INTERLOCAL COOPERATION AGREEMENT
BETWEEN
TEXAS A & M UNIVERSITY -- CORPUS CHRISTI
AND
THE CITY OF CORPUS CHRISTI

REGARDING PACKERY CHANNEL AIDS TO NAVIGATION

WHEREAS, Texas A & M University -- Corpus Christi ("TAMUCC") and the City of Corpus Christi ("City") are authorized by Chapter 791 of the Texas Government Code to enter into an interlocal cooperation contract;

WHEREAS, Section 791.035 of the Texas Government Code states that a local government and an institution of higher education or university system may contract with one another to perform any governmental functions and services;

WHEREAS, Section 791.035 provides that if the terms of the contract provide for payment based on cost recovery, any law otherwise requiring competitive procurement does not apply to the functions and services covered by the contract;

WHEREAS, the Corpus Christi City Council finds that repair and replacement of aids to navigation along Packery Channel are governmental functions and services of the City of Corpus Christi which may be provided by TAMUCC pursuant to Section 791.035 of the Texas Government Code

NOW, THEREFORE, the parties hereto agree as follows:

1. PURPOSE. The purpose of this Agreement is to provide for the identification, repair or replacement of aids to navigation ("**ATON**s") located on Packery Channel as further described in Exhibit A.

2. STATEMENT OF WORK. TAMUCC agrees to perform all services as outlined in Exhibit A.

3. PERIOD OF PERFORMANCE. The work described in Exhibit A shall be conducted January 1, 2016 through June 30, 2016, or until all required work has been completed, whichever date is earlier.

4. PRICE AND PAYMENT.

A. As compensation for the performance of services and work performed under this Agreement, the City agrees to pay TAMUCC up to **Sixty thousand nine hundred forty one dollars** ($60,941.00) as itemized in the budget shown in Exhibit A, which TAMUCC acknowledges is full cost recovery of all services provided by or thru TAMUCC under this Agreement.

B. The parties agree that all expenditures under this agreement shall be paid with current revenues of the paying party.

C. The parties acknowledge that continuation of this agreement beyond City's current fiscal year is subject to annual budget process and appropriation of funds.

D. Invoices for compensation shall be submitted to the following address:

City of Corpus Christi
Attn: Parks and Recreation Director
P.O. Box 9277
Corpus Christi, TX., 78469-9277

5. TAMUCC Responsibilities. TAMUCC will be responsible to arrange for any and all necessary repairs or replacements of ATONs located on Packery Channel as required for compliance with applicable Federal State and local laws and regulations within the total amount of funds payable under this Agreement. TAMUCC shall ensure that all work performed under this Agreement complies with all applicable Federal, State, and Local laws and regulations. In no event shall City be responsible for payment of any funds for services under this Agreement in excess of the amount specified in item 4 above. TAMUCC will obtain any required permits and arrange for performance of work to repair or replace ATONS. TAMUCC agrees to require that any contractor hired to perform said work shall be required to obtain the insurance as stated on attached Exhibit A. TAMUCC shall ensure that an indemnity clause acceptable to the City is included in all construction contracts. All construction contracts must be approved in writing by the Director of Engineering Services or designee. All construction contracts must include terms regarding the City's ability to inspect, reject and accept the work. TAMUCC shall include in all construction contracts for the work under this Agreement, in large, bold face text: "**Contractor does hereby agree to release, indemnify, defend and hold harmless City of Corpus Christi, and all of its officials, officers, agents and employees, in both their public and private capacities, from and against any and all liability, claims, losses, damages, suits, demands or causes of action including all expenses of litigation and/or settlement, court costs and attorney fees which may arise by reason of injury to or death of any person or for loss of, damage to, or loss of use of any property occasioned by error, omission, or negligent act of contractor, its officers, agents, employees, subcontractors, invitees or any other person arising out of or in connection with the performance of the construction contract, and contractor shall at his or her own cost and expense defend and protect the City of Corpus Christi from any and all such claims and demands**."

6. TERMINATION. Performance under this agreement may be terminated by either party with or without cause upon thirty days written notice.

7. NOTICES. All notices to parties under this Agreement shall be in writing and sent to the names and address stated below. Either party to the Agreement may change the name and address by notice to the other in accordance herewith, and any change shall take effect immediately upon receipt of the notice.

TAMUCC

Texas A & M University - Corpus Christi
6300 Ocean Drive, NRC #5853

Corpus Christi, TX., 78412
Attn:
Telephone: (361) 825-2637
Fax: (361) 825-2384

CITY

City of Corpus Christi
Attn: Reba George
P.O. Box 9277
Corpus Christi, TX., 78469
Telephone: (361) 826-3466

8. AMENDMENTS AUTHORIZED.

The representatives who were authorized to sign this agreement are authorized to execute minor amendments to this agreement, to extend deadlines or minor changes in the scope of work.

9. SEVERABILITY. If any of the provisions of the agreement in the application thereof to any person or circumstance, is rendered or declared illegal for any reason, or shall be invalid or unenforceable, the remainder of the agreement and the application of the provision to other persons or circumstances shall not be affected thereby, but shall be enforced to the greatest extent by applicable law. The City and TAMUCC agree that this agreement shall be reformed to replace the stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10. DISPUTE RESOLUTION PROCESS. To the extent applicable, the dispute resolution procedures provided in Chapter 2260 of the Texas Government Code will be used to resolve contract claims under this contract

11. MISCELLANEOUS. This agreement constitutes the entire agreement between the parties relative to the subject matter, and may only be modified or amended by a written agreement signed by both parties. It shall be construed in accordance with the laws of the State of Texas.

IN WITNESS WHEREOF, the parties have caused this agreement to be executed by their authorized representative.

TEXAS A & M UNIVERSITY -- CORPUS CHRISTI

By: Mayra Hough Digitally signed by Mayra Hough DN: cn=Mayra Hough, o=Texas A&M University-Corpus Christi, ou=Division of Research, Commercialization and Outreach, email=mayra.hough@tamucc.edu, c=US Date: 2015.11.13 09:47:54 -06'00'

Name: Luis A. Cifuentes for

Title: Vice President for Research

Date: 11-13-15

CITY OF CORPUS CHRISTI

ATTEST

_____
Rebecca Huerta
City Secretary

By: _____
Ronald L. Olson
City Manager

APPROVED AS TO FORM:

This 17 day of Nov, 2015

Lisa Aguilar
Lisa Aguilar, Assistant City Attorney
For City Attorney

EXHIBIT A

SCOPE OF WORK

Packery Channel ATON Replacement

Parties and Purpose

This Agreement is between the City of Corpus Christi, Parks and Recreation (CCPR) and the Conrad Blucher Institute for Surveying and Science (CBI) at Texas A&M University–Corpus Christi (TAMU-CC) hereafter referred to as the "Parties". This Scope of Work was mutually developed by the Parties and identifies the Tasks to be accomplished during the period of performance.

The CCPR is responsible for maintaining Aids to Navigation (ATON) located on Packery Channel, southeast of Corpus Christi Bay. The purpose of this Agreement is to identify activities required for the repair and/or replacement of ATONs on Packery Channel identified previously by the United States Coast Guard (USCG) and/or during a reconnaissance to be conducted by CBI personnel when this project commences.

The Agreement also sets forth the general terms and conditions under which the Parties will operate during the period of performance. Activities during this project may include, but are not limited to, exchange of technical information required for the proper processing and permitting of ATONs installed by CBI on behalf of CCPR on Packery Channel. This project will result in the upgrade, repair, or replacement of damaged or destroyed ATONs on Packery Channel as required by USCG and following USCG specifications identified in the documentation listed in Appendix A at the end of this document. All required documentation will be assembled by CBI for submittal to the USCG by CCPR personnel prior to initiation of field work.

Packery Channel

The channel between the southeastern most portions of Corpus Christi Bay and the Gulf of Mexico is known as Packery Channel (fig. 1). The channel was initially opened during a tropical storm in 2005. Subsequent dredging enabled the channel to be officially opened to the general public in 2006. Aids to Navigation were placed along the channel as required by the US Coast Guard following USCG specifications. Since that time, many of the ATONs have been damaged or destroyed requiring the activities contained within this proposal.

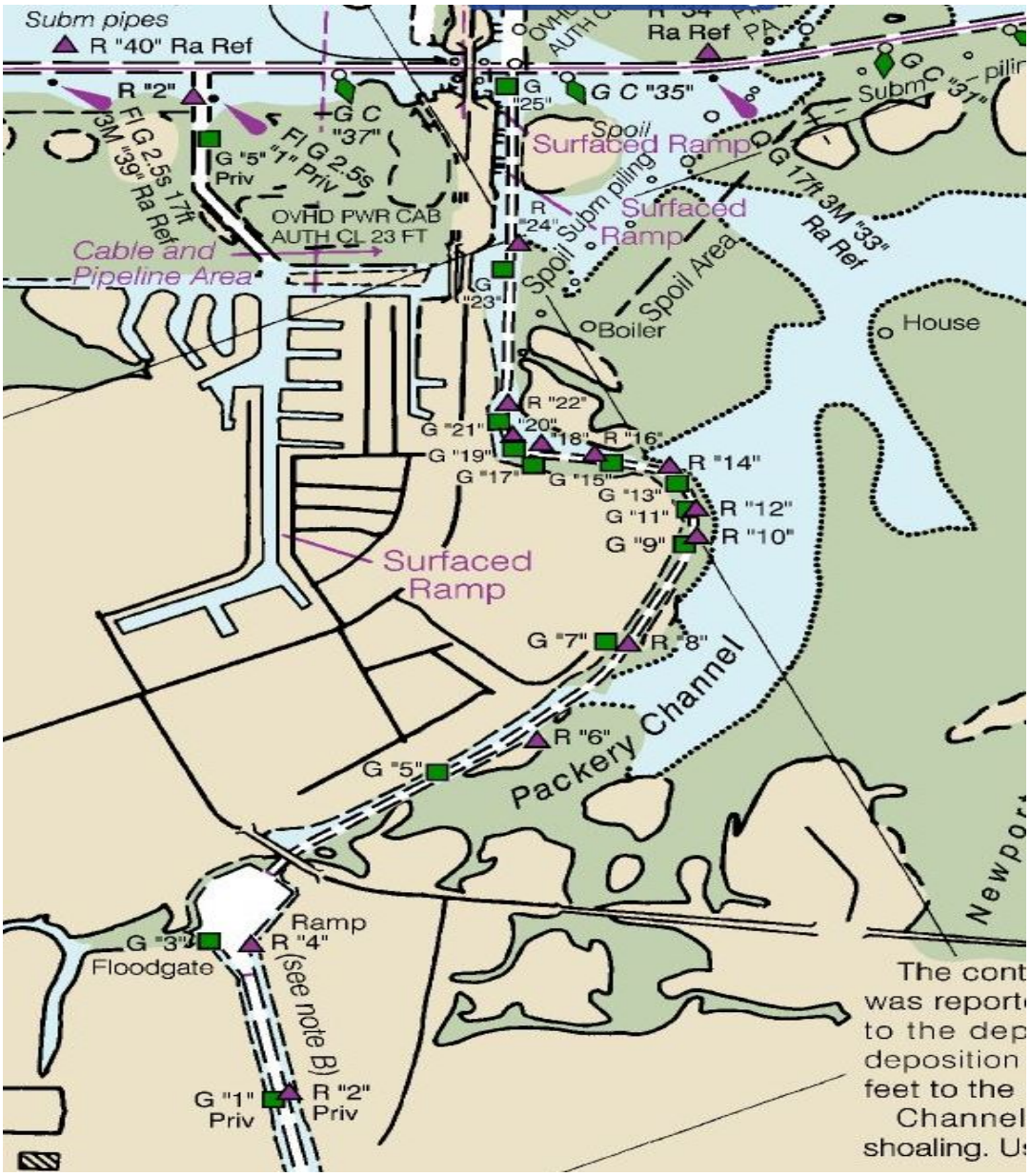


Figure 1: Packery Channel

Scope of Work

TAMU-CC-CBI will:

1. Perform reconnaissance of all ATONs located on Packery Channel. The purpose of the reconnaissance will be to determine the location, existence, and condition of each ATON.

2. Mark the location of each ATON located on Packery Channel

3. Based on the results of the reconnaissance, provide CCPR with a revised CG 2554 indicate the day coordinates, shape, color, and associated number of each ATON replaced, repaired, or installed.

4. Provide CCPR personnel with any information required to satisfy inquiries or questions provided by the USCG Eighth District ATON Section concerning the installation, repair, or replacement of ATONs on Packery Channel.

5. Secure a contractor for the installation of the wooden piles at locations designated by CBI.

6. Install new day piles and day boards as indicated on CG 2554 following specifications provided in the reference documentation provided **in Appendix A** at the end of this document.

7. Provide CCPR personnel with photographs of each new day marker.

CITY OF CORPUS CHRISTI will:

1. Complete CG 2554 (Rev.09-05) "Private Aids to Navigation Application" document that will be initiated by CBI, which will contain the proposed location of all Aids to Navigation that will be installed, services, repaired, or replaced by CBI.

2. Submit CG 2554 to:
   Eighth Coast Guard District (dpw)
   Private Aids to Navigation Section
   500 Poydras St., Suite 1230
   New Orleans, LA 70130

3. Provide CBI with any inquiries received from the USCG ATON Section or provide an authorization to proceed.

4. Provide CBI with any request for information received from the US Coast Guard regarding the CG 2554 application or this proposed ATON project.

3. Accompany CBI personnel during final inspection of ATONs installed.

Points of Contacts

The Points of Contact (POC) for each of the Parties to this Agreement are:

City of Corpus Christi, Parks and Recreation Department:
Reba George, Superintendent
Parks and Recreation Department
City of Corpus Christi
(361) 826-3466
RebaG@cctexas.com

TAMU-CC - CBI POC:
James Rizzo
Assistant Director of Operations
Conrad Blucher Institute for Surveying and Science
Texas A&M University-Corpus Christi
6300 Ocean Drive
Corpus Christi, Texas 78412
(361) 825-5758
(361) 549-5120 (Mobile)
James.Rizzo@tamucc.edu

Budget:

Salary	**$11,819.00**
Fringe	**$3,567.00**
Travel	**$5,932.00**
Supplies	**$5,240.00**
Equipment	**$0.00**
Other	**$18,920.00**
F&A (34%MTDC)	**$15,463.00**
Total	**$60,941.00**

Table 1. Packery Channel Aids to Navigation

Lite List number	Description	Coordinates	Chart	ATON	Reported Condition
39855	Day Beacon 1	N 27 36 54.96 / W 097 12 22.08	11308	Green Square	R&R Boards
39860	Day Beacon 2	N 27 36 56.7 / W 097 12 22.08	11308	Red Triangle	R&R Boards
39865	Day Beacon 3	N 27 36 57.78 / W 097 12 44.88	11308	Green Square	Pile missing
39870	Day Beacon 4	N 27 39 01.2 / W 097 12 42.42	11308	Red Triangle	R&R Boards
39875	Day Beacon 5	N 27 37 25.86 W 097 12 56.10	11308	Green Square	Pile missing
39880	Day Beacon 6	N 27 37 36.00 / W 097 12 55.56	11308	Red Triangle	R&R Boards
39885	Day Beacon 7	N 27 37 46.9 / W 097 13 05.17	11308	Green Square	R&R Boards
39890	Day Beacon 8	N 27 37 48.72 / W 097 13 03.72	11308	Red Triangle	R&R Boards
39895	Day Beacon 9	N 27 37 58.62 / w 097 13 13.98	11308	Green Square	R&R Boards
39900	Day Beacon 10	N 27 38 00.12 / W 097 13 14.24	11308	Red Triangle	R&R Boards
39950	Day Beacon 11	N 27 38 00.66 / W 097 13 18.24	11308	Green Square	R&R Boards
39910	Day Beacon 12	N 27 38 01.50 / W 097 13 17.76	11308	Red Triangle	R&R Boards
39915	Day Beacon 13	N 27 38 01.14 / W 097 13 21.96	11308	Green Square	Pile missing
39920	Day Beacon 14	N 27 38 01.50 / W 097 13 24.30	11308	Red Triangle	Pile missing
39925	Day Beacon 15	N 27 37 56.7 / W 097 13 27.48	11308	Green Square	Pile missing
39930	Day Beacon 16	N 2738 55.80 / W 097 13 29.1	11308	Red Triangle	Pile missing
39935	Day Beacon 17	N 27 37 49.98 / W 097 13 30.6	11308	Green Square	R&R Boards
39940	Day Beacon 18	N 27 37 51.84 / W 097 13 32.76	11308	Red Triangle	Pile missing
39945	Day Beacon 19	N 27 37 49.26 / W 097 13 33.62	11308	Green Square	R&R Boards
39950	Day Beacon 20	N 27 37 49.86 / W 097 13 35.04	11308	Red Triangle	R&R Boards
39955	Day Beacon 21	N 27 37 49.32 / W 097 13 37.62	11308	Green Square	R&R Boards
39960	Day Beacon 22	N 27 37 51.12 / W 097 13 39.30	11308	Red Triangle	R*R Boards
39965	Day Beacon 23	N 27 37 57.66 / W 097 13 56.64	11308	Green Square	R&R Boards
39970	Day Beacon 24	N 27 38 00.36 / W 097 13 58.98	11308	Red Triangle	R&R Boards
39980	Day Beacon 25	N 27 38 07.44 / W 097 14 19.56	11308	Green Square	R&R Boards

Appendix A: Reference Documentation:

1. Packery_Channel_Discrepancies.pdf
2. Daymark.Single.Cluster.Pile.Technical.Vertical.Height.Info.pdf
3. DayboardTechnicalInformation.pdf
4. 33CFRpart66.pdf

31825	Sandestin Beach Channel Light 22	MISSING	11385		51/13
31830	Sandestin Beach Channel Daybeacon 23	DAYMK MISSING	11385		51/13
31835	Sandestin Beach Channel Light 24	DAYMK MISSING	11385		51/13
31855	Sandestin Beach Channel Daybeacon 30	MISSING	11385		51/13
31970	Indian Bayou Daybeacon 6	DAYMK DMGD	11385		14/12
33160	Sherman Cove Marina Daybeacon 6	DAYMK MISSING/STRUCT DMGD	11383	1002-12	02/13
33610	Bay La Launch Channel Daybeacon 5	STRUCT DEST	11378	0539-11 NO	16/11
36215	Pier 77 Channel Buoy 3	MISSING	11324		38/14
36220	Pier 77 Channel Buoy 4	MISSING	11324		38/14
36225	Pier 77 Channel Buoy 7	MISSING	11324		38/14
36230	Pier 77 Channel Buoy 9	MISSING	11324		38/14
36235	Pier 77 Channel Buoy 10	MISSING	11324		38/14
36240	Pier 77 Channel Buoy 12	MISSING	11324		38/14
36245	Pier 77 Channel Buoy 13	MISSING	11324		38/14
36250	Pier 77 Channel Buoy 14	OFF STA	11324	0860-13 GA	46/13
36715	Harborwalk Entrance East Buoy 4	OFF STA	11322		34/13
37375	Brazoria Wildlife Refuge Wave Barrier Light	LT EXT	11322	0321-13 GA	17/13
37480	Texas Meridian Mat/Bay Reef A	MISSING	11319		37/10
37485	Texas Maridian Mat/Bay Reef B	MISSING	11319		37/10
37490	Texas Meridian Mat/Bay Reef C	MISSING	11319		37/10
39855	Packery Channel Daybeacon 1	STRUCT DEST	11308		42/14
39860	Packery Channel Daybeacon 2	STRUCT DEST	11308		41/14
39865	Packery Channel Daybeacon 3	DAYMK DMGD	11308	0403-15 CC	31/15
39870	Packery Channel Daybeacon 4	DAYMK MISSING	11308	0404-15 CC	31/15
39875	Packery Channel Daybeacon 5	DAYMK MISSING	11308	0405-15 CC	31/15
39885	Packery Channel Daybeacon 7	DAYMK IMCH	11308	0407-15 CC	31/15
39890	Packery Channel Daybeacon 8	DAYMK IMCH	11308	0408-15 CC	31/15
39915	Packery Channel Daybeacon 13	STRUCT DEST	11308	0416-15 CC	31/15
39920	Packery Channel Daybeacon 14	DAYMK MISSING	11308	0414-15 CC	31/15
39930	Packery Channel Daybeacon 16	DAYMK MISSING		0416-15 CC	31/15
39935	Packery Channel Daybeacon 17	DAYMK DMGD	11308	0417-15 CC	31/15
39940	Packery Channel Daybeacon 18	DAYMK DMGD	11308	0418-15 CC	31/15
39945	Packery Channel Daybeacon 19	DAYMK IMCH	11308	0419-15 CC	31/15
39950	Packery Channel Daybeacon 20	DAYMK DMGD	11308	0420-15 CC	31/15
39955	Packery Channel Daybeacon 21	DAYMK IMCH	11308		31/15
39960	Packery Channel Daybeacon 22	DAYMK IMCH	11308		31/15
39980	Packery Channel Daybeacon 26	DAYMK IMCH	11308		31/15
40065	Padre Isles North Channel Daybeacon 18	DAYMK DMGD	11308		27/10
40335	Pita Island Channel Daybeacon 39	STRUCT DEST			39/14
	FR-MS-13	MISSING	11373		33/14
	Mississippi Gulf Fishing Bank Buoy FH-6	MISSING			33/14
	Ms Gulf Fishing Bank Buoy Fh-1	MISSING	11373		33/14
	Ms Gulf Fishing Bank Buoy Fh-3	MISSING	11373		33/14

DISCREPANCIES (PRIVATE AIDS) CORRECTED

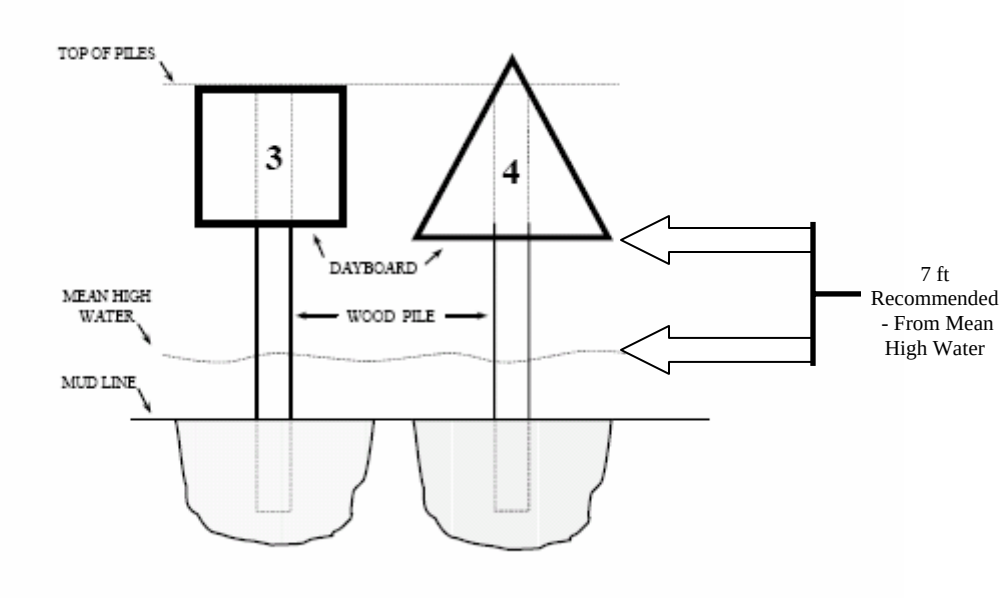
LLNR	Aid Name	Status	Chart No.	BNM Ref.	LNM St	LNM End

None

PLATFORM DISCREPANCIES

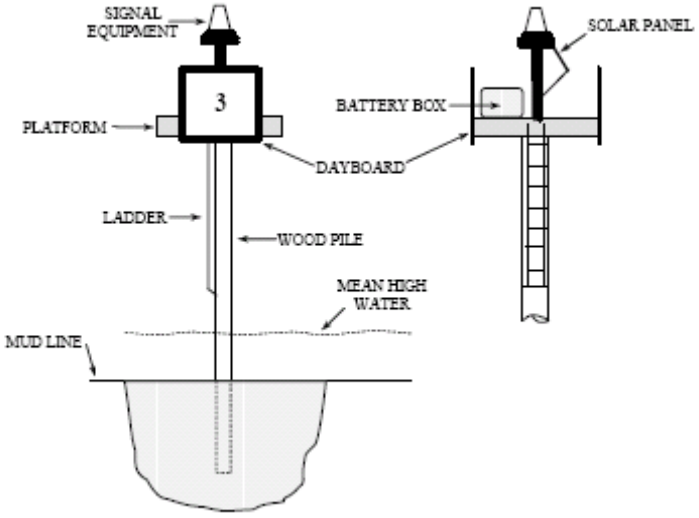
Name	Status	Position		BNM Ref.	LNM St	LNM End
Spn-100-1	LT EXT/SS INOP	30-06-16.280N	087-45-27.480W	0401-13 MO	21/13	
New field-116-1	SS INOP	29-19-55.500N	087-52-40.300W	0382-14 MO	19/14	

Single Pile Wood Beacon Structure



Description. A single pile wood structure is commonly used for lighted and unlighted aids in marine locations where exposure and bottom conditions permit. Typical use would be in protected and semi-exposed environments. Advantages include low cost, ready availability, and ease of construction. Disadvantages include susceptibility to marine borers, rotting, ice damage, beetle attack, and brooming of the tip during driving. When subject to a moderate collision, a wood pile will snap upon failure.

"THE ABOVE IS RECOMMENDED INFORMATION ONLY"



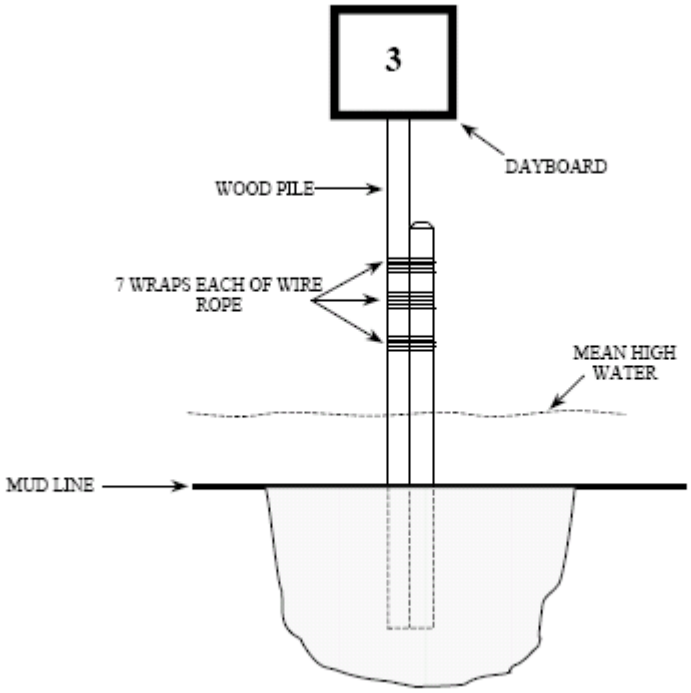
Description. A single pile steel structure is commonly used for lighted and unlighted aids in marine locations where exposure and bottom conditions permit. This is generally the most effective type of pile for moderate ice conditions or hard bottom areas. Advantages include the relative permanence of the aid, the ability to withstand hard driving and moderate collisions, and the ability to achieve long lengths by welding sections together. Disadvantages include higher cost and limited availability as compared with wood. When subject to moderate collisions, a steel pile will yield and can be straightened to its original position.

Physical Characteristics.

- Steel: 12" or 18" diameter steel pipe, or 12H53 "H" piling.
- Common lengths: 30', 40', 50' and 60'.

"THE ABOVE IS RECOMMENDED INFORMATION ONLY"

Description. A cluster pile dolphin structure is used on marine sites for lighted or unlighted aids when a single pile structure is not effective because of exposure conditions such as severe wind or wave action. The basic configuration involves three or more piles (usually wood) driven vertically, skin-to-skin, and wrapped tightly together at various heights.



"THE ABOVE IS RECOMMENDED INFORMATION ONLY"

Radar Reflector

Function. The structure radar reflector is designed to be installed on structures when the radar reflectivity of the structure does not meet the operational requirements.

