

It is the responsibility of the U.S. Army Corps of Engineers to provide appropriate signs and markers at each project to guide, inform, and protect visitors and employees.

This manual has been prepared as part of the Corps Graphic Standards Program and is intended to:

- Develop a sign standard for the Corps.
- Establish standard guidelines for all signage including: planning, use, placement, materials, and maintenance.
- Define the design standard for each category of signs.
- Catalog all standard signs with specifications for procurement.

The purpose of this manual is to provide guidance for effective management of the Corps sign program. Through successful management, the goals of signage are to:

- Deliver a readable and understandable message to the intended viewer.
- Establish a cohesive and distinctive image for all Corps signs. This image is like a corporate "brand" that requires strategic and long-term management similar to any other asset owned by the Corps.
- Establish visual and verbal consistency for signs at each project.
- Increase effectiveness of project management.
- Maximize the effectiveness of each individual sign and the collective statement of all signs placed at a project.
- Reduce overall procurement and maintenance costs.

The effective use of signs is an integral part of project management. Both Corps policy and individual project requirements must be satisfied. This manual has been designed to provide the tools necessary to implement the Corps sign program. It sets forth basic principles that govern the design of all signs. It outlines the process by which a comprehensive sign plan is developed: determining the need for new or replacement signs as well as evaluating the effectiveness of existing signs. This manual also provides information on procurement, fabrication, installation, and maintenance of signs.

Where appropriate, this manual incorporates excerpts from existing sign manuals, including: *Manual on Uniform Traffic Control Devices* (DOT-FHWA) for highway signs, and *Uniform State Waterways Marking System* (DOT-USCG) for navigational markers.

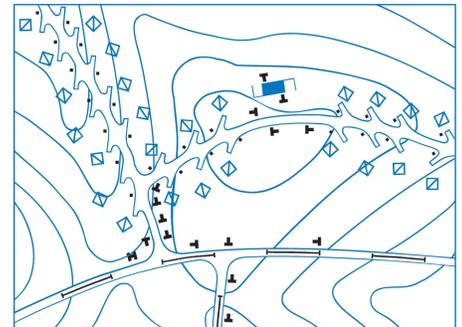
The manual has been organized into three basic, sequential groups of sections. **Group 1.** Sections (2-4) provide basic guidelines that apply to all Corps signs.

Section 2
Principles and Guidelines

Guidelines for the development of sign messages: descriptions of available materials, explanations of mounting methods, and directions for maintenance procedures.

Section 3
Sign Plan

Guidelines for developing a comprehensive sign plan for a given project: locating signs, coding them, and preparing documentation of existing and proposed signs.



Section 4
Design Standards

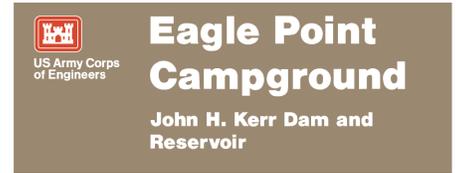
Description of the design elements that are used in the design and layout of signs, including: use of the Corps Signature, letter-spacing guidelines, color standards, and use of directional arrows.



Group 2. Sections 5-18 describe specific types of signs or sign use areas. Each section contains descriptions, layout formats, mounting methods, and specification codes for the sign types included in that section.

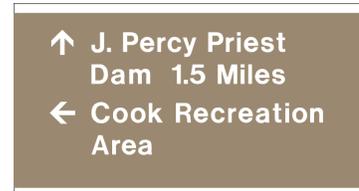
Section 5
Project Identification Signs

Standard Identification signs for Corps projects and cooperatively managed areas. Secondary Identification signs for individual facilities within a project, and a Corps Participation Credit Sign for out-granted areas.



Section 6
Directional Signs

Signs directing the public to a Corps facility including: Approach Roadway Directional signs and Approach Roadway Directional signs with symbols. Project Roadway Directional signs are used to direct the public within a project. Directional signs using symbols exclusively are described in Section 8.



Section 7
Recreation Area Signs

Standard signs for use within an area, including instruction, information and regulatory signs specific to recreational uses. Examples show the various standard grid formats and colors. Traffic signs which are governed by the *Manual on Uniform Traffic Control Devices* (MUTCD) are found in Section 9.



