

**EXHIBIT C**

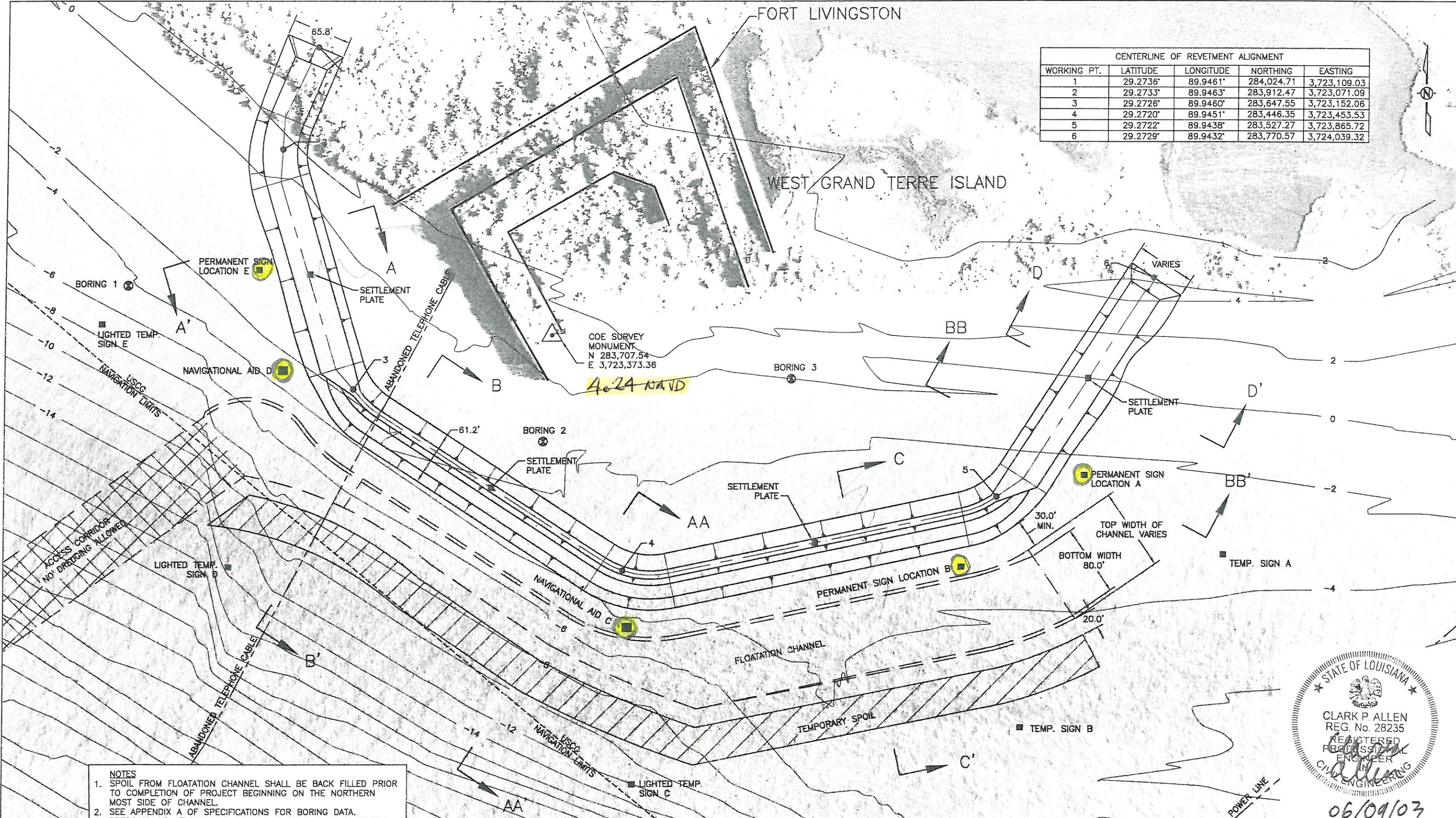
**FORT LIVINGSTON CONSERVATION (BA-0005)**



FORT LIVINGSTON

WEST GRAND TERRE ISLAND

CENTERLINE OF REVETMENT ALIGNMENT				
WORKING PT.	LATITUDE	LONGITUDE	NORTHING	EASTING
1	29.2736°	89.9461°	284,024.71	3,723,109.03
2	29.2733°	89.9463°	283,912.47	3,723,071.09
3	29.2726°	89.9460°	283,647.55	3,723,152.06
4	29.2720°	89.9451°	283,446.35	3,723,453.53
5	29.2722°	89.9438°	283,527.27	3,723,865.72
6	29.2729°	89.9432°	283,770.57	3,724,039.32



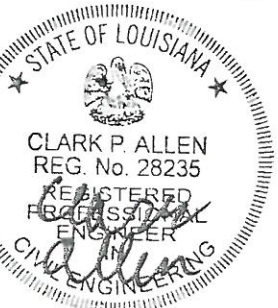
NOTES  
 1. SPOIL FROM FLOATATION CHANNEL SHALL BE BACK FILLED PRIOR TO COMPLETION OF PROJECT BEGINNING ON THE NORTHERN MOST SIDE OF CHANNEL.  
 2. SEE APPENDIX A OF SPECIFICATIONS FOR BORING DATA.  
 3. DREDGING OF FLOATATION CHANNEL IS DEEMED AS INCIDENTAL CONSTRUCTION AND SHALL BE PERFORMED AT NO DIRECT PAY.  
 4. TEMPORARY SIGNS C, D, AND E WILL BE LIGHTED WITH A QUICK FLASHING RED LIGHT.



