

STATEMENT OF WORK  
FOR CONSTRUCTION SOLICITATION

Date: 23 August 2016

PROJECT TITLE: B1173 Repair Exterior Doors  
PROJECT LOCATION: B1173 Coddington Point  
Naval Station Newport, Newport, RI

PART I - PROJECT SCOPE AND GENERAL INFORMATION:

1. GENERAL INTENTION: It is the declared and acknowledged intention and meaning to retain the services of a qualified contractor for a complete and ready to use product.

2. GENERAL DESCRIPTION: Provide all labor, materials, transportation, equipment, supplies and supervision to replace access main entrance doors as described herein, complete and ready for use.

3. LOCATION: Building #1173 CP Navy Station Newport, Newport, RI

4. COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK: The contractor shall commence work under the contract within 30 calendar days after the date of contract award. The contractor shall complete the entire work, ready for use, within 100 calendar days. The time stated for completion shall include final clean-up of the premises. The contractor shall set up a meeting with the contracting officer or representative prior to the start of work. The Contractor shall schedule his work no less than 48 hours in advance with the Contracting Officer.

5. GENERAL REQUIREMENTS:

- Min. 15 days before beginning any excavation, contractor will follow National and Navy Dig Safe requirements. Navy Dig Safe POC, Fran Furtado (401) 841-1355.
- Extreme care shall be exercised to avoid damaging government or personal property, damaged or destroyed objects will be repaired or replaced, at the contracting officers' approval at no expense to the government.
- Any road closures will be coordinated through the Navy road closure process set forth by the NAVFAC Newport Facilities Engineering and Acquisition Division
- In accordance with the EM-385-1-1, contractor will be responsible for submitting an Accident Prevention Plan (APP) to the contracting officer or representative before the start of work.
- The contractor shall be responsible for proper disposal of all items to be removed from government property, and clean up all dust and debris generated at the construction sites on a daily

basis. For specific direction, contact Naval Station Newport's environmental division at (401) 841-7561.

- Work is to be performed Monday through Friday between 0700 and 1630 excluding federal holidays. Any work done outside this time must be approved in writing by the contracting officer or representative.
- Partial payment for work under this contract shall not be made. Payment will only be made when work is complete and accepted by the government.
- During the performance of this contract, contractor shall strictly adhere to environmental protection agency regulations (EPA), the federal occupational safety and health regulations (OSHA), EM 385-1-1, as well as all applicable state and local requirements.
- Bidders are expected to visit the site of work to make a survey of the conditions to be encountered which may affect the cost of the performance of the work. Failure to familiarize with the conditions shall not relieve the contractor from the responsibility for full completion of the work.
- Contractor parking is available on site.
- Contractor to provide preferred space for lay down area for Government approval.
- Soil and sediment erosion controls are necessary unless excess soil is to be piled.
- For exterior work, or work which involves closing a building's entrance, the contractor shall install and maintain temporary chain link construction fencing set into moveable concrete blocks, meeting the requirements of EM-385-1-1, around the entire work area unless otherwise indicated. Fencing shall be installed to prevent unauthorized personnel from entering the work zone or any unsafe area. The fence shall be equipped with signage as required by EM-385-1-1. Provide gates where necessary for access by emergency personnel or to allow personnel to escape during an emergency. Temporary chain link fencing shall remain in place and maintained for the duration of the project.
- The contractor shall take necessary precautions to ensure any roof or other building opening exposed to the weather are monitored and protected. Take immediate actions necessary to seal off such openings when rain or other detrimental weather is imminent, and at the end of each workday. Ensure that the openings are completely sealed off to protect materials and equipment in the building from damage.

