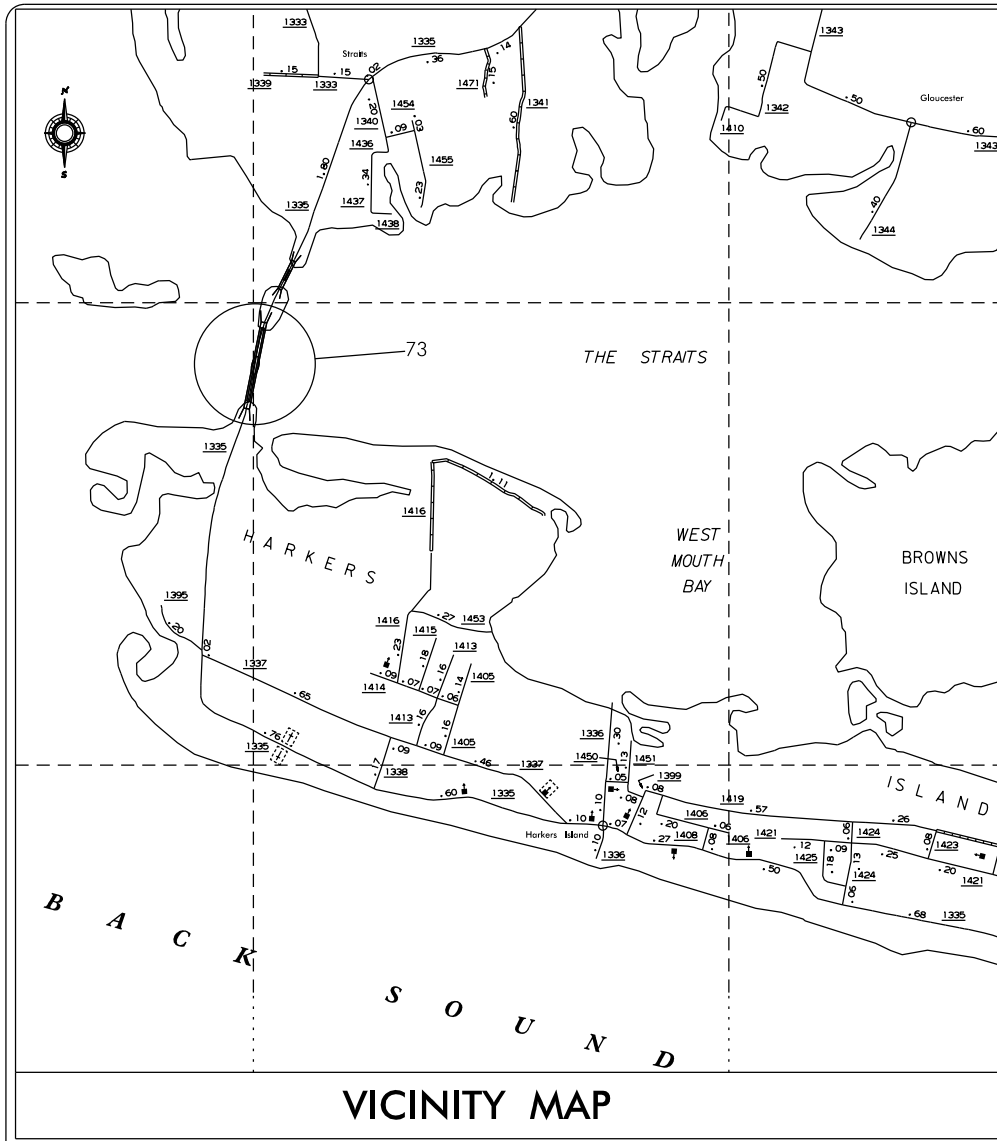


WBS # 41733.2



VICINITY MAP

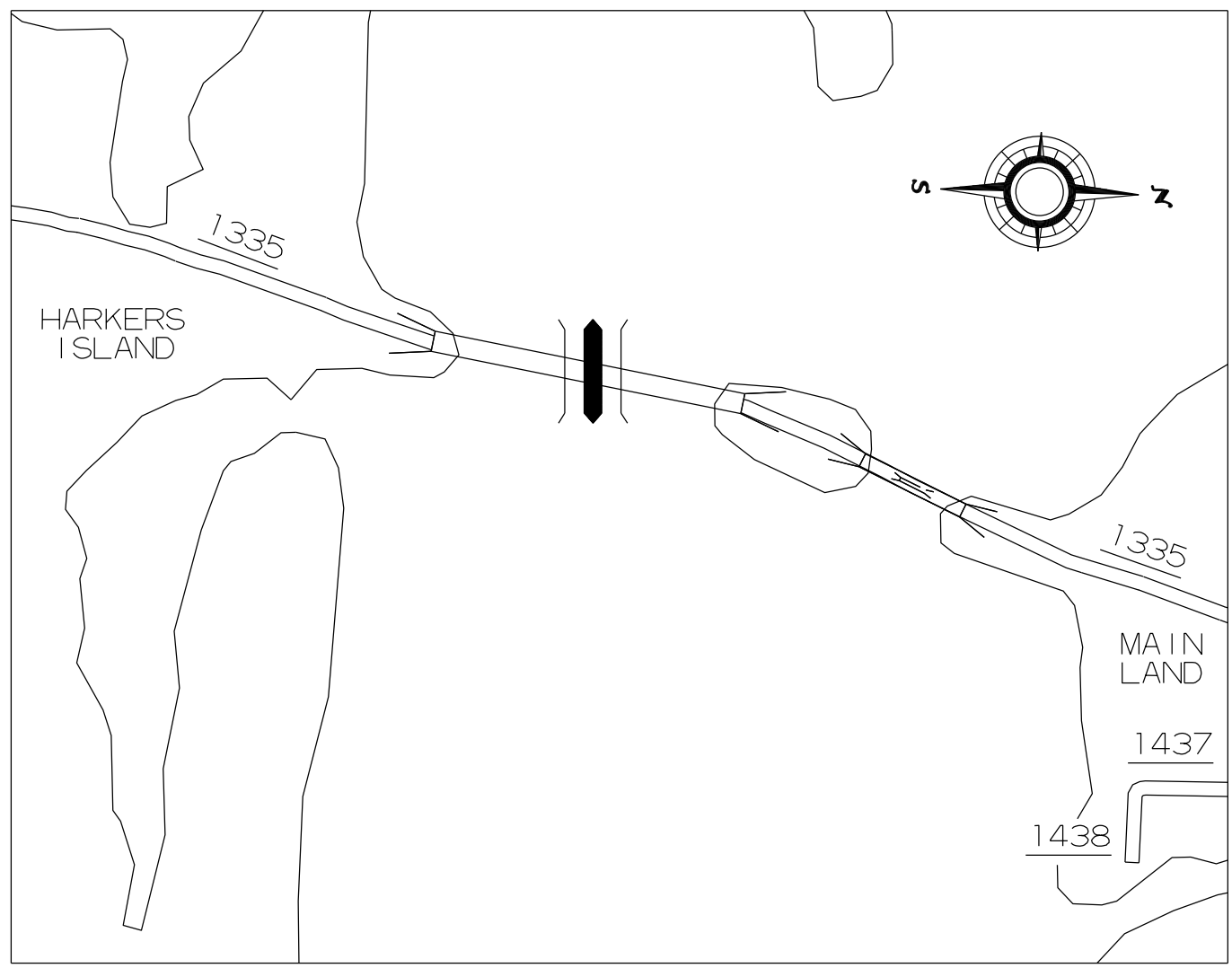
INDEX OF SHEETS	
1	TITLE SHEET
S1 - S6	STRUCTURE PLANS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

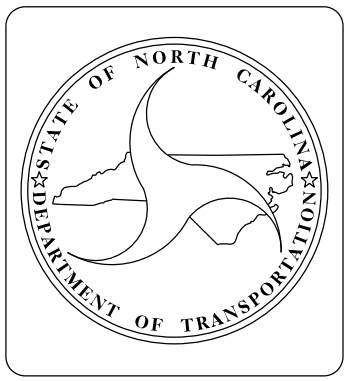
CARTERET COUNTY

**LOCATION: BRIDGE #73, ON SR 1335, HARKERS ISLAND RD.
OVER THE INTERCOASTAL WATERWAY.**

TYPE OF WORK: BRIDGE REST FENDER RESTORATION



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	WBS #41733.2	1	7
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
41733.2	NA	CONST	



DESIGN DATA

PROJECT LENGTH

LENGTH OF PROJECT = 190'

