

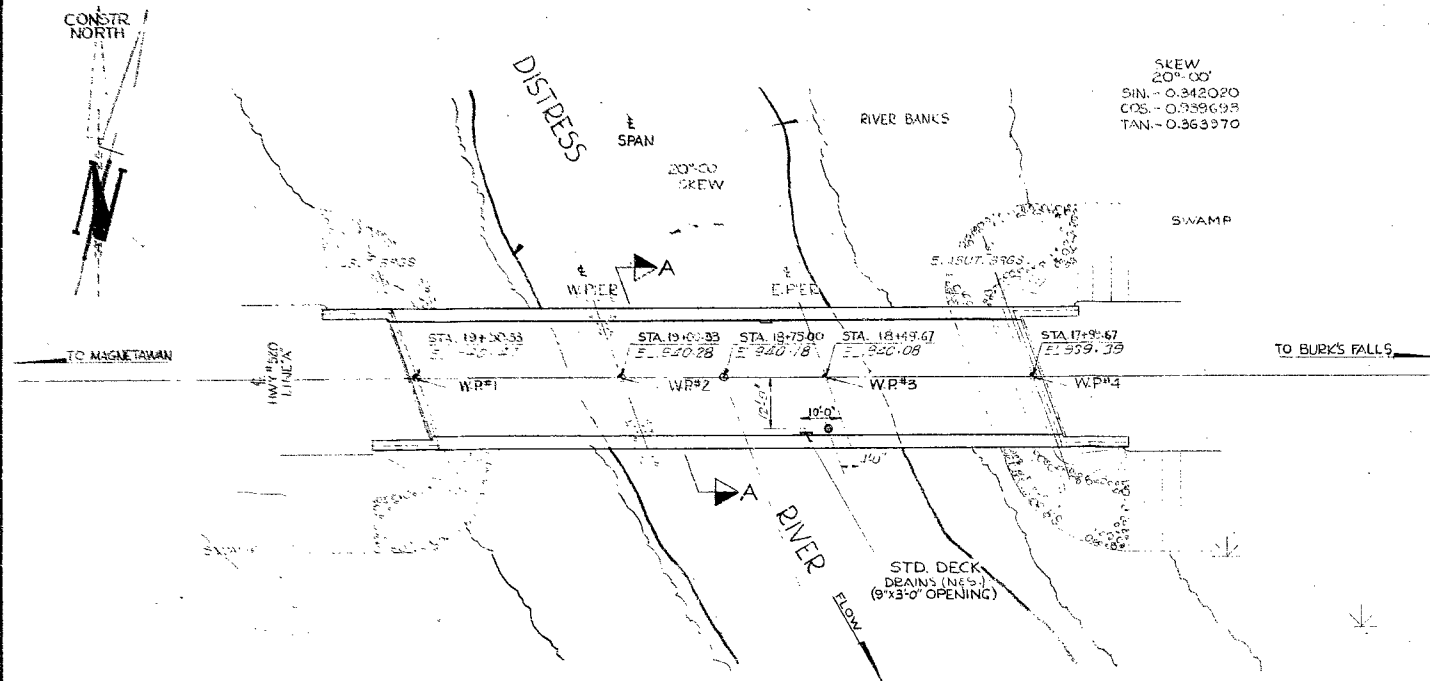
#69-F-21

W.P. 333-63

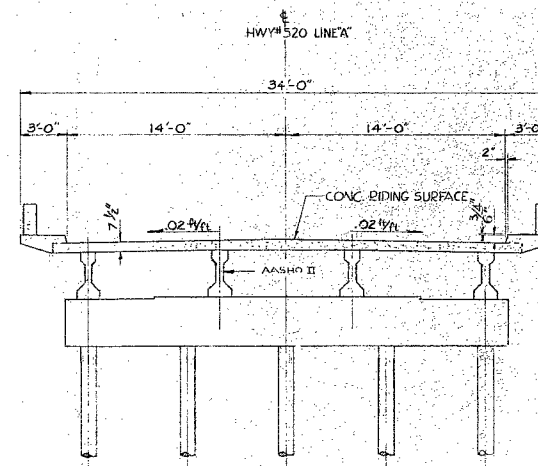
H.W.Y. #520

DISTRESS RIVER

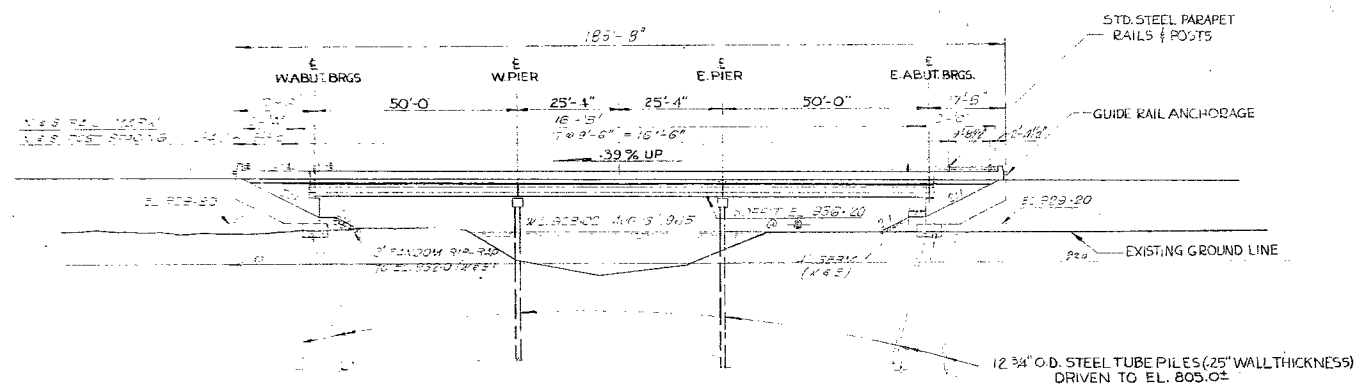
BRIDGE



PLAN
SCALE 1"=20'-0"

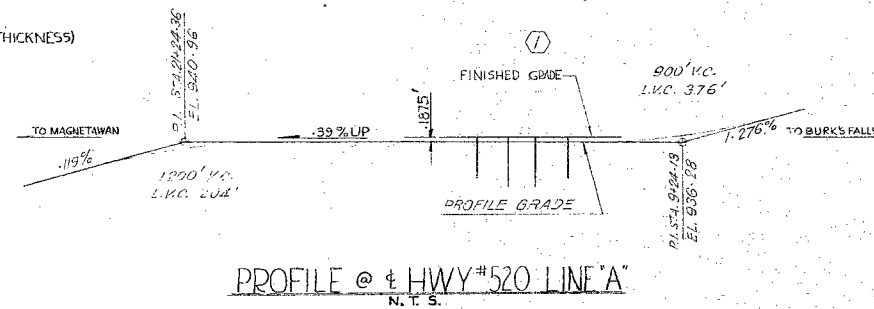


SECTION AA
SCALE 3/16"=1'-0"

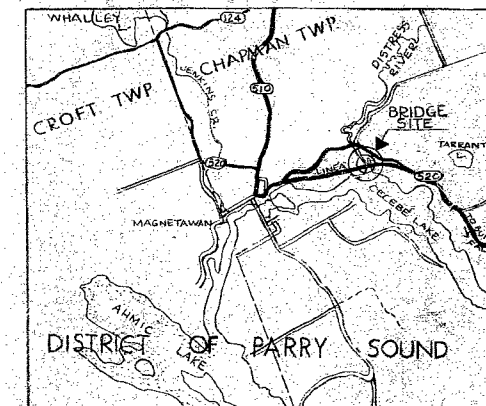


ELEVATION
SCALE 1"=20'-0"

- LIST OF DRAWINGS
- | | |
|----------|--------------------------------------|
| D-5917-1 | GENERAL LAYOUT |
| -2 | BORE HOLE LOCATIONS & SOIL STRATA |
| -3 | FOOTING LAYOUT & PIERS |
| -4 | ABUTMENTS |
| -5 | PRESTRESSED GIRDERS & BEARINGS |
| -6 | DECK, DIAPHRAGMS & SCREED ELEVATIONS |
| -7 | PARAPET WALL DETAILS |
| -8 | STANDARD STEEL PARAPET RAIL |
| -9 | STANDARD DETAILS |



PROFILE @ & HWY#520 LINE "A"
N.T.S.



KEY PLAN

SCALE IN MILES

CLASS OF CONCRETE
DECK, CURBS & PARAPET 4000 P.S.I.
REMAINDER 3000 P.S.I.
FOR PRESTRESSED GIRDERS SEE DWG. D-5917-5

CLEAR COVER ON REINFORCING STEEL

FOOTINGS	3"
ABUTMENTS & PIERS	3"
DECK	1 1/2" TOP
	1" BOTTOM
DIAPHRAGMS	2"
CURBS	2"
AND/OR AS NOTED ON DRAWINGS	

CONSTRUCTION NOTES

THE CONTRACTOR IS RESPONSIBLE FOR FINISHING THE BEARING SEATS DEAD LEVEL TO THE SPECIFIED ELEVATIONS WITH A TOLERANCE OF $\pm 1/8$ INCH.

NO CONCRETE SHALL BE PLACED ABOVE THE ABUTMENT BEARING SEATS UNTIL THE CONCRETE IN THE DECK HAS BEEN PLACED.

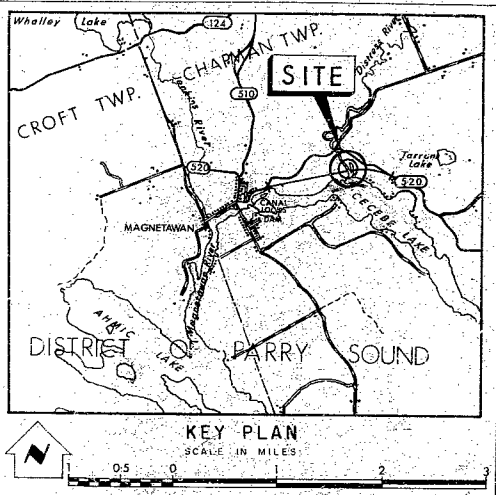
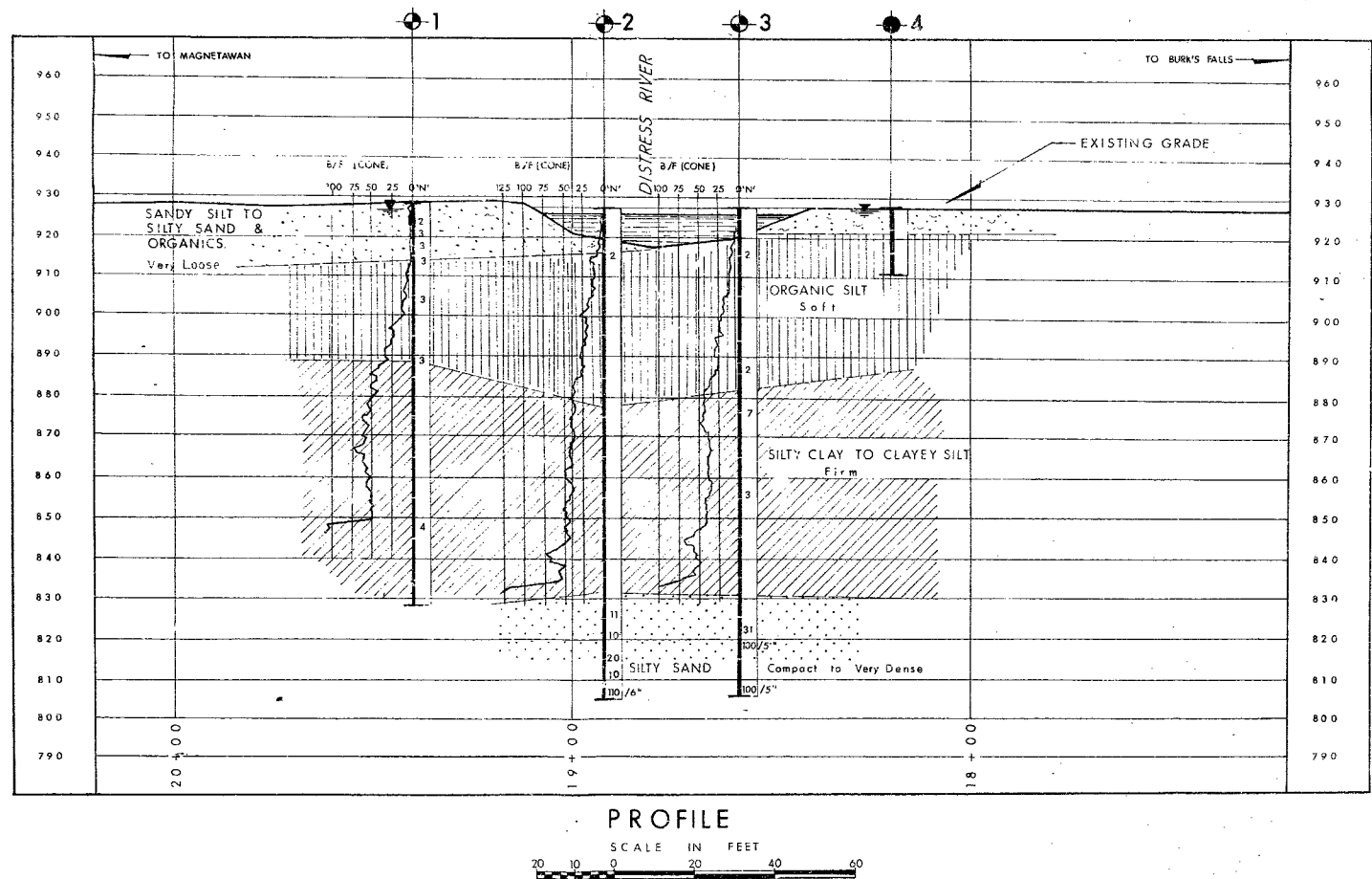
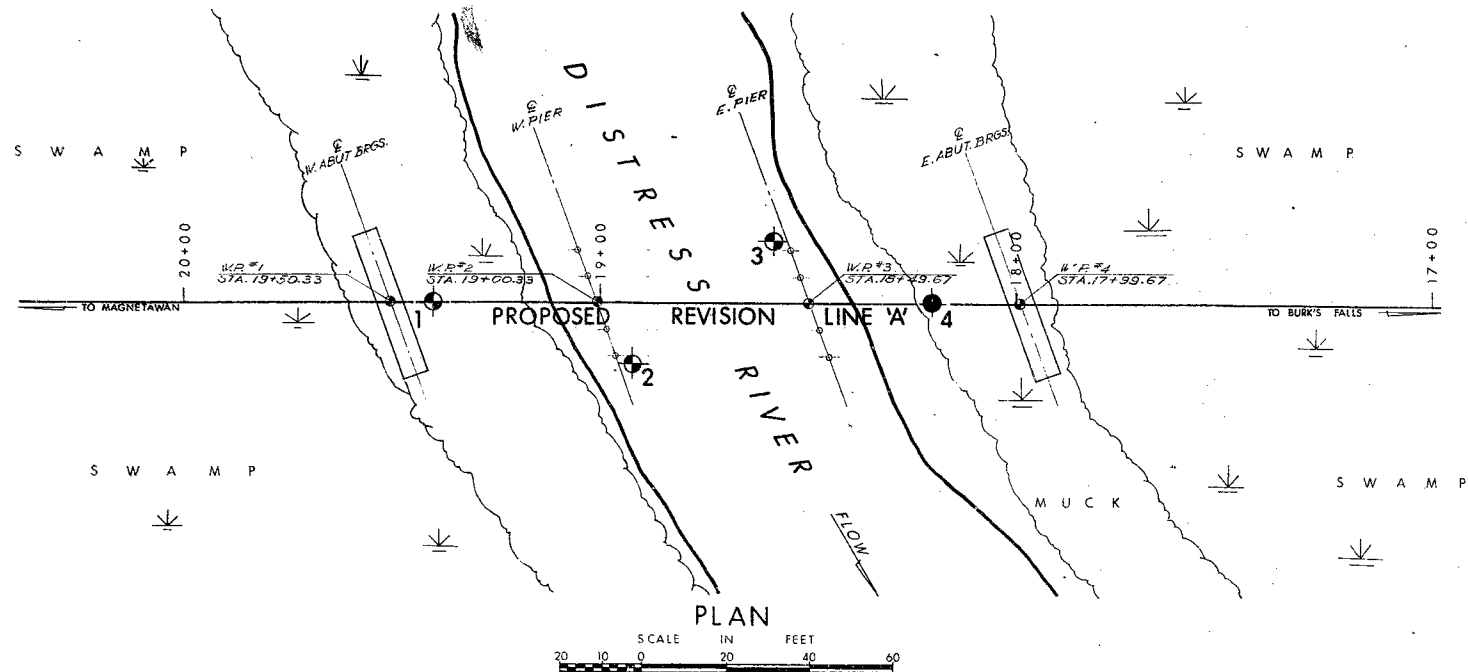
B.M. EL. 929.47
GEODETIC DATUM
N4W. IN ROOT 1" MAP
127' LT. OF STA. 18+52

