

## **Acknowledgements**

The Division of Technical Resources would like to thank the following individuals for their contribution in knowledge and time to make the NIH Interior Signage Guideline possible.

Ricardo Herring, FAIA  
Gabor Konkoly-Thege  
Alamelu Ramesh, P.E.  
Tracie Washington  
Michael Shaw  
Angela Watson  
Rayane Wood  
Charles Blumberg, FIIDA, Architect  
Ann Ellis  
Tom Ligis  
Xu Yichang, P.E.  
Walter Armstrong, AIA

The Division of Technical Resources would like to thank the following individual for composing the NIH Interior Signage Guideline.

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## **TABLE OF CONTENTS**

- A. Purpose
- B. Applicability
- C. Utilization of Standards
- D. Codes and Standards
- E. Wayfinding Strategy
- F. Signage System
- G. Building Directory and Orientation Signage
- H. Navigation System Signage
- I. Interior Space Identification Signage
- J. Interior Confined Space Identification Signage
- K. Means of Egress Signage

Appendix 1: Sample Specifications

Appendix 2: Signage Catalogue List

Appendix 3: Sample Signage

Appendix 4: UFAS Signage Design Parameters

## **A. Purpose**

This standard establishes the guidelines for developing interior signage plans and way finding strategies for NIH facilities, excluding the Clinical Research Center Complex (CRC). The CRC signage is governed by a separate guideline that is specific for that facility. This document shall be the guide for all interior signage within NIH facilities, whether owned or leased.

## **B. Applicability**

This guideline applies to NIH interior areas. The standard shall facilitate the establishment of comprehensive, flexible and uniform signage numbering systems.

The applicable use this guideline shall improve wayfinding by incorporating effective signage. This guideline will facilitate wayfinding and address the use of signage that clearly and uniformly communicate directions and provides readily understood messages. This guideline will assist in improving emergency egress. The guideline will also assist with the achievement of visual consistency and adherence to Government and national signage standards.

## **C. Utilization of Standards**

The Interior Signage Guideline provides guidance to improve the internal circulation within NIH facilities. This document is intended to be used to implement a consistent signage policy for new and renovated NIH facilities.

## **D. Codes and Standards**

All signage shall comply with the codes and standards referenced by the Uniform Federal Accessibility Standards (UFAS) and the Architectural Barriers Act (ABA). Under the ABA, the UFAS applies to Federally-funded design, construction, or alterations.

This guideline shall be used in conjunction with the project specific site guideline. Coordinate the signage design with any existing applicable Building Integrity Guideline, the campus Master Plan, the exterior campus signage system, and existing room numbering systems.

### **D.1. Codes and References**

- f* Uniform Federal Accessibility Standards (UFAS)
- f* International Building Code (IBC)
- f* Bio-safety in Microbiological and Biomedical Laboratories (BMBL)
- f* Accessibility and the International Code Council (ICC)

## **E. Wayfinding Strategy**

### **E.1. Developing a Wayfinding Strategy**

Wayfinding within NIH buildings is a challenge. The process of identifying the most appropriate wayfinding strategy for a particular building is dependant on several factors that are unique to that particular building. When designing a wayfinding strategy, consider the floor plan, egress routes, pedestrian travel paths, corridor decision points, and the various destination points within a building.

### **E.2 Travel Path**

One important factor in wayfinding is the analysis of employee and visitor travel paths. A determination of the various travel paths must be made. The travel path provides the foundation for the location of the signage.

Pedestrian travel paths must be reviewed. Determine the present paths as well as the desired travel paths. Determine if there are priority levels for travel paths. The path's level of importance may be based on the amount of use and or the destination point. These levels may be identified as primary and secondary paths. In cases where there are several travel paths to a destination, consider defining the desired visitor travel path. Navigation signs are to be placed along the travel paths.

### **E.3 Destination Points**

Destination points are those areas that are lead to from the travel paths. The process of identifying the travel path should yield a definitive identification of various destination points. There may be several destination points along one travel path.

Determine which offices receive the highest number of visitors and pedestrian traffic. Every office may not be considered to be a destination point. Determine the priority of the various destination points. The offices that are labeled as destination points, may be considered as higher priority areas. Place navigation signage at higher priority destination points.

### **E.4 Decision Points**

Consideration must be given to the location of intersecting corridors along the travel path. The intersecting corridors along the travel path are decision points. Place navigation signage at decision points.

## **E.5 Navigation Tools**

The primary navigation tool is signage. Additional options to consider are the identification of areas by color codes, symbols, and logos. Color coding is a very effective method of identifying floors of a building, departments and or suites. The color coding scheme may also be organized by floor areas on a particular floor. It is advised that the selected color coding scheme be a maximum of five (5) colors within a building.

Signage logo selection is another very effective method of identifying building areas. An example of this application is the selection of a particular design logo for the main office identification sign. The same office logo that is used on the office identification sign is repeated on every interior space at a smaller scale.

Combination color coding and logo signage identification may be used. This space identification method combines two (2) primary methods by having a specific signage color scheme and logo style assigned to a particular floor or office suite. The selection of a combination of color code and logo style is very common. An interior design color scheme for an office is typically carried over into to the signage color scheme. A style combination may be categorized by office suite, floor, and or the entire building.

The interior color scheme and logo style location is typically determined at the very early phases of the interior design process. The limitations of the selected style will also be determined at this time.

## **E.6 Signage Placement**

Signage placement is a very important aspect of an effective wayfinding strategy. A new visitor should be able to enter a facility and find any area of that facility by following the signage.

Develop a signage placement floor plan. This plan indicates the location of every sign and directory in the facility. The signage placement plan is to be keyed with a notation symbol based on the signage type.

## **F. SIGNAGE SYSTEM**

### **F.1 Planning**

The signage system should be consistent and flexible. There must be a planning phase for signage. An early determination of the amount of signage required, location, and type of signage must be made during the preliminary design phase. When preparing the signage system, consider the building's interior design, function and the wayfinding needs of the occupants and visitors.