Section 8
Symbol Signs

A display of approved symbol signs and guidelines for their use for Identification, Direction, Prohibition and Area Regulation signs.



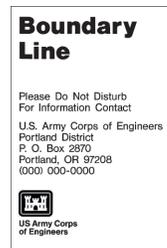
Section 9
Traffic Signs

General use guidelines, along with a display of the most frequently used traffic signs from the MUTCD. Parking regulation signs, specially adapted for use on Corps projects, are specified in this section.



Section 10
Boundary Signs

Markers used for the identification and marking of government property. This includes witness posts, boundary lines, easement lines, and identification of wildlife management areas.



Section 11
Safety Signs

All safety signs placed in and around power plants, maintenance shops, and mechanical equipment. These signs are Danger, Caution, Safety, Notice and Directional, and are used in compliance with Occupational Safety and Health Administration Standards.



Section 12
Regulatory Signs

Rules governing the posting of Title 36. Regulatory signs specific to particular types of public use areas will appear in the section covering those areas. For example: signs adjacent to a boat ramp identifying regulations and restrictions are shown in the Recreation Area Signs section (Section 7). Signs regulating the use of a lock are specified in the Lock, Dam and Waterway Signs section (Section 14).



Section 13
Interpretive Signs

Informative and educational signage describing man-made, ecological, and conservation systems in a project area as well as historical points of interest to visitors. This section provides design parameters rather than specific sign layouts.

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Section 14
Lock, Dam and Waterway Signs

Informational, safety, and instructional signs located on or near waterways, locks, dams, and canals.

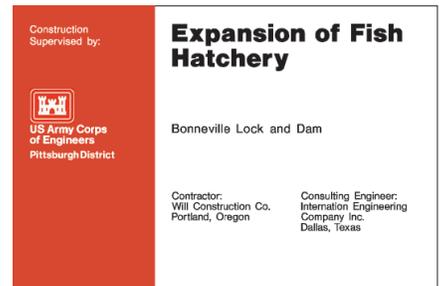


Section 15
Aids to Navigation

General guidelines for the use of the *Uniform State Waterway Marking System* (DOT-USCG).

Section 16
Construction Project Signs

Designs and specifications for Construction Project and Safety Record signs.



Section 17
Concession Sign Policy

Guidelines for out-grant and cooperating agency signs placed on Corps property, and design guidelines for commercial enterprises signing on Corps project lands.

Section 18
Building Interior and Office Signs

Complete sign system for building interiors.



Group 3. Volume 2 of the manual is made up of Appendices A-F. They contain support reference material including: procurement instructions, fabrication specifications, maintenance procedures, a glossary of terminology, and additional reference material.

Appendix A
Procurement Procedures

Explanation of procurement procedures as well as the review process necessary to purchase signs. Also a sample order worksheet with instructions on filling it out.

Appendix B
Materials and Specifications

Specifications for materials, fabrication techniques, and installation.

Appendix C
Sign Maintenance Procedures

Guidelines for maintenance of all project signs. Included are a sample field report, and repair request worksheets, with instructions on how to use them.

Appendix D
Typography Reference

Standards for use of typography on signs. Guidelines are provided for letter-spacing, word-spacing, and legend length sizing for the three Corps typefaces. In addition, there are displays of commonly used words properly typeset and letter-spaced in Helvetica Bold, Helvetica Medium, and Helvetica Regular.

Appendix E
Reference Materials

Reference materials that support, explain or document the information outlined in this manual. Included are technical standards and references, a bibliography, a glossary, a listing of approved suppliers on contract, and a list of district/division Sign Program Managers.

Appendix F
Reproduction Art

Reproduction art for symbol signs is not included in this version of the sign manual. The UNICOR sign factory has the software necessary to manufacture all symbol signs in Section 8 of Volume 1. Copies of the original pages from Appendix F are available from the National Sign Program Manager.

Implementation and management of the sign standards outlined in this manual follow the procedures described below. With each procedure, there is an explanation of required actions, along with page references for the corresponding data in the manual.

Reading the entire manual will provide an understanding of the principles of the Corps sign program. This understanding will be helpful in using the information and instructions outlined for each specific sign type.

