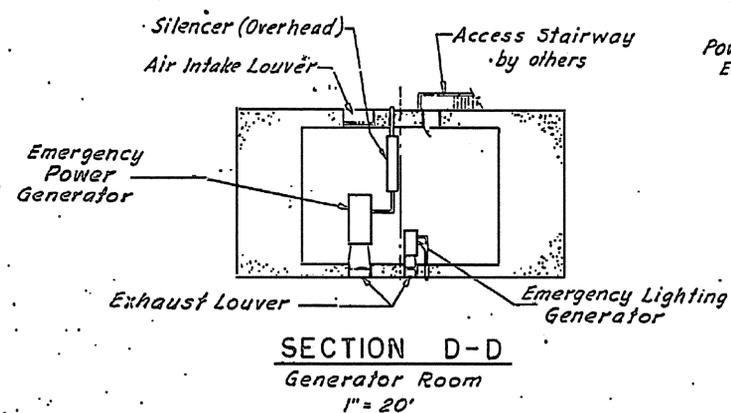
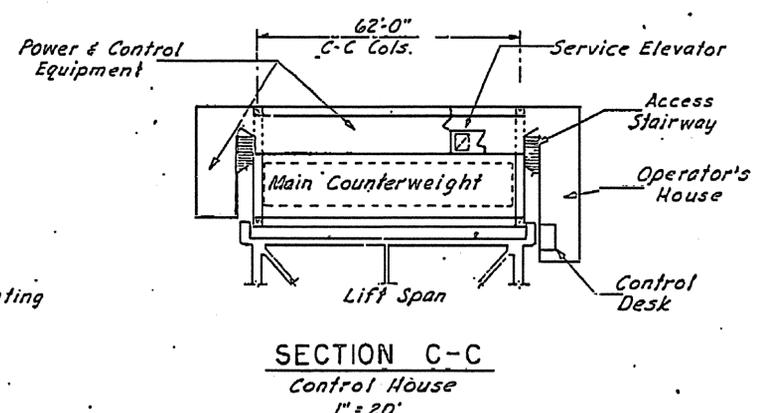


**SOUTH ELEVATION**  
1" = 20'

**TOWER ELEVATION A-A**  
1" = 20'



**SECTION D-D**  
Generator Room  
1" = 20'



**SECTION C-C**  
Control House  
1" = 20'

**NOTES:**  
1. For Elevation B-B, see Sheet No. 5.

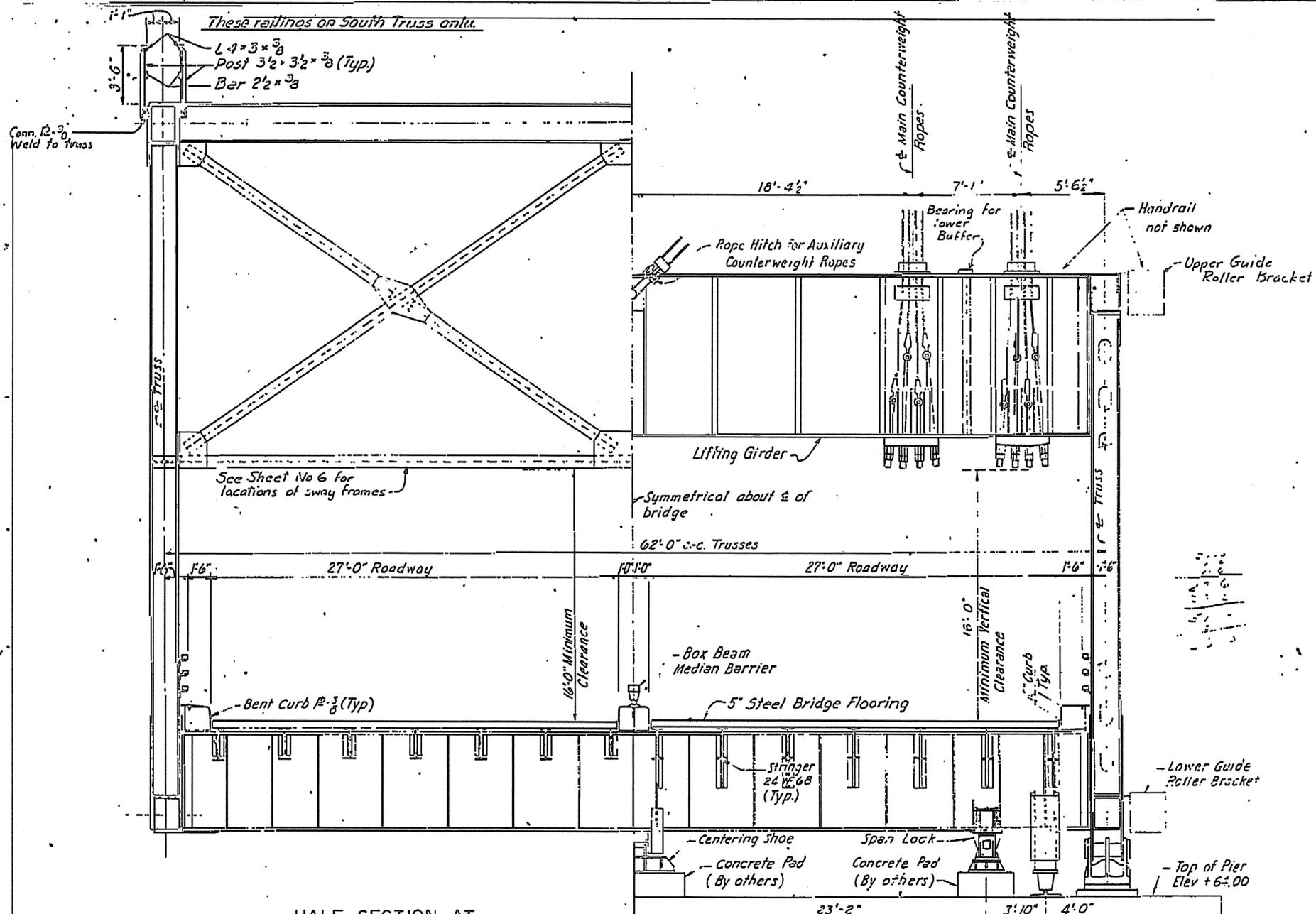
PROJECT No. B.1355105  
NEW HANOVER COUNTY  
STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
DAVIDSON  
CAPE FEAR RIVER CROSSING  
AT WILMINGTON  
**LIFT BRIDGE SUPERSTRUCTURE**  
ELEVATIONS AND SECTIONS

REVISION	BY	DATE

5-1

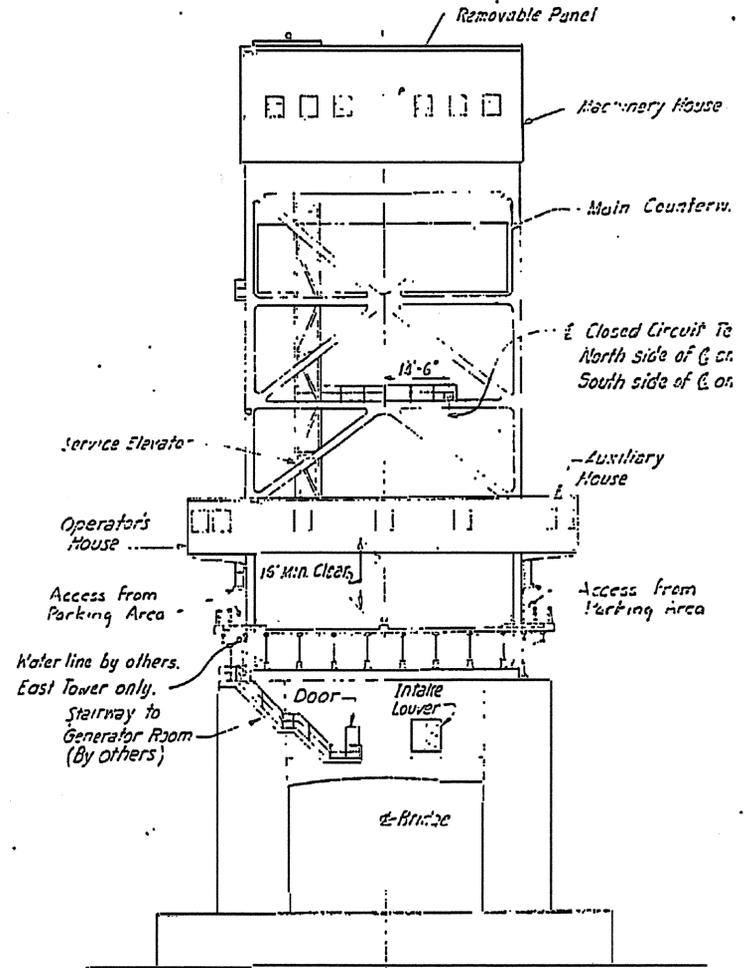
Scale: 1/4" = 1'-0"

DATE	BY



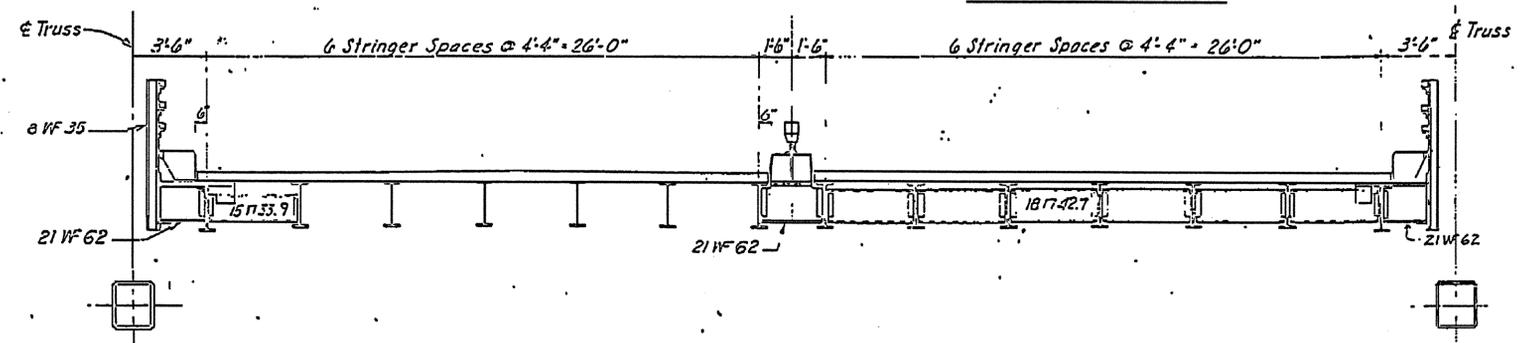
HALF SECTION AT INTERMEDIATE FLOORBEAM

HALF SECTION AT END FLOOR BEAM



TOWER ELEVATION B-B

For location, see Sheet No. 4  
1" = 20'



HALF SECTION AT QUARTER POINT

HALF SECTION AT MID PANEL

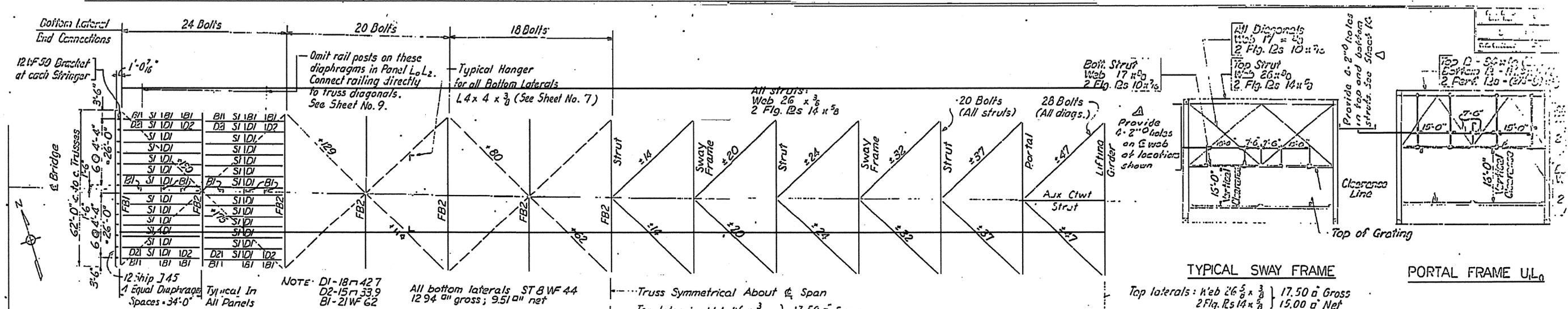
Scale: 1/4" = 1'-0"

PROJECT No. B.135  
NEW MANOVER COU  
STATE OF NORTH CAROLINA  
STATE HIGHWAY COM.  
CAPE FEAR RIVER CROSS  
AT WILMINGTON  
LIFT BRIDGE SUPERST  
LIFT SPAN CROSS SECT  
REAR ELEVATION OF T

REVISION	BY	DATE

5-2

M.C. 5-2-51



**LIFT SPAN FLOOR**

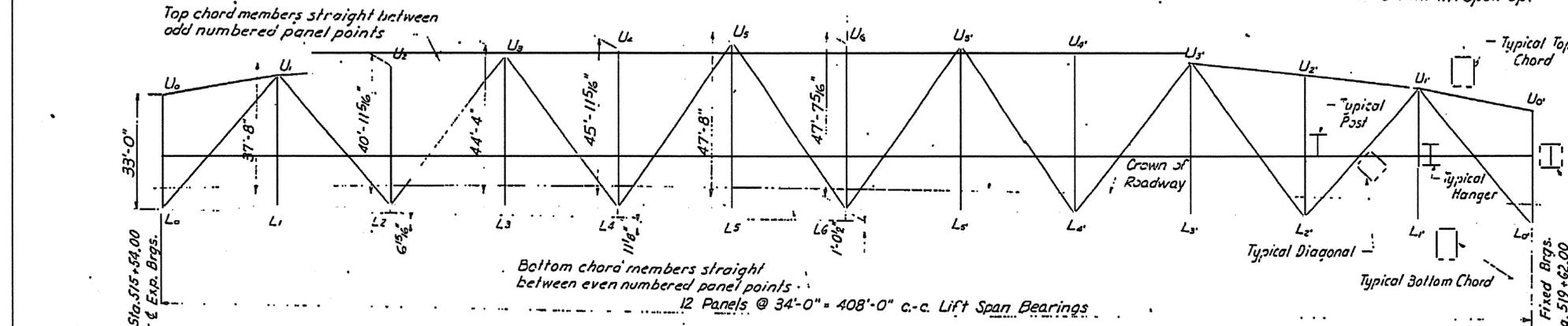
	FB1	FB2	Stringer
Shear (Kips)	94	52	30
Dead	94	52	30
Live	0	0	0
Impact	0	0	0
Total	94	52	30
Moment (Ft. Kips)	677	600	35
Dead	677	600	35
Live	0	0	0
Impact	0	0	0
Total	677	600	35
Web Reg'd. @ 12" o.c.	150	146	100
3 M Reg'd. @ 12" o.c.	163	150	100
Section	Web 60x46	78x46	80WFG0
Flg. I's	19x14	20x14	20WFG0
Section Modulus	1570	1550	1591
Material	A56	A56	A56

**LIFTING GIRDER**

Var. Load	Design Load	Material
Shear	100	A56
Moment	100	A56
Vertical	100	A56
Moment	100	A56
Horizontal	100	A56
Section	Flg. I's	A56
Web	80x46	A56
Flg. I's	20x14	A56
Section Modulus	1570	1550
Material	A56	A56

**BOTTOM LATERAL BRACING AND FLOOR SYSTEM**  
All bottom lateral stresses based on 75% wind with lift span down.

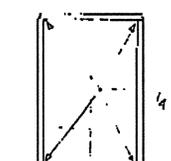
**TOP LATERAL BRACING**  
All top lateral stresses based on 75% wind with lift span down, except in Panel U<sub>6</sub>L<sub>1</sub> where stresses are based on 30% wind with lift span up.



**LIFT SPAN TRUSS**  
Scale: 1" = 20'

Member	U <sub>1</sub> L <sub>1</sub>	U <sub>1</sub> U <sub>2</sub>	U <sub>2</sub> U <sub>3</sub>	U <sub>3</sub> U <sub>4</sub>	U <sub>4</sub> U <sub>5</sub>	U <sub>5</sub> U <sub>6</sub>	L <sub>1</sub> L <sub>2</sub>	L <sub>2</sub> L <sub>3</sub>	L <sub>3</sub> L <sub>4</sub>	L <sub>4</sub> L <sub>5</sub>	L <sub>5</sub> L <sub>6</sub>	U <sub>6</sub> L <sub>6</sub>	
Dead Load	0	0	-882	-1256	-1360	-1360	+526	+1100	+1320	+1320	+1100	-816	
Live Load	0	0	-359	-510	-551	-551	+215	+466	+536	+536	+466	0	
Impact	0	0	-34	-48	-52	-52	+20	+42	+50	+50	+42	0	
DL+LL+I	0	0	-1275	-1814	-1963	-1963	+759	+1563	+1905	+1905	+1563	-816	
DL+LL+I+Reversal	0	0	-1275	-1814	-1963	-1963	+759	+1563	+1905	+1905	+1563	-816	
Wind (75% W)	0	0	-1275	-1814	-1963	-1963	+759	+1563	+1905	+1905	+1563	-816	
Design Stress in Kips	0	0	-106	-106	-109	-109	+23	+53	+53	+53	+23	-229	
Bending Moment	0	0	-1275	-1814	-1963	-1963	+759	+1563	+1905	+1905	+1563	-816	
Allowable Unit Stress	15.4	20.0	19.0	19.0	17.1	17.1	20.0	24.0	24.0	24.0	24.0	20.0	
Section Area Required	3.3	1.6	67.2	95.5	115	115	38.0	66.3	79.5	79.5	66.3	40.8	
Section Used	Cov. 19x3 1/2	9.50	7.90	Cov. 19x3 1/2	14.25	14.25	Cov. 19x3 1/2	7.13	9.50	8.00	9.50	8.25	8.25
Area of Section	54.13	41.63	76.44	56.69	116.54	116.54	51.76	43.88	61.13	63.88	44.63	33.25	

- LIFT SPAN NOTES:**
- For General Notes, see Sheet No. 2.
  - At both tension and compression chord splices of truss, the abutting surfaces shall be faced and bolted to an even bearing.
  - All rivets or bolts are to be 3/4" unless otherwise specified. See General Note No. 6 for use of bolts and rivets. For additional welds at ends of all box sections, see Detail "W" on this sheet.



**DETAIL "W"**  
Additional Welds At Ends of Box Sections  
Scale: 1/2" = 1'-0"

PROJECT No. 8.1355105  
NEW MANOVER COUNTY

STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
RALEIGH

CAPE FEAR RIVER CROSSING  
AT WILKINSON

LIFT BRIDGE SUPERSTRUCTURE  
LIFT SPAN STRESS SHEET

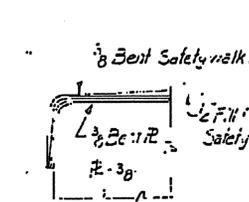
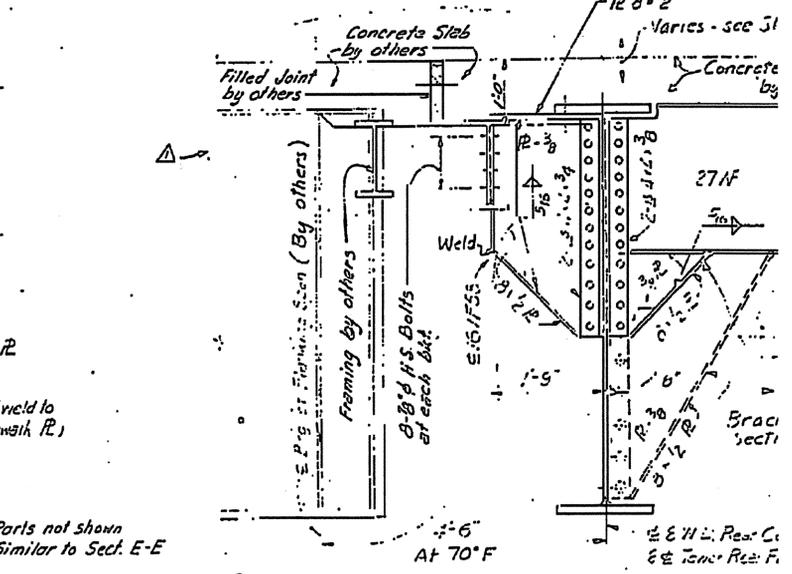
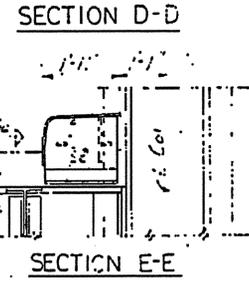
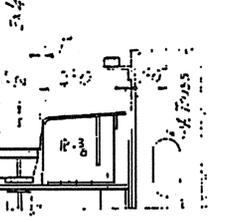
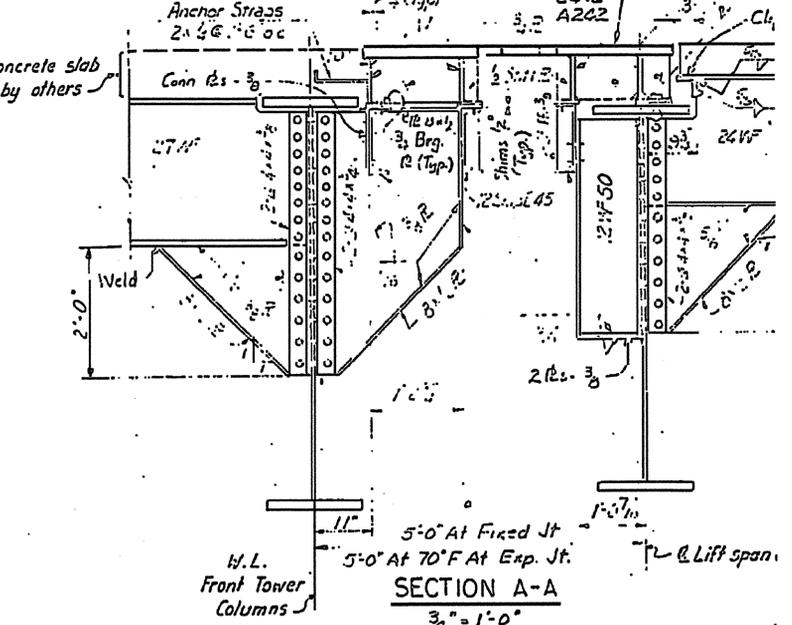
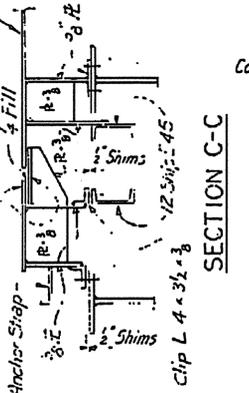
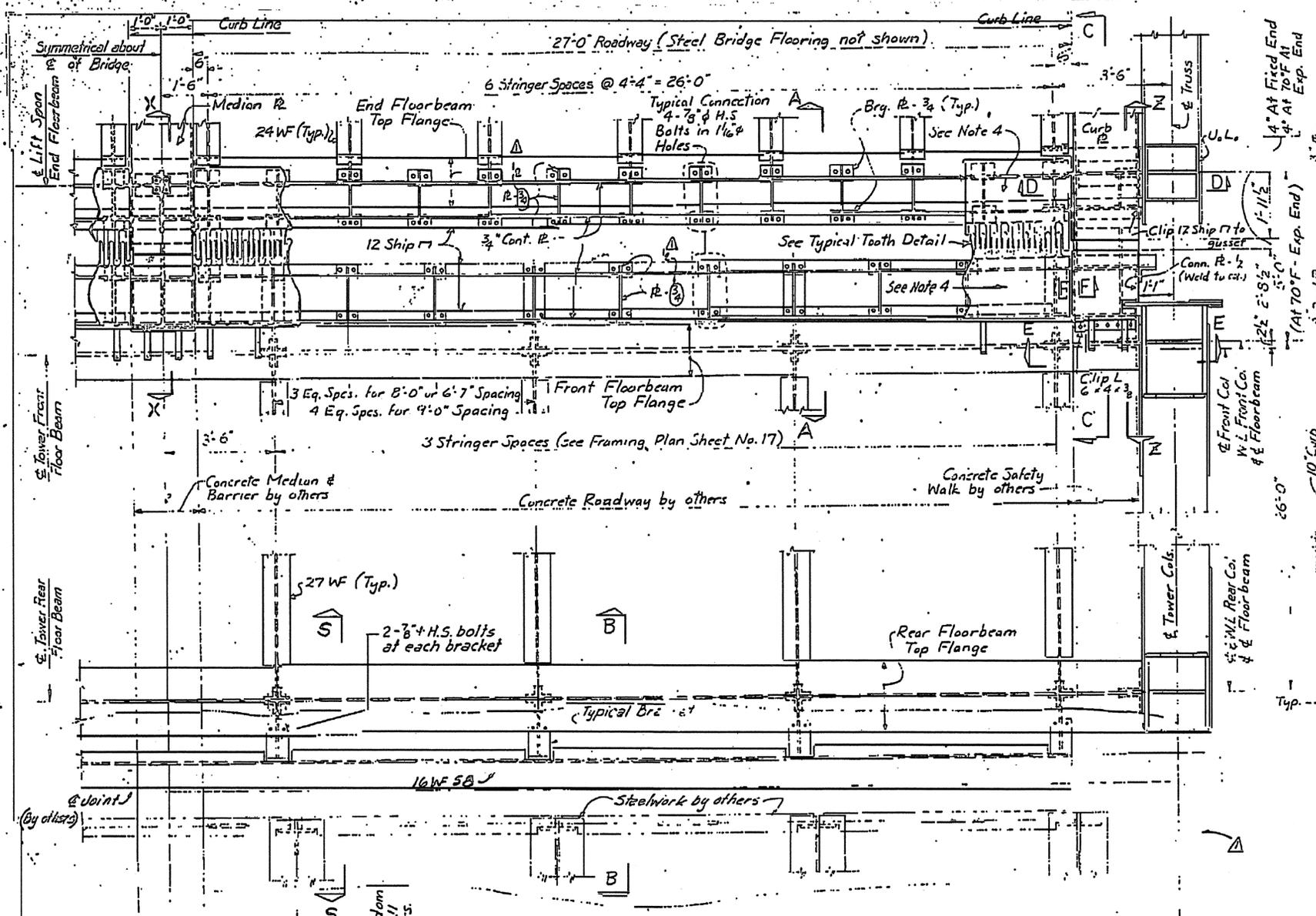
REVISION	BY	DATE
1	MSD	3-10-55

5-3

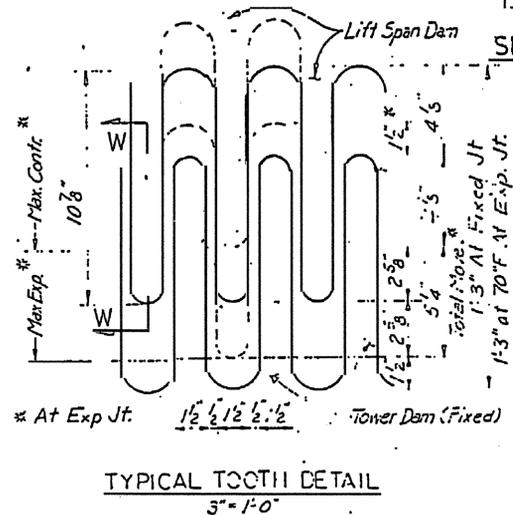
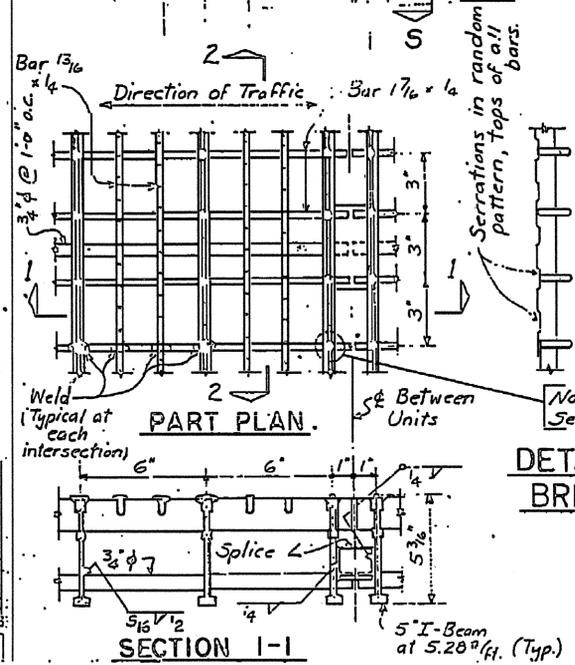


DATE	BY	CHKD
9	EC	

**Notes For Sect. A-A:**  
 A. Toothed Rs, continuous Rs, stiffener Rs and bearing Rs to be joined by 5/8" fillet welds.  
 B. Brackets occur only at stringers.  
 C. Provide stiffener Rs on 12 Ship 171 at all bearing Rs.  
 D. Toothed Rs to be A242 Corrosion Resistant Steel.



PLAN OF ROADWAY JOINTS

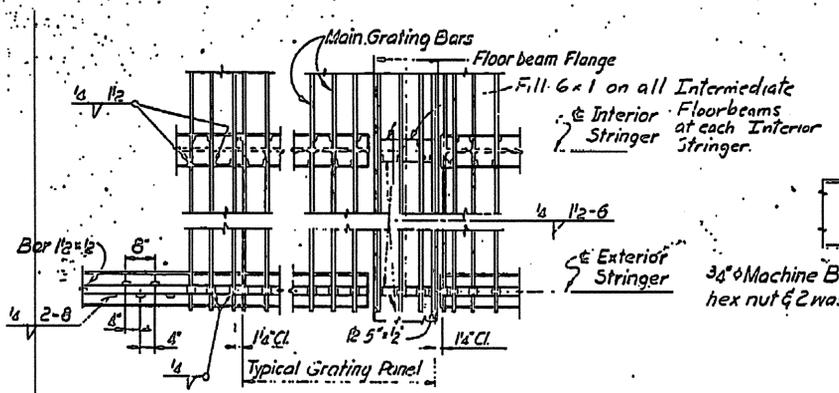


- NOTES**
- For General Notes see Sh. No 2
  - For Sections X-X and Z-Z, see Sheet No. 9.
  - All bolts are 3/4" H.S. unless otherwise noted.
  - Weld knock-off studs to top of 2" toothed Rs at approximately 3" centers. Studs shall be 3/8" in diameter and the portion remaining shall be 1/4" high.

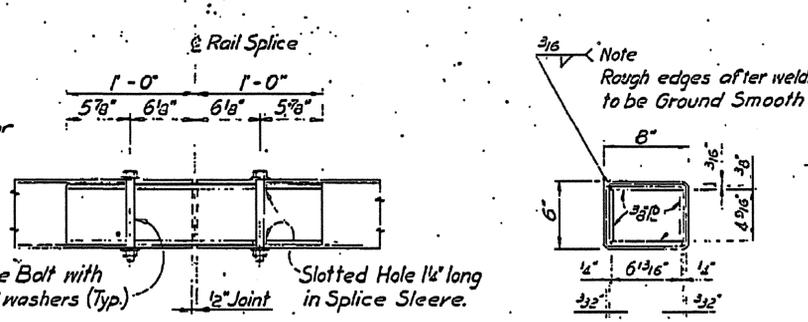
PROJECT No. 8.135510  
 NEW HANOVER COUNTY  
 STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 BALTIMORE  
 CAPE FEAR RIVER CROSSING  
 AT WELLSVILLE  
 LIFT BRIDGE SUPERSTRUCTURE  
 ROADWAY JOINTS

Scale: 1/2" = 1'-0" Unless Noted

Non-skid studs	MCS	4-8-60
Rein. joint	MCS	2-2-61
Division	or	

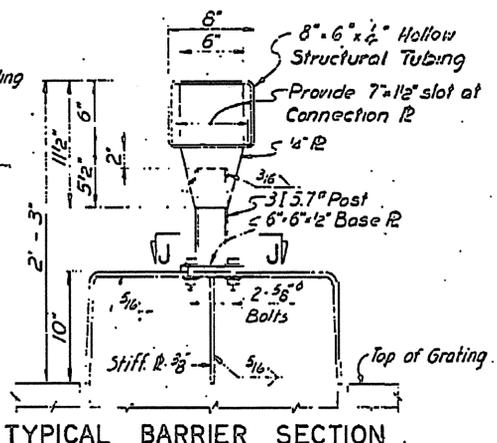


WELDING OF STEEL BRIDGE FLOORING TO STRINGERS



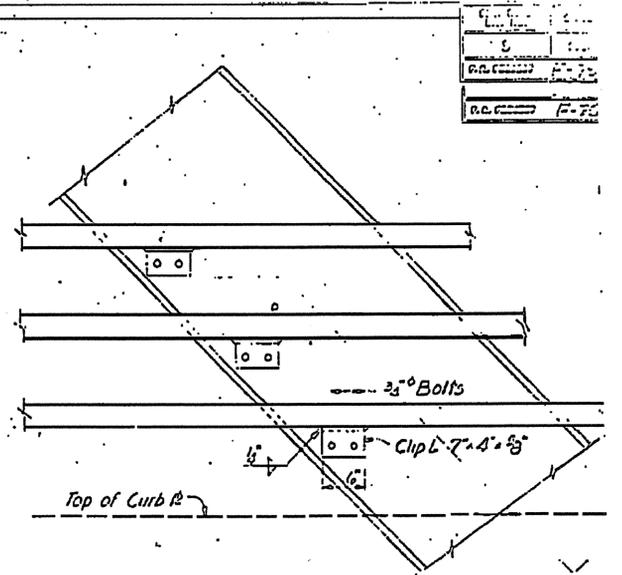
DETAILS OF SPLICE SLEEVE

Box Beam Median Barrier shown Bridge Railing splice similar Scale: 1/2"=1'-0"



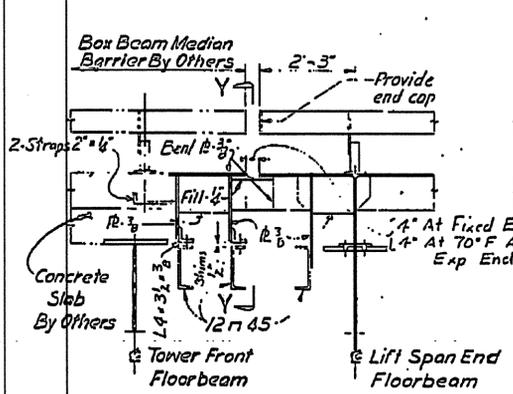
TYPICAL BARRIER SECTION

Scale: 1/2"=1'-0"



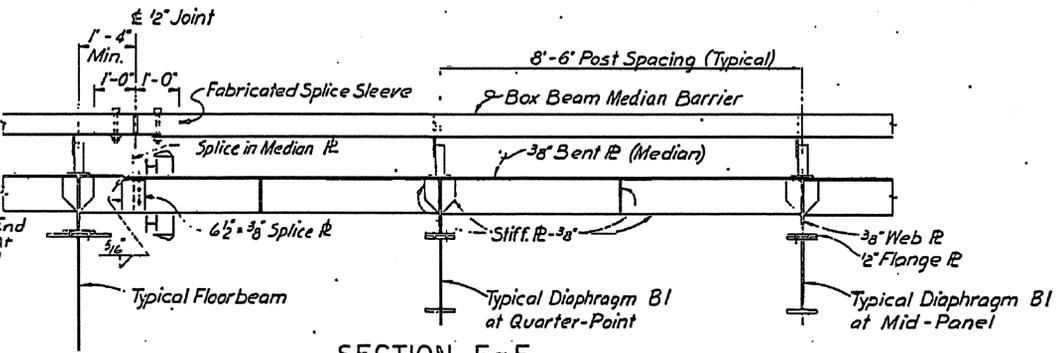
RAILING CONNECTIONS TO LIFT SPAN DIAGONALS L2, U2 AND U1

Connections at Tower Bracing Similar Scale: 1'-1'-0"



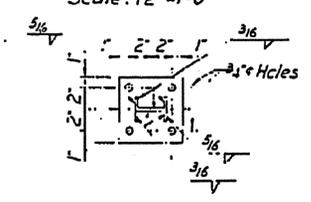
SECTION X-X

For location see Sheet No. 8



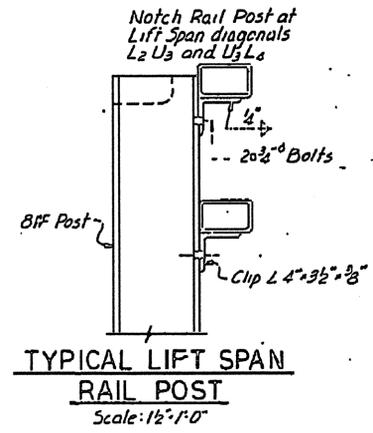
SECTION E-E

For location see Sheet No. 7



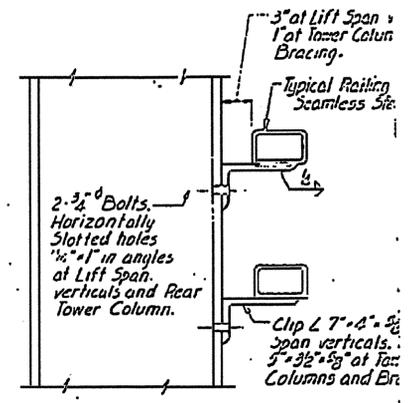
SECTION J-J

Scale: 1/2"=1'-0"



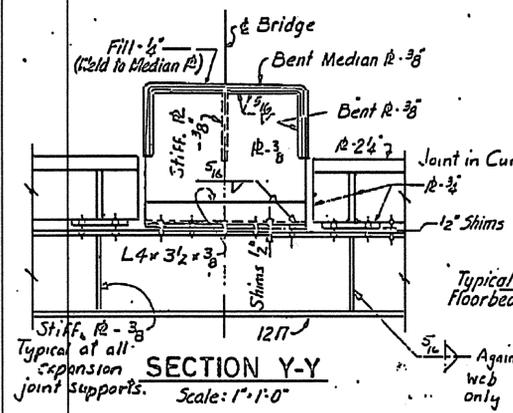
TYPICAL LIFT SPAN RAIL POST

Scale: 1/2"=1'-0"



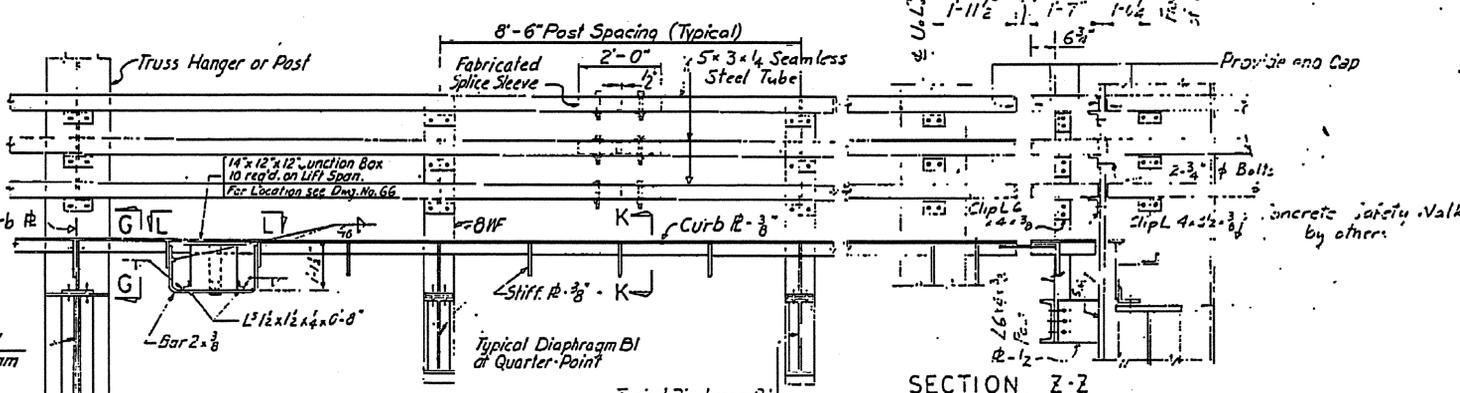
RAILING CONNECTIONS AT LIFT SPAN VERTICAL & TOWER MEMBER

Scale: 1/2"=1'-0"



SECTION Y-Y

Scale: 1'-1'-0"

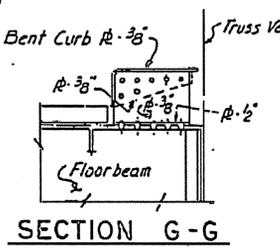


SECTION F-F

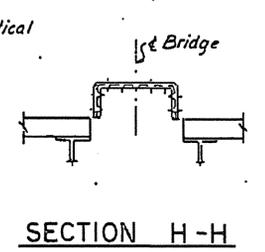
For location see Sheet No. 7

SECTION Z-Z

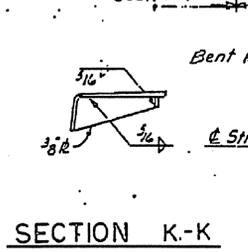
For location see Sheet No. 8



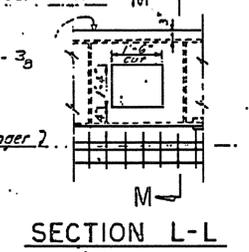
SECTION G-G



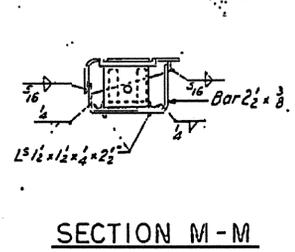
SECTION H-H



SECTION K-K



SECTION L-L



SECTION M-M

NOTES:

1. Minimum Length of 8x6 Box Beam to be 34.
2. Minimum Length of 5x3 Rails to be 34 on lift span. No splices in Rails on tower spans.
3. Lift span railing and tower beam railing may be built on lift grade. Tower beam railing to be installed on tower grade.

