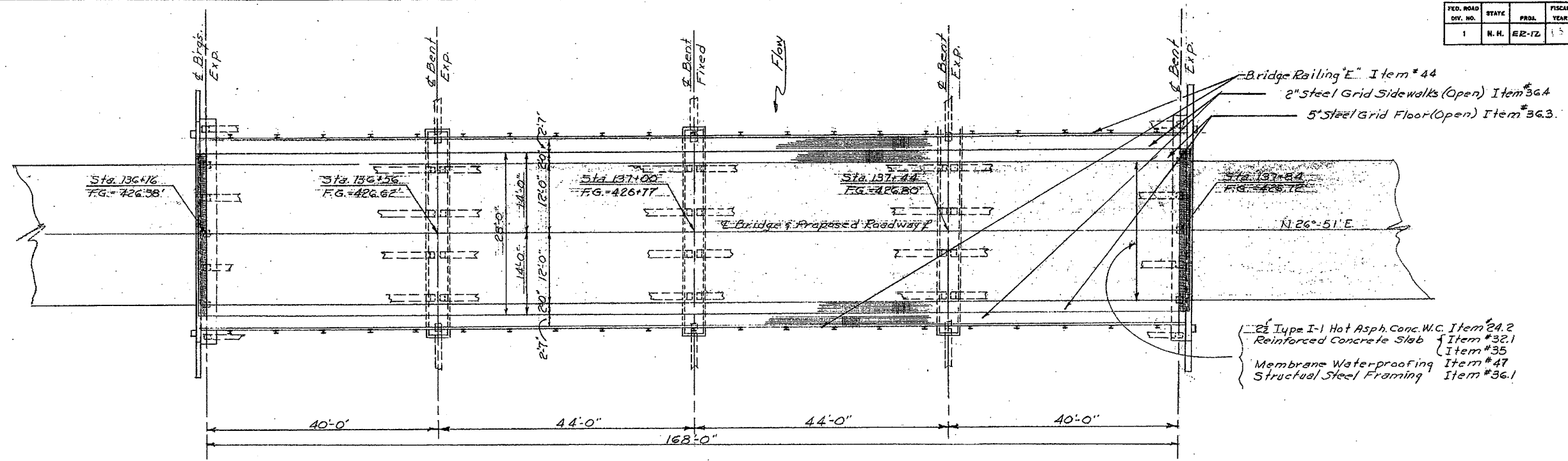
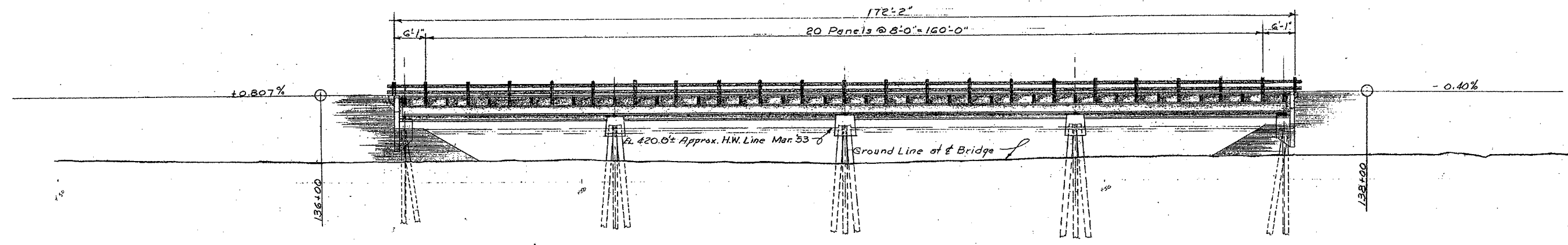


FED. ROAD DIV. NO.	STATE	PRJL.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.H.	ER-12	55	18	66



PLAN
Scale 1"=10'



DOWNSTREAM ELEVATION
Scale 1"=10'

Item	Description	Quantity
24.2	Type H Hot Asphaltic Conc. Wear. Coc.	6.4 Tons
32.1	Class A Concrete (air entrained)	202 C.Y.
35.	Reinforcing Steel	27,100 Lbs.
36.1	Structural Steel	190,000 Lbs.
36.2	Bridge Shoes	1/2 Unit
36.3	5" Steel Grid Floor (Open)	672 SF.
36.4	2" Steel Grid Sidewalk (Open)	682 SF.
43.3	Steel Bearing Piles	209,000 Lbs.
43.4	Pile Loading Test	2 Tests
43.5	Pile Driving Equipment	1/2 Unit
47	Bridge Railing I	348 LF.
47	Membrane Waterproofing	448 SF.

GENERAL NOTES

Design Loading: H20-S16-44
 Specifications A.A.S.H.O 1953 and N.H.D.P.W. 1954
 All Concrete shall be Class A (air entrained)
 For Surface Finish of Concrete, see Special Provisions
 Order of placing Concrete in superstructure shall meet the approval of the Bridge Engineer.
 Main reinforcing steel shall be 2" Clear from surface of Concrete unless otherwise noted.
 Steel Bearing Piles to have special primer, KOPPER'S BITUMASTIC MILL UNDERCOAT or equivalent and two coats of KOPPER'S BITUMASTIC No. 50 or equivalent as called for on plans and Special Provisions.
 Materials and application of above primer and protective coatings will not be paid for directly but will be subsidiary to Item 43.3, Steel Bearing Piles.
 For further information, see sheets titled "Addenda to Specifications" attached to Proposal.

STATE OF NEW HAMPSHIRE
 DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
 BRIDGE DIVISION

TOWN: OSSIPEE-TAMWORTH BRIDGE NO. 137/299
 FEDERAL PROJECT: ER-12 STATE PROJECT: R2738
 ROUTE NO.: N.H. #16 OVER RELIEF STRUCTURE
 LOCATION: APPROX. 2.0 MI. S. OSSIPEE-TAMWORTH T.L.

BY	DATE	BY	DATE	BRIDGE SHEET NO.
DESIGNED		CHECKED		1 OF 12
DRAWN: F.Y. 2/54		CHECKED: J.T.H. 7-54		
TRACED		CHECKED		FILE NUMBER
QUANTITIES: F.Y. 7/54		CHECKED: J.T.H. 7-54		3-4-3-5

PROJ. NO.	SHEET NO.	TOTAL SHEETS
ER-12	18	159

18
203

#2

#4

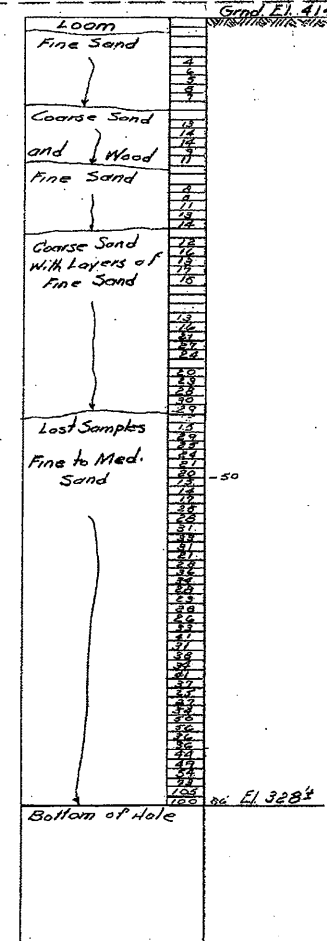
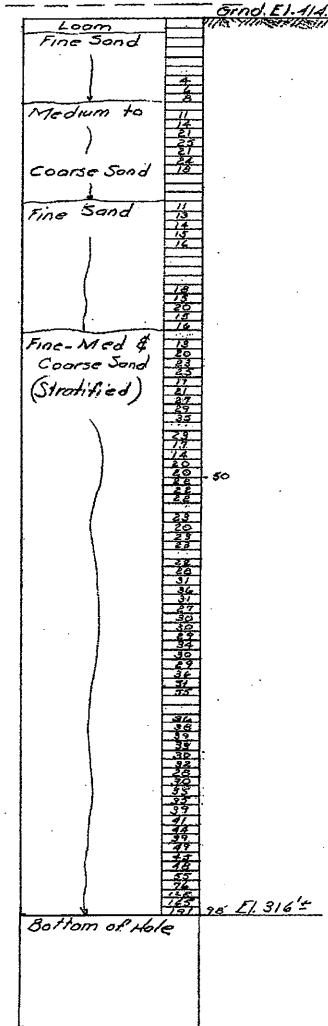
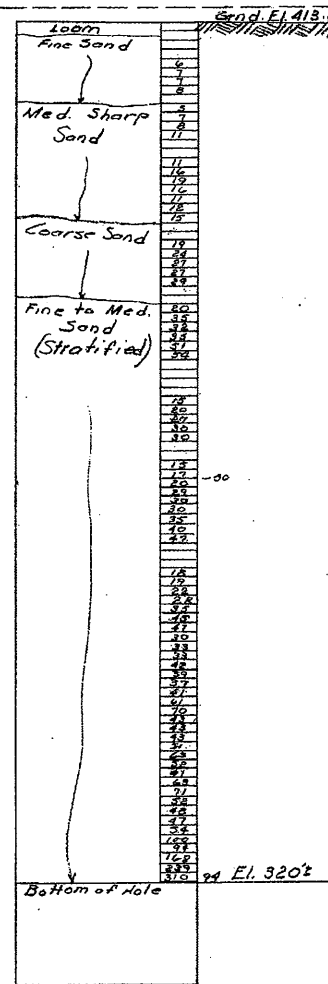
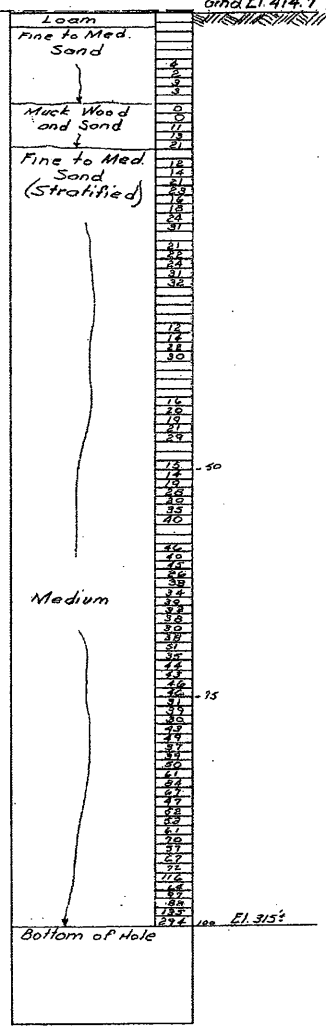
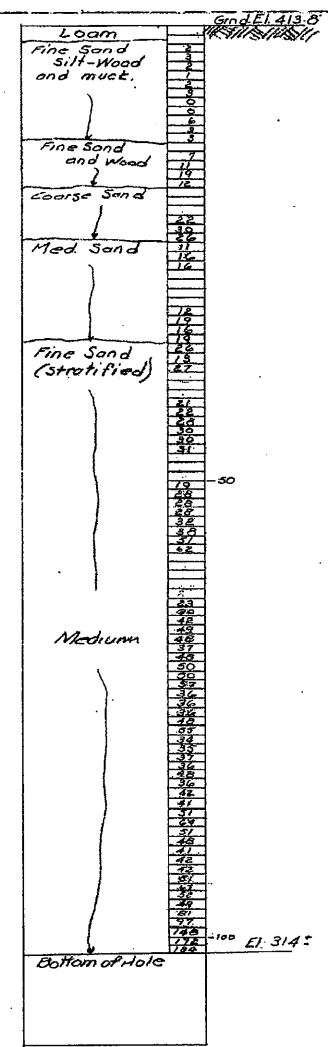
#6

#8

#10

DATUM - 415.0'

DATUM - 415.0'



NOTE:
 - Borings indicated thus were made by the N.H.D.P.W.&Hwy's in August 1954. Figures in right hand column indicate the number of blows required to drive a 1 1/2" pipe one foot using 135# weight falling two feet.
 - Borings are for design and show conditions of boring points only and do not necessarily indicate material to be encountered during construction. Samples taken during the boring operation may be examined at the office of the Bridge Engineer, Concord, N.H.

