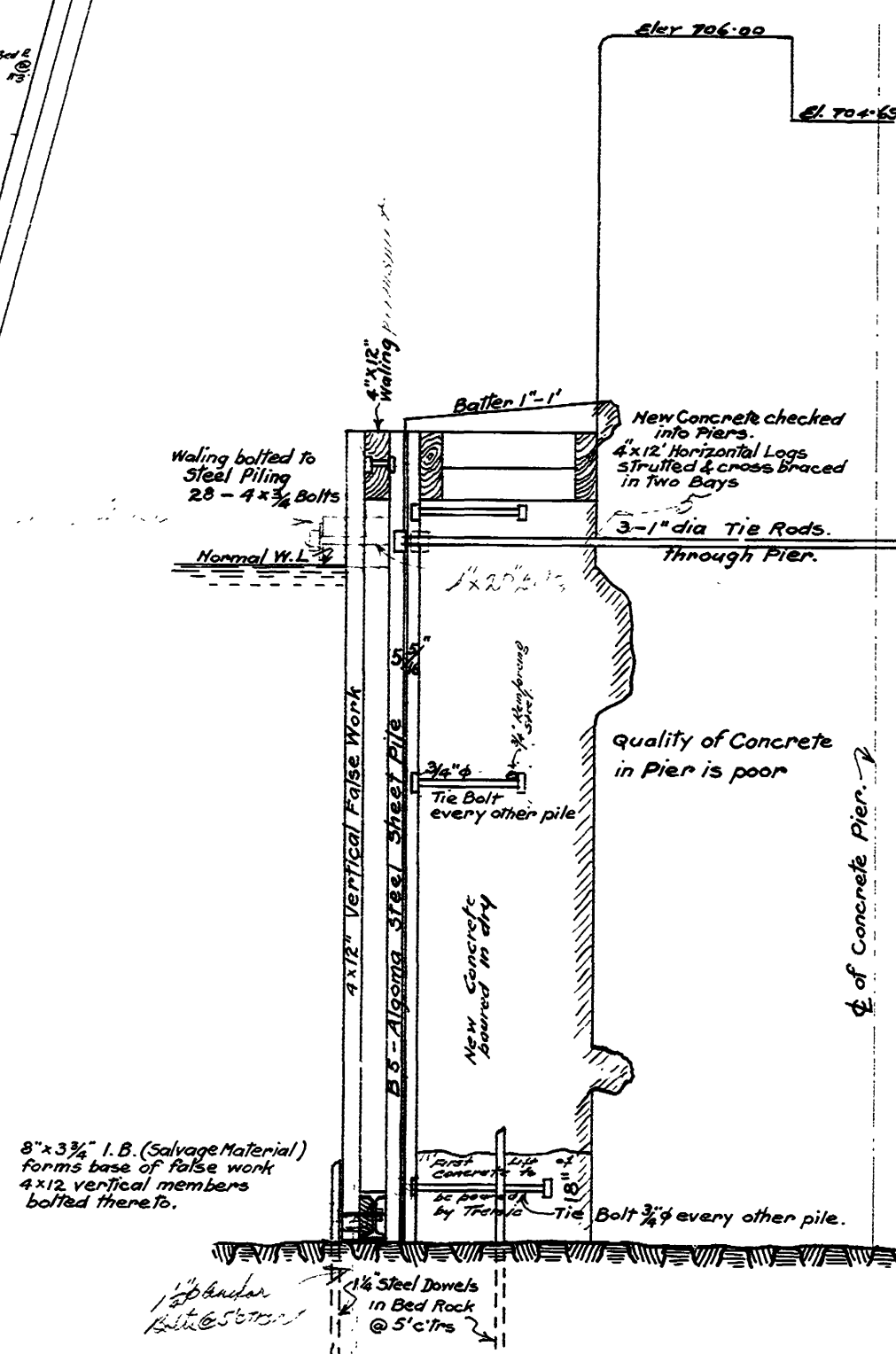
T-2-2009.00



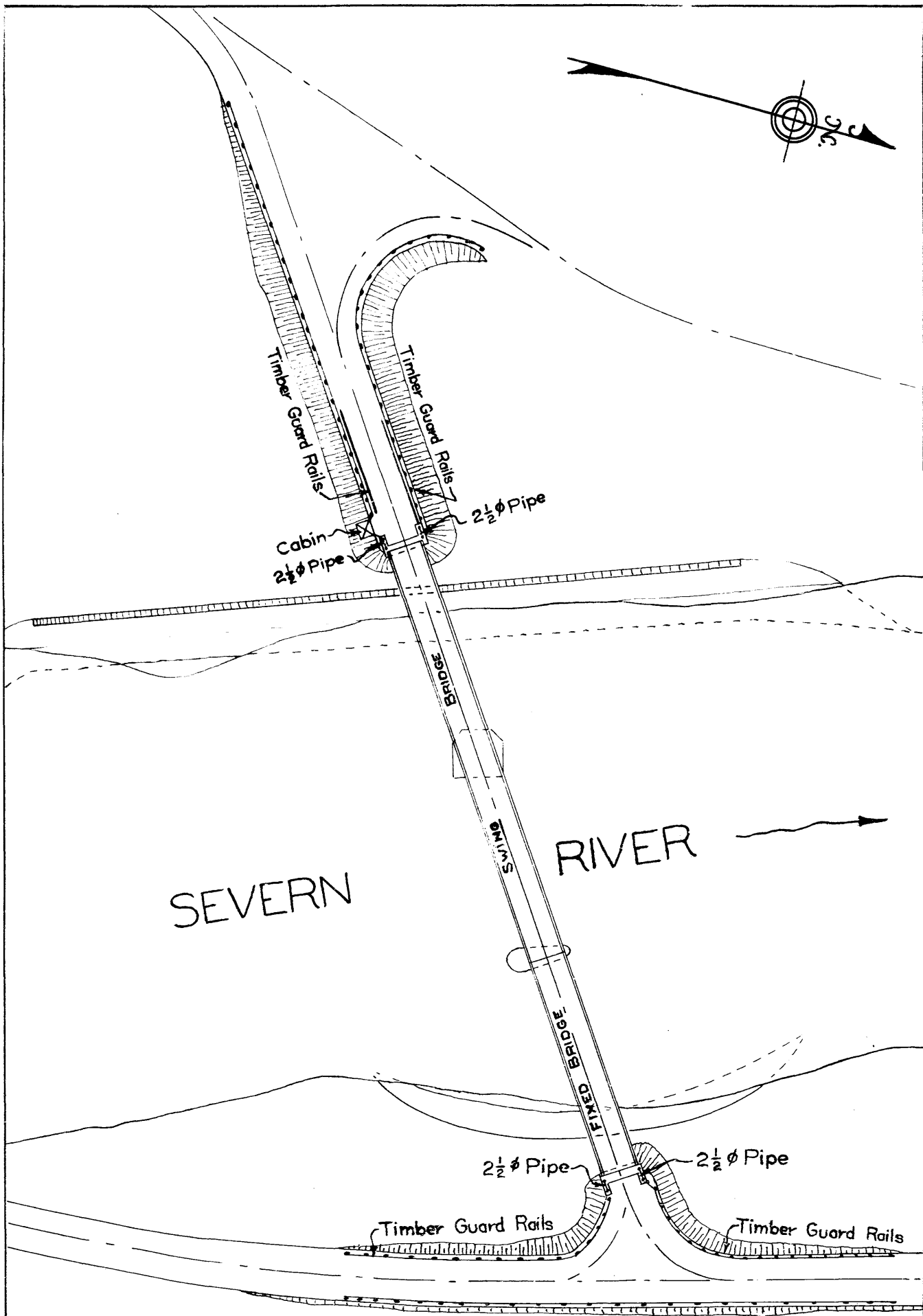
4" x 12" Waling
(Temporary)
1" x 6" x 8" Plate
1" x 20" Bolt



Bottom of pile to be cut with
Trench to conform to rock surface
where required.



DEPARTMENT OF TRANSPORT,
TRENT CANAL.
PLAN OF COFFERDAM FOR REPAIRS TO RIVER PIER,
HAMLET HIGHWAY BRIDGE
USING ALGOMA STEEL SHEET PILING TIED INTO CONCRETE
Scale: 1 inch = 2 feet.
September 14th 1945.



DEPARTMENT OF TRANSPORT
TRENT CANAL
PLAN SHOWING IN RED LOCATION
OF FLEX-BEAM GUARD RAILS
HAMLET BRIDGE No. 57

SCALE: 1" = 60'

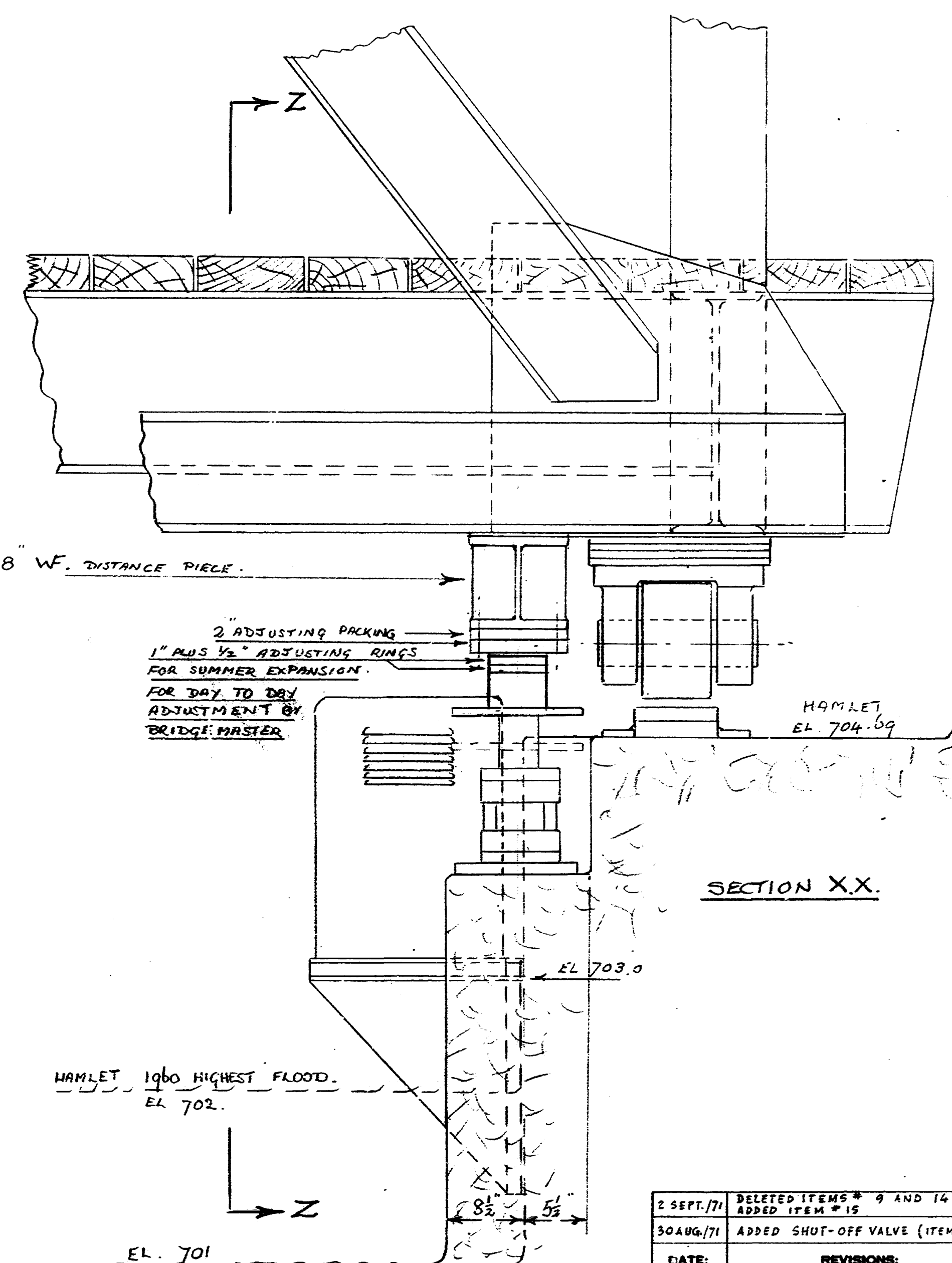
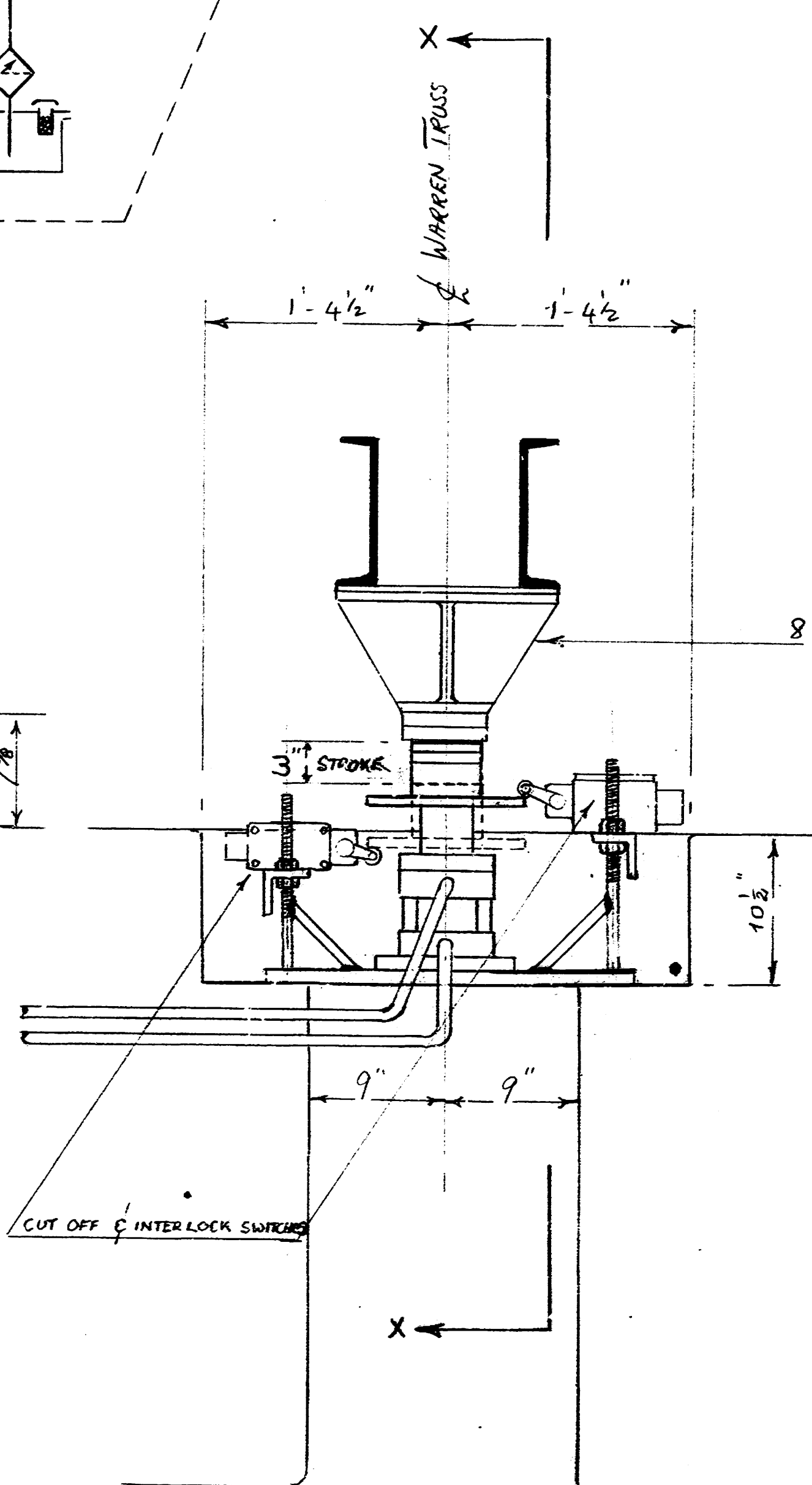
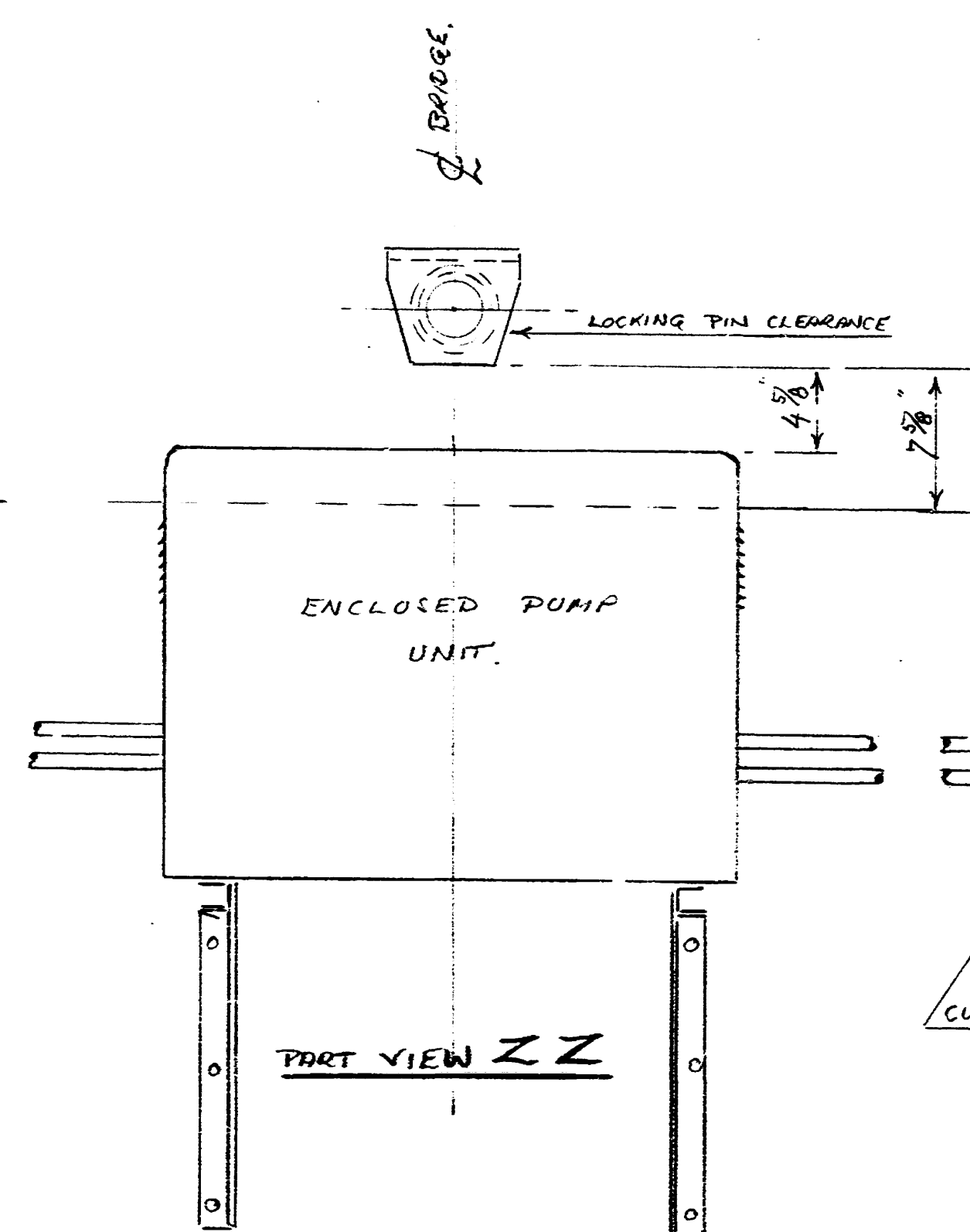
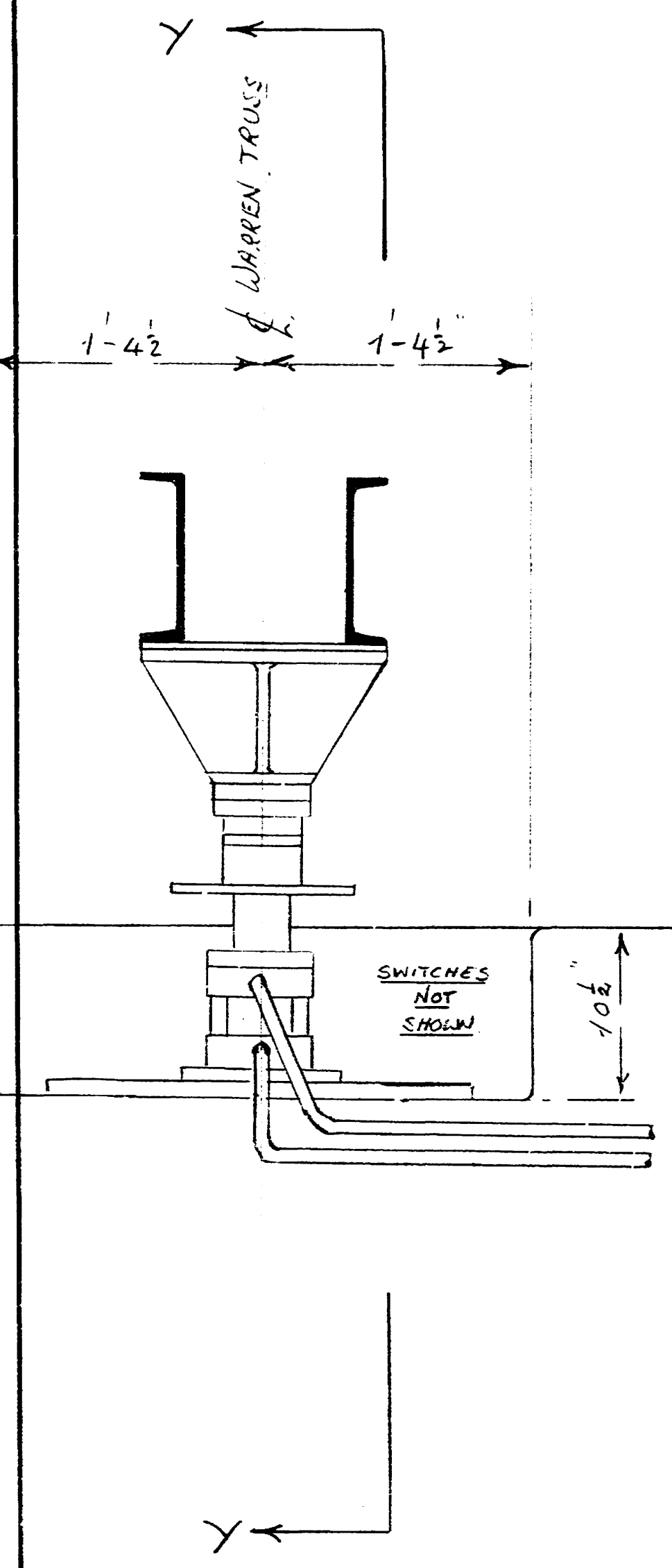
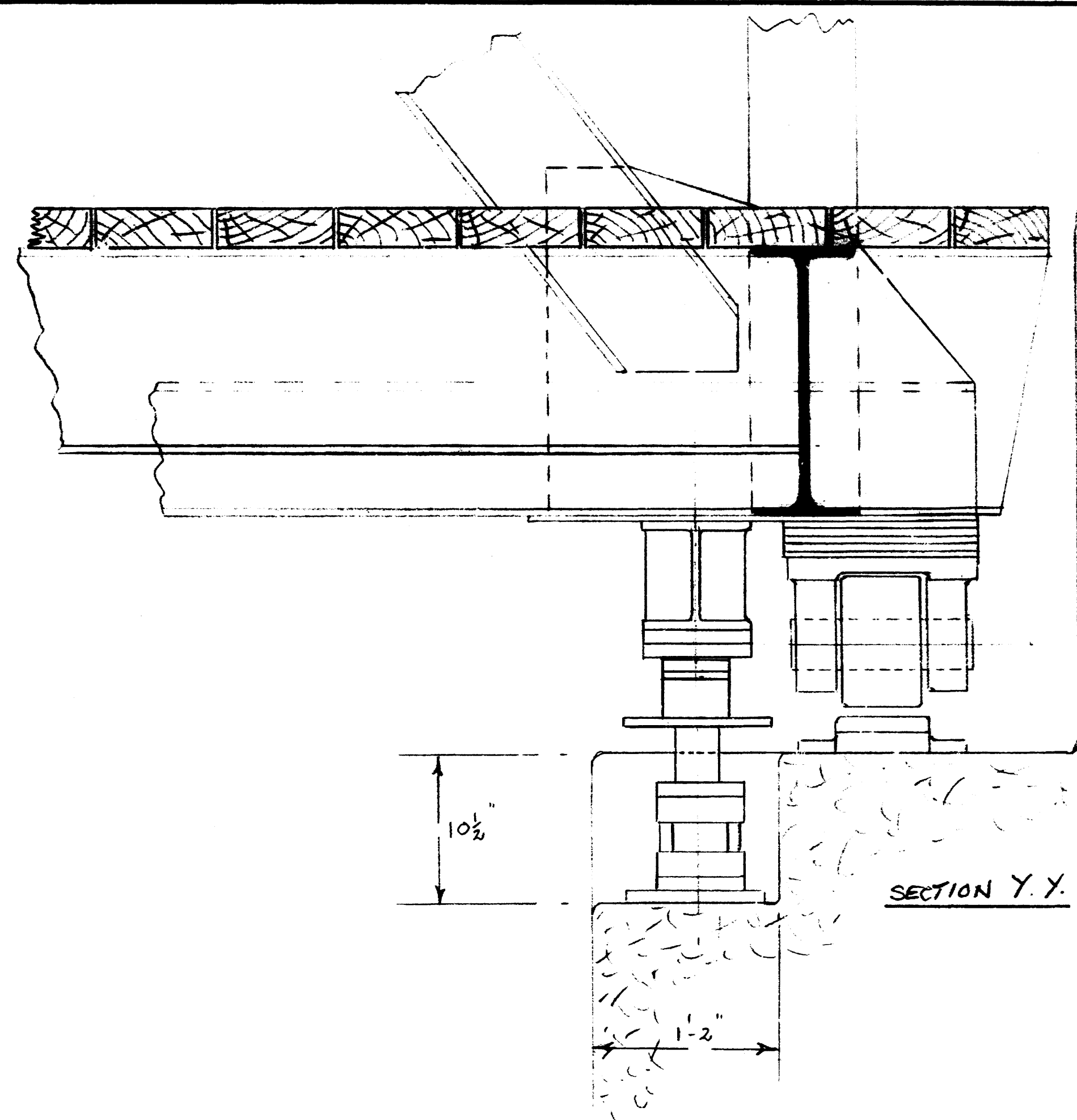
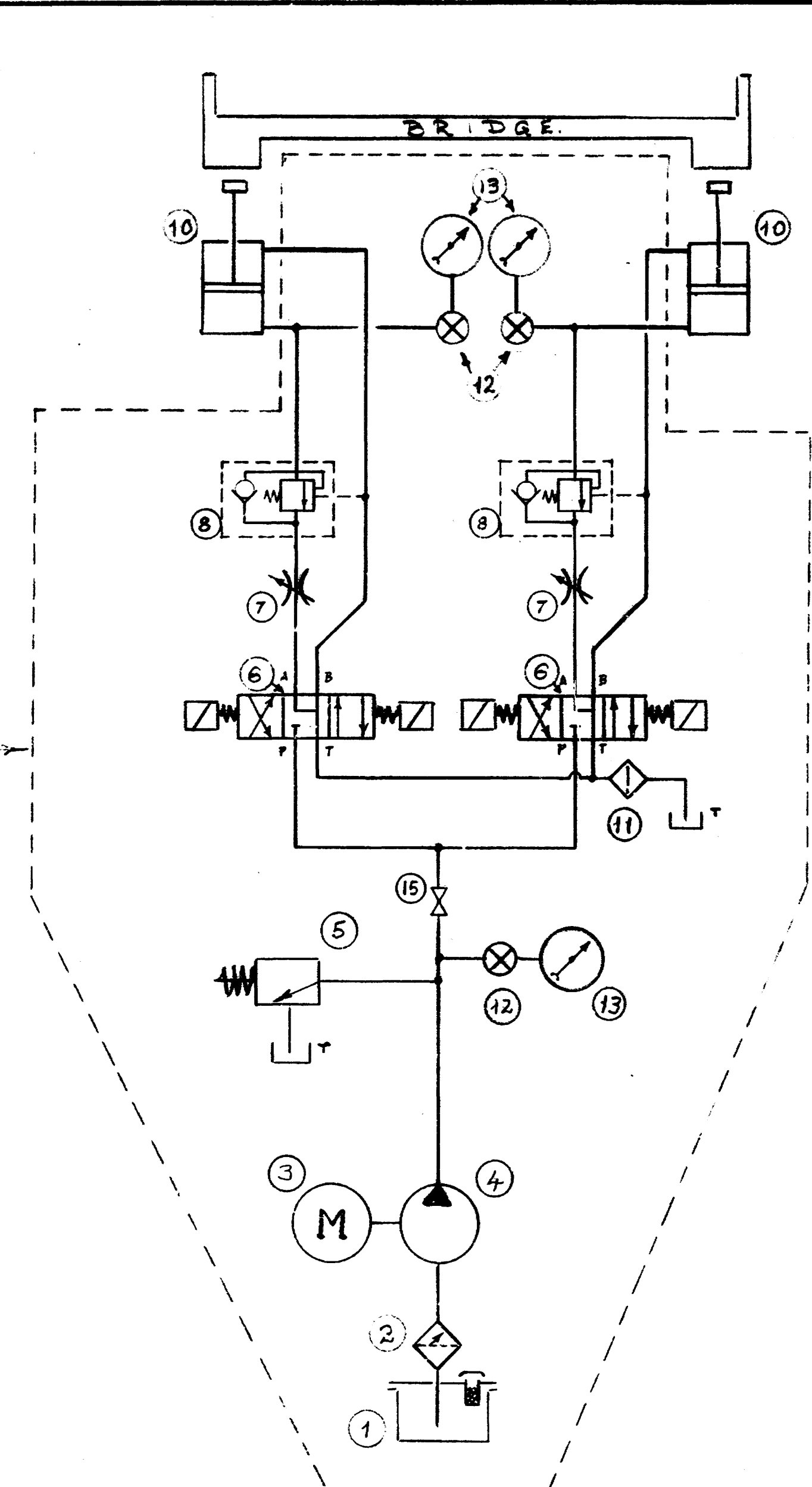
Superintending Engineer:
Peterborough Ont. Apr. 8 1953