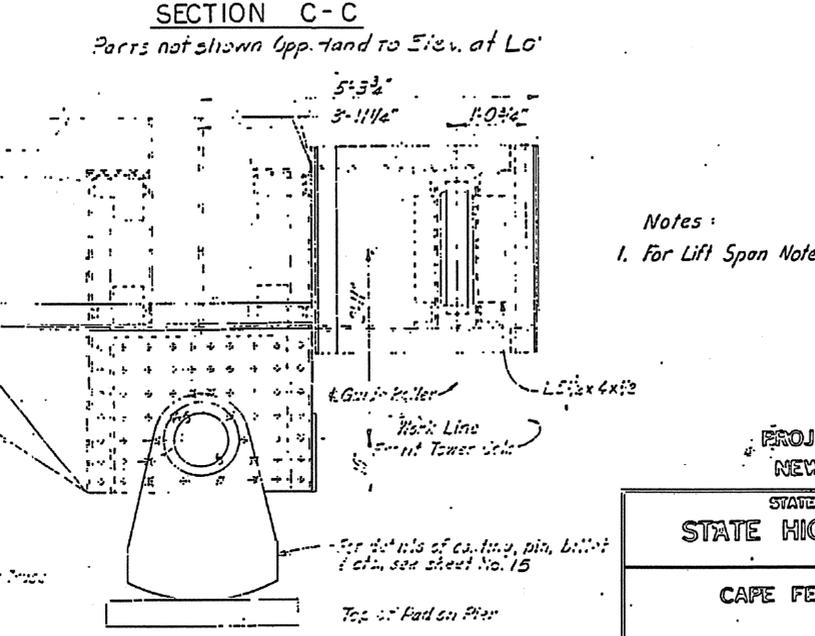
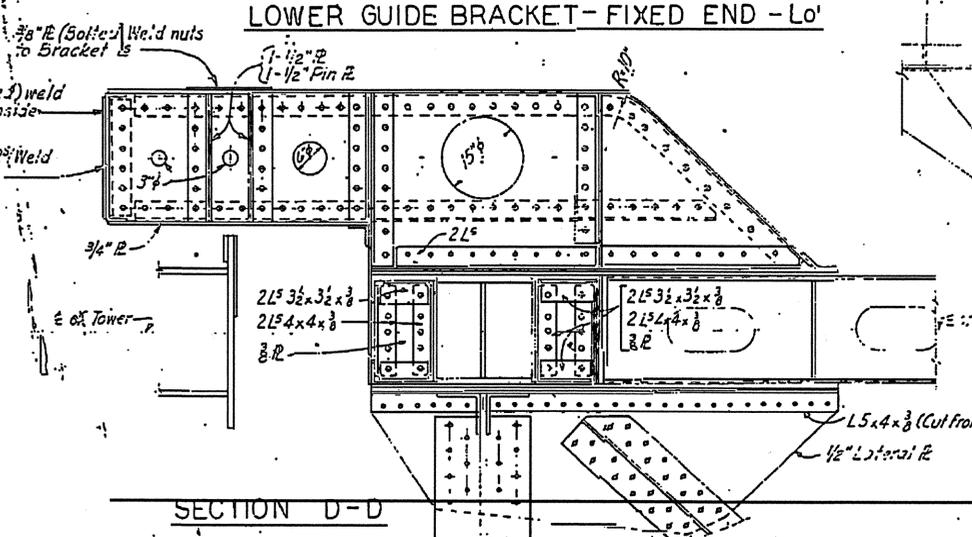
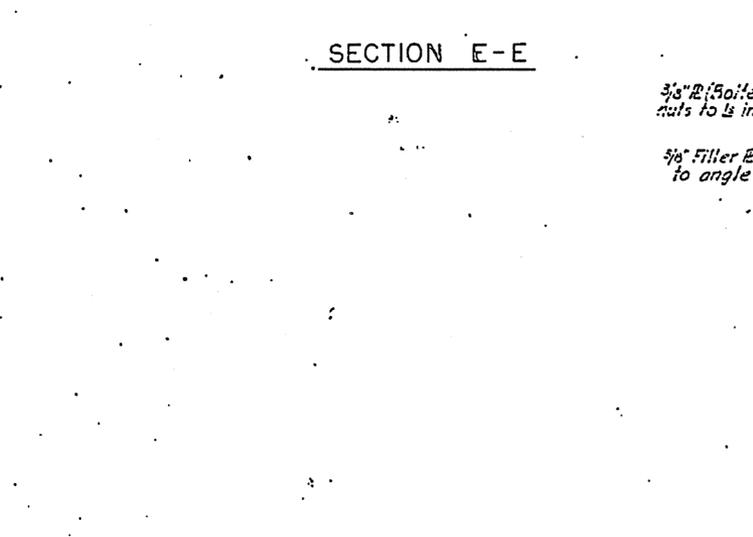
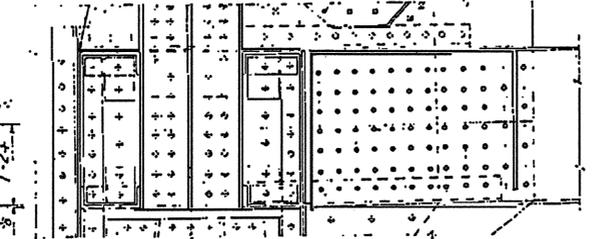
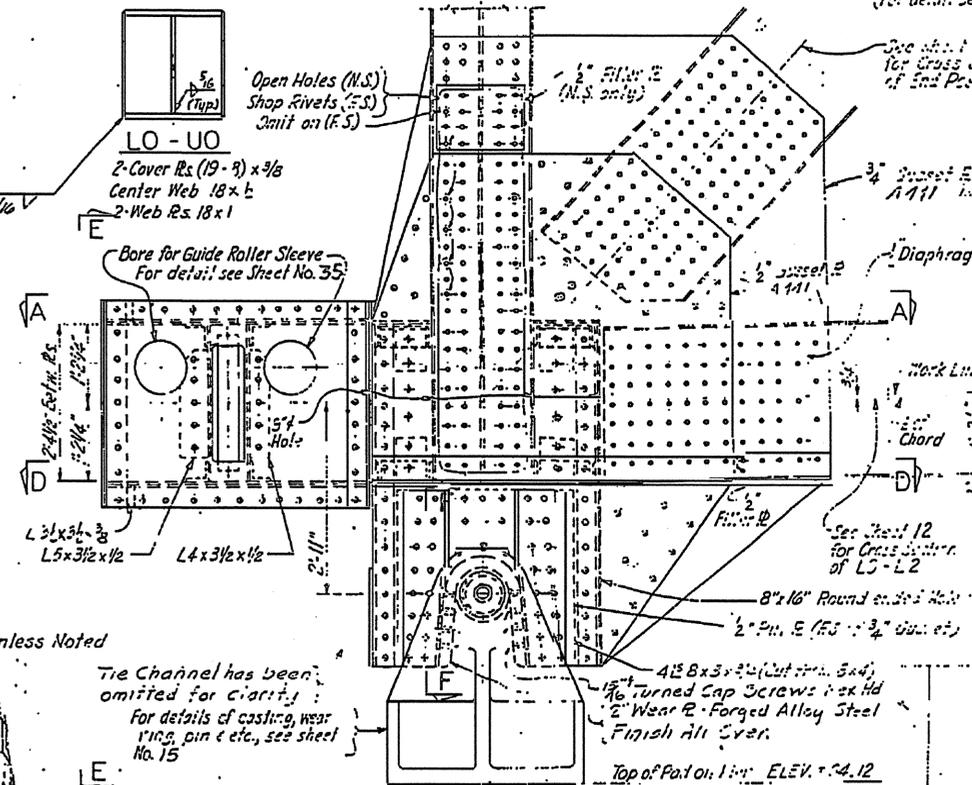
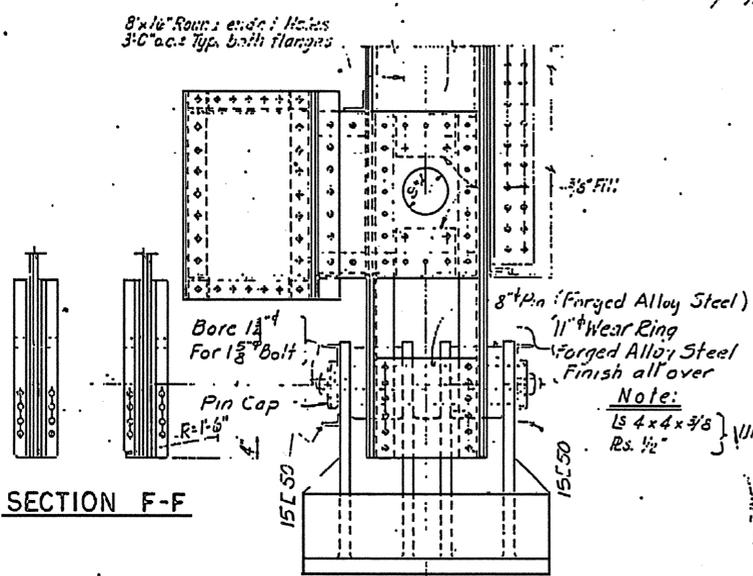
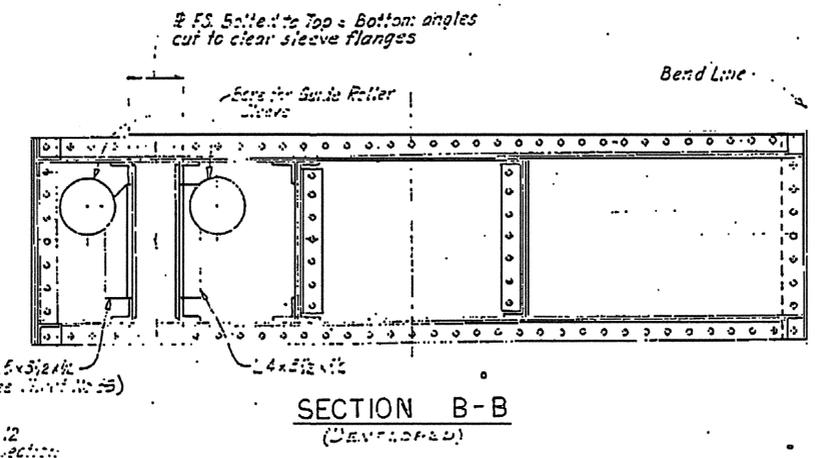
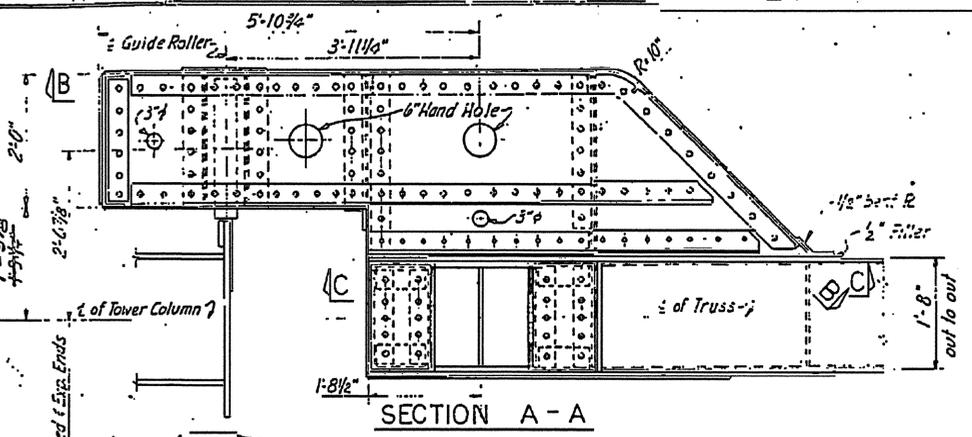
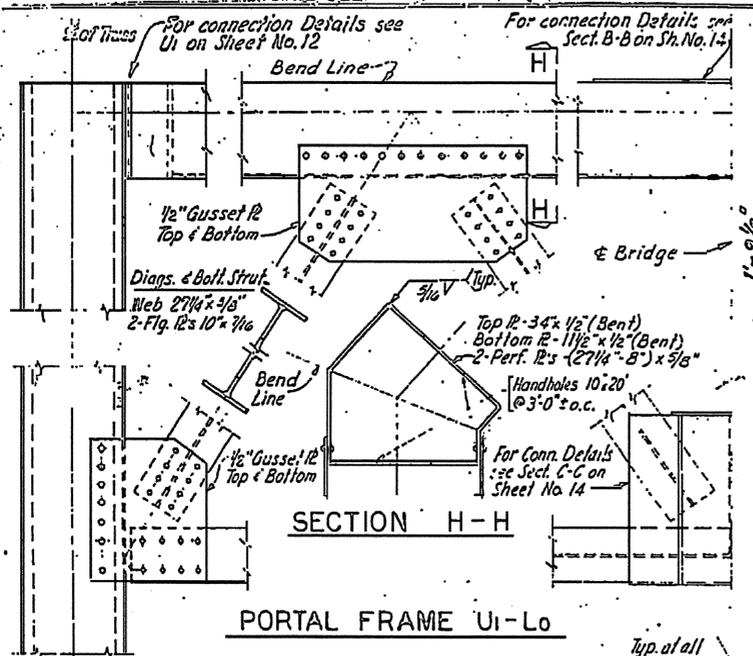
PROJECT No. 8.1399105  
NEW HANOVER COUNTY

STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
RAILROAD

CAPE FEAR RIVER CROSSING  
AT WELLSVILLE

LIFT BRIDGE SUPERSTRUCTURE  
LIFT SPAN FLOOR AND RAILING DET.

Scale	3/4" = 1'-0"
Sheet No.	5-7
Project No.	8.1355105



Notes:  
1. For Lift Span Notes, see Sheet No. 6.

PROJECT, No. 8.1355105  
NEW HANOVER COUNTY  
STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
RALEIGH  
CAPE FEAR RIVER CROSSING  
AT WILMINGTON  
LIFT BRIDGE SUPERSTRUCTURE  
LIFT SPAN TRUSS DETAILS  
L0, Lc AND PORTALS

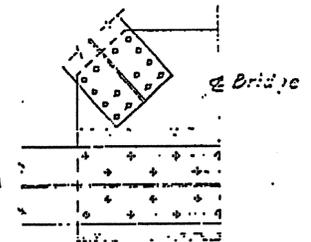
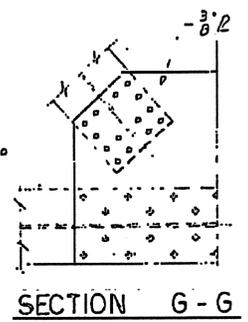
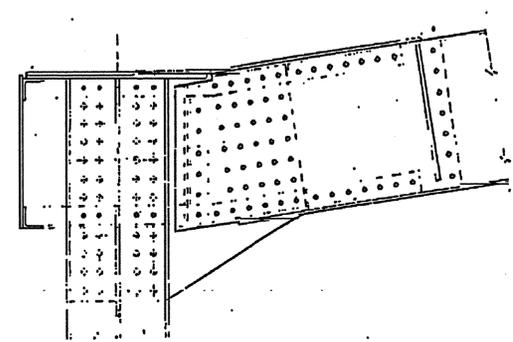
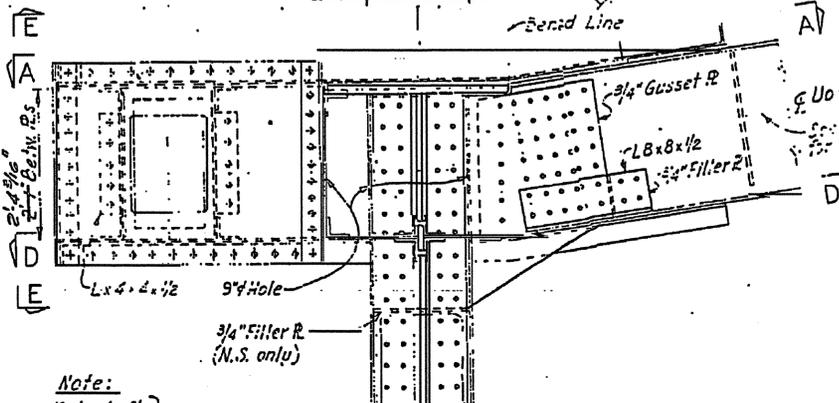
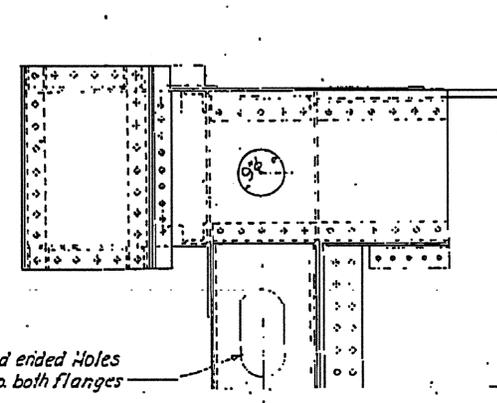
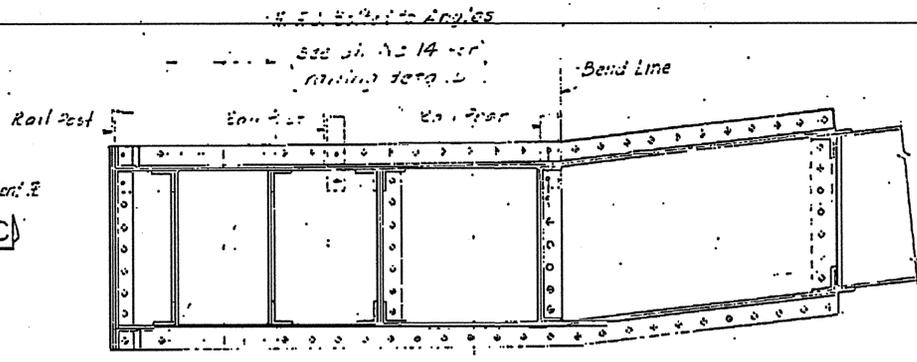
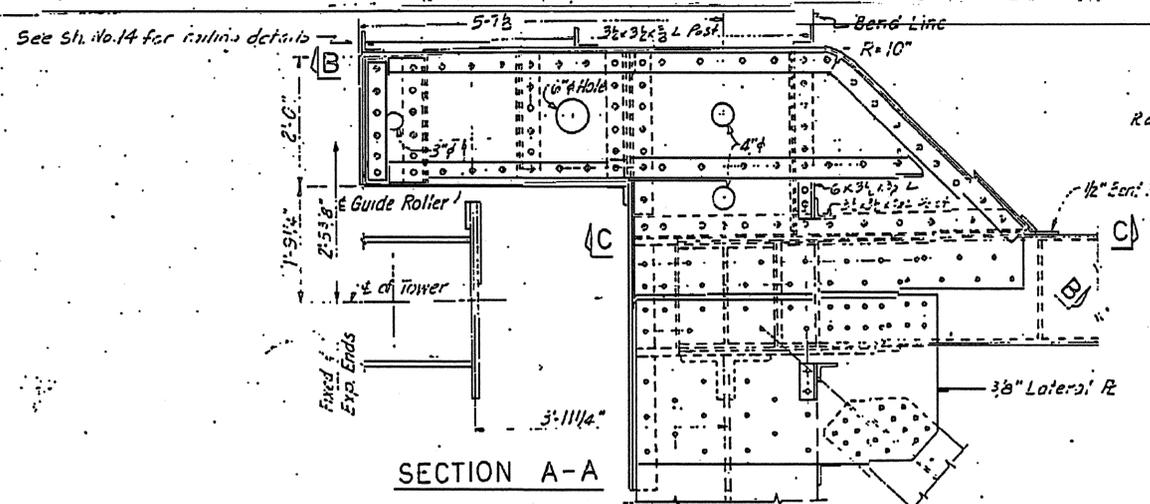
DESIGNER	MCS	2-9-68
DATE		

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

IN CHARGE OF M.C. FLAY

CHECKED BY M.C. FLAY

DESIGNED BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE

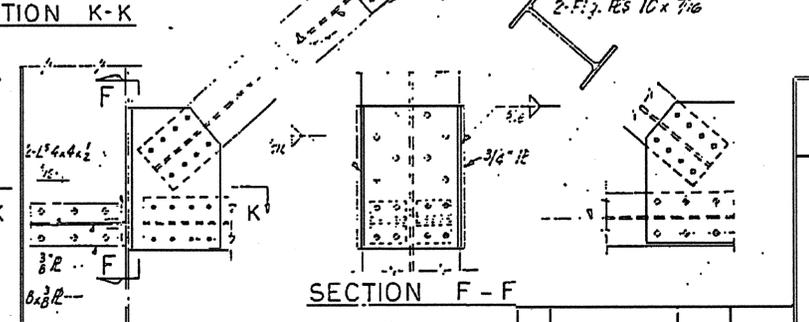
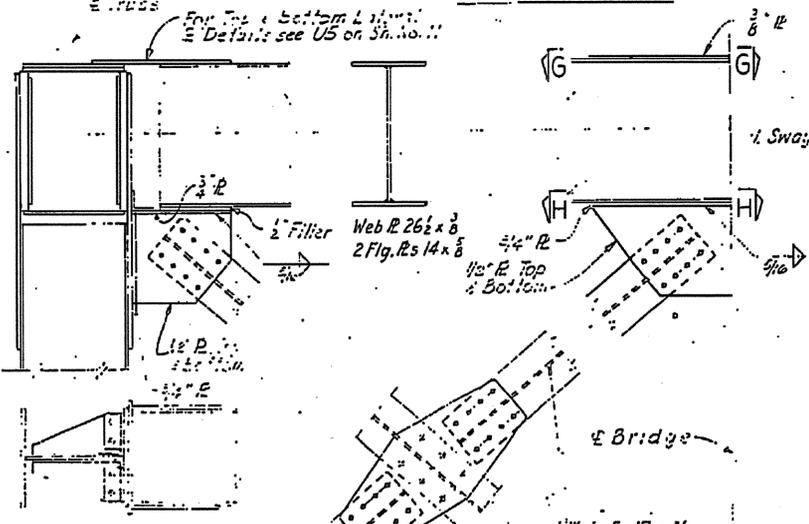
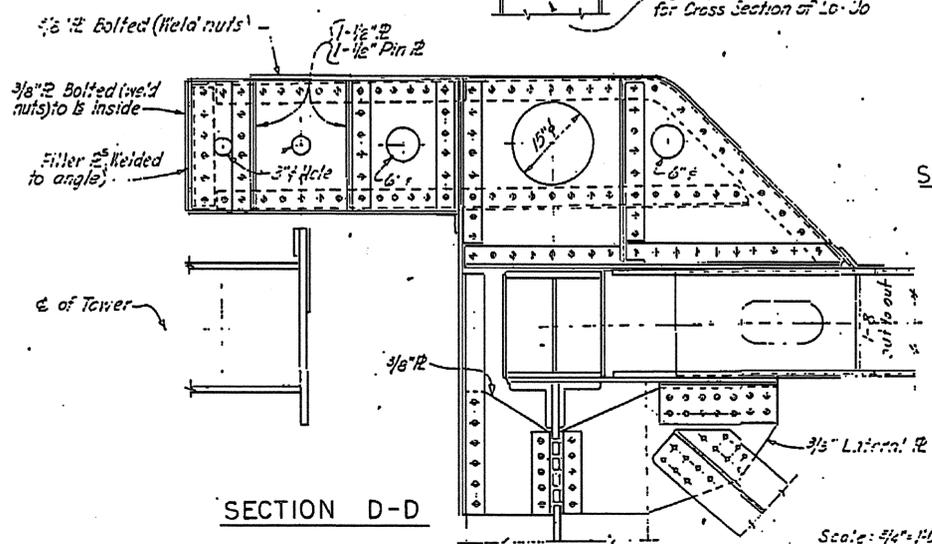


Note:  
 1/2" x 4" x 3/8"  
 RS 1/2" } Unless Noted

These holes }  
 N.S. only

8" x 16" Round ended Holes  
 3" O.C. ± Typ. both flanges

UPPER GUIDE BRACKET



SWAY FRAME AT U5  
 U3 SIMILAR

Note:  
 For Lift Span Notes see Sheet No. 6.

PROJECT No. 8.1355105  
 NEW HANOVER COUNTY  
 STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 RALEIGH  
 CAPE FEAR RIVER CROSSING  
 AT WILKINSON  
 LIFT BRIDGE SUPERSTRUCTURE  
 LIFT SPAN TRUSS DETAILS  
 U<sub>5</sub> AND SWAY FRAMES

REVISION	BY	DATE

M.C. Spald

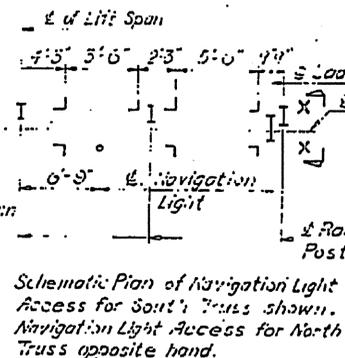
Scale: 3/4" = 1'-0"



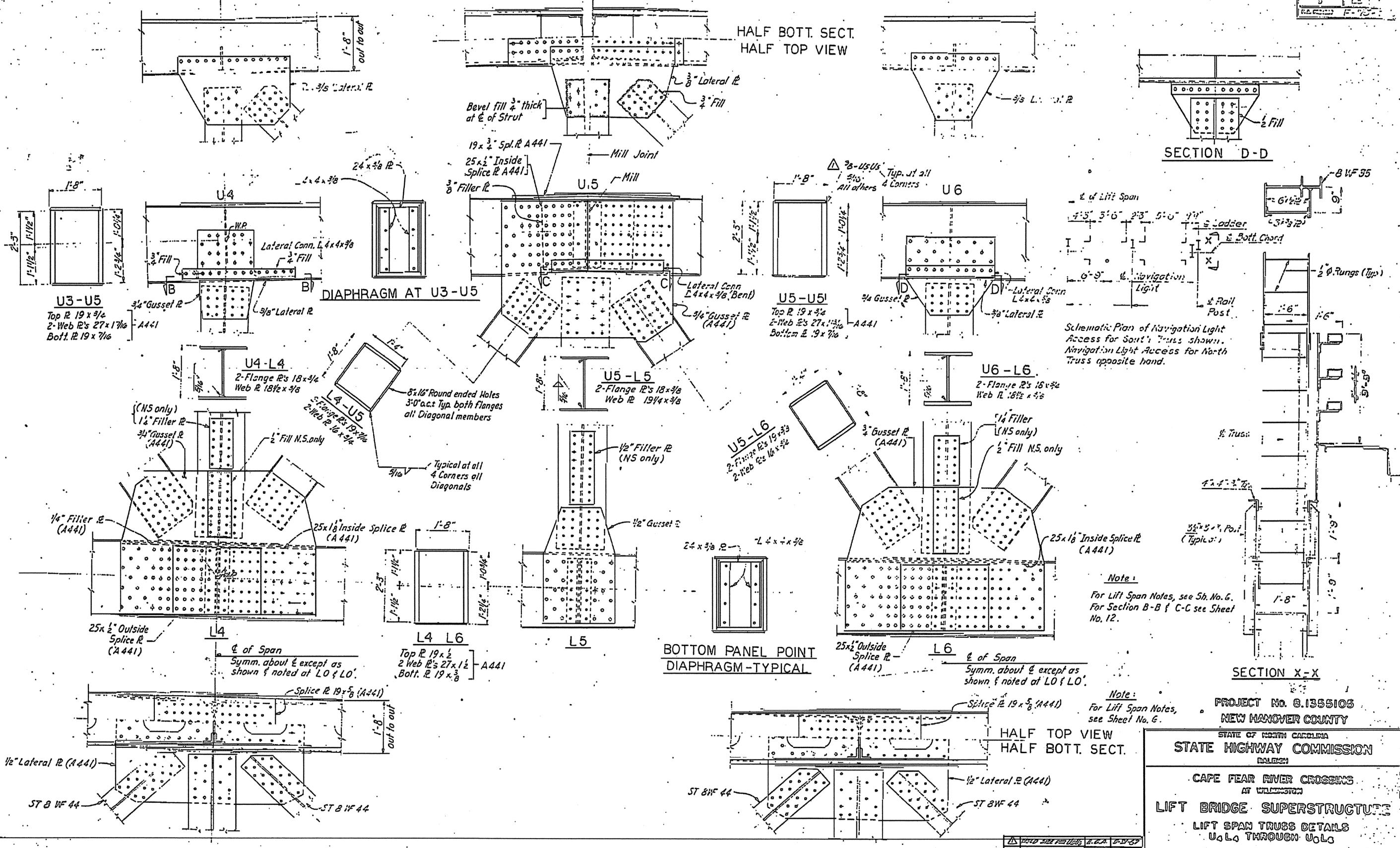
All Top Chord Laterals  
 Web R 26 $\frac{1}{2}$  x  $\frac{3}{8}$   
 2- Flange R's 14 x  $\frac{5}{8}$


HALF BOTT. SECT.  
 HALF TOP VIEW

SECTION D-D



SECTION X-X



Note:  
 For Lift Span Notes, see Sh. No. 6.  
 For Section B-B & C-C see Sheet No. 12.

Note:  
 For Lift Span Notes, see Sheet No. 6.

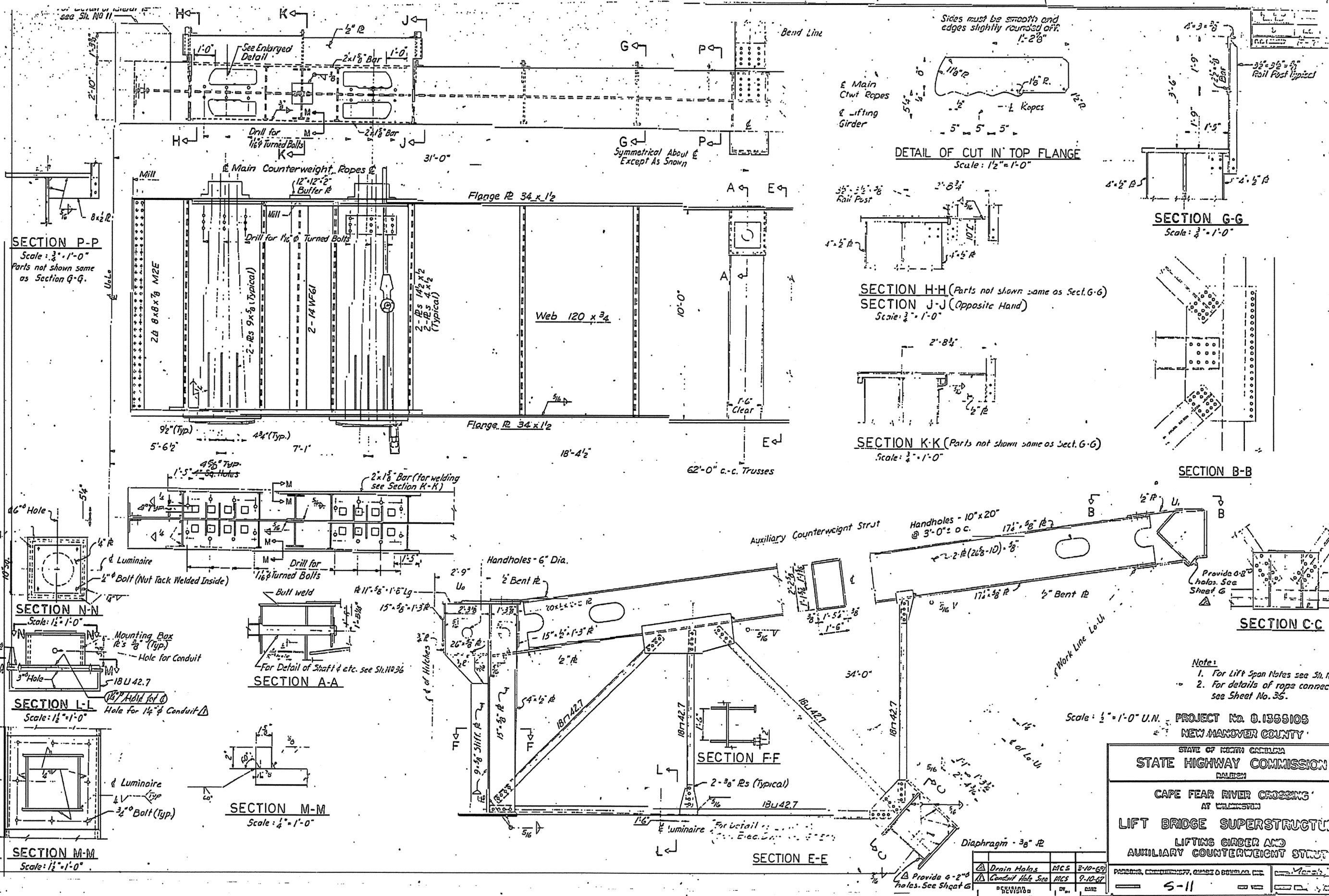
PROJECT No. 8.1355105  
 NEW HANOVER COUNTY

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 RALEIGH

CAPE FEAR RIVER CROSSING  
 AT WILMINGTON  
 LIFT BRIDGE SUPERSTRUCTURE  
 LIFT SPAN TRUSS DETAILS  
 U<sub>3</sub>L<sub>4</sub> THROUGH U<sub>6</sub>L<sub>6</sub>



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



Sides must be smooth and edges slightly rounded off. 1/2" R.

ε Main Ctw Ropes  
 ζ Lifting Girder

DETAIL OF CUT IN TOP FLANGE  
 Scale: 1/2" = 1'-0"

SECTION G-G  
 Scale: 3/4" = 1'-0"

SECTION H-H (Parts not shown same as Sect. G-G)  
 SECTION J-J (Opposite Hand)  
 Scale: 3/4" = 1'-0"

SECTION K-K (Parts not shown same as Sect. G-G)  
 Scale: 3/4" = 1'-0"

SECTION B-B

SECTION C-C

SECTION P-P  
 Scale: 3/4" = 1'-0"  
 Parts not shown same as Section G-G.

SECTION N-N  
 Scale: 1/2" = 1'-0"

SECTION L-L  
 Scale: 1/2" = 1'-0"

SECTION M-M  
 Scale: 1/2" = 1'-0"

SECTION A-A

SECTION M-M  
 Scale: 1/4" = 1'-0"

SECTION F-F

SECTION E-E

- Note:
1. For Lift Span Notes see Sh. N.
  2. For details of rope connect. see Sheet No. 35.