## **F.1 Planning (continued)**

The signage systems should be flexible and capable of easily accommodating future spatial and personnel changes. The selected signage style shall compliment the interior space and enhance the department's logo and interior design scheme.

## **F.2 Specification**

The signage specifications shall be clear and concise. The design specifications will become more detailed as the design phase progress. Make a determination of the most appropriate signage style by selecting a style that compliments the interior design. Signage may be wall mounted, corner mounted, ceiling mounted or free standing. (See Appendix 1)

### **F.2.1. Signage Material**

There are several acceptable signage material types. Some of the more popular signage material selections are aluminum, acrylic, wood, stainless steel, brass, bronze, and copper. The signage material may be complimented by illumination features as well as material and color combinations.

#### **F.2.1.1 LED and LCD signs**

The incorporation of LED and LCD signage provides a unique category of signage material options. These signs are typically used for displaying messages for a wide audience.

The LED signs utilize light emitting diodes technology. There are large selections of LED signs. LED features may be incorporated in electronic signs and digital displays. Digital displays are available in multiple configurations including single-line scrolling signs, multiline information boards, full-matrix electronic billboards, stock tickers, and true color large LED video walls for high impact outdoor advertising displays.

The signage text can be different colors provided in a still format or in motion. The text may also move and incorporate visual effects such as changing messages and images. Changing images are limited to very simple graphics. LED technology may be used in building directory signage. These signs typically incorporate programmable digital text.

LED displays are networkable and programmed in several ways: locally by Infra-red wireless keyboard; connecting LED display directly to a PC via serial or USB ports; electronic sign equipped with wired or wireless Ethernet adapter could be integrated into existing LAN-WAN.

### **F.2.1.1 LED and LCD signs**

LED sign boards may be controlled from a centralized location, using a PC running Windows LED message software; and data transmitter with receivers for wireless LED display network.

The LCD digital signs utilize liquid crystal display technology. LCD signage can incorporate graphics, text, maps and interactive technology. They are flexible and programmable. Text and graphics information displays may be changed easily at the control center with the computer interface. The system can also be used to provide weather information, announcements and notifications.

### **F.2.2 Text Style**

Consider clarity and consistency when selecting text style, size, and specification. The text must be in accordance with the UFAS. Determine signs that are to be bilingual and or text and brail. Determine which signs will use illumination features. Determine which signs will incorporate changeable text letter boards.

#### **F.2.2.1 Braille**

All interior navigation and room identification signs shall have both visual and tactile text characters. Provide either one sign with visual and tactile characters, or two separate signs, one with visual and one with tactile characters.

### **F.3 Sustainability**

The incorporation of sustainability design principles shall be a part of the basic signage specifications. Provide a preference for sustainable material in the statement of work. Consider the following sustainable design features:

- f* Recycled signs
- f* Signage material manufactured with 10%-20% recycled content
- f* Signage manufactured regionally
- f* Signage that use low-emitting adhesives or no adhesives
- f* Energy efficient electronic signage systems

### **F.4 Installation**

The sign shall be mounted in accordance with the signage manufactures instructions and the UFAS. The mounting method shall minimize damage to walls and be able to withstand occasional pedestrian impacts.

## **F.5 Contract Documents**

The signage can be a task within the interior construction project or it can be a separate contract. Provide a complete description of the type, placement, and location of the signs.

The contract documents for a new or renovated facility shall ideally design the signage system in conjunction with the facility design. Provide a signage schedule that is directly in accordance with the signage plan. A signage schedule shall be provided within the contract documents.

Provide separate typical sign drawings for each signage type to indicate the type, text, font, location, message, and plaque size for all signs. Provide a requirement in the signage contract for verification of existing conditions prior to submitting the installation specifications. Require a signage sample in the submittal register. Provide signage specifications that are based on the MASTERSPEC Section 101400 Signage, or an equivalent specification template.

Signage design shall be in accordance with the UFAS. The signage placement, text style, text color contrast and all other pertinent features must be in accordance with the UFAS. Provide a statement of this requirement within the contract documents.

## **F.6 Signage Catalogue List**

Develop a flexible and maintainable alphanumeric signage labeling system. The system must allow for future additions of new signage groups. Refer to the signage catalogue within this manual for guidance (Appendix 2). Develop a project specific signage list.

## **G. Building Directory and Orientation Signage Types**

The building orientation map and directory provides information to determine where key building offices are located. Provide this map and or directory in the main and secondary entrance lobbies. Each floor should have a listing of key offices and suites, and their particular room locations.

### **G.1 Sign Placement**

Building orientation signage directories with or without maps shall be placed in the vicinity of the building main entrance lobby. The selected signage location shall be based on the building lobby or entrance design. The location of these signs must allow easy visibility while not impeding the mobility of persons passing through the lobby areas.

The main and secondary entrances of all buildings should have a building occupant directory sign. Consider placing these signs within main entrances and near the elevator lobby of secondary entrances.

Place signage to maintain a height of tactile characters at 48 inches above the finish floor minimum, measured from the baseline of the lowest tactile character and 60 inches maximum above the finish floor or ground surface, measured from the baseline of the highest tactile character.

### **G.1.2 Signage Type**

Provide signage types that are coordinated with the interior design of the space that they are in. There are several acceptable signage types for building directories. These are the signs that list the building occupants. Consider stand alone, wall mounted illuminated or non illuminated signs. Building directory signs can incorporate various text designs such as changeable message strip, illuminated text, LED, LCD and electronic touch screen interaction.

### **G.1.3 Sign Text Dimension and Size**

Reference the UFAS.

### **G.1.4 Sign Material**

The building orientation and directional signs are placed in areas with the greatest amount of pedestrian traffic. These signs will be touched often. Select signage materials and construction types that are durable and capable of withstanding pedestrian impacts.

## **H. Navigation System Signage**

### **H.1.2 Sign Placement**

As discussed in Section E, Wayfinding Strategy, navigation signage is a key feature of the overall wayfinding strategy. The best location for the navigation signage is at the decision point, within the travel path. These signs will reassure the traveler that they are headed in the right direction.