When a warning of gale force winds is issued, take precautions to minimize danger to persons, and protect the work and nearby Government property. Precautions shall include, but are not limited to, closing openings; removing or securing loose materials, tools and equipment from exposed locations; and removing or securing scaffolding and other temporary work. Close openings in the work when storms of lesser

intensity pose a threat to the work or any nearby Government property. During severe weather the contractor will be required to take any additional actions as required by the contracting officer or representative. Any work required to protect against inclement weather or high winds shall be at the contractor's expense

6. OSHA/EPA REGULATIONS: During performance of all work under this contract, the Contractor shall strictly adhere to regulations of the Environmental Protection Agency (EPA) and the Occupational Safety and Health Agency (OSHA NFPA 70), as well as all applicable State and Local requirements, Newport NAVSTA regulations, and the Army Corps of Engineers Safety and Health Requirements Manual EM-385.

7. DRAWINGS ACCOMPANYING SPECIFICATIONS: N/A

8. EXAMINATION OF THE PREMISES: Bidders are expected to visit the site of work to make a survey of the conditions to be encountered which may affect the cost of the performance of the work. Failure to familiarize with the conditions shall not relieve the contractor from the responsibility for full completion of the work. The contractor is required to contact the Facilities Support Contracts Office at 401-841-2047 prior to commencement and upon completion of work. Work to be performed Monday through Friday 0700-1530.

#### PART II - TECHNICAL REQUIREMENTS:

##### DETAILED REQUIREMENTS:

Building 1173, Coddington Point, serves as the Dental Clinic for NHCNE (Naval Health Clinic New England).

The automatic doors at the entrance of Building 1173 have performance issues and the controls frequently break down. This is a result, in part, of the salt air and poor weather.

##### *Work Scope:*

Replace the existing doors with exterior quality automatic sliding doors.

- The doors shall be extruded aluminum stile and rail doors, exterior grade hurricane rated, with tempered glass, and emergency breakout of the sliding and side-lite panels. Match existing color and finish.

Slides with the following features:

- Micro-processor control logic with automatic self tuning.
- Electro-mechanical belt drive operator.
- Motion sensor activation.
- Threshold safety presence sensor.
- Doorway holding beam safety.
- Standard hookbolt locking with keyed cylinder on exterior and thumbturn on interior.

Exterior bipart door will be hurricane impact rated prepped with 9/16" impact rated glass.

Interior single slide doors will be standard sliders prepped with 1/4" clear tempered glass.

Three sets of doors shall be replaced. Each door leaf is approximately 4 feet by 7 feet (must be verified in field).

- 2 sets are interior lobby doors (each set has one active and one fixed door). Interior doors will be 97" wide x 91 3/4" high - contractor to verify in field.

- 1 set is the exterior door set (with 2 active doors and 2 fixed doors). Exterior door package dimensions to be 168" wide x 92" high - contractor to verify in field.

The new doors sets shall each include:

- an adjustable motion sensor.
- an on-off switch at each set of doors.
- a key for manual locking.
- a sound-dampening track at each door set.
- weather-stripping.

Additional work might include wall and floor patching and wall/ceiling painting.

### PART III - SUPPLEMENTAL REQUIREMENTS:

#### REFERENCES:

All work shall comply with Unified Facilities Criteria (UFC) 1-200-01, GENERAL BUILDING REQUIREMENTS.

#### WARRANTY:

The Contractor shall provide a minimum one year warranty on parts and labor.

#### Specifications:

### IMPACT RATED SLIDING AUTOMATIC ENTRANCES

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. This Section includes the following types of automatic entrances:
  - 1. Exterior and interior, single slide and bi-parting, impact rated, sliding automatic entrances.
  
- B. Related Sections:
  - 1. Division 7 Sections for caulking to the extent not specified in this section.
  - 2. Division 8 Section "Aluminum-Framed Entrances and Storefronts" for entrances furnished and installed separately in Division 8 Section.
  - 3. Division 8 Section "Door Hardware" for hardware to the extent not specified in this Section.
  - 4. Division 8 Section Glazing for materials and installation requirements of glazing for automatic entrances.
  - 5. Division 26 Sections for electrical connections provided separately in Division 26 including conduit and wiring for power to sliding automatic entrances.

## 1.3 REFERENCES

- A. General: Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.
  
- B. Underwriters Laboratories (UL):
  - 1. UL 325 – Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems.
  