T.C. 1713-A

T-14-113

NO	PORT	NUMBER	ITEM
1	DM. KE	1	RESERVOIR AIR BREATHER, WHELED FILLER, ELEV. GAUGE
2		1	STRAINER 75 MICRON.
3		1	ELECTRIC MOTOR 3HP, 1Ø, 220V, 60W, 1800RPM
4		1	HYDRAULIC PUMP, 12 G.P.M. AT 1800 R.P.M.
5		1	SYSTEM RELIEF VALVE 1500 P.S.I. SET
6		2	SOLENOID OPERATED DIRECTIONAL CONTROL VALVE
7		2	NEEDLE VALVE
8		2	HOLDING VALVE - 25725-3-3-2 RACING OR EQUIV.
9		2	INTERLOCK VALVE
10		2	JACKING CYLINDERS 4" DIA. BORE
11		1	FILTER 10 MICRON.
12		3	STOP COCK
13		3	PRESSURE GAUGE 1 SYSTEM 2 VEHICLE.
14		1	SHUT-OFF VALVE - FOR CHECKING RELIEF PRESSURE SETTING
15		1	SHUT-OFF VALVE - FOR CHECKING RELIEF PRESSURE SETTING
16			
17			
18			

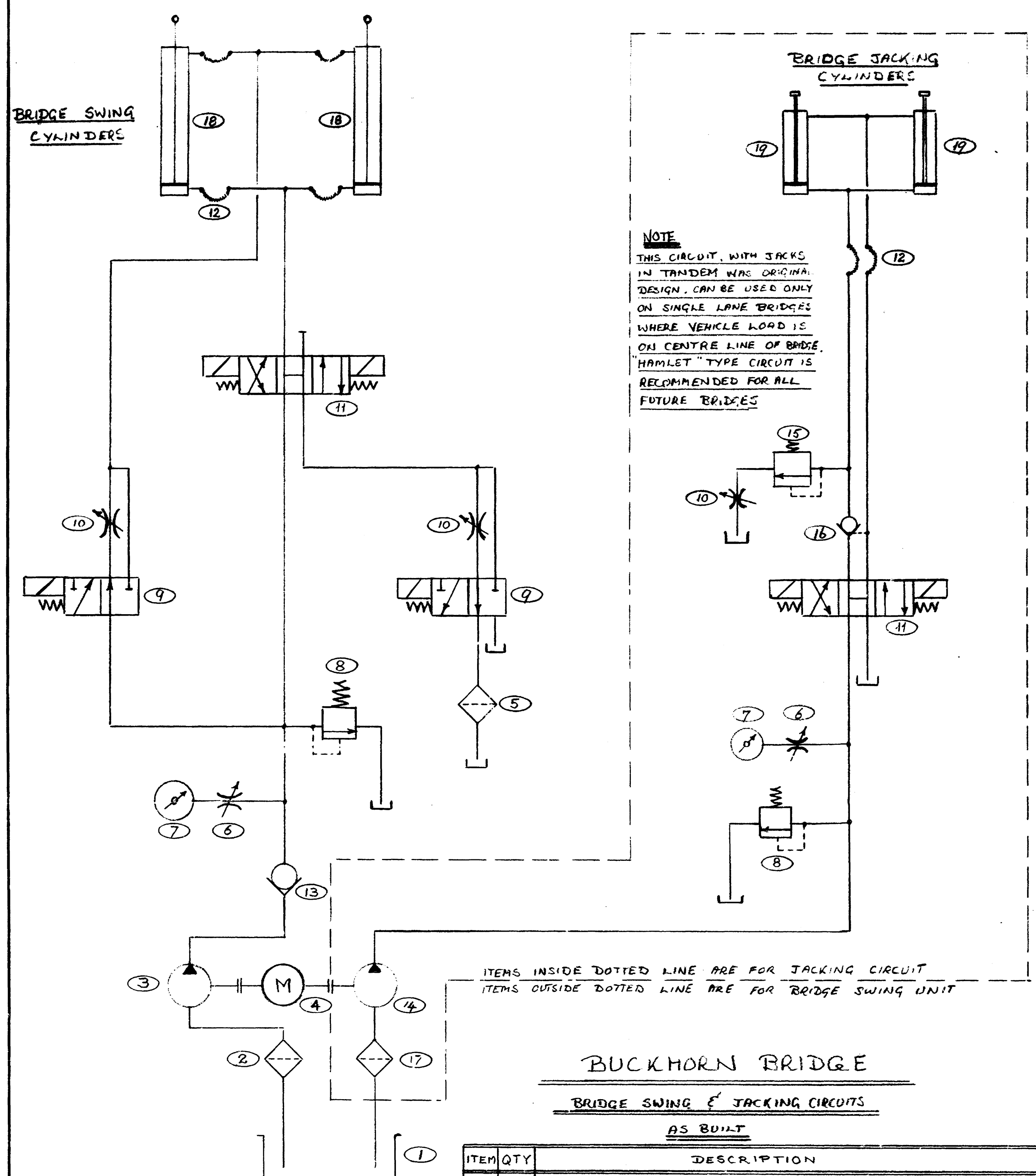
NOTE:- ALL ITEMS INSIDE DOTTED LINES TO BE INCLUDED IN PUMP UNIT.



NOTE:
THIS DRAWING ALSO USED FOR:
BOLSOVER BRIDGE
LAKESHORE RD. BRIDGE #50
HASTINGS BRIDGE

DEPARTMENT OF TRANSPORT			
MARINE WORKS			
CANALS DIVISION			
TRENT CANAL SYSTEM			
HYDRAULIC JACKING SYSTEM.			
HAMLET SWING BRIDGE.			
SCALE: 1/2" = 1'-0"	DESIGN: J.W.H.T.	DRAWN: J.W.H.T.	CHECKED: J.W.H.T.
DATE: 1 SEPT 1970	REVISIONS:	MADE: CH'K'D:	SUPERINTENDING ENGINEER
T.C. 3941-G			

T-19-118.3



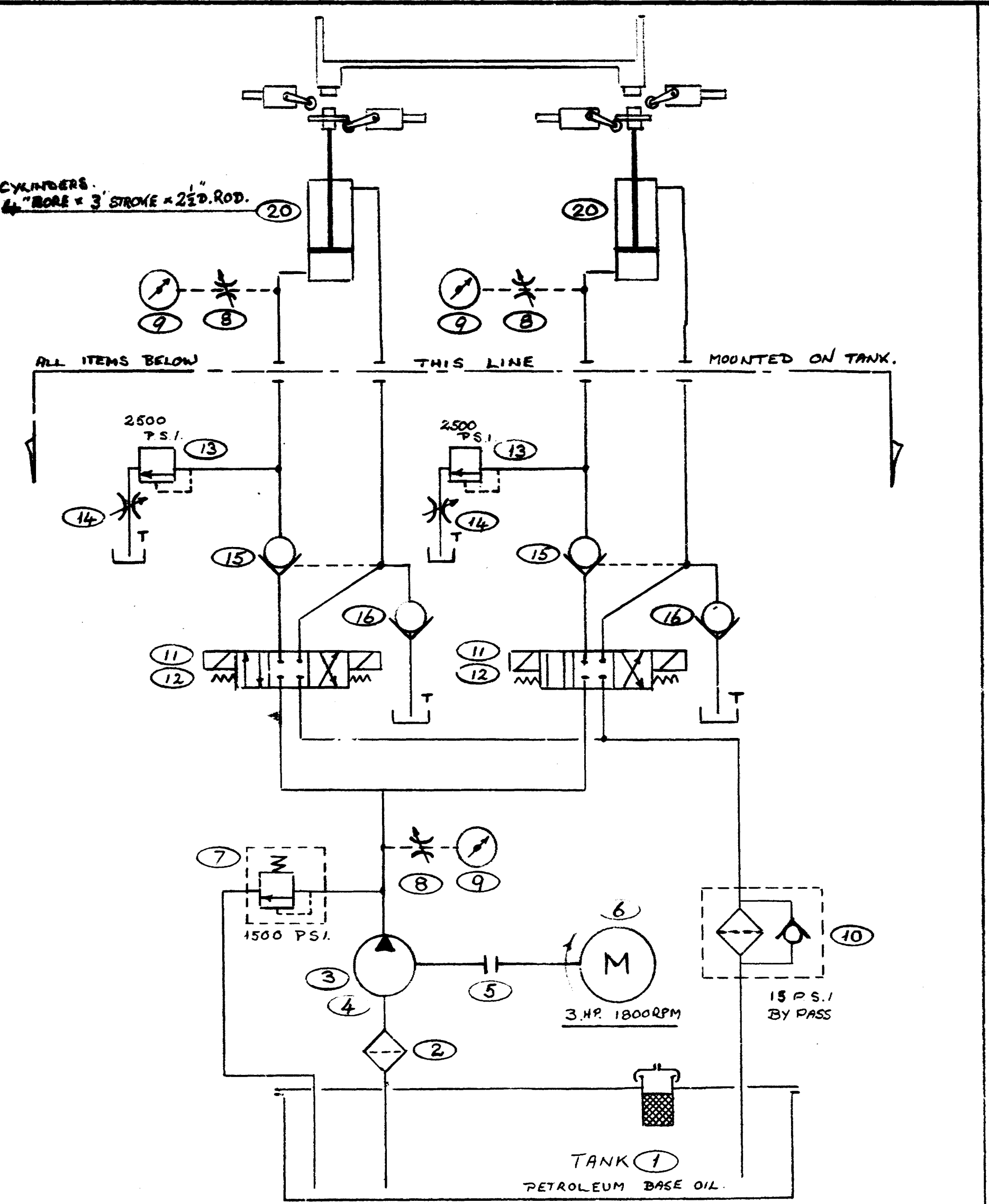
BASIC HYDRAULIC SWING CIRCUIT
USED AT:

BRIDGE	SPAN
CARRYING PLACE BRIDGE, MURRAY CANAL	6"
BRIGHTON ROAD BRIDGE, MURRAY CANAL	6"
BRIDGE #7 GLEN ROSS, TRENT CANAL	5"
BRIDGE #11 CAMPELLFORD	5"
BUCKHORN BRIDGE #33	5"
BRIDGE #43 BOLSOVER	5"
BRIDGE #50 LAKESHORE RD.	5"

② 6" used from Canal spans, spans 5" required by design.

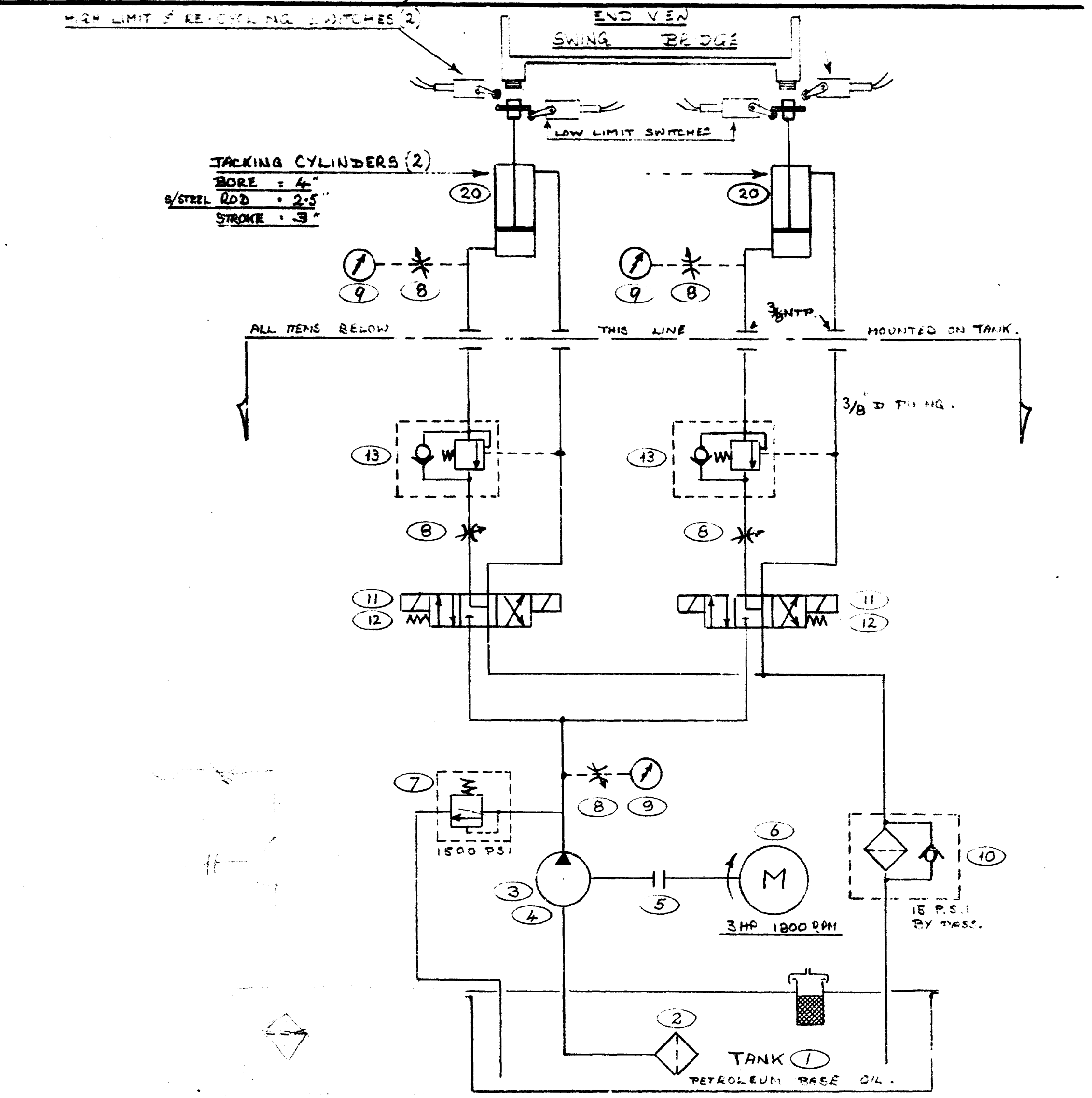
Sta 1962 to 1969.