Navigation signs can be placed on the wall, suspended from the ceiling or from the corner. Signs that are placed suspended from the ceiling or corner shall not reduce the minimum required corridor ceiling height and width clearances, as stated by the pertinent building code. All signage wall placements shall be in accordance with UFAS.

### **H.1.2 Sign Placement (continued)**

Provide restroom navigation signage in nearby intersecting corridors, and lobbies.

### **H.1.3 Signage Type**

There are several acceptable navigation signage types. Some choices are: aluminum cast text, negative graphics, LED, LCD, electronic touch screen interaction and changeable message strip. Select an adjustable message strip signage type for altering office and suite names.

Unframed paper signs are prohibited.

### **H.1.4 Sign Dimension and Size**

Determine the size and dimension of the building directory sign based on the information that will be placed on it. All text size and dimensions are to be in compliance with the UFAS.

## **I. Interior Space Identification Signage**

Provide space identification signage for all rooms. The room identification signage shall indicate the function of the room.

### **I.1 Sign Placement**

The preferred location of the interior room signage is on the wall next to the latch side of the entrance door. The signage is to be placed in accordance with the UFAS. This guideline directs the placement of interior signage alongside the door on the latch side. Mount the signage at a height of between 54 inches and 66 inches (1370 mm and 1675 mm) above the finished floor.

### **I.1.2 Signage Type**

Provide signage that is consistent with the interior color scheme and interior design. Provide the room number, room name and the office logo. The following are areas that may require interior signage:

- f* Floor identification
- f* Room and suite
- f* Office suite cubicle
- f* Restrooms
- f* Stairways

## **I.1.2 Signage Type (continued)**

- f* Public elevators
- f* Housekeeping
- f* Building operation and maintenance
- f* Biological laboratory
- f* Hazardous area signage
- f* Chemical biological safety
- f* Emergency exits
- f* Egress routes
- f* Regulatory signage
- f* Fire and emergency regulation
- f* Access, use, and activity regulations

### **I.1.2.a. Biological Hazard Area Signage**

A biohazard sign must be posted on the laboratory entrance when etiologic agents are in use. Provide the following information on the biohazard signage:

- f* Agents in use
- f* Biological Safety Level
- f* Required immunizations
- f* Investigator's name, telephone number and required (personal protective equipment) PPE
- f* Required procedures for exiting the laboratory

### **I.1.2.b. Text Style**

Provide both visual and tactile text characters.

#### **I.1.2.1. General Hazardous Area Signage**

Identify all hazardous areas with signage. The following are areas that may require hazardous signage:

- f* Animal facilities
- f* Quarantine Areas
- f* Biological Containment Areas
- f* Chemical Storage
- f* High Noise areas
- f* High voltage areas
- f* Incineration rooms
- f* Hazardous Plant rooms
- f* Radiation areas

### **I.1.2.1. General Hazardous Area Signage (continued)**

- f* Roof access points
- f* Service tunnels

Use appropriate signage for identifying areas where an action is not permitted. Use the restricted area signage.

#### **I.1.2.1.b. Personal Protective Equipment (PPE)**

If persons within an area are required to wear personal protective equipment within the area, a mandatory PPE symbol sign is required.

#### **I.1.2.1.c. Emergency Related Equipment**

If emergency related facilities such as safety equipment or first aid facilities are within an area, an emergency information sign is required.

#### **I.1.2.1.d. Identification of a Particular Hazard**

Provide a danger sign for areas that identify particular hazard or hazardous conditions. A danger sign is required for conditions that are likely to be life threatening.

### **I.1.2.2. Restroom Signage**

Provide navigation signage in nearby intersecting corridors, main lobbies, and elevator lobbies that indicate directions to restrooms. Restroom signage shall clearly state the location of the restroom. Provide tactile text as well as Braille.

## **J. Interior Confined Space Identification Signage**

### **J.1.1 Sign Placement**

Make a determination of spaces that are classified as confined spaces. If the workplace contains permit required confined spaces, the employer shall post danger signs indicating the existence and location of the confined space. The signs indicate the danger posed by the permitted spaces. Provide signage that clearly identifies where the confined spaces are and any relevant access restrictions.

### **J.1.2 Signage Type**

Provide caution signage on the entrance door of each permitted confined space. The sign shall state DANGER – PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER or using other similar language would satisfy the requirement for a sign. The sign shall state that the space has been identified as a confined space and that the sign shall indicate the special equipment required in order to enter the space.

### **J.1.3 Sign Dimension and Size**

Reference the UFAS.

## **K. Means of Egress Signage**

Signage shall be placed at each door providing access to an egress path or area of refuge. The signage shall be in compliance with the International Symbol of Accessibility and the International Code Council (ICC) A117.1.

### **K.1. Signage Placement**

Place signage at exits and elevators serving a required accessible space. Place signage indicating the locations of accessible means of egress.

#### **K.1.1 Exit Signs**

Exit signs shall be internally illuminated. The word “EXIT” shall be in high contrast with its background and be clearly visible whether or not the exit signs are illuminated. Exit signs are to remain illuminated at all times. The exit sign illumination shall be connected to an emergency power system that is provided from storage batteries.

##### **K.1.a Signage Placement**

Provide a tactile sign stating EXIT adjacent to each door to an egress stairway, exit passageway and exit discharge area.

##### **K.1.b. Exit Sign Dimension and Size**

Exit signs and directional exit signs shall have plainly legible letters not less than 6 inches high. The principle stroke letters shall be less than .75 inch wide. The word “EXIT” shall have letters having a width not less than 2 inches wide, except the letter “I”, and the minimum spacing between letters shall not be less than .375 inch. Signs larger than the minimum shall have letter widths, strokes, and spacing in proportion to their height.

**K.1.c. Sign Illumination**

The face of the exit sign shall have an intensity of not less than 5 foot-candles.

**APPENDIX (1)**

**SAMPLE SPECIFICATIONS**

SECTION 101400 - SIGNAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
  - 1. Dimensional **illuminated** characters.
  - 2. Illuminated panel signs.

1.3 DEFINITIONS

- A. ADA-ABA Accessibility Guidelines: U.S. Architectural & Transportation Barriers Compliance Board's Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) , Uniform Federal Accessibility Guideline (UFAS).