REV.	DATE	DESCRIPTION	BY
1	6/3/03	EDITED FLOATATION AND TEMPORARY FILL AREAS.	KC
2	6/3/03	EDITED SIGN LETTERING.	KC
3	6/3/03	ADDED NOTE 4.	KC
4	6/3/03	CORRECTED COORDINATES OF POINTS 4, 5, AND 6.	KC
5	6/3/03	ADDED USCG NAVIGATION LIMITS.	KC

LOUISIANA DEPARTMENT OF NATURAL RESOURCES  
 COASTAL RESTORATION DIVISION  
 617 NORTH 3RD STREET  
 BATON ROUGE, LOUISIANA 70802

FORT LIVINGSTON CONSERVATION  
 STATE PROJECT NUMBER: FTL-01  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: C. KNOTTS, P.E.



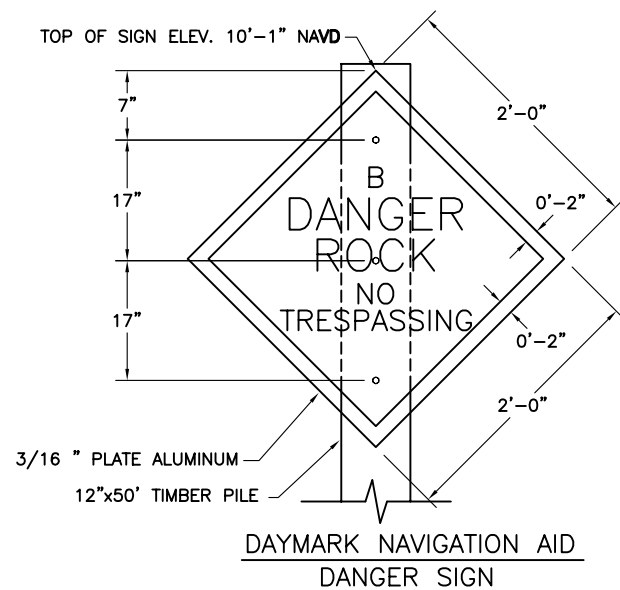
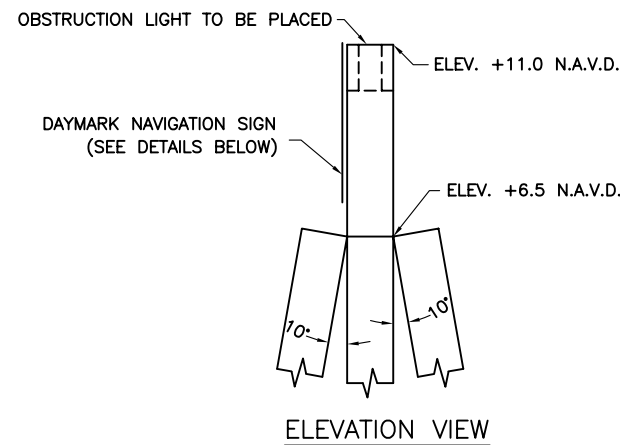
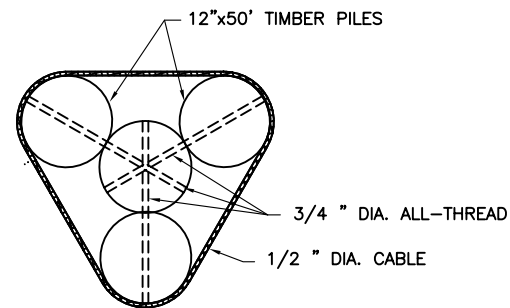
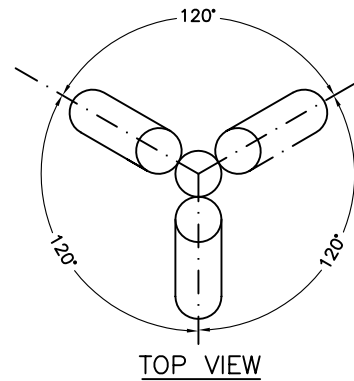
06/09/03

PLAN VIEW  
 DATE: 6/6/03  
 SHEET 4 OF 10



NOTES:

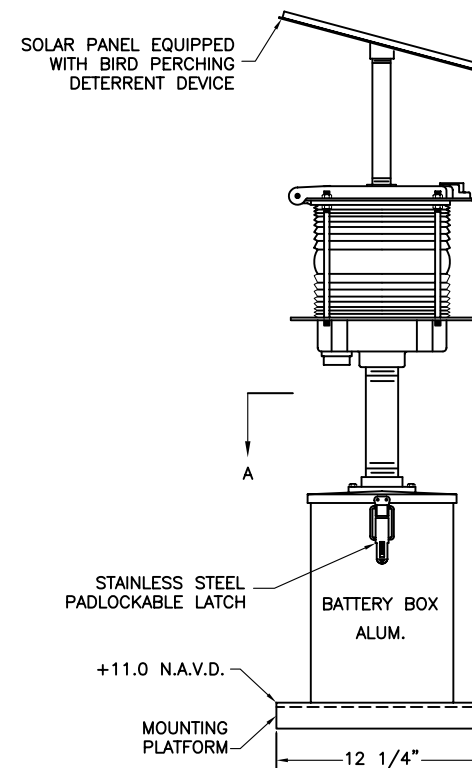
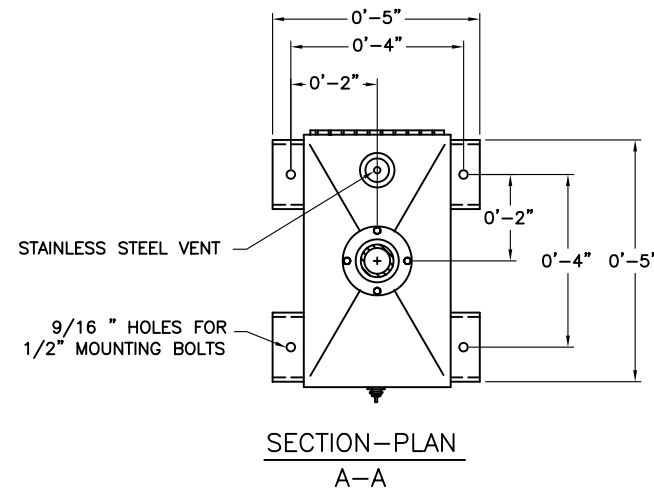
1. ALL 3/4" DIA. ALL THREAD TIE RODS SHALL BE SECURED BY NOTCHED IN PLACE OGEE WASHERS AND TACK WELDED NUTS.
2. 8 WRAPS OF 1/2" DIA. CABLE MEETING ASTM A-416 AND ASTM A-882/A-882M-92 BETWEEN THE 3- 3/4" DIA. ALL-THREAD ASTM A-615 GR60 GALVANIZED AND EPOXY COATED TIE RODS.
3. THE 1/2" DIA. CABLE SHALL BE SECURED USING 3 STAINLESS STEEL CLAMPS.
4. THE 3/4" DIA. ALL-THREAD TIE RODS SHALL BE A MINIMUM OF 6" BELOW TOP OF BATTER PILE AND AND 3" VERTICAL CLEARANCE FROM ADJACENT TIE ROD.
5. TIMBER PILING SHALL BE 50- FEET IN LENGTH WITH AN NOMINAL 12-INCH DIAMETER BUTT AND 7-INCH MINIMUM DIAMETER AT THE TIP.



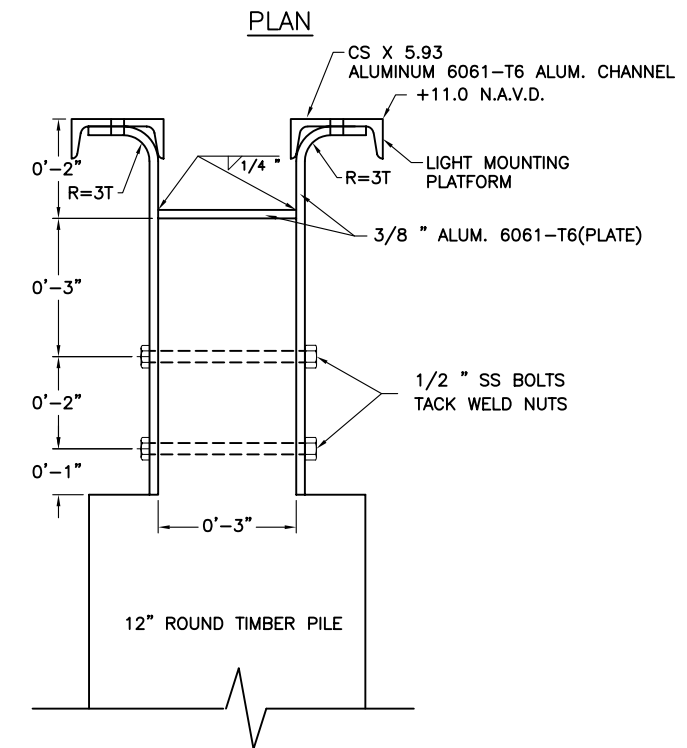
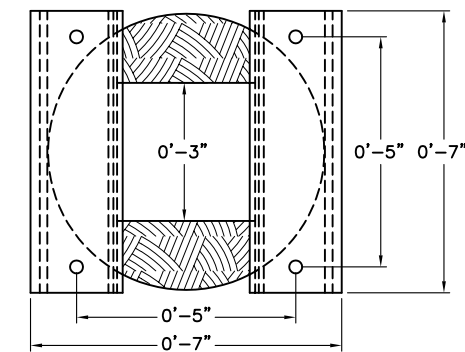
NOTE:  
U.S. COAST GUARD WILL DETERMINE LETTERING ON DAYMARKER.

NOTES

1. NOTCH ROUND TIMBER PILE FOR FLUSH ALUMINUM MOUNTING BRACKET ATTACHMENT.
2. HOLES IN ALUMINUM SHALL BE 1/16" OVERSIZE AND HOLES IN ROUND TIMBER PILE SHALL BE 1/8" OVERSIZE FOR THEIR CORRESPONDING BOLTS.
3. THE COVER OF THE BULB SHALL BE CONFIGURED TO ACCEPT A PADLOCK AND TWO STAINLESS STEEL 42" BOLTS.
4. THE SUCCESSFUL BIDDER SHALL SUBMIT SHOP DRAWINGS OF THE LIGHTED DANGER SIGNS AT THE PRE CONSTRUCTION MEETING.
5. ALL BOLTS SHALL HAVE NEOPRENE AND STAINLESS STEEL FENDER WASHERS UNDER BOLT HEAD AND UNDER LOCKWASHER/NUT.
6. ALL BOLTS, WASHERS AND NUTS IN CONTACT WITH ALUMINUM SHALL BE STAINLESS STEEL.
7. ALL ALUMINUM SHALL BE 6061-T6
8. ALL WELDING SHALL CONFORM TO THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY D1-2 STRUCTURAL WELDING CODE ALUMINUM.