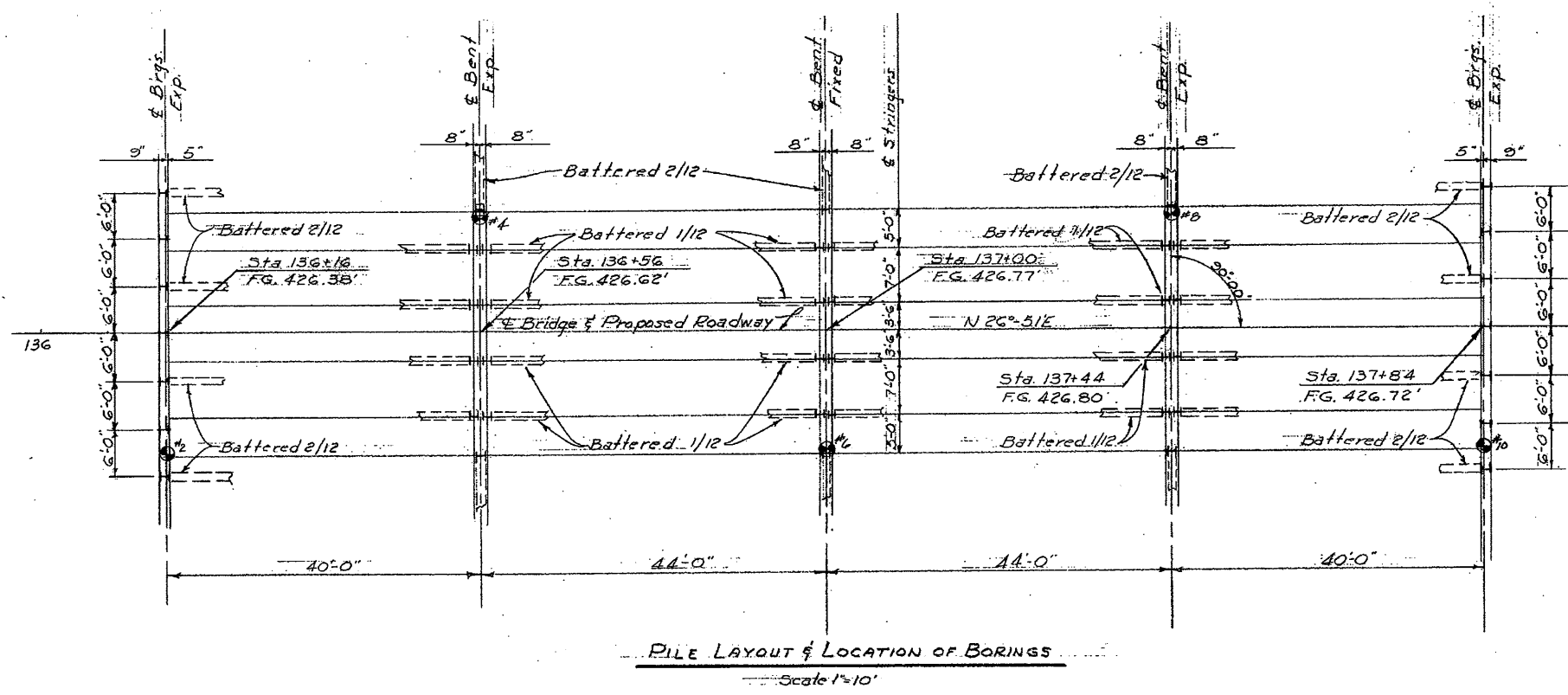
STATE OF NEW HAMPSHIRE
 DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
 BRIDGE DIVISION

TOWN: OSSISPEE - TAMMORTH BRIDGE NO. 137-299A
 FEDERAL PROJECT: ER-12 STATE PROJECT: P-2788
 ROUTE NO. N.H.#16 OVER RELIEF STRUCTURE
 LOCATION: APPROX. 2.0 MI. S. OF OSSISPEE TAMMORTH I.L.

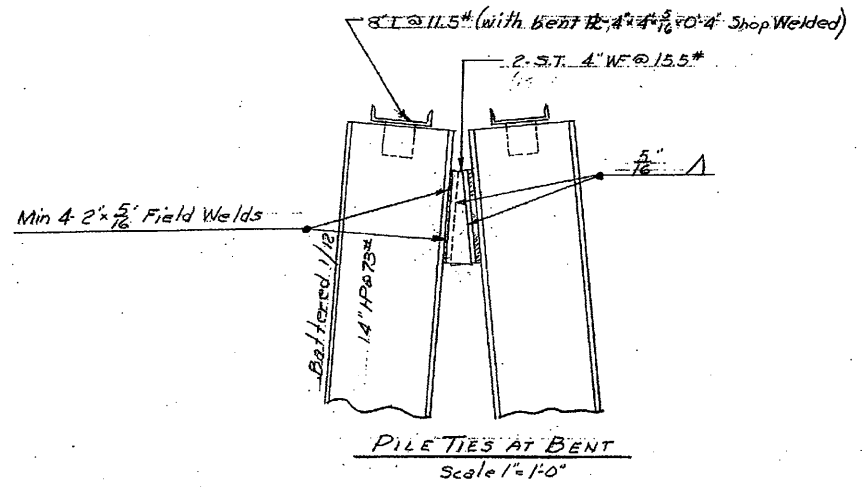
DESIGNED		BY DATE		CHECKED		BY DATE		BRIDGE SHEET NO.	
A	Bridge Number	J.T.H.	9-54	F.Y.	9-54			2	OF 12
Δ	DESCRIPTION								FILE NUMBER
REVISIONS									3-4-3-5
		PROJ. NO.		SHEET NO.		TOTAL SHEETS			
		ER-12		19		159			

19
203

FED. ROAD DIV. NO.	STATE	PROJ.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.H.	ER-12		20	167



NOTE:
 Two Pile Loading Tests will be required
 Design Load per pile is 28 tons.
 All piles to be 14" H @ 75#
 Length of piles for estimating purposes is 65'-0". Actual lengths to be determined from tests prior to delivery.
 Hammer to be used shall be McKiernan-Terry #10-B3 or equivalent.



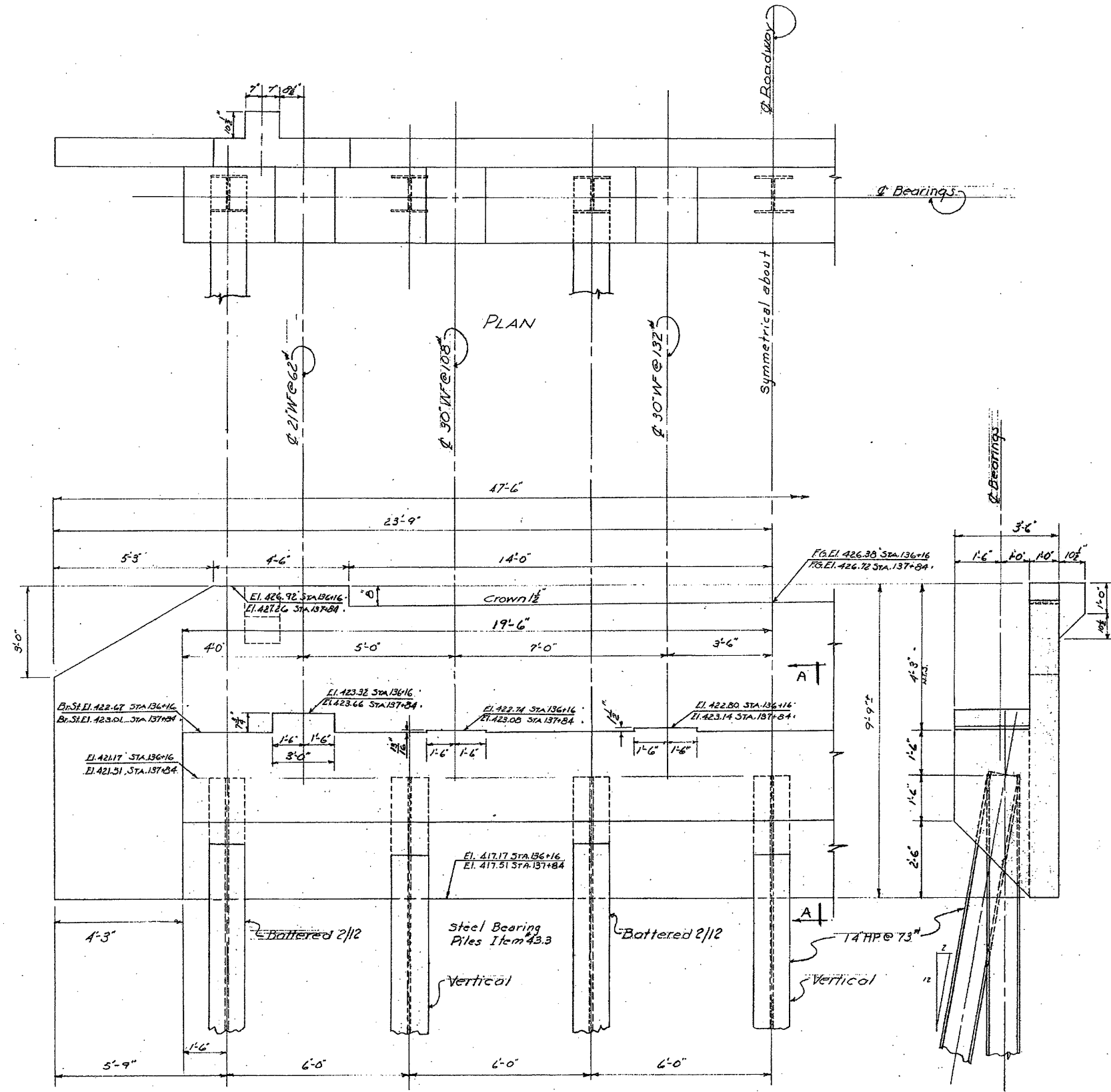
20
203

STATE OF NEW HAMPSHIRE
 DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
 BRIDGE DIVISION

TOWN OSSISPEE-TAMWORTH BRIDGE NO. 137/203
 FEDERAL PROJECT ER-12 STATE PROJECT P-2738
 ROUTE NO. N.H. #16 OVER RELIEF STRUCTURE
 LOCATION Approx. 2.0 Mi. So. OSSISPEE-TAMWORTH, N.H.

LAYOUT OF STEEL BEARING PILES			
DESIGNED BY	DATE	CHECKED BY	DATE
BY	DATE	BY	DATE
DESIGNED <u>F.Y.</u>	<u>8-58</u>	CHECKED <u>J.T.H.</u>	<u>7-58</u>
DRAWN		CHECKED	
TRACED		CHECKED	
QUANTITIES	<u>F.G.S.</u>	<u>8-58</u>	<u>F.Y.</u>
REVISIONS			
Δ	DESCRIPTION	BY	DATE

BRIDGE SHEET NO.	3 OF 12
FILE NUMBER	9-4-3-5
PROJ. NO.	ER-12
SHEET NO.	20
TOTAL SHEETS	159



ELEVATION
N.T.S.