69-1-21

PRINT RECORD		
No.	FOR	DATE
1	DES.	22-22
2		
3		
4		
5		
6		
7		
8		
9		
10		

REVISIONS	DATE	BY	DESCRIPTION

DEPARTMENT OF HIGHWAYS ONTARIO BRIDGE DIVISION			
DISTRESS RIVER BRIDGE			
13.5 MILES WEST OF HWY#11			
KING'S HIGHWAY No. 520	DIST. No. 11 (HUNTSVILLE)		
DISTRICT OF PARRY SOUND			
TWP. CHAPMAN	LOT 29 & 30	CON. 3 & 6	
GENERAL LAYOUT			
APPROVED	BRIDGE ENGINEER	SITE No. 44-71	W.P. No. 333-63
DESIGN	R.O.L. CHECK	AR	CONTRACT No. 67-111
DRAWING	F.J.R. CHECK	R.O.L.	DRAWING No. D-5917-1
DATE	NOV. 1966	LOADING	H520-44



LEGEND			
	Bore Hole		
	Cone Penetration Hole		
	Bore & Cone Penetration Hole		
	Water Levels established at time of field investigation, JAN. 1966		
NO.	ELEVATION	STATION	OFFSET
1	928.5	19+40	ON C
2	927.0	18+92	15' LT
3	927.0	18+48	15' RT
4	927.5	18+20	ON C

NOTE
The boundaries between soil strata have been established only at Bore Hole locations. Between Bore Holes the boundaries are assumed from geological evidence and may be subject to considerable error.

REVISIONS	DATE	BY	DESCRIPTION

DEPARTMENT OF HIGHWAYS - ONTARIO
MATERIALS & TESTING DIVISION - FOUNDATION SECTION

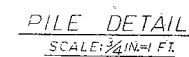
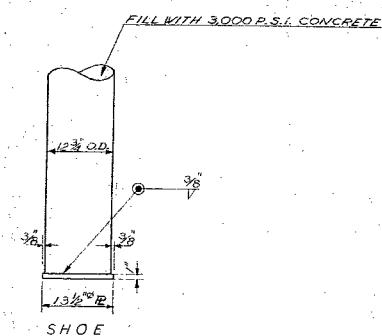
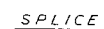
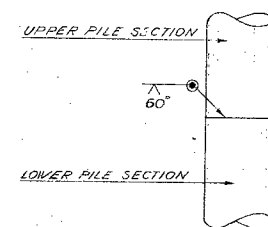
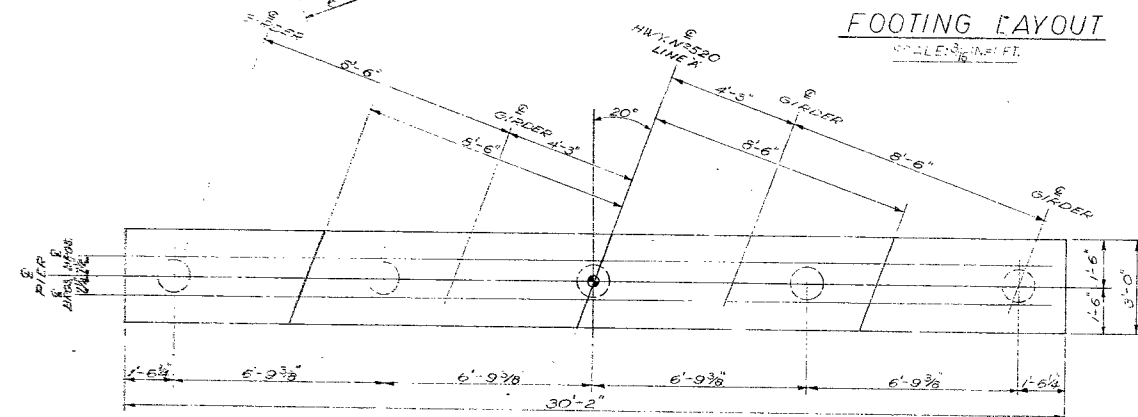
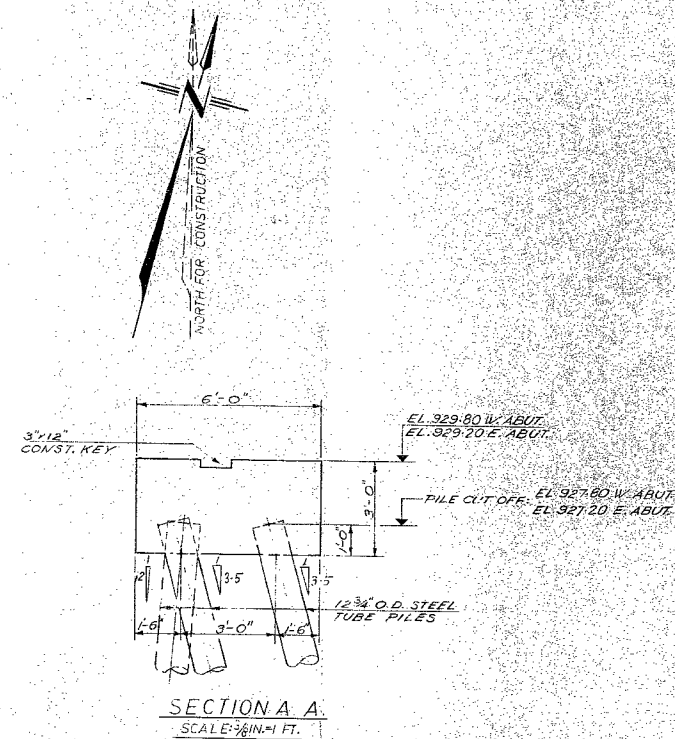
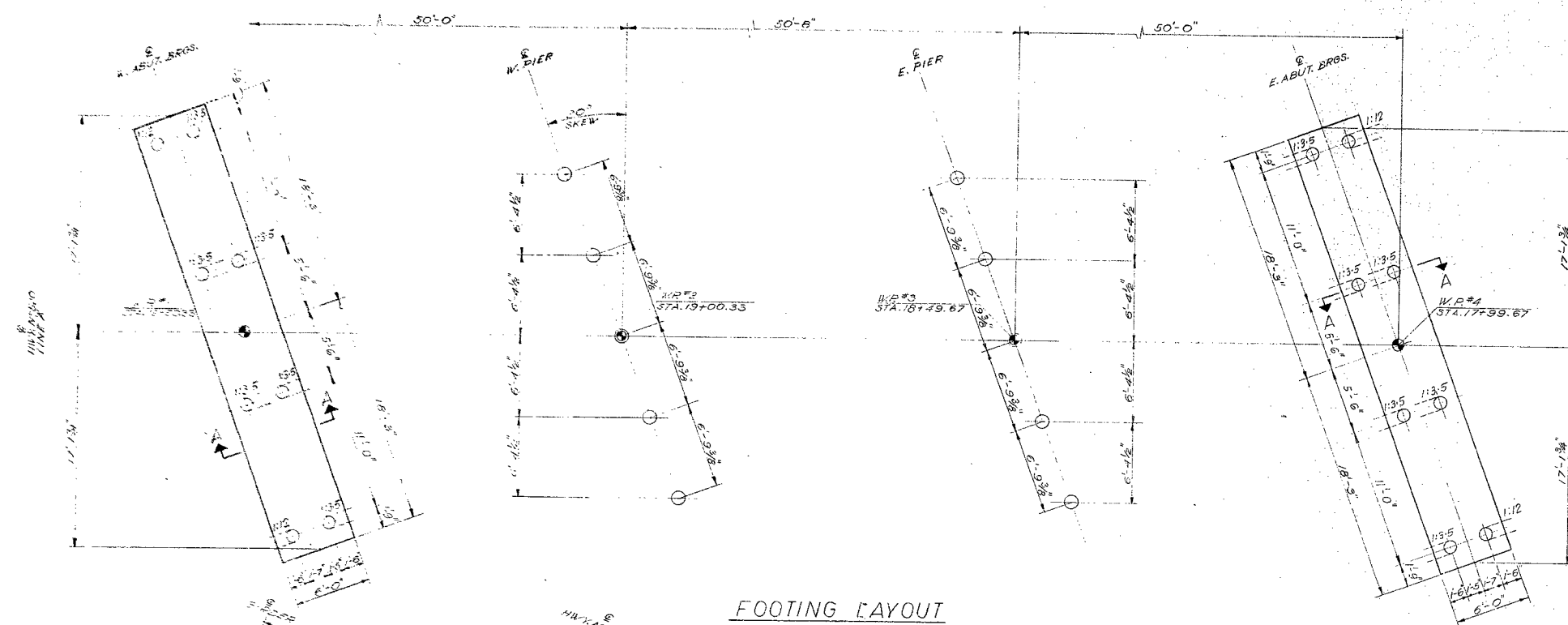
DISTRESS RIVER