ITEM	QTY	DESCRIPTION
1	1	HYDRAULIC RESERVOIR DOWTY, 25 GALLONS, COMPLETE WITH FILLER, STRAINER LEVEL GAUGE.
2	1	EXTERNAL STRAINER
3	1	GEAR PUMP, DOWTY, GR 2048/69, RP/150F, 1500 PSI, 1.3 GPM AT 1200 RPM
4	1	ELECTRIC MOTOR 3 HP, BROOK ELECTRIC MOTOR OF CANADA LTD. AC MOTOR, TYPE DP, FRAME EK 104, T. CODE H, VOLTS 115/120, 1 PH, 60V, FLA 322/178
5	1	RETURN LINE FILTER DOWTY, 10 MICRON
6	2	NEEDLE VALVE, DOWTY
7	2	PRESSURE GAUGE, 0-3000 P.S.I., DOWTY
8	2	RELIEF VALVE, DOWTY YUKEN #BT 06-H2090D, 500-2000 P.S.I.
9	2	DIRECTIONAL VALVE YUKEN #48A-28B-032290-68, 120 VOLTS, 60V
10	2	METERING VALVE, DOWTY
11	2	DIRECTIONAL VALVE - YUKEN #48A-3C3-03-3090 - 120 VOLTS - 60V.
12	6	FLEXIBLE HYDRAULIC LINES, MADE TO MEASURE ON SITE
13	1	IN LINE CHECK VALVE, DOWTY
14	1	VANE TYPE PUMP, VICKERS SPERRY MOD #V-114-1.5-1C-10
15	1	RELIEF VALVE, VICKERS SPERRY, MOD #C-175-F-10, SET 1500-3000 P.S.I. RANGE
16	1	PILOT OPERATED CHECK VALVE, VICKERS SPERRY, MOD #4CT06A10
17	1	SUMP STRAINER, BELLWIS VALVAIR LTD, CAT #30307, 10 GPM.
18	2	CYLINDERS (SWING) FLUID POWER LTD #5HHC-40KY, 5" BORE X 40 STROKE, HEAVY DUTY ROD
19	2	CYLINDERS (JACKING) PARKER HANNAFIN, COWEN, SCOTLAND, MOD #J2A524, WORKING PRESSURE 3000 P.S.I., 5" STROKE X 4" BORE - ROD CHROM. PL. 5/16" DIA. X 2 1/2" DIA.



BRIDGE JACKING CIRCUIT, TRENT CANAL DESIGN, WITH INDEPENDENTLY OPERATED JACKS.

ITEM	QTY	DESCRIPTION
1	1	RESERVOIR, AIR BREATHER, SCREENED FILLER, LEVEL GAUGE.
2	1	STRAINER, 75 MICRON.
3	1	PUMP, 1.2 GPM AT 1800 RPM.
4	1	PUMP MOUNT BRACKET
5	1	FLEX COUPLING
6	1	ELECTRIC MOTOR, 3 HP, 1800 RPM, 220V, 1Ø, 60V.
7	1	SYSTEM RELIEF VALVE, 1500 P.S.I.
8	3	NEEDLE VALVE
9	1	PRESSURE GAUGE, 0-3000 P.S.I.
10	1	RETURN FILTER, 10 MICRON.
11	2	4 WAY SOLENOID VALVE, 110V, 1Ø, 60V.
12	2	SUB-PLATE FOR ITEM 11.
13	2	VEHICLE RELIEF VALVE, 2500 P.S.I.
14	2	VARIABLE FLOW CONTROL
15	2	PILOT OPERATED CHECK VALVE, "NO LEAK".
16	2	CHECK VALVE.
17		
18		
19		
20	2	JACKING CYLINDER, AIR BLEEDERS, S/STEEL CHROM PLATED RODS, BASE MOUNT, 3000 P.S.I.



JACKING CIRCUIT BY "RACINE HYDRAULICS CANADA LTD. AS ORDERED."

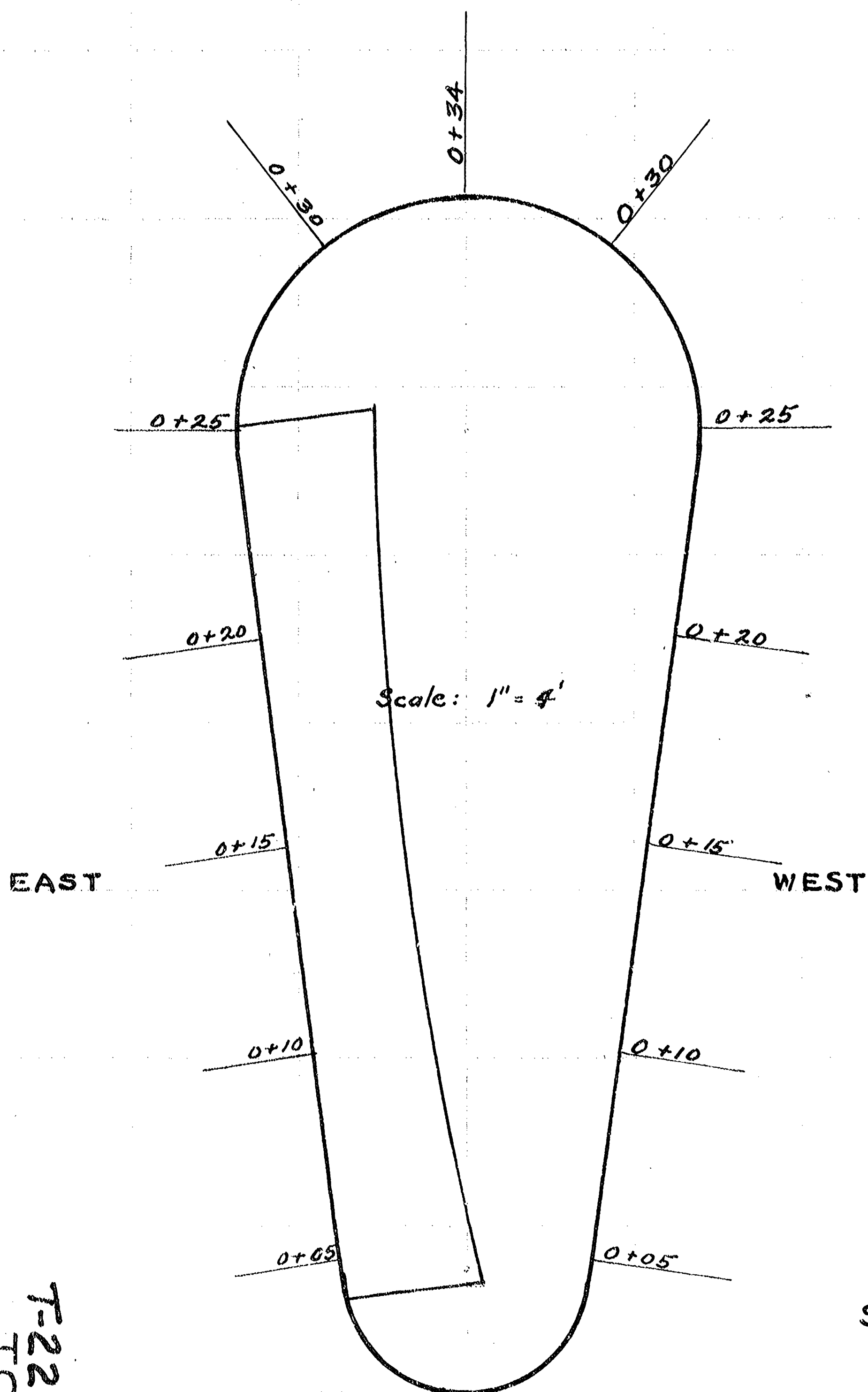
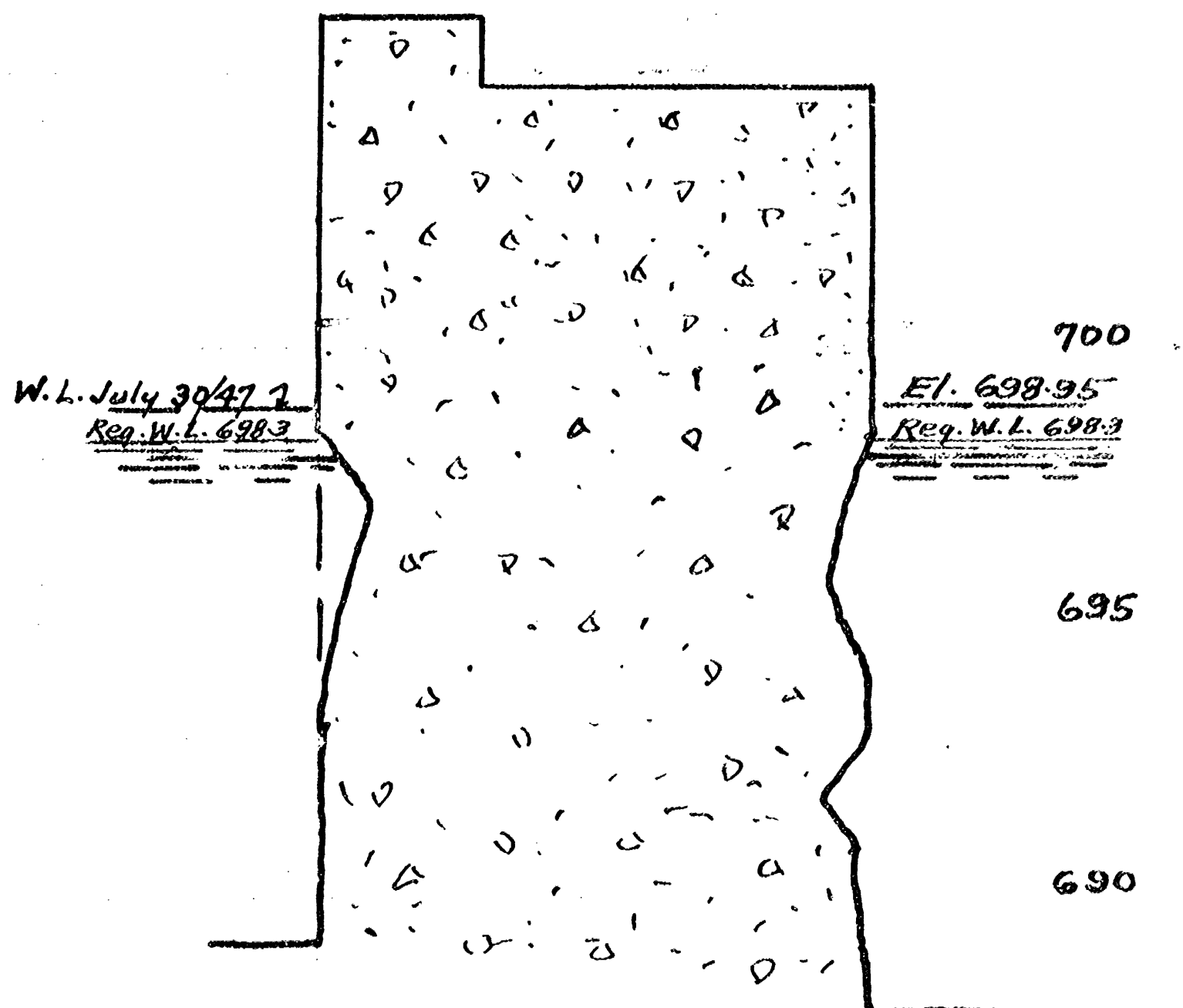
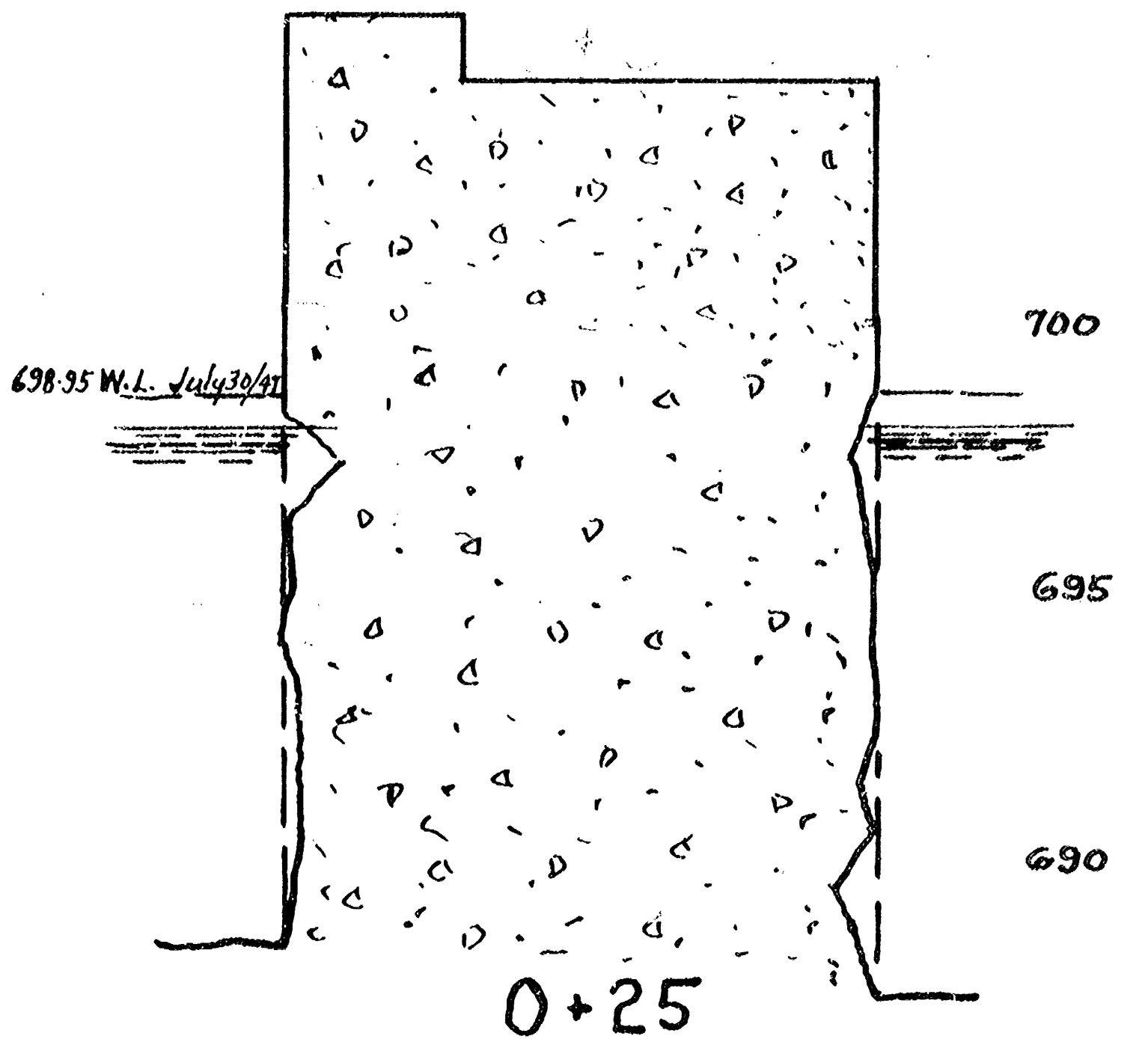
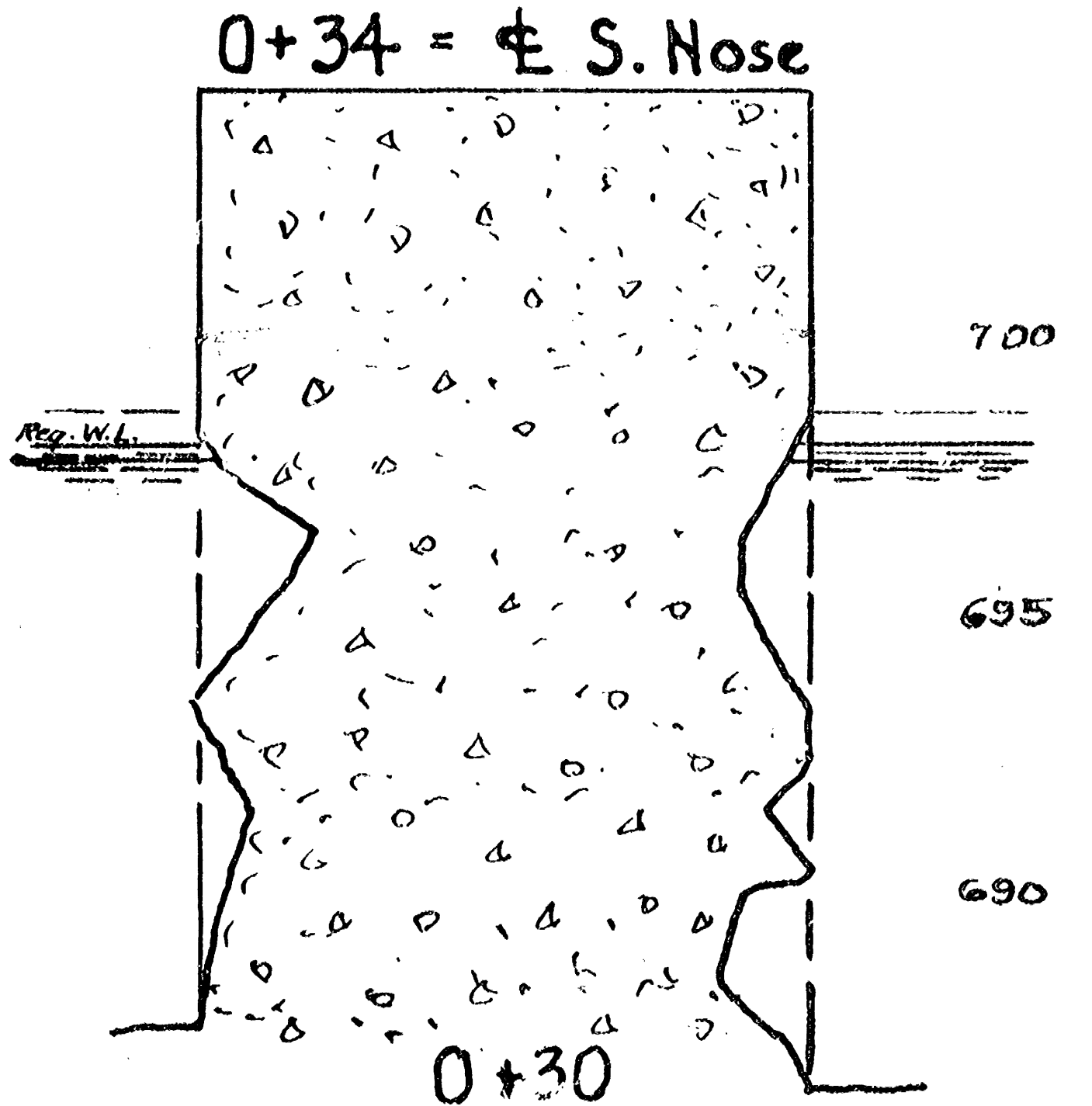
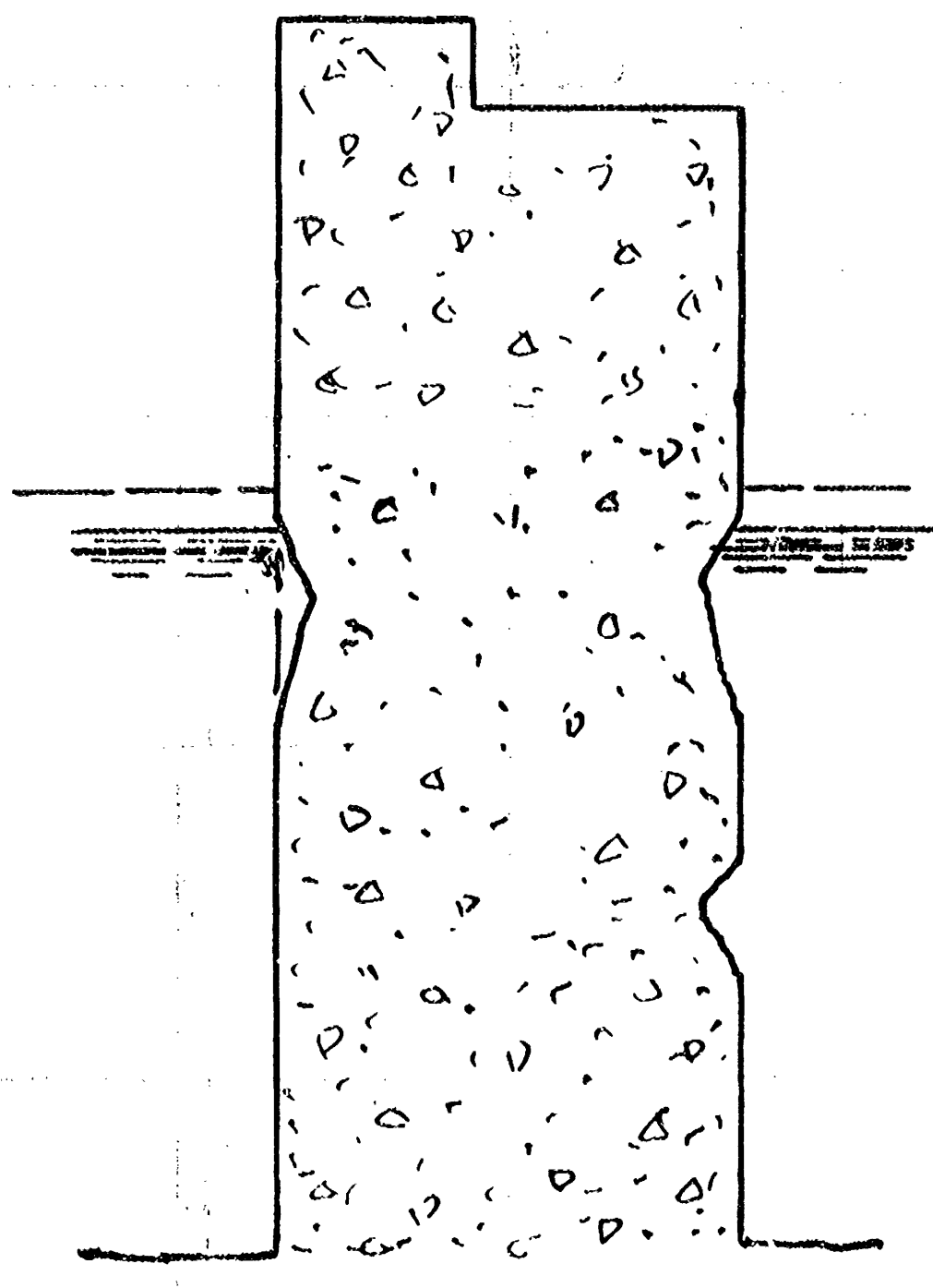
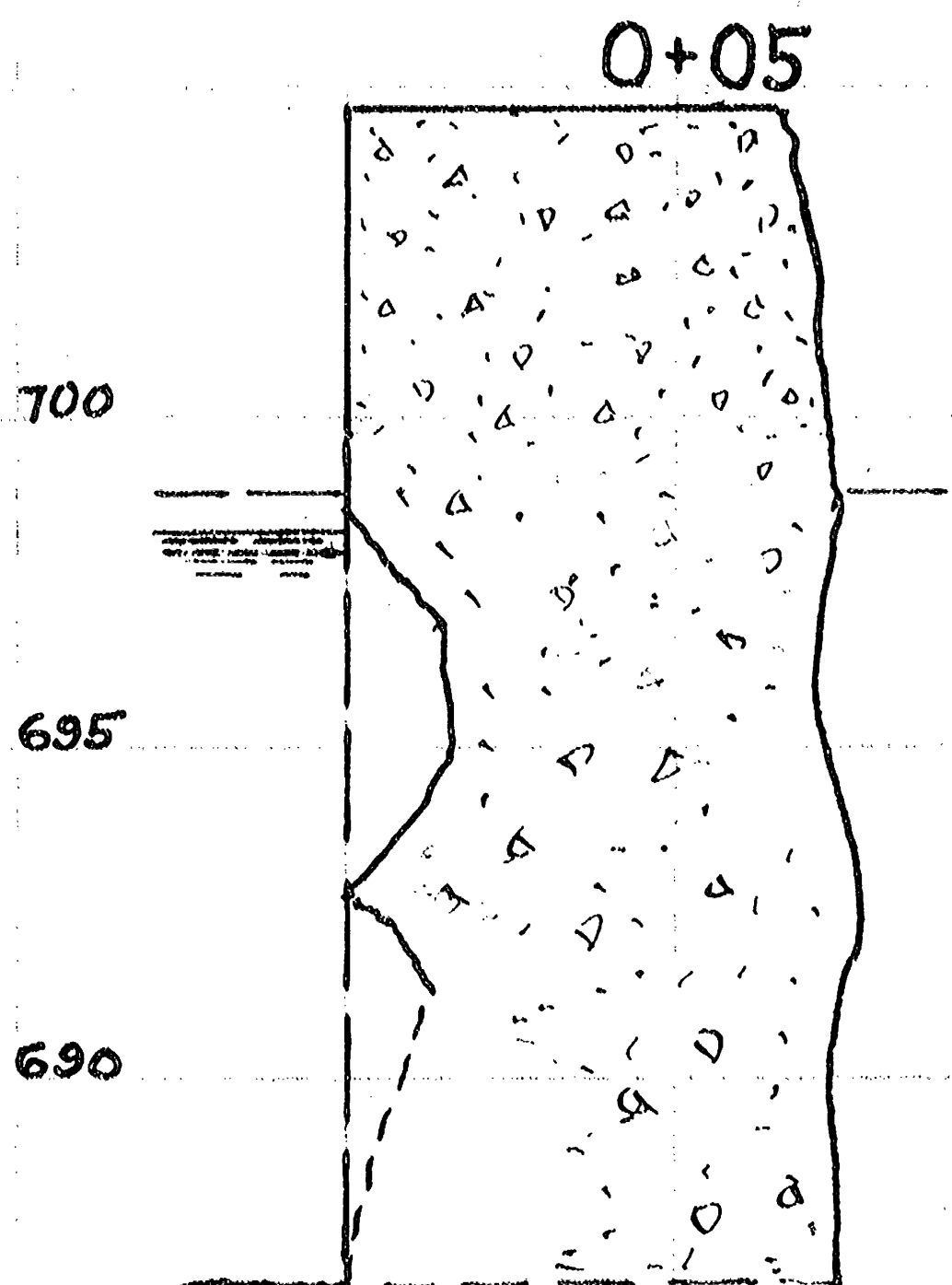
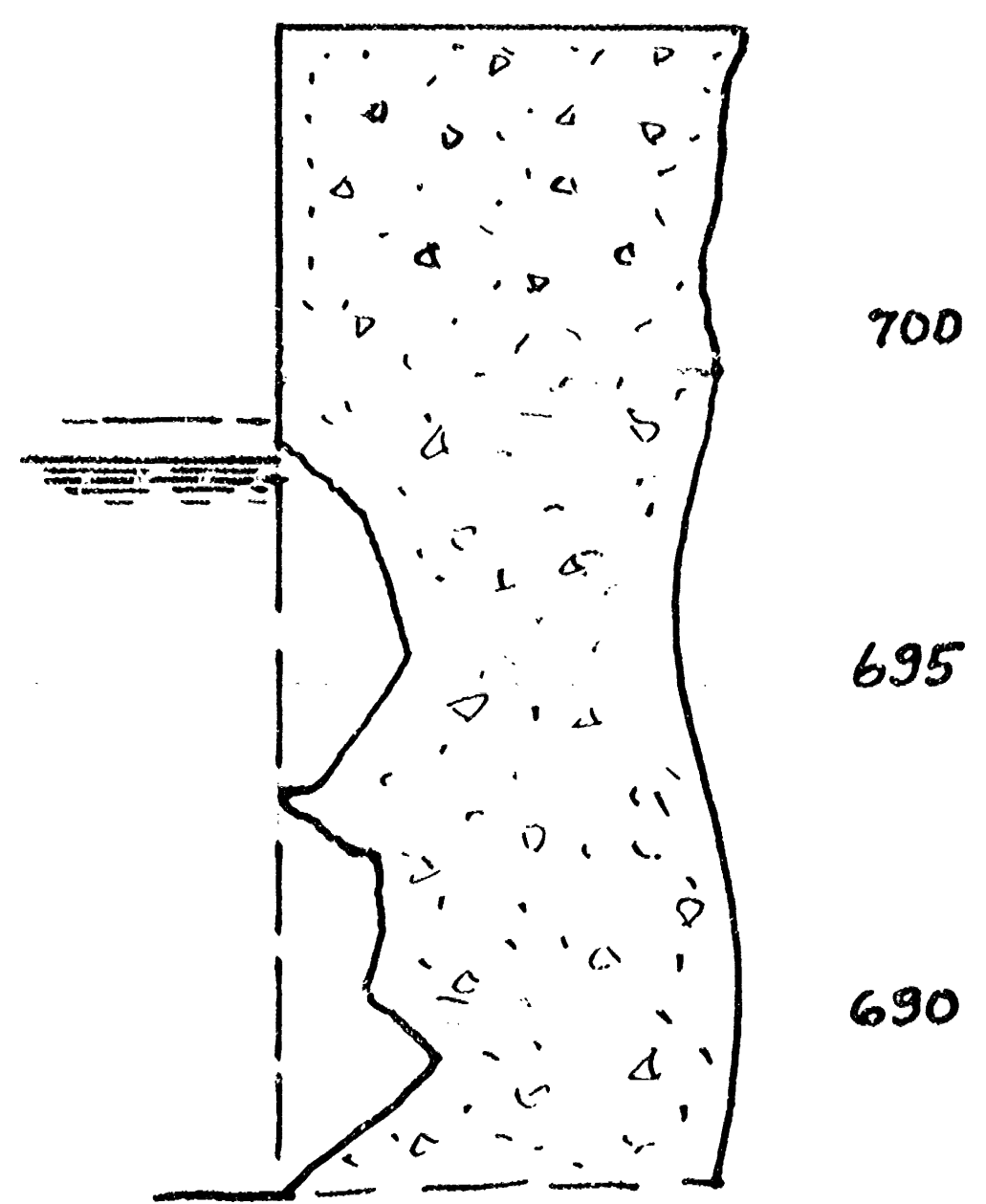
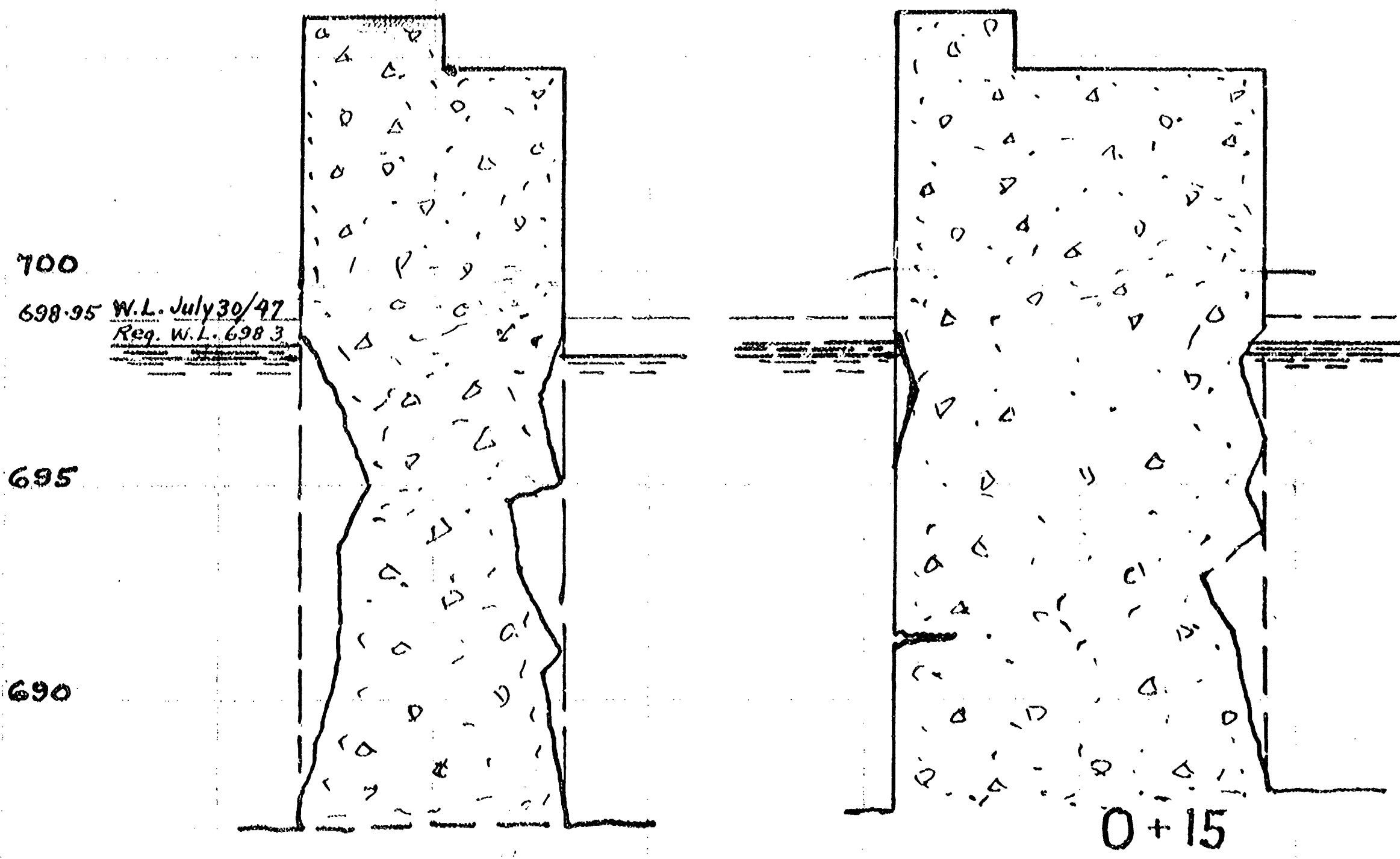
ITEM	QTY	DESCRIPTION
1	1	RESERVOIR, 5 GALLON, RACINE DRAWING # C502-0006-B.
2	1	SACTION STRAINER, # 44013B
3	1	PUMP, DOWTY GPR-10-A, 1.2 GPM AT 1800 RPM.
4	1	FOOT BRACKET, RACINE
5	1	COUPLING, A300, MATOR 1/8" X 1/4" PUMP 1/32" X 1/8"
6	1	MOTOR, 3 HP, 1800 RPM, 115T, DE 220V, 1Ø, 60V.
7	1	RELIEF VALVE, 1351B-3.
8	5	NEEDLE VALVE, 1900 FFG 1/2"
9	3	GAUGE, FIG 50, 0-3000 PSI.
10	1	RETURN FILTER, OFA-A-15-A-D
11	2	4 WAY VALVE, 004-08H8-1025
12	2	SUBPLATE, D4H-03A-B29.
13	2	HOLDING VALVE, 057LE-3-3-2, RACINE.
14		
15		
16		
17		
18		
19		
20	2	CYLINDER, HANNA, 2222-NC-M-4-3" WITH 303 S.S. CHROME PLATED ROD & AIR BLEEDS.