- C. American National Standards Institute (ANSI) / Builders' Hardware Manufacturers Association (BHMA):
  - 1. ANSI/BHMA A156.10: Standard for Power Operated Pedestrian Doors.
  - 2. ANSI/BHMA A156.5: Standard for Auxiliary Locks and Associated Products
  
- D. American Society for Testing and Materials (ASTM):
  - 1. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
  - 2. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate
  - 3. ASTM E283 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
  
- E. American Welding Society (AWS):
  - 1. AWS A5.10/A5.10M - Specification For Bare Aluminum And Aluminum-Alloy Welding Electrodes And Rods.
  
- F. American Association of Automatic Door Manufacturers (AAADM):
  
- G. National Fire Protection Association (NFPA):
  - 1. NFPA 101 – Life Safety Code.
  - 2. NFPA 70 – National Electric Code.
  
- H. International Code Council (ICC):
  - 1. IBC: International Building Code

- I. Building Officials and Code Administrators International (BOCA), 1999:
- J. International Organization for Standardization (ISO):
  - 1. ISO 9001 - Quality Management Systems
- K. Miami-Dade County Building Code Compliance Office
  - 1. Product Control Division, Notice of Acceptance
- L. Florida Building Code, 2010
- M. Florida Administrative Code (FAC)
- N. National Association of Architectural Metal Manufacturers (NAAMM):
  - 1. Metal Finishes Manual for Architectural and Metal Products.
- O. American Architectural Manufacturers Association (AAMA):
  - 1. **AAMA 606.1 – Integral Color Anodic Finishes for Architectural Aluminum.**
  - 2. AAMA 611 Voluntary Specification for Anodized Architectural Aluminum.

#### 1.4 DEFINITIONS

- A. Activation Device: Device that, when actuated, sends an electrical signal to the door operator to open the door.
- B. Safety Device: Device that prevents a door from opening or closing, as appropriate.

#### 1.5 PERFORMANCE REQUIREMENTS

- A. General: Provide automatic entrance door assemblies capable of withstanding loads and thermal movements based on testing manufacturer's standard units in assemblies similar to those indicated for this Project.
- B. Thermal Movements: Provide automatic entrances that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.
- C. Operating Range: Minus 30 deg F (Minus 34 deg C) to 130 deg F (54 deg C).
- D. Opening-Force Requirements for Egress Doors: Not more than 50 lbf (222 N) required to manually set door in motion in the direction of egress if power fails, and not more than 15 lbf (67 N) required to open door to minimum required width.
- E. Closing-Force Requirements: Not more than 30 lbf (133 N) required to prevent door from closing.
- F. Air Infiltration: Maximum air leakage through fixed glazing and framing areas of 1.25 cfm/sf. (6.4 L/s-m<sup>2</sup>) of fixed entrance system area when tested according to ASTM E 283 at a minimum static-air-pressure difference of 6.24 lbf/sf (299 Pa).

- G. Design Pressures: Impact rated sliding automatic entrance systems shall be designed to withstand up to **75 psf (3591 Pa)**, wind force in both the positive and negative direction, and be large and small missile impact rated in accordance with Florida Building Code.

#### 1.6 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of the Contract and Division 1 Specification Sections.
- B. Shop Drawings: Include plans, elevations, sections, details, hardware mounting heights, and attachments to other work.
- C. Color Samples for selection of factory-applied color finishes.
- D. Closeout Submittals:
  - 1. Owner's Manual.
  - 2. Warranties.
- E. Design Certifications:
  - 1. Product Control Division, Notice of Acceptance from Miami-Dade County Building Code Compliance Office.
  - 2. Product Approval in accordance with FAC 9N-3.