SECTION A-A

21
203

STATE OF NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BRIDGE DIVISION

TOWN OSSISPEE-TAMWORTH BRIDGE NO. 137-299

FEDERAL PROJECT ER-12 STATE PROJECT P2738

ROUTE NO. N.H. #16 OVER RELIEF STRUCTURE

LOCATION APPROX. 2.0 MI. S. OF OSSISPEE-TAMWORTH, N.H.

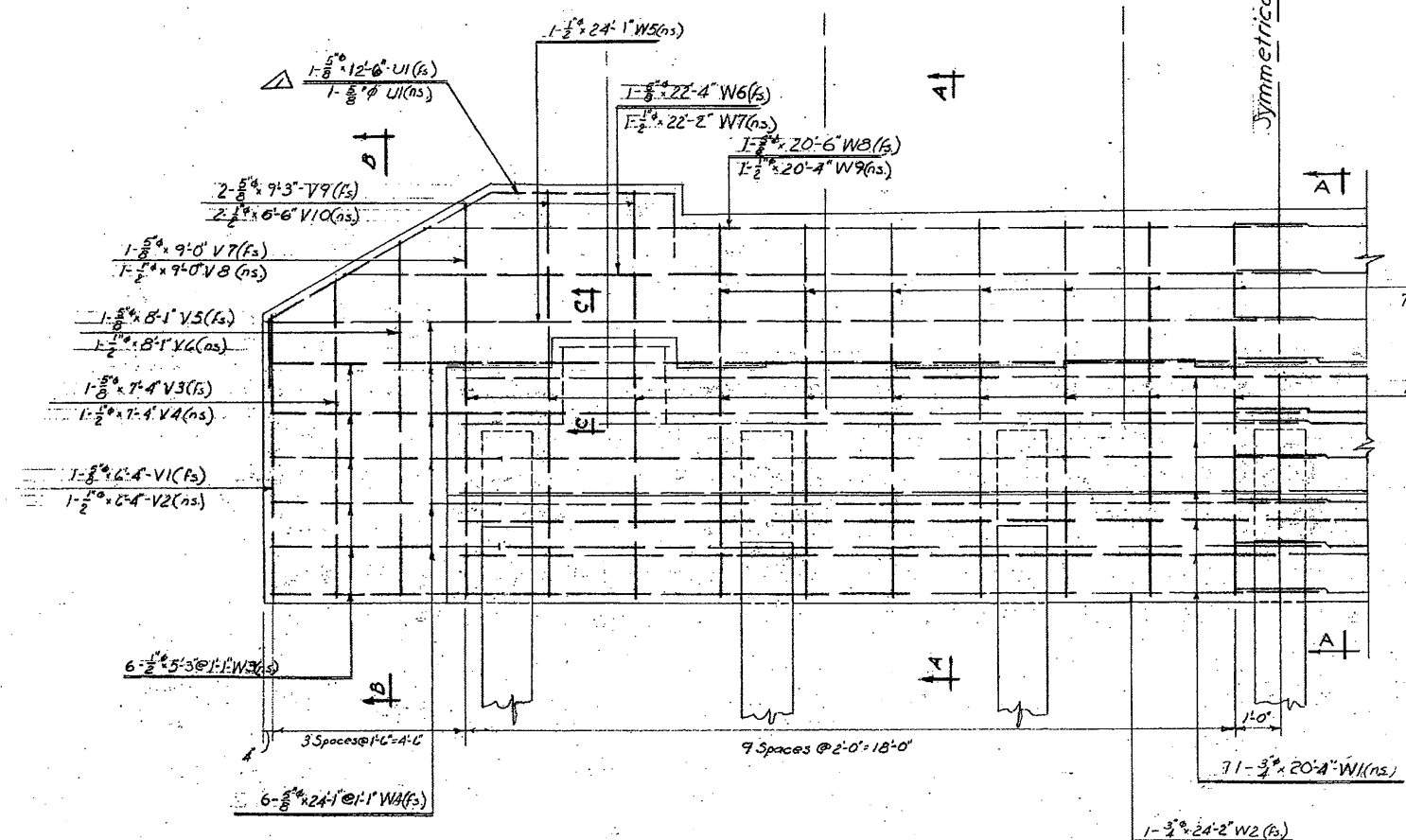
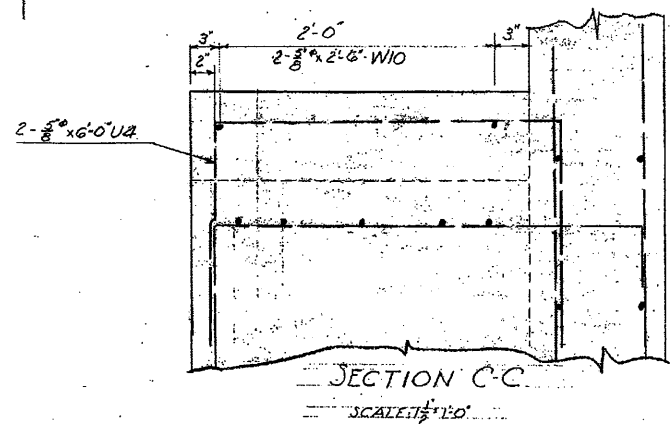
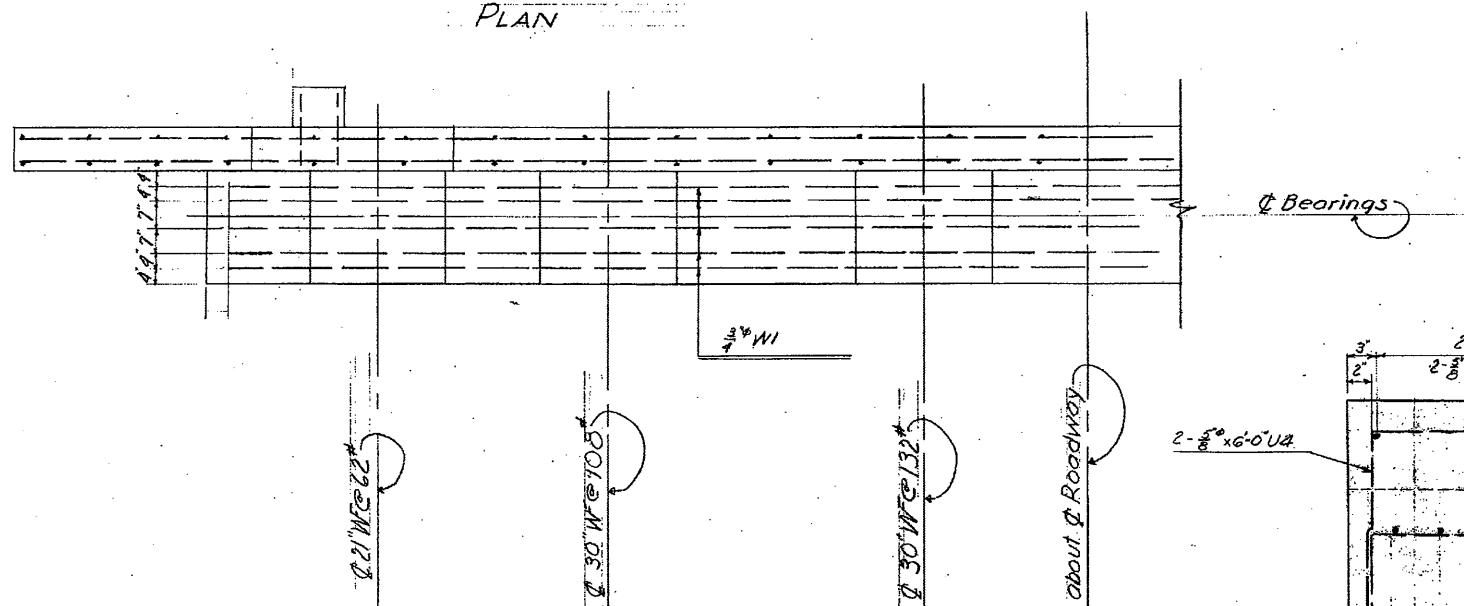
ABUTMENT DETAILS					
BY	DATE	BY	DATE	BRIDGE SHEET NO.	
DESIGNED <u>HEL</u>	<u>2-54</u>	CHECKED <u>EY</u>	<u>9-54</u>	<u>4</u>	<u>OF 12</u>
DRAWN <u>JTH</u>	<u>2-54</u>	CHECKED <u>JTH</u>	<u>2-54</u>	FILE NUMBER	<u>3-4-3-5</u>
QUANTITIES <u>EGS</u>	<u>2-54</u>	CHECKED <u>JTH</u>	<u>2-54</u>		

REVISIONS	DESCRIPTION	BY	DATE

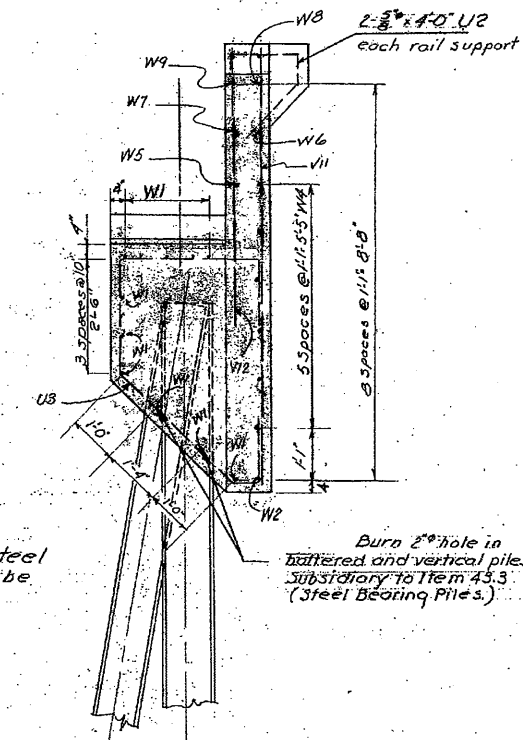
PROJ. NO.	SHEET NO.	TOTAL SHEETS
<u>ER-12</u>	<u>21</u>	<u>159</u>

SHEET SCALE: 1/4" = 1'-0" (except note)

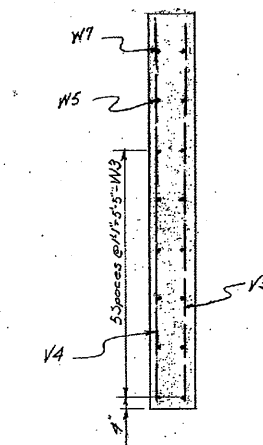
PLAN



HALF ELEVATION



SECTION A-A



SECTION B-B

NOTE: Steel shown on this drawing for one half of abutment only. All steel in the abutments shall be not less than 2' clear.

SHEET SCALE: 1/2" = 1'-0" (except as noted)

STATE OF NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BRIDGE DIVISION

TOWN: OSSIPEE-TAMWORTH BRIDGE NO: 137/299
FEDERAL PROJECT: ER-12 STATE PROJECT: P2738
ROUTE NO.: NH #16 OVER: RELIEF STRUCTURE
LOCATION: APPROX. 2.0 MI. So. OSSIPEE-TAMWORTH, N.H.