DEPARTMENT OF TRANSPORT
MARINE WORKS
CANALS DIVISION
TRENT CANAL SYSTEM
BRIDGE SWING & BRIDGE JACKING HYDRAULIC CIRCUITS AS USED ON TRENT & MURRAY CANALS

SCALE: NOT
DESIGN: F.W.H.T.E.G.C.
DRAWN: F.W.H.T.
CHECKED: *[Signature]*
DATE: 19 Nov. 1970

DATE: _____ REVISIONS: _____ MADE: _____ CHECK'D: _____

T-19-118.4



Made by - *E.W.M.*
Traced by - *E.W.M.*
Checked by R. J. B.
Recommended by
Approved by

SECTIONS TAKEN
JULY 30TH 1947
BY DIVER F. JAMES
and reported by Telephone
as taken.

DEPARTMENT OF TRANSPORT
TRENT CANAL
HAMLET HIGHWAY BRIDGE
CROSS SECTIONS THRO. RIVER PIER
SHOWING DISINTEGRATION
scale: 1" = 5'

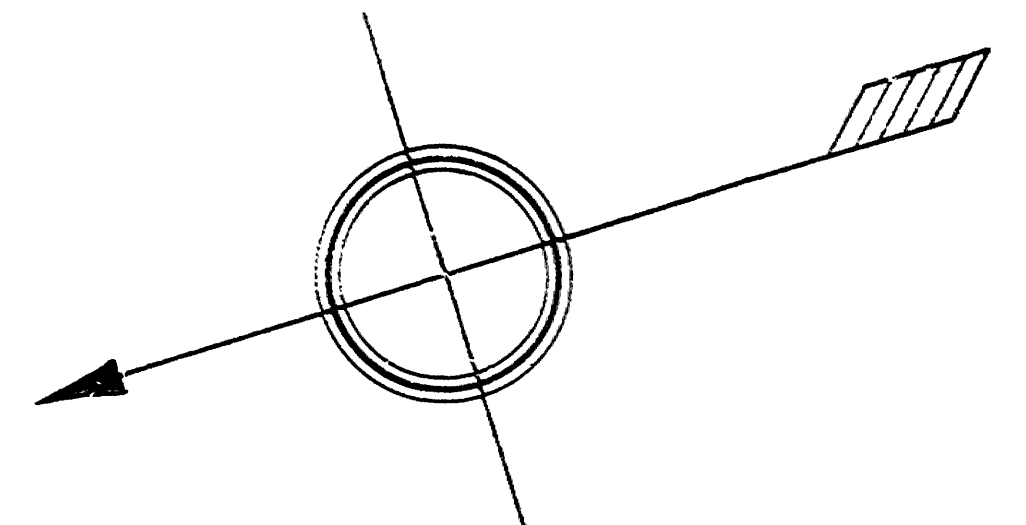
KEY PLAN OF SECTIONS

Peterborough, Aug 1st 1947

TC. 1066-C

T-22-220
TC 1066-C

65



TP.

OF

M O R R I S O N

CON.III.
CON.IV.

CON.II.
CON.III.

LOT 31
LOT 32

LOT 32
LOT 33

LOT 33
LOT 34

SEVERN RIVER

MONAHAN
POINT

Right-of-way

Right-of-way

Wharf

Hamlet #57
Bridge

Right-of-way

LOT 17
LOT 18

LOT 18
LOT 19

LOT 18
LOT 19

OF

O R I L L I A

TP.