Scale: 1/2" = 1'-0" U.N. - PROJECT No. B.1355103  
 NEW HANOVER COUNTY

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 DIVISION

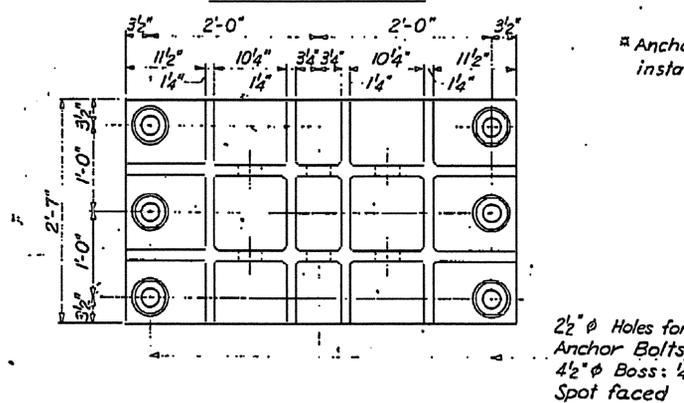
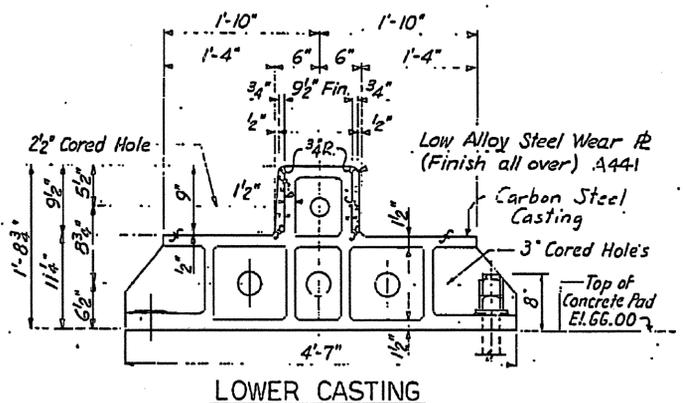
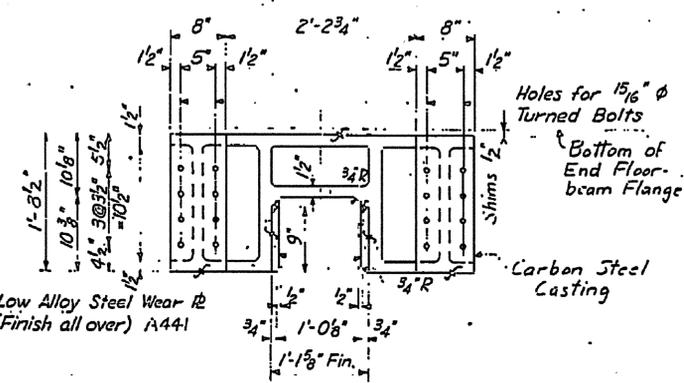
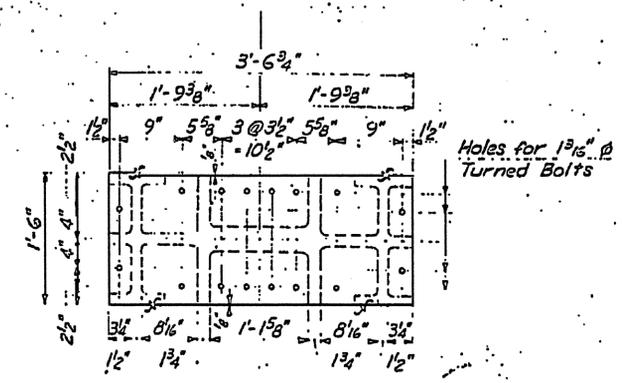
CAPE FEAR RIVER CROSSING  
 AT WINSTON

LIFT BRIDGE SUPERSTRUCTURE  
 LIFTING GIRDER AND  
 AUXILIARY COUNTERWEIGHT STRUT

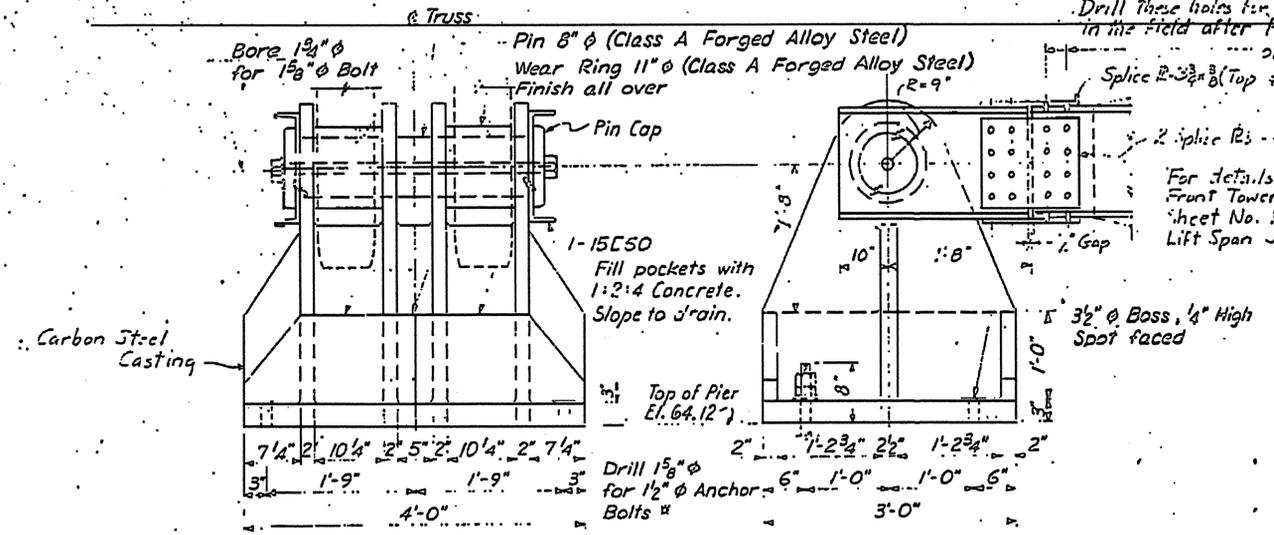
△ Drain Holes	MCS	3-10-69
△ Conduit Hole Size	MCS	2-10-67

REVISION	DATE

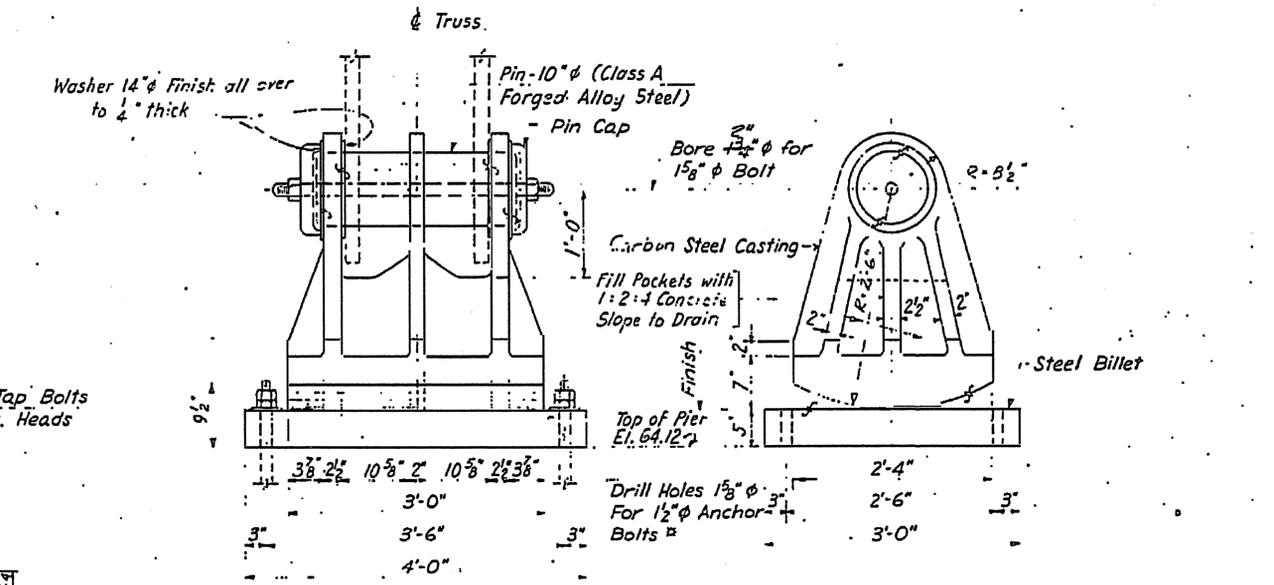
5-11



TRANSVERSE CENTERING SHOE  
Scale: 1"=1'-0"  
(Two Required)



FIXED SHOE  
Scale: 1"=1'-0"



EXPANSION SHOE  
Scale: 1"=1'-0"

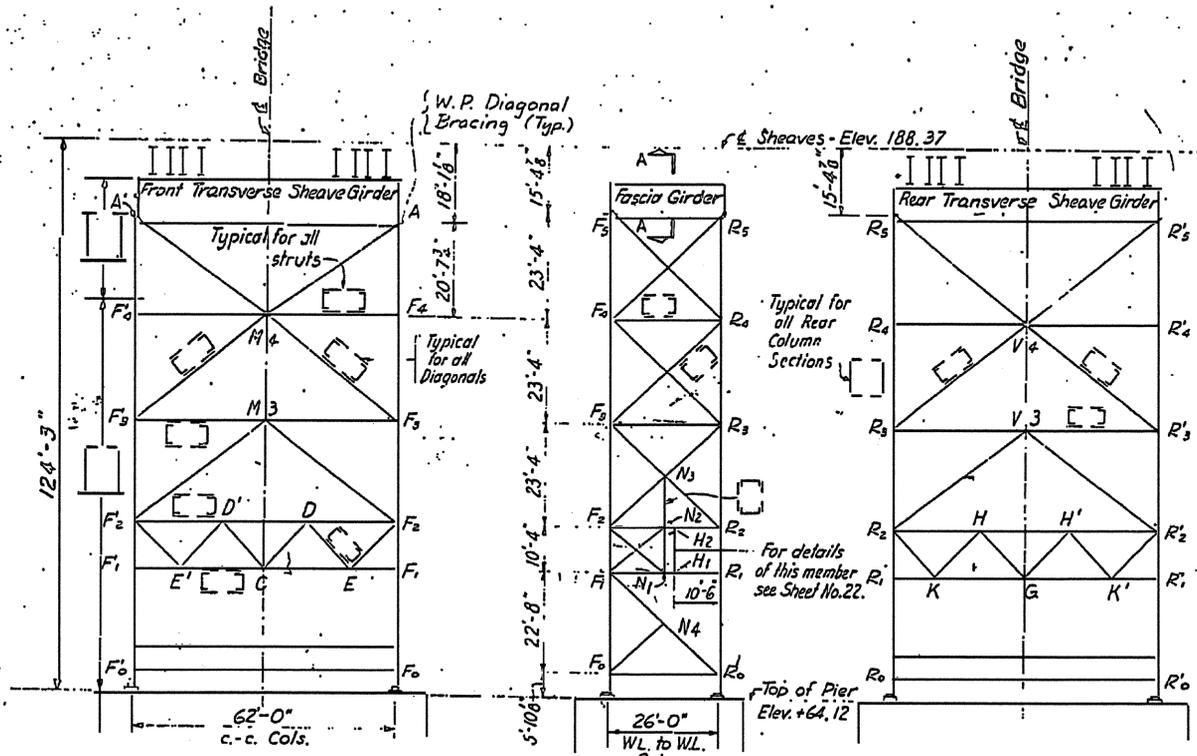
- NOTES:
- All surfaces where steel is bearing steel shall be fine finished. Surfaces of masonry piers and castings with concrete pier tops shall be finish cut.
  - All anchor bolts are furnished and under Contract No. 1.

PROJECT No. B.1355  
NEW HANOVER COUNTY

STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
CAPE FEAR RIVER CROSS  
AT WILMINGTON  
LIFT BRIDGE SUPERSTRUCTURE  
LIFT SPAN BEARINGS

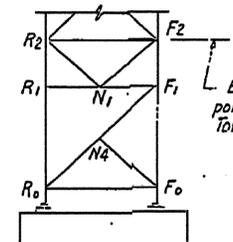
REVISION	BY	DATE

Checked by Carl Sabinger  
 M.C. Plans



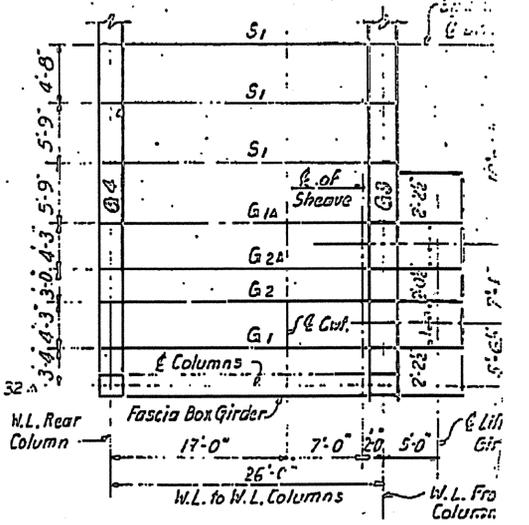
LOAD TO LIFT = 2800 Kips  
 Sheave Load:  
 Span 2800 x 6 = 350 K  
 Counterweight = 350  
 Shoes & Fastening = 15  
 Sheave & Bearing = 45  
 Operating force = 20  
 Total = 780 K/Sheave

Bearing Loads:  
 Bearing at G1 & G1A = 380 Kips  
 Bearing at G2 & G2A = 400 Kips



Bracing above this point same as on East tower except omit N2, N3.

TOWER TOP										
	Longitudinal sheave girders		Floor stringer		Transverse sheave girders					
	G1, G1A	G2, G2A	S1	Front G3	Rear G4					
Dead Load	Moment 45	Shear 37	Moment 36	Shear 26	Moment 130	Shear 20	Moment 3254	Shear 219	Moment 3025	Shear 207
Sheave Load	702	350	740	370			13110	1090	1090	120
Impact 20% Sheave Load	140	70	148	74			2620	208	218	24
Dead Load on Girders	887	451	924	470	130	20	18904	1947	4333	357
Counterweight on Girders							2060	229	3365	370
Dead Load on Girders							2300	280	5405	463
Net section @ 20 ksi	533		1110		78				2600	
Required @ 25 ksi							9100			
Gross Area of @ 12 ksi	38		40		3				31	
Web required @ 15 ksi							130			
Section	Web 8 x 16	Flanges 14 x 4	27 WF 94	2x 8x 8x 14 x 6	2x 8x 8x 14 x 6	2x 8x 8x 14 x 6	2x 8x 8x 14 x 6	2x 8x 8x 14 x 6	2x 8x 8x 14 x 6	2x 8x 8x 14 x 6
Section Modulus	1400	1280	242.8	9100	3310					
Web Area Gross	40.13	46.13	199.5	126						
Material	A 36	A 36	A 36	A 36	A 36					



HALF PLAN OF TOWER TOP

COLUMN REACTIONS (KIPS)			
Member	Front Column	Rear Column	
		Counterweight	on Ropes
Dead Load	-552	-555	-808
Sheave Load	-1440	-120	-
Total Static Load	-1992	-675	-808
Sheave Load Impact	-288	-24	-
Live Load on Tower Floor	-99	-99	-
L.L. on Tower Floor Impact	-26	-26	-
Maximum Load on Wind	-2280	-800	-808
Minimum Load on Wind	-1067	-545	-678
30° Longitudinal Wind	±318	±318	±571
75° Longitudinal Wind	±678	±678	±578
Total Maximum Load	-2670	-1353	-1886
Total Minimum Load	-329	-133	0
30° Wind Transverse	±57	±57	±57
75° Wind Longitudinal	±108	±108	±108
75° Wind Transverse	±54	±54	±54

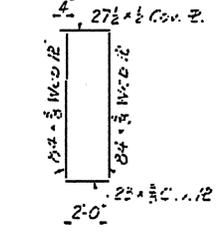
TOWER NOTES:

- For General Notes, see Sheet No. 2.
- At tower column splices, the abutting surfaces shall be milled and brought to an even bearing.
- All rivets or bolts in the columns and in the front and rear transverse sheave box girders are to be 1" φ, unless otherwise noted. All other rivets or bolts in the towers are to be 3/4" φ, unless otherwise noted. See General Note No. 6 for use of bolts and rivets.
- For Details of Tower Floor System, see Sheet No. 17.
- All tower gusset plates shall be 1/2" thick unless noted.
- For additional welds at ends of all box sections, see Detail "W" on this sheet.

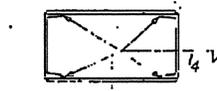
FRONT COLUMN		REAR COLUMN	
Member	F1, F2, F3, F4, F5	R1, R2, R3, R4, R5	R0, R2
Dead Load	235	348	471
Sheave Load	1440	1440	1440
20% Sheave Ld. Impact	288	288	288
Total without Wind	1963	2076	2199
30° Longitudinal	36	135	295
75° Longitudinal	96	326	635
30° Transverse	23	56	137
75° Transverse	27	49	113
30° Longit. (1)	82	82	-
30° Transv. (1)	136	136	-
75° Transv. (2)	-	704	-
Gravity Load Moments	1290	-	58
Axial Stress	1963	2076	2336
Moment	1290	-	762

FRONT BRACING				REAR BRACING				
Member	Portal		Above portal		Portal		Above portal	
	F1, F2	F3, F4	F5, F6	F7, F8	R1, R2	R3, R4	R5, R6	R7, R8
2 1/2% Column Load		±55		±63		±17		±19
Control House Load	-37				+177	-50	+48	+80
Transverse Wind	-23/±118	-134/±20	±58	-62/±42	±65	+103/±25	-105/±24	±47
Bending Moment					14/54	22		
Design Stress	-160	-132	±113	-62	±128	-103	-155	-112, ±144
Design Moment					54	22		
L/r	56	56	40.5	84	106	56	47	40.5
Allowable Unit Stress	Compression 15.0	Tension 20	20	20	20	20	20	20
Area Gross	10.7	9.0	7.3	4.5	10.1	11.4	15.2	5.8
Area Required	5.9	1.4	5.7	2.1	6.4	-	5.8	3.1
Section	2-12L25 2 Cover R5 (30-16) 3/8				2-12L25 2-25 2-25 2-25			
Area Gross	14.64				26.6			
Area Net	12.32				14.64			
Material	A 36							

SIDE BRACING										
Member	R0, F1		F0, N4		N1, F1		N1, R1		F2, R2	
	Control House Loads									
2 1/2% Column Load	±90	±45								
Wind	-261		-199/±175	-23	±114	±145	-147/±115	-50/±32	±154	±89
Bending Moment					68.5					
Design Stress	±351	-45	-199/±175	-23	±156	±145/±122	±141	-50	±192	±129
Design Moment					88.5					
L/r	40	46	30	30	23	31.6	35.2	70.5	47.5	70.5
Allowable Unit Stress	Compression 15.5	Tension 20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Area Gross	22.6	3.0	12.7	14.7	9.9	9.2	9.1	3.5	13.9	5.5
Area Required	17.5		8.8		7.0	9.6	7.1		9.0	5.0
Section	2-12L25		12L25		2-12L25		2-12L25 + 2R5 (22-12) 3/8			
Section Area Gross	24.64		14.64		24.64		14.64			
Section Area Net	22.32		22.32		22.32		12.32			
Material	A 36									



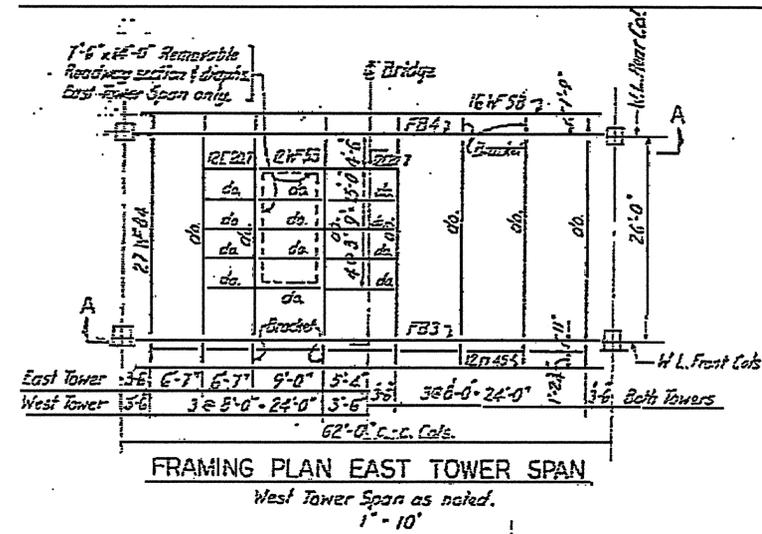
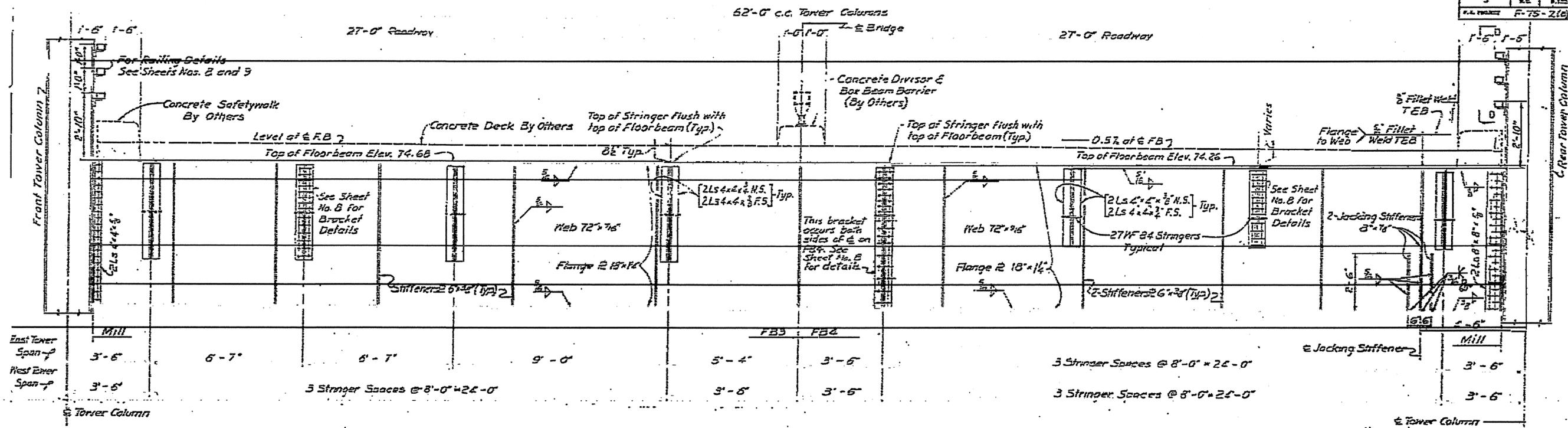
SECTION A-A



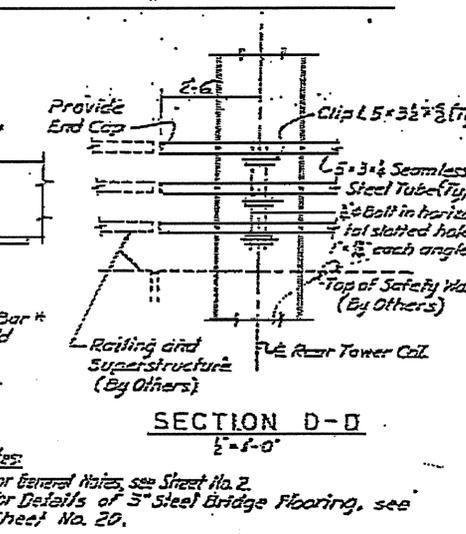
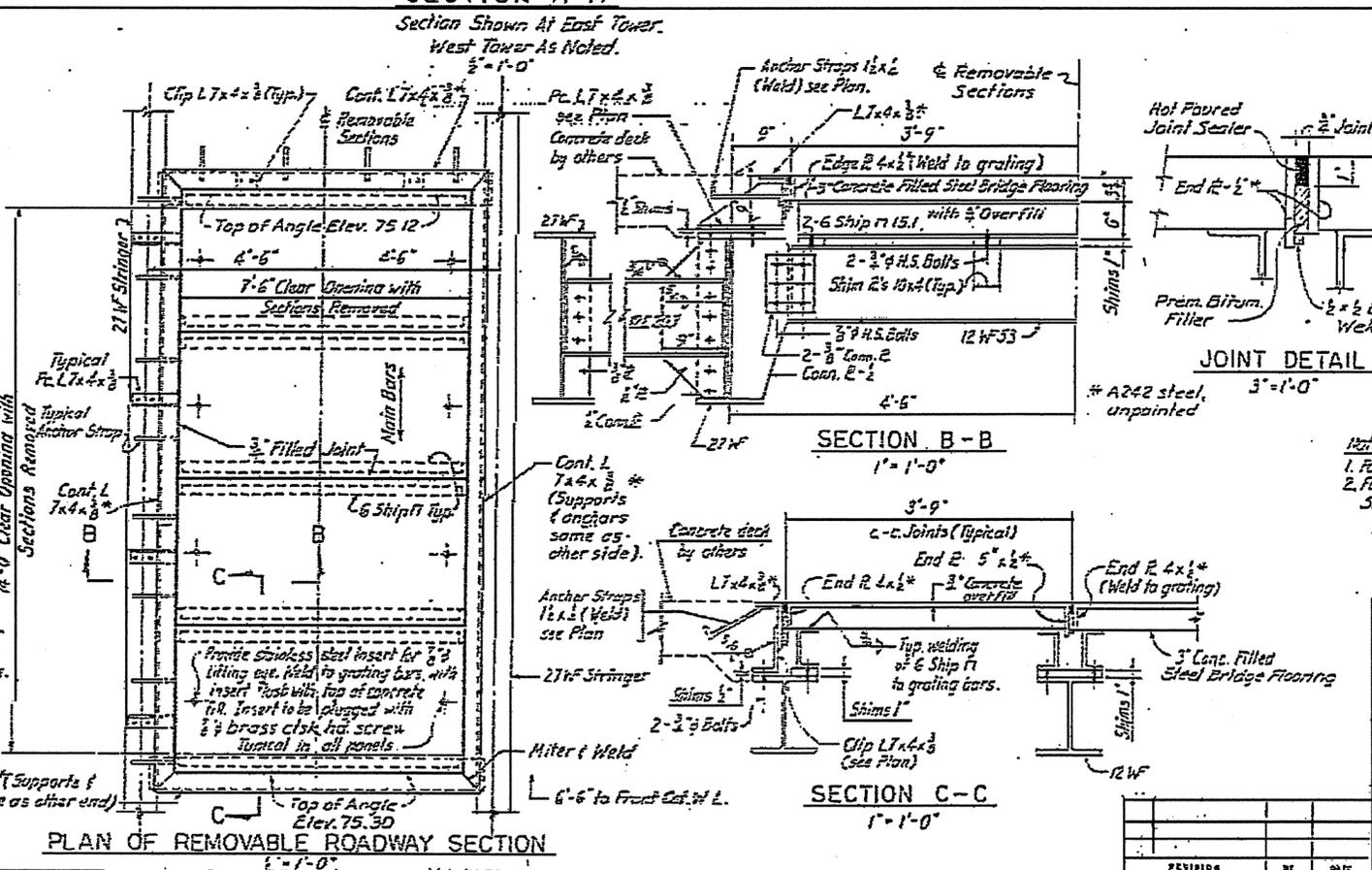
DETAIL "W"  
Additional Welds At Ends of Box Sections  
Scale: 3/4" = 1'-0"

① From guide rollers \* Extends from Top of Base R to 1'-0" above Floor Beam.  
 ② Portal moment \*\* Extends from 1'-0" above Floor Beam to splice 4'-9" above R2.

NO.	DATE	BY	CHKD.
3	11-11-57	W.C.	W.C.
P.A. NUMBER F-75-216			



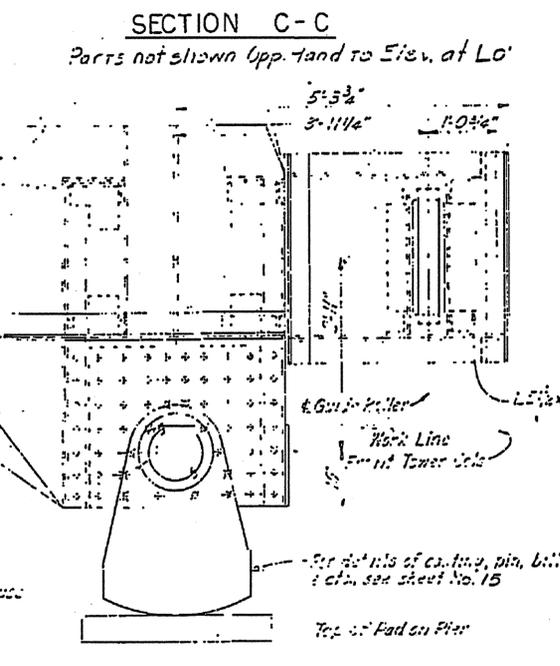
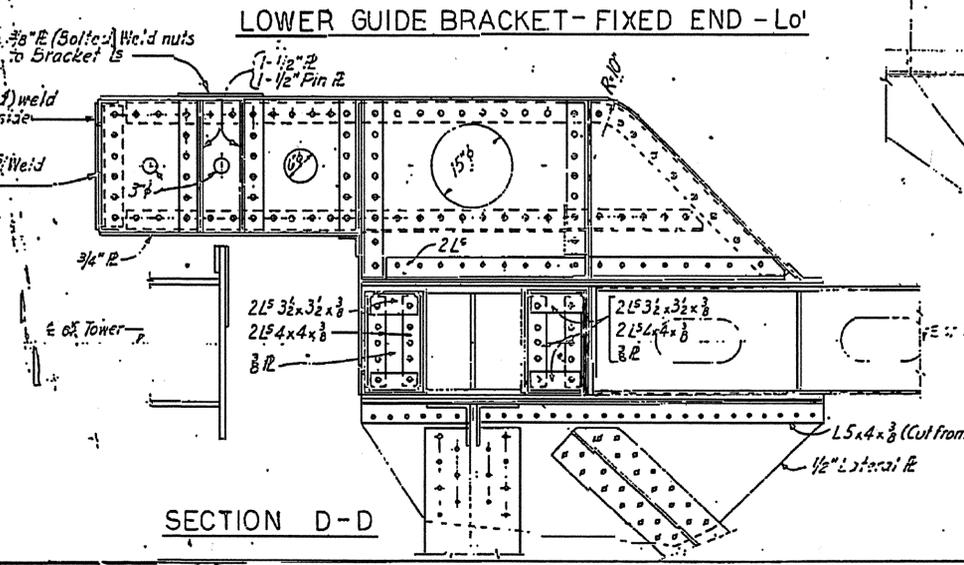
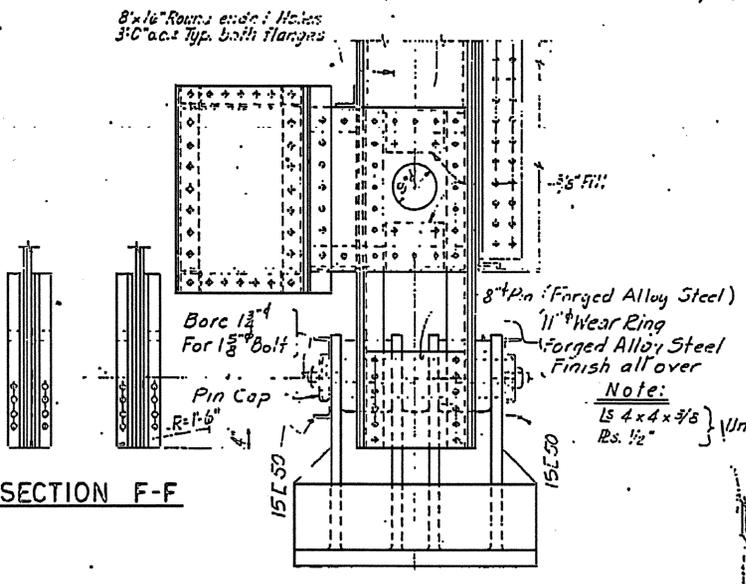
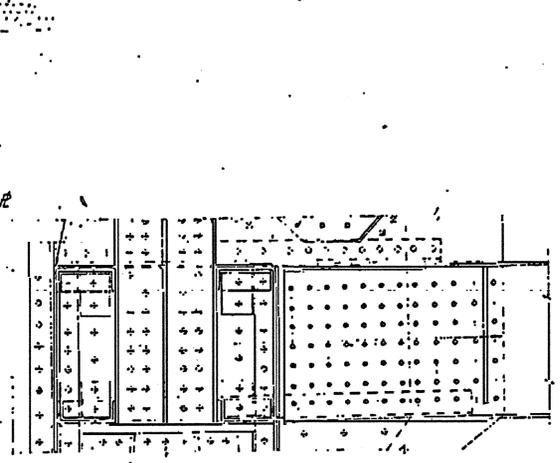
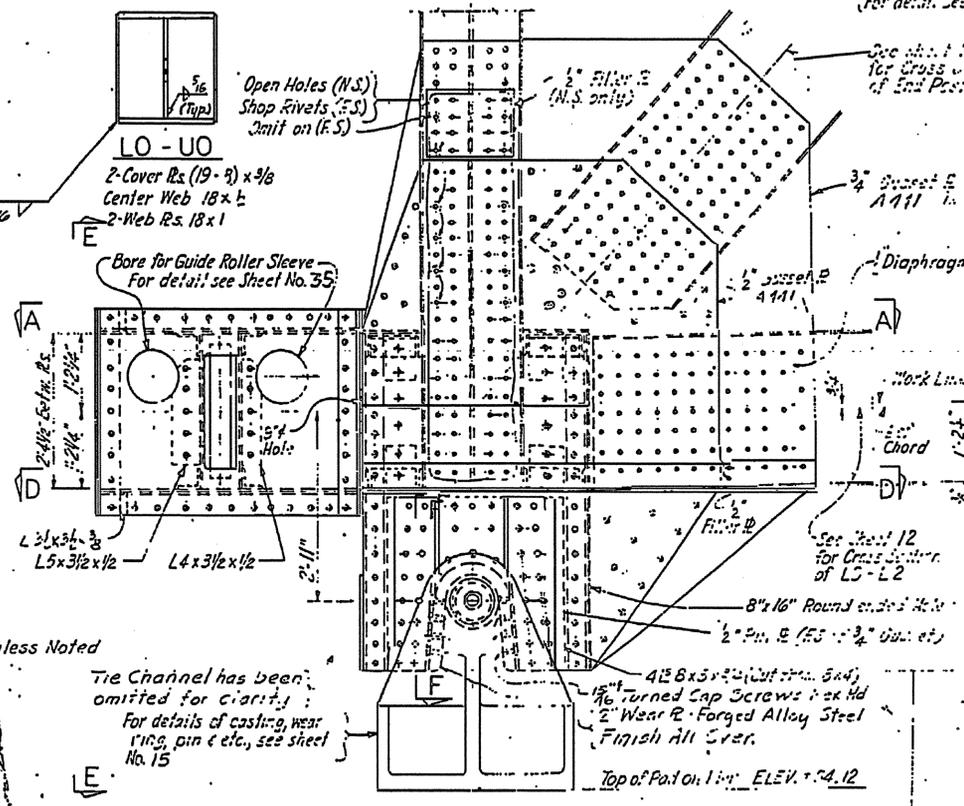
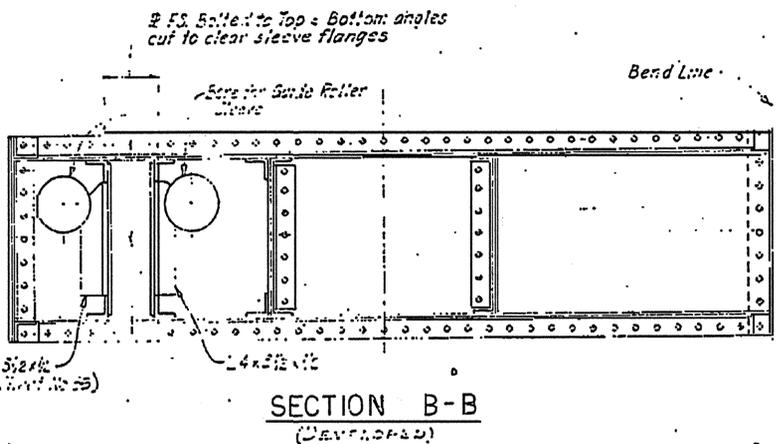
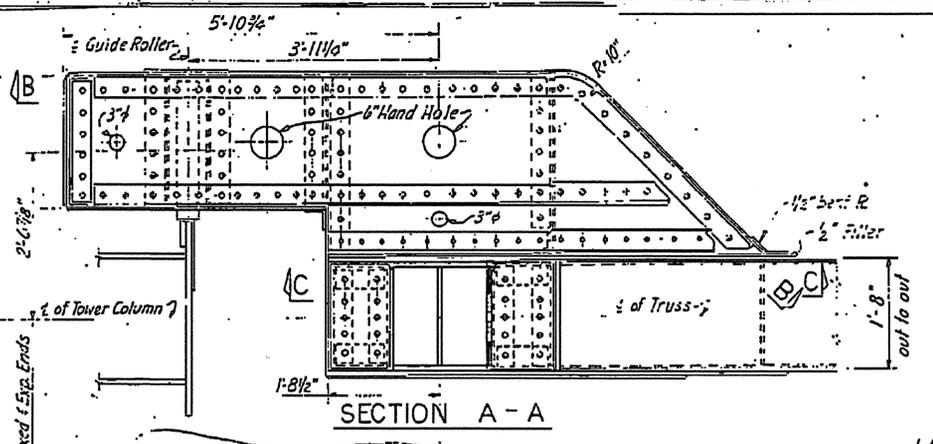
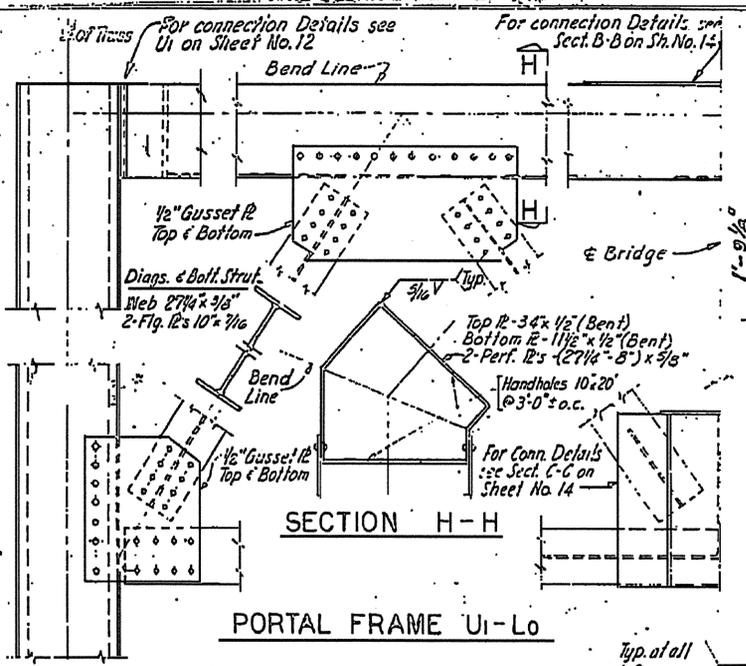
LIFT SPAN FLOOR				
	FB3	FB2	Stringer	
Shear (Kips)	Dead	76 <sup>k</sup>	561	13.2 <sup>k</sup>
	Live	99	—	38.3
	Impact	26	—	11.5
Moment (Ft. Kips)	Dead	201	561**	63.4
	Live	1220 K-Ft	1220	88
	Impact	443	460	55
Web Area @ 12" In		1672	37.5 @ 15 1/2"	5.39'
	S.M. Area @ 30" In	1990 in. <sup>2</sup>	1990 in. <sup>2</sup>	195 in. <sup>2</sup>
	Section Modulus	1990 in. <sup>3</sup>	2080 in. <sup>3</sup>	211.7 in. <sup>3</sup>
Material	A-36	A-36	A-36	



Notes:  
1. For General Notes, see Sheet No. 2.  
2. For Details of 3" Steel Bridge Flooring, see Sheet No. 20.

PROJECT NO. 8.1355105  
NEW HANOVER COUNTY  
STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
EXHIBIT  
CAPE FEAR RIVER CROSSING  
AT WILMINGTON  
LIFT BRIDGE SUPERSTRUCTURE  
TOWER SPANS - FRAMING PLAN,  
FLOORBEAMS AND DETAILS  
FARNSWORTH, HOFF, CRUDE & DOUGLAS, INC.  
March, 1957  
S-14

Scale	3/4" = 1'-0"
Sheet No.	S-15
Project No.	B.1355105



Notes:  
1. For Lift Span Notes, see Sheet No. 6.