Features.

- Galvanized steel construction.
- 1.5 to 2.0 nmi range (using two adds about 0.5 nmi).
- Weight: 8 lbs.

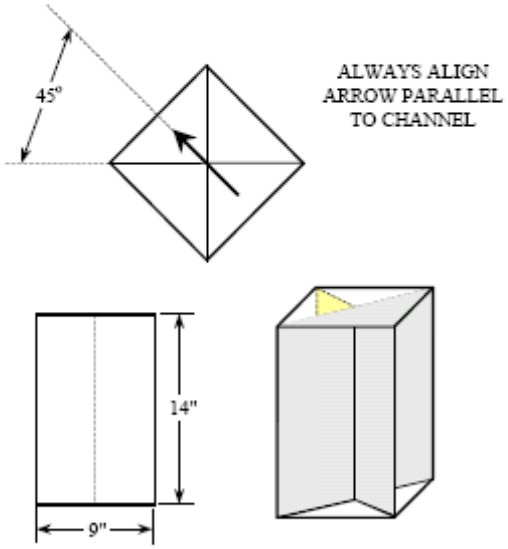


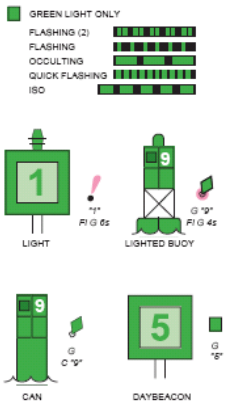
Figure 19-1 - Radar Reflector

"THE ABOVE IS RECOMMENDED INFORMATION ONLY"

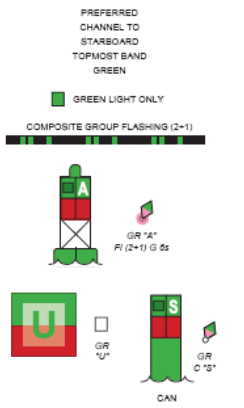
U.S. AIDS TO NAVIGATION SYSTEM
on navigable waters except Western Rivers

LATERAL SYSTEM AS SEEN ENTERING FROM SEAWARD

PORT SIDE
ODD NUMBERED AIDS



PREFERRED CHANNEL
NO NUMBERS-MAY BE LETTERED



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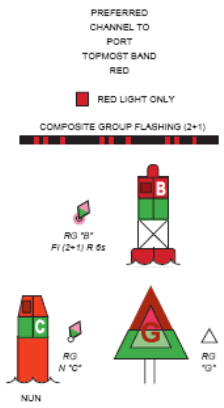
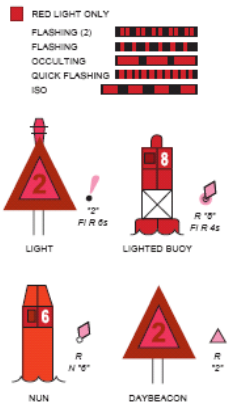
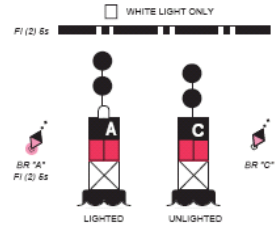


STARBOARD SIDE
EVEN NUMBERED AIDS

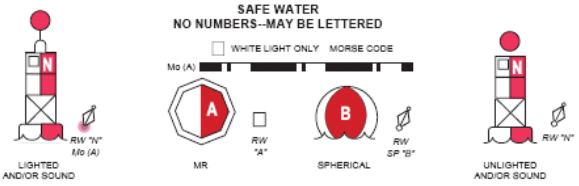


AIDS TO NAVIGATION HAVING NO LATERAL SIGNIFICANCE

ISOLATED DANGER
NO NUMBERS--MAY BE LETTERED

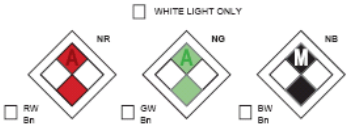


SAFE WATER
NO NUMBERS--MAY BE LETTERED

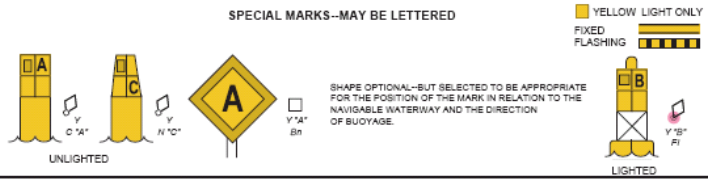


RANGE DAYBOARDS--MAY BE LETTERED

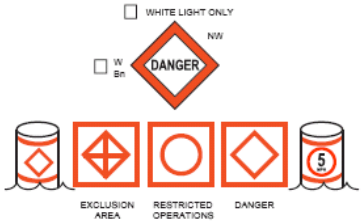
DAYBOARDS--MAY BE LETTERED



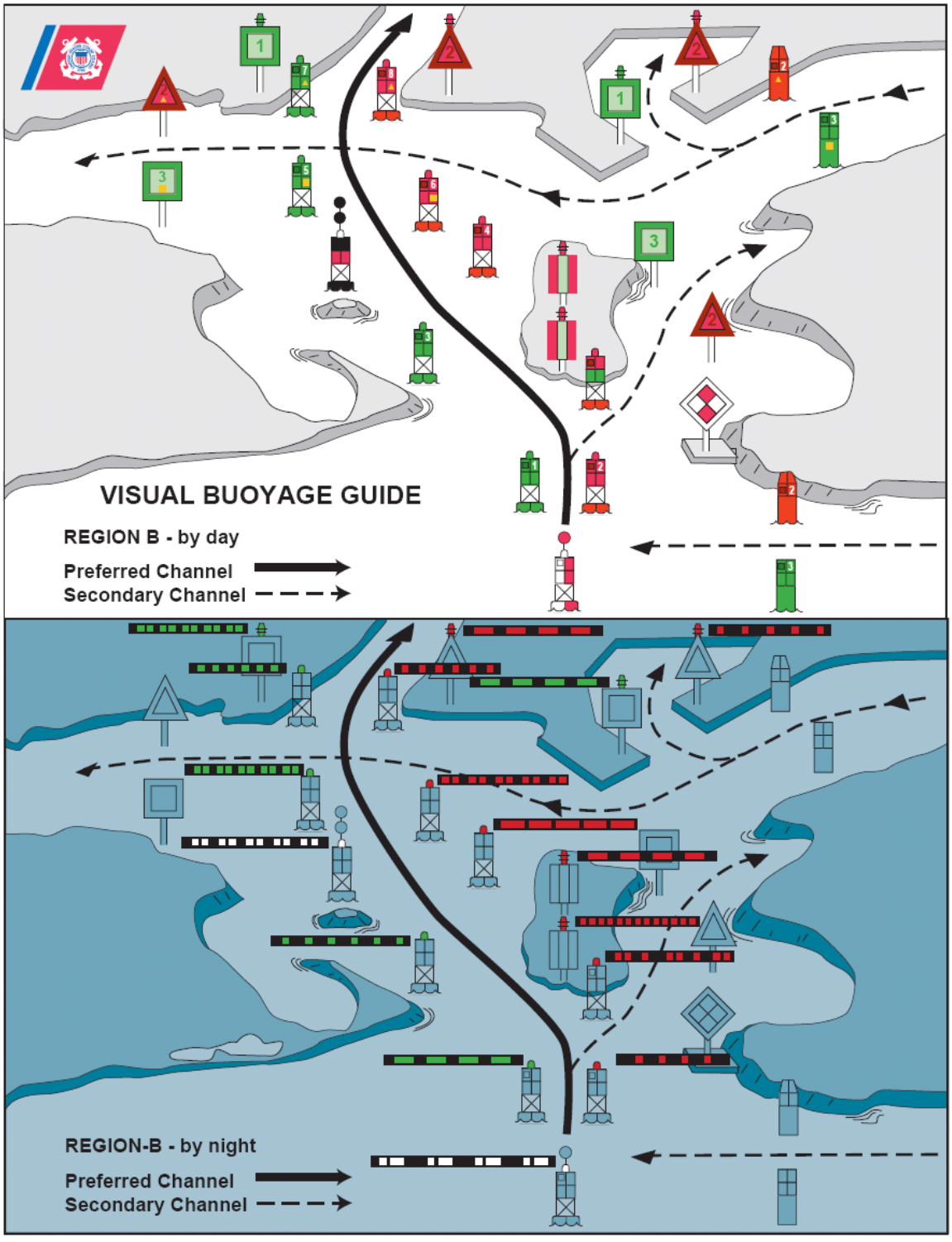
SPECIAL MARKS--MAY BE LETTERED



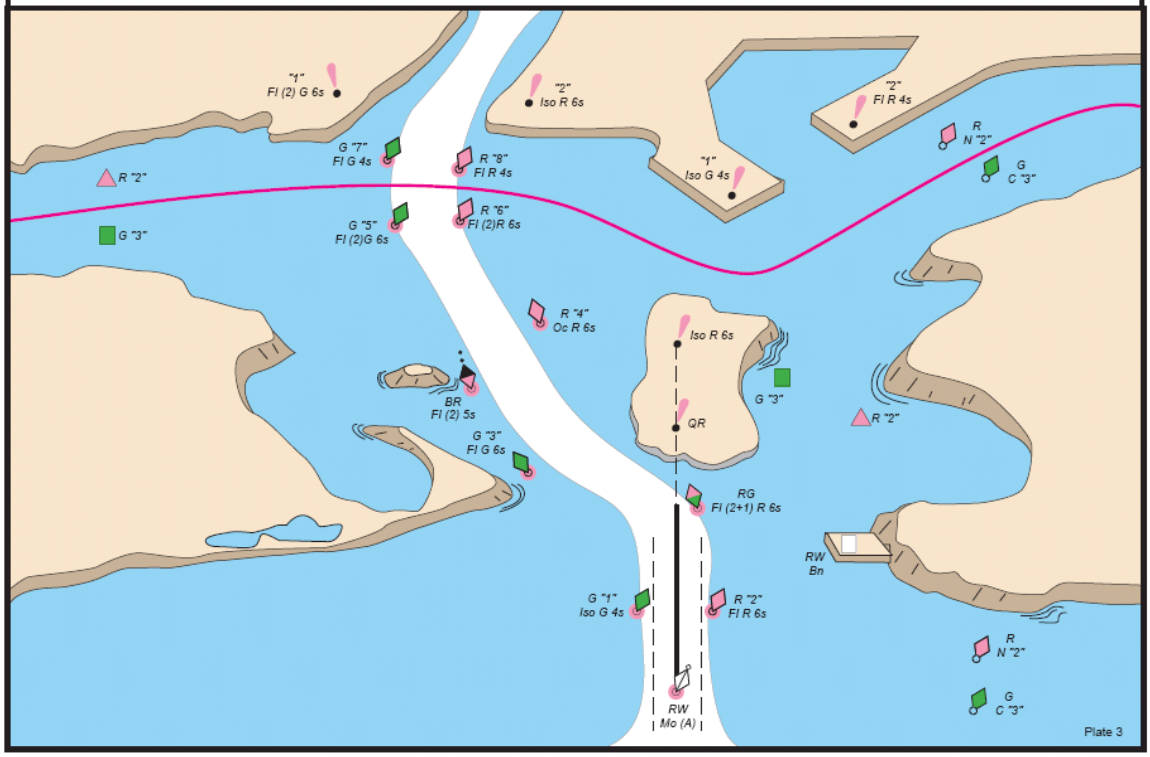
TYPICAL INFORMATION AND REGULATORY MARKS



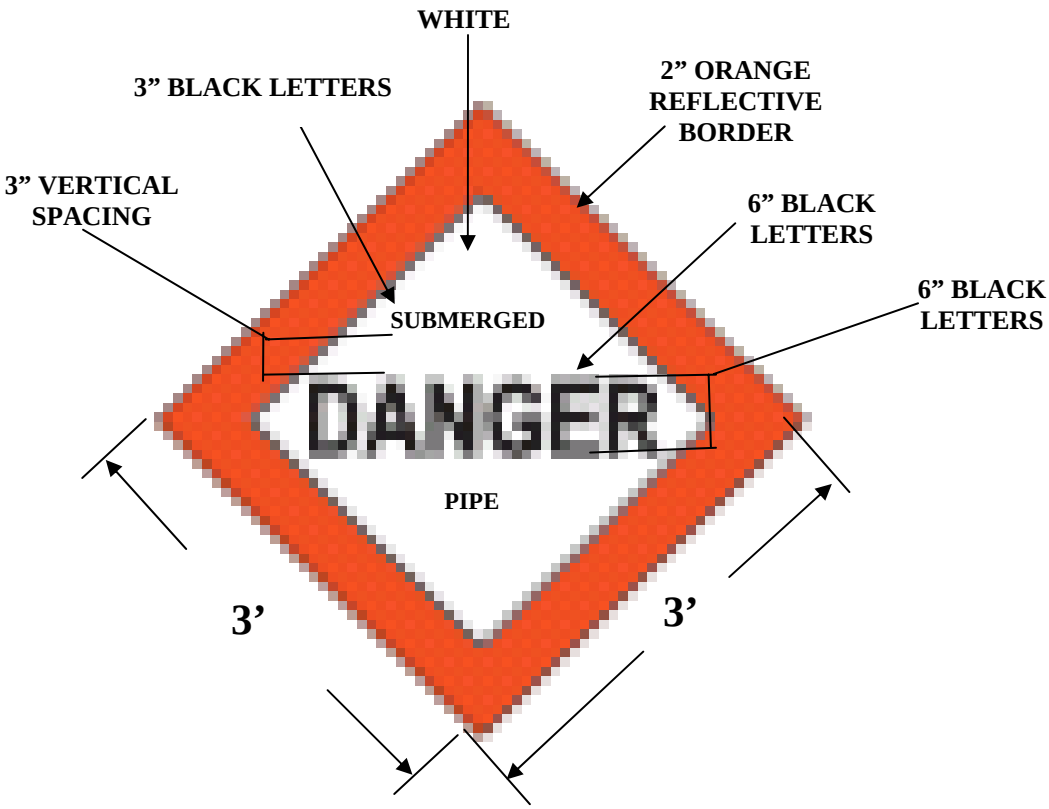
Aids to navigation marking the Intercoastal Waterway (ICW) display unique yellow symbols to distinguish them from aids marking other waters. Yellow triangles △ indicate aids should be passed by keeping them on the starboard (right) hand of the vessel. Yellow squares ▢ indicate aids should be passed by keeping them on the port (left) hand of the vessel. A yellow horizontal band ▭ provides no lateral information, but simply identifies aids as marking the ICW.


VISUAL BUOYAGE GUIDE
REGION B - by day
Preferred Channel
Secondary Channel
REGION-B - by night
Preferred Channel
Secondary Channel

FICTITIOUS NAUTICAL CHART



ALL WATERWAYS WARNING MARKERS



NO LATERAL SIGNIFICANCE.
The word "DANGER" is to be placed on all warning daymarks. Informational words may be placed below, or above and below, to suit particular needs.

Examples: **DANGER** **or** **SUBMERGED**
ROCK **DANGER**
PIPE

"THE ABOVE IS RECOMMENDED INFORMATION ONLY"

CHAPTER 5. DAYBOARDS

A. Introduction. Dayboards differ in size and markings depending on the marking system and specific function. There are three marking systems used in the U.S.: General Use; Intercoastal Waterway (ICW); and Western Rivers. All three are based on a Lateral System, wherein marks are used to define the edges of a channel. Not all marks within a lateral system will have lateral significance. Safe-water marks and special marks, for example, do not provide the mariner with guidance on which side the mark should be passed. This chapter describes dayboard characteristics and provides guidance for selecting, preparing, inspecting and maintaining dayboards.

B. Selection Guide.

1. Designations. Prior to selecting a dayboard, it is helpful to understand the standard designations and operational parameters. Every daymark, with the exception of information and regulatory marks, has a designator-composed of a numeral followed by a group of letters-which indicates its dimension, shape and color. The designator is constructed as follows:

a. A NUMERAL gives the width of the dayboard in feet.

b. The first LETTER refers to the shape or purpose of the dayboard.

S – square;
T – triangle;
J – preferred channel;
M – safe water;
N – no lateral significance;
K – range; and
C – crossing.

c. The second LETTER represents the key color:

R – red;
G – green;
W – white; and
B – black.

d. The third LETTER indicates the color of stripe (range dayboards only):

R – red;
G – green;
W – white; and
B – black.

e. Additional information is shown by LETTERS placed after the dash (-):

I – intracoastal waterway;
SY – yellow square on dayboard (dual purpose); and
TY – yellow triangle on dayboard (dual purpose).

As shown in Figure 5-1, a 6KRW-I designator indicates a 6 ft wide, red range dayboard with a white center stripe and a yellow, reflective strip along the bottom edge, which shows that it is used on the intracoastal waterway. The yellow strip is placed on the front dayboard only.

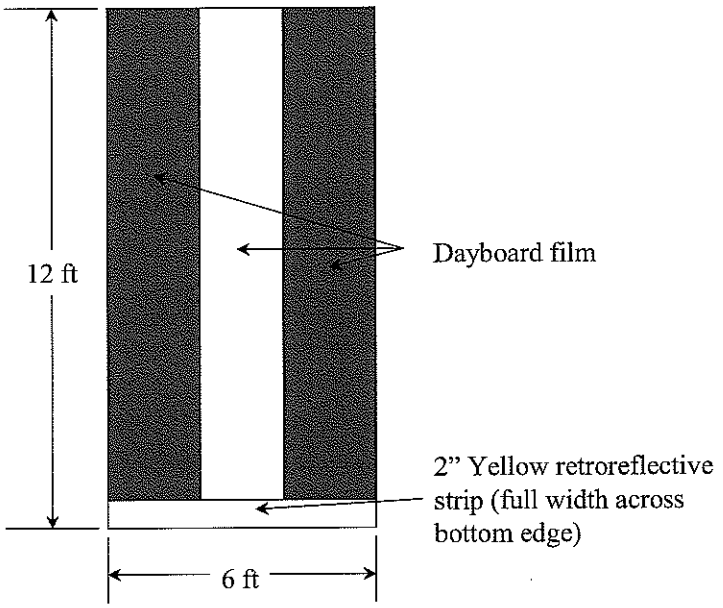


Figure 5-1. Sample 6KRW-I dayboard designator.

5.B.1.e (cont)

A 4JR-SY designator indicates a 4-ft wide, red and green, triangular dual-purpose preferred channel dayboard with a yellow square, as shown in Figure 5-2. The dayboard marks a junction between the intracoastal waterway (ICW) and another waterway, with the dayboard position denoting the port side of the ICW and the starboard side of the other waterway.

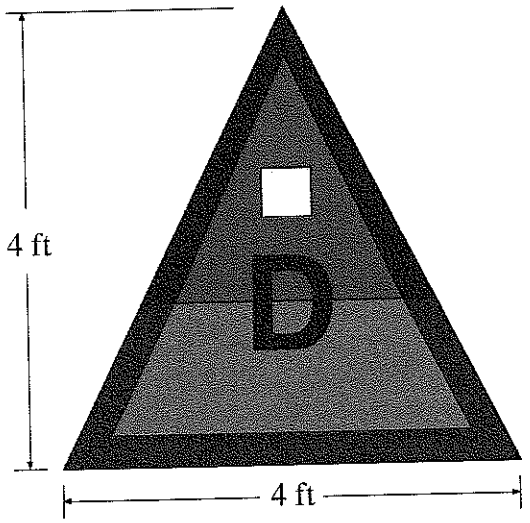


Figure 5-2. Sample 4JR-SY dayboard designator.

2. Nominal Ranges. As a mariner approaches a dayboard from a distance, it is first *detected* as an object apart from its surroundings (detection range). Upon coming closer to the dayboard, it can be *recognized* as an aid to navigation with color and shape (recognition range). Finally, the particular aid can be *identified* when the mariner is close enough to read the numbers and letters on the dayboard (identification range).

The values for these three ranges will depend on the mariner's vision and the viewing conditions. The nominal range rating used in the classification of dayboards will generally fall between the detection and recognition ranges, for days when the visibility is 10 nm or more. The identification range (in feet) for viewing dayboard characters is approximately 40 times the character height (in inches)—i.e., a 16-in. character can be identified at 640 ft or just over 200 yd—in clear visibility.

5.B.

3. Selection. Figure 5-3 is a functional diagram of the dayboard selection process.

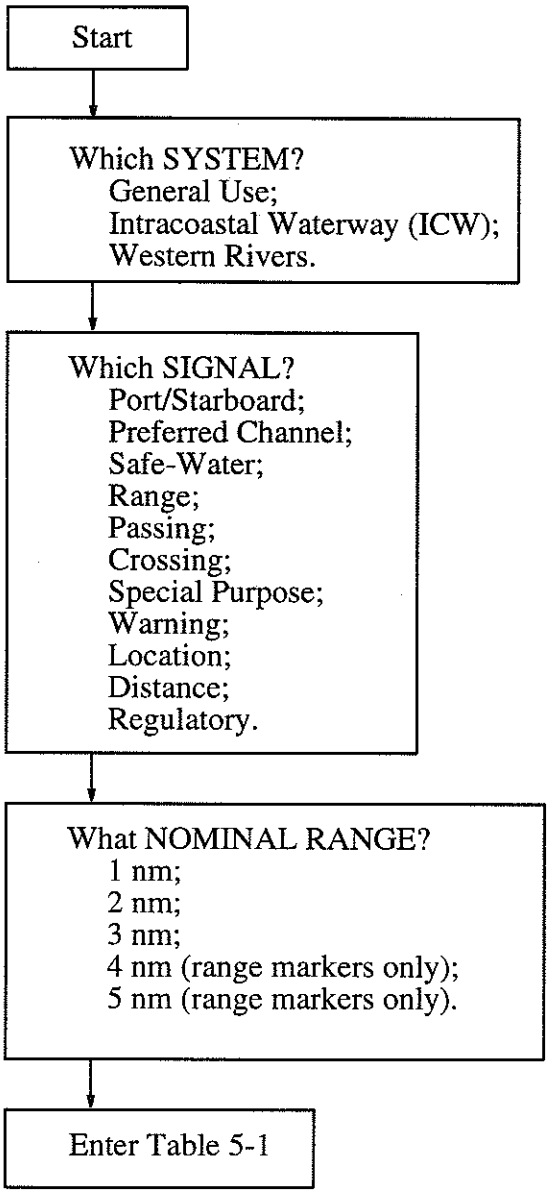


Figure 5-3. Selection procedure for dayboards.

Table 5-1
Reference Table for Dayboard Selection
(Numbers refer to data sheets in Section E of this Chapter)

Function (Nominal Range-nm)	General Use	W. Rivers	ICW
Port and starboard (1)	5-E(1)	—	5-E(12)
Port and starboard (2)	5-E(2)	—	5-E(12)
Port and starboard (3)	5-E(3)	—	5-E(12)
Preferred channel (1,2,3)	5-E(4)	5-E(20)	5-E(13)
Safe-water (1,3)	5-E(5)	—	5-E(16)
Range (1,2,3,4,5)	5-E(6)	5-E(6)	5-E(17)
Non-Lateral (1,2,3)	5-E(7)	5-E(7)*	5-E(7)
Warning (1,2,3)	5-E(8)	5-E(8)	5-E(8)
Information & regulatory	5-E(9)	5-E(9)	5-E(9)
Special (1,2,3)	5-E(10)	5-E(10)	5-E(10)
Location (1,2,3)	5-E(11)	5-E(11)	5-E(11)
Dual-purpose port and starboard (1,2,3)	5-E(14)	—	5-E(14)
Dual-purpose preferred channel (1,2,3)	5-E(15)	—	5-E(15)
Distance	—	5-E(21)	5-E(18)
Passing (1,2,3)	—	5-E(19)	—

* Non-lateral marks have replaced crossing marks in the Western Rivers.

5.C. Preparation and Installation.

1. Preparation. Data Sheet 5-E(22) provides cutting patterns for dayboard backings. Application of dayboard film(s) and retroreflective characters shall be conducted in accordance with the manufacturers' instruction. Preparation of dayboards by units subsequent to the manufacturing stage should be limited to the selection and application of identifying marks, such as letters, numerals, and dual purpose and intracoastal waterway markings. Data Sheets 5-E(1) through 5-E-(21) provide guidance on the size, color, and placement of dayboard films and identifying markings.

2. Installation. Dayboards shall be fastened to their support structures in such a way as to meet or exceed a lifetime of 5 years. Common fasteners acceptable for this purpose are listed in Table 5-2.

Table 5-2

Dayboard Support Structure Fasteners

Structure	Fastener	Notes
Wood	Nails	Minimum size 8d galvanized Minimum number, 4 per 8-sq ft board area
	Lag screw	Minimum size 3/8 in. galvanized Minimum number, 2 per 8-sq ft board area
Concrete or steel (with platform)	Through bolts Carriage bolts	1/2 in. X 13 in. NC galvanized 1/2 in. X 13 in. NC aluminum Minimum number, 2 per 8-sq ft board area
	U bolts or J bolts	3/8 in. X 3 in. galvanized Minimum number, 2 per 8-sq ft board area

5.C.

3. Dayboard Backings. Acceptable materials for dayboard construction are either 3/8-in. or 1/2-in. Medium Density Overlay (single-sided) plywood or 1/8-in. commercial grade aluminum sheet. When Medium Density Overlay plywood is used, place the film on the wood facing and treat the exposed edges with a sealer, such as paint or polyurethane. Data Sheet 5-E(22) provides cutting patterns for dayboard backings. Knockdown rates and other special considerations may justify the use of less expensive backings.

4. Films and Characters. The surface of a dayboard is covered with a colored vinyl film and retroreflective tape, and may also have identifying characters (letters and numbers). Commandant (G-SEC) maintains separate Qualified Products Lists (QPLs) for red and green dayboard films and retroreflective materials. (White and black dayboard films are commercial items.) Identification of qualified suppliers of dayboard film and retroreflective materials will be promulgated by Commandat (G-SEC) annually. Retroreflective numbers and letters (A through E, R, T, and W) should be purchased from the Engineering Logistics Center (ELC). Remaining letters should be purchased from a qualified vendor.

D. Inspection, Maintenance, and Repair on Station.

1. Inspection. Dayboards shall be inspected at least biennially. The dayboard surface and backing materials will deteriorate due to the effects of weathering—wind, rain, freezing temperatures, and sunlight cause delamination (separation), cracking, peeling, and fading. Attention shall be given to these conditions when inspecting according to the following guidelines.

   a. Backing Material. Delamination of the plies on a plywood backing should not affect more than 25 percent of the surface area. Any warpage should not visibly detract from the signal presented to the mariner. The backing should not be softened or otherwise deteriorated around the mounting points to a degree that the board could come loose in a storm typical for the area.

   b. Elastomeric Films, Retroreflective Numerals, Letters, and Borders. Delamination of films and retroreflective markings should not affect more than 10 percent of the surface area of the material. The film and markings should not be cracked, checked, or abraded so as to provide a dull or roughened top surface. Peeling of the film and markings from the dayboard should not affect more than 10 percent of the surface area.

5.D.

2. Replacement or Repair. The dayboard shall be replaced if any of the deterioration noted above is observed, or if for any reason it cannot function as intended (including significant fading or other discoloration) until the next regularly scheduled visit. Onsite repairs are permitted if they do not detract from the intended signal function of the dayboard.

5.E. General Description Data Sheets.

GENERAL USE PORT AND STARBOARD MARKS

System: General Use.
Function: Laterally significant port and starboard marks.
Nominal Range: 1 nm.
Additional Data: For three numerals on a 3SG, use 8-inch characters at a height of 14 inches from the base. For three numerals on a 4TR, use 8-inch characters at a height of 12 inches.