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Show fabrication and installation details for signs.
  - 1. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
  - 2. Provide message list, typestyles, graphic elements, **including tactile characters and Braille**, and layout for each sign.
  - 3. Wiring Diagrams: Power, signal, and control wiring.
- C. Samples for Initial Selection: Manufacturer's color charts consisting of actual units or sections of units showing the full range of colors available for the following:
  - 1. Aluminum.
  - 2. Acrylic sheet.
  - 3. Polycarbonate sheet.
- D. Samples for Verification: For each of the following products and for the full range of color, texture, and sign material indicated, of sizes indicated:
  - 1. Dimensional Characters: Full-size Samples of each type of dimensional character (letter, number, and graphic element).
  - 2. Aluminum: For each form, finish, and color, on **6-inch- (150-mm-)** long sections of extrusions and squares of sheet at least **4 by 4 inches (100 by 100 mm)**.
  - 3. Acrylic Sheet: **8 by 10 inches (200 by 250 mm)** for each color required.
  - 4. Polycarbonate Sheet: **8 by 10 inches (200 by 250 mm)** for each color required.
  - 5. Photoluminescent Signs: Full-size sign.
  - 6. **Trim and Frame:** **6-inch- (152-mm-)** long sections of each profile.
  - 7. Accessories: Manufacturer's full-size unit.
- E. Qualification Data: For **Installer and fabricator**.
- F. Maintenance Data: For signs to include in maintenance manuals.
- G. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: **An employer of workers trained and approved by manufacturer.**

- B. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.
- C. Source Limitations for Signs: Obtain each sign type indicated from one source from a single manufacturer.
- D. Regulatory Requirements: Comply with applicable provisions in **ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1**.
- E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

## 1.8 COORDINATION

- A. Coordinate placement of anchorage devices with templates for installing signs.

## 1.9 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.
  1. Failures include, but are not limited to, the following:
    - a. Deterioration of **metal and polymer** finishes beyond normal weathering.
    - b. Deterioration of embedded graphic image **colors and sign lamination**.
  2. Warranty Period: **Five** years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Aluminum Castings: ASTM B 26/B 26M, of alloy and temper recommended by sign manufacturer for casting process used and for use and finish indicated.
- B. Aluminum Sheet and Plate: **ASTM B 209** alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 5005-H32.
- C. Aluminum Extrusions: **ASTM B 221**, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 6063-T5.
- D. Brass Castings: ASTM B 584, Alloy UNS No. C85200 (high-copper yellow brass).
- E. Brass, Yellow, Sheet: ASTM B 36/B 36M, Alloy UNS No. C26000.
- F. Bronze Castings: ASTM B 584, Alloy UNS No. C86500 (No. 1 manganese bronze).
- G. Bronze Plate: ASTM B 36/B 36M.
- H. Copper Sheet: ASTM B 152/B 152M.
- I. Steel:
  1. Galvanized Steel Sheet: ASTM A 653/A 653M, **G90 (Z275)** coating, either commercial or forming steel.
  - 2.. Stainless-Steel Sheet: ASTM A 240/A 240M or ASTM A 666, Type**304**, stretcher-leveled standard of flatness.
  3. Steel Members Fabricated from Plate or Bar Stock: ASTM A 529/A 529M or ASTM A 572/A 572M, **42,000-psi (290-MPa)** minimum yield strength.
  4. For steel exposed to view on completion, provide materials having flat, smooth surfaces without blemishes. Do not use materials whose surfaces exhibit pitting, seam marks, roller marks, rolled trade names, or roughness.
- J. Acrylic Sheet: ASTM D 4802, Category A-1 (cell-cast sheet), Type UVA (UV absorbing).
- K. Polycarbonate Sheet: Of thickness indicated, manufactured by extrusion process, coated on both surfaces with abrasion-resistant coating:
  1. Impact Resistance: **16 ft-lbf/in. (854 J/m)** per ASTM D 256, Method A.

2. Tensile Strength: **9000 lbf/sq. in. (62 MPa)** per ASTM D 638.
  3. Flexural Modulus of Elasticity: **340,000 lbf/sq. in. (2345 MPa)** per ASTM D 790.
  4. Heat Deflection: **265 deg F (129 deg C)** at **264 lbf/sq. in. (1.82 MPa)** per ASTM D 648.
  5. Abrasion Resistance: 1.5 percent maximum haze increase for 100 revolutions of a Taber abraser with a load of 500 g per ASTM D 1044.
- L. Applied Vinyl: Die-cut characters from vinyl film of nominal thickness of **3 mils (0.076 mm)** with pressure-sensitive adhesive backing, suitable for exterior applications.

## 2.2 DIMENSIONAL CHARACTERS

- A. Cast Characters: Produce characters with smooth flat faces, sharp corners, and precisely formed lines and profiles, free of pits, scale, sand holes, and other defects. Cast lugs into back of characters and tap to receive threaded mounting studs.

Alloy and temper recommended by sign manufacturer for casting process used and for use and finish indicated. Comply with the following requirements.