KING'S HIGHWAY NO. 520, PROP. REV'N LINE W DIST. NO. 11
DIST. OF PARRY SOUND
TWP. CHAPMAN LOT. 29 & 30 CON. 5 & 6

BORE HOLE LOCATIONS & SOIL STRATA

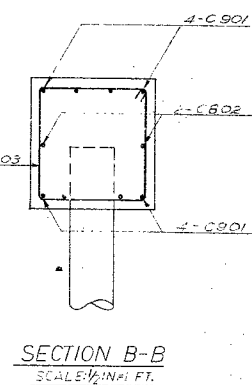
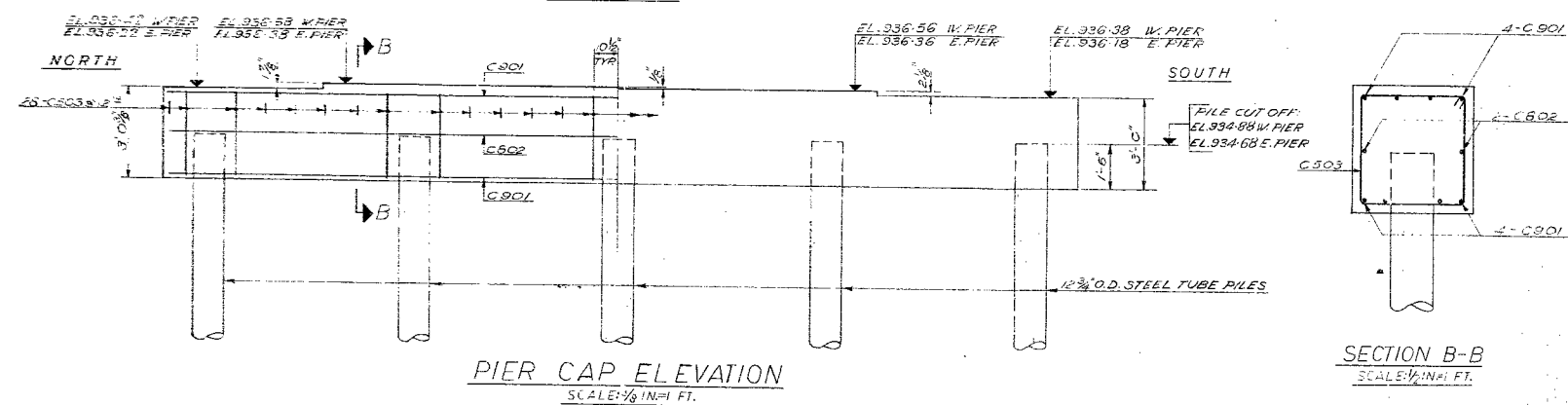
SUBM'D. V.K.	CHECKED	W.P. NO. 333 - 65	M.S.T. DRAWING NO.
DRAWN J.N.	CHECKED	JOB NO. 66 - F-4	66-F-4 A
DATE 16 MARCH 1966	SITE NO. 44-71	BRIDGE DRAWING NO.	
APPROVED <i>[Signature]</i>	CONT. NO. 67-111		05917-2

NO.	FOR	DATE
1	AS	2/22

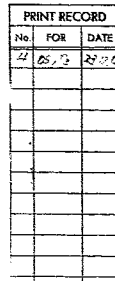


LIST OF 1240D. STEEL TUBE PILES
WALL THICKNESS = 0.25"
DRIVEN WITH CLOSED END

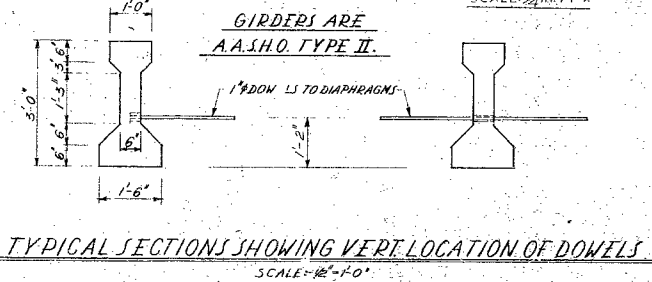
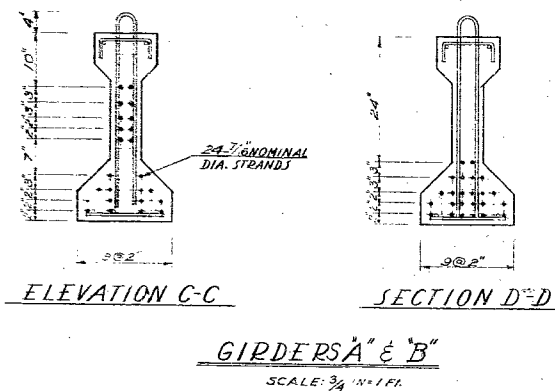
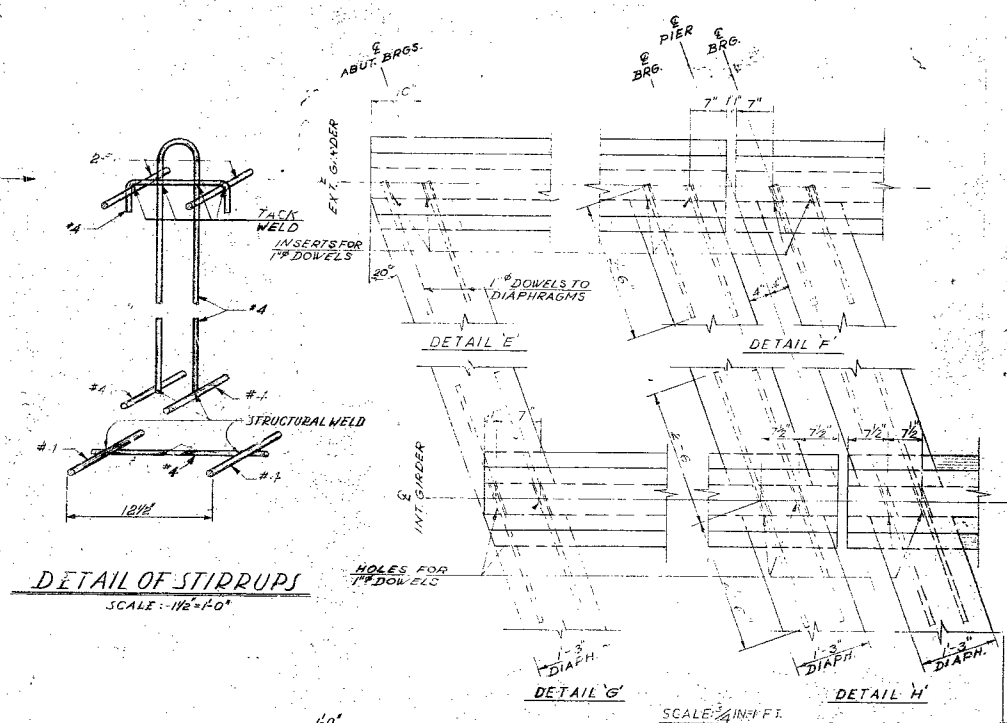
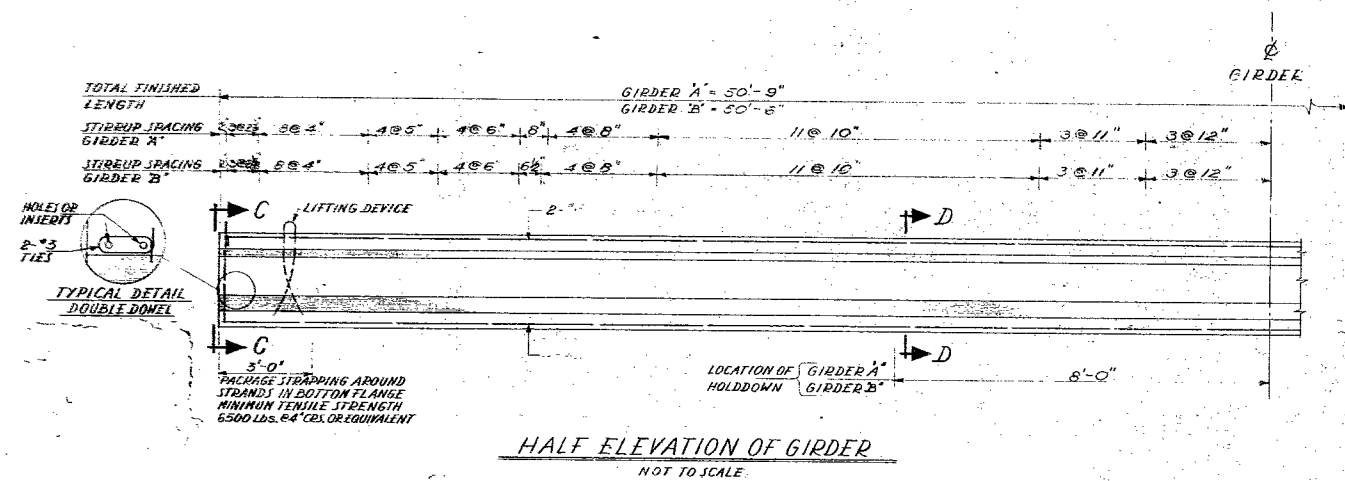
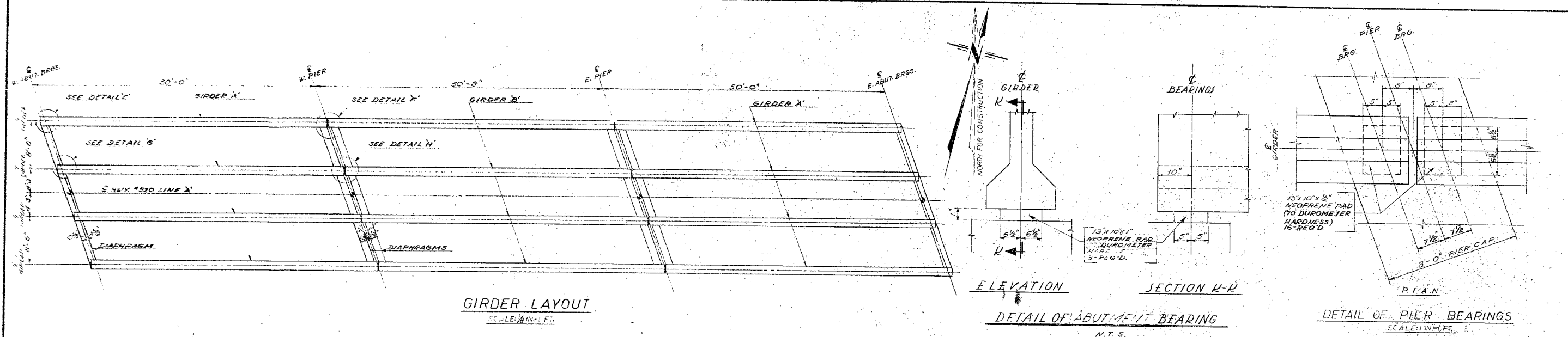
<u>LOCATION</u>	<u>DESIGN LOAD PER PILE</u>	<u>NO OF PILES REQ'D.</u>	<u>ESTIMATED LENGTH</u>
<u>W. ABUT.</u>	<u>60 TONS</u>	<u>3</u>	<u>128</u>
<u>W. PIER</u>	<u>60 TONS</u>	<u>5</u>	<u>133</u>
<u>E. PIER</u>	<u>60 TONS</u>	<u>5</u>	<u>133</u>
<u>E. ABUT.</u>	<u>60 TONS</u>	<u>3</u>	<u>128</u>

[illegible]

<u>DEPARTMENT OF HIGHWAYS ONTARIO</u> <u>BRIDGE DIVISION</u>	
<u><i>DISTRESS RIVER BRIDGE</i></u> <u><i>1.35 MILES WEST OF HWY. N#11</i></u>	
KING'S HIGHWAY No. 520 DIST. OF PARRY SOUND	DIST. No. 11 (HUNTSVILLE)
TWP. CHAPMAN	LOT 28532 CON. 568



<u>DEPARTMENT OF HIGHWAYS</u> <u>ONTARIO</u> BRIDGE DIVISION				
<h1 style="margin: 0;">DISTRESS RIVER BRIDGE</h1> <p style="font-size: 1.2em; margin: 0;">(3.5 MILES WEST OF HWY #11)</p>				
KING'S HIGHWAY No. 520		DIST. No. 11 (MUNTSVILLE)		
DISTRICT OF PARRY SOUND				
TWP. CHAPMAN		LOT 29 620		CON. 5 86
<h2 style="margin: 0;">ABUTMENTS</h2>				
APPROVED		SITE No. 44-71		W.P. No. 333-63
BRIDGE ENGINEER		CONTRACT No.		67-111
DESIGN	P.O.L.	CHECK	A.P.	
DRAWING	F.J.R.	CHECK	F.O.L.	
DATE	NOV. 1966	LOADING	HS20-44	
		DRAWING No.		D-5917-4



- ## NOTES FOR PRE-TENSIONED GIRDERS
- CONCRETE STRENGTH AT 28 DAYS 5000 p.s.i.
 - CONCRETE STRENGTH AT TRANSFER 4500 p.s.i.
 - STRAND TYPE 7, NOMINAL DIA. 7, WIRE EXTRA HIGH STRENGTH.
 - MINIMUM ULTIMATE STRENGTH OF STRANDS 34,000 lbs.
 - INITIAL FORCE PER STRAND 22,700 lbs.
 - WORKING FORCE PER STRAND AFTER ALL LOSSES 15,600 lbs.
 - MINIMUM CLEAR COVER ON REINFORCING STEEL 1"