#### 1.7 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative, with certificate issued by AAADM, who is trained for installation and maintenance of units required for this Project.
- B. Manufacturer Qualifications: A qualified manufacturer with a manufacturing facility certified under ISO 9001.
- C. Manufacturer shall have in place a national service dispatch center providing 24 hours a day, 7 days a week, emergency call back service.
- D. Certifications: Automatic sliding door systems shall be certified by the manufacturer to meet performance design criteria in accordance with the following standards:
  - 1. ANSI/BHMA A156.10.
  - 2. NFPA 101.
  - 3. UL 325 listed.
  - 4. IBC 2009
  - 5. BOCA
  - 6. Miami-Dade County Building Code Compliance Office
- E. Source Limitations: Obtain automatic entrance door assemblies through one source from a single manufacturer.
- F. Product Options: Drawings indicate sizes, profiles, and dimensional requirements of automatic entrance door assemblies and are based on the specific system indicated. Refer to Division 1 Section "Product Requirements."
- G. 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.

- H. Emergency-Exit Door Requirements: Comply with requirements of authorities having jurisdiction for automatic entrances serving as a required means of egress.

## 1.8 PROJECT CONDITIONS

- A. Field Measurements: General Contractor shall verify openings to receive automatic entrance door assemblies by field measurements before fabrication and indicate measurements on Shop Drawings.
- B. Mounting Surfaces: General Contractor shall verify all surfaces to be plumb, straight and secure; substrates to be of proper dimension and material.
- C. Other trades: General Contractor shall advise of any inadequate conditions or equipment.

## 1.9 COORDINATION

- A. Templates: Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing automatic entrances to comply with indicated requirements.
- B. Electrical System Roughing-in: Coordinate layout and installation of automatic entrance door assemblies with connections to power supplies.

## 1.10 WARRANTY

- A. Automatic Entrances shall be free of defects in material and workmanship for a period of one (1) year from the date of substantial completion.
- B. During the warranty period the Owner shall engage a factory-trained technician to perform service and affect repairs. A safety inspection shall be performed after each adjustment or repair and a completed inspection form shall be submitted to the Owner.
- C. During the warranty period all warranty work, including but not limited to emergency service, shall be performed during normal working hours.

## PART 2 - PRODUCTS

### 2.1 AUTOMATIC ENTRANCES

### 2.2 MATERIALS

- A. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
  1. Headers, stiles, rails, and frames: 6063-T6.
  2. Extruded Bars, Rods, Profiles, and Tubes: ASTM B 221.
  3. Sheet and Plate: ASTM B 209.
- B. Sealants and Joint Fillers: Performed under Division 7 Section "Joint Sealants".

### 2.3 AUTOMATIC ENTRANCE DOOR ASSEMBLIES

- A. General: Provide manufacturer's standard automatic entrance door assemblies including doors, sidelights, framing, headers, carrier assemblies, roller tracks, door operators, activation and safety devices, and accessories required for a complete installation.
- B. Sliding Automatic Entrances:

1. Single Slide Entrances:
  - a. Configuration: One sliding leaf and one full sidelight.
  - b. Traffic Pattern: Two-way.
  - c. Emergency Breakaway Capability: **Sliding leaf only.**
  - d. Mounting: Between jambs.
2. Bi-Parting Entrances:
  - a. Configuration: Two sliding leaves and two full sidelights.
  - b. Traffic Pattern: Two-way.
  - c. Emergency Breakaway Capability: **Sliding leaves only**
  - d. Mounting: Between jambs.