The legends used on the signs in this manual have been carefully developed, reviewed, and approved for nationwide

use. The purpose of developing a uniform system is twofold: to establish a cohesive look for signs at all Corps projects and to reduce costs. The system discourages costly, one-of-a-kind signs. However, should the need occur for a sign not displayed, there are grids provided in their respective sections for layout purposes. Consult the district/division Sign Program Manager for ordering procedures. It is important that special application signs with site-specific legends follow the format, color, and letter style outlined in this manual.

Although every effort has been made to standardize sign legends, individual sign conditions vary from project to project so

that the appropriateness of an individual sign to a given setting must be determined on a case-by-case basis as part of the sign plan. The Project Sign Program Manager is responsible for making a sign plan for each specific site based on: geography, hazards, audience, traffic, and the uses for each site. Site-specific sign legends will follow the standard sign formats to maintain a uniform and cohesive look throughout a project. The section below outlines the implementation process with page references for the various support materials contained in this manual.

Documentation of Existing Conditions

1) All signs currently in place must be inventoried and located on a site map. A photograph showing each sign and its surrounding area is highly recommended.

Explanation of documentation process; pp. 3.1-2.
Sign inventory worksheet; p. 3.3.
Example of map; p. 3.4.

Preparation of Sign Plan

1) Evaluate the data collected to determine required signs, replacement signs, and unnecessary signs.
2) Schedule the removal of existing signs that are unnecessary or the replacement of non-complying signs.

The principles and guidelines governing the sign standards program; pp. 2.1-12.
Explanation of sign plan process; pp. 3.1-2.
Illustrations and descriptions of the signs available for use on a Corps project; pp. 5.1-18.21.
Sign Inventory worksheet; p.3.3.
Example of map; p. 3.6.

Implementation of Sign Plan

1) Upon approval of the sign plan by the district/division Sign Program Manager, carry out the plan by replacing, removing unnecessary, non-complying or missing signs.
2) Order and install new signs.
3) Update project sign inventory worksheet and site map as required.

Sign order worksheet; Appendix A.
Material and Installation specifications; Appendix B.
Example of implementation drawing; p. 3.6.

Maintenance of Sign Plan

1) Inspect the signs on a regular basis to insure that signs are in place and in good condition.
2) Continue to order and install new signs to replace non-complying signs.
3) Evaluate site conditions continually to determine if new signs are required or if existing signs are no longer necessary.
4) Review and update project sign inventory worksheet and site map annually or as required.
5) Provide routine maintenance of signs.

Explanation of Maintenance process; p. 2.12.
Maintenance guidelines; Appendix C.
Sign repair/maintenance request worksheet; Appendix C.

Every sign in this manual has an alphanumeric code associated with it. The letters in the code show the sign type, and the numbers identify the particular sign within that type.

The Sign Code Matrix below is an example of the charts that appear throughout the manual to give specifica-

tions for each sign. Below the matrix is a chart showing the sign codes in alphabetical order by sign type. The page numbers show where that sign type is first described and illustrated. (Note that the sign type UNS, for the eleven "undesigned" safety signs, has been retained to maintain continuity in existing project sign plans.)

There is a separate chart below showing the codes for custom signs (CST) that use standard grid formats. Note that CST signs differ slightly depending on whether they are to be viewed from land or from the water.

Sign Code Matrix Example

Sign Type	Legend Size (A)	Panel Size	Post Size	Specification Code	Mounting Height	Color Bkg/Lgd
UNS-11	1.51"	18" x 15.75"	4" x 4"	HDO-5	36"	RD/WH
UNS-11	2"	24" x 21"	4" x 4"	HDO-5	36"	RD/WH
UNS-11	3"	36" x 31.5"	4" x 4"	HDO-3	36"	RD/WH
UNS-11	4"	48.125" x 42"	4" x 6"	HDO-3	36"	RD/WH

Sign Type

Here are the codes identifying the sign types in alphabetical order.

