

Plastic, Aluminum and Vista Signs or Equal – Salient Characteristics

Palo Alto Veterans Affairs Medical Center
3801 Miranda Avenue, Palo Alto, CA 94304
Project 640-413, Building 520, Mental Health, 80-Bed Psychiatric Facility
Purchase Order: 640-12-1-057-0007

1.0 GENERAL

1.01 Summary

- A. Sign Contractor is to provide all labor, tools, equipment, materials and transportation in order to properly execute the project in accordance with the sign type drawings, location plans and specifications. Shop drawings produced by the Sign Contractor shall be used as the final documents and shall include all construction and installation details required for fabricating and installing the signs.
- B. Fabrication and installation shall be per the Owner's schedule.
- C. References: Furnish and install items of work and materials in conformance with applicable publications of those listed in the architectural documents as well as the following.

- 1. Architectural governing codes for this project:
2006 NFPA 101; 2006 IBC; VA Mental Health Guidelines; VHA Program
Guide, PG-18-3, November 2005; Uniform Federal Accessibility
Standards (UFAS)
- 2. All Federal, State, County and Local regulations applicable to this
project.

1.02 Submittals

- A. Identification: Each submittal item shall include the following: name of project, Sign Contractor's name, and date submitted. Each submittal shall include a transmittal form including the specifications section number and paragraph number.
- B. Schedule: Sign Contractor shall submit shop drawings, product data and samples as described in this document. Submission of shop drawings, product data and samples will be submitted in a timely manner so as not to cause a delay in signage work or work of other Contractors. Allow adequate time for all submittal review. Sign Contractor shall send submittals directly to the Designer with some submittals also sent to the Owner at the Owner's discretion. At the end of the submittal process, the Sign Contractor shall send the Owner all approved finish samples (one each), one digital copy and two hard copies of the final approved shop drawings.
- C. Designer and Owner Review

- 1. General: The review of shop drawings, product data and samples is only for the Owner's and Designer's convenience and does not relieve Sign Contractor from responsibility for any deviations from requirements of the Contract Documents. Do not construe the review as a complete check nor relief from responsibility for errors of any sort. The review of a

separate item does not indicate review of complete assembly in which it functions.

2. Submittals not stamped by Designer, and submittals that in the reviewer's opinion are incomplete, contain numerous errors or have not been checked or have only been checked superficially, will be returned for re-submittal.

3. If Owner and Designer agree that some or all documents, such as shop drawings and patterns, can be submitted digitally in Adobe Acrobat, the Sign Contractor is to provide easy means to upload and download large files to all interested parties (no email transmission unless files are small).

D. Initial submittal: 1 hard copy and digital set (Shop Drawings and patterns) and 2 items (Finished Product Samples/ Submittals) each are required unless indicated otherwise. All samples and shop drawings as defined below must be sent to and reviewed by the Designer (and by the Owner, as indicated) before signs can be fabricated. The consequence of fabrication based on any sample or shop drawing not approved by the Designer may be the rejection of any and all finished and installed signs with unapproved elements.

1. Graphic and Typography Pattern Submittals

- a. Graphic patterns/ layouts (including outline of plaque or panel)

for the following sign types, 1 hard copy set. Pattern sizes as noted. Some or all patterns may be submitted to Designer as digital files in lieu of hard copy drawings if practicable and agreed upon in advance. Note that all necessary shop drawings and typography submittals must be submitted and approved before graphic patterns can be done (see following requirements). Patterns will contain a solid black outline, indicating the outline of the sign and other constructed elements. Patterns will be on white paper with solid black letterforms and graphics, and shall be organized in compiled PDF sets, per group as listed below.

- (1) Sign Types V.FDIR1, V.DIR1, V.DIR2, E.DIR1, L1, L2, L3, G1, V.SF1, V.SF2, R10, E.ID3, E.ID4, all messages, at largest standard scale that will fit on 11" x 17" sheets. Each message shall be accompanied by the sign number and shall be organized by sign type to facilitate review.