1. Character Material: **Aluminum**
  2. Thickness: **As indicated**
  3. Color(s): **As selected by Architect from manufacturer's full range.**
  4. Mounting: **Rosettes and fasteners matching character finish** for substrates encountered.
- B. Aluminum Extrusions: Comply with the following requirements:
1. Finish: **Anodized.**
  2. Thickness: **As indicated.**
  3. Custom Paint Colors: Match color matching system.
  4. Color(s): **As selected by Architect from manufacturer's full range.**
  5. Mounting: Concealed studs, **noncorroding** for substrates encountered.
- C. Fabricated Channel Characters: Form exposed faces and sides of characters to produce surfaces free from warp and distortion. Include internal bracing for stability and attachment of mounting accessories. Comply with the following requirements:
1. Illuminated **Backlighted** Channel Characters: Manufacturer's standard lighting including transformers, insulators, and other components. Make provisions for servicing and concealing connections to building electrical system.
  2. Aluminum Sheet: Not less than **0.090 inch (2.29 mm)** thick.
    - a. Finish: **Anodized, Painted, as indicated on the drawings.**
    - b. Custom Paint Colors: Match **Pantone** color matching system.
    - c. Color: **As selected by Architect from manufacturer's full range.**
  3. Bronze Sheet: Not less than **0.032 inch (0.81 mm)** thick.
  4. Brass Sheet: Not less than **0.032 inch (0.81 mm)** thick.
  5. Copper Sheet: Not less than **0.048 inch (1.22 mm)** thick.
  6. Steel Sheet: Painted, not less than **0.050 inch (1.27 mm)** thick for face and **0.031 inch (0.78 mm)** thick for returns.
    - a. Color: **As selected by Architect from manufacturer's full range.**
  7. Stainless-Steel Sheet: Not less than **0.050 inch (1.27 mm)** thick for face and **0.031 inch (0.78 mm)** thick for returns.
  10. Provide translucent acrylic face sheet of thickness indicated. Attach characters to sheet metal back channels. Provide required to illuminate sign faces evenly.
    - a. Color: **As selected by Architect from manufacturer's full range.**
- D. Molded Plastic Characters: **Thermoformed** and as follows:

1. Illuminated Characters: Provide manufacturer's standard lighting including transformers, insulators, and other components. Make provisions for servicing and concealing connections to building electrical system.
  2. **Integral Color Painted Finish: As selected by Architect from manufacturer's full range.**
- E. Cutout Characters: Provide characters with square-cut, smooth, **eased** edges. Comply with the following requirements:
1. Acrylic: **0.25 inch (6.35 mm)** thick.
    - a. Metal face laminated to acrylic base **with painted edges**.
      - 1) Brass Face: **Polished** finish.
      - 2) Stainless-Steel Face: **No. 8** finish.
      - 3) Metal Thickness: **0.030 inch (0.76 mm)**.
    - b. Custom Paint Colors: Match **Pantone** color matching system.
    - c. Color: **As selected by Architect from manufacturer's full range.**
  2. Aluminum Sheet: **0.125 inch (3.18 mm)** thick.
    - a. Finish: **Anodized**
    - b. Custom Paint Colors: Match **Pantone color** matching system.
    - c. Color: **As selected by Architect from manufacturer's full range, reference the finish schedule.**
  3. Brass Sheet, Yellow: **0.125 inch (3.18 mm)** thick.
  4. Bronze Sheet: **0.125 inch (3.18 mm)** thick.
  5. Vinyl: Pressure sensitive, [**3.5 mils (0.09 mm)**] thick.
    - a. Custom Paint Colors: Match **Pantone** color matching system.
    - b. Color: **As selected by Architect from manufacturer's full range.**
  6. Mounting: Mounting techniques varies based on the signage. Reference the signage drawings to mounting details. The mounting techniques incorporated are **Flush, Projected, Back bar, Bracket with concealed noncorroding studs** for substrates encountered.

### 2.3 ACCESSORIES

- A. Anchors and Inserts: Provide nonferrous-metal or hot-dip galvanized anchors and inserts as required for corrosion resistance. Use toothed steel or lead expansion-bolt devices for drilled-in-place anchors. Furnish inserts, as required, to be set into concrete or masonry work.

### 2.4 FABRICATION

- A. General: Provide manufacturer's standard signs of configurations indicated.
1. Welded Connections: Comply with AWS standards for recommended practices in shop welding. Provide welds behind finished surfaces without distortion or discoloration of exposed side. Clean exposed welded surfaces of welding flux and dress exposed and contact surfaces.
  2. Mill joints to tight, hairline fit. Form joints exposed to weather to exclude water penetration.
  3. Preassemble signs in the shop to greatest extent possible. Disassemble signs only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation, in location not exposed to view after final assembly.
  4. Conceal fasteners if possible; otherwise, locate fasteners where they will be inconspicuous.

### 2.5 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

## 2.6 ALUMINUM FINISHES

- A. Clear Anodic Finish: Manufacturer's standard Class 1 clear anodic coating, 0.018 mm or thicker, over a **satin (directionally textured)** mechanical finish, complying with AAMA 611.
  - 1. Organic Coating: Thermosetting, modified-acrylic enamel primer/topcoat system complying with AAMA 2603 except with a minimum dry film thickness of **1.5 mils (0.04 mm)**, medium gloss.

## 2.7 STEEL FINISHES

- A. Surface Preparation: Remove mill scale and rust, if present, from uncoated steel, complying with SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning," or SSPC-SP 8, "Pickling."
- B. Factory Priming for Painted Finish: Apply shop primer specified below immediately after surface preparation and pretreatment.
  - 1. Shop Primer: Manufacturer's or fabricator's standard, fast-curing, lead- and chromate-free, universal primer, selected for resistance to normal atmospheric corrosion, for compatibility with substrate and field-applied finish paint system indicated, and for capability to provide a sound foundation for field-applied topcoats despite prolonged exposure.
- C. Baked-Enamel Finish: Immediately after cleaning and pretreating, apply manufacturer's standard two-coat, baked-enamel finish consisting of prime coat and thermosetting topcoat. Comply with paint manufacturer's written instructions for applying and baking to achieve a minimum dry film thickness of **2 mils (0.05 mm)**.

## 2.8 STAINLESS-STEEL FINISHES

- A. Remove tool and die marks and stretch lines or blend into finish. Grind and polish surfaces to produce uniform, directionally textured, polished finish indicated, free of cross scratches. Run grain with long dimension of each piece.
- B. Directional Satin Finish: No. 4 finish.
- C. Mirrorlike Reflective, Nondirectional Polish: No. 8 finish.
- D. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.

## 2.9 COPPER-ALLOY FINISHES

- A. Sheet or Plate Finish: **Medium satin (directionally textured)** finish.
  - 1. Raised Finish: **Satin**.
  - 2. Recessed Finish: Etched **Painted**.
- B. Cast **Brass** Character Finishes: Manufacturer's **standard satin finish** with exposed surfaces free from porosity, burrs, and rough spots; with returns finished with fine-grain air blast.
- C. Clear Protective Coating: Coat exposed surfaces of copper alloys with manufacturer's standard, clear organic coating specially designed for coating copper-alloy products.