2.5 SEC. DAYLIGHT ALUM.

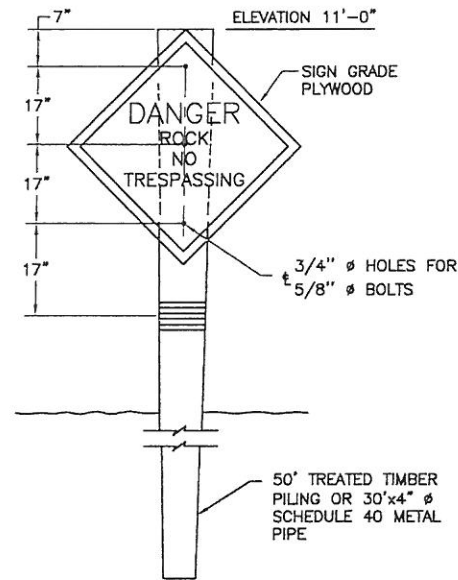


MOUNTING DETAILS-2.5 SEC. DAYLIGHT ALUM.

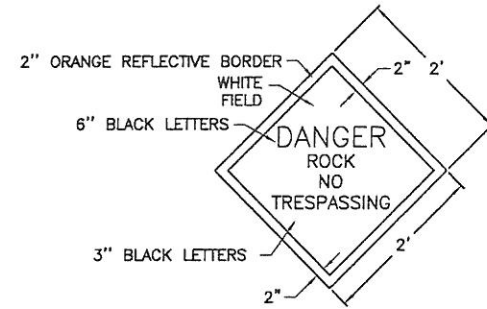
NOTES:

1. SEE SHEET 4 FOR SIGN PLACEMENT LOCATIONS.
2. ALL DAYMARK NAVIGATION AIDS SHALL ABIDE BY U.S.C.G. REGULATIONS.
3. SIGNS SHALL BE SECURED TO TIMBER PILE WITH 3- 5/8 "x 8" STAINLESS STEEL LAG SCREWS WITH 1 1/4 " O.D. STAINLESS STEEL WASHER.
4. SIGNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH APPENDEX C, AIDES TO NAVIGATION, OF SPECIFICATION.

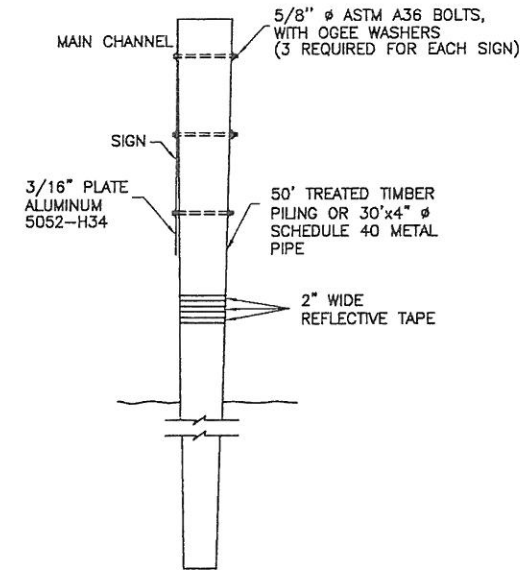
			<b>LOUISIANA DEPARTMENT OF NATURAL RESOURCES COASTAL RESTORATION DIVISION</b>		FORT LIVINGSTON CONSERVATION		WARNING SIGN DETAILS	
			617 NORTH 3RD STREET BATON ROUGE, LOUISIANA 70804					
					STATE PROJECT NUMBER: FTL-01			
					FEDERAL PROJECT NUMBER:		DATE: MAY 23, 2003	
REV.	DATE	DESCRIPTION	BY	DRAWN BY: S. FAUST	DESIGNED BY: C. ALLEN, P.E.	APPROVED BY: C. KNOTTS, P.E.	SHEET 9 OF 9	



TEMPORARY WARNING SIGN ELEVATION  
N.T.S.



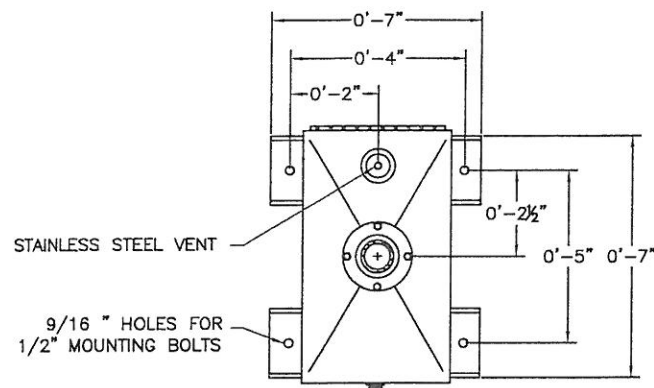
SIGN DETAIL  
APPLIES TO SIGNS A AND B  
N.T.S.



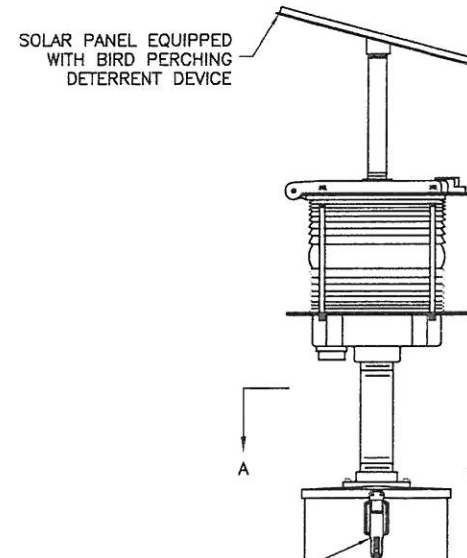
WARNING SIGN SIDE DETAIL  
APPLIES TO SIGNS A AND B  
N.T.S.

