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STANDARD SHEETS

G-18 6/1/1994

RECORD PLANS

CONTRACTOR:	ENGINEERS CONSTRUCTION INC. - SO BURLINGTON, VT
RESIDENT ENGINEER:	GREG WILCOX
CONSTRUCTION BEGAN:	DECEMBER 12, 2007
CONSTRUCTION COMPLETE:	FEBRUARY 29, 2008
RECORD PLANS BY:	GREG WILCOX, BEN LOGAN

HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

BY *Greg Wilcox* RESIDENT ENGINEER

DATE 9/2/09

NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

STATE OF VERMONT AGENCY OF TRANSPORTATION

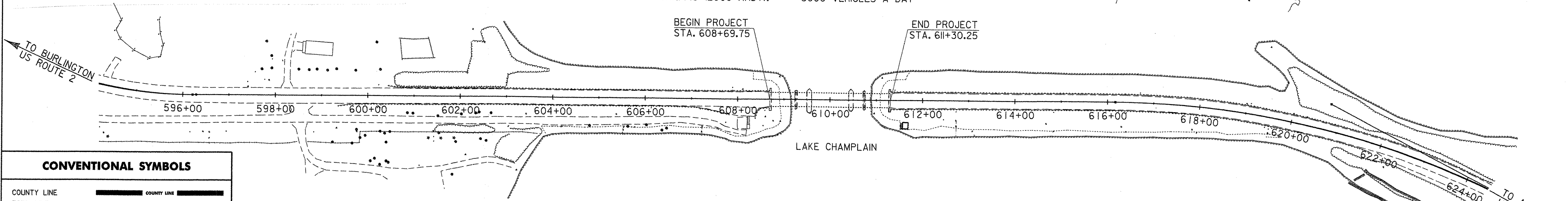
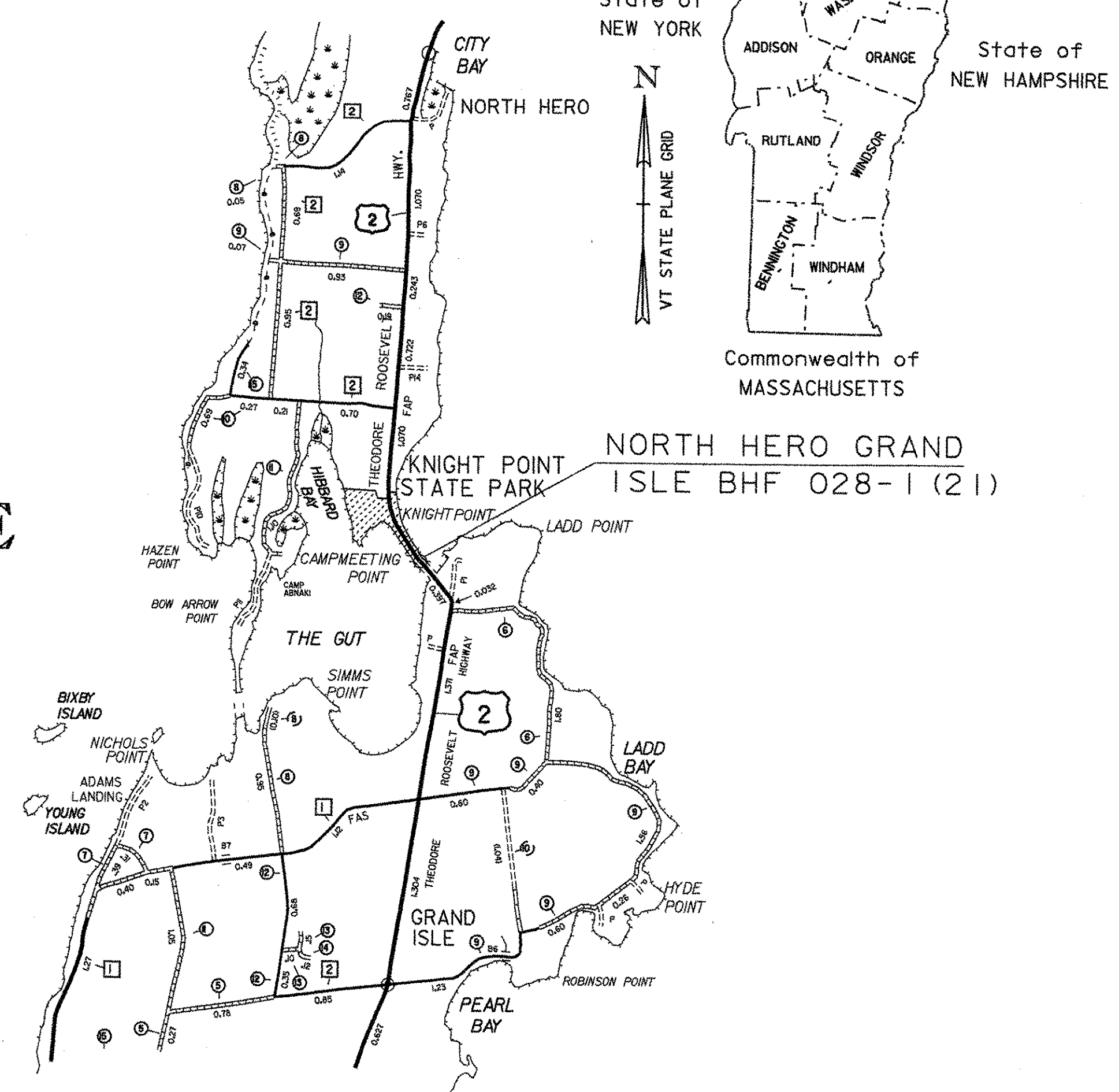
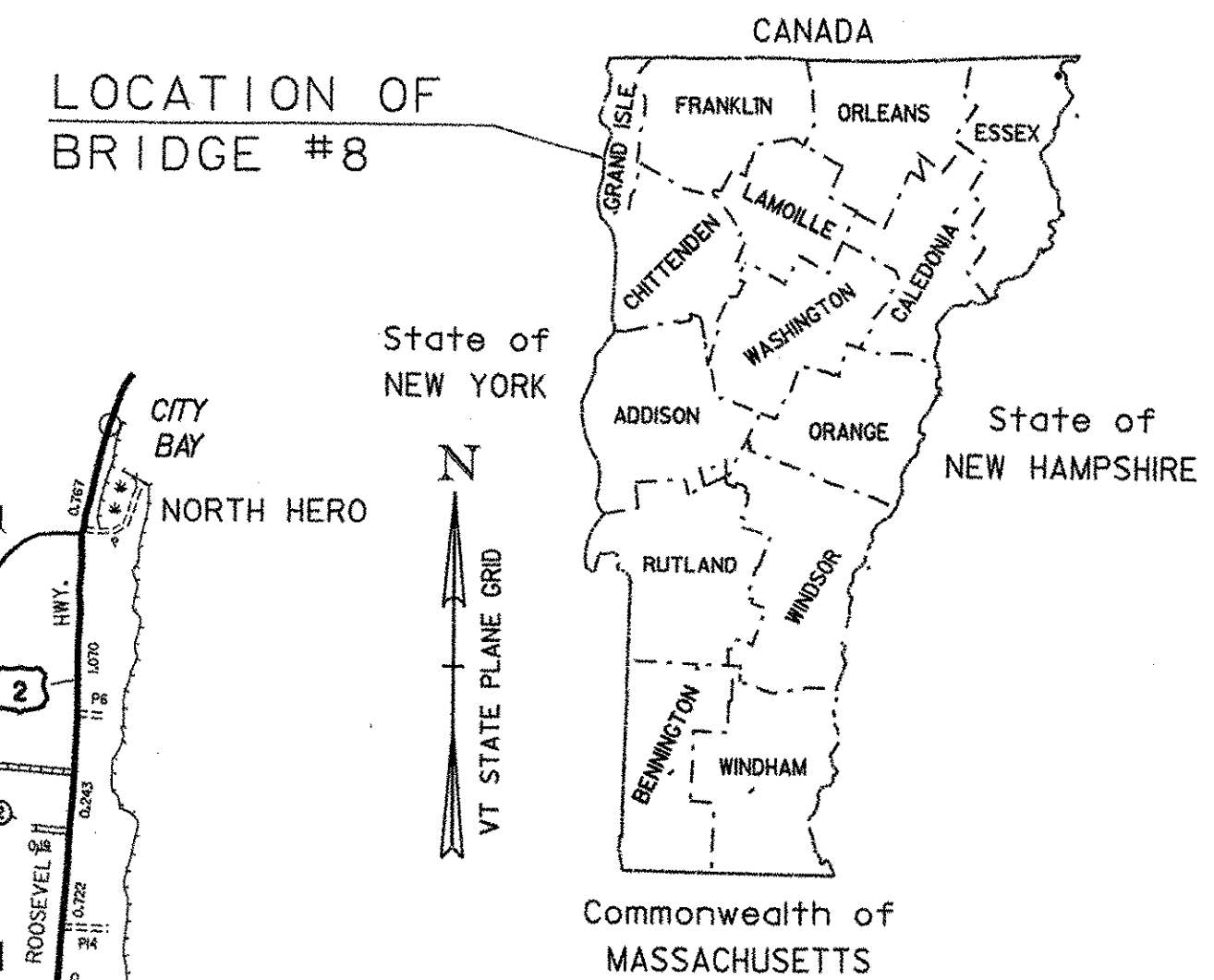


PROPOSED IMPROVEMENT BRIDGE PROJECT TOWN OF NORTH HERO-GRAND ISLE COUNTY OF GRAND ISLE US ROUTE 2 (MAJOR COLLECTOR) BRIDGE #8

PROJECT LOCATION : HISTORICAL DRAW BRIDGE LOCATED ON US 2 OVER LAKE CHAMPLAIN (THE GUT) SOUTH OF KNIGHTS POINT STATE PARK.

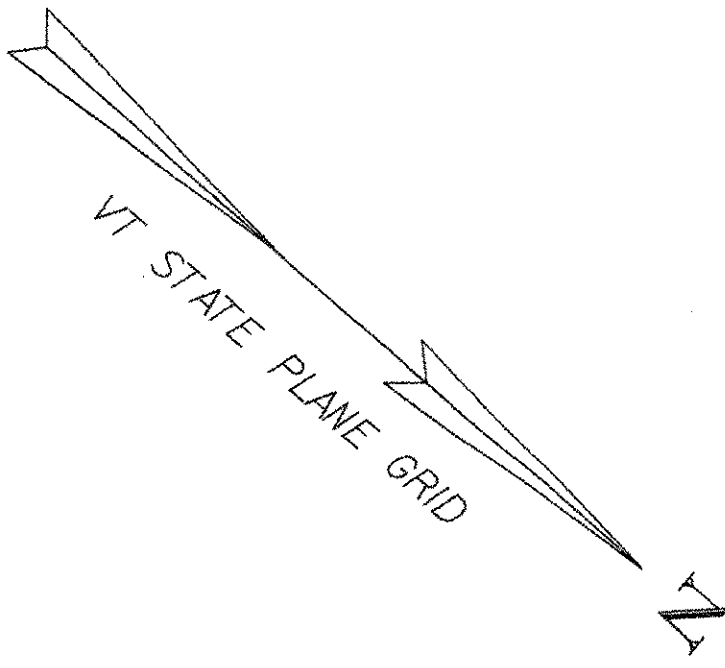
PROJECT DESCRIPTION : REPLACEMENT OF VARIOUS STEEL COMPONENTS AND RELATED CONNECTORS OF BASCULE SPAN #3.

LENGTH OF STRUCTURE : 260.50 FEET.
 LENGTH OF ROADWAY : 0 FEET.
 LENGTH OF PROJECT : 260.50 FEET.
 TRAFFIC (2006 AADT): 3000 VEHICLES A DAY



COUNTY LINE	
TOWN LINE	
LIMITS OF ACCESS	
POINT OF ACCESS	
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY :	R. GILMAN
SURVEYED DATE :	OCT. 19, 2004
DATUM	
VERTICAL :	NAVD 88
HORIZONTAL :	NAD 83 (96)



THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.
 CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

DIRECTOR OF PROGRAM DEVELOPMENT	APPROVED <i>[Signature]</i> DATE 10-18-07
PROJECT MANAGER :	M. EVANS-MONGEON
PROJECT NAME :	NORTH HERO - GRAND ISLE
PROJECT NUMBER :	BHF 028-1 (21)
SHEET 1 OF 41 SHEETS	

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
								ROADWAY	BRIDGE	FULL C&E	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
									1		1		LS	SHORING SUPERSTRUCTURE	502.10				
									1		1		LS	CONTAINMENT & ENVIRONMENTAL PROTECTION, FIELD	513.36				
									1		1		LS	SURFACE PREPARATION, FIELD (1 TON)	513.41				
									1		1		LS	MAINTENANCE OF STRUCTURES AND APPROACHES	527.10				
								1			1		EACH	REMOVAL OF STRUCTURE (2100 SF - EST.)	529.15				
									1		1		EACH	PARTIAL REMOVAL OF STRUCTURE	529.20				
									1		1		CY	CONCRETE, CLASS LW	541.40				
									3		3		SY	REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS I	580.10				
								40			40		LF	TEMPORARY TRAFFIC BARRIER	621.90				
								260			260		LF	REMOVE AND RESET TEMPORARY TRAFFIC BARRIER	621.95				
								400			400		HR	FLAGGERS	630.15				
										1	1		LS	FIELD OFFICE, ENGINEERS	631.10				
										1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
										1	1		LU	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.25				
								1			1		LS	MOBILIZATION/DEMOBILIZATION	635.11				
								1			1		LS	TRAFFIC CONTROL	641.10				
									23470		23470		LB	SPECIAL PROVISION (INSTALLATION OF STRUCTURAL STEEL)(FPQ)	900.635				
									260		260		LF	SPECIAL PROVISION (MAINTENANCE AND REMOVAL OF TEMPORARY TRAFFIC BARRIE	900.640				
									2290		2290		SF	SPECIAL PROVISION (INSTALLATION OF GRID DECK)(FPQ)	900.670				

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AND ITS LATEST REVISIONS.
2. THE INCLUDED RECORD PLAN SHEETS (9-41) ARE FROM THE ORIGINAL PROJECT MODIFIED TO SHOW THE WORK THAT NEEDS TO BE COMPLETED.
3. BRIDGE COMPONENTS BEING REPLACED ARE DESIGNED FOR AN HS-25 LIVE LOAD.
4. STRUCTURAL STEEL AND GRID DECK WILL BE DELIVERED BY THE FABRICATORS TO THE OLD CAUSEWAY WITHIN THE PROJECT LIMITS.
5. A MINIMUM OF ONE LANE, TWO-WAY TRAFFIC SHALL BE MAINTAINED THROUGH THE PROJECT AT ALL TIMES.
6. NOTE NOT USED
7. THE CONTRACTOR SHALL MAINTAIN TEMPORARY ON AND OFF-PROJECT SIGNS AND BARRICADES AS SHOWN IN THE PLANS AND AS DIRECTED BY THE RESIDENT ENGINEER. PAYMENT FOR MAINTAINING EXISTING CONSTRUCTION SIGNS WILL BE MADE INCIDENTAL TO ITEM 641.10, TRAFFIC CONTROL.
8. FULL ACCESS TO ALL SIDE ROADS AND DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL."
9. ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.
10. THE ITEM 631.10, FIELD OFFICE ENGINEERS SHALL INCLUDE PROVIDING ALL OF THE OFFICE EQUIPMENT AND SUPPLIES AS SPECIFIED IN SECTION 631 OF THE STANDARD SPECIFICATIONS, EXCEPT FOR A DRAFT TABLE, STORAGE CABINET, PLAN FILE, PLAN RACK, LOCKER FOR SURVEYING EQUIPMENT, AND A CALCULATOR. THE OPERATOR'S HOUSE, LOCATED AT STA. 608+10 RT, MAY BE USED TO HOUSE THIS EQUIPMENT, IF THE CONTRACTOR SO CHOOSES. IF THE OPERATOR'S HOUSE IS USED, THE CONTRACTOR SHALL PROVIDE HEATING EQUIPMENT, A POTABLE WATER SUPPLY AND SANITARY FACILITIES AS THE BUILDING IS NOT WINTERIZED. PAYMENT FOR THIS WILL BE INCLUDED IN THE ITEM 631.10, FIELD OFFICE, ENGINEERS.

TEMPORARY BRIDGE AND BARRIERS

11. DURING CONSTRUCTION, TRAFFIC SHALL BE MAINTAINED ON AN EXISTING ONE-WAY TEMPORARY BRIDGE CONSTRUCTED OVER THE NORTH LANE OF EXISTING STRUCTURE. MAINTENANCE OF THE TEMPORARY BRIDGE AND ITS APPROACHES SHALL BE PAID FOR UNDER ITEM 527.10, MAINTENANCE OF STRUCTURES AND APPROACHES.
12. THE REMOVAL OF THE EXISTING TEMPORARY BRIDGE AND ITS APPROACHES WILL BE PAID FOR UNDER CONTRACT ITEM 529.15, REMOVAL OF STRUCTURE (2100 SF - EST).
13. THE CONTRACTOR SHALL REMOVE AND RESET THE TEMPORARY TRAFFIC BARRIERS FROM THE LOCATIONS SHOWN ON SHEET 7 TO THE LOCATIONS SHOWN ON SHEET 8 WHEN THE TEMPORARY BRIDGE IS NO LONGER NEEDED. PAYMENT FOR THIS WORK WILL BE MADE UNDER ITEM 621.95, REMOVE AND RESET TEMPORARY TRAFFIC BARRIER.
14. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE EXISTING TEMPORARY TRAFFIC BARRIER DURING CONSTRUCTION. WHEN THE PROJECT IS COMPLETE THE BARRIERS, AND CONCRETE BLOCKS, WHICH WERE ORIGINALLY PROVIDED BY DISTRICT 8 WILL BE REMOVED AND RETURNED TO THE DISTRICT 8 GARAGE LOCATED IN NORTH HERO, CONTACT PERSON IS GEORGE DECELL, (802) 524-5926. PAYMENT FOR MAINTENANCE AND REMOVAL OF THE EXISTING TEMPORARY TRAFFIC BARRIERS WILL BE MADE UNDER CONTRACT ITEM 900.640 SPECIAL PROVISION (MAINTENANCE AND REMOVAL OF TEMPORARY TRAFFIC BARRIER). PAYMENT FOR REMOVAL OF THE CONCRETE BLOCKS WILL BE INCIDENTAL TO THIS ITEM.
15. ADDITIONAL TEMPORARY TRAFFIC BARRIER WILL BE NEEDED, ONCE THE TEMPORARY BRIDGE IS REMOVED. SEE SHEET 8, THE CONTRACTOR WILL PROVIDE THIS BARRIER. PAYMENT FOR THIS WORK WILL BE MADE UNDER ITEM 621.90, TEMPORARY TRAFFIC BARRIER.
16. RELOCATION OF TYPE III BARRICADES AND ATTENUATORS TO BE INCIDENTAL TO 641.10, TRAFFIC CONTROL. PAYMENT FOR REPLACEMENT OF THE ATTENUATOR, IF NECESSARY, WILL BE MADE IN ACCORDANCE WITH SUBSECTION 621.14.

STRUCTURAL STEEL

17. THE FOLLOWING TABLE OF ALLOWABLE STRESSES AND WEIGHTS APPLY TO THESE PLANS FOR DESIGN PURPOSES:

STRUCTURAL STEEL: Fy = 50,000 PSI

18. NOTE NOT USED
19. ALL FIELD CONNECTIONS SHALL BE MADE USING 7/8 INCH BOLTS MEETING AASHTO M 164, TYPE 1. UNLESS OTHERWISE NOTED, HOLE DIAMETER SHALL BE 15/16 INCH. ANY CONNECTIONS NOT DESIGNATED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.
20. ALL WELDING SHALL CONFORM TO SUBSECTION 506.10.
21. THE NEW FLOOR BEAMS ARE TO BE CONNECTED TO THE EXISTING ANGLES ON THE BASCULE GIRDERS. THE CONNECTION SURFACES OF THESE EXISTING ANGLES SHALL BE CLEANED FOLLOWING THE REQUIREMENT OF SUBSECTION 513.04, SURFACE PREPARATION, PRIOR TO MAKING THE NEW CONNECTIONS. PAYMENT FOR THE CLEANING WILL BE UNDER ITEM 513.41, SURFACE PREPARATION, FIELD (1 TON). THE EXISTING STEEL IS COATED WITH RED LEAD PAINT. ENVIRONMENTAL PROTECTION, CONFORMING TO SUBSECTION 513.03(B) MUST BE USED IN REMOVING THE PAINT IN THESE AREAS. PAYMENT WILL BE MADE UNDER ITEM 513.36, CONTAINMENT AND ENVIRONMENTAL PROTECTION, FIELD FOR THIS WORK.
22. THE NEW METAL GRID DECKING WILL BE GALVANIZED TO AASHTO M232M/232M. IT WILL BE ATTACHED TO THE NEW FLOOR BEAMS BY MEANS OF A BOLTED CONNECTION. THE DETAILS OF THE CONNECTION WILL BE PROVIDED BY THE STEEL GRID MANUFACTURER. THE CONTRACTOR SHALL FIELD DRILL HOLES IN THE STRUCTURAL STEEL TO ATTACH THE DECKING. PAYMENT FOR CONNECTING THE STEEL GRID DECKING WILL BE PAID FOR UNDER ITEM 900.670, SPECIAL PROVISION (INSTALLATION OF GRID DECK)(FPQ).
23. THE EXISTING CONNECTIONS BETWEEN THE FLOOR BEAMS AND THE ANGLES ON THE GIRDERS ARE RIVETED CONNECTIONS. THE CONTRACTOR WILL REMOVE THE RIVETS BY DRILLING THEM OUT. ONCE THE RIVETS ARE REMOVED, THE HOLE WILL BE DRILLED TO 15/16" TO ACCOMMODATE THE BOLTS FOR THE NEW CONNECTIONS. THE WORK WILL BE INCLUDED IN THE BID PRICE FOR ITEM 900.635, SPECIAL PROVISION (INSTALLATION OF STRUCTURAL STEEL)(FPQ).
24. THE SHIMS FOR THE BASCULE GIRDER BEARINGS WILL BE REPLACED AS PART OF THIS CONTRACT. SHEET 20 SHOWS DETAILS OF THESE SHIMS. THIS WORK WILL BE INCLUDED IN THE BID PRICE FOR ITEM 900.635, SPECIAL PROVISION (INSTALLATION OF STRUCTURAL STEEL)(FPQ). THE SHIM PLATES WILL BE PROVIDED TO THE CONTRACTOR. ANY WORK NEEDED TO JACK UP THE END OF THE GIRDER IN ORDER TO INSTALL THESE SHIMS WILL BE CONSIDERED INCIDENTAL TO ITEM 900.635, SPECIAL PROVISION (INSTALLATION OF STRUCTURAL STEEL)(FPQ).
25. THE DIAMOND PLATED FLOOR SUPPORTING THE LOCK BAR MACHINERY MUST BE SHORED WHILE REPLACING THE FLOOR BEAMS UNDER IT, REFER TO SHEETS 19, 20, AND 25. PAYMENT FOR THIS ITEM WILL BE ITEM 502.10, SHORING SUPERSTRUCTURE. THE ENDS OF FB#25 AND FB#26 MUST BE SUPPORTED WHILE FB#34 AND FB#35 ARE BEING REPLACED SEE SHEETS 16, 17, AND 18. PAYMENT FOR THIS WORK WILL ALSO BE INCLUDED IN THE ITEM 502.10, SHORING SUPERSTRUCTURE.
26. THE ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE WILL INCLUDE THE REMOVAL OF FLOORBEAMS AND CROSS FRAMES AS INDICATED ON SHEETS 13, 14, 15, AND 18. IT WILL ALSO INCLUDE REMOVAL OF OPEN STEEL GRID DECK, AS INDICATED ON SHEETS 19 AND 20. ALL OF THIS MATERIAL IS COATED WITH RED LEAD PAINT. PAYMENT FOR PARTIAL REMOVAL OF STRUCTURE WILL BE FULL COMPENSATION REMOVAL OF THESE COMPONENTS. ONCE REMOVED, THEY BECOME THE PROPERTY OF THE CONTRACTOR, WHO SHALL DISPOSE OF THEM PROPERLY. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE HARMLESS REGARDING THE DISPOSITION OF THE EXISTING STEEL TO BE REMOVED.
27. THE LIGHTWEIGHT CONCRETE FILLED PORTION OF THE DECK WILL BE REMOVED 4 INCHES ON BOTH BASCULE SPANS TO ALLOW THE STEEL GRID DECK TO BE SUPPORTED BY FLOORBEAMS AS DIMENSIONED AND SHOWN ON SHEETS 19 AND 20, PAYMENT FOR THIS WORK WILL BE INCIDENTAL TO ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE.

CONCRETE

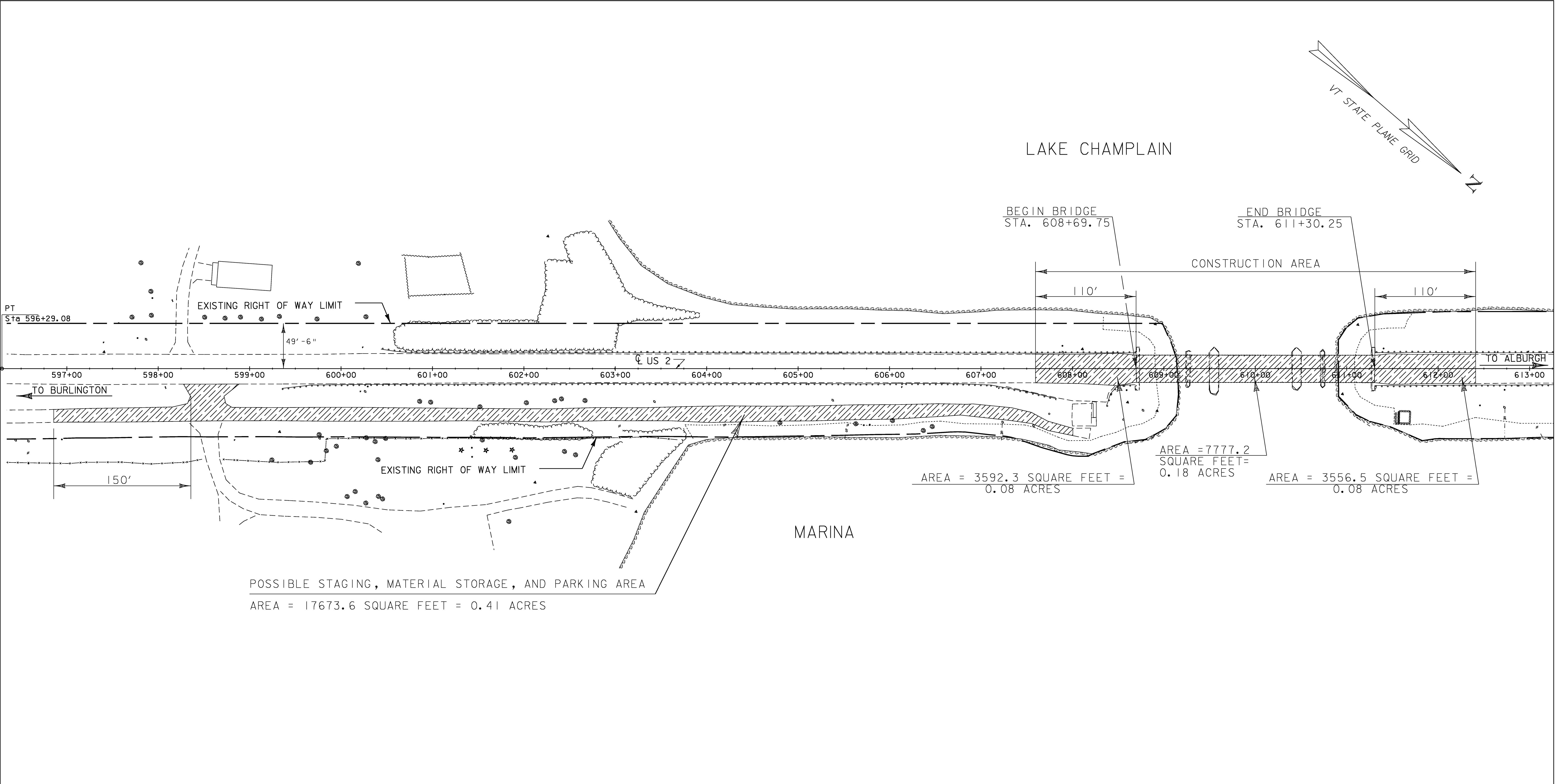
28. CONCRETE FILLED PORTION OF GRID DECK ON THE BASCULE SPAN WILL BE CLEANED OF ANY LOOSE OR CRACKED CONCRETE AS SHOWN ON SHEETS 19 AND 20, UNDER ITEM 580.10, REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS I AS DIRECTED BY THE RESIDENT ENGINEER.

28. THE LIGHTWEIGHT CONCRETE IN THE CONCRETE FILLED REMOVABLE PANELS AND ALL ASSOCIATED WORK WILL BE PAID FOR UNDER ITEM 541.40, CONCRETE, CLASS LW. THE CONTRACTOR SHALL PLACE THE CONCRETE IN THE CONCRETE FILLED REMOVABLE PANELS OFF SITE IN A CONTROLLED ENVIRONMENT, UNLESS OTHERWISE APPROVED BY THE RESIDENT ENGINEER. THE UNIT WEIGHT OF THIS CONCRETE SHALL NOT EXCEED 103 POUNDS PER CUBIC FOOT. PANELS SHALL NOT BE TRANSPORTED UNTIL THE 10 DAY CURE PERIOD HAS ELAPSED AND THE CONCRETE HAS ACHIEVED 85% OF ITS DESIGN STRENGTH.

STAGING

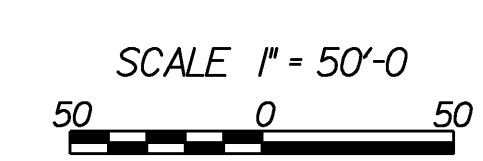
29. THE ROADWAY THAT RUNS PARALLEL TO US 2 ON THE NORTH SIDE FROM STATION 595+00 TO 608+00 MAY BE USED FOR STAGING, PARKING, ETC. ACCESS THROUGH THIS ROAD, FROM THE ENTRANCE AT STATION 598+25, TO THE LAKE, MUST BE MAINTAINED AT ALL TIMES FOR USE BY ANGLERS. ACCESS AT THIS LOCATION, STATION 598+25 THROUGH TO THE DRIVE TO THE MARINA MUST ALSO BE MAINTAINED AT ALL TIMES.
30. BARGES MAY BE USED IN ACCOMPLISHING THIS WORK WITH THE FOLLOWING RESTRICTIONS. THERE WILL BE NO SHORELINE DISTURBANCE FOR LAUNCHING THE BARGES. THERE WILL BE NO ICE BREAKING IN ORDER TO MAINTAIN A CLEAN CHANNEL FOR RE-POSITIONING BARGES, OR FOR ANY OTHER PURPOSE. THERE WILL BE NO DISTURBANCE OF THE LAKE BOTTOM, BELOW ORDINARY HIGH WATER.

PROJECT NAME:	NORTH HERO-GRAND ISLE
PROJECT NUMBER:	BHF 028-I(2I)
FILE NAME:	structures\92b284gennotes
PROJECT LEADER:	M. EVANS MONGEON
DESIGNED BY:	S. SCRIBNER
PLOT DATE:	24-OCT-2007
DRAWN BY:	L. DUQUETTE
CHECKED BY:	S. SCRIBNER
SHEET	3 OF 41

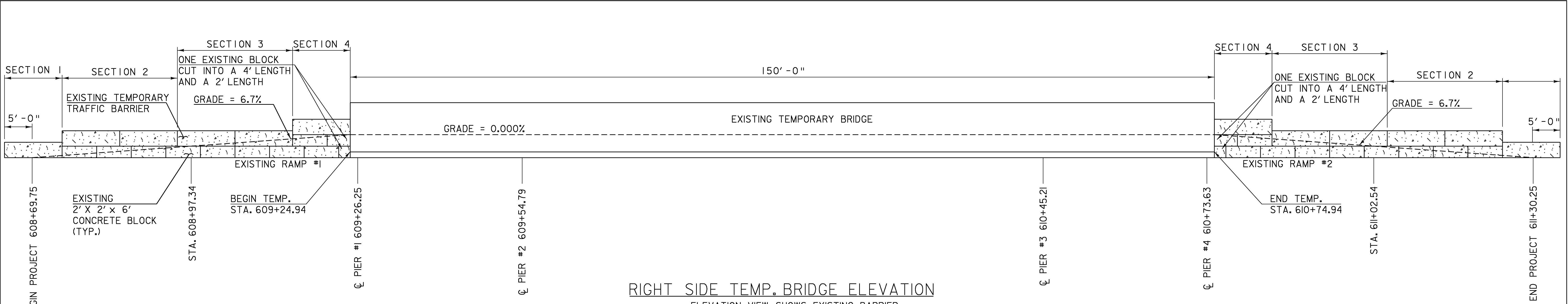


TOTAL DISTURBED AREA = 32599.3 SQUARE FEET = 0.75 ACRES

AREA OF DISTURBANCE



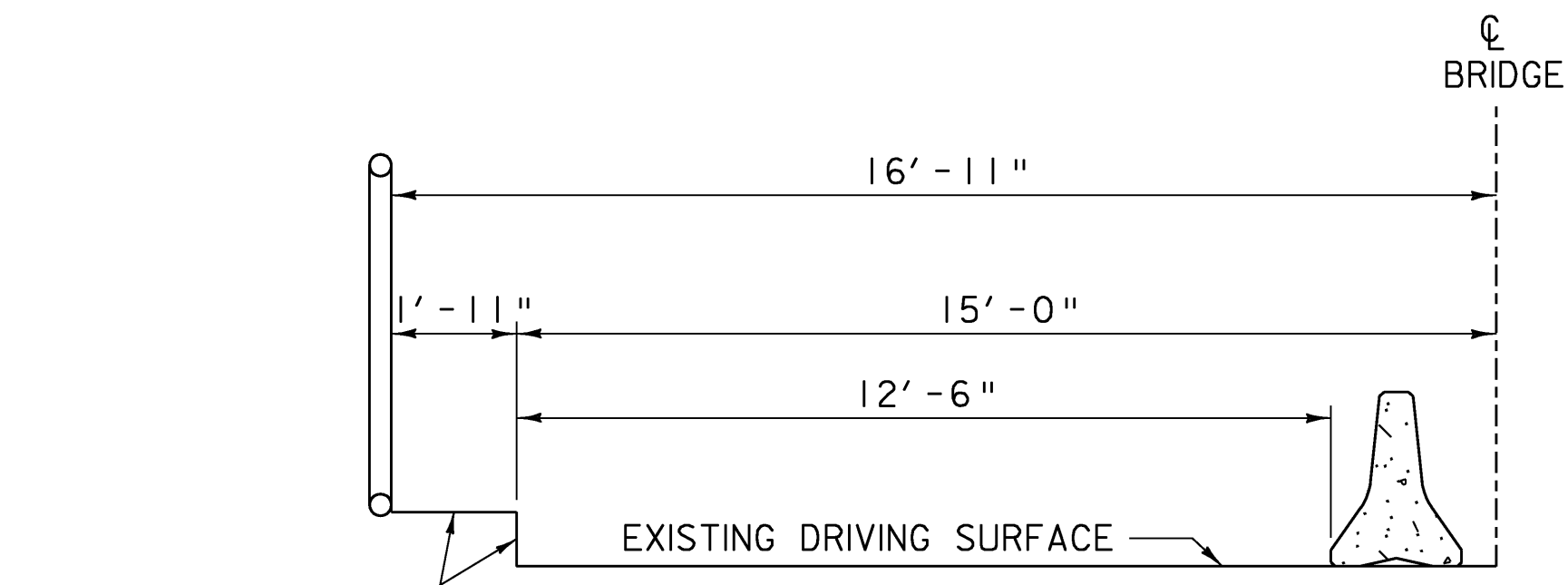
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PROJECT NUMBER:	BHF 028-1(21)
FILE NAME:	structures\92b284bdr.dgn
PLOT DATE:	18-OCT-2007
PROJECT LEADER:	M. EVANS-MONGEON
DRAWN BY:	M.E-Mongeon
DESIGNED BY:	M.EVANS-MONGEON
CHECKED BY:	S.SCRIBNER
AREA OF DISTURB AND RIGHT OF WAY	SHEET 4 OF 41



RIGHT SIDE TEMP. BRIDGE ELEVATION

ELEVATION VIEW SHOWS EXISTING BARRIER AT THE C OF BRIDGE, REFER TO SECTIONS BELOW FOR EXISTING BARRIER PLACEMENT AT RAIL.

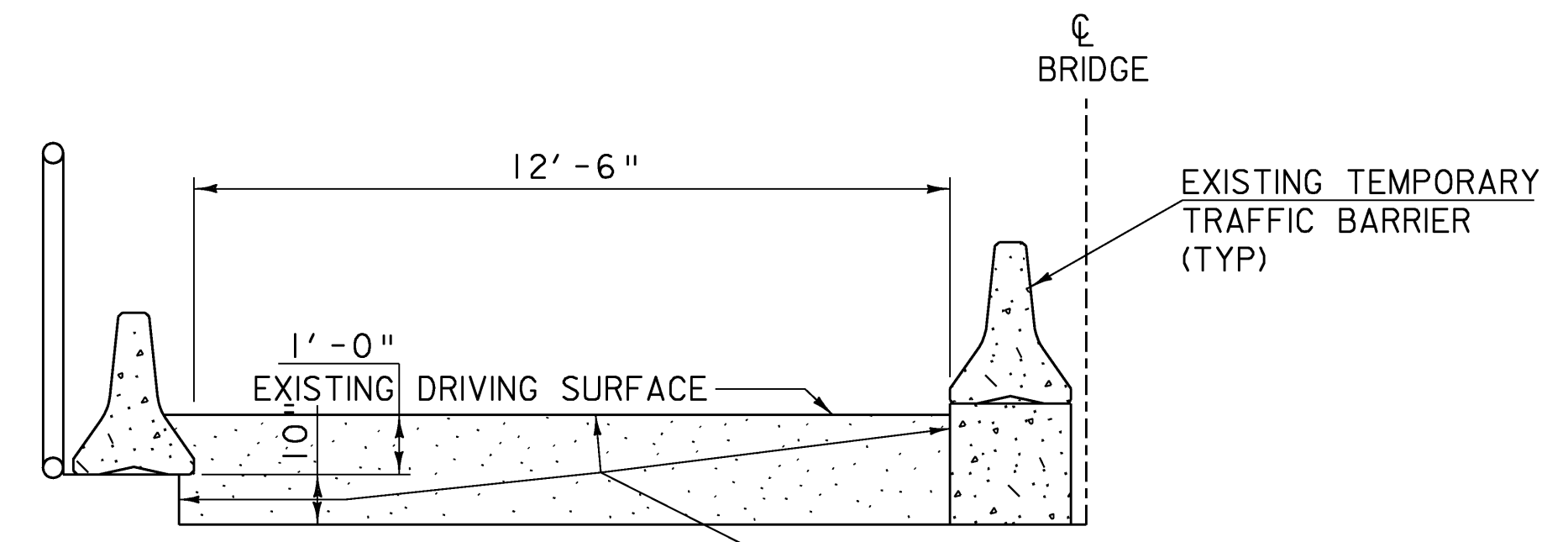
SCALE $\frac{1}{8}'' = 1'-0''$
 10 2 4 6 8



END RAMP SECTION 1

STA. 608+64.94 TO 608+74.94
 AND
 STA. 611+24.94 TO 611+34.94

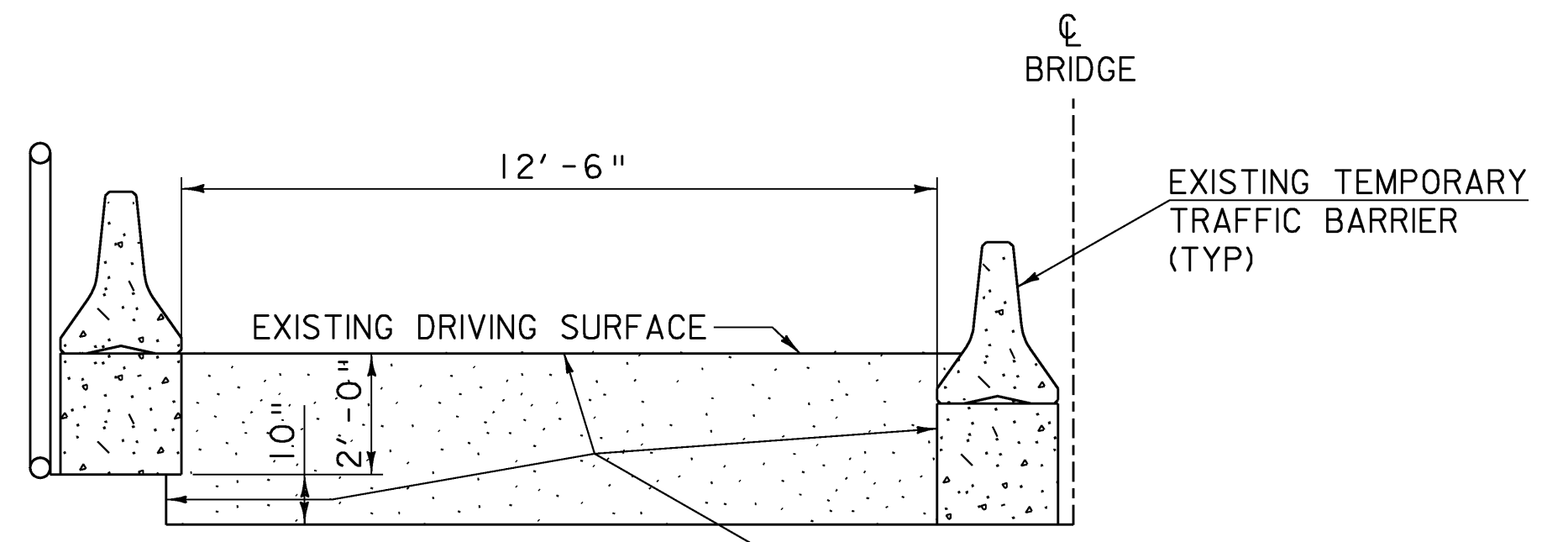
SCALE $\frac{3}{8}'' = 1'-0''$
 1 0 1 2 3 4



RAMP SECTION 2

STA. 608+74.94 TO 608+94.94
 AND
 STA. 611+04.94 TO 611+24.94

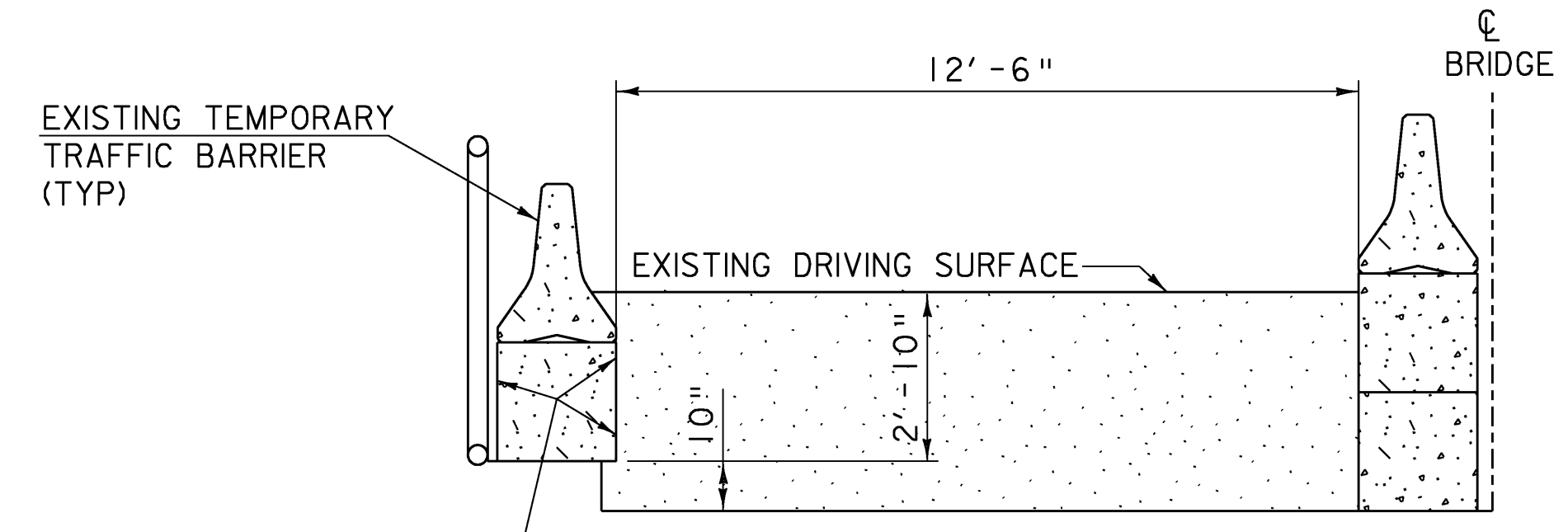
SCALE $\frac{3}{8}'' = 1'-0''$
 1 0 1 2 3 4



RAMP SECTION 3

STA. 608+94.94 TO 609+14.94
 AND
 STA. 610+84.94 TO 611+04.94

SCALE $\frac{3}{8}'' = 1'-0''$
 1 0 1 2 3 4



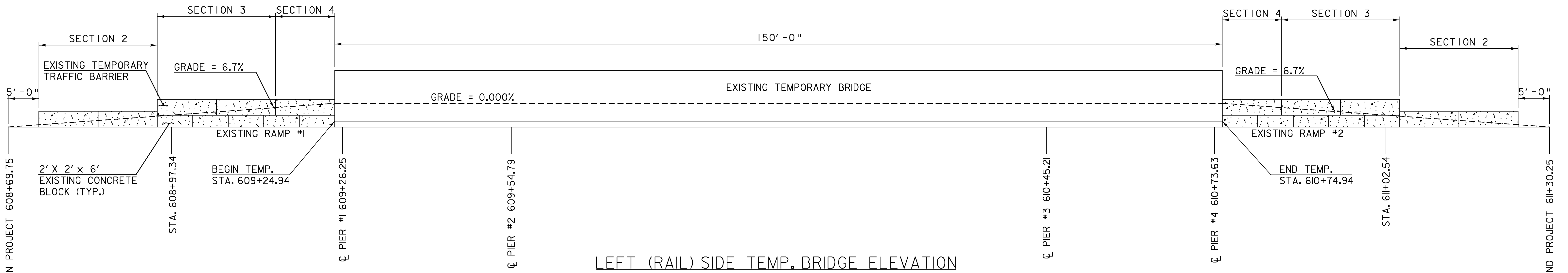
RAMP SECTION 4

STA. 609+14.94 TO 609+24.94
 AND
 STA. 610+74.94 TO 610+84.94

SCALE $\frac{3}{8}'' = 1'-0''$
 1 0 1 2 3 4

EXISTING TEMPORARY BRIDGE DETAILS

PROJECT NAME:	NORTH HERO-GRAND ISLE
PROJECT NUMBER:	BHF 028-1(21)
FILE NAME:	struc\s92b284tempdtds.dgn
PROJECT LEADER:	M. EVANS MONGEON
DESIGNED BY:	S. SCRIBNER
PLOT DATE:	22-OCT-2007
DRAWN BY:	L. DUQUETTE
CHECKED BY:	S. SCRIBNER
SHEET	5 OF 41



LEFT (RAIL) SIDE TEMP. BRIDGE ELEVATION

SCALE 1/8" = 1'-0"
 0 2 4 6 8

EXISTING TEMPORARY BRIDGE DETAILS

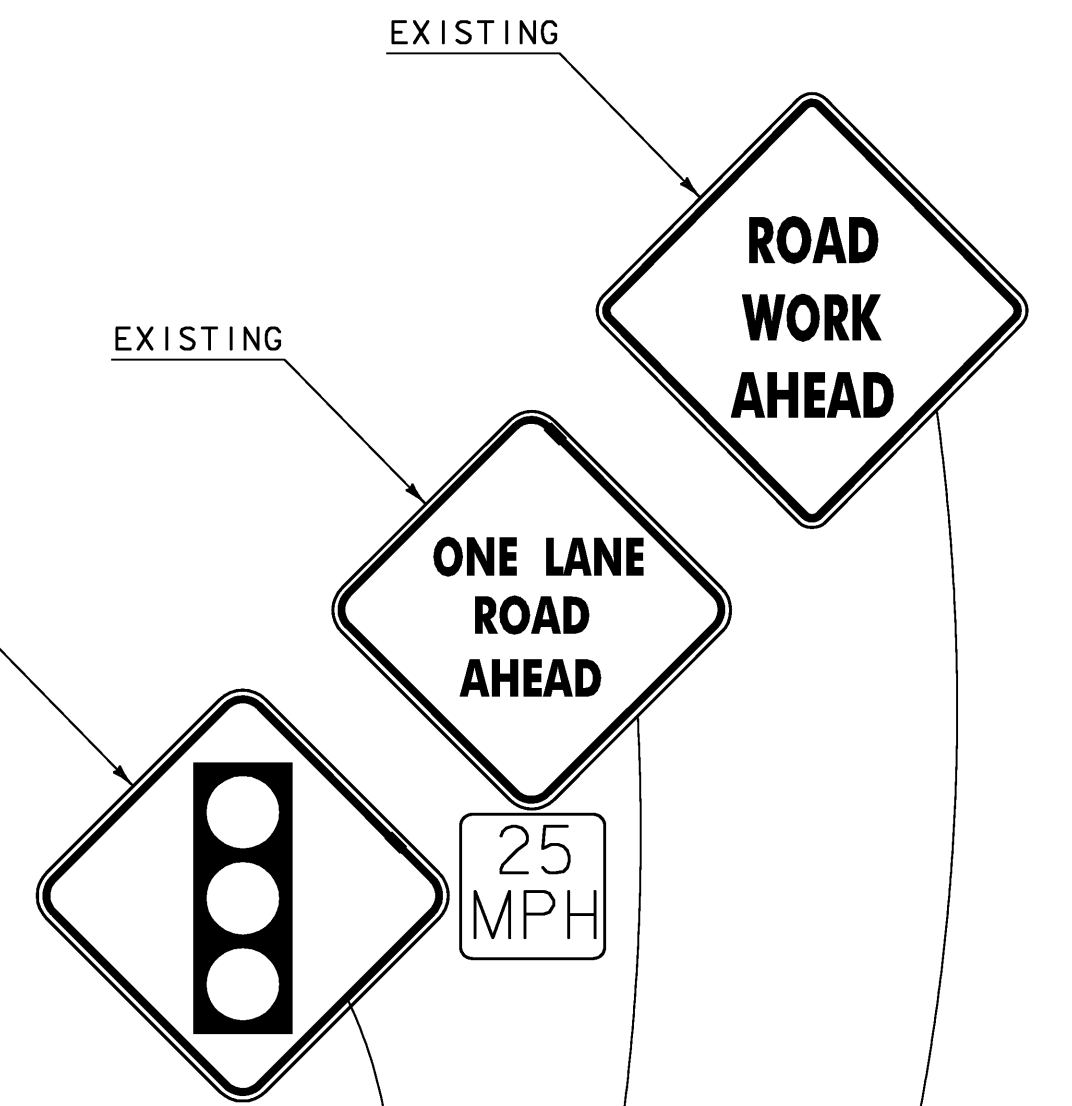
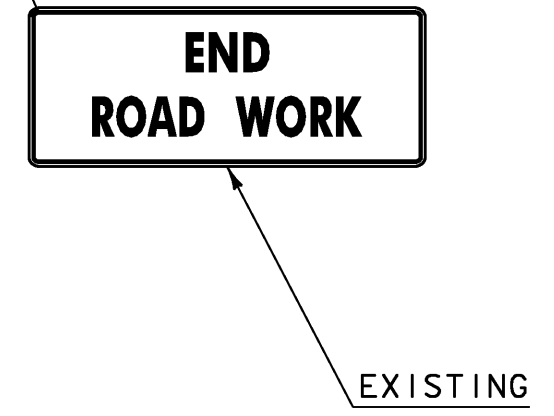
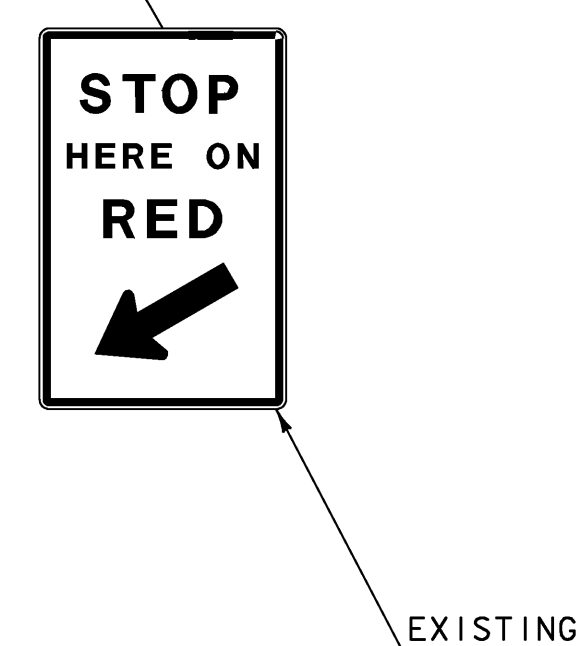
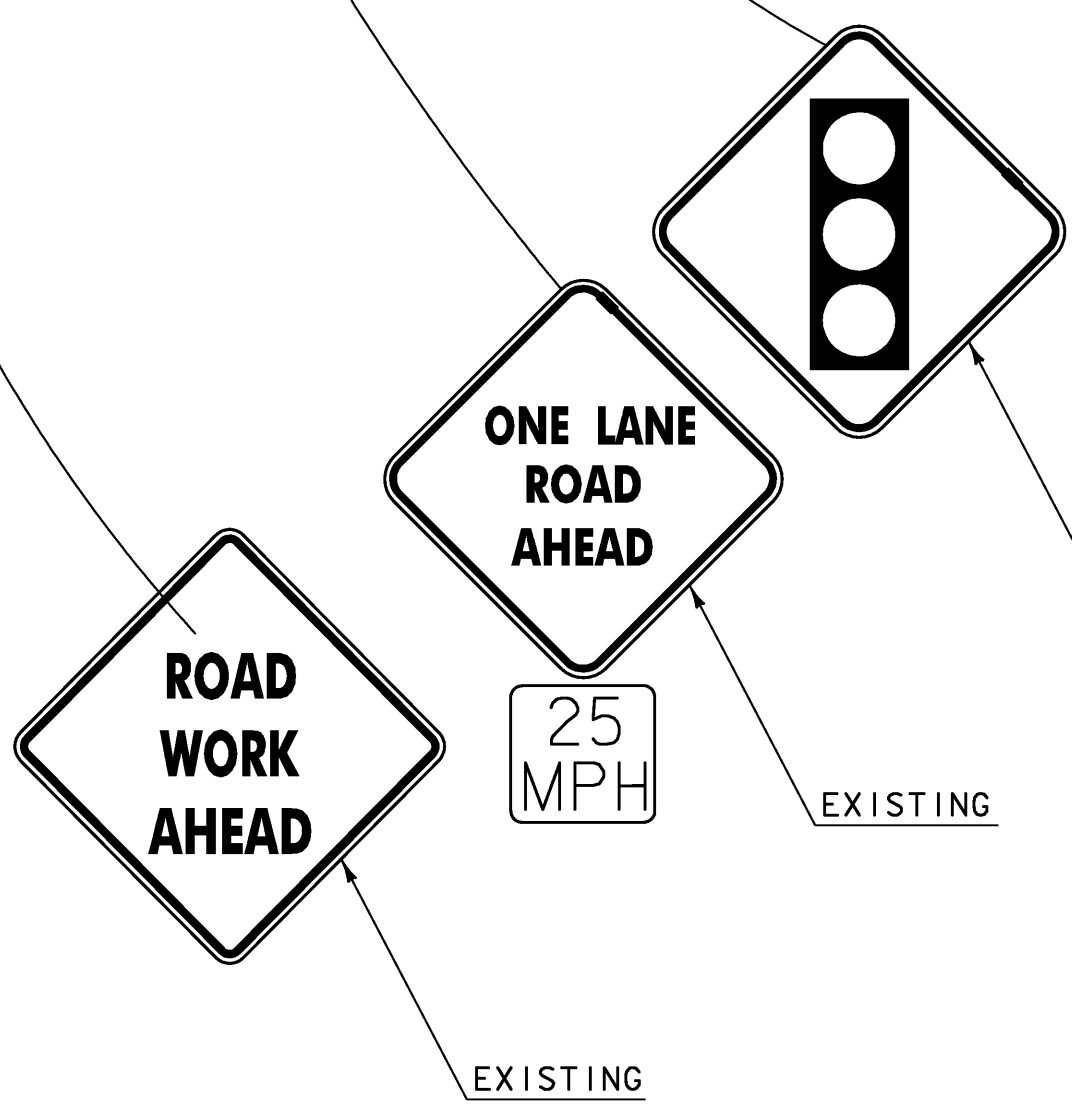
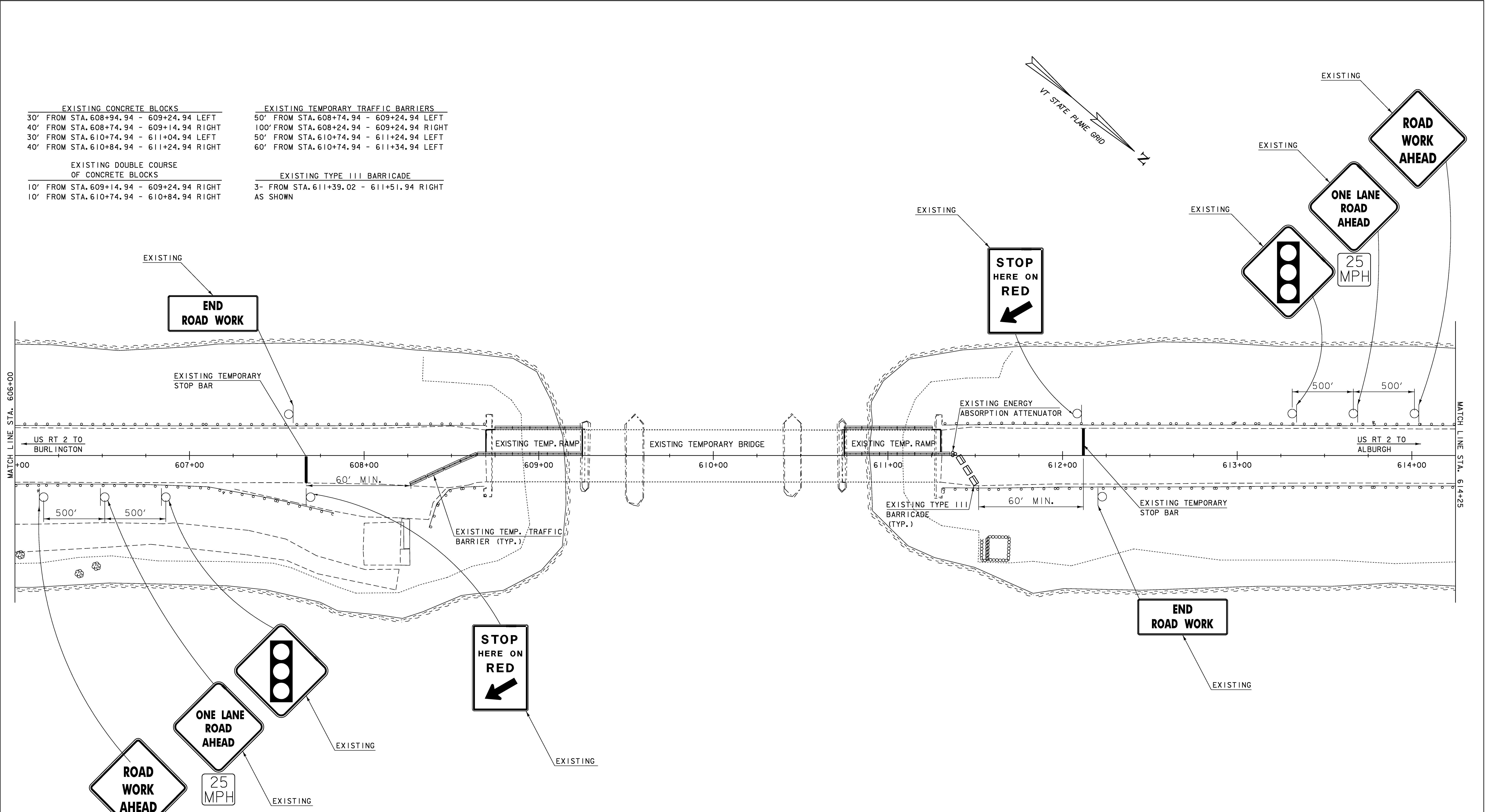
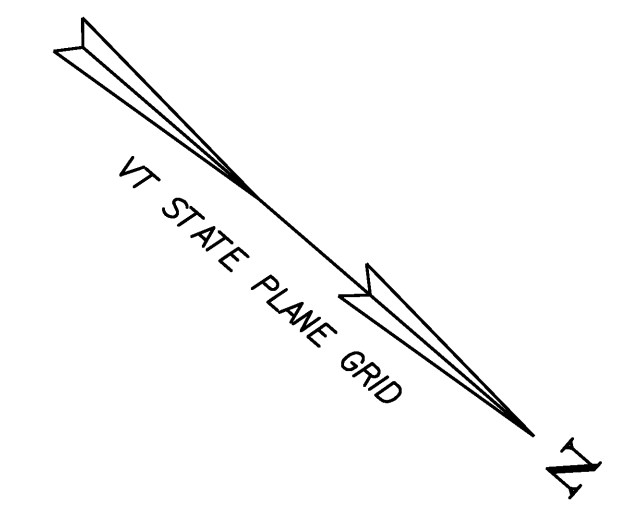
PROJECT NAME:	NORTH HERO-GRAND ISLE
PROJECT NUMBER:	BHF 028-1(21)
FILE NAME:	struc\s92b284tempd1ls.dgn
PROJECT LEADER:	M. EVANS MONGEON
DESIGNED BY:	S. SCRIBNER
PLOT DATE:	18-OCT-2007
DRAWN BY:	L. DUQUETTE
CHECKED BY:	S. SCRIBNER
SHEET	6 OF 41

EXISTING CONCRETE BLOCKS
 30' FROM STA. 608+94.94 - 609+24.94 LEFT
 40' FROM STA. 608+74.94 - 609+14.94 RIGHT
 30' FROM STA. 610+74.94 - 611+04.94 LEFT
 40' FROM STA. 610+84.94 - 611+24.94 RIGHT

EXISTING DOUBLE COURSE OF CONCRETE BLOCKS
 10' FROM STA. 609+14.94 - 609+24.94 RIGHT
 10' FROM STA. 610+74.94 - 610+84.94 RIGHT

EXISTING TEMPORARY TRAFFIC BARRIERS
 50' FROM STA. 608+74.94 - 609+24.94 LEFT
 100' FROM STA. 608+24.94 - 609+24.94 RIGHT
 50' FROM STA. 610+74.94 - 611+24.94 LEFT
 60' FROM STA. 610+74.94 - 611+34.94 LEFT

EXISTING TYPE III BARRICADE
 3- FROM STA. 611+39.02 - 611+51.94 RIGHT AS SHOWN

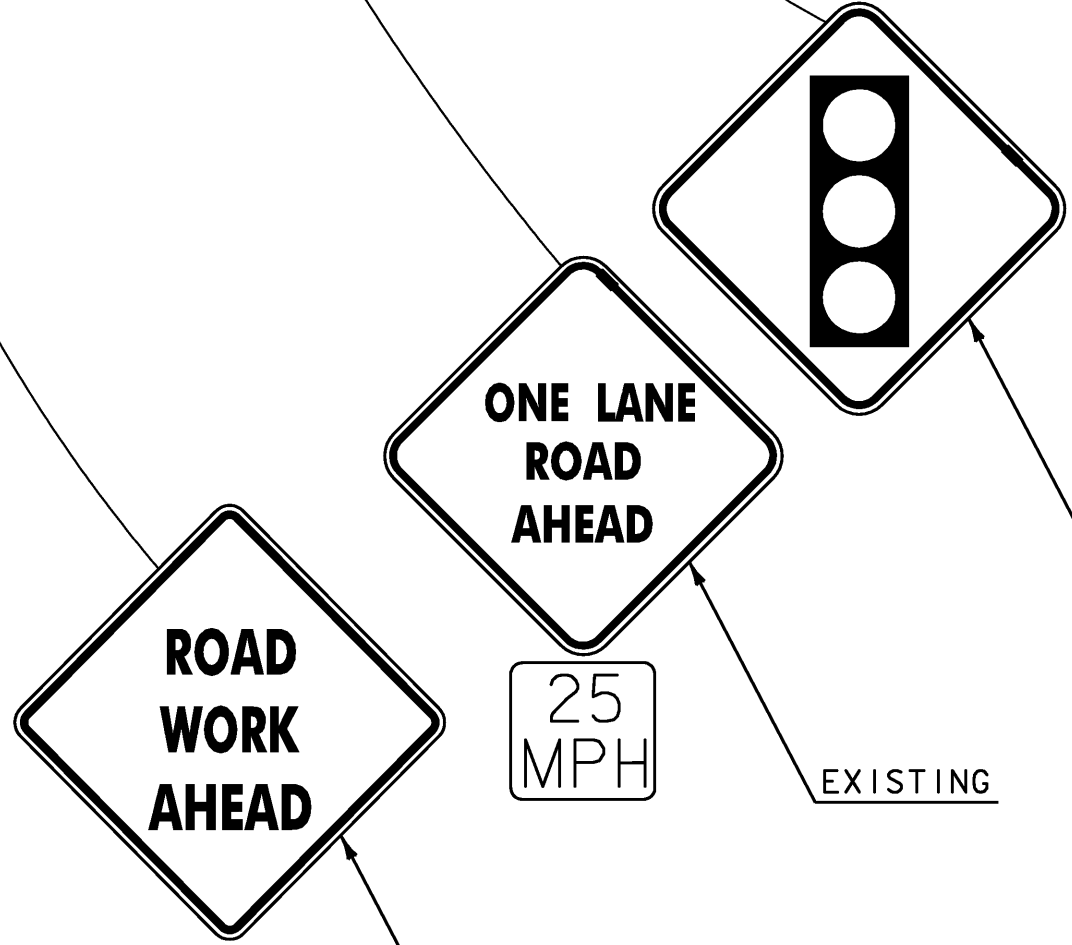
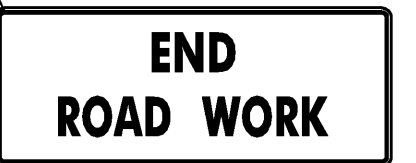
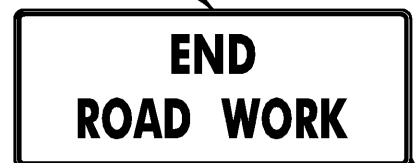
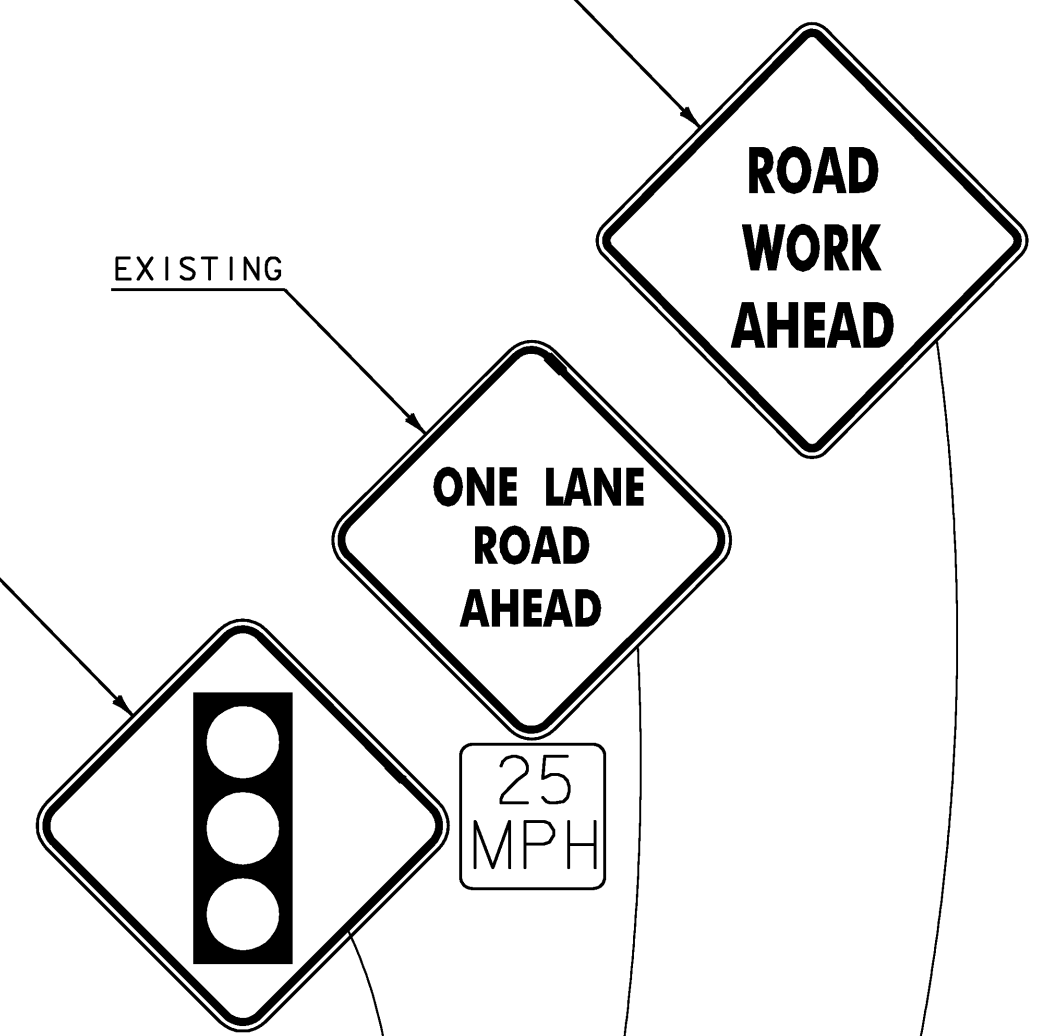
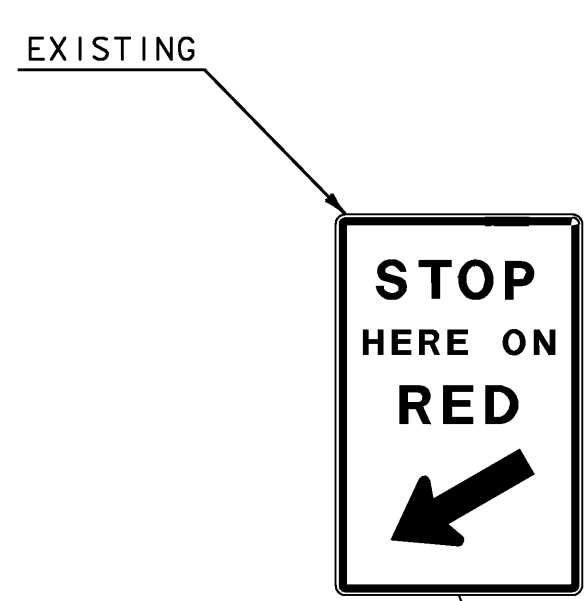
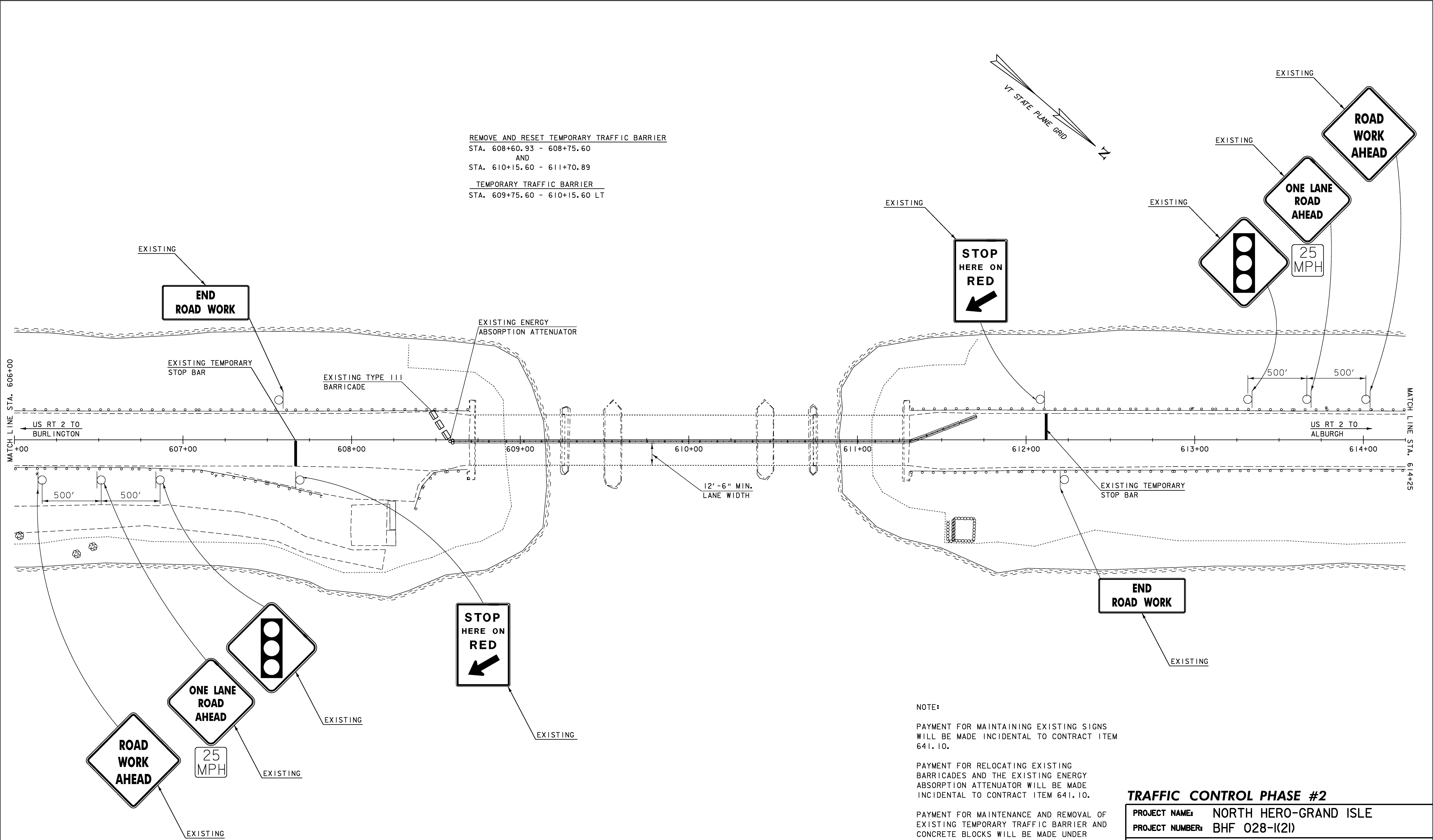
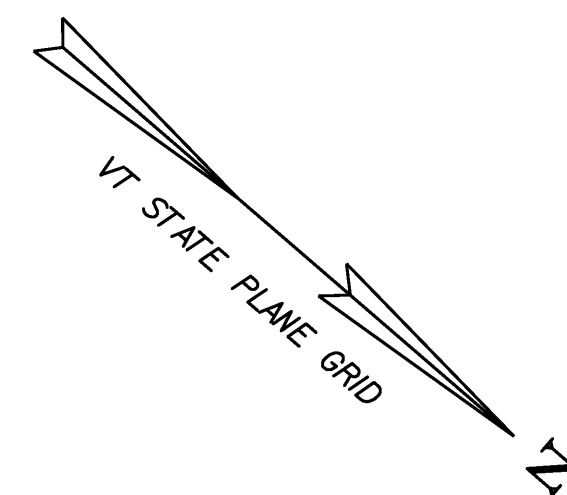


TRAFFIC CONTROL PHASE #1 EXISTING CONDITIONS

PAYMENT FOR MAINTAINING EXISTING SIGNS WILL BE MADE INCIDENTAL TO CONTRACT ITEM 641.10.	PROJECT NAME: NORTH HERO-GRAND ISLE
	PROJECT NUMBER: BHF 028-1(21)
	FILE NAME: structures\92b284bdr.dgn
PROJECT LEADER: M. EVANS-MONGEON	PLOT DATE: 18-OCT-2007
DESIGNED BY: S. SCRIBNER	DRAWN BY: L. DUQUETTE
	CHECKED BY: S. SCRIBNER
	SHEET 7 OF 41

NOT TO SCALE

REMOVE AND RESET TEMPORARY TRAFFIC BARRIER
 STA. 608+60.93 - 608+75.60
 AND
 STA. 610+15.60 - 611+70.89
 TEMPORARY TRAFFIC BARRIER
 STA. 609+75.60 - 610+15.60 LT

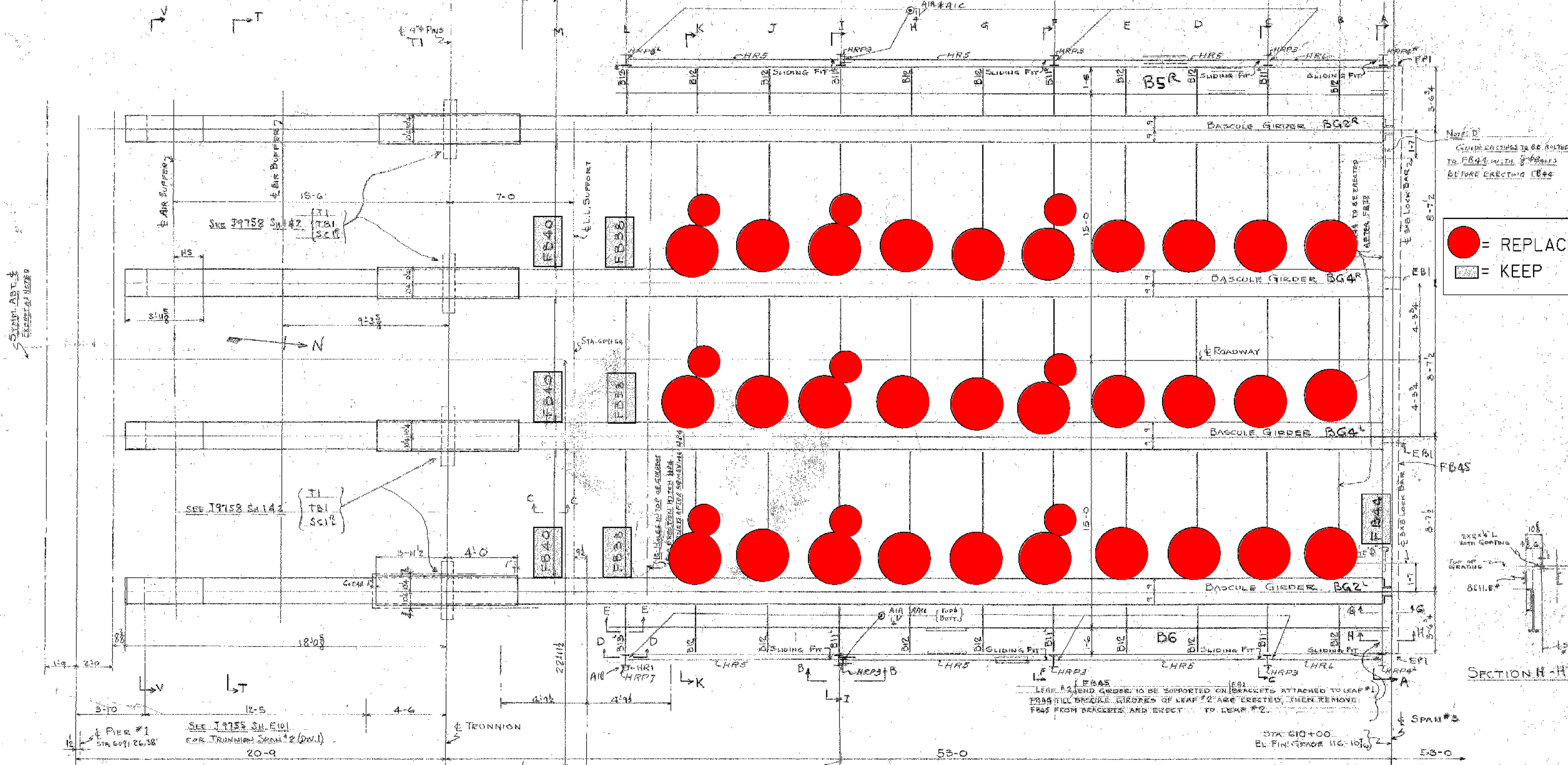


NOTE:
 PAYMENT FOR MAINTAINING EXISTING SIGNS WILL BE MADE INCIDENTAL TO CONTRACT ITEM 641.10.
 PAYMENT FOR RELOCATING EXISTING BARRICADES AND THE EXISTING ENERGY ABSORPTION ATTENUATOR WILL BE MADE INCIDENTAL TO CONTRACT ITEM 641.10.
 PAYMENT FOR MAINTENANCE AND REMOVAL OF EXISTING TEMPORARY TRAFFIC BARRIER AND CONCRETE BLOCKS WILL BE MADE UNDER CONTRACT ITEM 900.640 SPECIAL PROVISION (MAINTENANCE AND REMOVAL OF TEMPORARY TRAFFIC BARRIER).