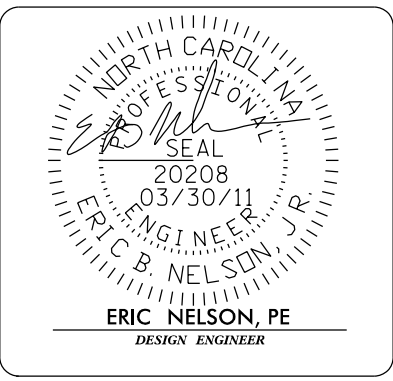
Prepared in the Office of:

DIVISION OF BRIDGE MANAGEMENT

2006 STANDARD SPECIFICATIONS

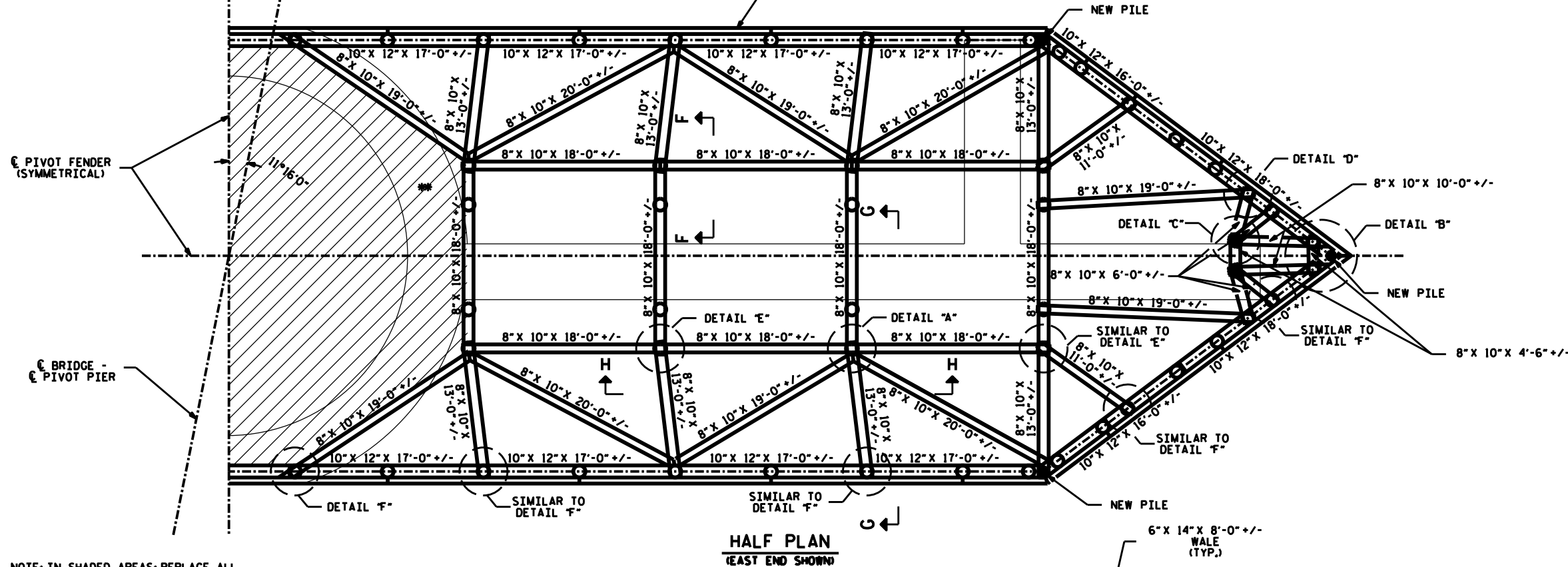
LETTING DATE:
JUNE 16, 2011

DAN HOLDERMAN, PE
PROJECT ENGINEER

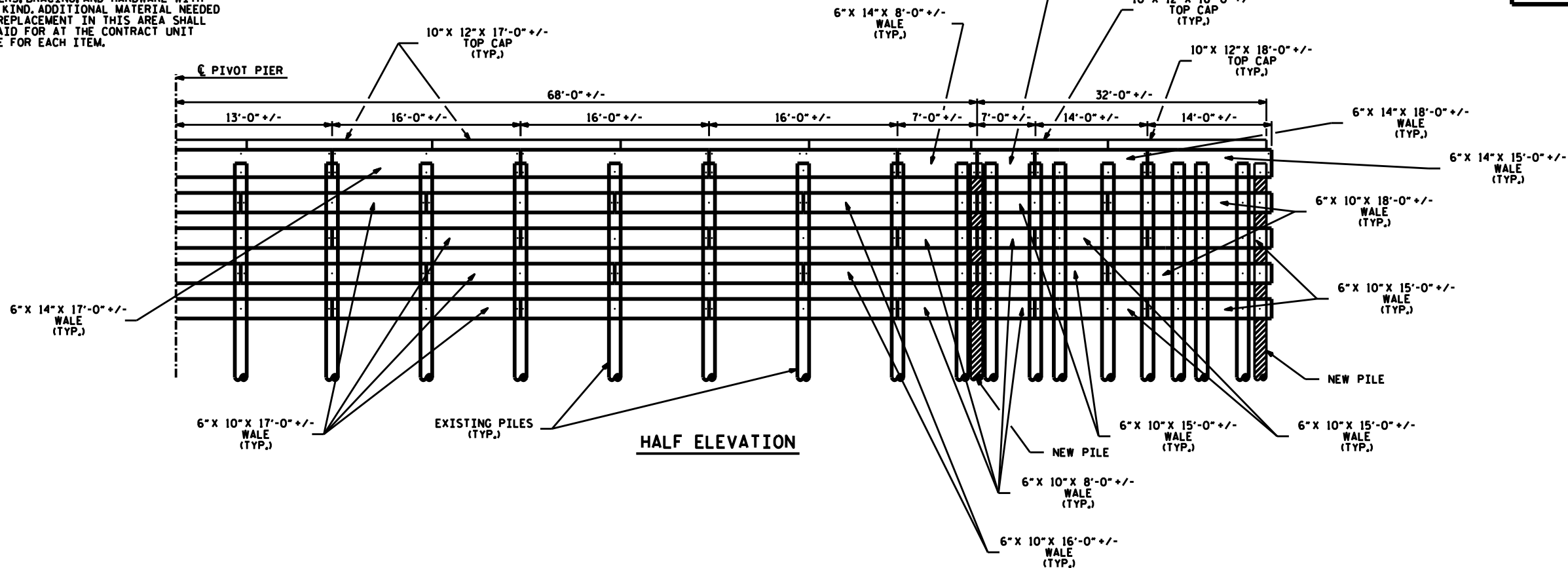


NOTE: ALL TIMBER LENGTH MEASUREMENTS MUST BE FIELD VARIED PRIOR TO CONSTRUCTION. DESIGN BASED ON ORIGINAL PLANS, LOCATION OF PILES SHOWN ON PLANS ARE BASED ON PHOTOGRAPHS, AND ACTUAL LOCATION IS UNKNOWN.

NOTE: FRAME WORK UNDER WOODEN WALKWAY AROUND PIVOT PIER IS OF UNKNOWN CONDITION AND LAYOUT.



NOTE: IN SHADED AREAS, REPLACE ALL TIMBERS, BRACING, AND HARDWARE WITH LIKE KIND. ADDITIONAL MATERIAL NEEDED FOR REPLACEMENT IN THIS AREA SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR EACH ITEM.