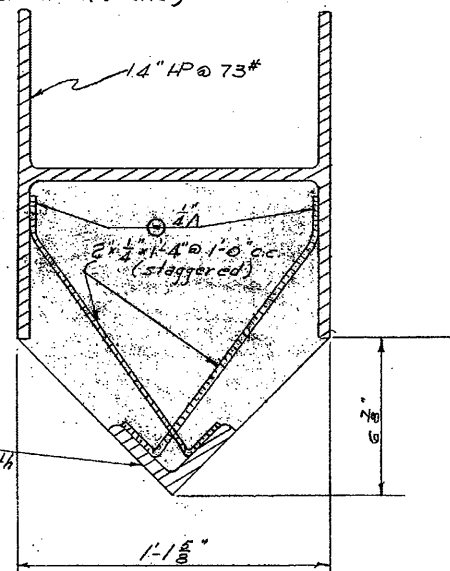
ABUTMENT REINFORCING DETAILS			
BY	DATE	BY	DATE
DESIGNED J.T.H.	8-54	CHECKED	
DRAWN J.T.H.	8-54	CHECKED E.Y.	9-54
TRACED		CHECKED	
QUANTITIES E.Y.	8-54	CHECKED J.T.H.	8-54

BRIDGE SHEET NO.	5 OF 12
FILE NUMBER	3-4-3-5
PROJ. NO.	ER-12
SHEET NO.	22
TOTAL SHEETS	159

22
208

FED. ROAD DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.H.	FR 12		23	166

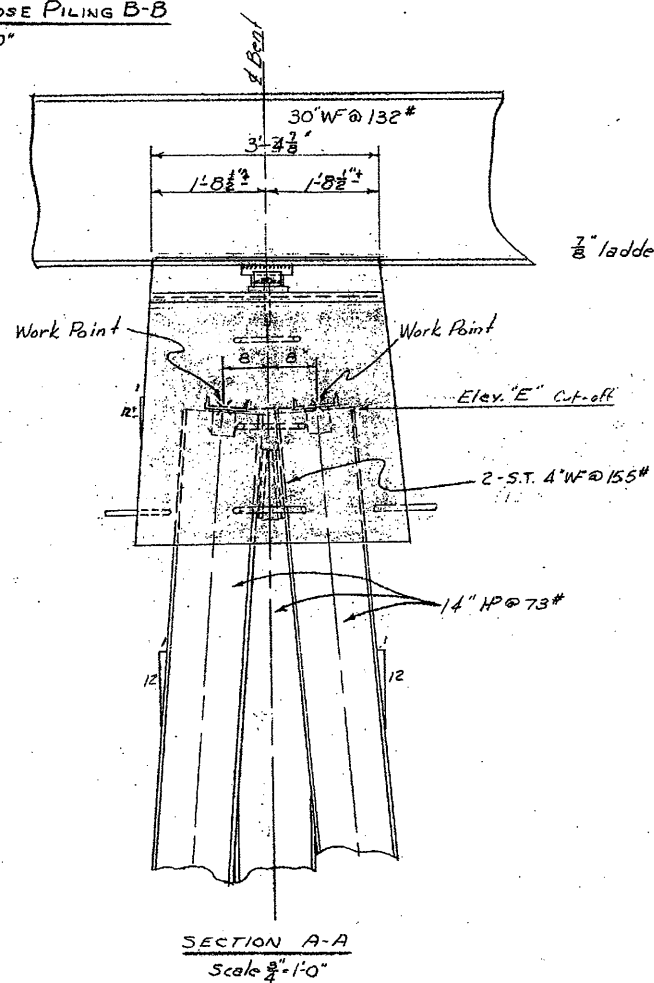
NOTE: Nose Piling to be used on upstream side only. See table for length of Station. Nose angle and anchor straps to be paid for as Item #61 (Str. Steel)



L 4" x 4" x 8" sec table for length of station

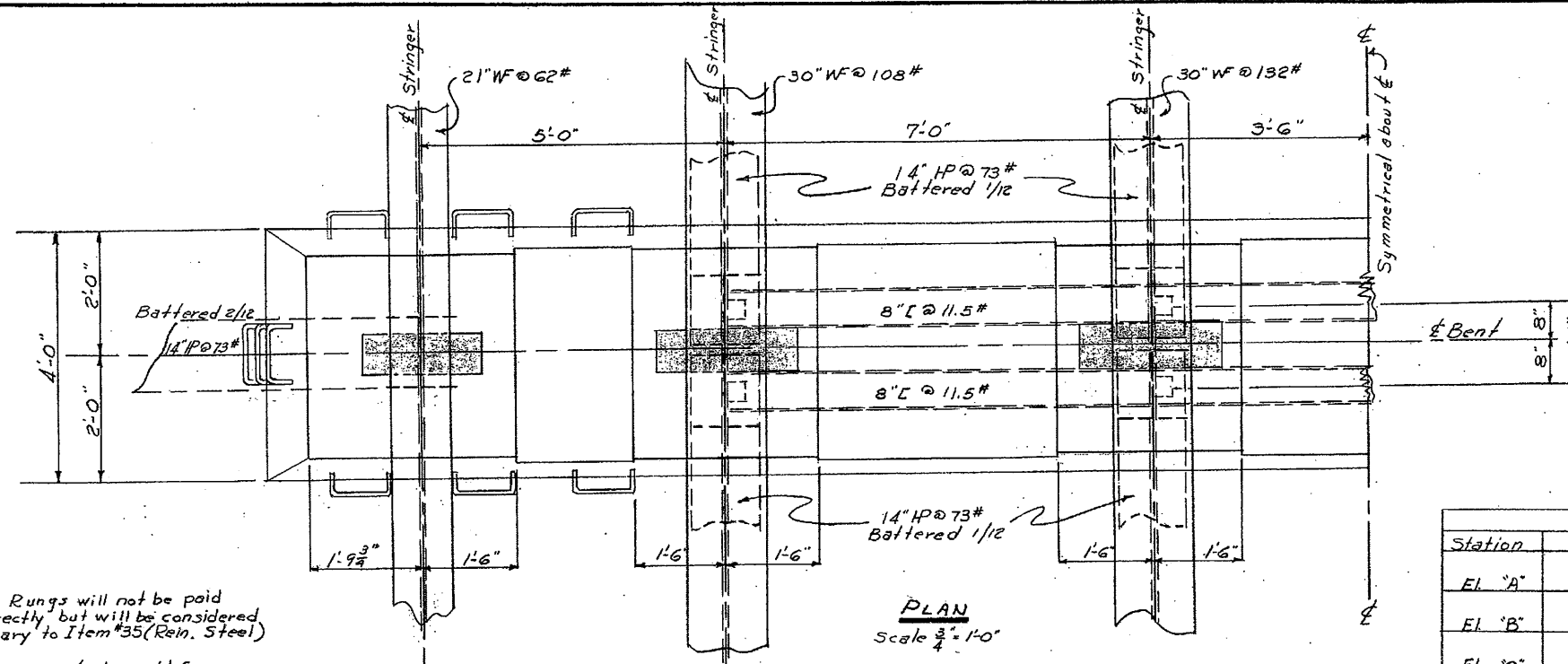
STATION	APPROX. GROUND LINE EL.	LENGTH
136+56	414.0'	5.5±
137+00	414.0'	5.5±
137+44	415.0'	4.5±

NORMAL SECTION OF NOSE PILING B-B
Scale 3" = 1'-0"

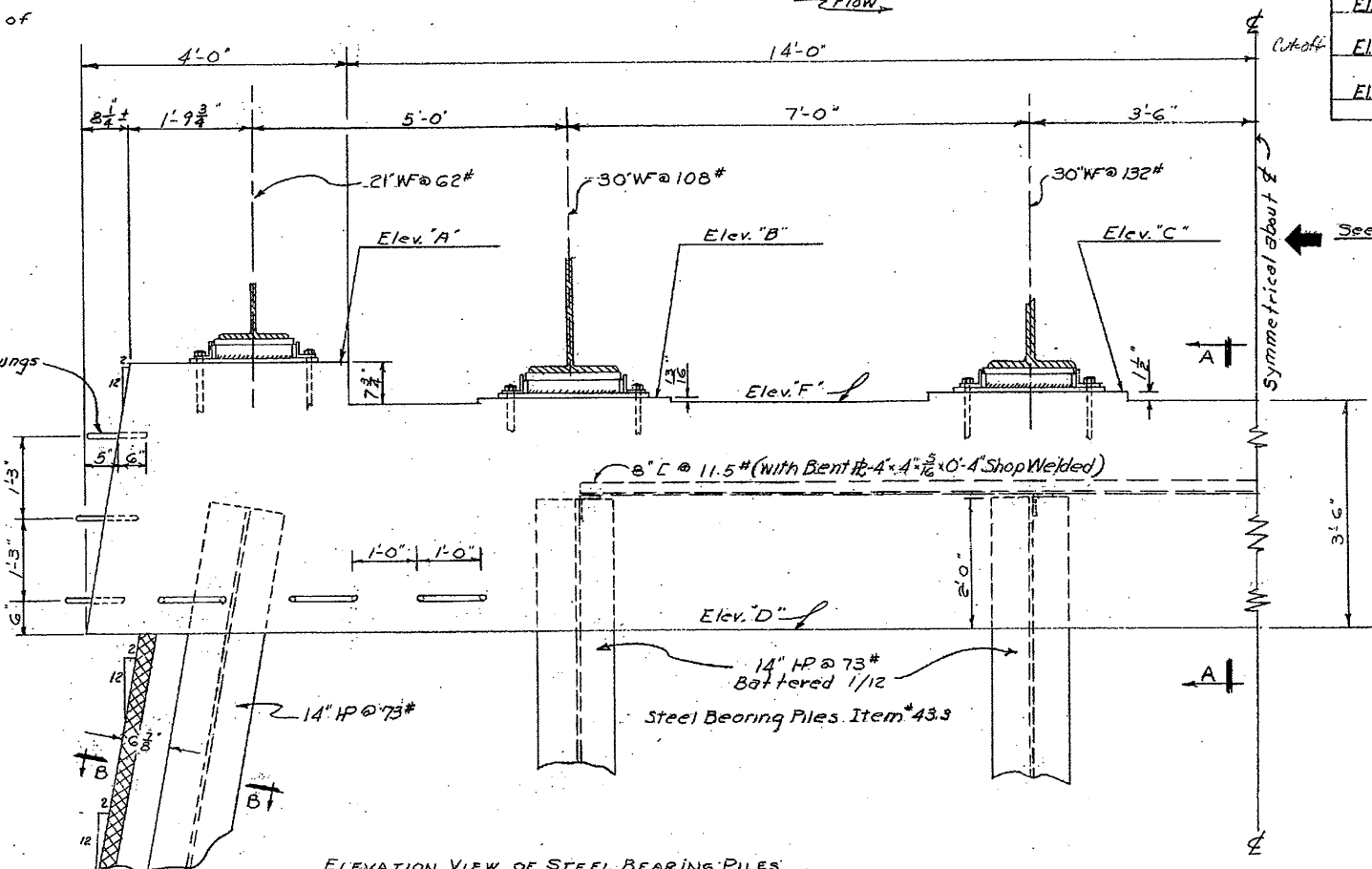


SECTION A-A
Scale 3/4" = 1'-0"

NOTE: Ladder Rungs will not be paid for directly but will be considered subsidiary to Item #35 (Rein. Steel).
Pile spacers to be paid for as structural steel Item #36.1. See sheet #8 for details of fixed shoes at sta. 137+00



PLAN
Scale 3/4" = 1'-0"



ELEVATION VIEW OF STEEL BEARING PILES AND CONCRETE Bent CAP
Scale 3/4" = 1'-0"

BENT ELEVATIONS			
Station	136+56	137+00	137+44
EL 'A'	423.56'	423.71'	423.74'
EL 'B'	422.28'	423.13'	423.16'
EL 'C'	423.04'	423.18'	423.22'
EL 'D'	419.41'	419.56'	419.59'
EL 'E'	421.41'	421.56'	421.59'
EL 'F'	422.01'	423.06'	423.09'

See table for Sta. & Elev.