NOT TO SCALE

TRAFFIC CONTROL PHASE #2	
PROJECT NAME:	NORTH HERO-GRAND ISLE
PROJECT NUMBER:	BHF 028-1(21)
FILE NAME:	structures\92b284bdr.dgn
PROJECT LEADER:	M. EVANS-MONGEON
DESIGNED BY:	S. SCRIBNER
PLOT DATE:	18-OCT-2007
DRAWN BY:	L. DUQUETTE
CHECKED BY:	S. SCRIBNER
SHEET	8 OF 41

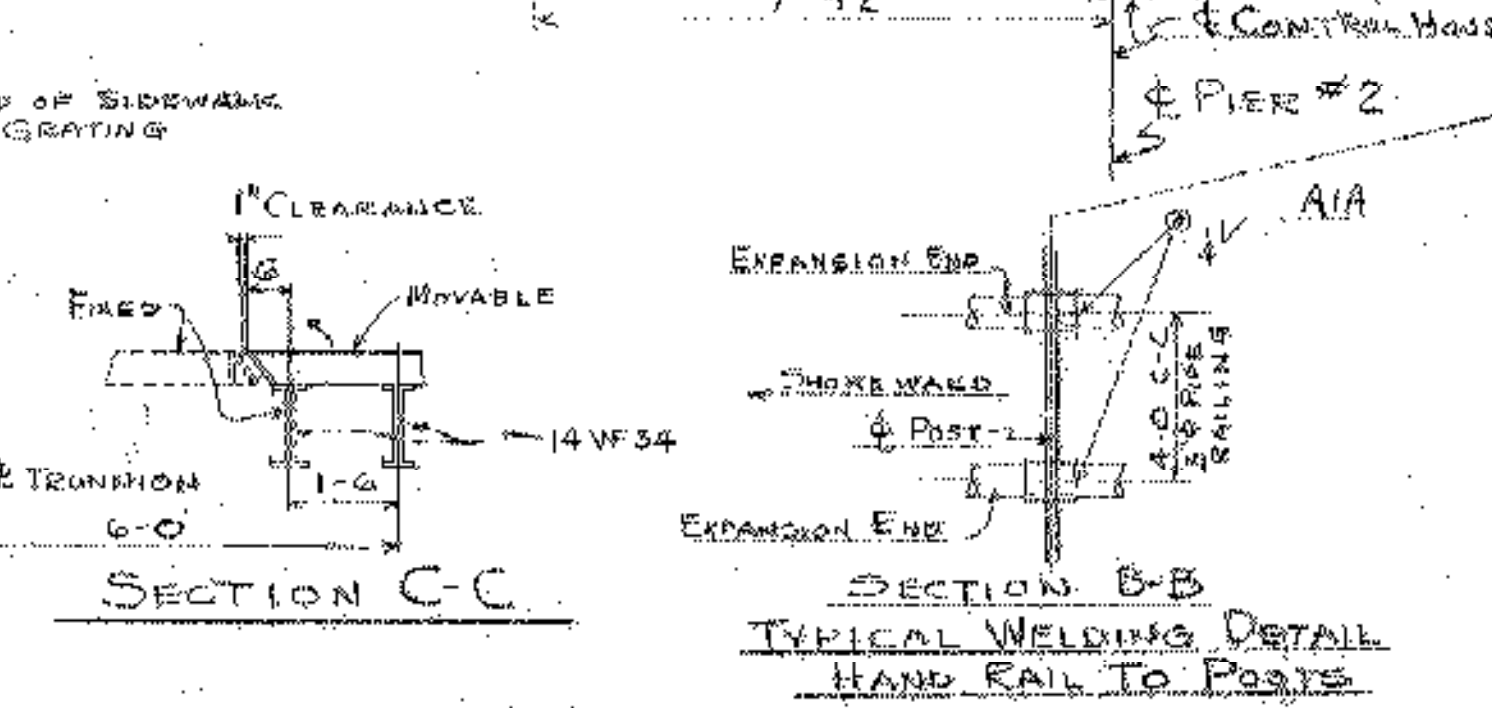
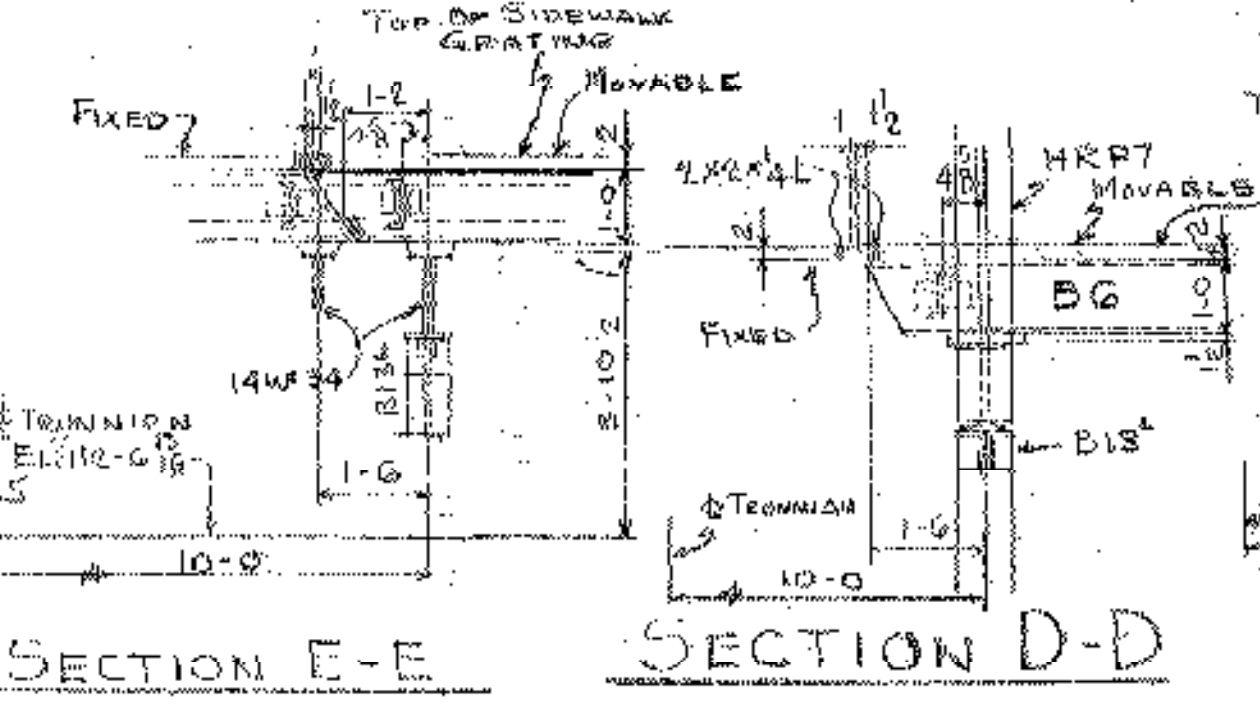
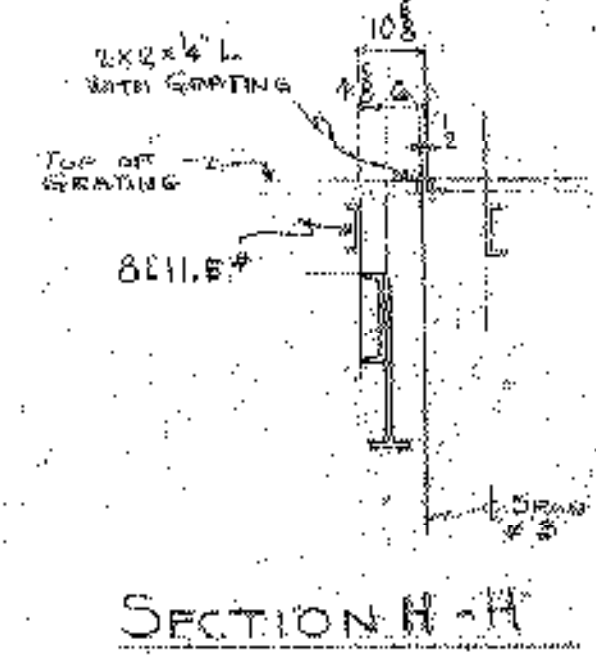
49-0 OPEN GRID FLOOR (EXCEPT OVER PIERS & LOCK PLATFORMS) GRID DEPTH B'



Note: D
 GIRDERS TO BE BOLTED TO FB40 WITH 8" BOLTS BEFORE ERECTING CB44

● = REPLACE
 □ = KEEP

SYMBOLS AND EXPLANATIONS

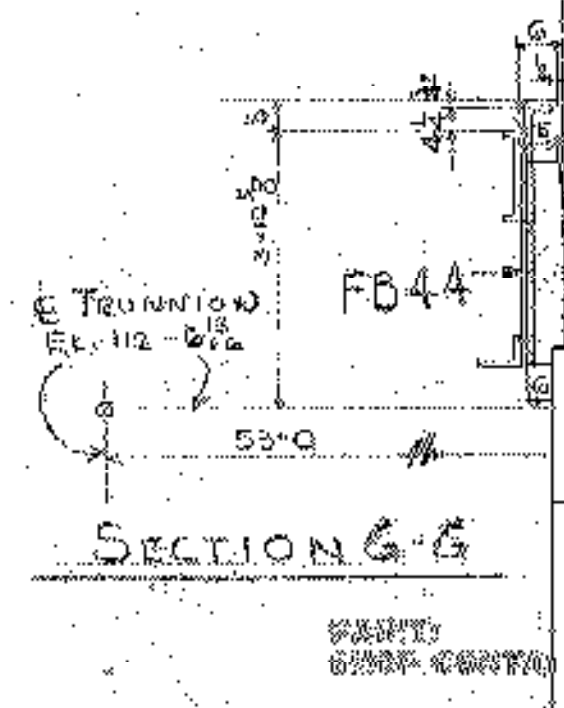


FLOOR PLAN OF BASCULE LEAF #1 SPAN #3 (DIV. 1)

ALL NEW CONNECTIONS PAINTED WITH COLD APPLIED GALVANIZE PAINT

SEE SH. E103 FOR SECTIONS A-A, G-G, F-F, I-I, K-K, T-T & V-V

MARK SHOWN ON PANS THAT (AREA) INDICATE THE SHEET SHEET ON WHICH THE TYPE OF CONNECTION & BRIG WELDING ARE SHOWN



STATE OF VERMONT
 STATE HIGHWAY DEPARTMENT
 FEDERAL PROJECT #28(3)
 GRAND ISLE-NORTH HERO BRIDGE
 COUNTY OF GRAND ISLE, VT.

AMERICAN BRIDGE COMPANY

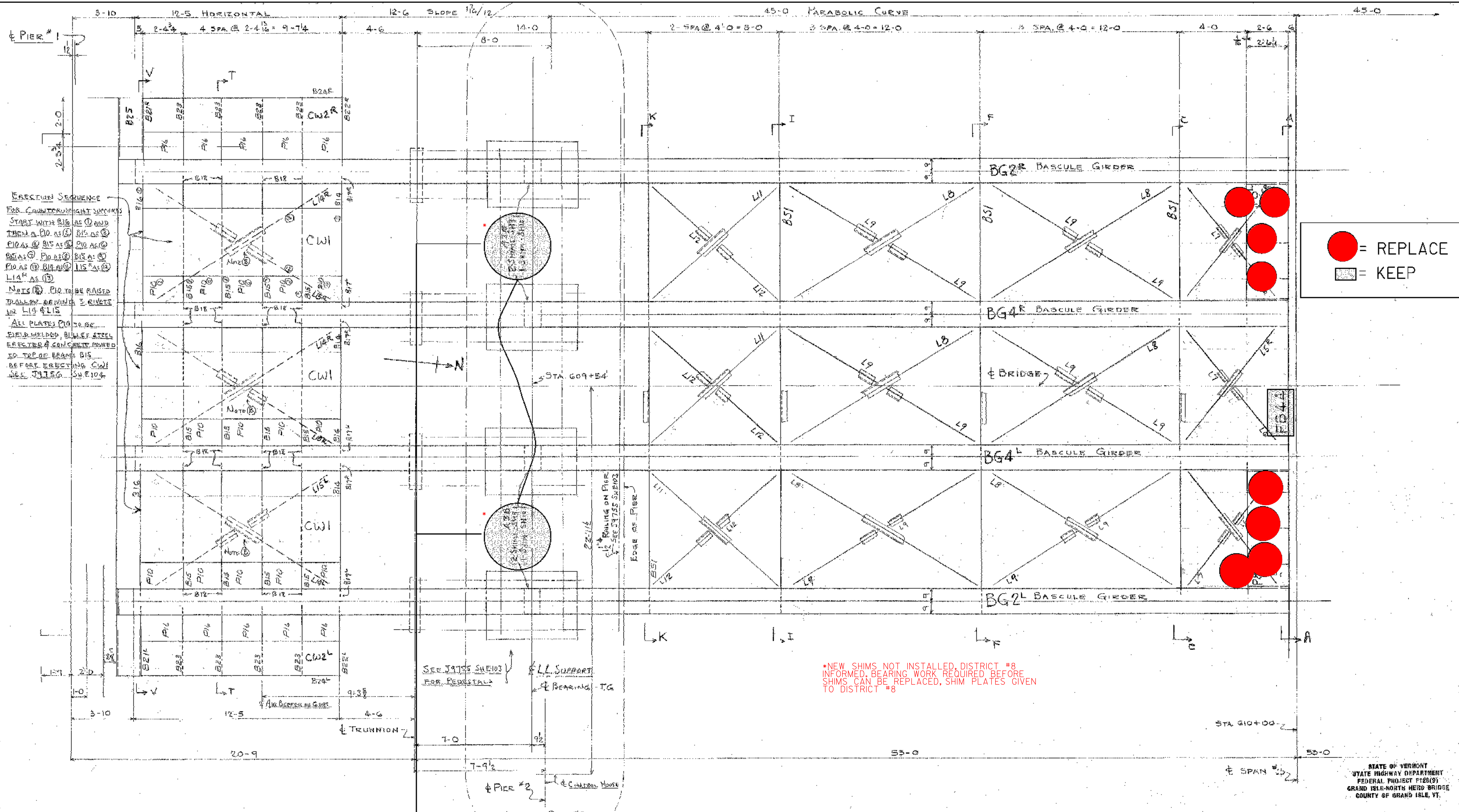
FLOOR PLAN OF BASCULE LEAF #1

PROJECT NAME: NORTH HERO-GRANDE ISLE
 PROJECT NUMBER: BHF 028-(K21)

FILE NAME: structure\92b284cleandsoa
 PROJECT LEADER: M. EVANS-MONGEON
 DESIGNED BY: S. SCRIBNER

PLOT DATE: 18-OCT-2007
 DRAWN BY: L. DUQUETTE
 CHECKED BY: S. SCRIBNER

SHEET 9 OF 41



ERECTOR SEQUENCE
 FOR COUNTERWEIGHT SUPPORTS
 START WITH RIG AS (1) AND
 THEN A P10 AS (2) B15 AS (3)
 P12 AS (4) B18 AS (5) P14 AS (6)
 B20 AS (7) P16 AS (8) B22 AS (9)
 P18 AS (10) B24 AS (11) P20 AS (12)
 B26 AS (13) P22 AS (14) B28 AS (15)
 P24 AS (16) B30 AS (17) P26 AS (18)
 B32 AS (19) P28 AS (20) B34 AS (21)
 P30 AS (22) B36 AS (23) P32 AS (24)
 B38 AS (25) P34 AS (26) B40 AS (27)
 P36 AS (28) B42 AS (29) P38 AS (30)
 B44 AS (31) P40 AS (32) B46 AS (33)
 P42 AS (34) B48 AS (35) P44 AS (36)
 B50 AS (37) P46 AS (38) B52 AS (39)
 P48 AS (40) B54 AS (41) P50 AS (42)
 B56 AS (43) P52 AS (44) B58 AS (45)
 P54 AS (46) B60 AS (47) P56 AS (48)
 B62 AS (49) P58 AS (50) B64 AS (51)
 P60 AS (52) B66 AS (53) P62 AS (54)
 B68 AS (55) P64 AS (56) B70 AS (57)
 P66 AS (58) B72 AS (59) P68 AS (60)
 B74 AS (61) P70 AS (62) B76 AS (63)
 P72 AS (64) B78 AS (65) P74 AS (66)
 B80 AS (67) P76 AS (68) B82 AS (69)
 P78 AS (70) B84 AS (71) P80 AS (72)
 B86 AS (73) P82 AS (74) B88 AS (75)
 P84 AS (76) B90 AS (77) P86 AS (78)
 B92 AS (79) P88 AS (80) B94 AS (81)
 P90 AS (82) B96 AS (83) P92 AS (84)
 B98 AS (85) P94 AS (86) B100 AS (87)

REPLACE (Red Circle)
KEEP (Grey Square)

*NEW SHIMS NOT INSTALLED, DISTRICT #8
 INFORMED. BEARING WORK REQUIRED BEFORE
 SHIMS CAN BE REPLACED, SHIM PLATES GIVEN
 TO DISTRICT #8

SEE SHEET 21
 FOR SHIM PLATE
 DETAILS

BOTTOM FLANGE PLAN OF BASCULE LEAF #1 (DWG#1)

BOTTOM FLANGE PLAN OF BASCULE LEAF #1

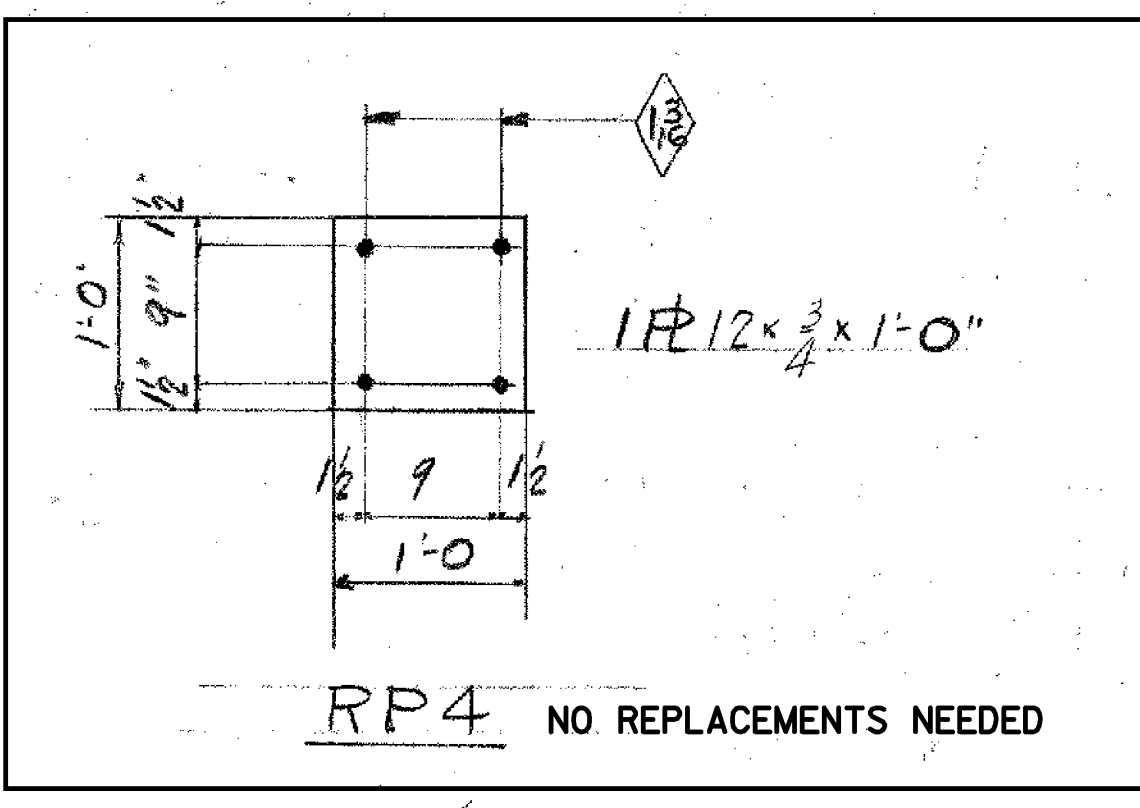
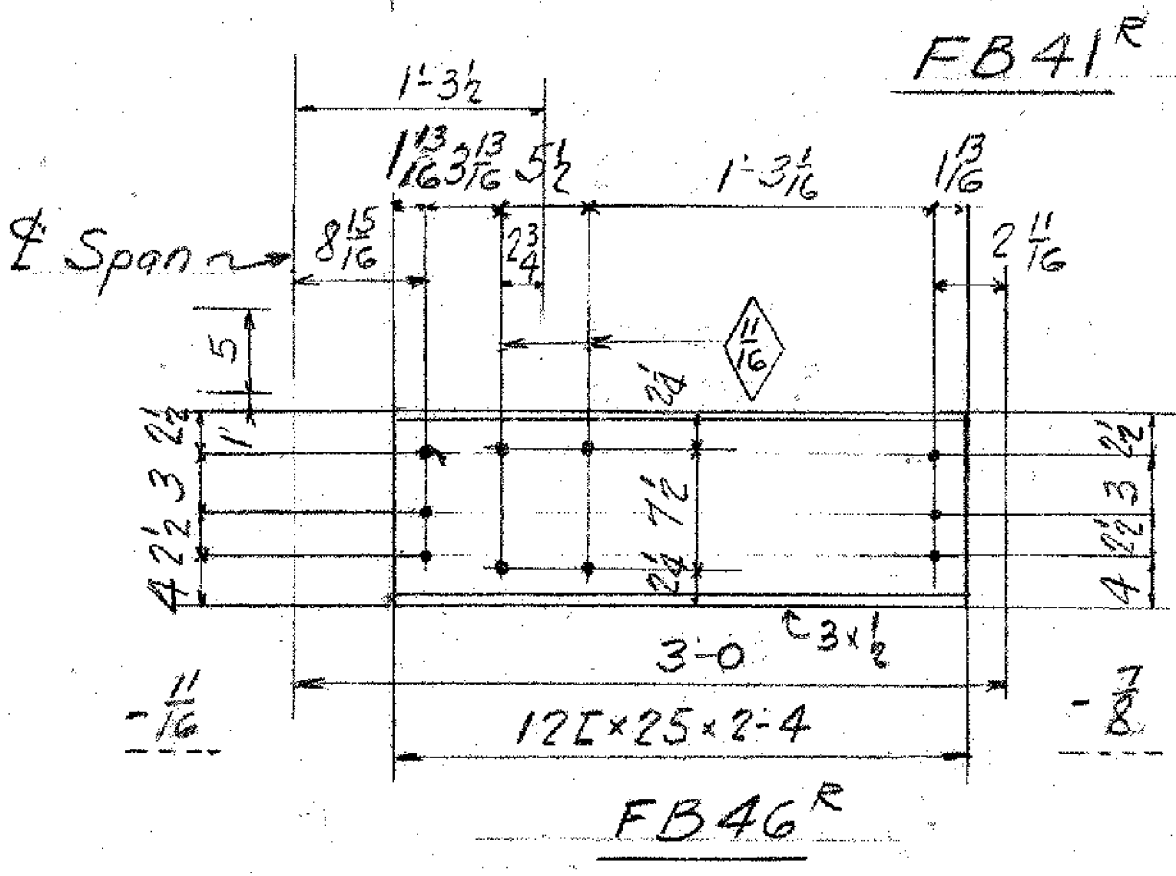
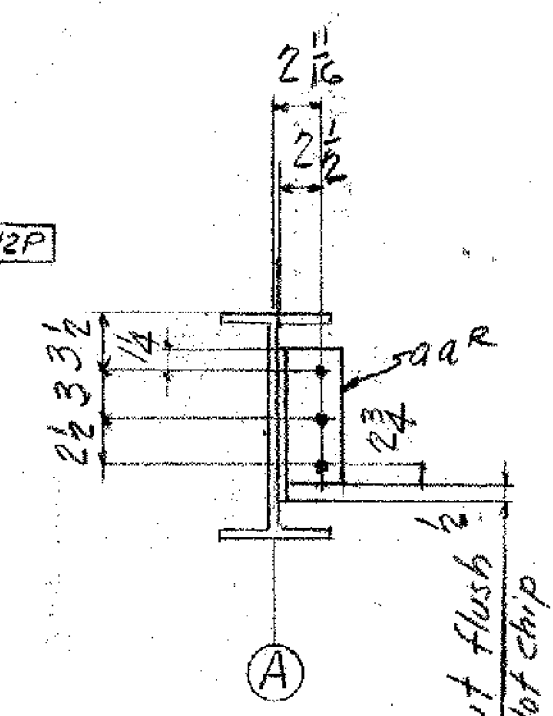
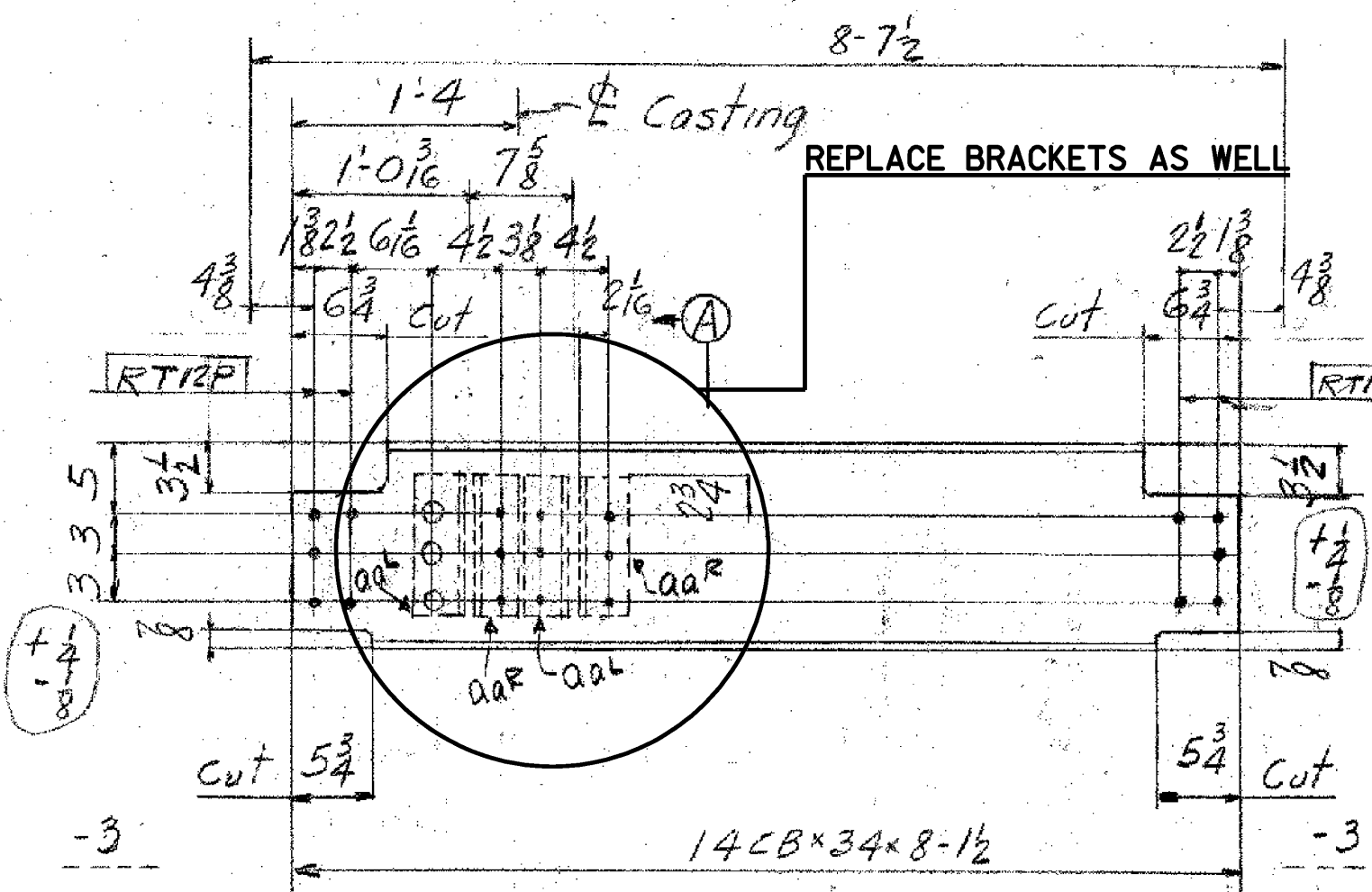
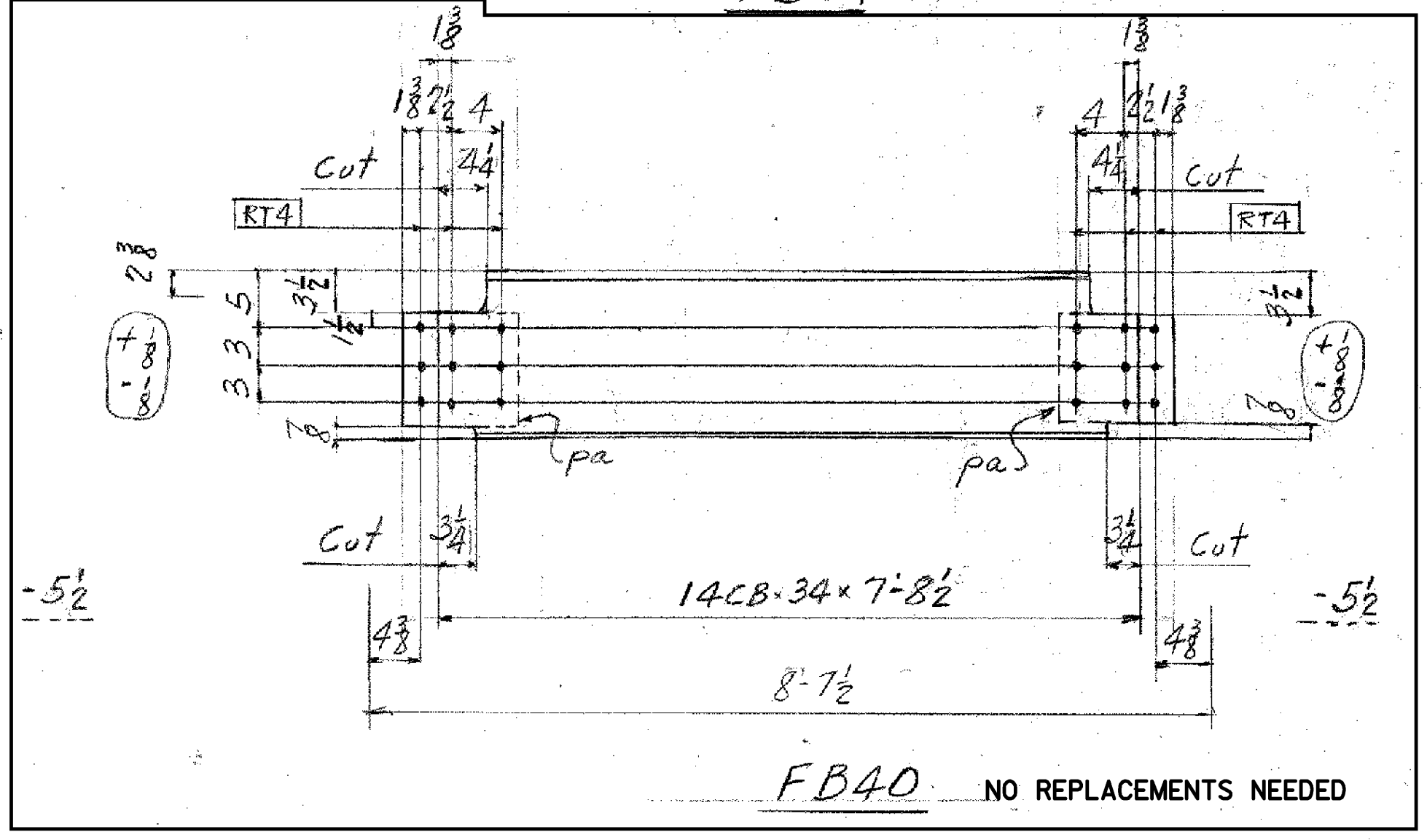
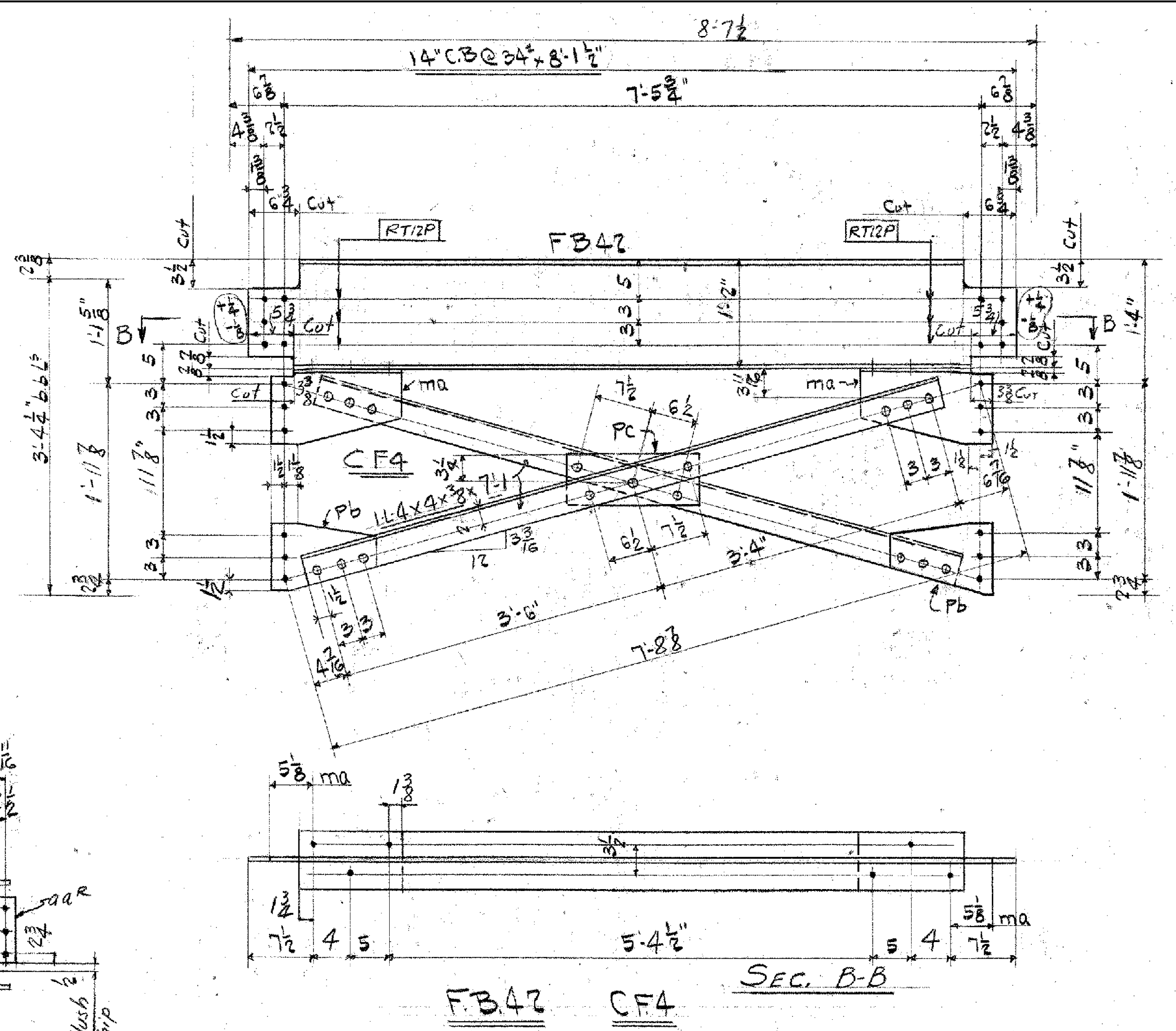
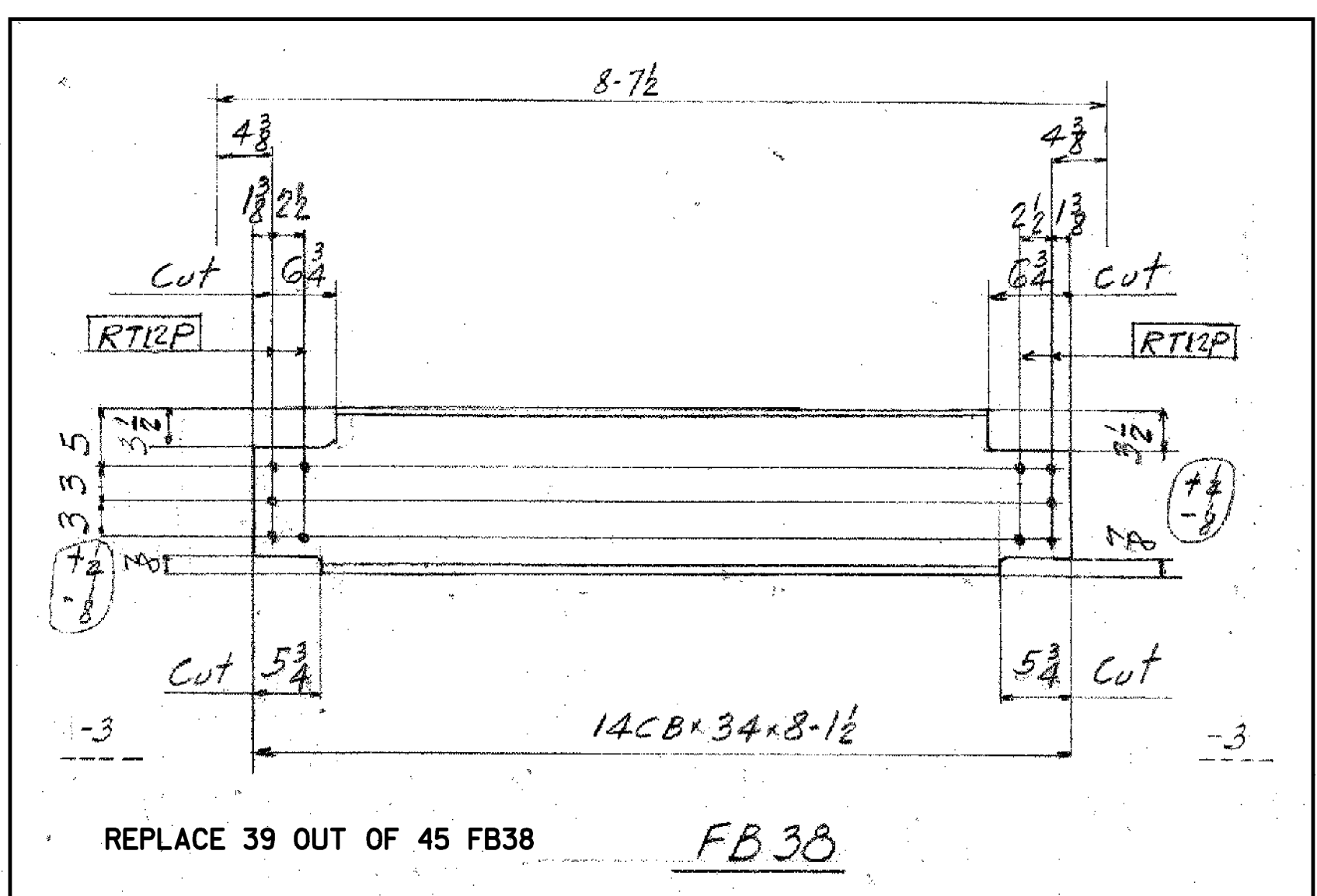
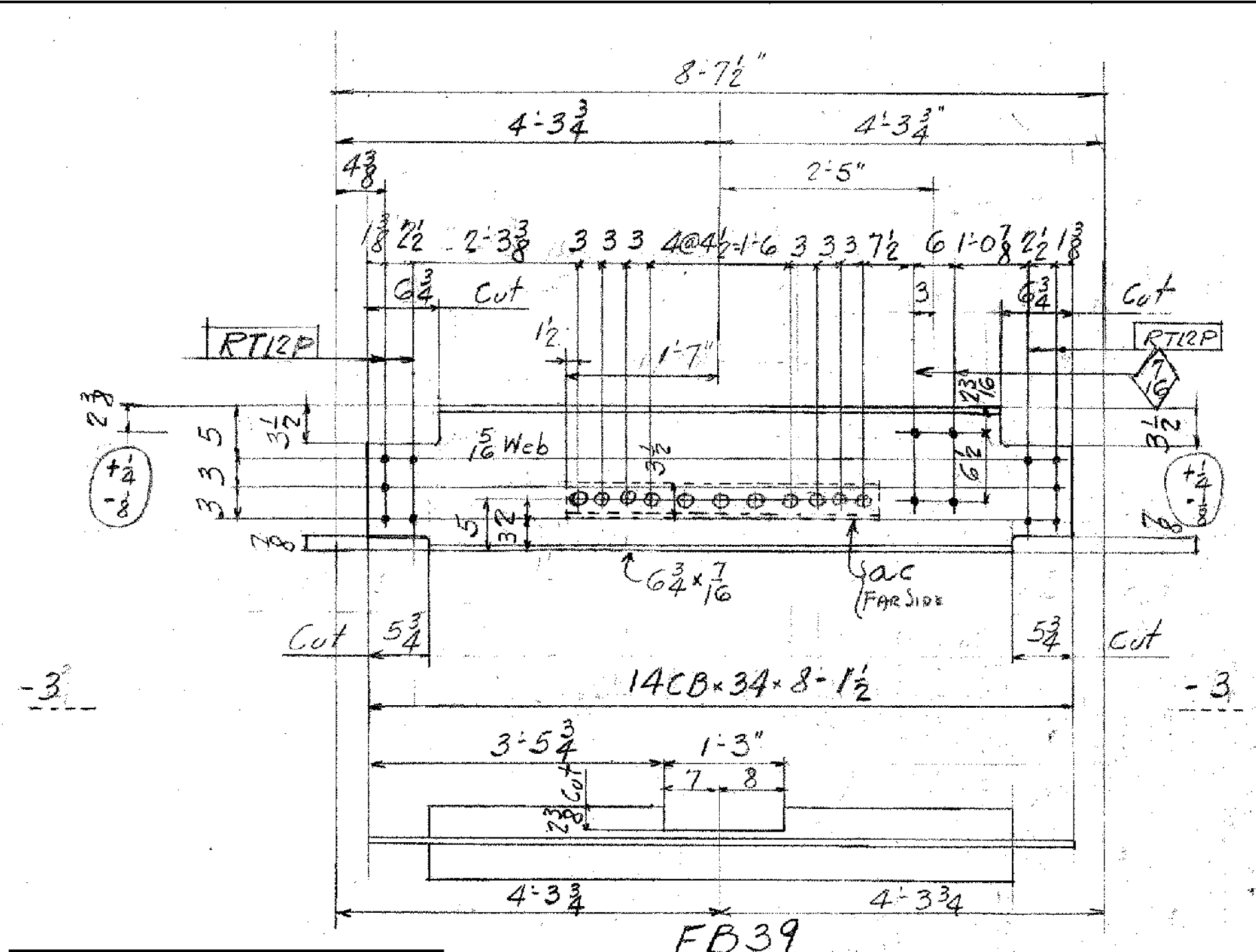
STATE OF VERMONT
 STATE HIGHWAY DEPARTMENT
 FEDERAL PROJECT F128(9)
 GRAND ISLE-NORTH HERO BRIDGE
 COUNTY OF GRAND ISLE, VT.

AMERICAN BRIDGE COMPANY

PROJECT NAME: NORTH HERO-GRANDE ISLE
 PROJECT NUMBER: BHF 028-(K21)

FILE NAME: structure\92b284cleandsca PLOT DATE: 18-OCT-2007
 PROJECT LEADER: M. EVANS-MONGEON DRAWN BY: L. DUQUETTE
 DESIGNED BY: S. SCRIBNER CHECKED BY: S. SCRIBNER
 SHEET 10 OF 41

NOTE: DIMENSIONS SHOWN ON PLANS THUS (AS) INDICATING SYSTEM SAFETY
 ON WHICH THIS TYPE OF CONNECTION & FIELD WELDING ARE SHOWN



- FB38 - REPLACE 39 OUT OF 45
- FB39 - REPLACE ALL (1)
- FB40 - NO REPLACEMENTS NEEDED
- FB41R - REPLACE ALL (1)R AND (1)R
- FB42 - REPLACE ALL (6)
- FB46R - REPLACE ALL (2)R AND (2)R
- RP4 - NO REPLACEMENTS NEEDED
- CF4 - REPLACE ALL (6)

MARK	DIVI	DIV2
FB38	24	21
FB39		1
FB40	3	3
FB41R		1
FB41L		1
FB42		1/2
CF4	3	3
RP4	4	4
FB42	3	3

LINE	MATERIAL	ASS'N. MARK	REMARKS	ENLARGED WEIGHT FOR ONE SHIP PIECE	ORDERED	ITEM	LINE	MATERIAL	ASS'N. MARK	REMARKS	ENLARGED WEIGHT FOR ONE SHIP PIECE	ORDERED	ITEM	LINE	MATERIAL	ASS'N. MARK	REMARKS	ENLARGED WEIGHT FOR ONE SHIP PIECE	ORDERED	ITEM			
																					SHAPE	LENGTH	NO. OF
1	45 FLOOR BEAMS - FB38						16							46									
2	45 14"CB x 34" 8 1/2				8-1/2	1017	17	6 FLOOR BEAMS FB42						47									
3							18							48									
4	1 FLOOR BEAM FB39						19	6 14"CB x 34 8 1/2				8-1/2	1017	34	4 12" x 25 2 4						S	49	
5	1 14"CB x 34" 8 1/2				8-1/2	1017	20							35								50	
6	1 L 4 3/2 x 3 3	gc					21	6 CROSS FRAME CF4						36	8 BEARING PLATES RP4								51
7	6 FLOOR BEAMS FB40						22	12 L 4 3/2 x 3 3 7 1 ab			28-5	1033	37										52
8	6 14"CB x 34" 7 8/2				40-0	1016	23	12 14"CB x 34" 1 3/2 ma	cut		40-0	1016	38	8 PL 12 3/4 x 1 0									53
9	12 PL 9 3/2 x 0 9/2	pa					24	12 PL 9 3/2 x 0 9/2 1 1/2 pb					39										54
10	24 5/8 x 7/8						25	6 PL 6 7/2 x 5/16 1 5/2 pc					40										55
11							26						41										56
12	ONE FLOOR BEAM - FB41R						27						42										57
13	ONE " FB41L						28						43										58
14	2 14"CB x 34 8 1/2				8-1/2	1017	29						44										59
15	8 L 4 3/2 x 3 3 0 10	aaR					30						45										60

Riv $\frac{1}{2}$ UNLESS NOTED

HOLES $\frac{1}{16}$ UNLESS NOTED

R.T. - SUBPUNCHED $\frac{1}{16}$ AND REAMED TO TEMPLET $\frac{15}{16}$

STATE OF VERMONT
STATE HIGHWAY DEPARTMENT
PROJECT F128(6)
GRAND ISLE-NORTH HERO BRIDGE
COUNTY OF GRAND ISLE, VT.

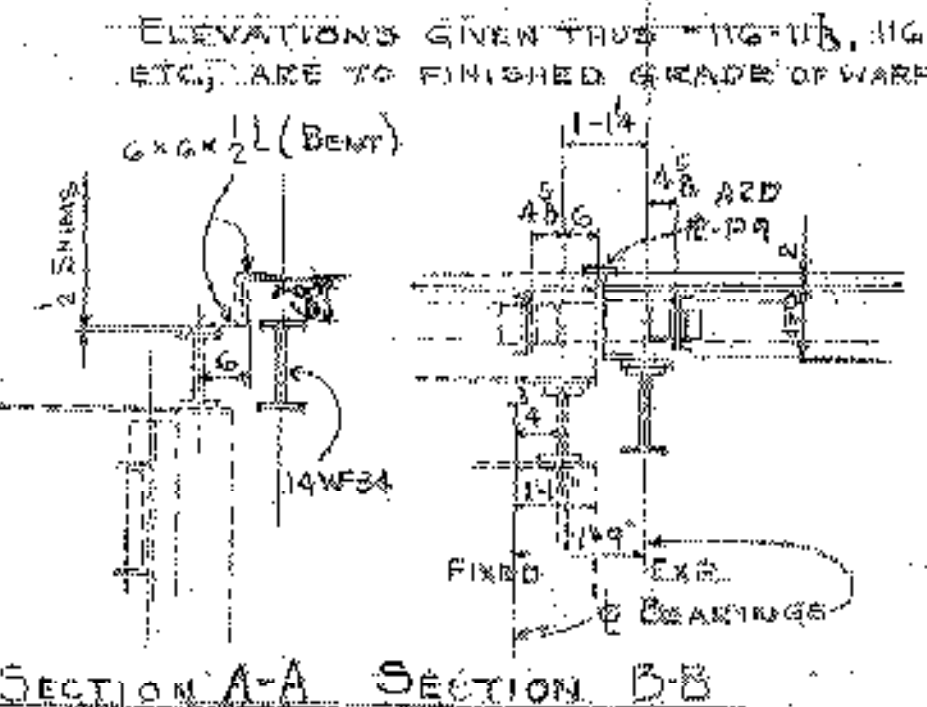
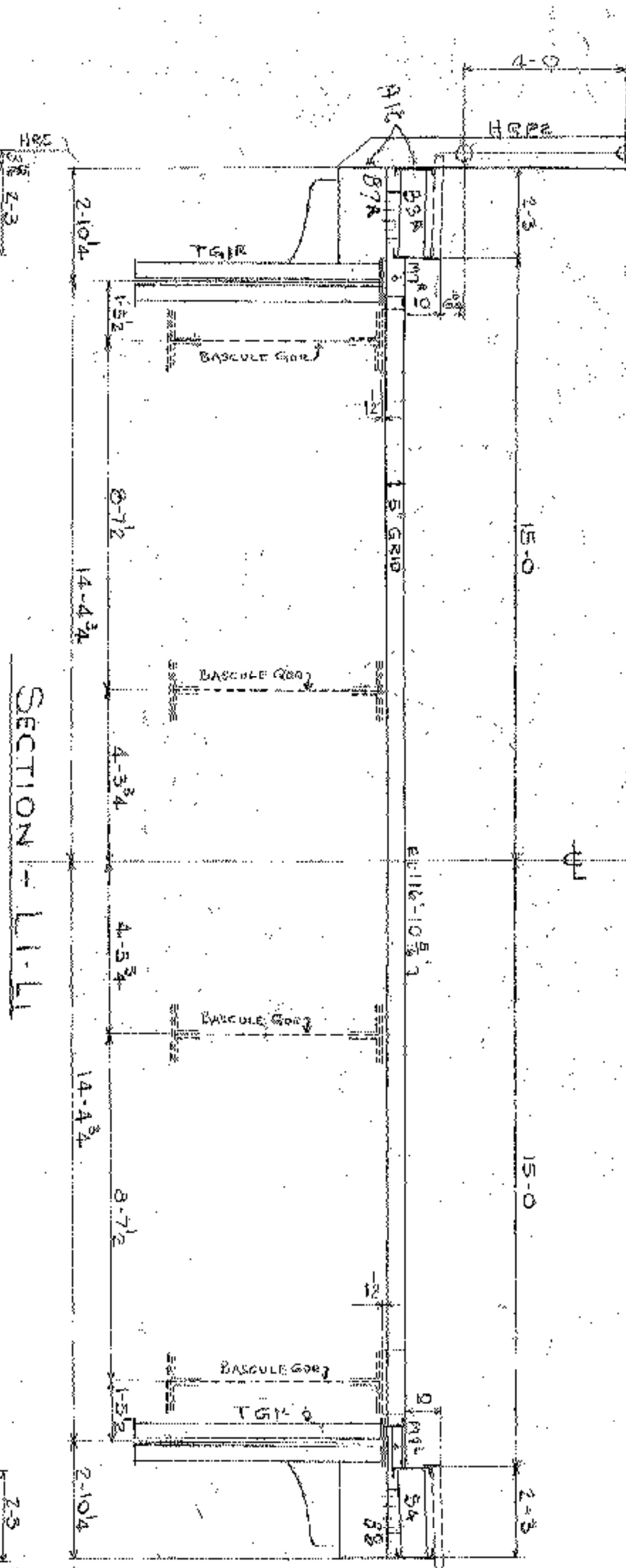
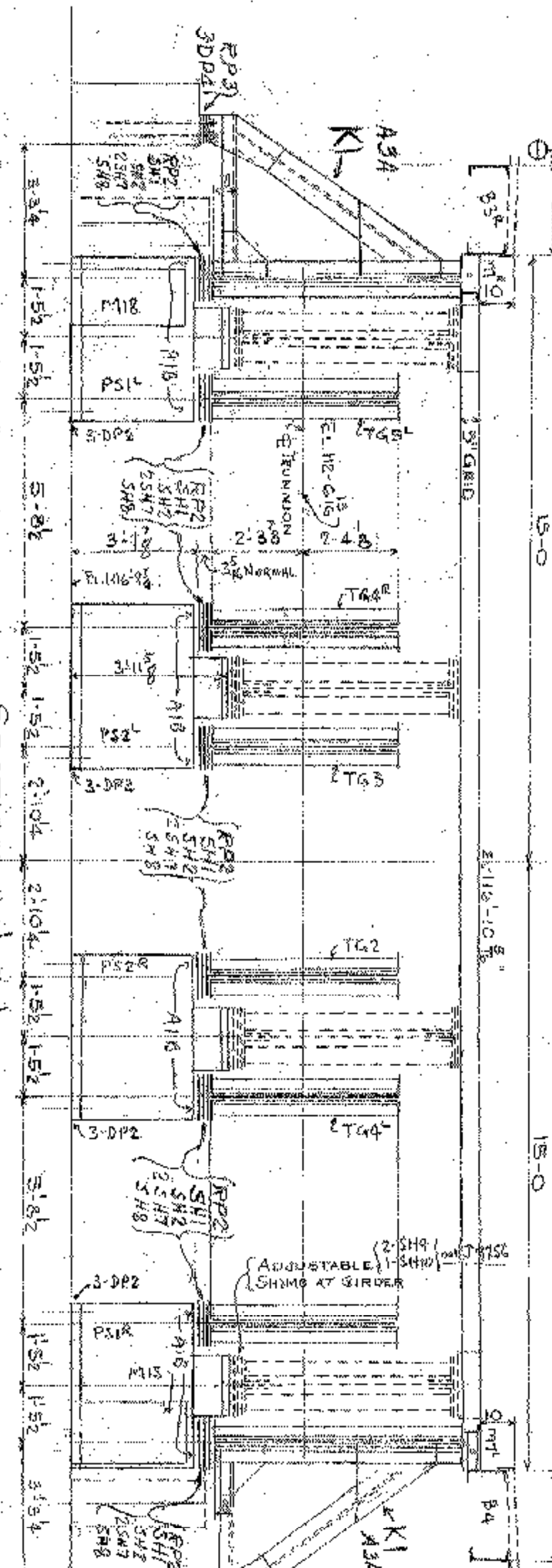
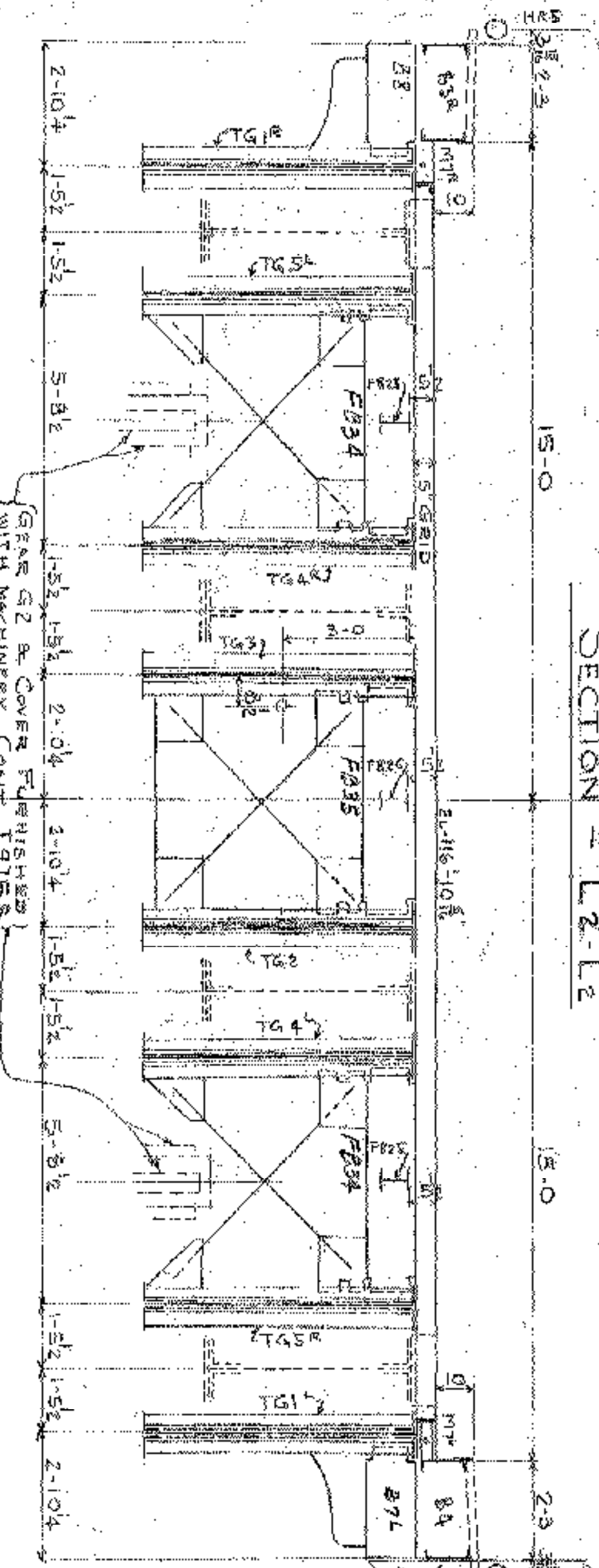
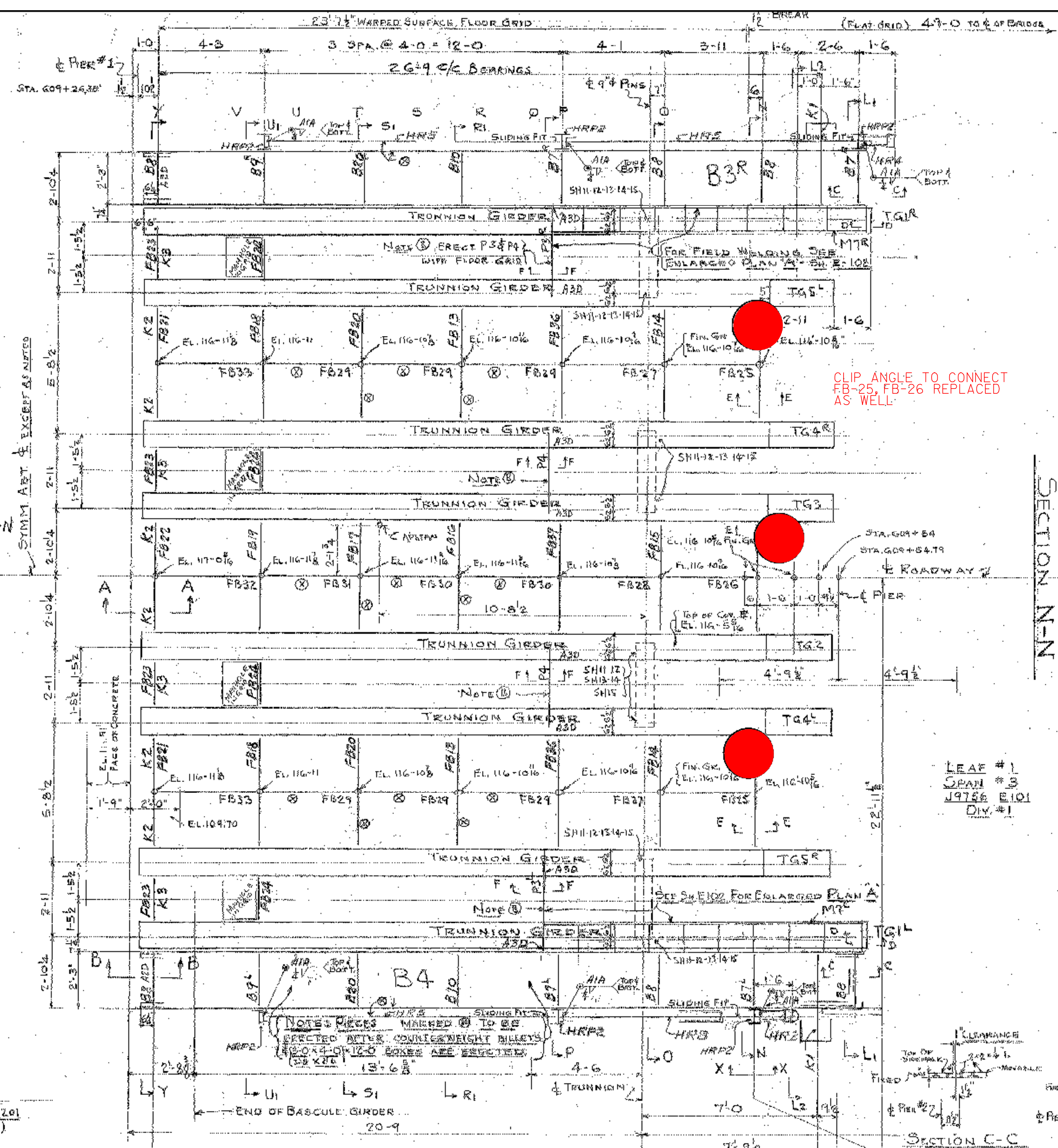
AMERICAN BRIDGE COMPANY

BASCULE SPAN STRUCTURAL DETAILS

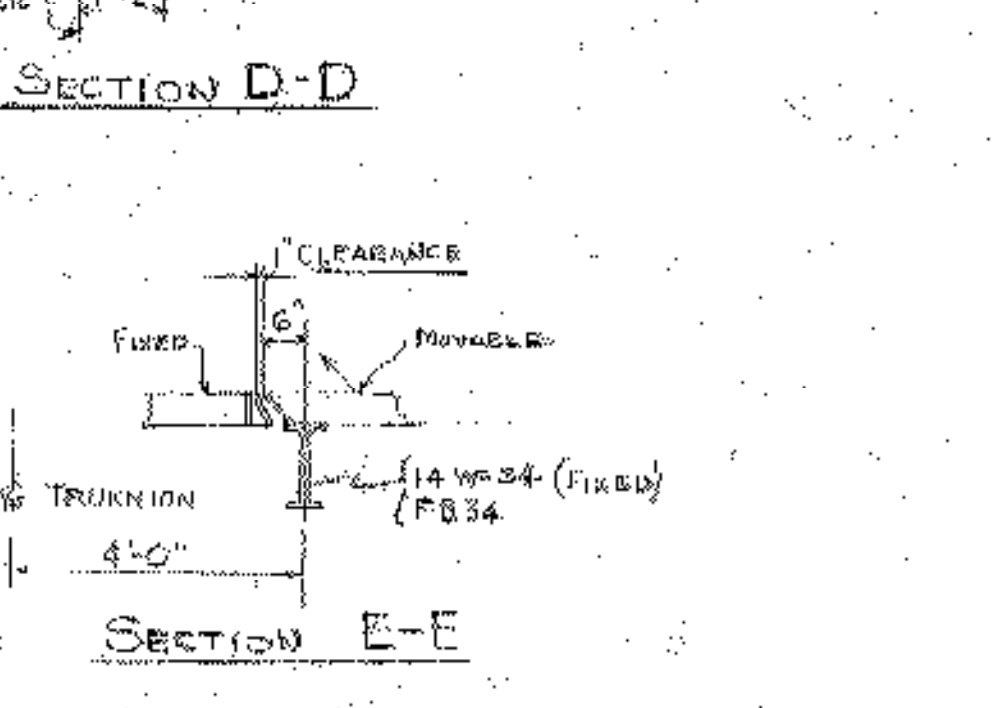
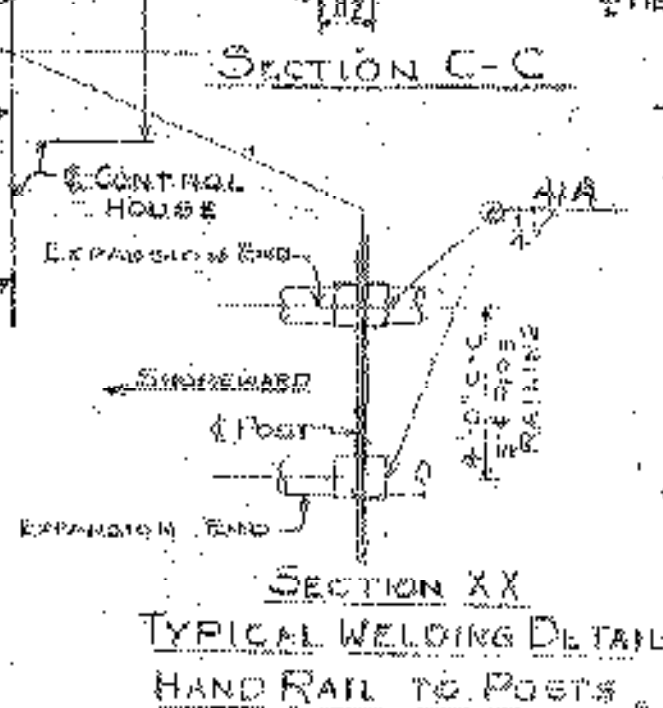
PROJECT NAME: NORTH HERO-GRANDE ISLE
PROJECT NUMBER: BHF 028-1(K2I)

FILE NAME: structure\s92b284cleandsca PLOT DATE: 18-OCT-2007
PROJECT LEADER: M. EVANS-MONGEON DRAWN BY: L. DUQUETTE
DESIGNED BY: S. SCRIBNER CHECKED BY: S. SCRIBNER
SHEET 14 OF 41

● = REPLACE



FLOOR PLAN OF TRUNNION SPAN #2 (DIV. #1)



NOTE: MARKS SHOWN ON PLAN (AIA) INDICATE THE SKETCH SHEET ON WHICH THE TYPE OF CONNECTION AND FIELD WELDING ARE SHOWN.

FOR SECTIONS O-O, P-P, R-R, S-S, U-U & V-V SEE SH. # E10

FOR ANCHOR BOLT PLAN SEE SH. # E10

FLOOR PLAN OF TRUNNION SPAN #2

STATE OF VERMONT
STATE HIGHWAY DEPARTMENT
FEDERAL PROJECT #126(9)
WARD-BILL-BORTH HERO BRIDGE
COUNTY OF GRANVILLE, VT.