## 2.10 ACRYLIC SHEET FINISHES

- A. Colored Coatings for Acrylic Sheet: For copy **and background and frame** colors, provide colored coatings, including inks, dyes, and paints, that are recommended by acrylic manufacturers for optimum adherence to acrylic surface and that are UV and water resistant for **five** years for application intended.

## PART 3 – EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- B. Verify that items, **including anchor inserts, and electrical power** are sized and located to accommodate signs.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Locate signs and accessories where indicated, using mounting methods of types described and complying with manufacturer's written instructions.
  - 1.. Interior Wall Signs: Install signs on walls adjacent to latch side of door where applicable. Where not indicated or possible, such as double doors, install signs on nearest adjacent walls. Locate to allow approach within **3 inches (75 mm)** of sign without encountering protruding objects or standing within swing of door.
- B. Wall-Mounted Signs: Comply with sign manufacturer's written instructions except where more stringent requirements apply. Incorporated the following mounting techniques at locations indicated on the drawings and signage schedule.
  - 1. Two-Face Tape: Mount signs to smooth, nonporous surfaces. Do not use this method for vinyl-covered or rough surfaces.
  - 2. Hook-and-Loop Tapes: Mount signs to smooth, nonporous surfaces.
  - 3. Magnetic Tape: Mount signs to smooth, nonporous surfaces.
  - 4. Silicone-Adhesive Mounting: Attach signs to irregular, porous, or vinyl-covered surfaces.
  - 5. Mechanical Fasteners: Use nonremovable mechanical fasteners placed through predrilled holes. Attach signs with fasteners and anchors suitable for secure attachment to substrate as recommended in writing by sign manufacturer.
  - 6. Signs Mounted on Glass: Provide matching opaque plate on opposite side of glass to conceal mounting materials.
- C. Bracket-Mounted Signs: Provide manufacturer's standard brackets, fittings, and hardware for mounting signs that project at right angles from walls and ceilings. Attach brackets and fittings securely to walls and ceilings with concealed fasteners and anchoring devices to comply with manufacturer's written instructions.
- D. Dimensional Characters: Mount characters using standard fastening methods to comply with manufacturer's written instructions for character form, type of mounting, wall construction, and condition of exposure indicated. Provide heavy paper template to establish character spacing and to locate holes for fasteners.
  - 1. Flush Mounting: Mount characters with backs in contact with wall surface.
  - 2. Projected Mounting: Mount characters at projection distance from wall surface indicated.

### 3.3 CLEANING AND PROTECTION

- A. After installation, clean soiled sign surfaces according to manufacturer's written instructions. Protect signs from damage until acceptance by Owner.

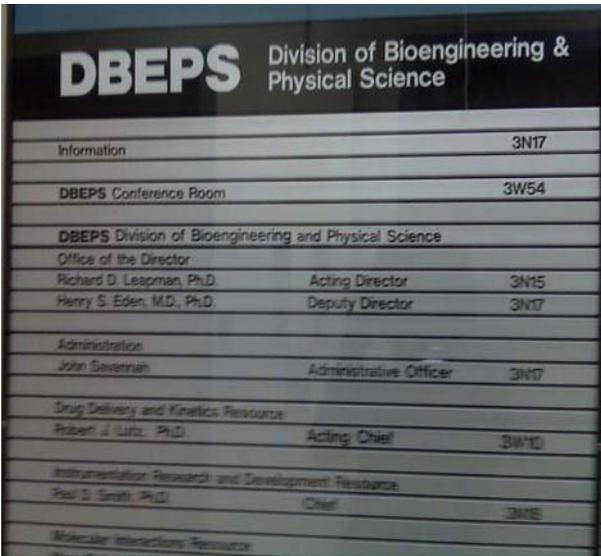
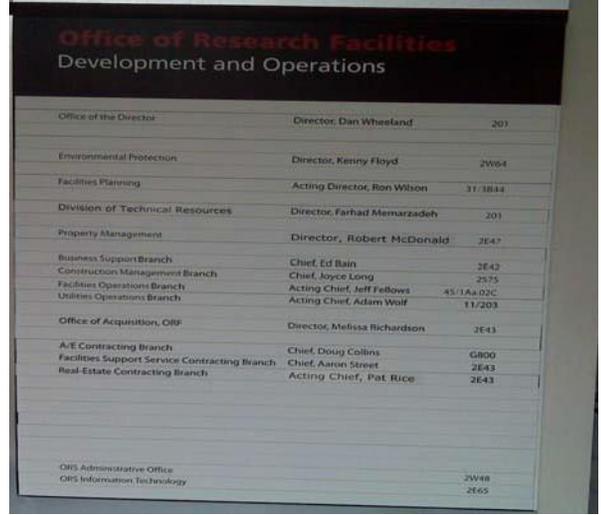
END OF SECTION 101400