## 2.4 COMPONENTS

- A. Framing Members: Manufacturer's standard extruded aluminum reinforced as required to support imposed loads.
  1. Nominal Size: **1 3/4 inch by 4 1/2 inch (45 by 115 mm).**
  2. Concealed Fastening: Framing shall incorporate a concealed fastening pocket, and continuous flush insert cover, extending full length of each framing member.
- B. Stile and Rail Doors and Sidelights: Manufacturer's standard 1 3/4 inch (45 mm) thick glazed doors with extruded-aluminum tubular stile and rail members. Incorporate concealed tie-rods that span full length of top and bottom rails. All corners, including intersections of stiles and rails or stiles and muntin bars, shall be welded secure.
  1. Glazing Stops and Gaskets: Snap-on, extruded-security aluminum inboard stops with preformed glazing gaskets. Mechanically fastened outboard gutter stop with approved structural glazing tape.
  2. Stile Design: **Narrow stile; 2 inch (51 mm) nominal width.**
  3. Bottom Rail Design: Minimum **4 inch (102 mm) nominal height.**
  4. Muntin Bars: **Horizontal rail member for each door; 2 inch (51 mm) nominal width.**
- C. "Glazing" in accordance with product approvals and the following:
  1. Glass: 9/16 inch (14 mm) laminated impact rated glass as specified in product approvals.
  2. Glazing: Outboard stop with approved structural tape.
- D. Headers: Fabricated from extruded aluminum and extending full width of automatic entrance door units to conceal door operators, carrier assemblies, and roller tracks. Provide hinged or removable access panels for service and adjustment of door operators and controls. Secure panels to prevent unauthorized access.
  1. Mounting: Concealed, with one side of header flush with framing.
  2. Capacity: Capable of supporting up to 220 lb (100 kg) per panel, up to four panels, over spans up to 14 feet (4.3 m) without intermediate supports.
- E. Carrier Assemblies and Overhead Roller Tracks: Manufacturer's standard carrier assembly that allows vertical adjustment of at least 1/8 inch (3 mm); consisting of urethane with precision steel lubricated ball-bearing wheels, operating on a continuous roller track. Support panels from carrier assembly by load wheels and anti-riser wheels with factory adjusted cantilever and pivot assembly. Minimum two ball-bearing load wheels and two anti-rise rollers for each active leaf. Minimum load wheel diameter shall be 2 1/2 inch (64 mm); minimum anti-rise roller diameter shall be 2 inch (51 mm).
- F. Thresholds: Manufacturer's standard thresholds as indicated below (VIF):
  1. **Continuous standard tapered extrusion square by bevel, with bevel to exterior. Or**
  2. **Continuous standard tapered extrusion double bevel. Or**
  3. **Continuous standard square extrusion, for recessed installation.**
  4. All thresholds to conform to details and requirements for code compliance.

- G. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, non-staining, non-bleeding fasteners and accessories compatible with adjacent materials.
- H. Signage: Provide signage in accordance with ANSI/BHMA A156.10.

## 2.5 DOOR OPERATORS

- A. General: Provide door operators of size recommended by manufacturer for door size, weight, and movement; for condition of exposure; and for long-term, operation under normal traffic load for type of occupancy indicated.
- B. Electromechanical Operators: Self-contained overhead unit powered by a minimum of 1/4 horsepower, permanent-magnet DC motor with gear reduction drive, microprocessor controller; and encoder.
  - 1. Operation: Power opening and power closing.
  - 2. Features:
    - a. Adjustable opening and closing speeds.
    - b. Adjustable latch-check and back-check.
    - c. Adjustable acceleration and braking.
    - d. Adjustable hold-open time between 0 and 30 seconds.
    - e. Obstruction recycle.
    - f. On/Off switch to control electric power to operator.
    - g. Energy conservation switch that reduces door-opening width.
    - h. Closed loop speed control with active braking and acceleration.
    - i. Adjustable obstruction recycle time delay.
    - j. Self adjusting stop position.
    - k. Self adjusting closing compression force.
    - l. Onboard sensor power supply.
    - m. Onboard sensor monitoring.
    - n. Optional Switch to open/Switch to close operation.
  - 3. Mounting: Concealed.
  - 4. Drive System: Synchronous belt type.
- C. Electrical service to door operators shall be Minimum service to be 115 VAC, 5 amps.

## 2.6 ELECTRICAL CONTROLS

- A. Electrical Control System: Electrical control system shall include a microprocessor controller and position encoder. The encoder shall monitor revolutions of the operator shaft and send signals to microprocessor controller to define door position and speed. Systems utilizing external magnets and magnetic switches are not acceptable.
- B. Performance Data: The microprocessor shall collect and store performance data as follows:
  - 1. Counter: A non-resettable counter to track operating cycles.
  - 2. Event Reporting: Unit shall include event and error recording including number of occurrences of events and errors, and cycle count of most recent events and errors.
  - 3. LED Display: Display presenting the current operating state of the controller.
- C. Controller Protection: The microprocessor controller shall incorporate the following features to ensure trouble free operation:
  - 1. Automatic Reset Upon Power Up.
  - 2. Main Fuse Protection.
  - 3. Electronic Surge Protection.
  - 4. Internal Power Supply Protection.
  - 5. Auto-Resetting sensor supply protection.
  - 6. Motor Protection, over-current protection.