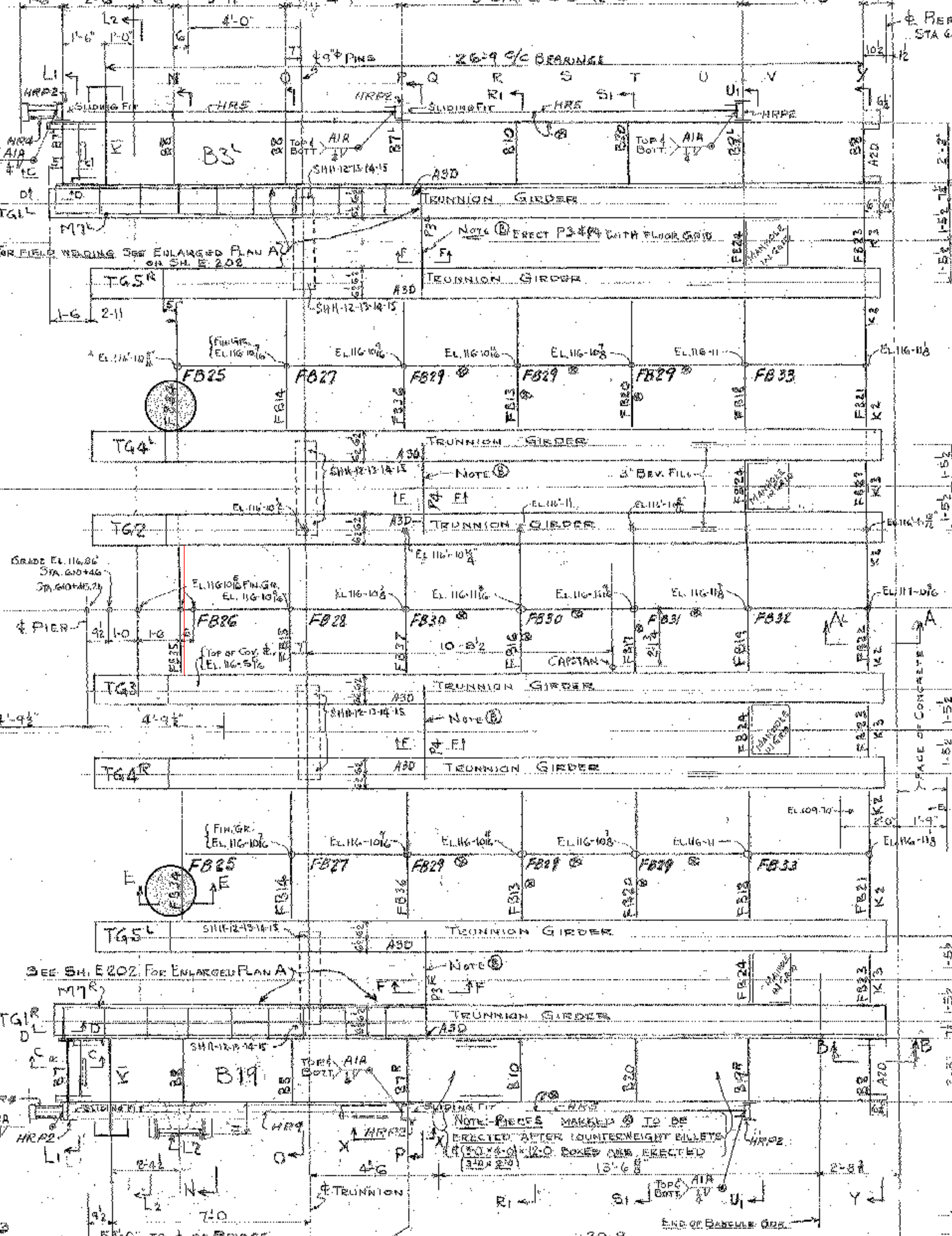
AMERICAN BRIDGE COMPANY

PROJECT NAME: NORTH HERO-GRANDE ISLE
PROJECT NUMBER: BHF 028-(K21)

FILE NAME: structure\92b284cleandsoc
PLOT DATE: 18-OCT-2007
PROJECT LEADER: M. EVANS-MONGEON
DESIGNED BY: S. SCRIBNER
DRAWN BY: L. DUQUETTE
CHECKED BY: S. SCRIBNER
SHEET 16 OF 41

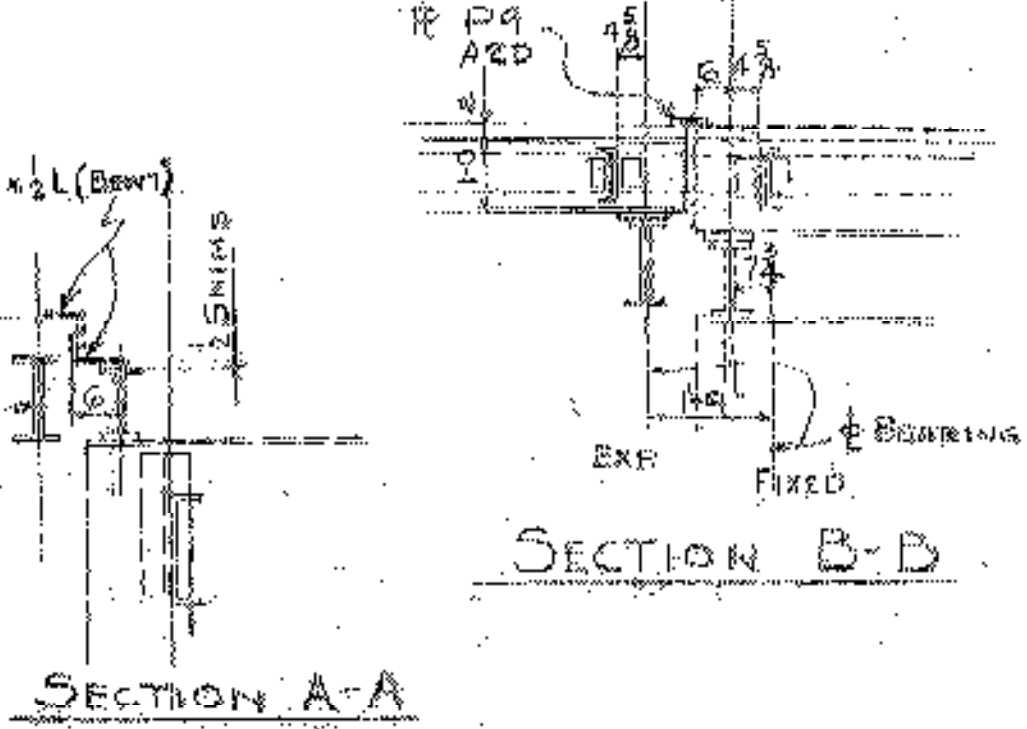
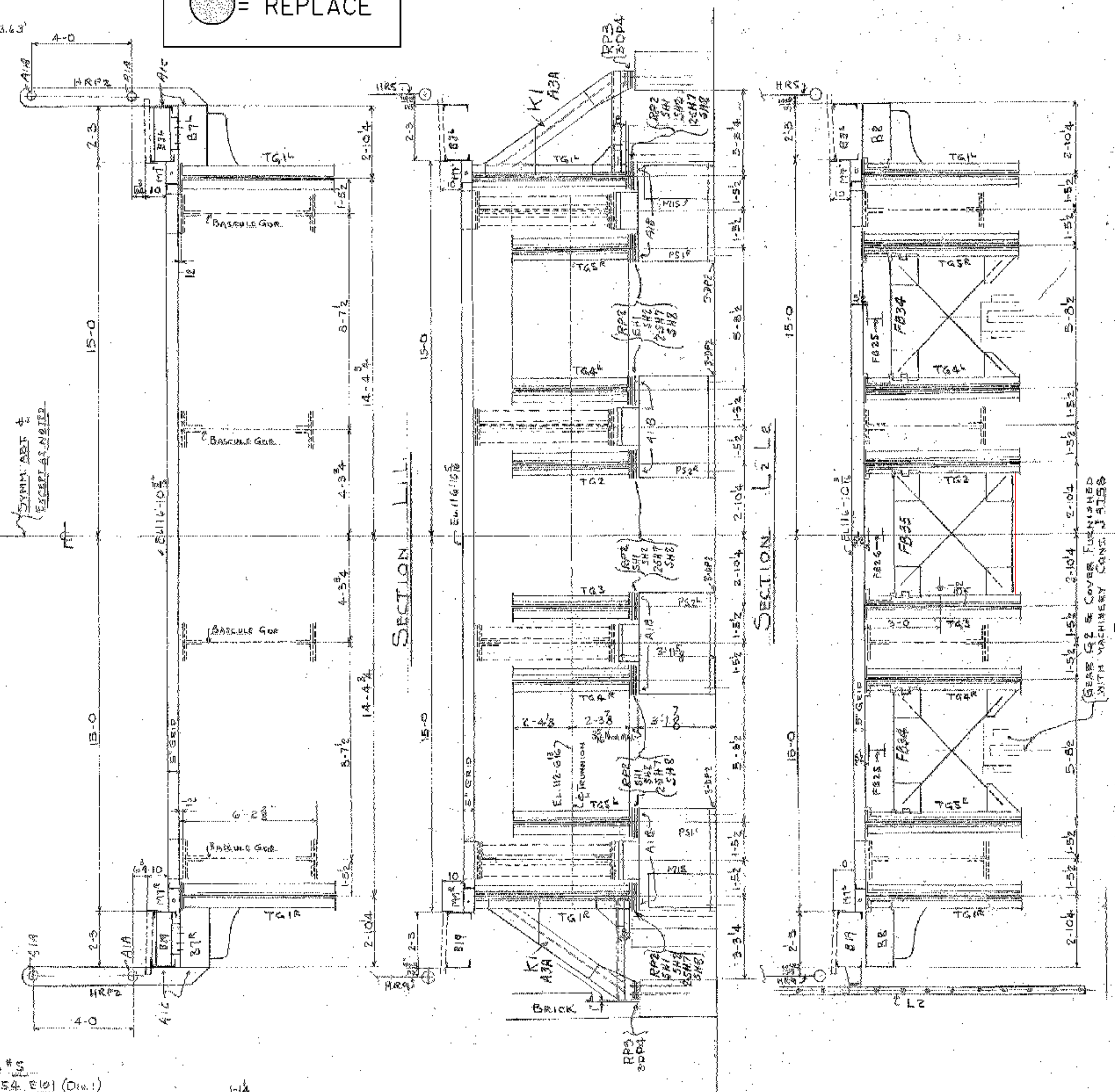
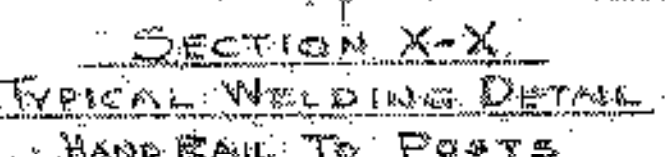
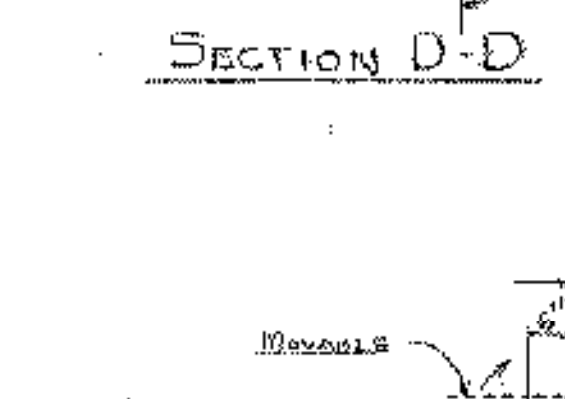
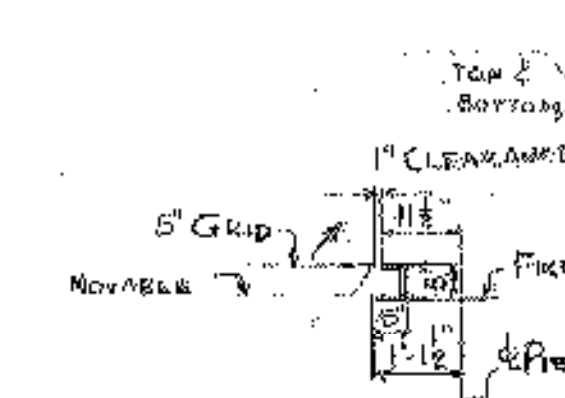
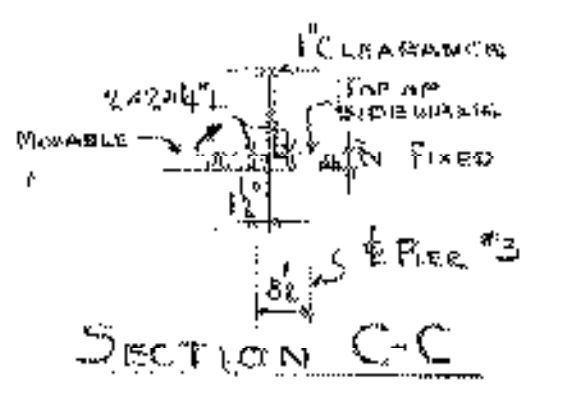
● = REPLACE

49-0 TO E.O.F. BRIDGE (PLAT) 12 BREAK 23'-7 1/2 WARPED SURFACE FLOOR GR.D. BEARINGS STA. 610+72.76



BOTTOM ANGLE BRACE REPLACED FOR FB-35 SUPPORT

LEAF #2 SPAN #3 1975 F.201 (Div. 2)



ELEVATIONS GIVEN THUS -116-11, 116-11 ETC. ARE TO FINISHED GRADE OF WARPED SURFACE

FLOOR PLAN OF TRUNNION SPAN #4 (Div. 2)

FLOOR PLAN OF TRUNNION SPAN #4

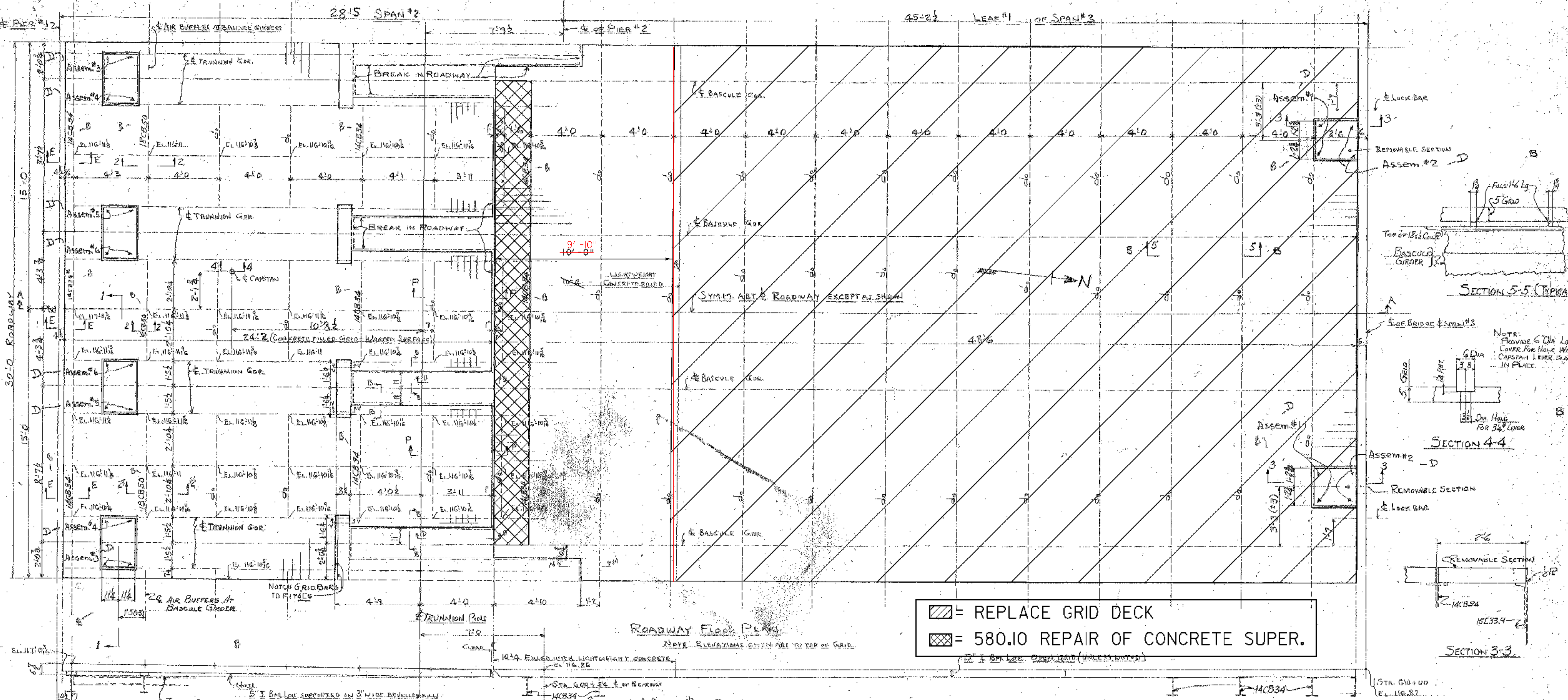
PROJECT NAME: NORTH HERO-GRADE ISLE
PROJECT NUMBER: BHF 028-(K21)
FILE NAME: structure\92b284cleandsoa
PLOT DATE: 18-OCT-2007
PROJECT LEADER: M. EVANS-MONGEON
DESIGNED BY: S. SCRIBNER
DRAWN BY: L. DUQUETTE
CHECKED BY: S. SCRIBNER
SHEET 17 OF 41

STATE OF VERMONT
HIGHWAY DEPARTMENT
FEDERAL PROJECT #200(3)
GRAND ISLE-NORTH HERO BRIDGE
COUNTY OF GRAND ISLE, VT.

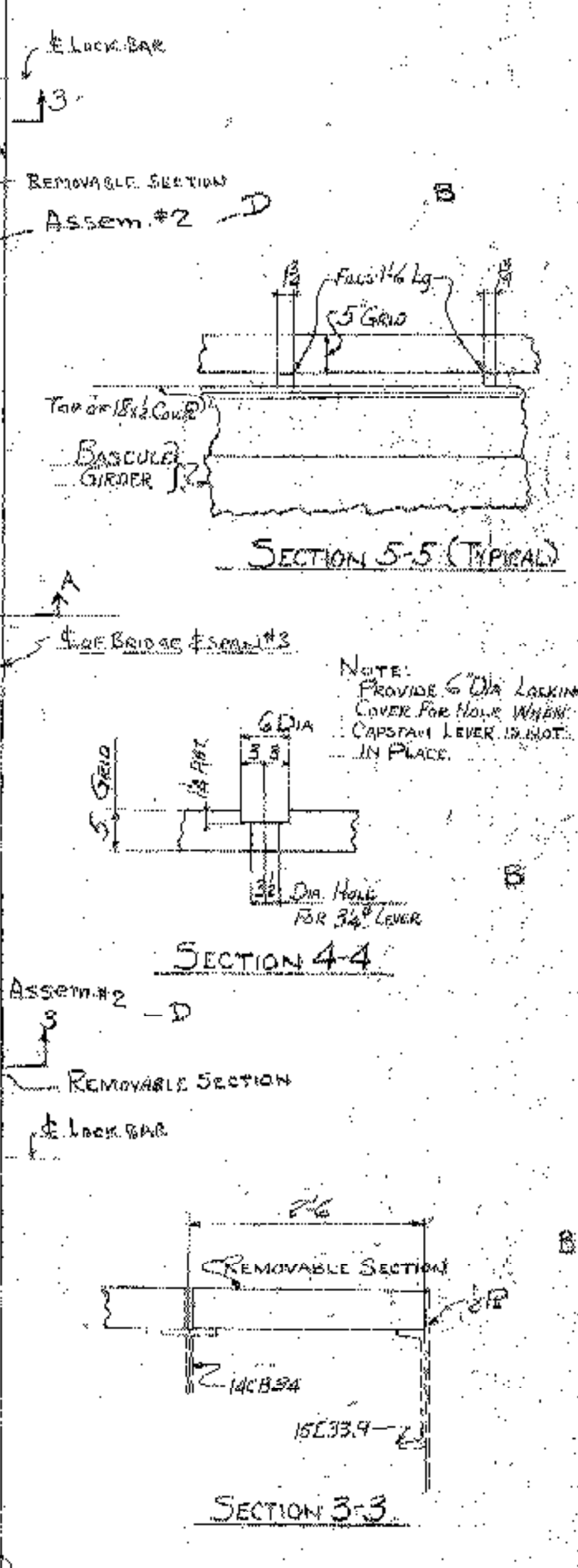
TRUNNION SPAN #4

AMERICAN BRIDGE COMPANY

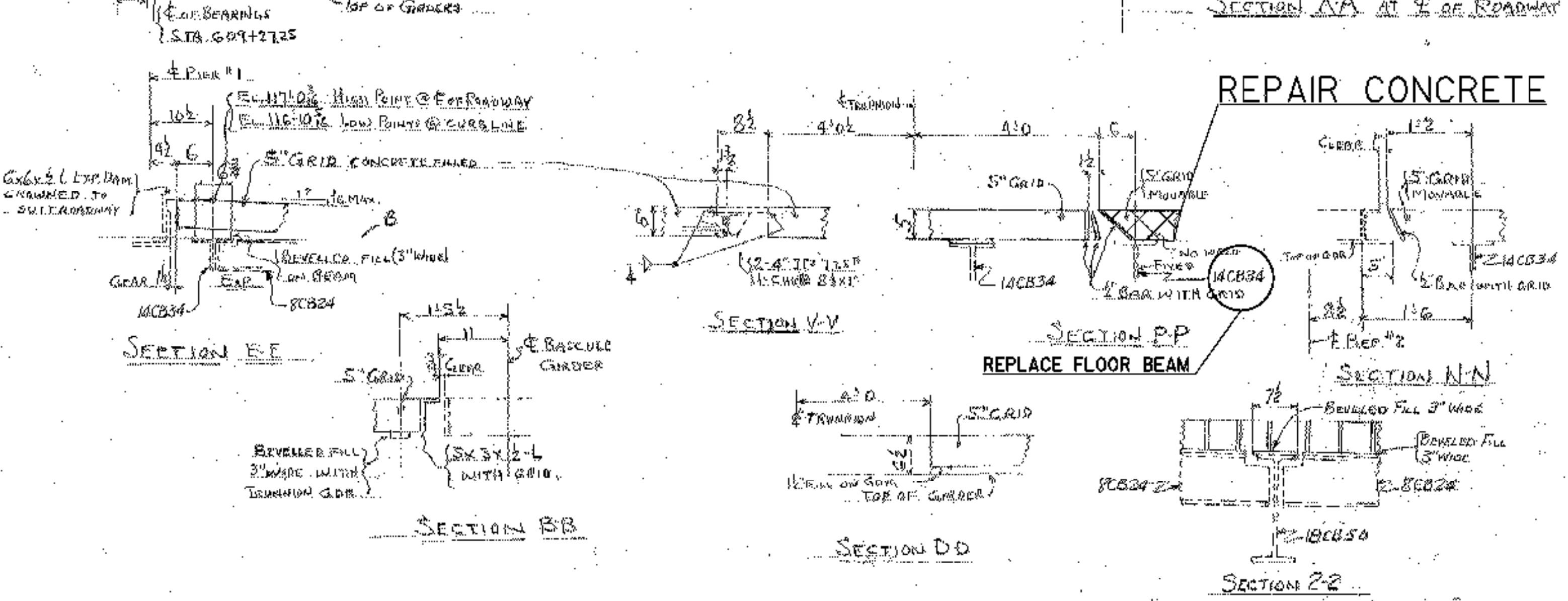
1/2" X 30" X 5" STEEL PLATE ADDED TO PROTECT SAWCUT CONCRETE



▨ = REPLACE GRID DECK
▩ = 580.10 REPAIR OF CONCRETE SUPER.



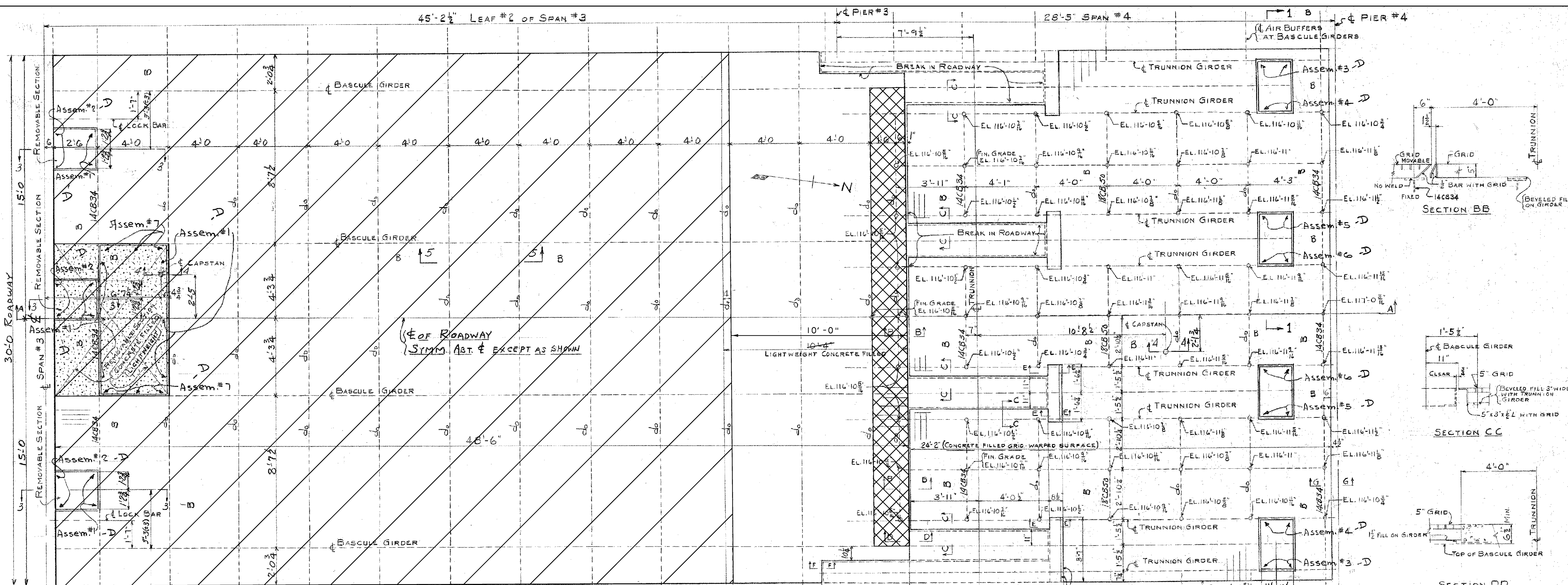
ROADWAY FLOOR PLAN
NOTE: ELEVATIONS GIVEN ARE TO TOP OF GRID.



NOTES:
ABOUT 21RS SURF OF E.I. BRIDGE FOR SPAN #2 & LEAF #1 OF SPAN #3
ROADWAY FLOOR GRID AS SHOWN ON DESIGNS #17-20-21-22-23-25-28-29-30-31
NOTED ON PAGE 305 ITEM 406 OF STD. SPEC. OF STATE OF VERMONT
DEPT. OF HIGHWAYS.
ORDERED ON PAGE #101 REQ 57597
SHIP DIRECT TO SITE
SUPPLIER TO FURNISH 6 SETS OF DETAIL DRAWINGS FOR APPROVAL
& ADDITIONAL PRINTS AS REQUESTED FOR FILE
FURNISH TRACINGS FOR CUSTOMER'S PERMANENT FILE
REMOVABLE SECTIONS TO BE DETAIL IN PLACE WITH 1/2" BRONZE BOLTS WITH LOCK WASHERS AND N.T. NUTS
NUTS TO BE WELDED TO SUPPORTS AS SHOWN. NUTS TO BE IN PLACE ABOVE TOP OF GRID.
OPEN STEEL GRID FLOORING - MAIN MEMBERS TRANSVERSE TO TRAFFIC. TRUSSING SPANS
AND PARALLEL TO TRAFFIC - BASCULE SEAM. MINIMUM MOMENT OF INERTIA 4.5 IN⁴ FOR 4" HIGH
WIDTH. EACH MAIN MEMBER TO BE WELDED TO SUPPORT WITH 1/2" FILLET WELLS BOTH SIDES.
IT SHALL BE EQUIVALENT TO USS-1 BRIDGELOK OPEN FLOOR AS TO DESIGN DETAIL OF BRIDGELOK.

SOUTH HALF ROADWAY GRID

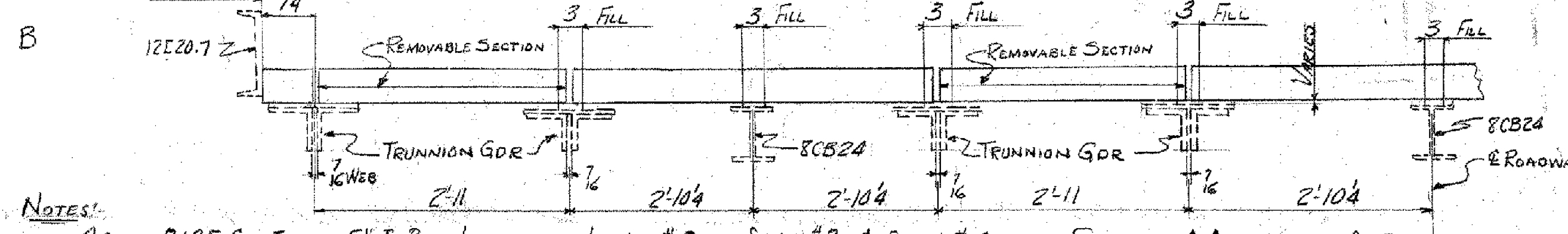
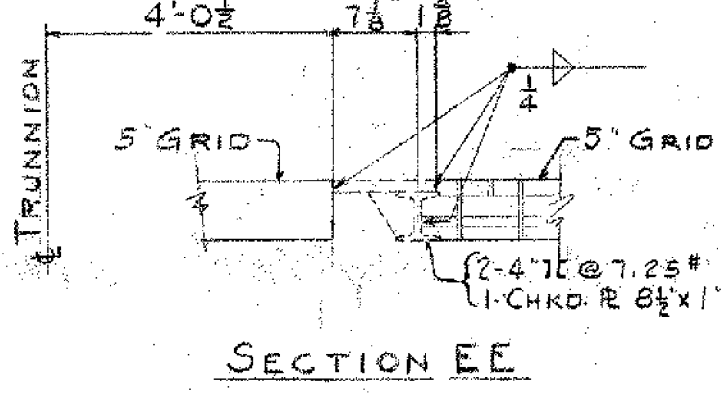
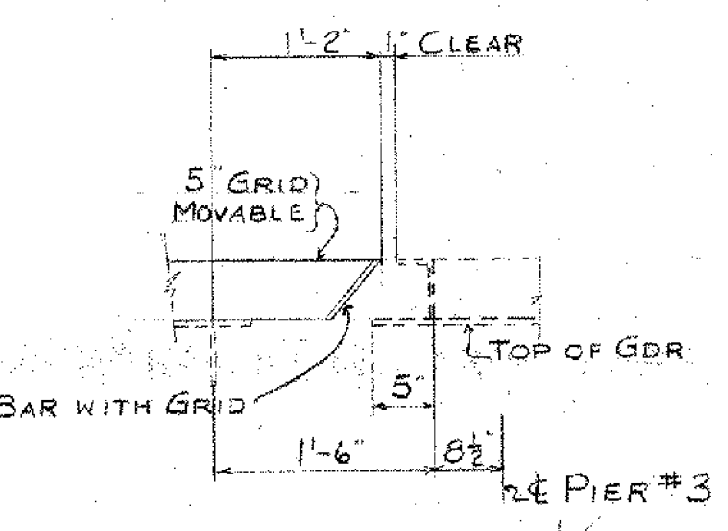
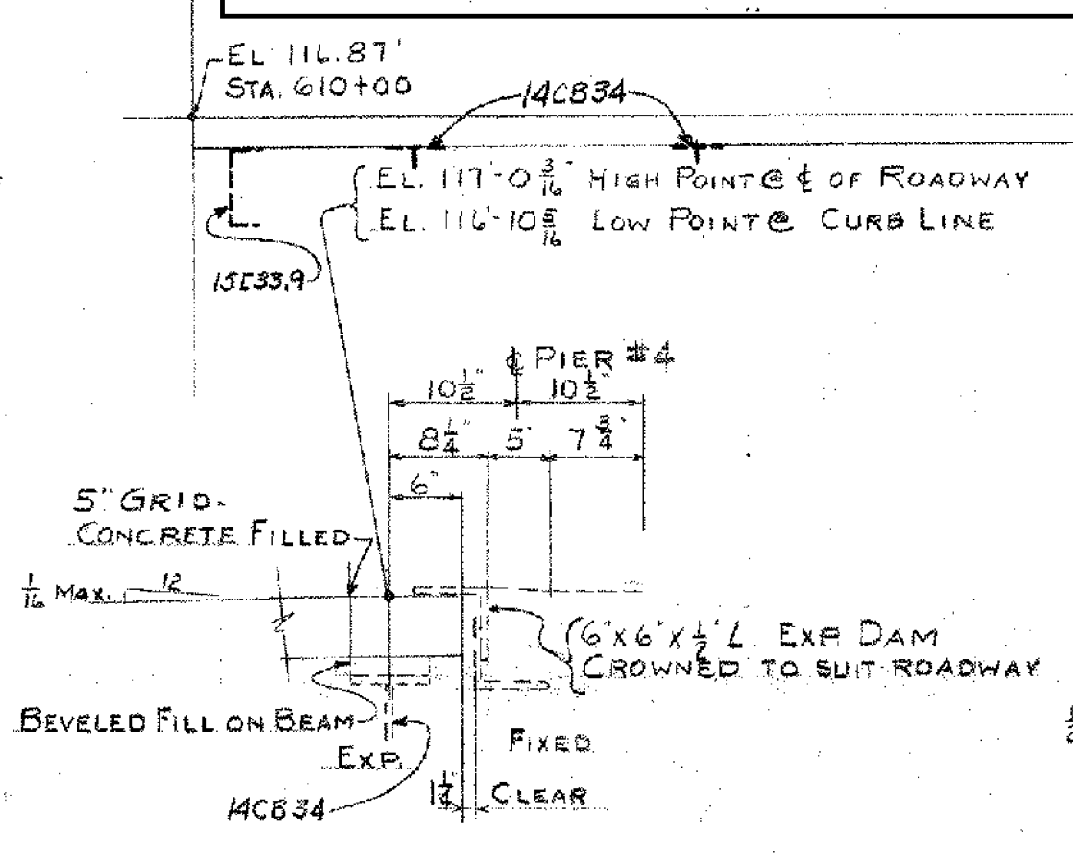
PROJECT NAME: NORTH HERO-GRANDE ISLE
PROJECT NUMBER: BHF 028-(K21)
FILE NAME: structure\92b284\cleandsoc
PROJECT LEADER: M. EVANS-MONGEON
DESIGNED BY: S. SCRIBNER
PLOT DATE: 18-OCT-2007
DRAWN BY: L. DUQUETTE
CHECKED BY: S. SCRIBNER
SHEET 19 OF 41



= REPLACE GRID DECK
 = 580.10 REPAIR OF CONCRETE SUPER.

ROADWAY FLOOR PLAN
 NOTE - ELEVATIONS GIVEN ARE TO TOP OF GRID

REMOVABLE LIGHTWEIGHT CONCRETE PANELS TO BE REPLACED



SECTION 3-3

NOTES:
 ABOUT 2185 SQ FT OF 5" I BM. LOK FOR LEAF #2 OF SPAN #3 & SPAN #4
 ROADWAY FLOOR GRID AS SHOWN ON DESIGNS #19-20-21-22-23-25-28 & 29 OF 72
 #NOTED ON PAGE 305 ITEM 406 OF STD SPECS OF STATE OF VERMONT
 DEPT. OF HIGHWAYS

See sheet 1A for method of "D" holding down removable sections

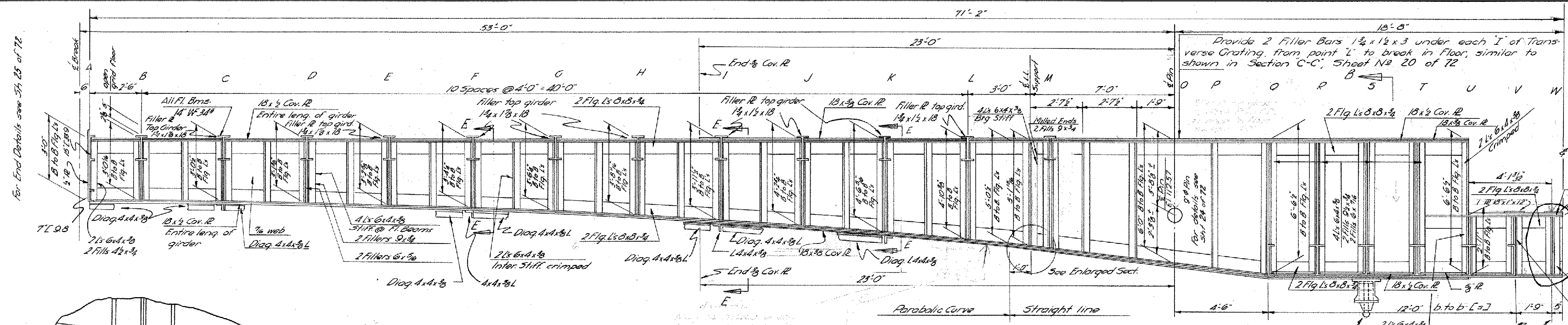
ORDERED ON PAGE #101 REG 57597
 SHIP DIRECT TO SITE
 SUPPLIER TO FURNISH 6 SETS OF DETAIL DRAWINGS FOR APPROVAL
 #ADDITIONAL PRINTS AS REQUESTED FOR FILE
 FURNISH TRACINGS FOR CUSTOMERS PERMANENT FILE
 REMOVABLE SECTIONS TO BE BOLTED IN PLACE WITH 2" BRASS BOLTS WITH LOCK WASHERS & W/ NUTS
 NUTS FIELD WELDED TO SUPPORTING BEAMS. NO BOLT HEADS TO BE ABOVE TOP OF GRID
 OPEN STEEL GRID FLOORING - MAIN MEMBERS TRANSVERSE TO TRAFFIC. TRUNNION SPAN AND PARALLEL TO TRAFFIC - BASCULE SPAN. MINIMUM MOMENT OF INERTIA 4.45 IN⁴ FOR A SIX INCH WIDTH.
 EACH MAIN MEMBER TO BE WELDED TO SUPPORT WITH 1/2" FILLET WELD BOTH SIDES. IT SHALL BE EQUIVALENT TO U.S.S.I. BEAM/LOK OPEN FLOOR AS TO DESIGN DETAIL OF OPENINGS.

STATE OF VERMONT
 STATE HIGHWAY DEPARTMENT
 FEDERAL PROJECT #128(2)
 GRAND ISLE-NORTH HERO BRIDGE
 COUNTY OF GRAND ISLE, VT.

AMERICAN BRIDGE COMPANY

NORTH HALF ROADWAY GRID
 PROJECT NAME: NORTH HERO-GRANDE ISLE
 PROJECT NUMBER: BHF 028-1(K2I)
 FILE NAME: structure\s92b284cleandsca
 PLOT DATE: 18-OCT-2007
 PROJECT LEADER: M. EVANS-MONGEON
 DESIGNED BY: S. SCRIBNER
 DRAWN BY: L. DUQUETTE
 CHECKED BY: S. SCRIBNER
 SHEET 20 OF 41

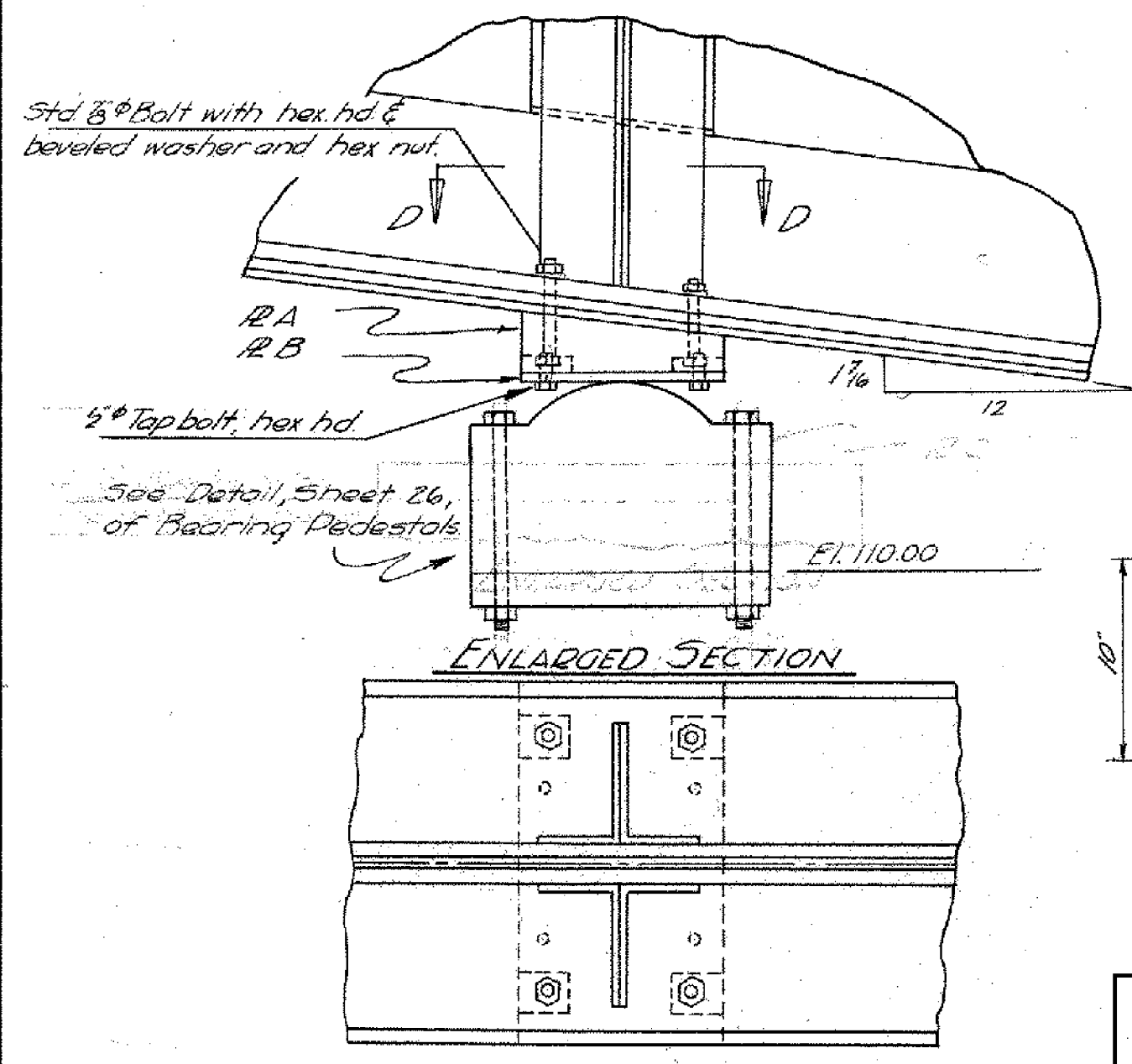
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
9	VT.				



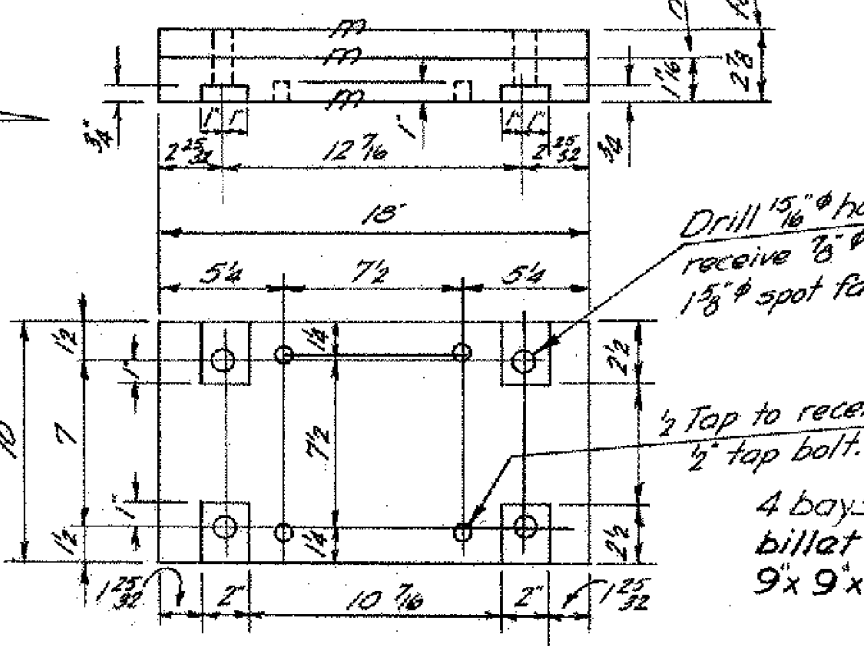
ELEVATION
SCALE 3/8" = 1'-0"

For details of Air Buffer & Anchor Bearing see Sheet 22 of 72

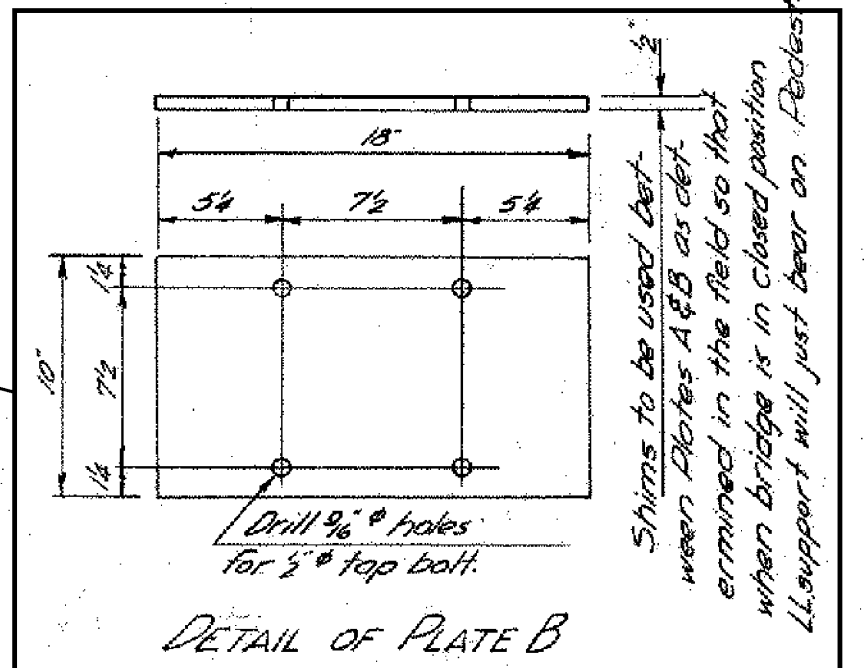
This end of counterweight rail may be used if required to provide additional counterweight. If not used may be cut back by fabricator.



ENLARGED SECTION



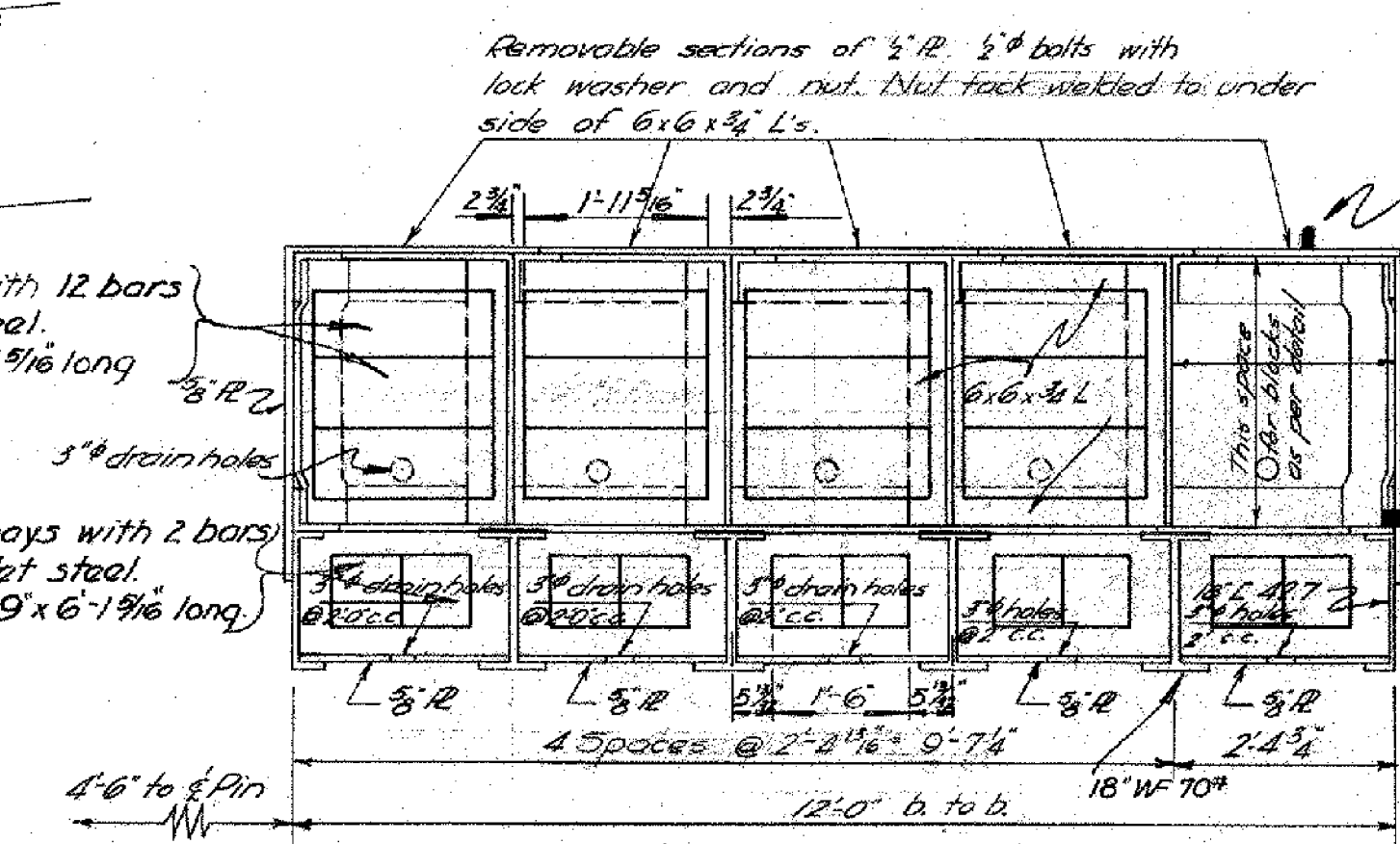
DETAIL OF PLATE A
TO BE CAST STEEL



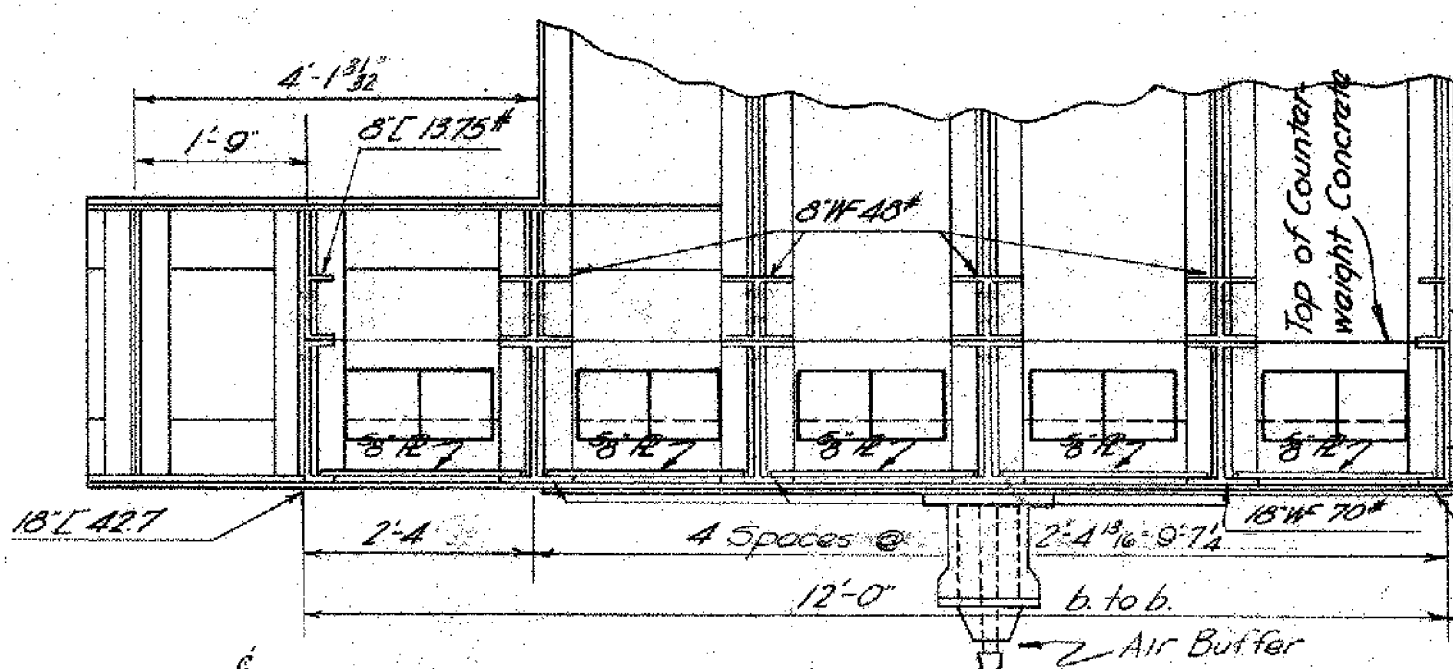
DETAIL OF PLATE B

SECTION D-D
THESE PLATES ARE TO BE REPLACED. REFER TO SHEETS 9 AND 11. PLATE THICKNESSES ARE 1/2" FOR SH9 AND 1/2" FOR SH10. NO HOLES DRILLED IN THESE PLATES

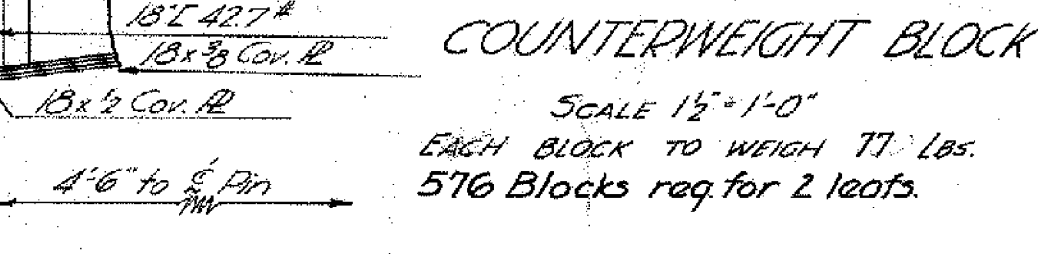
DETAIL OF LINE LOAD SUPPORT
SCALE 1/2" = 1'-0"



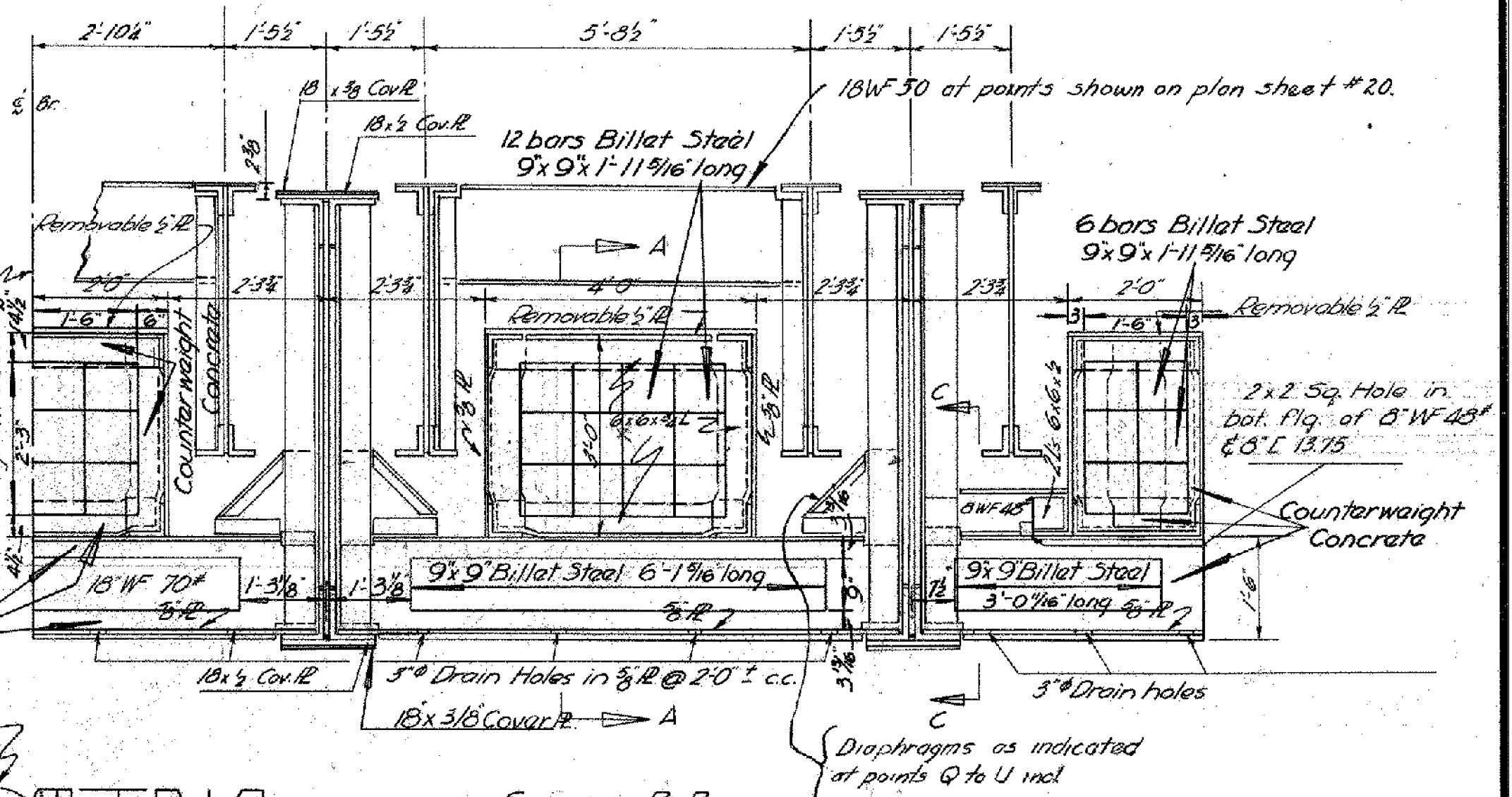
SECTION A-A
SCALE 3/4" = 1'-0"



SECTION C-C
SCALE 3/4" = 1'-0"



COUNTERWEIGHT BLOCK
SCALE 1 1/2" = 1'-0"



SECTION B-B
SCALE 3/4" = 1'-0"

NOTE: It is estimated the volume in Counterweight below the top of the 18 WF 70 Bms is 516.5 c.f., also volume in Counterweight boxes with end bay not included is 4197 c.f. The end bay in Counterweight boxes being left for blocks weighing 77 lbs. as per detail.

It is estimated the average wgt. per c.f. below the top of 18 WF 70 Bms will be 3441 lbs., also the average wgt. per c.f. in Cntrwgt. boxes with end bay not included will be 390 lbs. per c.f.

The counterweight concrete shall weigh 300 lbs. per c.f. and shall entirely surround the bars of Billet Steel, as shown.

The weight of 300 lbs. per c.f. in counterweight concrete shall be obtained by the addition of clean steel punchings, replacing aggregate, as necessary.

It shall be the contractor's responsibility to see that sufficient billets and steel punchings are added to balance each counterweight as called for.

The gross wgt. of the counterweight weight of steel right of the pin times their moment arms shall balance the moment left of the pin within 2%. The final balance shall be obtained by adding or subtracting counterweight blocks in the end bay of the counterweight. Letters are for reference only.

NOTES FOR COUNTERWEIGHT BOXES
Boxes to be shop assembled and matched, marked, unless shipped to job as complete boxes.
Inside surfaces which will be in contact with concrete are to be unpainted, and free from oil, grease, rust, etc.
While being filled with concrete all drain holes to be plugged with wooden discs, flush with the inside surface. These discs to be removed when concrete has set.
After concrete has set in upper boxes, all steel surfaces which will be in contact with the covers, and the inside of the covers, also all exposed concrete outside the boxes, shall receive two coats of an approved asphalt paint. Then the covers shall be placed while the paint is still wet.

See Steel Details

DETAILS OF
BASCULE GIRDER
GRAND ISLE - NO HERO

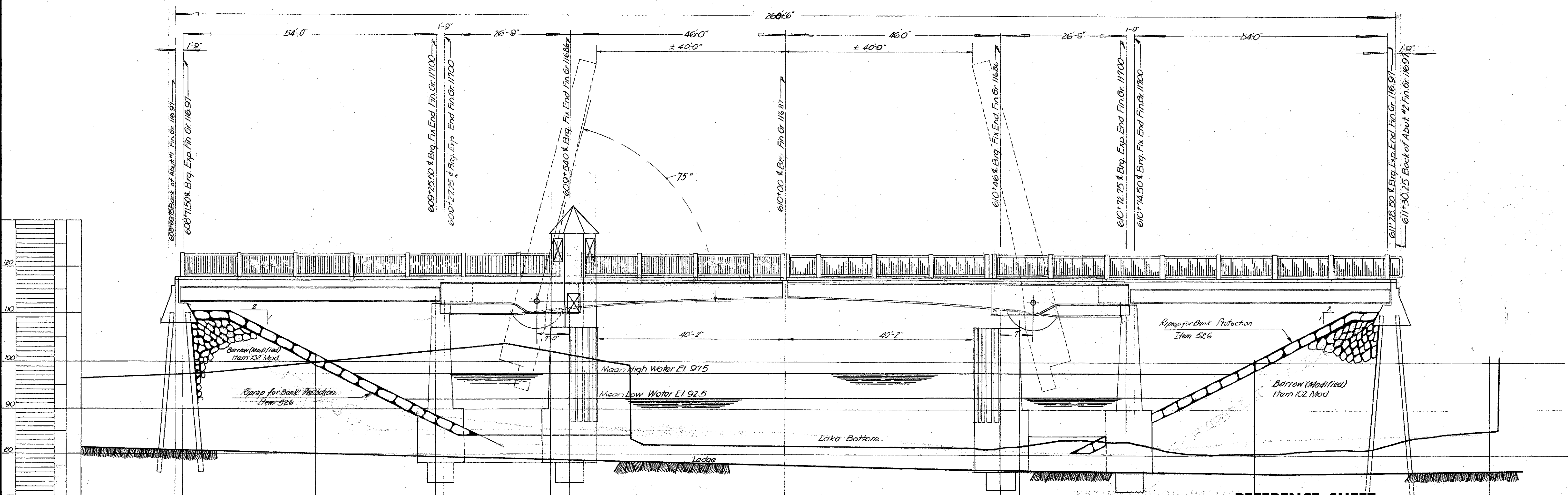
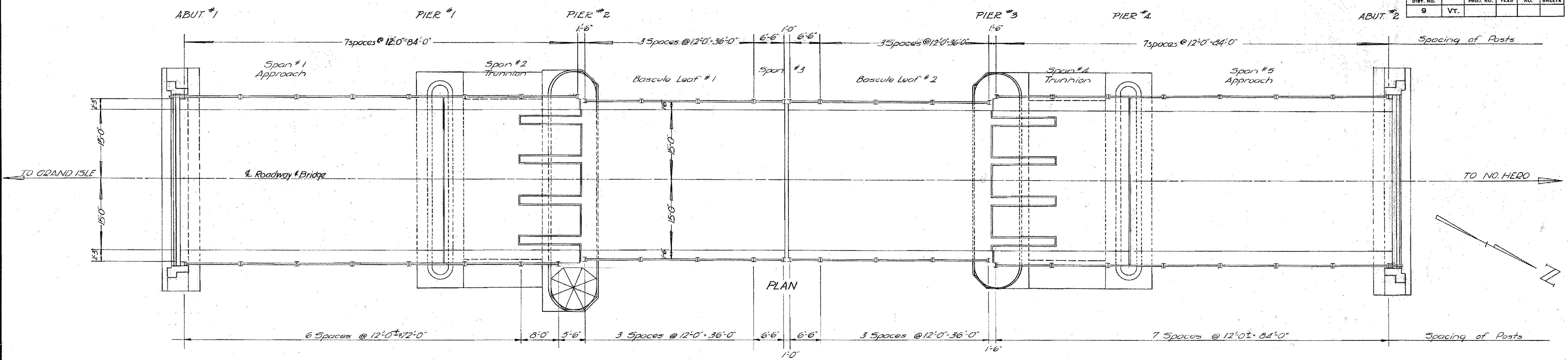
ESTIMATED QUANTITIES SHIM PLATE DETAIL

Item	Qty
Steel Superstructure	1/2
5" Open Steel Grid Floor	1/2
2" Swk Steel Grid Floor	1/2
Concrete Class A	1/2
Concrete Class B (Counterweight)	1/2
Machinery (Air Buffer)	1/2
Steel Punchings	1/2
9x9 Billet Steel	1/2

PROJECT NAME:	NORTH HERO-GRANDE ISLE	PLOT DATE:	18-OCT-2007
PROJECT NUMBER:	BHF 028-(K2I)	DRAWN BY:	L. DUQUETTE
FILE NAME:	structure\s92b284cleandsca	CHECKED BY:	S. SCRIBNER
PROJECT LEADER:	M. EVANS-MONGEON	SHEET	21 OF 41
DESIGNED BY:	S. SCRIBNER		

June 1, 1950 - Revised in accordance with B.P.R. letter of May 24, 1950

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
9	VT.				



ESTIMATED QUANTITIES
 June 1, 1950 - Revised in accordance with B.P.R. letter of May 24, 1950.

REFERENCE SHEET

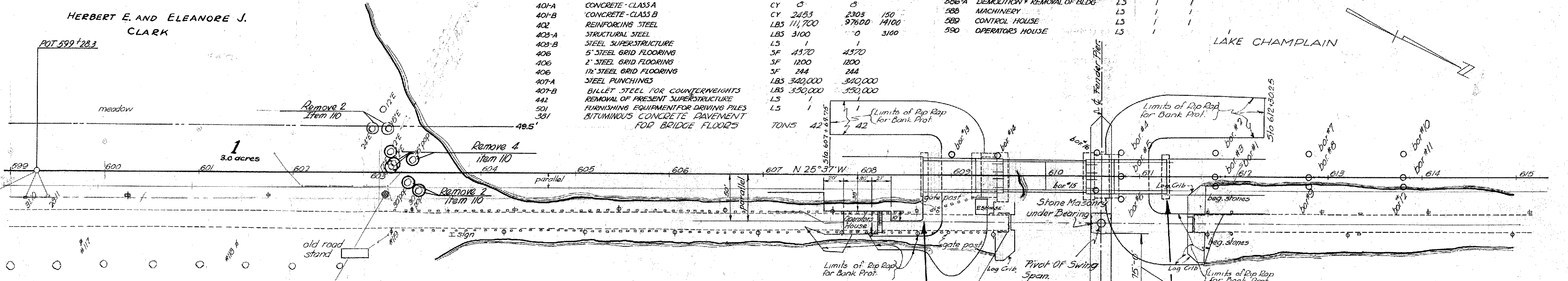
PROJECT NAME: NORTH HERO-GRANDE ISLE
 PROJECT NUMBER: BHF 028-1(21)
 FILE NAME: structure\s92b284cleandsca
 PROJECT LEADER: M. EVANS-MONGEON
 DESIGNED BY: S. SCRIBNER
 PLOT DATE: 18-OCT-2007
 DRAWN BY: L. DUQUETTE
 CHECKED BY: S. SCRIBNER
 SHEET 22 OF 41

GRAND ISLE
 BASCU

HERBERT E. AND ELEANORE J. CLARK

ITEM NO.	DESCRIPTION	TOT	60K	NON-60K	ITEM NO.	DESCRIPTION	TOT	60K	NON-60K
102-MOD	BORROW (MODIFIED)	CY 7000	7000		504	STEEL PILING	LF 1050		
103-A	TRENCH EXCAVATION OF EARTH	CY 163	163		504-1	CUT OFF FOR STEEL PILING	LF 84		
106	CHANNEL EXCAVATION	CY 4954	4954	100	512-MOD	STRUCTURAL TIMBER (MODIFIED)	MBM 16		
107	STRUCTURE EXCAVATION	CY 571			526	RIPRAP FOR BANK PROTECTION	CY 1502	1502	
109	MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS	LS 1			577	ELECTRICAL EQUIPMENT	LS 1		
201-A	SUB-BASE OF GRAVEL (MEASURED IN PLACE)	CY 100	0	100	586-A	DEMOLITION & REMOVAL OF BLDG	LS 1		
401-A	CONCRETE - CLASS A	CY 0	0		588	MACHINERY	LS 1		
401-B	CONCRETE - CLASS B	CY 2453	2303	150	589	CONTROL HOUSE	LS 1		
402	REINFORCING STEEL	LBS 11,700	9760	1940	590	OPERATORS HOUSE	LS 1		
403-A	STRUCTURAL STEEL	LBS 3100	0	3100					
403-B	STEEL SUPERSTRUCTURE	LS 1							
406	5" STEEL GRID FLOORING	SF 4370	4370						
406	2" STEEL GRID FLOORING	SF 1200	1200						
406	1 1/2" STEEL GRID FLOORING	SF 244	244						
407-A	STEEL PUNCHINGS	LBS 340,000	340,000						
407-B	BILLET STEEL FOR COUNTERWEIGHTS	LBS 350,000	350,000						
442	REMOVAL OF PRESENT SUPERSTRUCTURE	LS 1							
501	FURNISHING EQUIPMENT FOR DRIVING PILES	LS 1							
501	BITUMINOUS CONCRETE PAVEMENT FOR BRIDGE FLOORS	TONS 42	42						

DIST. NO.	SCALE	PROJ. NO.	YEAR	BY	DATE
9	V.T.				

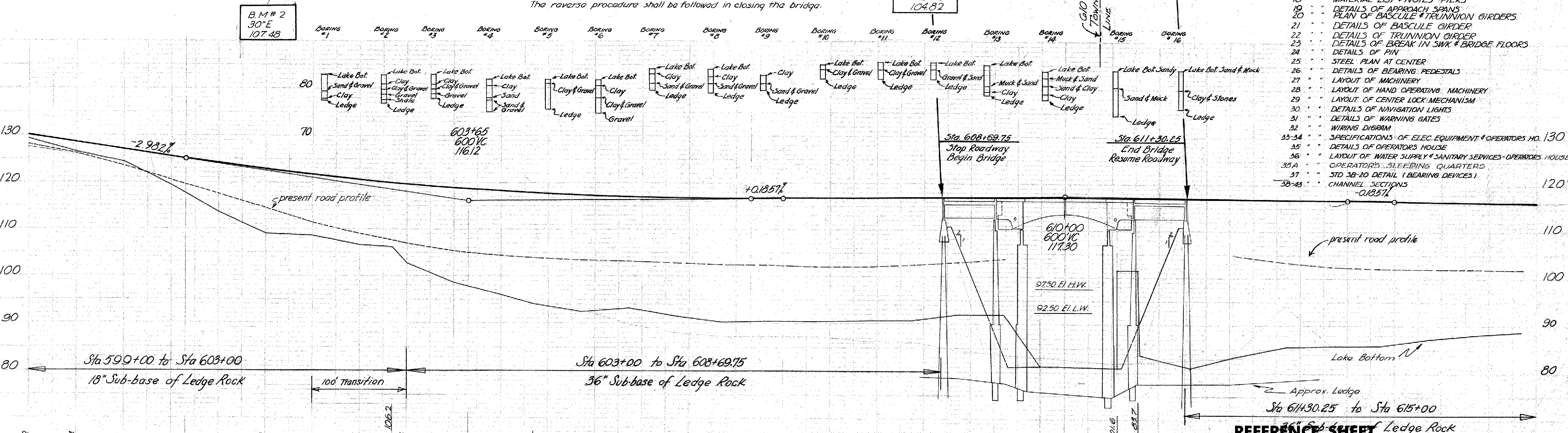


GENERAL OPERATING PROCEDURE
 The operation shall be controlled from the control house on the right of Pier #2 and shall be interlocked for the following procedure in raising.
 The flashing red lights on all posts shall go together with the warning bells. A time interval of 45 sec. shall elapse before the gates start to lower. The flashing red lights on gate arms shall go on when gate starts to lower. A time interval of 30 sec. shall elapse from start of lowering of gate to start of the movement to with draw center lock pins. After the center lock shear pins are with drawn the bascule spans are raised.
 The reverse procedure shall be followed in closing the bridge.

LAKE CHAMPLAIN

This portion of fender pier to be removed to lake bottom before any other major work is started to allow for laying of submarine cables by the Telephone & Utility Company.