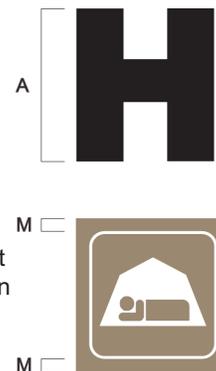
AC-000	Symbol of Access	p. 8.4	RSV-00	Reserved Facility	pp.7.16
APRDIR	Approach Road Directional	p. 6.3	SAF-00	Safety; Safety	p. 11.7
APRS-0	Approach Roadway Directional with Symbols	pp. 6.9-10	SCA-00	Safety; Caution	pp. 11.5-5a
BLM-00	Boundary	Sec. 10	SDA-00	Safety; Danger	pp. 11.4-4a
BTR-00	Boat Launch Ramp	pp. 7.23-28	SDR-00	Safety; Directional	p. 11.8
CID-00	Construction Project	Sec. 16	SECNID	Secondary Identification	p. 5.21
CMP-00	Campground	pp. 7.9-14	SLAT-0	Slat System	p. 8.23
CREDIT	Participation Credit Sign	pp. 5.18-19	SNO-00	Safety; Notice	p. 11.6
DNG-00	Undesignated Danger	Sec. 7	STANID	Standard Identification	pp. 5.4-6
DRSS-0	Directional Symbol Sign	pp. 8.5-6	SWM-00	Swimming Beach	pp. 7.18-21
ENT-00	Entrance Station	pp. 7.4-7	TR-000	Trail Marker	p. 7.36
FDI-00	Fire Danger Index	p. 7.34a-b	UNS-00	Undesignated Safety	pp. 7.29-30
HRS-00	Hours Open	pp. 7.31-32	WCA-00	Waterway Caution	Sec. 14
INT-00	Office Interior Signs	Sec. 18	WDA-00	Waterway Danger	Sec. 14
INTPRT	Interpretive	Sec. 13	WLI-00	Waterway Lock Instruction and Information	Sec. 14
NPK-00	No Parking	p. 9.12	W00-00	Traffic Warning (MUTCD)	pp. 9.5-8
PRJDIR	Project Roadway Directional	p. 6.11	WPM-00	Lake Mile Marker (Prime)	Sec. 14
PRK-00	Parking	p. 9.10	WRE-00	Waterway Restricted	Sec.14
PRK-AC	Disabled Access Parking	p. 9-10a	WRN-00	Undesignated Warning	Sec. 7
PS-0000	Prohibition Symbol	pp. 8.17-18	WS-000	Waterway Symbol Guide Signs	Sec. 14
REG-00	Regulatory Signs	Sec. 12	WSM-00	Lake Mile Marker (Sec)	Sec. 14
RES-00	Undesignated Restricted	Sec. 7	WWA-00	Waterway Warning	Sec. 14
R00-00	Traffic Regulatory (MUTCD)	pp. 9.2-4	WWSTID	Waterway Identification	Sec. 14
RS-000	Symbol Sign	p. 8.2			
RSID-0	Symbol Identification	pp. 8.2-3			

Custom Signs using standard grids

Custom Recreation Signs with Helvetica Bold legend (standard letterspace)			Custom Waterway Signs with Helvetica Medium legend (+30% extended letterspace)		
CST-01	Grid 1	p. 7.35	CST-04	Grid 1	p. 7.35
CST-02	Grid 2	p. 7.36	CST-05	Grid 2	p. 7.36
CST-03	Grid 3	p. 7.37	CST-06	Grid 3	p. 7.37

Legend Size

The height of the capital letters in the primary legend is also known as A. All dimensions of a sign will be described in terms of A. The size of the sign legend (A) is determined by the distance at which the sign is to be read. This letter size is calculated using the Viewing Distance Guide (see page 2.6). For symbol signs without worded legends, the signs are built around the dimension of the margin, known as M.