STATE OF NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BRIDGE DIVISION
TOWN OSSIPEE-TAMWORTH BRIDGE No. 137/217
FEDERAL PROJECT FR 12 STATE PROJECT R2738
ROUTE NO. N.H. #16 OVER RELIEF STRUCTURE
LOCATION APPROX. 2.0 MI. So. OSSIPEE-TAMWORTH T.I.

TYPICAL BENT DETAILS

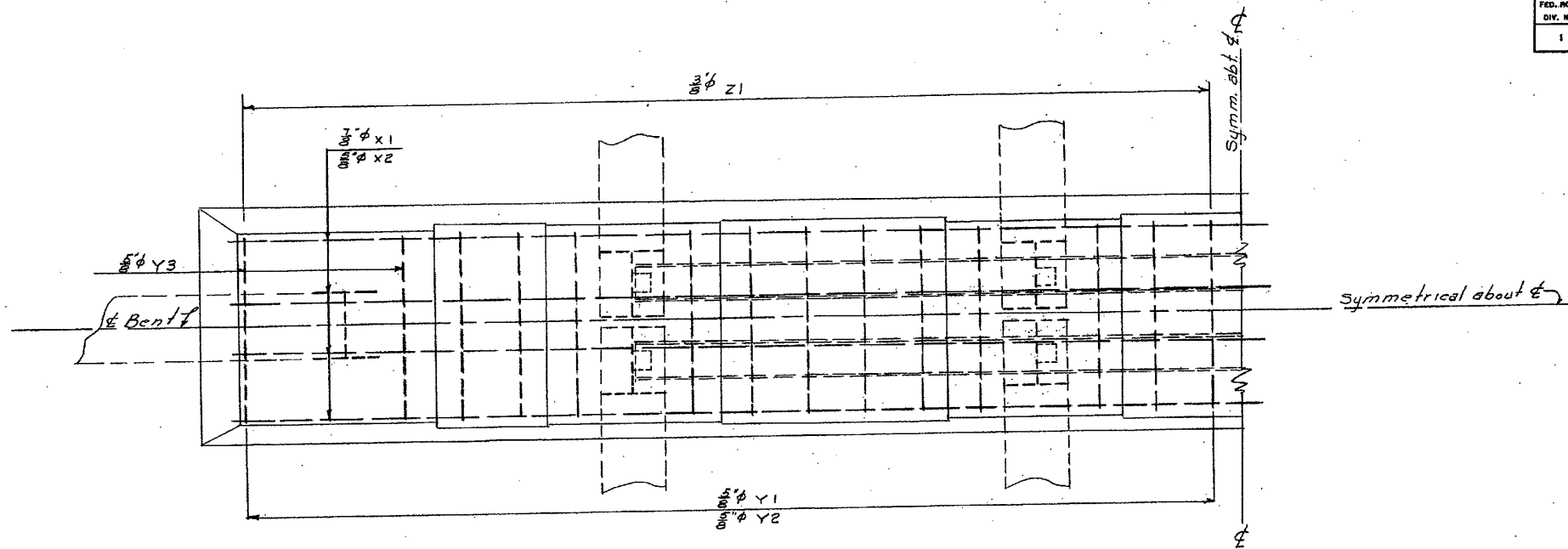
DESIGNED BY	DATE	CHECKED BY	DATE	BRIDGE SHEET NO.
F.V.	2/54	J.H.	7-54	6 OF 12
TRACED BY <td>DATE <td>CHECKED BY <td>DATE <td>FILE NUMBER</td> </td></td></td>	DATE <td>CHECKED BY <td>DATE <td>FILE NUMBER</td> </td></td>	CHECKED BY <td>DATE <td>FILE NUMBER</td> </td>	DATE <td>FILE NUMBER</td>	FILE NUMBER
F.C.S.	2-54	F.V.	8-54	3-4-3-5

NO.	DESCRIPTION	BY	DATE
Δ	REVISIONS		

PROJ. NO.	SHEET NO.	TOTAL SHEETS
FR-12	23	166

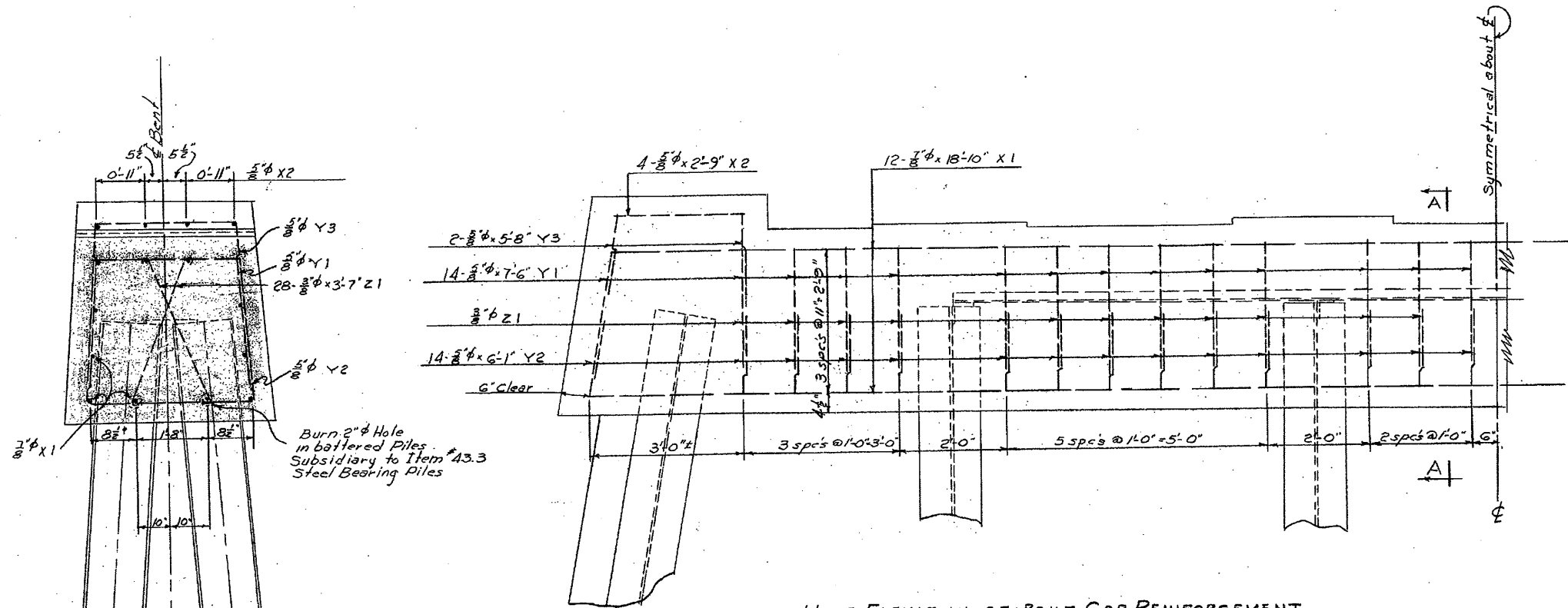
23
203

FED. ROAD DIV. NO.	STATE	E.P. PROJ.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.H.	12		24	103

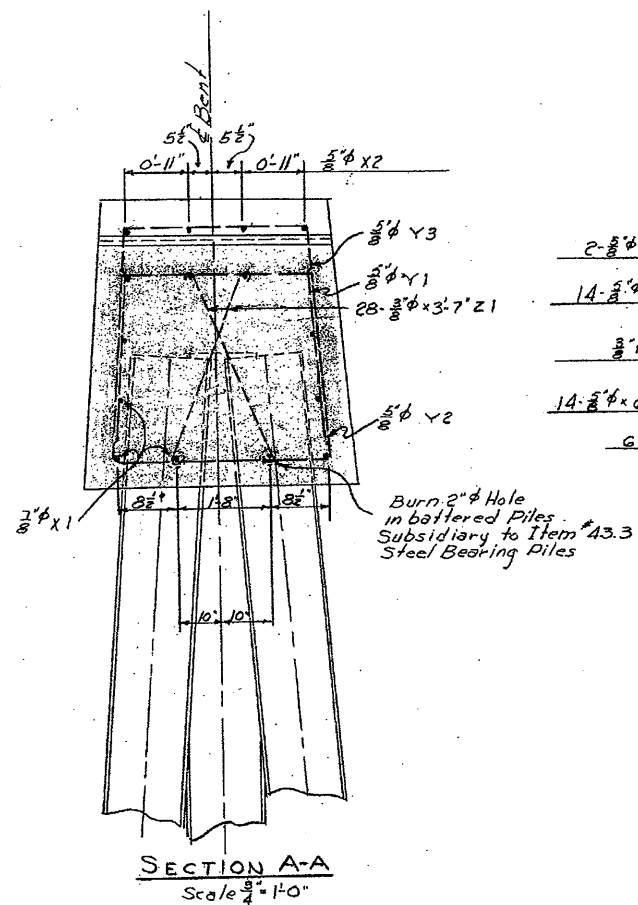


PLAN
Scale $\frac{3}{4} = 1'-0''$

NOTE:
Reinforcing steel shown on this drawing
for one half bent cap only.



HALF ELEVATION OF BENT CAP REINFORCEMENT
Scale $\frac{3}{4} = 1'-0''$



SECTION A-A
Scale $\frac{3}{4} = 1'-0''$

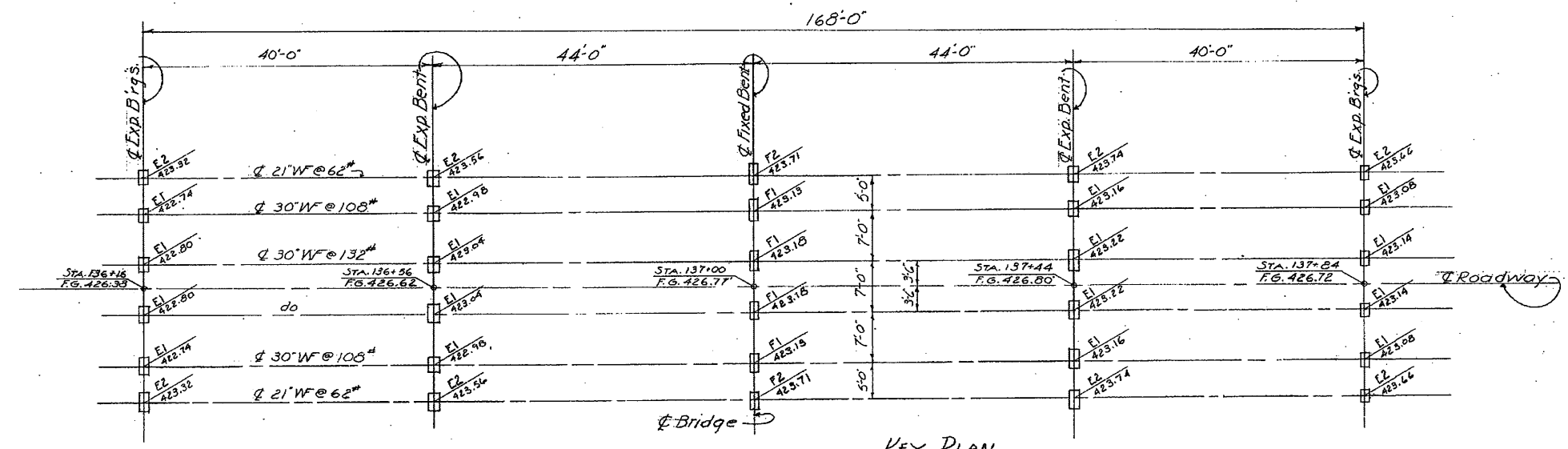
STATE OF NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BRIDGE DIVISION

TOWN OSSISPEE-TAMWORTH BRIDGE NO. 137/299
 FEDERAL PROJECT E.P. 12 STATE PROJECT R2238
 ROUTE NO. N.H. #16 OVER RELIEF STRUCTURE
 LOCATION APPROX. 2.0 MI. So. OSSISPEE-TAMWORTH, N.H.