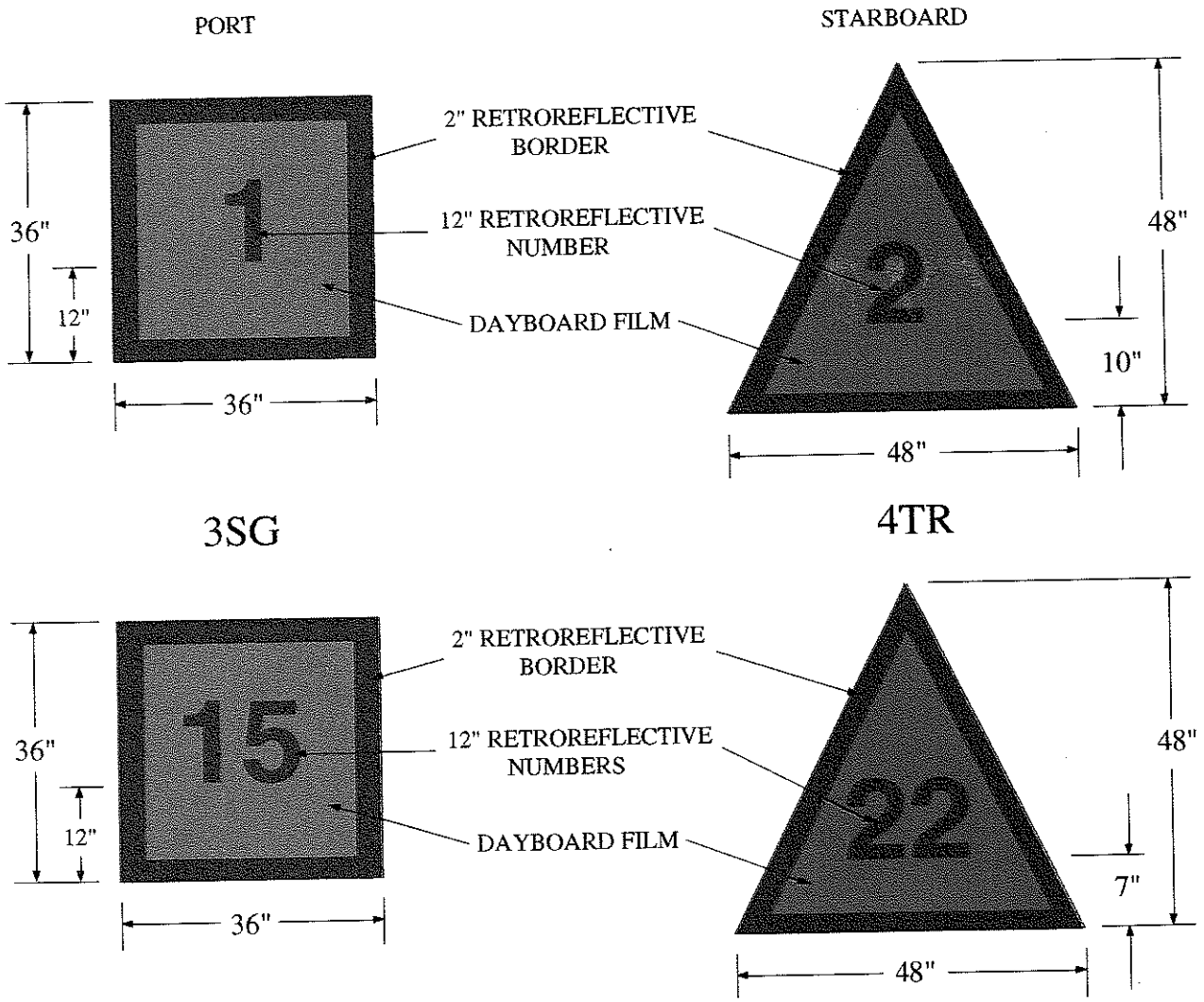


Figure 5-4. General Use port and starboard marks.

Data Sheet 5-E(1). General Use port and starboard marks (nominal range, 1 nm).

5.E.

GENERAL USE PORT AND STARBOARD MARKS

System: General Use.
Function: Laterally significant port and starboard marks.
Nominal Range: 2 nm.
Additional Data: For three numerals on a 4SG, use 12-inch characters at a height of 18 inches from the base. For three numerals on a 6TR, use 12-inch characters at a height of 12 inches.

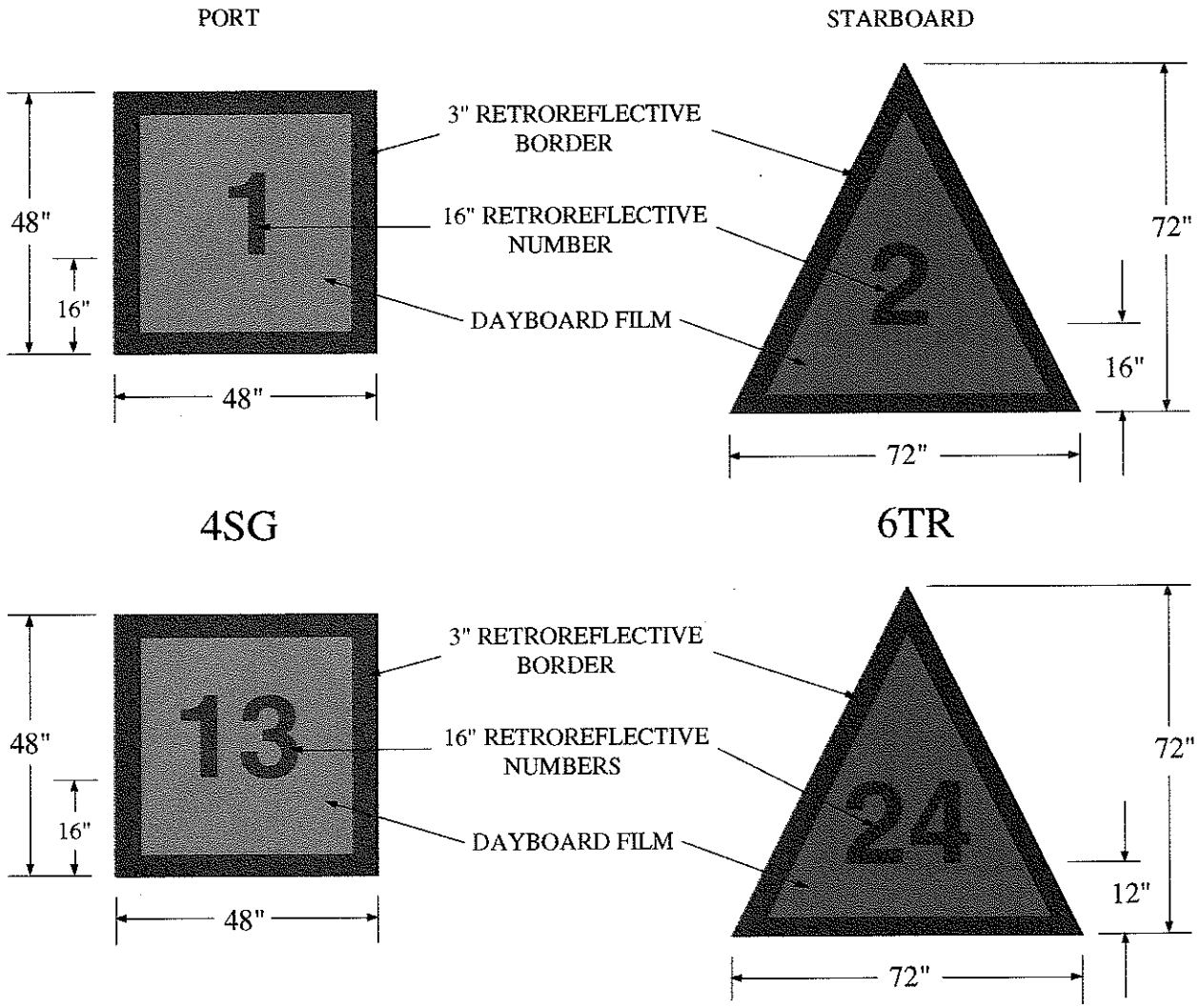


Figure 5-5. General Use port and starboard marks.

Data Sheet 5-E(2). General Use port and starboard marks (nominal range—2 nm).

5.E.

GENERAL USE PORT AND STARBOARD MARKS

System: General Use.
Function: Laterally significant port and starboard marks.
Nominal Range: 3 nm.
Additional Data: For three numerals on a 6SG, use 16-inch characters at a height of 28 inches from the base. For three numerals on an 8TR, use 16-inch characters at a height of 14 inches.

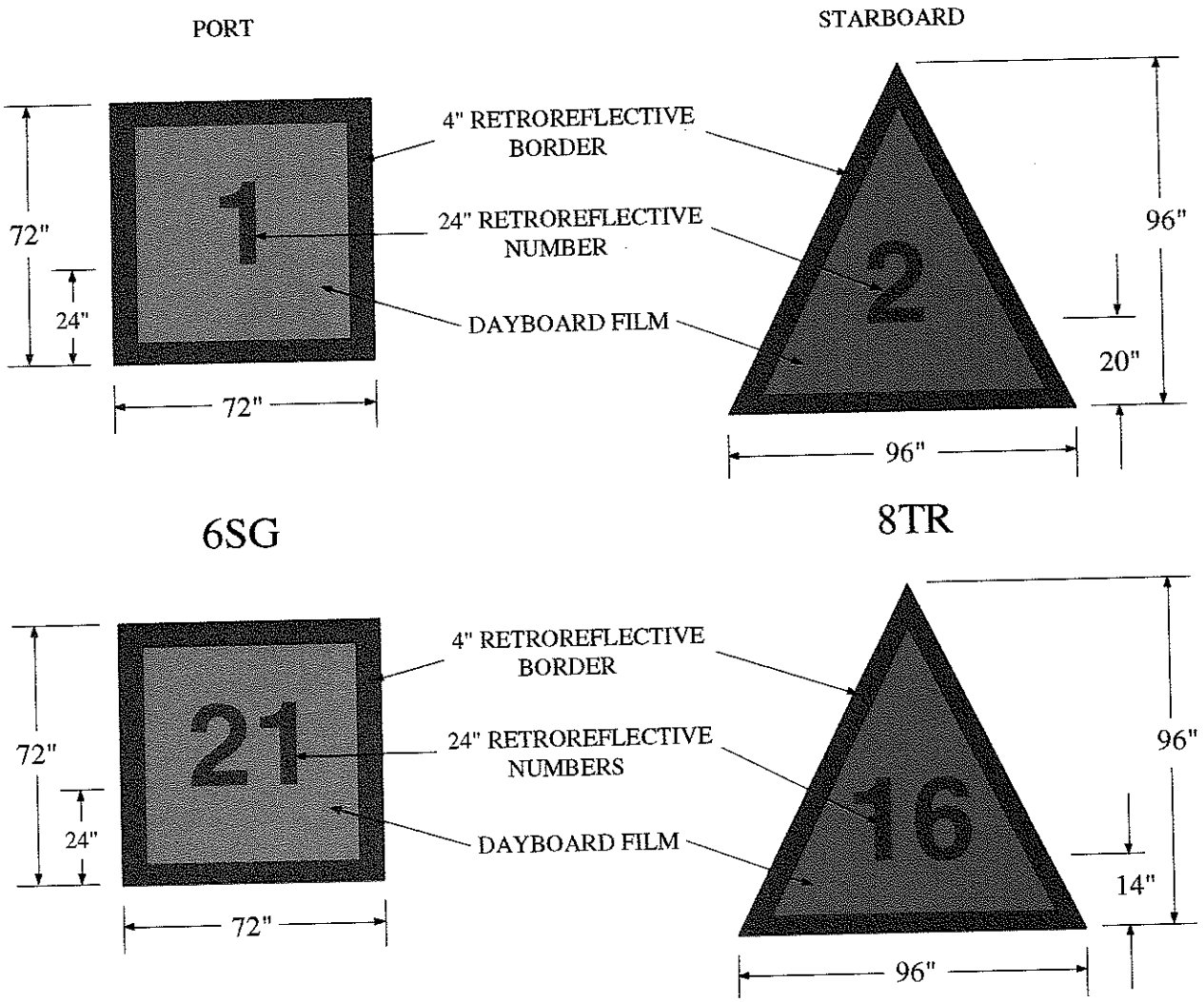


Figure 5-6. General Use port and starboard marks.

Data Sheet 5-E(3). General Use port and starboard marks (nominal range—3 nm).

5.E.

GENERAL USE PREFERRED CHANNEL MARKS

System: General Use.
Function: Laterally significant preferred channel marks.
Nominal Range: 1 nm (*as designated in Figure 5-7, below—use Table 5-3 for dimensions of preferred channel marks with nominal ranges of 1-, 2-, and 3-nm).
Additional Data: For both JG and JR markers, letters are vertically centered on the dividing line of the dayboard film. The letters on a JG dayboard are green, while those on a JRs are red.

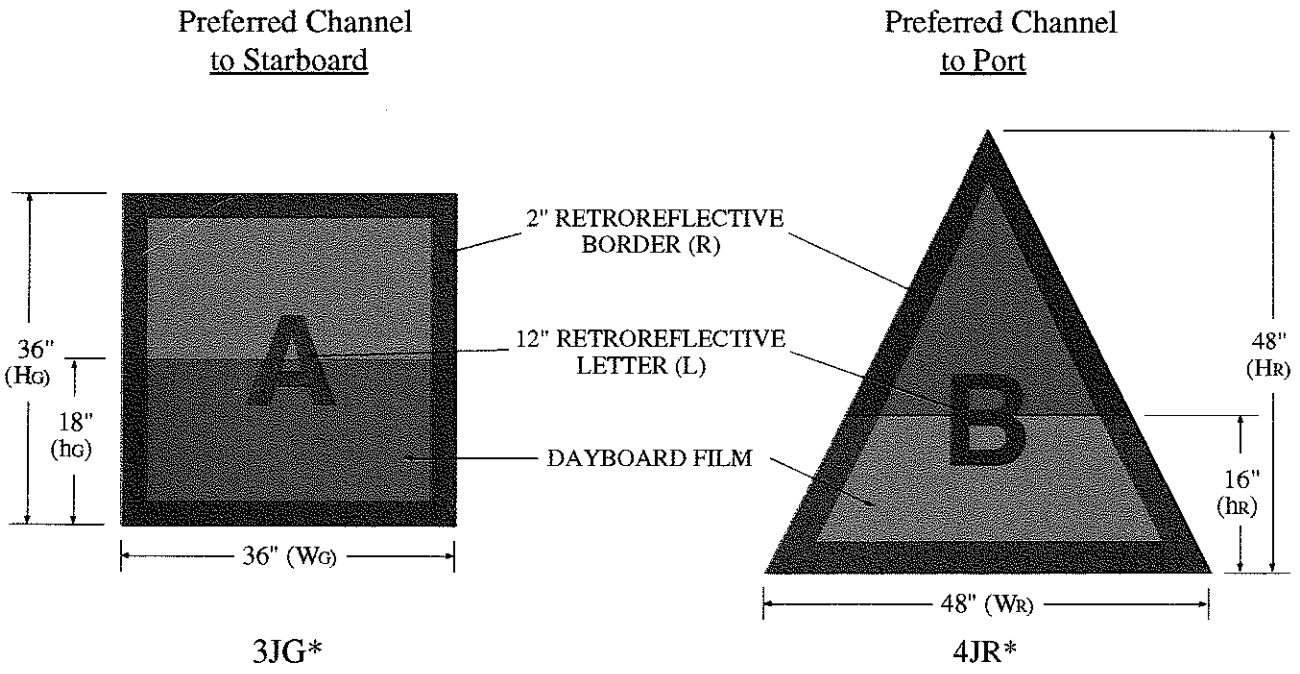


Figure 5-7. General Use preferred channel marks.

Data Sheet 5-E(4). General Use preferred channel marks (nominal ranges, 1, 2, and 3 nm).

Table 5-3

Dimensions for 1-, 2-, and 3-nm Nominal Range Dayboards
for General Use Preferred Channel Marks

Preferred Channel to Starboard

Mark	Nominal Range (nm)	H_G x W_G (in)	h_G (in)	R (in)	L (in) (1 letter)	L (in) (2 letters)	L(in) (3 letters)
3JG	1	36 x 36	18	2	12	12	8
4JG	2	48 x 48	24	3	16	16	12
6JG	3	72 x 72	36	4	24	24	16

Preferred Channel to Port

Mark	Nominal Range (nm)	H_R x W_R (in)	h_R (in)	R (in)	L (in) (1 letter)	L (in) (2 letters)	L(in) (3 letters)
4JR	1	48 x 48	16	2	12	12	8
6JR	2	72 x 72	24	3	16	12	12
8JR	3	96 x 96	32	4	24	16	16

Data Sheet 5-E(4). (cont'd).

GENERAL USE SAFE-WATER MARKS

System: General Use.
Function: Safe-water markers.
Nominal Range: 1 nm and 3 nm.
Additional Data: The 4MR daymark, illustrated in Figure 5-8a, is a 4-ft octogon. The 8MR, shown in Figure 5-8b, is an 8-ft octogon. Borders and letters on safe-water marks are white retroreflective material. Letters are centered on the red portion of the daymark. When displaying two characters on a 4MR, use 8-in letters. For a single character on an 8MR, use a 16-in letter.

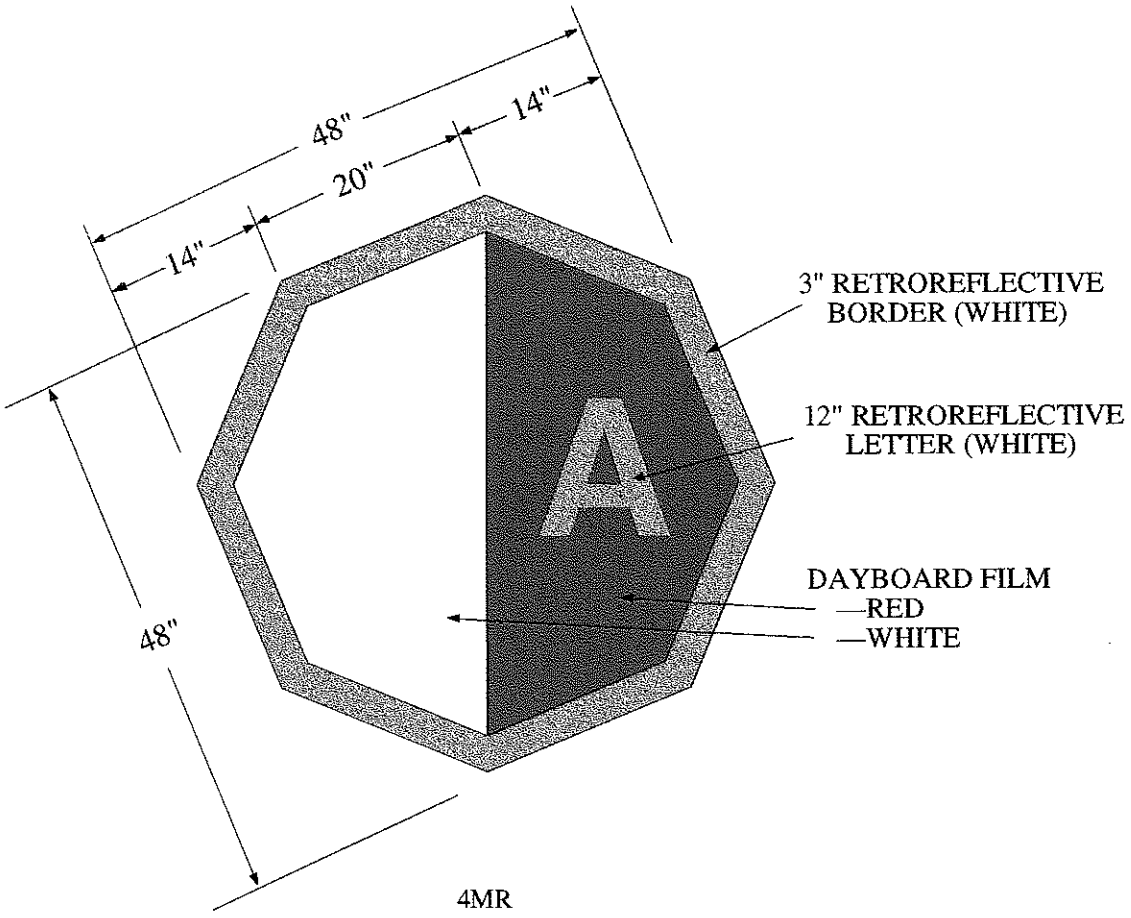


Figure 5-8a. General Use safe-water marks (nominal range—1 nm).

Data Sheet 5-E(5). General Use safe-water marks.

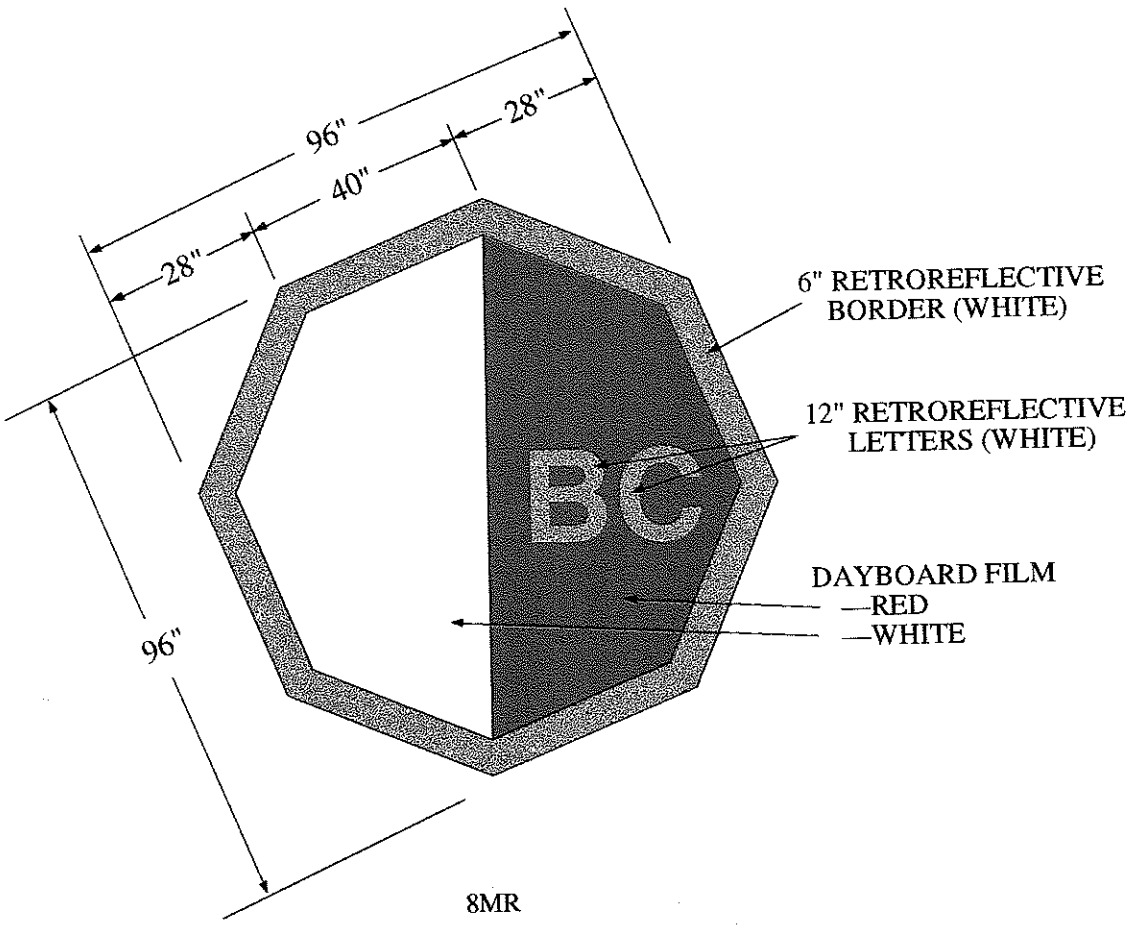


Figure 5-8b. General Use safe water marks (nominal range—3 nm).

Data Sheet 5-E(5). (cont'd).

5.E.

GENERAL USE OR WESTERN RIVERS RANGE MARKS

System: General Use or Western Rivers.
Function: Range marks.
Nominal Range: 1 to 5 nm. See Table 5-4 for the dimensions of range boards required to acheive the various stated nominal ranges.
Additional Data: Front and rear daymarks for a given range will be the same colors, although the sizes may vary. The front range board may be marked with a contrasting colored letter. Use a white retroreflective character on range boards with a black stripe (KWB, KRB and KGB), and a black vinyl film character on all other type range boards. Letters shall be centered on the range board. Use the largest letter which will fit on the center stripe.

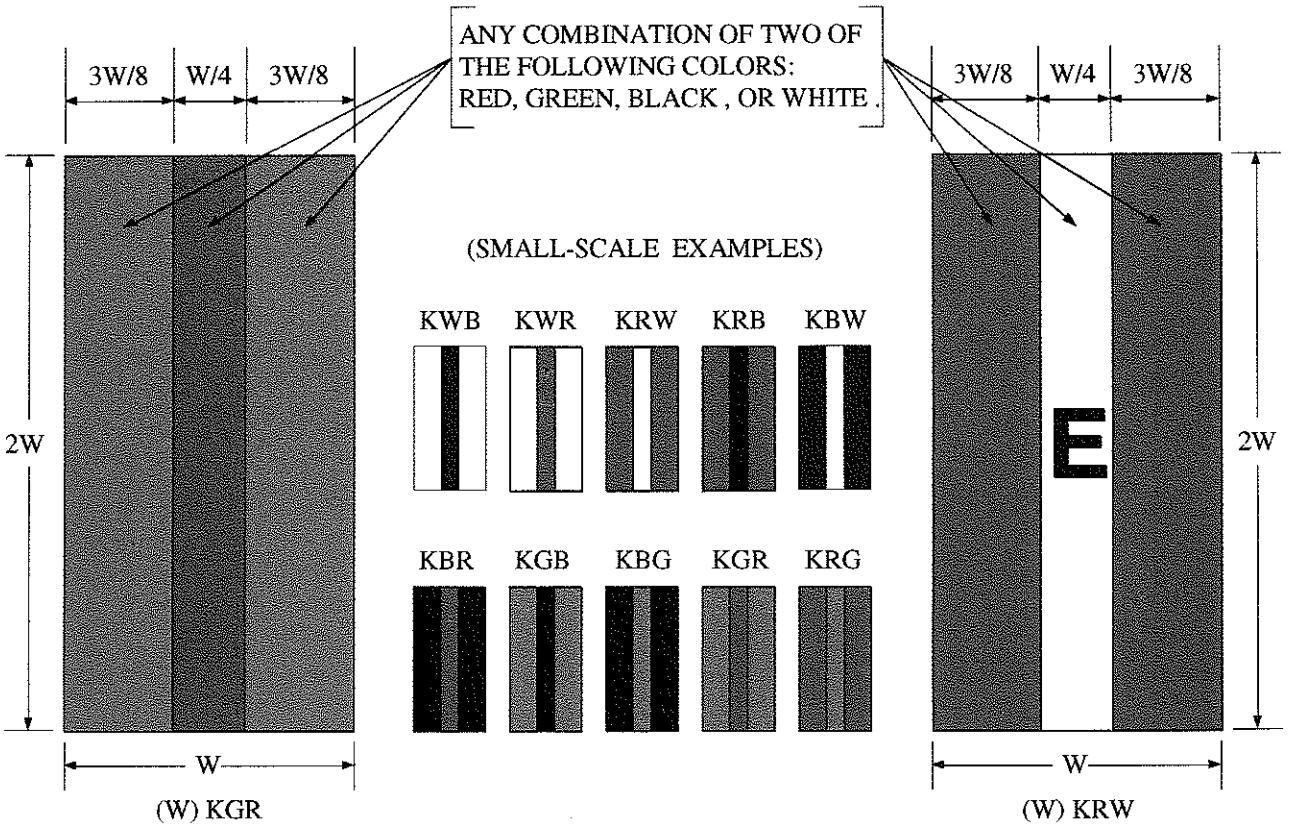


Figure 5-9. General Use or Western Rivers range marks.

Data Sheet 5-E(6). General Use or Western Rivers range marks

Table 5-4

Dimensions for 1- to 5-nm Nominal Range Dayboards for General Use, or Western Rivers Range Marks

Nominal Range (nm)	Range Board Designation	Width—W (ft)	Width of Side Panels—3W/8 (in.)	Width of Center Stripe—W/4 (in.)
1	3K__	3	13.5	9
2	4K__	4	18	12
3	6K__	6	27	18
4	8K__	8	36	24
5	12K__	12	54	36

Data Sheet 5-E(6). (cont'd).