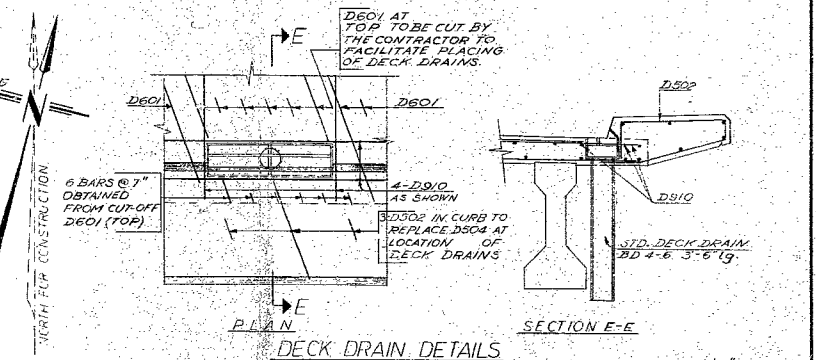
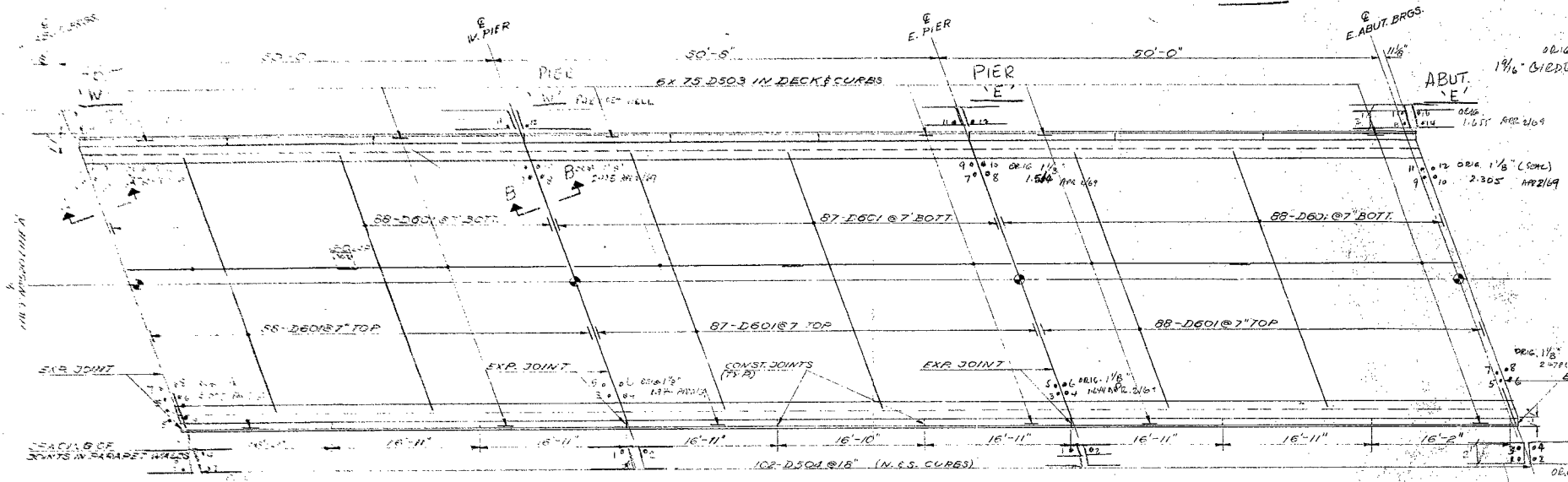
- ## NOTES FOR DOWELS
- DOWEL INSERTS SHALL BE CAPABLE OF DEVELOPING FULL STRENGTH OF DOWELS.
 - 1" Ø DOWELS FOR EXTERIOR GIRDERS SHALL BE THREADED AT ONE END TO MATCH INSERTS.
 - ALL DOWELS AND INSERTS SHALL BE SUPPLIED AND INSTALLED (OR GROUVED) BY THE CONTRACTOR.

[illegible][illegible]

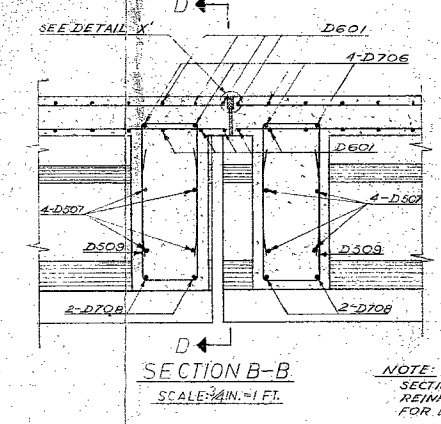
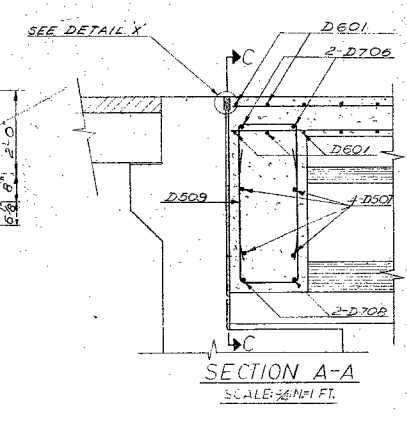
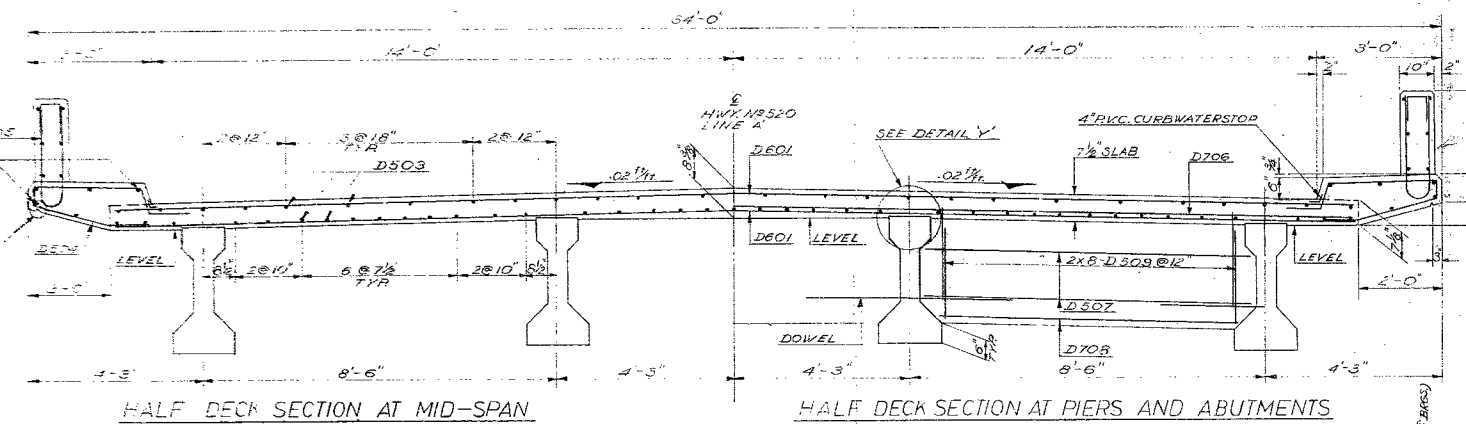
DEPARTMENT OF HIGHWAYS ONTARIO BRIDGE DIVISION			
<u>DISTRESS RIVER BRIDGE</u> <u>13.5 MILES WEST OF HWY N° 11</u>			
KING'S HIGHWAY No. 520		DIST. No. 11	
DISTRICT OF PARRY SOUND		(HUNTSVILLE)	
TWP. CHAPMAN		LOT 28630	CON. 566
<u>PRESERVED GIRDERS & BEARINGS</u>			
APPROVED <i>BS</i>		SITE No. 44-71	W.P. No. 333-63
BRIDGE No. 101			
DESIGN	P.C.L.	CHECK	A.R.
DRAWING	P.S.C.H.	CHECK	P.C.L.
		CONTRACT	No.
			67-111
DATE	NOV/1966	LOADING	HS 23-44
		DRAWING No.	D-5917-5

LOCATION OF
PINS

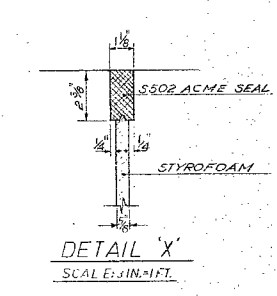
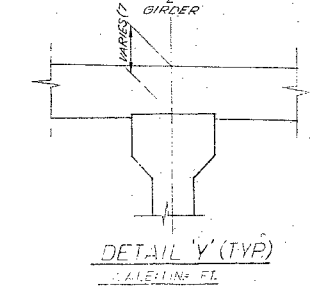
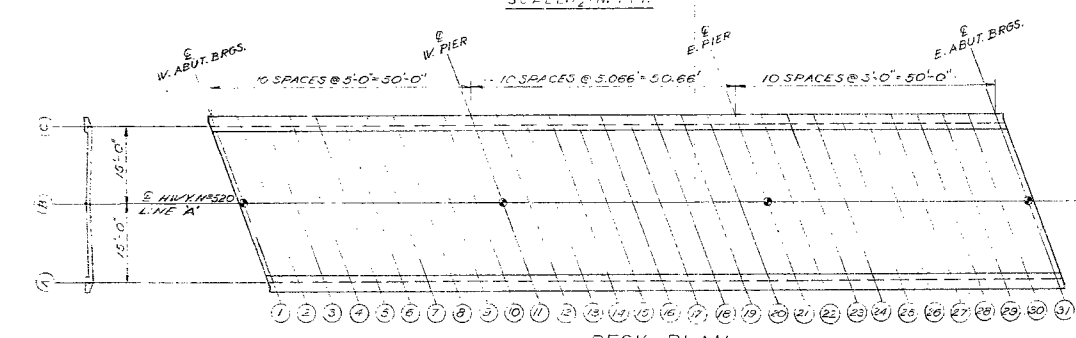
NOTE:
FOR LOCATION OF DECK
DRAINS SEE DRWG. D-5917-1



NOTE:
FOR PARAPET WALL DETAILS
SEE DRWG. D-5917-7



NOTE:
SECTIONS A-A & B-B SHOWING
REIN. IN DIAPHRAGMS.
FOR LAYOUT SEE DRWG. D-5917-5



PRINT RECORD

No.	FOR	DATE
1	FOR	DATE
2	FOR	DATE
3	FOR	DATE
4	FOR	DATE
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26	FOR	DATE
27	FOR	DATE
28	FOR	DATE
29	FOR	DATE
30	FOR	DATE
31	FOR	DATE

SCREED ELEVATIONS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
A	3.11	3.13	3.15	3.17	3.19	3.21	3.23	3.25	3.27	3.29	3.31	3.33	3.35	3.37	3.39	3.41	3.43	3.45	3.47	3.49	3.51	3.53	3.55	3.57	3.59	3.61	3.63	3.65	3.67	3.69	3.71
E	3.11	3.13	3.15	3.17	3.19	3.21	3.23	3.25	3.27	3.29	3.31	3.33	3.35	3.37	3.39	3.41	3.43	3.45	3.47	3.49	3.51	3.53	3.55	3.57	3.59	3.61	3.63	3.65	3.67	3.69	3.71
C	3.11	3.13	3.15	3.17	3.19	3.21	3.23	3.25	3.27	3.29	3.31	3.33	3.35	3.37	3.39	3.41	3.43	3.45	3.47	3.49	3.51	3.53	3.55	3.57	3.59	3.61	3.63	3.65	3.67	3.69	3.71

REVISIONS

DATE	BY	DESCRIPTION

DEPARTMENT OF HIGHWAYS ONTARIO
BRIDGE DIVISION

DISTRESS RIVER BRIDGE
1.5 MI. WEST OF HWY. N#11

KING'S HIGHWAY No. 22 DIST. No. 11
DISTRICT OF PARRY SOUND (HUNTSVILLE)

TWP. CHAPMAN LOT 29630 CON. 566

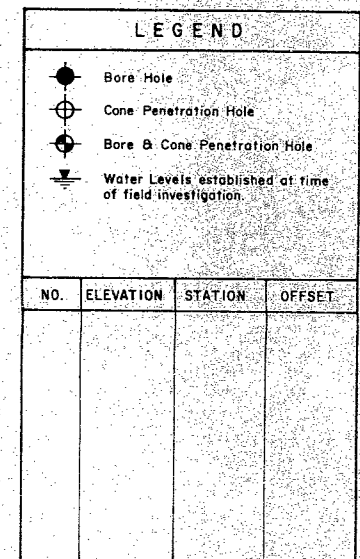
DECK, DIAPHRAGMS & SCREED ELEVATIONS

APPROVED [Signature] SITE No. 44-71 W.P. No. 333-6

DESIGN P.O.L. CHECK A.R. CONTRACT No. 67-1
DRAWING B.S.C.H. CHECK P.O.L. DRAWING No. D-5917-6
DATE NOV. 1966 LOADING 1520-24