Panel Size	<p>Built around the length and size of the legend. The first number in the matrix is the panel width, which is based on the longest legend line, plus left and right margins. The second number is panel height, which is based on the number of legend lines, the size of the legend A, and the spacing between lines. All of these elements are shown on the grid format for that sign type. For catalog signs, panel sizes are fixed and appear in the matrix. For site-specific (custom)</p>	<p>signs such as identification or directional, panel sizes will vary with the legend, and cannot be determined until the typeset legend has been laid-out on the format grid. All dimensions are in decimals; a conversion chart is provided in Appendix E. When determining panel sizes round-off all dimensions to the nearest .125".</p>																																																																		
Specification Code	<p>Refers to the materials and fabrication techniques available for Corps signs as outlined in Appendix B. The specification for a given sign type may vary with the panel size, placement location or intended use. The number as shown on the matrix following the specification code indicates the mounting configuration and type of post assembly. Each material and sign assembly method is individually specified in Appendix B.</p>	<p>RRW-00 Routed Signs HDO-00 HDO Plywood Signs ALU-00 Aluminum Signs ICL-00 Individual Letter-forms SCP-00 Screen Printed Signs FRP-00 Fiber Reinforced Polyester IMP-00 Injection Molded Plastic PES-00 Porcelain Enamel/Steel FSM-00 Flexible Sign Markers WTW-00 Waterway Signs</p>																																																																		
Post Size	<p>Sizes are given for nominal dimensions, not the actual cross-section size of the post. For example, a nominal 4" x 4" post may be as small as 3.5" x 3.5", depending on how it is milled.</p>																																																																			
Mounting	<p>The distance from the ground to the bottom edge of a sign panel, also known as the HAGL (Height-Above Grade Level) or HAWL (Height Above Water Level) for Waterway signs.</p>																																																																			