## SAMPLE

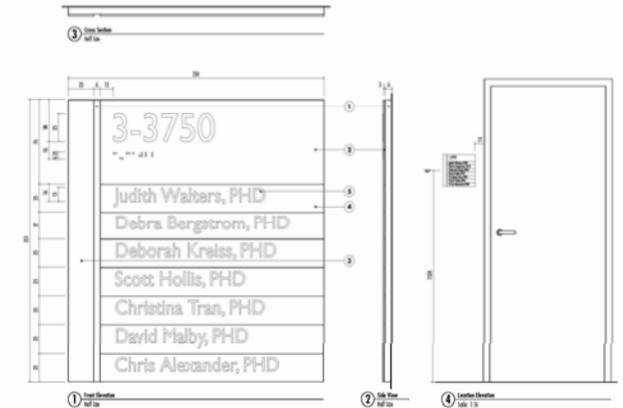
### Signage Catalogue List

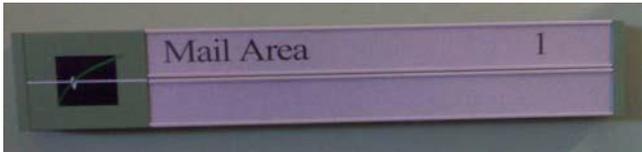
| Symbol   | Signage Type                               |
|----------|--|
| A1       | Building Orientation Map and Directory     |
| A2       | Navigation System Signage Secondary Lobby  |
| A3       | Navigation System Signage Public Corridors |
| A4       | Navigation System Signage Public Spaces    |
| A5       | Navigation System Signage Office Suites    |
| A6       | Navigation System Signage Ceiling Mounted  |
| A7       | Navigation System Signage Wall Mounted     |
| A8       | Navigation System Signage Corner Mounted   |
| A-9      | Floor Identification                       |
| A-10     | Corridor Directional                       |
| A-11     | Department Name                            |
| A-12     | Room and Suite Identification              |
| A-13     | Cubicle Identification Signage             |
| A-14.1   | Public Space Signage- Sign Type            |
| A-14.1.1 | Restrooms                                  |
| A-14.1.2 | Permanent Corridors                        |
| A-14.1.3 | Stairways                                  |
| A-14.1.4 | Public Elevators                           |
| A-14.1.5 | Housekeeping                               |
| A-14.1.6 | Building Operation and Maintenance         |
|          |  |
| B.1      | Hazardous Area                             |
| B-1.1    | Chemical Biological Safety                 |
| B-1.2    | Vivarium                                   |
| B-1.3    | Fire Protection                            |
| B-1.4    | Emergency Exits                            |
| B-1.5    | Egress routes                              |
|          |  |
| C-1      | Temporary Construction Signs               |
|          |  |
| D-1      | Regulatory Signage                         |
| D-1.1    | Fire and Emergency Regulation              |
| D-1.2    | Access, Use, and Activity Regulations      |
| D-1.3    | Safety and Hazard Warnings                 |

# SAMPLE SIGNAGE

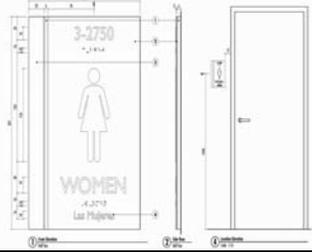
| Guideline Section  | Name  | Function  | Sign Symbol   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
|--|---|---|---|--|--|--|------------------------|------------------------|------|--------------------------|-----------------------|------|---|-----------------------------|---------|---------------------------------|-----------------------------|-----|---------------------------|---------------------------|------|----------------------------|-----------------|------|--------------------------------|-------------------|------|------------------------------|----------------------------|------------|-------------------------------------|-------------------------|--------|----------------------------|------------------------------|------|---|---------------------|------|---|---------------------|------|---------------------------------|------------------------|------|---------------------------|--|------|----------------------------|--|------|
| H  | Decision Points   | eNavigation System Signag   |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| G  | <b>Building Directory</b><br><br>Non – Illuminated Changeable Strip | Building Directory which indicates the offices on one floor of the building |  <table border="1"> <thead> <tr> <th colspan="3">DBEPS Division of Bioengineering &amp; Physical Science</th> </tr> </thead> <tbody> <tr> <td>Information</td> <td></td> <td>3N17</td> </tr> <tr> <td>DBEPS Conference Room</td> <td></td> <td>3W54</td> </tr> <tr> <td colspan="3">DBEPS Division of Bioengineering and Physical Science</td> </tr> <tr> <td colspan="3">Office of the Director</td> </tr> <tr> <td>Richard D. Leapman, Ph.D.</td> <td>Acting Director</td> <td>3N15</td> </tr> <tr> <td>Henry S. Eden, M.D., Ph.D.</td> <td>Deputy Director</td> <td>3N17</td> </tr> <tr> <td colspan="3">Administration</td> </tr> <tr> <td>John Savannah</td> <td>Administrative Officer</td> <td>3N17</td> </tr> <tr> <td colspan="3">Drug Delivery and Kinetics Resource</td> </tr> <tr> <td>Robert J. Lutz, Ph.D.</td> <td>Acting Chief</td> <td>3W10</td> </tr> <tr> <td colspan="3">Instrumentation Research and Development Resource</td> </tr> <tr> <td>Paul D. Smith, Ph.D.</td> <td>Chief</td> <td>3N15</td> </tr> <tr> <td colspan="3">Molecular Interactions Resource</td> </tr> </tbody> </table>  | DBEPS Division of Bioengineering & Physical Science      |  |  | Information            |                        | 3N17 | DBEPS Conference Room    |                       | 3W54 | DBEPS Division of Bioengineering and Physical Science |                             |         | Office of the Director          |                             |     | Richard D. Leapman, Ph.D. | Acting Director           | 3N15 | Henry S. Eden, M.D., Ph.D. | Deputy Director | 3N17 | Administration                 |                   |      | John Savannah                | Administrative Officer     | 3N17       | Drug Delivery and Kinetics Resource |                         |        | Robert J. Lutz, Ph.D.      | Acting Chief                 | 3W10 | Instrumentation Research and Development Resource |                     |      | Paul D. Smith, Ph.D.                          | Chief               | 3N15 | Molecular Interactions Resource |                        |      |                           |  |      |                            |  |      |
| DBEPS Division of Bioengineering & Physical Science      |   |   |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Information  |   | 3N17  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| DBEPS Conference Room                                    |   | 3W54  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| DBEPS Division of Bioengineering and Physical Science    |   |   |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Office of the Director                                   |   |   |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Richard D. Leapman, Ph.D.                                | Acting Director   | 3N15  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Henry S. Eden, M.D., Ph.D.                               | Deputy Director   | 3N17  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Administration   |   |   |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| John Savannah  | Administrative Officer  | 3N17  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Drug Delivery and Kinetics Resource                      |   |   |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Robert J. Lutz, Ph.D.                                    | Acting Chief  | 3W10  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Instrumentation Research and Development Resource        |   |   |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Paul D. Smith, Ph.D.                                     | Chief   | 3N15  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
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| Office of Research Facilities Development and Operations |   |   |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Office of the Director                                   | Director, Dan Wheeland  | 201   |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Environmental Protection                                 | Director, Kesny Floyd   | 2W64  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Facilities Planning                                      | Acting Director, Ron Wilson   | 31-1B44   |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Division of Technical Resources                          | Director, Farhad Memarzadeh   | 201   |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Property Management                                      | Director, Robert McDonald   | 2E47  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Business Support Branch                                  | Chief, Ed Bain  | 2E42  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Construction Management Branch                           | Chief, Joyce Long   | 2575  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Facilities Operations Branch                             | Acting Chief, Jeff Fellows  | 45/1Aa.02C  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Utilities Operations Branch                              | Acting Chief, Adam Wolf   | 11/203  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Office of Acquisition, ORP                               | Director, Melissa Richardson  | 2E43  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| A-E Contracting Branch                                   | Chief, Doug Collins   | G800  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Facilities Support Service Contracting Branch            | Chief, Aaron Street   | 2E43  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| Real-Estate Contracting Branch                           | Acting Chief, Pat Rice  | 2E43  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| ORF Administrative Office                                |   | 2W48  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |
| ORF Information Technology                               |   | 2E65  |   |  |  |  |                        |                        |      |                          |                       |      |   |                             |         |                                 |                             |     |                           |                           |      |                            |                 |      |                                |                   |      |                              |                            |            |                                     |                         |        |                            |                              |      |   |                     |      |   |                     |      |                                 |                        |      |                           |  |      |                            |  |      |