DATE		E ELEVATIONS ALONG APPROACHES & BRIDGE DECK																							
		WEST APPROACH										BRIDGE DECK				EAST APPROACH									
INITIAL READINGS		24+00	23+50	23+00	22+50	22+00	21+50	21+00	20+50	20+00	19+82	19+50	19+00	18+50	18+00	17+83	17+50	17+00	16+50	16+00	15+50	15+00	14+50	14+00	
2 APR 69		39.01	38.49	38.21	38.12	38.09	38.13	38.29	38.52	38.59	38.58	39.21	39.06	38.83	38.65	37.88	37.50	37.06	36.69	36.49	36.41	36.42	36.80	37.01	
11 Apr 69		39.03	38.70	38.21	38.11	38.07	38.12	38.29	38.50	38.57	38.57	39.22	39.06	38.82	38.64	37.87	37.41	36.98	36.57	36.40	36.33	36.35	36.75	37.02	
12 " "		39.02	38.55	38.22	38.11	38.06	38.10	38.31	38.48	38.56	38.56	39.24	39.07	38.82	38.63	37.79	37.49	36.94	36.59	36.41	36.34	36.40	36.80	37.03	
2 MAY 69		39.09	38.58	38.12	38.05	38.05	38.30	38.47	38.56	38.55	39.27	39.02	38.85	38.62	37.81	37.39	36.93	36.50	36.39	36.30	36.37	36.83	37.05		
2 MAY 69		39.03	38.50	38.12	38.02	38.02	38.17	38.44	38.54	38.54	39.27	39.08	38.86	38.67	37.79	37.39	36.92	36.57	36.28	36.28	36.36	36.82	37.04		
9 " "		39.07	38.51	38.15	38.01	38.01	38.15	38.43	38.55	38.54	39.27	39.09	38.87	38.67	37.75	37.37	36.89	36.53	36.25	36.27	36.36	36.81	37.07		
30 " "		39.06	38.52	38.16	38.02	38.01	38.16	38.48	38.54	38.53	39.26	39.10	38.86	38.67	37.77	37.38	36.90	36.56	36.36	36.21	36.35	36.82	37.06		
6 June 69		39.05	38.52	38.07	37.92	37.90	37.90	38.07	38.36	38.51	38.50	39.28	39.13	38.90	38.65	37.69	37.30	36.79	36.42	36.23	36.15	36.27	36.77	37.02	
20 June 69		39.06	38.53	37.87	37.75	37.76	37.78	37.76	38.27	38.44	38.44	39.27	39.11	38.91	38.71	37.77	37.32	36.82	36.44	36.23	36.14	36.26	36.77	37.02	
14 July 69		39.02	38.46	37.89	37.72	37.77	37.77	37.76	38.25	38.44	38.44	39.29	39.14	38.90	38.69	37.64	37.24	36.75	36.36	36.16	36.09	36.25	36.97	37.05	

Date		Plog Elevations		S. Elev		Plum	
		S. (Foot)		S. (In)			
2	APR 69	937.68	937.99	937.93			Plum
11	" "	937.47	937.99	937.94			Plum
18	" "	937.44	937.99	937.94			"
28	" "	937.50	938.00	937.95			"
2	MAY 69	937.83	938.01	937.95			"
9	" "	937.82	938.01	937.95			"
30	" "	937.82	938.01	937.95			"
6	June 69	937.81	938.02	937.99			"
20	June 69	937.57	938.02	937.98			"
14	July 69	937.83	938.02	937.96			"



REVISIONS			
	DATE	BY	DESCRIPTION

DEPARTMENT OF HIGHWAYS - ONTARIO MATERIALS & TESTING OFFICE - FOUNDATION SECTION			
KING'S HIGHWAY NO. 520		DIST. NO. 11	
DIST PARRY SOUND			
TWP. CHAPMAN	LOT 29&30	CON. 5 & 6	

BRIDGE CONSTRUCTION - PILE DRIVING RECORD

DISTRICT NO. 11 CONTRACT NO. 67-111 STRUCTURE DISTRESS BRIDGE
CONTRACTOR FALGOUT (FRANKI PILING) DESIGN LOAD OF PILE 60 TONS
HAMMER DETAILS: TYPE DROP WEIGHT 7500 HEIGHT OF FALL OR ENERGY 4'
TYPE OF ANVIL OR CAP _____ WEIGHT OF ANVIL OR CAP 500 LBS
PILE DETAILS 12 3/4" O.D. X .250 WALL - LENGTH 2.45' AND 1-43'
PILE NO. 11 LOCATION CENTRE PILE IN EAST PILE DRIVEN JUNE 10/66

TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.
133	1	↑	133	26	↑	133	51	3	133	76	2
	2	↑		27	↑		52			77	2
	3			28			53	3		78	2
	4			29			54	2		79	2
	5			30			55	3		80	2
	6			31			56	3		81	2
	7			32			57	3		82	2
	8			33			58	3		83	2
	9			34			59	2		84	2
	10			35			60	2		85	2
	11			36			61	2		86	2
	12			37			62	2		87	2
	13			38			63	2		88	2
	14			39	↓		64	2		89	3
	15			40	1		65	2		90	3
	16			41	1		66	2		91	2
	17			42	1		67	2		92	2
	18			43	1		68	2		93	2
	19			44	1		69	2		94	2
	20			45	2		70	2		95	2
	21			46	2		71	2		96	3
	22			47	2		72	2		97	3
	23			48	3		73	2		98	✓
	24			49	2		74	2		99	3
133	25	✓	✓	50	2	133	75	2	133	100	3

DETAILS FOR FINAL SIX INCHES OF PENETRATION	1	2	3	4	5	6
BLOWS PER INCH						
MEASURED REBOUND IN INCHES						
FINAL LENGTH OF PILE	FINAL CUT OFF ELEVATION					

REPORT TO BE SENT TO: - PRINCIPAL FOUNDATION ENGINEER
MATERIALS & TESTING DIVISION
DEPARTMENT OF HIGHWAYS
DOWNSVIEW, ONTARIO

SIGNED _____
NAME (PRINT) _____
DATE _____

ATTACH SKETCH OF PILE NUMBERING SYSTEM

BRIDGE CONSTRUCTION - PILE DRIVING RECORD

DISTRICT NO. 11 CONTRACT NO. 67-111 STRUCTURE DISTRESS RIVER

CONTRACTOR FALGAK (FRANKI PILING) DESIGN LOAD OF PILE 60 TONS

HAMMER DETAILS: TYPE DROP WEIGHT 7500 HEIGHT OF FALL OR ENERGY 4

TYPE OF ANVIL OR CAP _____ WEIGHT OF ANVIL OR CAP 500 LBS

PILE DETAILS 12 3/4" O.D. X .250 WALL LENGTH 2-45 AND 1-45'

PILE NO. 11 LOCATION PILE IN EAST PIER DATE DRIVEN JUNE 10/68

TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.
133	101	2		26			51			76	
↑	102			27			52			77	
	103			28			53			78	
	104			29			54			79	
	105			30			55			80	
	106	2		31			56			81	
	107	4		32			57			82	
	108	3		33			58			83	
	109	3		34			59			84	
	110	4		35			60			85	
	111	5		36			61			86	
	112	4		37			62			87	
	113	4		38			63			88	
	114	4		39			64			89	
	115	5		40			65			90	
	116	6		41			66			91	
	117	8		42			67			92	
	118	7		43			68			93	
	119	7		44			69			94	
	120	6		45			70			95	
	121	7		46			71			96	
	122	11		47			72			97	
	123	14		48			73			98	
	124	14		49			74			99	
133	125	20		50			75			100	

DETAILS FOR FINAL SIX INCHES OF PENETRATION	1	2	3	4	5	6
BLOWS PER INCH	2	3	3	4	6	10
MEASURED REBOUND IN INCHES	1	5				155'
FINAL LENGTH OF PILE	131.16					
FINAL CUT OFF ELEVATION	934.68					

REPORT TO BE SENT TO: - PRINCIPAL FOUNDATION ENGINEER
MATERIALS & TESTING DIVISION
DEPARTMENT OF HIGHWAYS
DOWNSVIEW, ONTARIO

SIGNED _____

NAME (PRINT) _____

DATE _____

ATTACH SKETCH OF PILE NUMBERING SYSTEM

(DO NOT USE FOR GRADING QUANTITIES, ETC.)
OR FOR SCRATCH PAD USE

SHEET NO. _____ OF _____ DATE _____

WORK PROJECT NO. _____ CONTRACT NO. 67-111 ITEM NO. _____

LOCATION OF MATERIAL, ETC. DISTRESS RIVER BRIDGE

							UNIT
PILE # 9	1"	2"	3"	4"	5"	6"	
BLOWS	2	2	3	5	8	10	E. PIER
REBOUND	1"	1"	1.5"	1.5"	1.5"	1.5"	
FINAL LENGTH	130.83'		FINAL CUT OFF ELEV. 934.68				
PILE # 10	1"	2"	3"	4"	5"	6"	
BLOWS	2	2	2	6	10	12	E. PIER
REBOUND	1"	1"	1.5"	1.5"	2"	1.5"	
FINAL LENGTH	129.75'		FINAL CUT OFF ELEV. 934.68				
PILE # 11	1"	2"	3"	4"	5"	6"	
BLOWS	3	3	3	4	6	10	E. PIER
REBOUND	1."	← ————— →				15"	
FINAL LENGTH	131.16		FINAL CUT OFF ELEV. 934.68				
PILE # 12	1"	2"	3"	4"	5"	6"	
BLOWS	1	2	2	4	8	12	E. PIER
REBOUND	1"	1"	1"	1.5"	1.5"	2.5"	
FINAL LENGTH	132.58		FINAL CUT OFF ELEV. 934.68				
PILE # 13	1"	2"	3"	4"	5"	6"	
BLOWS	2	2	2	2	4	10	E. PIER
REBOUND	1"	1"	1"	1"	1.5"	2.5"	
FINAL LENGTH	131.48		FINAL CUT OFF ELEV. 934.68				

DETAILED BY

CHECKED BY

MISCELLANEOUS DETAIL SHEET

(DO NOT USE FOR GRADING QUANTITIES, ETC.)
OR FOR SCRATCH PAD USE

SHEET NO. _____ OF _____ DATE _____

WORK PROJECT NO. _____ CONTRACT NO. 47-111 ITEM NO. _____

LOCATION OF MATERIAL, ETC. DISTRESS RIVER BRIDGE

SKETCH SHOWING PILE IDENTIFICATION No ^s	UNIT
<p style="text-align: center;"><u>W. ABUT</u></p> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <div style="display: flex; justify-content: space-around; width: 100%;"> (26)(25)(24)(23) </div> <div style="display: flex; justify-content: space-around; width: 100%;"> (22)(21)(20)(19) </div> </div>	

R. Kan

2

BRIDGE CONSTRUCTION - PILE DRIVING RECORD

DISTRICT NO. 11 CONTRACT NO. 67-111 STRUCTURE LISKESS KILLS

CONTRACTOR FALCON (FRANK) PILING DESIGN LOAD OF PILE 60 TON

HAMMER DETAILS: TYPE DROP WEIGHT 7500 HEIGHT OF FALL OR ENERGY

TYPE OF ANVIL OR CAP WEIGHT OF ANVIL OR CAP 500 LBS

PILE DETAILS 12 3/4" O.D. STEEL TUBE X 0.25" @ 33 LBS/FT. VERTICAL, 12' X 1" STEEL

PILE NO. 4 LOCATION EAST ABUT DATE DRIVEN JUNE 12/68

TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.
128	1	↑	128	26	↓	128	51	3	128	76	4
	2			27			52	3		77	4
	3			28			53	4		78	4
	4			29			54	5		79	5
	5			30			55	5		80	3
	6			31			56	5		81	3
	7			32			57	5		82	3
	8			33			58	5		83	4
	9			34			59	4		84	3
	10			35	1		60	5		85	3
	11			36	1		61	4		86	3
	12			37	1		62	4		87	3
	13			38	1		63	4		88	3
	14			39	1		64	3		89	3
	15			40	1		65	3		90	3
	16			41	1		66	4		91	3
	17			42	1		67	3		92	5
	18			43	1		68	4		93	5
	19			44	2		69	3		94	6
	20			45	2		70	4		95	10
	21			46	2		71	4		96	8
	22			47	2		72	3		97	10
	23			48	2		73	3		98	7
	24			49	2		74	3		99	9
128	25		128	50	3	128	75	3	128	100	9

DETAILS FOR FINAL SIX INCHES OF PENETRATION	1	2	3	4	5	6
BLOWS PER INCH						
MEASURED REBOUND IN INCHES						CRIP'D
FINAL LENGTH OF PILE	FINAL CUT OFF ELEVATION					

REPORT TO BE SENT TO: - PRINCIPAL FOUNDATION ENGINEER
MATERIALS & RESEARCH DIVISION
DEPARTMENT OF HIGHWAYS
PARLIAMENT BUILDINGS
TORONTO, ONTARIO

SIGNED _____
NAME (PRINT) _____
DATE _____
ATTACH SKETCH OF PILE NUMBERING SYSTEM

BRIDGE CONSTRUCTION - PILE DRIVING RECORD

DISTRICT NO. 11 CONTRACT NO. 67-111 STRUCTURE DISTRESS RIVER
CONTRACTOR FALGAR (FRANKI PILING) DESIGN LOAD OF PILE 60 TON
HAMMER DETAILS: TYPE DROP WEIGHT 7500 LB HEIGHT OF FALL OR ENERGY _____
TYPE OF ANVIL OR CAP _____ WEIGHT OF ANVIL OR CAP 500 LB
PILE DETAILS 12 1/2" I.D. STEEL TUBE X 0.25 @ 33 1/2 LB/FT. VERTICAL 13 1/2" X 1" STEEL PLATE SHOC
PILE NO. 4 LOCATION EAST ABUT. DATE DRIVEN JUNE 12/68

TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.
128	101	9		26			51			76	
	102	8		27			52			77	
	103	9		28			53			78	
	104	9		29			54			79	
	105	9		30			55			80	
	106	9		31			56			81	
	107	12		32			57			82	
	108	12		33			58			83	
	109	12		34			59			84	
	110	12		35			60			85	
	111	11		36			61			86	
	112	11		37			62			87	
	113	10		38			63			88	
	114	10		39			64			89	
	115	12		40			65			90	
	116	13		41			66			91	
	117	14		42			67			92	
	118	17		43			68			93	
	119	24		44			69			94	
128	120	1/1		45			70			95	
	21			46			71			96	
	22			47			72			97	
	23			48			73			98	
	24			49			74			99	
	25			50			75			100	