GENERAL NOTES:

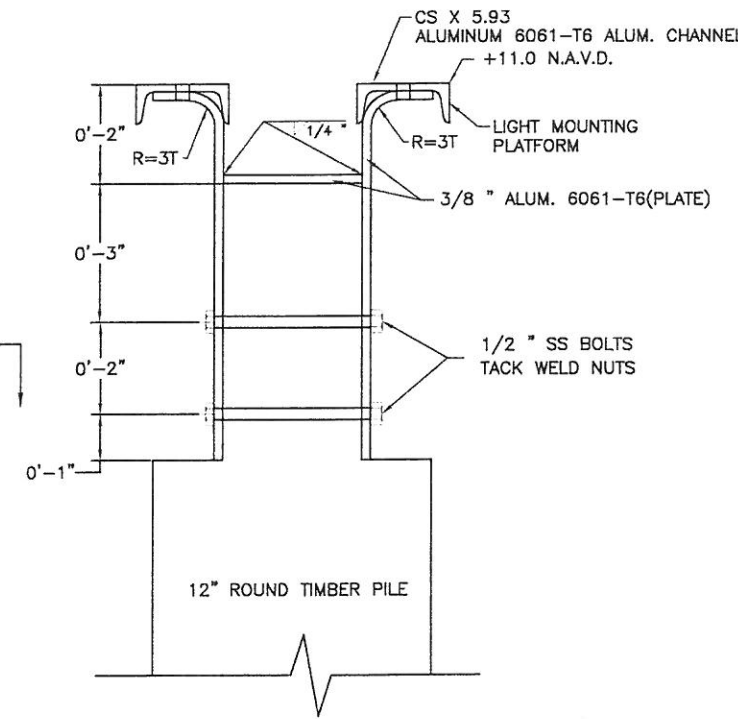
- TWO UNLIGHTED AND THREE LIGHTED WARNING SIGNS SHALL BE INSTALLED AT LOCATIONS STATED, BY LETTER DESIGNATION, ON SHEET 4.
- THE 2" BORDER ON THE WARNING SIGN WILL BE A REFLECTIVE MATERIAL OF ORANGE COLOR. THE LETTERING FIELD WILL BE A REFLECTIVE MATERIAL OF WHITE COLOR. THE LETTERING FOR THE WARNING SIGNS WILL BE BLACK. ALL SIGNS MUST MEET U.S. COAST GUARD STANDARDS; IN ACCORDANCE WITH 33 CFR 330.4 (a) (1) WHICH CAN BE DOWNLOADED AT [http://www.access.gpo.gov/nara/cfr/waisidx\\_02/33cfr330\\_02.html](http://www.access.gpo.gov/nara/cfr/waisidx_02/33cfr330_02.html)
- NEOPRENE WASHERS SHALL BE PLACED BETWEEN THE SIGN AND THE PILING AT ALL POINTS OF CONTACT.
- HARDWARE FOR TIMBER CONNECTIONS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SECTION 811.5 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, AS PUBLISHED BY THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT, LATEST EDITION.
- TIMBER PILES SHALL CONFORM TO SECTIONS 804 AND 1014 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, AS PUBLISHED BY THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT, LATEST EDITION. PILES SHALL BE TREATED WITH A CREOSOTE SOLUTION CONFORMING TO AWPA P2 TO A MINIMUM RETENTION OF 16 PCF AND CAPPED ACCORDING TO LA DOTD SPECIFICATION 812.06.
- THE CONTRACTOR HAS THE OPTION OF USING A 30"x4" SCHEDULE 40 METAL PIPE OR OTHER APPROVED MATERIAL.
- TIMBER PILING SHALL BE 50- FEET IN LENGTH WITH A NOMINAL 12-INCH DIAMETER BUTT AND 7-INCH MINIMUM DIAMETER AT THE TIP.
- THE UNLIGHTED TEMPORARY SIGNS SHALL BE INSTALLED AT NO DIRECT PAY. THE LIGHTED TEMPORARY SIGNS WILL BE PAID FOR UNDER BID ITEM NINE.
- TEMPORARY WARNING SIGNS SHALL HAVE THE SAME COLORING AND REFLECTIVE TAPE AS PERMANENT SIGNS BUT CONSTRUCTED WITH 3/4" SIGN GRADE PLYWOOD.
- ALL DAY BOARDS, LIGHTS, AND ASSOCIATED HARDWARE SHALL BE DELIVERED TO THE INSPECTOR ONCE THE PERMANENT SIGNS AND LIGHTS ARE ACCEPTED.
- THE SUPPORTS FOR THE TEMPORARY SIGNS SHALL BE REMOVED TO 5' BELOW MUD LINE OR REMOVED COMPLETELY AFTER PERMANENT SIGNS ARE ACCEPTED. THIS APPLIES TO BOTH THE LIGHTED AND UNLIGHTED SIGNS.