PROJECT No. B.1355105  
NEW HANOVER COUNTY

STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
DALEIGH

CAPE FEAR RIVER CROSSINGS  
AT WILMINGTON

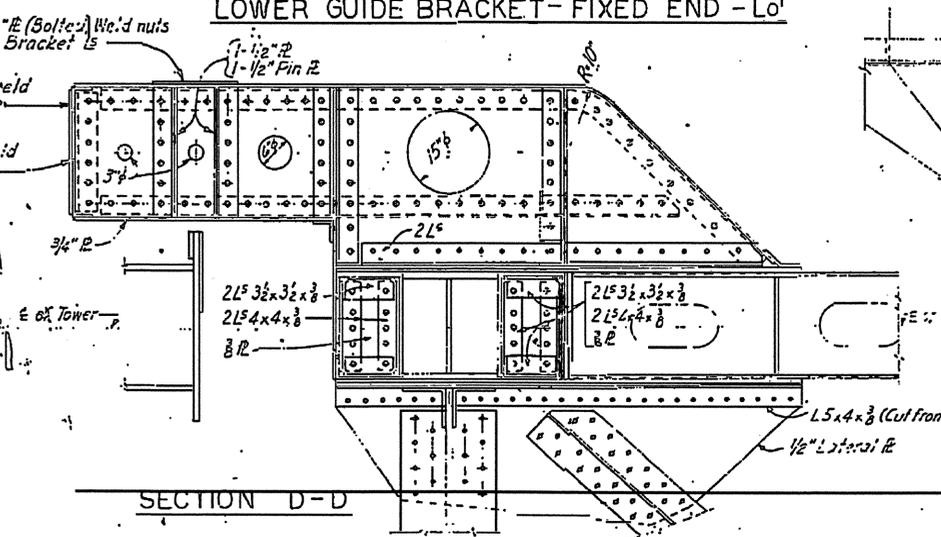
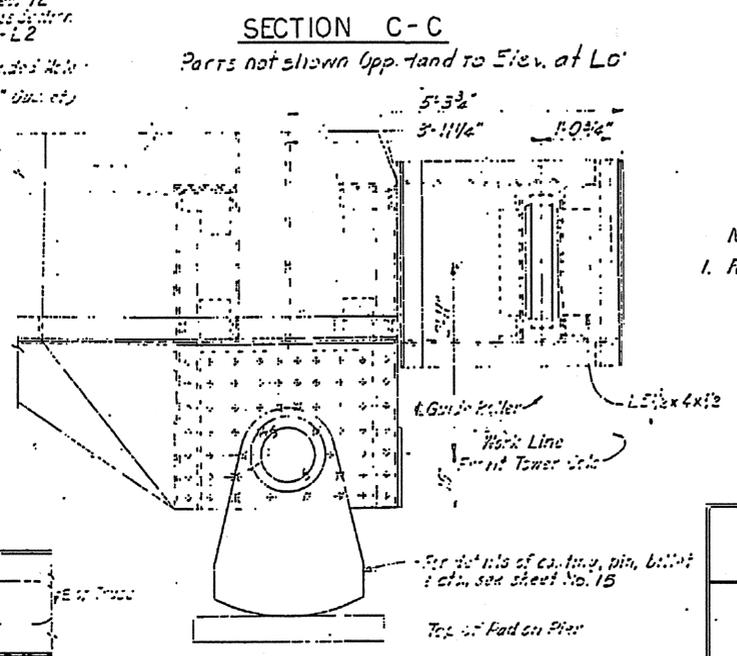
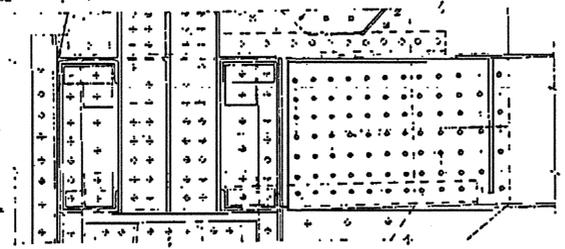
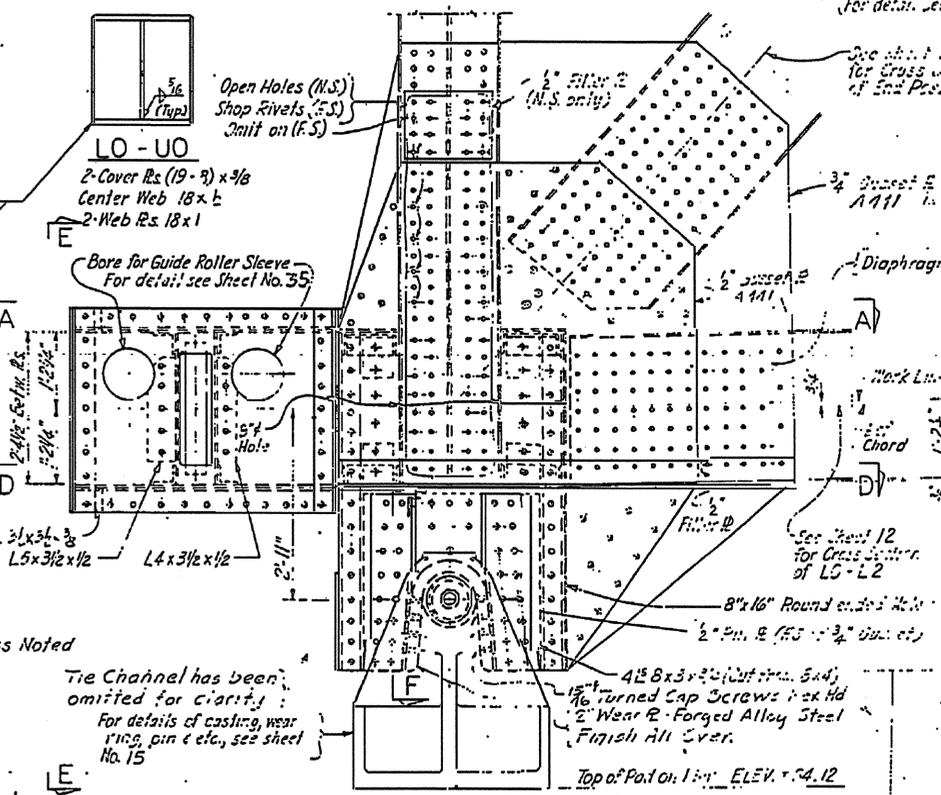
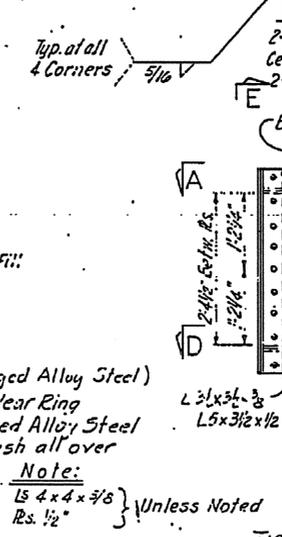
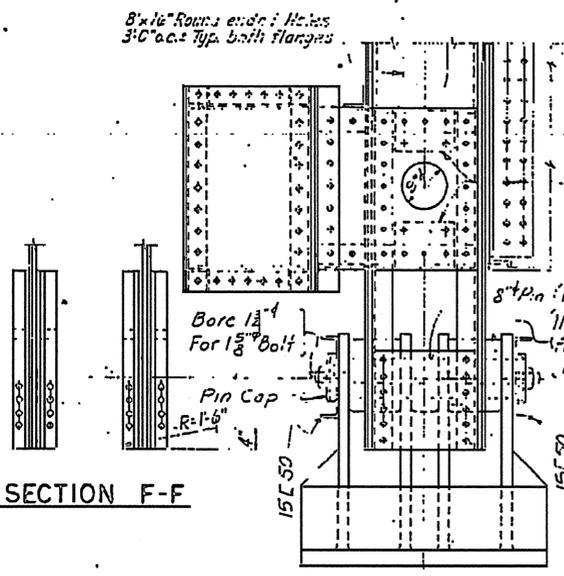
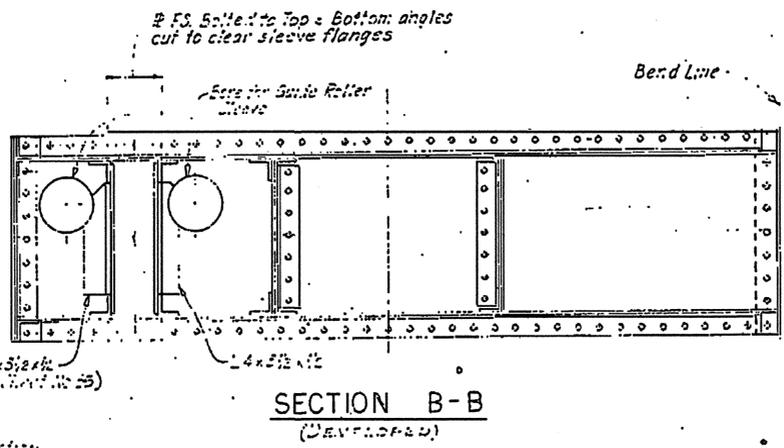
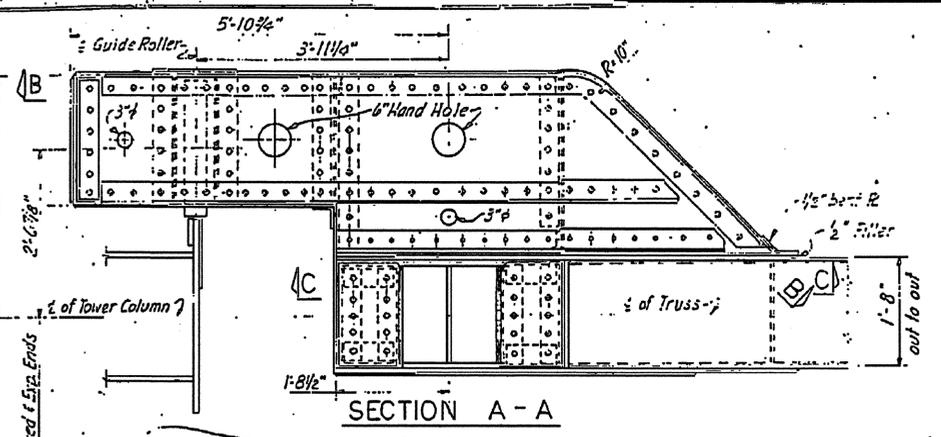
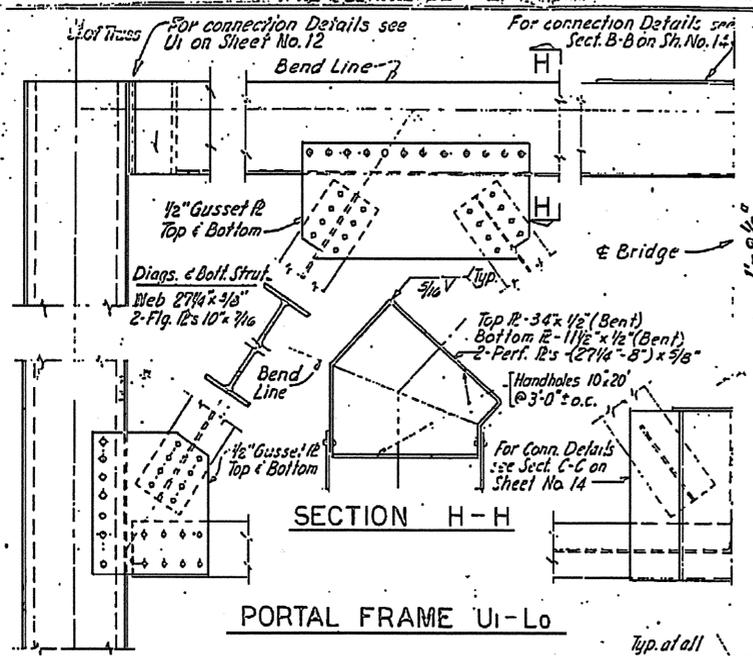
LIFT BRIDGE SUPERSTRUCTURE  
LIFT SPAN TRUSS DETAILS  
L0, Lc AND PORTALS

DESIGNED BY	PAUL W. GIBSON
CHECKED BY	W. L. GIBSON
DATE	2-9-68
REVISION	

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

M.C. CHU

DATE	BY



Notes:  
1. For Lift Span Notes, see Sheet No. 5.

PROJECT No. 8.1355105  
NEW HANOVER COUNTY

STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
RALEIGH

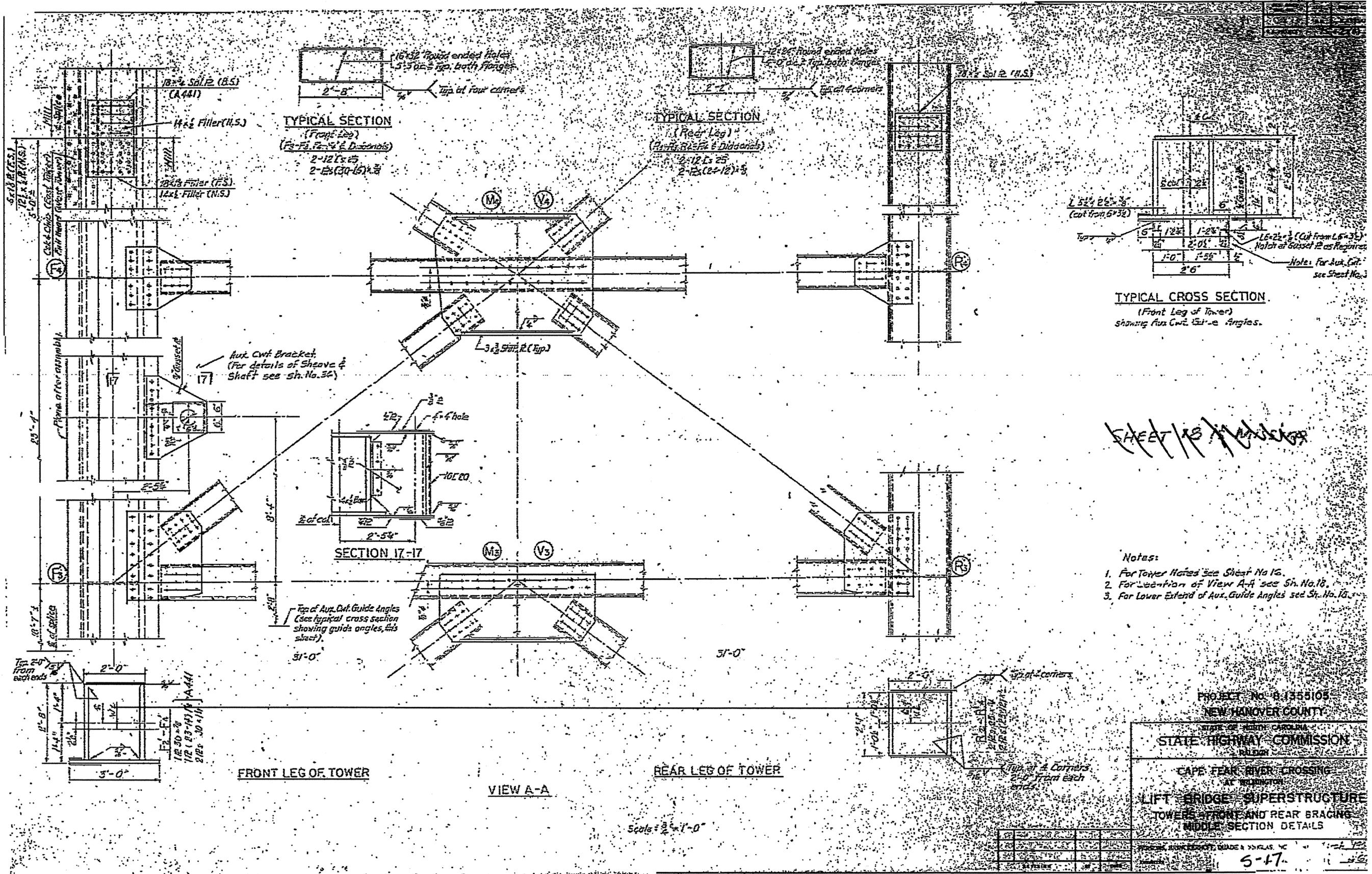
CAPE FEAR RIVER CROSSING  
AT WILMINGTON

LIFT BRIDGE SUPERSTRUCTURE  
LIFT SPAN TRUSS DETAILS  
L0, L0' AND PORTALS

DESIGNED BY	DATE	APPROVED BY	DATE

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

BY ENGINEER M.C. SLOAN



SHEET 15 of 16

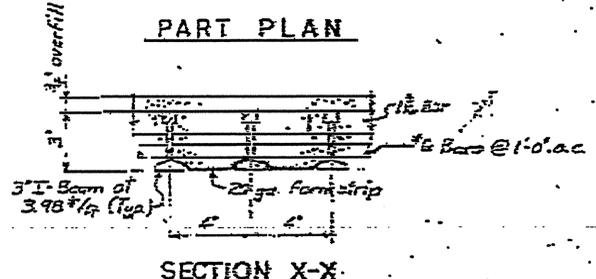
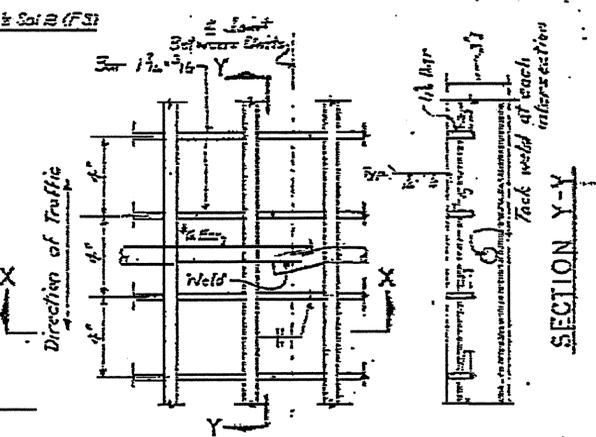
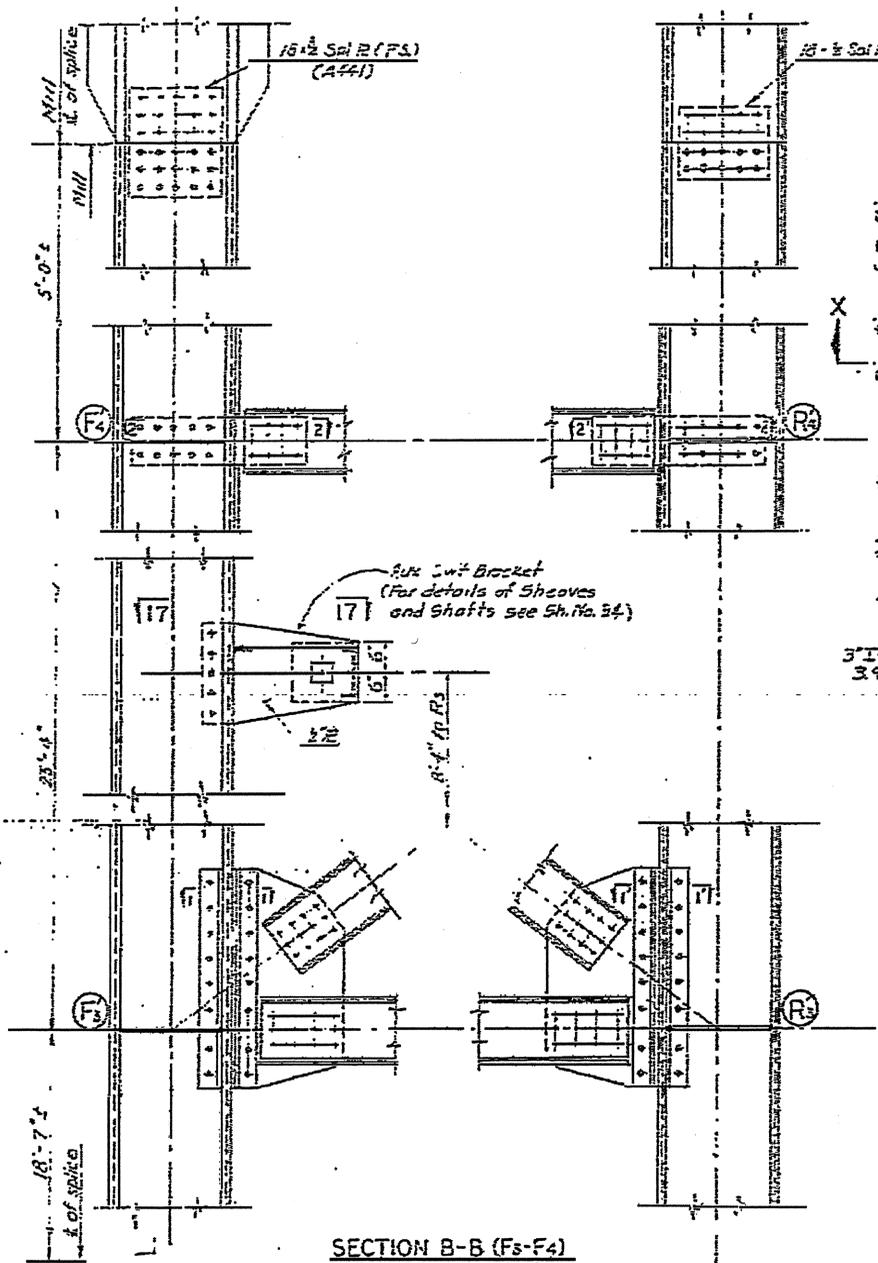
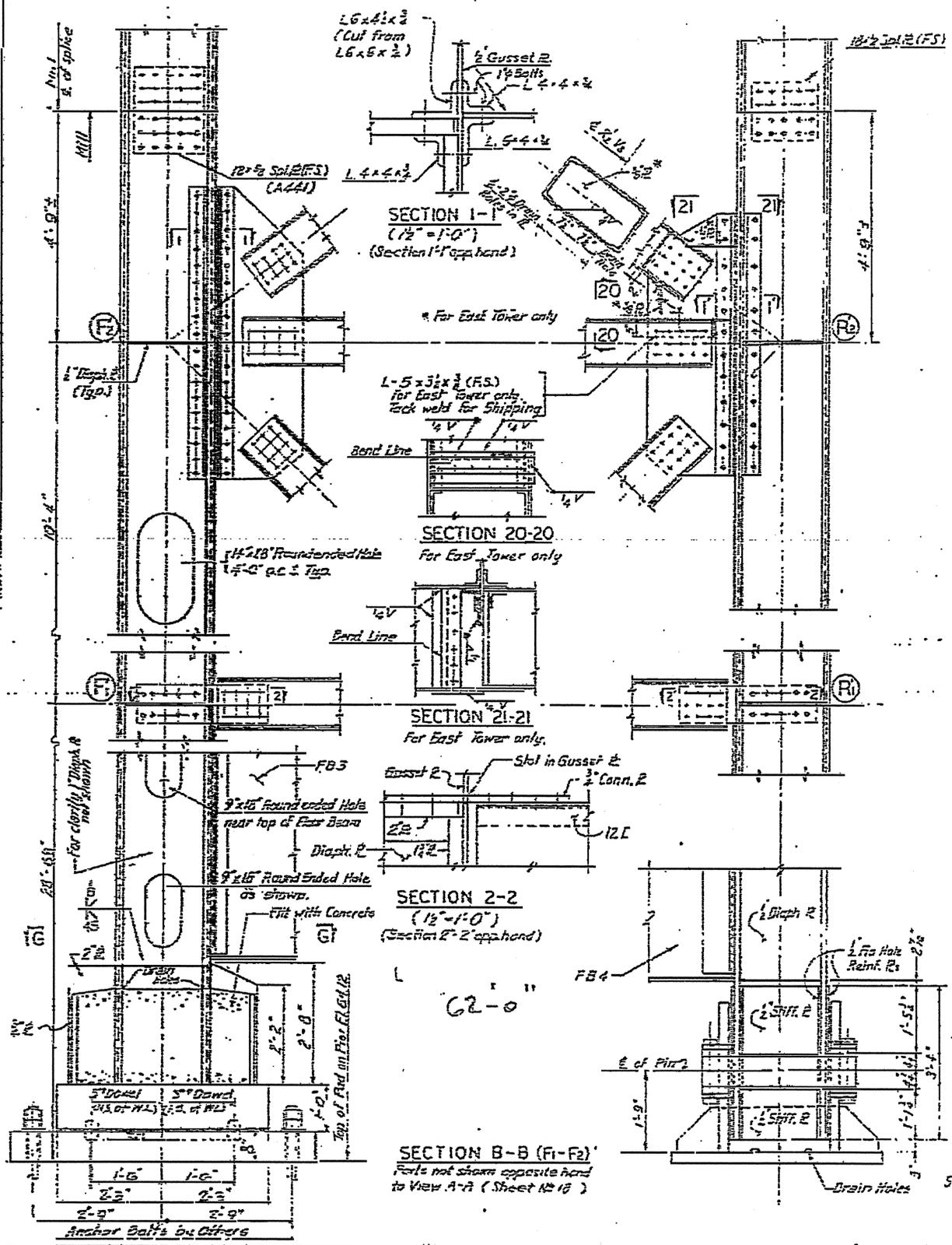
- Notes:
1. For Tower Notes see Sheet No. 16.
  2. For location of View A-A see Sh. No. 18.
  3. For Lower Extent of Aux. Guide Angles see Sh. No. 18.

PROJECT No. B-1355105  
 NEW HANOVER COUNTY  
 STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 DIVISION  
 CAPE FEAR RIVER CROSSING  
 AT WILMINGTON  
 LIFT BRIDGE SUPERSTRUCTURE  
 TOWERS FRONT AND REAR BRACING  
 MIDDLE SECTION DETAILS

5-17

Scale = 3/8" = 1'-0"

REV.	DATE	BY	CHKD.
1	11-1-54	J.M.	J.M.
P.A. NUMBER F-75-2(B)			



DETAILS OF 3" STEEL BRIDGE FLOORING  
3'-10"  
For location, see Sheet No. 17.

- NOTE:
1. For Tower Notes see Sh. No. 16
  2. For Section G-G & H-H see Sh. No. 18
  3. For Location of Section B-B see Sh. No. 15
  4. For Section 17-17 see Sh. No. 19
  5. For Material and Sections of Main Columns, see Sh. Nos. 18 & 19.
  6. For details of Floor Beams FB3 and FB4 see Sheet No. 17.

PROJECT No. 8.1355105  
NEW HANOVER COUNTY

STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
RALEIGH

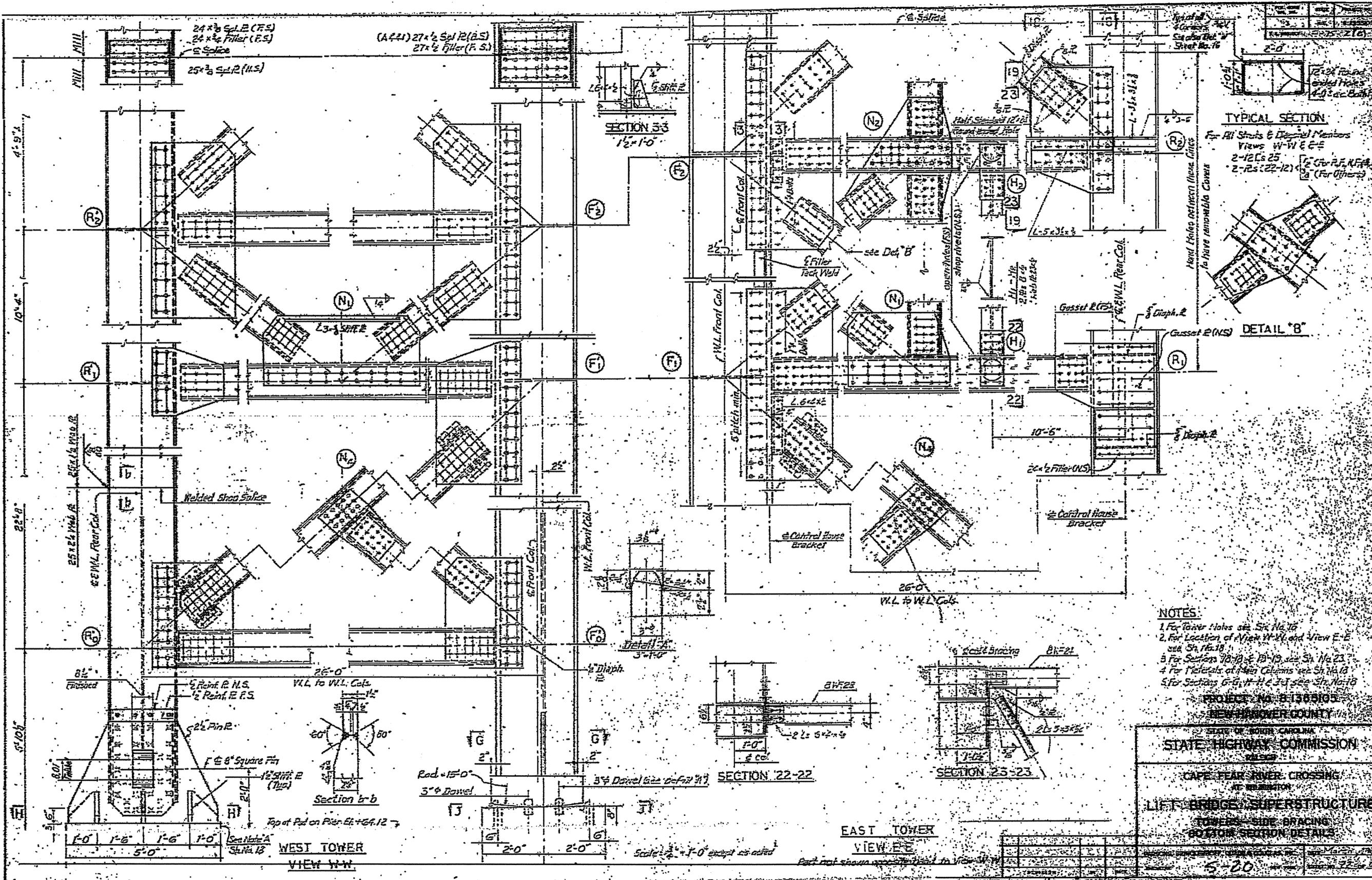
CAPE FEAR RIVER CROSSING  
AT WILMINGTON

LIFT BRIDGE SUPERSTRUCTURE  
TOWERS - FRONT AND REAR BRACING  
BOTTOM & MIDDLE SECTION DETAILS

FRANK, BRONKHORST, GIBBS & ASSOCIATES, INC.  
5-18

Scale: 3/4" = 1'-0" except as noted.





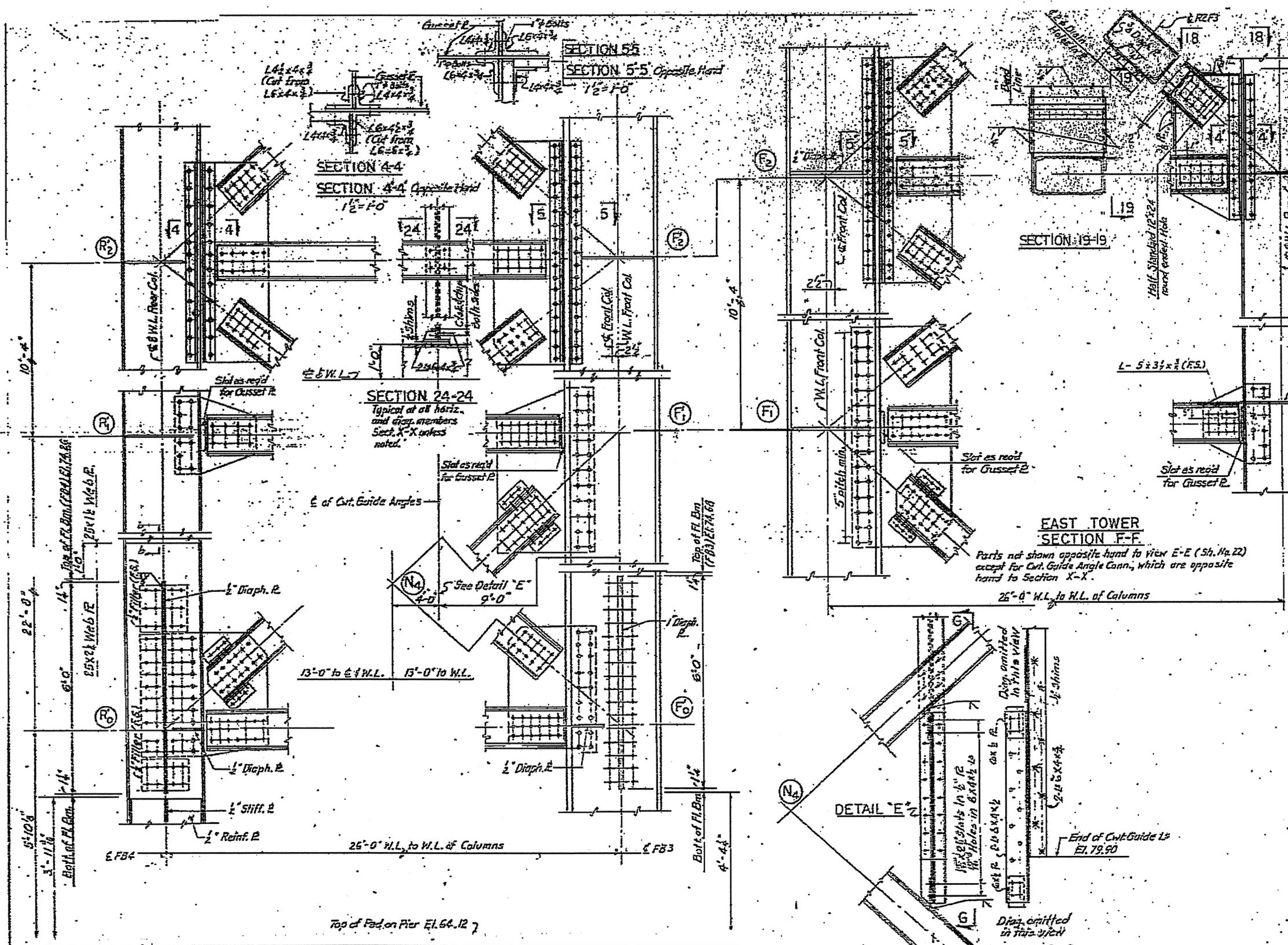
**TYPICAL SECTION**  
 For All Struts & Diagonal Members  
 Views W-W & E-E  
 2-12Cs 25  
 2-2s (22-12) (F.S. or F.S. or F.S.)  
 (F.S. or F.S.)

**DETAIL 'B'**

- NOTES:**
- 1 For Tower Notes see Sh. No. 10
  - 2 For Location of View W-W and View E-E see Sh. No. 18
  - 3 For Sections 22-22 & 25-23 see Sh. No. 23
  - 4 For Materials of Main Columns see Sh. No. 13
  - 5 For Sections G-G, H-H & J-J see Sh. No. 18

PROJECT NO. B-1389105  
 NEW HANOVER COUNTY

STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
 RALEIGH  
 CAFE FEAR RIVER CROSSING  
 AT WILMINGTON  
**LIFT BRIDGE SUPERSTRUCTURE**  
 TOWERS - SIDE BRACING  
 BOTTOM SECTION DETAILS



- NOTES:**
1. For Tower Notes see Sh. No. 16
  2. For Location of Section X-X & Section F-F see Sh. No. 17
  3. For Materials of Main Columns see Sh. No. 18
  4. For Details of Floor Beams FB3 and FB4 see Sheet No. 17.

PROJECT NO. 81355105  
 NEW HANOVER COUNTY  
 STATE HIGHWAY COMMISSION  
 RALEIGH  
 CAPE FEAR RIVER CROSSING  
 AT WILMINGTON  
 LIFT BRIDGE SUPERSTRUCTURE  
 TOWERS - SIDE BRACING  
 BOTTOM SECTION DETAILS

**WEST TOWER SECTION X-X**  
 Parts not shown, opposite hand to View W-W (Sh. No. 22)

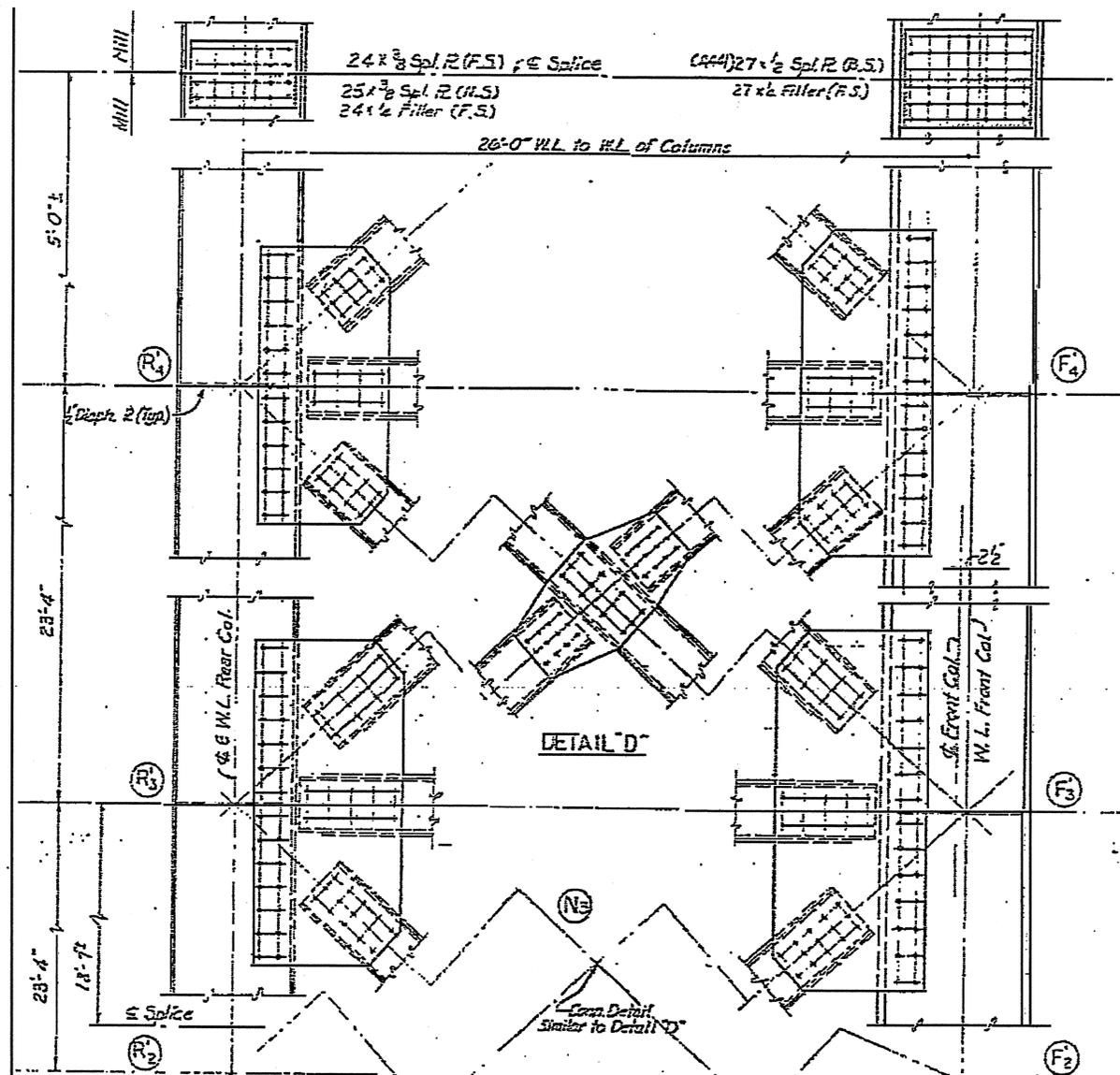
**EAST TOWER SECTION F-F**  
 Parts not shown opposite hand to view E-E (Sh. No. 22) except for Cwt. Guide Angle Cann., which are opposite hand to Section X-X.