N O R T H

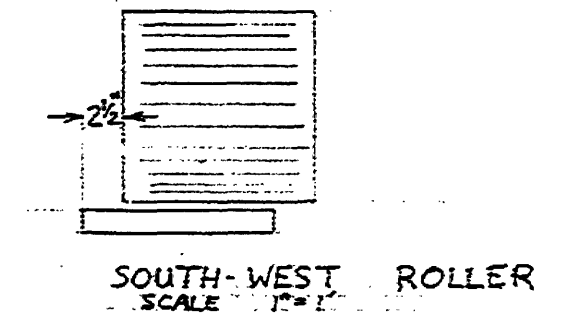
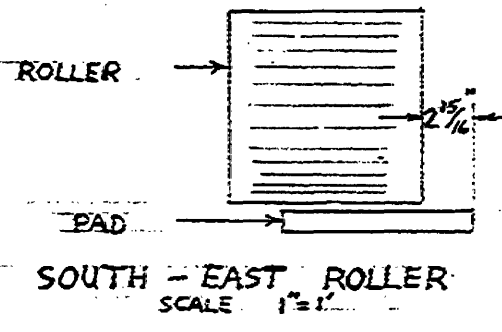
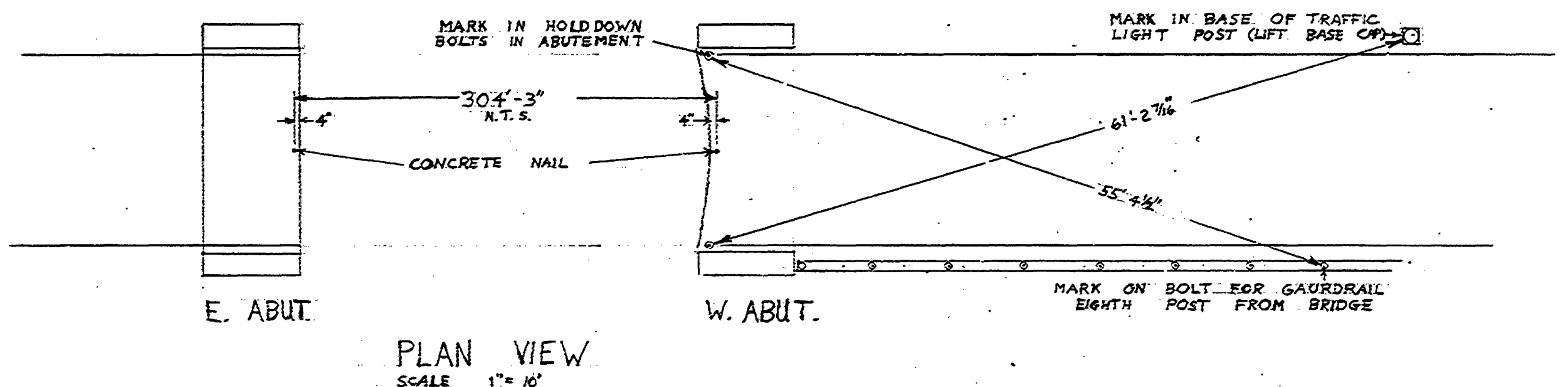
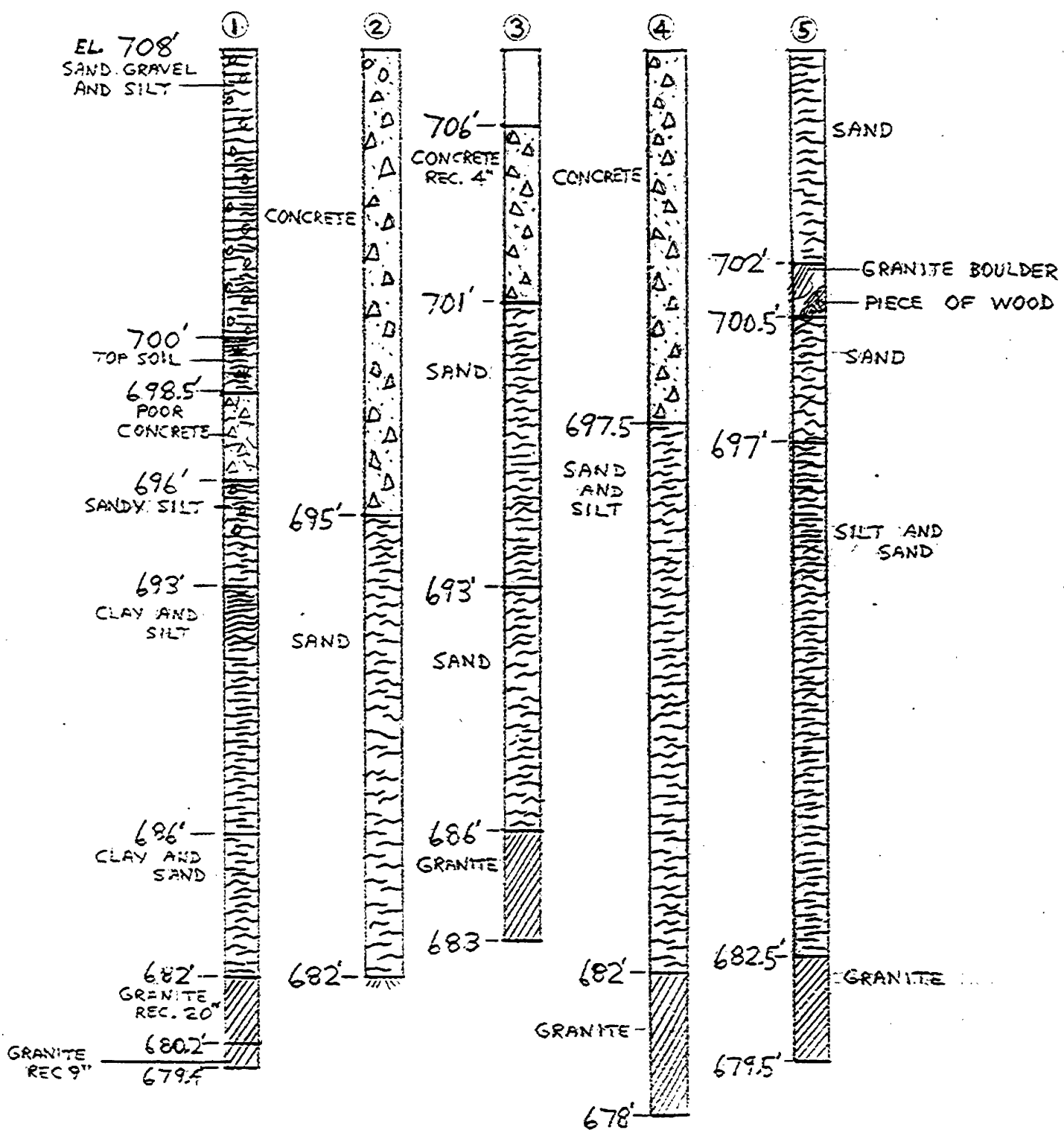
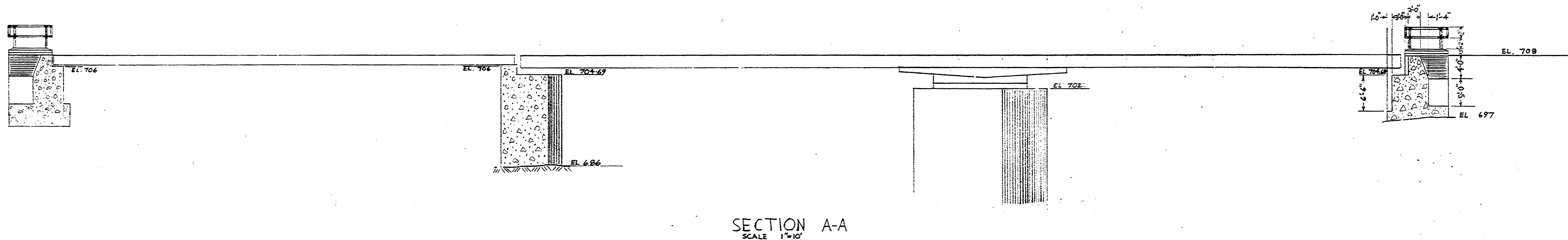
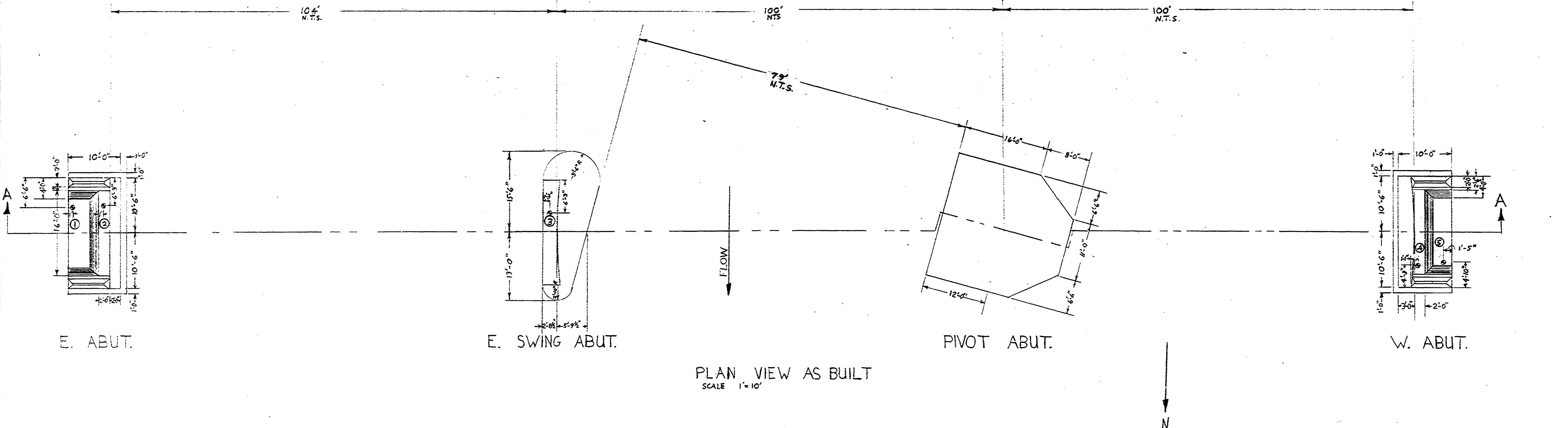
CON. XIII.

S P A R R O W
L A K E

DEPARTMENT OF TRANSPORT
CANAL SERVICES
TRENT CANAL SYSTEM
TP. OF MORRISON AND
NORTH ORILLIA

SCALE: 1"=400' DATE: Jan. 30/58

10-428



MEASUREMENTS TAKEN JULY 7, 1969

DEPARTMENT OF TRANSPORT			
MARINE WORKS			
CANALS DIVISION			
TRENT CANAL SYSTEM			
HAMLET ROAD BRIDGE			
ABUTEMENT MOVEMENT INVESTIGATION			
SCALE: AS SHOWN	DATE: JULY 23, 1969		
DESIGN:			
DRAWN: J.S.L.			
CHECKED:			
	SUPERINTENDING ENGINEER	TC 3932-G	

T-22-347.1

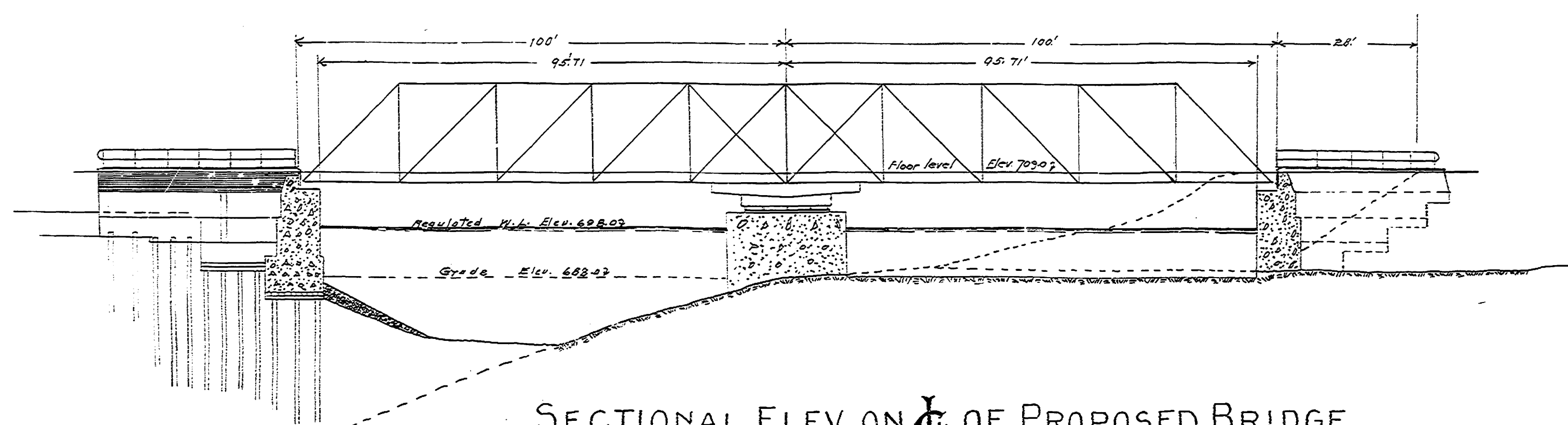
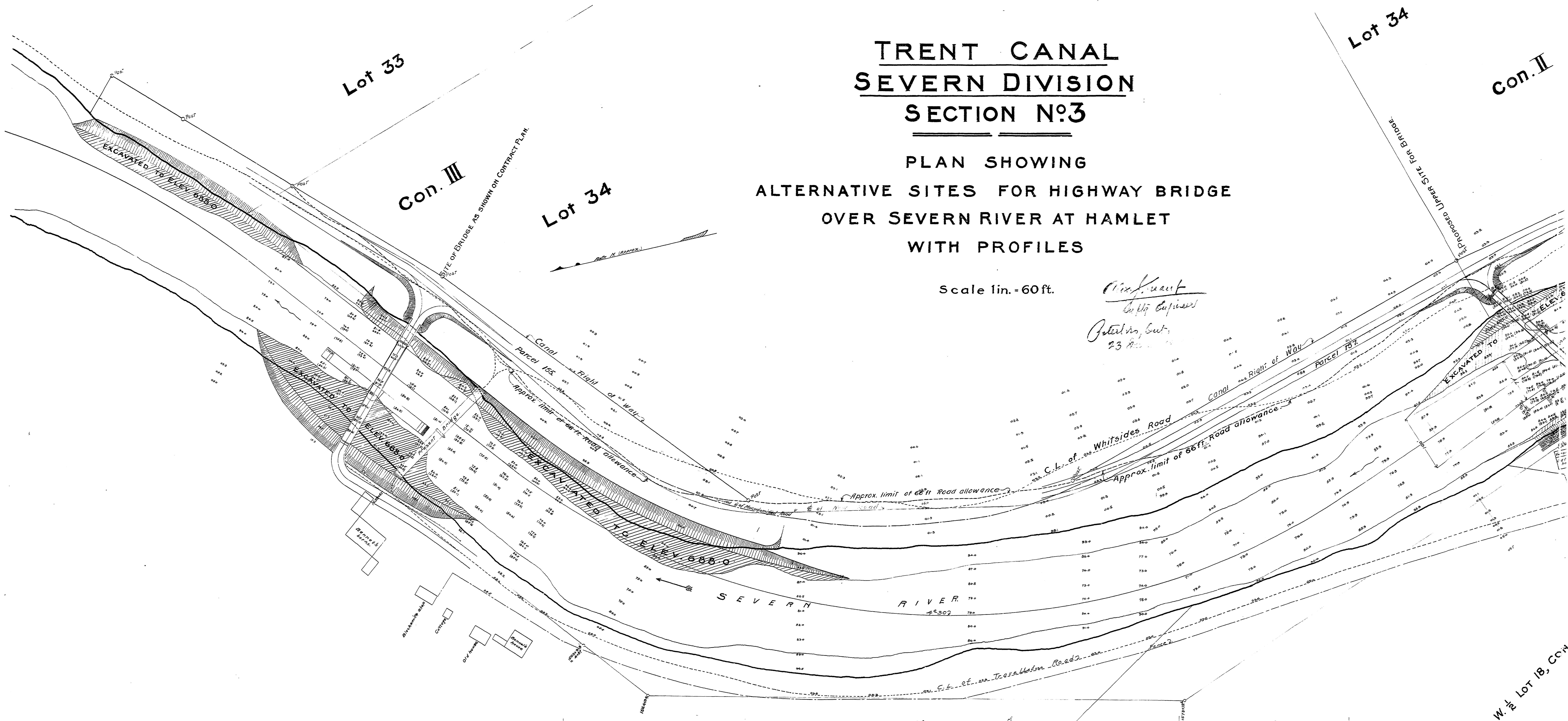
T-22-347.2

TRENT CANAL SEVERN DIVISION SECTION N^o3

PLAN SHOWING
ALTERNATIVE SITES FOR HIGHWAY BRIDGE
OVER SEVERN RIVER AT HAMLET
WITH PROFILES

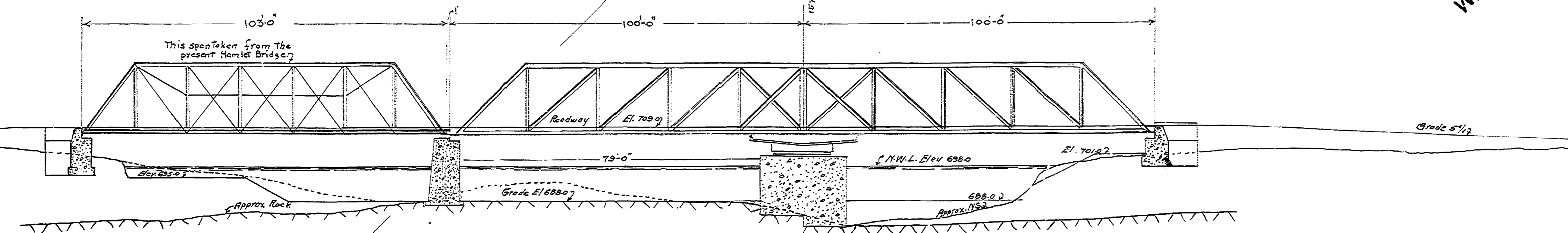
Scale 1 in. = 60 ft.

Wm. J. Grant
Civil Engineer
Patel, S. S.
23 April 1911



SECTIONAL ELEV. ON $\frac{1}{2}$ OF PROPOSED BRIDGE
Scale 1" = 20'
ON LOWER SITE, AS SHOWN ON CONTRACT PLAN.

E. $\frac{1}{2}$ Lot 18, Con. XIII.



SECTIONAL ELEV. ON $\frac{1}{2}$ OF PROPOSED BRIDGE.
Scale 1" = 20'
ON PROPOSED UPPER SITE.

E. HALF Con. XIII.
W. HALF Con. XIII.

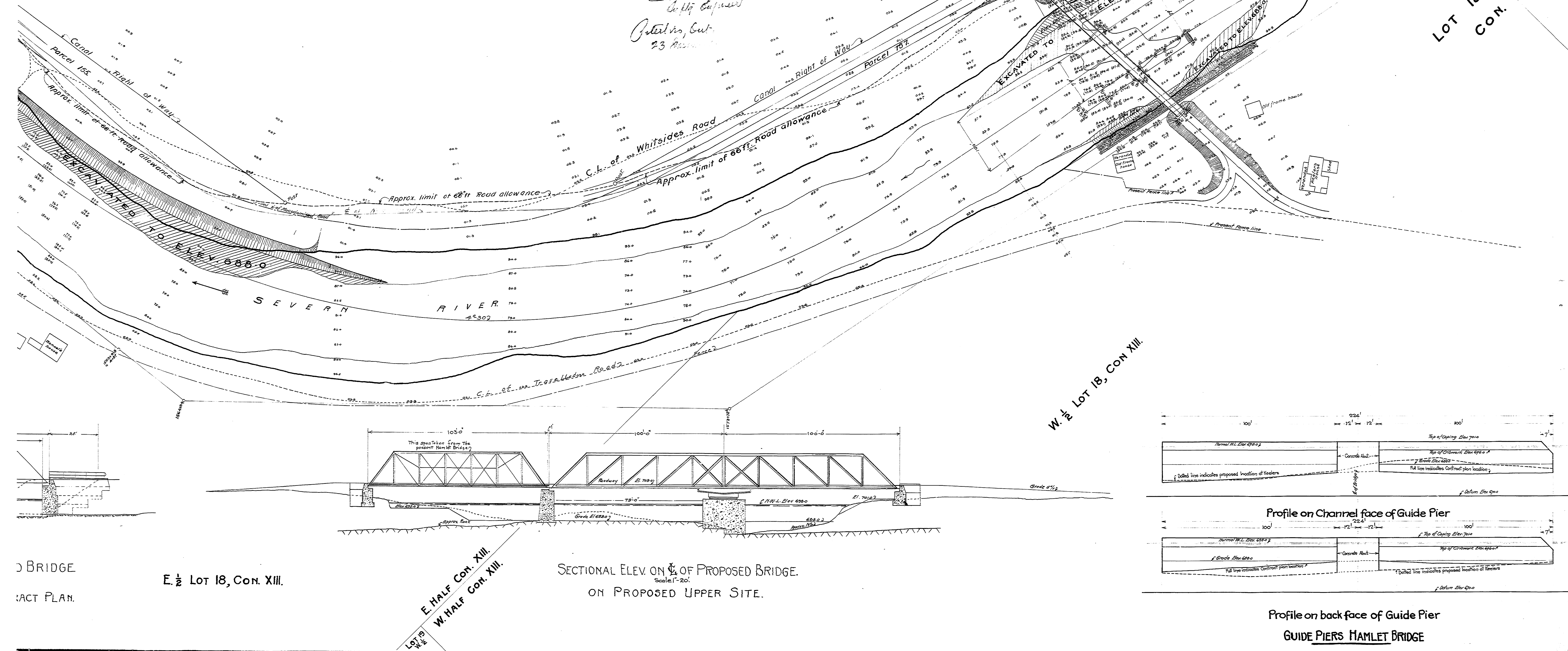
W. $\frac{1}{2}$ Lot 18, Con. XIII

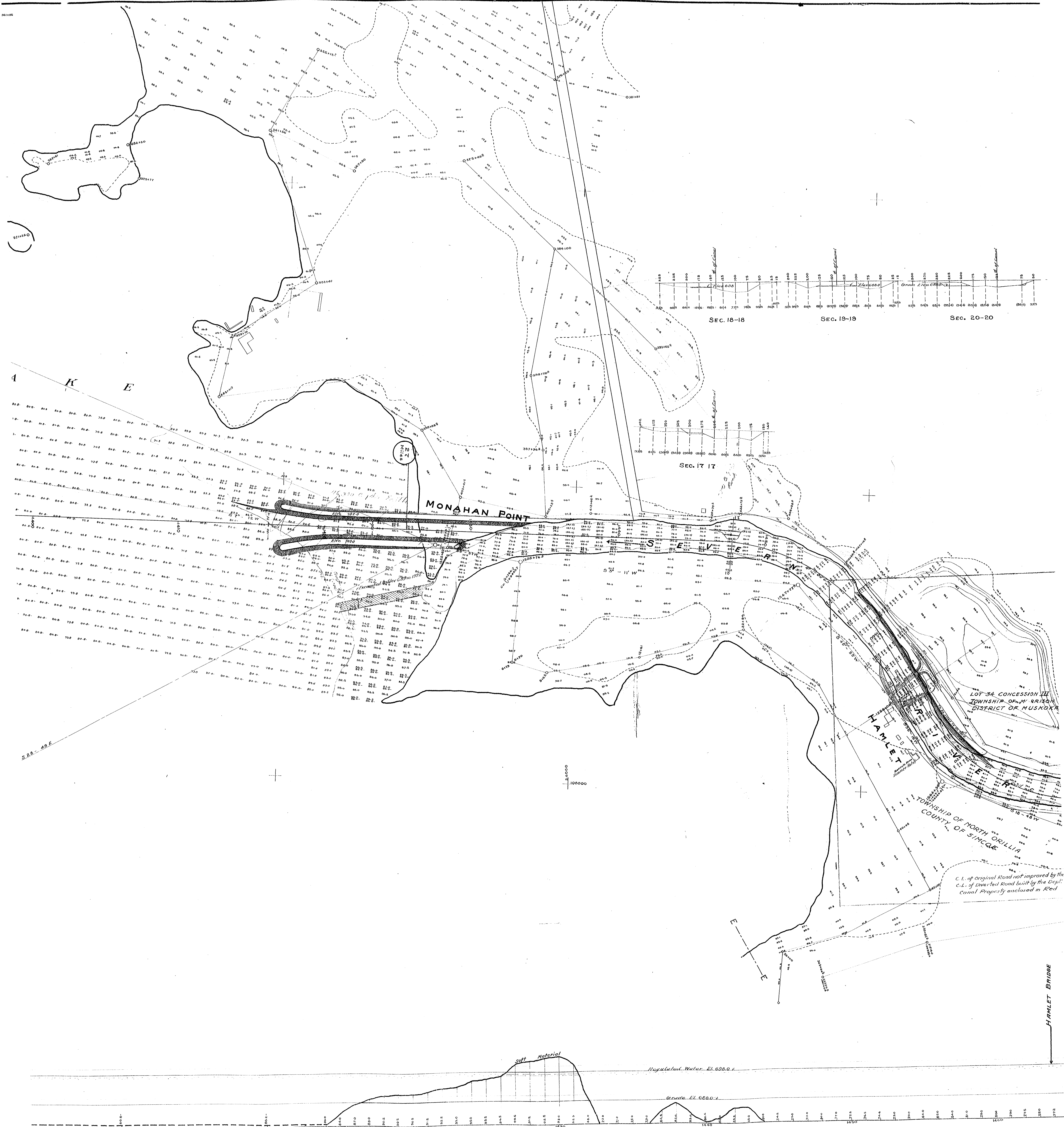
TRENT CANAL
SEVERN DIVISION
SECTION N^o3