SECTION-PLAN  
A-A



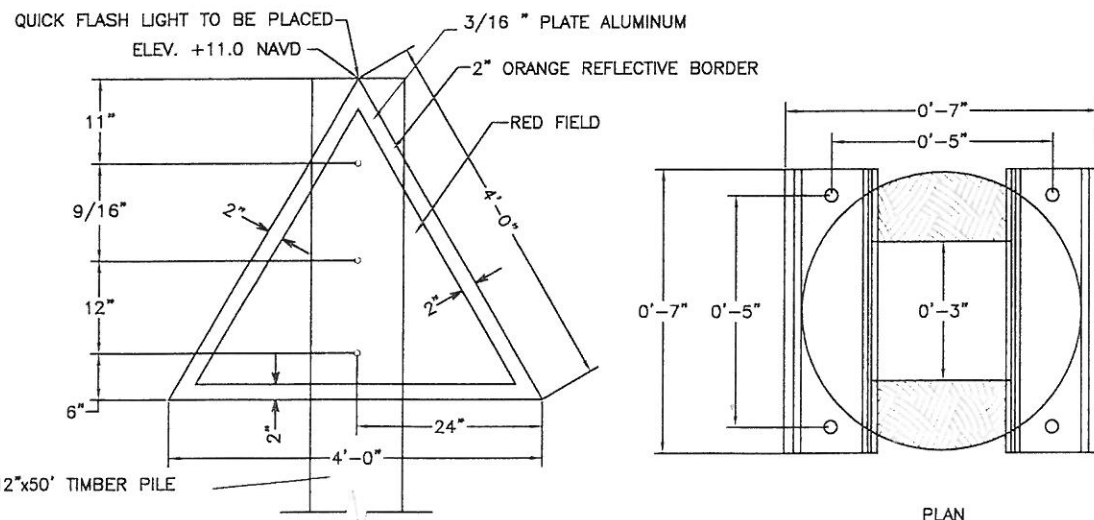
ELEVATION  
QUICK FLASH CHANNEL MARKER  
ALUM.



ELEVATION  
MOUNTING DETAILS-CHANNEL MARKER  
ALUM.

LIGHTED TEMPORARY SIGN NOTES :

- NOTCH ROUND TIMBER PILE FOR FLUSH ALUMINUM MOUNTING BRACKET ATTACHMENT.
- HOLES IN ALUMINUM SHALL BE 1/16" OVERSIZE AND HOLES IN ROUND TIMBER PILE SHALL BE 1/8" OVERSIZE FOR THEIR CORRESPONDING BOLTS.
- THE COVER OF THE BULB SHALL BE CONFIGURED TO ACCEPT A PADLOCK AND TWO STAINLESS STEEL 1/2" BOLTS.
- THE SUCCESSFUL BIDDER SHALL SUBMIT SHOP DRAWINGS OF THE LIGHTED DANGER SIGNS AT THE PRE CONSTRUCTION MEETING.
- ALL BOLTS SHALL HAVE NEOPRENE AND STAINLESS STEEL FENDER WASHERS UNDER BOLT HEAD AND UNDER LOCKWASHER/NUT.
- ALL BOLTS, WASHERS AND NUTS IN CONTACT WITH ALUMINUM SHALL BE STAINLESS STEEL.
- ALL BOLTS, WASHERS AND NUTS IN CONTACT WITH WOOD SHALL BE HOT DIPPED GALVANIZED.
- ALL ALUMINUM SHALL BE 6061-T6.
- ALL WELDING SHALL CONFORM TO THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY D1-2 STRUCTURAL WELDING CODE ALUMINUM.
- LIGHT TRANSMITTING DIODE WILL BE ALLOWED FOR TEMPORARY SIGNS ONLY.
- TEMPORARY LIGHTED SIGNS C, D, AND E SHALL HAVE A RED LIGHT FLASHING ONCE EVERY SECOND. THE LIGHT WILL BE MOUNTED ON TOP OF A SINGLE 50"x12" NOMINAL PILING, 30"x4" SCHEDULE 40 METAL PIPE OR OTHER APPROVED MATERIAL.



RED DAYMARK NAVIGATION AID  
APPLIES TO SIGNS C, D, AND E

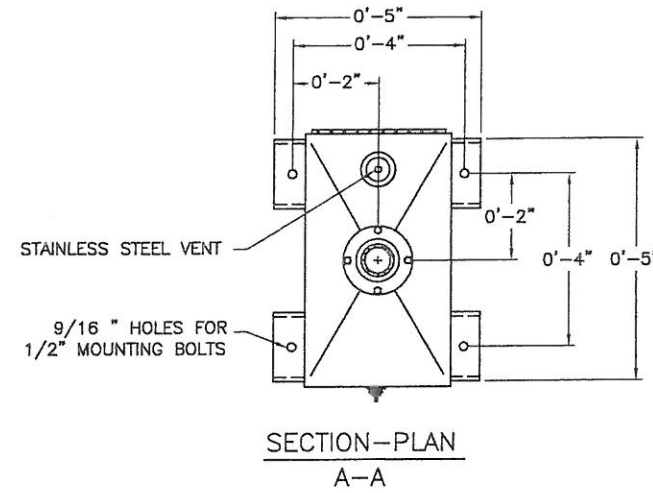
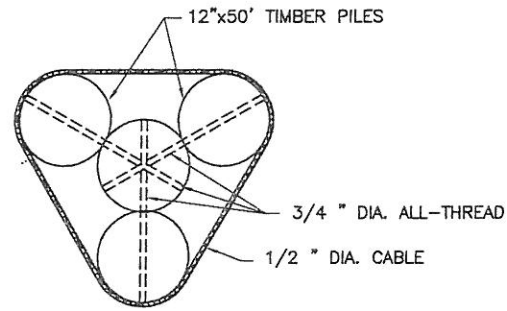
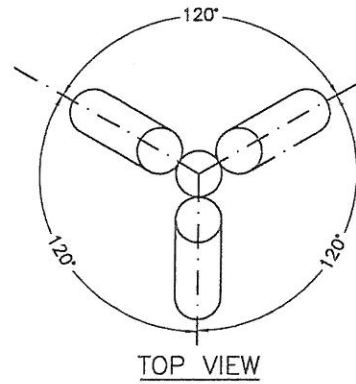
PLAN



LOUISIANA DEPARTMENT OF NATURAL RESOURCES COASTAL RESTORATION DIVISION 617 NORTH 3RD STREET BATON ROUGE, LOUISIANA 70802				FORT LIVINGSTON CONSERVATION		TEMPORARY SIGN DETAILS
				STATE PROJECT NUMBER: FTL-01		
REV. DATE DESCRIPTION BY				APPROVED BY: C. KNOTTS, P.E.		SHEET 8 OF 10
DRAWN BY: K. CANTU				DESIGNED BY: C. ALLEN, P.E.		