SH. NO.	LIST OF SHEETS (BRIDGE ONLY)
12	OF 72 GENERAL PLAN & PROFILE
13	PLAN & ELEVATION OF BRIDGE
14	DETAILS OF ABUT #1 & ABUT #2
15	PLAN & ELEVATION OF PIERS
16	SECTION & ELEVATION OF PIERS
17	CONTROL HOUSE & LADDERS
18	MATERIAL LIST & NOTES - PIERS
19	DETAILS OF APPROACH SPANS
20	PLAN OF BASCULE & TRUNNION GIRDERS
21	DETAILS OF BASCULE GIRDER
22	DETAILS OF TRUNNION GIRDER
23	DETAILS OF BREAK IN SWK & BRIDGE FLOORS
24	DETAILS OF PIN
25	STEEL PLAN AT CENTER
26	DETAILS OF BEARING PEDESTALS
27	LAYOUT OF MACHINERY
28	LAYOUT OF HAND OPERATING MACHINERY
29	LAYOUT OF CENTER LOCK MECHANISM
30	DETAILS OF NAVIGATION LIGHTS
31	DETAILS OF WARNING GATES
32	WIRING DIAGRAM
33-34	SPECIFICATIONS OF ELEC. EQUIPMENT & OPERATORS HO.
35	DETAILS OF OPERATORS HOUSE
36	LAYOUT OF WATER SUPPLY & SANITARY SERVICES - OPERATORS HOUSE
35A	OPERATOR'S SLEEPING QUARTERS
37	STD 38-20 DETAIL (BEARING DEVICES)
38-43	CHANNEL SECTIONS

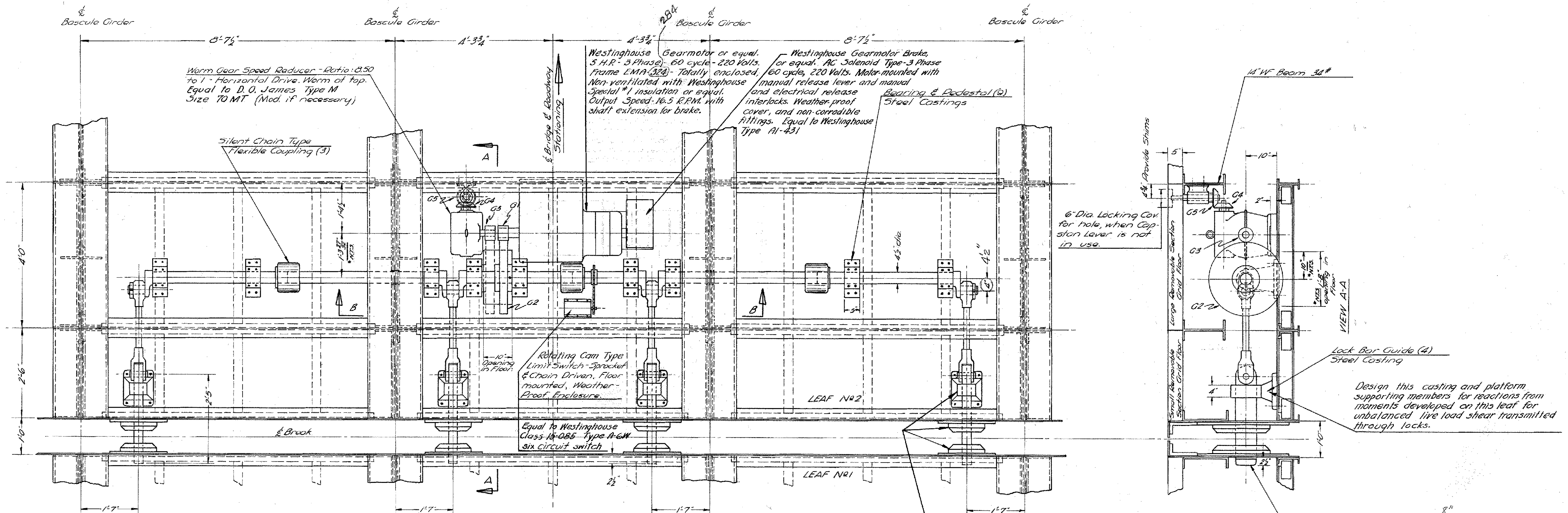


REFERENCE SHEET

PROJECT NAME: NORTH HERO-GRANDE ISLE
 PROJECT NUMBER: BHF 028-(K2I)
 FILE NAME: structure\s92b284cleandsca
 PLOT DATE: 18-OCT-2007
 PROJECT LEADER: M. EVANS-MONGEON
 DRAWN BY: L. DUQUETTE
 DESIGNED BY: S. SCRIBNER
 CHECKED BY: S. SCRIBNER
 SHEET 24 OF 41

B.M. # 2 S.P. 30" Elm 22' H. Sta. 602+97 El. 107.48
 U.S.G.S. PBM on launch 60' H. Sta. 609+60 El. 105.00 = 104.82

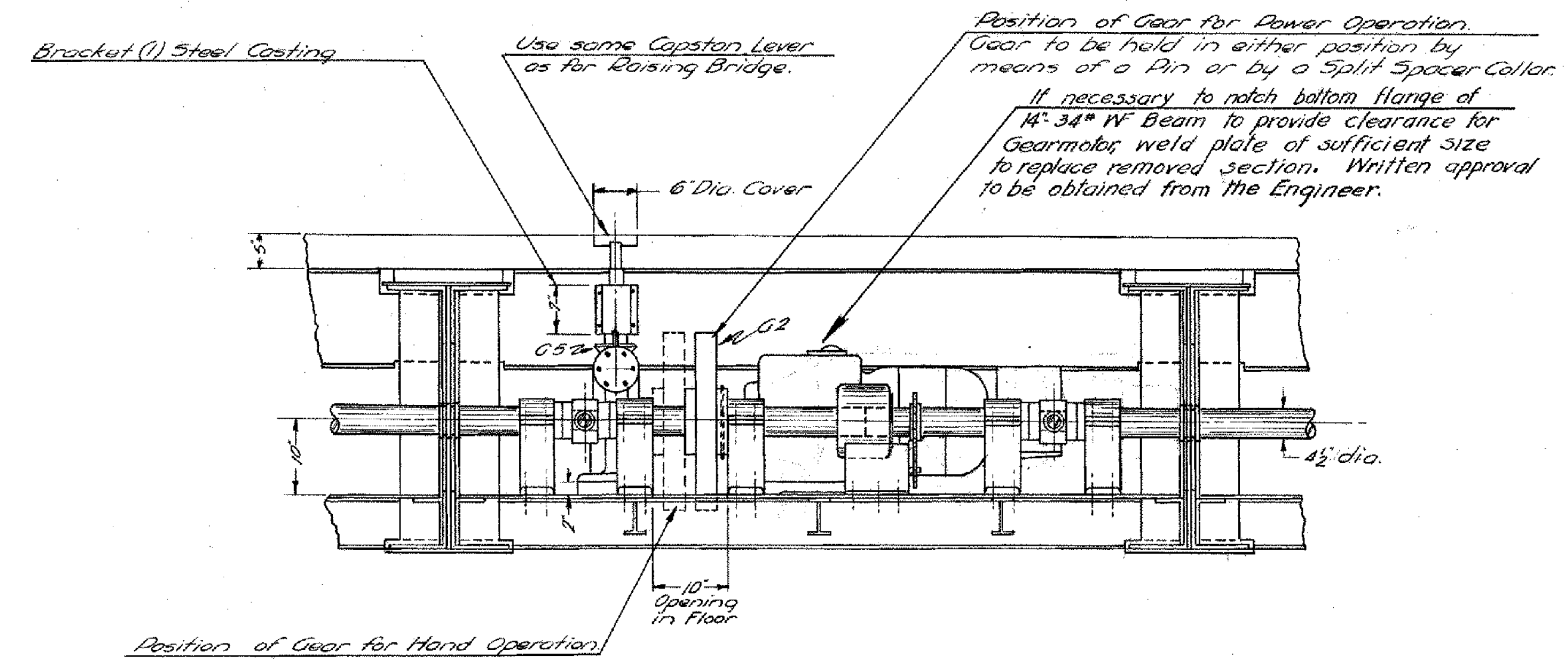
June 1, 1950 - Revised in accordance with B.P.R. letter of May 24, 1950.



6" Dia. Locking Cap for hole, when Capstan Lever is not in use.

Design this casting and platform supporting members for reactions from moments developed on this leaf for unbalanced live load shear transmitted through locks.

See Sheet 25 of 72 for 3"x(7") Lock Bar.



VIEW B-B

SEE STEEL & MACHINERY DETAILS

Provide bearing gibs with lubrication grooves for lubrication of Lock Bars in Lock Bar Guides, Lock Bar Castings and Receiving Castings.

-NOTES-

For Details & Dimensions not shown see Steel Plan at Center - Detail of Shear Lock & Guides. Sheet #25
 Fabricator shall complete the detail Design of Shafting, Crankshafts, Connecting Rods, Clevises, Brackets, Gearing, Bearings, Pedestals, Pins, etc., to support the loads transmitted.
 Fabricator to design & provide Sheet Metal Covers over all machinery except that which is totally enclosed. This is for protection of the machinery against rain, etc. when the Leafs are in the lowered position. Sheet Metal Covers may be tack welded to under side of Grid Floor.
 Machinery shown to be installed on Leaf No 2. Receiving Castings are to be installed on Leaf No 1.
 Crankshafts, Lock Bars, Clevises, & Pins to be Steel Forgings.
 Lubrication Fittings to be provided for adequate lubrication of Lock Bars in lock Bar Guides, Lock Bar Castings, and Receiving Castings.
 Movement of Lock Bars to be (3) (Total)
 Time of Motor Operation (3) Seconds 7.27 Secs.
 Time of Hand Operation (3) Min. 18 Secs. 2 Min. 42 Secs.
 * N.T.S. - Not to scale

GEAR DATA

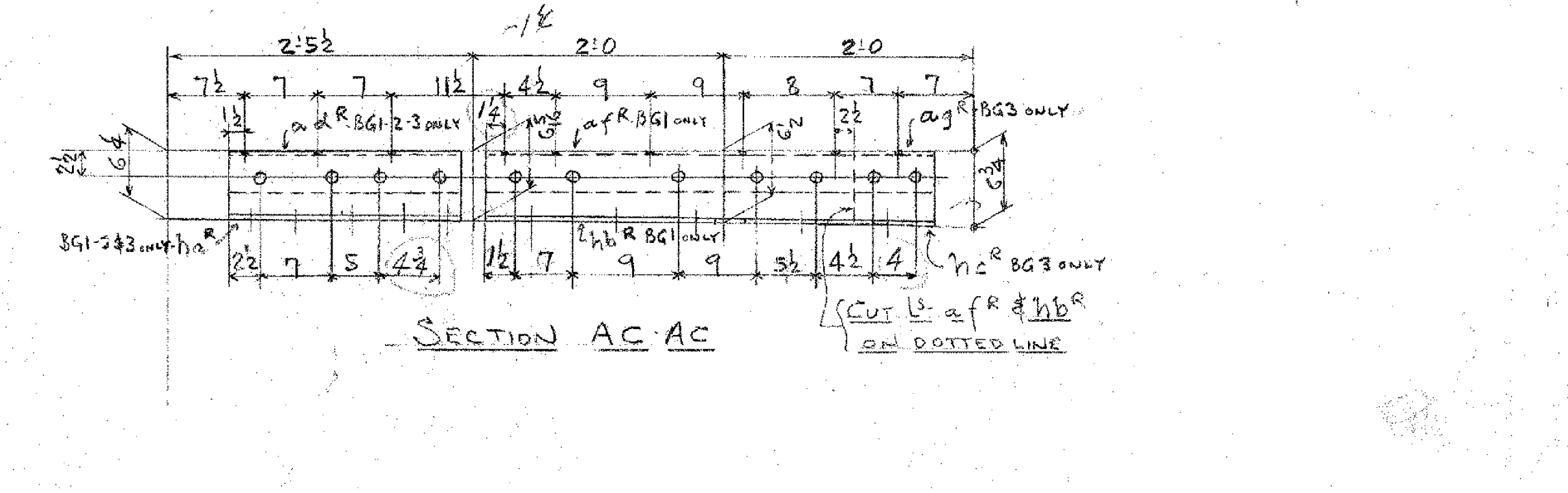
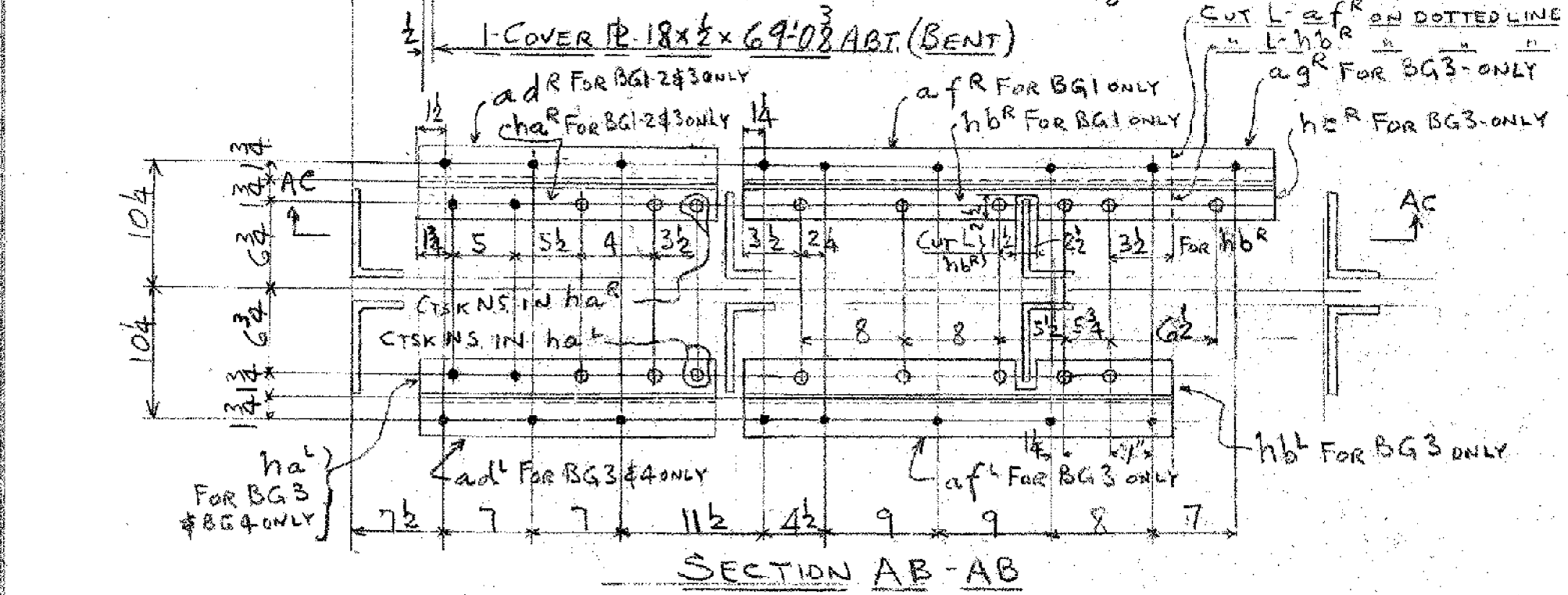
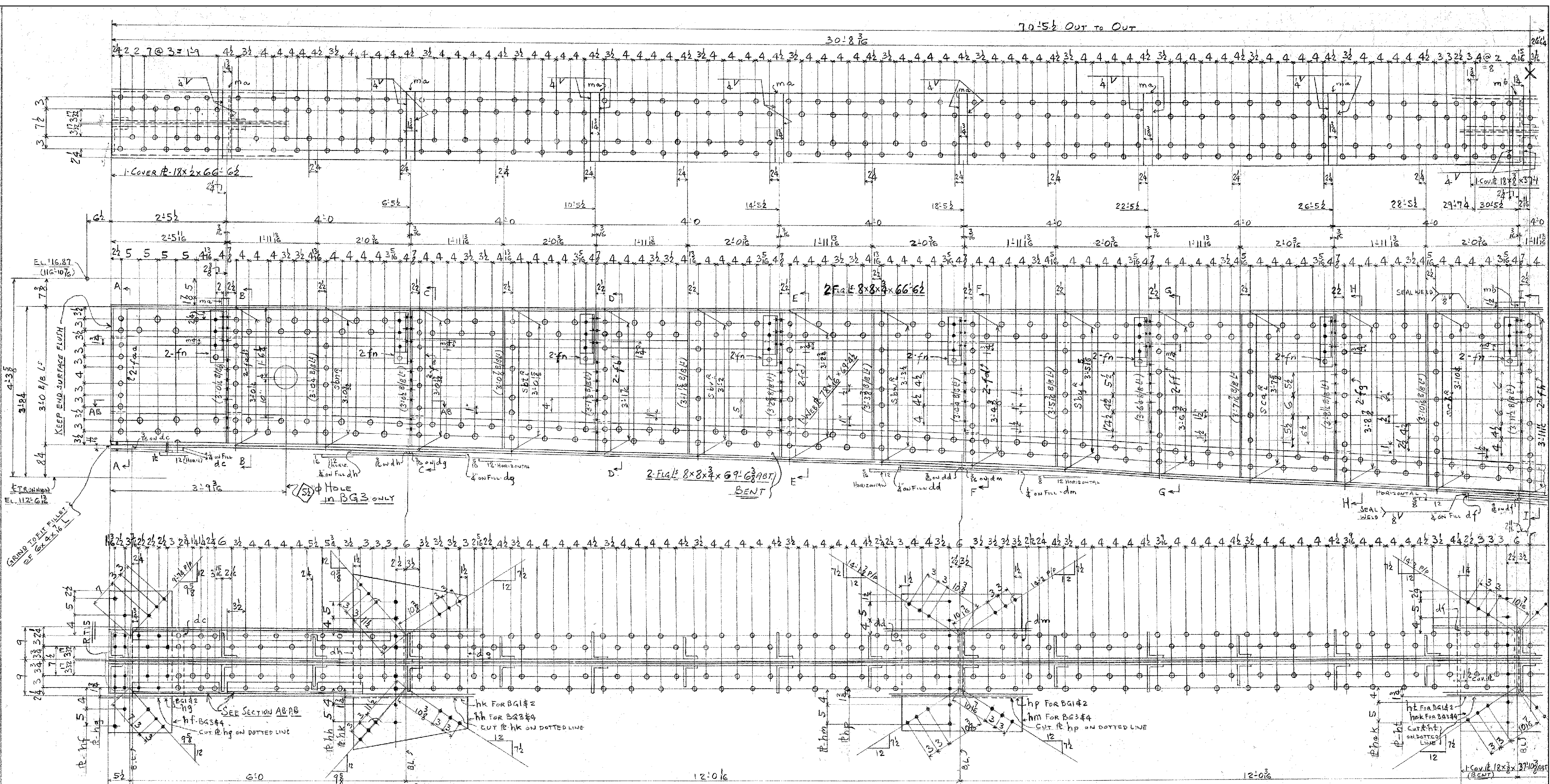
GEAR NR	D.P.	N ^o TEETH	PITCH DIA.	TOOTH SYSTEM	FACE WIDTH	N ^o PIECES
G1	3	147	4.333	20° Inv	3 1/2"	1
G2	3	147	4.333	20° Inv	3"	1
G3	3	147	4.333	20° Inv	3 1/2"	1
G4	3	15	5.000	20° Inv	2"	1
G5	3	15	5.000	20° Inv	2"	1

GRAND ISLE - NO. HERO
 LAYOUT OF CENTER SHEAR LOCK
 MECHANISM
 Scale 3/4" = 1'-0"

REFERENCE SHEET

PROJECT NAME: NORTH HERO-GRANDE ISLE
 PROJECT NUMBER: BHF 028-(K2I)
 FILE NAME: structure\s92b284cleandsca PLOT DATE: 18-OCT-2007
 PROJECT LEADER: M. EVANS-MONGEON DRAWN BY: L. DUQUETTE
 DESIGNED BY: S. SCRIBNER CHECKED BY: S. SCRIBNER
 SHEET 25 OF 41

Machinery includes G1, G2, G3, G4, G5, Shafting, Connecting Rods, Bearings, Brg. Pedestals & Lock Bars, etc.
 Machinery - 1 L.S. (4300*)



LIFTING WEIGHT = 20 Ton

RIVETS - 3/4"
 HOLES - 1/8" UNLESS NOTED

RT = SUBPUNCH 1/4"
 TO 1/8" TO A

RE. DENOTES

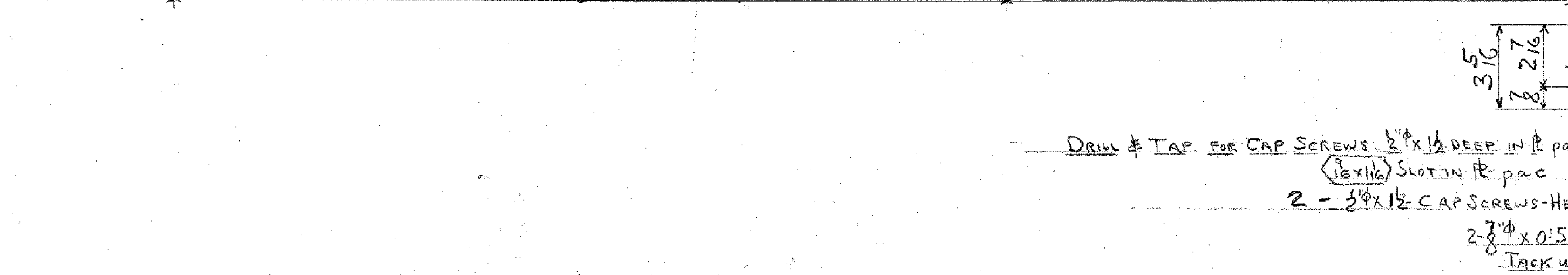
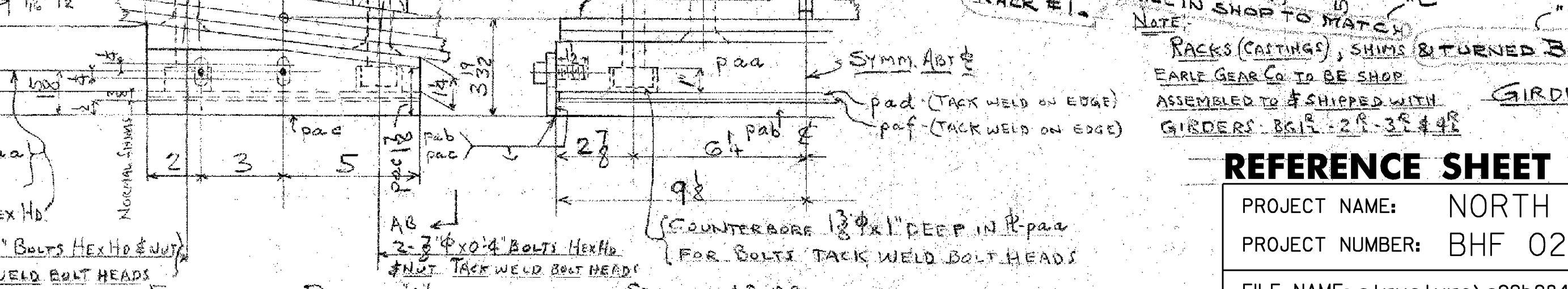
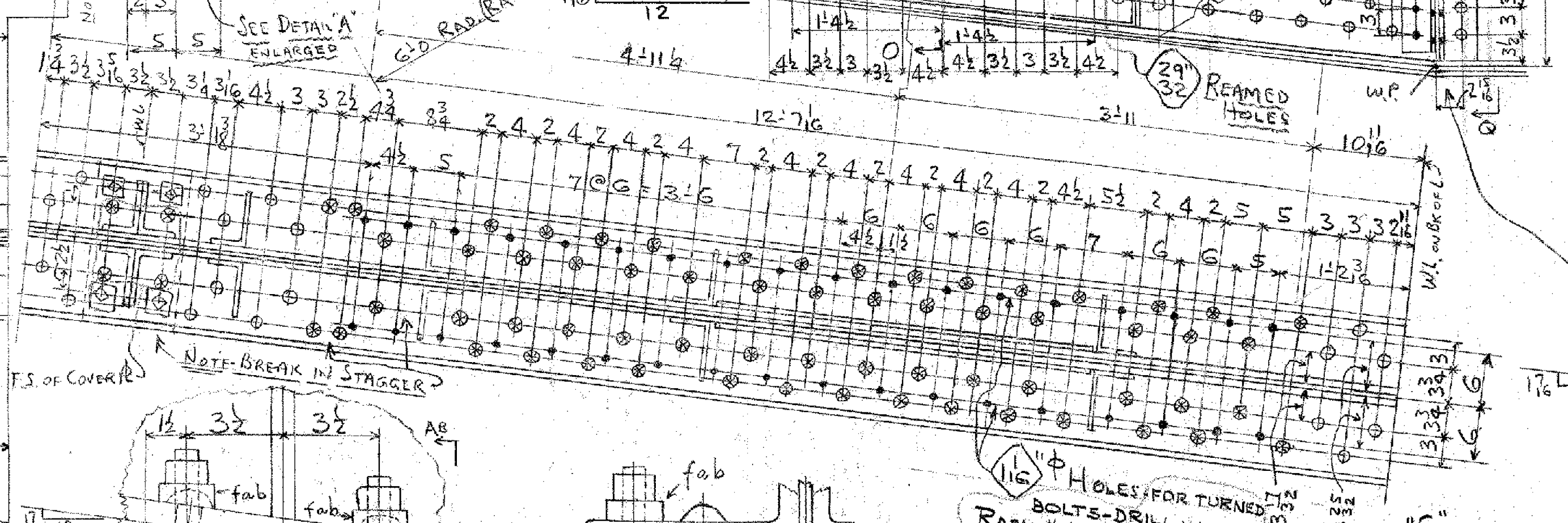
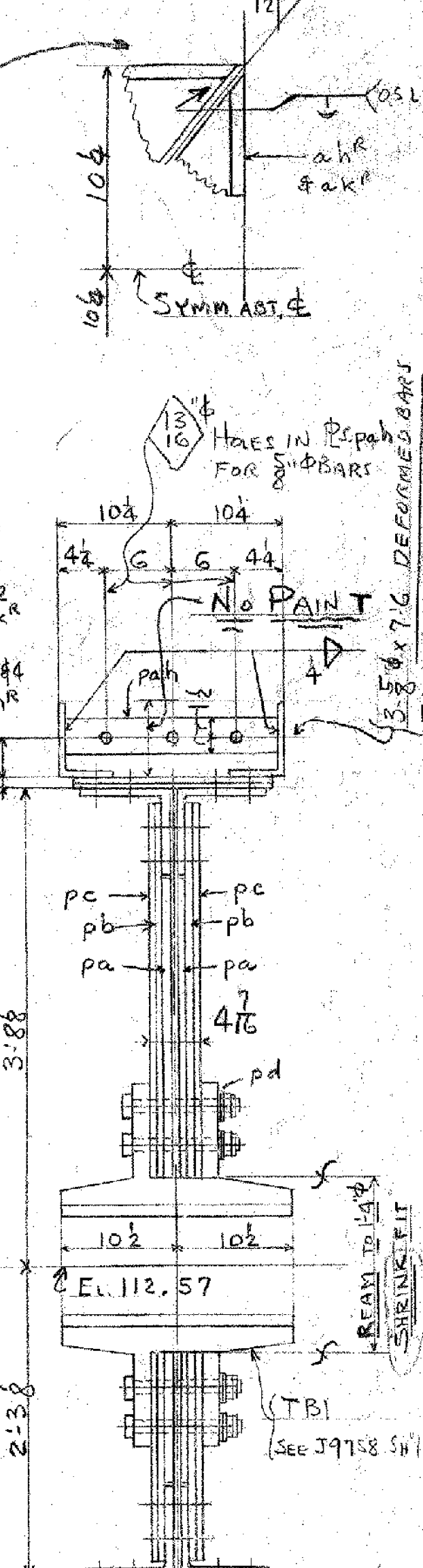
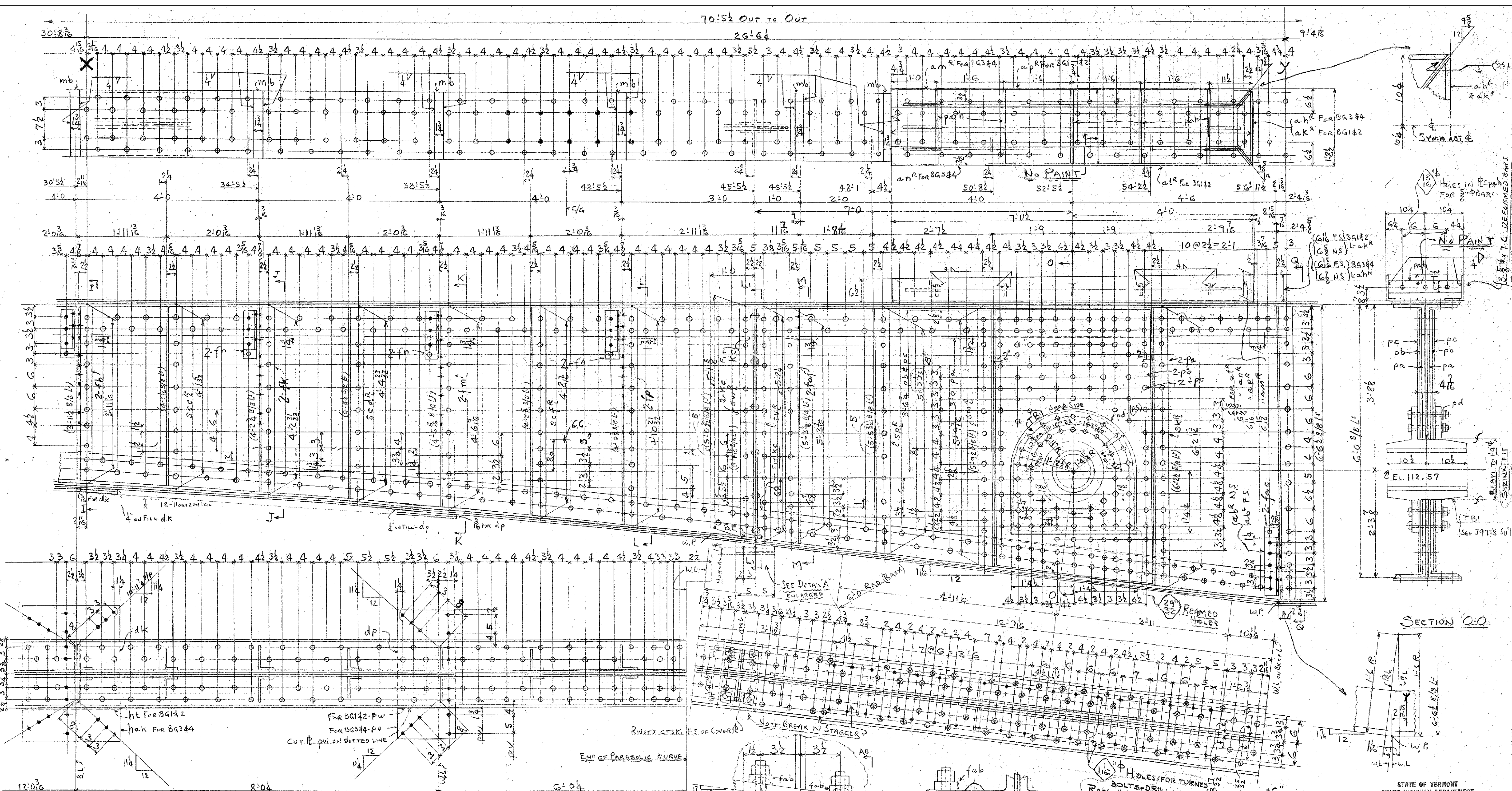
REFERENCE SHEET

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 PROJECT NUMBER: BHF 028-1(21)

FILE NAME: structure\s92b284cleandsca PLOT DATE: 18-OCT-2007
 PROJECT LEADER: M. EVANS-MONGEON DRAWN BY: L. DUQUETTE
 DESIGNED BY: S. SCRIBNER CHECKED BY: S. SCRIBNER
 SHEET 26 OF 41

STATE OF VERMONT
 STATE HIGHWAY DEPARTMENT
 FEDERAL PROJECT F188(9)
 GRAND ISLE-NORTH HERO BRIDGE
 COUNTY OF GRAND ISLE, VT.

AMERICAN BRIDGE COMPANY
 BRIDGE DIVISION

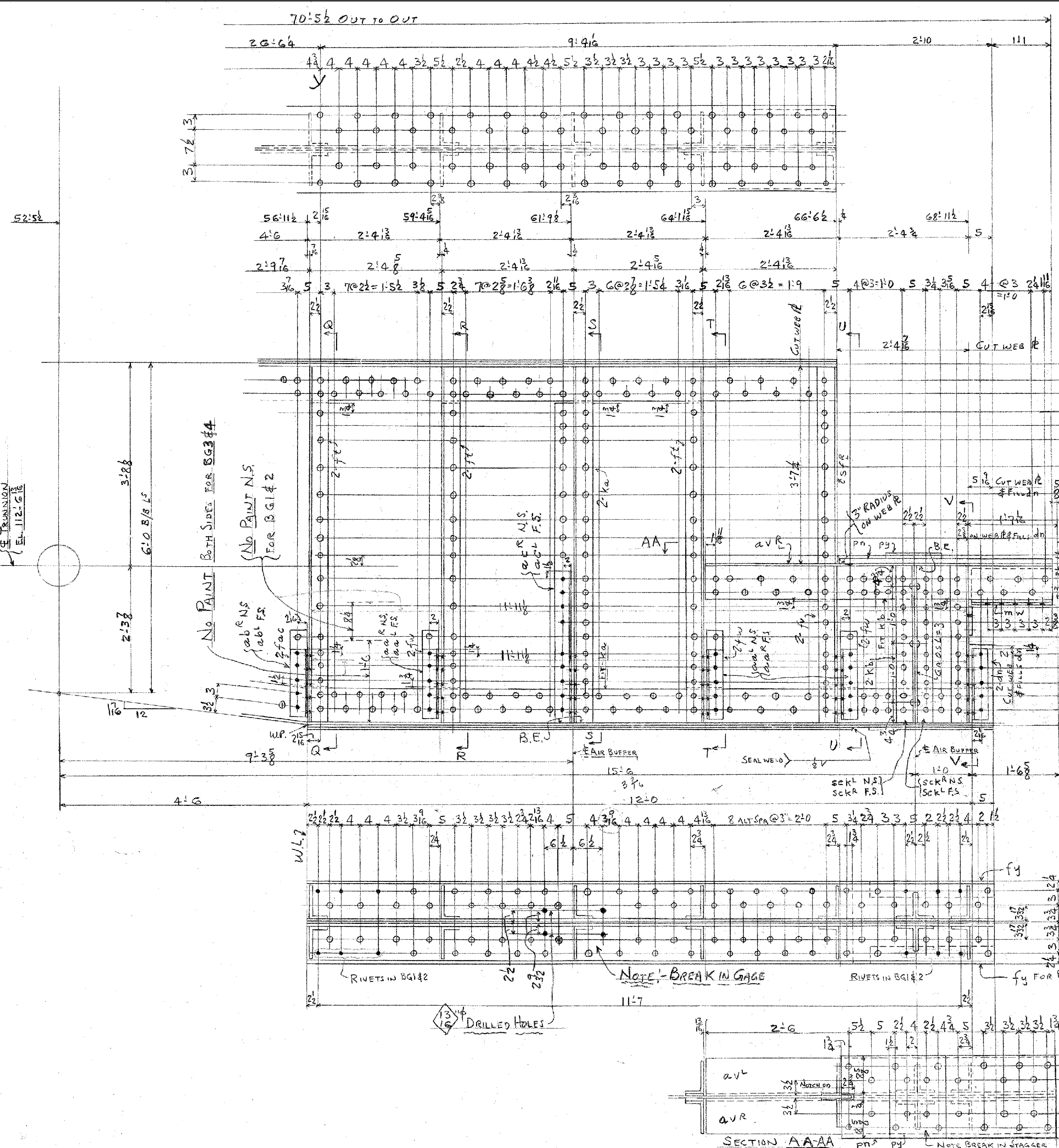


STATE OF VERMONT
 STATE HIGHWAY DEPARTMENT
 FEDERAL PROJECT F128(9)
 GRAND ISLE-NORTH HERO BRIDGE
 COUNTY OF GRAND ISLE, VT.
 AMERICAN BRIDGE COMPANY
 1000 WEST 10TH AVENUE
 DENVER, COLORADO 80202

REFERENCE SHEET

PROJECT NAME: NORTH HERO-GRANDE ISLE
 PROJECT NUMBER: BHF 028-1(21)

FILE NAME: structure\s92b284cleandsca PLOT DATE: 18-OCT-2007
 PROJECT LEADER: M. EVANS-MONGEON DRAWN BY: L. DUQUETTE
 DESIGNED BY: S. SCRIBNER CHECKED BY: S. SCRIBNER
 SHEET 27 OF 41



LINE	NO.	MATERIAL	LENGTH FEET	ASSEMBLY MARK	REMARKS	ORDERED	CALC. WEIGHT
1	1	ONE BASCULE GIRDER - BG1R					
2	1	ONE "					
3	1	ONE "					
4	1	ONE "					
5	1	ONE "					
6	1	ONE "					
7	1	ONE "					
8	1	ONE "					
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LINE	NO.	MATERIAL	LENGTH FEET	ASSEMBLY MARK	REMARKS	ORDERED	CALC. WEIGHT
1	1	ONE BASCULE GIRDER - BG1R					
2	1	ONE "					
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STATE OF VERMONT
 STATE HIGHWAY DEPARTMENT
 FEDERAL PROJECT #188(0)
 GRAND ISLE-NORTH HERO BRIDGE
 COUNTY OF GRAND ISLE, VT.

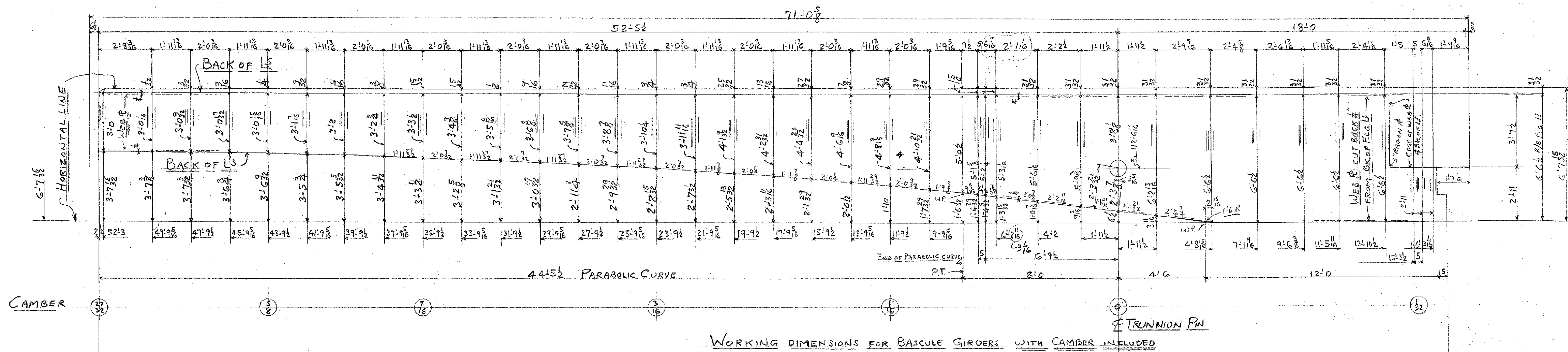
GIRDERS BG1R-BG2R-BG3R & BG4R

AMERICAN BRIDGE COMPANY
 UNITED STATES PATENT OFFICE

REFERENCE SHEET

PROJECT NAME: NORTH HERO-GRANDE ISLE
 PROJECT NUMBER: BHF 028-(K2I)

FILE NAME: structure\s92b284cleandsca PLOT DATE: 18-OCT-2007
 PROJECT LEADER: M. EVANS-MONGEON DRAWN BY: L. DUQUETTE
 DESIGNED BY: S. SCRIBNER CHECKED BY: S. SCRIBNER
 SHEET 28 OF 41



Stiffener	BG1R	BG2R	BG3R	BG4R
1	sbm ^L	sbm ^L	sbm ^L	sbm ^L
2	sbh ^R	sbh ^R	sbh ^R	sbh ^R
3	sbm ^L	sbm ^L	sbm ^L	sbm ^L
4	sbgr	sbgr	sbgr	sbgr
5	sbt ^L	sbt ^L	sbt ^L	sbt ^L
6	scm ^R	scm ^R	scm ^R	scm ^R
7	sbw ^L	sbw ^L	sbw ^L	sbw ^L
8	scap ^R	scap ^R	scap ^R	scap ^R
9	sbw ^L	sbw ^L	sbw ^L	sbw ^L
10	sbbr	sbbr	sbbr	sbbr
11	sbgr	sbgr	sbgr	sbgr
12	scm ^R	scm ^R	scm ^R	scm ^R
13	scat	scat	scat	scat
14	scak ^R	scak ^R	scak ^R	scak ^R
15	scbl	scbl	scbl	scbl
16	sbaf	sbaf	sbaf	sbaf
17	sccl	sccl	sccl	sccl
18	scak ^R	scak ^R	scak ^R	scak ^R
19	scdl	scdl	scdl	scdl
20	scay ^R	scay ^R	scay ^R	scay ^R
21	scfl	scfl	scfl	scfl
22	scagr	scagr	scagr	scagr
23	sw ^L	sw ^L	sw ^L	sw ^L
24	sv ^L	sv ^L	sv ^L	sv ^L
25	st ^L	st ^L	st ^L	st ^L
26	spl	spl	spl	spl
27	sm ^L	sm ^L	sm ^L	sm ^L
28	sk ^L	sk ^L	sk ^L	sk ^L
29	sh ^L	sh ^L	sh ^L	sh ^L
30	sh ^R	sh ^R	sh ^R	sh ^R
31	sch ^R	sch ^R	sch ^R	sch ^R
32	sh ^L	sh ^L	sh ^L	sh ^L
33	sd ^L	sd ^L	sd ^L	sd ^L
34	sc ^L	sc ^L	sc ^L	sc ^L
35	sc ^R	sc ^R	sc ^R	sc ^R
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41	sc ^R	sc ^R	sc ^R	sc ^R
42	sc ^L	sc ^L	sc ^L	sc ^L
43	sc ^R	sc ^R	sc ^R	sc ^R
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45	sc ^R	sc ^R	sc ^R	sc ^R
46	sc ^L	sc ^L	sc ^L	sc ^L
47	sc ^R	sc ^R	sc ^R	sc ^R
48	sc ^L	sc ^L	sc ^L	sc ^L
49	sc ^R	sc ^R	sc ^R	sc ^R
50	sc ^L	sc ^L	sc ^L	sc ^L
51	sc ^R	sc ^R	sc ^R	sc ^R
52	sc ^L	sc ^L	sc ^L	sc ^L
53	sc ^R	sc ^R	sc ^R	sc ^R
54	sc ^L	sc ^L	sc ^L	sc ^L
55	sc ^R	sc ^R	sc ^R	sc ^R
56	sc ^L	sc ^L	sc ^L	sc ^L
57	sc ^R	sc ^R	sc ^R	sc ^R
58	sc ^L	sc ^L	sc ^L	sc ^L
59	sc ^R	sc ^R	sc ^R	sc ^R
60	sc ^L	sc ^L	sc ^L	sc ^L
61	sc ^R	sc ^R	sc ^R	sc ^R
62	sc ^L	sc ^L	sc ^L	sc ^L
63	sc ^R	sc ^R	sc ^R	sc ^R
64	sc ^L	sc ^L	sc ^L	sc ^L
65	sc ^R	sc ^R	sc ^R	sc ^R
66	sc ^L	sc ^L	sc ^L	sc ^L
67	sc ^R	sc ^R	sc ^R	sc ^R
68	sc ^L	sc ^L	sc ^L	sc ^L
69	sc ^R	sc ^R	sc ^R	sc ^R
70	sc ^L	sc ^L	sc ^L	sc ^L
71	sc ^R	sc ^R	sc ^R	sc ^R
72	sc ^L	sc ^L	sc ^L	sc ^L
73	sc ^R	sc ^R	sc ^R	sc ^R
74	sc ^L	sc ^L	sc ^L	sc ^L
75	sc ^R	sc ^R	sc ^R	sc ^R
76	sc ^L	sc ^L	sc ^L	sc ^L
77	sc ^R	sc ^R	sc ^R	sc ^R
78	sc ^L	sc ^L	sc ^L	sc ^L
79	sc ^R	sc ^R	sc ^R	sc ^R
80	sc ^L	sc ^L	sc ^L	sc ^L
81	sc ^R	sc ^R	sc ^R	sc ^R
82	sc ^L	sc ^L	sc ^L	sc ^L
83	sc ^R	sc ^R	sc ^R	sc ^R
84	sc ^L	sc ^L	sc ^L	sc ^L
85	sc ^R	sc ^R	sc ^R	sc ^R
86	sc ^L	sc ^L	sc ^L	sc ^L
87	sc ^R	sc ^R	sc ^R	sc ^R
88	sc ^L	sc ^L	sc ^L	sc ^L
89	sc ^R	sc ^R	sc ^R	sc ^R
90	sc ^L	sc ^L	sc ^L	sc ^L
91	sc ^R	sc ^R	sc ^R	sc ^R
92	sc ^L	sc ^L	sc ^L	sc ^L
93	sc ^R	sc ^R	sc ^R	sc ^R
94	sc ^L	sc ^L	sc ^L	sc ^L
95	sc ^R	sc ^R	sc ^R	sc ^R
96	sc ^L	sc ^L	sc ^L	sc ^L
97	sc ^R	sc ^R	sc ^R	sc ^R
98	sc ^L	sc ^L	sc ^L	sc ^L
99	sc ^R	sc ^R	sc ^R	sc ^R
100	sc ^L	sc ^L	sc ^L	sc ^L

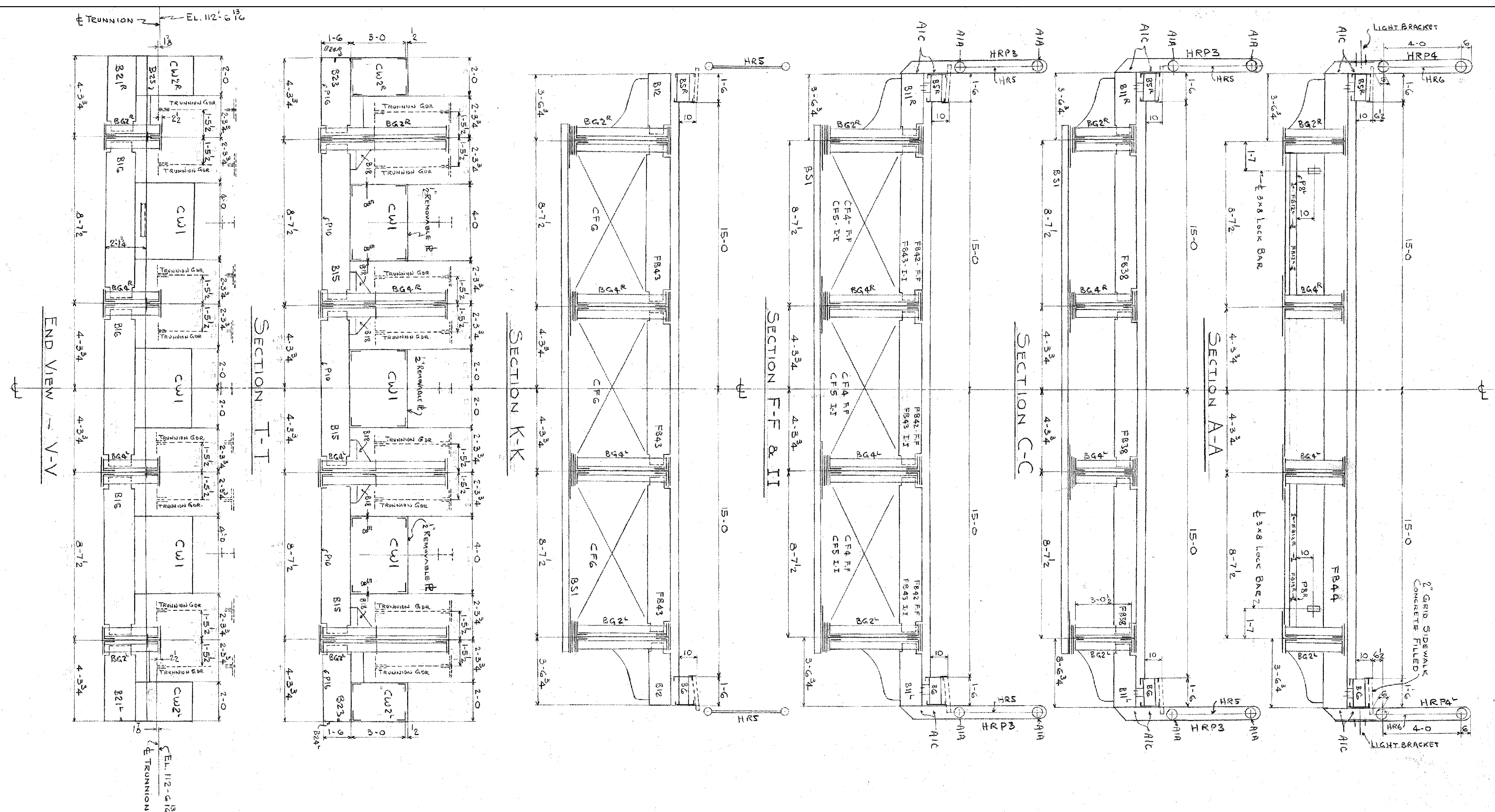
BOTTOM FLANGES OF GIRDERS SHOWING STIFFENERS

STATE OF VERMONT
 STATE HIGHWAY DEPARTMENT
 FEDERAL PROJECT #128(8)
 GRAND ISLE-NORTH HERO BRIDGE
 COUNTY OF GRAND ISLE, VT.

GIRDERS BG1R-BG2R-BG3R-BG4R

AMERICAN BRIDGE COMPANY
 UNITED STATES STEEL CORPORATION

REFERENCE SHEET	
PROJECT NAME:	NORTH HERO-GRANDE ISLE
PROJECT NUMBER:	BHF 028-(K2I)
FILE NAME:	structure\s92b284cleandsca
PROJECT LEADER:	M. EVANS-MONGEON
DESIGNED BY:	S. SCRIBNER
PLOT DATE:	18-OCT-2007
DRAWN BY:	L. DUQUETTE
CHECKED BY:	S. SCRIBNER
SHEET	30 OF 41



SPAN #3
SECTIONS LEAF #1 (DIV #1)

STATE OF VERMONT
STATE HIGHWAY DEPARTMENT
FEDERAL PROJECT F128(3)
GRAND ISLE-NORTH HERO BRIDGE
COUNTY OF GRAND ISLE, VT.

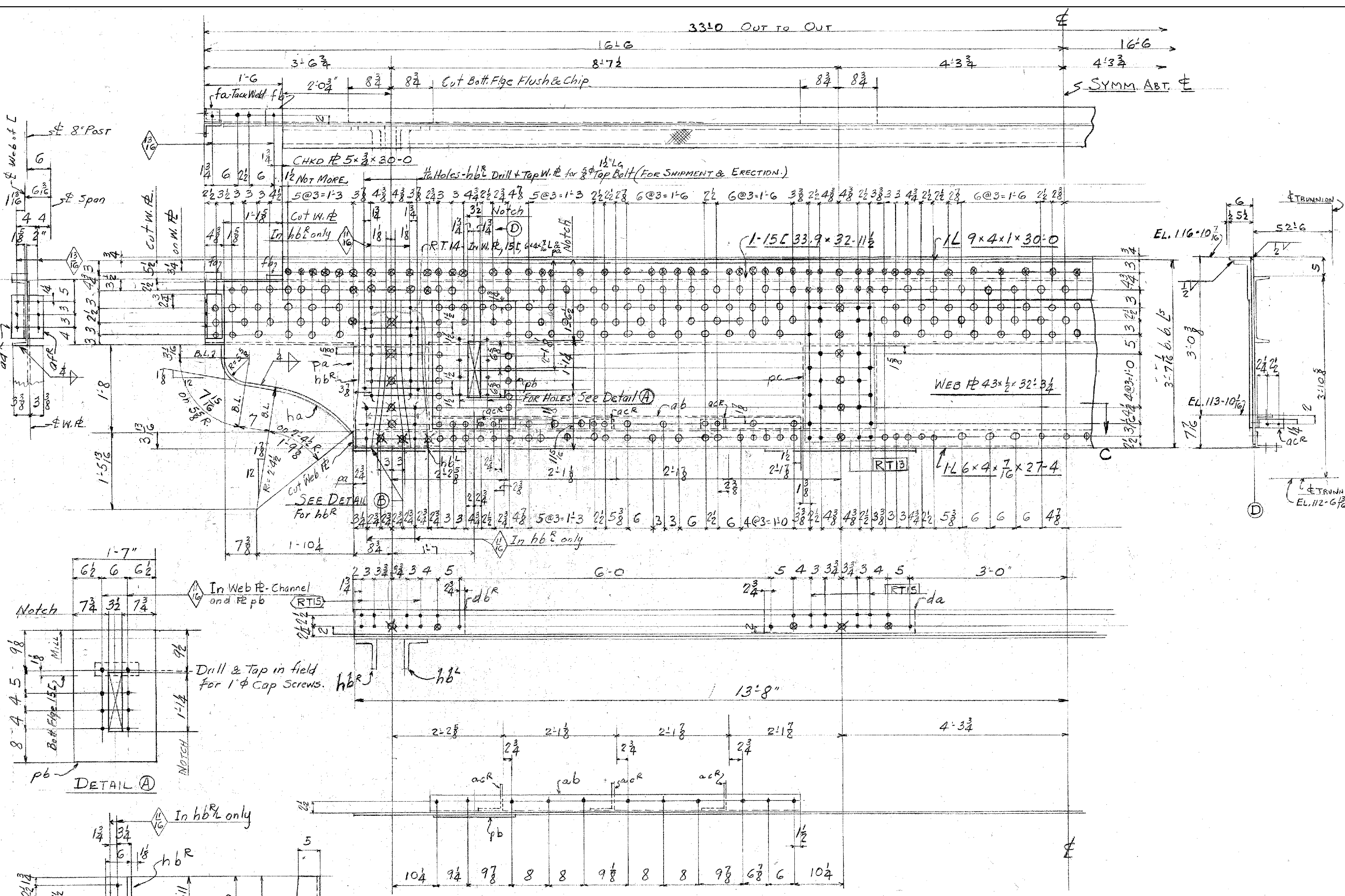
AMERICAN BRIDGE COMPANY
ENGINEERS AND ARCHITECTS

SEE SHEET FOR LOCATION OF SECTION
MARKS SHOWN THUS (A1A) INDICATE THE SKETCH WHICH THE TYPE OF CONNECTION IS FOLLOWS

REFERENCE SHEET

PROJECT NAME: NORTH HERO-GRANDE ISLE
PROJECT NUMBER: BHF 028-1(21)

FILE NAME: structure\s92b284cleandsc0 PLOT DATE: 18-OCT-2007
PROJECT LEADER: M. EVANS-MONGEON DRAWN BY: L. DUQUETTE
DESIGNED BY: S. SCRIBNER CHECKED BY: S. SCRIBNER
SHEET 31 OF 41



Div 1	QTY	MATERIAL	REMARKS	ORDERED		CALCULATED WEIGHT FOR ORDER
				FROM	ITEM	
ONE		ONE FLOOR BEAM FB44				
1	1	Web PL 43	2 32 3/4	32-5 1/2	1041	
2	1	CHKD PL 5	3/4 30 0	30-0	1058	
3	2	R	16 2 1/2 1 7/4 pa		S	
4	2	R	19 3/4 2 6 1/2 pb	M-I-E	S	
5	2	R	6 3/4 3 3 3/4 ha	30-0	1060	
6	2	Fill	3 1/2 0 3 1/2 fa		S	
7	2	Fill	3 1/2 0 3 1/2 fb		S	
8	1	L	15 @ 33.9 x 32 11 1/2	32-11 1/2	1005	
9	1	L	9 4 1 30 0	30-0	1008	
10	1	L	6 4 7/8 27 4		S	
11	4	L	6 6 1 2 10 1/2 hbr	Cut 8 x 16	S	
12	2	L	4 3 3/8 0 9 1/2 acR	40-0	1038	
13	2	L	4 3 3/8 0 9 1/2 acR	Cut 4 x 3 1/2	S	
14	2	L	4 3 3/8 7 2 acR	40-0	1038	
15	2	Fill	5 3/4 3 1 da		S	
16	2	Fill	5 3/4 2 3 db		S	
17	6	L	6 6 3/8 0 2 1/2 acL		S	
18	2	R	16 2 1/2 1 7/4 pc		S	
19	8	8	3/8 Top Bolts 0 1/2	For hbr	S	

FLOOR BEAM-FB44

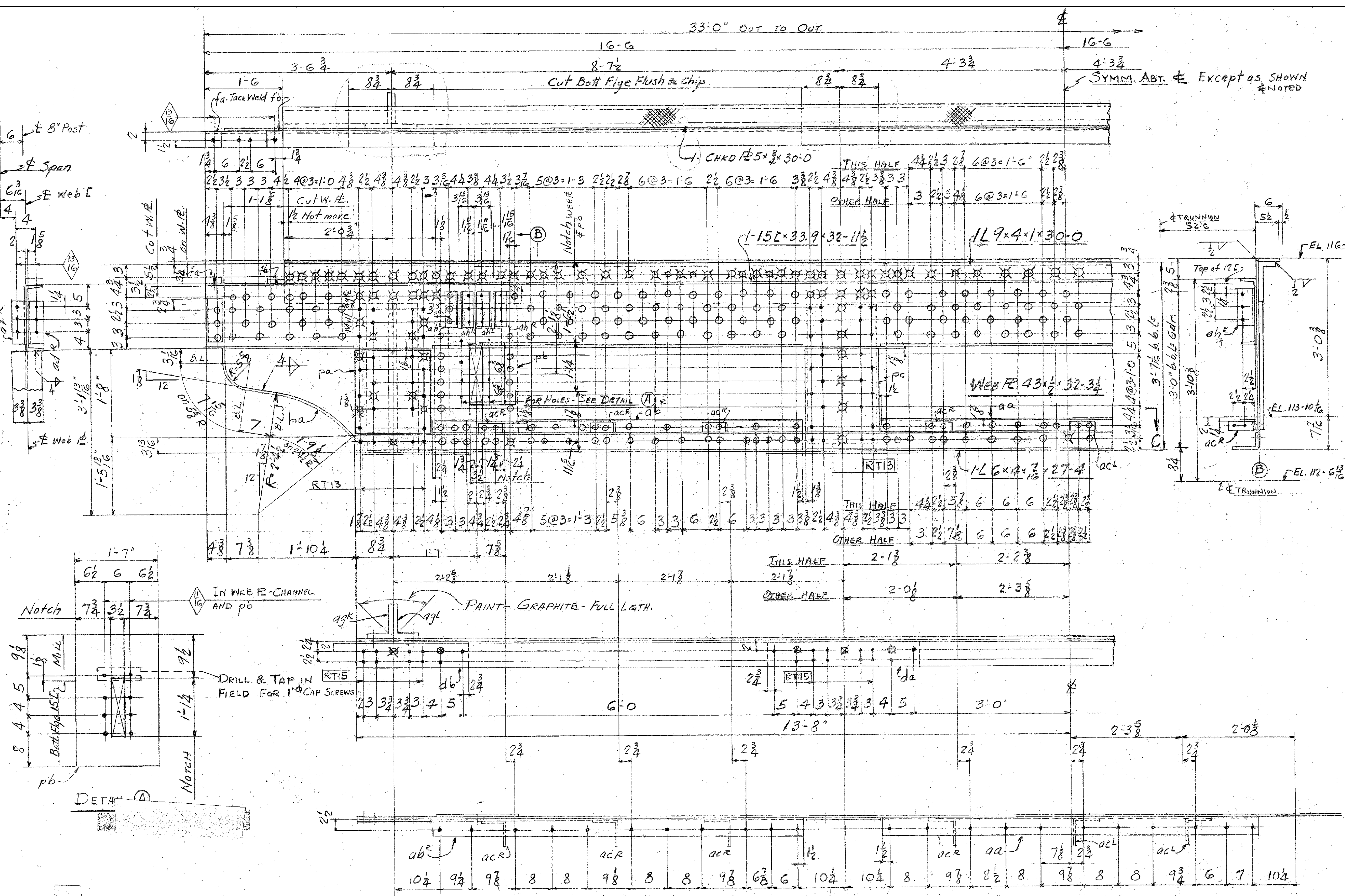
STATE OF VERMONT
STATE HIGHWAY DEPARTMENT
FEDERAL PROJECT F128(0)
GRAND ISLE-NORTH HERO BRIDGE
COUNTY OF GRAND ISLE, VT.

AMERICAN BRIDGE COMPANY

BASCULE SPAN STRUCTURAL DETAILS

PROJECT NAME: NORTH HERO-GRANDE ISLE
PROJECT NUMBER: BHF 028-(K2I)

FILE NAME: structure\s92b284cleandsca PLOT DATE: 18-OCT-2007
PROJECT LEADER: M. EVANS-MONGEON DRAWN BY: L. DUQUETTE
DESIGNED BY: S. SCRIBNER CHECKED BY: S. SCRIBNER
SHEET 33 OF 41



LINE	NO.	QTY	DESCRIPTION	REMARKS	ORDERED	DELIVERED
ONE	1		ONE FLOOR BEAM - FB 45			
2	1	2	WEB #43 2 32 3/4		32'-5 1/2"	1041
3	1	2	CHORD #5 2 30 0	Carriage Patt.	30'-0"	1058
4	1	2	L #4 1 30 0		30'-2"	1005
5	1	2	L #4 1 30 0		30'-2"	1008
6	1	2	L #4 3 7 2	aa	40'-0"	1038
7	1	2	L #4 3 7 2	ab		
8	1	2	L #4 3 7 2	ac		
9	1	2	L #4 3 7 2	ad		
10	1	2	L #4 3 7 2	ae		
11	1	2	L #4 3 7 2	af		
12	1	2	L #4 3 7 2	ag		
13	1	2	L #4 3 7 2	ah		
14	1	2	L #4 3 7 2	ai		
15	1	2	L #4 3 7 2	aj		
16	1	2	L #4 3 7 2	ak		
17	1	2	L #4 3 7 2	al		
18	1	2	L #4 3 7 2	am		
19	1	2	L #4 3 7 2	an		
20	1	2	L #4 3 7 2	ao		
21	1	2	L #4 3 7 2	ap		
22	1	2	L #4 3 7 2	aq		
23	1	2	L #4 3 7 2	ar		
24	1	2	L #4 3 7 2	as		
25	1	2	L #4 3 7 2	at		
26	1	2	L #4 3 7 2	au		
27	1	2	L #4 3 7 2	av		
28	1	2	L #4 3 7 2	aw		
29	1	2	L #4 3 7 2	ax		
30	1	2	L #4 3 7 2	ay		
31	1	2	L #4 3 7 2	az		
32	1	2	L #4 3 7 2	ba		
33	1	2	L #4 3 7 2	bb		
34	1	2	L #4 3 7 2	bc		
35	1	2	L #4 3 7 2	bd		
36	1	2	L #4 3 7 2	be		
37	1	2	L #4 3 7 2	bf		
38	1	2	L #4 3 7 2	bg		
39	1	2	L #4 3 7 2	bh		
40	1	2	L #4 3 7 2	bi		
41	1	2	L #4 3 7 2	bj		
42	1	2	L #4 3 7 2	bk		
43	1	2	L #4 3 7 2	bl		
44	1	2	L #4 3 7 2	bm		
45	1	2	L #4 3 7 2	bn		
46	1	2	L #4 3 7 2	bo		
47	1	2	L #4 3 7 2	bp		
48	1	2	L #4 3 7 2	bq		
49	1	2	L #4 3 7 2	br		
50	1	2	L #4 3 7 2	bs		
51	1	2	L #4 3 7 2	bt		
52	1	2	L #4 3 7 2	bu		
53	1	2	L #4 3 7 2	bv		
54	1	2	L #4 3 7 2	bw		
55	1	2	L #4 3 7 2	bx		
56	1	2	L #4 3 7 2	by		
57	1	2	L #4 3 7 2	bz		
58	1	2	L #4 3 7 2	ca		
59	1	2	L #4 3 7 2	cb		
60	1	2	L #4 3 7 2	cc		
61	1	2	L #4 3 7 2	cd		
62	1	2	L #4 3 7 2	ce		
63	1	2	L #4 3 7 2	cf		
64	1	2	L #4 3 7 2	cg		

FLOOR BEAM - FB 45

STATE OF VERMONT
STATE HIGHWAY DEPARTMENT
FEDERAL PROJECT F120(0)
GRAND ISLE-NORTH HERO BRIDGE
COUNTY OF GRAND ISLE, VT.

SECTION C-C
FB 45

RIVS
HOLES
R.T. - SUBP
REAMED TO

AMERICAN BRIDGE COMPANY

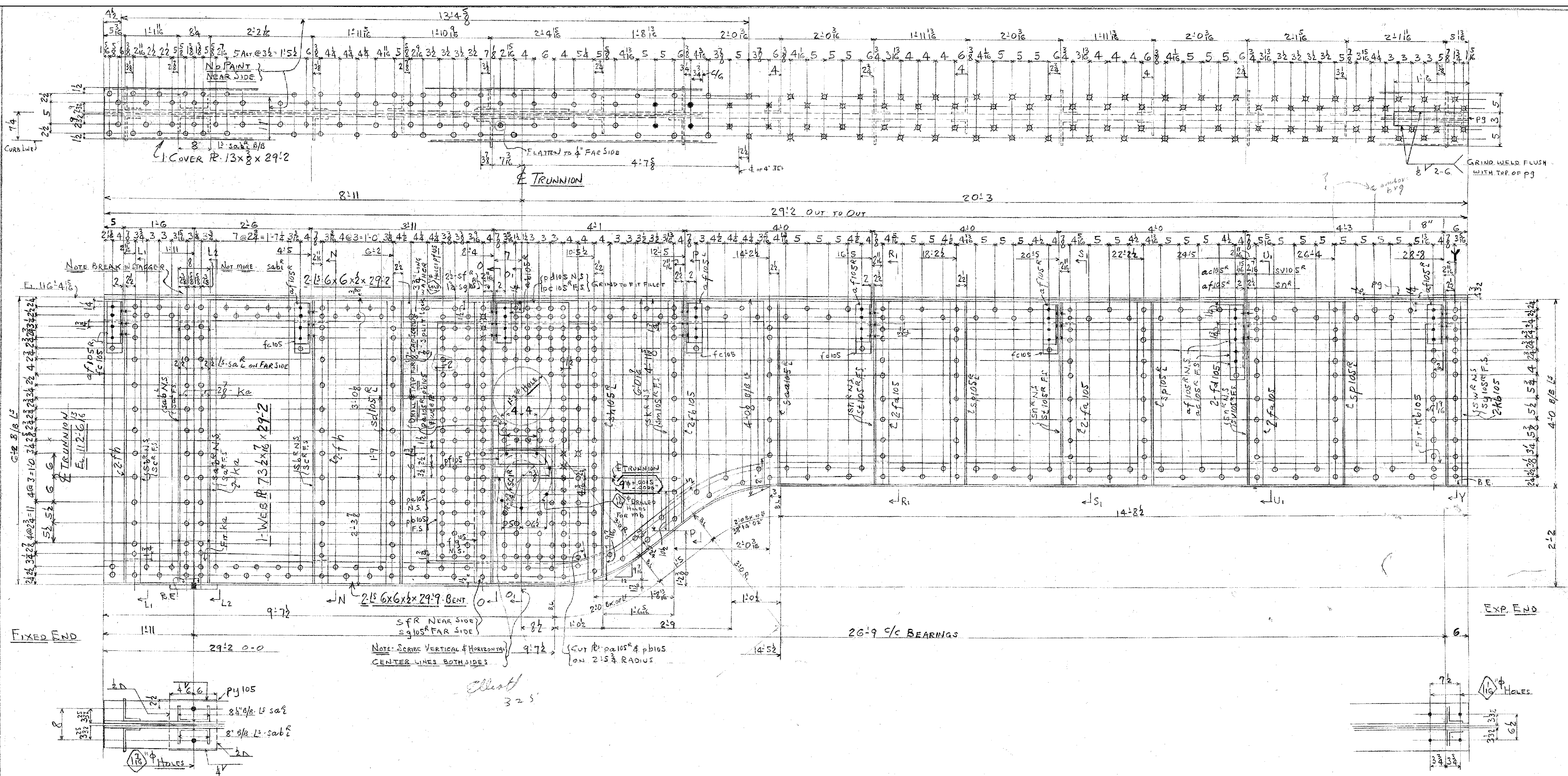
BASCULE SPAN STRUCTURAL DETAILS

PROJECT NAME: NORTH HERO-GRANDE ISLE
PROJECT NUMBER: BHF 028-(K2I)

FILE NAME: structure\s92b284cleandsca
PROJECT LEADER: M. EVANS-MONGEON
DESIGNED BY: S. SCRIBNER

PLOT DATE: 18-OCT-2007
DRAWN BY: L. DUQUETTE
CHECKED BY: S. SCRIBNER

SHEET 34 OF 41



ITEM	QTY	DESCRIPTION	UNIT	ORDERED	REMARKS	ITEM	QTY	DESCRIPTION	UNIT	ORDERED	REMARKS		
1	2	TRUNNION GIRDERS - TGR	LINEAL FT	29-2		16	8	1/2	6	3/4	29-2		
2	1	"	LINEAL FT	29-2		17	8	1/2	6	3/4	29-2		
3	1	"	LINEAL FT	29-2		18	8	1/2	4	3/8	29-2		
4	4	1/2" x 4" x 1/2" PL	LINEAL FT	20-7	1012	15	8	1/2	4	3/8	29-2		
5	4	1/2" x 4" x 1/2" PL	LINEAL FT	20-7	1012	20	8	1/2	6	4	1/2	29-2	
6	16	4" x 1/2" x 1/2" PL	LINEAL FT	20-7	1012	21	8	1/2	6	4	1/2	29-2	
7	16	4" x 1/2" x 1/2" PL	LINEAL FT	30-0	1015	22	8	1/2	6	4	1/2	29-2	
8	16	4" x 1/2" x 1/2" PL	LINEAL FT	30-0	1015	23	8	1/2	6	4	1/2	29-2	
9	16	4" x 1/2" x 1/2" PL	LINEAL FT	30-0	1015	24	8	1/2	6	4	1/2	29-2	
10	4	1/2" x 4" x 1/2" PL	LINEAL FT	27-2	1018	25	8	1/2	4	3/8	29-2		
11	16	4" x 1/2" x 1/2" PL	LINEAL FT	30-0	1025	26	8	1/2	6	4	1/2	29-2	
12	16	4" x 1/2" x 1/2" PL	LINEAL FT	30-0	1025	27	8	1/2	6	4	1/2	29-2	
13	16	4" x 1/2" x 1/2" PL	LINEAL FT	30-0	1025	28	8	1/2	6	4	1/2	29-2	
14	16	4" x 1/2" x 1/2" PL	LINEAL FT	30-0	1025	29	8	1/2	6	4	1/2	29-2	
15	16	4" x 1/2" x 1/2" PL	LINEAL FT	30-0	1025	30	8	1/2	6	4	1/2	29-2	
16	32	8" x 1/2" x 1/2" PL	LINEAL FT	30-0	1025	31	8	1/2	6	4	1/2	29-2	

LT. WT = 5 TONS
TRUNNION GIRDER TGR

RIVETS 7/8"
OPEN HOLES 1 1/2"
RT = SUBPUNCH 1/8" AND
REAM TO 1/8" TO A METAL TEMPLATE

STATE OF VERMONT
STATE HIGHWAY DEPARTMENT
FEDERAL PROJECT F128(9)
GRAND ISLE-NORTH HERO BRIDGE
COUNTY OF GRAND ISLE, VT.

AMERICAN BRIDGE COMPANY
UNITED STATES STEEL CORPORATION

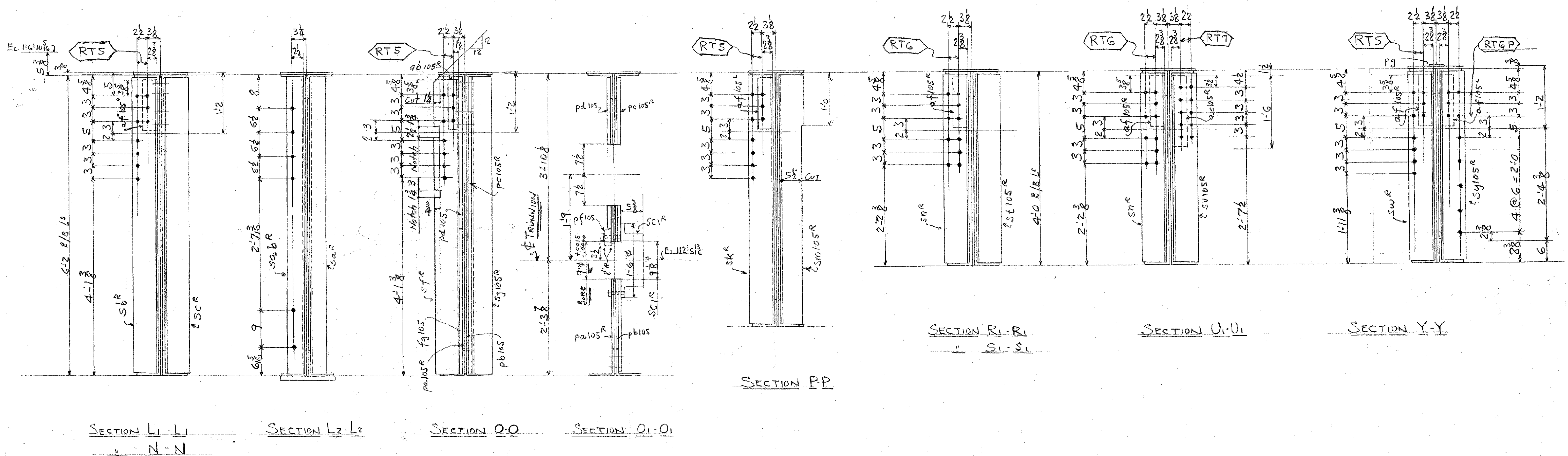
REFERENCE SHEET

PROJECT NAME: NORTH HERO-GRANDE ISLE
PROJECT NUMBER: BHF 028-(K2I)
FILE NAME: structure\s92b284cleandsca
PLOT DATE: 18-OCT-2007
PROJECT LEADER: M. EVANS-MONGEON
DESIGNED BY: S. SCRIBNER

STATE OF VERMONT
STATE HIGHWAY DEPARTMENT
FEDERAL PROJECT F128(9)
GRAND ISLE-NORTH HERO BRIDGE
COUNTY OF GRAND ISLE, VT.

AMERICAN BRIDGE COMPANY
UNITED STATES STEEL CORPORATION

PLOT DATE: 18-OCT-2007
DRAWN BY: L. DUQUETTE
CHECKED BY: S. SCRIBNER
SHEET 35 OF 41



LINE	MATERIAL			REMARKS	CALCULATED WEIGHT FOR ONE GIRDER	ORDERED	ITEM	MATERIAL	ASSEMBLY MARK	REMARKS	CALCULATED WEIGHT FOR ONE GIRDER	ORDERED	ITEM	MATERIAL	ASSEMBLY MARK	REMARKS	CALCULATED WEIGHT FOR ONE GIRDER	ORDERED	ITEM	
	SHAPE	LENGTH	QUANTITY																	SHAPE
1																				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
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STATE OF VERMONT
 STATE HIGHWAY DEPARTMENT
 FEDERAL PROJECT #128(9)
 GRAND ISLE-NORTH HERO BRIDGE
 COUNTY OF GRAND ISLE, VT.