- (2) Sign Types IN1, V.IN1, V.PD1, R1, V.R1, R5, V.R5, V.R6, V.R7, C.R8, all messages at ½ full size on 11" x 17" sheet. Each message shall be accompanied by the sign number and shall be organized by sign type to facilitate review.

- (3) Sign Types ID1, (patient room and non-patient room), ID2, E.ID2, V.ID1, V.ID2, V.ID3, R9, one longest message for each sign type, full size. R9 may be ½ full size.

B. The Designer and Owner reserve the right to add to and otherwise

modify text and lettering layout during the shop drawing and pattern review phase at no additional cost to the Owner. Any changes are anticipated to be minor.

2. Finished Sample Products/ Submittals (one each or as indicated):

NOTE: All necessary shop drawings, patterns and color/ material submittals must be submitted and approved prior to fabrication of these product submittals. All painted samples must include all necessary primers and finish coats.

- a. Sign Types V,DIR1, ID1 (patient room), ID2, E, ID2, V, ID2, V, R1, R10, one finished sign each, with attachments.
- b. Sign Type L1: one 3" high finished letter "B".
- c. Sign Type ID1 (patient room), IN3, V, IN3, R, V, R3: proofs of digital graphics, full size. May require multiple samples to get colors of graphics acceptable and approved. For Type ID1, patient room sign, Beige printed background color to match project standard paint; it shall be the responsibility of the Sign Contractor to adjust digital files so that print samples match these two paint colors as well as PMS colors for the leaf image.
- d. Photos of sign fabrication in progress as requested by Designer to be emailed periodically.

3. Shop Drawings

- a. Sign Contractor shall submit 11" x 17" shop drawings for fabrication and erection of all Sign Types in the form of compiled pdf files. Designer and Owner will provide comments digitally directly on files in Adobe Acrobat.
- b. Any editable files requested by Designer shall be saved in the programs that originally generated them by Designer.
- c. At the end of the fabrication process, the Sign Contractor will provide the Owner and Designer with an "as built" set of drawings, documenting any and all revisions made during the course of the project. At the onset of the project, Designer will upload via the internet for Sign Contractor's use, digital files of design drawings and sign location plans (Adobe Illustrator CS5 for Macintosh), as well as copy schedules (Microsoft Excel 2011 for Macintosh). All drawings should be included in final shop drawing set with Sign Contractor's title block with reference to the Designer.
- d. Sign Contractor shall be responsible for engineering all items so they are structurally safe and sound to withstand the conditions that are ordinary in its designed purpose. In checking shop drawings, verify dimensions and field conditions, and check and coordinate shop drawings of any section or trade with requirements of other sections or trades as related thereto, as required for proper and complete installation of Work.

- e. If applicable, Sign Contractor shall provide details to provide suitable materials, gauges, footings, anchors, materials compatibility, structural integrity, etc for proper and secure mounting. Show all anchorages and accessory items.
- f. Sign Contractor will be responsible for confirming by field measurements all dimensions for all sign types.
4. Vinyl colors: 8" x 8" samples, 2 each.
5. Paint colors: 8" x 8" samples of each color, 3 each, in appropriate type and finish (including primer and finish coats) on appropriate substrate as specified for sign type. Surface or subsurface paint as shown on drawings.
6. 8" x 8" x .040" thick clear PETG panel (transparent thermoplastic polymer resin sheet) with clear non-glare photopolymer.
7. 8" x 8" x .060" thick non-glare polycarbonate lens (for use with tactile insert window sign frames).
8. Full size sample of typical V.ID3 name insert (paper print).
- E. Manufacturer's Data
1. Submit copies of manufacturer's printed specifications, installation and maintenance instructions for products to be used in the fabrication of signs and graphics work.

1.03 Quality Assurance

- A. Sign Contractor shall assign to the job a project manager who is fully aware of all aspects of the job at all times.
- B. Sign Contractor shall furnish at his or her own cost all labor, tools, materials, expendable equipment and transportation services required to perform and complete the work in the best possible and most expeditious manner.
- C. Should Sign Contractor find discrepancies in, or omissions from the Sign Program bid documents, he or she should at once notify the Designer in writing. All drawings and specifications are mutually dependent. In the event of a discrepancy or error, the Sign Contractor shall bring it to the attention of the Designer for clarification as neither one rules over the other.