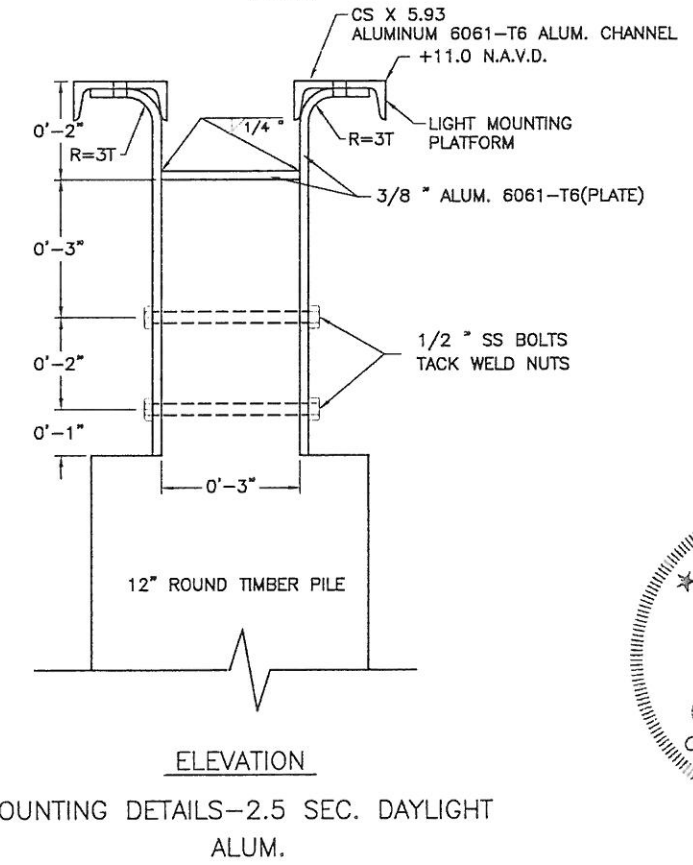
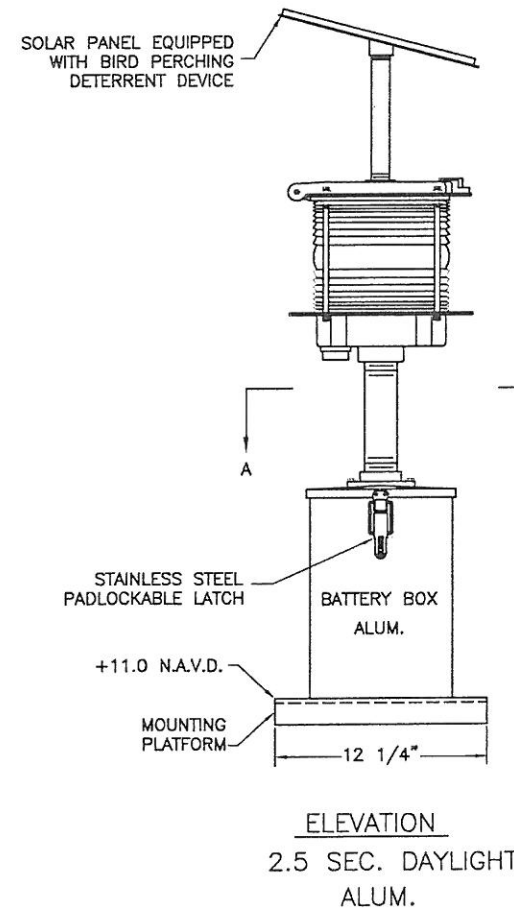
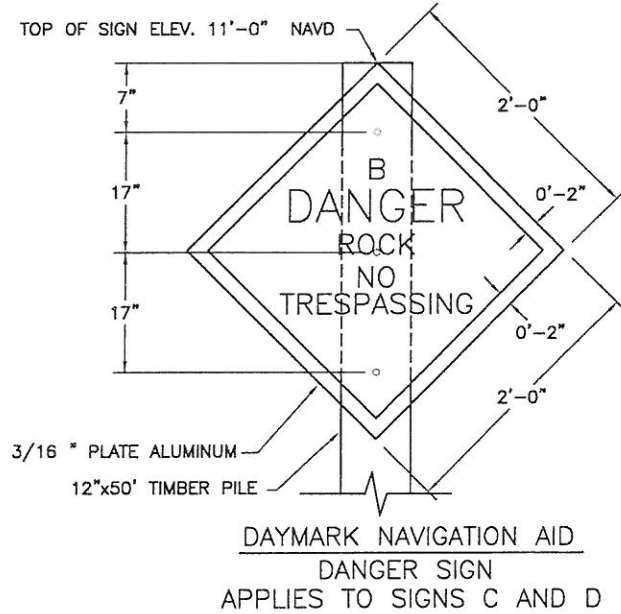
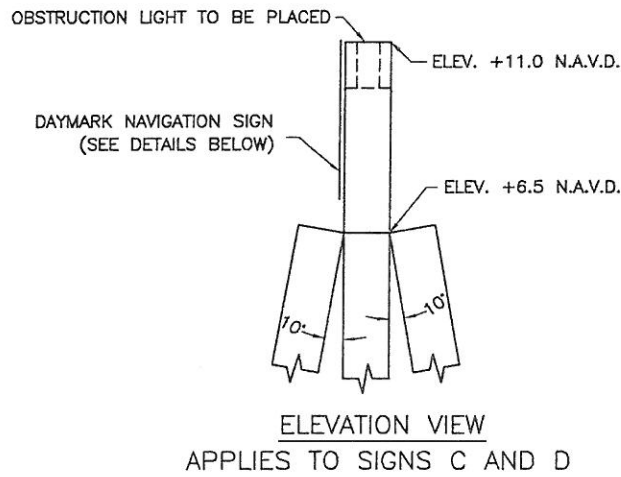
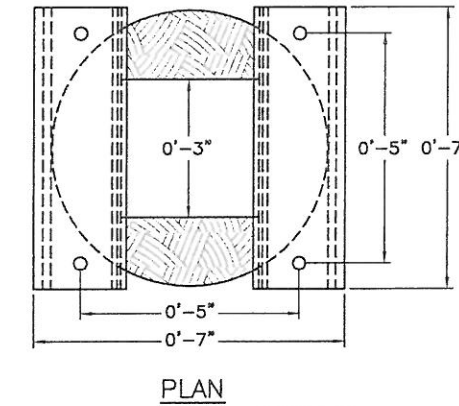
**DOLPHIN NOTES:**