DETAILS FOR FINAL SIX INCHES OF PENETRATION	1	2	3	4	5	6
BLOWS PER INCH	4	4	6	8	8	10
MEASURED REBOUND IN INCHES	1"					1 1/2"
FINAL LENGTH OF PILE	117.92					FINAL CUT OFF ELEVATION 927.20

REPORT TO BE SENT TO: - PRINCIPAL FOUNDATION ENGINEER
MATERIALS & RESEARCH DIVISION
DEPARTMENT OF HIGHWAYS
PARLIAMENT BUILDINGS
TORONTO, ONTARIO

SIGNED Harry J. Wilson
NAME (PRINT) HARRY J. WILSON
DATE JUNE 12/68
ATTACH SKETCH OF PILE NUMBERING SYSTEM

MISCELLANEOUS DETAIL SHEET

(DO NOT USE FOR GRADING QUANTITIES, ETC.)
OR FOR SCRATCH PAD USE

SHEET NO. _____ OF _____ DATE _____

WORK PROJECT NO. _____ CONTRACT NO. 67-111 ITEM NO. _____LOCATION OF MATERIAL, ETC. DISTRESS RIVER BRIDGE

							UNIT
PILE # ①	1"	2"	3"	4"	5"	6"	
BLOWS	5	5	5	6	8	12	E. ABUT.
REBOUND	1"					1 1/2	
FINAL LENGTH 116.37	FINAL CUT OFF ELEV. 927.20						
PILE # ②	1"	2"	3"	4"	5"	6"	
BLOWS	6	6	6	6	8	8	E. ABUT.
REBOUND	1					1 1/2	
FINAL LENGTH 124.18	FINAL CUT OFF ELEV.						
PILE # ③	1"	2"	3"	4"	5"	6"	
BLOWS	5	5	5	6	8	12	E. ABUT.
REBOUND	1					1 1/8	
FINAL LENGTH 129.88	FINAL CUT OFF ELEV. 927.20						
PILE # ④	1"	2"	3"	4"	5"	6"	
BLOWS	4	4	6	8	8	10	E. ABUT.
REBOUND	1					1 1/2	
FINAL LENGTH 117.92	FINAL CUT OFF ELEV. 927.20						
PILE # ⑤	1"	2"	3"	4"	5"	6"	
BLOWS	4	4	4	4	6	8	E. ABUT.
REBOUND	1					1 1/4	
FINAL LENGTH 126.98	FINAL CUT OFF ELEV. 927.20						
PILE # ⑥	1"	2"	3"	4"	5"	6"	
BLOWS	5	5	5	6	8	8	E. ABUT.
REBOUND	1					1 1/2	
FINAL LENGTH 123.71	FINAL CUT OFF ELEV. 927.20						
PILE # ⑦	1"	2"	3"	4"	5"	6"	
BLOWS	5	5	6	6	10	12	E. ABUT.
REBOUND	1					1 1/2	
FINAL LENGTH 125.17	FINAL CUT OFF ELEV. 927.20						
PILE # ⑧	1"	2"	3"	4"	5"	6"	
BLOWS	4	5	5	6	8	11	E. ABUT.
REBOUND	1					1 1/4	
FINAL LENGTH 124.44	FINAL CUT OFF ELEV. 927.20						

BRIDGE CONSTRUCTION - PILE DRIVING RECORD

DISTRICT NO. 11 CONTRACT NO. 67-111 STRUCTURE MISSISSAUGA RIVER

CONTRACTOR FALCIK (FRANKI PILING) DESIGN LOAD OF PILE 60 TON

HAMMER DETAILS: TYPE Drop WEIGHT 7500 LB HEIGHT OF FALL OR ENERGY 4'

TYPE OF ANVIL OR CAP _____ WEIGHT OF ANVIL OR CAP 500 LB

PILE DETAILS 12 3/4" STEEL TUBE 70.25 x 3.25 L/FT. VERTICAL 13 1/2" X 1" STEEL PILE BRIDGE

PILE NO. 15 LOCATION WEST PIER DATE DRIVEN FEB 1968

TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.
133	1		133	26		133	51		133	76	
	2			27			52			77	
	3			28			53			78	
	4			29			54			79	
	5			30			55			80	
	6			31			56			81	
	7			32			57			82	
	8			33			58			83	
	9			34			59			84	
	10			35			60			85	
	11			36			61			86	
	12			37	1		62			87	
	13			38	1		63			88	
	14			39	1		64			89	
	15			40	2		65			90	
	16			41	2		66			91	
	17			42	2		67			92	
	18			43	2		68			93	
	19			44	2		69			94	
	20			45	3		70			95	
	21			46	3		71			96	
	22			47	3		72			97	
	23			48	2		73			98	
	24			49	3		74			99	
133	25		133	50	3	133	75		133	100	

DETAILS FOR FINAL SIX INCHES OF PENETRATION	1	2	3	4	5	6
BLOWS PER INCH						Cont'd
MEASURED REBOUND IN INCHES						
FINAL LENGTH OF PILE	FINAL CUT OFF ELEVATION					

REPORT TO BE SENT TO: - PRINCIPAL FOUNDATION ENGINEER
MATERIALS & RESEARCH DIVISION
DEPARTMENT OF HIGHWAYS
PARLIAMENT BUILDINGS
TORONTO, ONTARIO

SIGNED _____

NAME (PRINT) _____

DATE _____

ATTACH SKETCH OF PILE NUMBERING SYSTEM

DEPARTMENT OF HIGHWAYS - ONT.
MATERIALS & RESEARCH DIVISION
FOUNDATION SECTION

BRIDGE CONSTRUCTION - PILE DRIVING RECORD

DISTRICT NO. 11 CONTRACT NO. 67-111 STRUCTURE DISTRESS RIVER

CONTRACTOR FALGAR (FRANKL PILING) DESIGN LOAD OF PILE 62700

HAMMER DETAILS: TYPE D-20 WEIGHT 75000 HEIGHT OF FALL OR ENERGY 4

TYPE OF ANVIL OR CAP WEIGHT OF ANVIL OR CAP 10000

PILE DETAILS 12 1/4" O.D. TUBE X 0.25" @ 33 1/2" / FT. ; VERTICAL ; 13 1/2" X 1" STEEL PLATE

PILE NO. 15 LOCATION WEST PIER DATE DRIVEN JUNE 17, 1968

TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.
133	101	6		26			51			76	
	102	6		27			52			77	
	103	6		28			53			78	
	104	6		29			54			79	
	105	6		30			55			80	
	106	6		31			56			81	
	107	6		32			57			82	
	108	6		33			58			83	
	109	6		34			59			84	
	110	6		35			60			85	
	111	5		36			61			86	
	112	5		37			62			87	
	113	5		38			63			88	
	114	6		39			64			89	
	115	6		40			65			90	
	116	6		41			66			91	
	117	6		42			67			92	
	118	7		43			68			93	
	119	7		44			69			94	
	120	7		45			70			95	
	121	7		46			71			96	
	122	7		47			72			97	
	123	7		48			73			98	
133	124	7		49			74			99	
	25			50			75			100	

DETAILS FOR FINAL SIX INCHES OF PENETRATION	1	2	3	4	5	6
BLOWS PER INCH	3	5	8	11	13	16
MEASURED REBOUND IN INCHES	1					1 1/2
FINAL LENGTH OF PILE	129.58'			FINAL CUT OFF ELEVATION 934.00		

REPORT TO BE SENT TO: - PRINCIPAL FOUNDATION ENGINEER
MATERIALS & RESEARCH DIVISION
DEPARTMENT OF HIGHWAYS
PARLIAMENT BUILDINGS
TORONTO, ONTARIO

SIGNED Carl Woodman
NAME (PRINT) CARL WOODMAN
DATE JUNE 17, 1968

ATTACH SKETCH OF PILE NUMBERING SYSTEM

MISCELLANEOUS DETAIL SHEET

(DO NOT USE FOR GRADING QUANTITIES, ETC.)
OR FOR SCRATCH PAD USE

SHEET NO. _____ OF _____ DATE _____

WORK PROJECT NO. _____ CONTRACT NO. 67-111 ITEM NO. _____

LOCATION OF MATERIAL, ETC. DISTRESS RIVER BRIDGE

							UNIT
FILE #	(14)	1"	2"	3"	4"	5"	6"
BLOWS		3	5	7	9	10	12
REBOUND		1					1 1/2
FINAL LENGTH	130.00	FINAL CUT OFF ELEV.					934.88
FILE #	(15)	1"	2"	3"	4"	5"	6"
BLOWS		3	5	8	11	13	16
REBOUND		1					1 1/2
FINAL LENGTH	129.58	FINAL CUT OFF ELEV.					934.88
FILE #	(16)	1"	2"	3"	4"	5"	6"
BLOWS		4	4	5	7	8	10
REBOUND		1					1 1/2
FINAL LENGTH	130.67	FINAL CUT OFF ELEV.					934.88
FILE #	(17)	1"	2"	3"	4"	5"	6"
BLOWS		3	4	6	7	9	10
REBOUND		1					1 1/2
FINAL LENGTH	131.83	FINAL CUT OFF ELEV.					934.88
FILE #	(18)	1"	2"	3"	4"	5"	6"
BLOWS		4	4	5	5	8	9
REBOUND		1					1 1/2
FINAL LENGTH	134.96	FINAL CUT OFF ELEV.					934.88

R. Ken

BRIDGE CONSTRUCTION - PILE DRIVING RECORD

DISTRICT NO. 11 CONTRACT NO. 67-111 STRUCTURE DISTRESS RIVER
CONTRACTOR FRANK PILING DESIGN LOAD OF PILE 60 TONS
HAMMER DETAILS: TYPE DROP WEIGHT 7500 LBS HEIGHT OF FALL OR ENERGY 4 FT
TYPE OF ANVIL OR CAP _____ WEIGHT OF ANVIL OR CAP 500 LBS
PILE DETAILS 12 3/4 O.D. STEEL TUBE PILE X 0.25" @ 33 1/2 LBS/FT ; 1:12 BATTER, 13 1/2' TOTAL
PILE NO. 26 LOCATION WEST ABUTMENT DATE DRIVEN JUNE 19/68

TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.
128	1	1	128	26	1	128	51	2	128	76	3
	2			27			52	2		77	3
	3			28			53	3		78	3
	4			29			54	3		79	3
	5			30			55	3		80	3
	6			31			56	3		81	4
	7			32			57	3		82	3
	8			33			58	3		83	3
	9			34			59	4		84	3
	10			35			60	3		85	3
	11			36			61	3		86	3
	12			37			62	4		87	3
	13			38			63	3		88	5
	14			39			64	3		89	4
	15			40			65	4		90	3
	16			41			66	3		91	3
	17			42	1		67	3		92	4
	18			43	2		68	3		93	3
	19			44	2		69	3		94	4
	20			45	3		70	3		95	4
	21			46	3		71	3		96	5
	22			47	3		72	3		97	5
	23			48	2		73	3		98	5
	24			49	3		74	3		99	5
128	25		128	50	3	128	75	4	128	100	CON.

DETAILS FOR FINAL SIX INCHES OF PENETRATION	1	2	3	4	5	6
BLOWS PER INCH						
MEASURED REBOUND IN INCHES						
FINAL LENGTH OF PILE	FINAL CUT OFF ELEVATION <u>927.80</u>					

REPORT TO BE SENT TO: - PRINCIPAL FOUNDATION ENGINEER
MATERIALS & RESEARCH DIVISION
DEPARTMENT OF HIGHWAYS
PARLIAMENT BUILDINGS
TORONTO, ONTARIO

SIGNED Carl Woodman
NAME (PRINT) CARL WOODMAN
DATE JUNE 18, 1968

ATTACH SKETCH OF PILE NUMBERING SYSTEM

DEPARTMENT OF HIGHWAYS - ONTARIO
MATERIALS & RESEARCH DIVISION
FOUNDATION SECTION

BRIDGE CONSTRUCTION - PILE DRIVING RECORD

DISTRICT NO. 11 CONTRACT NO. 67-111 STRUCTURE DISTRESS RIVER
CONTRACTOR FALGAK (FRANK PILING) DESIGN LOAD OF PILE 60 TONS
HAMMER DETAILS: TYPE DROP WEIGHT 7500 HEIGHT OF FALL OR ENERGY 4 FT
TYPE OF ANVIL OR CAP _____ WEIGHT OF ANVIL OR CAP 500 LB
PILE DETAILS 12 1/4" O.D. STEEL TUBE - 0.25 @ 33 1/2 LB/FT; 12 1/2" BATTERY 13 1/2" STEEL TUBE
PILE NO. 26 LOCATION WEST ABUTMENT DATE DRIVEN JUNE 19, 1968

TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.	TOTAL LENGTH BEING DRIVEN	LENGTH IN GROUND	PENETRATION BLOWS/FT.
128	101	7		26			51			76	
	102	8		27			52			77	
	103	8		28			53			78	
	104	8		29			54			79	
	105	5		30			55			80	
	106	6		31			56			81	
	107	7		32			57			82	
	108	5		33			58			83	
	109	5		34			59			84	
	110	5		35			60			85	
	111	7		36			61			86	
	112	6		37			62			87	
	113	6		38			63			88	
	114	6		39			64			89	
	115	5		40			65			90	
	116	5		41			66			91	
	117	3		42			67			92	
	118	3		43			68			93	
	119	5		44			69			94	
	120	8		45			70			95	
128	121	13		46			71			96	
	122			47			72			97	
	123			48			73			98	
	124			49			74			99	
	125			50			75			100	