PLAN SHOWING
ALTERNATIVE SITES FOR HIGHWAY BRIDGE
OVER SEVERN RIVER AT HAMLET
WITH PROFILES

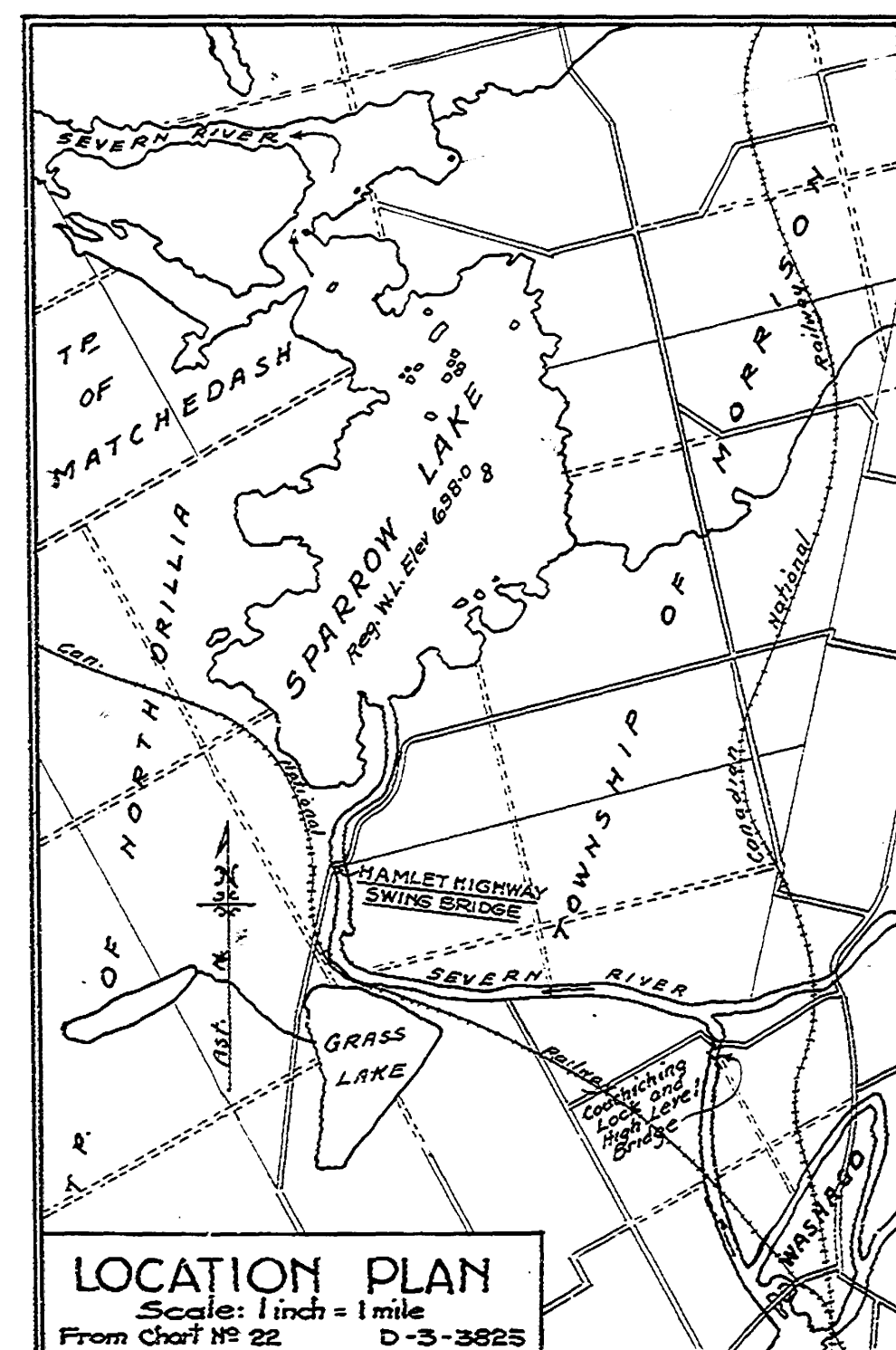
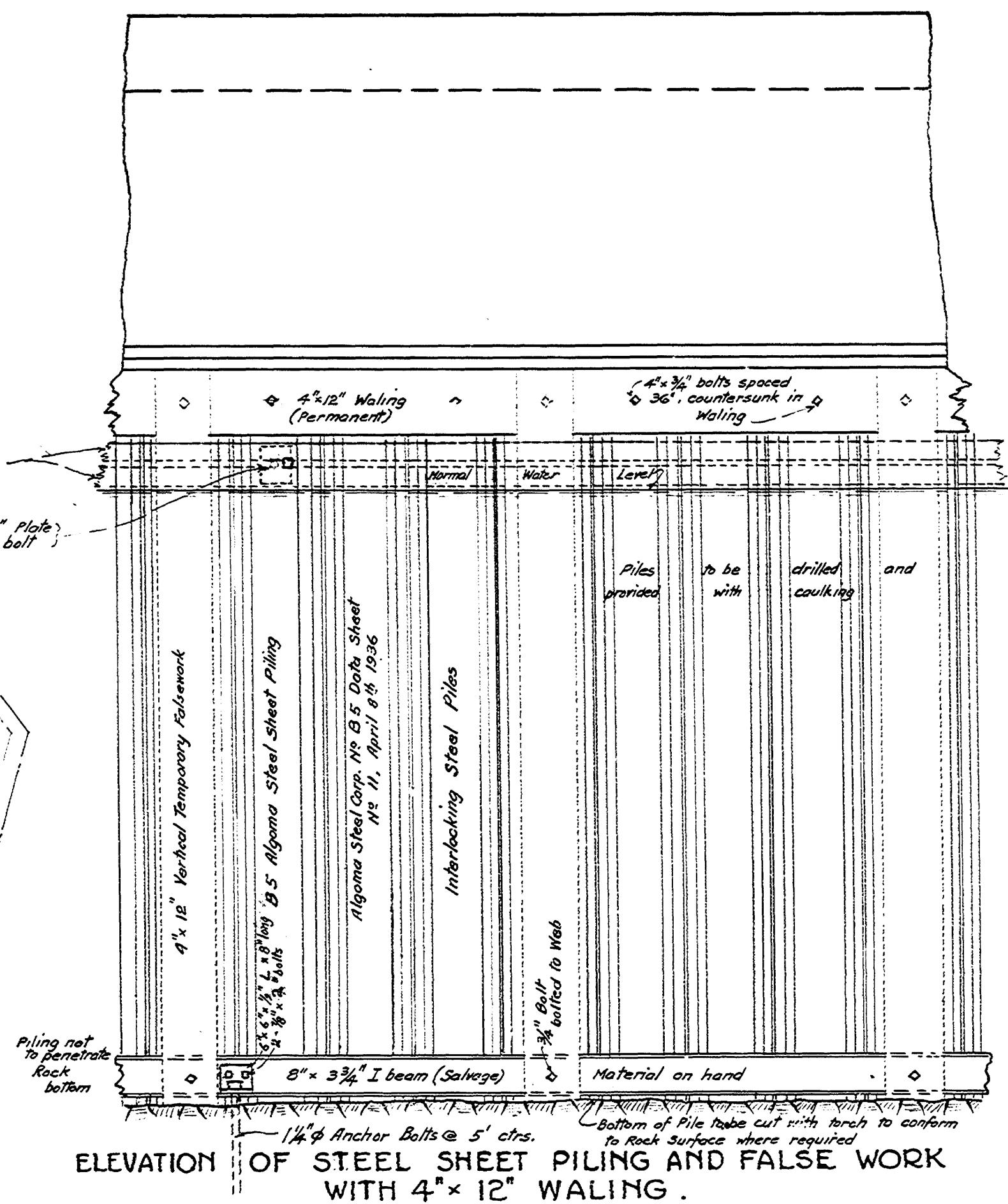
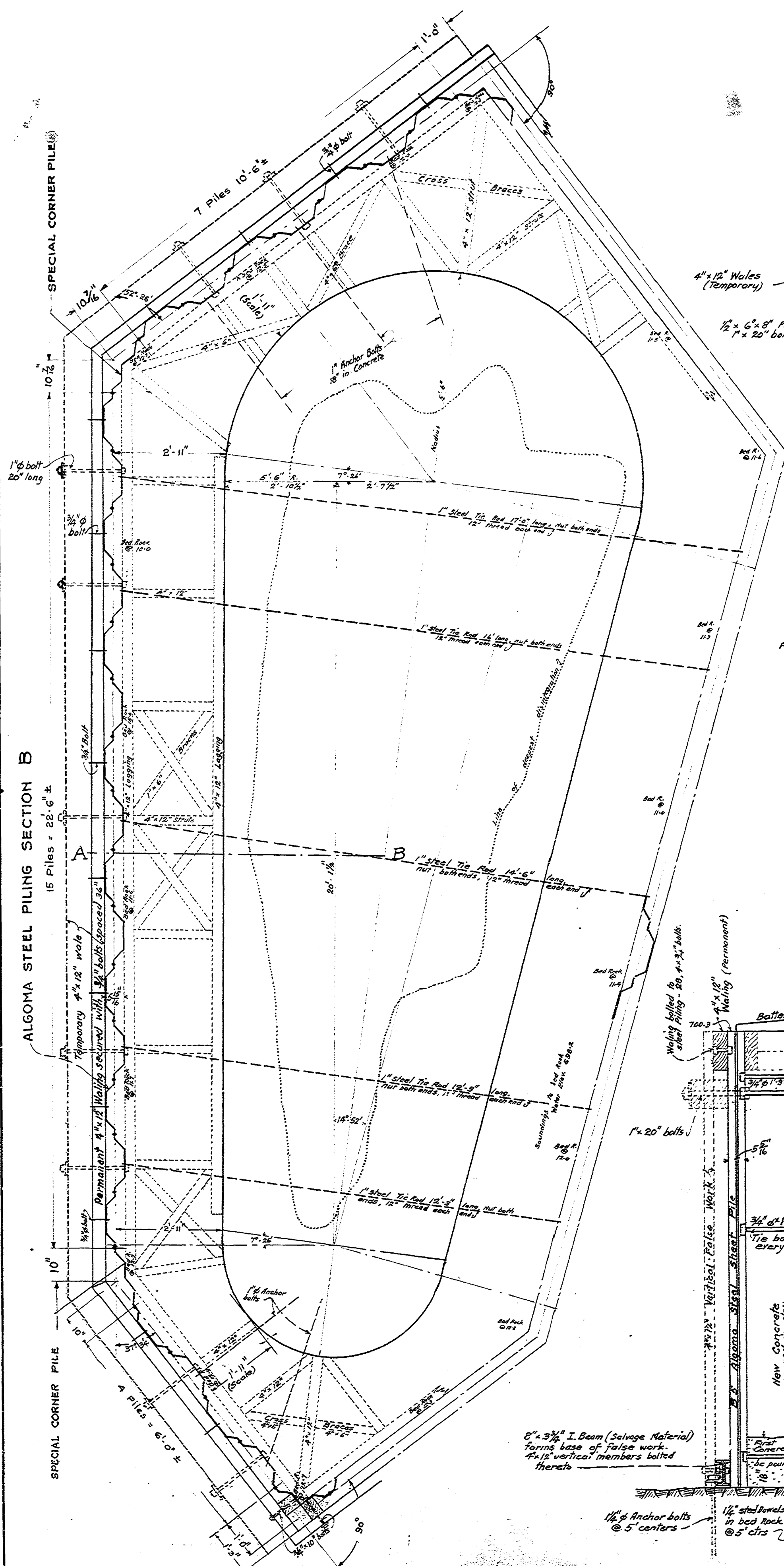
Scale 1 in. = 60 ft.

Max. J. Grant
Capt. Engineer
Posters, Out.
23 August 1944









DEPARTMENT OF TRANSPORT
TRENT CANAL
PLAN SHOWING
PROPOSED METHOD OF REPAIR
OF CONCRETE RIVER PIER.
- HAMLET HIGHWAY BRIDGE -
Scale: 1 inch = 2 feet.

Peterborough, Ont.
November 13th, 1945

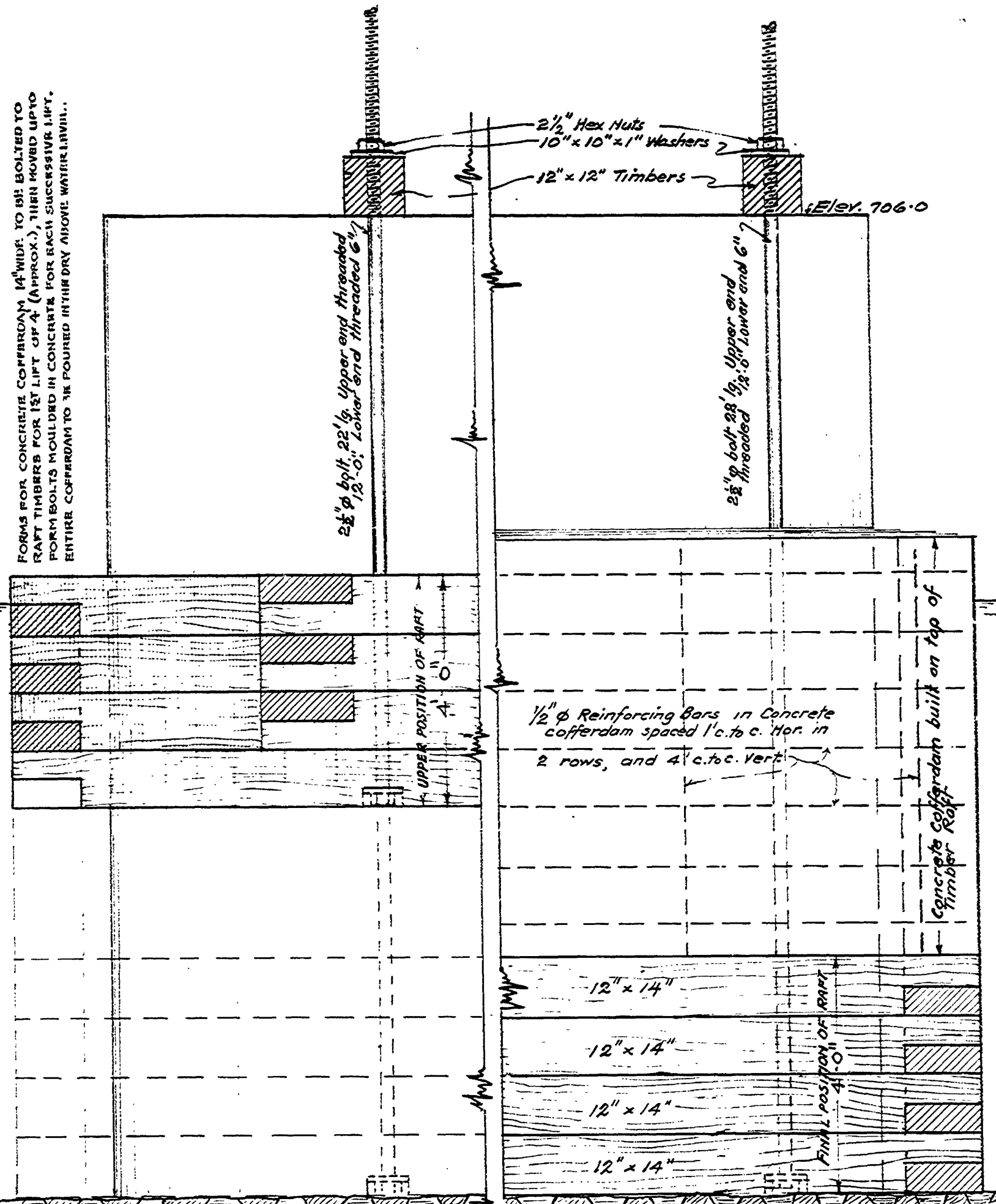
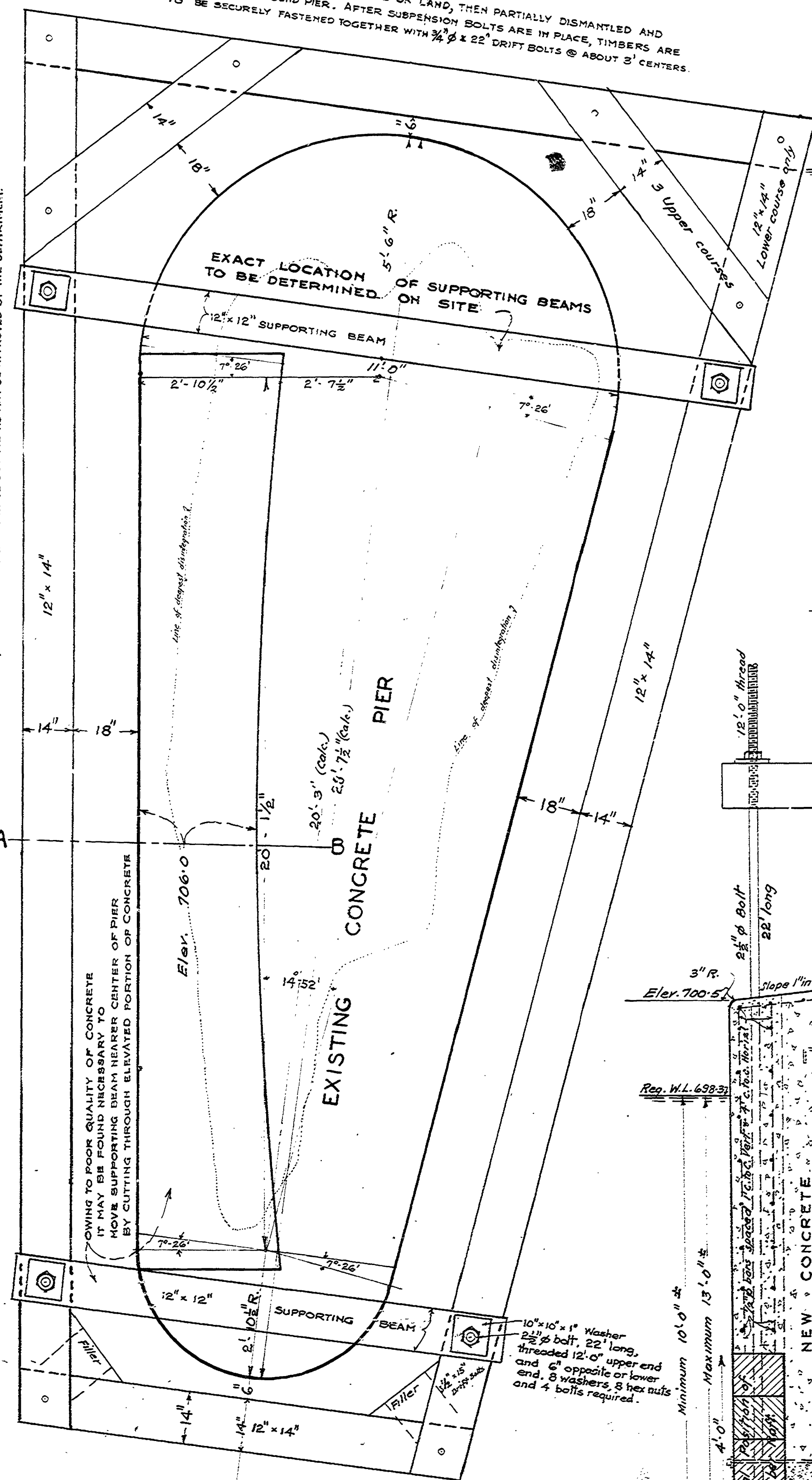
C-5-2919

T-28-167-1

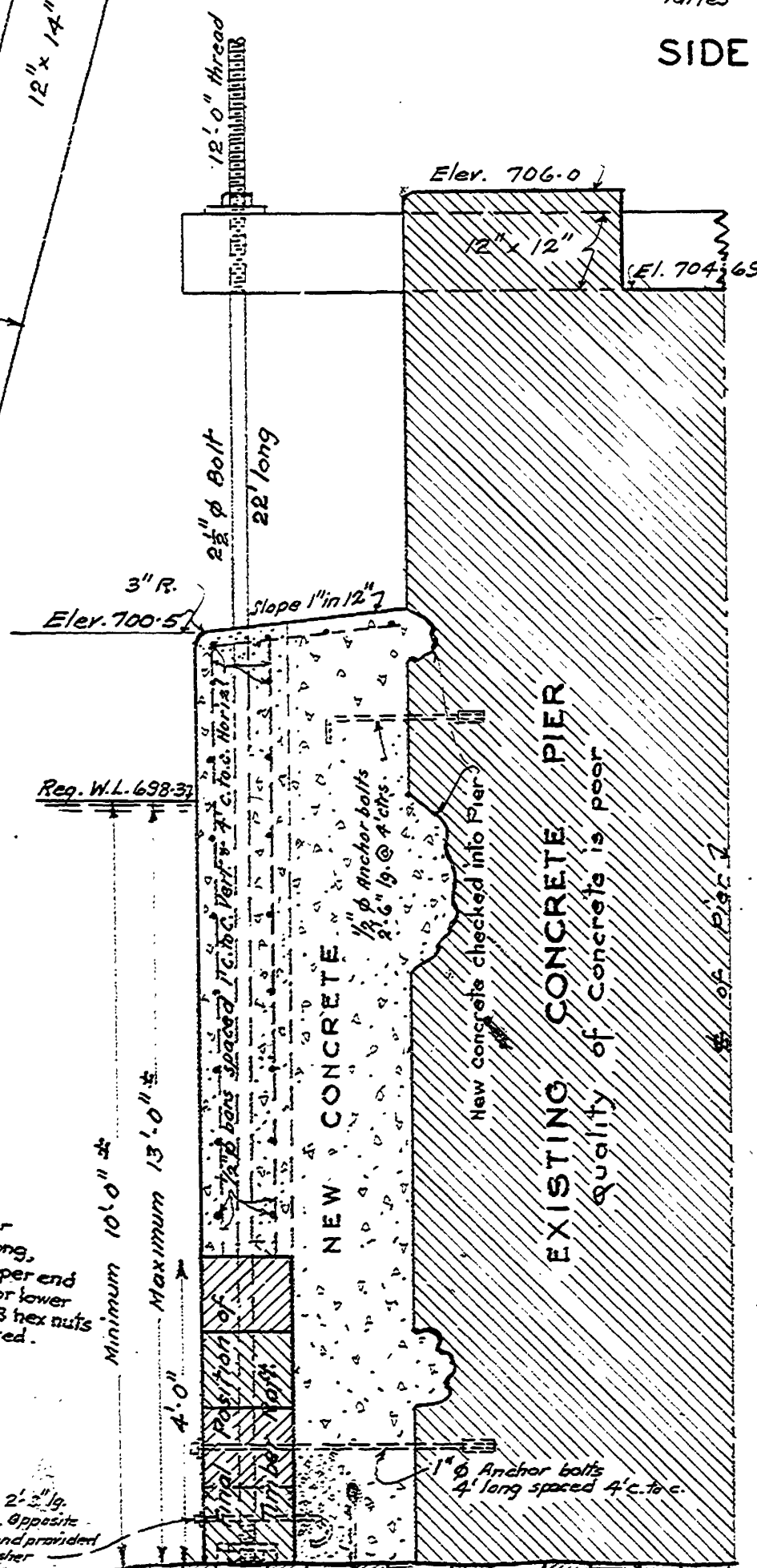
NOTE: SHOULD EXISTING CONCRETE PIER BE CONSIDERED BY THE ENGINEER IN CHARGE AS INCAPABLE OF SOLELY SUPPORTING COMBINED WEIGHT OF RAFT AND CONCRETE COFFERDAM, PROVISION MUST BE MADE FOR ADDITIONAL SUPPORT BY MEANS OF TIMBER PROPS OR BENTS PLACED UNDER OUTER ENDS OF SUPPORTING BEAMS, OR SUCH OTHER ALTERNATIVE SCHEME AS MAY BE APPROVED BY THE DEPARTMENT.

