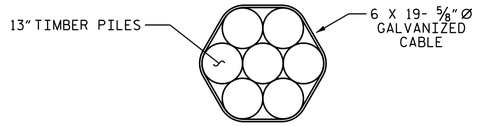


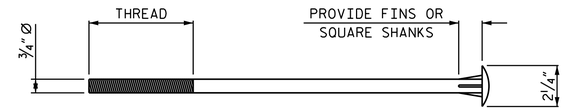
DETAIL OF 7-PILE CLUSTER (DOLPHINS)

PILES AT ENDS OF FENDER SYSTEM

SIX (6) OUTSIDE PILES TO BE EQUALLY SPACED ON 6 FT. CIRCLE AT TOP AND DRAWN TOGETHER AT TOP, WRAPPED WITH 3 TURNS OF 5/8" Ø WIRE ROPE AT ELEVS +11.0' AND +8.0'. CABLE SHALL BE SECURED WITH 3/8" X 4" STAPLES AND 3 CABLE CLAMPS. CABLES AND FASTENINGS TO BE HOT DIPPED GALVANIZED AND INCLUDED AS HARDWARE. BATTER THE 6 EXTERIOR PILES 1 1/2":12"

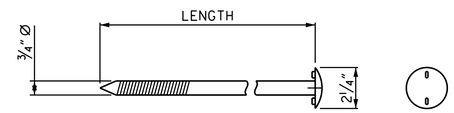
PILES 15' FROM ENDS OF FENDER SYSTEM

SIX (6) OUTSIDE PILES TO BE EQUALLY SPACED ON 6 FT. CIRCLE AT TOP AND DRAWN TOGETHER AT TOP, WRAPPED WITH 3 TURNS OF 5/8" Ø WIRE ROPE AT ELEVS +11.0' AND +8.0'. CABLE SHALL BE SECURED WITH 3/8" X 4" STAPLES AND 3 CABLE CLAMPS. CABLES AND FASTENINGS TO BE HOT DIPPED GALVANIZED AND INCLUDED AS HARDWARE. BATTER THE 6 EXTERIOR PILES 1 1/2":12"

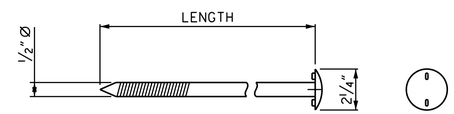


TYPICAL DOME HEAD TIMBER BOLT

ALL BOLTS ARE 3#4" Ø DOME HEADED TIMBER BOLTS WITH ONE O.G. WASHER & ONE STD NUT.



TYPICAL DOME HEAD TIMBER SPIKE

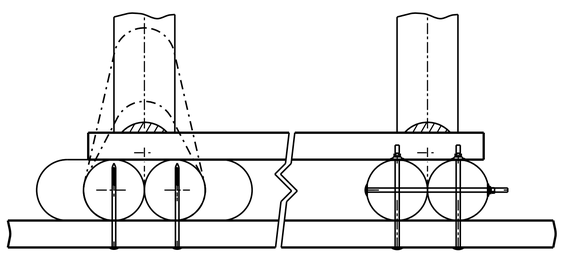


TYPICAL DOME HEAD TIMBER SPIKE

STRUCTURAL TIMBER					
ITEM	UNIT	LENGTH	SIZE	NO.	TOTAL
TIMBER PILE	LIN. FT.	60'-0"	13"	242	14,520'-0"
TIMBER WALE	LIN. FT.	16'-0"	6" X 10"	372	5952'-0"
TIMBER WALE	LIN. FT.	8'-0"	6" X 10"	24	192'-0"
TIMBER HEADER	LIN. FT.	20'-0"	6" X 10"	2	40'-0"
TIMBER HEADER	LIN. FT.	10'-0"	6" X 10"	28	280'-0"

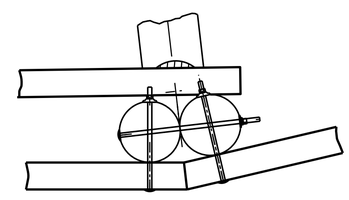
STRUCTURAL HARDWARE (GALVANIZED)			
ITEM	UNIT	NO.	TOTAL
6 X 19 -5/8" Ø GALVANIZED WIRE ROPE	LIN. FT.	——	2061'-0"
3/4" Ø CABLE CLAMPS	LBS.	144	22 LBS
3/8" STAPLES	LBS.	648	188 LBS
3/4" Ø X 1'-6" DOME HD TIMBER SPIKES	LBS.	748	1877 LBS
1/2" Ø X 1'-0" DOME HD TIMBER SPIKES	LBS.	256	197 LBS
3/4" Ø X 1'-10" DOME HD TIMBER BOLT	LBS.	784	2266 LBS
3/4" Ø X 2'-6" DOME HD TIMBER BOLT	LBS.	150	583 LBS
O.G. WASHER	LBS.	934	663 LBS.
3/4" Ø HEAVY HEX HEAD NUT	LBS.	934	187 LBS.
3/4" Ø X 1'-9" DRIFT PIN	LBS.	34	89.4 LBS.

AVERAGE PILE DIA IS ASSUMED TO BE 13"



VIEW A-A VIEW B-B

MAIN WALL SECTION



VIEW B-B

SHOWING WALE TO PILE CONNECTIONS ONLY

WING WALL SECTION

PROJECT NO. 41732.11
COUNTY NEW HANOVER
BRIDGE NO. 30

SHEET 5 OF 5

NORTH CAROLINA PROFESSIONAL SEAL 21271 ENGINEER GREGORY W. DICKEY

DocuSigned by: Greg Dickey 884E46B8CE58486...
12/18/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

FENDER SYSTEM

FENDER SYSTEM DETAILS

REVISIONS							
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.	
1			3			F-5	
2			4			TOTAL SHEETS	
						5	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : P.D. BRYANT DATE : 11/2017
CHECKED BY : G.W. DICKEY DATE : 12/2017

18-DEC-2017 15:21
S:\DPG1\Division3\New Hanover *30 Fender (2017)\xxxx_SMU_ DE_640030.dgn
gdickey