ALL WATERWAYS NON-LATERAL MARKS
(WESTERN RIVERS CROSSING MARKS)

System: All waterways.
Function: No lateral significance marks.
Nominal Range: 1 nm (*as designated in Figure 5-10, below—use Table 5-5 for dimensions of non-lateral marks with nominal ranges of 1-, 2-, and 3-nm).
Additional Data: Use red retroreflective letters on NR marks, green retroreflective letters on NG marks, and white retroreflective letters on NB marks. These marks are used in the ICW without addition of the yellow strip.

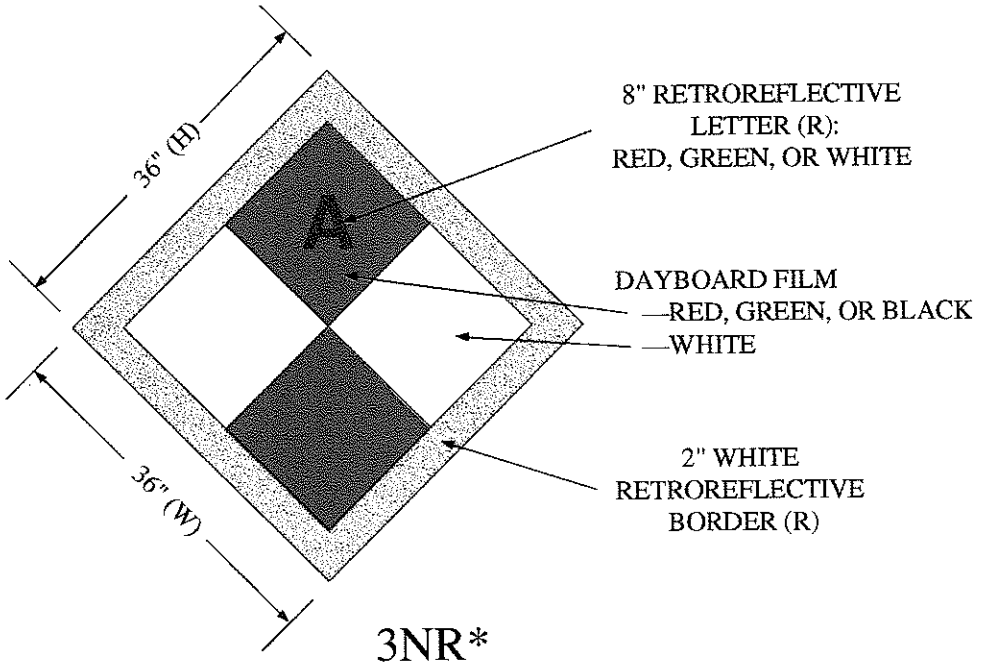


Figure 5-10a. All waterways non-lateral marks.
(Western Rivers crossing marks.)

Data Sheet 5-E(7), All Waterways Non-Lateral Marks.

5.E.

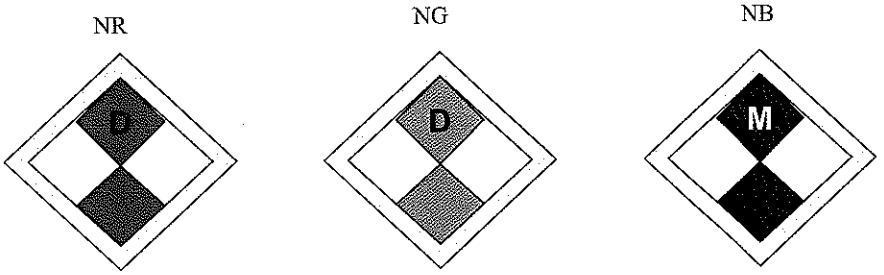


Figure 5-10b. Non-lateral marks
(except Western Rivers)

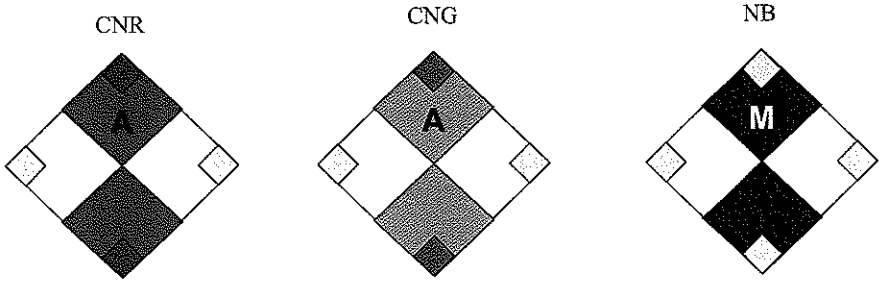


Figure 5-10c. Crossing marks (optional)
(Western Rivers)

Table 5-5

Dimensions for 1-, 2-, and 3-nm Nominal Range Dayboards
for all Waterways Special Marks

Mark	Nominal Range (nm)	H x W (in)	Retro* (R) (in)	Letter (L) (in)
3N_	1	36 x 36	2	8
4N_	2	48 x 48	3	12
6N_	3	72 x 72	4	16

*For Western Rivers, the square retroreflective patch should be 6" for the 3N_, 8" for the 4N_ and 12" for the 6N_.

Data Sheet 5-E(7), cont'd

5.E.

ALL WATERWAYS WARNING MARKS

System: All waterways.

Function: No lateral significance warning marks.

Nominal Range: 1nm (*as designated in Figure 5-11, below-use Table 5-5 for dimensions of warning marks with nominal ranges of 1-, 2- and 3-nm: except that the letter sizes for the word "DANGER" will be 6-in for a 3NW, 8-in for a 4NW and 10-in for a 6NW. Other wording will have 3-in letters on a 3NW, 4-in on a 4NW and 5-in on a 6NW).

Additional Data: The word "DANGER" will be centered on the daymark. Informational words may be placed above and/or below, as necessary (see examples below). Warning marks are used in the ICW without addition of the yellow strip.

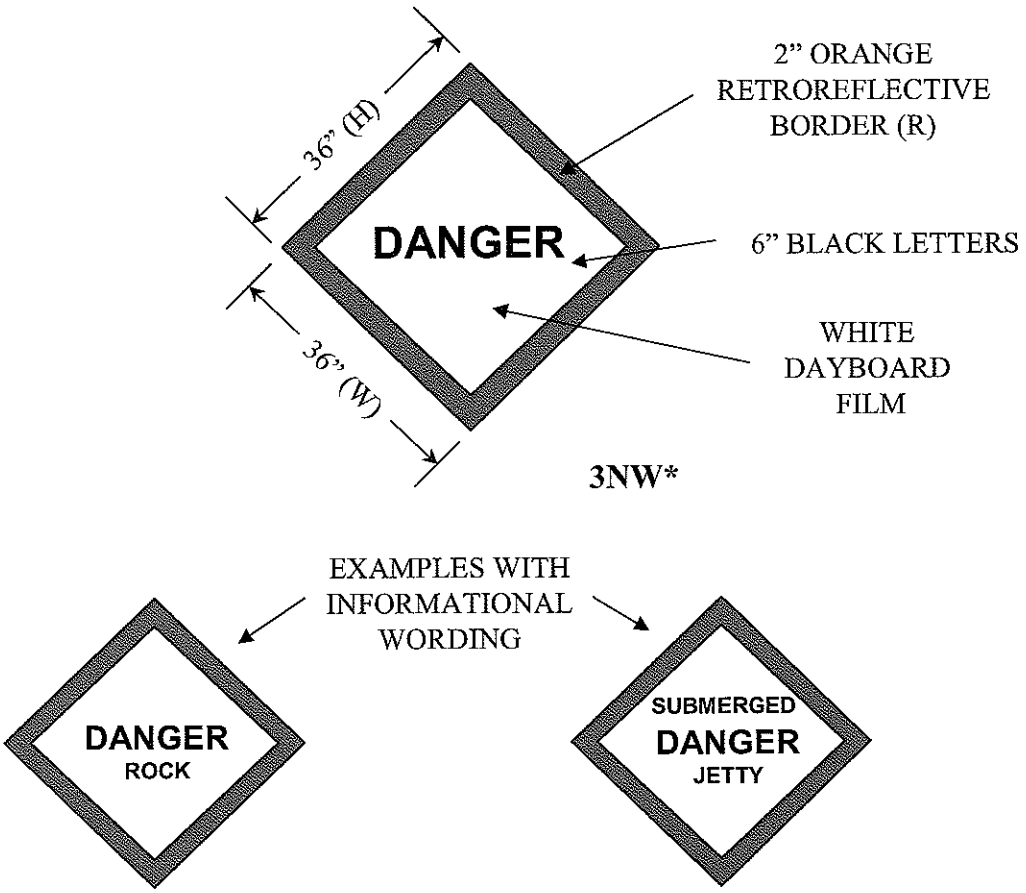


Figure 5-11. All waterways warning marks.

Data Sheet 5-E(8). All waterways warning marks (nominal ranges 1, 2 and 3 nm).

5.E

ALL WATERWAYS INFORMATION & REGULATORY MARKS

System: All waterways.
Function: No lateral significance information & regulatory marks.
Nominal Range: 1 nm (typical).
Additional Data: Information and regulatory marks do not have designators, as described in section B of this chapter. The border and center mark are orange retroreflective material. The remainder of the daymark is white dayboard film. Use black vinyl characters for informational wording, as necessary. Figure 5-12 illustrates the three types of information and regulatory marks, with typical wording. Information and regulatory marks are used in the ICW without addition of the yellow strip. Note—the warning mark, described in Data Sheet 5-E(8) is preferred to the "danger" version of the information and regulatory marks.

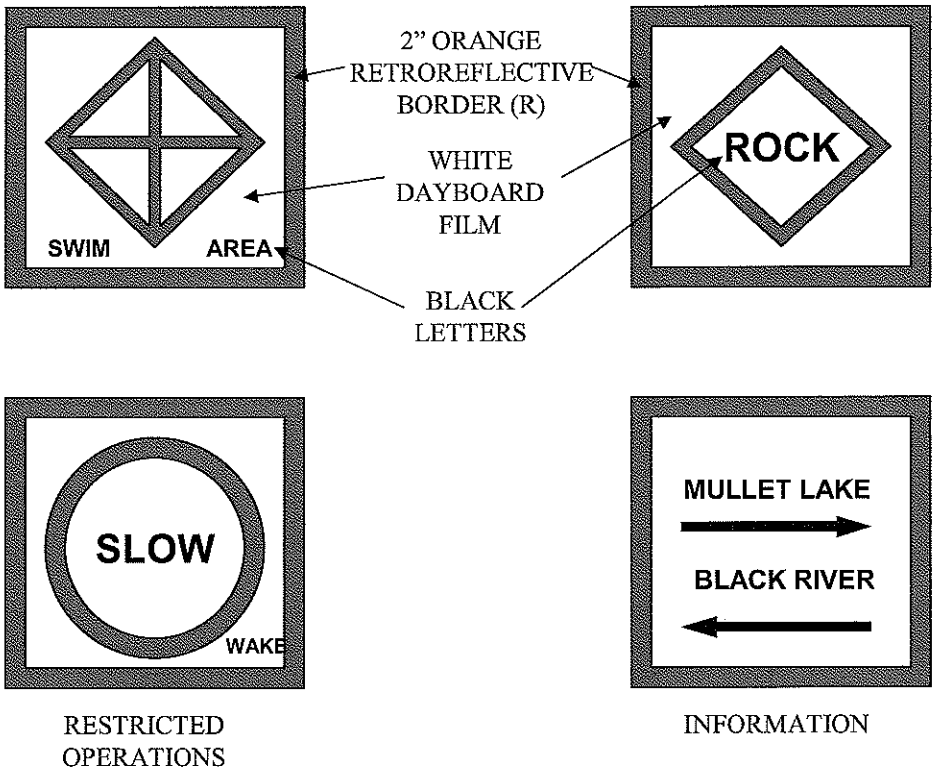


Figure 5-12. All waterways information & regulatory marks.

Data Sheet 5-E(9). All waterways information & regulatory marks

5.E.

ALL WATERWAYS SPECIAL MARKS

System: All waterways.
Function: No lateral significance special marks.
Nominal Range: 1 nm (*as designated in Figure 5-13, below—use Table 5-6 for dimensions of special marks with nominal ranges of 1-, 2-, and 3-nm).

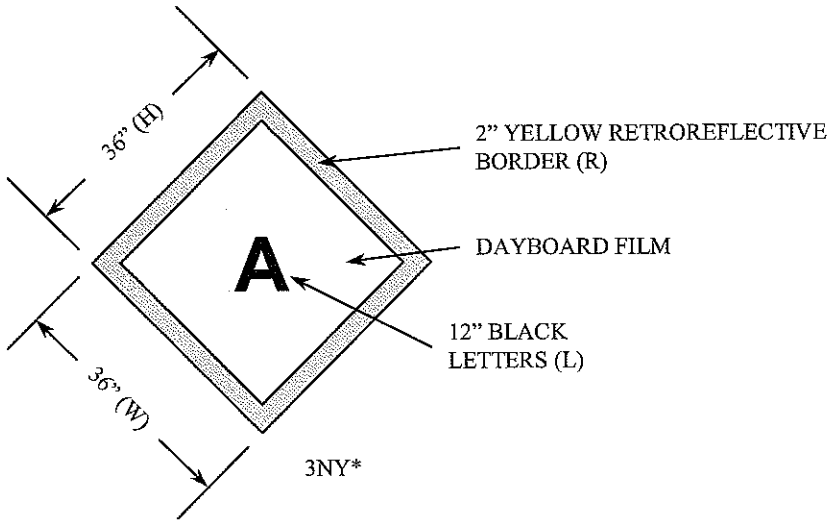


Figure 5-13. All waterways special mark.

Table 5-6

Dimensions for 1-, 2-, and 3-nm Nominal Range Dayboards
for All Waterways Special Marks

Mark	Nominal Range (nm)	H x W (in)	R (in)	L (in)
3NY	1	36 x 36	2	12
4NY	2	48 x 48	3	16
6NY	3	72 x 72	4	24

Data Sheet 5-E(10). General Use special marks (nominal ranges, 1, 2, and 3 nm).

5.E.

ALL WATERWAYS LOCATION MARKERS

System: All waterways.
Function: No lateral significance location marks.
Nominal Range: 1 nm, 2 nm, and 3 nm. See Table 5-7 for dimensions.
Additional Data: Location marks are used to indicate the approach or entrance to a harbor. Location marks are placed on structures, directly below the existing daymark. Lettering on location marks should be vertically and horizontally centered on the dayboard.

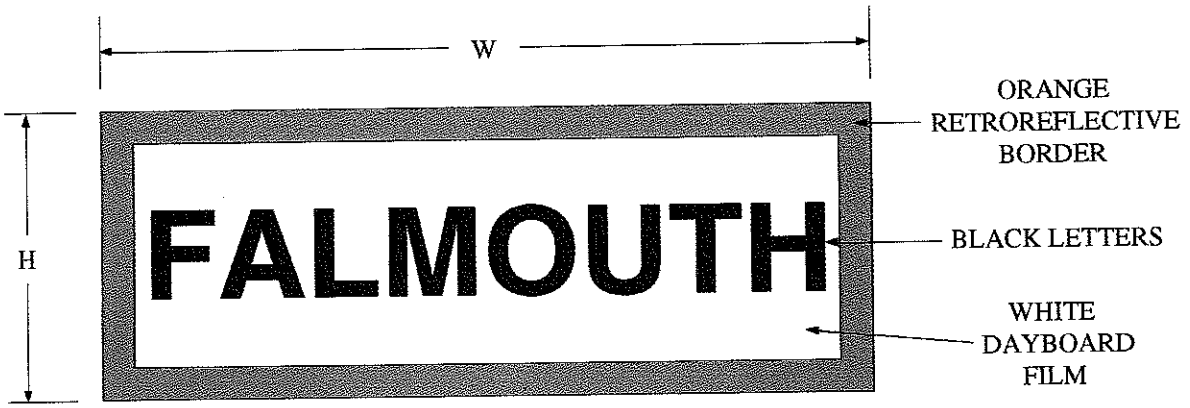


Figure 5-14. All waterways location mark.

Table 5-7

Dimensions for 1-, 2-, and 3-nm Nominal Range Dayboards for All Waterways Location Marks

Nominal Range (nm)	H x W (in)	Border Width (in.)	Maximum Letter Size (in.)
1	18 x 48	2	6
2	24 x 72	3	8
3	30 x 96	4	10

Data Sheet 5-E(11). All waterways location marks (nominal ranges, 1, 2, and 3 nm).

INTRACOASTAL WATERWAY (ICW) PORT AND STARBOARD MARKS

System: Intracoastal Waterway (ICW).
Function: Laterally significant port and starboard marks.
Nominal Range: 1, 2, and 3 nm.
Additional Data: ICW daymarks are identical to their general use counterparts (Data Sheets 5-E(1)—(3)) except for the yellow reflective ICW marking. For lateral aids, this marking consists of yellow squares (port) or triangles (starboard). The yellow square or triangle is centered between the top of the reflective character and the reflective border. Table 5-8 provides the dimensions for dayboards with nominal ranges of 1, 2, and 3 nm.

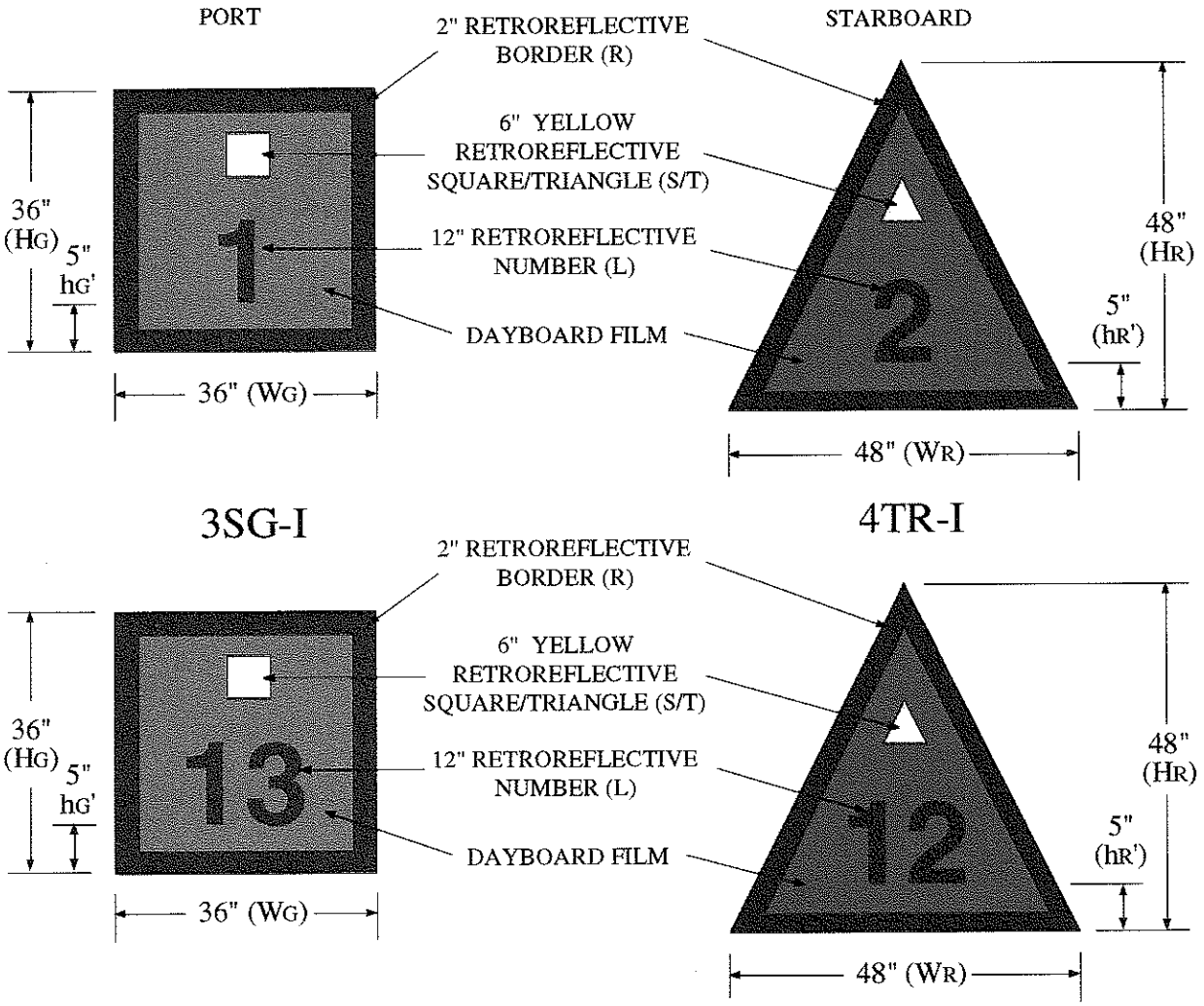


Figure 5-15. Intracoastal Waterway port and starboard marks.

Data Sheet 5-E(12). Intracoastal Waterway (ICW) port and starboard marks.

Table 5-8

Dimensions for 1-, 2-, and 3-nm Nominal Range Dayboards
for Intracoastal Waterway (ICW) Port and Starboard Marks

Port

Mark	Nominal Range (nm)	H_G x W_G (in)	h_G' (in)	R (in)	S/T (in)	L (in) (1 number)	L (in) (2 numbers)	L (in) (3 numbers)
3SG-I	1	36 x 36	5	2	6	12	12	8
4SG-I	2	48 x 48	6	3	9	16	16	12
6SG-I	3	72 x 72	7	4	12	24	24	16

Starboard

Mark	Nominal Range (nm)	H_R x W_R (in)	h_R' (in)	R (in)	S/T (in)	L (in) (1 number)	L (in) (2 numbers)	L (in) (3 numbers)
4TR-I	1	48 x 48	5	2	6	12	12	8
6TR-I	2	72 x 72	6	3	9	16	16	12
8TR-I	3	96 x 96	7	4	12	24	24	16

Note—Character sizes (L) and placement of the number above the base of the dayboard ($h_{G/R}$') are recommendations only. Smaller characters may be selected, however, the sizes must be uniform throughout the district.

Data Sheet 5-E(11). (cont'd).

5.E.

INTRACOASTAL WATERWAY (ICW) PREFERRED CHANNEL MARKS

System: Intracoastal waterway (ICW).
Function: Laterally significant preferred channel marks.
Nominal Range: 1 nm (*as designated in Figure 5-16, below—use Table 5-9 for dimensions of ICW port and starboard marks with nominal ranges of 1-, 2-, and 3- nm).
Additional Data: ICW daymarks are identical to their general use counterparts (Data Sheet 5-E(4)) except for the yellow reflective ICW marking. For lateral aids, this marking consists of yellow squares (port) or triangles (starboard). The yellow square or triangle is centered between the top of the reflective character and the reflective border.

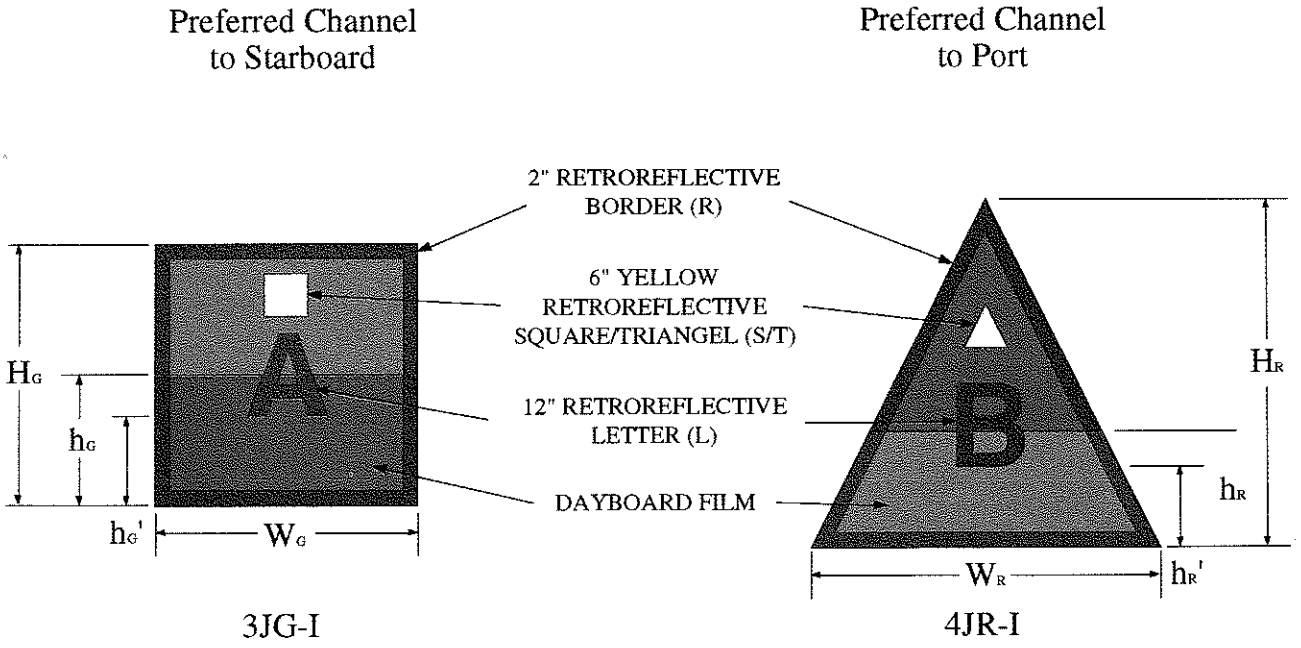


Figure 5-16. Intracoastal Waterway preferred channel marks.

Data Sheet 5-E(13). Intracoastal Waterway (ICW) preferred channel marks.

Table 5-9

Dimensions for 1-, 2-, and 3-nm Nominal Range Dayboards
for Intracoastal Waterway (ICW) Preferred Channel Marks

Port

Mark	Nominal Range (nm)	H_G x W_G (in)	h_G (in)	h_G' (in)	R (in)	S/T (in)	L (in)
3JG-I	1	36 x 36	18	12	2	6	12
4JG-I	2	48 x 48	24	16	3	9	16
6JG-I	3	72 x 72	36	24	4	12	24

Starboard

Mark	Nominal Range (nm)	H_R x W_R (in)	h_R (in)	h_R' (in)	R (in)	L (in) (1 letter)	L(in) (2 letters)
4JR-I	1	48 x 48	16	10	2	6	12
6JR-I	2	72 x 72	24	16	3	9	16
8JR-I	3	96 x 96	32	20	4	12	24

Note—Character sizes (L) and placement of the number above the base of the dayboard ($h_{G/R}$') are recommendations only. Letters can be centered on the dividing line between the upper and lower sections of the dayboard, or may be lowered to provide for greater separation between the letter and the ICW marking (similar to placement on the SG-I and TR-I dayboards described in Data Sheet 5-E(12)). In either case, the letter(s) shall be the same color as the upper portion of the daymark. Smaller characters than those recommended in Table 5-9 may be selected, however, the sizes must be uniform throughout the district.

Data Sheet 5-E(13). (cont'd).

DUAL PURPOSE (GENERAL USE/ICW) PORT AND STARBOARD MARKS

System: Combined General Use and Intracoastal Waterways.
Function: Laterally significant dual purpose port and starboard marks.
Nominal Range: 1, 2, and 3 nm.
Additional Data: Dual use port and starboard marks are identical to ICW port and starboard marks, except that the dayboard shape and color indicates the purpose of the mark in the General Use waterway only, while the ICW marking (yellow retroreflective square or triangle) indicates the purpose of the mark in the ICW. Therefore, the dayboard may mark opposite sides of the channels for the two waterways. Use the dimensions in Table 5-8 for daymarks with nominal ranges of 1, 2, and 3 nm.