NOTE:- RAFT TO BE FORMED AND ASSEMBLED ON LAND, THEN PARTIALLY DISMANTLED AND REASSEMBLED AROUND PIER. AFTER SUSPENSION BOLTS ARE IN PLACE, TIMBERS ARE TO BE SECURELY FASTENED TOGETHER WITH $\frac{3}{4}$ " ϕ & 22' DRIFT BOLTS @ ABOUT 3' CENTERS.

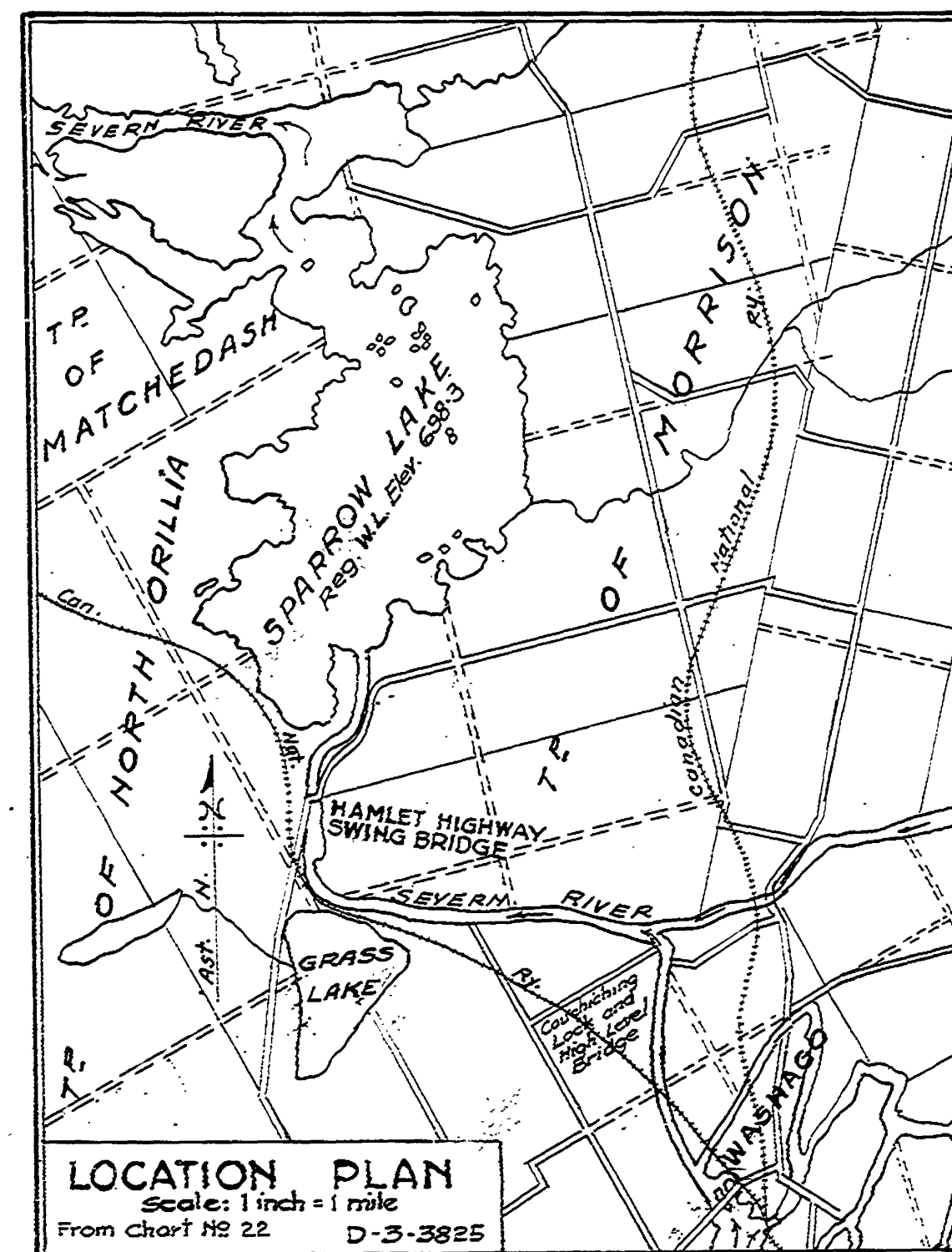
FORMS FOR CONCRETE COFFERDAM 14" WIDE TO BE BOLTED TO RAFT TIMBERS FOR 1ST LIFT OF 4' (APPROX.), THEN MOVED UP TO FORM BOLTS MOULDED IN CONCRETE FOR EACH SUCCESSIVE LIFT. ENTIRE COFFERDAM TO BE POURED IN THE DRY ABOVE WATER LEVEL.



SIDE ELEVATION OF PIER



HALF CROSS SECTION THROUGH PIER AT A - B



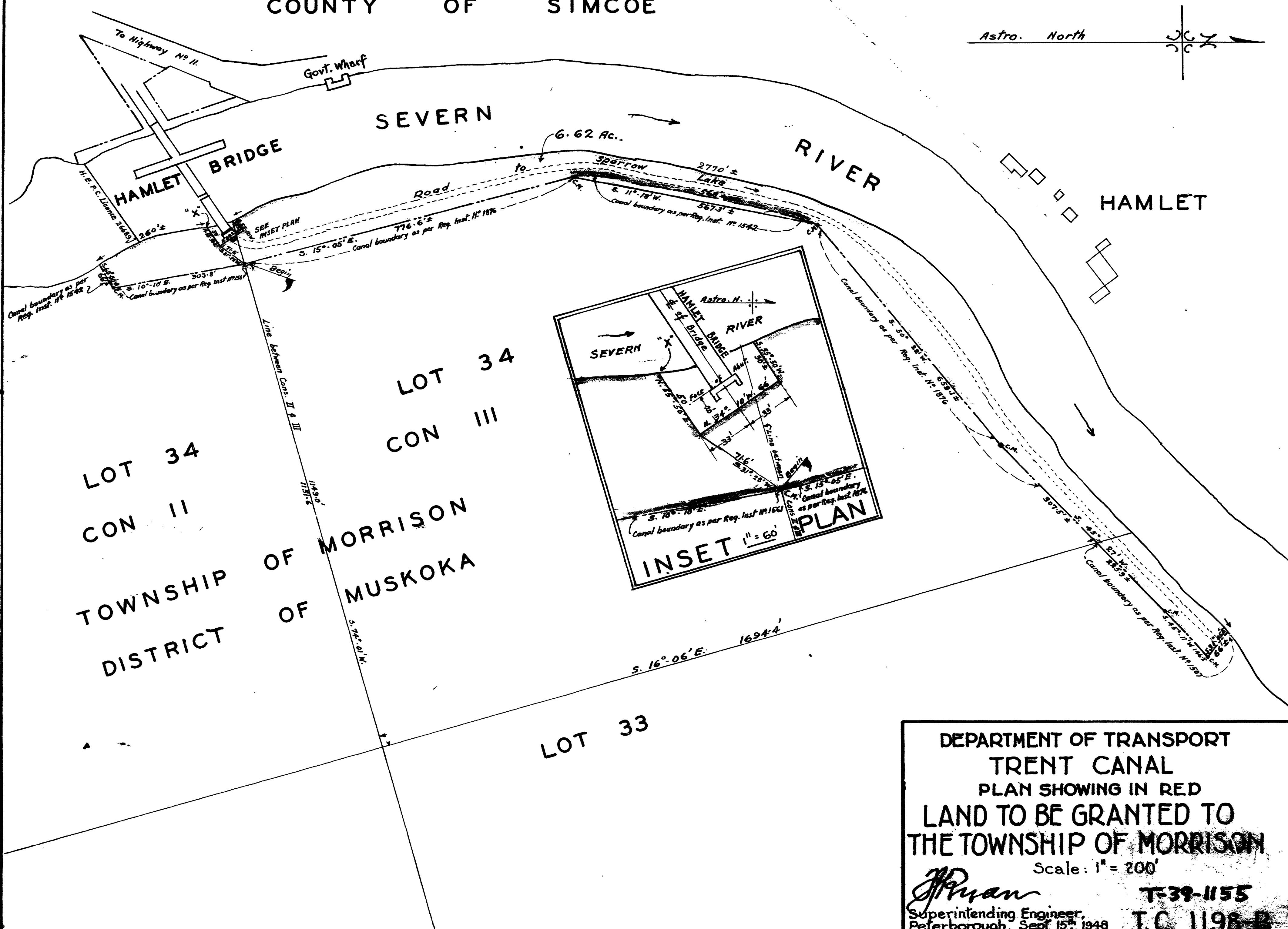
LOCATION PLAN
Scale: 1 inch = 1 mile
From Chart No. 22 D-3-3825

PLAN OF PIER SHOWING PROPOSED METHOD OF REPAIR

DEPARTMENT OF TRANSPORT
TRENT CANAL
PLAN SHOWING
REPAIRS TO
CONCRETE RIVER PIER
HAMLET HIGHWAY BRIDGE
Scale 1" = 2'

General Superintendent of Canals Peterborough, Ont. Superintending Engineer Nov. 29th, 1946

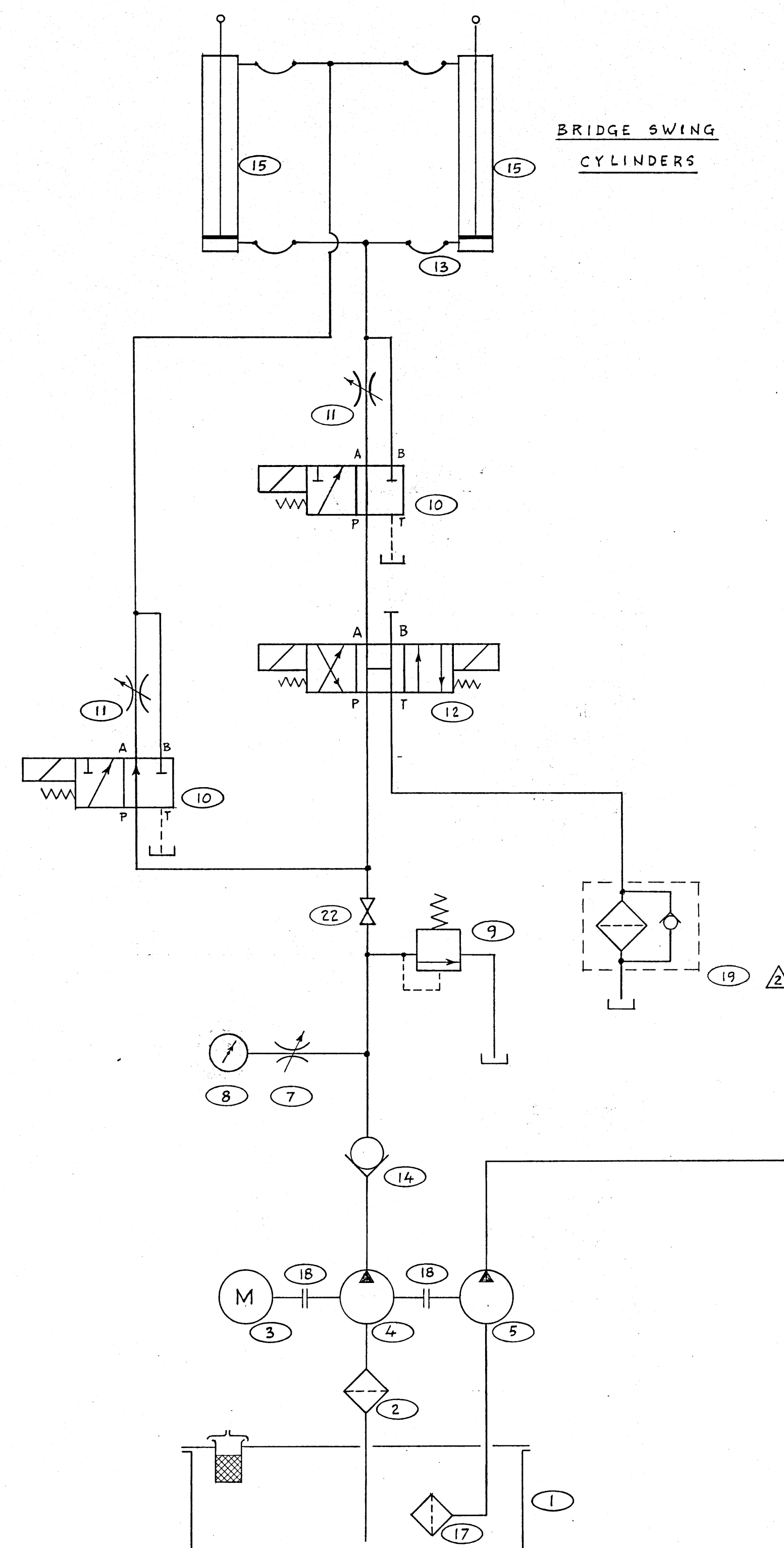
LOT 18 CON XIII
TOWNSHIP OF NORTH ORILLIA
COUNTY OF SIMCOE



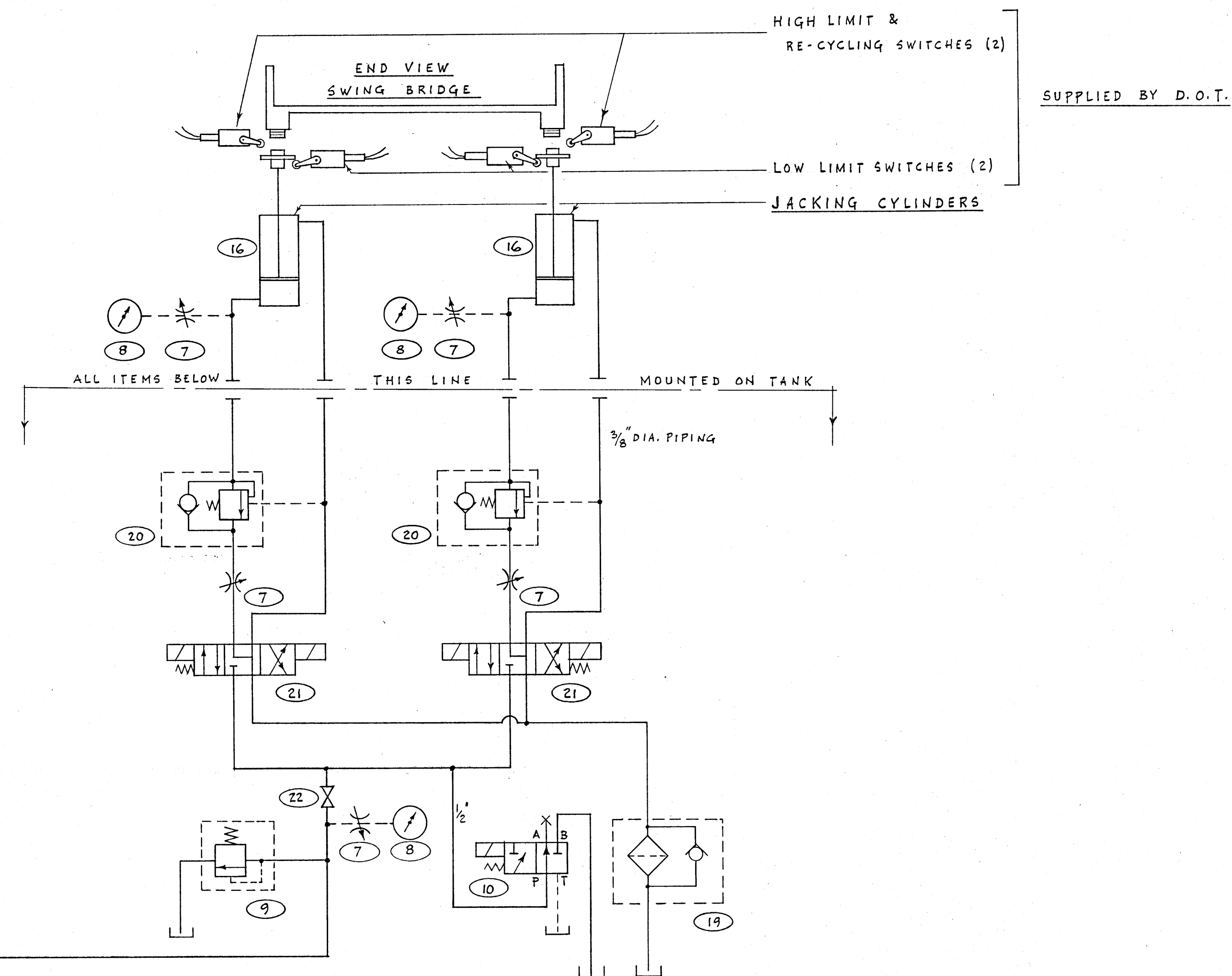
DEPARTMENT OF TRANSPORT
TRENT CANAL
PLAN SHOWING IN RED
LAND TO BE GRANTED TO
THE TOWNSHIP OF MORRISON
Scale: 1" = 200'
J. Ryan
Superintending Engineer,
Peterborough, Sept. 15th, 1948
T-39-1155
T.C. 1198-B

MATERIAL LIST

ITEM	QTY.	DESCRIPTION
1	1	RESERVOIR, 25 GALLONS, COMPLETE WITH FILLER, STRAINER, LEVEL GAUGE
2	1	STRAINER
3	1	ELECTRIC MOTOR - 3 HP, 1800 RPM, 220V, 1 ϕ , 60 \sim
4	1	PUMP - 1.2 G.P.M. AT 1800 RPM
5	1	PUMP - 1.2 G.P.M. AT 1800 RPM
6	1	FILTER - RETURN LINE - 10-MICRON
7	6	NEEDLE VALVE
8	4	PRESSURE GAUGE - 0-3000 P.S.I.
9	2	RELIEF VALVE - 500-2000 P.S.I.
10	3	DIRECTIONAL VALVE - 120V, 60 \sim
11	2	METERING VALVE
12	1	FOUR-WAY VALVE - 120V, 60 \sim
13		FLEXIBLE HYDRAULIC LINE - MADE TO MEASURE ON SITE
14	1	IN-LINE CHECK VALVE
15	2	CYLINDERS (SWING) - 5" DIA. BORE, 40" STROKE, HEAVY DUTY ROD
16	2	CYLINDERS (JACKING) - 3" STROKE, 4" BORE, WITH S.S. CHROME PLATED ROD & AIR BLEEDS
17	1	STRAINER
18	2	COUPLING
19	2	RETURN FILTER
20	2	HOLDING VALVE
21	2	FOUR-WAY VALVE
22	2	SHUT-OFF VALVE (FOR CHECKING RELIEF PRESSURE SETTING)



BRIDGE SWING CIRCUIT



BRIDGE JACKING CIRCUIT

NOTE:-

- ITEM #20, HOLDING VALVE OPERATES
- ① AS CYLINDER RELIEF VALVE AT 2500 P.S.I.
 - ② AS PILOT OPERATED RELIEF AT 1500 P.S.I.