1.04 Delivery, Storage and Handling

- A. Furnish factory wrapping, packaging, and other means necessary to prevent damage or deterioration during shipment, handling, storage and installation.
- B. Maintain protective coverings in place and in good repair until removal is necessary.

C. Store products in enclosed facilities and maintain storage spaces and products in dry and temperate conditions.

1.05 Job Conditions

- A. Inspection of site: Examine related work surfaces before starting work. Report to Owner, any site conditions which will prevent the proper provision of this work. Beginning the work without reporting unsuitable conditions constitutes acceptance of site conditions by Sign Contractor, with changes or additions of work caused by unsuitable conditions provided at no additional cost to the Owner.
- B. Coordination: Coordinate and cooperate with General Contractor, other subcontractors and/ or the Owner to enable work to proceed as rapidly and efficiently as possible. Any additional work incurred resulting from the lack of contractor coordination shall be done at the Sign Contractor's expense.
- C. Contractor shall remove all debris off-site daily. Contractor cannot use Owner's garbage/debris containers.

2.0 PRODUCTS

2.01 Signs, General

- A. Provide graphic items as completed units produced by a single manufacturer, including necessary mounting accessories, fittings and facings.
- B. Do not deliver units until approved by Owner and area is ready for installation. Protect from damage during delivery, handling, storage and installation.
- C. Verify with Owner, prior to fabrication, any revisions to sign schedule included hereinafter.
- D. Take field measurements prior to preparation of sign patterns and fabrication, where possible. Allow for trimming and fitting whenever the taking of field measurements before fabrication might delay work.
- E. Pre-assemble item in shop to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembling and coordinated installation.
- F. All sign panel surfaces to be smooth, even and level. All edge, corner and butt joint conditions to be square and true (90 degrees). All exposed welds to be ground smooth. All fasteners to be concealed where possible. Ease all sharp corners.
- G. Statement of Application

1. The Sign Contractor, by commencing signage fabrication work, assumes overall responsibility, as part of the warranty of work, to assure that assemblies, components and parts shown or required within the work shall comply with the contract documents. The Sign Contractor shall further warrant:

- a. That all components, specified or required to satisfactorily complete the installation, are compatible with the conditions of installations.
- b. The overall effective integration and correctness of individual parts and the whole of the system.
- c. Compatibility with adjoining substrates, finishes, materials, and work by other trades.
- d. There shall be no premature materials failure due to improper design and fabrication of the system. All materials are to fully perform to their normal life expectancy per industry standards.

2.02 Project Standards

A. Graphics and Typography

1. Typestyles: Helvetica Neue 55 Roman, 65 Medium and 75 bold, weights to match typestyles shown on drawings and Graphic Standards Sheet.
2. Layout drawings are to be used for placement of graphic elements only. All correct wording is listed in the copy schedule.
3. Arrow: As shown on sign type drawings.
4. Execution: Letter and word spacing to match layouts in sign type drawings as closely as possible while complying with all applicable codes and regulations. All letter and word spacing to be even and consistent. Sign Contractor to correct all spacing irregularities before patterns are submitted for approval. If copy required does not fit in space provided, slightly smaller or condensed lettering may be considered for approval. Copy on tactile signs to be adequately spaced per applicable Federal guidelines and regulations.
5. Letter forms and symbols shall be photographically precise, crisp, clean and free of ticks, discontinuous curves, free of line waves, cut or ragged edges, edge build-up, bleeding, surface pinholes, and other imperfections.