DUAL PURPOSE PORT & STARBOARD MARKS (GENERAL USE MARKING SAME AS ICW MARKING)

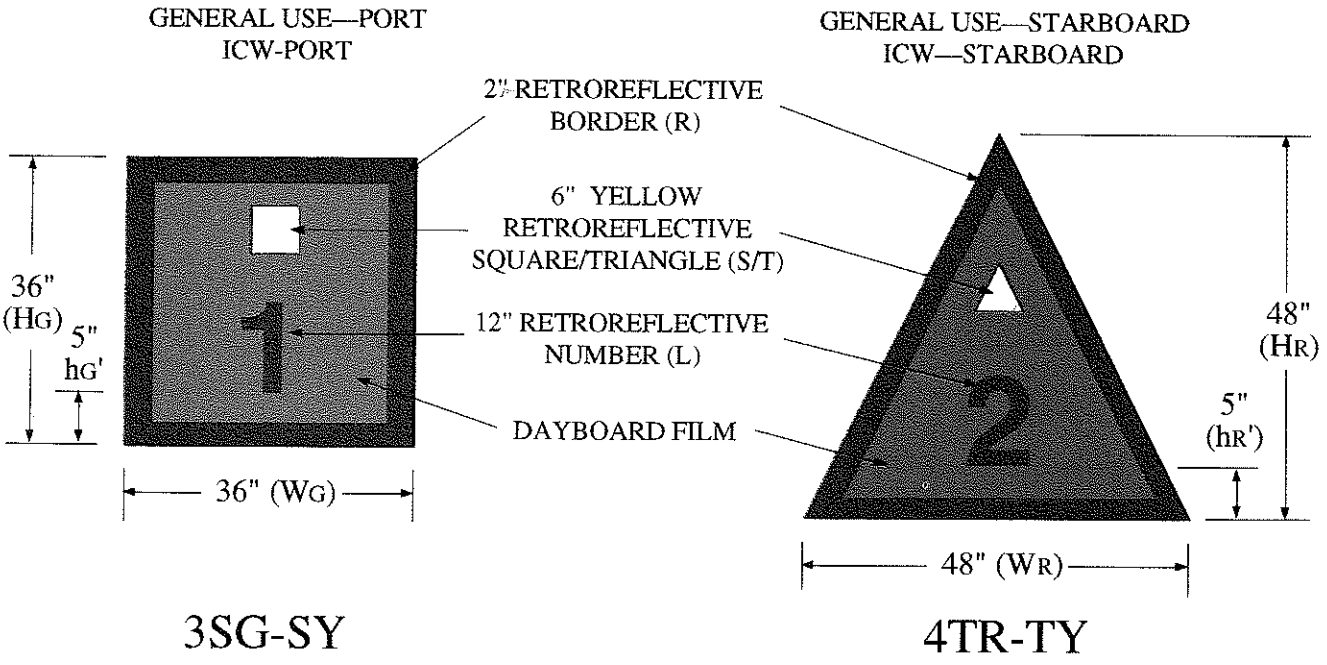


Figure 5-17a. Dual Use port and starboard marks (where lateral aid is same in General Use and ICW channels).

Data Sheet 5-E(14). Dual Use (General Use and ICW) port and starboard marks.

DUAL PURPOSE PORT & STARBOARD MARKS
(GENERAL USE MARKING OPPOSITE OF ICW MARKING)

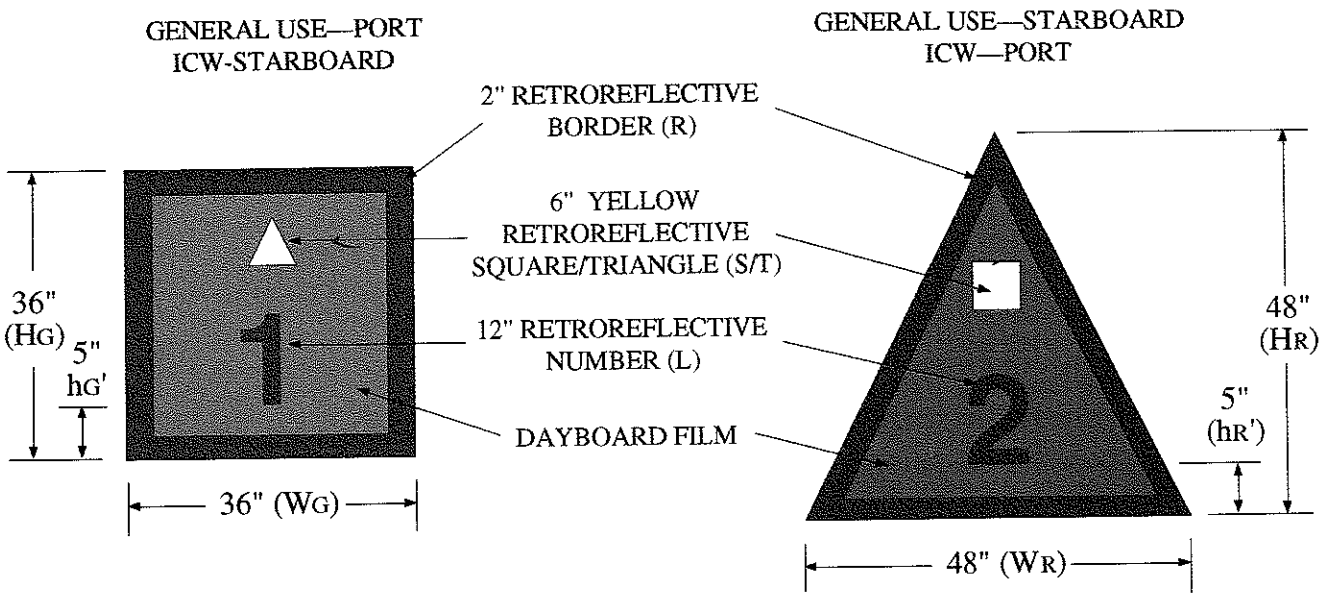


Figure 5-17b. Dual Use port and starboard marks
(where lateral aid is opposite in General Use and ICW channels).

Data Sheet 5-E(14). (cont'd).

DUAL PURPOSE (GENERAL USE/ICW) PREFERRED CHANNEL MARKS

System: Combined General Use and Intracoastal Waterway.
Function: Laterally significant dual purpose preferred channel marks.
Nominal Range: 1, 2, and 3 nm.
Additional Data: Dual use preferred channel marks are identical to ICW preferred channel marks, except that the dayboard shape and color indicates the purpose of the mark in the General Use waterway only, while the ICW marking (yellow retroreflective square or triangle) indicates the purpose of the mark in the ICW. Therefore, the dayboard may mark opposite sides of the shannels for the two waterways. Use the dimensions in Table 5-9 for daymarks with nominal ranges of 1, 2, and 3 nm.

DUAL PURPOSE PREFERRED CHANNEL MARKS (GENERAL USE MARKING SAME AS ICW MARKING)

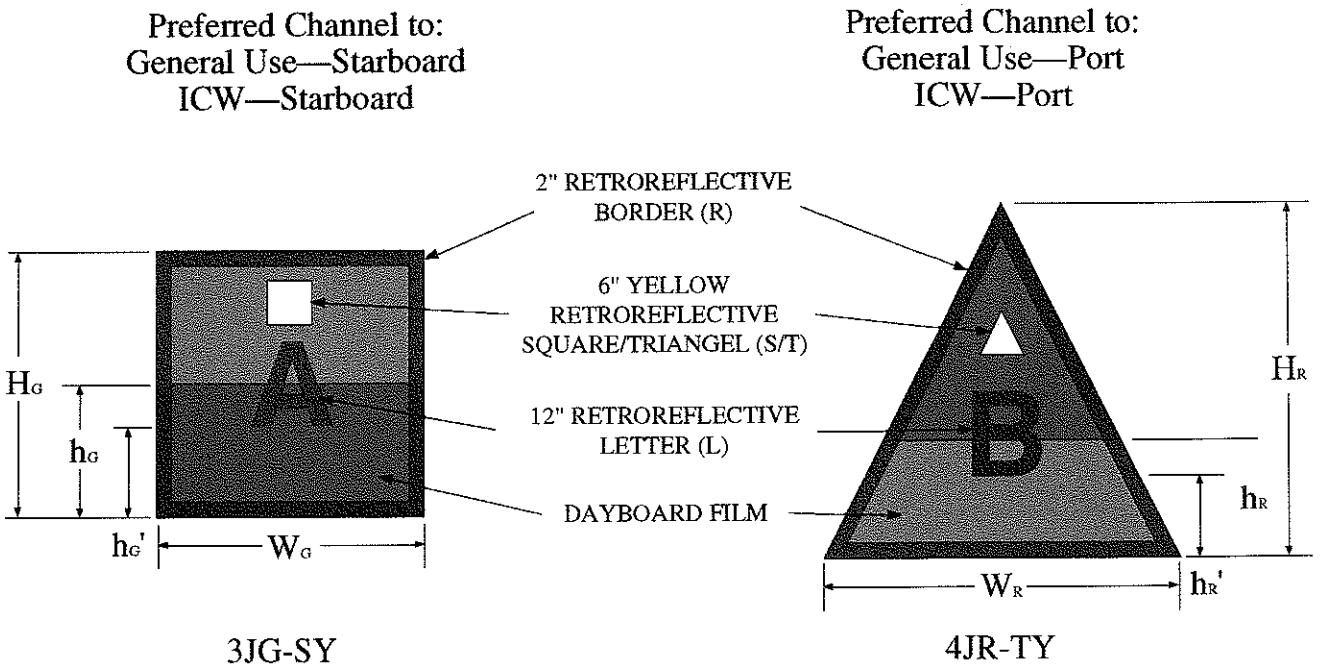


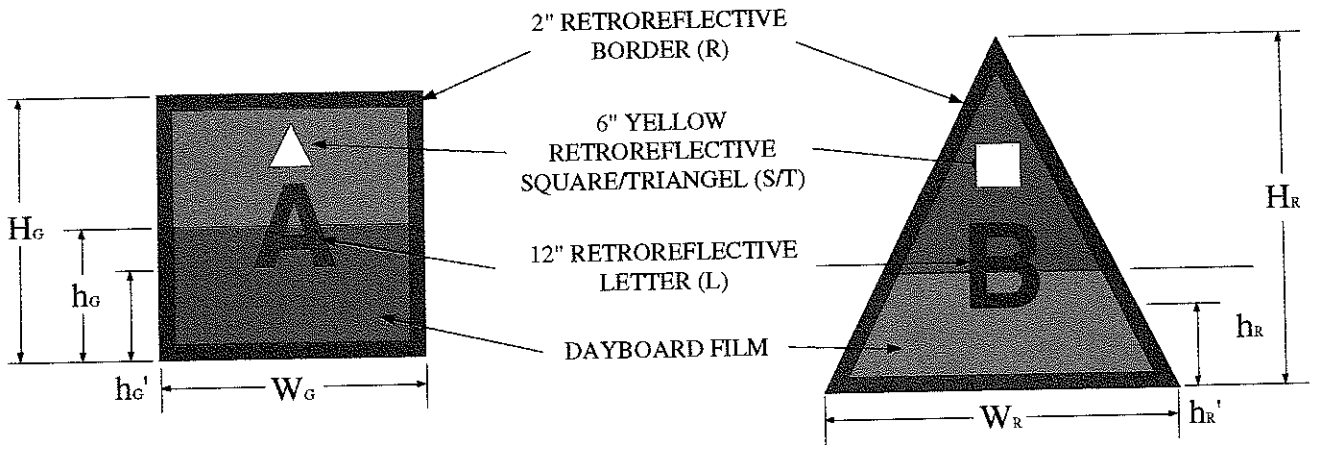
Figure 5-18a. Dual Use preferred channel marks
(where lateral aid is same in General Use and ICW channels).

Data Sheet 5-E(15). Dual Purpose(General Use and ICW) preferred channel marks.

DUAL PURPOSE PREFERRED CHANNEL MARKS
(GENERAL USE OPPOSITE OF ICW MARKING)

Preferred Channel to:
General Use—Starboard
ICW—Port

Preferred Channel to:
General Use—Port
ICW—Starboard



3JG-TY

4JR-SY

Figure 5-18b. Dual Use preferred channel marks
(where lateral aid is opposite in General Use and ICW channels).

Data Sheet 5-E(15). (cont'd).

INTRACOASTAL WATERWAY (ICW) SAFE-WATER MARKS

System: Intercoastal Waterway (ICW).
Function: Safe-water marks.
Nominal Range: 1 and 3 nm.
Additional Data: ICW daymarks are identical to their general use counterparts (Data Sheet 5-E(5)) except for the yellow reflective ICW marking. For aids with no lateral significance, such as a safe-water mark, this marking consists of a two-inch high yellow strip along the bottom of the dayboard. Use dimensions in Data Sheet 5-E(5) for appropriate sizing of 1-nm and 3-nm nominal range ICW safe-water markers.

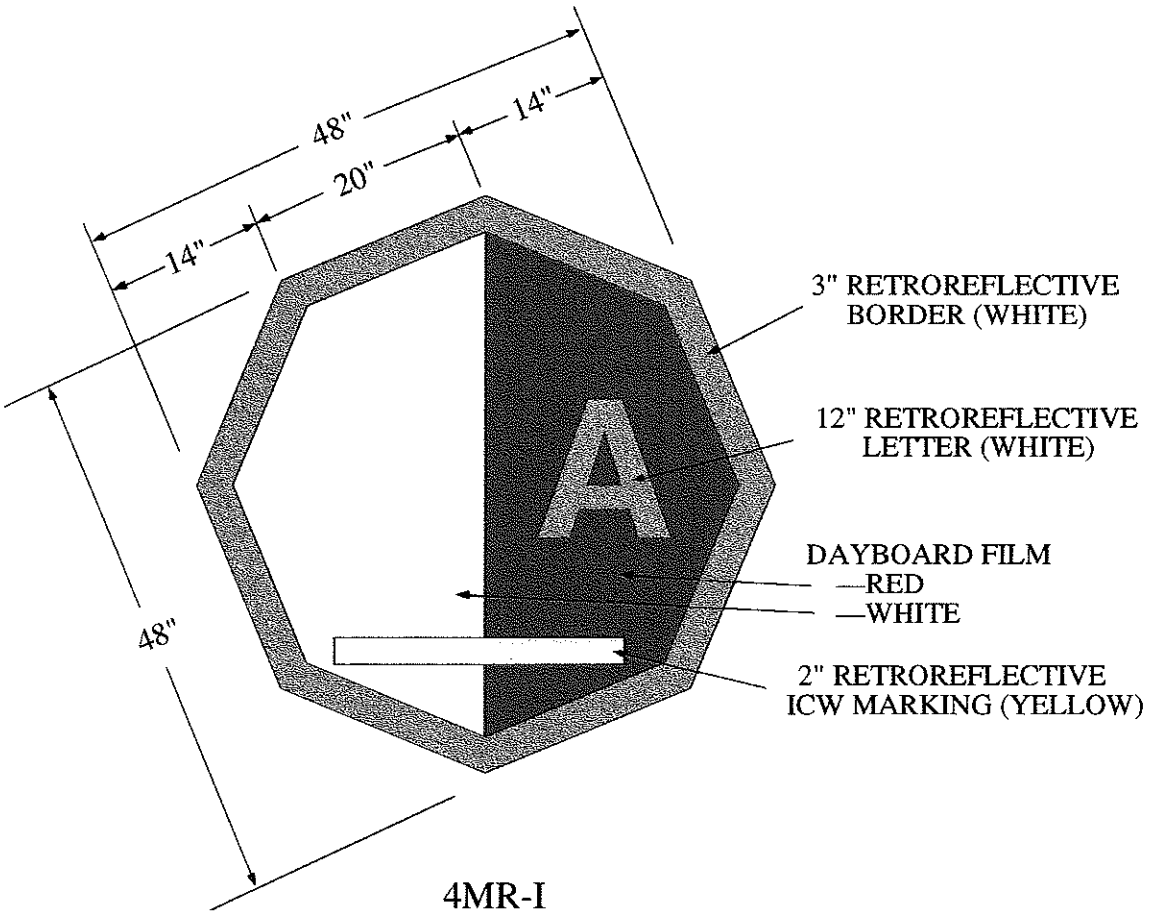


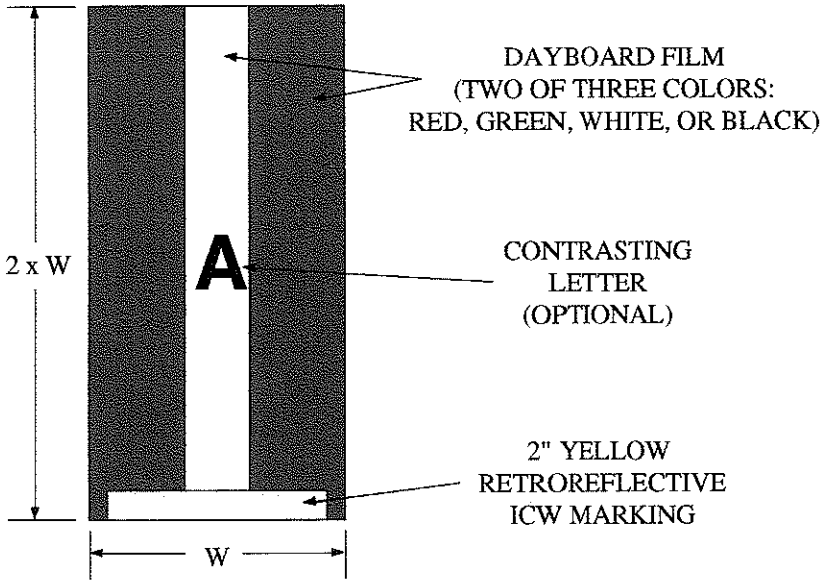
Figure 5-19. Intercoastal Waterway (ICW) safe-water mark.

Data Sheet 5-E(16). Intracoastal Waterway (ICW) safe-water marks.

5.E.

INTERCOASTAL WATERWAY (ICW) RANGE MARKS

System: Intercoastal Waterway (ICW).
Function: Intercoastal Waterway (ICW) range marks.
Nominal Range: 1 to 5 nm
Additional Data: ICW range marks are identical to their general use counterparts (Data Sheet 5-E(6)) except for the yellow reflective ICW marking. For range marks the ICW marking consists of a two-inch high yellow strip along the bottom of the front range board. The yellow strip is placed on the front range board only. Use the information in Data Sheet 5-E(6) for the appropriate dimensions and colors of ICW range marks.



(W) KRW-I

Figure 5-20. Intracoastal Waterway (ICW) range mark.

Data Sheet 5-E(17). Intercoastal Waterway (ICW) range marks.

5.E.

INTRACOASTAL WATERWAY (ICW) DISTANCE MARKS

System: Intracoastal Waterway (ICW).
Function: No lateral significance distance (mile) marks.
Nominal Range: 1/2 nm.
Additional Data: Distance marks may be used in the ICW. A distance mark is normally placed on a structure immediately below the aid to navigation mark. The distance indicated is from a designated point, established by each district.

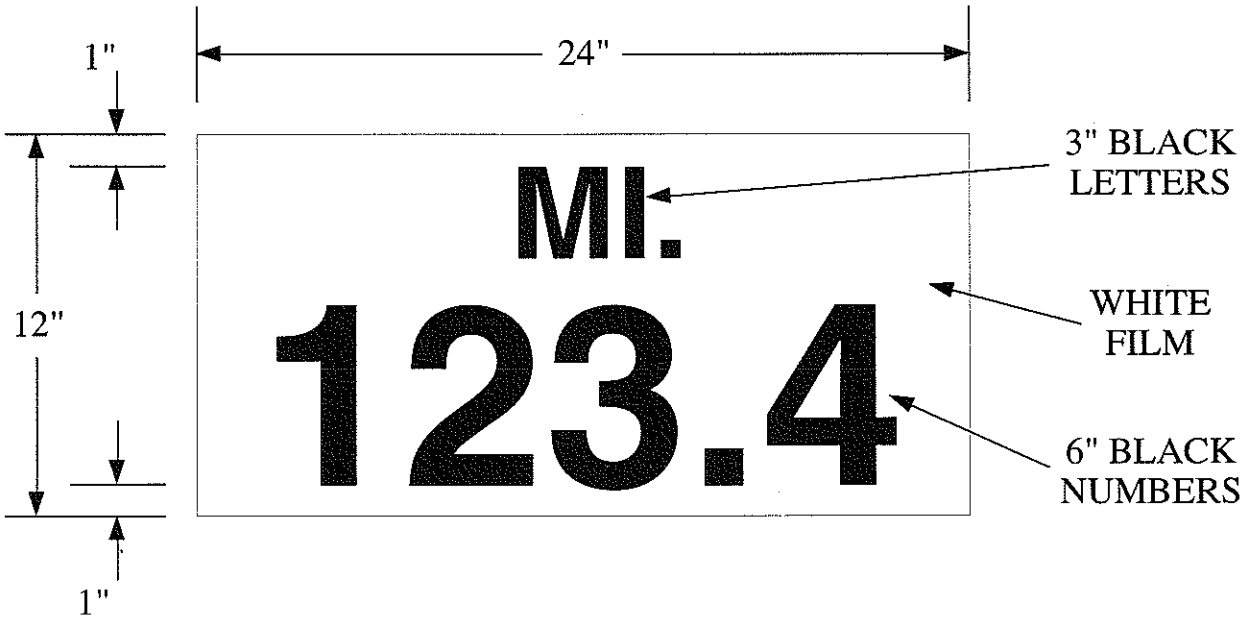


Figure 5-21. Intracoastal Waterway (ICW) distance mark.

Data Sheet 5-E(18). Intracoastal Waterway (ICW) distance marks.

WESTERN RIVERS PASSING MARKS

System: Western Rivers.
Function: Laterally significant passing marks.
Nominal Range: 1, 2, and 3 nm.
Additional Data: Western River passing marks are identical to General Use port and starboard marks, with the exception that no numbers are used on the mark. Passing marks are typically used in conjuntion with Western Rivers distance marks (see Data Sheet 5-E(21)). Use the dimensions from Table 5-10 for passing marks with nominal ranges of 1-, 2-, and 3-nm.

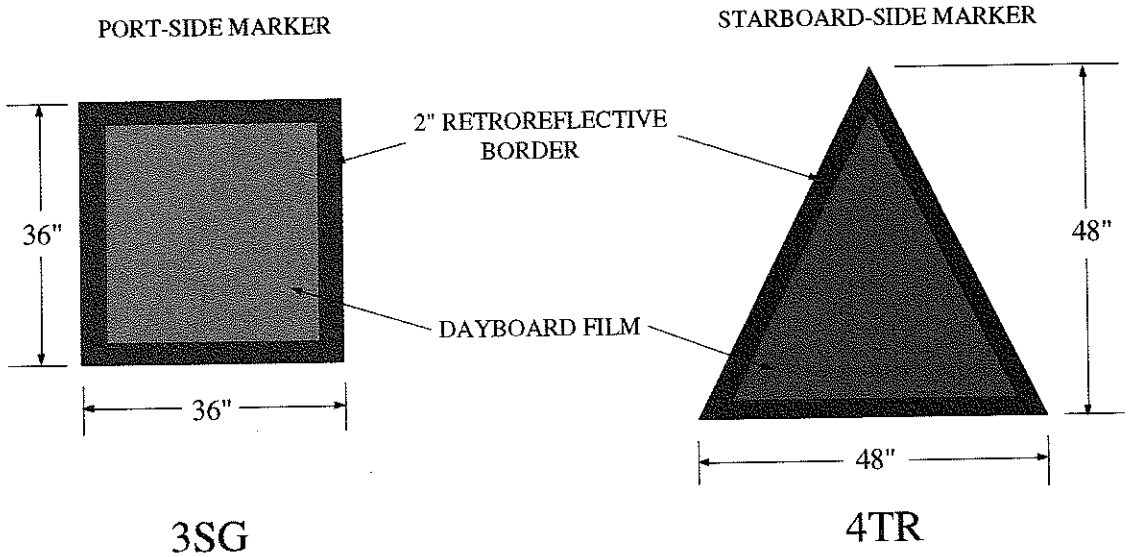


Figure 5-22. Western Rivers passing marks.

Dimensions for 1-, 2-, and 3-nm Nominal Range Dayboards for Western Rivers Passing Marks

Port-Hand Mark

Mark	Nominal Range	H_G x W_G (in)	R (in)
3SG	1 nm	36 x 36	2
4SG	2 nm	48 x 48	3
6SG	3 nm	72 x 72	4

Starboard-Hand Mark

Mark	Nominal Range	H_R x W_R (in)	R (in)
4TR	1 nm	48 x 48	2
6TR	2 nm	72 x 72	3
8TR	3 nm	96 x 96	4

Data Sheet 5-E(19). Western Rivers passing marks.

5.E.

WESTERN RIVERS PREFERRED CHANNEL MARKS

System: Western Rivers.
Function: Laterally significant preferred channel marks.
Nominal Range: 1, 2, and 3 nm.
Additional Data: Western Rivers preferred channel marks are identical to General Use preferred channel marks, with the exception that no letters are used. Use Table 5-11 to size preferred channel marks with nominal ranges of 1-, 2-, and 3-nm.

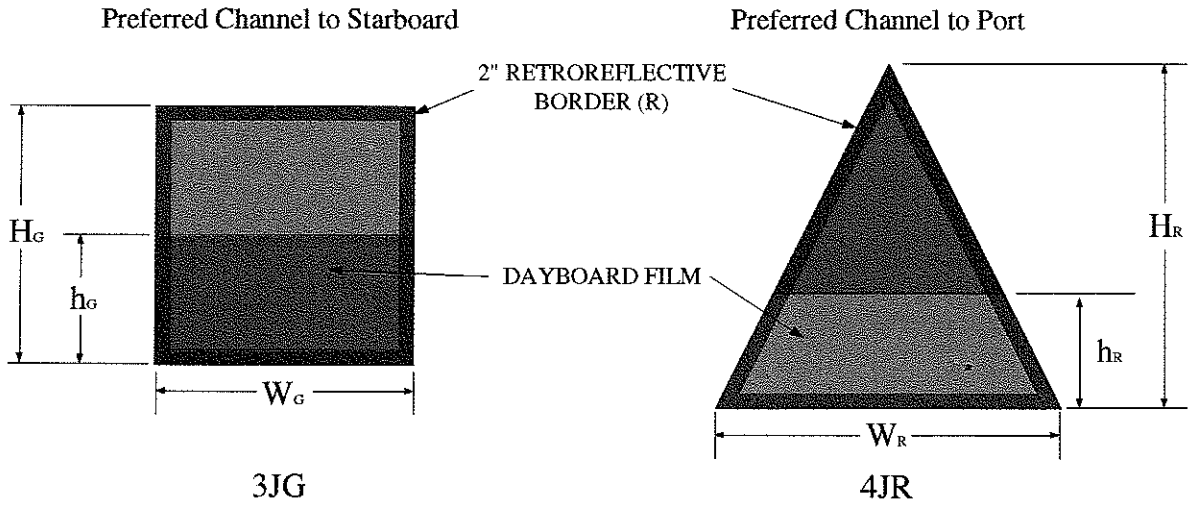


Figure 5-23. Western Rivers preferred channel marks.

Table 5-11

Dimensions for 1-, 2-, and 3-nm Nominal Range Dayboards
for Western Rivers Preferred Channel Marks

Preferred Channel to Starboard

Mark	Nominal Range	H_G x W_G (in)	h_G (in)	R (in)
3SG	1 nm	36 x 36	18	2
4SG	2 nm	48 x 48	24	3
6SG	3 nm	72 x 72	36	4

Preferred Channel to Port

Mark	Nominal Range	H_R x W_R (in)	h_R (in)	R (in)
4TR	1 nm	48 x 48	16	2
6TR	2 nm	72 x 72	24	3
8TR	3 nm	96 x 96	32	4

Data Sheet 5-E(20). Western Rivers preferred channel marks.

5.E.

WESTERN RIVERS DISTANCE MARKS

System: Western Rivers.
Function: No lateral significance distance marks.
Nominal Range: 1 nm
Additional Data: Western Rivers distance marks are typically used in conjunction with passing marks (Data Sheet 5-E(19)) and non-lateral marks (Data Sheet 5-E(7)) which indicate where the channel crosses a river. Eight inch black numbers are horizontally and vertically centered on the dayboard. The 1-foot by 4-foot distance mark is used in conjunction with all size passing and non-lateral marks.