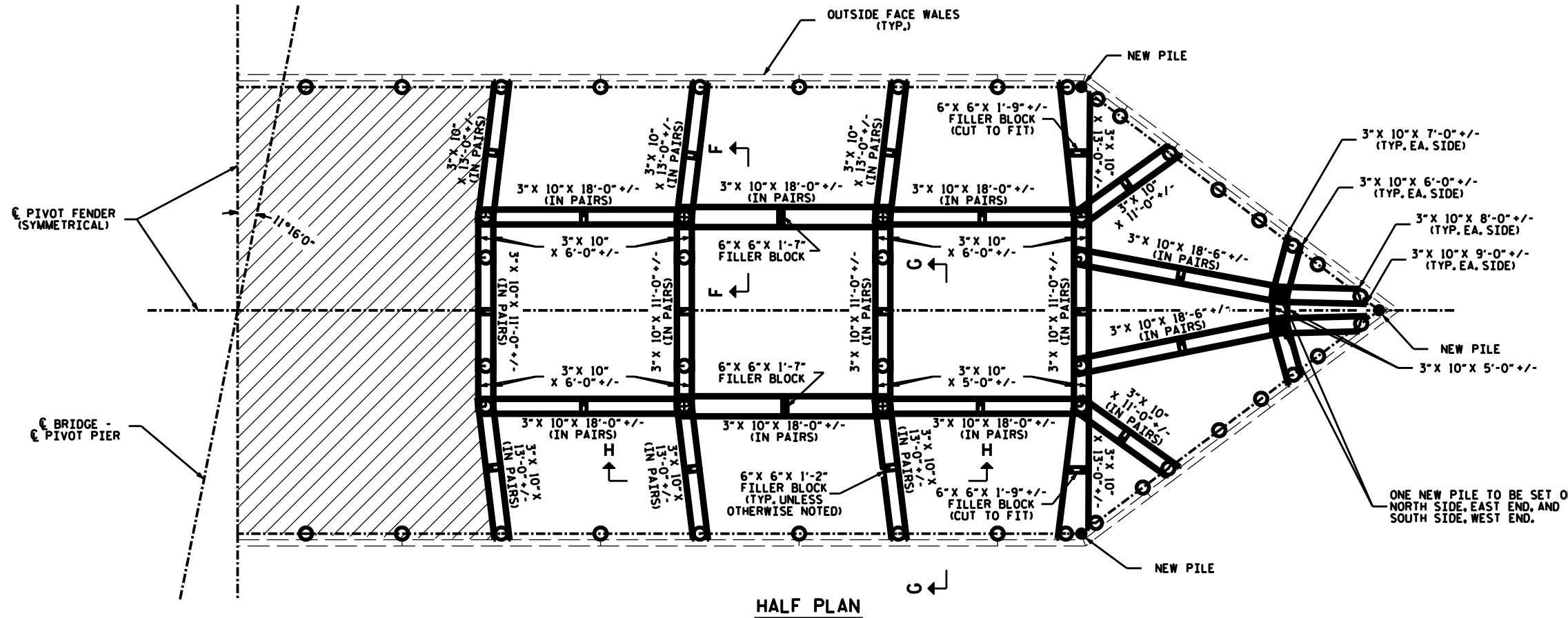
BILL OF MATERIAL						
FOR ONE END PIVOT FENDER (2 REQ'D)						
TREATED TIMBER BRACING						
ITEM	NO.	SIZE	LENGTH	LIN. FT.	SURFACE TO	BRD. FT.
CAP	2	10" X 12"	9'-0"	18'-0"	9 1/2" X 11 1/4"	160.31
CAP	2	10" X 12"	16'-0"	32'-0"	9 1/2" X 11 1/4"	285.00
CAP	4	10" X 12"	17'-0"	68'-0"	9 1/2" X 11 1/4"	605.63
CAP	6	10" X 12"	18'-0"	108'-0"	9 1/2" X 11 1/4"	961.88
BRACING	2	8" X 10"	4'-6"	9'-0"	7 1/2" X 9 1/4"	52.03
BRACING	4	8" X 10"	6'-0"	24'-0"	7 1/2" X 9 1/4"	138.75
BRACING	2	8" X 10"	10'-0"	20'-0"	7 1/2" X 9 1/4"	115.63
BRACING	2	8" X 10"	11'-0"	22'-0"	7 1/2" X 9 1/4"	127.19
BRACING	8	8" X 10"	13'-0"	104'-0"	7 1/2" X 9 1/4"	601.25
BRACING	10	8" X 10"	18'-0"	180'-0"	7 1/2" X 9 1/4"	1040.63
BRACING	6	8" X 10"	19'-0"	114'-0"	7 1/2" X 9 1/4"	659.06
BRACING	4	8" X 10"	20'-0"	80'-0"	7 1/2" X 9 1/4"	462.50
WALES	10	6" X 10"	8'-0"	80'-0"	5 1/2" X 9 1/4"	339.17
WALES	12	6" X 10"	15'-0"	180'-0"	5 1/2" X 9 1/4"	763.13
WALES	4	6" X 10"	16'-0"	64'-0"	5 1/2" X 9 1/4"	371.33
WALES	24	6" X 10"	17'-0"	408'-0"	5 1/2" X 9 1/4"	1729.75
WALES	4	6" X 10"	18'-0"	72'-0"	5 1/2" X 9 1/4"	305.25
WALES	2	6" X 10"	25'-0"	50'-0"	5 1/2" X 9 1/4"	211.98
WALES	4	6" X 14"	8'-0"	32'-0"	5 1/2" X 13 1/4"	194.33
WALES	4	6" X 14"	15'-0"	60'-0"	5 1/2" X 13 1/4"	364.38
WALES	6	6" X 14"	17'-0"	102'-0"	5 1/2" X 13 1/4"	619.44
WALES	1	6" X 14"	25'-0"	25'-0"	5 1/2" X 13 1/4"	151.82
TREATED TIMBER TOTAL LIN. FT. = 1852'-0"						
TREATED TIMBER TOTAL BRD. FT. = 9889.11						
HARDWARE						
ITEM	NO.	SIZE	LENGTH	WEIGHT		
O. H. BOLTS	276	3/4" Ø	22"	1009		
O. H. BOLTS	52	3/4" Ø	26"	217		
O. G. WASHERS	328	3/4" Ø	-	327		
DRIFT PINS	84	3/4" Ø	36"	379		
HARDWARE TOTAL LBS. = 1932						

PROJECT NO. 41733.2
 COUNTY: CARTERET
 STATION:
 BRIDGE NO. 73

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PIVOT PIER FENDER
 HALF PLAN

REVISIONS						SHEET NO. S1
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEETS S6
2			4			



BILL OF MATERIAL						
FOR ONE END REST PIER FENDER (2 REQ'D)						
TREATED TIMBER BRACING						
ITEM	NO.	SIZE	LENGTH	LIN. FT.	SURFACE TO	BRD. FT.
BRACING	2	3" X 10"	5'-0"	10'-0"	2 1/2" X 9/4"	19.27
BRACING	18	3" X 10"	6'-0"	108'-0"	2 1/2" X 9/4"	208.13
BRACING	2	3" X 10"	7'-0"	14'-0"	2 1/2" X 9/4"	26.98
BRACING	2	3" X 10"	8'-0"	16'-0"	2 1/2" X 9/4"	30.93
BRACING	2	3" X 10"	9'-0"	18'-0"	2 1/2" X 9/4"	34.69
BRACING	12	3" X 10"	11'-0"	132'-0"	2 1/2" X 9/4"	254.38
BRACING	16	3" X 10"	13'-0"	208'-0"	2 1/2" X 9/4"	400.83
BRACING	12	3" X 10"	18'-0"	216'-0"	2 1/2" X 9/4"	416.25
BRACING	4	3" X 10"	18'-6"	74'-0"	2 1/2" X 9/4"	142.60
FILLER BLOCK	18	6" X 6"	1'-2"	21'-0"	6" X 6"	63.00
FILLER BLOCK	2	6" X 6"	1'-7"	3'-4"	6" X 6"	10.00
FILLER BLOCK	2	6" X 6"	1'-9"	3'-8"	6" X 6"	11.00
PILES	4	14" Ø	50'-0"	200'-0"	N/A	N/A
				TIMBER PILES TOTAL LIN. FT. =	200'-0"	
				TREATED TIMBER TOTAL LIN. FT. =	824'-0"	
				TREATED TIMBER TOTAL BRD. FT. =	1618.06	
HARDWARE						
O. H. BOLTS	81	3/4" Ø	22"	296		
O. H. BOLTS	6	3/4" Ø	26"	25		
O. H. BOLTS	2	3/4" Ø	28"	9		
O. G. WASHERS	89	3/4" Ø	EA.	89		
				HARDWARE TOTAL WEIGHT =	419 LB.	

GENERAL NOTES:

EXISTING BRIDGE AND REPAIR DETAILS INDICATED ON THE PLANS ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE AND REPAIR DETAILS SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO VERIFY INFORMATION SHOWN ON THESE PLANS AND SHALL OBTAIN ALL OTHER EXISTING BRIDGE DATA NECESSARY FOR THE EXECUTION OF THE WORK.

ALL WORK SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL SUBMIT PLANS FOR REMOVAL AND REPAIR IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

THE EXISTING FENDER SYSTEM IS TO BE REMOVED AND PROPERLY DISPOSED OF AS NECESSARY TO CLEAR PROPOSED CONSTRUCTION. THE COST FOR THIS WORK IS TO BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS PAY ITEMS.

FOR REMOVAL OF EXISTING FENDER SYSTEM, SEE SPECIAL PROVISIONS.