B. Custom paint colors as shown on Project Standards sheet.

C. Applications and Finishes

1. Paint type/ finish
 - a. Polyurethane enamel, finish to meet ADA requirements where applicable:
 - (1) Provide Low VOC (to meet or exceed standards set by the State of California), polyurethane enamel with ultraviolet inhibitors, lightfast, weather, abrasion and wear resistant additive as supplied by, or equal to:

Matthews Paint Co.
Pleasant Prairie, WI
800-323-6593

- (2) Coatings shall be applied per manufacturer's specifications.
- (3) All paint finishes must be allowed to dry and cure properly in sign shop, per manufacturer's instructions, prior to graphic application and installation.

- D. Braille
 - 1. Braille to comply with all codes and regulations applicable to this project.

2.03 Materials/ Sign Products

A. Vinyl

- 1. Computer cut vinyl
 - a. Utilizing fonts to match construction drawings.
- 2. Specific vinyl as shown on Project Standards sheet, as manufactured by 3M or equal.
- 3. All vinyl graphics are to be applied per vinyl film manufacturers recommended methods with no bubbles, blisters, tears or folds in film permitted. Any graphic elements with edges not completely adhered to the substrate are considered defective.
- 4. 2 mil. High performance vinyl only.

B.

- Paint (Opaque paint for plastic sign panels)-- coatings & preparation instructions:
 - 1. Surface Preparation: Prior to priming or painting, acrylic to be free of dirt, oil, grease or any other substance that might impair adhesion of primer or paint.
 - 2. Follow manufacturer's instructions and specifications for recommended ingredient ratios, quantities and application methods.
 - 3. Spray apply.
 - 4. Colors: see Project Standards Sheet.

C.

- Paint (Opaque paint for aluminum panels, structures and exposed attachments)-- coatings & preparation instructions:
 - 1. Surface Preparation: Prior to priming or painting, aluminum to be free of dirt, oil, grease or any other substance that might impair adhesion of primer or paint.

2. Metal Primer Pre-treatment: Wash exposed metal surfaces with acid/water solution cleaner.
 3. Aluminum Primer Pre-treatment: Prime aluminum with phosphate activated metal treatment to help provide improved inter coat adhesion.
 4. Primer: Spray apply epoxy primer over all substrates per manufacturer's specifications, including dry film thickness.
- D. Paint Finish Coat: Spray apply 2 finish coats to a dry film thickness of 1.5 to 2 mils. Silver metallic paint shall have a clear gloss top coat.
1. Follow manufacturer's instructions and specifications for recommended ingredient ratios, quantities and application methods. Should these differ from those specified above, notify the Owner prior to executing further work of this section.
 2. Colors: see Graphic Standards Sheet.
- E. Plastics
1. Sheet
 - a. Non-glare or clear: Optix by Plaskolite Inc. or equal, thicknesses as specified.
 - b. PETG panel (transparent thermoplastic polymer resin sheet)
 - c. Polycarbonate
 - d. Mylar (thin, strong polyester film)
 - e. Material for raster method tactile lettering: single ply, integral color, modified acrylic sheet with matte, non-glare finish, "ADA Alternative Substrate & Applique", as manufactured by Rowmark, LLC, 800-243-3339, or equal.
 2. All signs with painted subsurface background colors to have unpainted, smooth, milled edges. No rough saw marks permitted.
- F. Fasteners
- a. Non-corrosive type
- G. Signs with photopolymer (photo-sensitive synthetic compound that hardens when exposed to an ultraviolet light source):
1. Photopolymer composition: provide only moisture resistant nylon based photopolymer resin with a Durometer hardness rating between 70 and 80 Shore D. Exterior rated photopolymer to be used for all exterior signs (water proof synthetic rubber photopolymer layer that is exterior rated immediately upon initial exposure. Durometer hardness rating of 90 Shore D.)