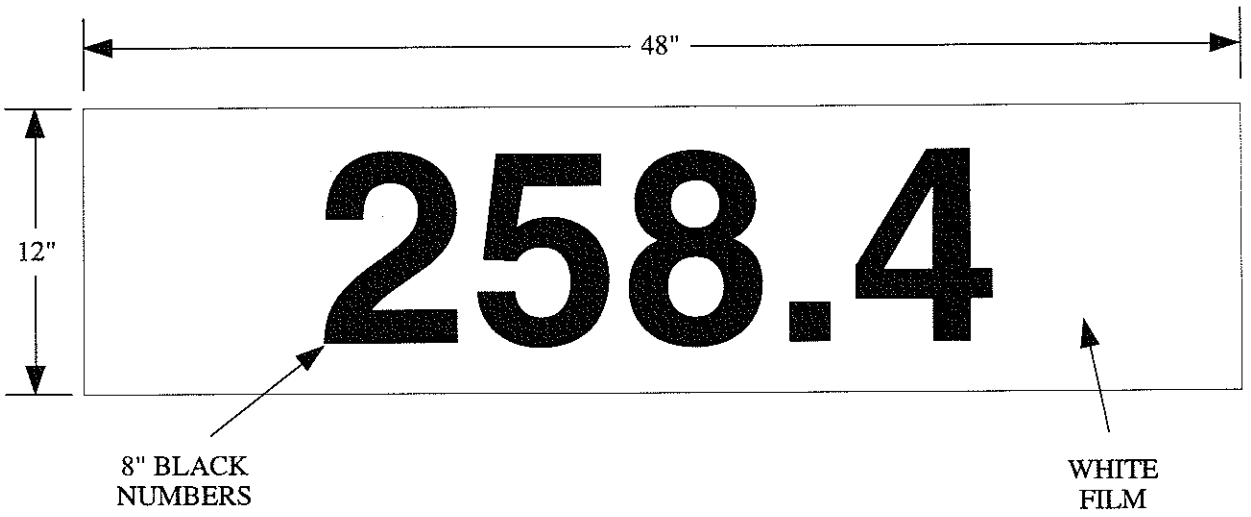
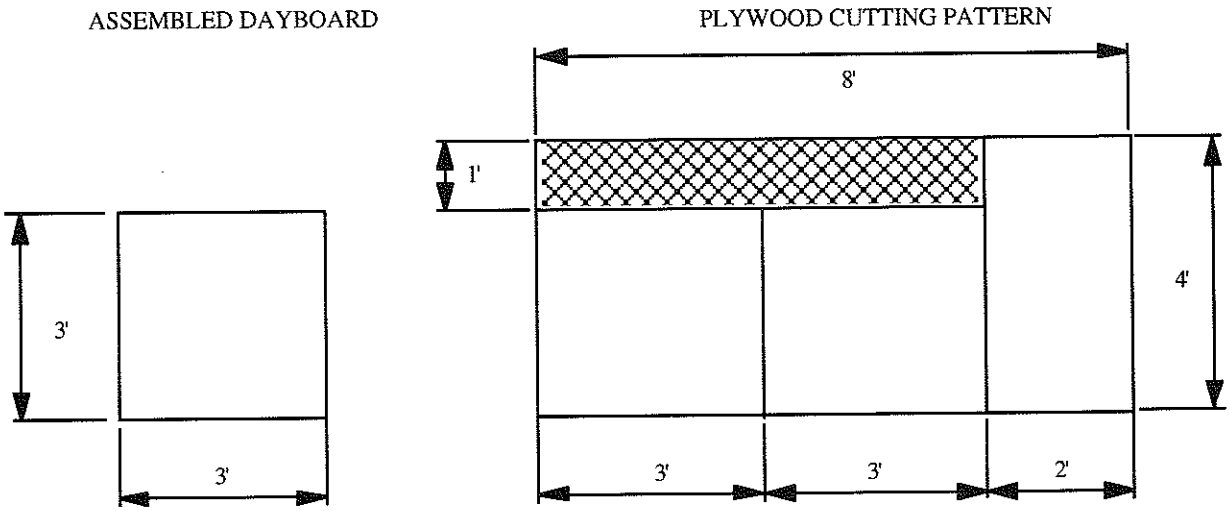


Figure 5-24. Western Rivers distance marks.

Data Sheet 5-E(21). Western Rivers distance marks.

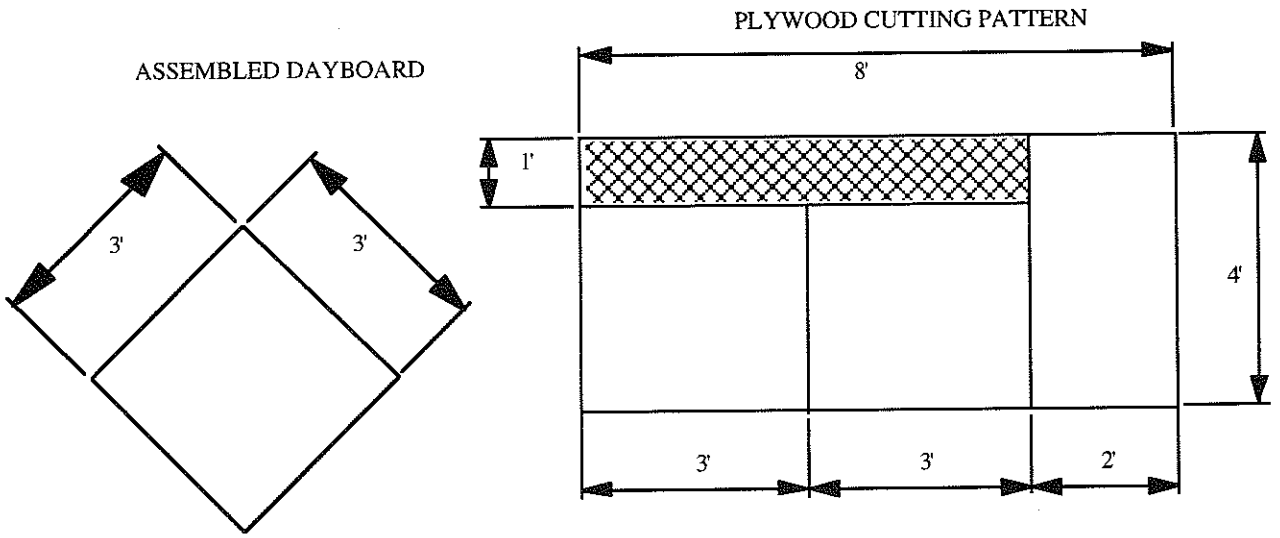
5.E.

PLYWOOD CUTTING PATTERN



3SG, 3SG-__, 3JG, 3JG-__

Figure 5-25.



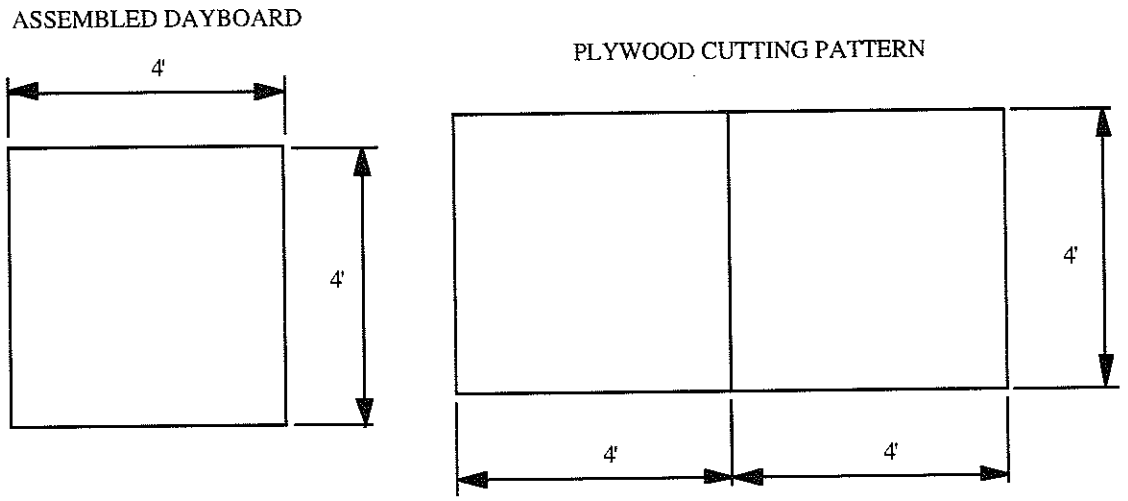
3CG, 3CR, 3NB, 3NG, 3NR, 3NW, 3NY

= BACKING OR MILE BOARD MATERIAL

Figure 5-26.

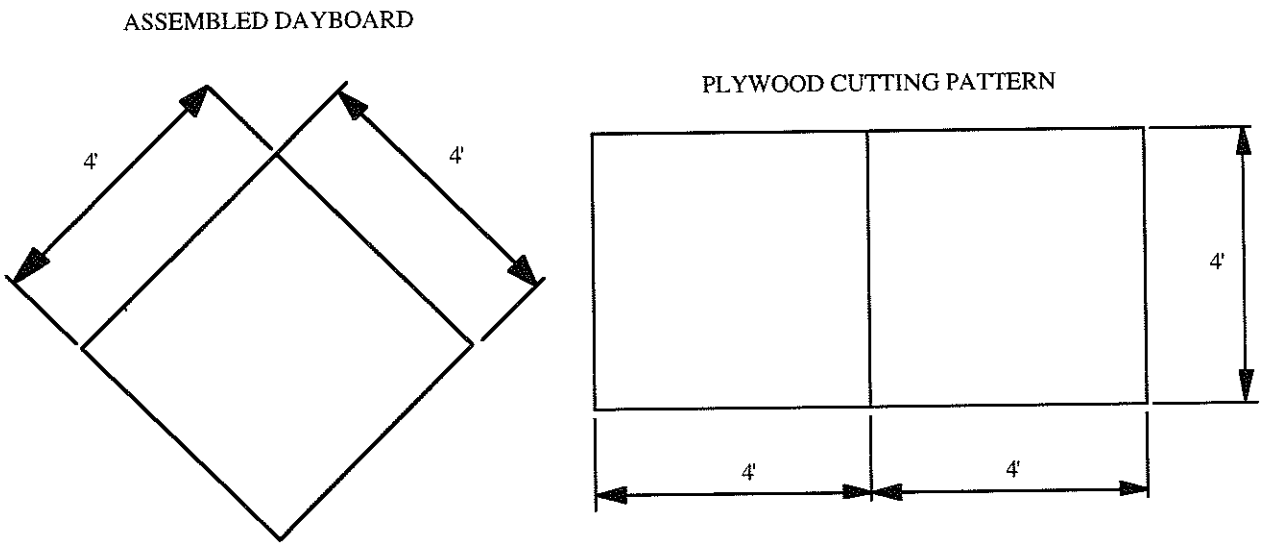
Data Sheet 5-E(22). Plywood Cutting Pattern.

5.E.



4SG, 4SG-__, 4JG, 4JG-____

Figure 5-27.



4CG, 4CR, 4NB, 4NG, 4NR,4NW,4NY

Figure 5-28.

Data Sheet 5-E(22). (cont'd).

5.E.

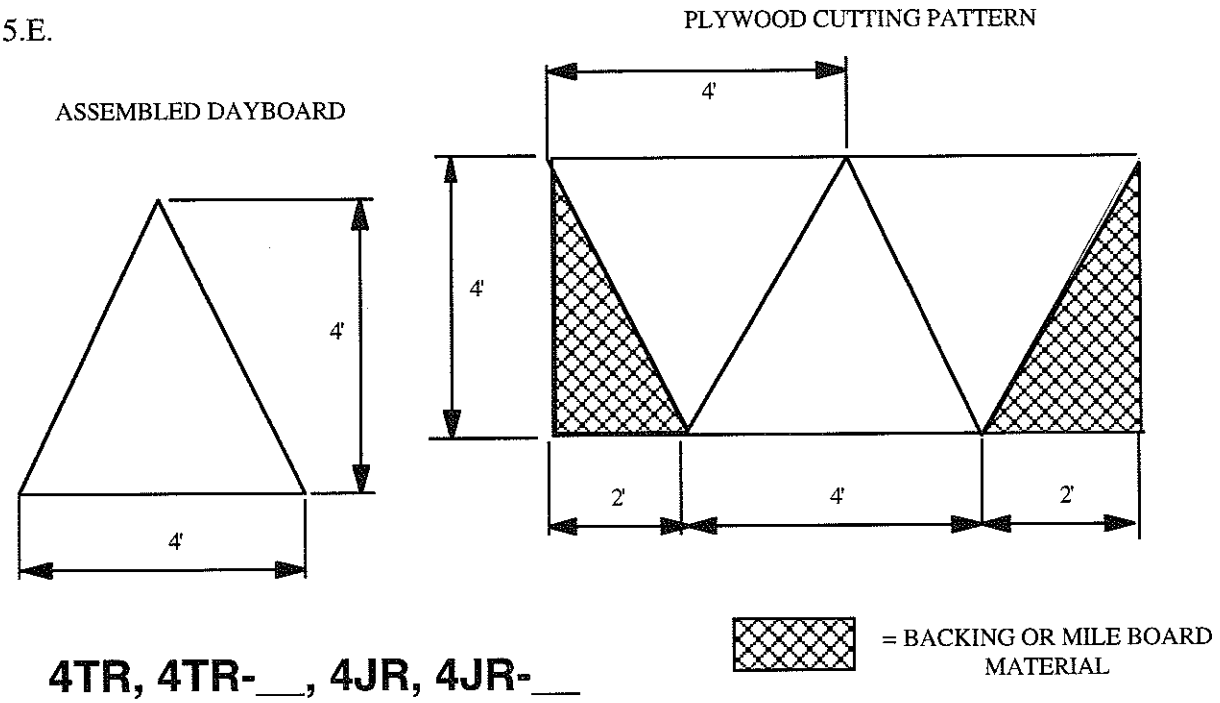


Figure 5-29.

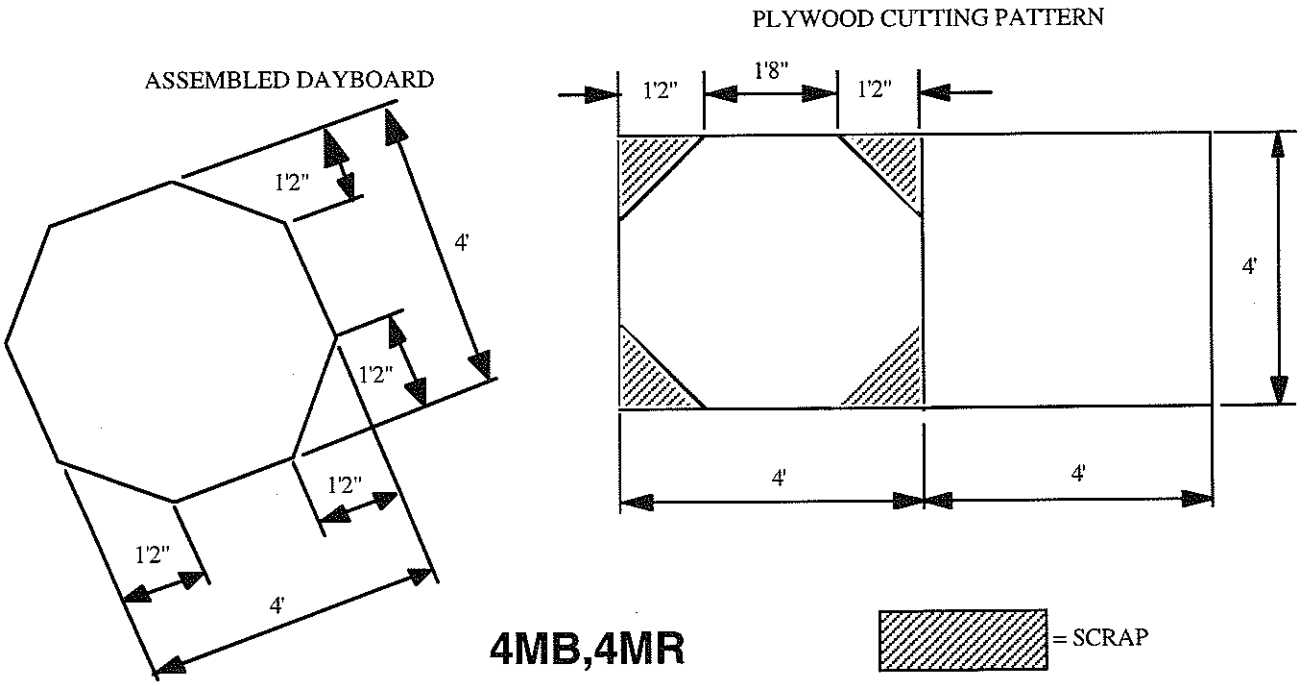
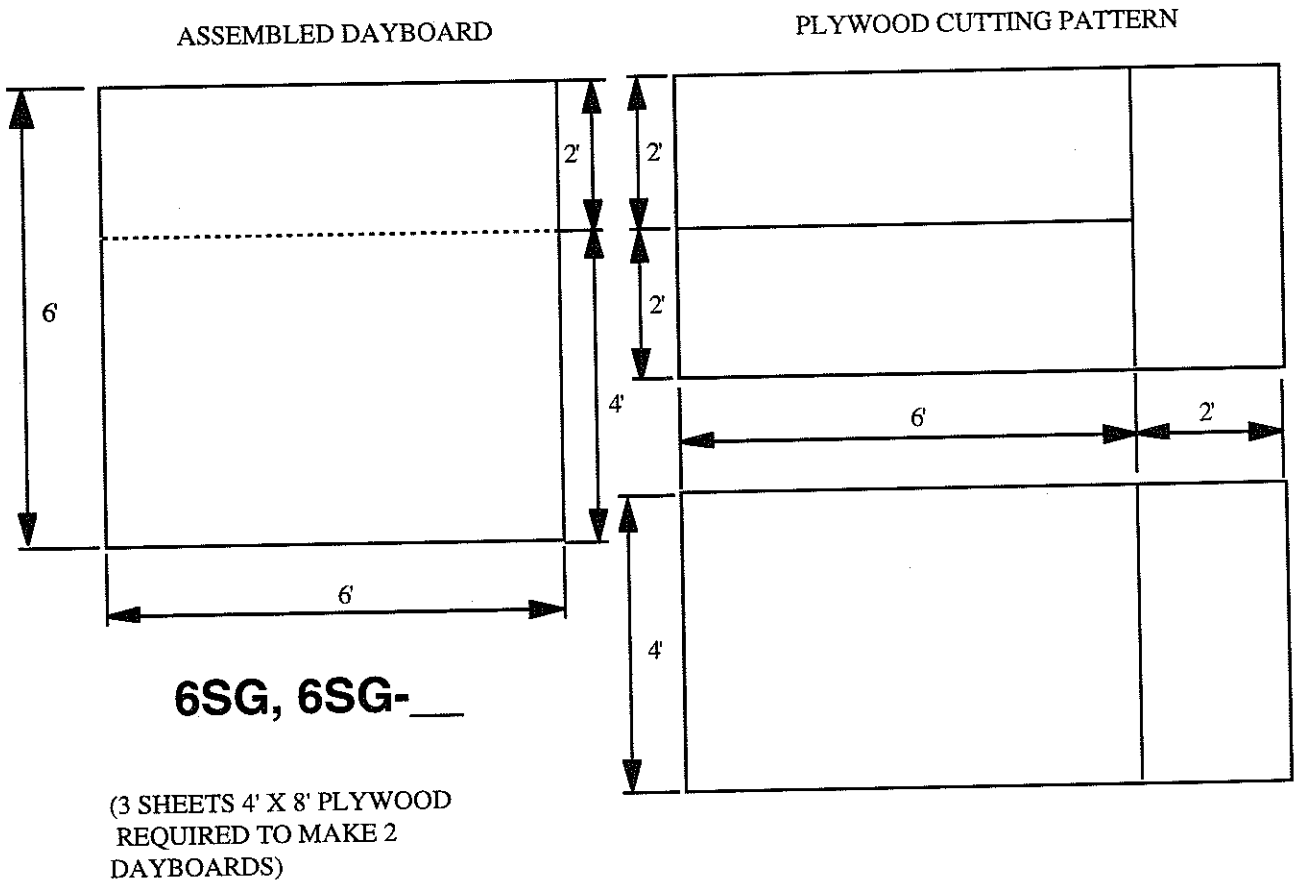


Figure 5-30.

Data Sheet 5-E(22). (cont'd).

5.E.

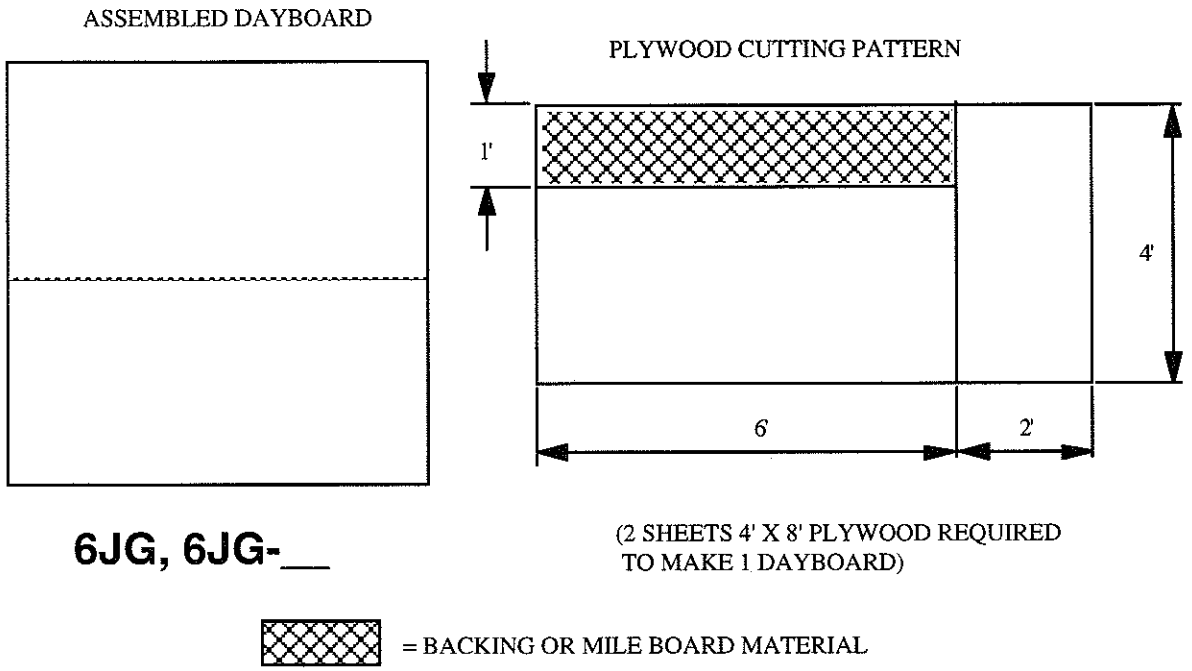


NOTE: DASHED LINES INDICATE HOW DAYBOARD IS TO BE ASSEMBLED FROM CUT PLYWOOD PIECES

Figure 5-31.

Data Sheet 5-E(22). (cont'd).

5.E.

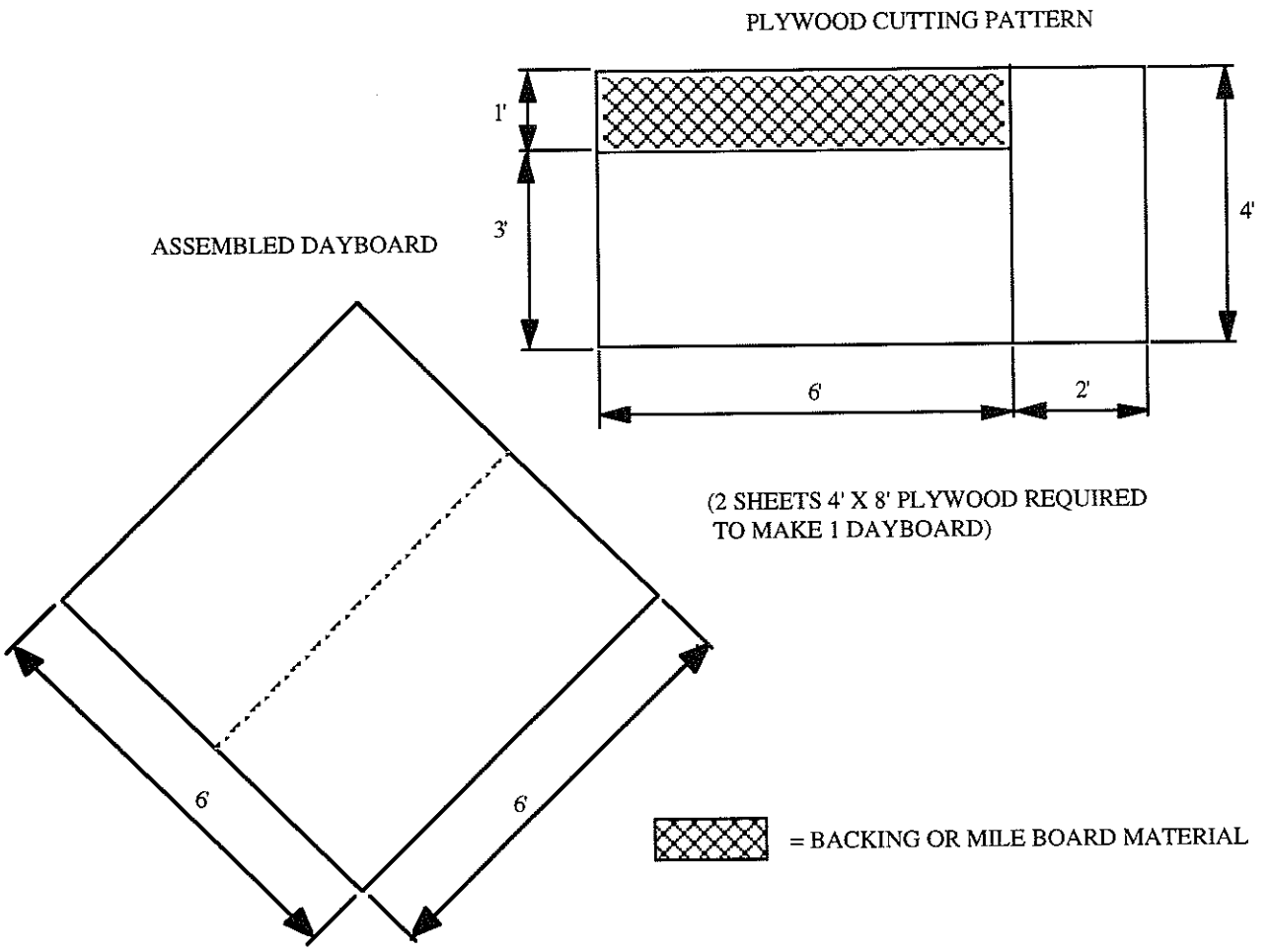


NOTE: DASHED LINES INDICATE HOW DAYBOARD IS TO BE ASSEMBLED FROM CUT PLYWOOD PIECES

Figure 5-32.

Data Sheet 5-E(22). (cont'd).

5.E.