TIMBER PILES SHALL BE SOUTHERN PINE AND MEET THE REQUIREMENTS OF ASTM D-25 AND SECTION 1082 OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, DATED JULY 2006.

PILES SHALL BE CCA TREATED IN ACCORDANCE WITH AWPAC-14 STANDARDS. AMOUNT OF TREATMENT SHALL BE 2.5" lcf.

ALL STRUCTURAL LUMBER SHALL MEET THE REQUIREMENTS OF SECTION 1082 OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, DATED JULY 2006.

ALL STRUCTURAL LUMBER SHALL BE S45 AND TREATED WITH 0.6" lcf CCA IN ACCORDANCE WITH AWPAC-14 STANDARDS.

IN SHADED AREAS, REPLACE ALL TIMBERS, BRACING, AND HARDWARE WITH LIKE KIND. ADDITIONAL MATERIAL NEEDED FOR REPLACEMENT IN THIS AREA SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR EACH ITEM.

ALL REPLACEMENT MATERIALS SHALL BE NEW.

LENGTHS OF TIMBERS SHOWN ALLOWS FOR CUTS.

BOLT LENGTHS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE EXACT LENGTH IN THE FIELD.

3/4" DIAMETER O. H. BOLTS WITH 3" MINIMUM DIAMETER HEADS SHALL BE USED.

BOLTS SHALL BE ASTM A307.

EXISTING NAVIGATION LIGHTS TO REMAIN. CONTACT DIVISION 2 BRIDGE MAINTAINANCE IF LIGHTING IS REQUIRED TO BE TEMPORARILY RE-LOCATED FOR FENDER REPAIR WORK. TEMPORARY AND FINAL RELOCATION OF LIGHTS WILL BE PERFORMED BY NCDOT.

ALL EXISTING SIGNS SHALL BE RETAINED. IF REQUIRED TO BE REMOVED, TO ACCOMPLISH REPAIR WORK, THE COST TO TEMPORARILY REMOVE AND REPLACE SIGNS SHALL BE INCIDENTAL TO THE WORK AND INCLUDED IN THE VARIOUS PAY ITEMS.