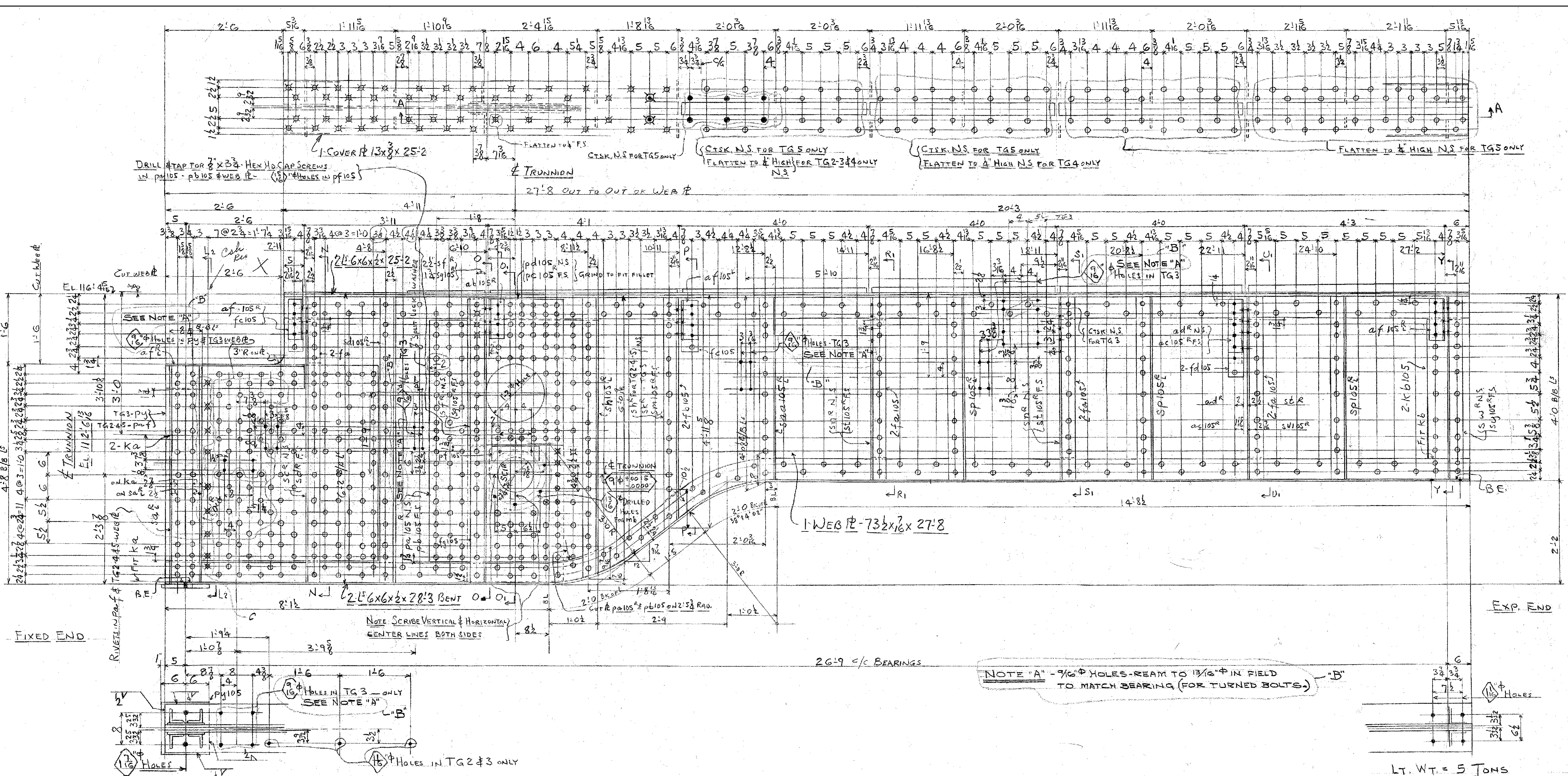
TRUNNION GIRDER TGI R

AMERICAN BRIDGE COMPANY
 BRIDGE DIVISION

REFERENCE SHEET

PROJECT NAME: NORTH HERO-GRANDE ISLE
 PROJECT NUMBER: BHF 028-1(21)

FILE NAME: structure\s92b284cleandsca PLOT DATE: 18-OCT-2007
 PROJECT LEADER: M. EVANS-MONGEON DRAWN BY: L. DUQUETTE
 DESIGNED BY: S. SCRIBNER CHECKED BY: S. SCRIBNER
 SHEET 36 OF 41



LINE	ITEM	SHAPE	LENGTH	REMARKS	ORDERED	ITEM	SHAPE	LENGTH	REMARKS	ORDERED	ITEM	SHAPE	LENGTH	REMARKS	ORDERED
1	DW1 DW2														
2	1	2	27.8	TRUNNION GIRDERS - TG2	27-8	16	4	RS 4 1/2	2	4	64	py	TG3		31
3	1	2	27.8	TRUNNION GIRDERS - TG3	27-8	17	12	FL 4 3/4	2	10 1/2	fgios				32
4	1	2	27.8	TRUNNION GIRDERS - TG4	27-8	18	24	FL 4 1/2	4	12	ka	FILE			33
5	1	2	27.8	TRUNNION GIRDERS - TG5	27-8	19	24	FL 4 1/2	0	11 1/2	fa				34
6	1	2	27.8	TRUNNION GIRDERS - TG6	27-8	20	12	RS 12	1	1	pyios				35
7	1	2	27.8	TRUNNION GIRDERS - TG7	27-8	21	72	FL 4 1/2	2	11 1/2	faios				36
8	1	2	27.8	TRUNNION GIRDERS - TG8	27-8	22	24	FL 4 1/2	3	10 1/2	fbios				37
9	12	RS	73 1/2	27.8	27-8	23	24	FL 3 1/2	0	8 1/2	fcios				38
10	12	RS	43	5	12	24	FL 3 1/2	2	11 1/2	kbios	FILE				39
11	12	RS	24	3	0 1/2	25	24	FL 2 1/2	2	11 1/2	ka	FILE			40
12	12	RS	24	3	1 1/2	26	20	RS 4 1/2	4	64	pa	TG2 & 5		41	
13	12	RS	24	3	1 1/2	27	4	FL 3 1/2	4	8 1/2	pa	TG2 & 3		42	
14	12	RS	13	3 1/2	25	28	4	FL 3 1/2	3	11 1/2	pa				43
15	12	RS	13	3 1/2	25	29	4	FL 3 1/2	3	11 1/2	pb				44
16	12	RS	43	2	5	30	4	FL 3 1/2	3	11 1/2	pc				45

LT. WT. = 5 TONS
TRUNNION GIRDERS
TG2-3 LEFT 4L #5R

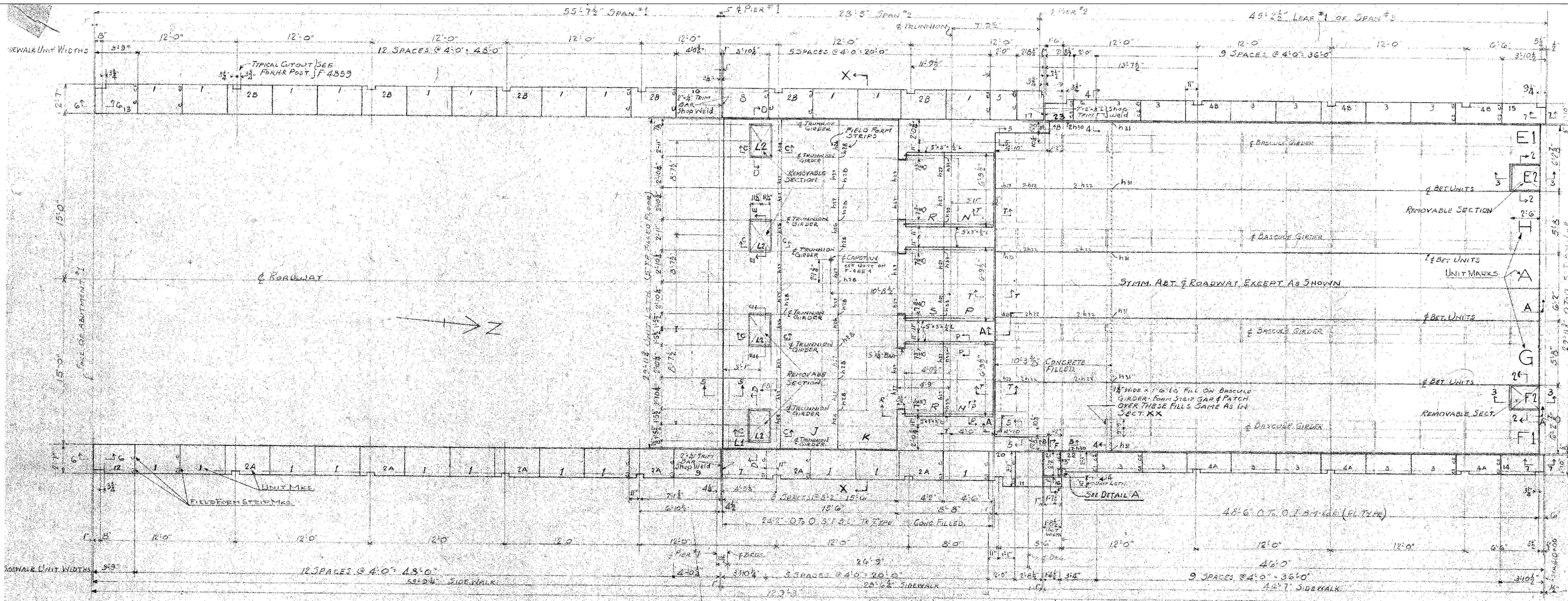
STATE OF VERMONT
STATE HIGHWAY DEPARTMENT
FEDERAL PROJECT F128(8)
GRAND ISLE-NORTH HERO BRIDGE
COUNTY OF GRAND ISLE, VT.

AMERICAN BRIDGE COMPANY
UNITED STATES DEPARTMENT OF TRANSPORTATION

REFERENCE SHEET

PROJECT NAME: NORTH HERO-GRANDE ISLE
PROJECT NUMBER: BHF 028-1(K2I)

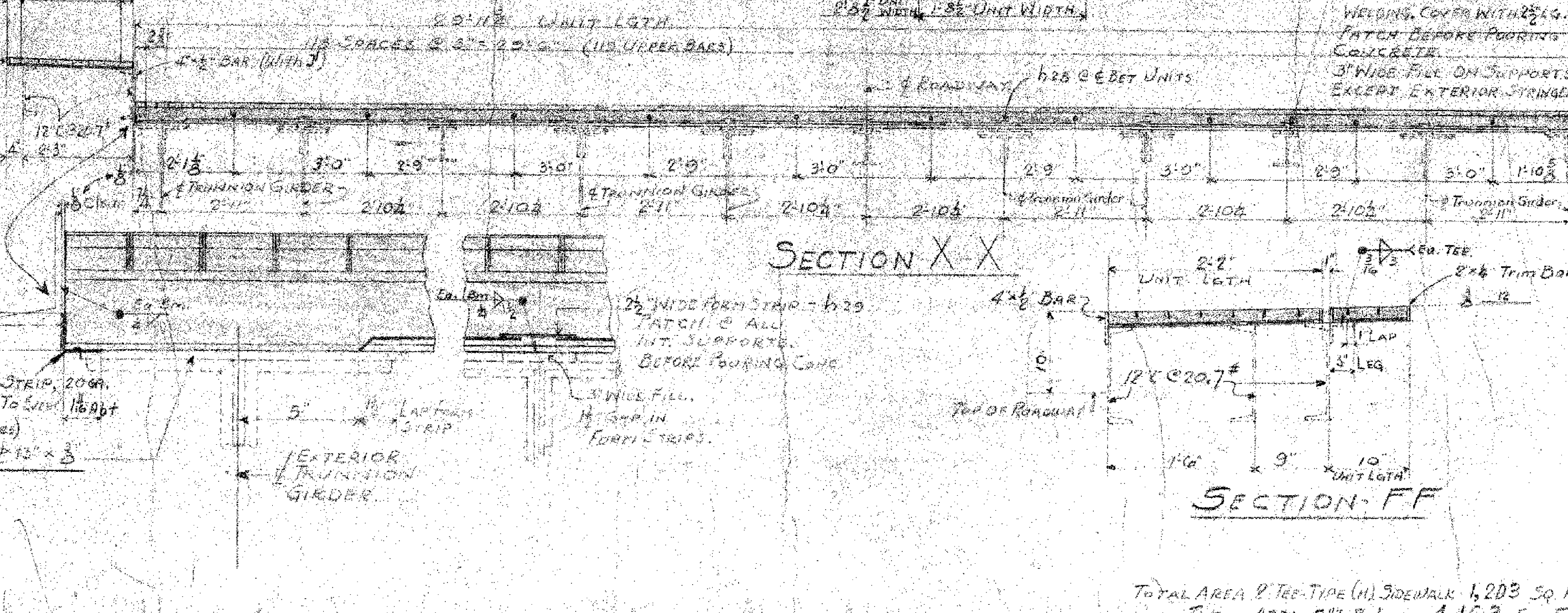
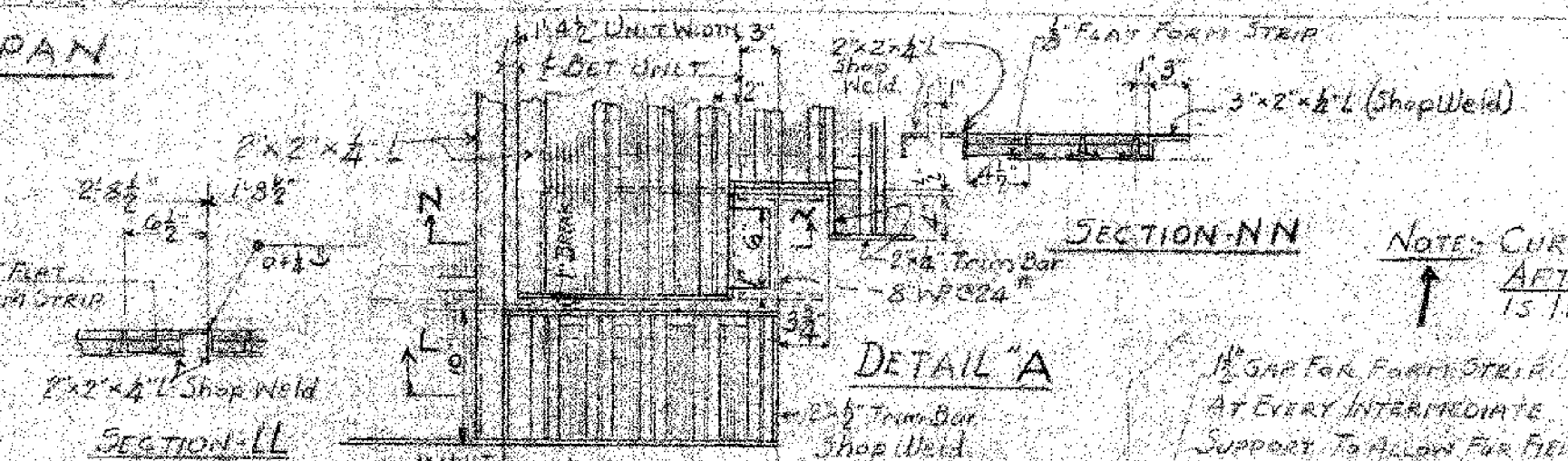
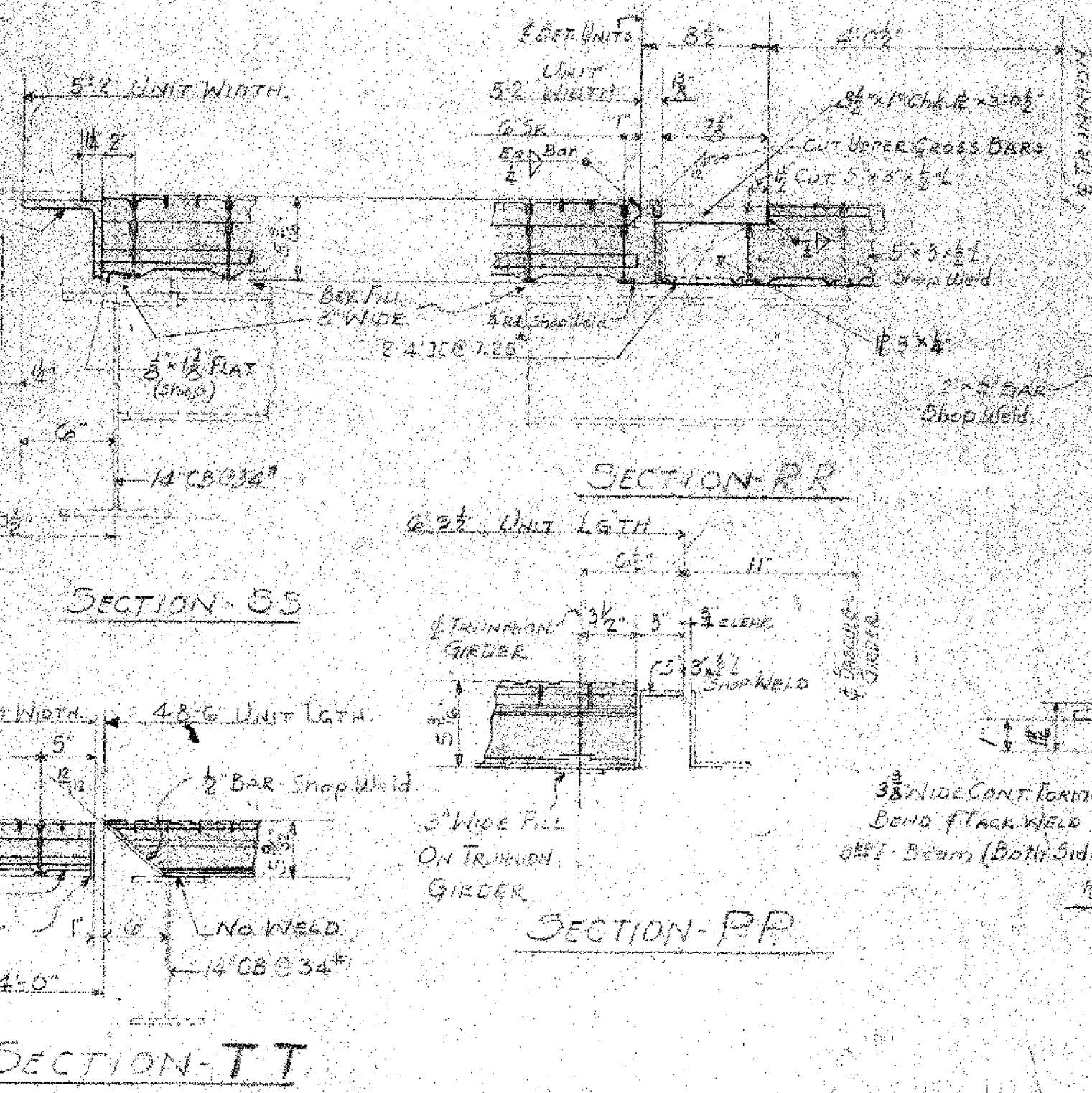
FILE NAME: structure\s92b284cleandsca PLOT DATE: 18-OCT-2007
PROJECT LEADER: M. EVANS-MONGEON DRAWN BY: L. DUQUETTE
DESIGNED BY: S. SCRIBNER CHECKED BY: S. SCRIBNER
SHEET 37 OF 41



PLAN SOUTH SPAN

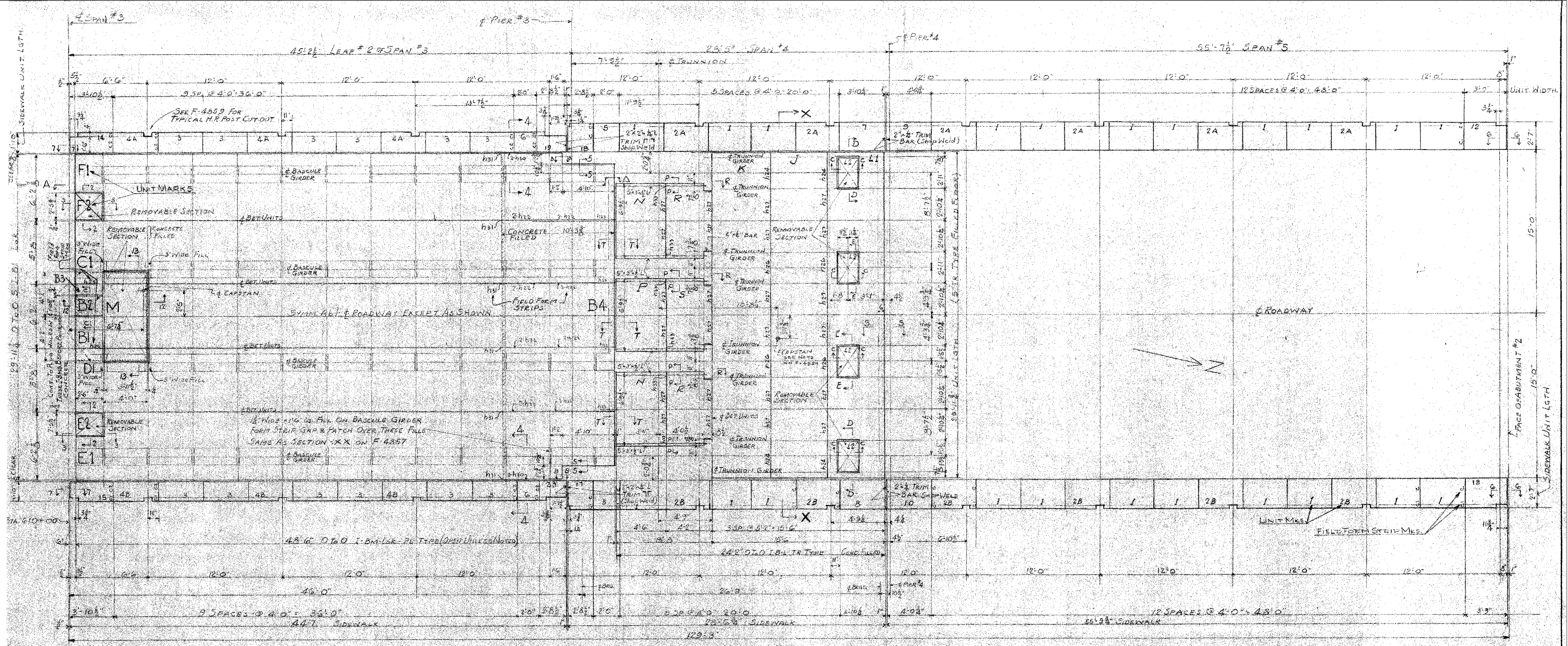
ERECTION NOTE:
 PLACE UNITS WITH MARKED END OF UNITS LOCATED AS SHOWN ON PLAN.
 DURING ERECTION OF UNITS, CARE MUST BE EXERCISED TO PLACE EACH UNIT IN ITS PROPER LOCATION, MEASURING IN ALL CASES FROM SOME FIXED POINT, AS OTHERWISE A CUMULATIVE ERROR IN SPACING WILL APPEAR, OUSING THE SPACE FOR THE FINAL UNITS TO BE MORE OR LESS THAN THE ACTUAL WIDTH OF UNITS.

GENERAL NOTES:
 INSPECTION: MILL
 I-BEAM-LOK UNITS TO BE FURNISHED FLAT; ANY CAMBERING REQUIRED TO CONFORM TO SUPPORTING STRUCTURAL STEEL IS TO BE DONE IN FIELD.
 MATERIAL SHOWN IN DASH & DASH LINES, NOT INCLUDED IN I-BEAM-LOK CONTRACT.
 SHOP PAINT: OPEN PORTION OF FLOORING TO HAVE ONE COAT OF DU PONT DULUX RED LEAD PRIMER FILLED PORTION TO HAVE ONE COAT OF DU PONT DULUX RED LEAD PRIMER ON UNDERSIDE OF UNITS FOR OUTSIDE FACE OF TRIM MATERIAL.
 FOR NOTES ABOUT FORM STRIPS, SEE SHOP DETAILS FOR FIELD WELDING 2" (H) TEE-TYPE SIDEWALK, SEE STD. ERECTION FOLDER FOR SHOP DETAILS OF 5" I-BEAM-LOK. SEE SHEETS # F-5376 THRU # F-5384 FOR TEE-TYPE SIDEWALK # F-5385 THRU # F-5389. BEAM PUNCH SHIT # 15-85115-3584 FOR SHOP BAR PUNCH SHIT # 15-85115-3584 USE ONLY.
 FOR ADDITIONAL PLANS & SECT. SEE R4893-9



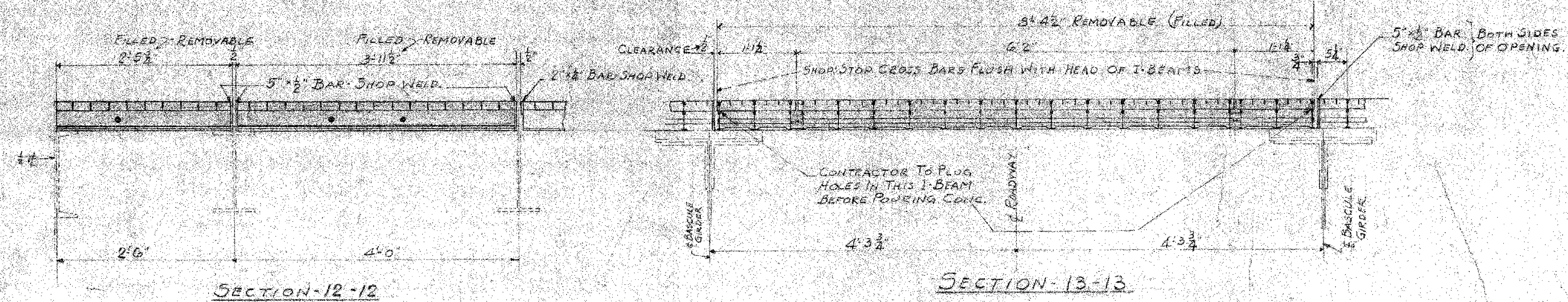
REFERENCE SHEET	
PROJECT NAME:	NORTH HERO-GRANDE ISLE
PROJECT NUMBER:	BHF 028-1(K2)
FILE NAME:	structure\s92b284cleandsca
PLOT DATE:	18-OCT-2007
PROJECT LEADER:	M. EVANS-MONGEON
DESIGNED BY:	S. SCRIBNER
DRAWN BY:	L. DUQUETTE
CHECKED BY:	S. SCRIBNER
SHEET	39 OF 41

TOTAL AREA OF TEE-TYPE (H) SIDEWALK 1,203 Sq. Ft.
 TOTAL AREA 57-8.1 OR 4,163 Sq. Ft.



PLAN - NORTH SPAN

ERECTION NOTE:
 PLACE UNITS, WITH MARKED END OF UNITS, LOCATED AS SHOWN ON PLAN.
 DURING ERECTION OF UNITS, CARE MUST BE EXERCISED TO PLACE EACH UNIT IN ITS PROPER LOCATION, MEASURING IN ALL CASES FROM SOME FIXED POINT, AS OTHERWISE A CUMULATIVE ERROR IN SPACING WILL APPEAR, CAUSING THE SPACE FOR THE FINAL UNITS TO BE MORE OR LESS THAN THE ACTUAL WIDTH OF UNITS.



SECTION-12-12

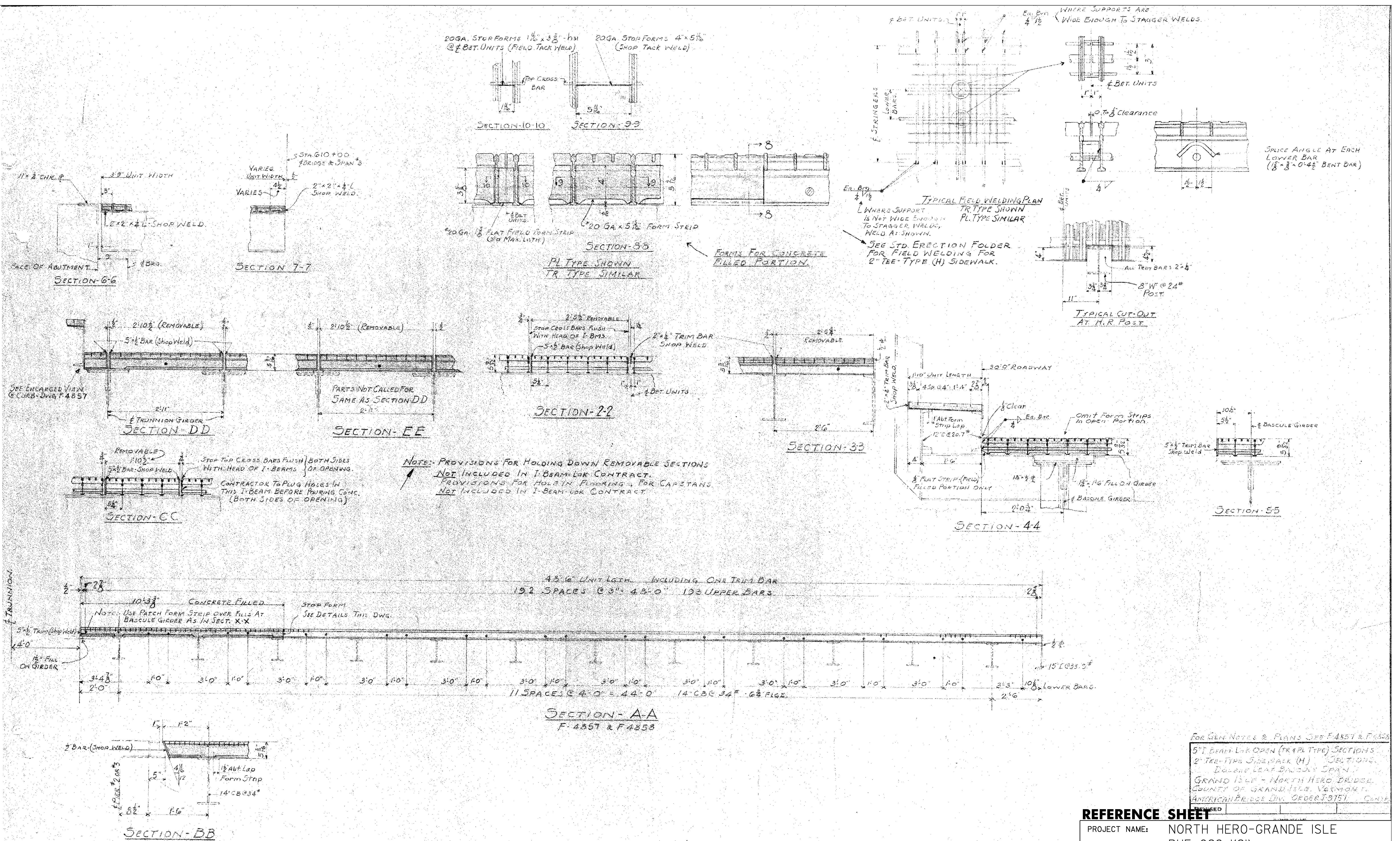
SECTION-13-13

FOR GEN. NOTES & ADDITIONAL PLANS: F-4357
 FOR SECTIONS: SEE F-4357 & F-4359

5 I-BEAM-LOK OPEN (TR & PL TYPE) FLOORING PLAN
 2 TEE-TYPE SIDEWALK (A) PLAN
 DOUBLE LEAF BASCULE SPAN (NORTH)
 GRAND ISLE - NORTH HERO BRIDGE,
 COUNTY OF GRAND ISLE, VT.
 AMERICAN BRIDGE DIV. ORDER # 9357 CONP

REFERENCE SHEET

PROJECT NAME:	NORTH HERO-GRANDE ISLE
PROJECT NUMBER:	BHF 028-1(21)
FILE NAME:	structure\s92b284cleandscd
PROJECT LEADER:	M. EVANS-MONGEON
DESIGNED BY:	S. SCRIBNER
PLOT DATE:	18-OCT-2007
DRAWN BY:	L. DUQUETTE
CHECKED BY:	S. SCRIBNER
SHEET	40 OF 41



NOTE: PROVISIONS FOR HOLDING DOWN REMOVABLE SECTIONS NOT INCLUDED IN I-BEAM LOK CONTRACT. PROVISIONS FOR HOLE IN FLOORING FOR CAPSTANS NOT INCLUDED IN I-BEAM LOK CONTRACT.

FOR GEN. NOTES & PLANS SEE F4857 & F4858
 5" I-BEAM LOK OPEN (TR & PL TYPE) SECTIONS
 2" TEE-TYPE SIDEWALK (H) SECTIONS
 BALSLEY BASCULE SPAN
 GRAND ISLE - NORTH HERO BRIDGE
 COUNTY OF GRAND ISLE, VERMONT
 AMERICAN BRIDGE DIV. ORDER 39751 GEN. 1

REFERENCE SHEET

PROJECT NAME:	NORTH HERO-GRANDE ISLE
PROJECT NUMBER:	BHF 028-K(2)
FILE NAME:	structure\s92b284cleandsca
PROJECT LEADER:	M. EVANS-MONGEON
DESIGNED BY:	S. SCRIBNER
PLOT DATE:	18-OCT-2007
DRAWN BY:	L. DUQUETTE
CHECKED BY:	S. SCRIBNER
SHEET	41 OF 41

- INDEX OF SHEETS
1. TITLE SHEET
 2. QUANTITY SHEET
 3. GENERAL NOTES SHEET
 4. AREA OF DISTURBANCE
 - 5.-6. EXISTING TEMPORARY BRIDGE DETAILS
 - 7.-8. TRAFFIC CONTROL SHEETS
 9. FLOOR PLAN OF BASCULE LEAF #1
 10. BOTTOM FLANGE PLAN OF BASCULE LEAF #1
 11. FLOOR PLAN OF BASCULE LEAF #2
 12. BOTTOM FLANGE PLAN OF BASCULE LEAF #2
 - 13.-15. BASCULE SPAN STRUCTURAL DETAILS
 16. FLOOR PLAN OF TRUNNION SPAN #2
 17. FLOOR PLAN OF TRUNNION SPAN #4
 18. TRUNNION SPAN STRUCTURAL DETAILS
 - 19.-20. ROADWAY GRID PLAN SHEETS
 21. SHIM PLATE DETAIL
 - 22.-41. REFERENCE SHEETS

STANDARD SHEETS
G-18 6/1/1994

STATE OF VERMONT AGENCY OF TRANSPORTATION

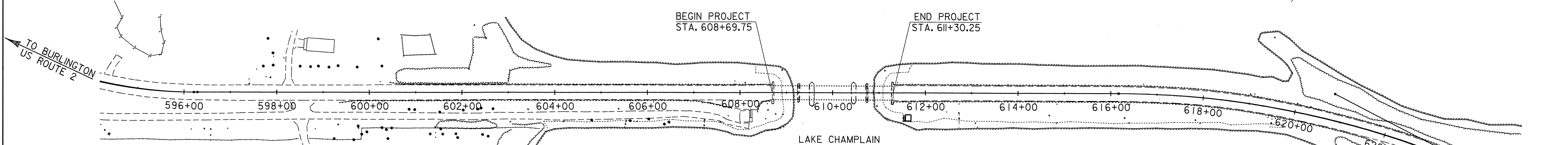
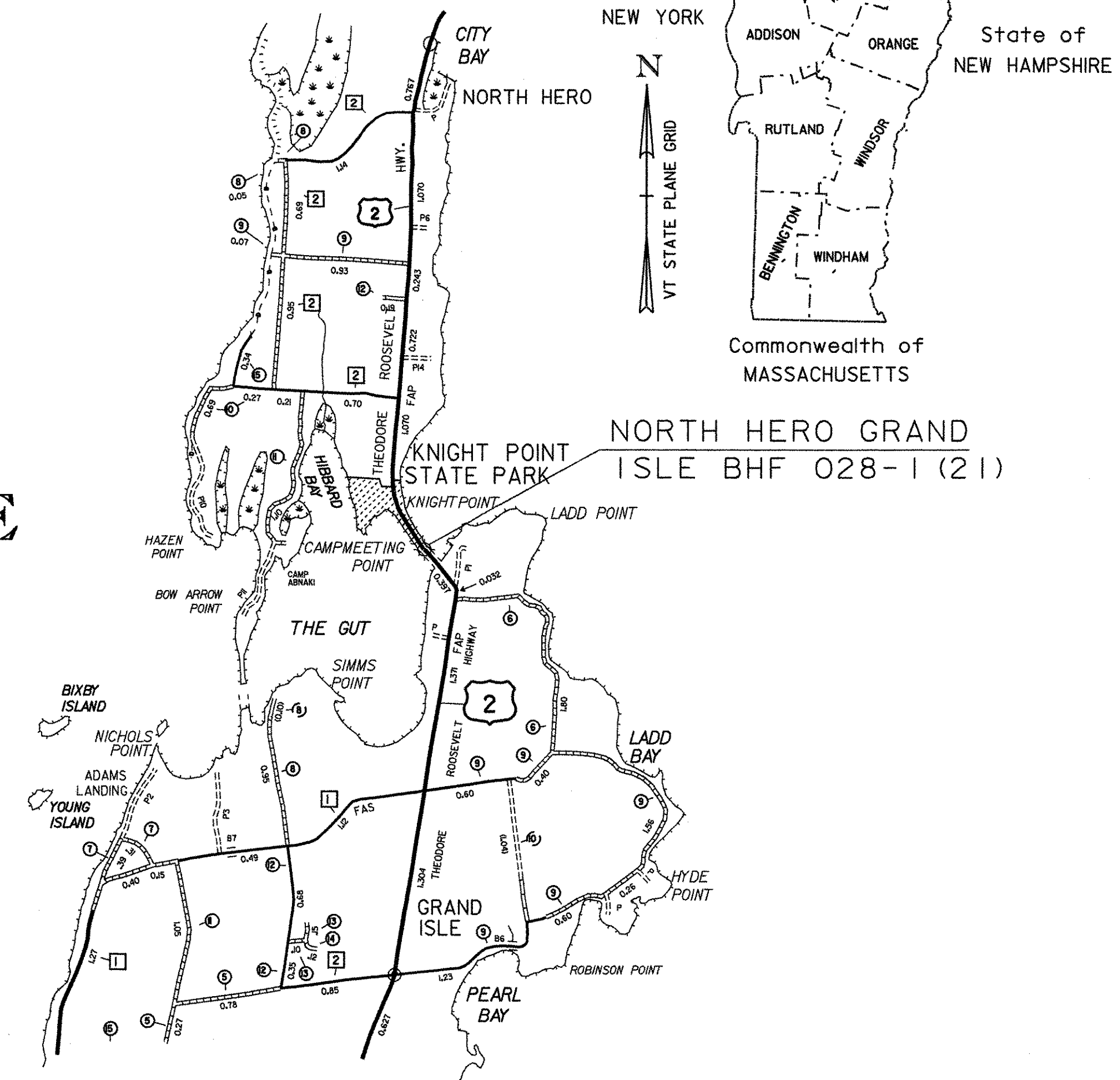
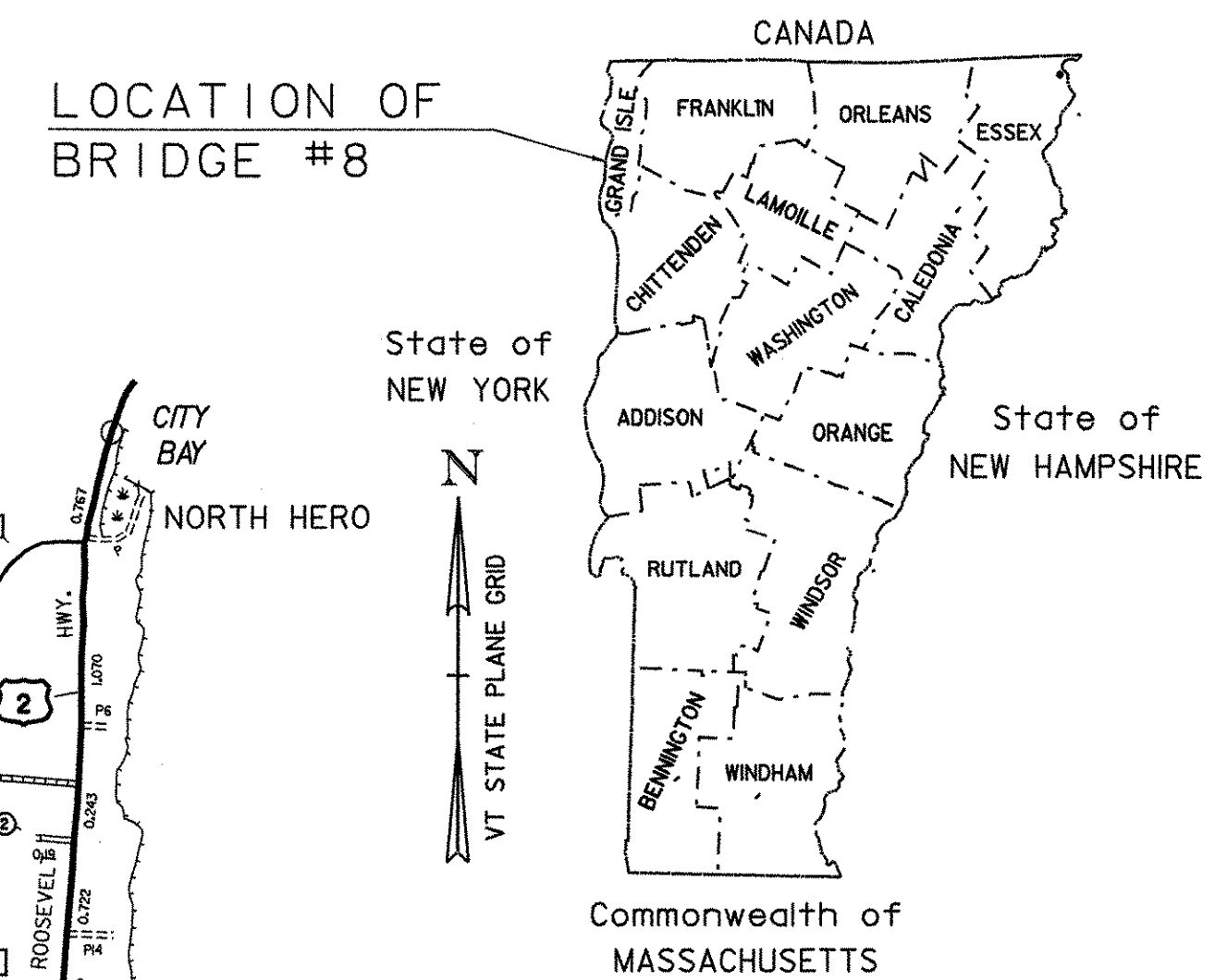


PROPOSED IMPROVEMENT BRIDGE PROJECT TOWN OF NORTH HERO-GRAND ISLE COUNTY OF GRAND ISLE US ROUTE 2 (MAJOR COLLECTOR) BRIDGE #8

PROJECT LOCATION : HISTORICAL DRAW BRIDGE LOCATED ON US 2 OVER LAKE CHAMPLAIN (THE GUT) SOUTH OF KNIGHTS POINT STATE PARK.

PROJECT DESCRIPTION : REPLACEMENT OF VARIOUS STEEL COMPONENTS AND RELATED CONNECTORS OF BASCULE SPAN #3.

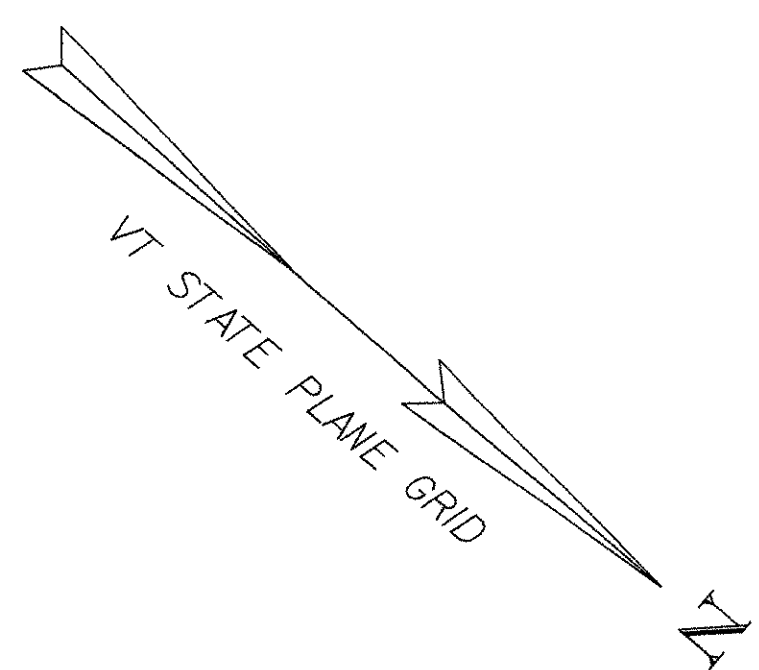
LENGTH OF STRUCTURE : 260.50 FEET.
LENGTH OF ROADWAY : 0 FEET.
LENGTH OF PROJECT : 260.50 FEET.
TRAFFIC (2006 AADT): 3000 VEHICLES A DAY



CONVENTIONAL SYMBOLS	
COUNTY LINE	
TOWN LINE	
LIMITS OF ACCESS	
POINT OF ACCESS	
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY : R. GILMAN
SURVEYED DATE : OCT. 19, 2004

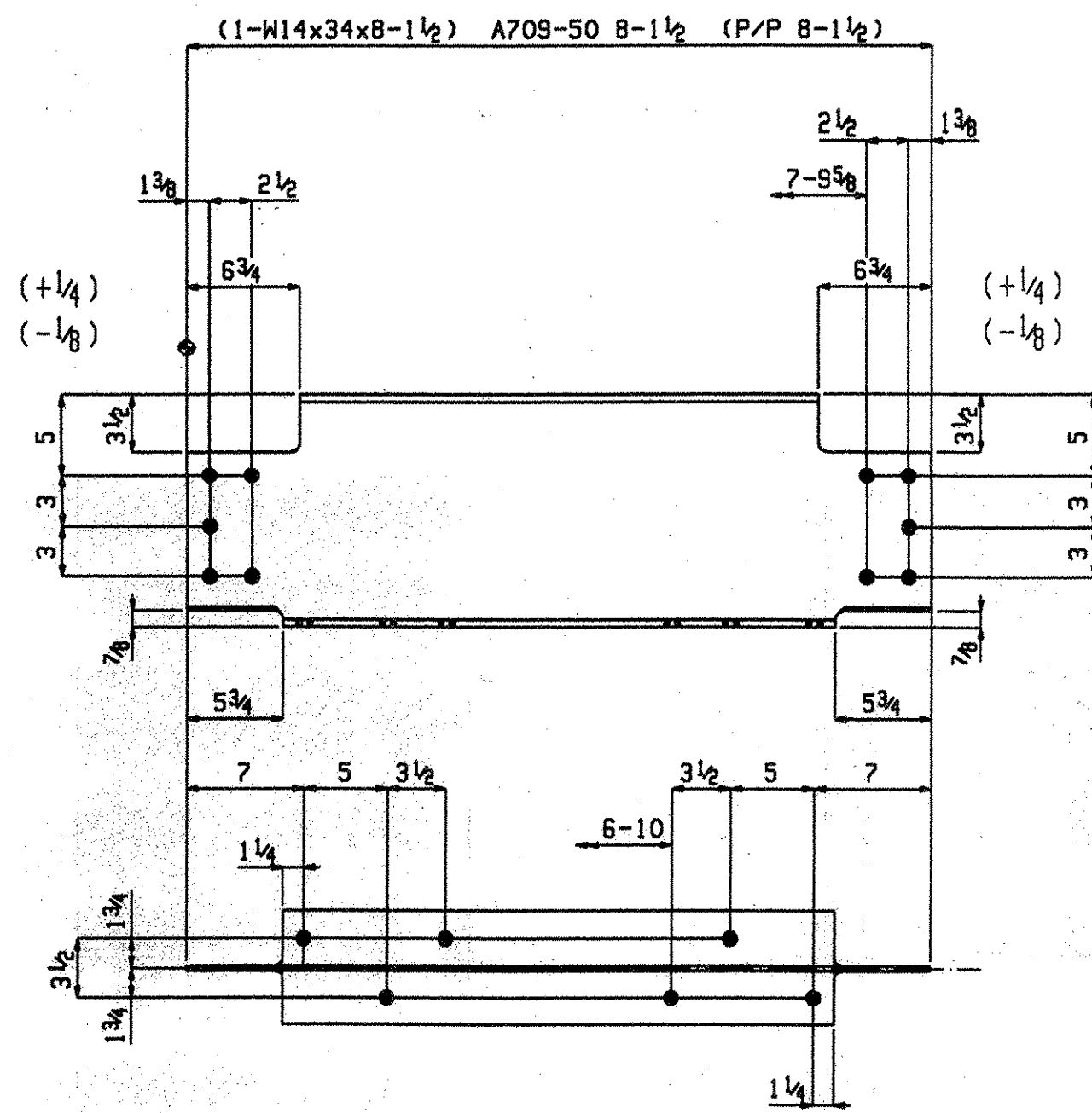
DATUM
VERTICAL: NAVD 88
HORIZONTAL: NAD 83 (96)



THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

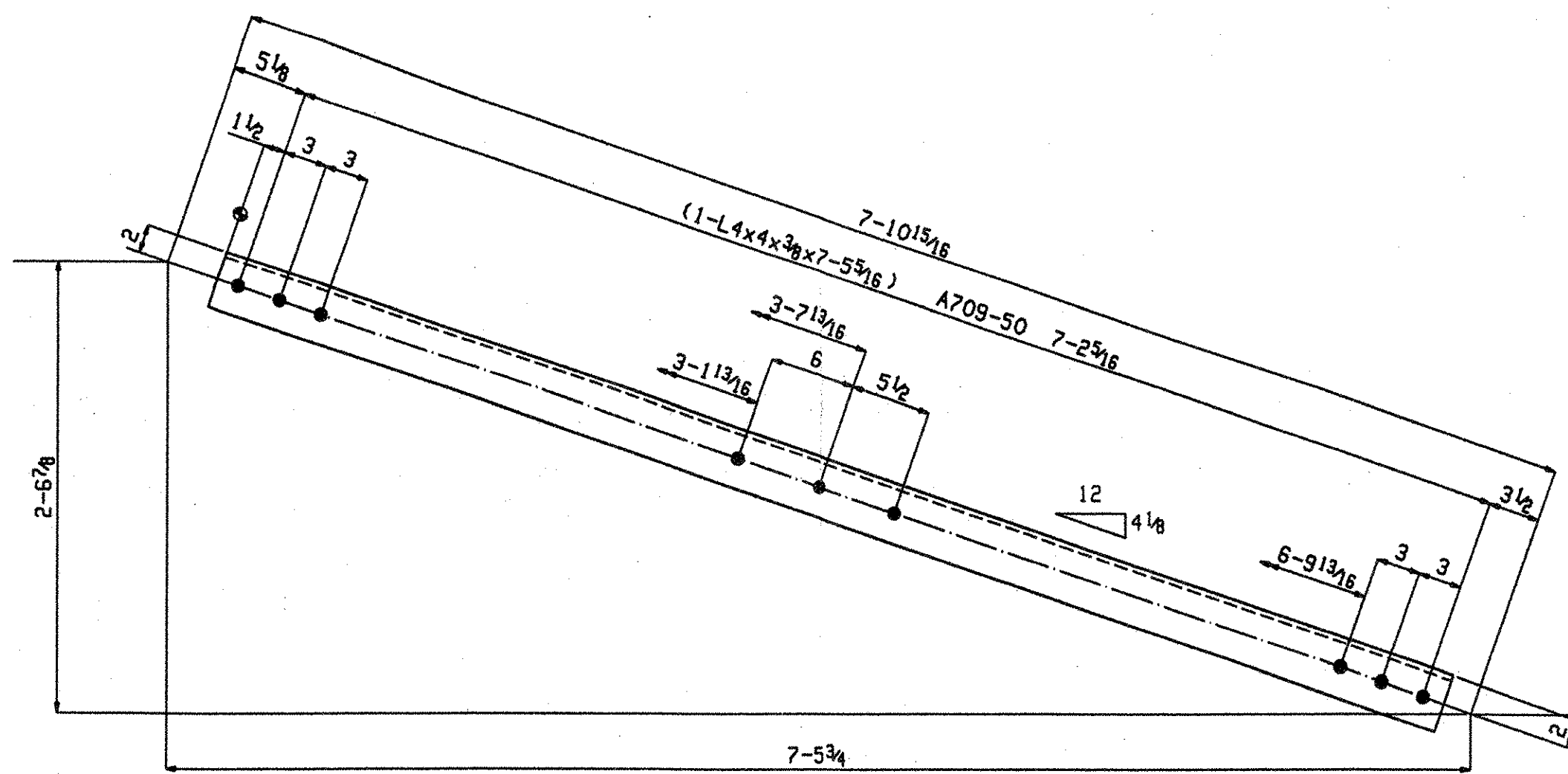
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

DIRECTOR OF PROGRAM DEVELOPMENT	
APPROVED	DATE 10-18-07
PROJECT MANAGER : M. EVANS-MONGEON	
PROJECT NAME :	NORTH HERO - GRAND ISLE
PROJECT NUMBER :	BHF 028-1 (21)
SHEET 1 OF 41 SHEETS	



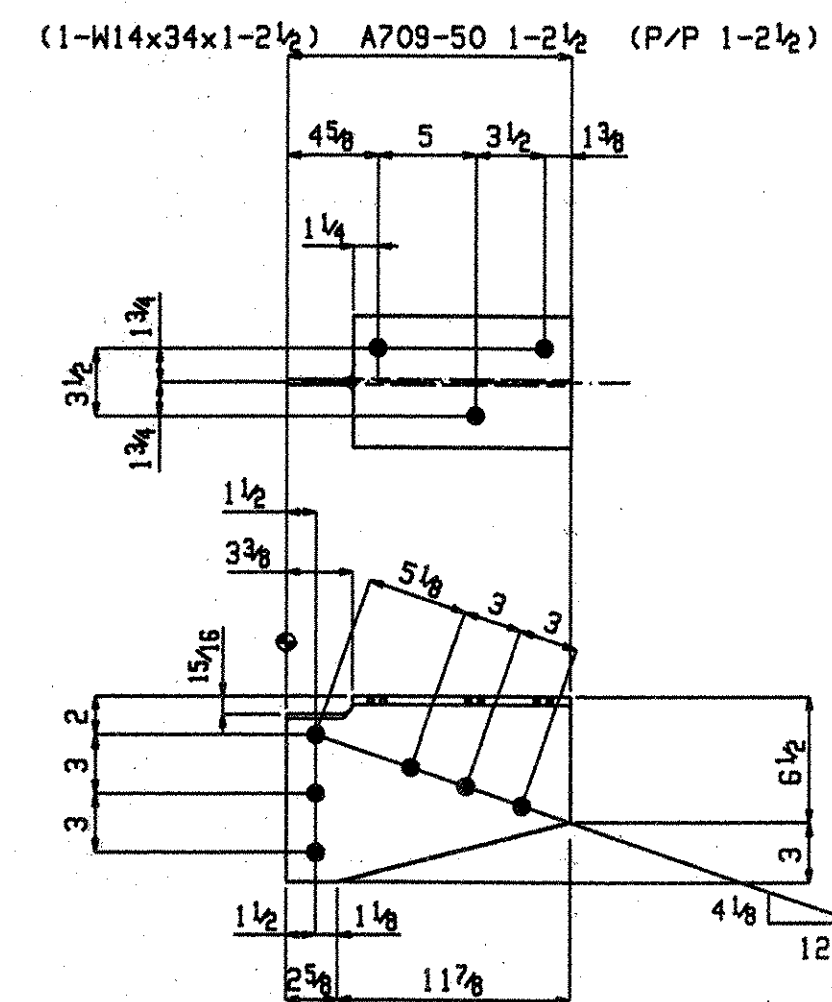
12 BEAMS FB43

W 14x31/2
F 63/4x7/16



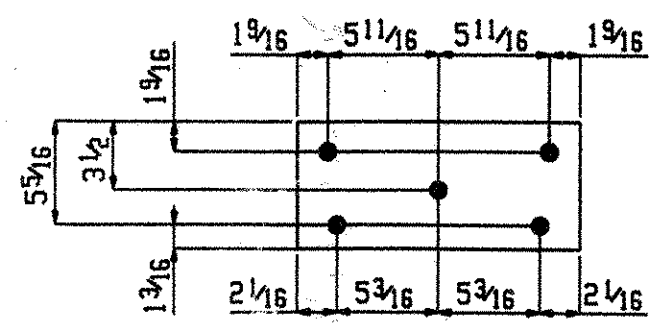
12 VERTICAL BRACES CF5

SHOP NOTE:
TOE DIRECTION FAR SIDE

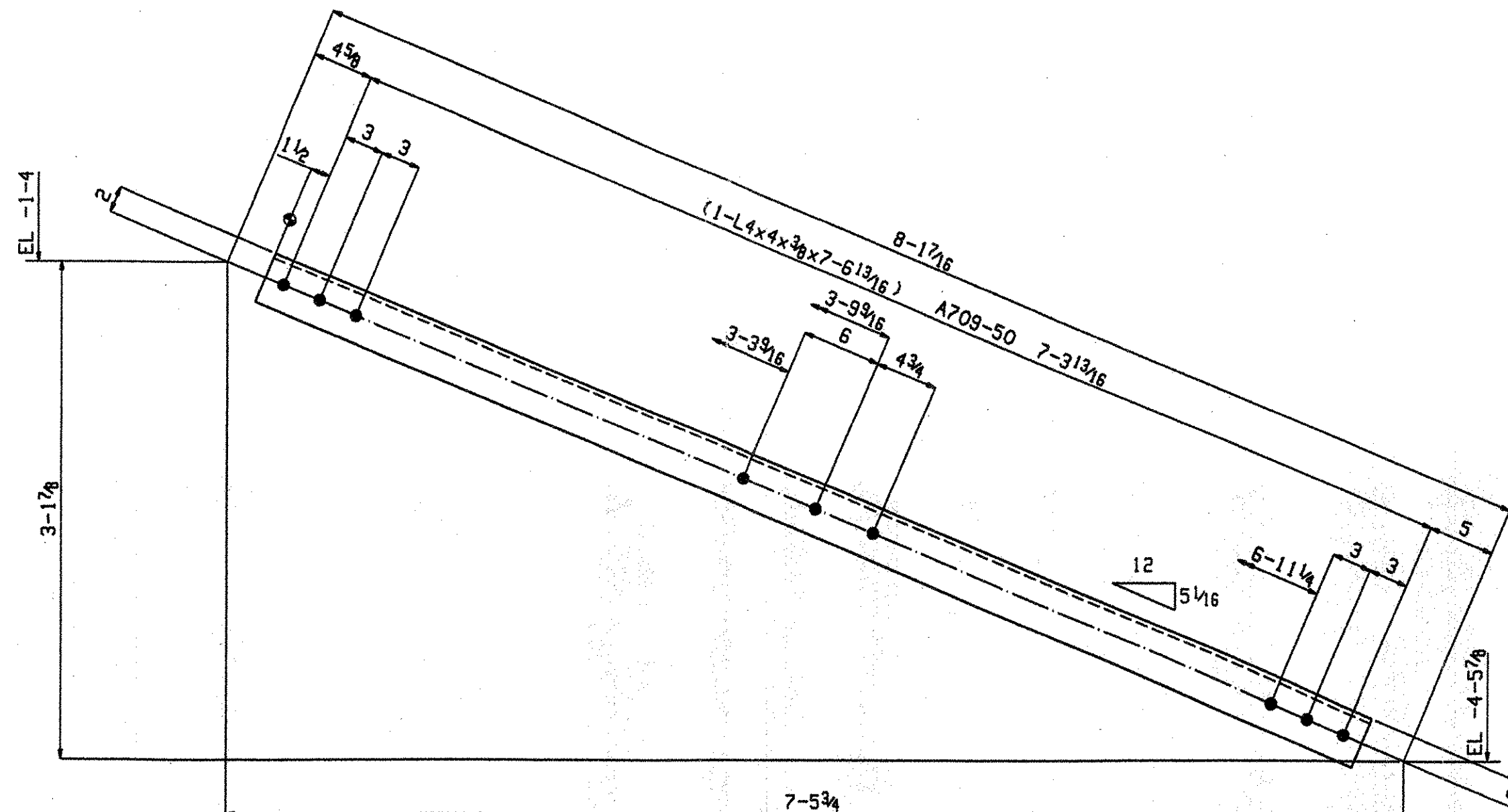


12 BEAMS CF5_ma

W 14x31/2
F 63/4x7/16

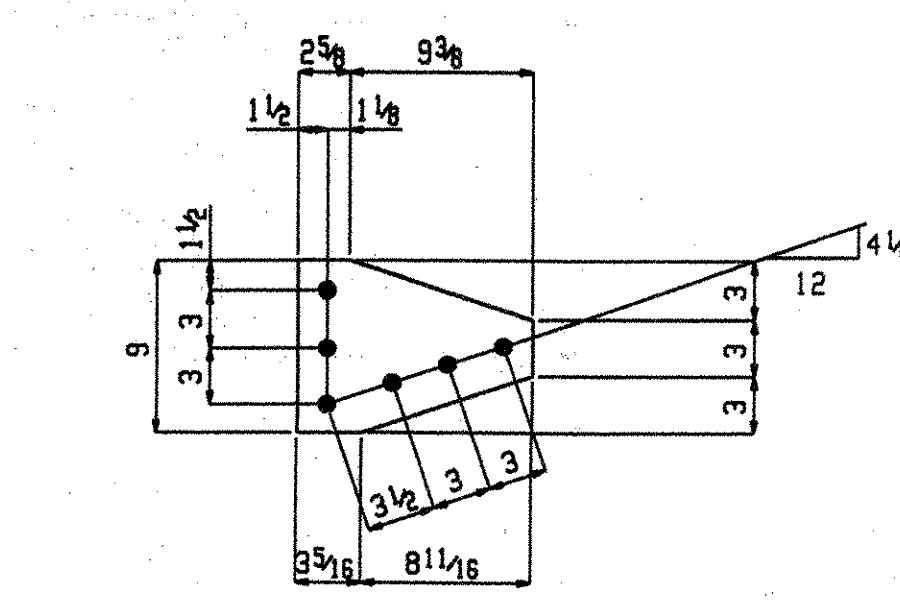


6 PLATES CF5_pb

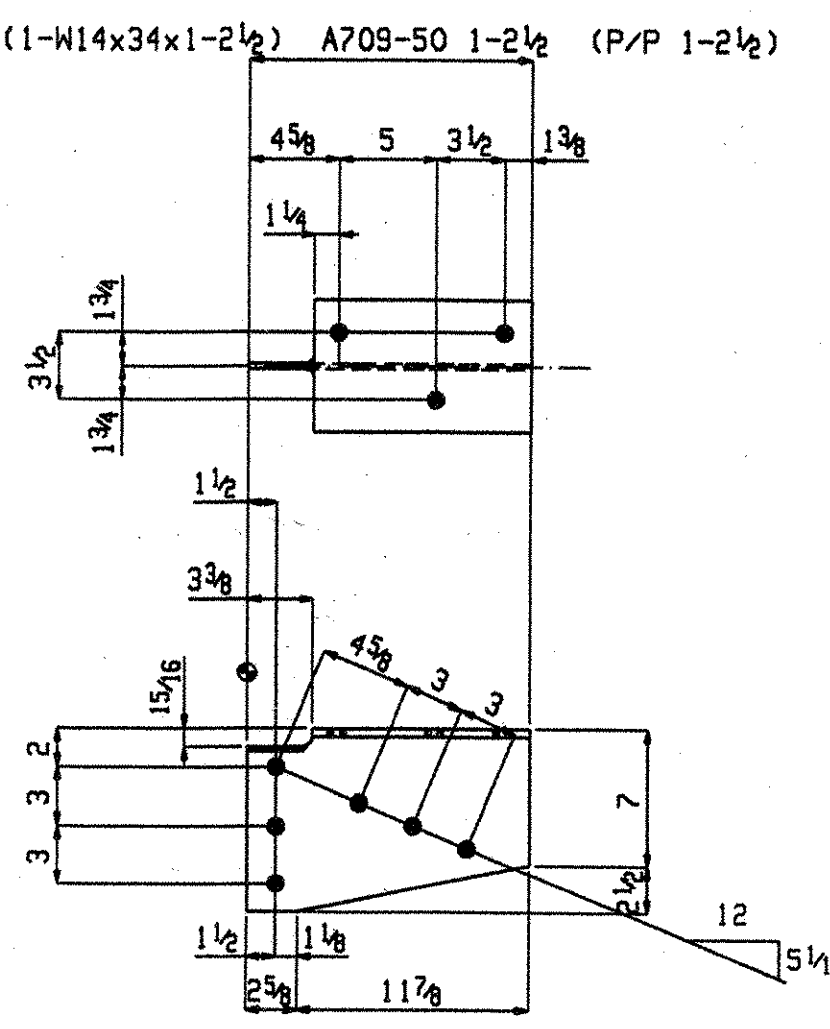


12 VERTICAL BRACES CF6

SHOP NOTE:
TOE DIRECTION FAR SIDE

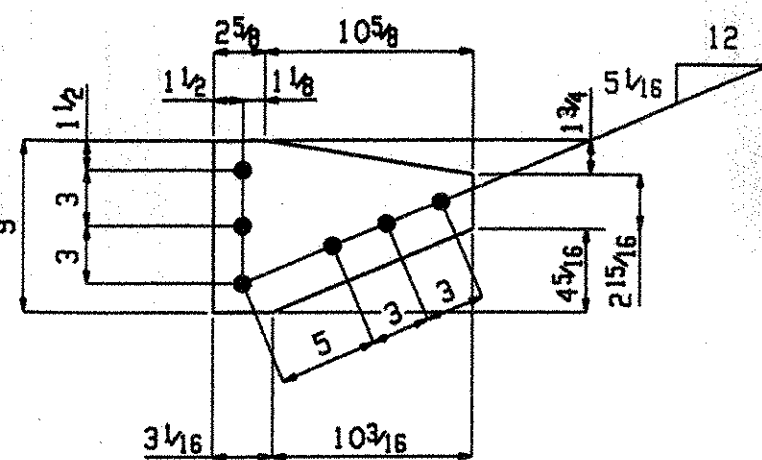


12 PLATES CF5_pa

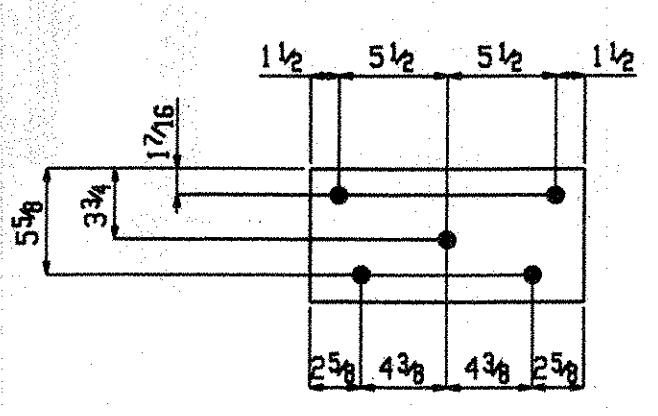


12 BEAMS CF6_mb

W 14x31/2
F 63/4x7/16



12 PLATES CF6_pc



6 PLATES CF6_pd

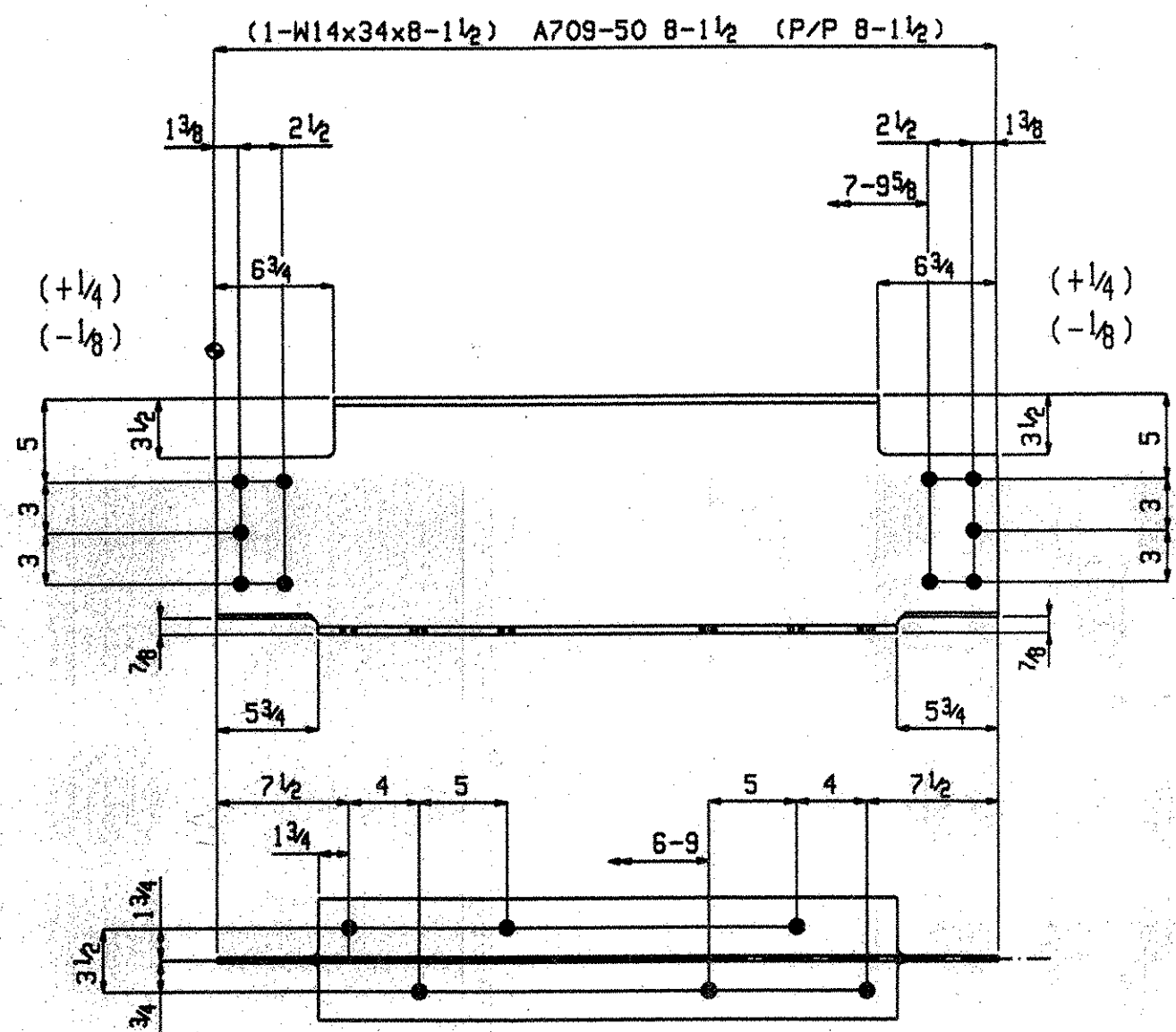
BILL OF MATERIAL				
Quantity	Description	Length	Piece	Remarks
Total				
12	BEAM		FB43	
12	W14x34	8 1/2	FB43	A709-50
	FIELD BOLTS			
72	7/8 Dia A325	0 2 1/2		1 HD WASH
72	7/8 Dia A325	0 2 1/4		1 HD WASH
48	7/8 Dia A325	0 2		1 HD WASH
12	VERTICAL BRACE		CF5	
12	L4x4x3/8	7 5 1/16	CF5	A709-50
	FIELD BOLTS			
6	7/8 Dia A325	0 2 1/4		1 HD WASH
96	7/8 Dia A325	0 2		1 HD WASH
12	BEAM		CF5_ma	
12	W14x34	1 2 1/2	CF5_ma	A709-50
	FIELD BOLTS			
36	7/8 Dia A325	0 2		1 HD WASH
12	PLATE		CF5_pa	
12	PL3/8x9	1 0	CF5_pa	A709-50
	FIELD BOLTS			
36	7/8 Dia A325	0 2 1/4		1 HD WASH
6	PLATE		CF5_pb	
6	PL5/8x6 1/2	1 2 1/2	CF5_pb	A709-50
12	VERTICAL BRACE		CF6	
12	L4x4x3/8	7 6 13/16	CF6	A709-50
	FIELD BOLTS			
6	7/8 Dia A325	0 2 1/4		1 HD WASH
96	7/8 Dia A325	0 2		1 HD WASH
12	BEAM		CF6_mb	
12	W14x34	1 2 1/2	CF6_mb	A709-50
	FIELD BOLTS			
36	7/8 Dia A325	0 2		1 HD WASH
12	PLATE		CF6_pc	
12	PL3/8x9	1 1 1/4	CF6_pc	A709-50
	FIELD BOLTS			
36	7/8 Dia A325	0 2 1/4		1 HD WASH
6	PLATE		CF6_pd	
6	PL5/8x7	1 2	CF6_pd	A709-50

OUT FOR APPROVAL	10/15									
OUT FOR APPROVAL										
ISSUED TO SHOP	10/29									
FIELD & OFFICE										
REV. REMARKS	DATE	DWN	CHK	APP	O.A.	NO.	DIA.	LGT	TYPE	WASHER
PROJECT NO. BHF 028-1(2)		STATE PROJECT NO. F128(9)								
MATERIAL : AS NOTED	ELECTRODES : E70LH	HOLES : 15/16 φ UNO		SHOP BOLTS : 7/8 φ						
SURFACE PREP & PAINT :		GALVANIZED								
DESCRIPTION : STRUCTURAL DETAILS		DRAWN BY		DATE						
JOB : GRAND ISLE-NORTH HERO BRIDGE		LCL		OCTOBER 2007						
COUNTY OF GRANDE ISLE, VT.		CHECKED BY		DATE						
		LB		OCTOBER 2007						
		APPROVED BY		DATE						
		G. A.		DATE						
CUSTOMER : STATE OF VERMONT HIGHWAY DEPARTMENT		JOB NO.		DRG. NO.						
CASCO BAY STEEL STRUCTURES, INC.		342		1						
75 SPRING HILL ROAD SACO, MAINE 04072		PHONE (207) 282-7360		FAX. (207) 282-1179						
		OCT 29 2007		09:40:50 AM						

JOB NO.	DRG. NO.
342	1

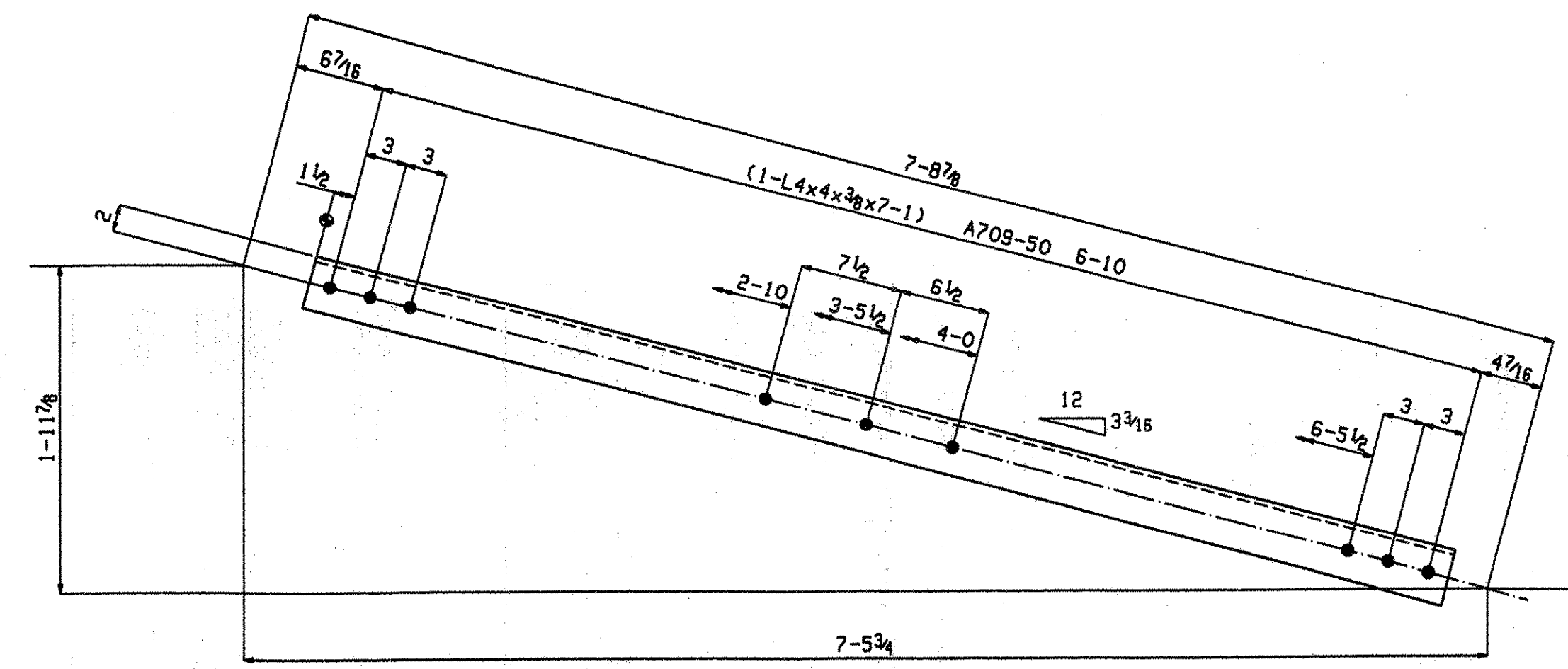
RECEIVED
NOV 05 2007
RESUBMIT APPROVED BY DATE 11/5/07

DRAWINGS PREPARED BY PATRIOT DRAFTING LLC.