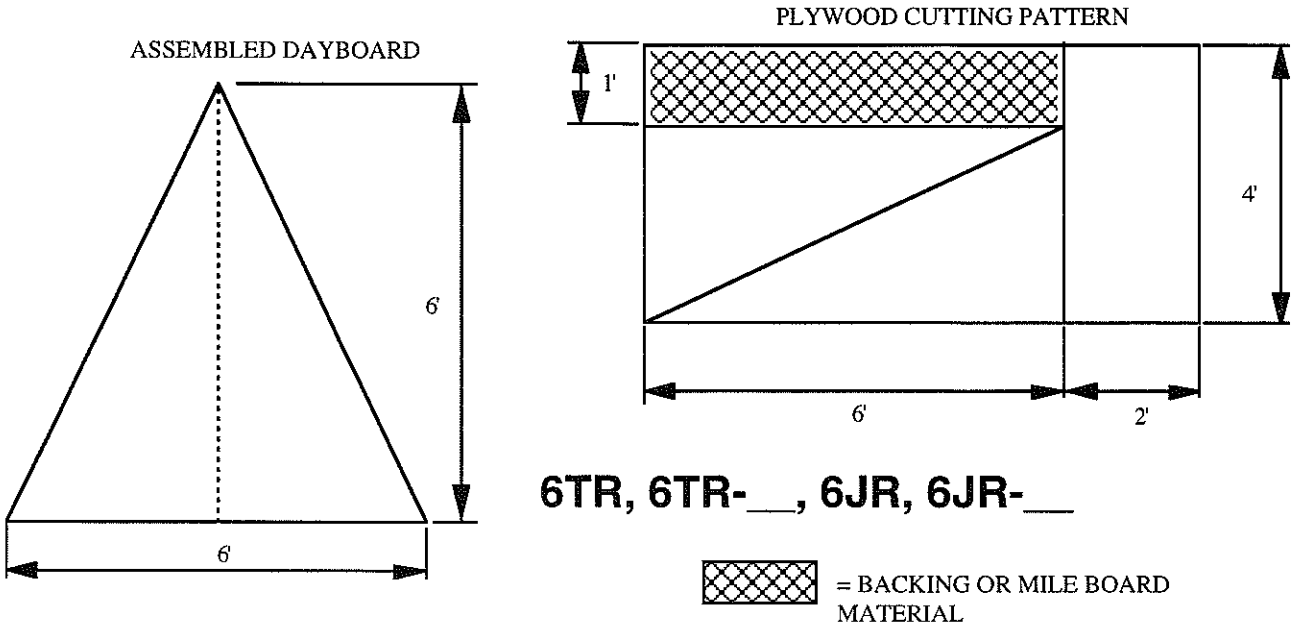


NOTE: DASHED LINES INDICATE HOW DAYBOARD IS TO BE ASSEMBLED FROM CUT PLYWOOD PIECES

Figure 5-33.

Data Sheet 5-E(22). (cont'd).

5.E.



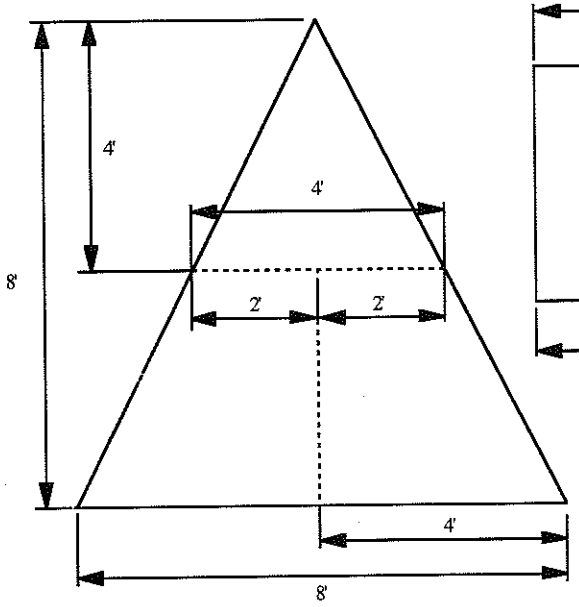
NOTE: DASHED LINES INDICATE HOW DAYBOARD IS TO BE ASSEMBLED FROM CUT PLYWOOD PIECES

Figure 5-34.

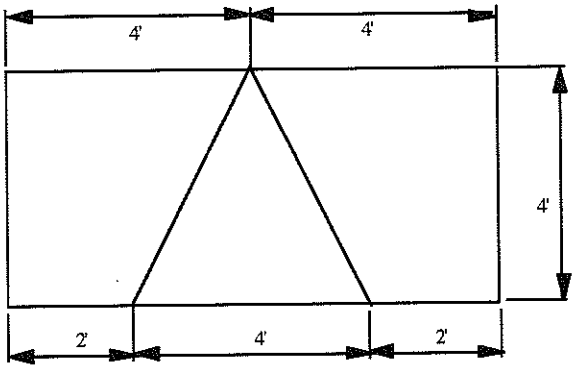
Data Sheet 5-E(22). (cont'd).

5.E.

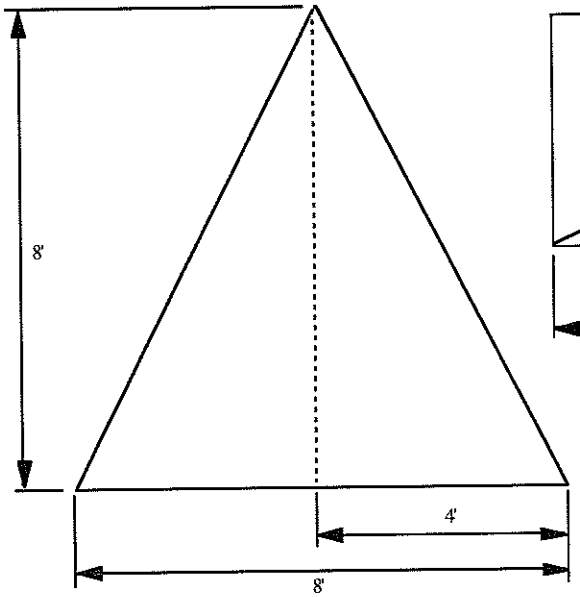
ASSEMBLED DAYBOARD



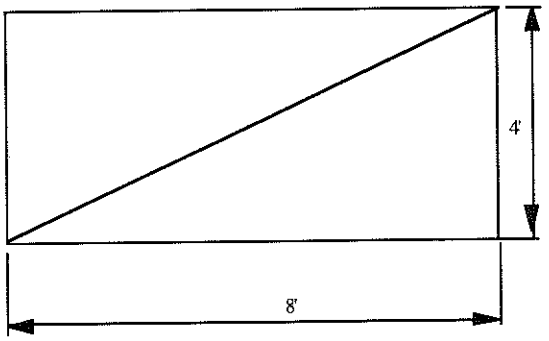
PLYWOOD CUTTING PATTERN



ASSEMBLED DAYBOARD



ALTERNATE PLYWOOD CUTTING PATTERN



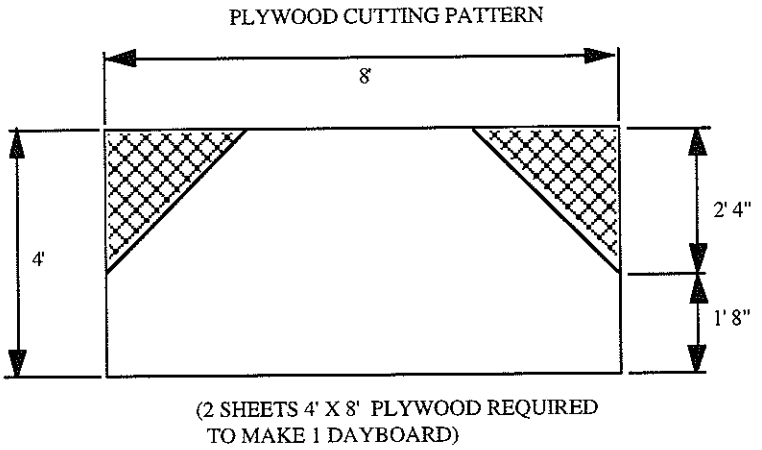
8TR, 8TR-__, 8JR, 8JR-__

NOTE: DASHED LINES INDICATE HOW DAYBOARD IS TO BE ASSEMBLED FROM CUT PLYWOOD PIECES

Figure 5-35.

Data Sheet 5-E(22). (cont'd).

5.E.



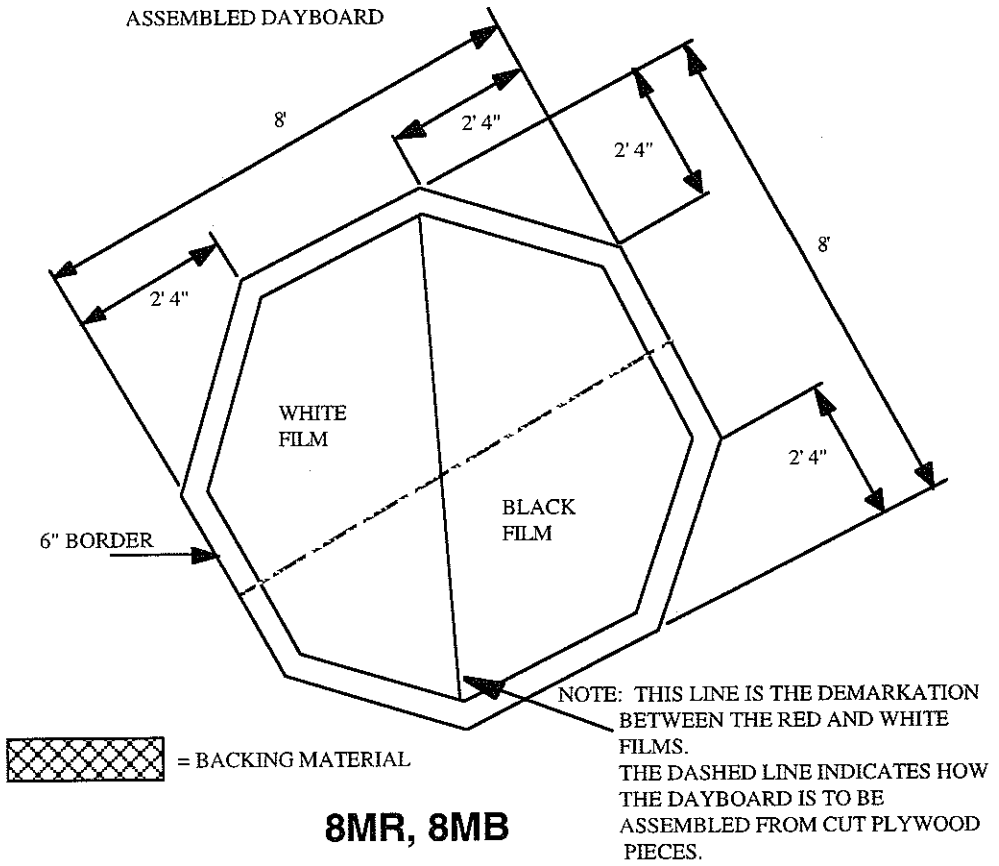
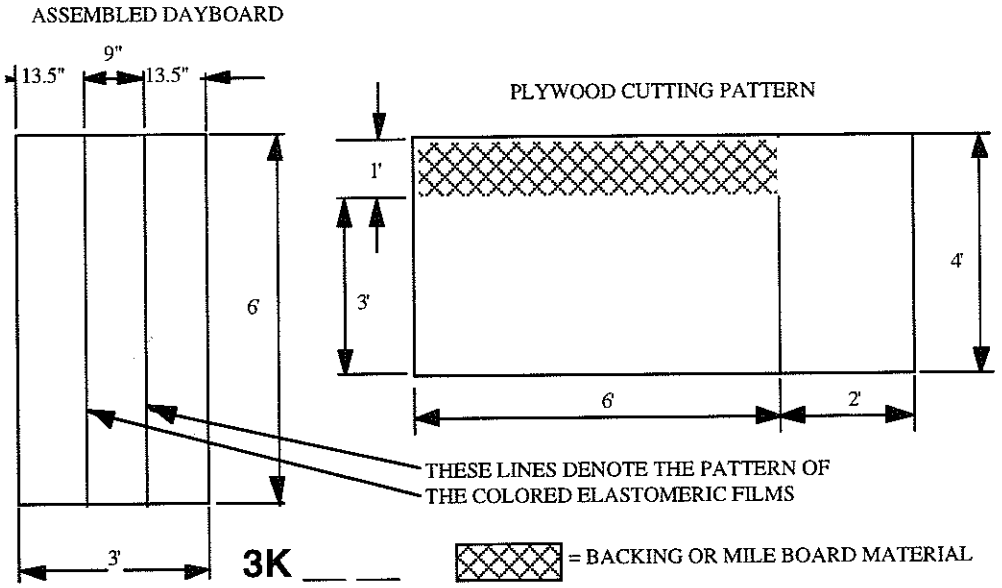


Figure 5-36

Data Sheet 5-E(22). (cont'd).

5.E.



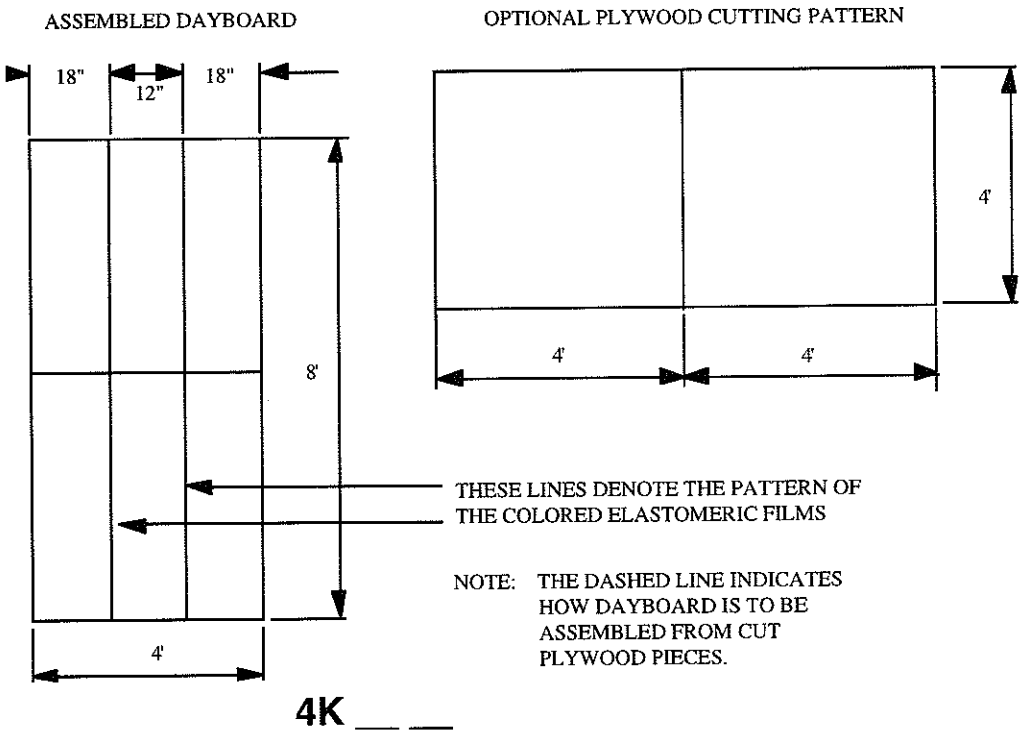
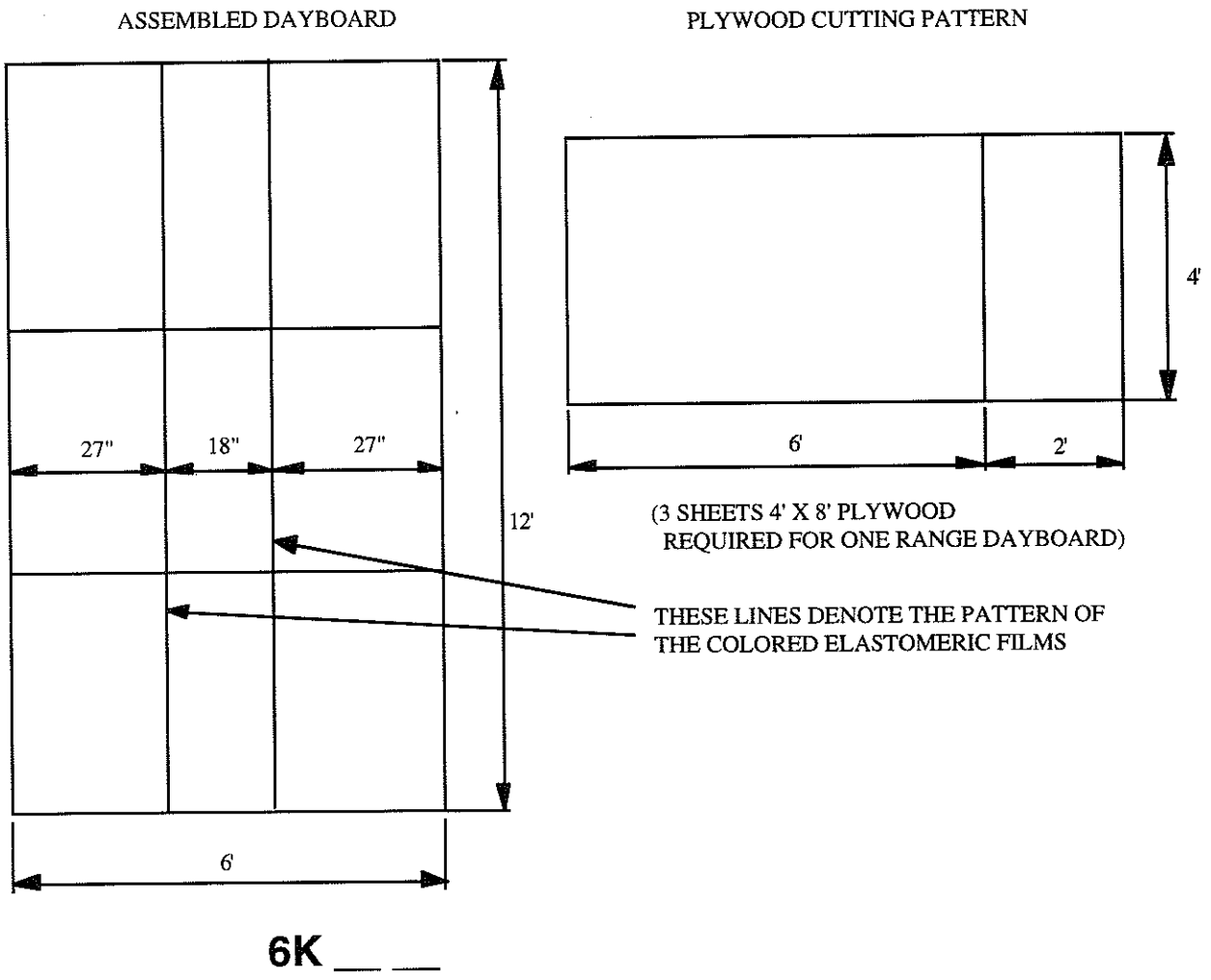


Figure 5-38

Data Sheet 5-E(22). (cont'd).

5.E.



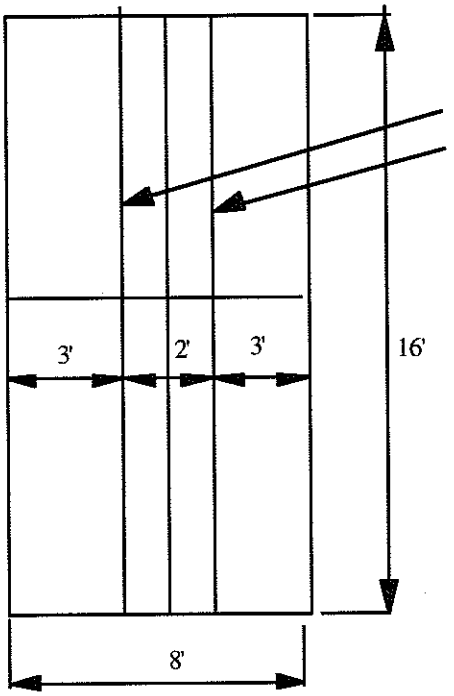
NOTE: DASHED LINES INDICATE HOW DAYBOARD IS TO BE ASSEMBLED FROM CUT PLYWOOD PIECES

Figure 5-39.

Data Sheet 5-E(22). (cont'd).

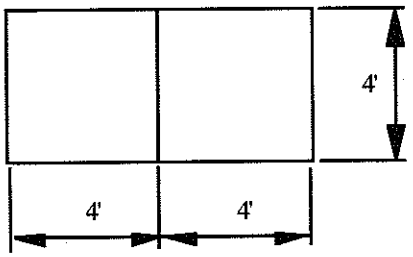
5.E.

ASSEMBLED DAYBOARD



THESE LINES DENOTE THE PATTERN OF THE COLORED ELASTOMERIC FILMS.

OPTIONAL PLYWOOD CUTTING PATTERN



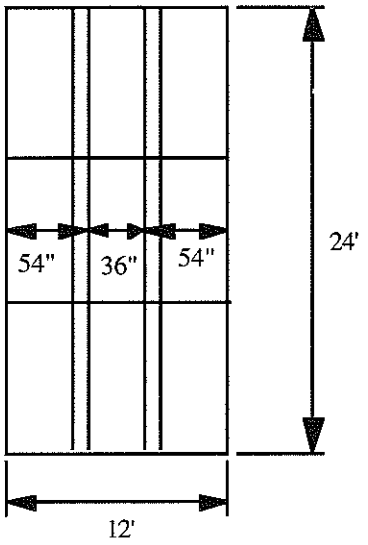
(4 SHEETS 4' X 8' PLYWOOD REQUIRED FOR ONE RANGE DAYBOARD)

8K ___ ___

Figure 5-40.

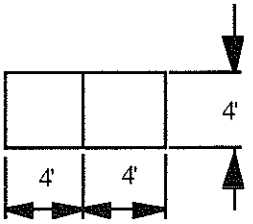
Data Sheet 5-E(22). (cont'd).

ASSEMBLED DAYBOARD



12 K __ __

OPTIONAL PLYWOOD CUTTING PATTERN



(9 SHEETS 4' X 8' PLYWOOD REQUIRED FOR ONE RANGE DAYBOARD)

DASHED LINES INDICATE HOW DAYBOARD MAY POSSIBLY BE ASSEMBLED FROM THE 4' X 8' PLYWOOD SHEETS, IF PLYWOOD IS NOT CUT.

Figure 5-41.

Data Sheet 5-E(22). (cont'd).

5.E.

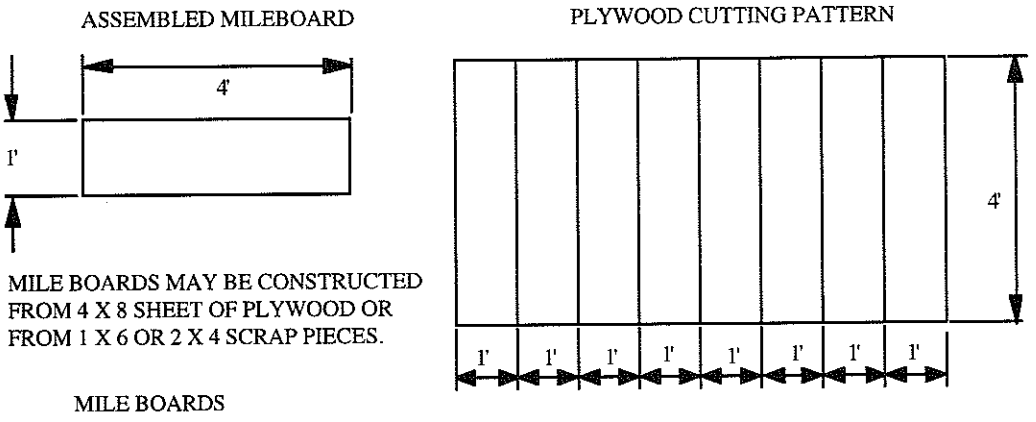


Figure 5-42.

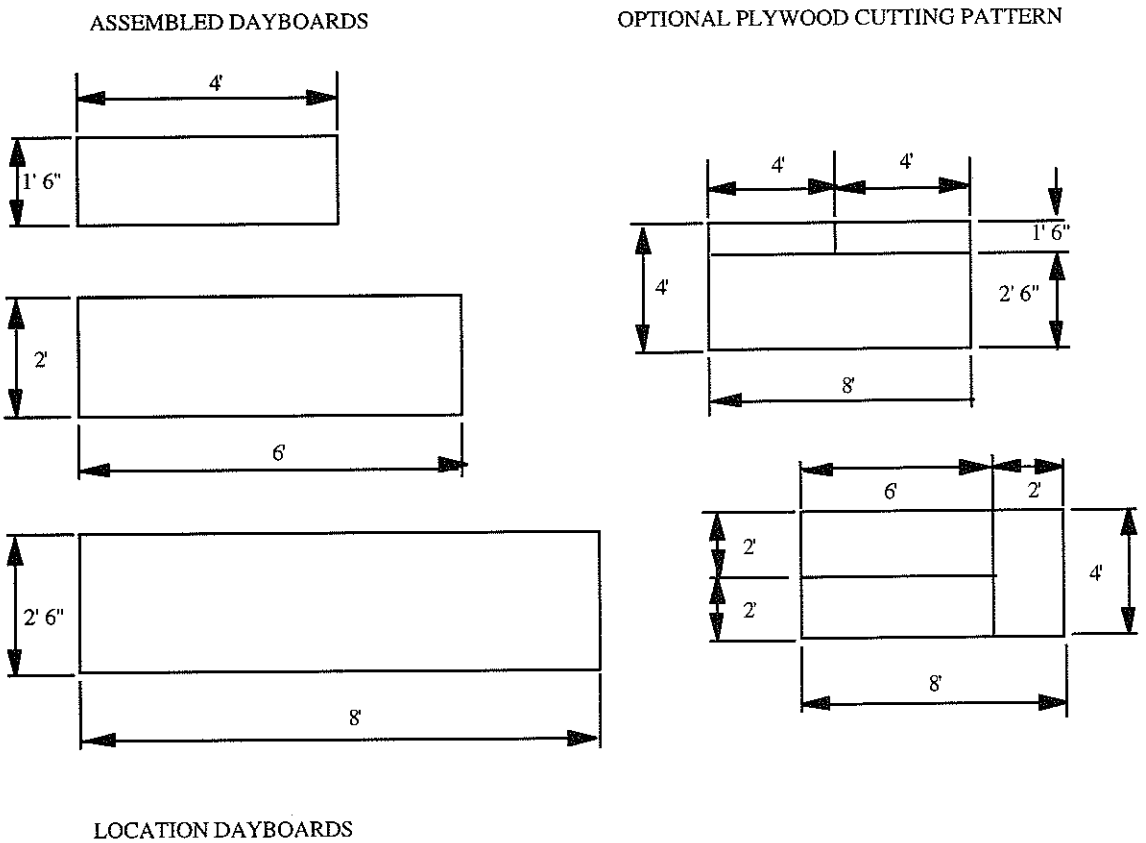
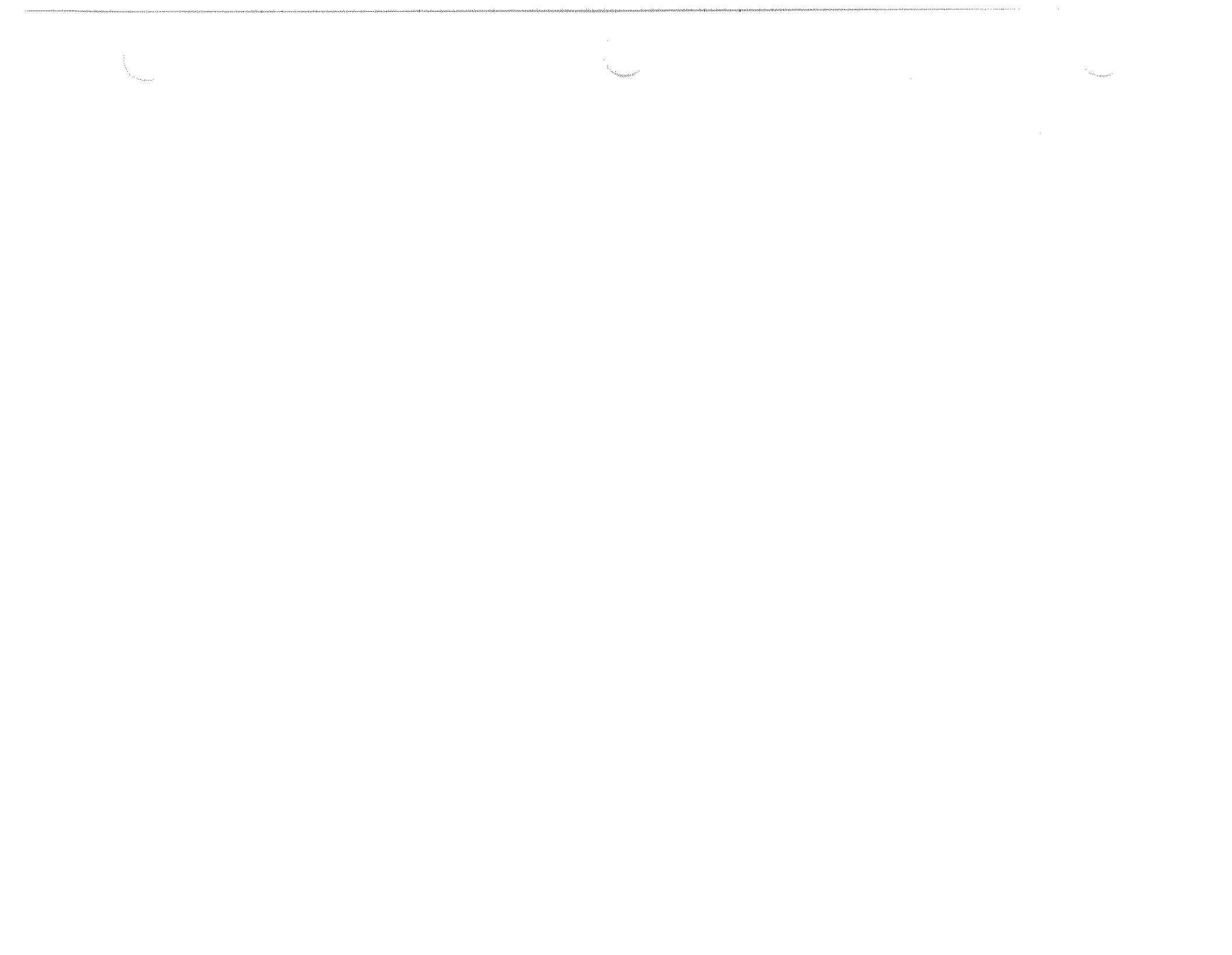


Figure 5-43

Data Sheet 5-E(22). (cont'd).