- D. Soft Start/Stop: A “soft-start” “soft-stop” motor driving circuit shall be provided for smooth normal opening and recycling.
- E. Obstruction Recycle: Provide system to recycle the sliding panels when an obstruction is encountered during the closing cycle. If an obstruction is detected, the system shall search for that object on the next closing cycle by reducing door closing speed prior to the previously encountered obstruction location, and will continue to close in check speed until doors are fully closed, at which time the doors will reset to normal speed. If obstruction is encountered again, the door will come to a full stop. The doors shall remain stopped until obstruction is removed and operate signal is given, resetting the door to normal operation.
- F. Programmable Controller: Microprocessor controller shall be programmable via standard push button controls, or by connection to a local configuration tool. Local configuration tool shall be a software driven handheld interface. The following parameters may be adjusted via the configuration tool.
  - 1. Operating speeds and forces as required to meet ANSI/BHMA A156.10.
  - 2. Adjustable and variable features as specified in 2.5, B., 2.
  - 3. Reduced opening position.
  - 4. Fail Safe/Secure control.
  - 5. Firmware update.
  - 6. Trouble Shooting
    - a. I/O Status.
    - b. Electrical component monitoring including parameter summary.
  - 7. Software for local configuration tool shall be available as a free download from the sliding automatic entrance manufacturer’s internet site. Software shall be compatible with the following operating system platforms: Palm®, Android®, and Windows Mobile®.

## 2.7 ACTIVATION AND SAFETY DEVICES

- A. Motion Sensors: Motion sensors shall be mounted on each side of door header to detect pedestrians in the activating zone, and to provide a signal to open doors in accordance with ANSI/BHMA A156.10. Units shall be programmable for bi-directional or uni-directional operation and shall incorporate K-band microwave frequency to detect all motion in both directions.
- B. Presence Sensors: Presence sensors shall be provided to sense people or objects in the threshold safety zone in accordance with ANSI/BHMA A156.10. Units shall be self-contained, fully adjustable, and shall function accordingly with motion sensors provided. The sensor shall be enabled simultaneously with the door-opening signal and shall emit an elliptical shaped infrared presence zone, centered on the doorway threshold line. Presence sensors shall be capable of selectively retuning to adjust for objects which may enter the safety zone; tuning out, or disregarding, the presence of small nuisance objects and not tuning out large objects regardless of the time the object is present in the safety zone. The door shall close only after all sensors detect a clear surveillance field.
- C. Photoelectric Beams: In addition to the threshold sensor include a minimum of two (2) doorway holding beams. Photoelectric beams shall be pulsed infrared type, including sender receiver assemblies for recessed mounting. Beams shall be monitored by electrical controls for faults and shall fail safe.

## 2.8 HARDWARE

- A. General: Provide units in sizes and types recommended by automatic entrance door and hardware manufacturers for entrances and uses indicated.

- B. Emergency Breakaway Feature: Provide release hardware that allows panel(s) to swing out in direction of egress to full 90 degrees from any position in sliding mode. Maximum force to open panel shall be 50 lbf (222 N) according to ANSI/BHMA A156.10. Interrupt powered operation of panel operator while in breakaway mode.
  - 1. Emergency breakaway feature shall include at least two adjustable detent devices mounted in each breakaway panel; one top mounted and one bottom mounted, to control panel breakaway force.
  - 2. Wind Resistant Damper: Provide factory installed concealed gas dampers in sliding or non-sliding breakaway panels to protect door panels from wind damage. Dampers shall be designed to slow panel movement after breakout.
  