BENT CAP REINFORCEMENT				BRIDGE SHEET NO.	
DESIGNED	BY	DATE	CHECKED	BY	DATE
<u>F.Y.</u>	<u>F.Y.</u>	<u>8/54</u>	<u>J.T.H.</u>	<u>J.T.H.</u>	<u>7-54</u>
TRACED	<u>F.Y.</u>	<u>8/54</u>	CHECKED	<u>J.T.H.</u>	<u>8-54</u>
QUANTITIES	<u>F.Y.</u>	<u>8-54</u>	CHECKED	<u>J.T.H.</u>	<u>8-54</u>
					7 OF 12
					FILE NUMBER
					3-4-3-5
PROJ. NO.			SHEET NO.		TOTAL SHEETS
E.P. 12			24		103

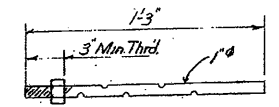
24
203

FED. ROAD DIV. NO.	STATE	F.R. PROJ.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.H.	12		25	161

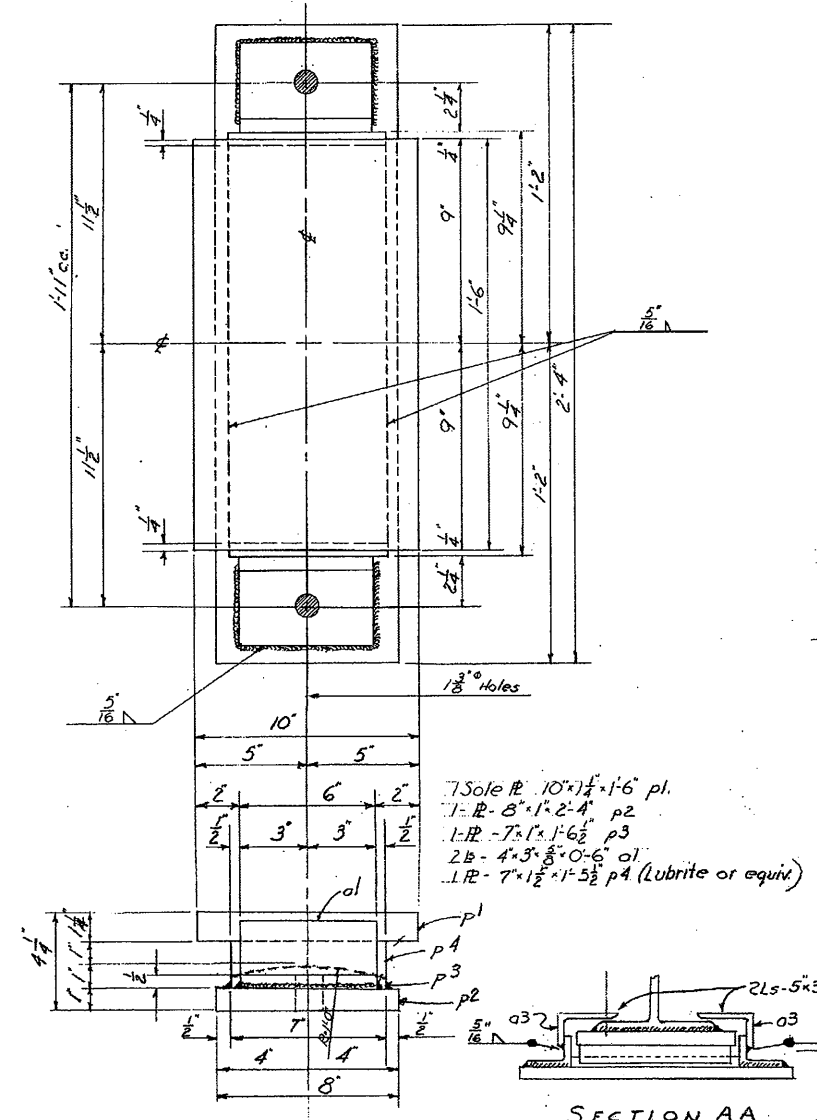


KEY PLAN
SHOWING LOCATION OF BRIDGE SHOES
&
BRIDGE SEAT ELEVATIONS
SCALE: 1"=10'

NOTE:
All material detailed or indicated on this sheet together with the cost of manufacturing and installing the same shall be considered as Bridge Shoes Item 36.2
All sole plates shall be field welded along the edges of beam flanges with a continuous 3/8" fillet weld after all dead load has been placed on the structure. Cost of field welding will not be paid for directly, but shall be subsidiary to Item 36.2.

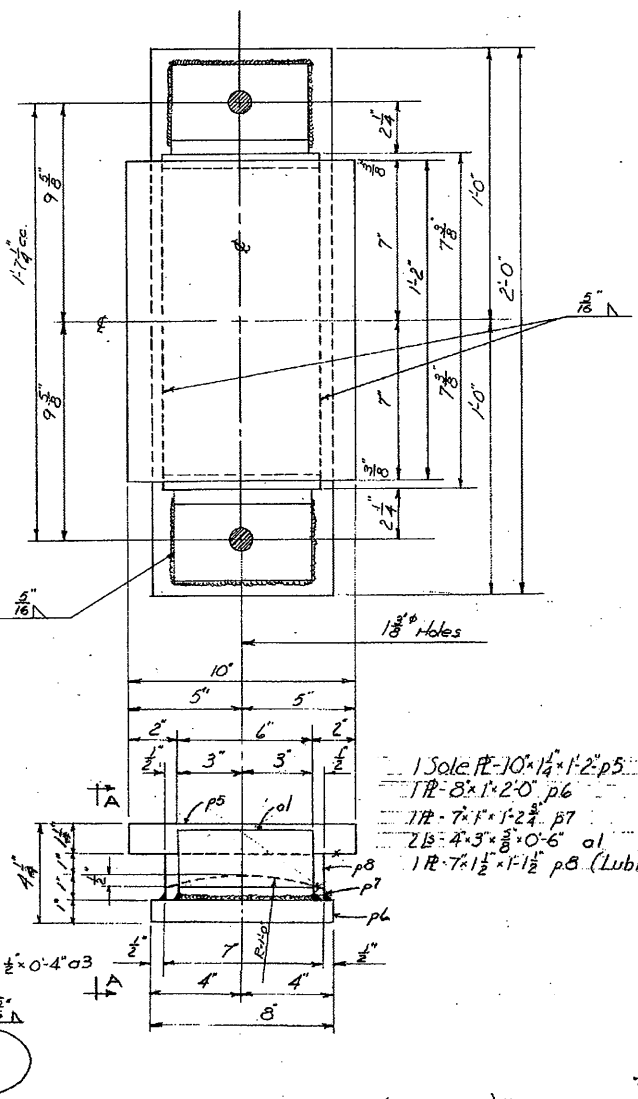


ANCHOR BOLTS (60 REQD)
(N.T.S.)

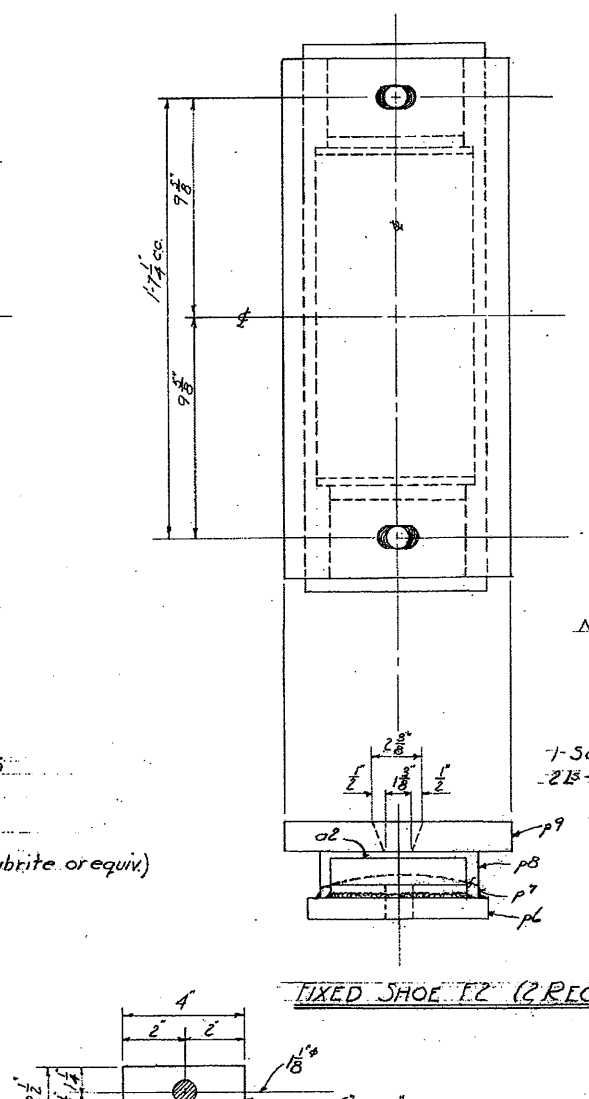


EXPANSION SHOE E1 (16 REQD)

Note: To be installed at E2 only.

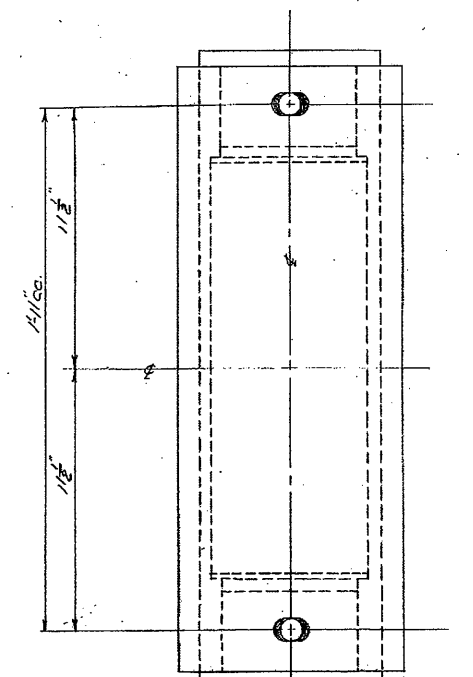


EXPANSION SHOE E2 (8 REQD)



FIXED SHOE F2 (2 REQD)

DUST PLATE WASHERS
(12 REQD)
(N.T.S.)



FIXED SHOE F1 (4 REQD)

NOTE:
Details of fixed shoes not shown same as for expansion shoes.