2. As produced by NOVA POLYMERS, INC., P.O. Box 1305, West Caldwell, NJ, 07007, telephone 888-484-NOVA (6682) or equal.
 3. Process to factory specifications only using approved processing methods and equipment. Use only computer generated, professional grade film. Use of vellum film is not acceptable.
 4. Sign Base: as shown in sign type drawings.
 5. Use of lacquer-based paints is not acceptable.
- H. Signs with Raster/ Braille Process:
1. Raised Letters:
 - a. 1/32" from plaque surface, precisely formed, uniformly router or laser cut or non-glare acrylic tactile graphics with integral color. No roughly cut edges permitted. No penetration or scratching of substrate permitted. Use non-visible adhesive to create permanent bond to plaque surface.
 2. Braille Graphics:
 - a. Braille copy is individually drilled holes to accept glass or plastic rasters for Braille message.
- I. Aluminum
1. Sheet/ angle, thickness as shown on drawings or as required for rigidity, strength, flatness and smoothness. Show all thicknesses in shop drawings.
 - a. V.PD1 Mandatory Policy sign, R3 and V.R3 evacuation maps, and V.ID3 name inserts, to be digitally printed in color on white, high quality coated cover stock paper.
- J. Adhesives
1. For wall plaques except for thin signs in Patient Units B, C & D, utilize appropriate double-sided tape (and silicone as necessary) for strong and durable attachment to wall.
 2. For thin sign plaques in Patient Units B, C & D:
 - a. Thin, very high bond, double sided adhesive: 3M™ VHB™ Plus Acrylic Foam Tape, White. Tape shall cover the entire back of the sign.
 - b. Before tape is adhered to the back of the sign and the sign is installed on the wall, the back of finished sign and the wall area where sign is to be attached must be thoroughly cleaned per tape manufacturer's instructions.

- A. Design components to allow for expansion and contraction of a minimum material temperature range of 100 degrees F., or as required to successfully withstand weather conditions in Palo Alto, CA, without causing buckling, excessive opening of joints or over-stressing of welds and fasteners.
- B. Use concealed fasteners whenever and wherever possible unless the design clearly intends for fasteners to be visible. All exposed fasteners intended to have minimal visual impact shall be counter sunk and shall match the color and finish of the sign area where they occur.
- C. Items shall be shop fabricated so far as practicable. Joints shall be fastened flush to conceal reinforcement.

3.01 Fabrication

3.0 EXECUTION

- 1. Owner shall provide, in Microsoft Word format, digital files of all copy for all inserts. Upon completion of job, Sign Contractor shall provide Owner with template in Microsoft word for name inserts.
- L. Sign Type V.ID3
 - 1. Modular sign system comprised of convex curved extrusions made of aluminum alloy 6063, with clear anodized coating of between 10-30 microns. Side edges of extrusion to be curved channels into which inserts slide. Metal end caps: aluminum alloy 5052 with clear anodized finish. All corners of end caps to be curved except the face that abuts the extrusion. End caps to screw into extrusion.
 - 2. The frame or sign holder system must allow for easy updating of the insert. It must accommodate a variety of flexible insert materials, including paper, mylar and polycarbonate. Extrusion must be able to hold insert thicknesses of:
 - up to .08" for extrusion widths up to 4-3/4" wide
 - up to .118" for extrusion widths between 5"-8" wide
 - up to .1" for extrusion widths over 8" wide
 - 3. Frames must be able to attach to mounting surface with both adhesives (double sided tape or silicone) and hidden mechanical fasteners (counter sunk screws behind the face).
 - 4. Steel bases made of steel alloy ST37-2 with a thickness of 4-6mm.
 - 5. System must have a lifetime warranty under normal working conditions.
 - 6. As produced by Vista System, Inc.: 800-468-4782, or equal.
- K. Insert Windows and post stanchions (with curved faces):