Scale: 3/8" = 1'-0"

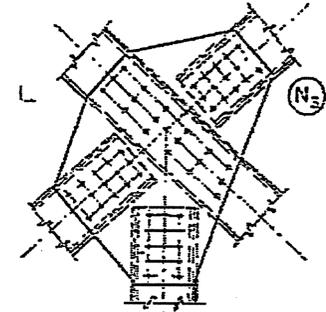
REVISION	BY	DATE

5-21

REV	BY	DATE
1	K.C.	3/22/67
P.L. PROJECT F-75-2(2)		

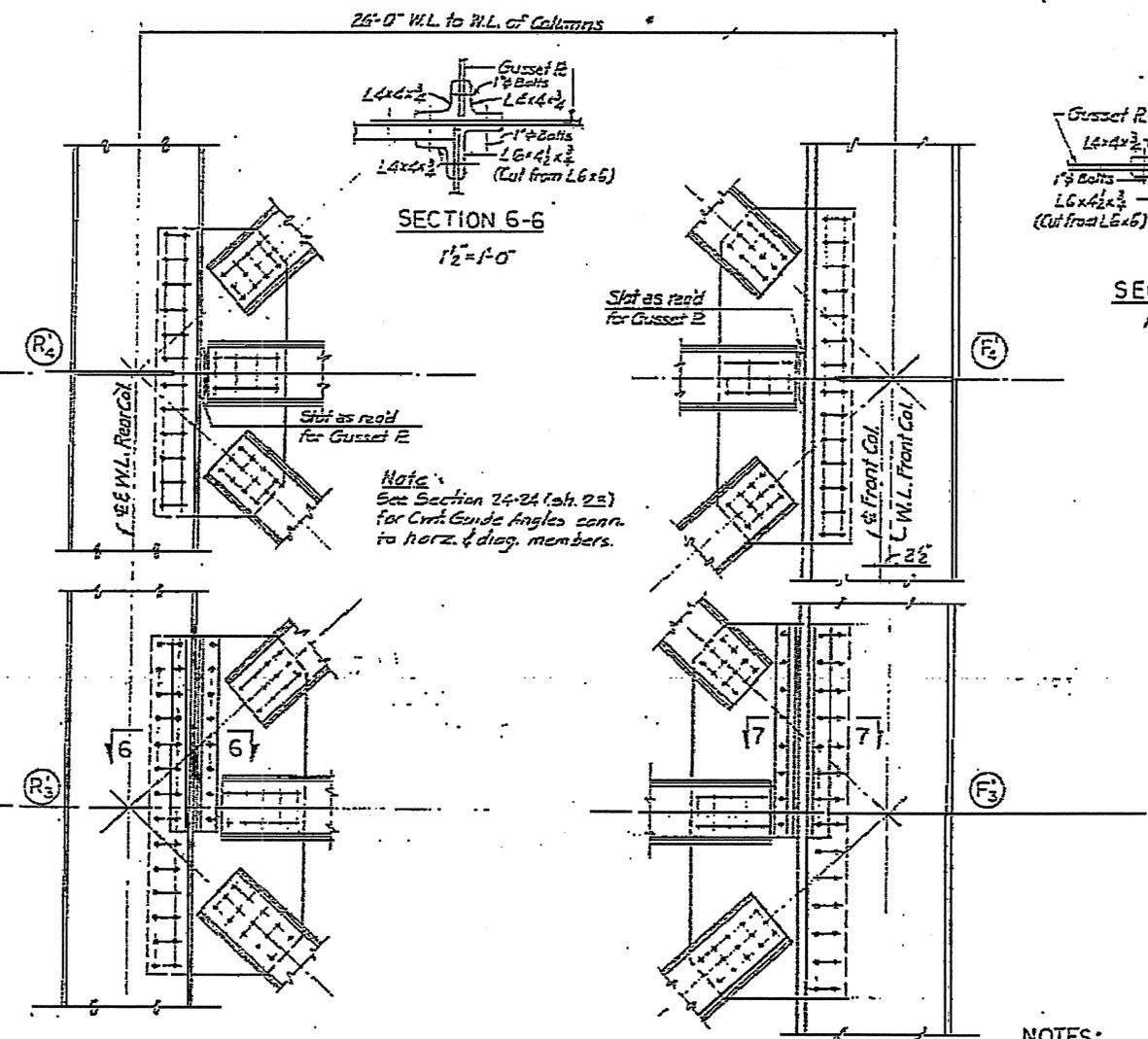


WEST TOWER  
 VIEW W-W (R<sub>2</sub>-R<sub>4</sub> & F<sub>2</sub>-F<sub>4</sub>)

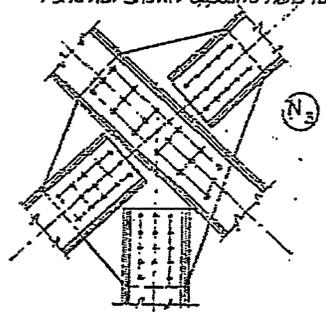


Parts not shown opposite hand to View W-W

Scale: 1/2" = 1'-0"



WEST TOWER  
 SECTION X-X (R<sub>2</sub>-R<sub>4</sub> & F<sub>2</sub>-F<sub>4</sub>)



Parts not shown opposite hand to Section X-X

- NOTES:
- 1 For Tower Notes see Sh. No. 16
  - 2 For Location of View E-E View W-W Section X-X & Section F-F see Sh. No. 18
  - 3 For Material of Main Columns see Sh. No. 19
  - 4 For Column Diaph. & Details see Sh. No. 12

PROJECT No. 8.1355105  
 NEW HANOVER COUNTY

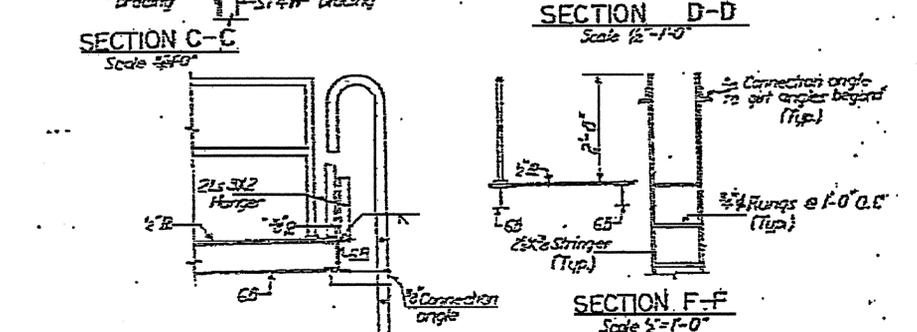
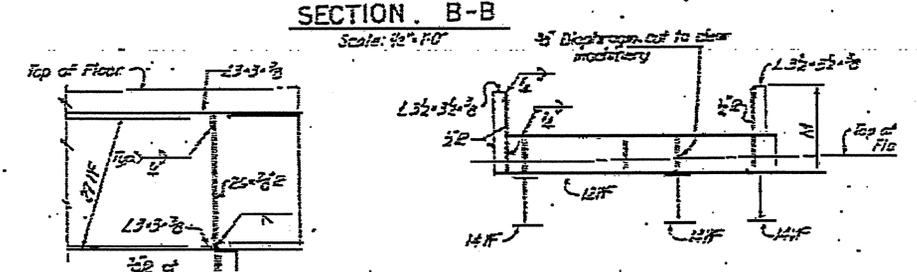
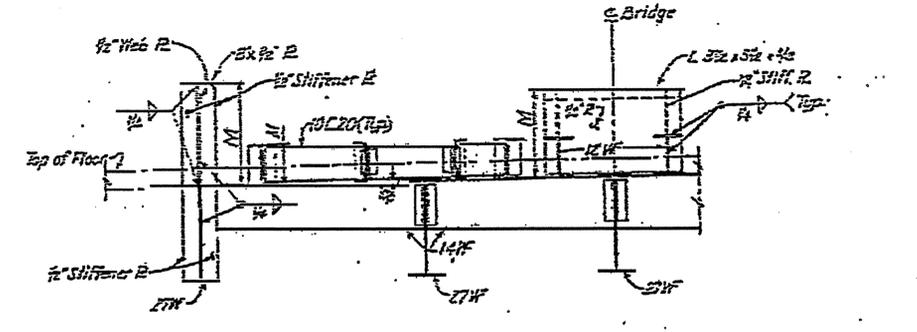
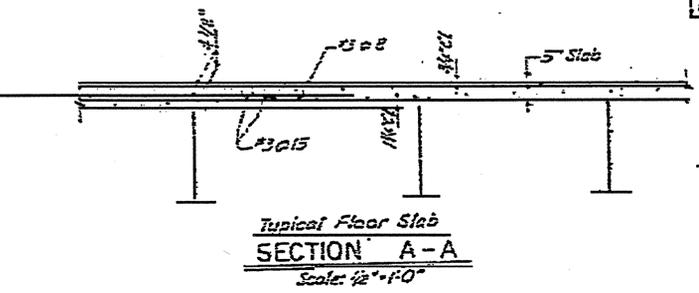
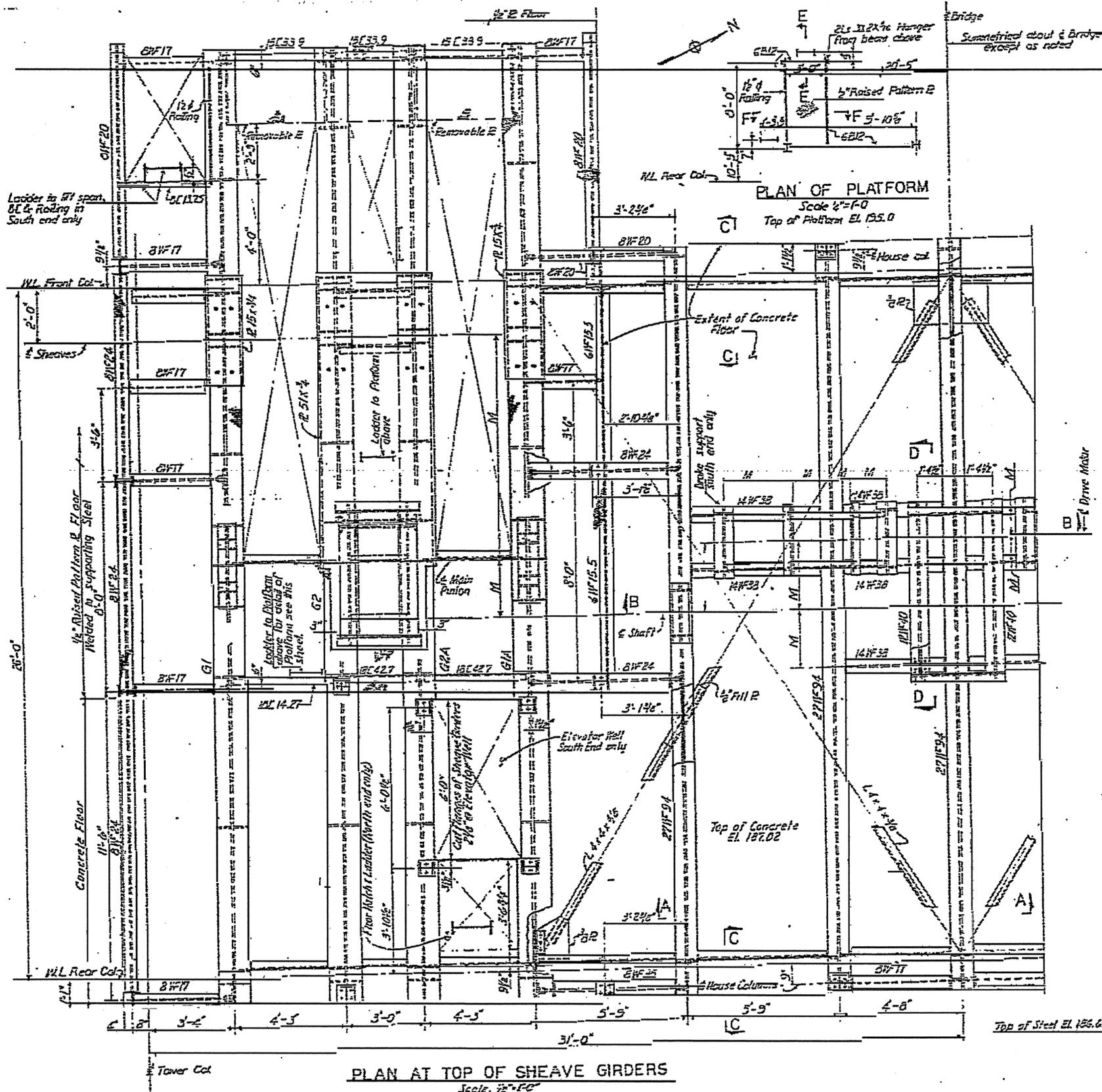
STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 RALEIGH

CAPE FEAR RIVER CROSSING  
 AT WILMINGTON  
 LIFT BRIDGE SUPERSTRUCTURE  
 TOWERS - SIDE BRACING  
 MIDDLE SECTION DETAILS

REVISION	BY	DATE	DESIGNED	5-22	NEW YORK	CHECKED	March 1967
			ENGINEER			SHEET NO.	22 of 27



NO.	DATE	BY	REVISION
1			
2			
3			
4			
5			
6			
7			

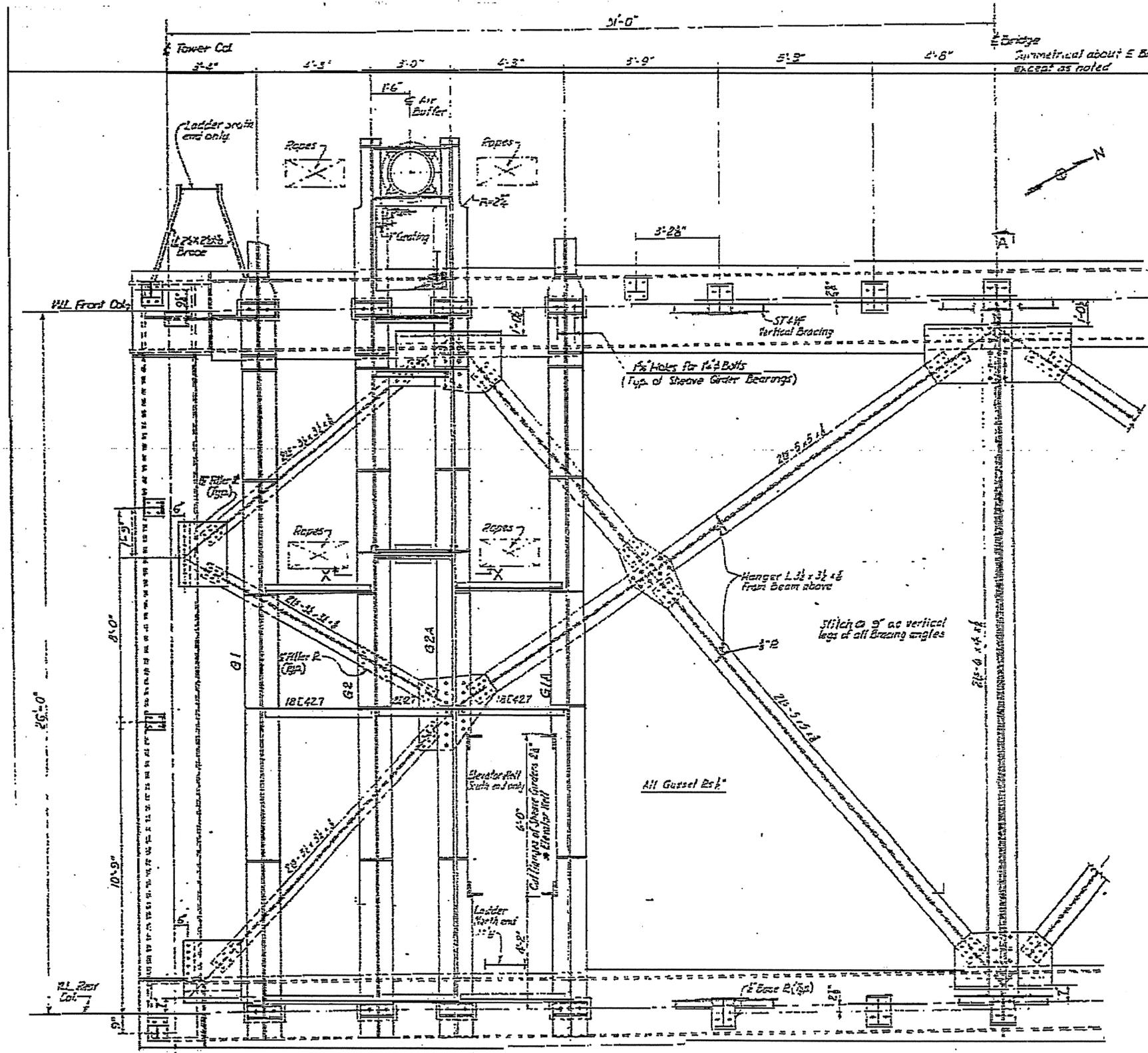


- NOTES:**
1. Plan & Details shown are for East Tower West Tower opposite hand.
  2.  $\frac{1}{2}$ " denotes dimensions determined by machinery to be installed.
  3. All House Col. Base B & E
  4. For Machinery Layout see sheet No. 570.55
  5. For Longitudinal Sheave Girders see sheet No. 28
  6. For Machinery house detail see sheet No. 4-B & 4-D
  7. For Bar schedule see sheet No. 50

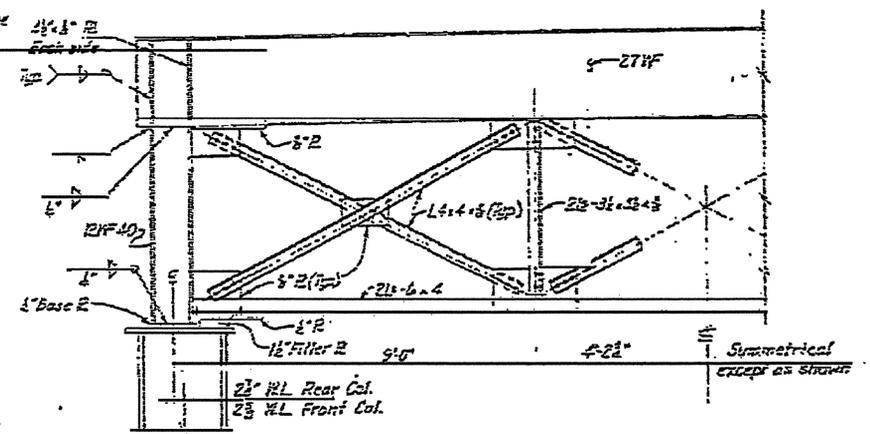
PROJECT No. 8:1355105  
**NEW HANOVER COUNTY**  
 STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
 RALEIGH  
 CAPE FEAR RIVER CROSSING  
 AT WILMINGTON  
**LIFT BRIDGE SUPERSTRUCTURE**  
 TOWER TOP  
 DETAILS AT TOPS OF SHEAVE GIRDERS

PREPARED BY: GEORGE A. DOUGLAS, INC.  
 DATE: 5-24  
 SHEET NO. 26 OF 26

DESIGN NO.	DATE	PROJECT NO.
3	K.C.	8-1355105
RAILROAD F-75-2(2)		



PLAN AT BOTTOM OF SHEAVE GIRDERS  
Scale: 1/4" = 1'-0"

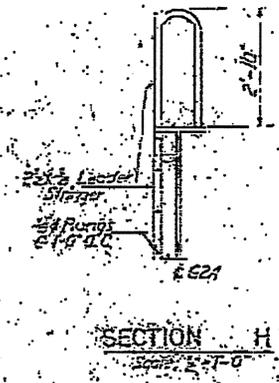
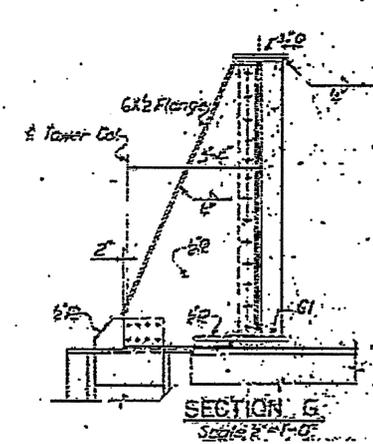
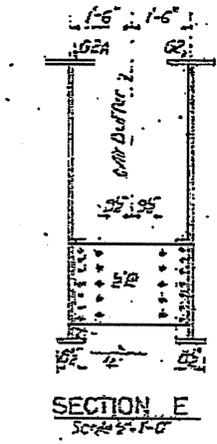
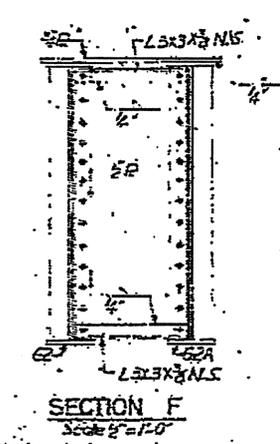
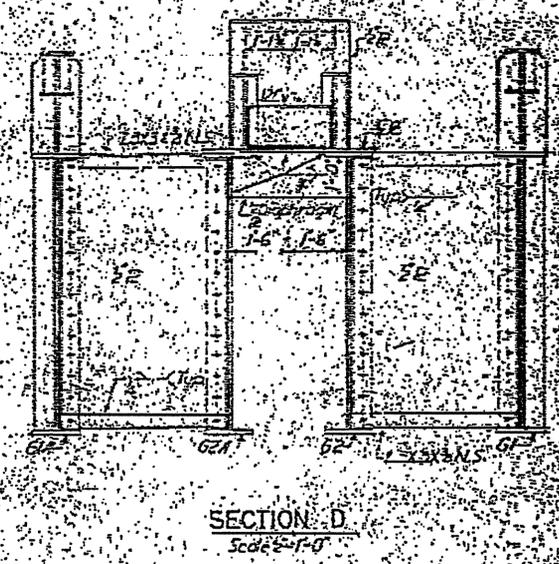
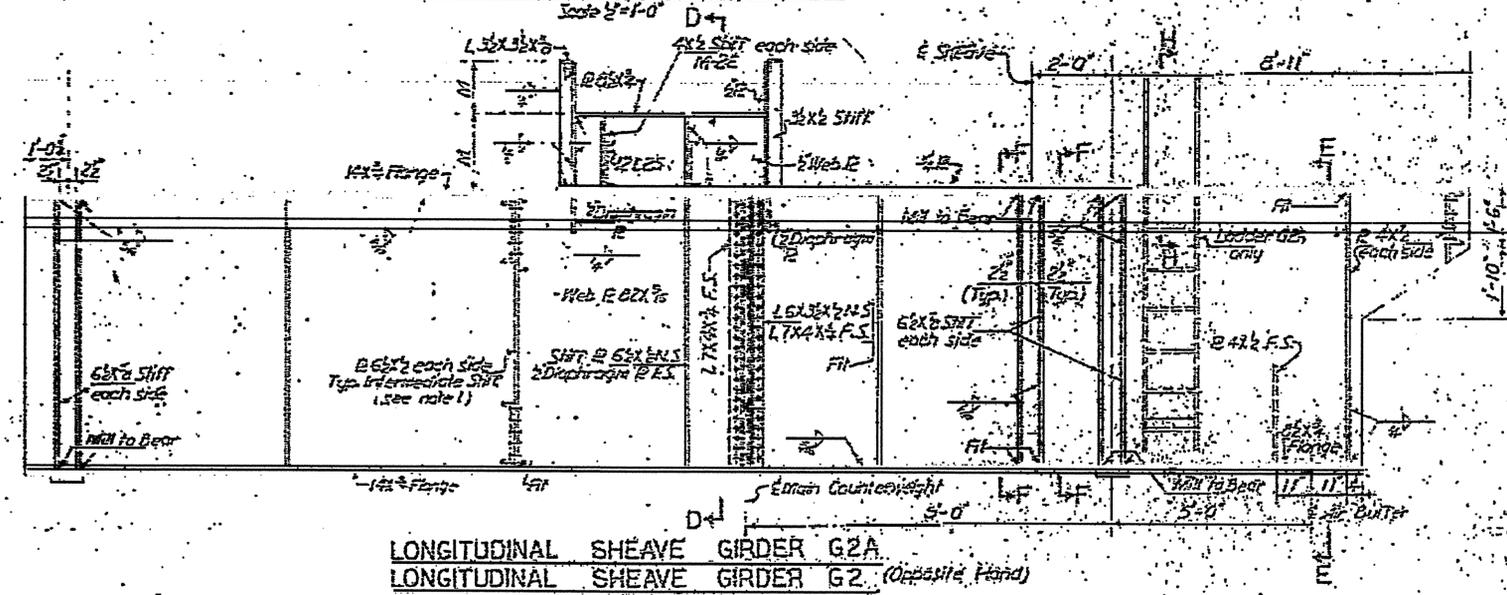
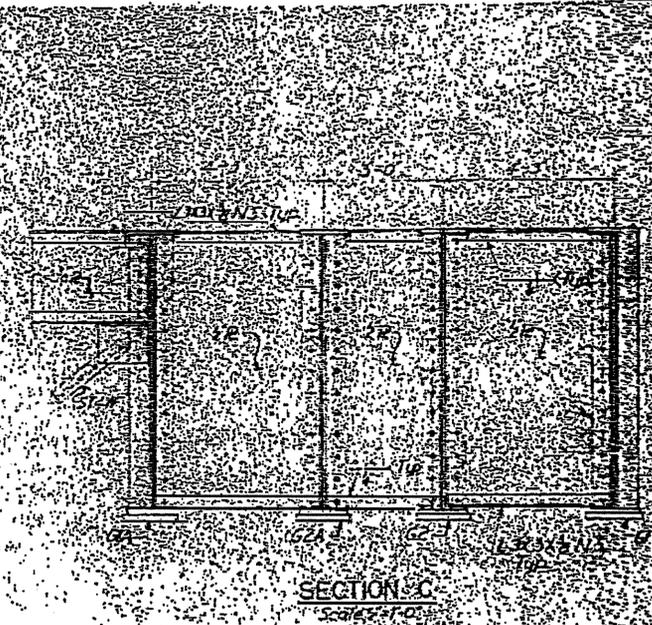
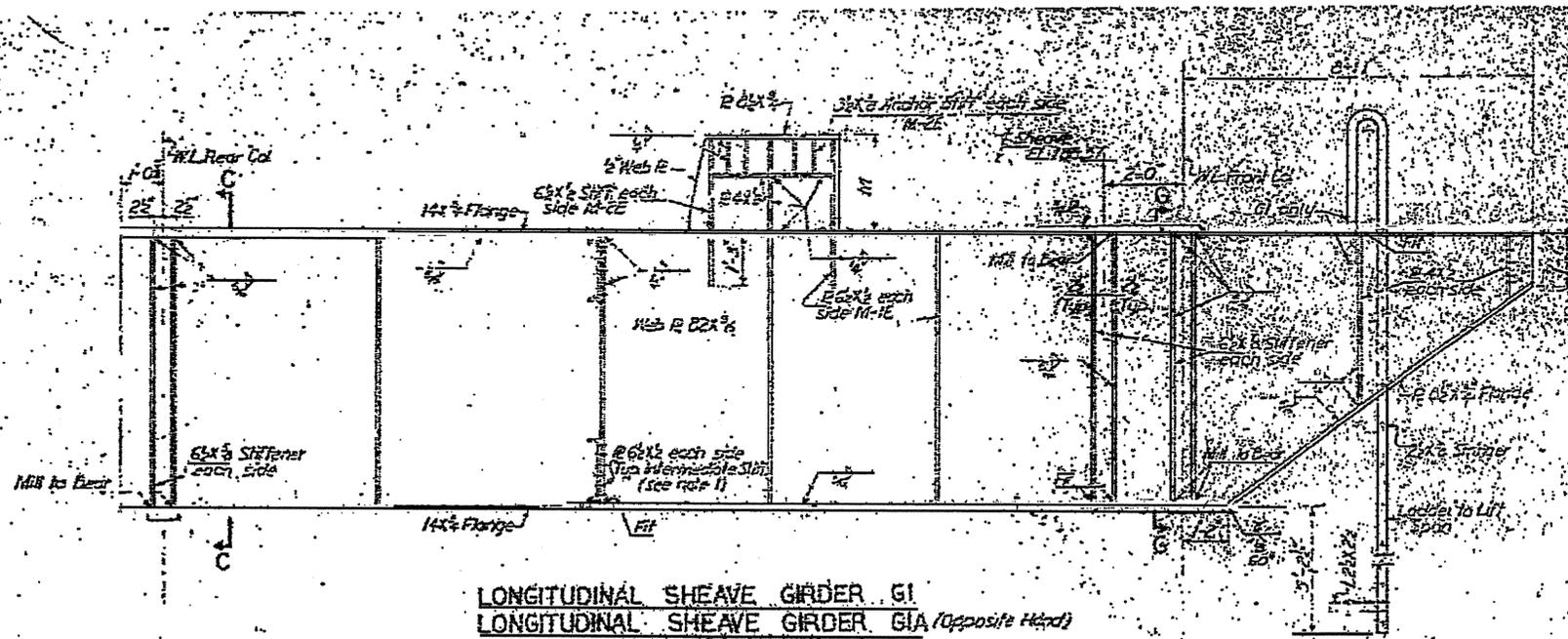


SECTION A-A  
Scale: 1/4" = 1'-0"

- NOTES
1. East Tower shown West Tower opposite hand.
  2. For longitudinal Sheave Girders see Sheet No. 28
  3. For Details of Air Buffer see Sheet No. 33
  4. All bolts shall be 5/8" H.S. bolts unless otherwise noted
  5. For Section X-X see sheet N-32

PROJECT No. B.1355105  
NEW HANOVER COUNTY  
STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
RALEIGH  
CAPE FEAR RIVER CROSSING  
AT WILMINGTON  
LIFT BRIDGE SUPERSTRUCTURE  
TOWER TOP  
DETAILS AT BOTTOMS OF SHEAVE GIRDERS

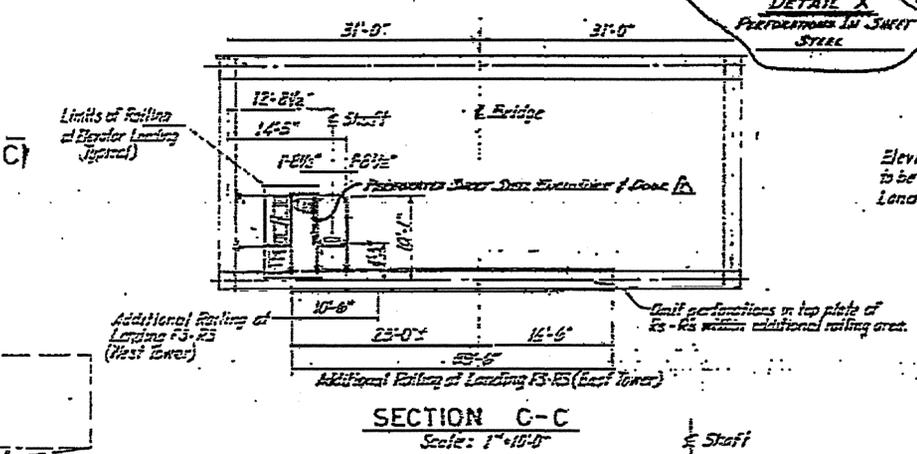
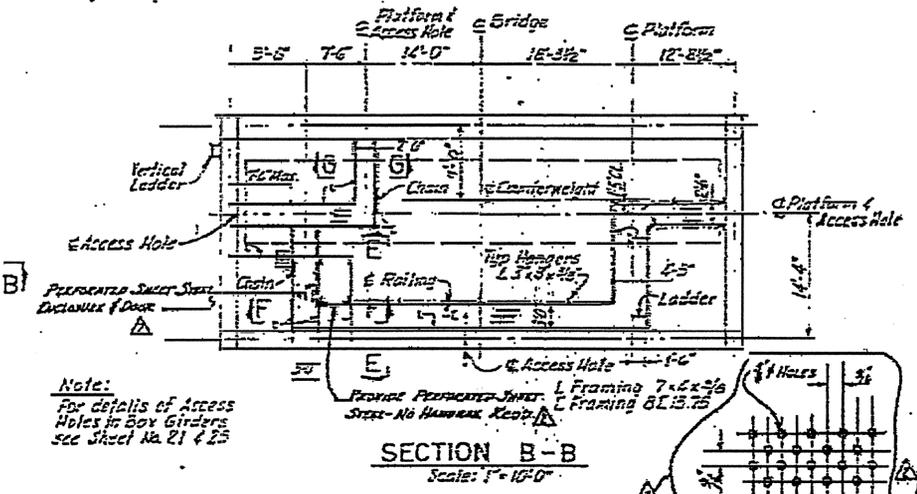
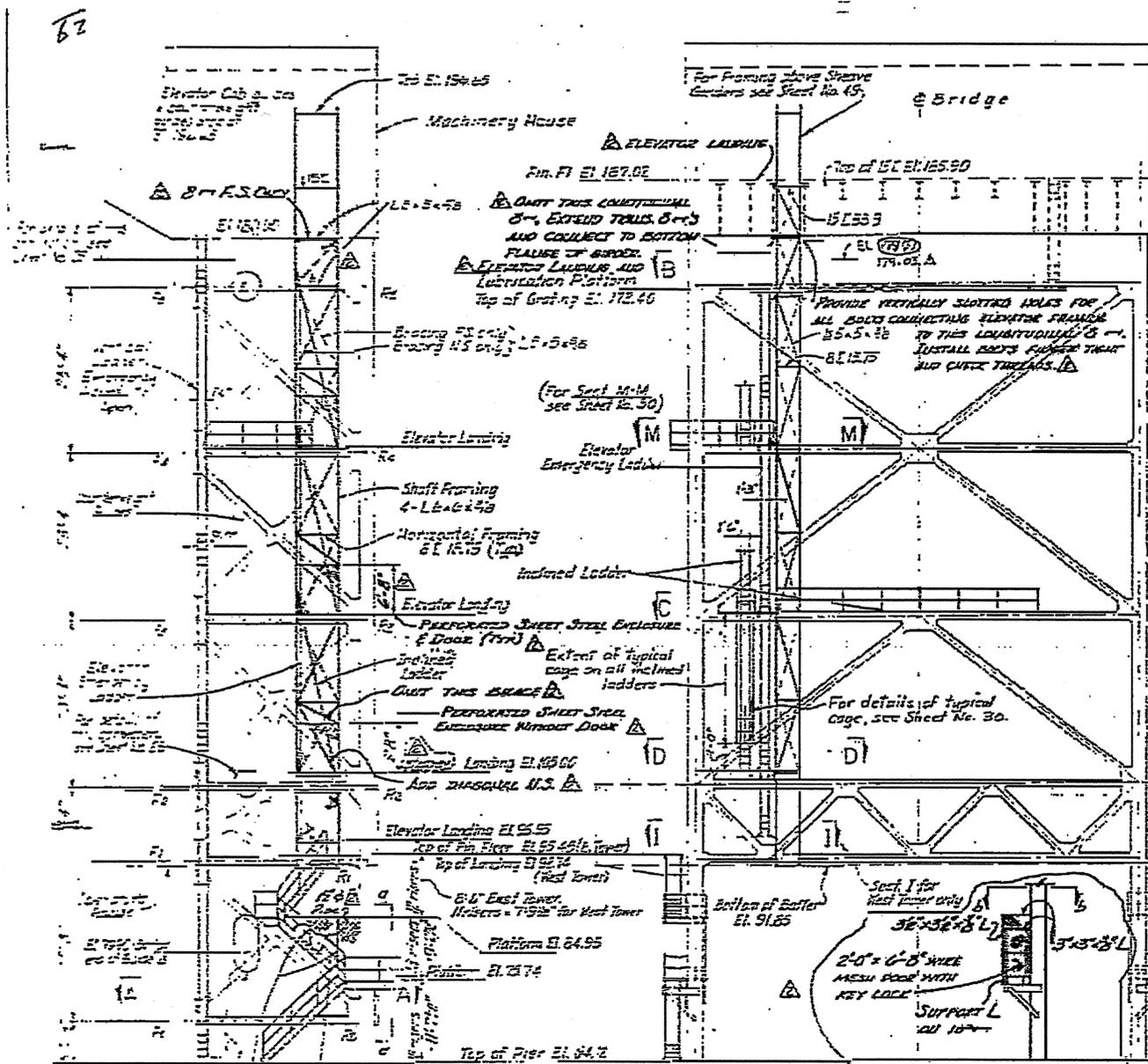
DESIGNER	DATE	BY	CHK
DIVISION		NO. 25	



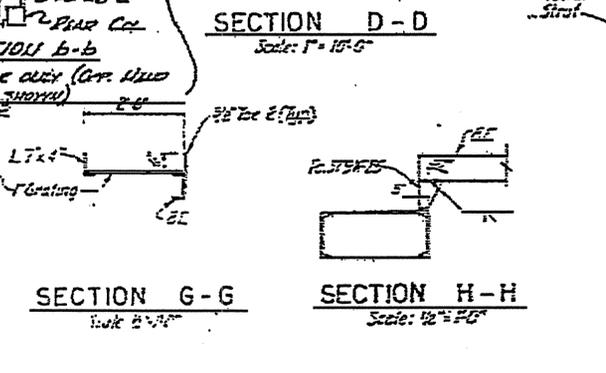
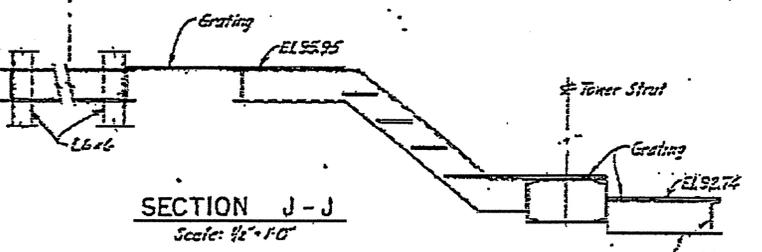
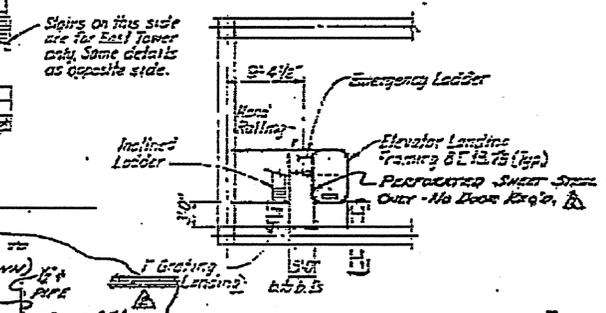
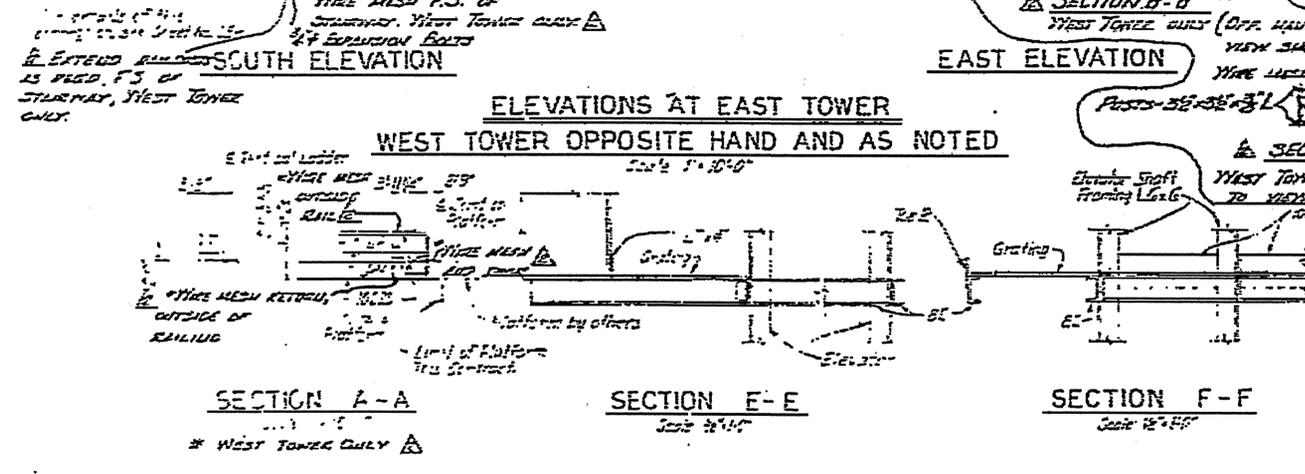
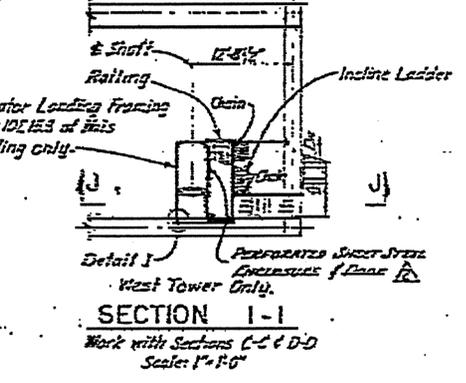
Notes:  
 1. At Elevator well where Girder Flanges are cut use  
 2. 2x6 SHT  
 3. 2x6 SHT

PROJECT NO. 8-135105  
 NEW HANOVER COUNTY  
 STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 CAPE FEAR RIVER CROSSING  
 AT WILMINGTON  
 LIFT BRIDGE SUPERSTRUCTURE  
 LONGITUDINAL SHEAVE GIRDERS

REV. NO.	DATE
3	4-25-53
P.A. PROJECT F-75-2(8)	



- NOTES**
1. Details shown are for EAST TOWER, WEST TOWER is opposite hand except for Central House or as noted.
  2. All railings for rest platforms, ramp of jusement, and lubrication platforms to consist of 1" rail cast L3 x 3 x 3/8, top rail L3 x 3/2 x 3/8, intermediate rail 3 x 3/8 bar.
  3. All grating to be galvanized steel, rectangular design, 1" deep. All bearing bars shall be 3/8" thick & spaced @ 1 1/2". Cross bars shall be spaced 4" on center.
  4. All railings and rail posts for stairs and rest platforms to Central House & pier top to consist of 1 1/2" pipe.
  5. Ladders to consist of 2-4C 225 with 3/4" rung @ 1'
  6. All bolts to be 3/4" except where framing to tower necessitates 1/2" or 1" bolts.
  7. All steel threads shall be galvanized steel grating 1" minimum depth. Bars shall be serrated on top edge, and nosings to be abrasive.
  8. For Section M-M, see Sheet No. 30.
  9. PERFORATED SHEET STEEL SHALL BE GALVANIZED AND PAINTED AND IT SHALL BE NO. 16 GAUGE ON DOORS & NO. 12 GAUGE ON ADJACENT PANELS. SEE DETAIL J FOR PERFORATIONS.
  10. WIRE MESH ON STAIRWAY CASE ON WEST TOWER SHALL BE 1/2" DIAMOND MESH, NO. 12 GAUGE MILD GALVANIZED AND PAINTED.