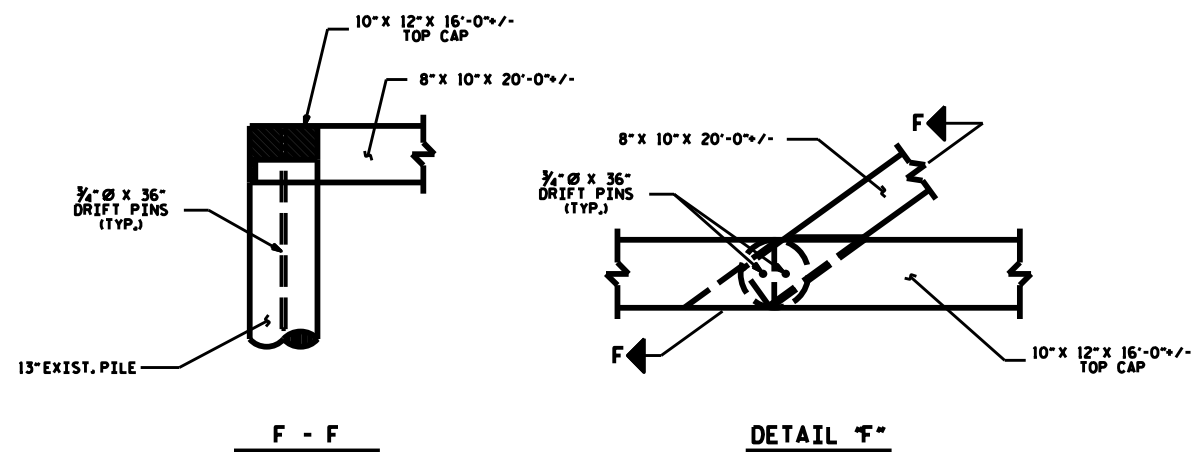
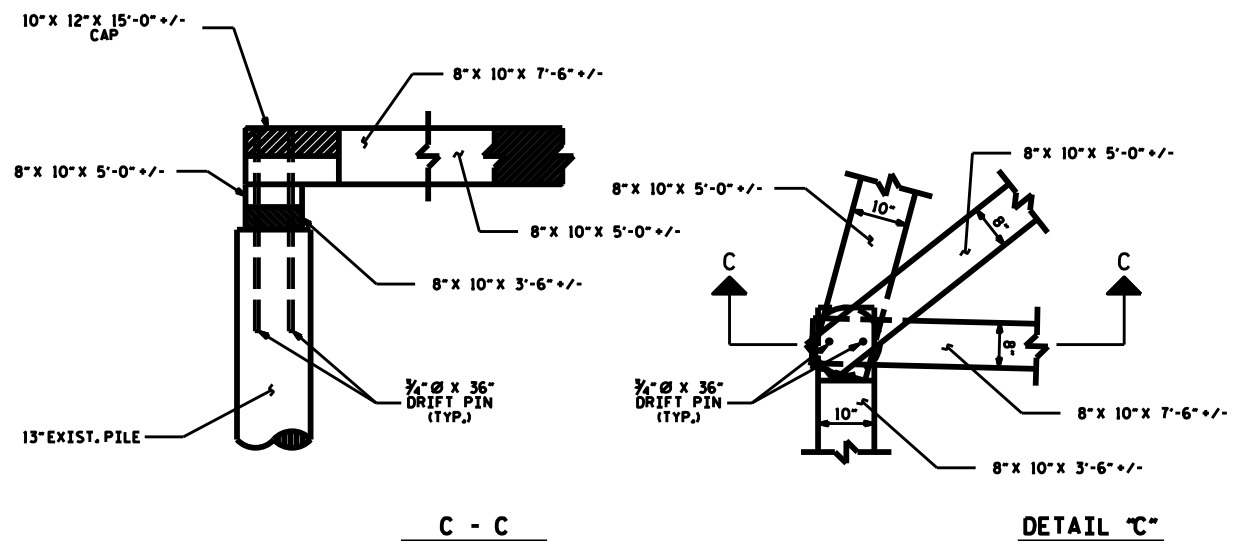
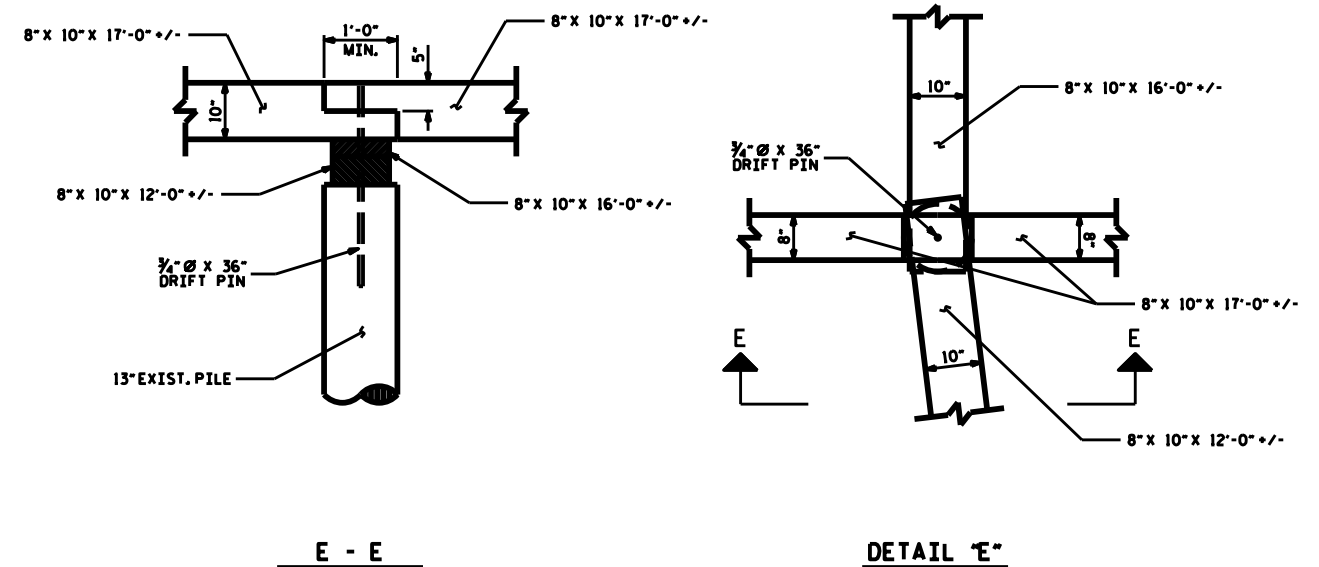
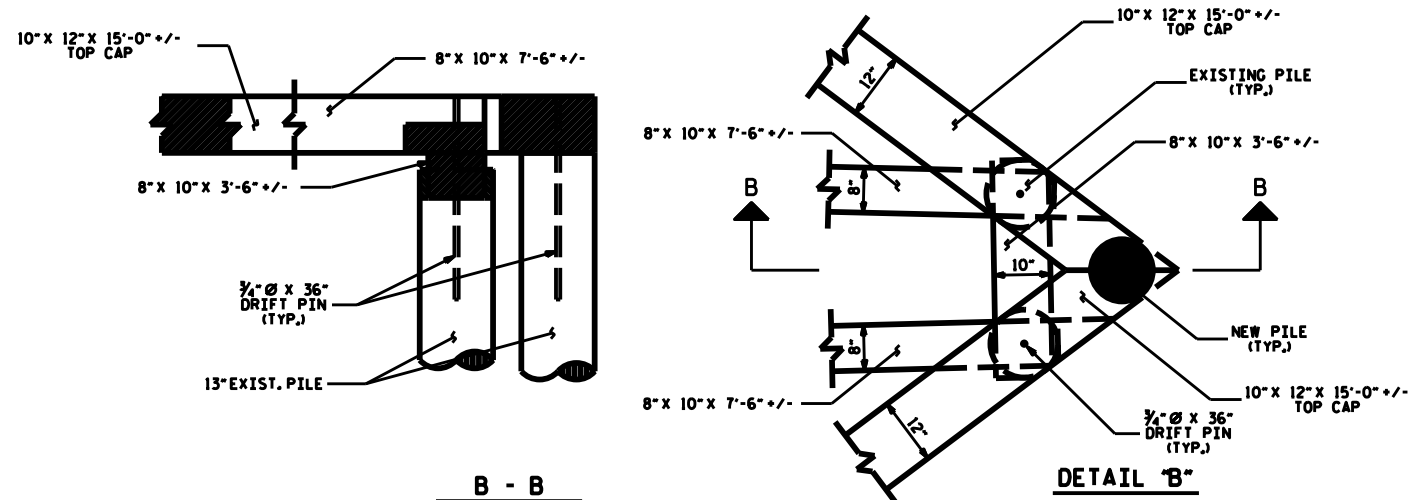
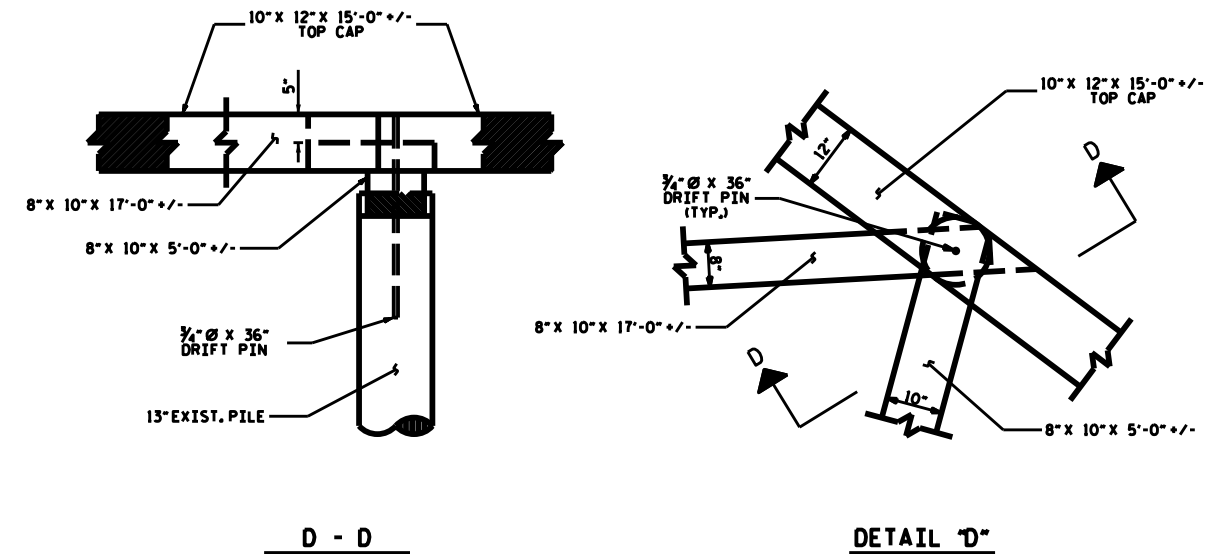
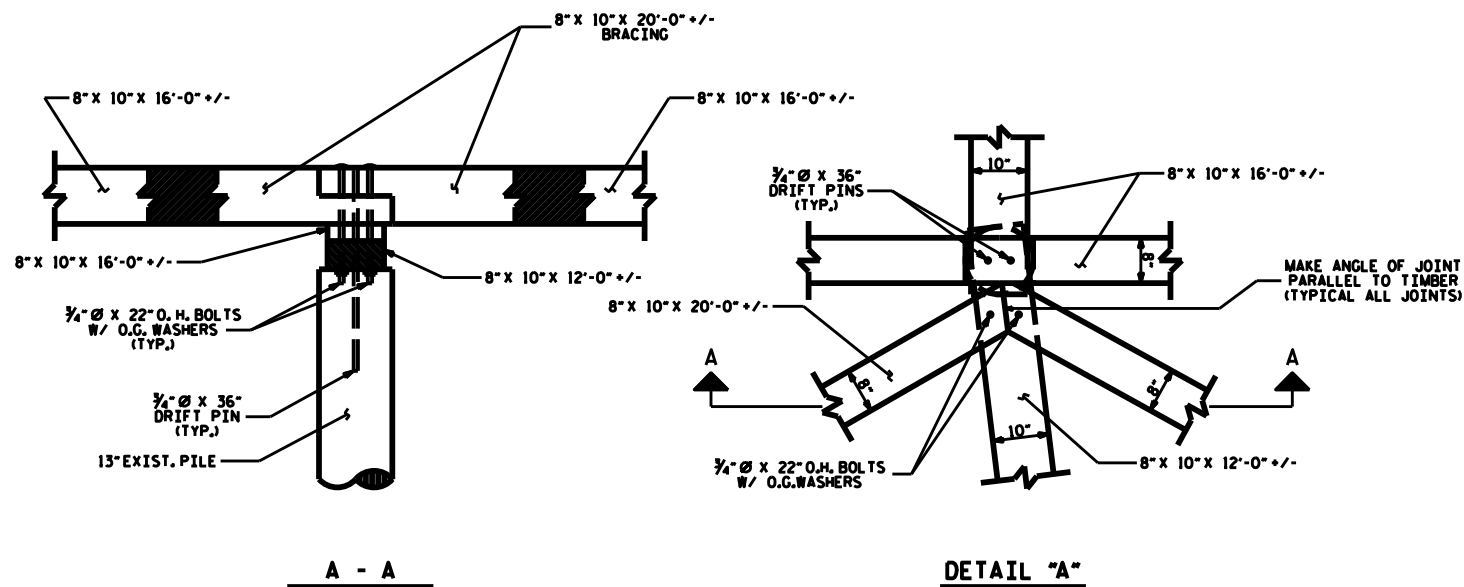
PROJECT NO. 41733.2
 COUNTY: CARTERET
 STATION:
 BRIDGE NO. 73

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PIVOT PIER FENDER
 HALF PLAN

REVISIONS						SHEET NO. S2
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEETS S6
2			4			