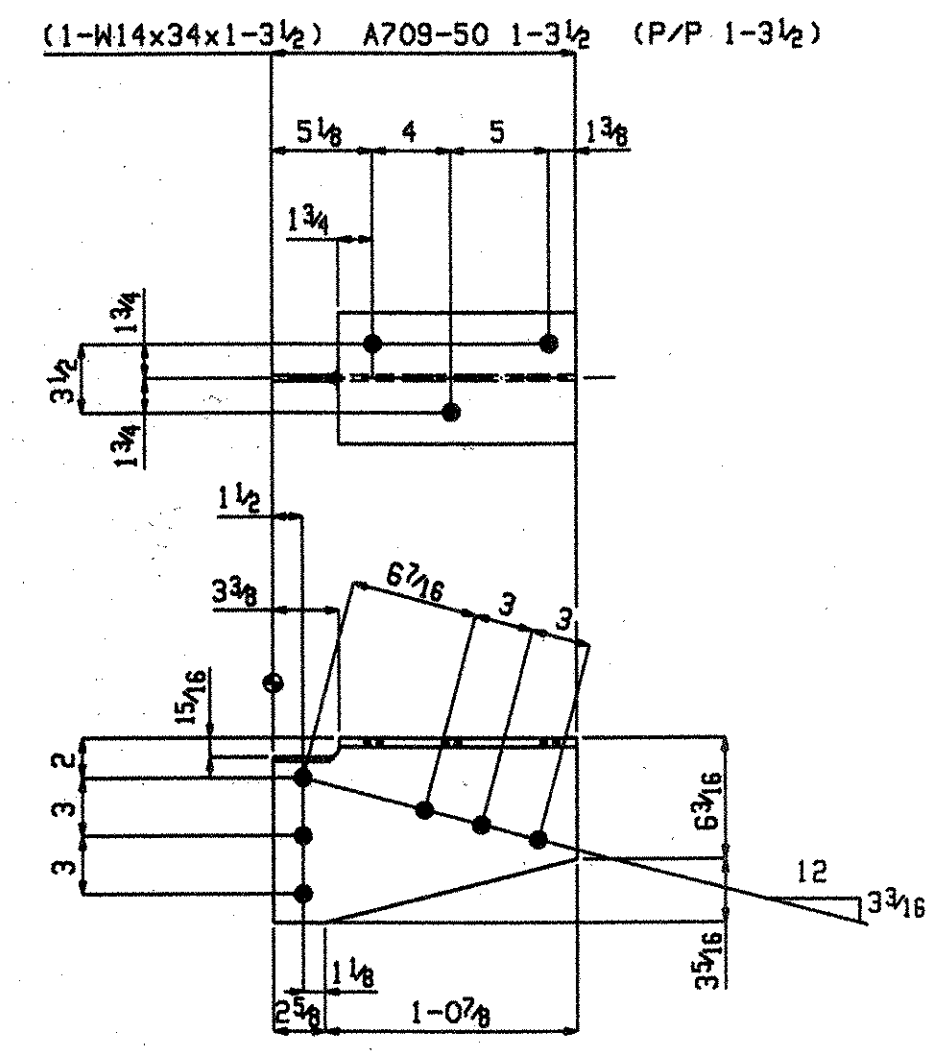
6 BEAMS FB42

W 14x34
F 6 3/4 x 7/8



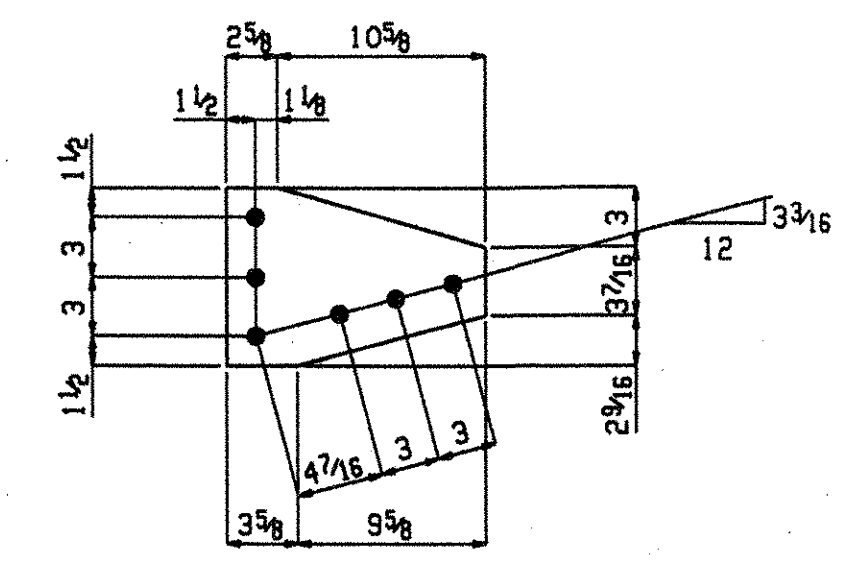
12 VERTICAL BRACES CF4

SHOP NOTE:
TOE DIRECTION FAR SIDE

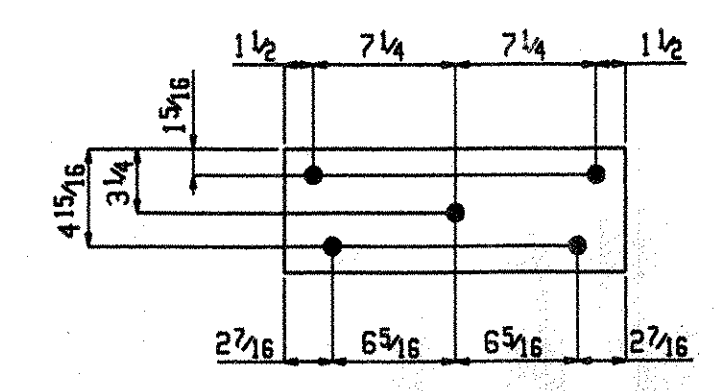


12 BEAMS CF4_ma

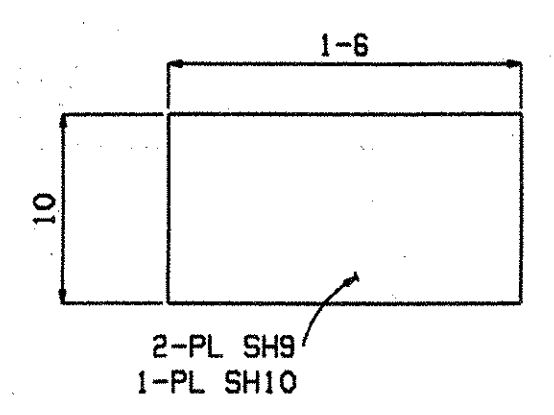
W 14x34
F 6 3/4 x 7/8



12 PLATES CF4_pb



6 PLATES CF4_pc



8 SHIM PLATE SETS A38

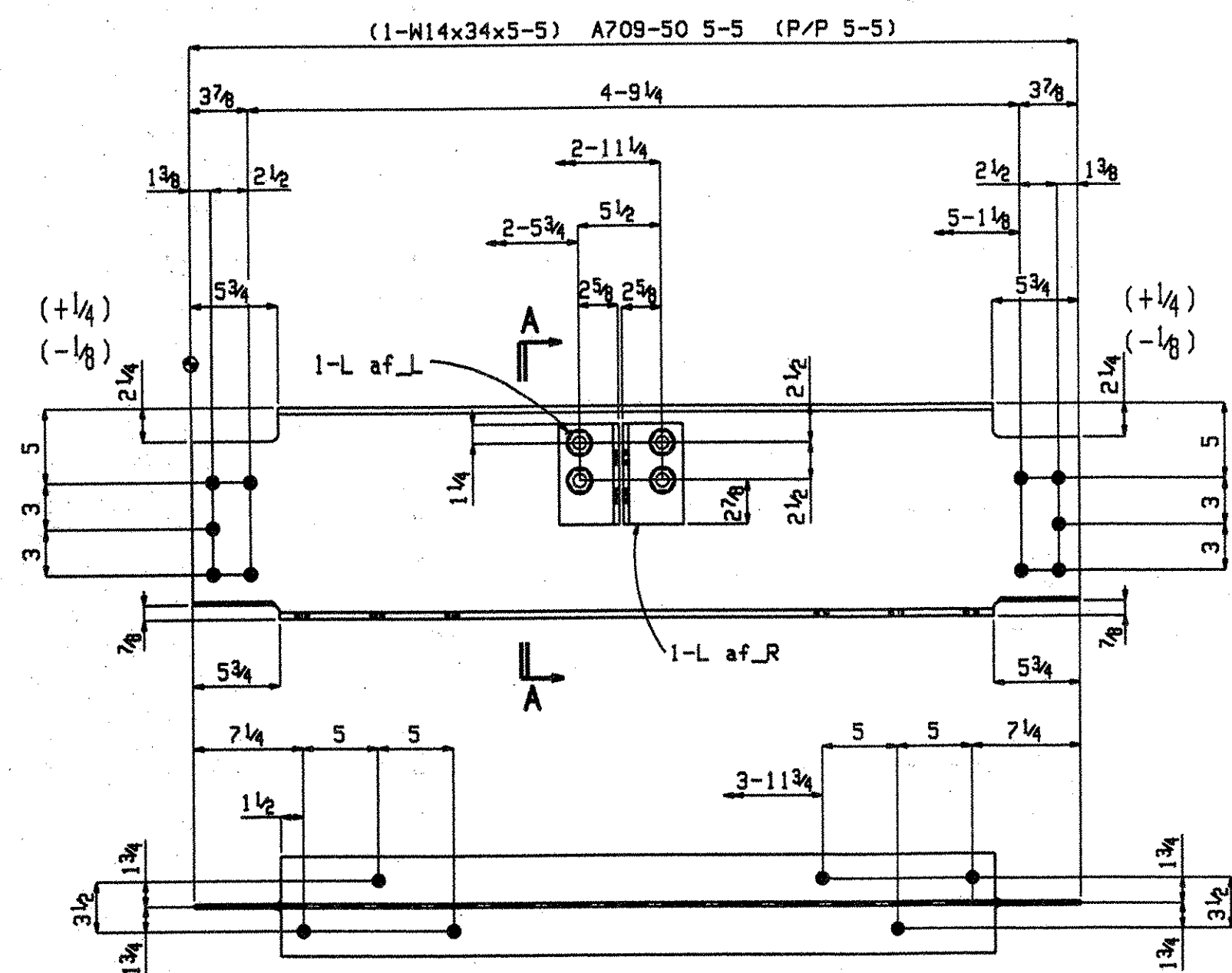
BILL OF MATERIAL				
Quantity	Description	Length	Piece	Remarks
6	BEAM		FB42	
6	W14x34	8 1 1/2	FB42	A709-50
	FIELD BOLTS			
36	7/8 Dia A325	0 2 1/2		1 HD WASH
36	7/8 Dia A325	0 2 1/4		1HD WASH
24	7/8 Dia A325	0 2		1 HD WASH
12	VERTICAL BRACE		CF4	
12	L4x4x3/8	7 1	CF4	A709-50
	FIELD BOLTS			
12	7/8 Dia A325	0 2 1/4		1HD WASH
96	7/8 Dia A325	0 2		1HD WASH
12	BEAM		CF4_ma	
12	W14x34	1 3 1/2	CF4_ma	A709-50
	FIELD BOLTS			
36	7/8 Dia A325	0 2		1 HD WASH
12	PLATE		CF4_pb	
12	PL 3x9	1 1 1/4	CF4_pb	A709-50
	FIELD BOLTS			
36	7/8 Dia A325	0 2 1/4		1 HD WASH
6	PLATE		CF4_pc	
6	PL 5 1/2 x 6 1/2	1 5 1/2	CF4_pc	A709-50
8	SHIM PLATE SET		A38	
8	SHIM PLATE SET		A38	A709-50
16	PL 1 1/2 x 10	1 6	SH9	A709-50
8	PL 1 1/2 x 10	1 6	SH10	A709-50

OUT FOR APPROVAL	10/15										
OUT FOR APPROVAL											
ISSUED TO SHOP	10/29										
FIELD & OFFICE											
REV.	REMARKS	DATE	DWN	CHK	APP	Q. A.	NO.	DIA.	LGT	TYPE	WASHER

PROJECT NO. BHF 028-1(2)	STATE PROJECT NO. F128(9)		
MATERIAL : AS NOTED	ELECTRODES : E70LH	HOLES : 15/16 φ UNO	SHOP BOLTS : 7/8 φ
SURFACE PREPN & PAINT : GALVANIZED			
DESCRIPTION : STRUCTURAL DETAILS		DRAWN BY	DATE
JOB : GRAND ISLE-NORTH HERO BRIDGE		LCL	OCTOBER 2007
COUNTY OF GRANDE ISLE, VT.		CHECKED BY	DATE
		LB	OCTOBER 2007
		APPROVED BY	DATE
		Q. A.	DATE
CUSTOMER : STATE OF VERMONT HIGHWAY DEPARTMENT			
CASCO BAY STEEL STRUCTURES, INC.		JOB NO.	DRG. NO.
75 SPRING HILL ROAD SACO, MAINE 04072		342	3
PHONE (207) 282-7360 FAX. (207) 282-1179		Oct 29 2007	
DRAWINGS PREPARED BY PATRIOT DRAFTING LLC.		09:40:52 AM	

RECEIVED
NOV 05 2007
RESUBMIT APPROVED
BY DATE

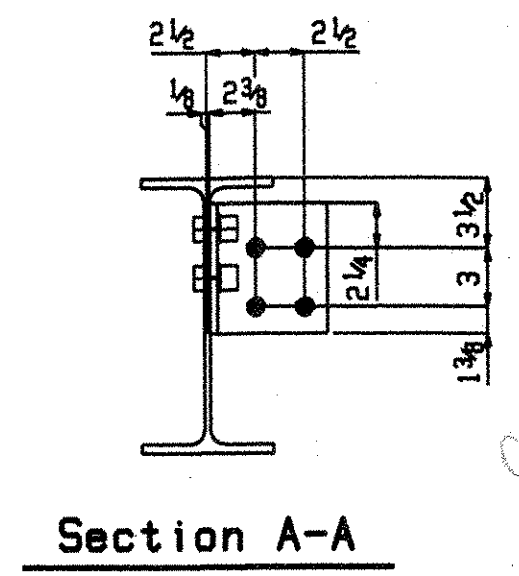
JOB NO.	DRG NO.
342	3



ONE BEAM FB35

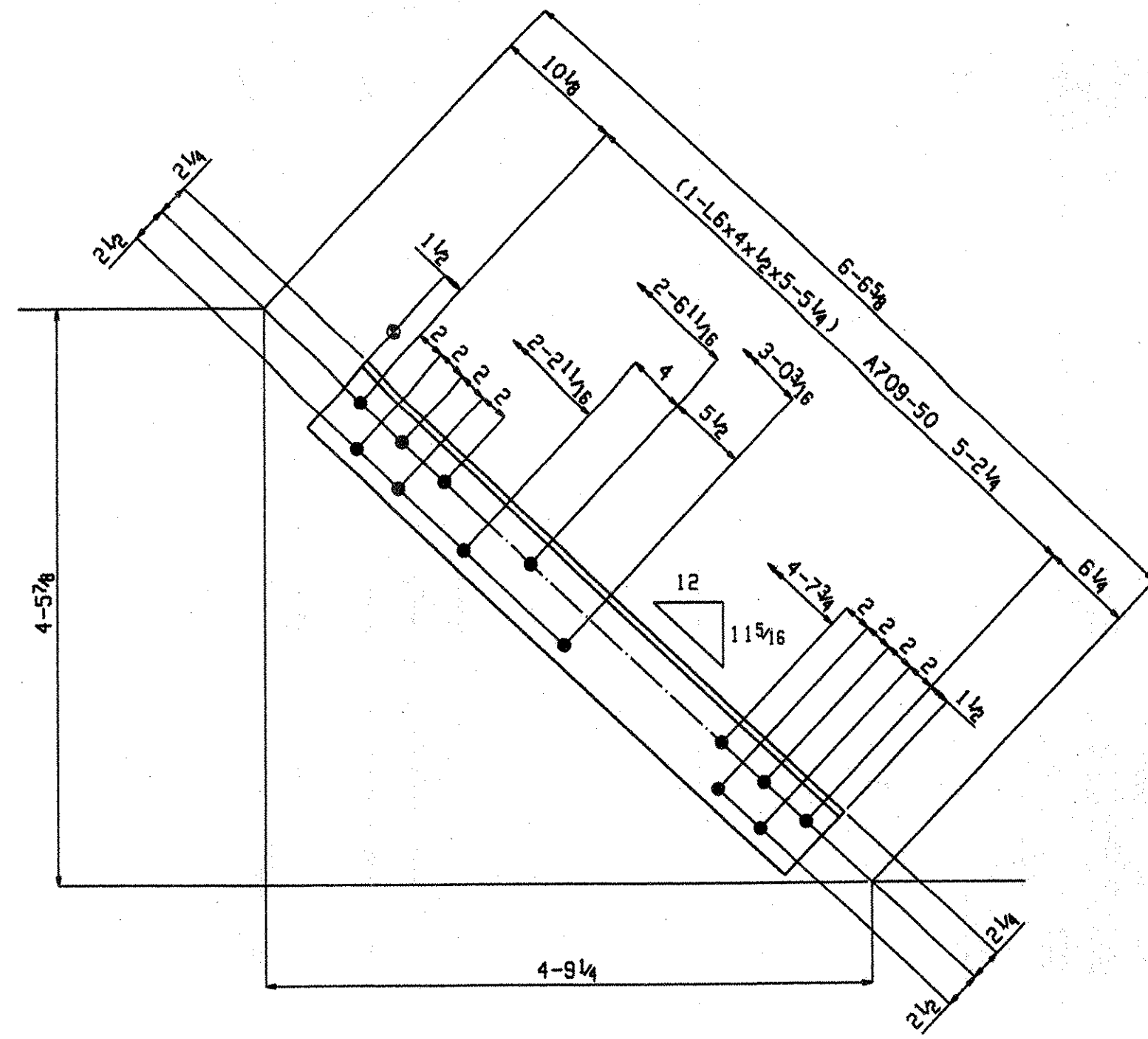
W14x34
F6 3/4 x 7/16

SHOP BOLTS:
4-7/8x2 A325



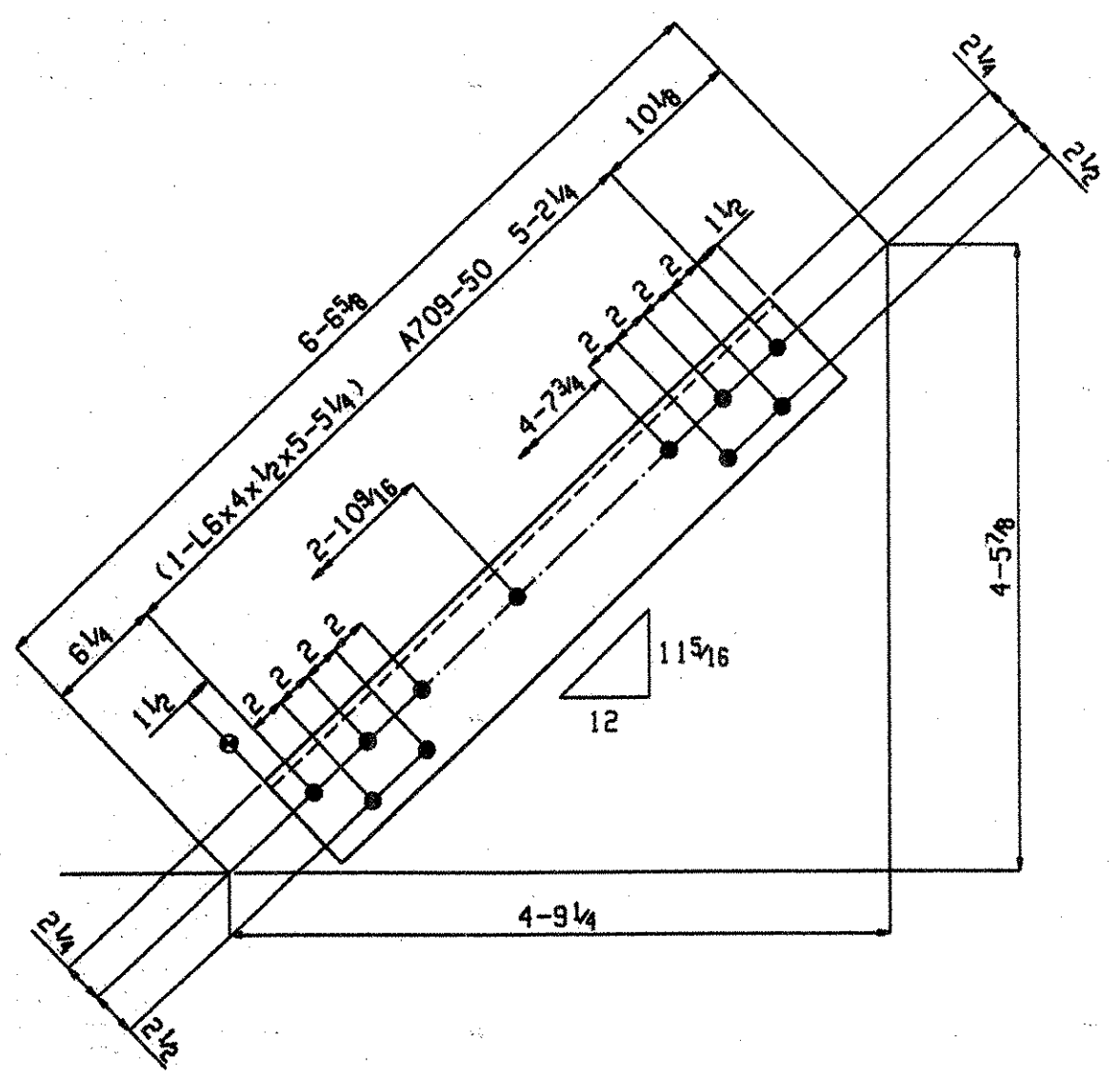
Section A-A
FB35

*correct hole
but should be
at an angle*



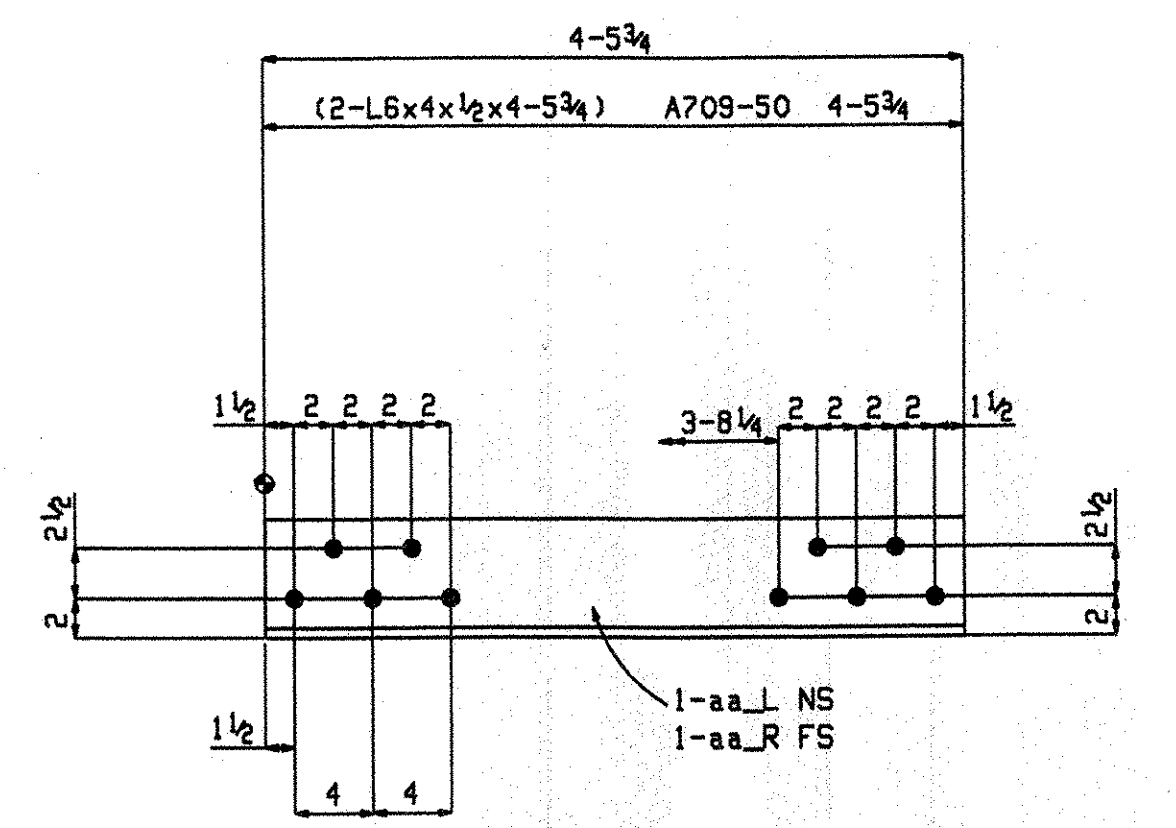
ONE VERTICAL BRACE FB35_ab

SHOP NOTE:
TOE DIRECTION NEAR SIDE
LONG LEG SHOWN

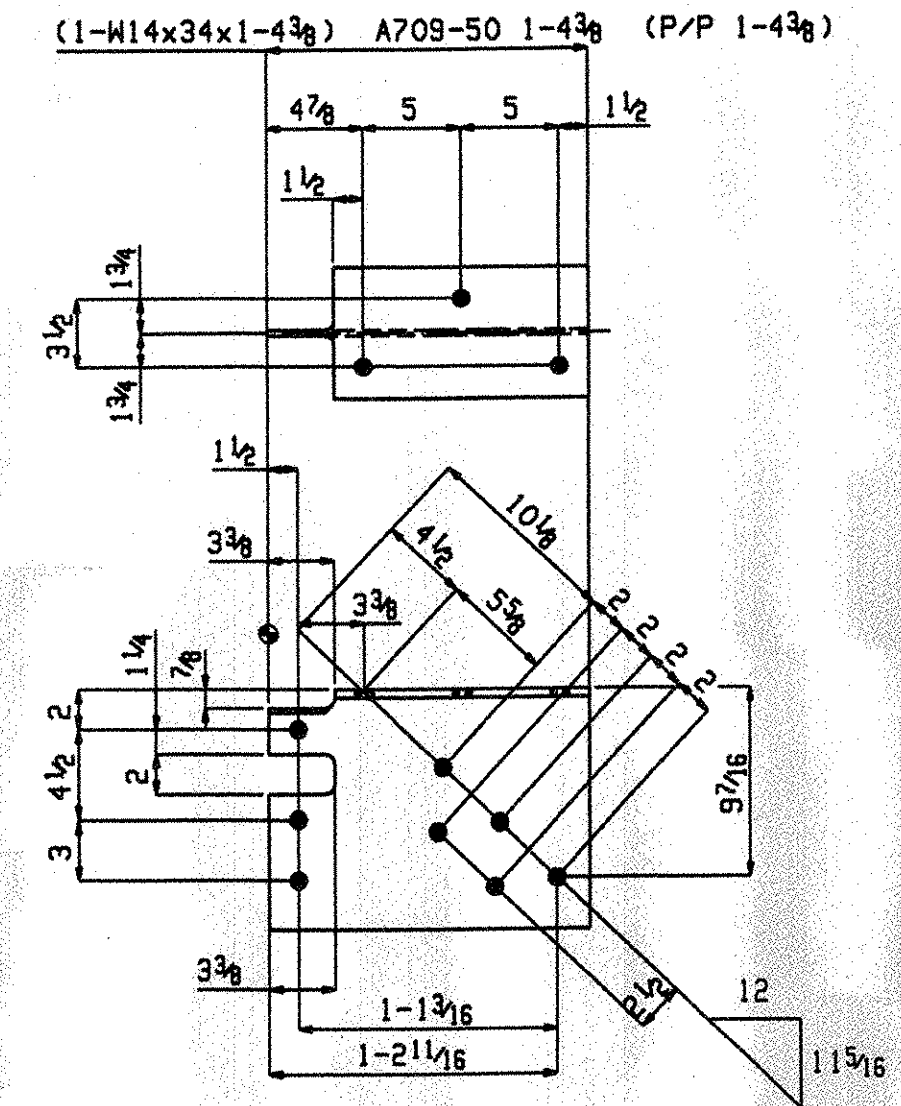


ONE VERTICAL BRACE FB35_ac

SHOP NOTE:
TOE DIRECTION FAR SIDE
LONG LEG SHOWN

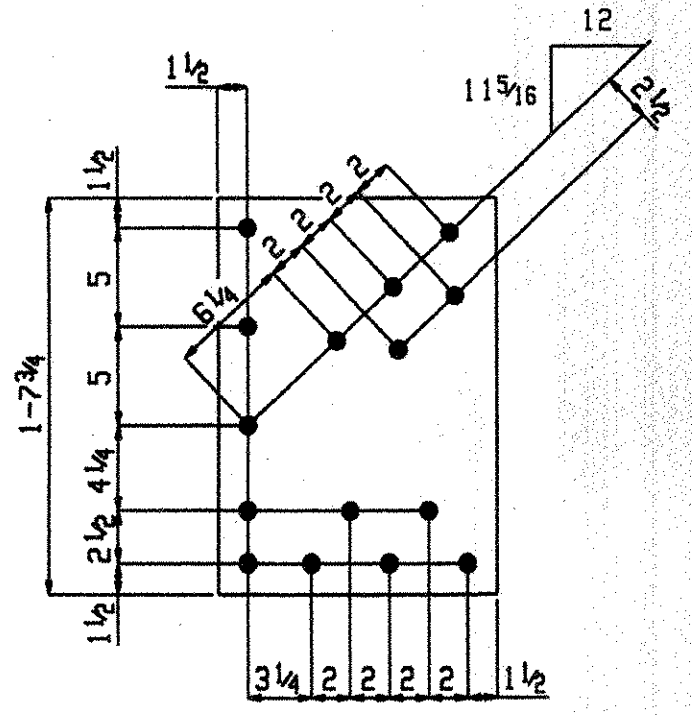


ONE HORIZONTAL BRACE FB35_aa

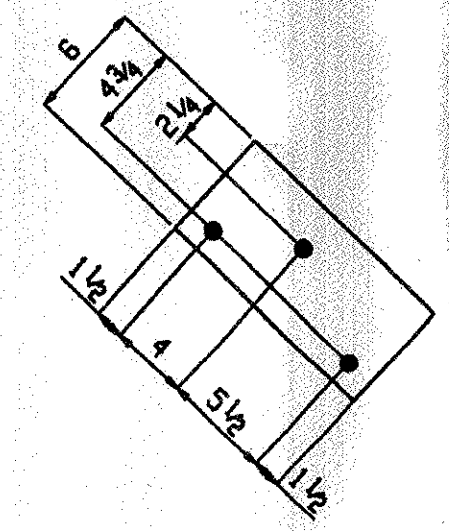


2 BEAMS FB35_ma

W14x34
F6 3/4 x 7/16



2 PLATES FB35_pb



ONE PLATE FB35_pc

*Need
more
girth
of
figure*

*Need
2 more*

BILL OF MATERIAL

Quantity	Description	Length	Mark	Piece	Remarks
ONE	BEAM			FB35	
1	W14x34	5 5	FB35		A709-50
1	L6x4x3/8	0 6 5/8	a512		A709-50
1	L6x4x3/8	0 6 5/8	a510		A709-50
4	7/8 Dia A325	0 2			1 HD WASH
	FIELD BOLTS				
6	7/8 Dia A325	0 2 1/2			1 HD WASH
6	7/8 Dia A325	0 2 1/4			1 HD WASH
4	7/8 Dia A325	0 2			1 HD WASH
ONE	HORIZONTAL BRACE			FB35_aa	
1	L6x4x1/2	4 5 3/4	FB35_aaL		A709-50
1	L6x4x1/2	4 5 3/4	FB35_aaR		A709-50
	FIELD BOLTS				
10	7/8 Dia A325	0 2 1/2			1 HD WASH
ONE	VERTICAL BRACE			FB35_ab	
1	L6x4x1/2	5 5 1/4	FB35_ab		A709-50
	FIELD BOLTS				
1	7/8 Dia A325	0 2 1/2			1 HD WASH
12	7/8 Dia A325	0 2			1 HD WASH
ONE	VERTICAL BRACE			FB35_ac	
1	L6x4x1/2	5 5 1/4	FB35_ac		A709-50
	FIELD BOLTS				
10	7/8 Dia A325	0 2			1 HD WASH
2	BEAM			FB35_ma	
2	W14x34	1 4 3/8	FB35_ma		A709-50
	FIELD BOLTS				
6	7/8 Dia A325	0 2			1 HD WASH
2	PLATE			FB35_pb	
2	PL 3/8 x 14 1/4	1 7 3/4	FB35_pb		A709-50
	FIELD BOLTS				
10	7/8 Dia A325	0 2 1/4			1 HD WASH
ONE	PLATE			FB35_pc	
1	PL 5/8 x 6	1 0 1/2	FB35_pc		A709-50

OUT FOR APPROVAL	10/15										
OUT FOR APPROVAL											
ISSUED TO SHOP	10/29										
FIELD & OFFICE											
REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER

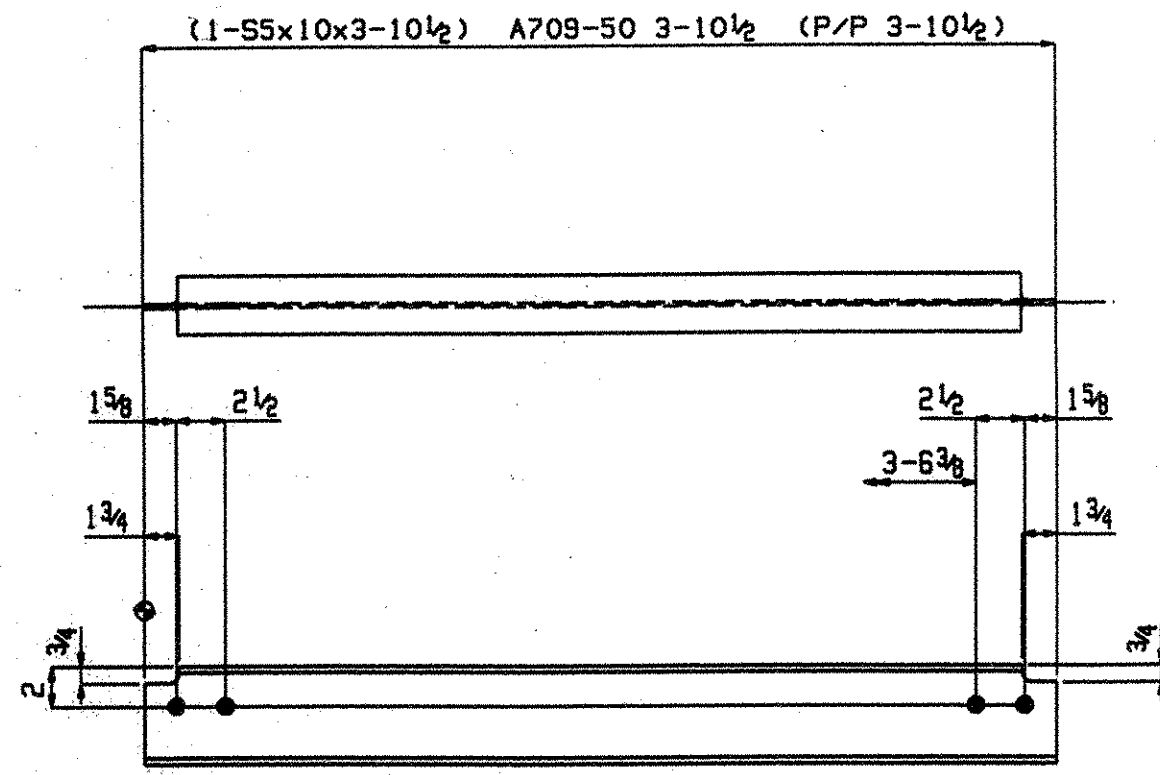
PROJECT NO. BHF 028-1(2) STATE PROJECT NO. F128(9)
 MATERIAL : AS NOTED ELECTRODES : E70LH HOLES : 15/16 φ UNO SHOP BOLTS : 7/8 φ
 SURFACE PREPN & PAINT : GALVANIZED

DESCRIPTION : STRUCTURAL DETAILS	DRAWN BY	DATE
JOB : GRAND ISLE-NORTH HERO BRIDGE COUNTY OF GRANDE ISLE, VT.	LCL	OCTOBER 2007
	CHECKED BY	DATE
	LB	OCTOBER 2007
	APPROVED BY	DATE
	Q.A.	DATE
CUSTOMER : STATE OF VERMONT HIGHWAY DEPARTMENT	JOB NO.	DRG. NO.
CASCO BAY STEEL STRUCTURES, INC.	342	5
75 SPRING HILL ROAD SACO, MAINE 04072	Rev:	
PHONE (207) 282-7360 FAX. (207) 282-1179	Job:	

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 REBUBMIT APPROVED [Signature]
 BY DATE 11/5/07

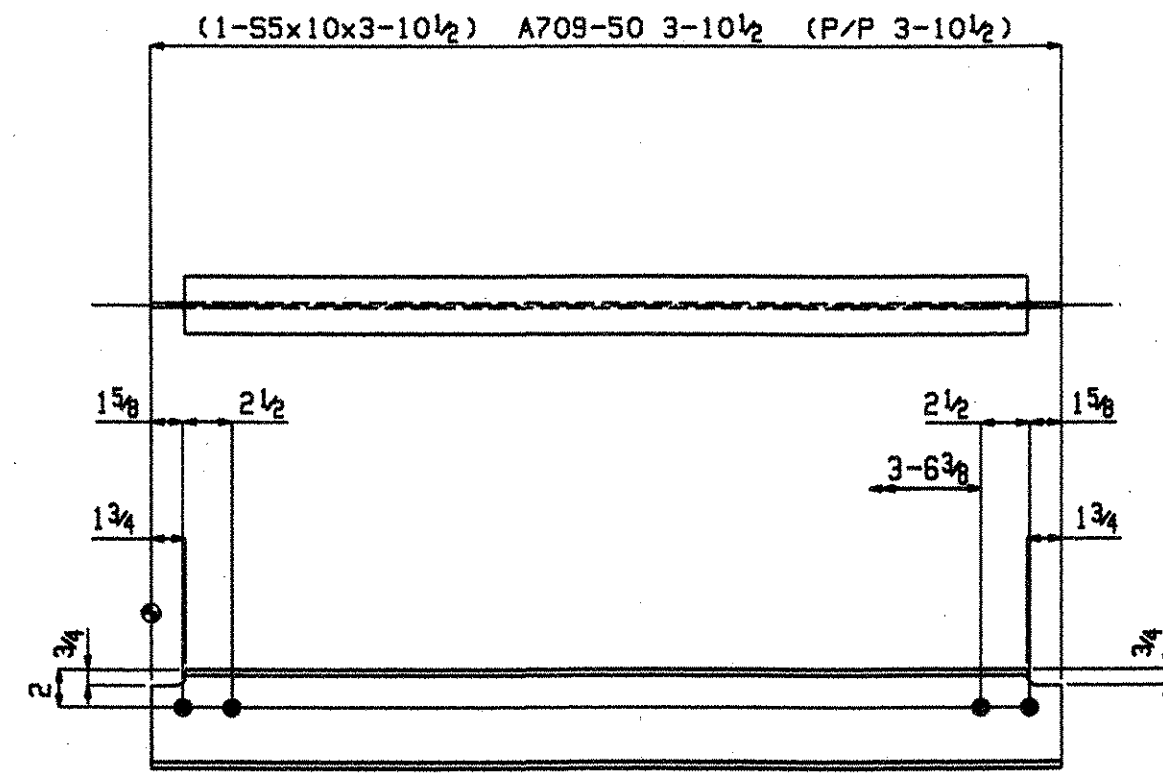
DRAWINGS PREPARED BY:
 PATRIOT DRAFTING LLC.

JOB NO.	DRG. NO.
342	5



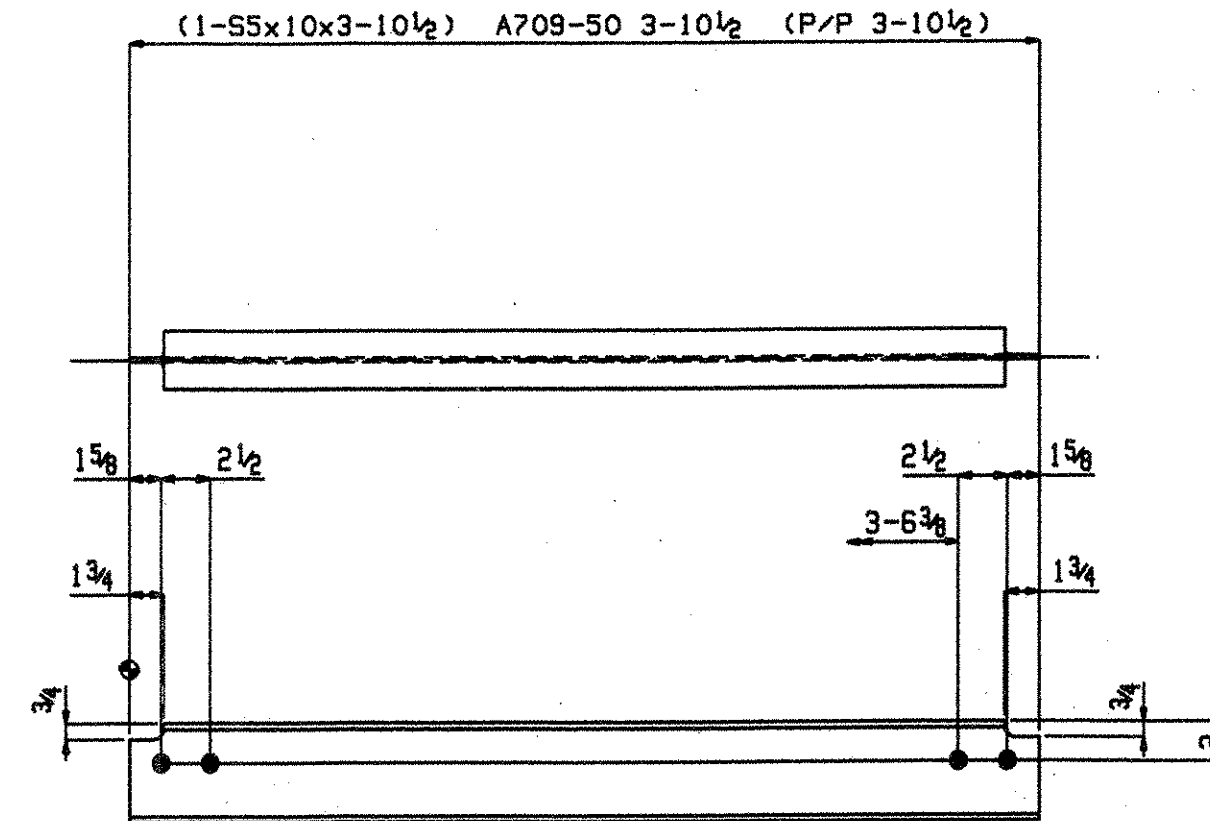
ONE BEAM FB8

W|5x3/16
F|3x3/16



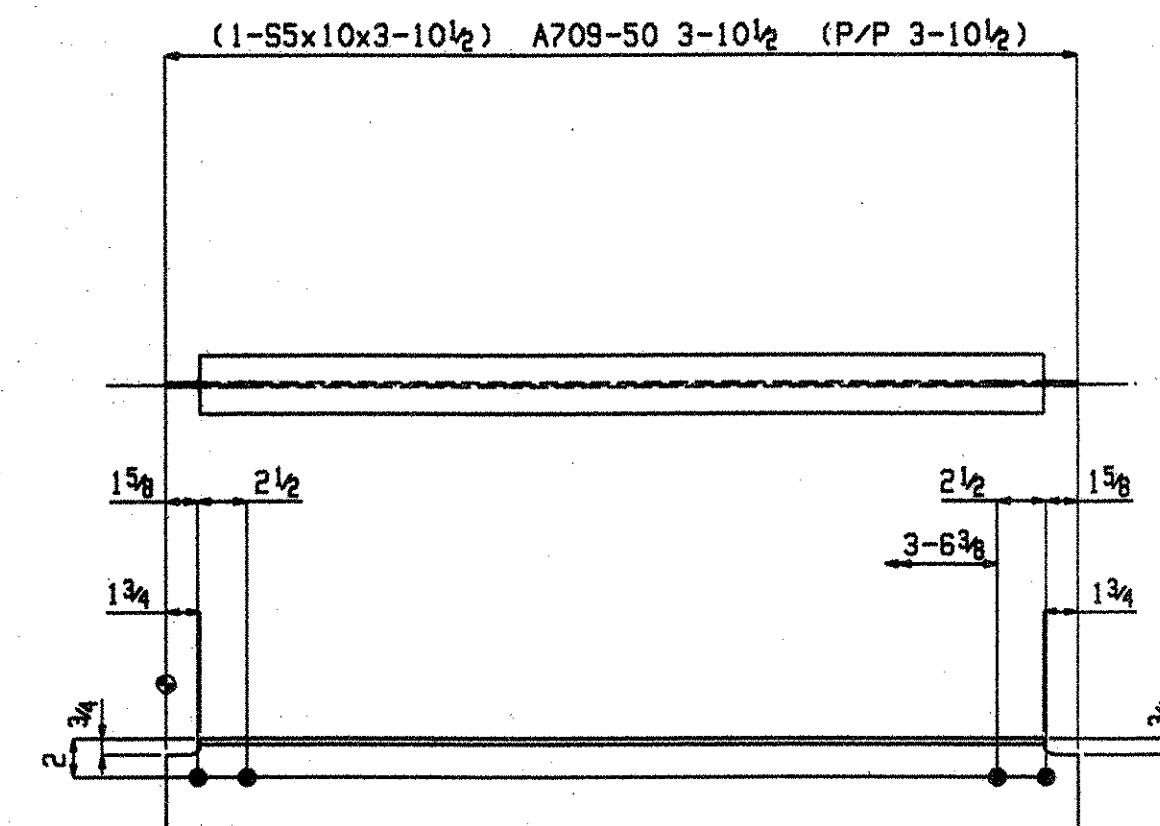
2 BEAMS FB9_L

W|5x3/16
F|3x3/16



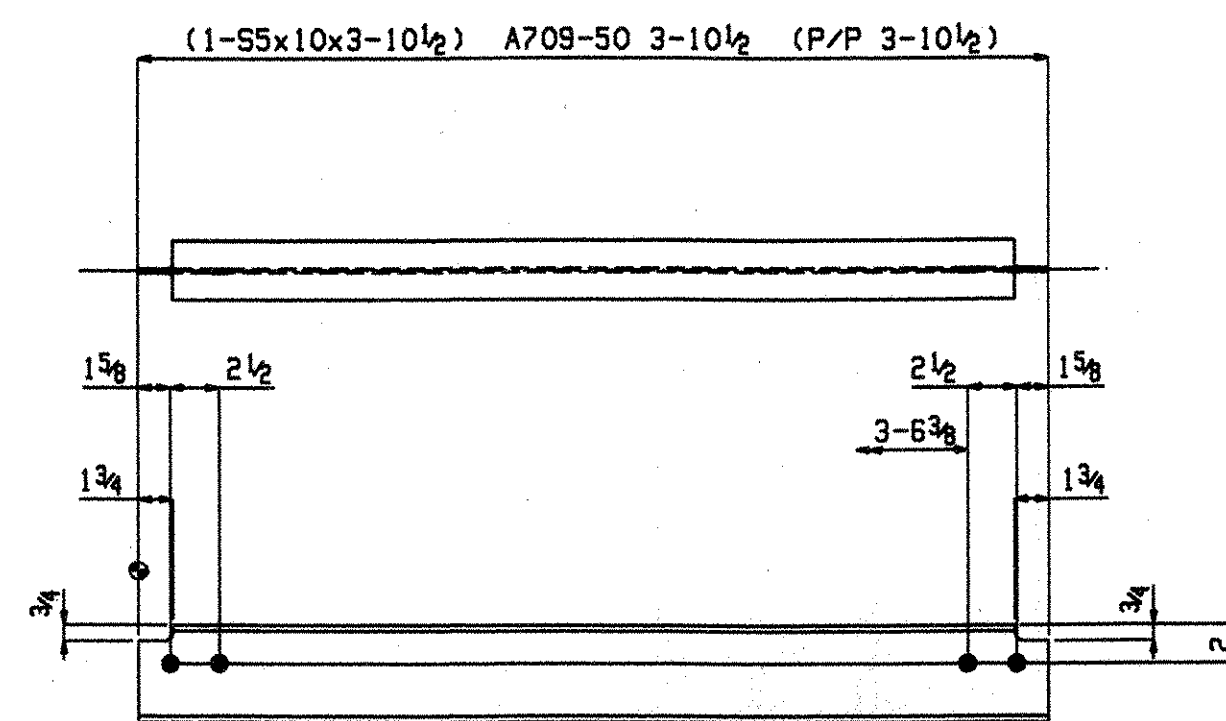
2 BEAMS FB9_R

W|5x3/16
F|3x3/16



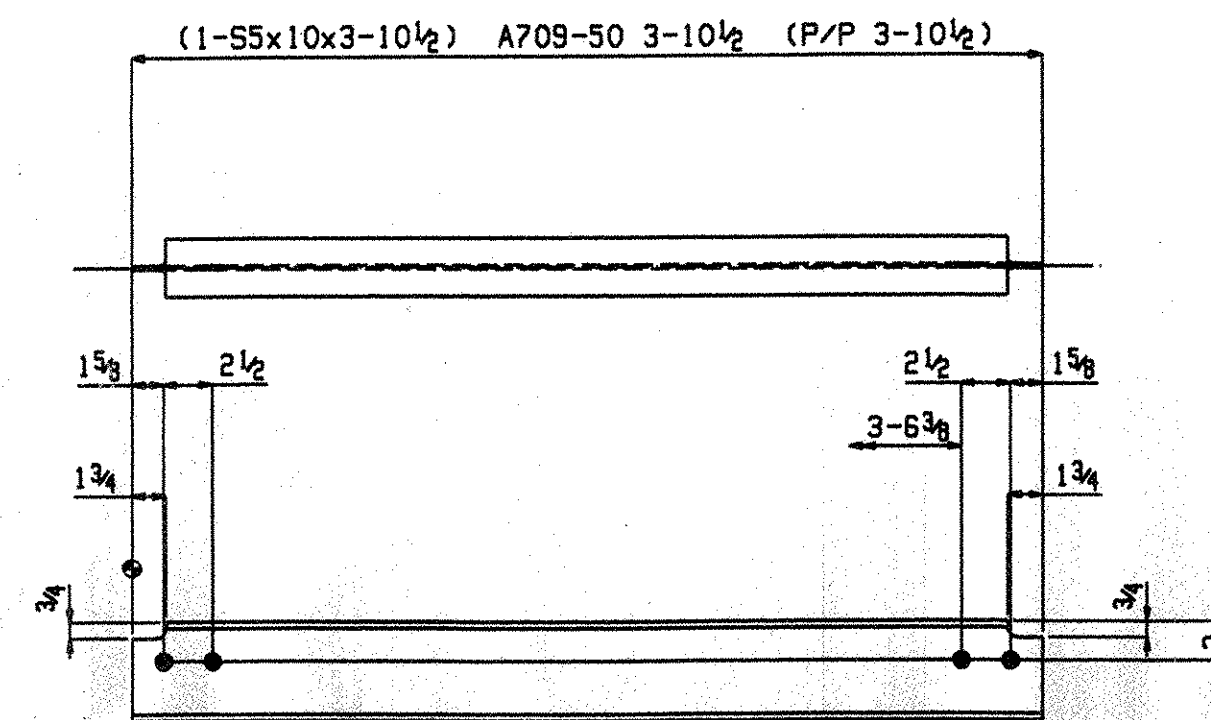
ONE BEAM FB47_L

W|5x3/16
F|3x3/16



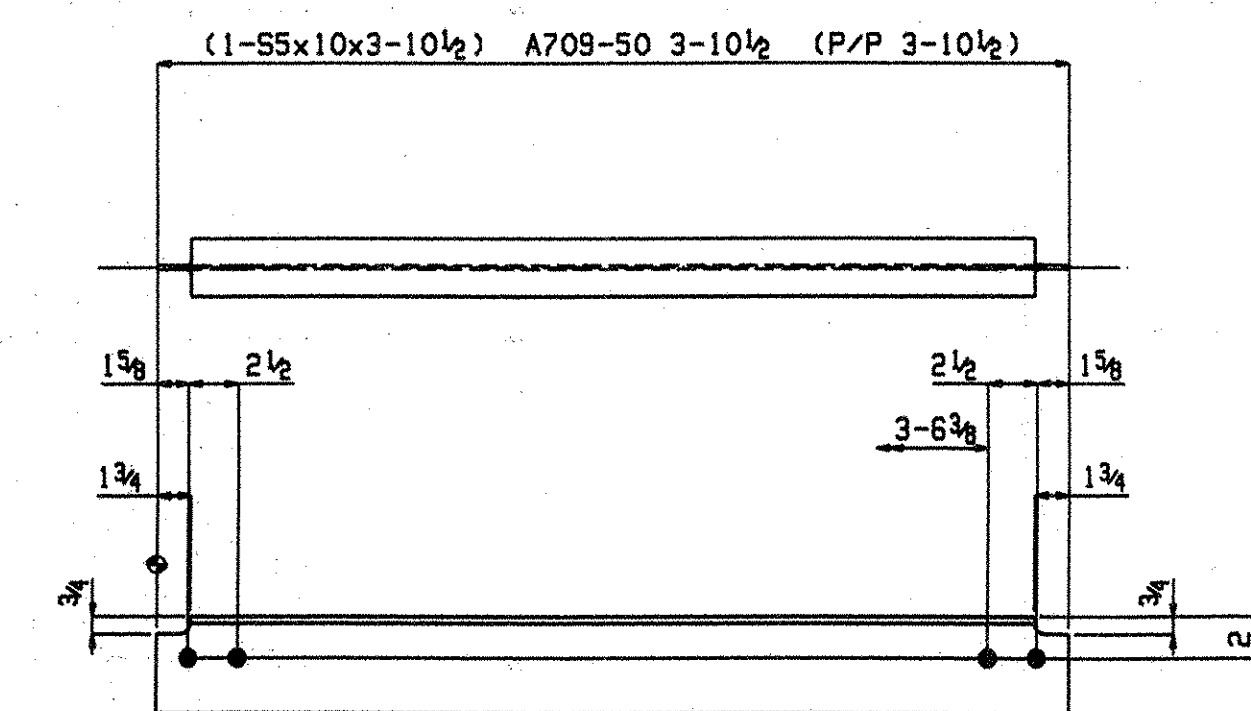
ONE BEAM FB47_R

W|5x3/16
F|3x3/16



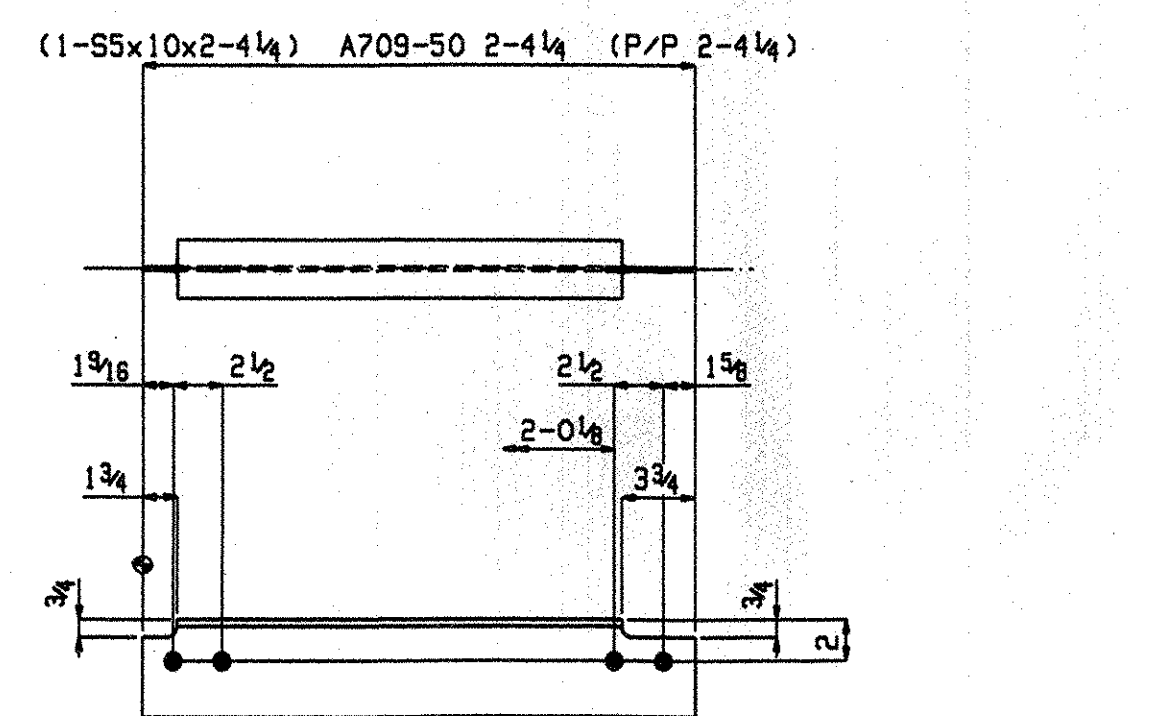
ONE BEAM FB48

W|5x3/16
F|3x3/16



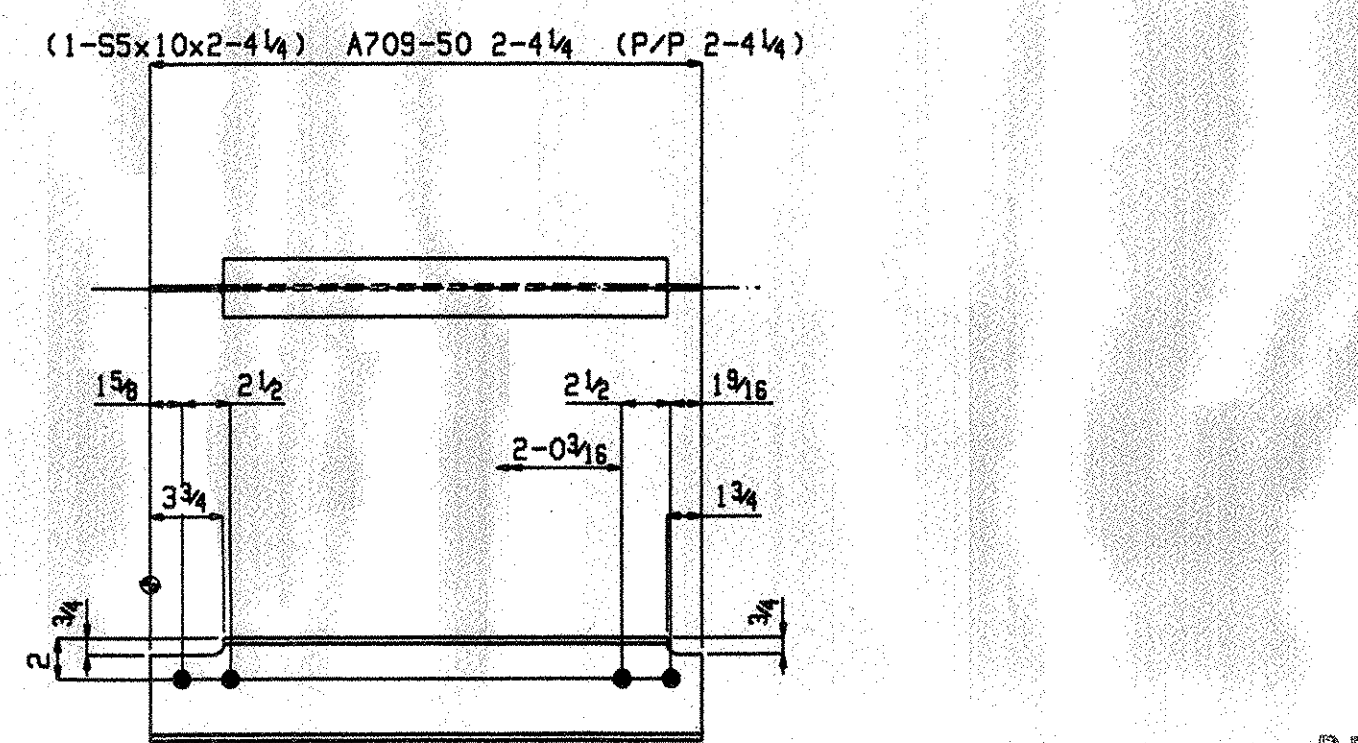
ONE BEAM FB49

W|5x3/16
F|3x3/16



3 BEAMS FB10_L

W|5x3/16
F|3x3/16



6 BEAMS FB10_R

W|5x3/16
F|3x3/16

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DRAWINGS PREPARED BY:
PATRIOT DRAFTING LLC.

BILL OF MATERIAL

Quantity	Description	Length	Mark	Remarks
ONE BEAM			FBB	
1 S5x10		3 10 1/2	FBB	A709-50
	FIELD BOLTS			
4 7/8 Dia A325		0 2		1 HD WASH
2 BEAM			FB9_L	
2 S5x10		3 10 1/2	FB9_L	A709-50
	FIELD BOLTS			
8 7/8 Dia A325		0 2		1 HD WASH
2 BEAM			FB9_R	
2 S5x10		3 10 1/2	FB9_R	A709-50
	FIELD BOLTS			
8 7/8 Dia A325		0 2		1 HD WASH
ONE BEAM			FB47_L	
1 S5x10		3 10 1/2	FB47_L	A709-50
	FIELD BOLTS			
4 7/8 Dia A325		0 2		1 HD WASH
ONE BEAM			FB47_R	
1 S5x10		3 10 1/2	FB47_R	A709-50
	FIELD BOLTS			
4 7/8 Dia A325		0 2		1 HD WASH
ONE BEAM			FB48	
1 S5x10		3 10 1/2	FB48	A709-50
	FIELD BOLTS			
4 7/8 Dia A325		0 2		1 HD WASH
ONE BEAM			FB49	
1 S5x10		3 10 1/2	FB49	A709-50
	FIELD BOLTS			
4 7/8 Dia A325		0 2		1 HD WASH
3 BEAM			FB10_L	
3 S5x10		2 4 1/4	FB10_L	A709-50
	FIELD BOLTS			
12 7/8 Dia A325		0 2		1 HD WASH
6 BEAM			FB10_R	
6 S5x10		2 4 1/4	FB10_R	A709-50
	FIELD BOLTS			
24 7/8 Dia A325		0 2		1 HD WASH

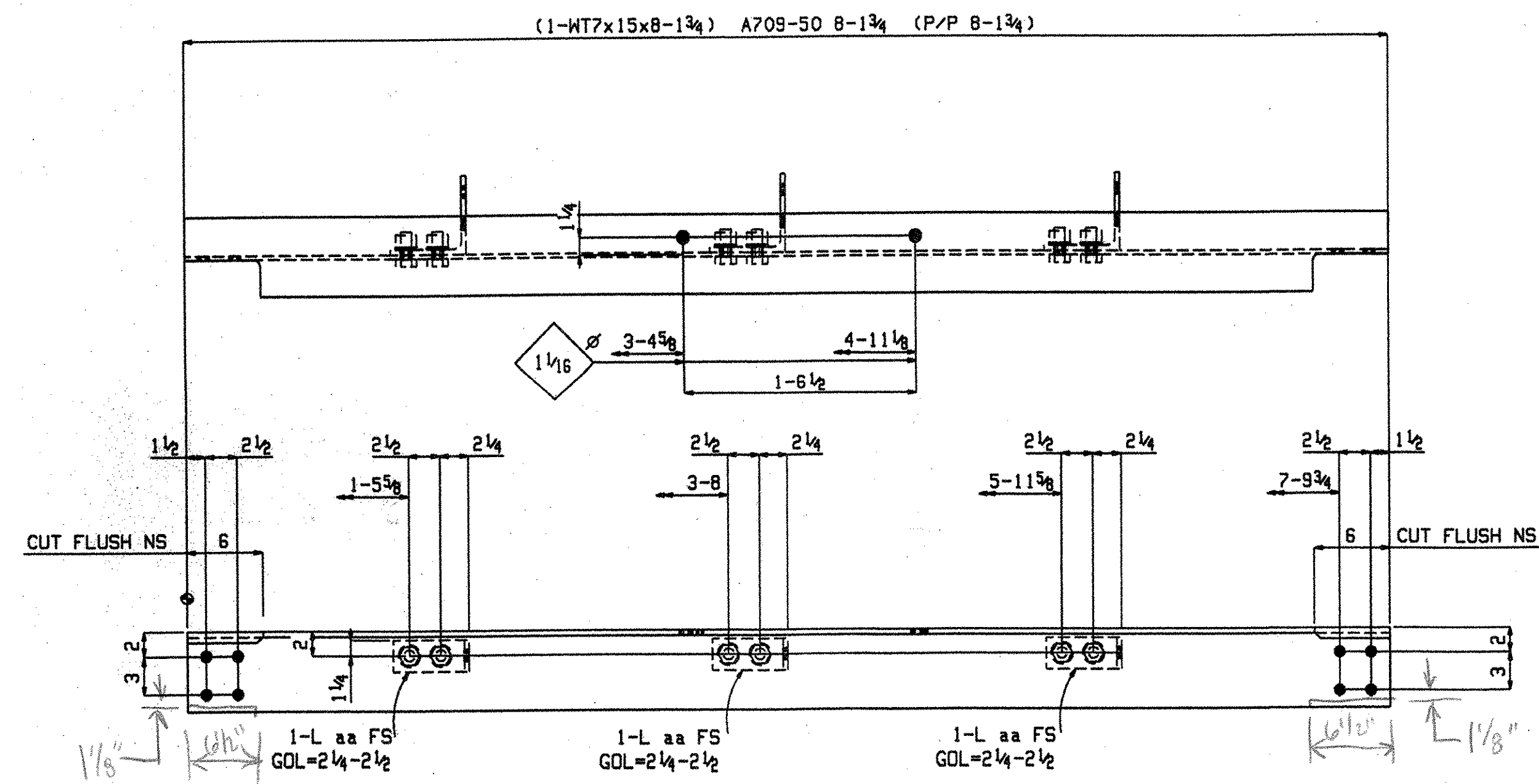
OUT FOR APPROVAL	10/15										
ISSUED TO SHOP	10/29										
FIELD & OFFICE											
REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER

PROJECT NO. BHF 028-1(2)	STATE PROJECT NO. F128(9)		
MATERIAL : AS NOTED	ELECTRODES : E70LH	HOLES : 15/16 φ UNO	SHOP BOLTS : 7/8 φ
SURFACE PREPN & PAINT : GALVANIZED			
DESCRIPTION : STRUCTURAL DETAILS	JOB :	GRAND ISLE-NORTH HERO BRIDGE COUNTY OF GRANDE ISLE, VT.	
CUSTOMER : STATE OF VERMONT HIGHWAY DEPARTMENT	JOB NO. :	342	DRG. NO. : 6
CASCO BAY STEEL STRUCTURES, INC.	75 SPRING HILL ROAD PHONE (207) 282-7360	SACO, MAINE 04072 FAX: (207) 282-1179	Nov 01 2007 10:59:35 AM

JOB NO.	DRG NO.
342	6

BILL OF MATERIAL

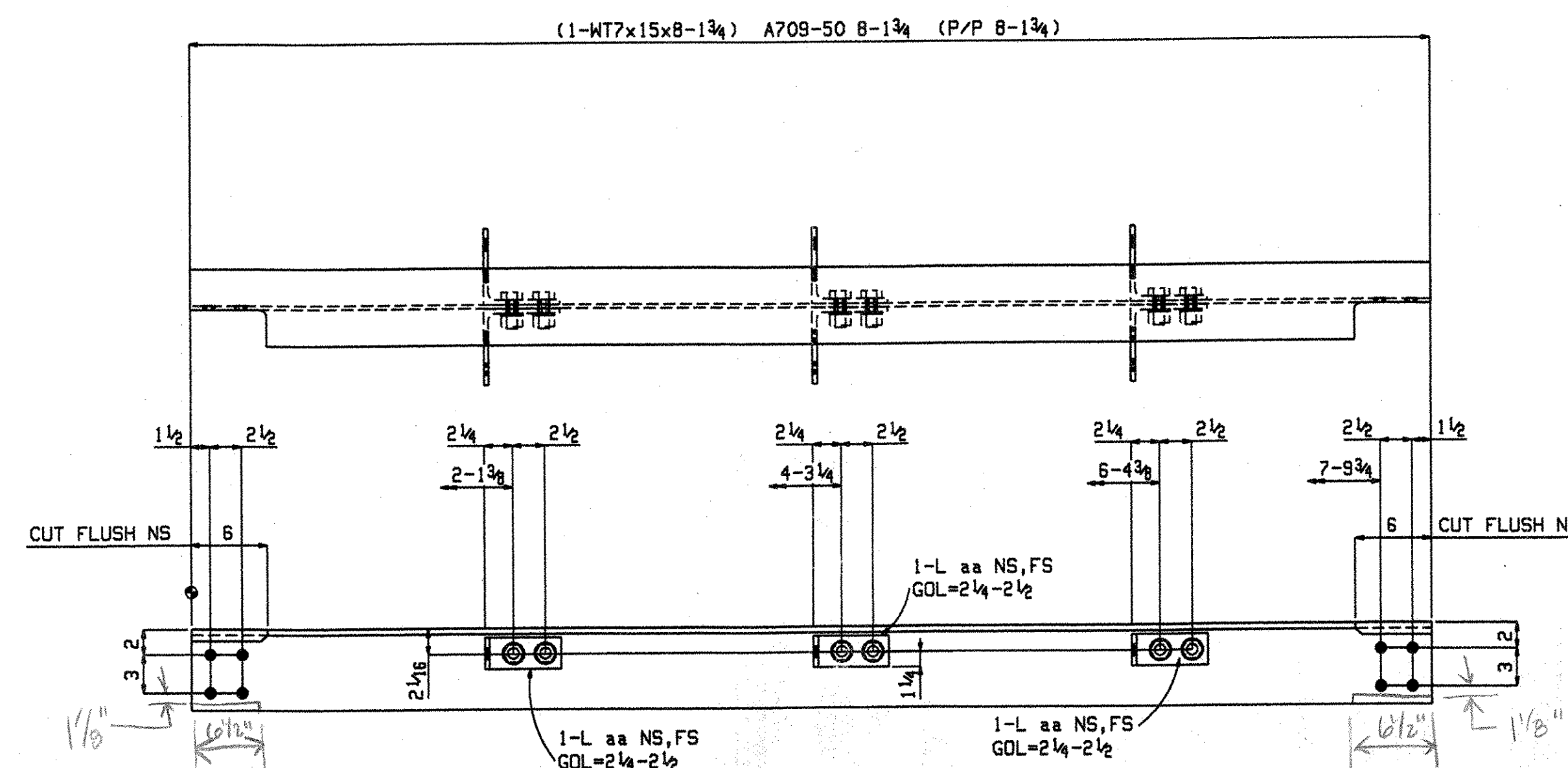
Quantity	Description	Length	Piece	Remarks
Total			Mark	
ONE BEAM			FB7	
1	WT7x15	8 13/4	FB7	A709-50
3	L6x6x3/8	0 2 1/2	aa	A709-50
6	7/8 Dia A325	0 2		1HD WASH
FIELD BOLTS				
8	7/8 Dia A325	0 2		1 HD WASH
ONE BEAM			FB50_L	
1	WT7x15	8 13/4	FB50_L	A709-50
6	L6x6x3/8	0 2 1/2	aa	A709-50
6	7/8 Dia A325	0 2 1/4		1HD WASH
FIELD BOLTS				
8	7/8 Dia A325	0 2		1 HD WASH
ONE BEAM			FB50_R	
1	WT7x15	8 13/4	FB50_R	A709-50
6	L6x6x3/8	0 2 1/2	aa	A709-50
6	7/8 Dia A325	0 2 1/4		1HD WASH
FIELD BOLTS				
8	7/8 Dia A325	0 2		1 HD WASH



ONE BEAM FB7

W 6 15/16 x 1/4
F 6 3/4 x 3/8

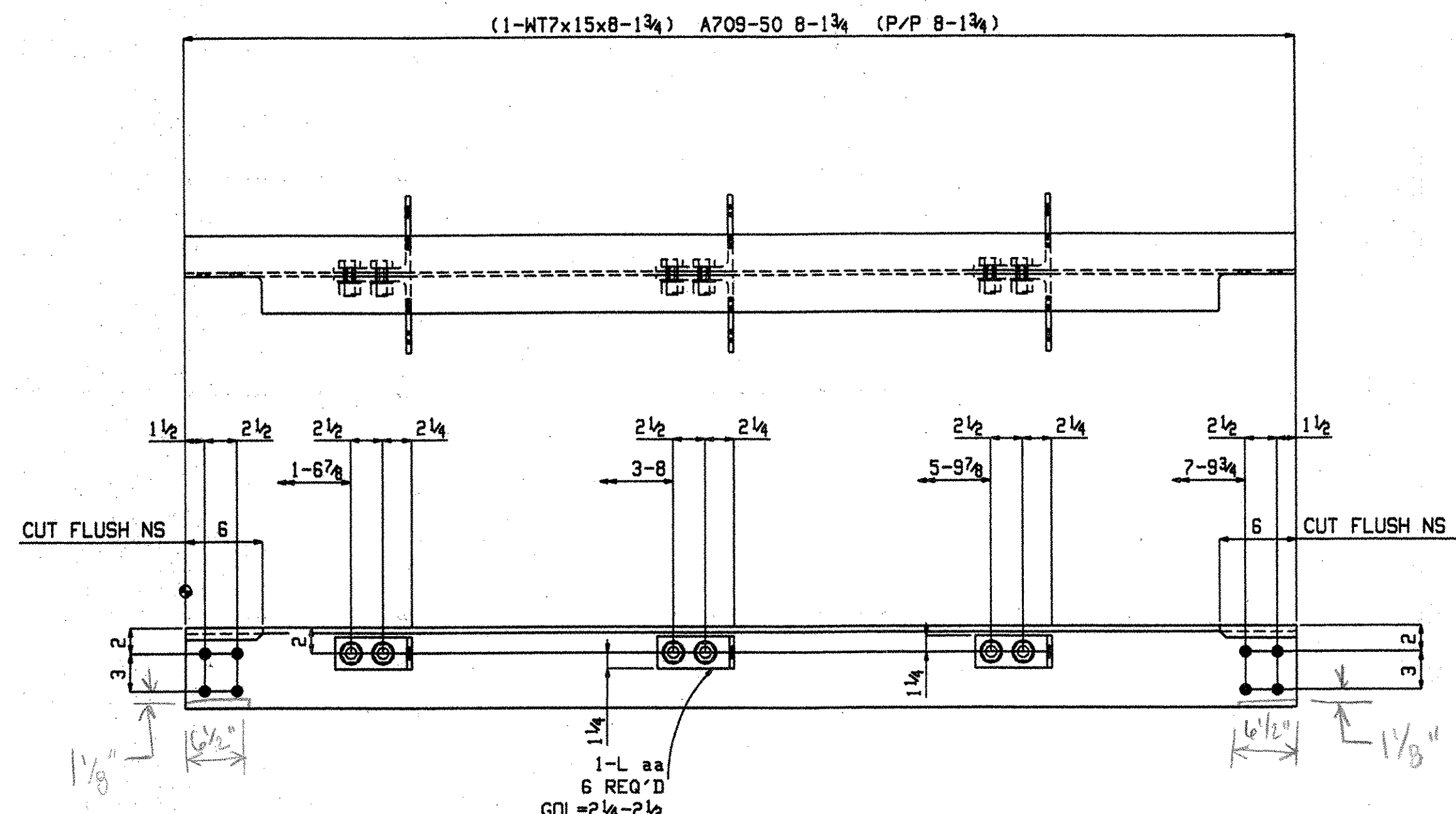
SHOP BOLTS:
6-7/8x2 A325



ONE BEAM FB50_L

W 6 15/16 x 1/4
F 6 3/4 x 3/8

SHOP BOLTS:
6-7/8x2 1/4 A325



ONE BEAM FB50_R

W 6 15/16 x 1/4
F 6 3/4 x 3/8

SHOP BOLTS:
6-7/8x2 1/4 A325

OUT FOR APPROVAL	10/15																			
OUT FOR APPROVAL																				
ISSUED TO SHOP	10/23																			
FIELD & OFFICE																				

REV.	REMARKS	DATE	DWN	CHK	APP	O.A.	NO.	DIA.	LGT	TYPE	WASHER
PROJECT NO. BHF 028-1(2) STATE PROJECT NO. F128(9)											
MATERIAL : AS NOTED ELECTRODES : E70LH HOLES : 15/16 φ UNO SHOP BOLTS : 7/8 φ											
SURFACE PREPN & PAINT : GALVANIZED											
DESCRIPTION : STRUCTURAL DETAILS											
JOB : GRAND ISLE-NORTH HERO BRIDGE COUNTY OF GRANDE ISLE, VT.											
CUSTOMER : STATE OF VERMONT HIGHWAY DEPARTMENT											
CASCO BAY STEEL STRUCTURES, INC.											
75 SPRING HILL ROAD SACO, MAINE 04072 Nov 01 2007											
PHONE (207) 282-7360 FAX. (207) 282-1179 10:59:36 AM											
JOB NO. DRG. NO.											
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FAB. JOB. REV.											