DETAILS FOR FINAL SIX INCHES OF PENETRATION	1	2	3	4	5	6
BLOWS PER INCH	3	4	4	6	7	10
MEASURED REBOUND IN INCHES	1					1 1/2
FINAL LENGTH OF PILE	FINAL CUT OFF ELEVATION 927.80					

REPORT TO: I SENT TO: - PRINCIPAL FOUNDATION ENGINEER
MATERIALS & RESEARCH DIVISION
DEPARTMENT OF HIGHWAYS
PARLIAMENT BUILDINGS
TORONTO, ONT. M10

SIGNED Carl Woodman
NAME (PRINT) CARL WOODMAN
DATE JUNE 19, 1968
ATTACH SKETCH OF PILE NUMBERING SYSTEM

MISCELLANEOUS DETAIL SHEET

(DO NOT USE FOR GRADING QUANTITIES, ETC.)
OR FOR SCRATCH PAD USE

SHEET NO. _____ OF _____ DATE _____

WORK PROJECT NO. _____ CONTRACT NO. 67-11 ITEM NO. _____LOCATION OF MATERIAL, ETC. DISTRESS RIVER BRIDGE

							UNIT	
PILE # <u>(19)</u>	1"	2"	3"	4"	5"	6"		
BLOWS	4	4	6	8	9	12	W.	ABUT.
REBOUND	1					1 1/2		
FINAL LENGTH <u>125.08</u>	FINAL CUT OFF ELEV. <u>927.80</u>							
PILE # <u>(20)</u>	1"	2"	3"	4"	5"	6"		
BLOWS	4	4	4	7	8	10	W.	ABUT.
REBOUND	1					1 1/2		
FINAL LENGTH <u>127.83</u>	FINAL CUT OFF ELEV. <u>927.80</u>							
PILE # <u>(21)</u>	1"	2"	3"	4"	5"	6"		
BLOWS	4	4	5	7	10	12	W.	ABUT.
REBOUND	1					1 1/4		
FINAL LENGTH <u>124.97</u>	FINAL CUT OFF ELEV. <u>927.80</u>							
PILE # <u>(22)</u>	1"	2"	3"	4"	5"	6"		
BLOWS	3	4	4	6	9	12	W.	ABUT.
REBOUND	1					1 1/2		
FINAL LENGTH <u>126.52</u>	FINAL CUT OFF ELEV. <u>927.80</u>							
PILE # <u>(23)</u>	1"	2"	3"	4"	5"	6"		
BLOWS	4	4	5	7	10	12	W.	ABUT.
REBOUND	1					1 1/2		
FINAL LENGTH <u>117.29</u>	FINAL CUT OFF ELEV. <u>927.80</u>							
PILE # <u>(24)</u>	1"	2"	3"	4"	5"	6"		
BLOWS	4	4	6	8	9	12	W.	ABUT.
REBOUND	1					1 1/2		
FINAL LENGTH <u>126.3</u>	FINAL CUT OFF ELEV. <u>927.80</u>							
PILE # <u>(25)</u>	1"	2"	3"	4"	5"	6"		
BLOWS	3	4	4	7	8	10	W.	ABUT.
REBOUND	1					1 1/4		
FINAL LENGTH <u>123.97</u>	FINAL CUT OFF ELEV. <u>927.80</u>							
PILE # <u>(26)</u>	1"	2"	3"	4"	5"	6"		
BLOWS	3	4	4	6	7	10	W.	ABUT.
REBOUND	1					1 1/2		
FINAL LENGTH <u>120.84</u>	FINAL CUT OFF ELEV. <u>927.80</u>							

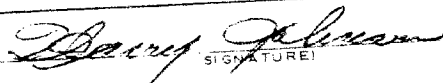
DETAILED BY _____

CHECKED BY _____

R. Kim

MAKE	MECHANICAL DESCRIPTION H.P., CU. YDS. ETC.	HOURS		LOCATION	REMARKS	DATE: JUNE 4/68	TEMP.: HIGH - 10
		WORKED	STAND-BY			CONTRACT NO: 67-111	WEATHER: SUNNY WARM 24
						WORKING DAY CHARGED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
WALKER BELT	LS 98 14 644	12		20725 MKG ETC	2 DRAGLINES ETC IN MKG AT STA 20725		
	1 644	12			1 2 3/4 YD LOADER 12 TRUCKS & 2 DOZERS		
ERCAT 927H	2 3/4 40	12		RAAFLAUB PIT	EARTH BORROW ON EARTH BORROW OPERATION FROM		
ICES INTER	TANDEM 44			"	RAAFLAUB PIT - EARTH PLACED AS MUCKS		
ER CAT	DC	12		21150	BACKFILL - D7 DOZER LEO ACCESS RD		
ER CAT	D7C	12		32100	RT OF STA 32100		
ER ADAMS	550-123hp	12		JOB	1 FOREMAN AND 2 LABOURS CUTTING		
UCK GMC	1/2 TON	12		"	BRUSH ETC. HAULING WITH 1/2 TON G.M.C.		
UCK DODGE	1/2 TON	12		"	OPERATION AT STA 44700 E		
DER LINCOLN	250 AMP	-		YARD	B. JOHNSTON ON JOB TO-DAY.		
DACTOR	15" PLATE	-		"			
LABOUR.						ADAMS 550-123 h.p GRADER MAINTENANCE ON HAUL ROADS - TWP ROAD AND HWY 520 EAST OF CONT 67-111 2 HRS ALLOWED TO-DAY	
	1 SUPT	12		JOB			
	1 CLERK	12		"			
	1 MECHANIC	12		"			
	1 FOREMAN	12		"			
	12 OPERATORS	216		PIT AND MKS			
	3 LABOUR	36		64700			
	1 FLAT	12		32100 RT			

INSPECTOR


 SIGNATURE

PERCENT	MAKE	MECHANICAL DESCRIPTION H.P., CU. YDS. ETC.	HOURS		LOCATION	REMARKS	DATE: <i>June 20/66</i>	TEMP.: <i>88</i>
			WORKED	STAND-BY			CONTRACT NO: <i>67-111</i>	WEATHER: <i>48</i>
							WORKING DAY CHARGED: <input type="checkbox"/> YES <input type="checkbox"/> NO	
		<i>FILGAR LABOUR</i>						
		<i>1 SPT 12</i>			<i>JOB</i>			
		<i>1 CLERK 12</i>						
		<i>2 FOREMAN 24</i>						
		<i>1 MECHANIC 1</i>						
		<i>2 DRILLERS 24</i>			<i>6700'</i>			
		<i>2 LABOURS 24</i>			<i>TIB</i>			
		<i>4 FLAGMEN 48</i>			<i>6700'</i>			
		<i>23 OPERATORS 276</i>			<i>TIB</i>			
		<i>FRANKI PILING</i>						
		<i>CRANE LIMA 44</i>			<i>25 T. 6</i>	<i>19400</i>		
		<i>DROP P. HAMMER</i>			<i>7500</i>	<i>6</i>		
		<i>WELDER</i>			<i>25 AMP</i>	<i>8</i>		
		<i>GRAB 2"</i>			<i>1</i>	<i>1</i>		
		<i>BRILEY CONST.</i>						
		<i>CRANE LIMA 44</i>			<i>25 T. 6</i>	<i>19400</i>		
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		<i>WELDER</i>			<i>25 AMP</i>	<i>8</i>		
		<i>GRAB 2"</i>			<i>1</i>	<i>1</i>		

ENT	MAKE	MECHANICAL DESCRIPTION H.P., CU. YDS. ETC.	HOURS		LOCATION	REMARKS
			WORKED	STAND BY		

Book #6

DATE: JUNE 17/68

TEMP.:

CONTRACT NO: 67-111

WEATHER:

41

WORKING DAY CHARGED: ☐ YES ☐ NO

FRANKI PILING

CONTRACTOR DRIVING PILES IN WEST
PIER DISTRESS R- COMPLETED THIS OPERA

AT 6⁰⁰ PM

PILE #18 DRIVE BELOW LENGTH- EXTRA SPLICE
AND WELD REQ.

PILE # LINGEROED TOTAL

14 124.6 ~~124.6~~ 130.0

15 124.0 129.58

16 125.0 130.67

17 120.0 131.83

18 129.0 134.96

657.04'

TOTAL LENGTH OF PILES DRIVEN IN

WEST PIER 657.04'

BALLOU CONST

1 JOHN DEERE BACKHCE COMB EXC FOR

EAST ABUT FOOTING. COMPLETES AT

3⁰⁰ PM

1 FOREMAN & 3 LABOURS PREPARING

FOOTING AND FOUNDATION FOR PIER CAP

18" PLATE COMPACTOR WORKING 2 HOURS

AROUND PILES IN EAST PIER

LABOUR

1 FOREMAN 10 18.00

3 LABOURS 30 "

1 2" PUMP WORKING AT EAST ABUT
FOOTING. WATER SEEPING IN VERY
SLOW.

1/1/68

INSPECTOR

Barry Johnson
SIGNATURE

ENT	MAKE	MECHANICAL DESCRIPTION H.P., CU. YDS. ETC.	HOURS		LOCATION	REMARKS																					
			WORKED	STAND-BY																							
CRANE E	4-1 LIMB	25 TON	8		18:00±	DRIVING PILES IN EAST PIER DISTRESS R. BRIDGE																					
DROP P. HAMMER		7500 LB	8		"																						
Welder DET. PETROW		4000 LB 25 AMP	8		"																						
<p align="center">LABOUR</p>						<p>CERTIFIED WELDER ON JOB TO-DAY</p> <p>PETERS WELDING 3488 FLEURY AVE MISSISSAUGA ONT</p> <p>CLASSIF. E-7018 ROD</p> <p>ELECTRODE APR 23/68</p>																					
	1 SUPT		8		18:00±	COMPLETED DRIVING PILES ON EAST PIER AT 5:48 PM TO-DAY.																					
	1 OPERATOR		8		"																						
	1 WELDER		8		"																						
	1 LABOUR		8		"	<p>PILE SKETCH ON EAST PIER</p> <p align="center"> </p>																					
						<table border="1"> <thead> <tr> <th>PILE"</th> <th>LENGTH DRIVEN</th> <th>CUT OFF ELEU</th> </tr> </thead> <tbody> <tr> <td>9</td> <td>130.83</td> <td>934.68</td> </tr> <tr> <td>10</td> <td>129.75</td> <td>934.68</td> </tr> <tr> <td>11</td> <td>131.16</td> <td>934.68</td> </tr> <tr> <td>12</td> <td>132.58</td> <td>934.68</td> </tr> <tr> <td>13</td> <td>131.42</td> <td>934.68</td> </tr> <tr> <td colspan="2">655.74'</td> <td></td> </tr> </tbody> </table>	PILE"	LENGTH DRIVEN	CUT OFF ELEU	9	130.83	934.68	10	129.75	934.68	11	131.16	934.68	12	132.58	934.68	13	131.42	934.68	655.74'		
PILE"	LENGTH DRIVEN	CUT OFF ELEU																									
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12	132.58	934.68																									
13	131.42	934.68																									
655.74'																											

INSPECTOR

(SIGNATURE)

MEMORANDUM

69-F-21

TO: Mr. A.G. Stermac,
Principal Foundation Engineer,
Materials and Testing Division,
Downsview.

FROM: G.T. Stevens,
Engineering Office Supvr.,
#11, Huntsville.

ATTENTION: Mr. M. DeVata.

DATE: April 10, 1969.

OUR FILE REF.

IN REPLY TO

SUBJECT:

As per your telephone call of yesterday, please find enclosed copies of our diaries and pile driving records which show the driving equipment used and the depths to which the piles were driven.

On June 4, 1968 a diary page shows a typical recording of muskeg excavation and the placing of earth borrow from the Raaflaub pit into the excavation as backfill.

Also attached are three copies of field compaction reports in the vicinity of the structure.

Type of material removed was noted as muskeg - see attached soils profile which was reasonably accurate.

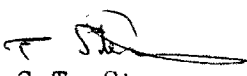
The soils description and recommendation was "muck over deep soft to medium firm organic silt. Recommendation - "Excavate muck and organic silt to 10' depth and standard width DD-406. Use sandy type earth borrow."

To our knowledge this was carried out. Also recommended that "consider lower grade".

This was not done, in fact the grade was raised approximately $1\frac{1}{2}$ ' to provide an 8' clearance under the structure, as requested by the Department of Transport to comply with The Navigable Waters Protection Act.

Hoping this information is satisfactory.

GTS/bjm
Encls.


G.T. Stevens,
Engineering Office Supvr.,
for
W.S. Aitken,
District Engineer.