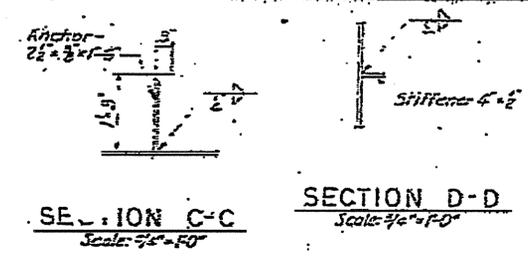


PROJECT No. E.1355105  
 NEW HANOVER COUNTY  
 STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 RALEIGH  
 CAPE FEAR RIVER CROSSING  
 AT WILMINGTON  
 LIFT BRIDGE SUPERSTRUCTURE  
 ELEVATOR FRAMING  
 LADDERS AND PLATFORMS

DESIGNED BY	DATE	APPROVED BY	DATE
MCS	4-16-53	MCS	4-15-53
REVISION	NO.	DATE	

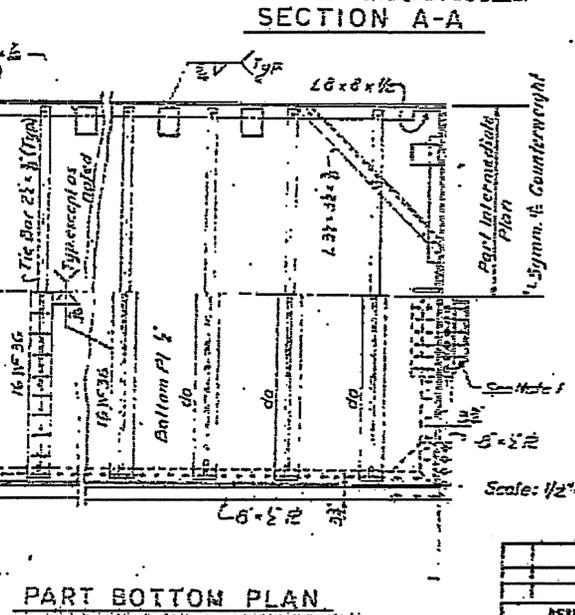
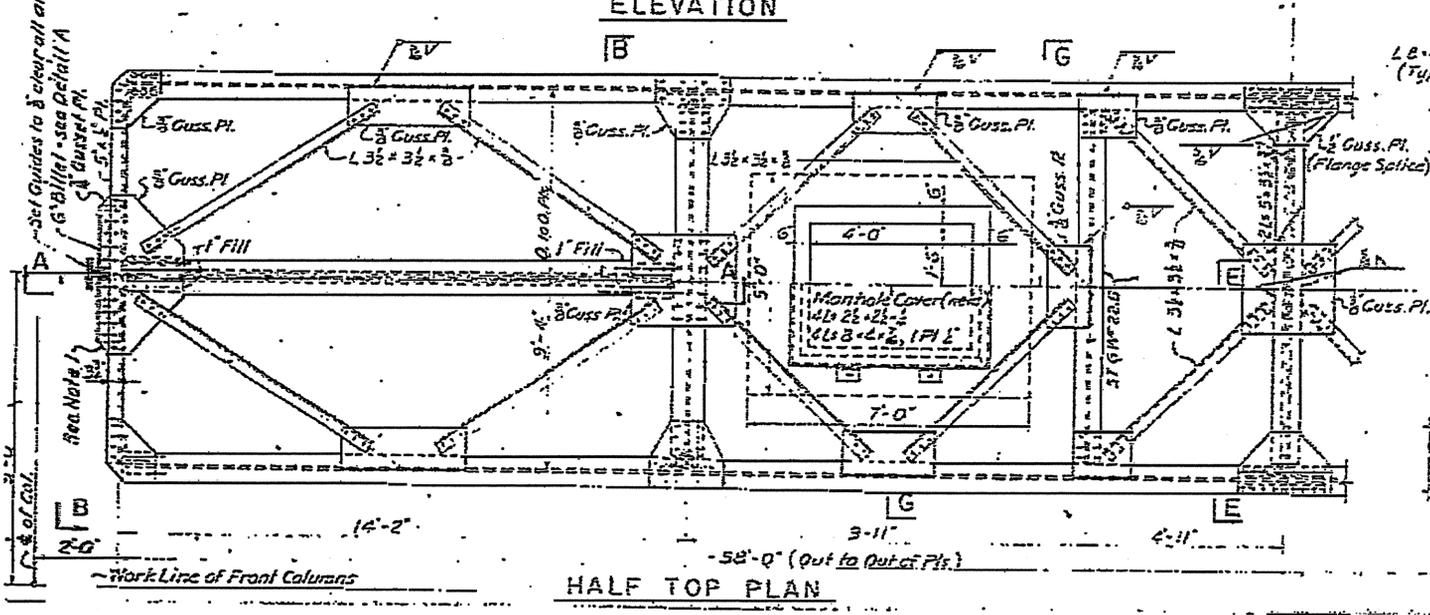
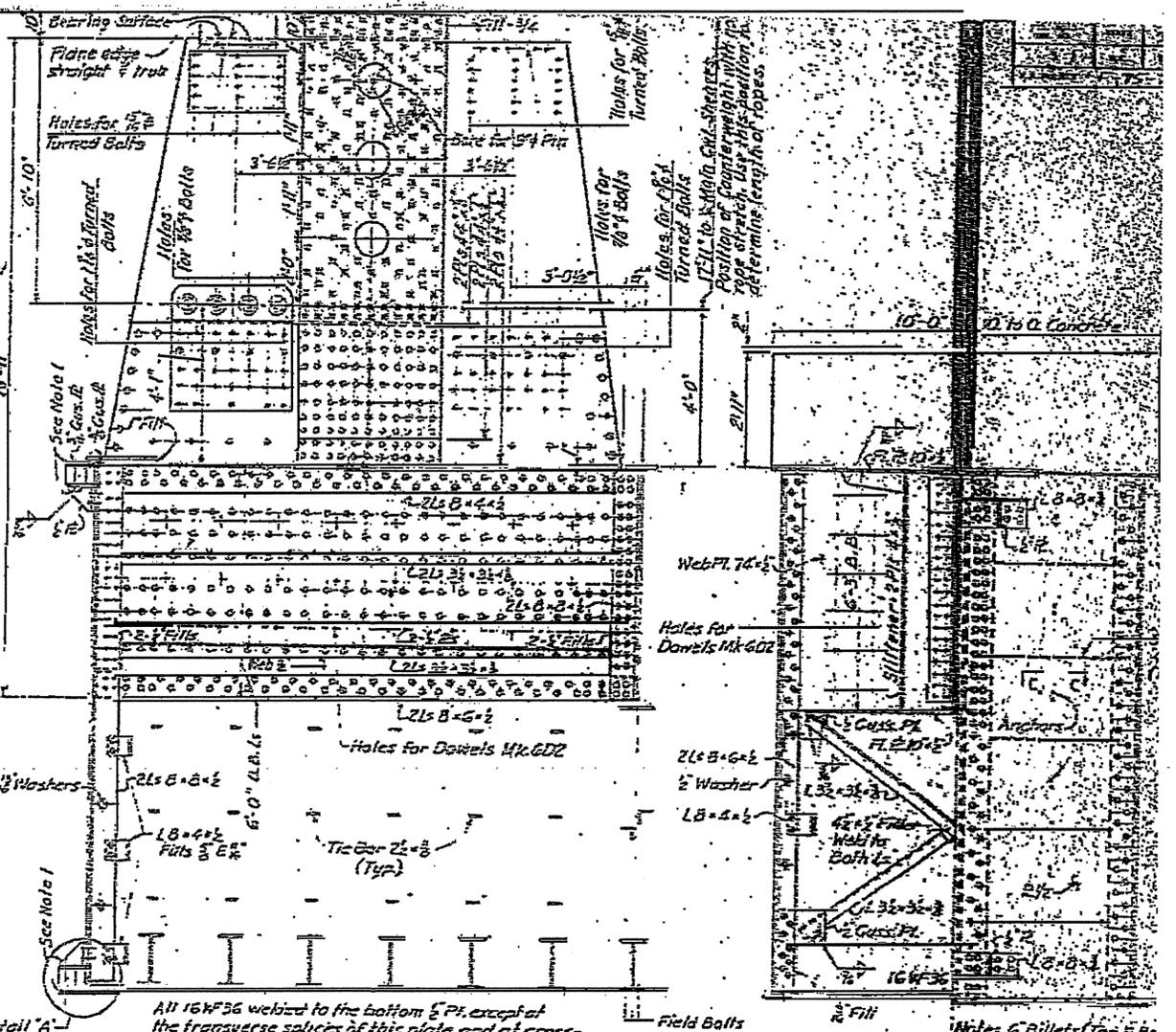
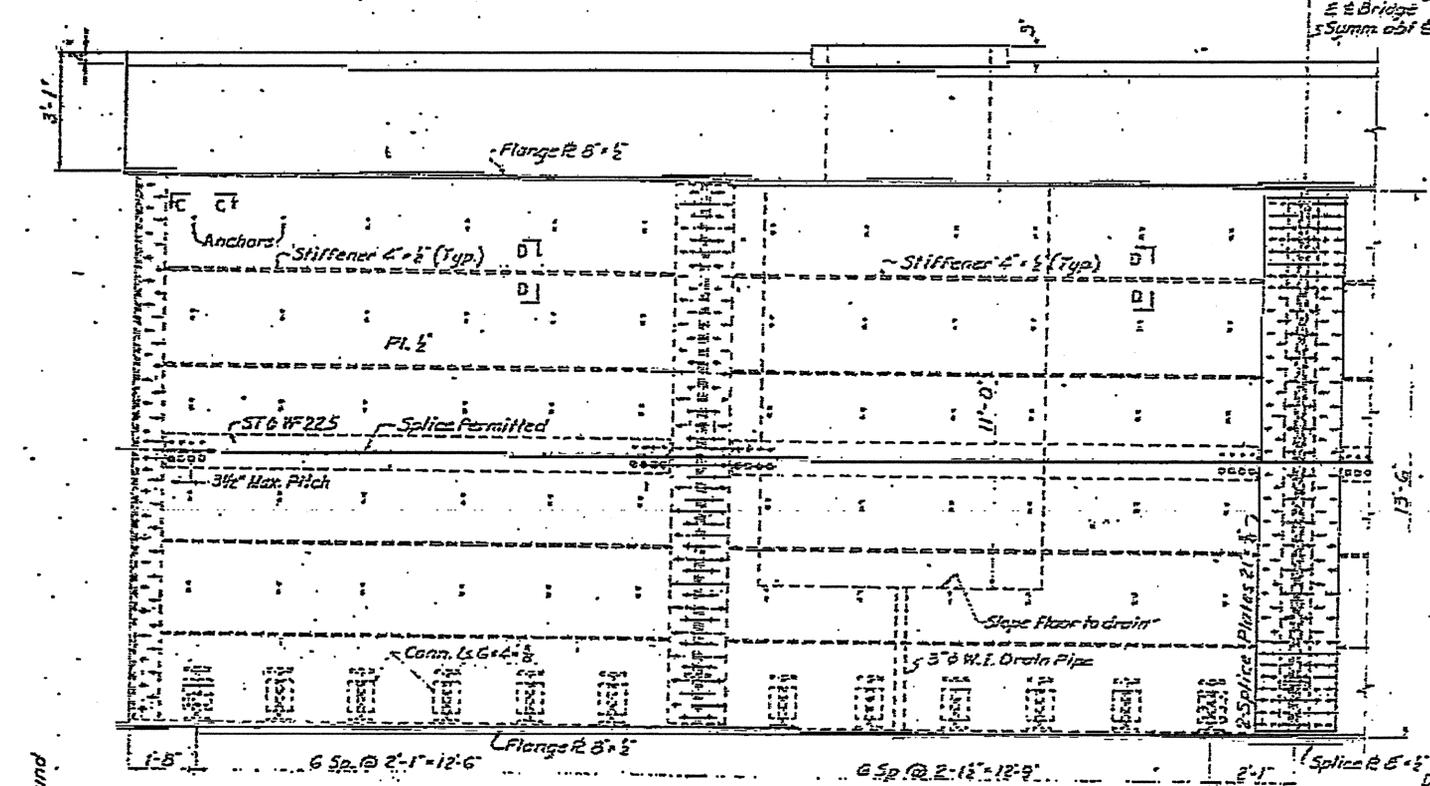
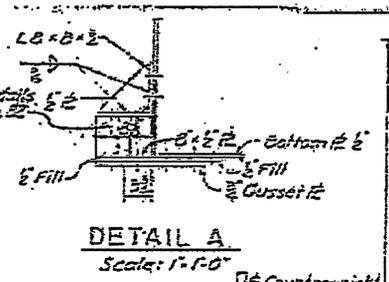
DATE: March 1953  
 SHEET NO. 22 OF 6





**NOTES:**

- All holes in gussets holding C' billets shall be 1/8" and reamed to 1/2" in the field after adjusting position of billets. 7/8" bolts 1/2" set in the field for top and bottom guides.
- All rivets or bolts shall be 7/8" unless otherwise noted. See General Note No. 6, Sheet No. 2, for use of rivets and bolts.
- For details of rope connections, see Sheet No. 3E.



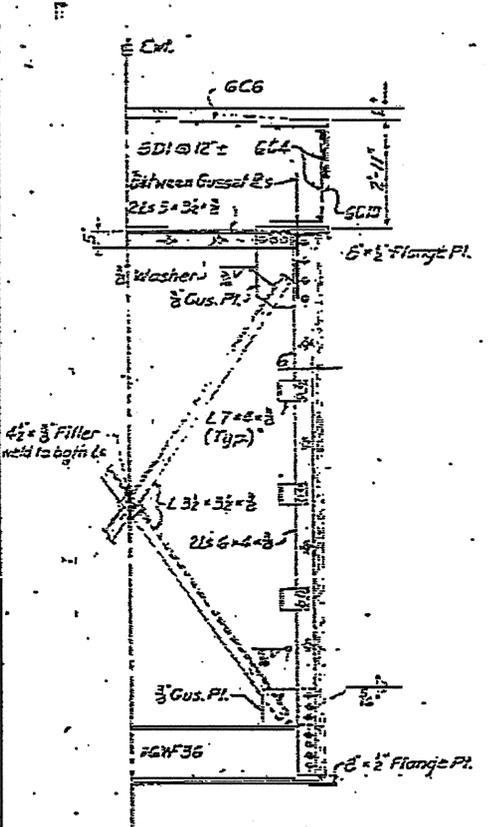
**Notes: (Cont)**

- Dimensions of Counterweight and number of Balance Blocks required are based on the design drawings and are for purpose of bidding only. The actual dimensions of the Counterweight and the actual number of Balance Blocks to be furnished shall be calculated by the Contractor from the detailed shop drawings. See Special Provisions.
- For Sections G-G and E-E, see Sheet No. 3E.
- Provide 1/2" drain holes in all sides and bottom of Counterweight Box. One hole to be provided for every 10 sq. ft. of surface.

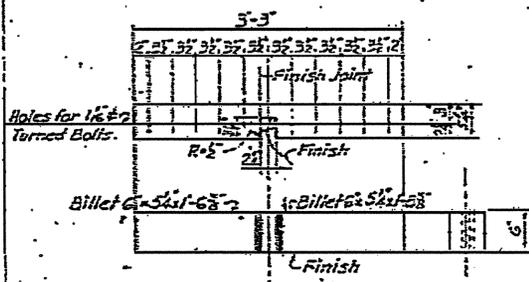
PROJECT No. 8.1355105  
NEW HANOVER COUNTY  
STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
CAPE FEAR RIVER CROSSING  
AT WILMINGTON  
**LIFT BRIDGE SUPERSTRUCTURE**  
MAIN COUNTERWEIGHTS - PLAN  
ELEVATION AND SECTIONS

Scale: 1/2" = 1'-0" Unless Noted

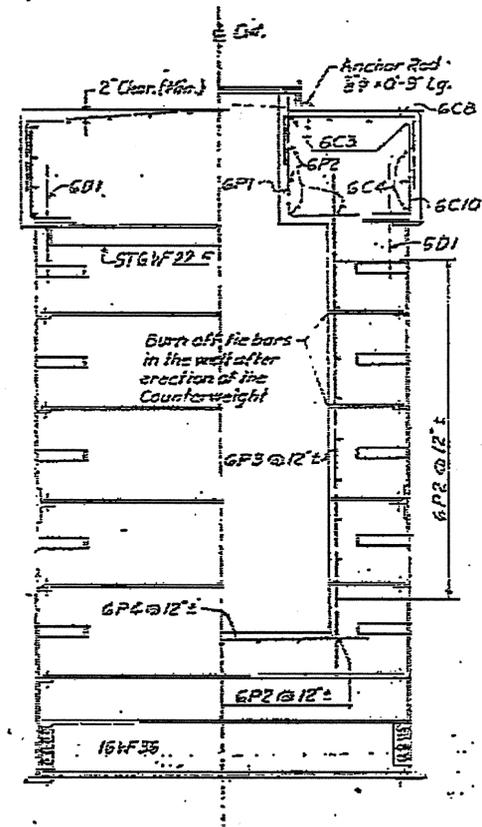
5-29



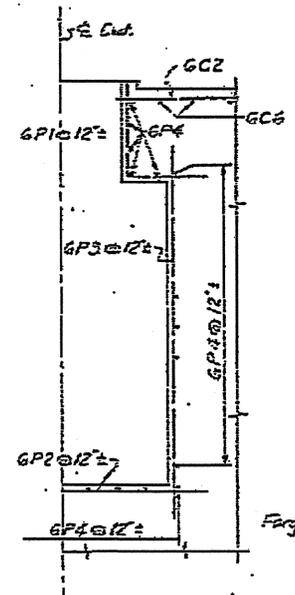
HALF SECTION E-E  
Scale: 1/2" = 1'-0"



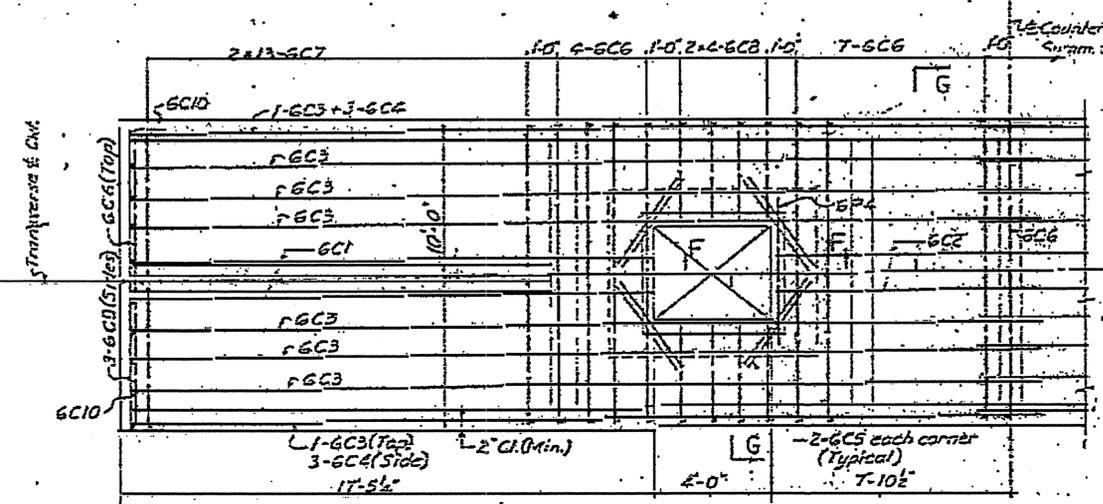
DETAIL OF GUIDE BILLETS  
3 REQUIRED  
Scale: 1" = 1'-0"



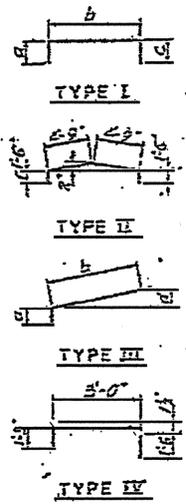
SECTION G-G  
Scale: 3/8" = 1'-0"



HALF SECTION F-F  
Scale: 3/8" = 1'-0"

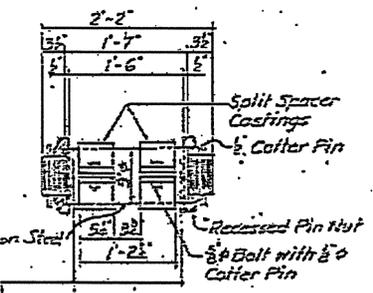


REINFORCEMENT PLAN  
Scale: 3/8" = 1'-0"

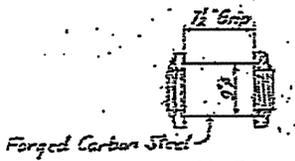


MARK	TOTAL LENGTH	TYPE	TOTAL NUMBER	DIMENSION				REMARKS
				a	b	c	d	
G61	18-5	I	2	1-9	17-0	0		
G62	15-4	I	2					
G63	31-6	I	16	1-5	29-9	0		
G64	27-9	I	12					
G65	3-5	I	16					
G66	12-6	II	23	See Bending Diagram				
G67	5-8	III	52	1-6	4-2		2"	
G68	5-9	III	16	See Bending Diagram				
G69	12-5	I	5	1-6	9-5	1-5		
G70	3-11	I	134	1-6	2-5	0		
G01	3-0		83					
G02	5-0		96					
GP1	5-3	I	28	2-5	2-10	0		
GP2	9-6		66					
GP3	14-0		28					
GP4	7-6		78					

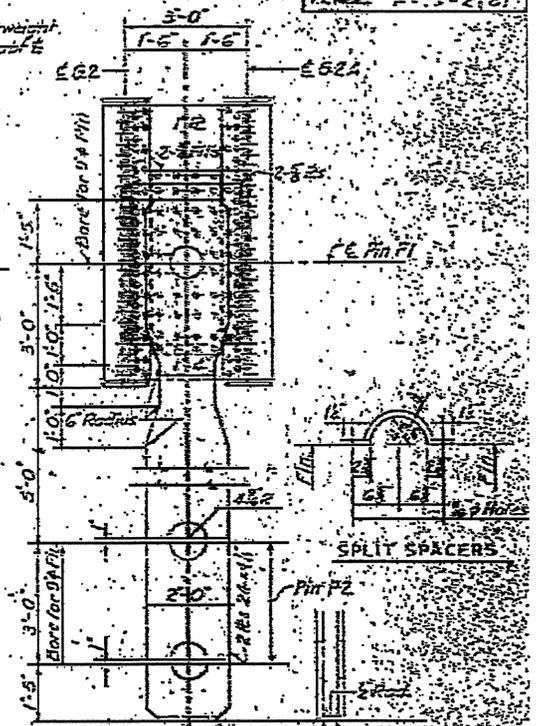
LEGEND:  
G61: G-Bar Size, C1-Bar Mark.  
All dimensions are out to out of bars.  
Quantities shown are for one counterweight.



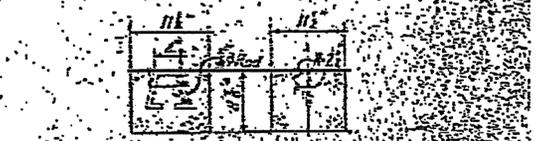
Hangers When Not in Use.  
Contractor to leave them in this position after attachment of Counterweight to span. When hangers are supporting the Counterweight, they are to be interchanged in position with the Spacers.  
PIN P1 (4 Req'd)  
Scale: 1" = 1'-0"



PIN P2  
Not to Scale  
4 REQUIRED  
To Connect Cast. to Temp. Hgr. Store Pins in Machinery House when not in use.



SECTION X-X  
MAIN COUNTERWEIGHT HANGERS  
Scale: 1/2" = 1'-0"



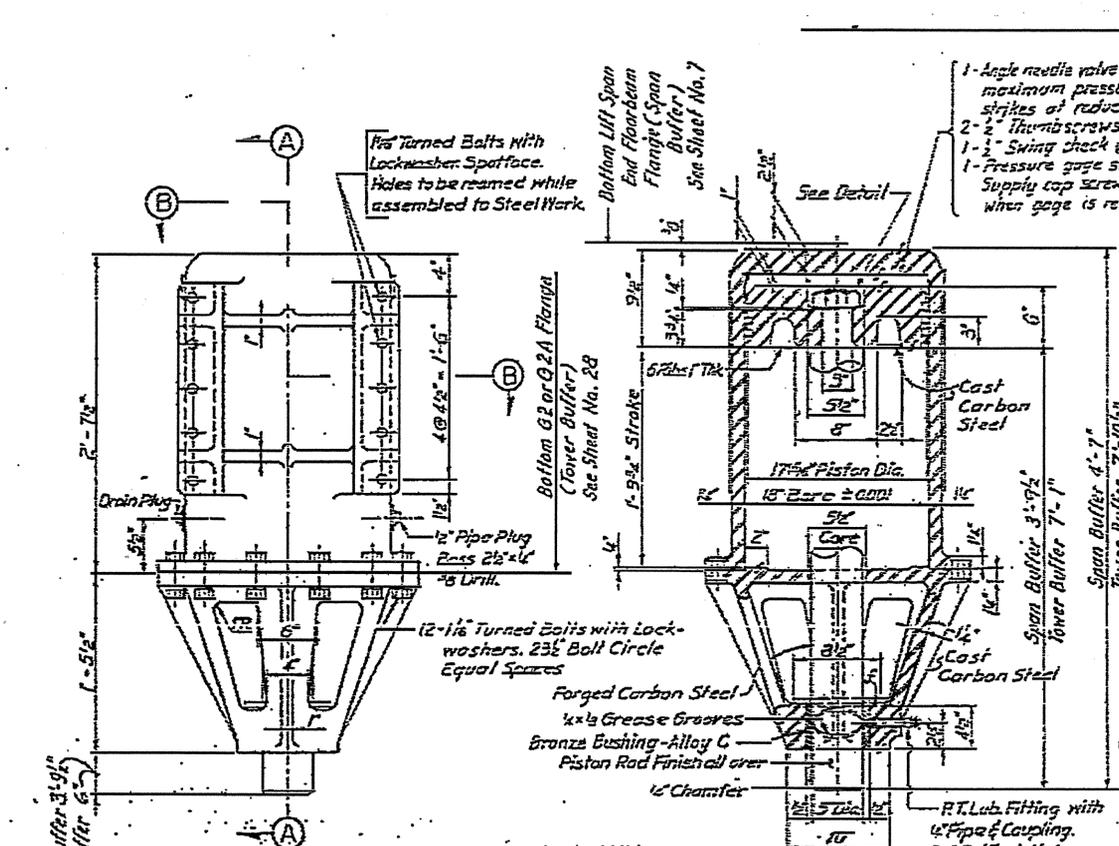
DETAIL OF BALANCE BLOCK  
1400 Required for 100 Counterweights  
Scale: 1" = 1'-0"

- Notes:
- For Location of Section X-X, see Sheet No. 27.
  - For Locations of Sections G-G and E-E see Sheet No. 31.
  - For additional notes, see Sheet No. 31.

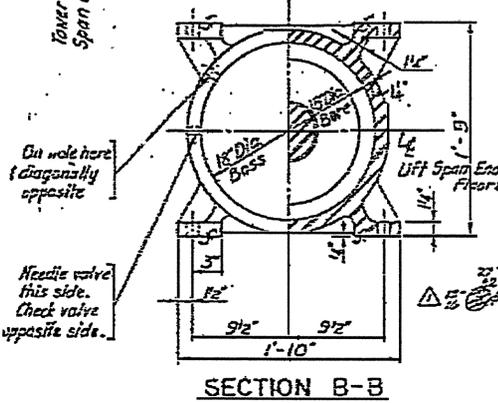
PROJECT NO. 8-1355106  
NEW HANOVER COUNTY  
STATE HIGHWAY COMMISSION  
CAPE FEAR RIVER CROSSING  
AT WILMINGTON  
LIFT BRIDGE SUPERSTRUCTURE  
MAIN COUNTERWEIGHTS - SECTIONS  
AND REINFORCING DETAILS

5-30

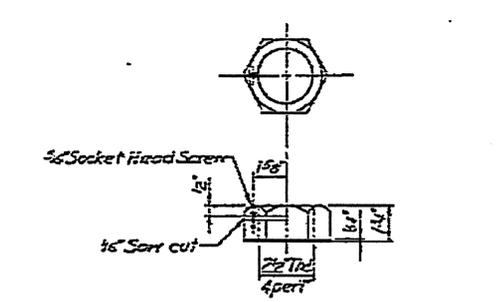
NO.	DATE	BY
1	1-15-57	J. H. ...
2	1-22-57	J. H. ...
3	1-29-57	J. H. ...



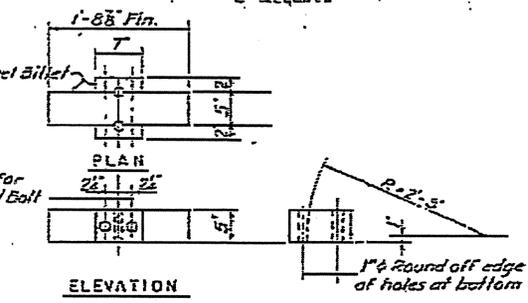
**SECTION A-A  
AIR BUFFER**  
Scale: 1/2" = 1'-0"  
8 Required



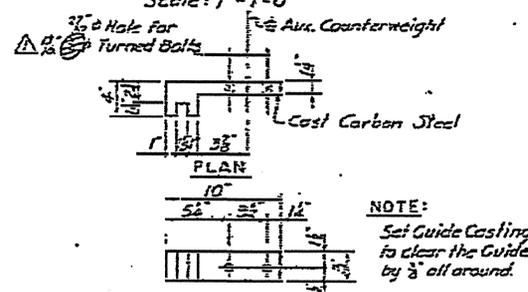
**SECTION B-B**



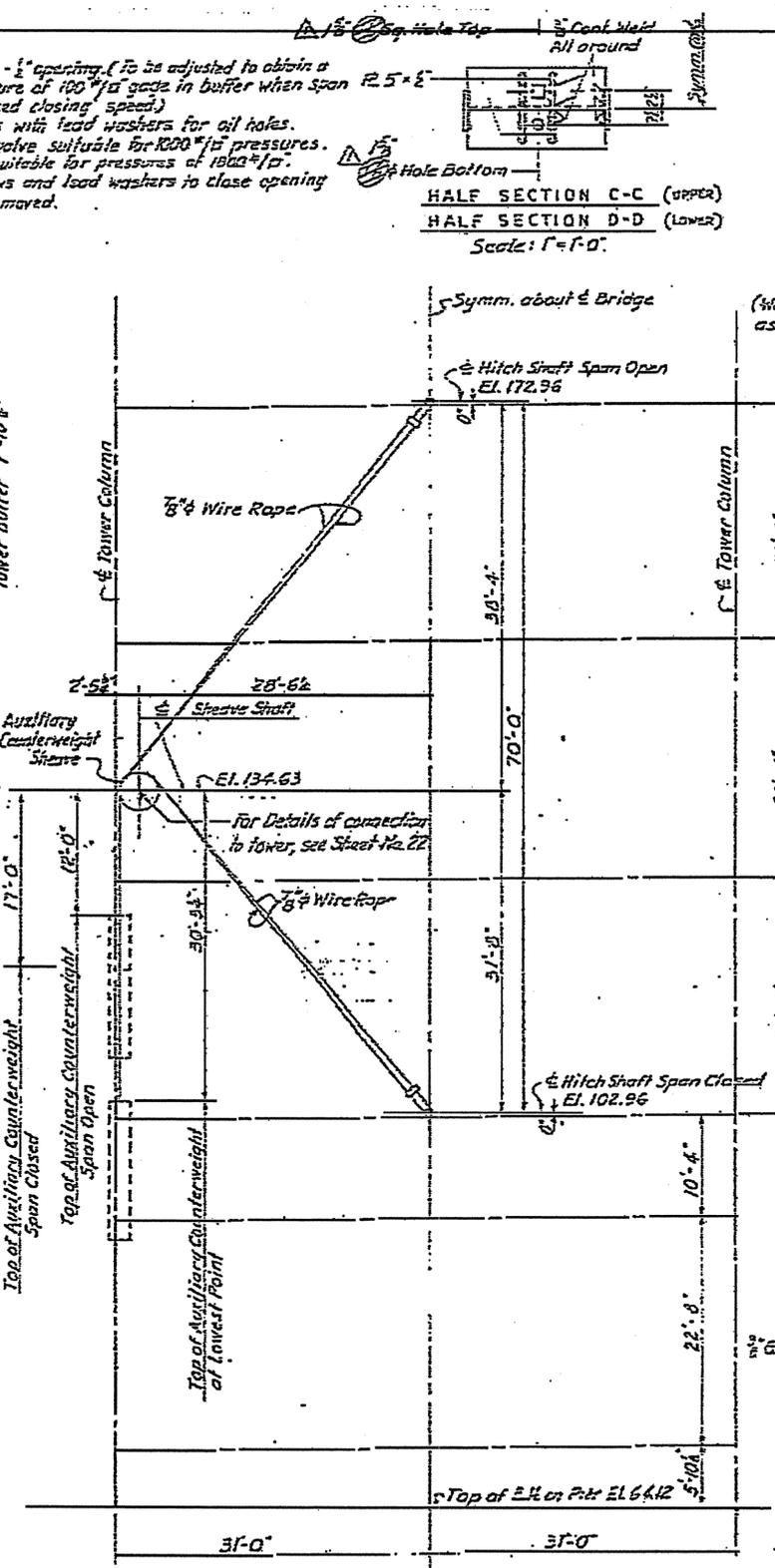
**PISTON ROD NUT**  
ASA Std. semi finished Heavy Series  
Cut to 1/2" thick with washer face.  
Scale: 3/4" = 1'-0"  
8 Required



**DETAIL OF ROPE DEFLECTOR**  
Scale: 1" = 1'-0"

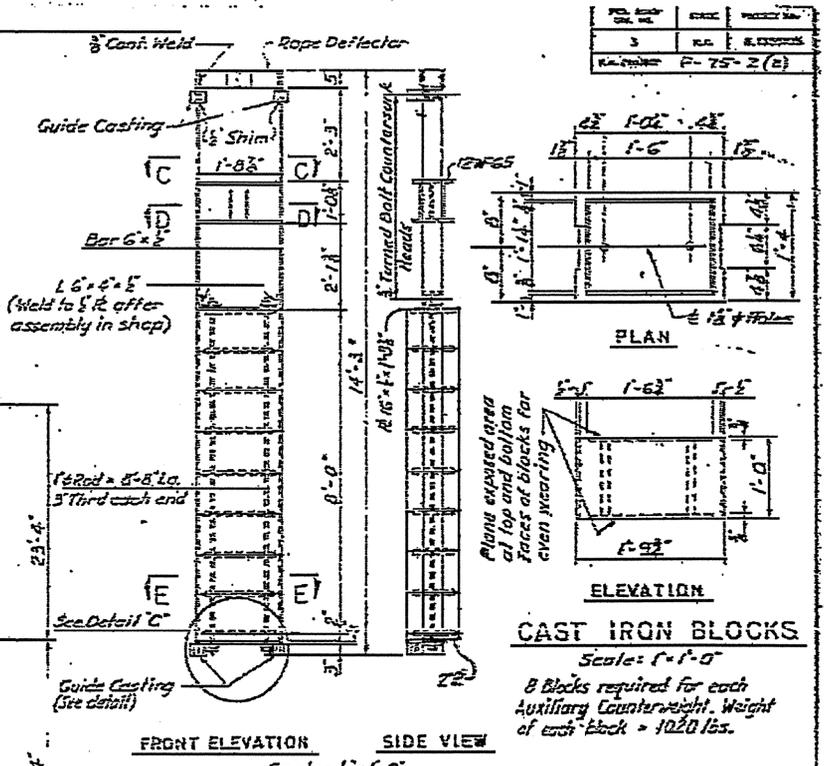


**DETAIL OF GUIDES**  
Scale: 1/2" = 1'-0"  
4 Required for each Auxiliary Counterweight

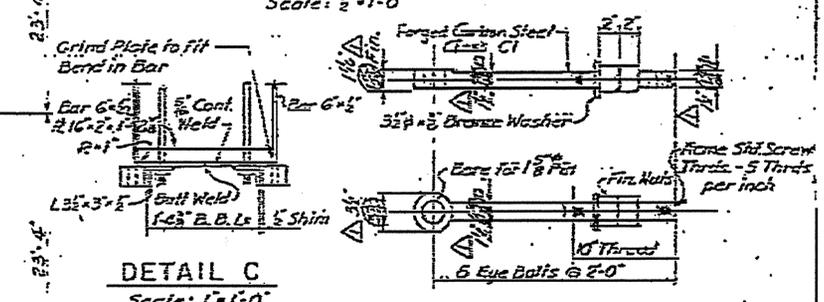


**SPAN FACE OF TOWER SHOWING  
AUXILIARY COUNTERWEIGHT**  
Scale: 1/8" = 1'-0"

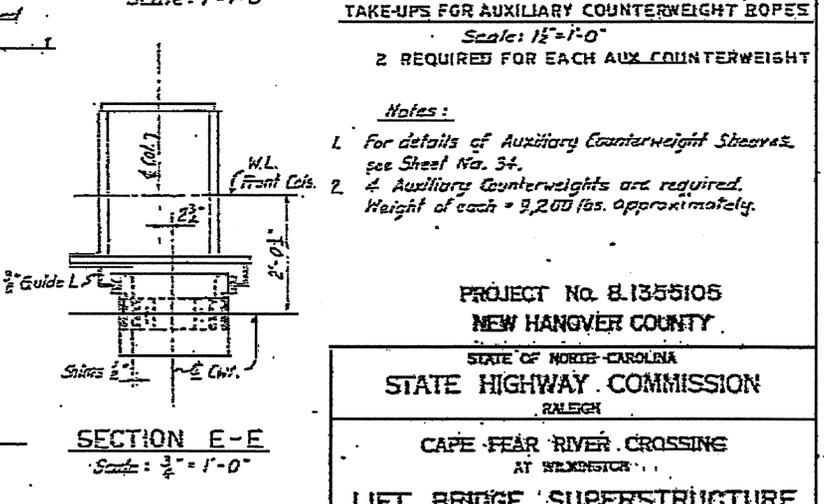
**HALF SECTION C-C (UPPER)  
HALF SECTION D-D (LOWER)**  
Scale: 1" = 1'-0"



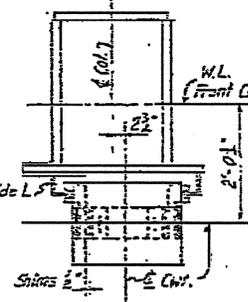
**FRONT ELEVATION SIDE VIEW**  
Scale: 1/2" = 1'-0"



**DETAIL C**  
Scale: 1" = 1'-0"



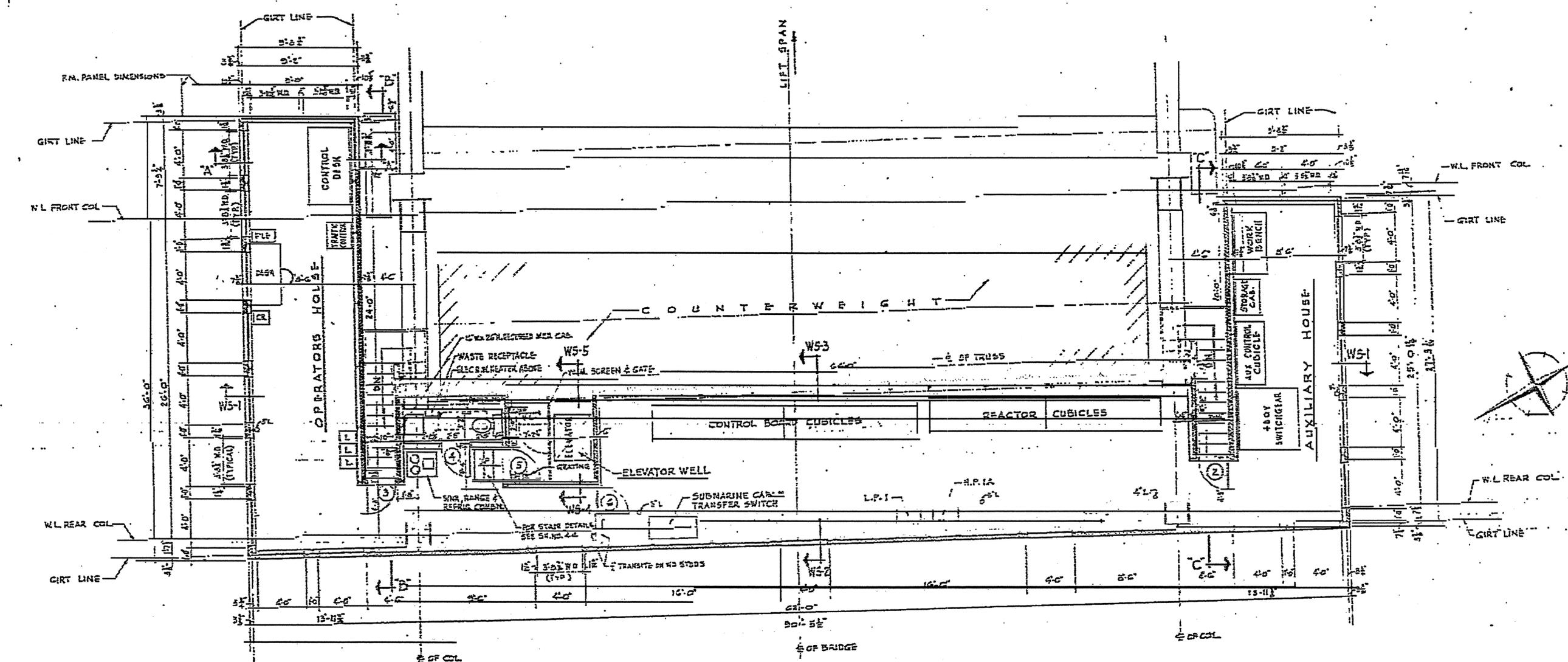
**TAKE-UPS FOR AUXILIARY COUNTERWEIGHT ROPES**  
Scale: 1/2" = 1'-0"  
2 REQUIRED FOR EACH AUX. COUNTERWEIGHT



**SECTION E-E**  
Scale: 3/4" = 1'-0"

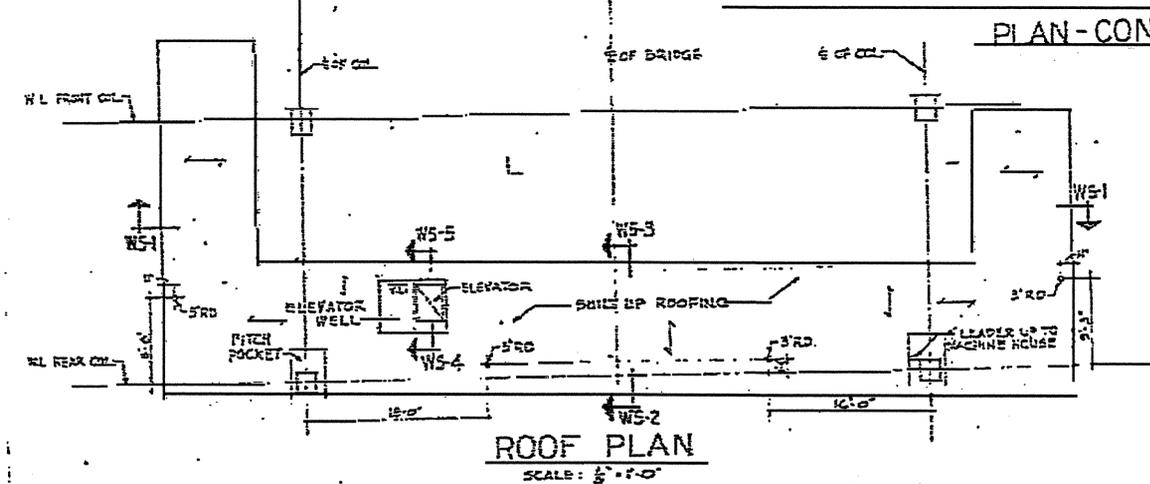
- Notes:**
1. For details of Auxiliary Counterweight Sheaves, see Sheet No. 34.
  2. 4 Auxiliary Counterweights are required. Height of each = 3,200 lbs. approximately.