Appendix A-4

Code of Federal Regulations
Title 33 Navigation and Navigable Waters

PART 66—PRIVATE AIDS TO NAVIGATION

Subpart 66.01—Aids to Navigation Other Than Federal or State

Sec.

Subpart 66.05—State Aids to Navigation

Subpart 66.10—Uniform State Waterway Marking System

Authority:

14 U.S.C. 83, 85, 43 U.S.C. 1333; Pub. L. 107–296, 116 Stat. 2135; 49 CFR 1.46.

Subpart 66.01—Aids to Navigation Other Than Federal or State

Source:

CGFR 68–152, 33 FR 19816, Dec. 27, 1968, unless otherwise noted.

§66.01–1 Basic provisions.

(a) No person, public body or instrumentality not under the control of the Commandant, exclusive of the Armed Forces, shall establish and maintain, discontinue, change or transfer ownership of any aid to maritime navigation, without first obtaining permission to do so from the Commandant.

(b) For the purposes of this subpart, the term private aids to navigation includes all marine aids to navigation operated in the navigable waters of the United States other than those operated by the Federal Government (part 62 of this subchapter) or those operated in State waters for private aids to navigation (subpart 66.05).

(c) Coast Guard authorization of a private aid to navigation does not authorize any invasion of private rights, nor grant any exclusive privileges, nor does it obviate the necessity of complying with any other Federal, State or local laws or regulations.

(d) With the exception of radar beacons (racons) and shore based radar stations, operation of electronic aids to navigation as private aids will not be authorized.

[CGFR 68–152, 33 FR 19816, Dec. 27, 1968, as amended by CGD 85–057, 51 FR 11448, Apr. 3, 1986]

§66.01–3 Delegation of authority to District Commanders.

(a) Under Section 888 of Pub. L. 107–296, 116 Stat. 2135, the Commandant delegates to the District Commanders within the confines of their respective districts (see Part 3 of this chapter for descriptions) the authority to grant permission to establish and maintain, discontinue, change or transfer ownership of private aids to maritime navigation, and otherwise administer the requirements of this subpart.

(b) The decisions of the District Commander may be appealed within 30 days from the date of decision. The decision of the Commandant in any case is final.

[CGFR 68–152, 33 FR 19816, Dec. 27, 1968, as amended by USCG–1998–3799, 63 FR 35526, June 30, 1998; USCG–2003–14505, 68 FR 9535, Feb. 28, 2003]

§66.01–5 Application procedure.

Application to establish and maintain, discontinue, change, or transfer ownership of a private aid to navigation shall be made to the Commander of the Coast Guard District in which the private aid to navigation is or will be located. Application forms (CG–2554) will be provided upon request. The applicant shall complete all parts of the form applicable to the aid to navigation concerned, and shall forward the application in triplicate to the District Commander. The following information is required:

(a) The proposed position of the aid to navigation by two or more horizontal angles, or bearings and distance from charted landmarks. A section of chart or sketch showing the proposed location of the aid to navigation shall be included.

(b) The name and address of the person at whose expense the aid will be maintained.

(c) The name and address of the person who will maintain the aid to navigation.

(d) The time and dates during which it is proposed to operate the aid.

(e) The necessity for the aid.

(f) For lights: The color, characteristic, height above water, and description of illuminating apparatus.

(g) For fog signals: Type (whistle, horn, bell, etc.) and characteristic.

(h) For buoys or daybeacons: Shape, color, number, or letter, depth of water in which located or height above water.

(i) For racons: Manufacturer and model number of racon, height above water of desired installation, and requested coding characteristic. Equipment must have FCC authorization.

[CGFR 68–152, 33 FR 19816, Dec. 27, 1968, as amended by CGD 85–057, 51 FR 11448, Apr. 3, 1986]

§66.01–10 Characteristics.

The characteristics of a private aid to navigation shall conform to the United States Aids to Navigation System described in Subpart B of Part 62 of this subchapter, except that only tungsten-incandescent light sources will be approved for electric lights.

[CGD 86–031, 52 FR 42645, Nov. 6, 1987, as amended by CGD 93–047, 58 FR 64153, Dec. 6, 1993; CGD 97–018, 63 FR 33573, June 19, 1998]

§66.01–15 Action by Coast Guard.

(a) The District Commander receiving the application will review it for completeness and will assign the aid one of the following classifications:

Class I: Aids to navigation on marine structures or other works which the owners are legally obligated to establish, maintain and operate as prescribed by the Coast Guard.

Class II: Aids to navigation exclusive of Class I located in waters used by general navigation.

Class III: Aids to navigation exclusive of Class I located in waters not ordinarily used by general navigation.

(b) Upon approval by the District Commander, a signed copy of the application will be returned to the applicant. Approval for the operation of radar beacons (racons) will be effective for an initial two year period, then subject to annual review without further submission required of the owner.

[CGFR 68–152, 33 FR 19816, Dec. 27, 1968, as amended by CGD 85–057, 51 FR 11448, Apr. 3, 1986]

§66.01–20 Inspection.

All classes of private aids to navigation shall be maintained in proper operating condition. They are subject to inspection by the Coast Guard at any time and without prior notice.

§66.01–25 Discontinuance and removal.

(a) No person, public body or instrumentality shall change, move or discontinue any authorized private aid to navigation required by statute or regulation (Class I, §66.01–15) without first obtaining permission to do so from the District Commander.

(b) Any authorized private aid to navigation not required by statute or regulation (Classes II and III, §66.01–15) may be discontinued and removed by the owner after 30 days' notice to the District Commander to whom the original request for authorization for establishment of the aid was submitted.

(c) Private aids to navigation which have been authorized pursuant to this part shall be discontinued and removed without expense to the United States by the person, public body or instrumentality establishing or maintaining such aids when so directed by the District Commander.

§66.01–30 Corps of Engineers' approval.

(a) Before any private aid to navigation consisting of a fixed structure is placed in the navigable waters of the United States, authorization to erect such structure shall first be obtained from the District Engineer, U.S. Army Corps of Engineers in whose district the aid will be located.

(b) The application to establish any private aid to navigation consisting of a fixed structure shall show evidence of the required permit having been issued by the Corps of Engineers.

§66.01–40 Exemptions.

(a) Nothing in the preceding sections of this subpart shall be construed to interfere with or nullify the requirements of existing laws and regulations pertaining to the marking of structures, vessels and other obstructions sunken in waters subject to the jurisdiction of the United States (Part 64 of this subchapter), the marking of artificial islands and structures which are erected on or over the seabed and subsoil of the Outer Continental Shelf (Part 67 of this subchapter), or the lighting of bridges over navigable waters of the United States (Subchapter J of this subchapter).

(b) Persons marking bridges pursuant to Subchapter J of this title are exempted from the provisions of §66.01–5.

[CGD 78–156, 48 FR 11268, Mar. 17, 1983]

§66.01–45 Penalties.

Any person, public body or instrumentality, excluding the armed forces, who shall establish, erect or maintain any aid to maritime navigation without first obtaining authority to do so from the Coast Guard, with the exception of those established in accordance with §64.10 of this chapter, or who shall violate the regulations relative thereto issued in this part, is subject to the provisions of 14 U.S.C. 83.

[CGD 78–156, 48 FR 11268, Mar. 17, 1983]

§66.01–50 Protection of private aids to navigation.

Private aids to navigation lawfully maintained under these regulations are entitled to the same protection against interference or obstruction as is afforded by law to Coast Guard aids to navigation (Part 70 of this subchapter). If interference or obstruction occurs, a prompt report containing all the evidence available should be made to the Commander of the Coast Guard District in which the aids are located.

§66.01–55 Transfer of ownership.

(a) When any private aid to navigation authorized by the District Commander, or the essential real estate or facility with which the aid is associated, is sold or transferred, both parties to the transaction shall submit application (§66.01–5) to the Commander of the Coast Guard District in which the aid is located requesting authority to transfer responsibility for maintenance of the aid.

(b) The party relinquishing responsibility for maintenance of the private aid to navigation shall indicate on the application form (CG–2554) both the discontinuance and the change of ownership of the aid sold or transferred.

(c) The party accepting responsibility for maintenance of the private aid to navigation shall indicate on the application form (CG–2554) both the establishment and the change of ownership of the aid sold or transferred.

(d) In the event the new owner of the essential real estate or facility with which the aid is associated refuses to accept responsibility for maintenance of the aid, the former owner shall be required to remove the aid without expense to the United States. This requirement shall not apply in the case of any authorized private aid to navigation required by statute or regulation (Class I, §66.01–15) which shall be maintained by the new owner until the conditions which made the aid necessary have been eliminated.

Subpart 66.05—State Aids to Navigation

Source:

CGFR 66–32, 31 FR 10320, July 30, 1966, unless otherwise noted.

§66.05–1 Purpose.

The purpose of the regulations in this subpart is to prescribe the conditions under which state governments may regulate aids to navigation owned by state or local governments, or private parties. With the exception on the provisions of subpart 66.10, which are valid until December 31, 2003, aids to navigation must be in accordance with the United States Aids to Navigation System in part 62 of this subchapter.

[CGD 97–018, 63 FR 33573, June 19, 1998]

§66.05–5 Definitions.

(a) The term *State waters for private aids to navigation* means those navigable waters of the United States which the Commandant, upon request of a State Administrator, has designated as waters within which a State government may regulate the establishment, operation, and maintenance of marine aids to

navigation, including regulatory markers. The Commandant will entertain requests to make such designations with respect to navigable waters of the United States not marked by the Federal government. These designations when approved will be set forth in separate sections by States in this subpart and will briefly describe or identify waters so designated.

(b) The term Uniform State Waterway Marking System (USWMS) means the system of private aids to navigation which may be operated in State waters. Subpart 66.10, which describes the USWMS, expires on December 31, 2003.

(c) The term *State Administrator* means the official of a State having power under the law of the State to regulate, establish, operate or maintain maritime aids to navigation on waters over which the State has jurisdiction.

(d) The term *State aids to navigation* means all private marine aids to navigation operated in State waters for private aids to navigation, whether owned by a State, political subdivisions thereof or by individuals, corporations, or organizations.

(e) The term *regulate State maritime aids to navigation* means to control the establishment, disestablishment, operation and maintenance of State aids to navigation.

[CGFR 66–32, 31 FR 10320, July 30, 1966, as amended by CGD 97–018, 63 FR 33573, June 19, 1998]

§66.05–10 State waters for private aids to navigation; designations; revisions, and revocations.

(a) A State Administrator who desires to regulate State maritime aids to navigation in the navigable waters of the United States not marked by the Federal Government, shall request the Commandant to designate the specific bodies of water involved as State waters for private aids to navigation.

(b) The request shall be forwarded to the District Commander in whose district the bodies of water are located. The request shall give the name and description of the waterway; the extent of use being made of the waterway for marine navigation, in general terms; an appropriate chart or sketch of the area; and a general outline of the nature and extent of the State aids to navigation which the Administrator plans to establish in the waterway.

(c) The District Commander shall review the request and consult with the State Administrator concerning the terms of an initial agreement to be entered into under provisions of §66.05–20. When they have arrived at terms of an agreement satisfactory to both, the District Commander shall forward the request to the Commandant with his recommendations and the terms of agreement mutually settled upon. If they cannot reach such agreement, the District Commander shall forward the request with his recommendations and a statement of the points agreed upon and the points remaining at issue.

(d) Upon receipt of the request, the Commandant will determine whether or not approval of the request is in the public interest and will inform the State Administrator and the District Commander of the Coast Guard's decision. If the request is approved, the designation by the Commandant of the waters in question as State waters for private aids to navigation will be also defined and described in this subpart.

(e) The Commandant may, upon his own initiative or upon request, revoke or revise any designations of State waters for private aids to navigation previously made by him. Written notice shall be given the State Administrator of the action contemplated by the Commandant. The State Administrator will be

afforded a period of not less than 30 days from the date of the notice in which to inform the Commandant of the State's views in the matter before final action is completed to revoke or revise such designation.

§66.05–20 Coast Guard-State agreements.

(a) The District Commander in whose District a waterway is located may enter into agreements with State Administrators permitting a State to regulate aids to navigation, including regulatory markers, in State waters for private aids to navigation, as, in the opinion of the District Commander, the State is able to do in a manner to improve the safety of navigation. When a waterway is located within the area of jurisdiction of more than one Coast Guard District, the District Commander in whose District the State capital is located shall execute the agreement in behalf of the Coast Guard. All such agreements shall reserve to the District Commander the right to inspect the State aids to navigation without prior notice to the State. They shall stipulate that State aids to navigation will conform to the Uniform State Waterway marking System or to the U.S. Aids to Navigation System and that the State Administrator will modify or remove State aids to navigation without expense to the United States when so directed by the District Commander, subject to the right of appeal on the part of the State Administrator to the Commandant.

(b) A Coast Guard-State agreement shall become effective when both parties have signed the agreements. In lieu of the procedure prescribed in §66.01–5, the agreement shall constitute blanket approval by the Commandant, of the State aids to navigation, including regulatory markers, established or to be established in State waters for private aids to navigation designated or to be designated by the Commandant.

(c) In addition to the matters set forth in paragraph (a) of this section, Coast Guard-State agreements shall cover the following points, together with such other matters as the parties find it desirable to include:

(1) A description, in sufficient detail for publication in Notices to Mariners, of all aids to navigations under State jurisdiction in navigable waters of the United States in existence prior to the effective date of the agreement which have not been previously approved under procedures of §66.01–5.

(2) Procedures for use by the State administrator to notify the District Commander of changes made in State aids to navigation, as required by §66.05–25.

(3) If prior to December 21, 2003, specification of the marking system to be used, whether the U.S. Aids to Navigation System or the Uniform State Waterway Marking System.

(4) Specification of standards as to minimum size and shape of markers, the use of identifying letters, the use of reflectors or retroreflective materials, and any other similar standards so as to enable Coast Guard inspectors to determine compliance with Statewide standards.

[CGD 86–031, 52 FR 42645, Nov. 6, 1987, as amended by CGD 97–018, 63 FR 33573, June 19, 1998]

§66.05–25 Change and modification of State aids to navigation.

(a) Wherever a State Administrator shall determine the need for change in State aids to navigation, he shall inform the District Commander of the nature and extent of the changes as soon as possible, preferably not less than 30 days in advance of making the changes.

§66.05–30 Notice to Mariners.

(a) The District Commander may publish information concerning State aids to navigation, including regulatory markers, in the Coast Guard Local Notices to Mariners as he deems necessary in the interest of public safety.

(b) Notices to Mariners which concern the establishment, disestablishment, or change of State aids to navigation, including regulatory markers, may be published whenever the aids to navigation concerned are covered by navigational charts or maps issued by the National Ocean Service or the U.S. Army Corps of Engineers.

[CGFR 66–32, 31 FR 10320, July 30, 1966, as amended by USCG–2000–7223, 65 FR 40055, June 29, 2000; USCG–2001–9286, 66 FR 33640, June 25, 2001]

§66.05–35 Private aids to navigation other than State owned.

(a) No person, public body or other instrumentality not under control of the Commandant or the State Administrator, exclusive of the Armed Forces of the United States, shall establish, erect or maintain in State waters for private aids to navigation any aid to navigation without first obtaining permission to do so from the State Administrator. Discontinuance of any State aids to navigation may be effected by order of the State Administrator.

§66.05–40 Corps of Engineers' approval.

(a) In each instance where a regulatory marker is to be established in navigable waters of the United States which have been designated by the Commandant as State waters for private aids to navigation, the State Administrator is responsible for obtaining prior permission from the District Engineer, U.S. Army Corps of Engineers concerned, authorizing the State to regulate the water area involved, or a statement that there is no objection to the proposed regulation of the water area. A copy of the Corps of Engineers permit or letter of authority shall be provided by the Administrator to the District Commander upon request.

(b) Similarly, where an aid to navigation is to be placed on a fixed structure or a mooring buoy is to be established in State waters for private aids to navigation, the State Administrator shall assure that prior permission or a statement of no objection to the structures or mooring buoys proposed is obtained from the District Engineer concerned. A copy of the permit or letter is not required by the District Commander.

§66.05–100 Designation of navigable waters as State waters for private aids to navigation.

In accordance with the procedures contained in §66.05–10(d), the following navigable waters listed by the State in which they are located, are designated as State waters for private aids to navigation:

(a) *Arizona.* The portion of Lake Havasu within the State, except that portion within Havasu Lake National Wildlife Refuge.

(b) *Louisiana.* The portion of Toledo Bend Reservoir within the State.

(c) *Missouri.* Teach water within the State except the:

(1) Mississippi River; and

(2) Missouri River.

(d) *Montana.* The portion of Missouri River between the U.S. Highway 287 bridge near Townsend and Great Falls including the following impoundments:

(1) Black Eagle Dam Reservoir.

(2) Canyon Ferry Reservoir.

(3) Hauser Lake.

(4) Holter Lake.

(5) Rainbow Dam Reservoir.

(e) *North Carolina.* Each navigable water within the State not marked with Coast Guard aids to navigation on June 1, 1973.

(f) *Pennsylvania.* The portion of Youghiogheny River Reservoir within the State.

(f–1) *South Carolina.* (1) The portion of Lake Wylie within the State; (2) Lake Marion; (3) Lake Moultrie; and (4) Lake Murray.

(g) *Texas.* The portion of Toledo Bend Reservoir within the State.

(h) *Virginia.* (1) Claytor Lake, on the New River in Pulaski County.

(2) Leesville Lake, on the Roanoke River below Smith Mountain Dam.

(3) The portions of the following reservoirs within the State:

(i) Gaston.

(ii) Holston.

(iii) John H. Kerr.

(iv) Philpott.

(i) *Wisconsin.* Navigable waters within the State not marked with Coast Guard aids to navigation as of May 1, 1996.

[CGD 72–154R, 38 FR 33473, Dec. 5, 1973, as amended by CGD 76–015, 41 FR 12879, Mar. 29, 1976; CGD 80–132, 46 FR 27643, May 21, 1981; CGD 98–3604, 63 FR 55947, Oct. 20, 1998]

Subpart 66.10—Uniform State Waterway Marking System

§66.10–1 General.

(a) Until December 31, 2003, the Uniform State Waterway Marking System's (USWMS) aids to navigation provisions for marking channels and obstructions may be used in those navigable waters of the U.S. that have been designated as state waters for private aids to navigation and in those internal waters that are non-navigable waters of the U.S. All other provisions for the use of regulatory markers and other aids to navigation shall be in accordance with United States Aid to Navigation System, described in part 62 of this subchapter.

(b) The USATONS may be used in all U.S. waters under state jurisdiction, including non-navigable state waters.

[CGD 97–018, 63 FR 33574, June 19, 1998]

§66.10–5 [Reserved]

§66.10–10 [Reserved]

§66.10–15 Aids to navigation.

(a) USWMS aids to navigation may have lateral or cardinal meaning.

(b) On a well defined channel including a river or other relatively narrow natural or improved waterway, an aid to navigation shall normally be a solid colored buoy. A buoy which marks the left side of the channel viewed looking upstream or toward the head of navigation shall be colored all black. A buoy which marks the right side of the channel viewed looking upstream or toward the head of a navigation shall be colored all red. On a well defined channel, solid colored buoys shall be established in pairs, one on each side of the navigable channel which they mark, and opposite each other to inform the user that the channel lies between the buoys and that he should pass between the buoys.

(c) On an irregularly defined channel, solid colored buoys may be used singly in staggered fashion on alternate sides of the channel provided they are spaced at sufficiently close intervals to inform the user that the channel lies between the buoys and that he should pass between the buoys.

(d) Where there is no well-defined channel or when a body of water is obstructed by objects whose nature or location is such that the obstruction can be approached by a vessel from more than one direction, supplemental aids to navigation having cardinal meaning (i.e., pertaining to the cardinal points of the compass, north, east, south, and west) may be used. The use of an aid to navigation having cardinal meaning is discretionary provided that the use of such a marker is limited to wholly State owned waters and the State waters for private aids to navigation as defined and described in this part.

(e) Aids to navigation conforming to the cardinal system shall consist of three distinctly colored buoys.

(1) A white buoy with a red top may be used to indicate to a vessel operator that he must pass to the south or west of the buoy.

(2) A white buoy with a black top may be used to indicate to a vessel operator that he must pass to the

north or east of the buoy.

(3) In addition, a buoy showing alternate vertical red and white stripes may be used to indicate to a vessel operator that an obstruction to navigation extends from the nearest shore to the buoy and that he must not pass between the buoy and shore. The number of white and red stripes is discretionary, provided that the white stripes are twice the width of the red stripes.

[CGFR 66–32, 31 FR 10321, July 30, 1966, as amended by CGD 97–018, 63 FR 33574, June 19, 1998]

Editorial Note:

Amendatory instruction no. 16 at 63 FR 33574, June 19, 1998, revising paragraph (a) of §66.10–15, incorrectly referred to a nonexistent §66.19–15 in the heading of the amendatory language. The heading should read: "§66.10–15 Aids to navigation."

§66.10–35 Navigation lights.

A red light shall only be used on a solid colored red buoy. A green light shall only be used on a solid colored black or a solid colored green buoy. White lights shall be used for all other buoys. When a light is used on a cardinal system buoy or a vertically striped white and red buoy, it shall always be quick flashing.

[CGD 97–018, 63 FR 33574, June 19, 1998]

EXHIBIT B

INSURANCE REQUIREMENTS

I. CONTRACTOR'S LIABILITY INSURANCE

A. Contractor shall not commence work under this agreement until all insurance required herein has been obtained and approved by the City's Risk Manager or designee. Contractor must not allow any subcontractor to commence work until all similar insurance required of the subcontractor has been so obtained.

B. Contractor shall furnish to the Risk Manager or designee and Director 1 copy of Certificates of Insurance, with applicable policy endorsements showing the following minimum coverage by an insurance company(s) acceptable to the Risk Manager or designee. The City must be listed as an additional insured for the General Liability and Auto Liability policies by **endorsement**, and a waiver of subrogation by **endorsement** is required on all applicable policies. **Endorsements** must be provided with Certificate of Insurance. Project name and/or number must be listed in Description Box of Certificate of Insurance.

C.

TYPE OF INSURANCE	**MINIMUM INSURANCE COVERAGE**
30-Day Notice of Cancellation required on all certificates or by policy endorsement(s)	Bodily injury and Property Damage Per Occurrence / aggregate
COMMERCIAL GENERAL LIABILITY including: 1. Broad Form 2. Premises – Operations 3. Products/Completed Operations Hazard 4. Contractual Liability 5. Broad Form Property Damage 6. Independent Contractors 7. Underground Hazard (if applicable) 8. Boom Collapse and Overload	$1,000,000 Per Occurrence $2,000,000 Aggregate
PROFESSIONAL LIABILITY (E & O) To be carried by Design Team (Engineers, Architects)	$1,000,000 per claim
BUSINESS AUTOMOBILE LIABILITY 1. Owned 2. Hired & Non-owned 3. Leased/Rented	$1,000,000 Combined Single Limit

WORKERS' COMPENSATION "All States" endorsement is required if contractor is not Domiciled in Texas. EMPLOYER'S LIABILITY	Which Complies With The Texas Workers' Compensation Act And Paragraph II Of This Exhibit. $500,000 / $500,000 / $500,000
MARITIME COVERAGES	
U.S. LONGSHORE & HARBORWORKERS' COMPENSATION (Where Applicable)	Which Complies with U.S. Longshore & Harborworkers' Act.
JONES ACT COVERAGE (Where Applicable)	Which Complies with Jones Act.
PROTECTION and INDEMNITY (P&I) (Where Applicable)	$1,000,000 Per Occurrence

C. In the event of accidents of any kind related to this project, Contractor shall furnish the Risk Manager with copies of all reports of such accidents within ten (10) days of the accident.

II. ADDITIONAL REQUIREMENTS

A. Contractor must obtain workers' compensation coverage through a licensed insurance company in accordance with Texas law. The contract for coverage must be written on a policy and endorsements approved by the Texas Department of Insurance. The coverage provided must be in amounts sufficient to assure that all workers' compensation obligations incurred will be promptly met. An "All States" endorsement shall be required if Workers' Compensation policy is not written in accordance with Texas Department of Insurance rules.

B. Contractor shall obtain and maintain in full force and effect for the duration of this Contract, and any extension hereof, at Contractor's sole expense, insurance coverage written on an occurrence basis, by companies authorized and admitted to do business in the State of Texas and with an A.M. Best's rating of no less than A- VII.

C. Contractor shall submit copies of certificates of insurance to City at the address provided below within 10 days of the requested change. Contractor shall pay any costs incurred resulting from said changes. All notices under this Article shall be given to City at the following address:

City of Corpus Christi
Attn: Risk Management
P.O. Box 9277
Corpus Christi, TX 78469-9277

D. Contractor agrees that with respect to the above required insurance, all insurance policies are to contain or be endorsed to contain the following required provisions:

- List the City and its officers, officials, employees, volunteers, and elected representatives as additional insured by endorsement, as respects operations, completed operations and activities of, or on behalf of, the named insured performed under contract with the City, with the exception of the workers' compensation policy
- Provide for an endorsement that the "other insurance" clause shall not apply to the City of Corpus Christi where the City is an additional insured shown on the policy;

- Workers' compensation and employers' liability policies will provide a waiver of subrogation in favor of the City; and

- Provide thirty (30) calendar days advance written notice directly to City of any suspension, cancellation, non-renewal or material change in coverage, and not less than ten (10) calendar days advance written notice for nonpayment of premium.

E. Within five (5) calendar days of a suspension, cancellation, or non-renewal of coverage, Successful Bidder shall provide a replacement Certificate of Insurance and applicable endorsements to City. City shall have the option to suspend Contractor's performance should there be a lapse in coverage at any time during this contract. Failure to provide and to maintain the required insurance shall constitute a material breach of this contract.

F. In addition to any other remedies the City may have upon Contractor's failure to provide and maintain any insurance or policy endorsements to the extent and within the time herein required, the City shall have the right to order Contractor to stop work hereunder, and/or withhold any payment(s) which become due to Contractor hereunder until Contractor demonstrates compliance with the requirements hereof.

G. Nothing herein contained shall be construed as limiting in any way the extent to which Contractor may be held responsible for payments of damages to persons or property resulting from Contractor's or its subcontractor’s performance of the work covered under this agreement.

H. It is agreed that Contractor's insurance shall be deemed primary and non-contributory with respect to any insurance or self- insurance carried by the City of Corpus Christi for liability arising out of operations under this agreement.

I. It is understood and agreed that the insurance required is in addition to and separate from any other obligation contained in this agreement.

2015 ins req.
Parks and Recreation Department
Paackery Channel ATON Repair and Replacement Project
10/28/2015 ds Risk Mgmt.