Color	<p>Refers to both the background (Bkg) and the legend (Lgd) as displayed on pages 4.11-15.</p>	<table border="0"> <tr> <td>BR</td> <td>Corps Brown</td> <td>pp. 4.11</td> </tr> <tr> <td>WH</td> <td>White</td> <td>pp. 4.11,12,13,14,15</td> </tr> <tr> <td>BK</td> <td>Black</td> <td>pp. 4.11,12,14</td> </tr> <tr> <td>CR</td> <td>Communication Red</td> <td>p. 4.11</td> </tr> <tr> <td>CR</td> <td>Fire Red</td> <td>p. 4.15</td> </tr> <tr> <td>RD</td> <td>Red (FHA)</td> <td>pp. 4.12,14</td> </tr> <tr> <td>YL</td> <td>Yellow (FHA)</td> <td>p. 4.12</td> </tr> <tr> <td>OR</td> <td>Orange (FHA)</td> <td>p. 4.12</td> </tr> <tr> <td>GR</td> <td>Green (FHA)</td> <td>p. 4.12</td> </tr> <tr> <td>SR</td> <td>Safety Red (ANSI)</td> <td>p. 4.13</td> </tr> <tr> <td>SY</td> <td>Safety Yellow (ANSI)</td> <td>p. 4.13</td> </tr> <tr> <td>SG</td> <td>Safety Green (ANSI)</td> <td>p. 13</td> </tr> <tr> <td>SB</td> <td>Safety Blue (ANSI)</td> <td>p. 13</td> </tr> <tr> <td>SK</td> <td>Safety Black (ANSI)</td> <td>p. 13</td> </tr> <tr> <td>SW</td> <td>Safety White (ANSI)</td> <td>p. 13</td> </tr> <tr> <td>LY</td> <td>Lemon Yellow (Chartreuse)</td> <td>p. 14</td> </tr> <tr> <td>MB</td> <td>Medium Blue</td> <td>p. 14</td> </tr> <tr> <td>DG</td> <td>Office Dark Grey</td> <td>p. 15</td> </tr> <tr> <td>OD</td> <td>Office Dark Red</td> <td>p. 15</td> </tr> <tr> <td>OL</td> <td>Office Dark Blue</td> <td>p. 15</td> </tr> <tr> <td>OG</td> <td>Office Dark Green</td> <td>p. 15</td> </tr> <tr> <td>WG</td> <td>Office Warm Grey</td> <td>p. 15</td> </tr> </table>	BR	Corps Brown	pp. 4.11	WH	White	pp. 4.11,12,13,14,15	BK	Black	pp. 4.11,12,14	CR	Communication Red	p. 4.11	CR	Fire Red	p. 4.15	RD	Red (FHA)	pp. 4.12,14	YL	Yellow (FHA)	p. 4.12	OR	Orange (FHA)	p. 4.12	GR	Green (FHA)	p. 4.12	SR	Safety Red (ANSI)	p. 4.13	SY	Safety Yellow (ANSI)	p. 4.13	SG	Safety Green (ANSI)	p. 13	SB	Safety Blue (ANSI)	p. 13	SK	Safety Black (ANSI)	p. 13	SW	Safety White (ANSI)	p. 13	LY	Lemon Yellow (Chartreuse)	p. 14	MB	Medium Blue	p. 14	DG	Office Dark Grey	p. 15	OD	Office Dark Red	p. 15	OL	Office Dark Blue	p. 15	OG	Office Dark Green	p. 15	WG	Office Warm Grey	p. 15
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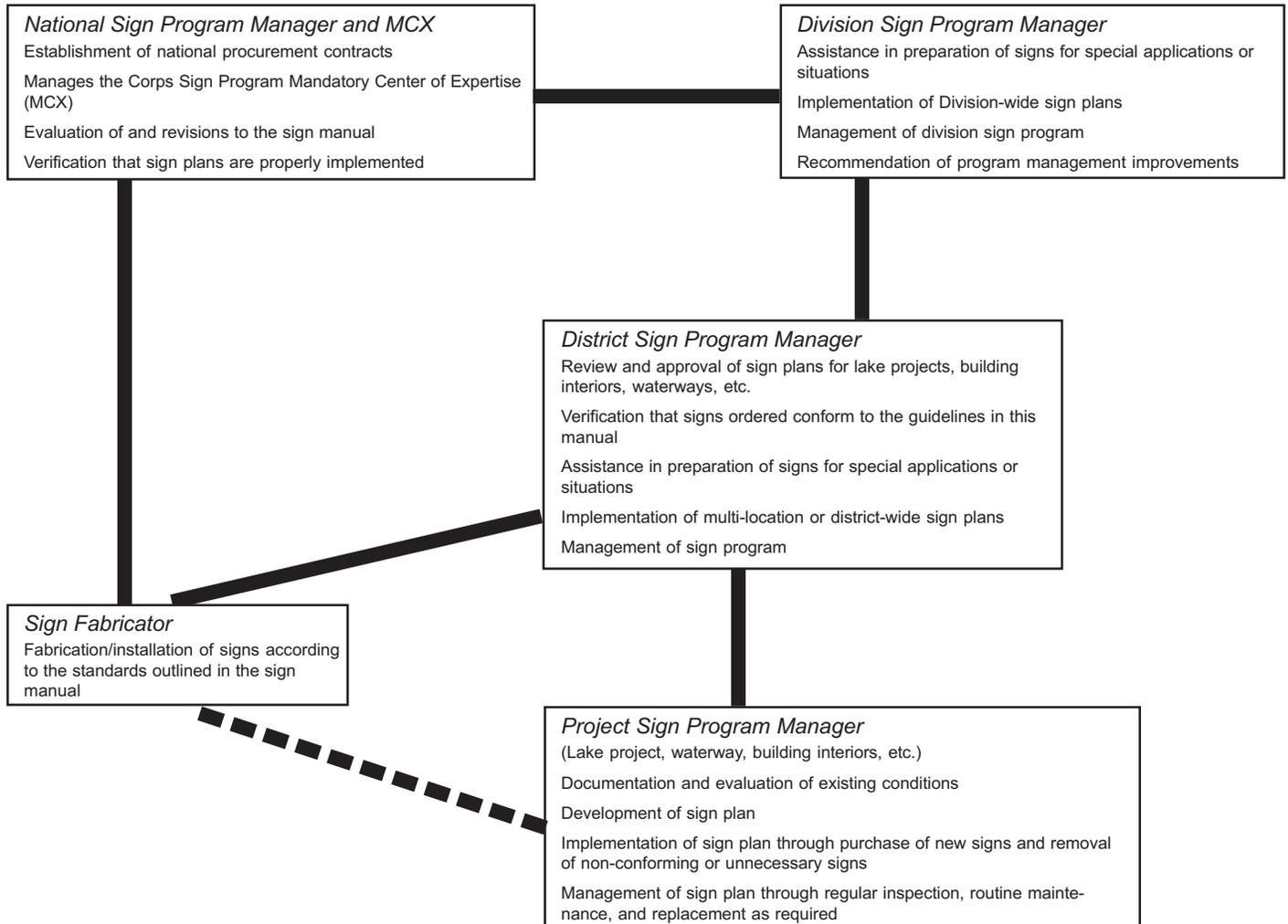
Program management will be the responsibility of trained individuals assigned as Sign Program Managers. There will be a Sign Program Manager for each project. At the district and division levels there will be a Program Manager to review sign planning and program implementation at all projects within that jurisdiction. The National Sign Program Manager will serve as a technical resource for all districts and divisions. The functions and responsibilities of Project, District, Division, and