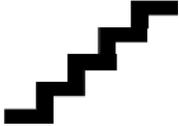
## SIGNAGE

| Guideline Section | Name  | Function  | Signage Symbol  |
|-------------------|---|---|---|
| <b>G</b>          | <b>Building Directory</b><br>Rear Illuminated | Building Directory which indicates the offices within the building                      |     |
| <b>I</b>          | <b>Suite ID</b>                               | Office suite personnel listing which indicates the employees within an office suite     |   |
| <b>I</b>          | <b>Suite ID</b>                               | Identify the office suite name which is placed at the main entrance of the office suite |  |

| <b>SIGNAGE</b>           |   |  |  |
|--------------------------|---|--|--|
| <b>Guideline Section</b> | <b>Name</b>   | <b>Function</b>  | <b>Signage Symbol</b>  |
| <b>I</b>                 | <b>Cubicle</b>  | List Name of function or person in a cubicle   |    |
| <b>I</b>                 | <b>Bilingual Room Identification Navigation</b>         | Identifies the different room types in English and Spanish   |   |
| <b>I.1.2.3</b>           | <b>Stair Location</b><br><br>Contract Document Drawings | Identify the stair location, indicating the level of the stair, consisting of bilingual text and Braille |  |

## SIGNAGE

| Guideline Section | Name   | Function   | Guideline Section   |
|-------------------|--|--|---|
| I.1.2.2           | <p><b>Women Restroom</b></p> <p>Contract Document Drawings</p> | <p>Identifies the placement of the restroom signage symbol, the room number as well as Braille</p>                       |     |
| J.1.2             | <p><b>Danger Confined Spaces</b></p>                           | <p>Confined Spaces Special Equipment Required prior to entry</p>   |     |
| I.1.2.1           | <p><b>Danger Asbestos</b></p>                                  | <p>Danger asbestos hazard warning that indicate the type of persons allowed in the space as well as the PPE required</p> |    |
| J.1.2             | <p><b>Danger Confined Spaces</b></p>                           | <p>Confined Spaces identification which restricts access</p>   |   |
| I.1.2.1           | <p><b>Biohazard</b></p>  | <p>Biohazard warning which identifies the type of hazard</p>   |  |

| <b>SIGNAGE</b>           |                     |   |   |
|--------------------------|---------------------|---|---|
| <b>Guideline Section</b> | <b>Name</b>         | <b>Function</b>   | <b>Sign Symbol</b>  |
| I.1.2                    | Radiation           | Radiation warning which indicates the present of radiation  |     |
| I.1.2.3                  | Stair               | Stair identification sign which shall be placed to identify the direction and location of the stair           |    |
| I.1.2.3                  | Elevator            | Elevation identification sign which shall be placed to identify the direction and location of the elevators   |   |
| I.1.2.2                  | Toilets             | Restroom identification signs which shall be placed to identify the location of the male and female restrooms |  |
| H.                       | Directional         | Directional signage placed along the travel path  |  |
| I.1.2.1.                 | Restricted activity | Signage that prohibits smoking  |  |

**UFAS Signage Design Parameters**

[Note: This section was taken from the most current Uniform Accessibility Standards (UFAS) as of March 2008. Reference the UFAS for the most current standard.]

**4.30 SIGNAGE**

**4.30.1\* GENERAL** Signage required to be accessible by 4.1 shall comply with 4.30.

**4.30.2\* CHARACTER PROPORTION** Letters and numbers on signs shall have a width-to-height ratio between 3:5 and 1:1 and a stroke width-to-height ratio between 1:5 and 1:10.

**4.30.3\* COLOR CONTRAST** Characters and symbols shall contrast with their background - either light characters on a dark background or dark characters on a light background.

**4.30.4\* RAISED CHARACTERS OR SYMBOLS** Letters and numbers on signs shall be raised 1/32 in (0.8 mm) minimum and shall be sans serif characters. Raised characters or symbols shall be at least 5/8 in (16 mm) high, but no higher than 2 in (50 mm). Symbols or pictographs on signs shall be raised 1/32 in (0.8 mm) minimum.

**4.30.5 SYMBOLS OF ACCESSIBILITY** Accessible facilities required to be identified by 4.1, shall use the international symbol of accessibility. The symbol shall be displayed as shown in Fig. 43.

**4.30.6 MOUNTING LOCATION AND HEIGHT** Interior signage shall be located alongside the door on the latch side and shall be mounted at a height of between 54 in and 66 in (1370 mm and 1675 mm) above the finished floor.





# **NIH Interior Signage Guideline**

- **Wayfinding Strategy**
- **Guidelines**
- **Standards**
- **Signage System Development**

October 2008



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