NOTE: NOT TO SCALE

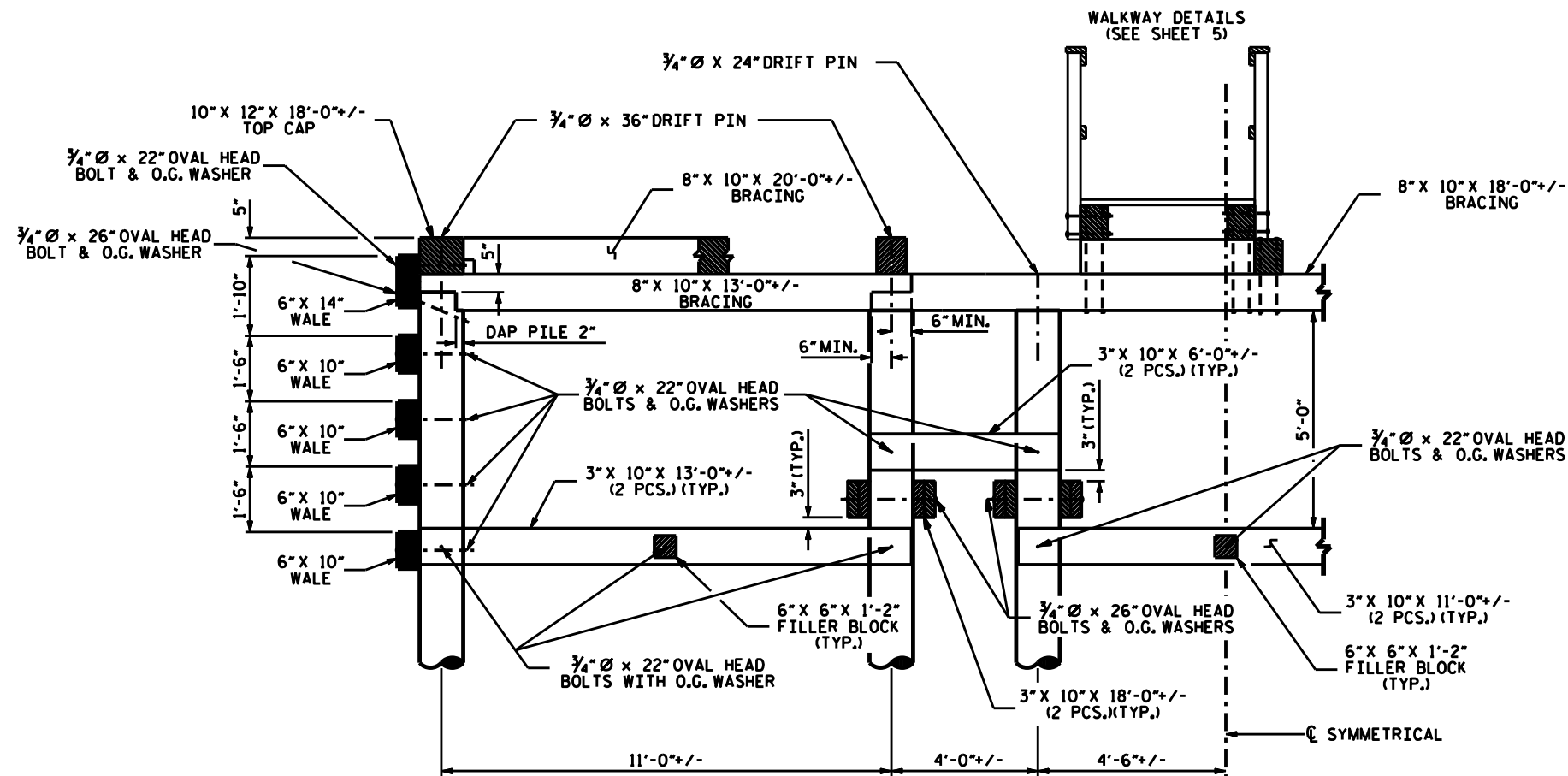


PROJECT NO. 41733.2
 COUNTY: CARTERET
 STATION:
 REPLACES BRIDGE NO. 73

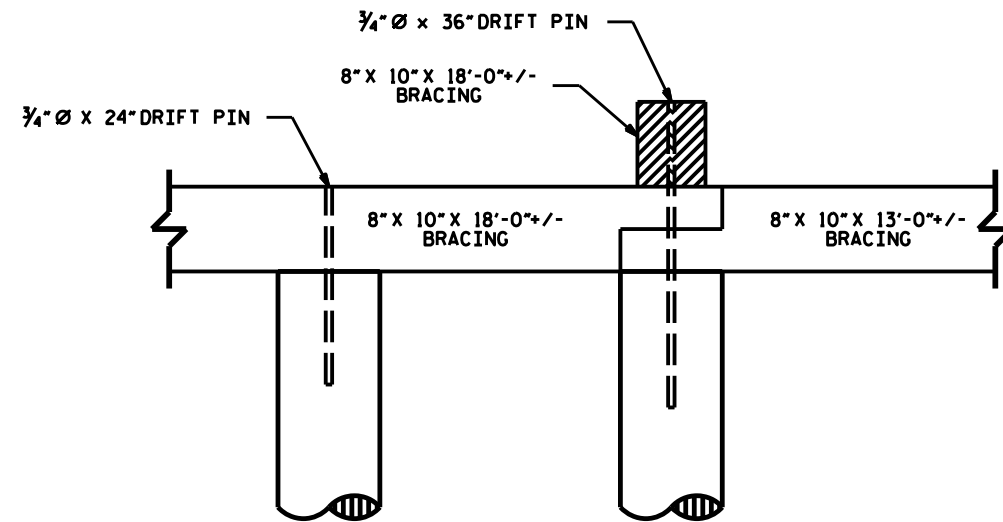
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PIVOT PIER
 FENDER DETAILS

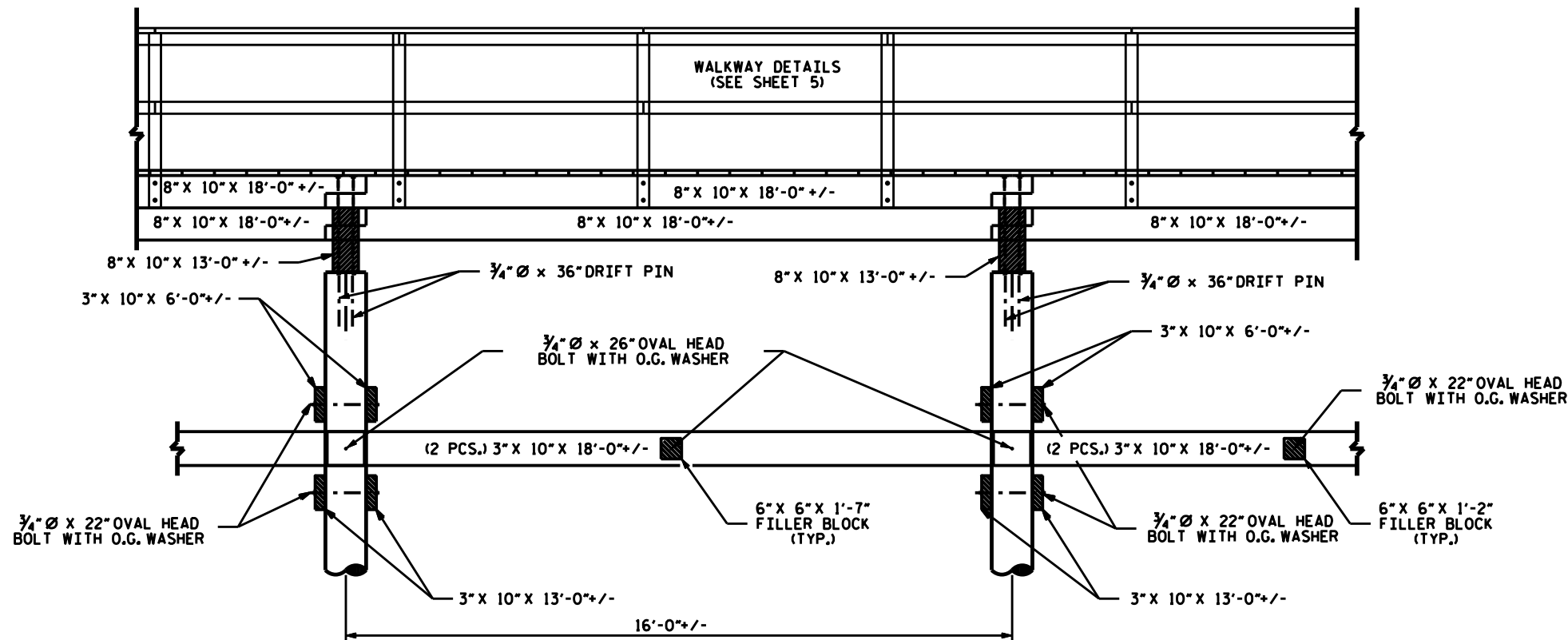
REVISIONS						SHEET NO. S3
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEETS S6
2			4			