National Sign Managers are described in the chart below. The qualifications and grade level of the person assigned to this role will vary depending on the size and complexity of the project, district or division. The basic job functions remain the same.

The guidelines provided in this manual will be used to implement and maintain a viable sign program at each project. All new and replacement signs will be

designed and constructed in accordance with this manual. Existing signs that do not conform to these guidelines will be scheduled for replacement on a priority basis.

Contact your district/division Sign Program Manager for assistance or advice when preparing a sign plan, ordering new signs or maintaining existing project signage.



The Sign Standards Manual is an ever evolving management tool. Users are encouraged to make recommendations that they feel will improve the overall program effort. Using the worksheet below, submit your recommendation to your district/division Sign Program

Manager. Approved recommendations should be forwarded to the National Sign Program Manager for review by the National Sign Advisory Committee. Changes in the manual will be made accordingly. Written responses will be provided.

1. Requested (check appropriate item)	<input type="checkbox"/> Revision	<input type="checkbox"/> Change	<input type="checkbox"/> Deletion	<input type="checkbox"/> Addition
	<input type="checkbox"/> Other			

2. Briefly describe action requested. Note Sign Standards Manual page numbers where and how proposed revision is to be used if applicable.

3. Briefly state reason for recommendation and alternatives tried.

4. Identify all benefits of change.

5. Identify all attached graphics and/or drawings, included to illustrate the issue.

Prepared by Project Sign Program Manager:	Name	Telephone
	Office	Symbol
	Address	
	City	State Zip Code

Concurrence by District Sign Program Manager:	Name	Telephone
	Office	Symbol

Concurrence by Division Sign Program Manager:	Name	Telephone
	Office	Symbol

When the Sign Standards Manual was developed, project managers identified common safety sign requirements from surveys sent to all districts and divisions. From those surveys, standard safety sign legends were established for clarity and brevity. Specific hazardous conditions may be identified that require a special or site-specific safety sign not included in the

manual. Once this need is identified, a procedure has been established to allow review of the proposed safety legend by the Chief Counsel's office. This process allows Sign Program Managers to make recommendations for additions to the manual. As a national system, specific signs developed by one project or district may be applicable to others. Through

communications, the Corps attempts to reduce potential safety hazards for visitors and others using our facilities. To request a new or site-specific safety sign, fill out the following description of the condition to be signed and the sign(s) proposed to help notify viewers of the hazard.

1. Describe the specific hazardous condition that requires a non-standard Danger or Warning type sign. Reference the Sign Standards Manual where applicable.

2. Describe what is currently being done to warn viewers and why this approach is not effective.

3. Identify the proposed sign format and legend.

Legend: Headline _____

Legend: Reason for Warning _____

Legend: Specific Prohibition _____

4. What unique conditions are present at this location which prohibit the use of existing standardized signs, or why existing standards are not applicable?

5. Describe how this proposed sign will be used to address this condition. Attach any photographs, site plans or relate visual materials that will help to illustrate your proposal. Identify if this proposed sign is intended for viewing by people on water or on land.

Requested by (office responsible for placing this sign):

Name		
Office	Telephone	Date

Approved by (Sign Program Manager);

Name	Symbol
------	--------

Reviewed by, and in concurrence with this request as presented:

District Sign Program Manager	Telephone	Date
Division Sign Program Manager		Date
HQUSACE Sign Program Manager (CECW-ON)		Date
Office of Counsel (CECC-K)		Date
Safety and Occupational Health Office (CESO-P)		Date