FIELD COMPACTION REPORT

MEMO TO: Mr. W. S. ALTREY DIST. # 11 ATTENTION: Mr. Z. KOTONA DATE JULY 8/68
DISTRICT ENGINEER

HWY. NO. 520 RE: CONTRACT 67-111 LOCATION DISTRESS PLACE

FIELD TESTS AND OBSERVATIONS MADE TODAY SHOW AS FOLLOWS

[illegible]

(a) TYPE OF MATERIAL EARTH SOURCE RAAFELAU

(b) COMPACTION REQUIREMENT ON THIS CONTRACT 95 %

(c) LABORATORY DATA: OPTIMUM MOISTURE _____

MAXIMUM DRY DENSITY _____

MAXIMUM WET DENSITY_____

(d) APPROXIMATE RATE OF HAUL 90 cu. yd. per hour compacted

(e) CONDITION OF MATERIAL : AT OR NEAR OPTIMUM ☒, BELOW ☐, ABOVE ☐

(f) COMPACTION UNITS USED: SHEEPSFOOT WOBBLEWHEEL OTHERS

LARGE ☐

LARGE ☐

VIBRATOR 30" X 54"

SMALL ☐SMALL ☐

(g) FILL CONSTRUCTION OPERATION : GOOD ☒ FAIR ☐ BAD ☐

(h) RECOMMENDED MEASURES FOR COMPACTION IMPROVEMENT

Signed

Carl L. Rodman

FIELD COMPACTION REPORT

MEMO TO: Mr. W.S. HITTEN DIST. #11 ATTENTION: Mr. Z. KATONA DATE JULY 9/68
DISTRICT ENGINEER
HWY. NO. 520 RE: CONTRACT 67-111 LOCATION DISTRESS RIVER

FIELD TESTS AND OBSERVATIONS MADE TODAY SHOW AS FOLLOWS

[illegible]

(a) TYPE OF MATERIAL EARTH SOURCE RAAFLAUB PIT

(b) COMPACTION REQUIREMENT ON THIS CONTRACT 95 %.

(c) LABORATORY DATA: OPTIMUM MOISTURE _____

MAXIMUM DRY DENSITY _____

MAXIMUM WET DENSITY_____

(d) APPROXIMATE RATE OF HAUL 80 cu. yd. per hour compacted

(e) CONDITION OF MATERIAL : AT OR NEAR OPTIMUM ☐, BELOW ☒, ABOVE ☐

(f) COMPACTION UNITS USED: SHEEPSFOOT WOBBLEWHEEL OTHERS

LARGE ☐

LARGE ☐

30x54" ESSEX VIBRATOR

SMALL ☐SMALL ☐

(g) FILL CONSTRUCTION OPERATION: GOOD ☒ FAIR ☐ BAD ☐

(h) RECOMMENDED MEASURES FOR COMPACTION IMPROVEMENT

Signed Carl Woodman

FIELD COMPACTION REPORT

MEMO TO: Mr. W. S. AITKEN DIST. 11 ATTENTION: Mr. Z. KOTONA DATE JULY 25/68
DISTRICT ENGINEER
 HWY. NO. 520 RE: CONTRACT 67-111 LOCATION DISTRESS RIVER 13.5 MI. W HWY 11

[illegible][illegible]

(a) TYPE OF MATERIAL EARTH SOURCE RAAFELAUB

(b) COMPACTION REQUIREMENT ON THIS CONTRACT 95 %

(c) LABORATORY DATA : OPTIMUM MOISTURE _____

MAXIMUM DRY DENSITY _____

MAXIMUM WET DENSITY _____

(d) APPROXIMATE RATE OF HAUL 80 cu. yd. per hour compacted ☒ ABOVE ☐ BELOW

(d) APPROXIMATE RATE OF HAUL 80 CU. YD. PER HOUR
(e) CONDITION OF MATERIAL: AT OR NEAR OPTIMUM ☒, BELOW ☐, ABOVE ☐

(e) CONDITION OF MATERIAL : AT OR NEAR SATURATED

(f) COMPACTION UNITS USED : SHEEPSFOOT WOBBLEWHEEL OTHERS
LARGE VIBRATOR

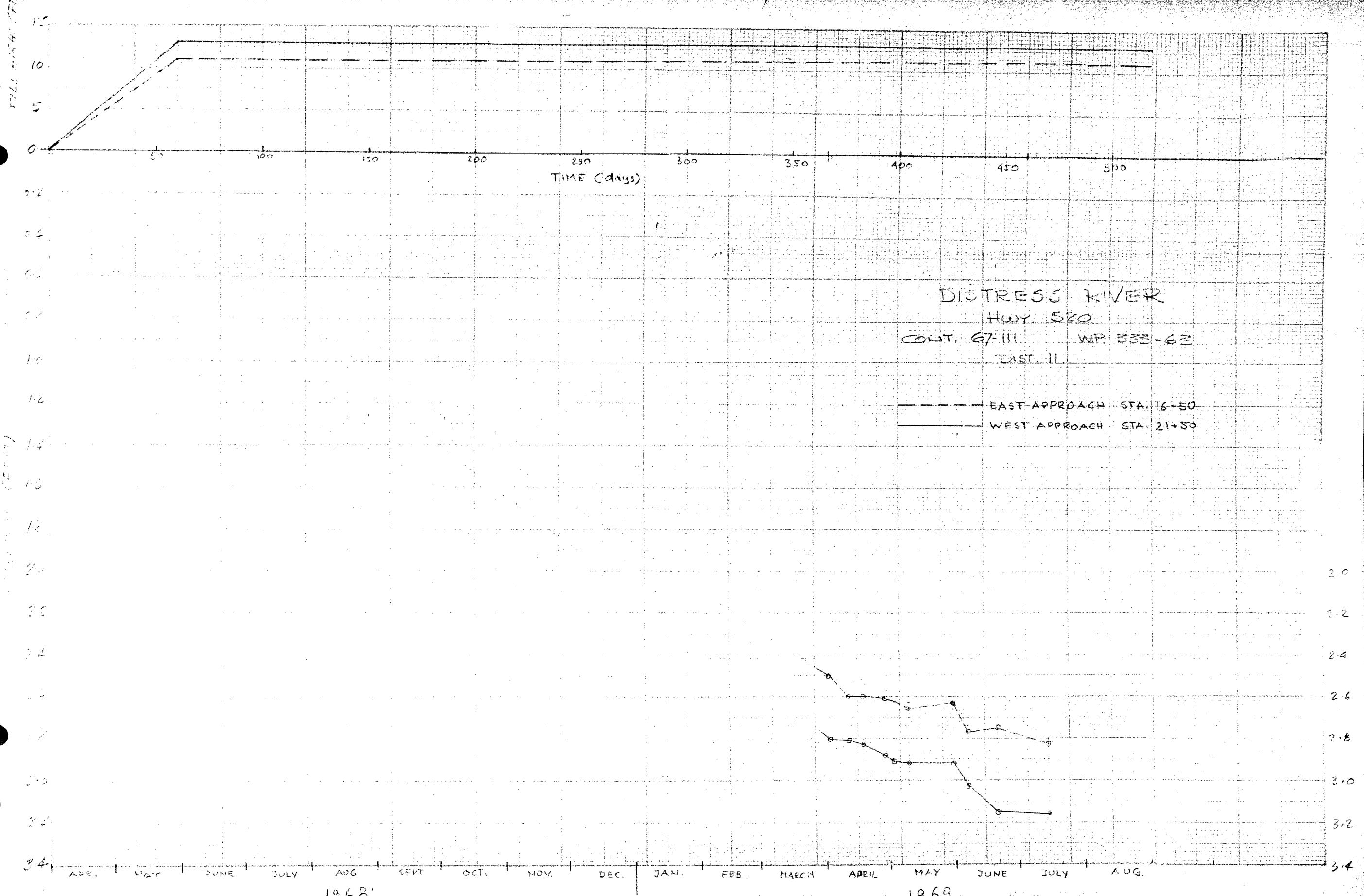
LARGE ☐ LARGE ☐
SMALL ☐ SMALL ☐

VIBRATOR

(g) FILL CONSTRUCTION OPERATION: GOOD ☒ FAIR ☐ BAD ☐

(h) RECOMMENDED MEASURES FOR COMPACTION IMPROVEMENT

Signed Carl Woodman



John DeWitt
3671

Contract 66-11

DIST. 11.

CONT. 67-11

WP. 333-63

Hwy 520

DISTRESS RIVER.

950

EAST

GRADE AS PER BRIDGE DWG. D-5917-1

940

GRADE AS APRIL 2, 1969

930

920

SETTLEMENT AS OF APRIL 2, 1969

April 2, 1969

WILKES
RIVER

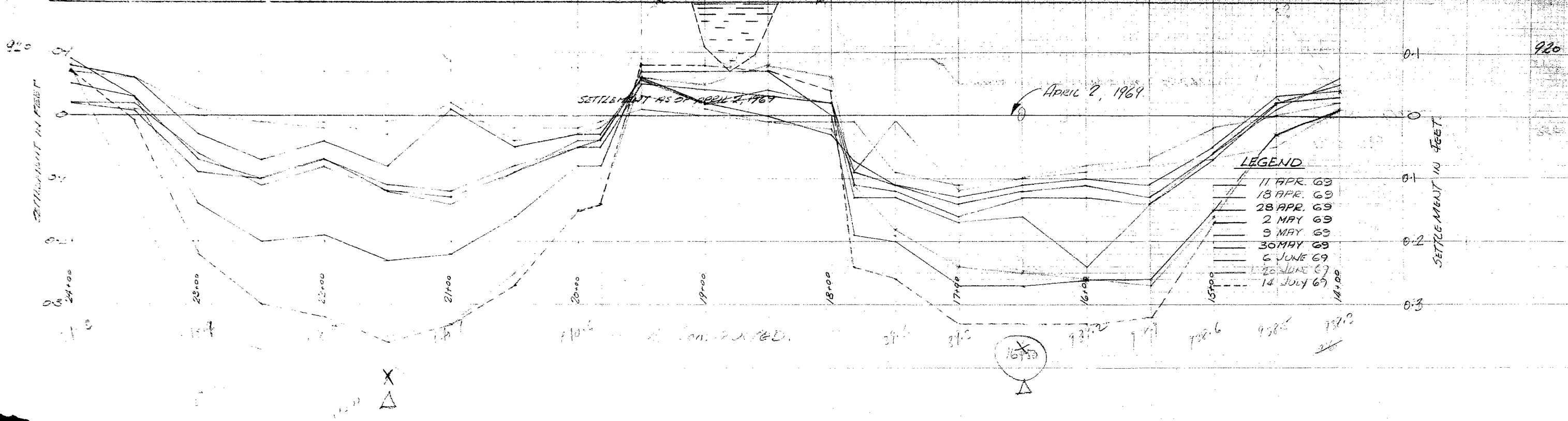
950

940

930

920

17357



008

V

HUNT DOWN 6 SEPT 9/69 3.25P VR

W S AITKEN DIST ENGR

ATTN R B ALLISON MTCF ENGR

CC E J ORR MICE ENGR

CC B R DAVIS BRIDGE ENGR

CC W D BIRCH BRIDGE MICE ENGR

69-F-21

RE DISTRESS RIVER BRIDGE 13.5 MILES WEST OF HWY 11 HWY 520 WP333-63
REGARDING THE ABOVE BRIDGE AND APPROCHES WE WOULD LIKE TO PROVIDE
YOU WITH THE FOLLOWING INFORMATION ACCORDING TO THE DESIGN GRADES
OF THE SURVEY CARRIED OUT RECENTLY THE MAXIMUM SETTLEMENTS OF THE EAST
AND WEST APPROACH FILLS ARE APPROXIMATELY 2.8 AND 3.2 FT RESPECTIVELY
MONITORING OF FILL~~ED~~ SETTLEMENTS WAS INITIATED AND STARTED
BEGINING OF APRIL 1969 IN THE 3 AND 1/3 MONTHS PERIOD (TILL MID JULY)
THE FILLS HAVE BEEN SETTLING AT A RATE OF MORE THAN A FOOT PER YEAR
AND THERE ARE NO SIGNS OF ANY APPRECIABLE DECREASE, IF FILLS ARE BROUGHT
UP TO ORIGINAL GRADE WHICH WILL REQUIRE PLACEMENT OF ABOUT 3 FT OF
MATERIAL AND SOME WIDENING OF THE APPROACH EMBANKMENTS
ADDITIONAL SETTLEMENTS HAVE TO BE EXPECTED THE DDESCRIBED GRADE RASING
WILL REPRESENT A CERTAIN AGGRAVATION OF THE PRESENT CONDITION AND
NO DOUBT MORE MAINTENANCE WILL BE REQUIRED IN THE FUTURE. MONITORING OF
FILL~~ED~~ SETTLEMENTS IS BEING CARRIED OUT ON 6 POINTS ON THE PAVEMENT. IT
IS SUGGESTED THAT BEFORE ANY CONSTRUCTION STARTS ANOTHER SET OF READINGS
SHOULD BE TAKEN, UPON COMPLETION OF CONSTRUCTION NEW FIXED POINTS SHOULD
BE ESTABLISHED ON THE PAVEMENT AT THE SAME CHAINAGES OF THE ORIGINAL
POINTS, A NEW SET OF READINGS SHOULD THEN BE TAKEN, THE DIFFERENCE BETWEEN
THE 2 WILL REPRESENT THE AMOUNT OF MATERIAL PLACED AT THESE PARTICULAR
LOCATIONS, FURTHER SETTLEMENT READINGS SHOULD BE CONTINUED ON A BI-WEEKLY
BASIS AT THE START AND ON A MONTHLY BASIS THEREAFTER, OUR OBSERVATIONS
OF THE BRIDGE INDICATE THAT THERE ARE NO MOVEMENTS WHICH SOULD CAUSE
ANY CONCERN. IT IS STRONGLY SUGGESTED THOUGH THAT THE BRIDGE BE
MONITORED DURING PLACING OF ADDITIONAL FILL IN THE IMMEDIATE PROXIMITY
OF THE BRIDGE ABUTMENTS, THE ABOVE IS BASICALLY WHAT WE HAVE DISCUSSED
OVER THE TELEPHONE THIS AFTERNOON, SHOULD YOU HAVE SOME QUERRIES PLEASE
FEEL FREE TO CONTACT THIS OFFICE

A G STERMAC PNOPL FOUNDATION ENGR

AW



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