24 MAY/74	PUMP RATING WAS 1.95 G.P.M.	P.P.
29 JAN/75	DELETED ITEM #6, - QTY. OF ITEM #19 WAS 1	P.P.
30 AUG/71	CHANGED CIRCUIT - ADDED ONE DIRECTLY VALVE (ITEM #10) & TWO SHUT-OFF VALVES (ITEM #22)	P.P.
DATE:	REVISIONS:	MADE: CH'CK'D:

DEPARTMENT OF TRANSPORT

MARINE WORKS

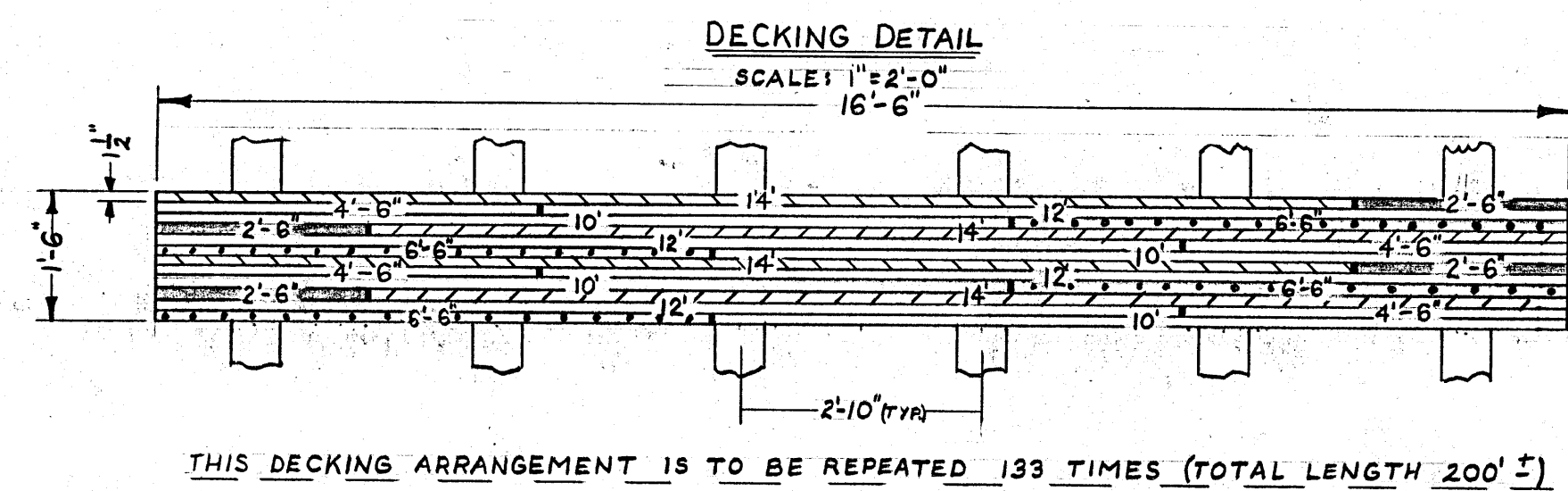
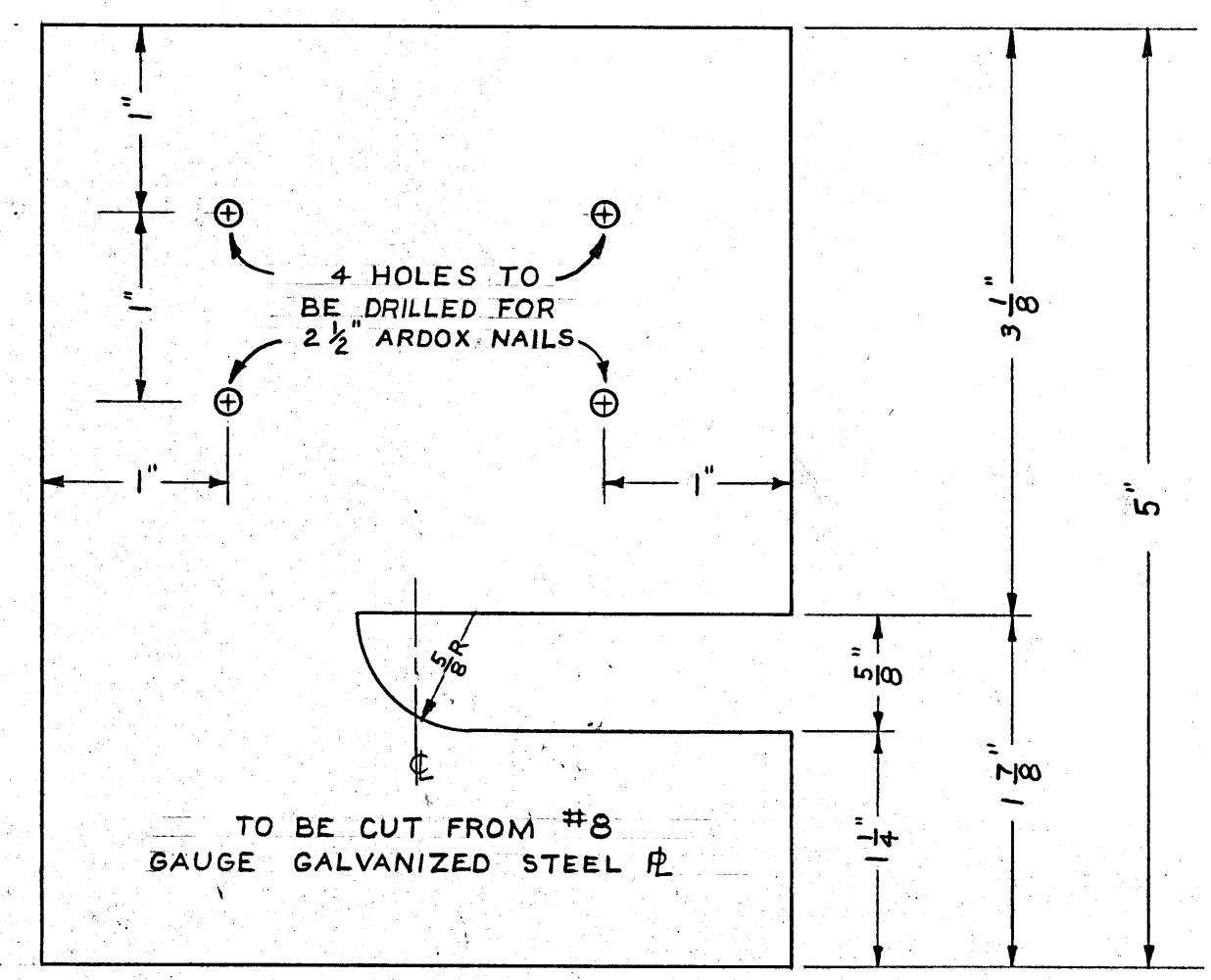
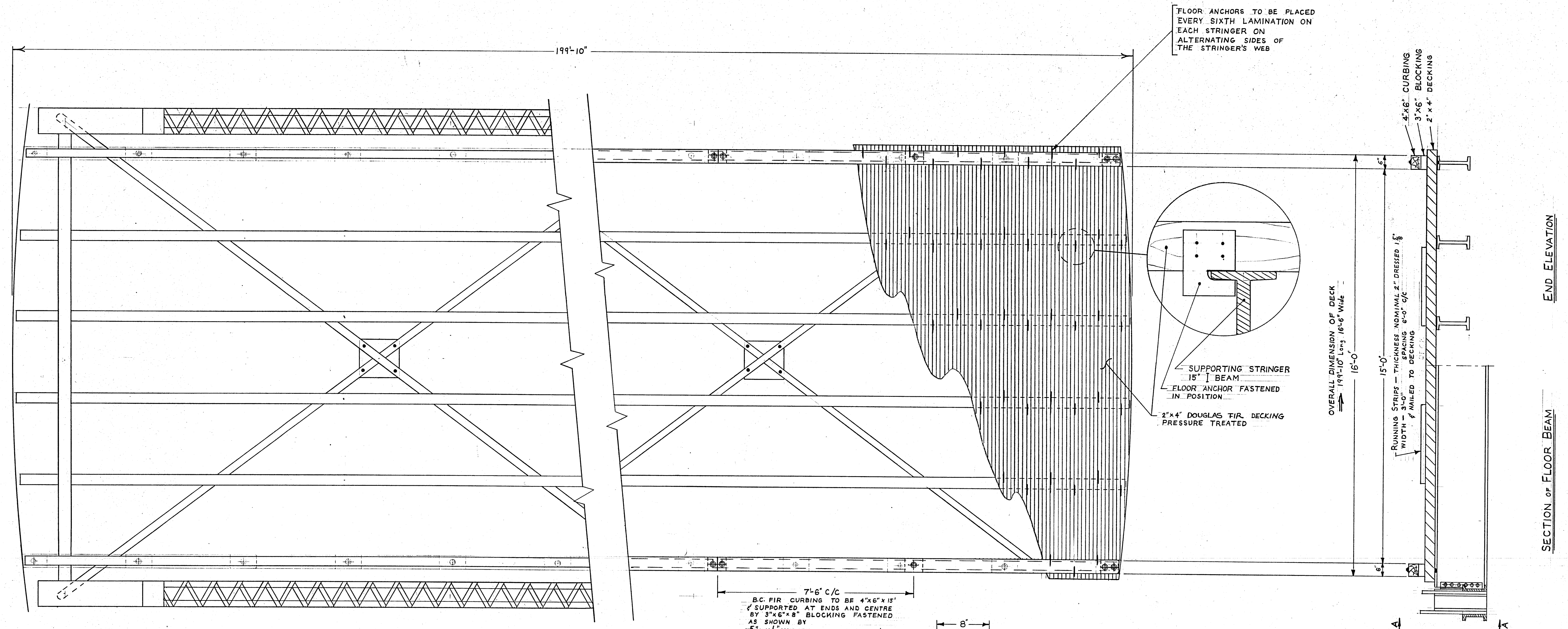
CANALS DIVISION
TRENT CANAL SYSTEMBRIDGE SWING & BRIDGE JACKING
HYDRAULIC CIRCUIT

SCALE: N.T.S.
DESIGN: F.W.H.T. & G.C.
DRAWN: P.P.
CHECKED: F.W.H.T.

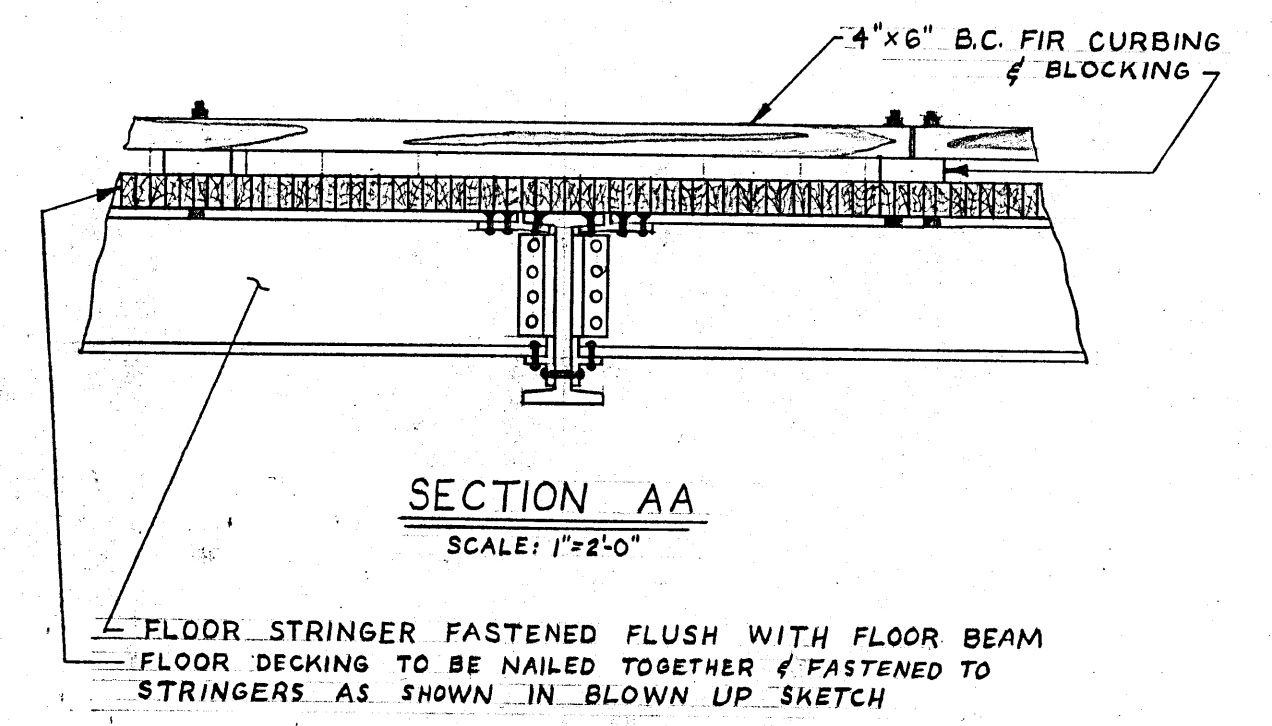
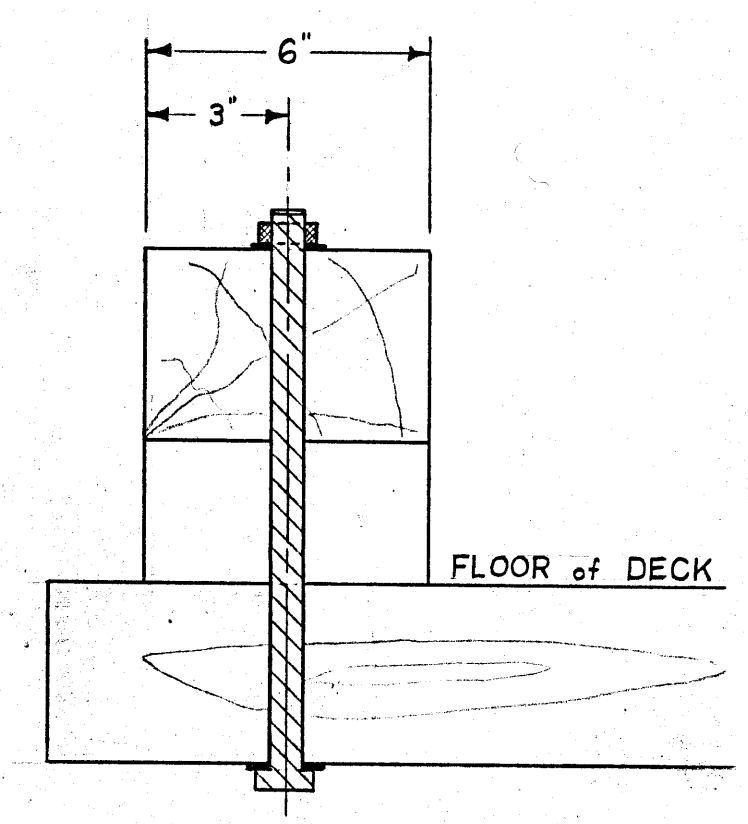
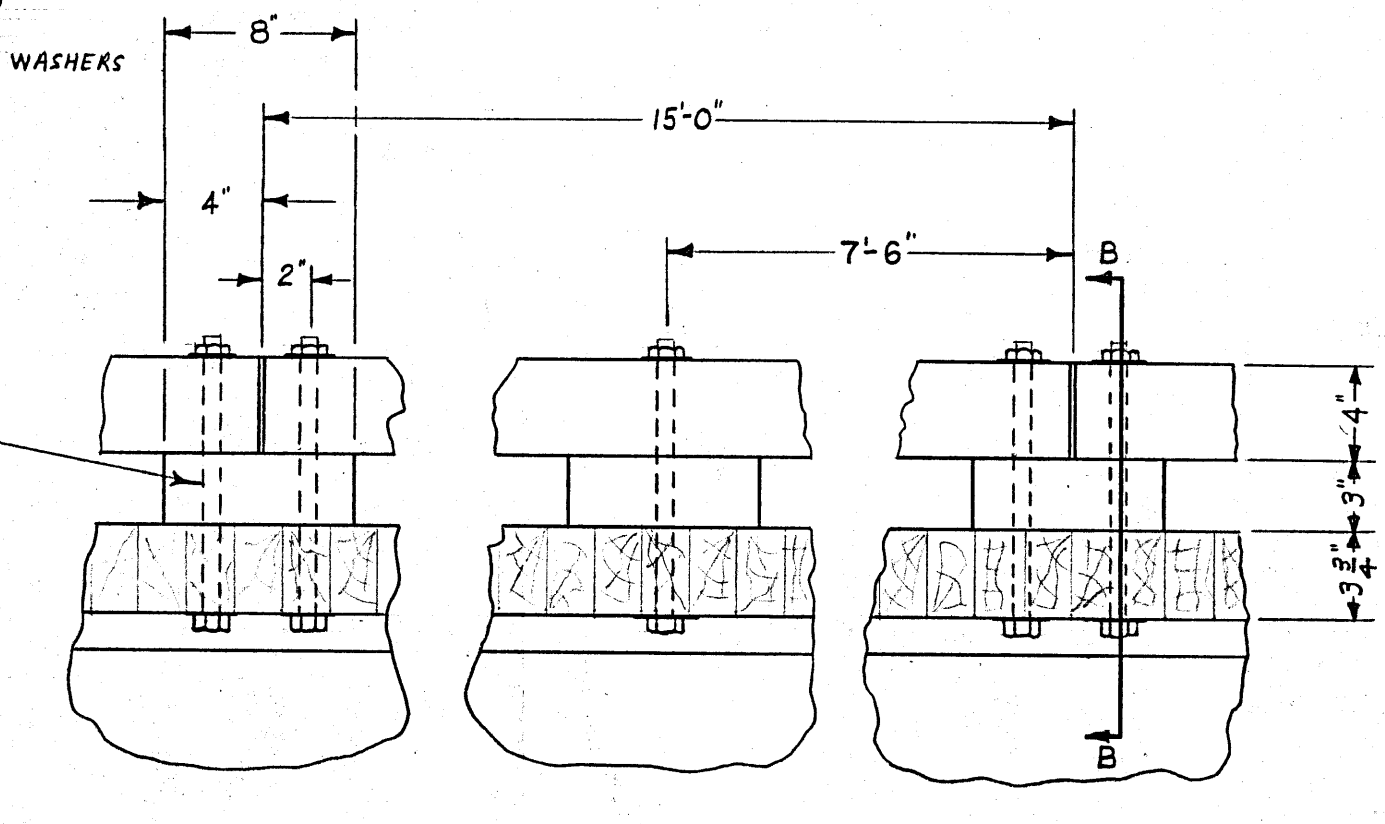
DATE: JULY 9, 71

SUPERINTENDING ENGINEER

T.C. 4019-G



MATERIAL LIST (LUMBER)			
LUMBER IN STOCK	864 pcs. - 10'-0" LONG.	LUMBER REQ'D	532 pcs. - 10'-0" LONG.
	653 pcs. - 12'-0" LONG.		532 pcs. - 12'-0" LONG.
	787 pcs. - 14'-0" LONG.		532 pcs. - 14'-0" LONG.
			532 pcs. - 2'-6" LONG.
			532 pcs. - 4'-6" LONG.
			532 pcs. - 6'-6" LONG.
FROM 10'-0" LENGTHS (864)			
SORT 532 PCS. (FULL LENGTH)			
CUT 195 PCS. INTO (4'-6" + 2'-6" + 2'-6" LENGTHS) 195 = 4'-6" pcs. & 390 = 2'-6" pcs.			
CUT 170 PCS. INTO (2'-6" + 4'-6" LENGTHS) 140 = 4'-6" pcs.			
FROM 12'-0" LENGTHS (653)			
SORT 532 PCS. (FULL LENGTH)			
CUT 199 PCS. INTO (4'-6" + 4'-6" + 2'-6" LENGTHS) 198 = 4'-6" pcs. & 99 = 2'-6" pcs.			
CUT 22 PCS. INTO (6'-6" + 2'-6" + 2'-6" LENGTHS) 22 = 6'-6" pcs. & 44 = 2'-6" pcs.			
FROM 14'-0" LENGTHS (787)			
SORT 532 PCS. (FULL LENGTH)			
CUT 255 PCS. INTO (2'-6" LENGTHS) 510 = 2'-6" pcs.			
EXTRA LUMBER 67 pcs. 10'-0" LONG.			



INDIAN AFFAIRS & NORTHERN DEVELOPMENT
NATIONAL & HISTORIC PARKS BRANCH - CANALS

AFFAIRES INDIENNES ET DU NORD CANADIEN
DIRECTION DES PARCS NATIONAUX ET DES LIEUX HISTORIQUES - CANAUX

TRENT CANAL SYSTEM
HAMLET BRIDGE - BRIDGE #57
REDECKING OF 200'x16'-6" SWING SPAN

SCALE/ÉCHELLE 1"=2'-0" DATE/DATE JUNE 74

APR. 75	DECKING MATERIAL	SWC	HVB
FEB. 75	DECKING DETAIL & MATERIAL LIST (LUMBER)	J.P.L.	T.J.A.
DATE	REVISIONS	BY	CH'CK'D. VERIFIÉ

CHECKED/VÉRIFIÉ D.M. SUPERINTENDING ENGINEER/SURINTENDANT T.C. 4417-G