PROJECT NO. 8.1355105  
NEW HANGOVER COUNTY  
STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
RALEIGH  
CAPE FEAR RIVER CROSSING  
AT WELLSVILLE  
**LIFT BRIDGE SUPERSTRUCTURE**  
AUXILIARY COUNTERWEIGHTS  
AND AIR BUFFERS

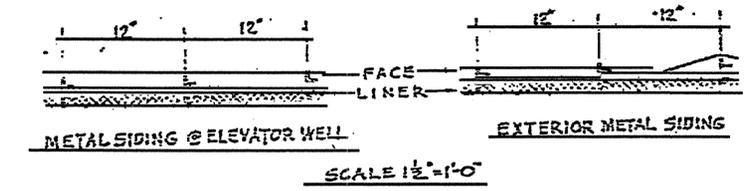


PLAN-CONTROL HOUSE - EAST TOWER  
SCALE: 1/4" = 1'-0"

- NOTES**
- 1- FOR STRUCTURAL PLANS & DETAILS SEE SHEET NO. 40 & 47
  - 2- FOR WALL SECTIONS & DETAILS SEE SHEET NO. 44
  - 3- FOR DOOR & FINISH SCHEDULES SEE SHEET NO. 45



ROOF PLAN  
SCALE: 1/8" = 1'-0"



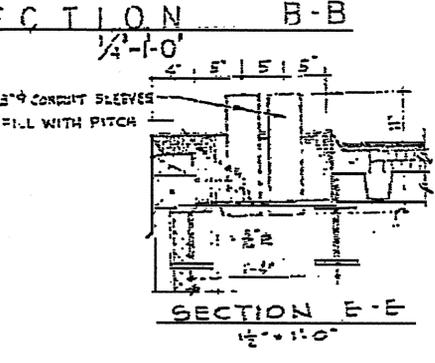
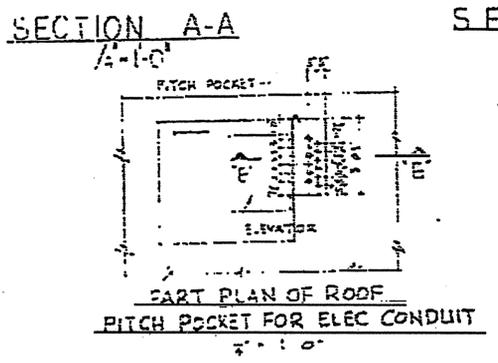
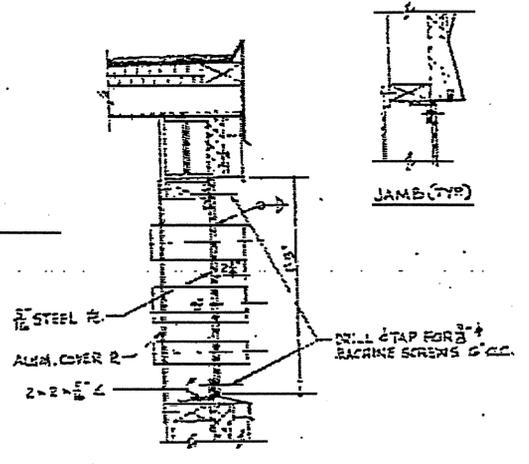
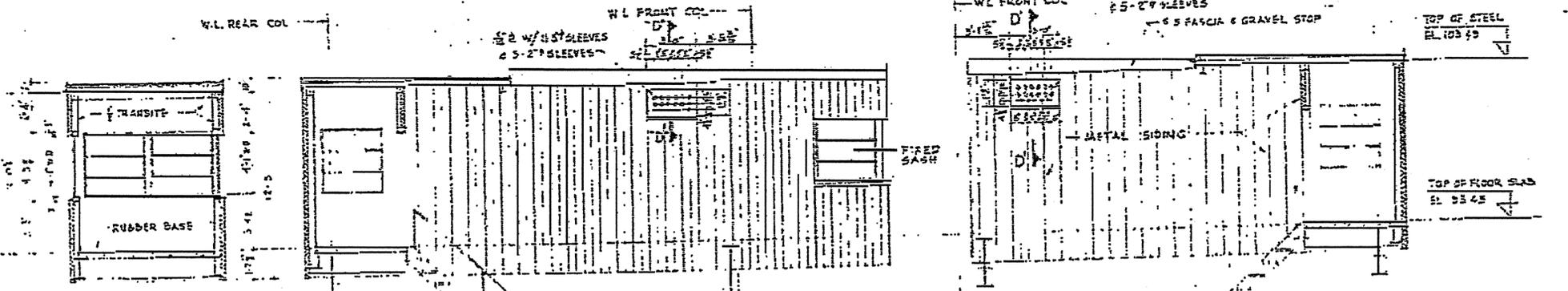
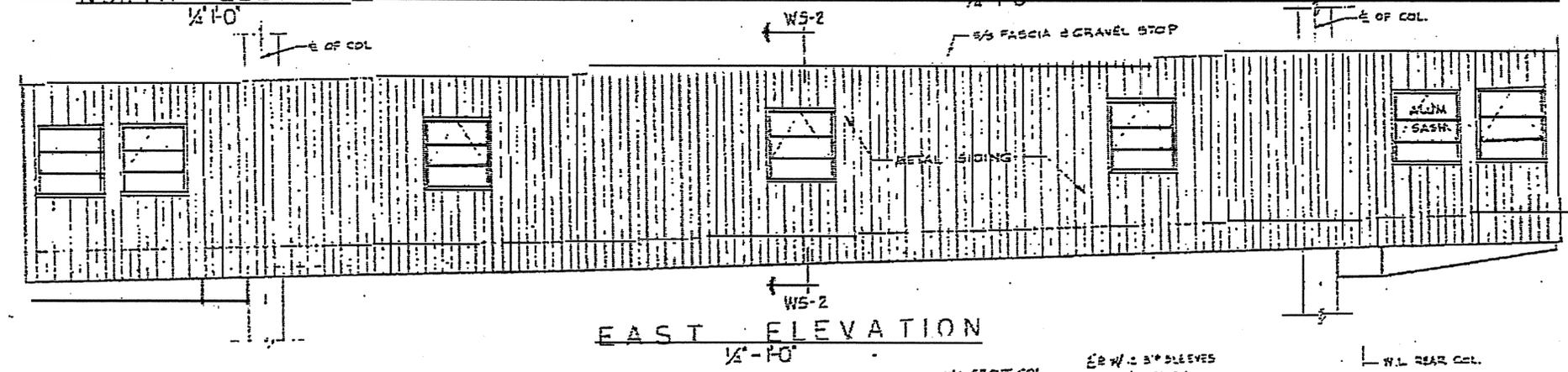
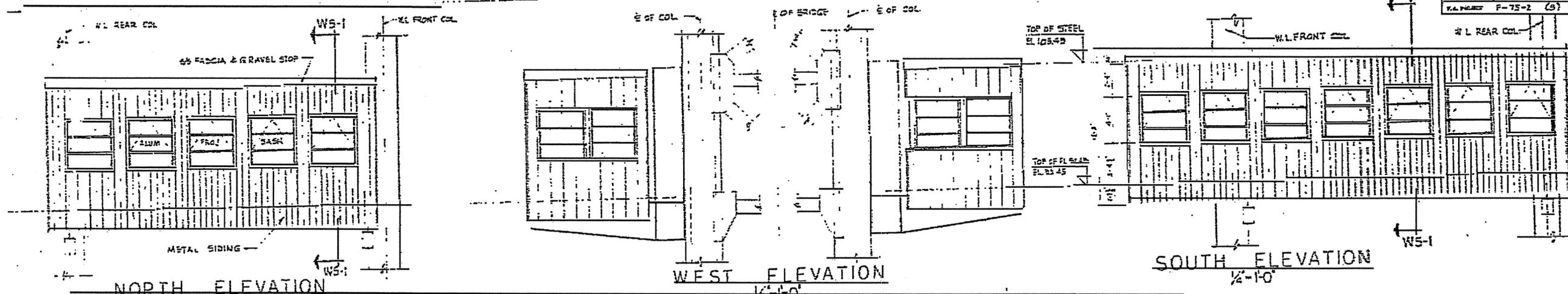
PROJECT: No. 81355105  
NEW HANOVER COUNTY

STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
RALEIGH

CAPE FEAR RIVER CROSSING  
AT WILMINGTON  
LIFT BRIDGE SUPERSTRUCTURE  
CONTROL HOUSE  
ARCHITECTURAL PLAN

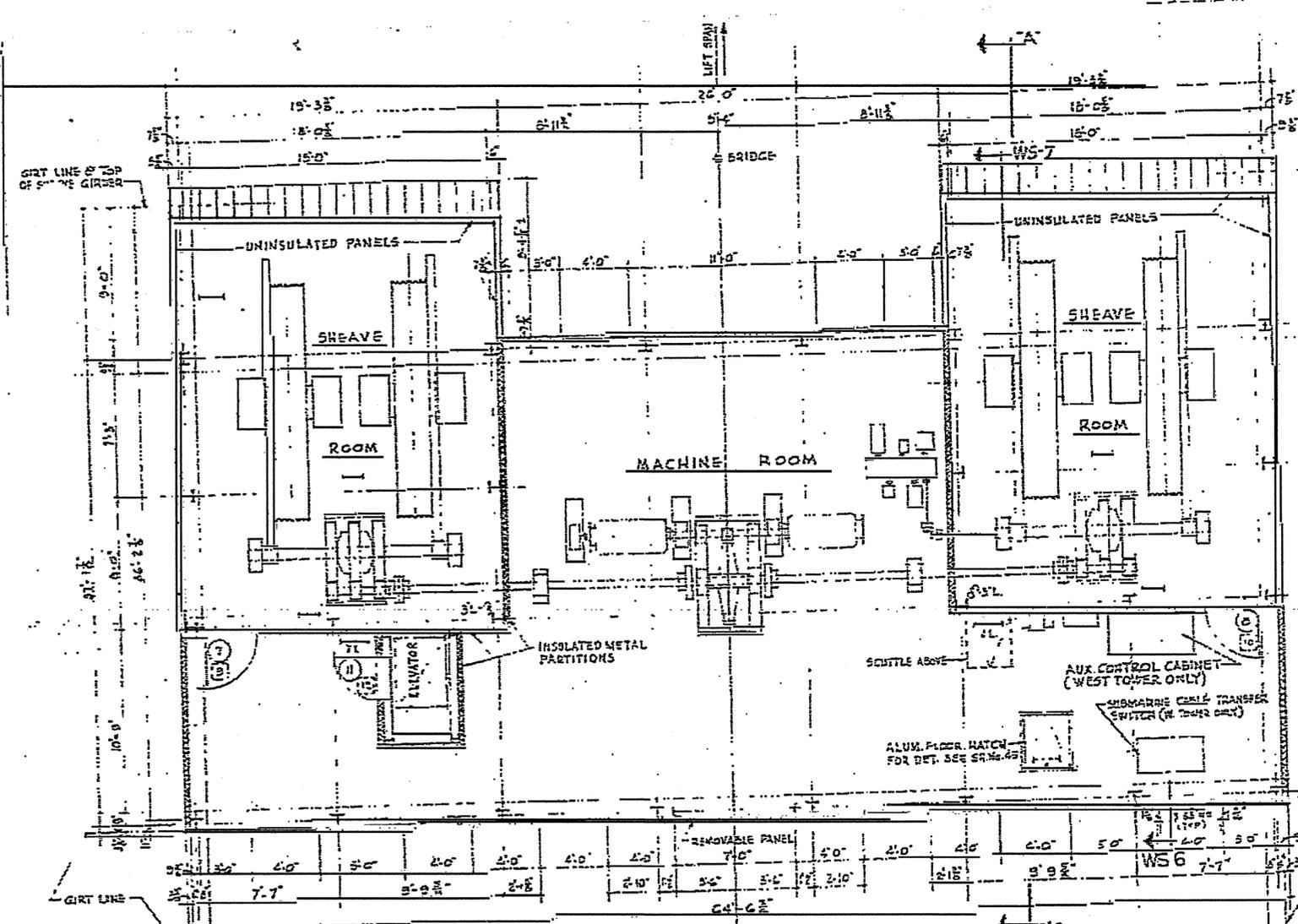
DESIGNED BY	DATE	REVISION	NO.	DATE
PARSONS, BRINCKERHOFF, SMITH & DOUGLAS, INC.		DATE: JANUARY 1954		
S-32		NEW YORK	SHEET NO. 40 OF 61	

REV. NO.	DATE	BY	PROJECT NO.
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

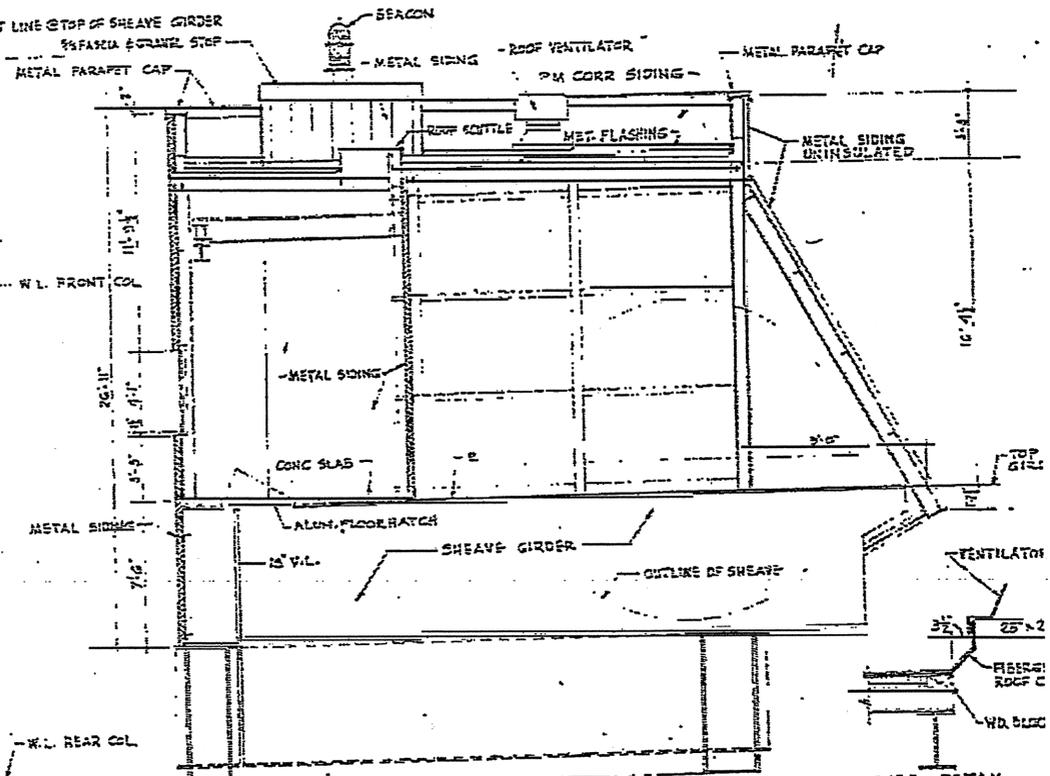
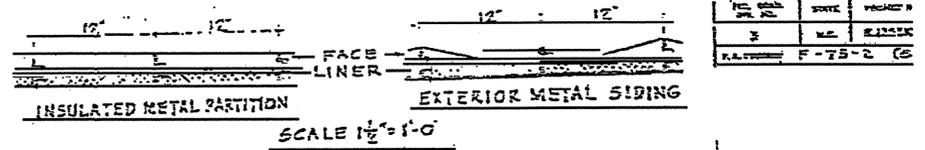


PROJECT No. 8.1355105  
 NEW HANOVER COUNTY  
 STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 RALEIGH  
 CAPE FEAR RIVER CROSSING  
 AT WILMINGTON  
 LIFT BRIDGE SUPERSTRUCTURE  
 CONTROL HOUSE  
 ARCHITECTURAL ELEVATIONS & SECTIONS  
 PARSONS, BRINCKERHOFF, CALLE & DOUGLAS, INC. DATE: MARCH 1966  
 SHEET NO. 5-33 OF 6

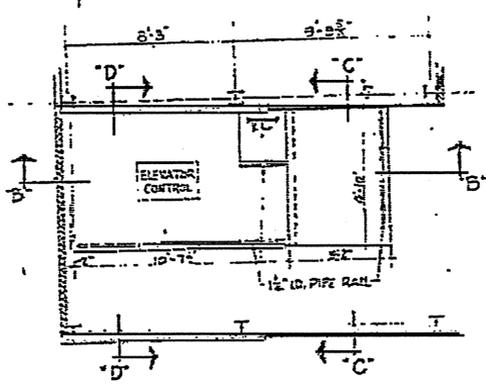
NO.	DATE	BY	PROJECT
1			
2			
3			
4			



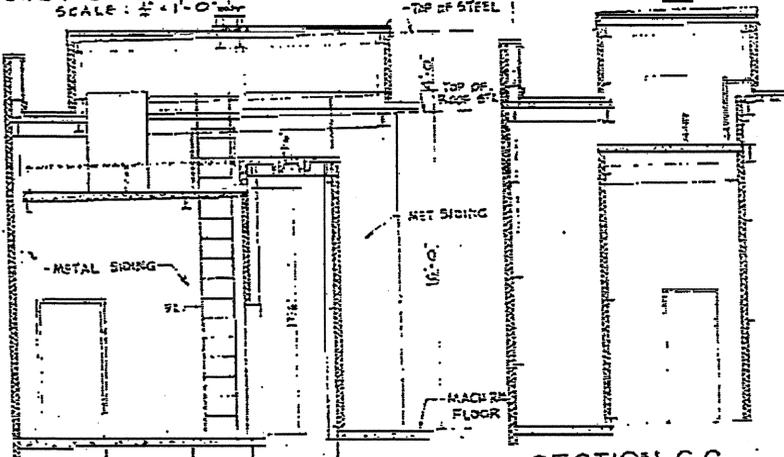
**MACHINE HOUSE PLAN - EAST TOWER**  
(WEST TOWER SIMILAR OPPOSITE HAND)  
SCALE: 1/2" = 1'-0"



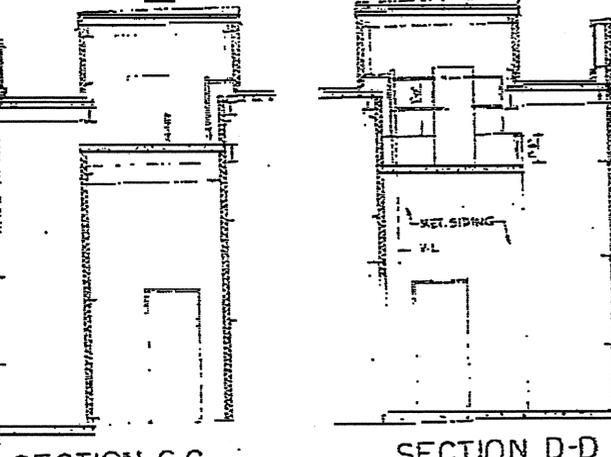
**SECTION A-A**  
SCALE: 3/4" = 1'-0"



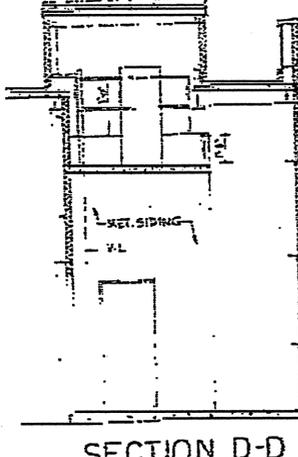
**PLAN - MACHINE ROOM SLAB**  
SCALE: 1/4" = 1'-0"



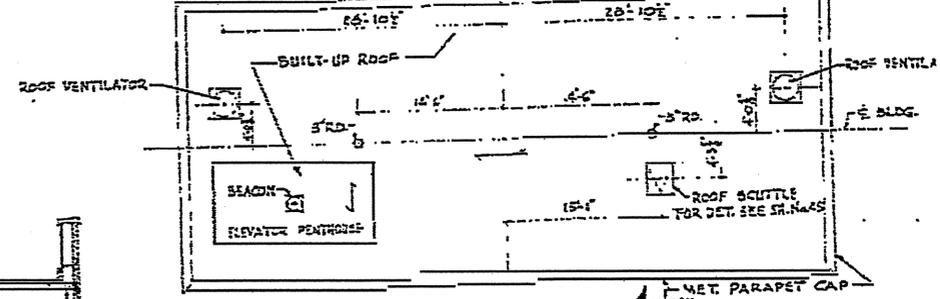
**SECTION B-B**



**SECTION C-C**  
SCALE: 1/2" = 1'-0"



**SECTION D-D**



**ROOF PLAN**  
SCALE: 1/2" = 1'-0"

**NOTES**

1. FOR STRUCTURAL PLANS & DETAILS SEE SH. NOS. 43 & 43
2. FOR WALL SECTIONS & DETAILS SEE SH. NOS. 44 & 45
3. FOR DOOR & WINDOW SCHEDULES SEE SH. NO. 45
4. FOR LADDER DETAILS SEE SH. NO. 45

REVISION	BY	DATE

PROJECT No. 8.1355105  
NEW HANOVER COUNTY

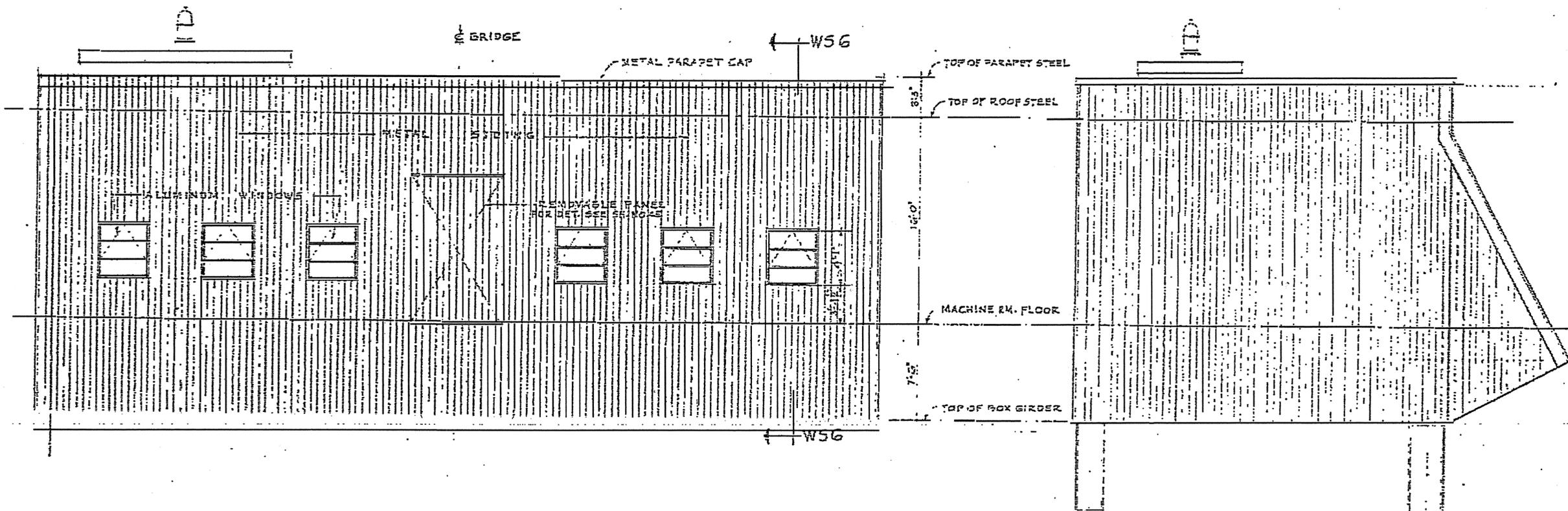
STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
RALEIGH

CAPE FEAR RIVER CROSSING  
AT WILMINGTON

**LIFT BRIDGE SUPERSTRUCTURE  
'MACHINERY' HOUSES**  
ARCHITECTURAL PLANS & SECTION

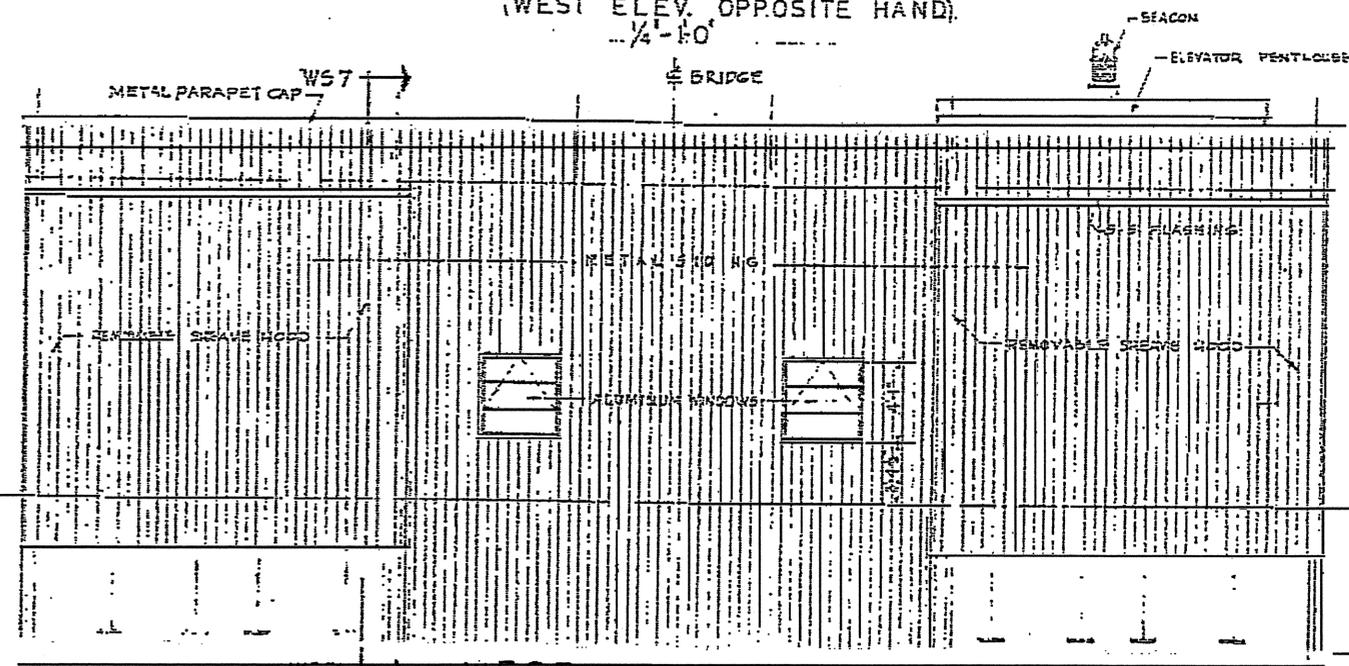
PARSONS, BRINCKERHOFF, GARDNER & DOUGLAS, INC.  
DATE: MARCH 1957  
DRAWING NO. S-34  
SHEET NO. 22

PROJECT NO.	DATE	BY
8.1355105	MARCH 1957	...



**EAST ELEVATION**  
(WEST ELEV. OPPOSITE HAND)  
1/4" = 1'-0"

**NORTH ELEVATION**  
(SOUTH ELEV. OPPOSITE HAND)  
1/4" = 1'-0"



**WEST ELEVATION**  
(EAST ELEV. OPPOSITE HAND)  
1/4" = 1'-0"



**PITCH POCKET FOR BEACON PEDESTAL**  
1/4" = 1'-0"

MACHINE ROOM FLOOR - TOP OF CONC. EL. 187.02  
**EAST TOWER SHOWN ONLY**  
(WEST TOWER OPPOSITE HAND)

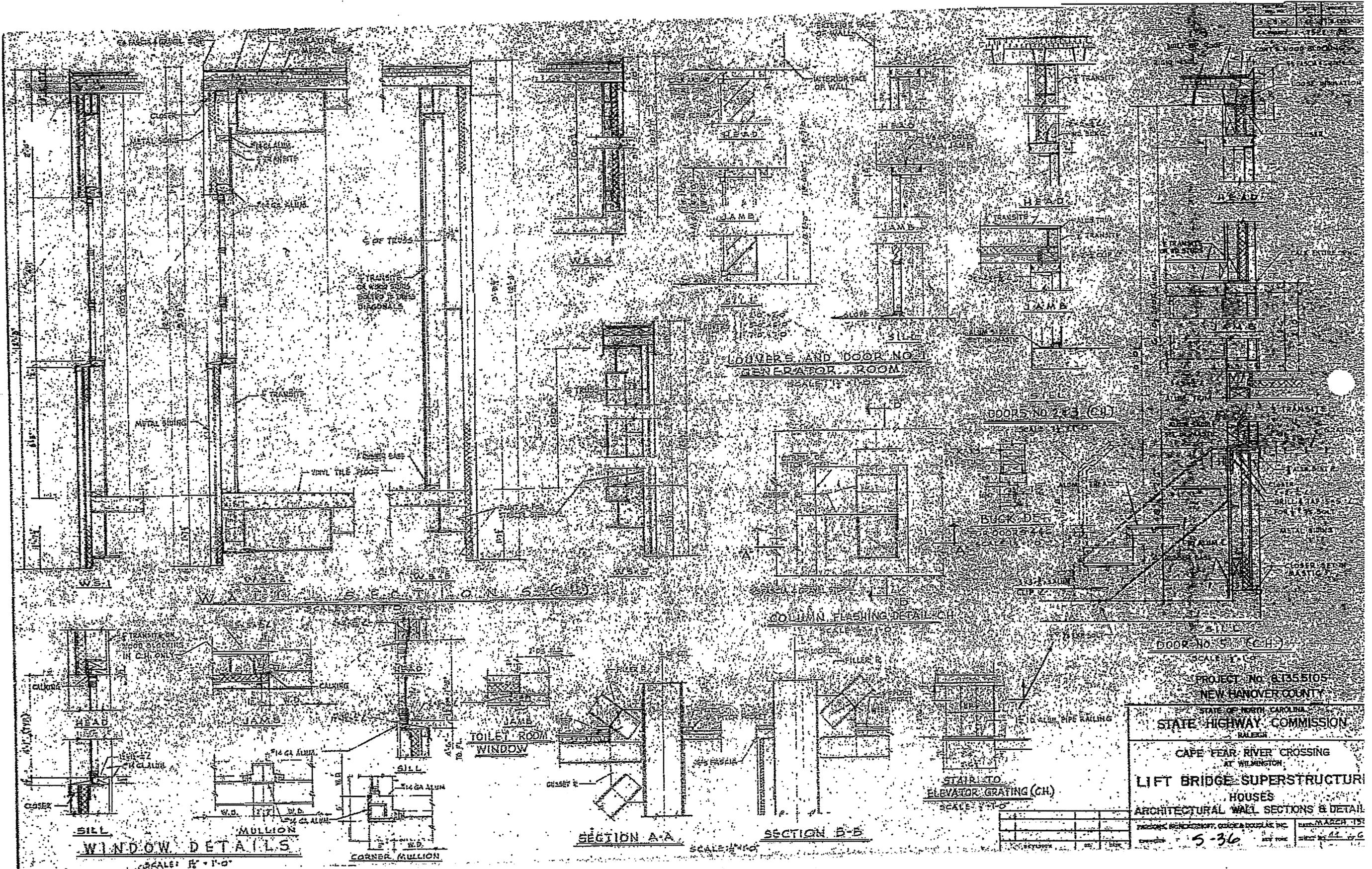
PROJECT No. 8.1355105  
NEW HANOVER COUNTY  
STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
RALEIGH

CAPE FEAR RIVER CROSSING  
AT WILMINGTON

**LIFT BRIDGE SUPERSTRUCTURE  
MACHINERY HOUSES  
ARCHITECTURAL ELEVATIONS**

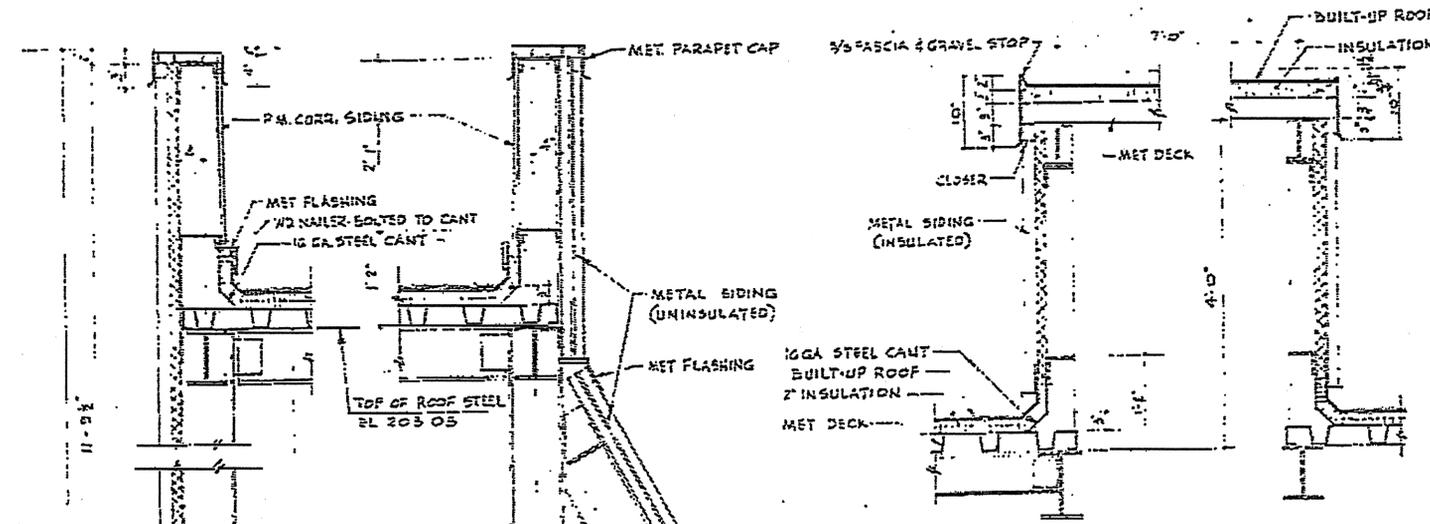
PARSONS, BRINCKERHOFF, QUADE & DEKLEIS, INC. DATE: MARCH 1957  
SHEET NO. 43 OF 67

REVISION	BY	DATE

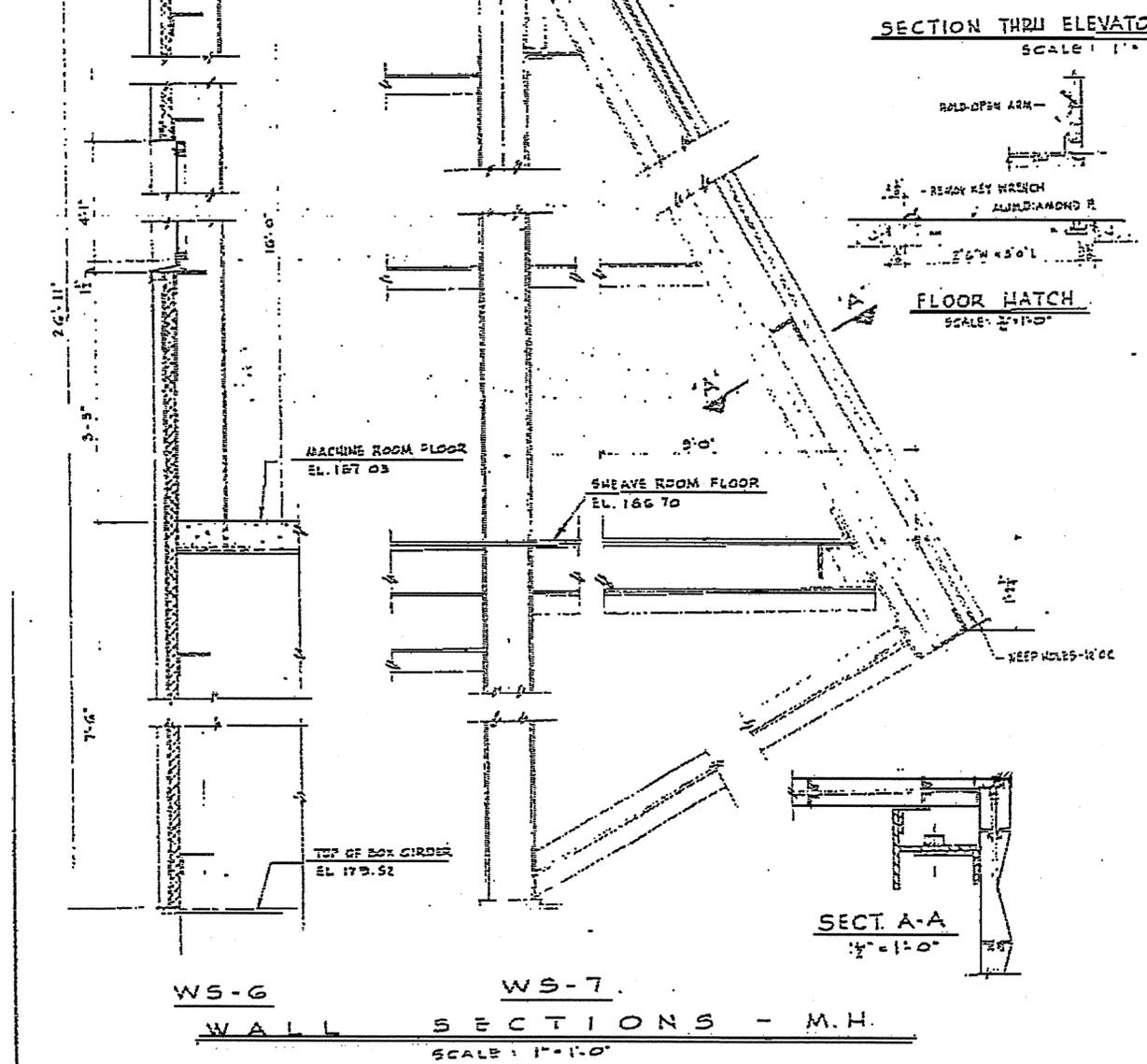


PROJECT NO. 61355105  
 NEW HANOVER COUNTY  
 STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
 RALEIGH  
 CAPE FEAR RIVER CROSSING  
 AT WILMINGTON  
**LIFT BRIDGE SUPERSTRUCTURE  
 HOUSES**  
 ARCHITECTURAL WALL SECTIONS & DETAIL  
 PREPARED BY: HENNINGSON, GREEN & DOUGLAS, INC. DATE: MARCH 1954  
 DRAWING NO. **5-36** SHEET NO. 12 OF 16

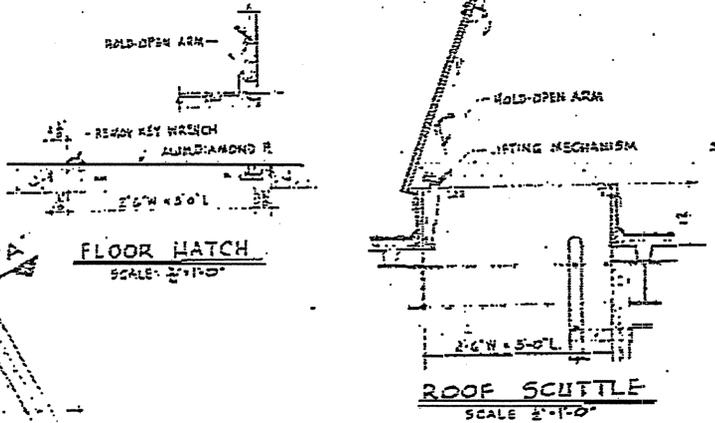
NO.	DATE	BY	REVISION
3	AC		BASED ON
V.A. PARSONS F-75-2 (S)			



SECTION THRU ELEVATOR PENTHOUSE  
SCALE: 1/4" = 1'-0"

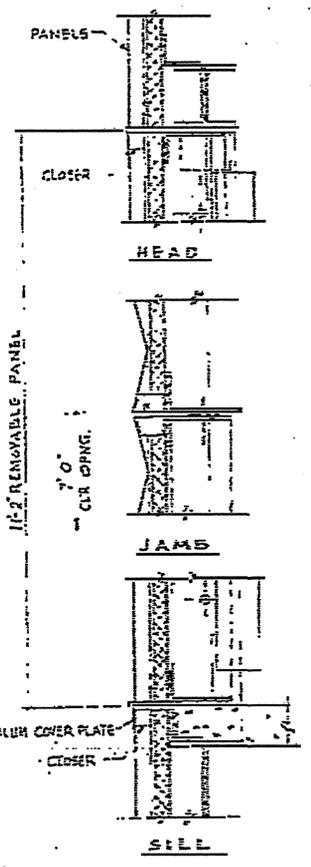


WS-6 WS-7  
WALL SECTIONS - M.H.  
SCALE: 1/4" = 1'-0"

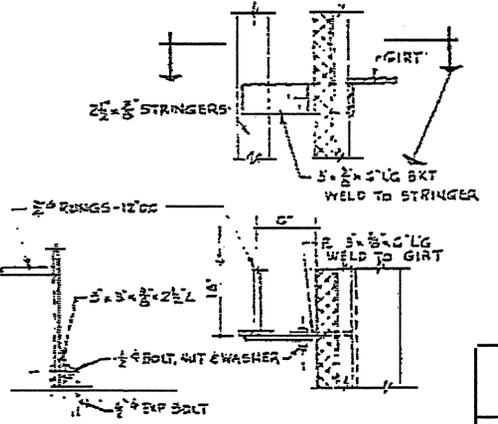


FLOOR HATCH  
SCALE: 1/4" = 1'-0"

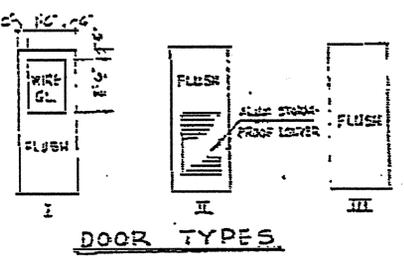
ROOF SCUTTLE  
SCALE: 1/4" = 1'-0"



REMOVABLE PANEL DETAILS  
SCALE: 1/2" = 1'-0"



TYPICAL LADDER CONNECTIONS  
SCALE: 1/2" = 1'-0"

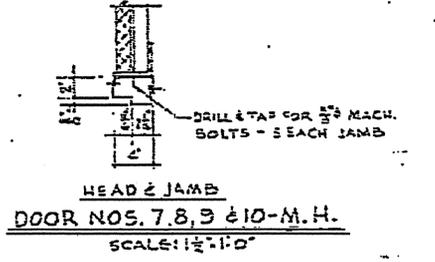


DOOR TYPES

DOOR SCHEDULE						
DOOR NO.	SIZE	TYPE	MAT.	FRAME	SADDLE	REMARKS
1	3'-0" x 7'-0" 1/2"	II	ALUM.	ALUM.	ALUM.	SEE L.S. FOR ROOF L.V.R.
2	2'-0" x 7'-0" 1/2"	I	ALUM.	ALUM.	ALUM.	
3	2'-0" x 7'-0" 1/2"	I	ALUM.	ALUM.	ALUM.	
4	2'-2" x 7'-0" 1/2"	III	H.M.	H.M.		
5	2'-0" x 6'-10" 1/2"	I	ALUM.	ALUM.	ALUM.	
6	2'-0" x 7'-0" 1/2"	III	H.M.	H.M.		
7, 8, 9	3'-0" x 7'-0" 1/2"	III	H.M.	H.M.		
10	3'-0" x 7'-0" 1/2"	III	H.M.	H.M.		
11, 12	2'-0" x 5'-7" 1/2"	III	H.M.	H.M.	ALUM.	BY ELEVATOR CONTRACTOR

NOTE:  
DOOR NOS. 9, 10 & 12 ARE FOR THE WEST TOWER MACHINE HOUSE.