1. ALL 3/4" DIA. ALL-THREAD TIE RODS SHALL BE SECURED BY NOTCHED IN PLACE OGEE WASHERS AND TACK WELDED NUTS.
2. 8 WRAPS OF 1/2" DIA. CABLE MEETING ASTM A-416 AND ASTM A-882/A-882M-92 BETWEEN THE 3- 3/4" DIA. ALL-THREAD ASTM A-615 GR60 GALVANIZED AND EPOXY COATED TIE RODS.
3. THE 1/2" DIA. CABLE SHALL BE SECURED USING 3 STAINLESS STEEL CLAMPS.
4. THE 3/4" DIA. ALL-THREAD TIE RODS SHALL BE A MINIMUM OF 6" BELOW TOP OF BATTER PILE AND AND 3" VERTICAL CLEARANCE FROM ADJACENT TIE ROD.
5. TIMBER PILING SHALL BE 50- FEET IN LENGTH WITH AN NOMINAL 12-INCH DIAMETER BUTT AND 7-INCH MINIMUM DIAMETER AT THE TIP.



**NAVIGATIONAL AIDS NOTES**

1. NOTCH ROUND TIMBER PILE FOR FLUSH ALUMINUM MOUNTING BRACKET ATTACHMENT.
2. HOLES IN ALUMINUM SHALL BE 1/16" OVERSIZE AND HOLES IN ROUND TIMBER PILE SHALL BE 1/8" OVERSIZE FOR THEIR CORRESPONDING BOLTS.
3. THE COVER OF THE BULB SHALL BE CONFIGURED TO ACCEPT A PADLOCK AND TWO STAINLESS STEEL 1/2" BOLTS.
4. THE SUCCESSFUL BIDDER SHALL SUBMIT SHOP DRAWINGS OF THE LIGHTED DANGER SIGNS AT THE PRE CONSTRUCTION MEETING.
5. ALL BOLTS SHALL HAVE NEOPRENE AND STAINLESS STEEL FENDER WASHERS UNDER BOLT HEAD AND UNDER LOCKWASHER/NUT.
6. ALL BOLTS, WASHERS AND NUTS IN CONTACT WITH ALUMINUM SHALL BE STAINLESS STEEL.
7. ALL ALUMINUM SHALL BE 6061-T6
8. ALL WELDING SHALL CONFORM TO THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY D1-2 STRUCTURAL WELDING CODE ALUMINUM.
9. ALL PILES SHALL BE CAPPED ACCORDING TO SECTION 812.06 OF THE LA DOTD SPEC, OR OTHER APPROVED METHODS.
10. ALL BULBS SHALL HAVE TUNGSTEN INCANDESCENT FILAMENTS.



06/09/03

**GENERAL NOTES:**

1. SEE SHEET 4 FOR SIGN PLACEMENT LOCATIONS.
2. ALL DAYMARK NAVIGATION AIDES SHALL ABIDE BY U.S.C.G. REGULATIONS.
3. SIGNS SHALL BE SECURED TO TIMBER PILE WITH 3- 5/8" x 8" STAINLESS STEEL LAG SCREWS WITH 1 1/4" O.D. STAINLESS STEEL WASHER.
4. SIGNS A, B, AND D SHALL BE INSTALLED ON SINGLE 50' PILES.

1	6/3/03	ADDED NOTES 9 AND 10.	KC	LOUISIANA DEPARTMENT OF NATURAL RESOURCES COASTAL RESTORATION DIVISION 817 NORTH 3RD STREET BATON ROUGE, LOUISIANA 70802	FORT LIVINGSTON CONSERVATION	PERMANENT SIGN DETAILS
2	6/3/03	EDITED ELEVATION TO DAYMARK NAVIGATION AID.	KC			
3	6/4/03	EDITED NOTE 3 ON TOP RIGHT.	KC			
REV.	DATE	DESCRIPTION	BY	DRAWN BY: S. FAUST	DESIGNED BY: C. ALLEN, P.E.	APPROVED BY: C. KNOTTS, P.E.
				STATE PROJECT NUMBER: FTL-01		DATE: 6/8/03
				FEDERAL PROJECT NUMBER:		SHEET 9 OF 10