D.	Contact surfaces of connected members shall be ground true. Parts shall be so assembled that joints will be tight and practically unnoticeable, without use of filling compound.
E.	Signs shall have fine, even texture and shall be flat and sound. Lines shall be sharp, arises unbroken, profiles accurate and ornament true to pattern. Plane surfaces shall be smoothed flat and without oil canning. Maximum variation from plane of surface plus or minus 1/32". Filled or cut areas shall have texture restored.
F.	Holes for bolts and screws shall be drilled. Exposed ends shall be milled smooth, sharp edges shall be eased, and corners slightly rounded.
G.	All painted surfaces, including sign panel edges, shall be properly primed and finish coating of paint shall be complete with no light or thin applications allowing substrate or primer to show.
3.02	Installation
A.	Protect products against damage during field handling and installation.
B.	Protect adjacent, existing and newly placed construction and finishes as necessary to prevent damage during installation.
C.	Meet with Designer and Owner on-site prior to installation, to verify specific locations of ALL signs. Mounting heights will be verified at this meeting. The Sign Contractor shall be responsible for coordination with General Contractor, and shall review architectural conditions for layout and location of all related items, necessary connections to work of other trades, and potential installation conflicts.
D.	For all signs attached with mechanical fasteners and/or studs to permanent construction, coordinate with Owner, General Contractor and Architect. It shall be the responsibility of the Sign Contractor to obtain all necessary information to ensure safe and code compliant installations for interior signage. Any damage to other construction or site work caused by the Sign Contractor shall become the his responsibility.
E.	Sign Contractor to provide Owner with detailed fabrication and installation schedule within 1 week of awarding of contract, if more detail is required. Installation must coordinate with General Contractor's schedule for related site work.
F.	It is inevitable that some room identification signs throughout the facility will not fit in locations dictated by applicable accessibility regulations. It is the responsibility of the Sign Contractor to obtain Owner's permission of any non-compliant sign locations.
G.	Provide vinyl backer for any signs installed on glass. Verify in field. Designer to specify standard vinyl color for backers. Vinyl shall be sized so that it is 1/8" less wide each side than sign installed on other side of glass.
H.	Sign Contractor shall be responsible for taking accurate field measurements as required to verify or supplement dimensions indicated herein and shall be responsible for accurate fit of all signs on site.

I.	Signs shall be delivered and installed as noted in the project timeline/ schedule. No exceptions shall be permitted unless approved in writing by the Owner.	
3.03	Field Quality Control	
A.	All sign elements shall be accurately fabricated and fit for easy assembly; install plumb, level and in proper alignment as shown, and per manufacturer's recommendations.	
B.	Sign Contractor shall warranty all sign products to be unconditionally guaranteed for a two (2) year period. Sign products to be free from defects such as cracking, peeling, abnormal fading or discoloration, delamination, pin holes, staining, gloss reduction, rusting or other adverse conditions due to the quality of materials or workmanship in manufacture or installation. Specific materials shall be guaranteed according to manufacturers' specifications. During the warranty period, the Sign Contractor agrees to restore defective work to the standard of contract documents without cost to the Owner, including materials and labor.	
C.	Signs shall be mounted level and plumb according to the plan locations and the dimensions given on the elevation drawings. Where otherwise not dimensioned, signs shall be installed where best suited to provide an even and consistent appearance throughout the project. When the exact position, angle, height or location of a sign is in doubt, the Sign Contractor shall contact the Owner, General Contractor and Architect for clarification.	
D.	The Sign Contractor shall fabricate and assemble each unit, in the shop, as complete as possible and as specified, before delivering to the job site to assure that each unit is installed with its correct components.	
E.	At the completion of each day the Sign Contractor shall return and store in the Sign Contractor's shop all signs, materials and parts that are not completely installed.	
F.	The Sign Contractor shall own and be responsible for all signs that are damaged, lost or stolen while materials are on the job site and up until the completion and final acceptance of the job.	
G.	The Sign Contractor shall notify the Owner a minimum of ten (10) days before the delivery of materials and on-site work to begin.	
3.04	Clean-up	
A.	Clean all exposed sign surfaces after completing installation.	
B.	Sign Contractor shall remove all packing and debris from the project site upon completion and leave the site in a condition that is clean and free of damage and abuse.	
3.05	Punch List	
A.	The Owner and Designer will inspect the project within one week upon written notice of completion from the Sign Contractor, and will issue the punch list within one week of that inspection.	

B. The Sign Contractor is to complete all punch list items within two weeks of receipt of punch list, or sooner if project schedule requires and requested by Owner.