FINISH SCHEDULE			
SPACE	FLOOR	BASE	WALLS & CE
ENTRANCE ROOM	VINYL TILE	RUBBER	TRANSIT-PAINTED DECK, PAINTED
OPERATOR'S HOUSE			
AUXILIARY HOUSE			
ELEVATOR WELL (CH)	STL GRATING		METAL SIDING
TOILET ROOM	VINYL TILE	RUBBER	TRANSIT-PAINTED DECK, PAINTED
MACHINE RM - E. TOWER	CONCRETE		METAL SIDING
SHEAVE ROOMS - E. TOWER	STEEL		
ELEVATOR - E. TOWER	CONCRETE		
MACHINE RM - W. TOWER	CONCRETE		
SHEAVE ROOMS - W. TOWER	STEEL		
ELEVATOR - W. TOWER	CONCRETE		

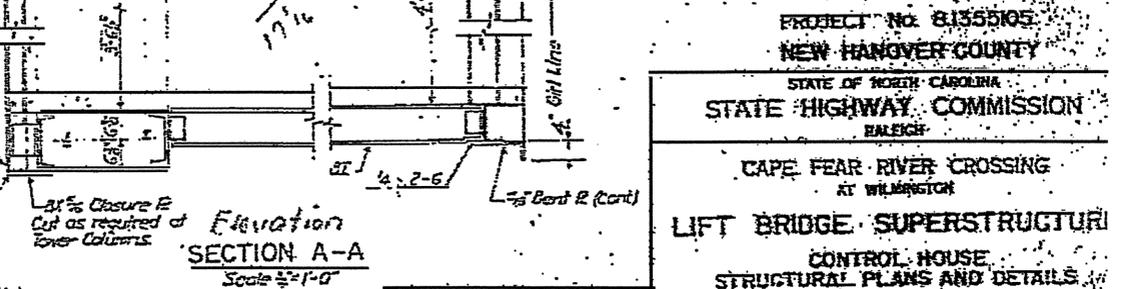
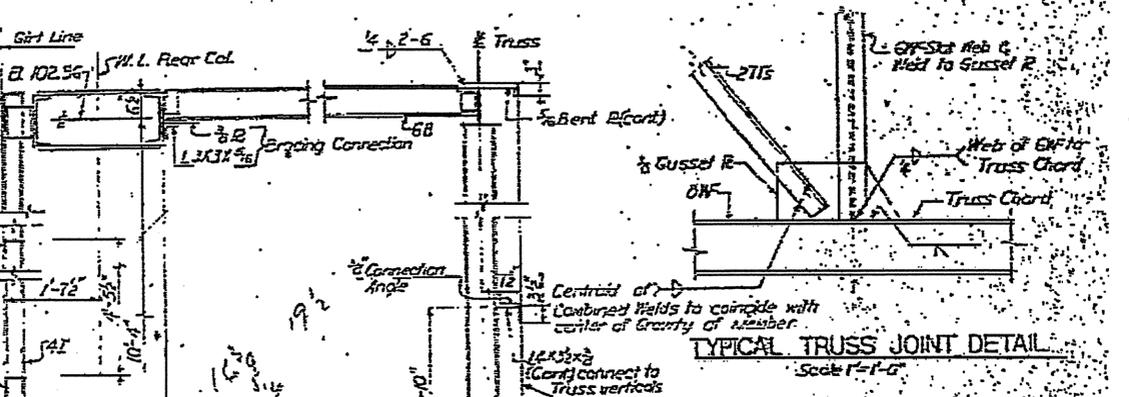
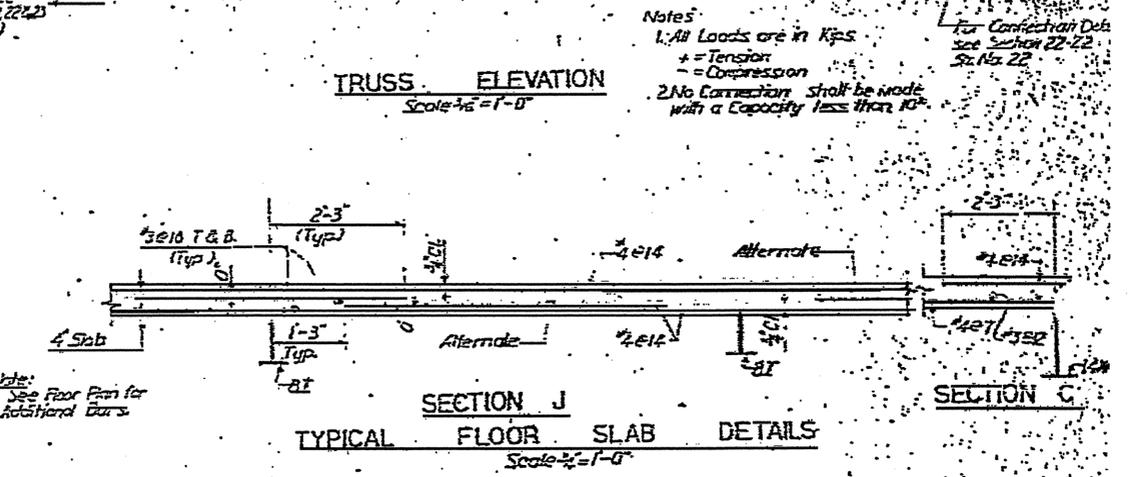
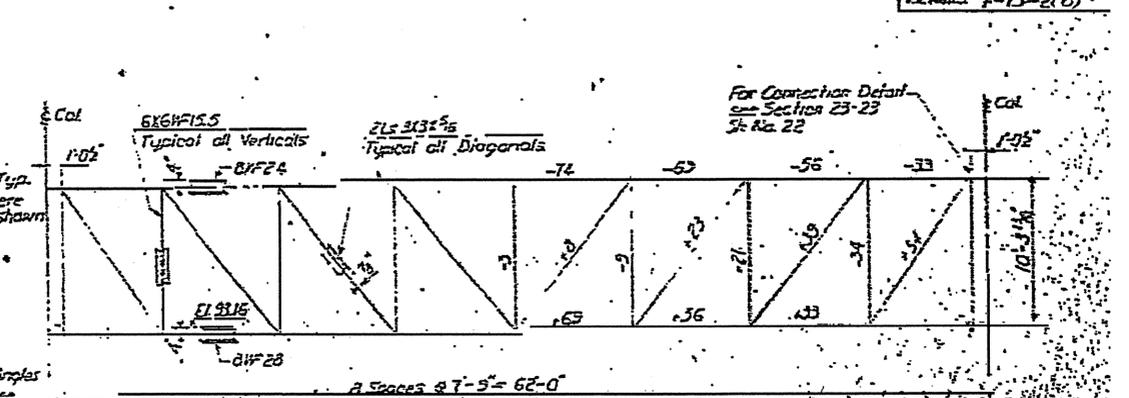
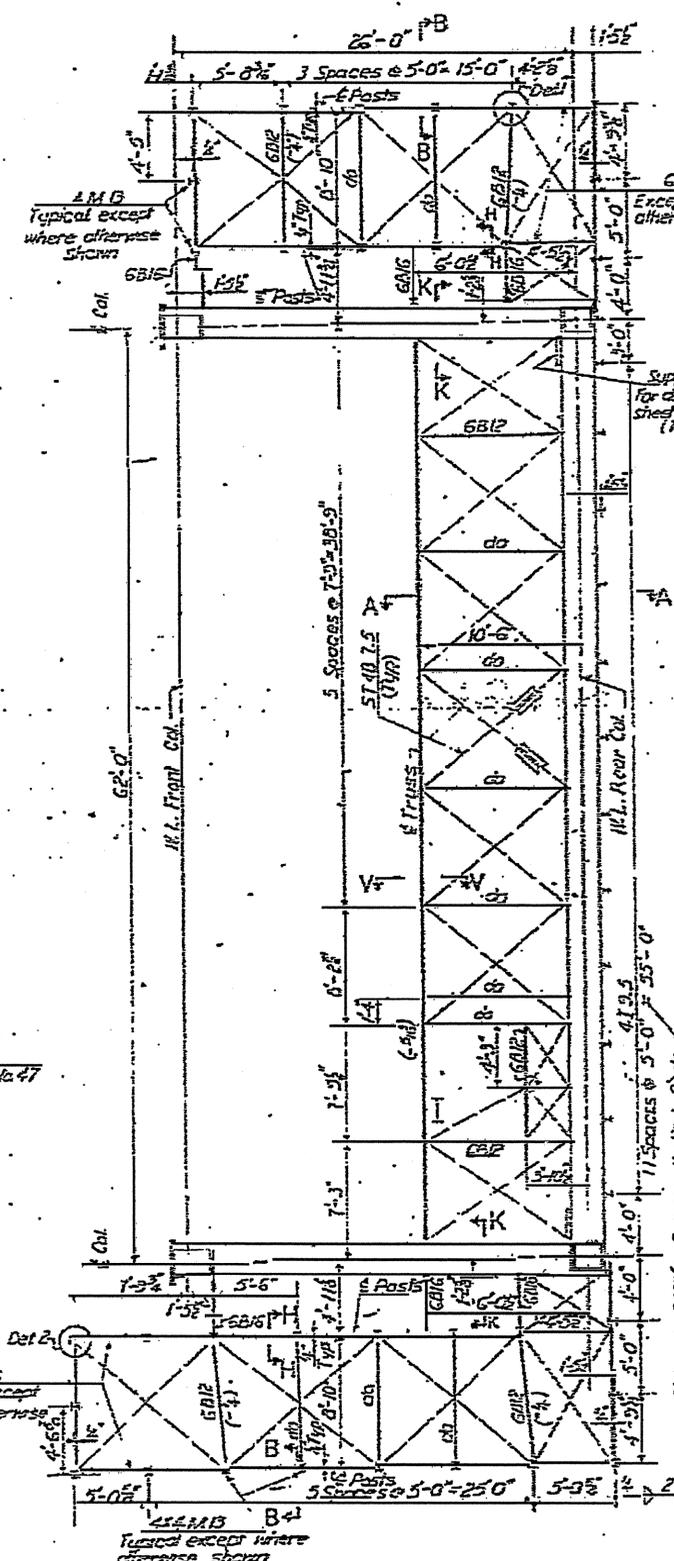
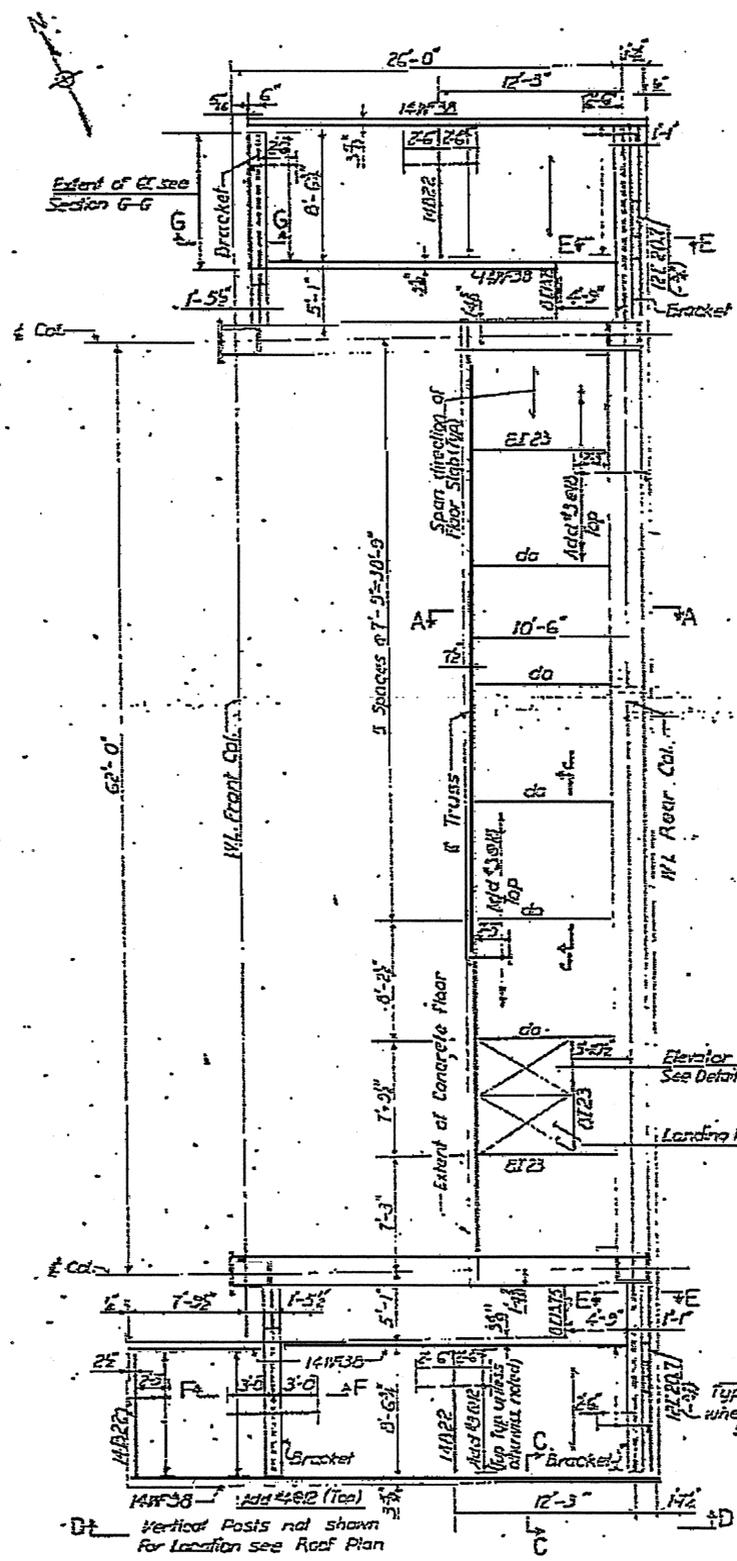


HEAD & JAMB  
DOOR NOS. 7, 8, 9 & 10 - M.H.  
SCALE: 1/2" = 1'-0"

PROJECT No. 8.1355105  
NEW HANOVER COUNTY  
STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
RALEIGH  
CAPE FEAR RIVER CROSSING  
AT WILMINGTON  
LIFT BRIDGE SUPERSTRUCTURE  
HOUSES  
ARCHITECTURAL WALL SECTIONS & DETAILS  
PARSONS, BRITTON, JOHNSON, QUINN & DOUGLAS, INC. DATE: MARCH 1961  
ENGINEER: S-37 NEW YORK SHEET NO. 25 OF 27

REVISION	BY	DATE

NO.	DATE	BY	PROJECT NO.
1	11-15-50	J.M.C.	81355105
DRAWING TITLE: F-75-2(6)			

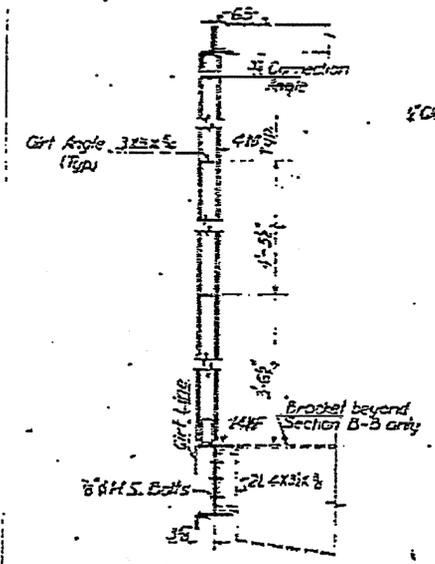


PROJECT NO. 81355105  
NEW HANOVER COUNTY  
STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
RALEIGH  
CAPE FEAR RIVER CROSSING  
AT WILMINGTON  
LIFT BRIDGE SUPERSTRUCTURE  
CONTROL HOUSE  
STRUCTURAL PLANS AND DETAILS

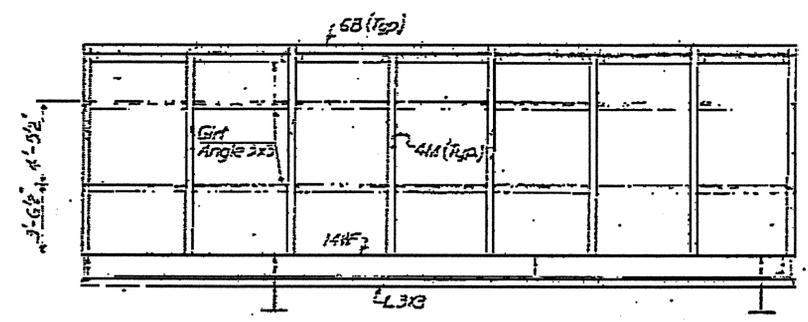
REVISION	BY	DATE

5-38

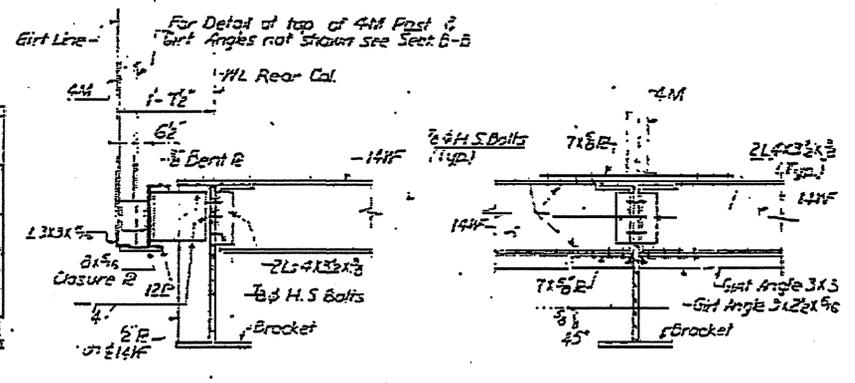
REV. NO.	DATE	PROJECT NO.
1	8.13.55	8.1355105
I.L. PRICE F-75-2(2)		



DETAIL 2  
Scale 1/2"=1'-0"

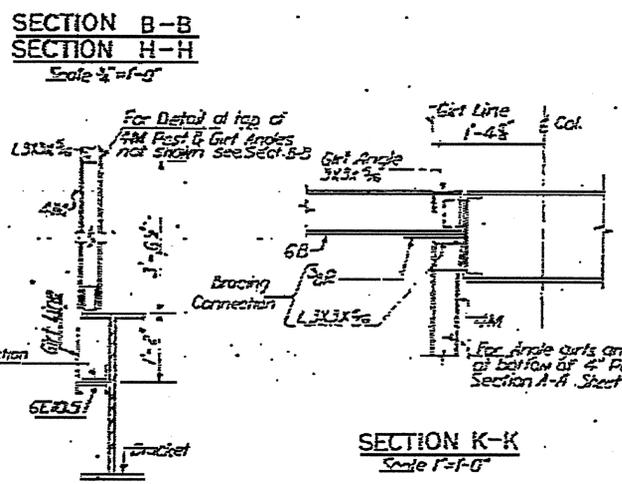


SECTION D-D  
Scale 1/2"=1'-0"  
(Typical Girt Elevation)

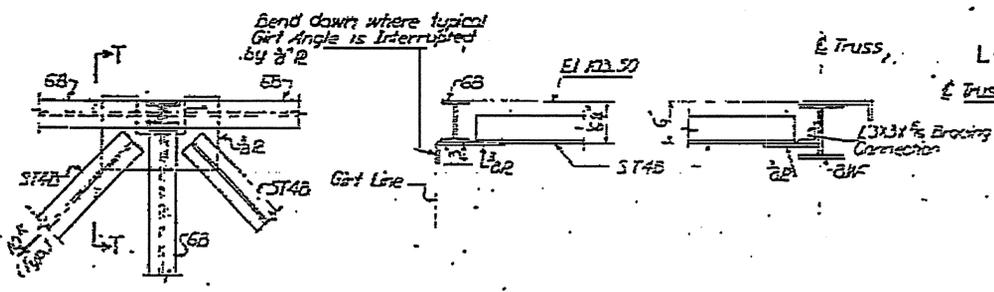


SECTION E-E  
Scale 1/2"=1'-0"

SECTION F-F  
Scale 1/2"=1'-0"



SECTION K-K  
Scale 1"=1'-0"

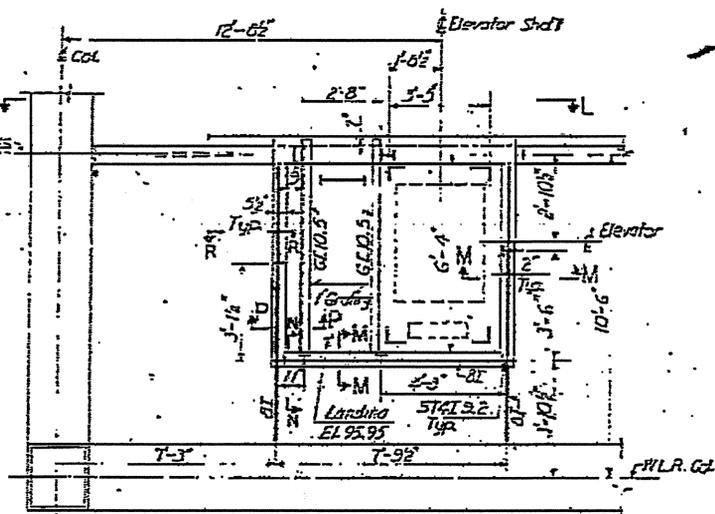


DETAIL 1

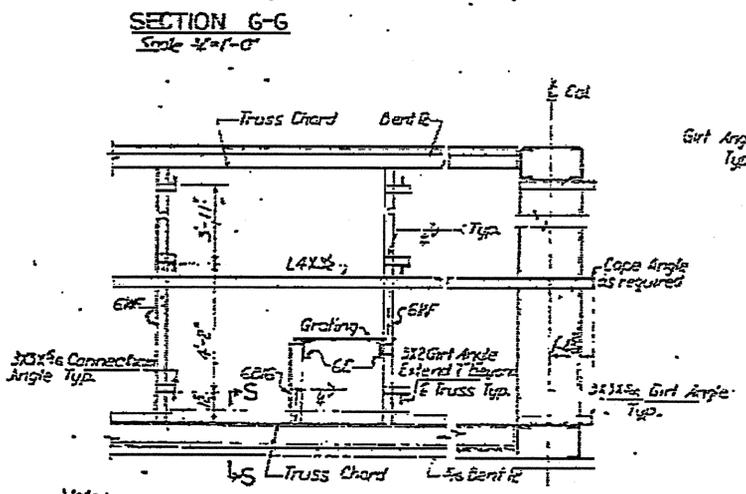
SECTION T-T

SECTION V-V

TYPICAL BRACING DETAILS  
Scale 1"=1'-0"

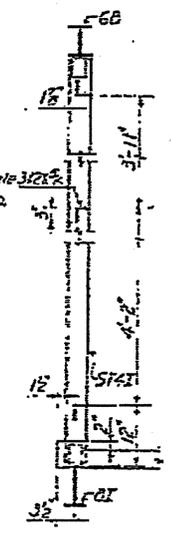


FLOOR PLAN AT ELEVATOR WELL  
Scale 1/2"=1'-0"

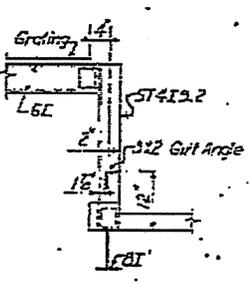


SECTION G-G  
Scale 1/2"=1'-0"

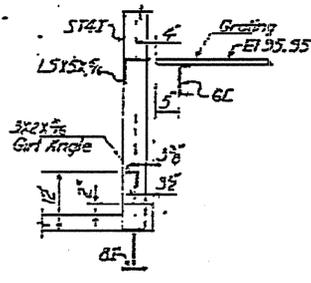
SECTION L-L  
Scale 1/2"=1'-0"



SECTION M-M  
SECTION R-R (Similar)  
Scale 1/2"=1'-0"



SECTION N-N  
Scale 1/2"=1'-0"



SECTION P-P  
Scale 1/2"=1'-0"

SECTION S-S  
Scale 1"=1'-0"

CONNECTION NOTES

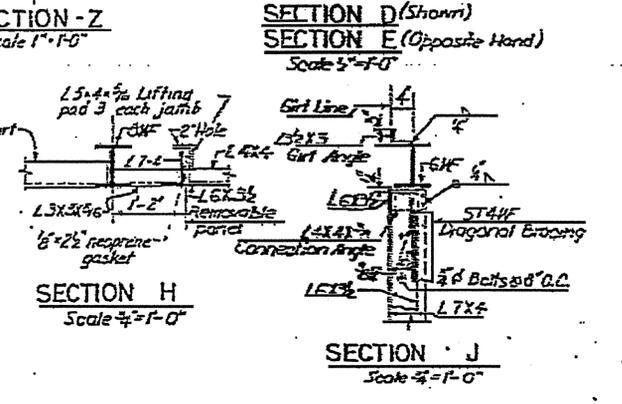
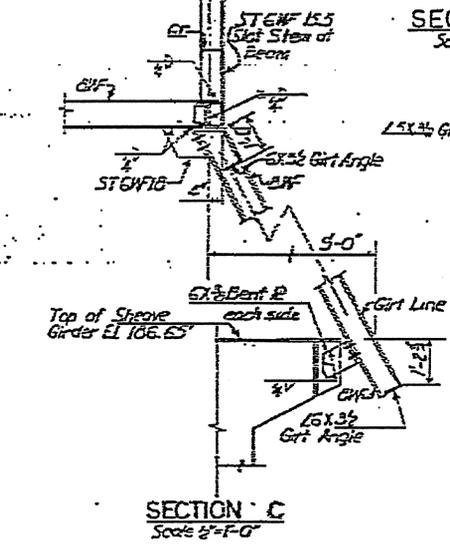
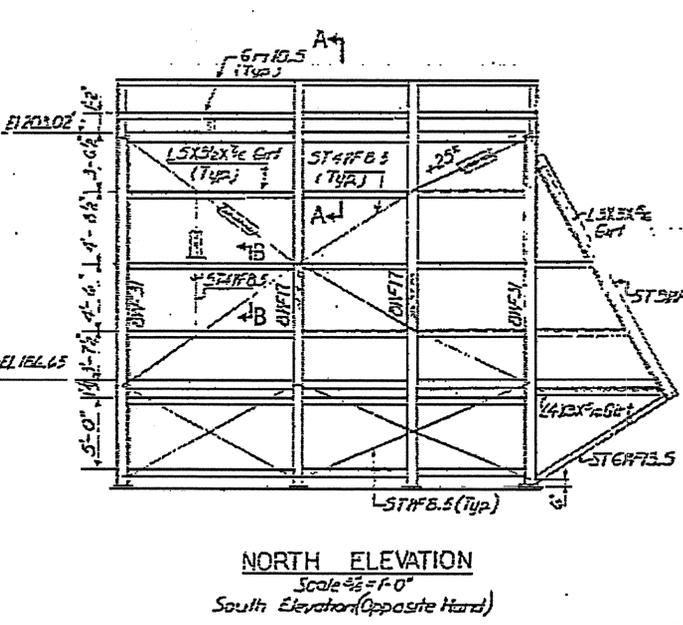
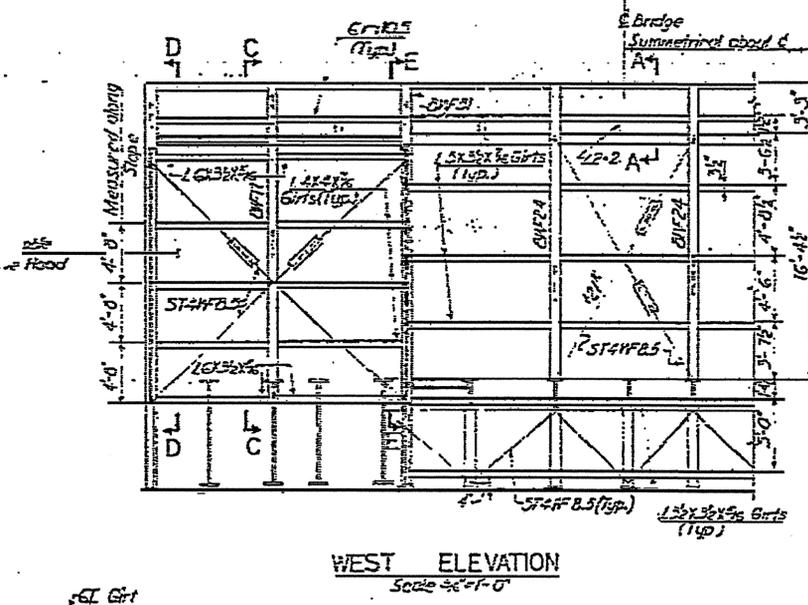
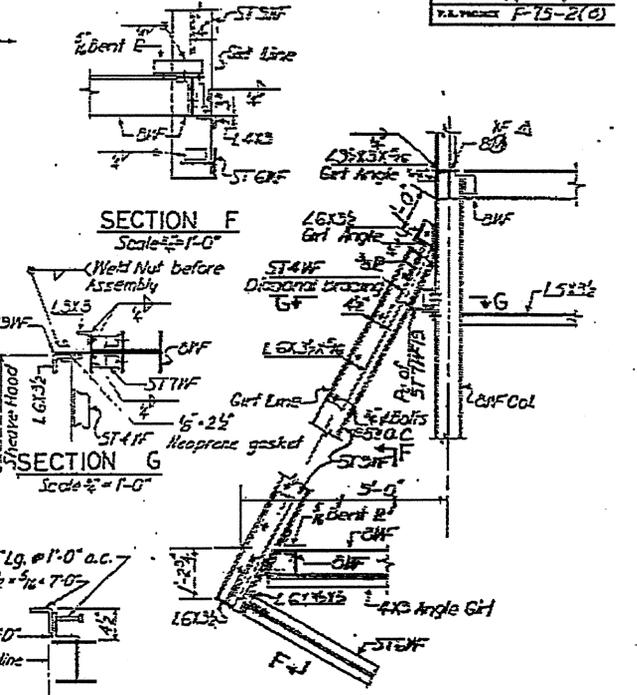
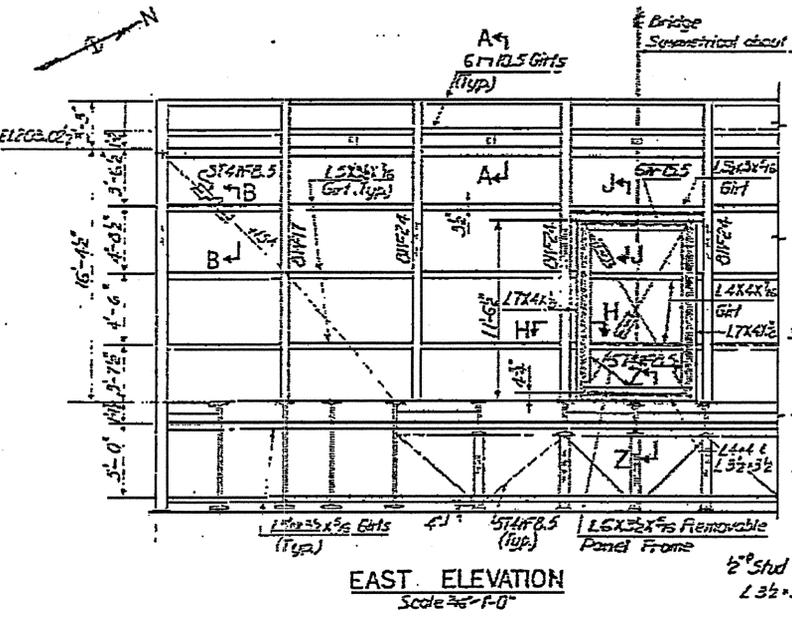
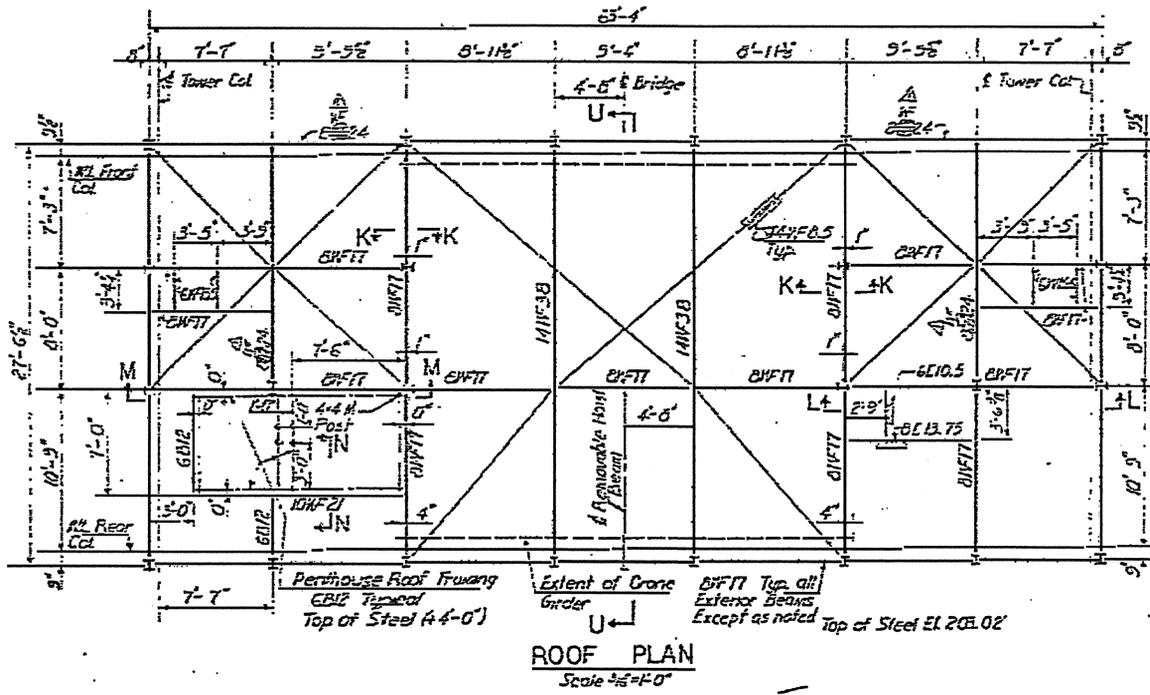
- All Field Connections shall be 3/4" H.S. Bolts unless otherwise shown and where required to match bolts of lower members.
- Unless otherwise noted web connections shall consist of two angles and shall have a capacity equivalent to:
  - 2 Rows of 3/4" H.S. Bolts for members 10" deep or less.
  - 3 Rows of 3/4" H.S. Bolts for members 12" & 14" deep.
- No connection shall be made with less than two bolts or a capacity less than 10K.

PROJECT No. 8.1355105  
NEW HANOVER COUNTY

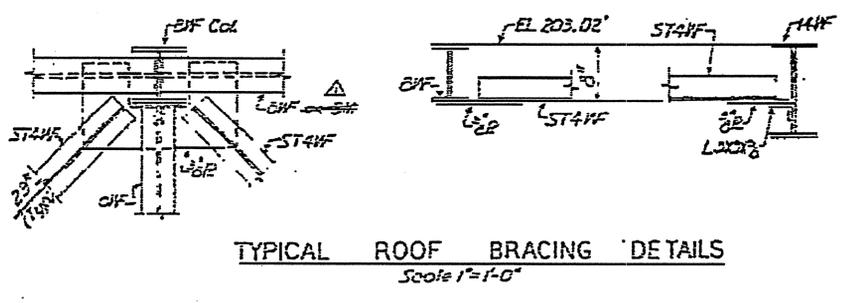
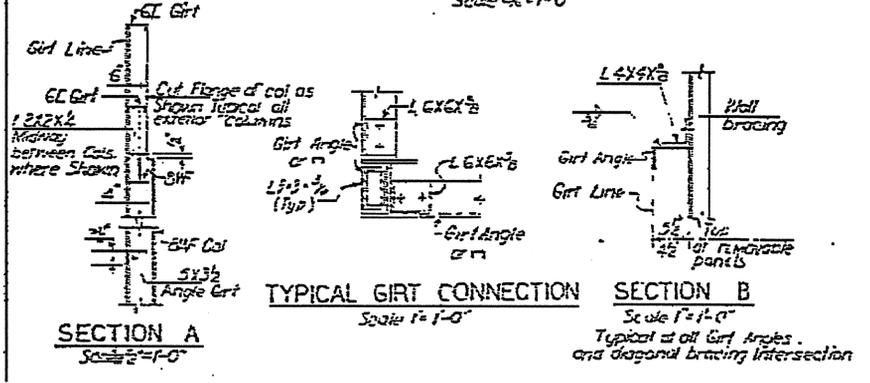
STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
RALEIGH  
CAPE FEAR RIVER CROSSING  
AT WILMINGTON  
LIFT BRIDGE SUPERSTRUCTURE  
CONTROL HOUSE - STRUCTURAL DETAILS

PARSONS, BRINCKERHOFF, CHASE & DOUGLAS, INC. DATE: March 1967  
DRAWN: S-39 REV. NO. SHEET NO. 47 OF 67

NO.	DATE	BY
1	1-15-57	RCS
2	1-25-57	RCS
3	1-25-57	RCS
4	1-25-57	RCS



**NOTES:**  
 1. PLAN AND DETAILS SHOWN ARE FOR EAST TOWER. WEST TOWER OPPOSITE HAND.  
 2. WORK THIS DRAWING WITH SHEET NO. 49  
 3. FOR CONNECTION NOTES SEE SHEET 1-47



PROJECT NO. 8.135105  
 NEW HANOVER COUNTY  
 STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 RALEIGH  
 CAPE FEAR RIVER CROSSING  
 AT WILMINGTON  
 LIFT BRIDGE SUPERSTRUCTURE  
 MACHINERY HOUSES  
 STRUCTURAL PLANS AND DETAILS

DESIGNED BY	PAULSON, BRIDGEMAN, BOGGS & BOGGS, INC.	DATE	March, 1957
CHECKED BY	RCS	DATE	1-25-57
REVISION		DATE	

EMPLOYEE NO. 5-40 NEW YORK SHEET NO. 48 OF 6