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JOB NO.	DRG NO.
342	8

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ISI WELDING PROCEDURE SPECIFICATION

Proc. Qual. Record No. (PQR#)	IDSI-6		
Material Specification	ASTM A36, A588, A709 Gr 36, A709 Gr 50, A709 Gr 50W, A572 Gr50 or A992 - as per approved shop drawings.		
Welding Process	GMAW		
Manual or Semi-auto	Semi-automatic		
Position of Welding	1G - Flat		
Filler Metal Specification	AWS A5.18		
Filler Metal Classification	AWS ER70S-6		
Electrode and Manufacturer	ESAB Spoolarc 86		
Shielding Gas	85% Argon 15% CO2	Dew Point	-40degree F Min.
Flow Rate	40 cfh		
Single or Multiple Pass	Single		
Single or Multiple Arc	Single		
Welding Current	DC		
Polarity	Reverse		
Welding Progression	NA		
Root Treatment	Wire brush as necessary to remove foreign material		
Preheat and Interpass Temp.	50 degree F min to 400 degree F Max		
Postheat Temperature	None		
Heat Input	25.5 kJ/in Min. to 36 kJ/in Max.		

DATE 11-5-07

NOTES:

WELDING PROCEDURE

Pass no.	Electrode size	Welding Parameters		Travel speed	MAIN RAIL PUDDLE WELD JOINT DETAIL
		Amperes	Volts		
All	.045	257-300	26.5-29	14.5 - 16 IPM	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in AWS D1.3, Section 5A.

Procedure no. IDSI-6-1A Fabricator Interlocking Deck Systems International, LLC
 Revision no. 1 Authorized By Brad King CWI #02100701
 Date 08-07-2006

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 OCT 29 2007
 RESUBMIT _____ APPROVED _____
 BY _____ DATE 11-5-07

ISI WELDING PROCEDURE SPECIFICATION

Proc. Qual. Record No. (PQR#)	IDSI-6		
Material Specification	ASTM A36, A588, A709 Gr 36, A709 Gr 50, A709 Gr 50W, A572 Gr50 or A992 - as per approved shop drawings.		
Welding Process	GMAW		
Manual or Semi-auto	Semi-automatic		
Position of Welding	1G - Flat		
Filler Metal Specification	AWS A5.18		
Filler Metal Classification	AWS ER70S-6		
Electrode and Manufacturer	ESAB Spoolarc 86		
Shielding Gas	85% Argon 15% CO2	Dew Point	-40degreeF Min.
Single or Multiple Pass	Single	Flow Rate	40 cfh
Single or Multiple Arc	Single		
Welding Current	DC		
Polarity	Reverse		
Welding Progression	NA		
Root Treatment	Wire brush as necessary to remove foreign material		
Preheat and Interpass Temp.	50 degree F min to 400 degree F Max		
Postheat Temperature	None		
Heat Input	25.5 kJ/in Min. to 36 kJ/in Max.		

NOTES: ✓

WELDING PROCEDURE

Pass no.	Electrode size	Welding Parameters		Travel speed	CROSS-BAR PUDDLE WELD JOINT DETAIL
		Amperes	Volts		
All	.045	257-300	26.5-29	14.5 - 16 IPM	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in AWS D1.3, Section 5A.

Procedure no. IDSI-6-2A Fabricator Interlocking Deck Systems International, LLC
 Revision no. 1 Authorized By Brad King CWI #02100701
 Date 08-07-2006

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 DATE 11-5-07

ISI WELDING PROCEDURE SPECIFICATION

Proc. Qual. Record No. (PQR#)	IDSI-6		
Material Specification	ASTM A36, A588, A709 Gr 36, A709 Gr 50, A709 Gr 50W, A572 Gr50 or A992 - as per approved shop drawings.		
Welding Process	GMAW		
Manual or Semi-auto	Semi-automatic		
Position of Welding	2F Horizontal & 1G - Flat		
Filler Metal Specification	AWS A5.18		
Filler Metal Classification	AWS ER70S-6		
Electrode and Manufacturer	ESAB Spoolarc 86		
Shielding Gas	85% Argon	Dew Point	Flow Rate
Single or Multiple Pass	15% CO2	-40degree F Min.	40 cfh
Single or Multiple Arc	Single		
Welding Current	DC		
Polarity	Reverse		
Welding Progression	NA		
Root Treatment	Wire brush as necessary to remove foreign material		
Preheat and Interpass Temp.	50 degree F min to 400 degree F Max		
Postheat Temperature	None		
Heat Input	25.5 kJ/in Min. to 36 kJ/in Max.		

NOTES: ✓

WELDING PROCEDURE

Pass no.	Electrode size	Welding Parameters		Travel speed	SUPPLEMENTAL BAR SPLICE WELD JOINT DETAIL
		Amperes	Volts		
All	.045	257-300	26.5-29	14.5 - 16 IPM	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in AWS D1.3, Section 5A.

Procedure no. IDSI-6-3A Fabricator Interlocking Deck Systems International, LLC
 Revision no. 1 Authorized By Brad King CWI #02100701
 Date 08-07-2006

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WELDING PROCEDURE SPECIFICATION

WITNESSED BY: JUL DATE BY: JUL
 OCT 29 2007
 RESUBMIT: APPROVED:
 BY: _____ DATE: 11-5-07

Proc. Qual. Record No. (PQR#)	IDSI-6		
Material Specification	ASTM A36, A588, A709 Gr 36, A709 Gr 50, A709 Gr 50W, A572 Gr50 or A992 - as per approved shop drawings.		
Welding Process	GMAW		
Manual or Semi-auto	Semi-automatic		
Position of Welding	2F Horizontal & 1G - Flat		
Filler Metal Specification	AWS A5.18		
Filler Metal Classification	AWS ER70S-6		
Electrode and Manufacturer	ESAB Spoolarc 86		
Shielding Gas	85% Argon 15% CO2	Dew Point	Flow Rate
Single or Multiple Pass	Single		
Single or Multiple Arc	Single		
Welding Current	DC		
Polarity	Reverse		
Welding Progression	NA		
Root Treatment	Wire brush as necessary to remove foreign material.		
Preheat and Interpass Temp.	50 degree F min to 400 degree F Max.		
Postheat Temperature	None		
Heat Input	25.5 kJ/in Min. to 36 kJ/in Max.		

NOTES:

WELDING PROCEDURE

Pass no.	Electrode size	Welding Parameters		Travel speed	DIAGONAL BAR SPLICE DETAIL
		Amperes	Volts		
All	.045	257-300	26.5-29	14.5 - 16 IPM	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in AWS D1.3, Section 5A.

Procedure no. IDSI-6-4A Fabricator Interlocking Deck Systems International, LLC
 Revision no. 1 Authorized By Brad King CWI #02100701
 Date 08-07-2006

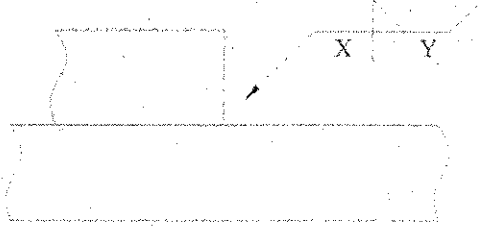
054 DGWP

ISI WELDING PROCEDURE SPECIFICATION

DESIGNED BY: Juc
 DATE: OCT 29 2007
 APPROVED BY: [Signature]
 DATE: 11-5-07

Proc. Qual. Record No. (PQR#)	IDSI-6			
Material Specification	ASTM A36, A588, A709 Gr 36, A709 Gr 50, A709 Gr 50W, A572 Gr50 or A992 - as per approved shop drawings.			
Welding Process	GMAW			
Manual or Semi-auto	Semi-automatic			
Position of Welding	2F - Horizontal			
Filler Metal Specification	AWS A5.18			
Filler Metal Classification	AWS ER70S-6			
Electrode and Manufacturer	ESAB Spoolarc 86			
Shielding Gas	85% Argon 15% CO ₂	Dew Point	-40degree F Min.	Flow Rate 40 cfm
Single or Multiple Pass	Single (see chart below)			
Single or Multiple Arc	Single			
Welding Current	DC			
Polarity	Reverse			
Welding Progression	NA			
Root Treatment	Wire brush as necessary to remove foreign material			
Preheat and Interpass Temp.	50 degree F min to 400 degree F Max			
Postheat Temperature	None			
Heat Input	25.5 kJ/in Min. to 36 kJ/in Max.			

NOTES:

Pass no.	Electrode size	Welding Parameters		Travel speed	FILLET WELD JOINT DETAIL
		Amperes	Volts		
1	.045	257-300	26.5-29	14.5 - 16 IPM	
Number of Passes Based on Fillet Weld Size					
Weld Size "X"		Number of Passes			
3/16" (5mm)		Single			
1/4" (6mm)		Single			
5/16" (8mm)		Single			

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in AWS D1.5, Section 5A.

Procedure no. IDSI-6-5A Fabricator Interlocking Deck Systems International, LLC
 Revision no. 2 Authorized By Brad King CWI #02100701
 Date 05-04-2007

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ISI WELDING PROCEDURE SPECIFICATION

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Proc. Qual. Record No. (PQR#)	IDSI-6		
Material Specification	ASTM A36, A588, A709 Gr 36, A709 Gr 50, A709 Gr 50W, A572 Gr50 or A992 - as per approved shop drawings.		
Welding Process	GMAW		
Manual or Semi-auto	Semi-automatic		
Position of Welding	1G - Flat		
Filler Metal Specification	AWS A5.18		
Filler Metal Classification	AWS ER70S-6		
Electrode and Manufacturer	ESAB Spoolarc 86		
Shielding Gas	85% Argon 15% CO2	Dew Point	-40degreeF Min.
Single or Multiple Pass	Single or Multiple (per chart below)		
Single or Multiple Arc	Single		
Welding Current	DC		
Polarity	Reverse		
Welding Progression	NA		
Root Treatment	Wire brush as necessary to remove foreign material		
Preheat and Interpass Temp.	50 degree F min to 400 degree F Max		
Postheat Temperature	None		
Heat Input	25.5 kJ/in Min. to 36 kJ/in Max.		

DATE 11-5-07

- NOTES:
- 1) Grind weld flush if required by job specification or as shown on shop drawings.
 - 2) Back-gouge to sound metal before welding 2nd side.

WELDING PROCEDURE

Pass no.	Electrode size	Welding Parameters		Travel speed	(B-U3-GF) JOINT DETAIL
		Amperes	Volts		
All	.045	257-300	26.5-29	14.5 - 16 IPM	

Number of Passes Based on Weld Size / Depth	
Weld Depth	Number of Passes
Less than or equal to 5/16"	Single
Greater than 5/16"	Multiple

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in AWS D1.3, Section 5A.

Procedure no. IDSI-6-14A Fabricator Interlocking Deck Systems International, LLC
 Revision no. 1 Authorized By Brad King CWI #02100701
 Date 08-07-2006

056-DGWP

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 DATE 11-5-07

ISI WELDING PROCEDURE SPECIFICATION

Proc. Qual. Record No. (POR#)	IDSI-6		
Material Specification	ASTM A36, A588, A709 Gr 36, A709 Gr 50, A709 Gr 50W, A572 Gr50 or A992 - as per approved shop drawings.		
Welding Process	GMAW		
Manual or Semi-auto	Semi-automatic		
Position of Welding	1G - Flat		
Filler Metal Specification	AWS A5.18		
Filler Metal Classification	AWS ER70S-6		
Electrode and Manufacturer	ESAB Spoolarc 86		
Shielding Gas	85% Argon	Dew Point	-40degree F Min.
Single or Multiple Pass	15% CO2	Flow Rate	40 cfm
Single or Multiple Arc	Single		
Welding Current	DC		
Polarity	Reverse		
Welding Progression	NA		
Root Treatment	Wire brush as necessary to remove foreign material		
Preheat and Interpass Temp.	50 degree F min to 400 degree F Max		
Postheat Temperature	None		
Heat Input	25.5 kJ/in Min. to 36 kJ/in Max.		

- NOTES:
 1) Grind weld flush if required by job specification or as shown on shop drawings.
 2) Dimensions 't' (material thickness) and 'S' (bevel size) are per approved shop drawings.

WELDING PROCEDURE

Size	Pass no.	Electrode size	Welding Parameters		Travel speed	SINGLE-BEVEL-GROOVE (TC-P4-GF)
			Amperes	Volts		
SI(E) Per Shop Dwgs	1	.045	257-300	26.5-29	14.5 - 16 IPM	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in AWS D1.5, Section 5A.

Procedure no. IDSI-6-26M Fabricator Interlocking Deck Systems International, LLC
 Revision no. 1 Authorized By Brad King CWI #02100701
 Date 05-04-2007

057-DGUP

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 TRAN'S
 DCD BY: [Signature]
 DATE: 11-5-07

ISI WELDING PROCEDURE SPECIFICATION

RESUBMIT: _____ APPROVED: [Signature]
 BY: _____ DATE: 11-5-07

Proc. Qual. Record No. (PQR#)	IDSI-6			
Material Specification	ASTM A36, A588, A709 Gr 36, A709 Gr 50, A709 Gr 50W, A572 Gr50 or A992 - as per approved shop drawings.			
Welding Process	GMAW			
Manual or Semi-auto	Semi-automatic			
Position of Welding	1G - Flat			
Filler Metal Specification	AWS A5.18			
Filler Metal Classification	AWS ER70S-6			
Electrode and Manufacturer	ESAB Spoolarc 86			
Shielding Gas	85% Argon	Dew Point	-40degreeF Min.	Flow Rate 40 cfm
	15% CO2			
Single or Multiple Pass	Single			
Single or Multiple Arc	Single			
Welding Current	DC			
Polarity	Reverse			
Welding Progression	NA			
Root Treatment	Wire brush as necessary to remove foreign material			
Preheat and Interpass Temp.	50 degree F min to 400 degree F Max			
Postheat Temperature	None			
Heat Input	25.5 kJ/in Min. to 36 kJ/in Max.			

NOTES:
 1) Weld finish (grind or not) according to approved shop drawings.
 2) Weld size as per approved shop drawings.

Pass no.	Electrode size	Welding Parameters		Travel speed	JOINT DETAIL
		Amperes	Volts		
All	.045	257-300	26.5-29	14.5 - 16 IPM	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in AWS D1.5, Section 5A.

Procedure no. IDSI-6-100B Fabricator Interlocking Deck Systems International, LLC
 Revision no. 0 Authorized By Brad King CWI #02100701
 Date 10-24-2007

058-DGWP

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REVISIONS		
REV	DESCRIPTION	DATE
0	INITIAL SUBMITTAL FOR REVIEW	10/24/2007

**VERMONT AGENCY OF TRANSPORTATION
US 2, BR 8 - GRAND ISLE DRAWBRIDGE
DRAWING SET 0697-07**

16 PANELS TOTAL

MATERIAL SPECIFICATIONS:

SEE BILL OF MATERIALS
NO CHAPPY V-NOTCH TEST REQUIREMENTS

INSTALLATION NOTES:

1. CONCRETE FORM PANS ARE NOT WATER TIGHT. CONCRETE AND WATER SEEPAGE WILL OCCUR. THIS CAN BE MINIMIZED BY SEALING VOIDS WITH SILICONE OF OTHER CONCRETE COMPATIBLE SEALANTS PRIOR TO PLACEMENT OF CONCRETE.
2. DURING PLACEMENT OF THE GRID PANELS, THE CONTRACTOR MUST PLACE EACH PANEL IN ITS PROPER POSITION AND VERIFY ITS LOCATION FROM A COMMON FIXED POINT. DOING SO, WILL MINIMIZE CUMULATIVE PLACEMENT ERRORS. CUMULATIVE ERRORS CAN RESULT IN A TOTAL DECK AREA LARGER OR SMALLER THAN THE ACTUAL AREA TO BE FILLED.
3. PANELS OF THE SAME TYPE SHOULD NOT BE INTERCHANGED. THEY SHOULD BE USED ONLY FOR THE LOCATION DESIGNATED ON THE PLAN VIEW IN ORDER TO INSURE PROPER ALIGNMENT.

SHOP DRAWINGS			
SHEET	REVISION	DATE	DESCRIPTION
1	0	10/24/2007	DRAWING INDEX
2	0	10/24/2007	SOUTH PLAN VIEW
3	0	10/24/2007	NORTH PLAN VIEW
4	0	10/24/2007	STANDARDS
5	0	10/24/2007	PANEL A LAYOUT
6	0	10/24/2007	PANEL B LAYOUT
7	0	10/24/2007	PANEL C LAYOUT
8	0	10/24/2007	PANEL D LAYOUT
9	0	10/24/2007	PANEL E LAYOUT
10	0	10/24/2007	PANEL F LAYOUT
11	0	10/24/2007	PANEL G LAYOUT
12	0	10/24/2007	PANEL H LAYOUT
13	0	10/24/2007	SECTIONS

FINISHING NOTES:

1. ENTIRE GRID DECK PANEL TO BE GALVANIZED AS PER ASTM A123.

WELDING PROCEDURE SPECIFICATIONS			
SHEET	REVISION	DATE	DESCRIPTION
-----	1	08/07/2006	WPS IDSI-6-1A
-----	1	08/07/2006	WPS IDSI-6-2A
-----	1	08/07/2006	WPS IDSI-6-3A
-----	1	08/07/2006	WPS IDSI-6-4A
-----	2	05/04/2007	WPS IDSI-6-5A
-----	1	08/07/2006	WPS IDSI-6-14A
-----	1	05/04/2007	WPS IDSI-6-26M
-----	0	10/24/2007	WPS IDSI-6-100B


WELDING NOTES:

1. ALL WELDING SHALL BE AS NOTED THROUGHOUT THESE DRAWINGS AND PER THE WELDING PROCEDURE SPECIFICATIONS (WPS) INCLUDED WITH THIS SUBMITTAL. THE WPS'S WERE DEVELOPED IN ACCORDANCE WITH AWS D1.5 LATEST VERSION.

GENERAL NOTES:

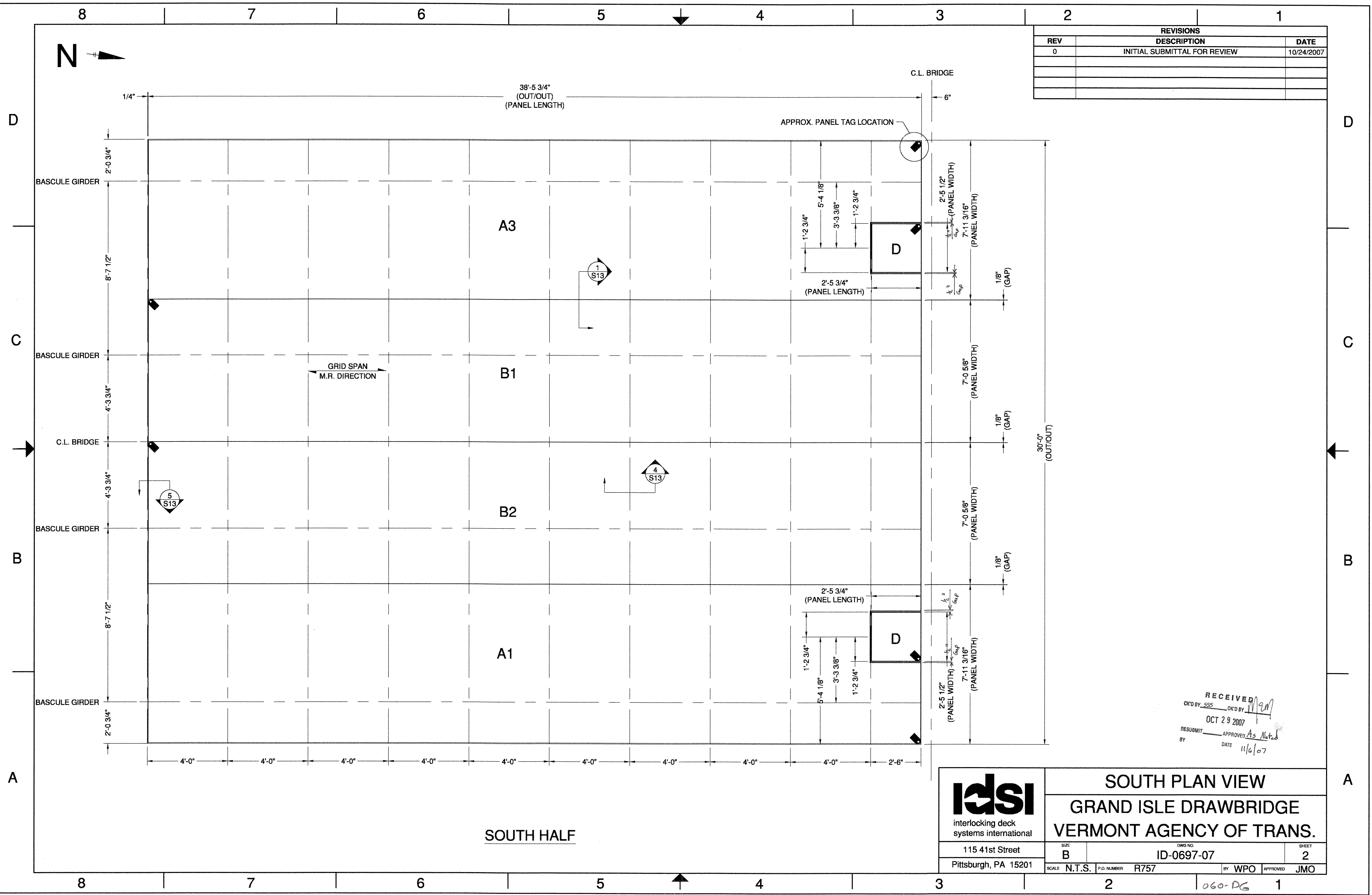
1. PANEL LENGTH IS IN DIRECTION OF MAIN RAIL.
2. PANEL WIDTH IS PERPENDICULAR TO DIRECTION OF MAIN RAIL.
3. PROPRIETARY STEEL PUNCHING DETAILS NOT SHOWN.
4. THIS WELDED GRID DECK SYSTEM UTILIZES INDUSTRY STANDARD WELDS AT THE INTERSECTION OF THE STEEL BARS.
5. THE FOLLOWING FABRICATION TOLERANCES SHALL APPLY:
 - A. PANEL LENGTH IS +/- 1/4".
 - B. PANEL WIDTH IS +/- 1/8".
 - C. SQUARENESS DIAGONAL MEASUREMENT IS +/- 1/2" OF OPPOSITE DIAGONAL.
 - D. LONGITUDINAL CAMBER (IN DIRECTION OF MAIN RAIL) IS .003 x LENGTH.
 - E. TRANSVERSE CAMBER IN DIRECTION OF CROSS BAR IS .004 x WIDTH.
 - F. SWEEP (SIDE BOW) = 0.025*L (IN FEET) FOR PANELS UP TO 40'-0", INCLUSIVE, AND 0.00065*L², FOR PANELS GREATER THAN 40'-0".
 - G. BAR VERTICALITY IS 0.04"H (FULL BAR HEIGHT). NO MORE THAN 1% OF ALL LOCATIONS CAN VIOLATE SPECIFIED TOLERANCE.
 - H. BAR SPACING IS +/- 1/8" CENTER-TO-CENTER.

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OCT 29 2007
RESUBMIT _____ APPROVED _____
BY _____ DATE 11/6/07


 interlocking deck systems international	DRAWING INDEX		
	GRAND ISLE DRAWBRIDGE VERMONT AGENCY OF TRANS.		
115 41st Street Pittsburgh, PA 15201	SIZE B	DWG NO. ID-0697-07	SHEET 1
SCALE: N.T.S.	P.O. NUMBER: R757	BY: WPO	APPROVED: JMO

059-06 1

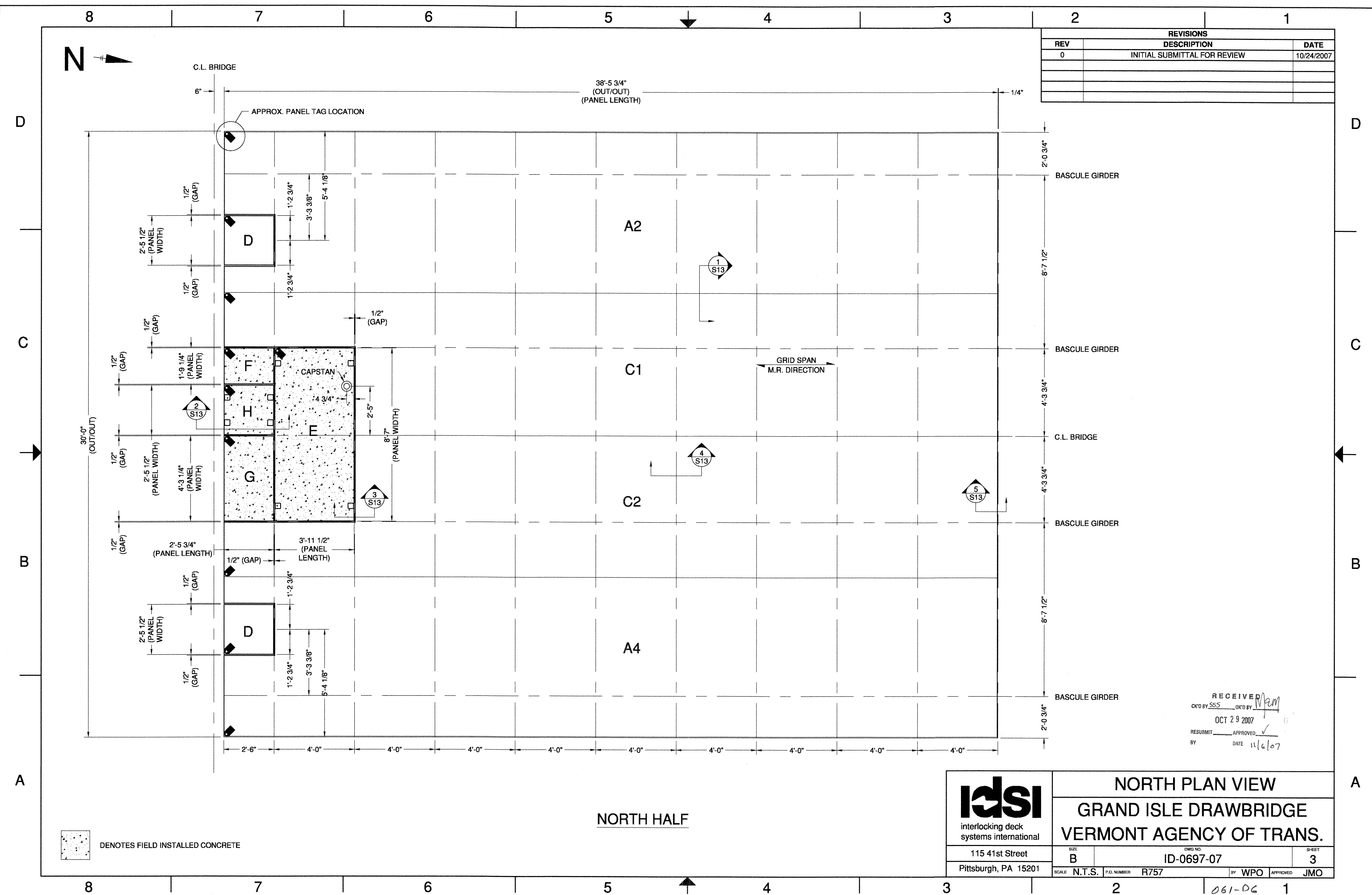
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REV	DESCRIPTION	DATE
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 RESUBMIT APPROVED *[Signature]*
 BY: *[Signature]* DATE: 11/6/07

 interlocking deck systems international 115 41st Street Pittsburgh, PA 15201	SOUTH PLAN VIEW GRAND ISLE DRAWBRIDGE VERMONT AGENCY OF TRANS.	
	SCALE: N.T.S. P.O. NUMBER: R757	DWG NO. ID-0697-07
BY: WPO APPROVED: JMO		060-DG


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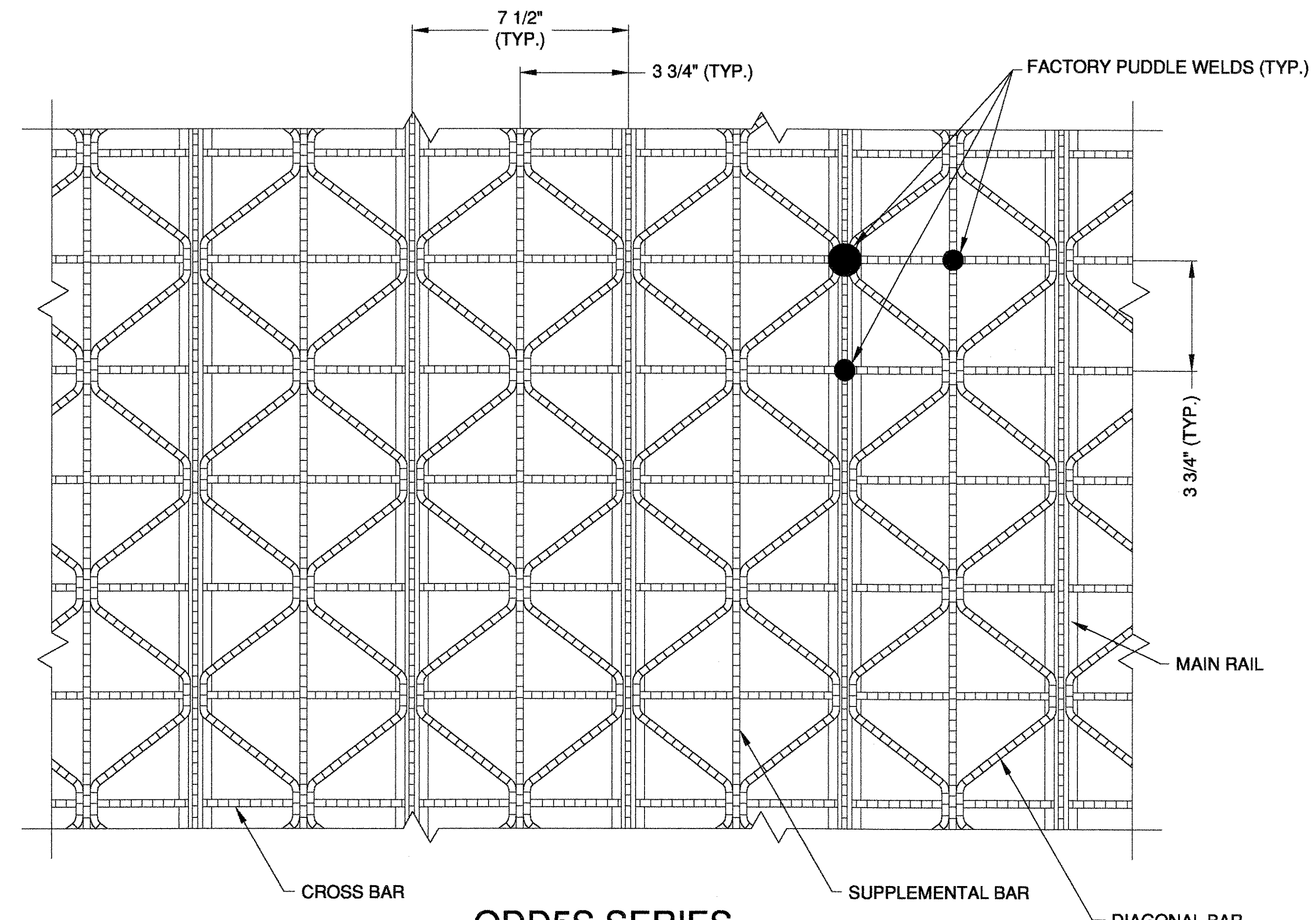
 DENOTES FIELD INSTALLED CONCRETE

NORTH HALF

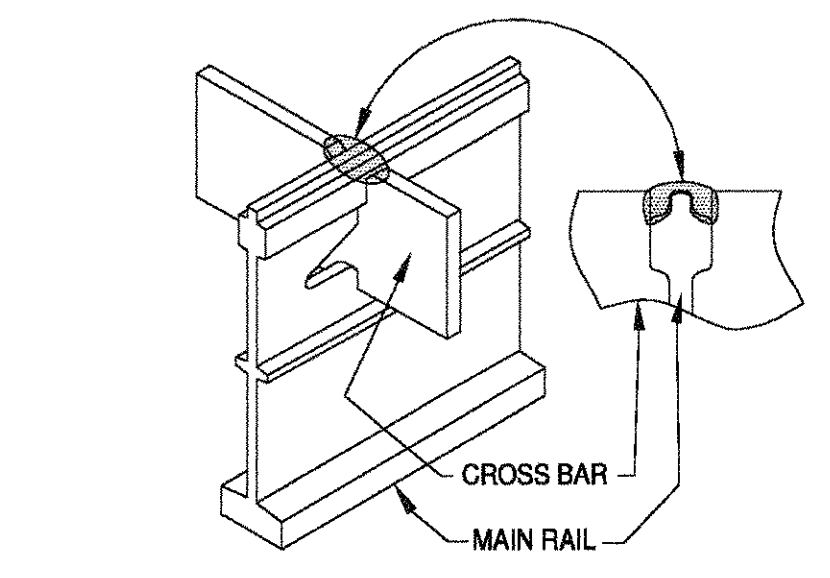
 interlocking deck systems international 115 41st Street Pittsburgh, PA 15201	NORTH PLAN VIEW GRAND ISLE DRAWBRIDGE VERMONT AGENCY OF TRANS.	
	SIZE B	DWG NO. ID-0697-07
SCALE N.T.S.	P.O. NUMBER R757	BY WPO APPROVED JMO

061-DC 1

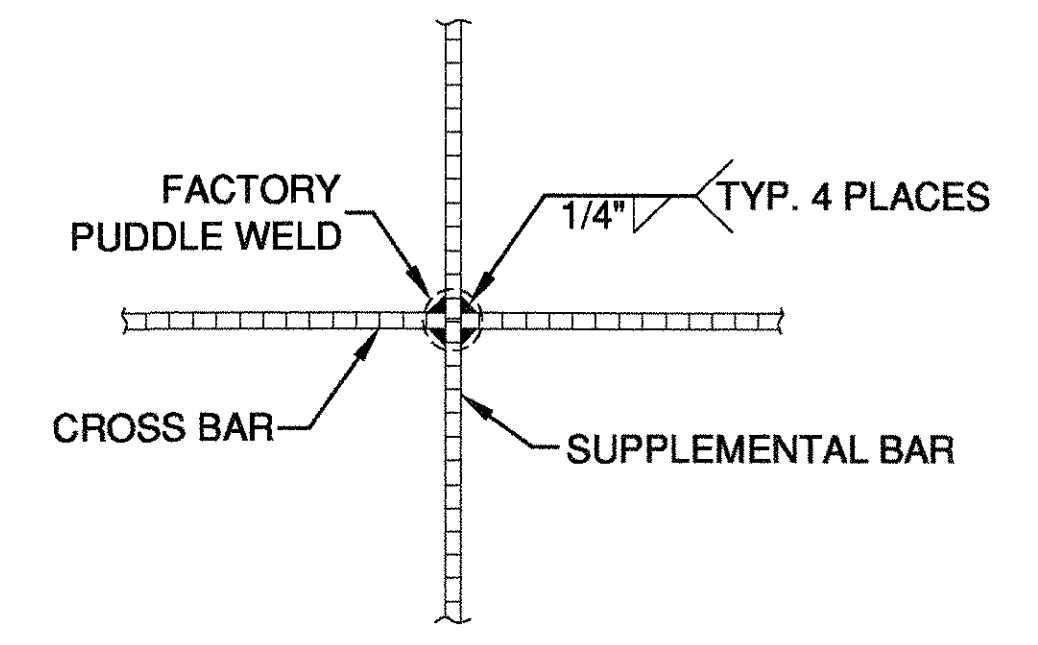
REVISIONS		
REV	DESCRIPTION	DATE
0	INITIAL SUBMITTAL FOR REVIEW	10/24/2007



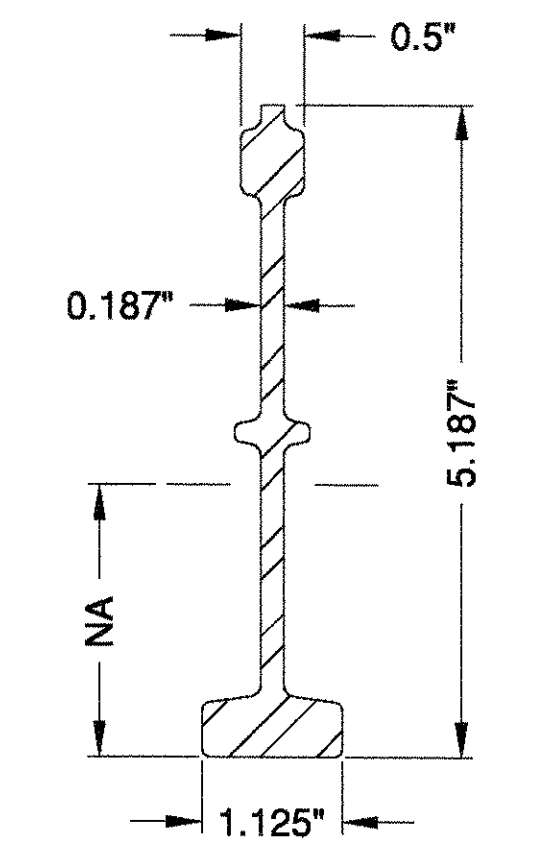
ODD5S SERIES
PLAN VIEW
N.T.S.
(5/8"Ø BOTTOM CROSS BAR NOT SHOWN)



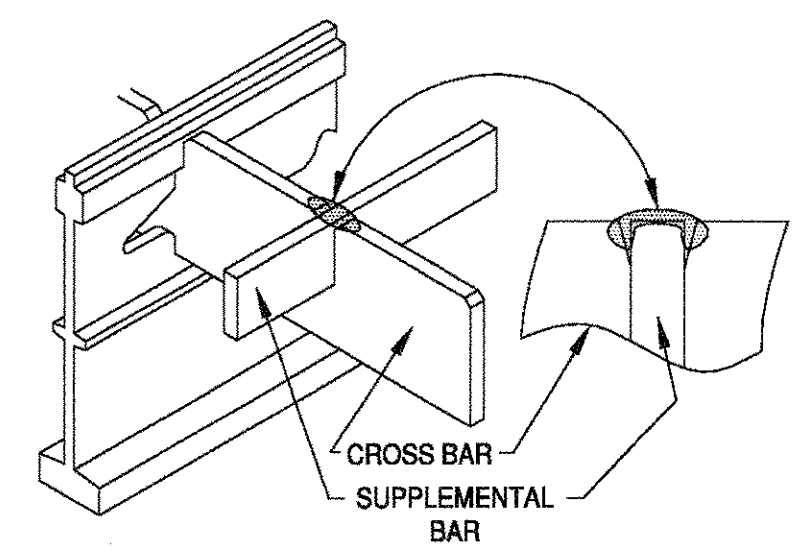
WPS IDSI-6-1A
TYPICAL MAIN RAIL
PUDDLE WELD
N.T.S.
(SERRATIONS NOT SHOWN FOR CLARITY)



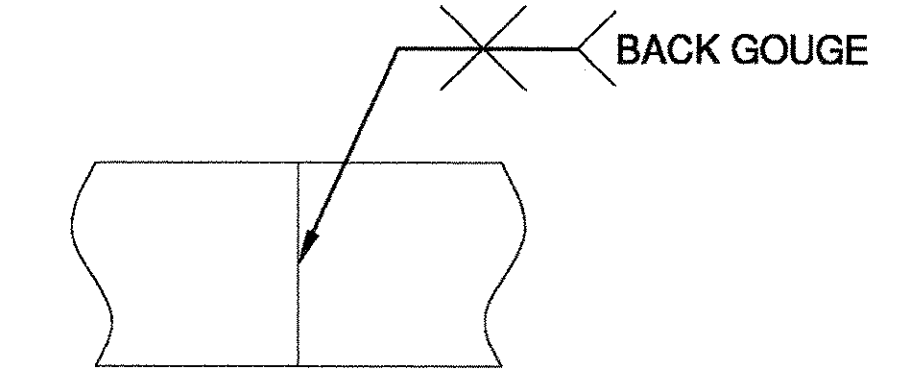
WPS IDSI-6-3A
TYPICAL SUPPLEMENTAL
BAR SPLICE
N.T.S.
(WHERE REQ'D.)



5 3/16\"/>

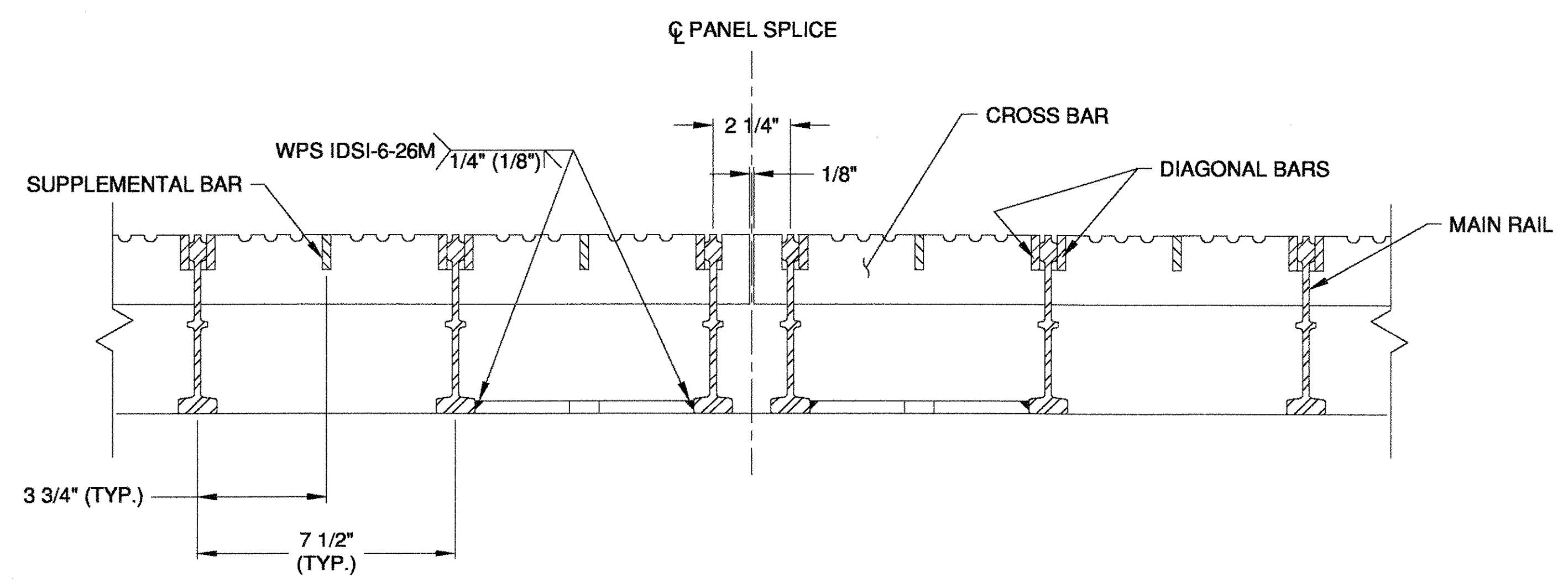


WPS IDSI-6-2A
TYPICAL CROSS BAR
PUDDLE WELD
N.T.S.
(SERRATIONS NOT SHOWN FOR CLARITY)

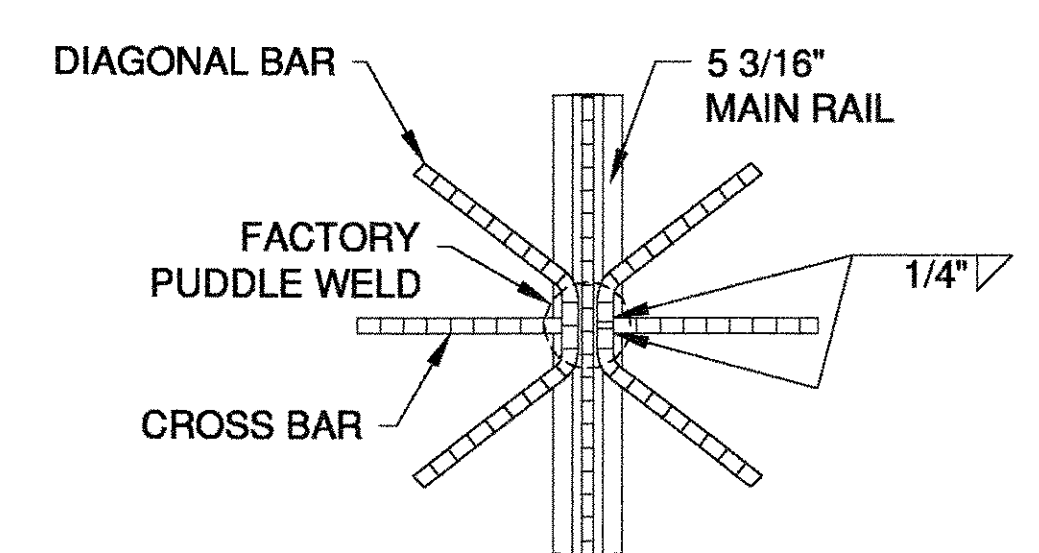


WPS IDSI-6-14A
TYPICAL TRIM BAR SPLICE
N.T.S.
(WHERE REQ'D.)

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SECTION 1/5
TYPICAL PANEL SPLICE DETAIL
N.T.S.



WPS IDSI-6-4A
TYPICAL DIAGONAL
BAR SPLICE
N.T.S.
(WHERE REQ'D.)

SECTION PROPERTIES	
BEAM ONLY (GROSS)	
WEIGHT = 5.60 LB/FT	
AREA = 1.646 IN ²	
NA = 2.179 IN	*
I _x = 5.108 IN ⁴	
S _{bottom} = 2.344 IN ³	
Stop = 1.698 IN ³	

* DOES NOT INCLUDE DEDUCTIONS FOR PUNCHOUTS OR SERRATIONS

idsi
interlocking deck
systems international
115 41st Street
Pittsburgh, PA 15201

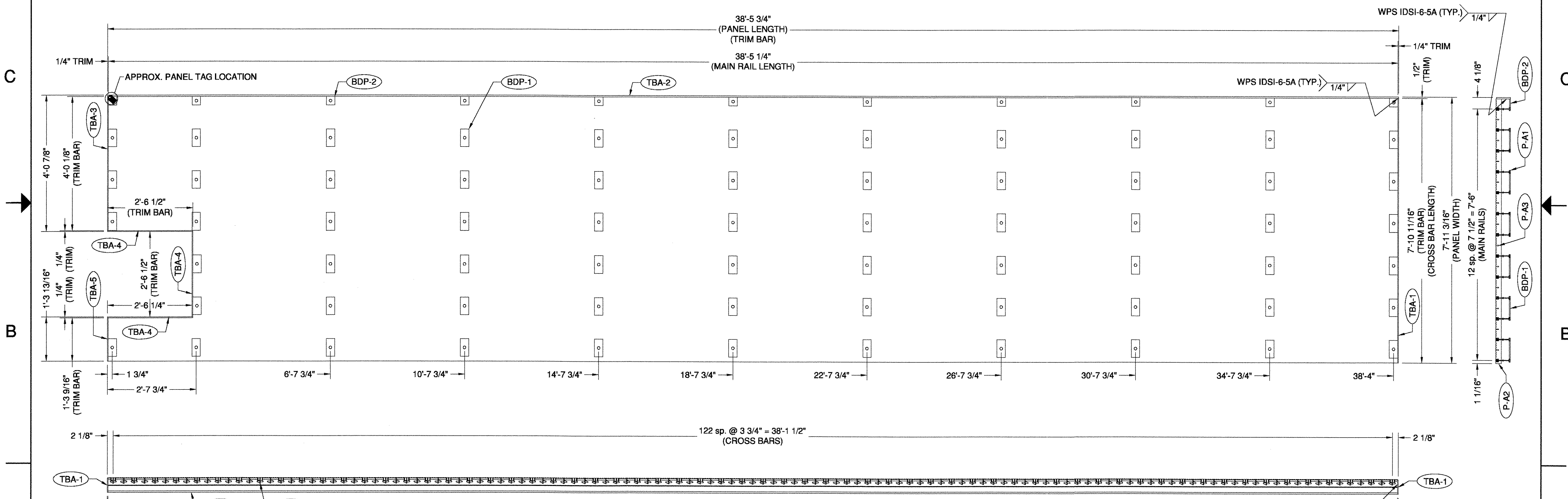
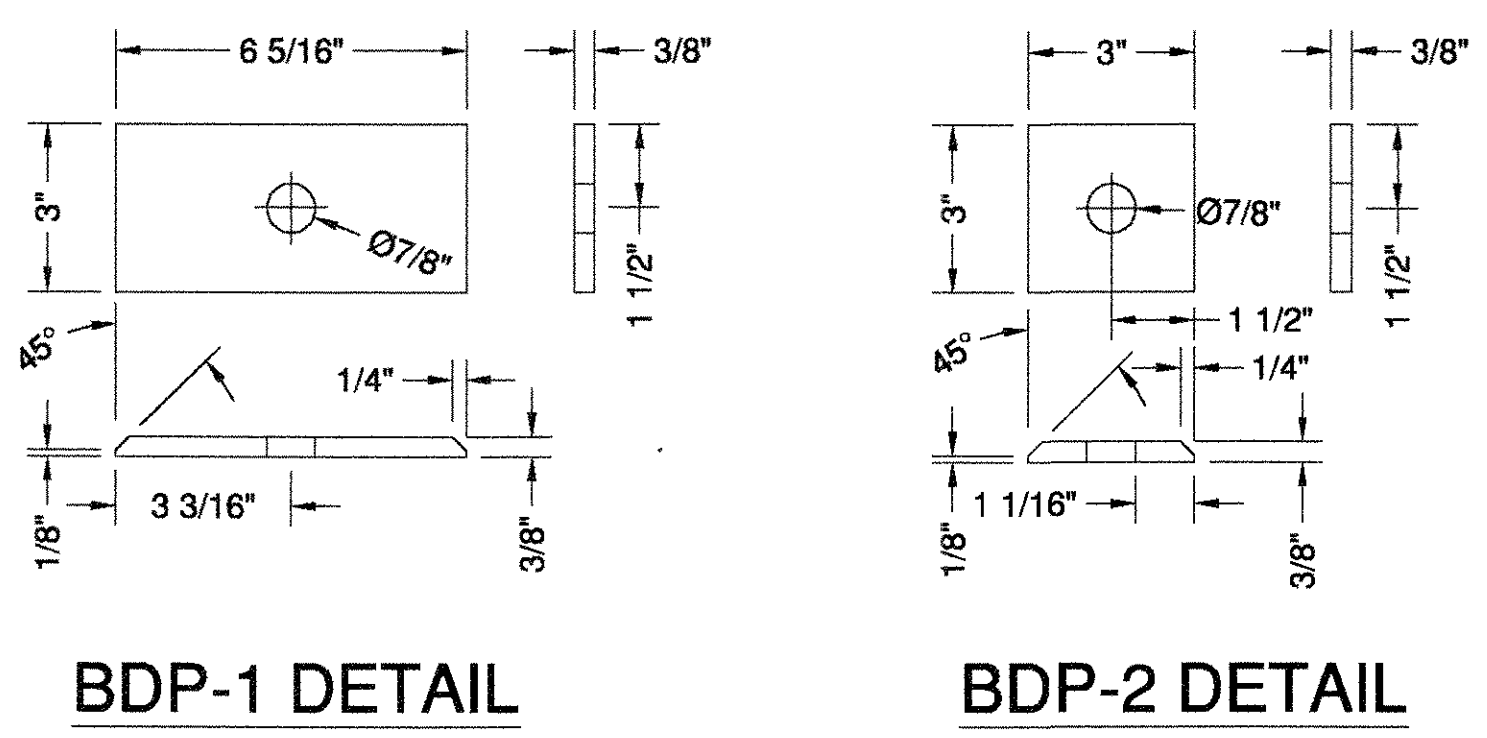
STANDARDS			
GRAND ISLE DRAWBRIDGE VERMONT AGENCY OF TRANS.			
SIZE B	DWG NO. ID-0697-07	SHEET 4	
SCALE N.T.S.	P.O. NUMBER R757	BY WPO	APPROVED JMO

062-DG 1

BILL OF MATERIALS							
PANEL A (QUANTITIES ARE PER PANEL - MULTIPLY BY TOTAL NUMBER OF PANELS)							
PART	DESCRIPTION	QUANTITY	LENGTH	WIDTH	THICKNESS	MATERIAL TYPE	TOLERANCE
P-A1	5 3/16" MAIN RAIL	13	38'-5 1/4"	-----	-----	ASTM A709 GR. 50	+/- 1/4"
P-A2	CROSS BAR	123	7'-10 11/16"	2"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
P-A3	SUPPLEMENTAL BAR	12	38'-5 1/4"	1"	1/4"	ASTM A709 GR. 50	+/- 1/4"
P-A4	DIAGONAL BAR	24	38'-5 1/4"	1"	1/4"	ASTM A709 GR. 50	+0/- 1/4"
TBA-1	TRIM BAR	1	7'-10 11/16"	5"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
TBA-2	TRIM BAR	1	38'-5 3/4"	5"	1/2"	ASTM A709 GR. 50	+0/- 1/8"
TBA-3	TRIM BAR	1	4'-0 1/8"	5"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
TBA-4	TRIM BAR	3	2'-6 1/2"	5"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
TBA-5	TRIM BAR	1	1'-3 9/16"	5"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
BDP-1	BOLTDOWN PLATE	64	6 5/16"	3"	3/8"	ASTM A709 GR. 50	+/- 1/32"
BDP-2	BOLTDOWN PLATE	11	3"	3"	3/8"	ASTM A709 GR. 50	+/- 1/32"
BT-1	BOLT	70	2"	-----	3/4" Ø	ASTM A325 HDG	-----
BT-2	BOLT	5	2 1/2"	-----	3/4" Ø	ASTM A325 HDG	-----
FW	WASHER	70	-----	-----	3/4" Ø	ASTM F436 HDG	-----
TW	TAPERED WASHER	5	-----	-----	3/4" Ø	ASTM A563 HDG	-----
NT	NUT	75	-----	-----	3/4" Ø	ASTM A563 HDG	-----

- SHIPPED LOOSE
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- SHIPPED LOOSE

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SHOP NOTE:
SHOP TO REUSE CUT MATERIAL
TO FABRICATE PANEL TYPE D.

PANEL A LAYOUT (4 TOTAL)
A1 & A2 - AS SHOWN
A3 & A4 - OPP. HAND

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 interlocking deck systems international 115 41st Street Pittsburgh, PA 15201	PANEL A LAYOUT GRAND ISLE DRAWBRIDGE VERMONT AGENCY OF TRANS.	
	DWG NO. ID-0697-07	SHEET 5
SCALE N.T.S. P.O. NUMBER R757	BY WPO APPROVED JMO	063-06

8 7 6 5 4 3 2 1

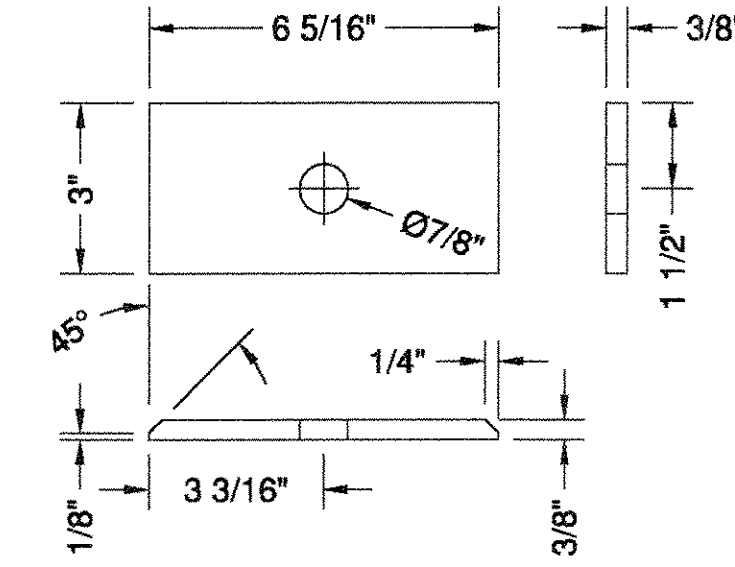
BILL OF MATERIALS

PANEL B (QUANTITIES ARE PER PANEL - MULTIPLY BY TOTAL NUMBER OF PANELS)

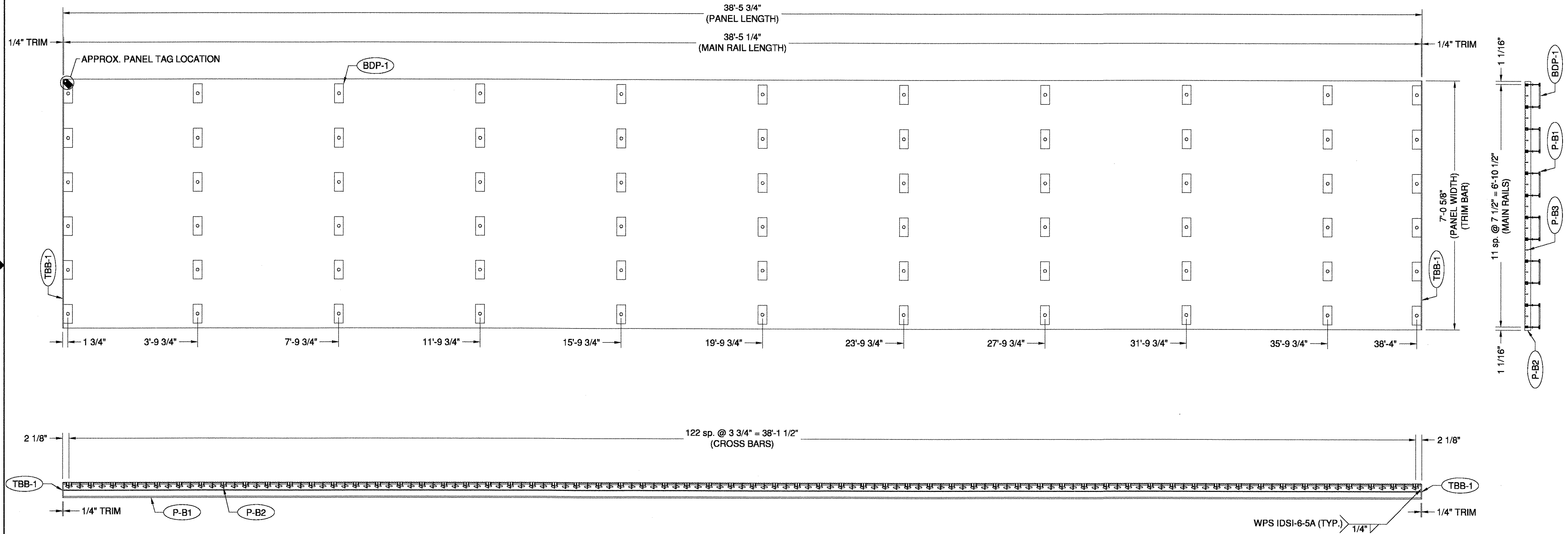
PART	DESCRIPTION	QUANTITY	LENGTH	WIDTH	THICKNESS	MATERIAL TYPE	TOLERANCE
P-B1	5 3/16" MAIN RAIL	12	38'-5 1/4"	-----	-----	ASTM A709 GR. 50	+/- 1/4"
P-B2	CROSS BAR	123	7'-0 5/8"	2"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
P-B3	SUPPLEMENTAL BAR	11	38'-5 1/4"	1"	1/4"	ASTM A709 GR. 50	+/- 1/4"
P-B4	DIAGONAL BAR	22	38'-5 1/4"	1"	1/4"	ASTM A709 GR. 50	+0/- 1/4"
TBB-1	TRIM BAR	2	7'-0 5/8"	5"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
BDP-1	BOLTDOWN PLATE	66	6 5/16"	3"	3/8"	ASTM A709 GR. 50	+/- 1/32"
BT-1	BOLT	60	2"	-----	3/4" Ø	ASTM A325 HDG	-----
BT-2	BOLT	6	2 1/2"	-----	3/4" Ø	ASTM A325 HDG	-----
FW	WASHER	60	-----	-----	3/4" Ø	ASTM F436 HDG	-----
TW	TAPERED WASHER	6	-----	-----	3/4" Ø	ASTM A563 HDG	-----
NT	NUT	66	-----	-----	3/4" Ø	ASTM A563 HDG	-----

- SHIPPED LOOSE
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REV	DESCRIPTION	DATE
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BDP-1 DETAIL



**PANEL B LAYOUT
2 TOTAL - AS SHOWN**

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 BY: DATE 11/6/07

 interlocking deck systems international 115 41st Street Pittsburgh, PA 15201	PANEL B LAYOUT GRAND ISLE DRAWBRIDGE VERMONT AGENCY OF TRANS.		
	SIZE B	DWG NO. ID-0697-07	SHEET 6
	SCALE N.T.S.	P.O. NUMBER R757	BY WPO APPROVED JMO

064-06 1

8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1

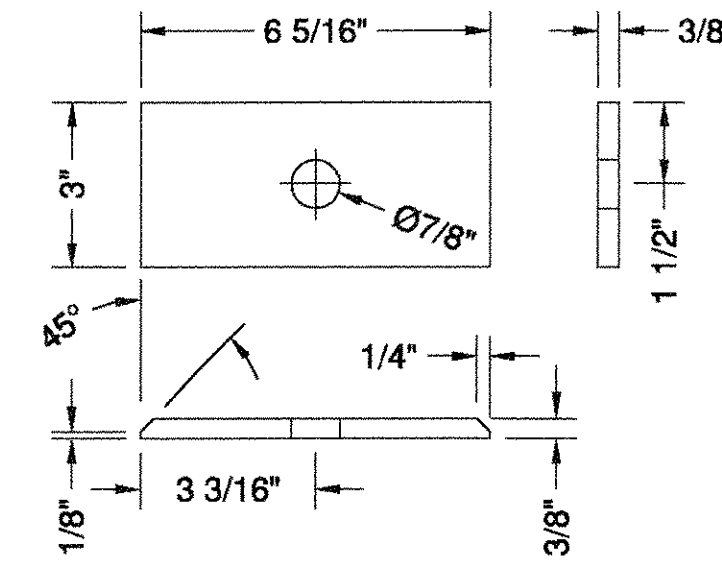
BILL OF MATERIALS

PANEL C (QUANTITIES ARE PER PANEL - MULTIPLY BY TOTAL NUMBER OF PANELS)

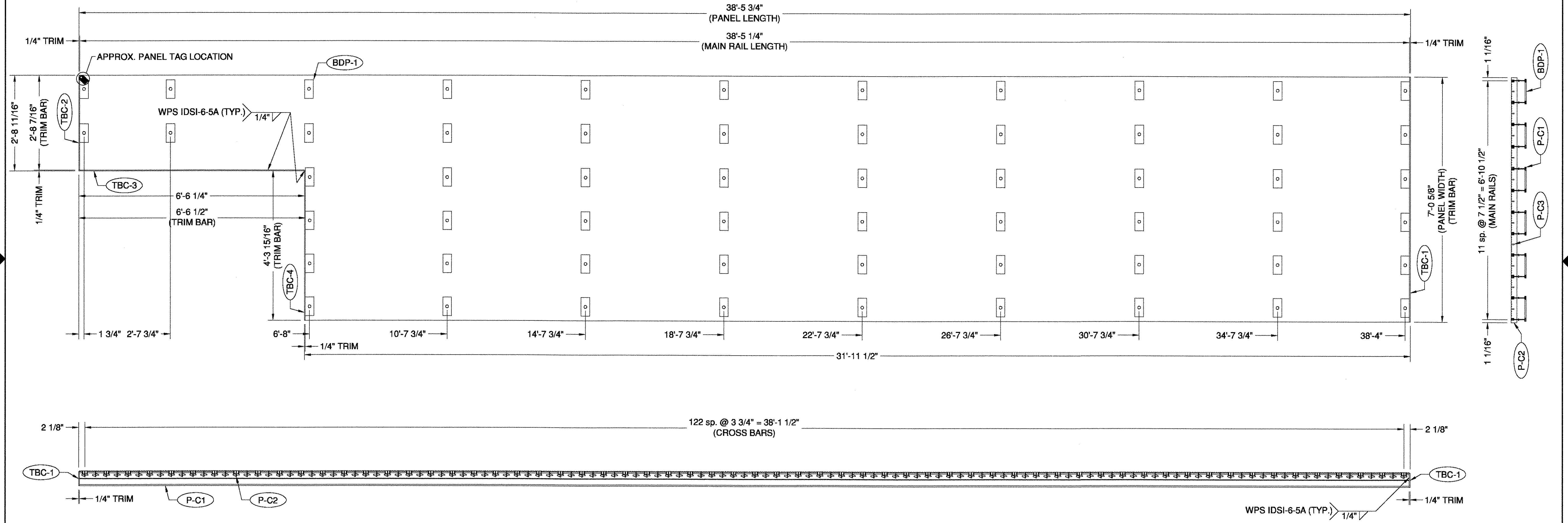
PART	DESCRIPTION	QUANTITY	LENGTH	WIDTH	THICKNESS	MATERIAL TYPE	TOLERANCE
P-C1	5 3/16" MAIN RAIL	12	38'-5 1/4"	-----	-----	ASTM A709 GR. 50	+/- 1/4"
P-C2	CROSS BAR	123	7'-0 5/8"	2"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
P-C3	SUPPLEMENTAL BAR	11	38'-5 1/4"	1"	1/4"	ASTM A709 GR. 50	+/- 1/4"
P-C4	DIAGONAL BAR	22	38'-5 1/4"	1"	1/4"	ASTM A709 GR. 50	+0/- 1/4"
TBC-1	TRIM BAR	1	7'-0 5/8"	5"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
TBC-2	TRIM BAR	1	2'-8 7/16"	5"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
TBC-3	TRIM BAR	1	6'-6 1/2"	5"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
TBC-4	TRIM BAR	1	4'-3 15/16"	5"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
BDP-1	BOLTDOWN PLATE	58	6 5/16"	3"	3/8"	ASTM A709 GR. 50	+/- 1/32"
BT-1	BOLT	56	2"	-----	3/4" Ø	ASTM A325 HDG	-----
BT-2	BOLT	2	2 1/2"	-----	3/4" Ø	ASTM A325 HDG	-----
FW	WASHER	56	-----	-----	3/4" Ø	ASTM F436 HDG	-----
TW	TAPERED WASHER	2	-----	-----	3/4" Ø	ASTM A563 HDG	-----
NT	NUT	58	-----	-----	3/4" Ø	ASTM A563 HDG	-----

- SHIPPED LOOSE
- SHIPPED LOOSE
- SHIPPED LOOSE
- SHIPPED LOOSE
- SHIPPED LOOSE

REVISIONS		
REV	DESCRIPTION	DATE
0	INITIAL SUBMITTAL FOR REVIEW	10/24/2007



BDP-1 DETAIL



SHOP NOTE:
SHOP TO REUSE CUT MATERIAL TO FABRICATE PANELS E, F & H.

PANEL C LAYOUT (2 TOTAL)
C1 - AS SHOWN
C2 - OPP. HAND

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G'D BY SSS OK'D BY [Signature]
OCT 29 2007
RESUBMIT APPROVED [Signature]
BY DATE 11/6/07

<p>interlocking deck systems international</p> <p>115 41st Street Pittsburgh, PA 15201</p>	<p>PANEL C LAYOUT</p> <p>GRAND ISLE DRAWBRIDGE</p> <p>VERMONT AGENCY OF TRANS.</p>		
	<p>SCALE N.T.S.</p>	<p>DWG NO. ID-0697-07</p>	<p>SHEET 7</p>
<p>BY WPO</p>	<p>APPROVED JMO</p>	<p>DATE 11/6/07</p>	<p>065-DG 1</p>

8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1

BILL OF MATERIALS

PANEL D (QUANTITIES ARE PER PANEL - MULTIPLY BY TOTAL NUMBER OF PANELS)

PART	DESCRIPTION	QUANTITY	LENGTH	WIDTH	THICKNESS	MATERIAL TYPE	TOLERANCE
P-D1	5 3/16" MAIN RAIL	4	2'-5 1/4"	-----	-----	ASTM A709 GR. 50	+/- 1/8"
P-D2	CROSS BAR	8	2'-5"	2"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
P-D3	SUPPLEMENTAL BAR	3	2'-5 1/4"	1"	1/4"	ASTM A709 GR. 50	+/- 1/8"
P-D4	DIAGONAL BAR	8	2'-5 1/4"	1"	1/4"	ASTM A709 GR. 50	+/- 1/8"
TBD-1	TRIM BAR	2	2'-5"	5"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
TBD-2	TRIM BAR	2	2'-5 3/4"	5"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
BDP-1	BOLT DOWN PLATE	4	3"	6 3/8"	3/8"	ASTM A709 GR. 50	+0/- 1/16"
BT-1	BOLT	2	2"	-----	3/4" Ø	ASTM A325 HDG	-----
BT-2	BOLT	2	2 1/2"	-----	3/4" Ø	ASTM A325 HDG	-----
FW	WASHER	2	-----	-----	3/4" Ø	ASTM F436 HDG	-----
TW	TAPERED WASHER	2	-----	-----	3/4" Ø	ASTM F436 HDG	-----
NT	NUT	4	-----	-----	3/4" Ø	ASTM A563 HDG	-----

- SHIPPED LOOSE
- SHIPPED LOOSE
- SHIPPED LOOSE
- SHIPPED LOOSE
- SHIPPED LOOSE

NOTE: REMOVABLE PANELS HAVE BOLT DOWN PLATES IN THE FOUR CORNERS ONLY. THE ENGINEER IS TO DEFINE WHETHER ADDITIONAL BOLT DOWN PLATES ARE REQUIRED.

NOTE: PANEL TO BE FABRICATED USING CUT MATERIAL FROM PANEL TYPE A.