- 1 Sole Pl. 10 x 1 1/2 x 1-6 p1
- 1 R. 8 x 1 x 2-4 p2
- 1 R. 7 x 1 x 1-6 1/2 p3
- 2 B. 4 x 3 x 3/8 x 0-6 al
- 1 R. 7 x 1 1/2 x 1-5 1/2 p4 (Lubrite or equiv)
- 1 Sole Pl. 10 x 1 1/2 x 1-10 1/2 p7
- 2 B. 4 x 1 1/2 x 3/8 x 0-6 (Cut 4 x 3 x 3/8) a2
- 1 R. p6
- 1 R. p2
- 1 R. p8

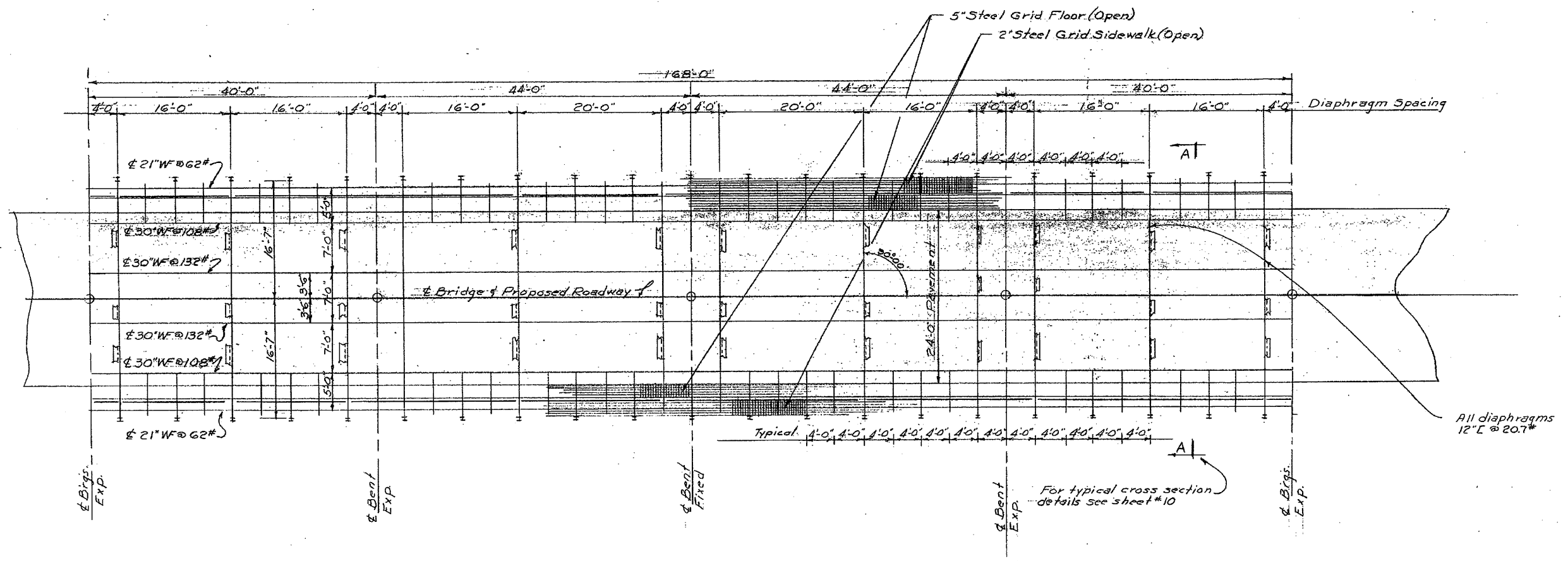
SHEET SCALE: 3"=1'-0" (except as noted)

BRIDGE SHOE DETAILS					
DESIGNED	BY	DATE	CHECKED	BY	DATE
HEL	W.H.	2-54	EY		2-54
REVISIONS					
Δ	DESCRIPTION	BY	DATE	FILE NUMBER	
				3-4-3-5	
PROJ. NO.		SHEET NO.		TOTAL SHEETS	
ER-12		25		159	

STATE OF NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BRIDGE DIVISION
TOWN: OSSISPEE, TAMWORTH BRIDGE NO. 137-299
FEDERAL PROJECT: IR-12 STATE PROJECT: P2738
ROUTE NO. NH-16 OVER RELIEF STRUCTURE
LOCATION: APPROX. 2.0 MI. SO. OSSISPEE-TAMWORTH, N.H.

25
203

FED. ROAD DIV. NO.	STATE	PRJ.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.H.	12		26	181



NOTE
 For materials and details of end dams and railings see sheets #1 and #10
 For details of bridge shoes see sheet # 8

26
203

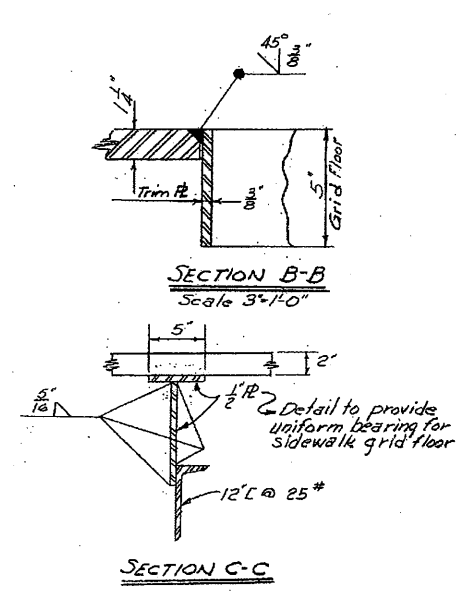
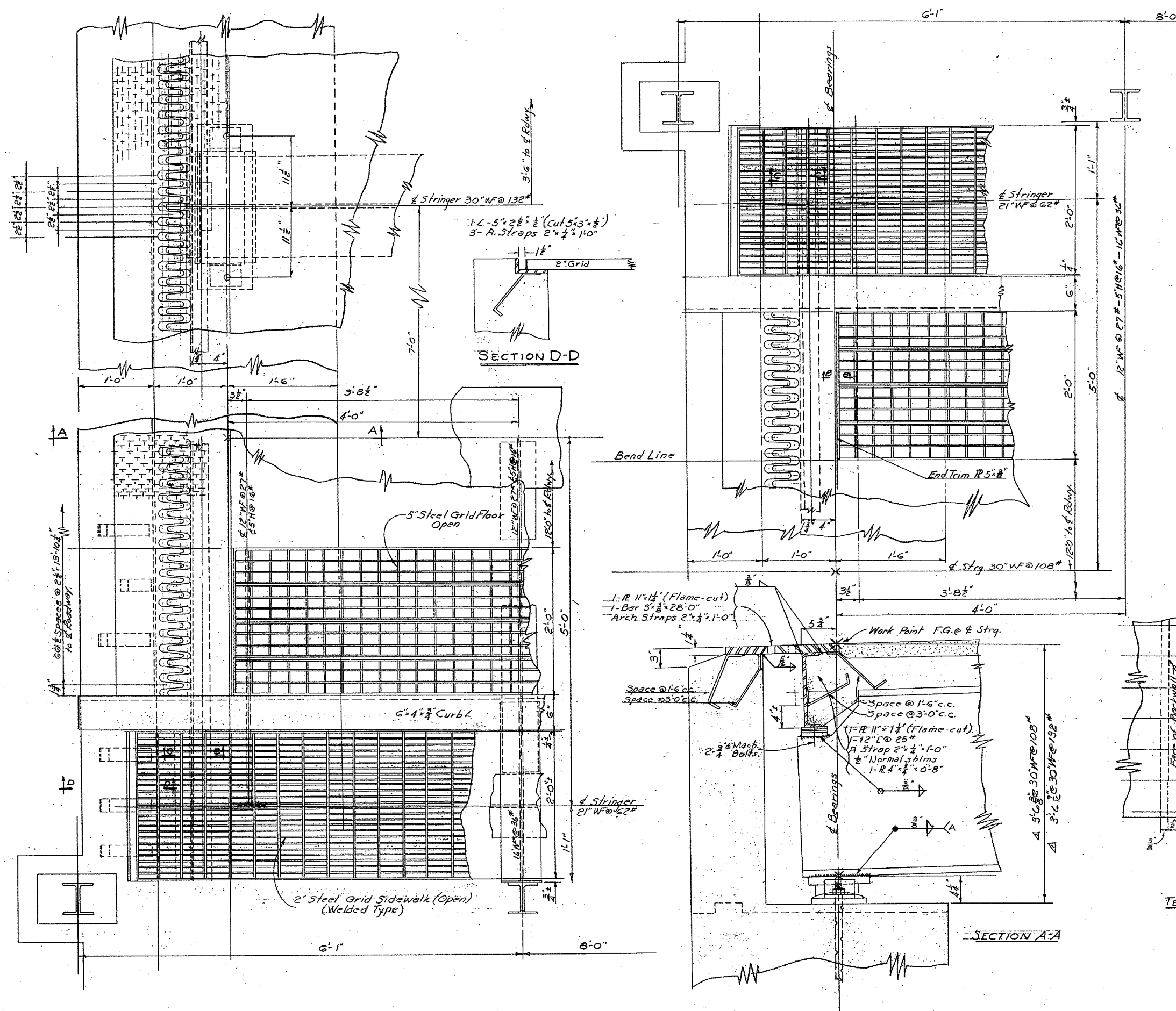
STATE OF NEW HAMPSHIRE
 DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
 BRIDGE DIVISION

TOWN: OSSEEP-TAMWORTH BRIDGE NO. 137/200
 FEDERAL PROJECT: E.R. 12 STATE PROJECT: R2738
 ROUTE NO. N.H. # 16 OVER: RELIEF STRUCTURE
 LOCATION: APPROX. 2.0 MI. S. OSSEEP-TAMWORTH T.L.