- C. **Locking: Manufacturer's approved multi-point locking system as follows:**
  - 1. **Standard hookbolt locking with keyed cylinder on exterior and thumb turn on interior.**
  
- D. Control Switch: Provide manufacturer's standard rotary switch mounted on the interior jamb and door position switch to allow for full control of the automatic entrance door. Controls to include, but are not limited to:
  - 1. One-way traffic
  - 2. Reduced Opening
  - 3. Open/Closed/Automatic
  
- E. Power Switch: Sliding automatic entrances shall be equipped with a two position On/Off rocker switch to control power to the door.
  
- F. Weather Stripping: Manufacturer's standard replaceable components complying with AAMA 701; made of wool, polypropylene, or nylon woven pile with nylon-fabric or aluminum-strip backing.
  - 1. Provide double pile weather stripping on lead stiles of sliding panels and stiles adjacent to jambs.
  - 2. Provide single pile weather stripping between carrier and header, lead stiles of sidelights, and on pivot stiles of sliding panels.
  
- G. Weather Sweeps: Adjustable, dual brush, nylon brush sweep mounted to underside of door bottom.

## 2.9 FABRICATION

- A. General: Factory fabricates automatic entrance door assembly components to designs, sizes, and thickness indicated and to comply with indicated standards.
  - 1. Form aluminum shapes before finishing.
  - 2. Use concealed fasteners to greatest extent possible.
    - a. Where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration, use self-locking devices.
    - b. Reinforce members as required to receive fastener threads.
  
- B. Framing: Provide automatic entrances as prefabricated assemblies.
  - 1. Fabricate tubular and channel frame assemblies with manufacturer's standard mechanical or welded joints. Provide sub-frames and reinforcement as required for a complete system to support required loads.
  - 2. Perform fabrication operations in manner that prevents damage to exposed finish surfaces.
  - 3. Form profiles that are sharp, straight, and free of defects or deformations.
  - 4. Prepare components to receive concealed fasteners and anchor and connection devices.

- 5. Fabricate components with accurately fitted joints with ends coped or mitered to produce hairline joints free of burrs and distortion.
  - C. Doors: Factory fabricated and assembled in profiles indicated. Reinforce as required to support imposed loads and for installing hardware.
  - D. Door Operators: Factory fabricated and installed in headers, including adjusting and testing.
  - E. Welding: Comply with AWS A5.10/A5.10M - Specification for Bare Aluminum and Aluminum-Alloy Welding Electrodes and Rods.
  - F. Glazing: Fabricate framing with minimum glazing edge clearances for thickness and type of glazing indicated.
  - G. Hardware: Factory install hardware to the greatest extent possible; remove only as required for final finishing operation and for delivery to and installation at Project site.
- 2.10 ALUMINUM FINISHES
- A. General: Comply with NAAMM Metal Finishes Manual for Architectural and Metal Products for recommendations for applying and designing finishes. Finish designations prefixed by AA comply with system established by Aluminum Association for designing finishes.
    - 1. Multi-coat Fluoropolymer painted finishes **Color: Match Existing.**
    - 2. **Applicator must be fully compliant with all applicable environmental regulations and permits, including wastewater and heavy metal discharge.**

## PART 3 - EXECUTION

### 3.1 INSPECTION

- A. Examine conditions for compliance with requirements for installation tolerances, header support, and other conditions affecting performance of automatic entrances. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. General: Do not install damaged components. Fit frame joints to produce joints free of burrs and distortion. Rigidly secure non-movement joints.
- B. Entrances: Install automatic entrances plumb and true in alignment with established lines and grades without warp or rack of framing members and doors. Anchor securely in place.
  - 1. Install surface-mounted hardware using concealed fasteners to greatest extent possible.
  - 2. Set headers, carrier assemblies, tracks, operating brackets, and guides level and true to location with anchorage for permanent support.
- C. Door Operators: Connect door operators to electrical power distribution system.
- D. Glazing: in accordance with sliding automatic entrance manufacturer's instructions.
- E. Sealants: Comply with requirements specified in Division 7 Section "Joint Sealants".