HALF SECTION G-G



SECTION F-F



SECTION H-H

PROJECT NO. 41733.2
 COUNTY: CARTERET
 STATION:
 REPLACES BRIDGE NO. 73

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PIVOT PIER
 FENDER DETAIL

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

SHEET NO.
S4
 TOTAL SHEETS
S6

BILL OF MATERIAL

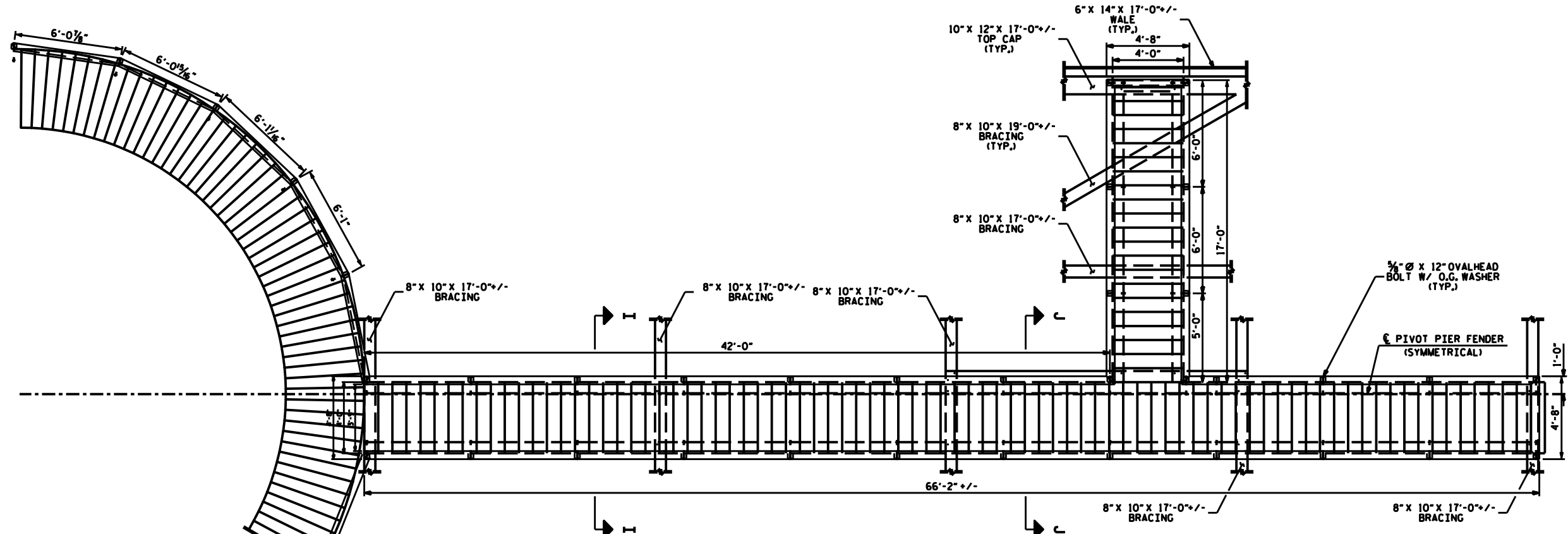
FOR ONE WALKWAY (2 REOD)

TREATED TIMBER

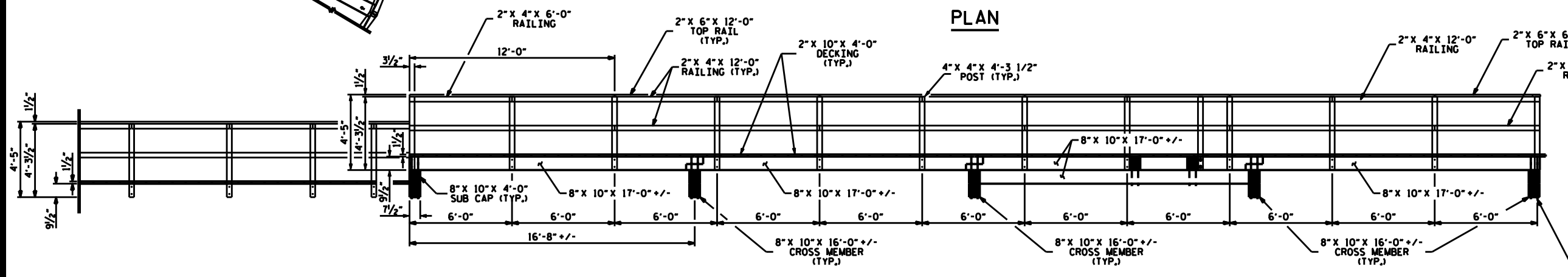
ITEM	NO.	SIZE	LENGTH	LIN. FT.	SURFACE TO	BRD. FT.
POST	40	4" x 4"	4'-3 1/2"	171'-8"	3/2" x 3/2"	175.24
TOP RAIL	2	2" x 6"	4'-8"	9'-6"	1/2" x 5/2"	6.53
TOP RAIL	2	2" x 6"	5'-3"	10'-6"	1/2" x 5/2"	7.22
TOP RAIL	11	2" x 6"	6'-6"	71'-6"	1/2" x 5/2"	49.16
TOP RAIL	1	2" x 6"	8'-3"	8'-3"	1/2" x 5/2"	5.67
TOP RAIL	11	2" x 6"	12'-0"	132'-0"	1/2" x 5/2"	90.75
RAILING	16	2" x 4"	6'-0"	96'-0"	1/2" x 3/2"	42.00
RAILING	24	2" x 4"	12'-0"	288'-0"	1/2" x 3/2"	126.00
RAILING	18	2" x 4"	6'-0"	108'-0"	1/2" x 3/2"	47.25
DECKING	106	2" x 10"	4'-0"	424'-0"	1/2" x 9/4"	490.25
DECKING	80	2" x 10"	4'-5"	353'-3"	1/2" x 9/4"	408.54
SUB CAP	7	8" x 10"	4'-0"	28'-0"	7/2" x 9/4"	161.88
BEAMS	11	8" x 10"	17'-0"	187'-0"	7/2" x 9/4"	1081.09
TOTAL TREATED TIMBER = LIN. FT. 1916'-2"						BRD. FT. 2691.58

HARDWARE

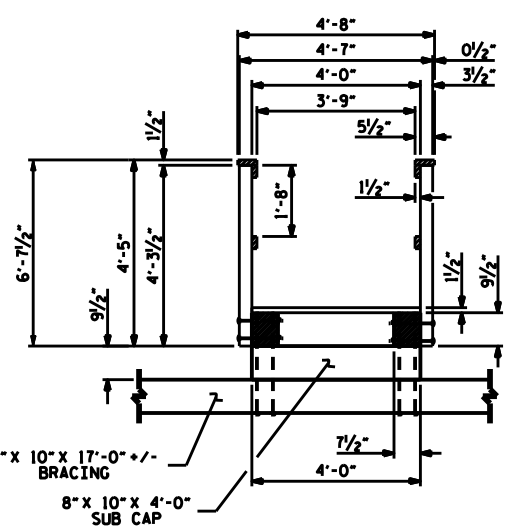
ITEM	NO.	SIZE	LENGTH	WEIGHT
O.H.BOLTS	80	3/4"	12"	130.0
O.H.BOLTS	4	1/2"	22"	15.0
O.H.BOLTS	28	3/4"	30"	132.0
O.G.WASHERS	62	3/4"		35.0
O.G.WASHERS	64	1/2"		64.0
DECK SCREWS	1000	*10	3"	
TOTAL WEIGHT = 376.0				