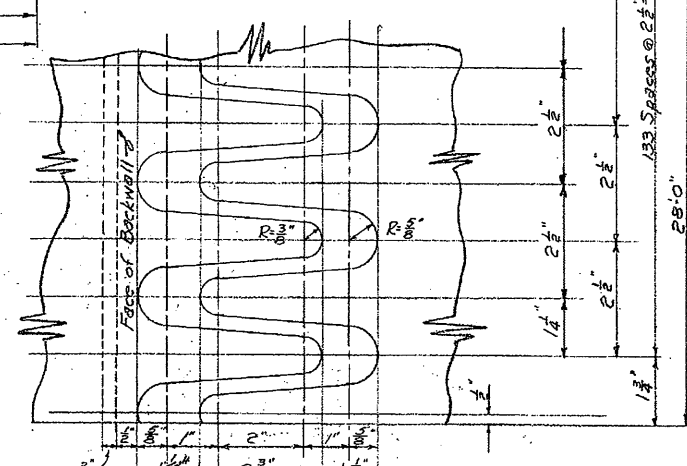
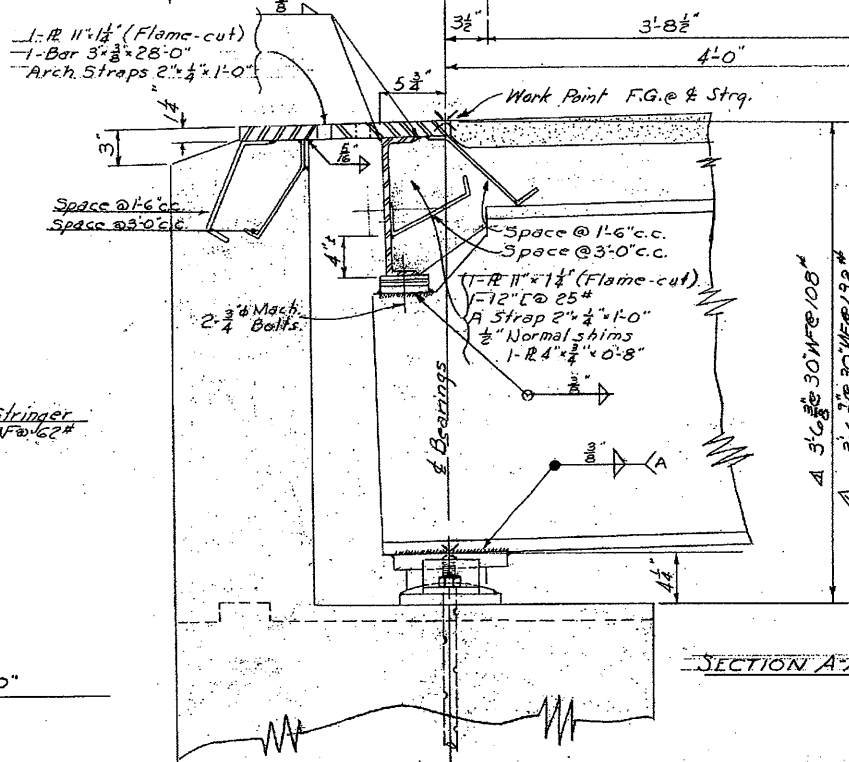
FRAMING PLAN			
BY	DATE	BY	DATE
DESIGNED		CHECKED	
DRAWN	<u>F.Y. 8-54</u>	CHECKED	<u>J.H. 7-54</u>
TRACED		CHECKED	
QUANTITIES	<u>E.C.S. 8-54</u>	CHECKED	<u>F.Y. 8-54</u>

BRIDGE SHEET NO.	9 OF 12
FILE NUMBER	3-4-3-5

PROJ. NO.	SHEET NO.	TOTAL SHEETS
ER-12	26	159



NOTE:
End dam and other detail shown apply to South Abutment. Details of North Abutment are similar.
A. See note on sheet of Bridge Shoes



ENLARGED DETAIL
(Half Actual Size)
TEMPLATE OF FLAME-CUT
END DAM FINGERS

Sheet Scale 1/8"=1'-0" (except as noted)

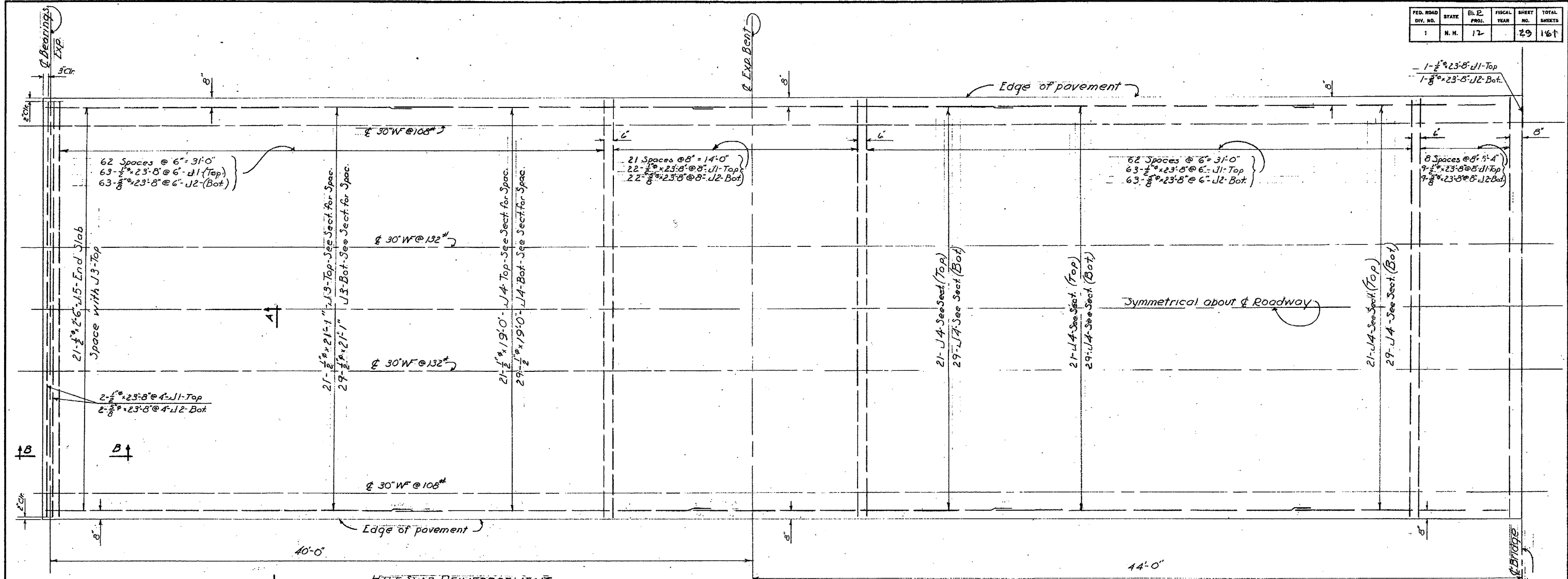
STATE OF NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BRIDGE DIVISION

TOWN: OSSISPEE-TAMWORTH BRIDGE NO. 137/229
FEDERAL PROJECT: ER-12 STATE PROJECT: P2738
ROUTE NO. N.H. #16 OVER RELIEF STRUCTURE
LOCATION: APPROX. 2.0 MI. S. OSSISPEE-TAMWORTH, N.H.

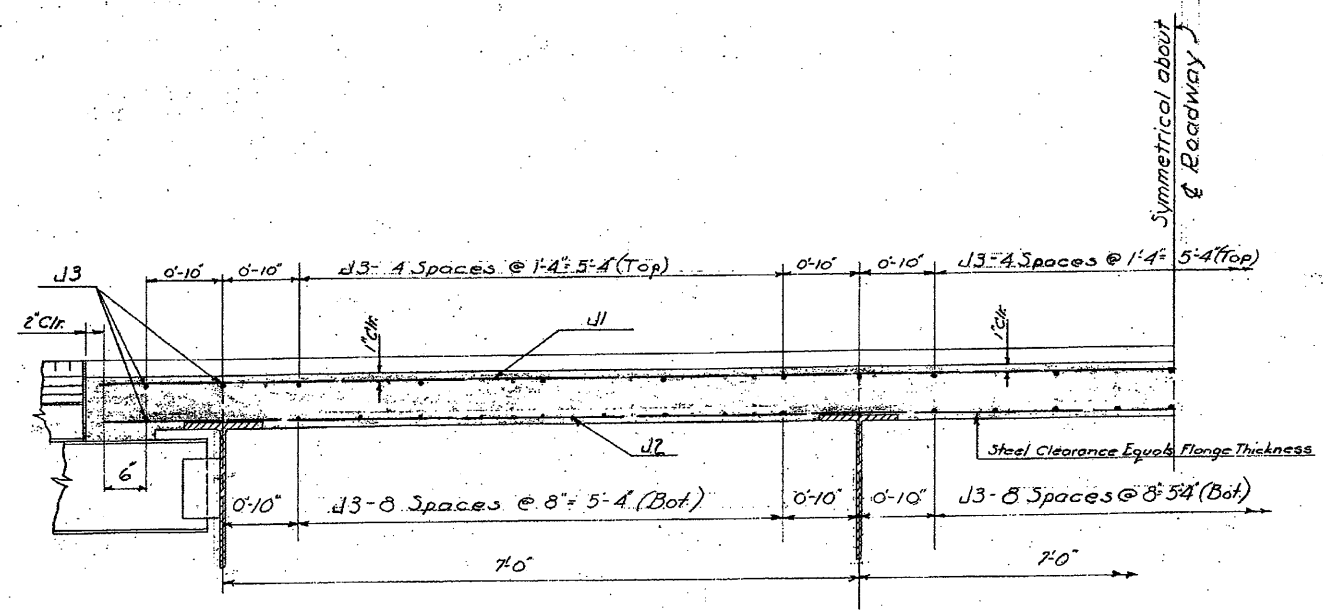
EXPANSION DETAILS			
DESIGNED	BY	DATE	BRIDGE SHEET NO.
DESIGNED	R.W.P.	7/54	11 OF 12
DRAWN	F.Y.	8/54	FILE NUMBER
TRACED			3-4-3-5
QUANTITIES	F.C.S.	8/54	
REVISIONS			
NO.	DESCRIPTION	BY	DATE
Δ	Chgd. dimensions	V.S.B.	7/55

PROJ. NO.	SHEET NO.	TOTAL SHEETS
ER-12	28	159

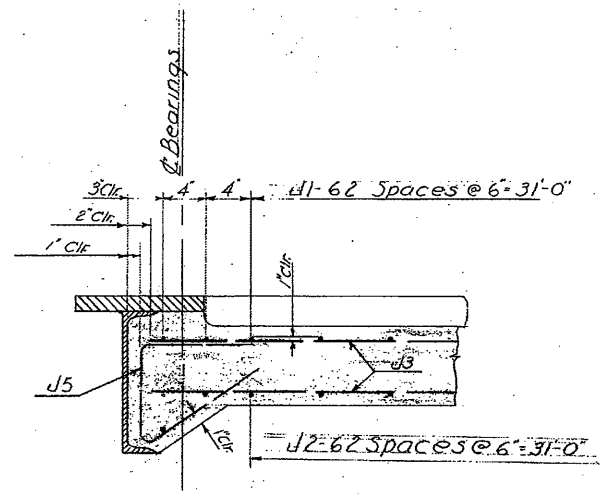
FED. ROAD DIV. NO.	STATE	EST. PROJ.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N. H.	12		29	161



HALF SLAB REINFORCEMENT
SCALE: $\frac{3}{8}$ " = 1'-0"



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



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

NOTE
Steel shown on this drawing for one half slab only.

Relief Structure

STATE OF NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BRIDGE DIVISION

TOWN: OSSISPEE-TAMWORTH BRIDGE NO. 137/222
FEDERAL PROJECT: ER-12 STATE PROJECT: P2738
ROUTE NO.: N.H. #16 OVER RELIEF STRUCTURE
LOCATION: APPROX. 2.0 MI. SO. OSSISPEE-TAMWORTH T.L.

SHEET SCALE AS NOTED

SLAB REINFORCEMENT			
DESIGNED BY	DATE	CHECKED BY	DATE
W.T.H.	8-54	E.Y.	9-54
DRAWN BY <td>DATE <td>CHECKED BY <td>DATE </td></td></td>	DATE <td>CHECKED BY <td>DATE </td></td>	CHECKED BY <td>DATE </td>	DATE
W.T.H.	8-54	E.Y.	9-54
TRACED BY <td>DATE <td>CHECKED BY <td>DATE </td></td></td>	DATE <td>CHECKED BY <td>DATE </td></td>	CHECKED BY <td>DATE </td>	DATE
W.T.H.	8-54	E.Y.	9-54
QUANTITIES BY <td>DATE <td>CHECKED BY <td>DATE </td></td></td>	DATE <td>CHECKED BY <td>DATE </td></td>	CHECKED BY <td>DATE </td>	DATE
W.T.H.	8-54	E.Y.	9-54

BRIDGE SHEET NO.	12 OF 12
FILE NUMBER	3-4-3-5
PROJ. NO.	ER-12
SHEET NO.	29
TOTAL SHEETS	159