No additional Bolt down plates required

REVISIONS		
REV	DESCRIPTION	DATE
0	INITIAL SUBMITTAL FOR REVIEW	10/24/2007

D

D

C

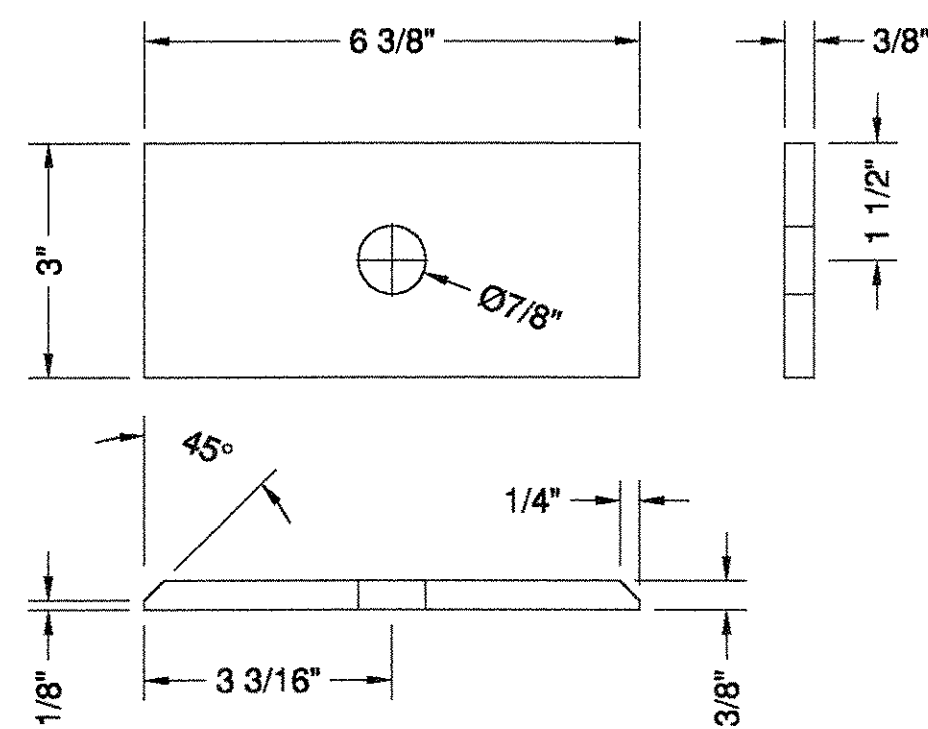
C

B

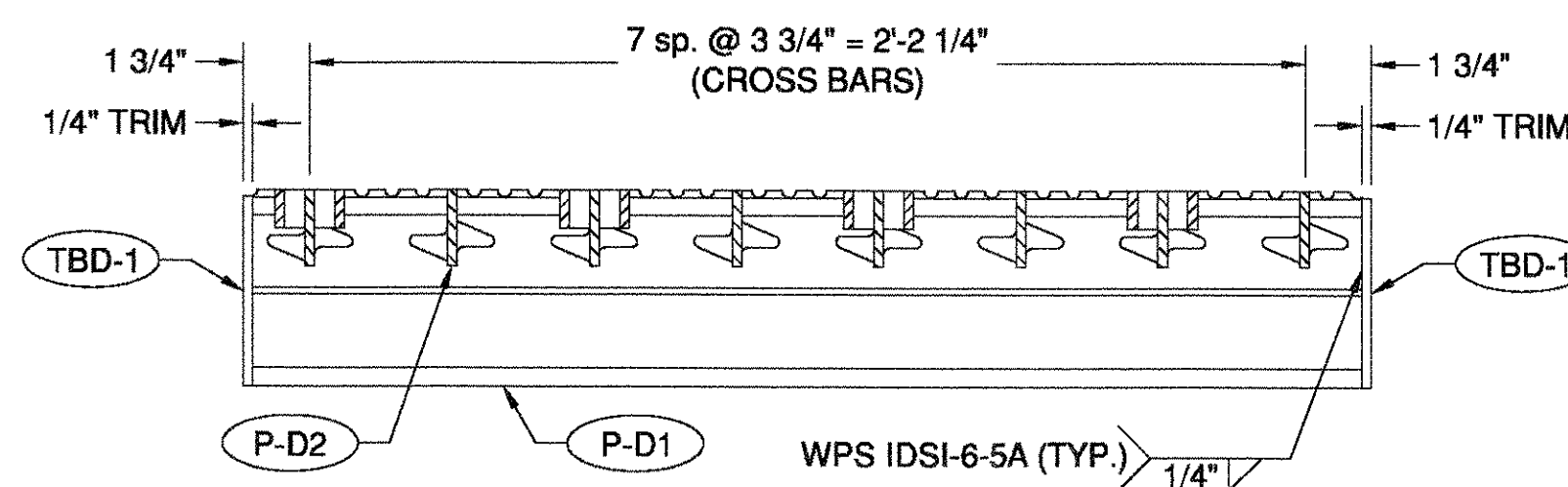
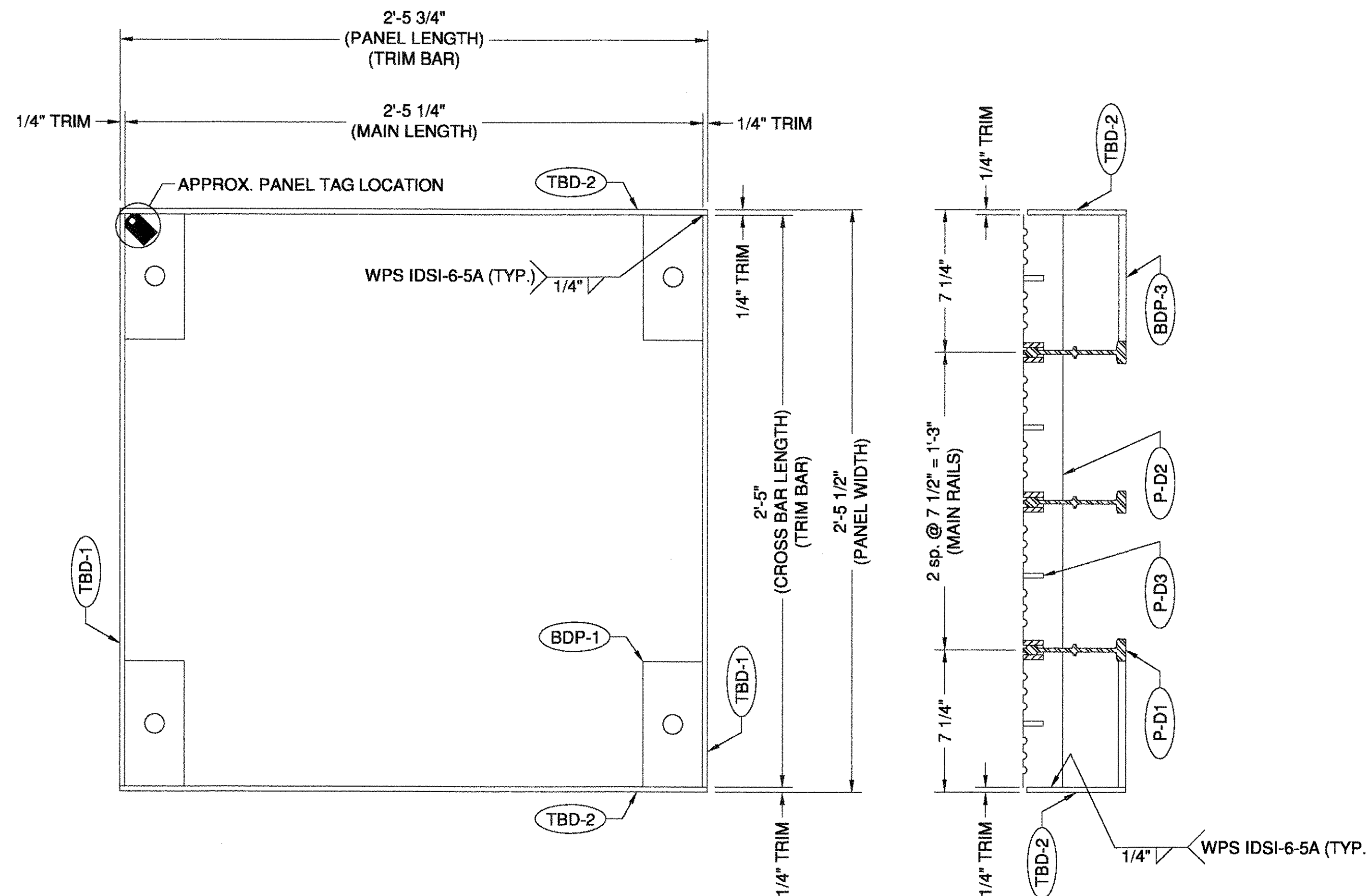
B

A

A




BDP-1 DETAIL



PANEL D LAYOUT
2 TOTAL - AS SHOWN
2 TOTAL - OPP. HAND

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CHK'D BY: SSS
OCT 29 2007
RESUBMIT APPROVED
DATE 11/6/07

 interlocking deck systems international 115 41st Street Pittsburgh, PA 15201	PANEL D LAYOUT GRAND ISLE DRAWBRIDGE VERMONT AGENCY OF TRANS.	
	SIZE B	DWG NO. ID-0697-07
SCALE: N.T.S.	P.O. NUMBER: R757	BY: WPO APPROVED: JMO

8 7 6 5 4 3 2 1 056-DG 1



State of Vermont
PDD/Structures Design Section
National Life Building - Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

Agency of Transportation

[phone] 802-828-2621
[fax] 802-828-3566
[tdd] 800-253-0191

IDS1
Attn: Joe Oliver
115 41st Street
Pittsburgh, PA 15201

DATE: November 30, 2007

Project Name: North Hero - Grand Isle Project #: BRF 028 -1 (21)

Structure Identification: US 2, Bridge #8 over Lake Champlain (Drawbridge)

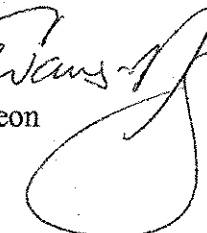
The following Steel Grid Decking details for the above project, Vendor's Job # ID 0697-07 transmitted with your e-mail dated October 29, 2007 have been reviewed and are being returned herewith.

Sheets: 9
is approved [X]

All other sheets were approved, or approved as noted, previously.

Welding procedure IDS1 6-26D is also approved.

Sincerely,


Martha Evans-Mongeon
Project Manager

Attachments

- cc: Resident Engineer w/prints, Greg Wilcox
 Shop Inspector w/prints, Jeff Clark
 Contractor w/prints
 Subcontractor - letter only
 Construction Division - letter only
 Materials & Research Section (C&IA Unit) - letter only
 Files (Structures & Central)



06702

ISI WELDING PROCEDURE SPECIFICATION

Proc. Qual. Record No. (PQR)	IDSI-6		
Material Specification	ASTM A36, A588, A709 Gr 36, A709 Gr 50, A709 Gr 50W, A572 Gr50 or A992 - as per approved shop drawings.		
Welding Process	GMAW		
Manual or Semi-auto	Semi-automatic		
Position of Welding	1G - Flat		
Filler Metal Specification	AWS A5.18		
Filler Metal Classification	AWS ER70S-6		
Electrode and Manufacturer	ESAB Spoolarc 86		
Shielding Gas	85% Argon	Dew Point	Flow Rate
Single or Multiple Pass	15% CO2	-40degreeF Min.	40 cfh
Single or Multiple Arc	Multiple		
Welding Current	DC		
Polarity	Reverse		
Welding Progression	NA		
Root Treatment	Wire brush as necessary to remove foreign material		
Preheat and Interpass Temp.	50 degree F min to 400 degree F Max		
Postheat Temperature	None		
Heat Input	25.5 kJ/in Min. to 36 kJ/in Max.		

NOTES:
1) Grind weld flush if required by job specification or as shown on shop drawings.

WELDING PROCEDURE					WELD JOINT DETAIL (TC-U5-GF)
Pass no.	Electrode size	Welding Parameters Amperes	Volts	Travel speed	
All	.045	257-300	26.5-29	14.5 - 16 IPM	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in AWS D1.5, Section 5A.

Procedure no. IDSI-6-26D Fabricator Interlocking Deck Systems International, LLC

Revision no. 2 Authorized By Brad King CWI #02100701

Date 10-26-2006

OK'D BY [Signature] OK'D BY [Signature]

NOV 27 2007

RESUBMIT APPROVED [Signature]

BY [Signature] DATE 11-30-07

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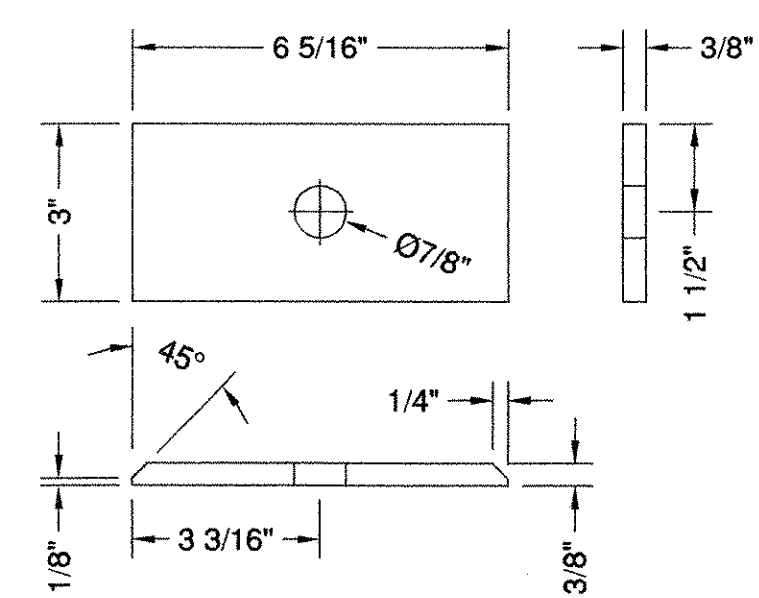
BILL OF MATERIALS

PANEL E (QUANTITIES ARE PER PANEL - MULTIPLY BY TOTAL NUMBER OF PANELS)

PART	DESCRIPTION	QUANTITY	LENGTH	WIDTH	THICKNESS	MATERIAL TYPE	TOLERANCE
P-E1	5 3/16" MAIN RAIL	14	3'-11"	-----	-----	ASTM A709 GR. 50	+/- 1/8"
P-E2	CROSS BAR	12	8'-6 1/2"	2"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
P-E3	SUPPLEMENTAL BAR	13	3'-11"	1"	1/4"	ASTM A709 GR. 50	+/- 1/8"
P-E4	DIAGONAL BAR	28	3'-11"	1"	1/4"	ASTM A709 GR. 50	+/- 1/8"
TBE-1	TRIM BAR	2	3'-11 1/2"	5"	1/4"	ASTM A709 GR. 50	+/- 1/8"
TBE-2	TRIM BAR	2	8'-6 1/2"	5"	1/4"	ASTM A709 GR. 50	+/- 1/8"
FP-1	FORM PAN	13	3'-11"	7 3/16"	20 GAUGE	ASTM A316	+0/- 1/8"
FP-2	FORM PAN	2	3'-11"	4 15/16"	20 GAUGE	ASTM A316	+0/- 1/8"
FP-3	FORM PAN	2	3'-11"	3 1/2"	20 GAUGE	ASTM A316	+0/- 1/8"
FP-4	FORM PAN	2	3'-11"	3 3/8"	20 GAUGE	ASTM A316	+0/- 1/8"
BDP-1	BOLT DOWN PLATE	4	6 5/16"	3"	3/8"	ASTM A709 GR. 50	+0/- 1/16"
BT-1	BOLT	4	2"	-----	3/4" Ø	ASTM A325 HDG	-----
FW	WASHER	4	-----	-----	3/4" Ø	ASTM F436 HDG	-----
NT	NUT	4	-----	-----	3/4" Ø	ASTM A563 HDG	-----
TAS-1	ACCESS SLEEVE	4	3"	3 1/2 x 3 1/2	1/4"	ASTM A500 GR. A	-----
CS-1	CAPSTAN SLEEVE	1	1 1/8"	6" Ø STANDARD	SCH. 40	ASTM A500 GR. A	-----
CS-2	CAPSTAN SLEEVE	1	2 1/4"	5" Ø STANDARD	SCH. 40	ASTM A500 GR. A	-----
RFB	ROLLED FILLER BAND	1	-----	AS REQUIRED	-----	ASTM A36	-----
ST	SPLICE TAB	12	3 1/4"	2"	1/4"	ASTM A709 GR. 50	-----

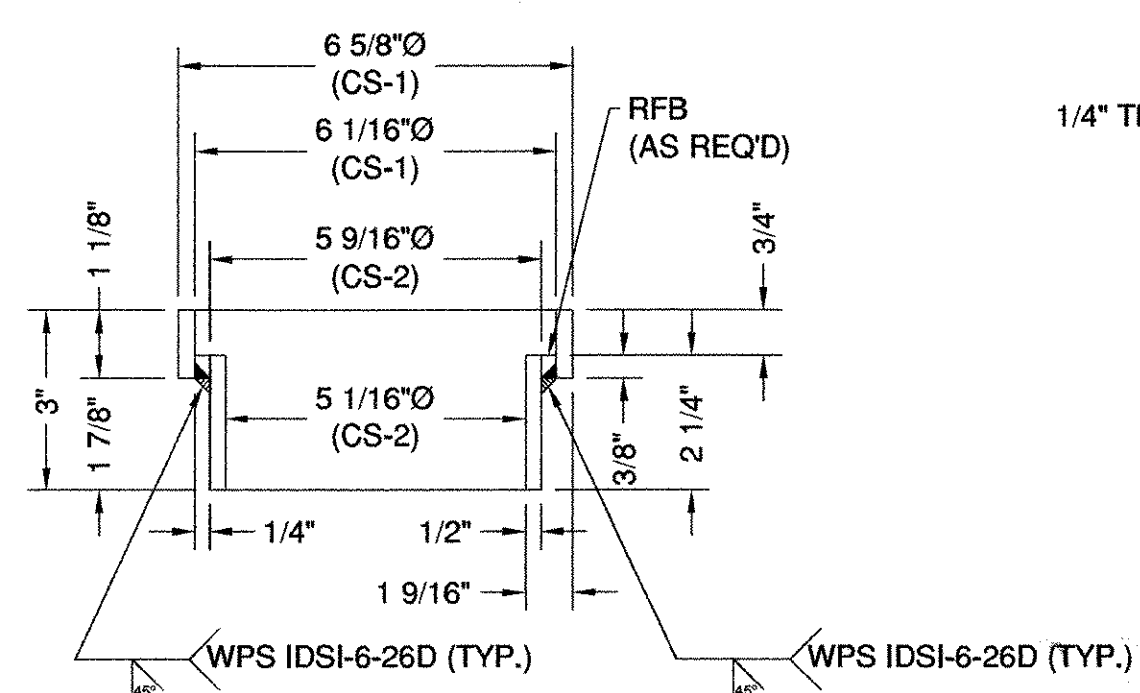
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REVISIONS		
REV	DESCRIPTION	DATE
0	INITIAL SUBMITTAL FOR REVIEW	10/24/2007
1	REVISED PER CUSTOMER COMMENTS	11/15/2007

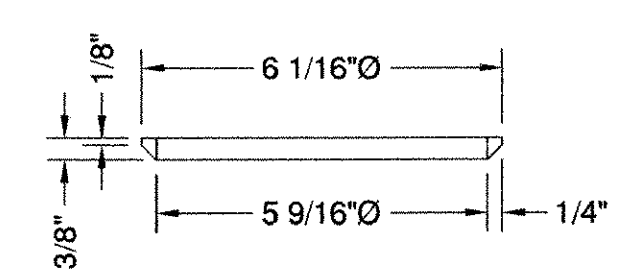


BDP-1 DETAIL

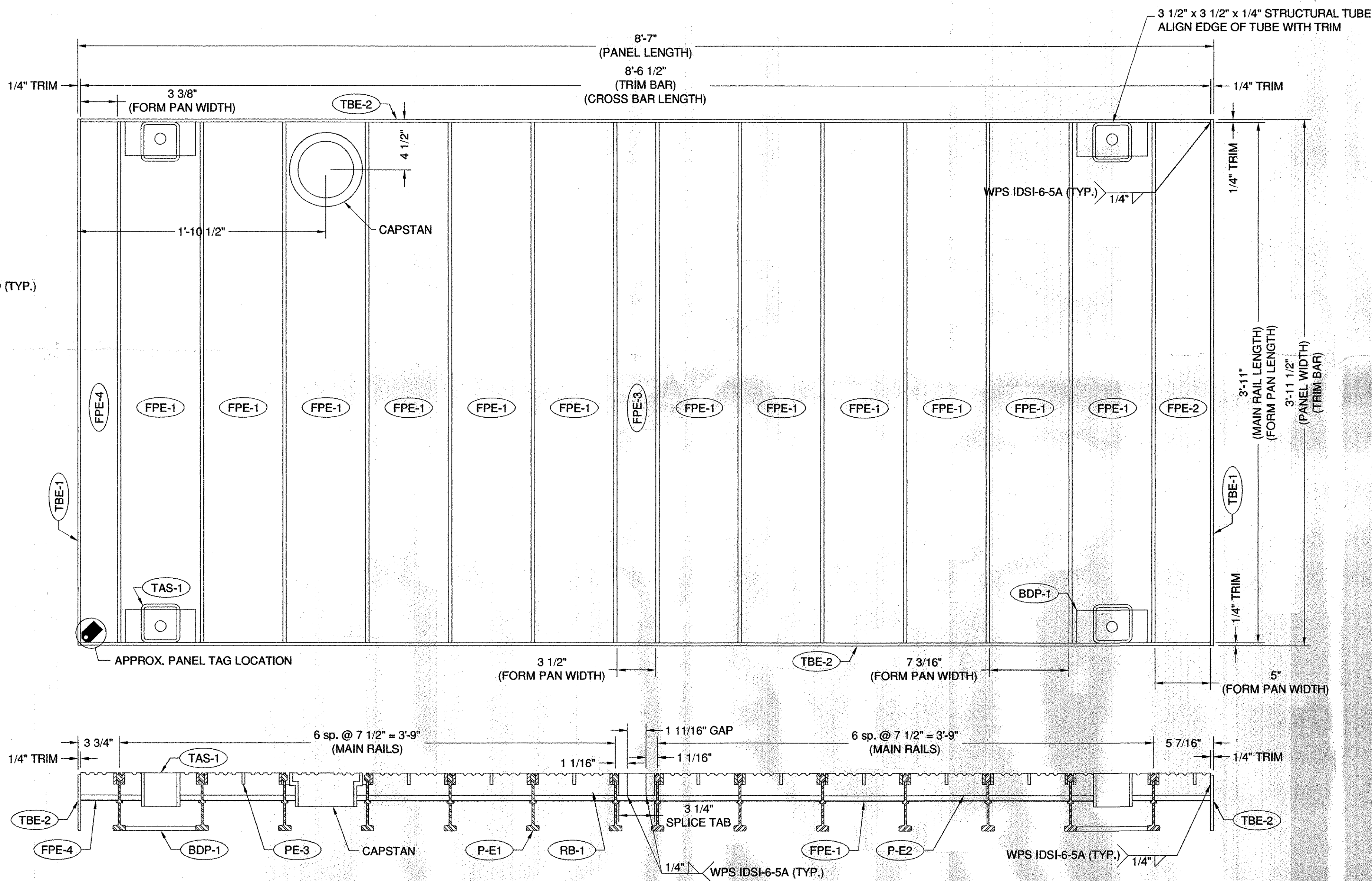
NOTE: PANEL TO BE FABRICATED USING CUT MATERIAL FROM PANEL TYPE C.



CAPSTAN DETAIL



RBH DETAIL



PANEL E LAYOUT
1 TOTAL - AS SHOWN

NOTE: REMOVABLE PANELS HAVE BOLT DOWN PLATES IN THE FOUR CORNERS ONLY. THE ENGINEER IS TO DEFINE WHETHER ADDITIONAL BOLT DOWN PLATES ARE REQUIRED.

NOTE: SHOP TO CUT GRID DECK COMPONENTS AS REQUIRED TO ALLOW INSTALLATION OF TUBULAR ACCESS SLEEVES AND CAPSTAN.

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NOV 27 2007
RESUBMIT APPROVED
BY: *[Signature]* DATE: 11/30/07

<p>interlocking deck systems international</p> <p>115 41st Street Pittsburgh, PA 15201</p>	<p>PANEL E LAYOUT</p> <p>GRAND ISLE DRAWBRIDGE</p> <p>VERMONT AGENCY OF TRANS.</p>		<p>SCALE: N.T.S. P.O. NUMBER: R757 BY: WPO APPROVED: JMO</p>	
	<p>SIZE: B</p>	<p>DWG NO.: ID-0697-07</p>		<p>SHEET: 9</p>
	<p>069-DG 1</p>			

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BILL OF MATERIALS

PANEL G (QUANTITIES ARE PER PANEL - MULTIPLY BY TOTAL NUMBER OF PANELS)

PART	DESCRIPTION	QUANTITY	LENGTH	WIDTH	THICKNESS	MATERIAL TYPE	TOLERANCE
P-G1	5 3/16" MAIN RAIL	7	2'-5 1/4"			ASTM A709 GR. 50	+/- 1/8"
P-G2	CROSS BAR	8	4'-2 3/4"	2"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
P-G3	SUPPLEMENTAL BAR	6	2'-5 1/4"	1"	1/4"	ASTM A709 GR. 50	+/- 1/8"
P-G4	DIAGONAL BAR	14	2'-5 1/4"	1"	1/4"	ASTM A709 GR. 50	+/- 1/8"
TBG-1	TRIM BAR	2	2'-5 3/4"	5"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
TBG-2	TRIM BAR	2	4'-2 3/4"	5"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
FPG-1	FORM PAN	4	2'-5 1/4"	7 3/16"	20 GAUGE	ASTM A316	+0/- 1/8"
FPG-2	FORM PAN	2	2'-5 1/4"	2 11/16"	20 GAUGE	ASTM A316	+0/- 1/8"
FPG-3	FORM PAN	(2) 3	2'-5 1/4"	7 3/16"	20 GAUGE	ASTM A316	
BDP-1	BOLT DOWN PLATE	(4) 6	6 5/16"	3"	3/8"	ASTM A709 GR. 50	+0/- 1/8"
BT-1	BOLT	(2) 3	2"		3/4" Ø	ASTM A325 HDG	
BT-2	BOLT	(2) 3	2 1/2"		3/4" Ø	ASTM A325 HDG	
FW	WASHER	(2) 3			3/4" Ø	ASTM F436 HDG	
TW	TAPERED WASHER	(2) 3			3/4" Ø	ASTM F436 HDG	
NT	NUT	(4) 6			3/4" Ø	ASTM A563 HDG	
LP	LOOSE PAN	1	12"	12"	20 GAUGE	ASTM A653 G-90	+0/- 1/8"

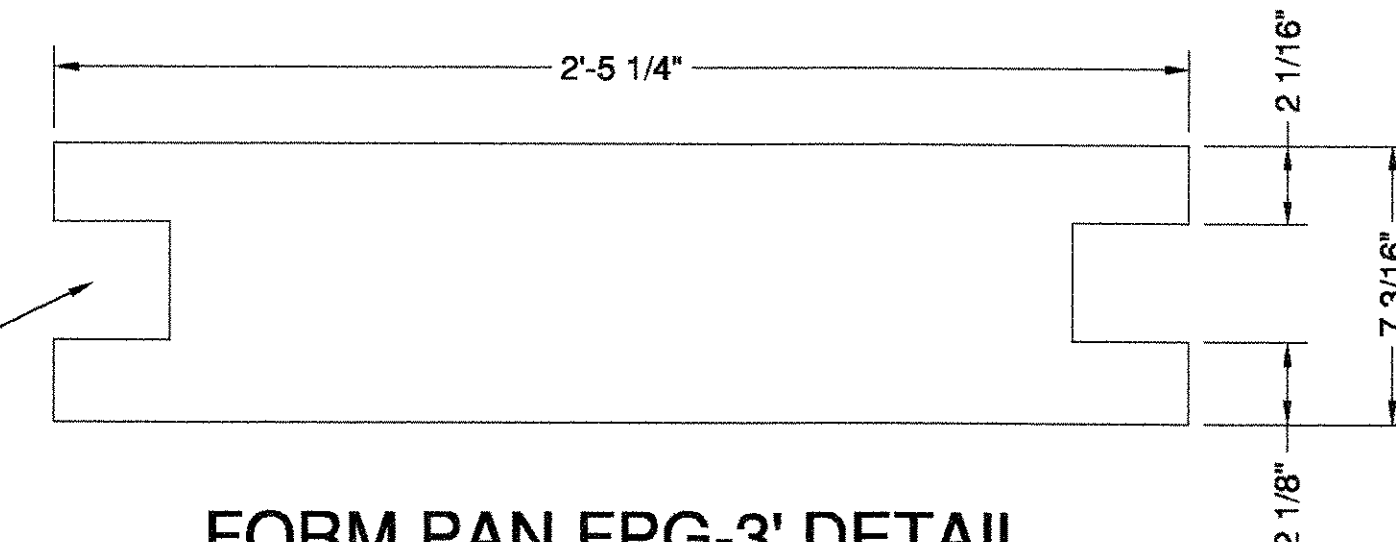
NOTE: THIS PANEL HAS BOLT DOWN PLATES IN THE FOUR CORNERS ONLY. THE ENGINEER IS TO DEFINE WHETHER ADDITIONAL BOLT DOWN PLATES ARE REQUIRED.

Shown Below

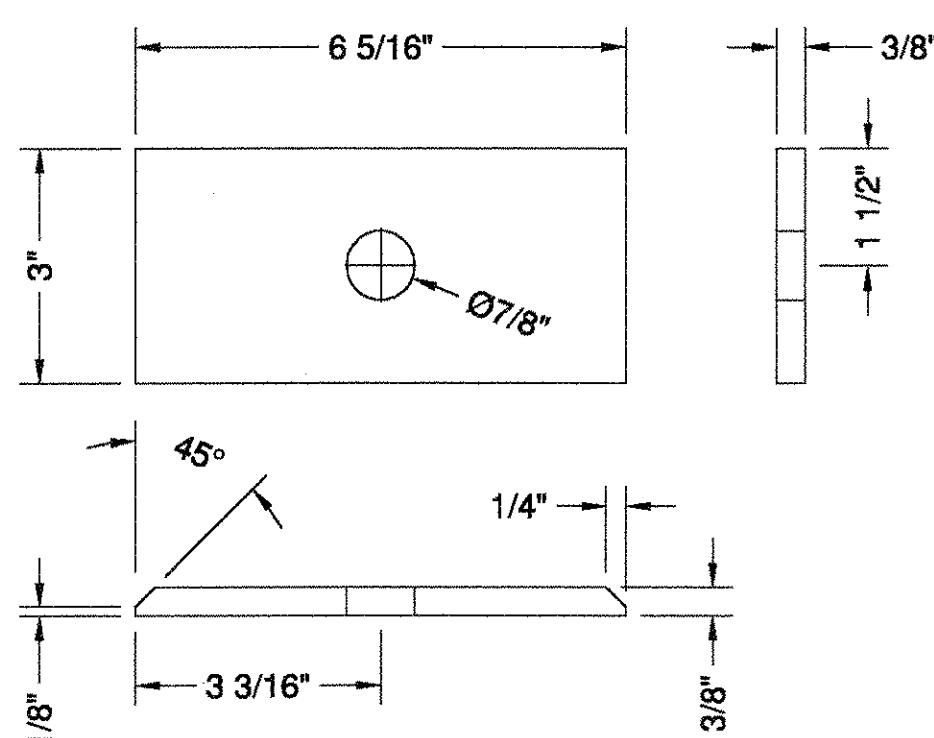
NOTE: THIS PANEL MUST BE INDIVIDUALLY FABRICATED. NO CUT MATERIAL FROM OTHER PANELS CAN BE UTILIZED.

REVISIONS		
REV	DESCRIPTION	DATE
0	INITIAL SUBMITTAL FOR REVIEW	10/24/2007

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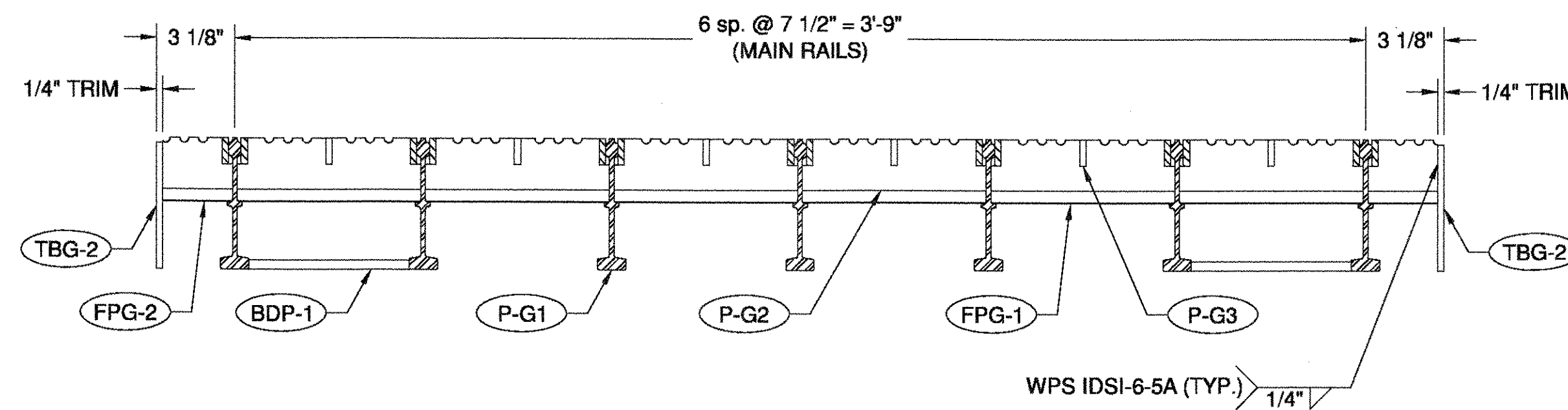
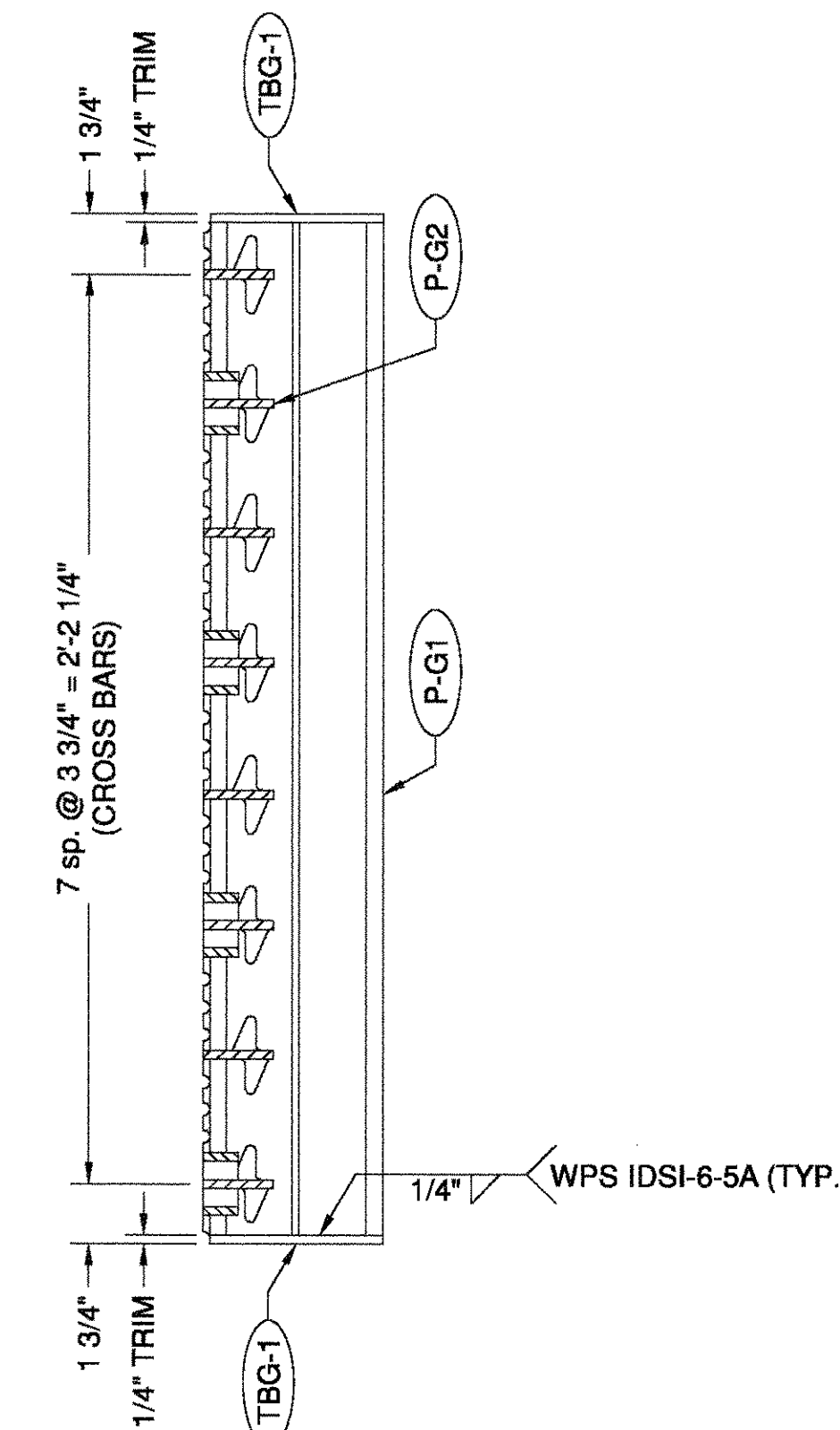
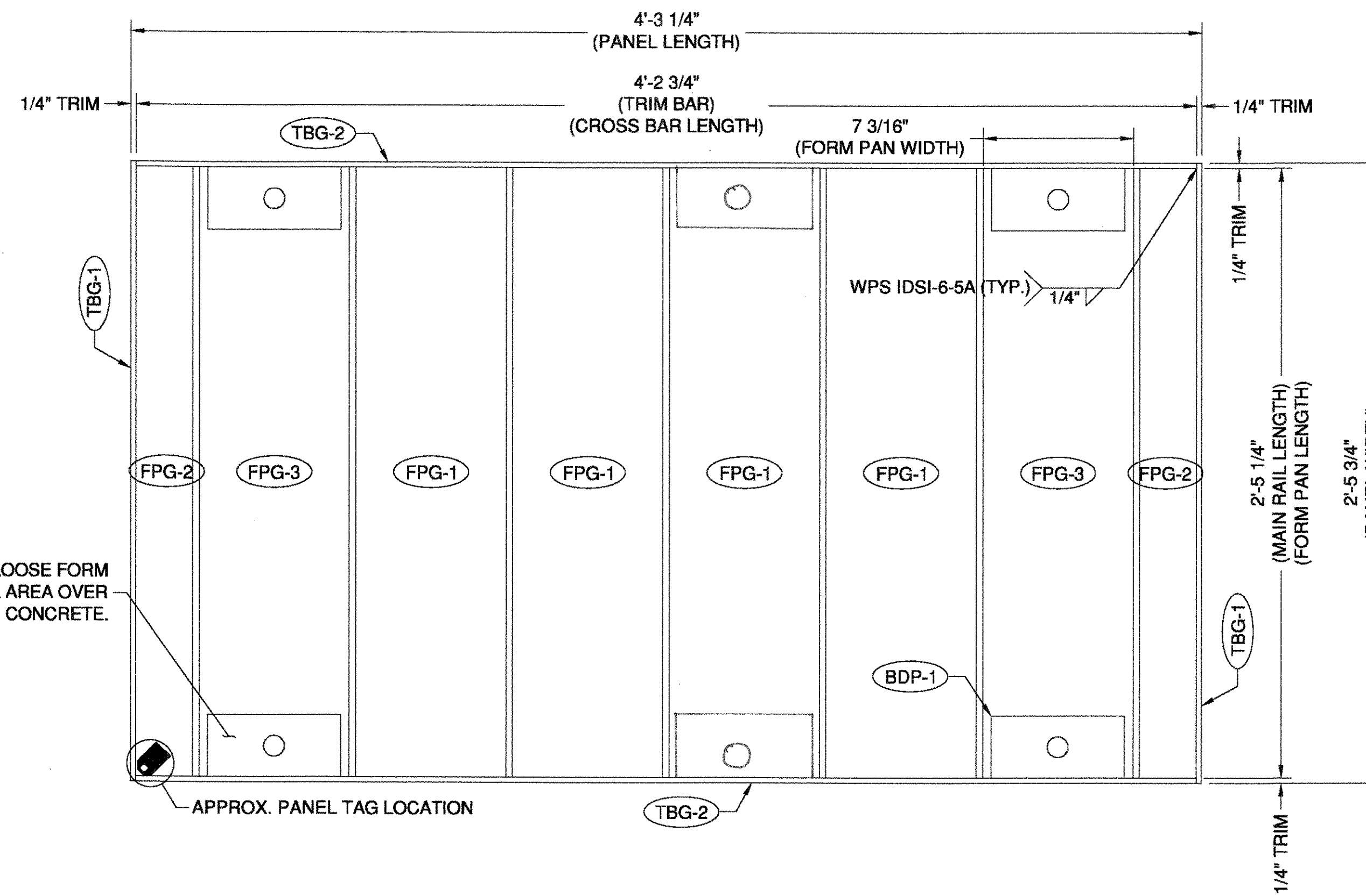


FORM PAN FPG-3' DETAIL



BDP-1 DETAIL

CONTRACTOR TO CUT LOOSE FORM PAN 'LP' AS REQ'D TO FILL AREA OVER BOLT PRIOR TO PLACING CONCRETE.



PANEL G LAYOUT 1 TOTAL - AS SHOWN

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 BY DATE 11/6/07

 interlocking deck systems international 115 41st Street Pittsburgh, PA 15201	PANEL G LAYOUT GRAND ISLE DRAWBRIDGE VERMONT AGENCY OF TRANS.	
	SIZE B	DWG NO. ID-0697-07
	SCALE: N.T.S. P.O. NUMBER R757	SHEET 11

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BILL OF MATERIALS

PANEL H (QUANTITIES ARE PER PANEL - MULTIPLY BY TOTAL NUMBER OF PANELS)

PART	DESCRIPTION	QUANTITY	LENGTH	WIDTH	THICKNESS	MATERIAL TYPE	TOLERANCE
P-H1	5 3/16" MAIN RAIL	4	2'-5 1/4"	-----	-----	ASTM A709 GR. 50	+/- 1/8"
P-H2	CROSS BAR	8	2'-4 1/2"	2"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
P-H3	SUPPLEMENTAL BAR	3	2'-5 1/4"	1"	1/4"	ASTM A709 GR. 50	+/- 1/8"
P-H4	DIAGONAL BAR	8	2'-5 1/4"	1"	1/4"	ASTM A709 GR. 50	+/- 1/8"
TBH-1	TRIM BAR	2	2'-5"	5"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
TBH-2	TRIM BAR	2	2'-5 3/4"	5"	1/4"	ASTM A709 GR. 50	+0/- 1/8"
FPH-1	FORM PAN	3	2'-5 1/4"	7 3/16"	20 GAUGE	ASTM A316	+0/- 1/8"
FPH-2	FORM PAN	2	2'-5 1/4"	3 1/16"	20 GAUGE	ASTM A316	+0/- 1/8"
BDP-1	BOLT DOWN PLATE	4	6 5/16"	3"	3/8"	ASTM A709 GR. 50	+0/- 1/8"
BT-1	BOLT	2	2"	-----	3/4" Ø	ASTM A325 HDG	-----
BT-2	BOLT	2	2 1/2"	-----	3/4" Ø	ASTM A325 HDG	-----
FW	WASHER	2	-----	-----	3/4" Ø	ASTM F436 HDG	-----
TW	TAPERED WASHER	2	-----	-----	3/4" Ø	ASTM F436 HDG	-----
NT	NUT	4	-----	-----	3/4" Ø	ASTM F563 HDG	-----
TAS-1	ACCESS SLEEVE	4	-----	-----	-----	ASTM A500 GR A	+0/- 1/8"

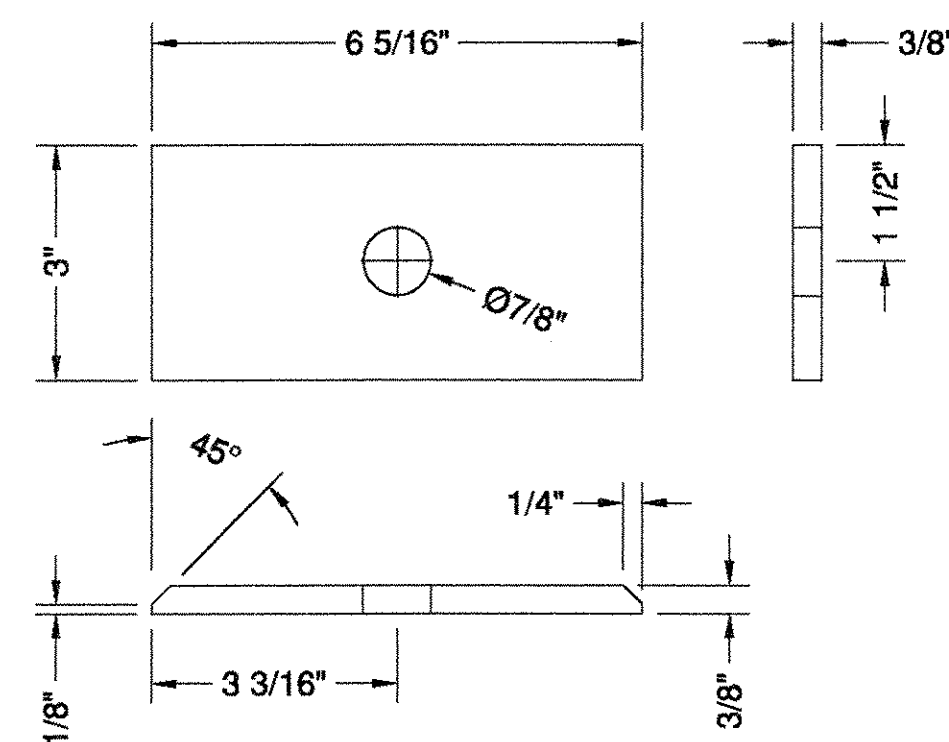
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NOTE: REMOVABLE PANELS HAVE BOLT DOWN PLATES IN THE FOUR CORNERS ONLY. THE ENGINEER IS TO DEFINE WHETHER ADDITIONAL BOLT DOWN PLATES ARE REQUIRED.

NOTE: SHOP TO CUT GRID DECK COMPONENTS AS REQUIRED TO ALLOW INSTALLATION OF TUBULAR ACCESS SLEEVES.

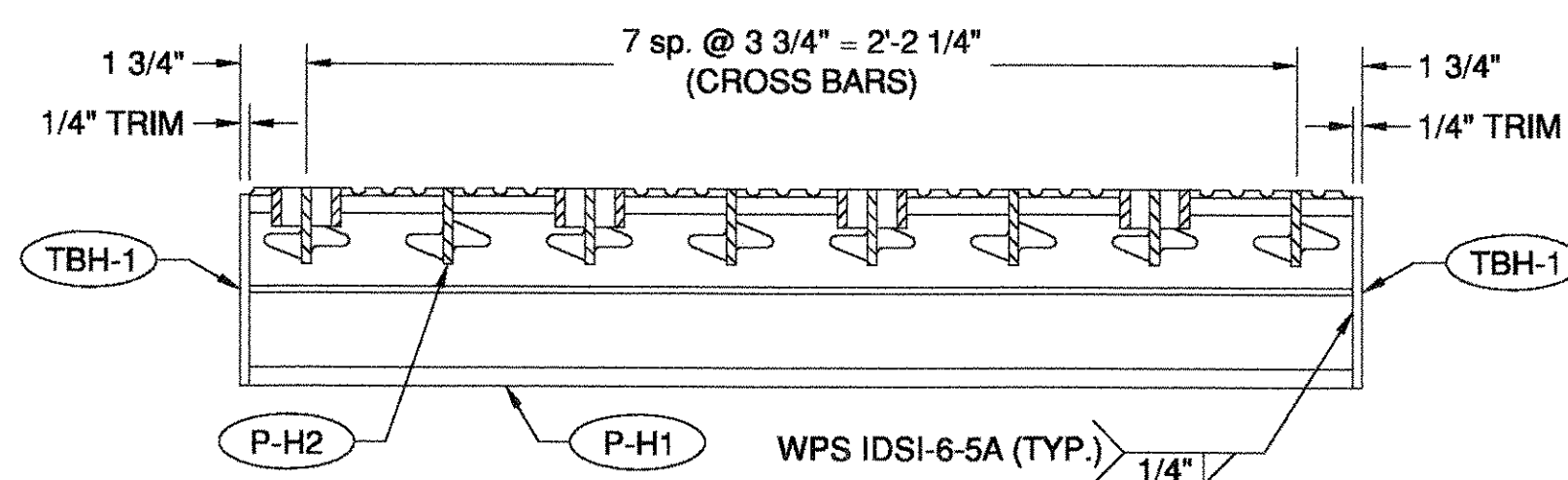
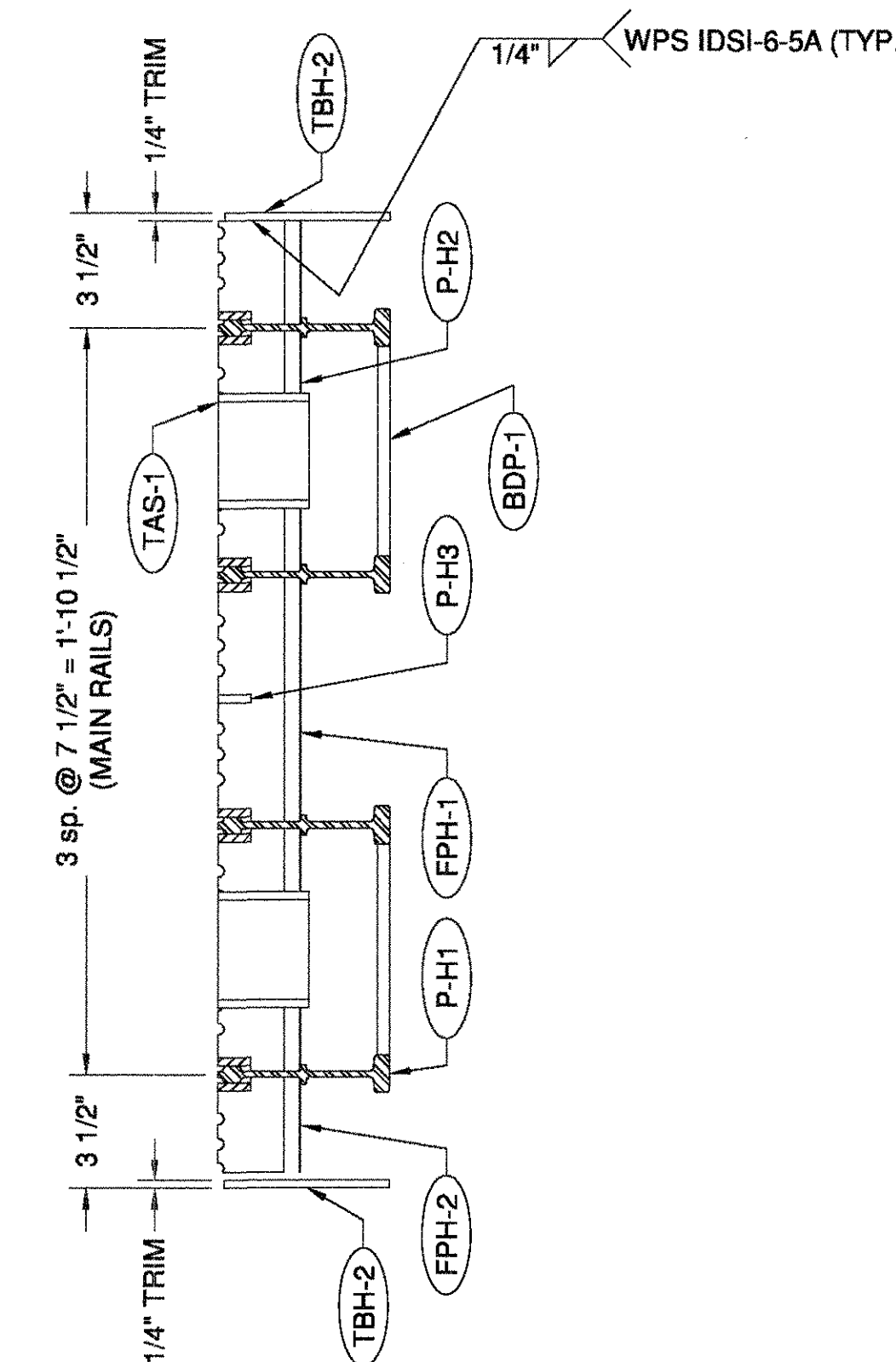
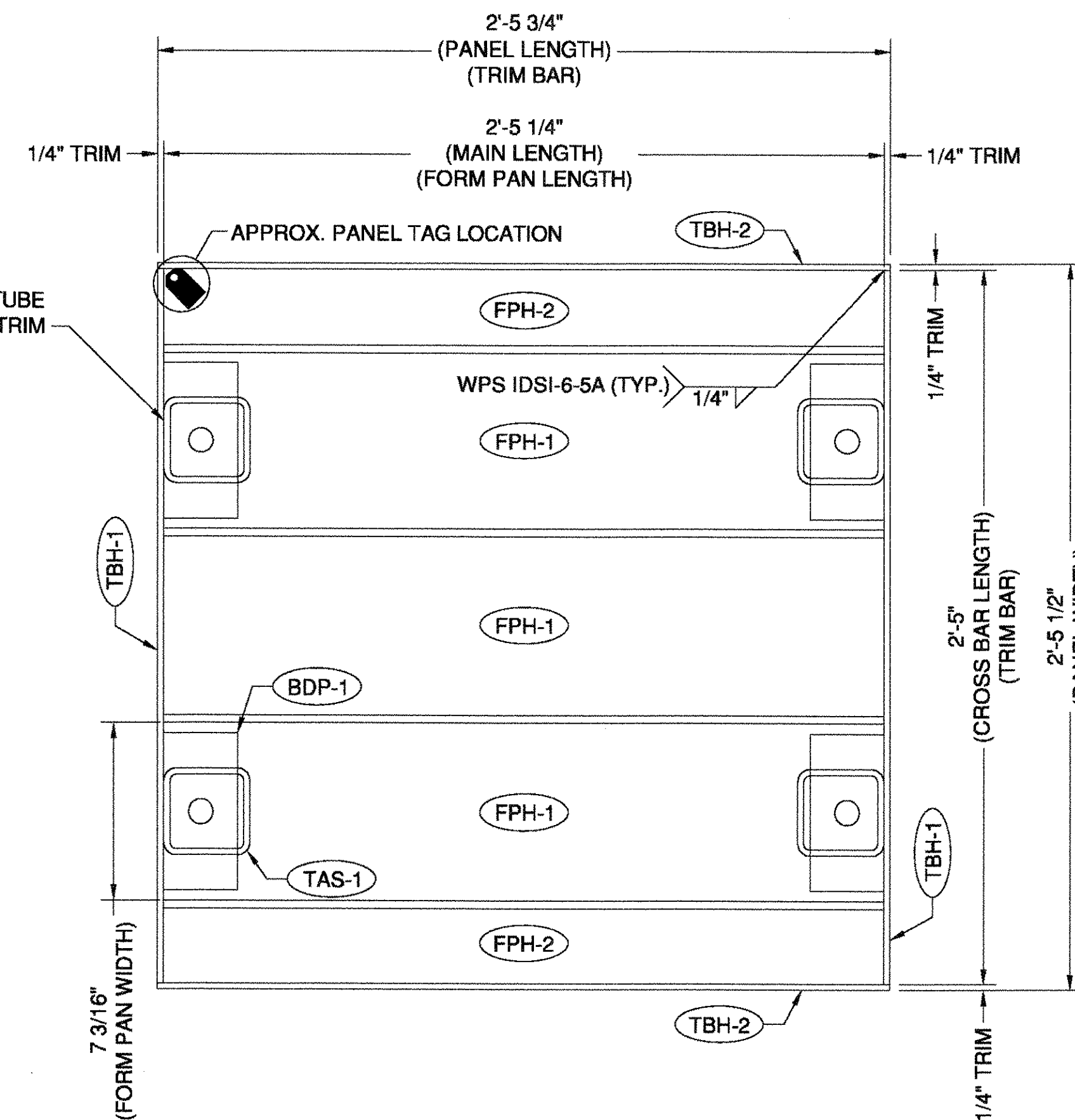
NOTE: CREATE PANEL FROM C PANELS' SCRAP.

REVISIONS		
REV	DESCRIPTION	DATE
0	INITIAL SUBMITTAL FOR REVIEW	10/24/2007



BDP-1 DETAIL

3 1/2" x 3 1/2" x 1/4" STRUCTURAL TUBE
ALIGN EDGE OF TUBE WITH TRIM



PANEL H LAYOUT
1 TOTAL - AS SHOWN

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OCT 29 2007
RESUBMIT APPROVED [Signature]
BY DATE 11/6/07

 interlocking deck systems international 115 41st Street Pittsburgh, PA 15201	PANEL H LAYOUT GRAND ISLE DRAWBRIDGE VERMONT AGENCY OF TRANS.	
	SIZE B	DWG NO. ID-0697-07
SCALE N.T.S.	P.O. NUMBER R757	BY WPO APPROVED JMO

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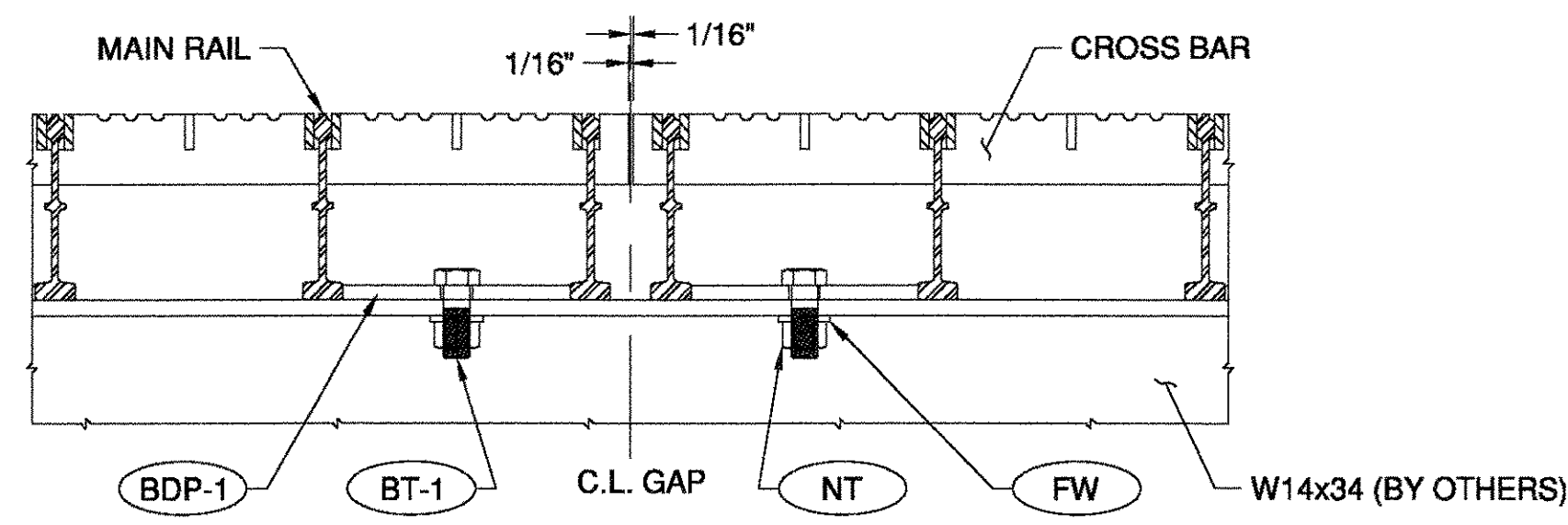
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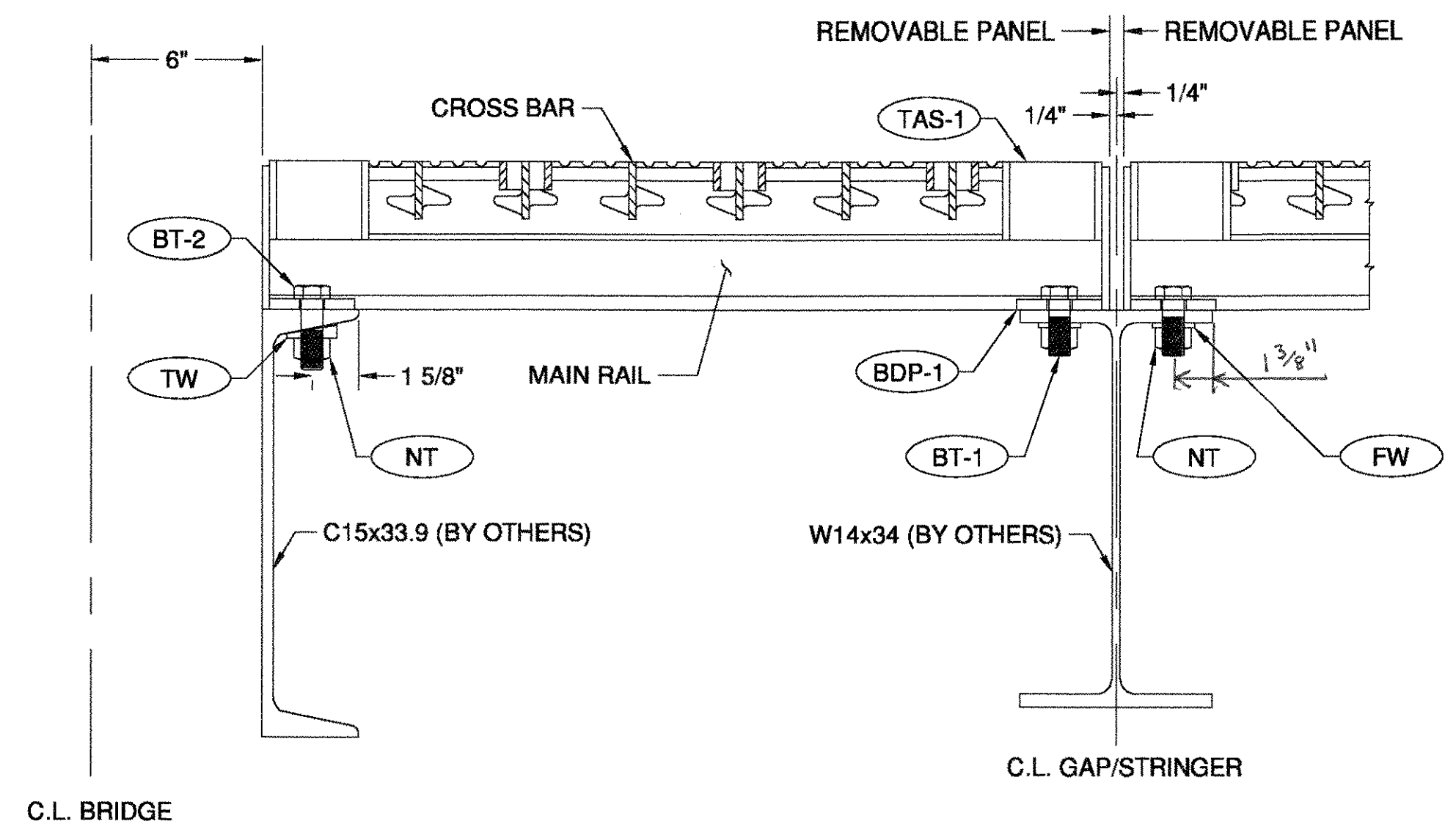
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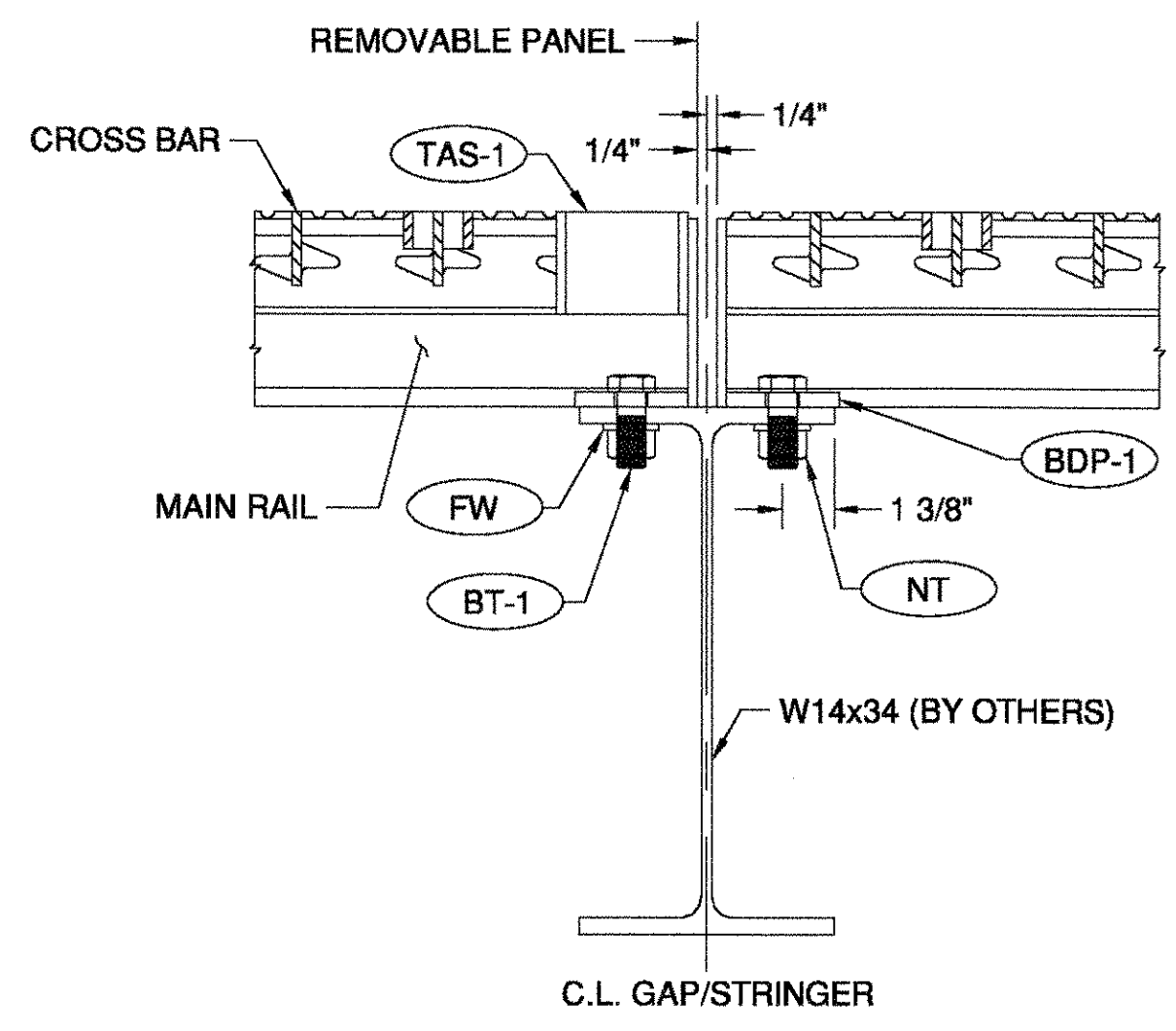
REVISIONS		
REV	DESCRIPTION	DATE
0	INITIAL SUBMITTAL FOR REVIEW	10/24/2007



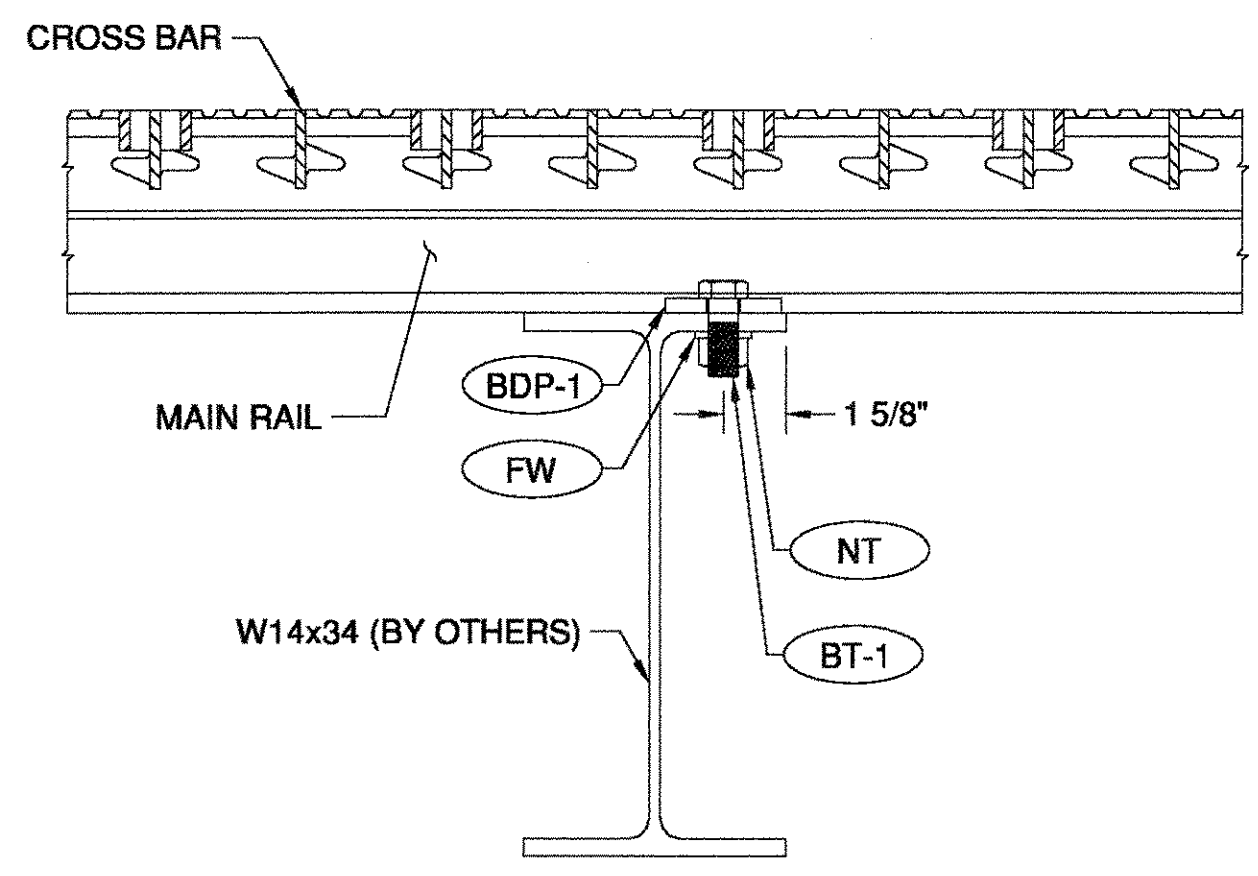
DETAIL 1/S13



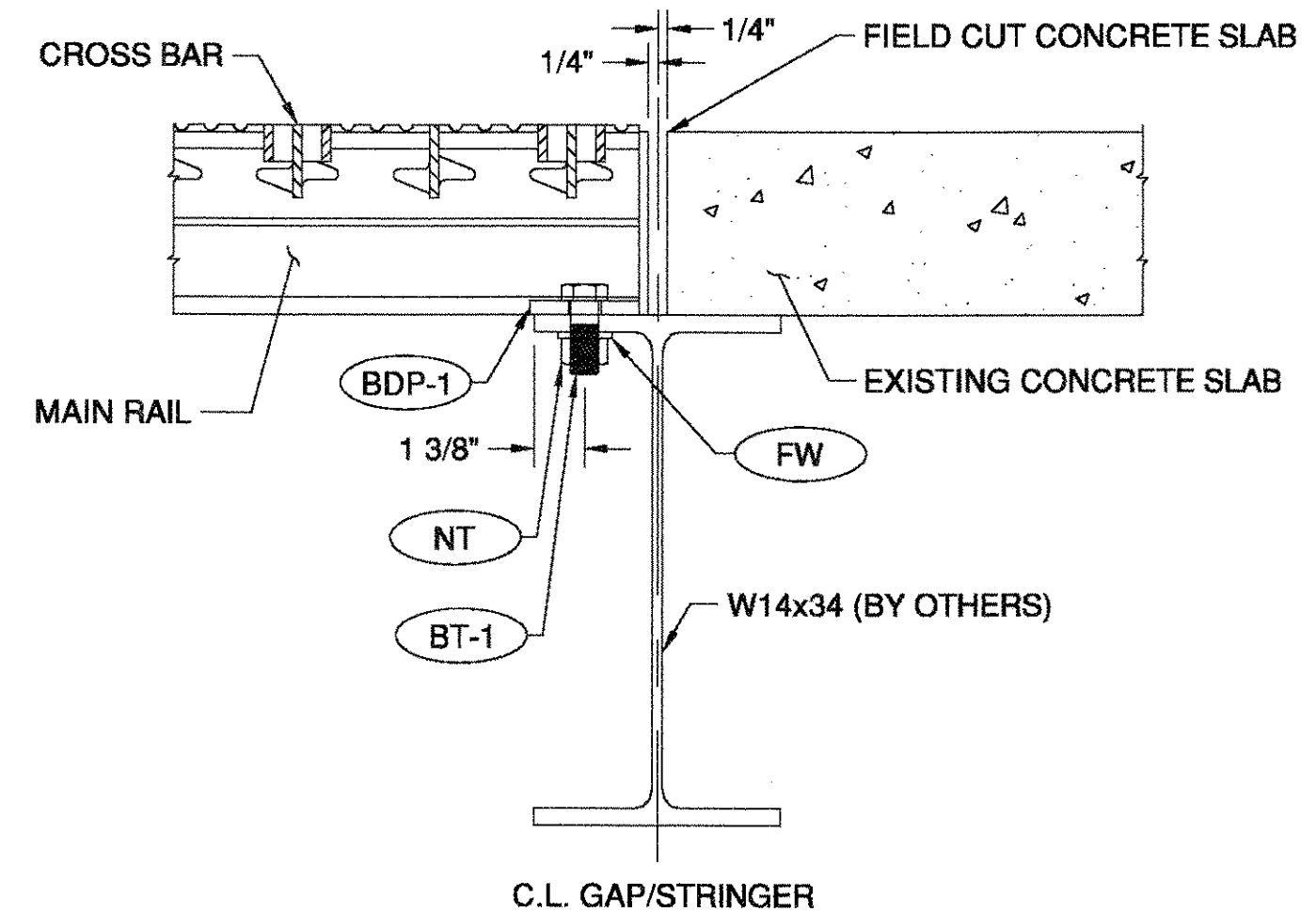
DETAIL 2/S13



DETAIL 3/S13




DETAIL 4/S13



DETAIL 5/S13

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 OCT 29 2007
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 BY DATE 11/6/07

 interlocking deck systems international 115 41st Street Pittsburgh, PA 15201	SECTIONS		
	GRAND ISLE DRAWBRIDGE VERMONT AGENCY OF TRANS.		
DWG NO. ID-0697-07 SHEET 13	SCALE N.T.S.	P.O. NUMBER R757	BY WPO APPROVED JMO

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