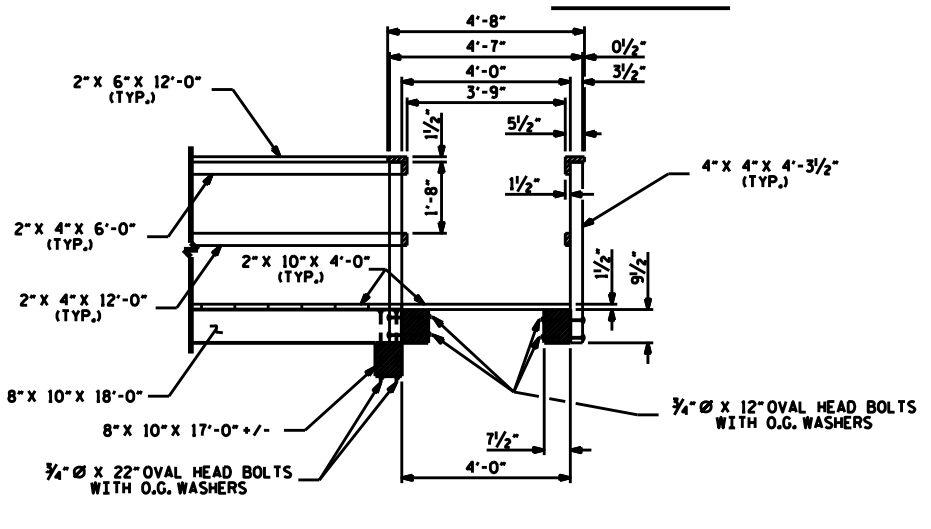
PLAN



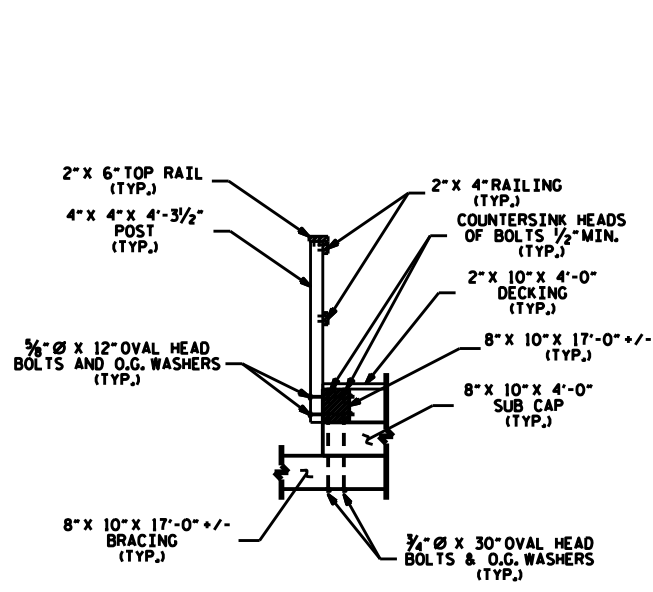
ELEVATION



SECTION I-I



SECTION J-J



NOTE: ALL 2" x 6" TOP RAILS, 2" x 4" RAILINGS, AND 2" x 10" DECKING SHALL BE ATTACHED TO POSTS USING 3" LONG *10 GALVANIZED WOOD SCREWS.

PROJECT NO. 41733.2
 COUNTY: CARTERET
 STATION:
 REPLACES BRIDGE NO. 73

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**FENDER WALKWAY
 HALF PLAN**

REVISIONS					SHEET NO. S5
NO.	BY	DATE	NO.	BY	
1			3		
2			4		

NOTE: NOT TO SCALE

BILL OF MATERIAL

FOR ONE REST PIER FENDER (2 REQ'D)

TREATED TIMBER

ITEM	NO.	SIZE	LENGTH **	LIN. FT.	SURFACE TO	BRD. FT.
WALES	8	6" X 10"	9'-0"	72'-0"	5 1/2" X 9 1/4"	360.0
WALES	14	6" X 10"	10'-0"	140'-0"	5 1/2" X 9 1/4"	700.0
WALES	61	6" X 10"	17'-0"	1037'-0"	5 1/2" X 9 1/4"	5185.0
WALES	8	6" X 10"	18'-0"	144'-0"	5 1/2" X 9 1/4"	720.0
HEADER	12	6" X 10"	10'-0"	120'-0"	5 1/2" X 9 1/4"	600.0
TOP PLATE	2	6" X 16"	10'-0"	20'-0"	5 1/2" X 15 1/4"	160.0
TOP PLATE	10	6" X 16"	17'-0"	170'-0"	5 1/2" X 15 1/4"	1360.0

TOTAL TREATED TIMBER: LIN. FT. 1703'-0" BRD. FT. 9085.0

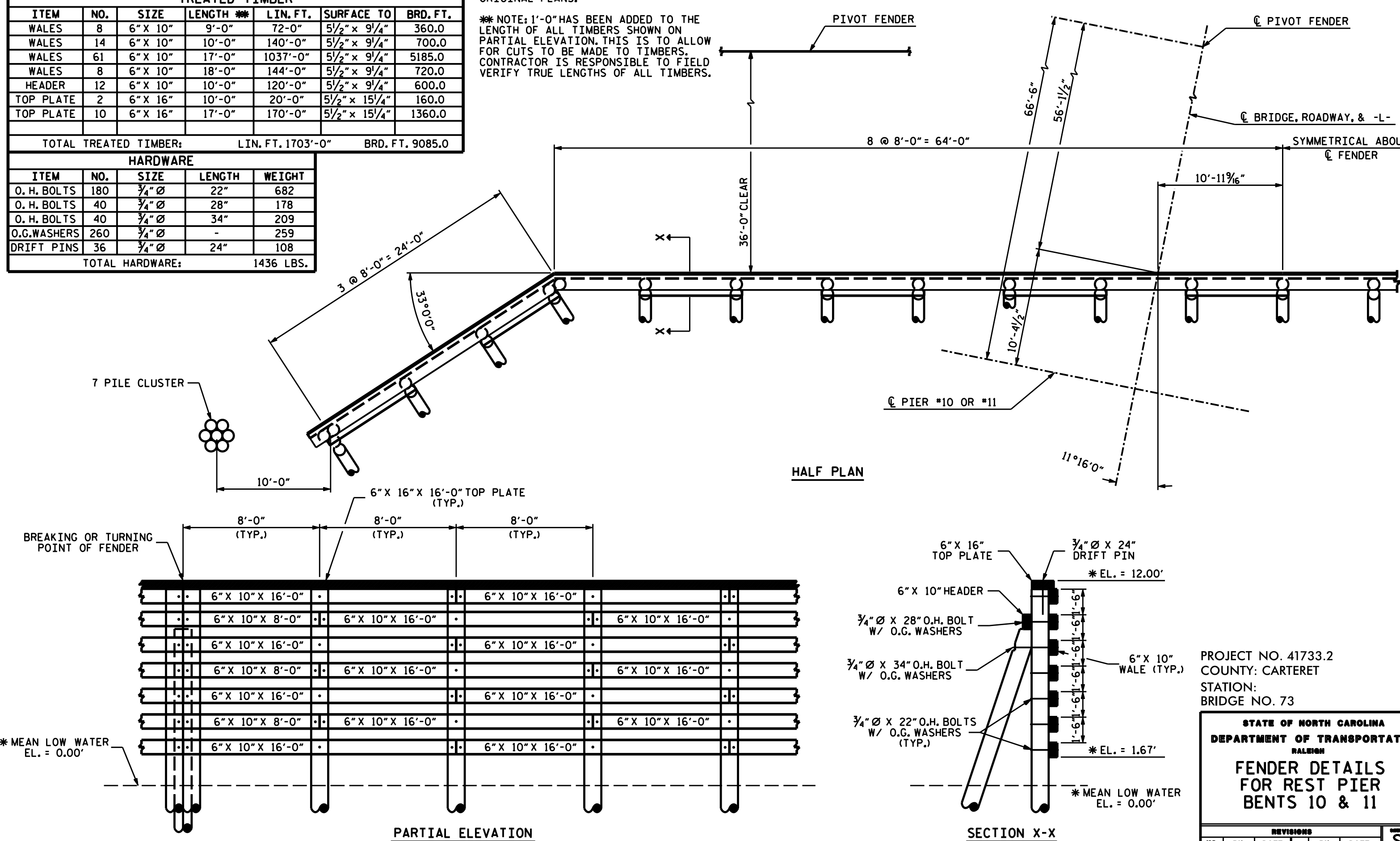
HARDWARE

ITEM	NO.	SIZE	LENGTH	WEIGHT
O. H. BOLTS	180	3/4" Ø	22"	682
O. H. BOLTS	40	3/4" Ø	28"	178
O. H. BOLTS	40	3/4" Ø	34"	209
O.G. WASHERS	260	3/4" Ø	-	259
DRIFT PINS	36	3/4" Ø	24"	108

TOTAL HARDWARE: 1436 LBS.

* NOTE: ELEVATIONS, AND MEAN LOW WATER ELEVATION SHOWN, ARE TAKEN FROM ORIGINAL PLANS.

** NOTE: 1'-0" HAS BEEN ADDED TO THE LENGTH OF ALL TIMBERS SHOWN ON PARTIAL ELEVATION. THIS IS TO ALLOW FOR CUTS TO BE MADE TO TIMBERS. CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY TRUE LENGTHS OF ALL TIMBERS.



HALF PLAN

PARTIAL ELEVATION

SECTION X-X

PROJECT NO. 41733.2
 COUNTY: CARTERET
 STATION:
 BRIDGE NO. 73

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
FENDER DETAILS FOR REST PIER BENTS 10 & 11					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

NOTE: NOT TO SCALE

DRAWN BY: R.PUTEK DATE: DEC. 2008
 CHECKED BY: P.BRYANT DATE: DEC. 2010

SHEET NO. S6
 TOTAL SHEETS S6