### 3.3 FIELD QUALITY CONTROL

- A. Testing Services: Factory Trained Installer shall test and inspect each automatic entrance door to determine compliance of installed systems with applicable ANSI standards.

### 3.4 ADJUSTING

- A. Adjust door operators, controls, and hardware for smooth and safe operation, for tight closure, and complying with requirements in ANSI/BHMA A156.10.

### 3.5 CLEANING AND PROTECTION

- A. Clean glass and aluminum surfaces promptly after installation. Remove excess glazing and sealant compounds, dirt, and other substances. Repair damaged finish to match original finish.

#### SHOP DRAWING AND SUBMITTAL:

Prior to starting work, the contractor shall provide a minimum of 2 copies of all submittals for approval purposes for all materials to be used on this project (project specifications may require the provision of additional submittal copies). Partial submittals will not be acceptable and will be returned without review. Submittals shall be from the manufacturer and complete with manufacturers name, catalog number, specifications, and any other information necessary to approve the materials. Material Safety Data Sheets (MSDS) shall be submitted along with product data for any potentially hazardous materials such as paints, adhesives, sealants, cleaners, gypsum board compound, flux materials, etc. Use low VOC materials wherever possible. No hazardous materials shall be brought on to government property without approved MSDS. The contractor shall maintain a copy of all MSDS at the job site at all times.

Submit shop drawings and calculations for review and approval. Submittals shall include the following:

- Accident Prevention Plan (APP) at least 10 days in advance of starting work, following Appendix A of EM-385-1-1. The plan shall incorporate all aspects of the project and additionally include the items mentioned below, as appropriate. Work may not begin until approval of the APP.
- Traffic control plan when any operation may interrupt or interfere with normal traffic in the area. Plan shall meet the requirements of EM-385-1-1.
- Safety plan
- Stainless steel lintel calculations
- Environmental Protection Plan
- Product information for all material to be used.
- Safety plan
- Warranties

## SECURITY:

- All contractor employees and sub-contractors on the job site must be U.S. citizens. A list of individuals requiring access to the job site will be provided to NAVSTA Newport, RI. prior to the start of the installation.
  
- IDENTIFICATION BADGES:
- Obtain access to the installation by participating in the Navy Commercial Access Control System (NCACS) or by obtaining passes each day from the Base Pass and Identification Office. Costs for obtaining passes through the NCACS are the responsibility of the Contractor. One-day passes, issued through the Base Pass and Identification Office will be furnished without charge. Furnish a completed EMPLOYMENT ELIGIBILITY VERIFICATION (DHS FORM I-9) form for all personnel requesting badges. This form is available at <http://www.uscis.gov/portal/site/uscis> by searching or selecting Employment Verification (Form I-9). Contractor shall immediately report instances of lost or stolen badges to the Contracting Officer.
  
- a. NCACS Program: NCACS is a voluntary program in which Contractor personnel who enroll, and are approved, are subsequently granted access to the installation for a period up to one year, or the length of the SECTION 01 14 00 contract, whichever is less, and are not required to obtain a new pass from the Base Pass and Identification Office for each visit. The Government performs background screening and credentialing. Throughout the year the Contractor employee must continue to meet background screening standards. Periodic background screenings are conducted to verify continued NCACS participation and installation access privileges. Under the NCACS program, no commercial vehicle inspection is required, other than for Random Anti-Terrorism Measures (RAM) or in the case of an elevation of Force Protection Conditions (FPCON). Information on costs and requirements to participate and enroll in NCACS is available at <http://www.rapidgate.com/vendors/how-to-enroll> or by calling 1-877-727-4342. Contractors should be aware that the costs incurred to obtain NCACS credentials, or costs related to any means of access to a Navy Installation, are not reimbursable. Any time invested, or price(s) paid, for obtaining NCACS credentials will not be compensated in any way or approved as a direct cost of any contract with the Department of the Navy.
  
- b. One-Day Passes: Participation in the NCACS is not mandatory, and if the Contractor chooses to not participate, the Contractor's personnel will have to obtain daily passes, be subject to daily mandatory vehicle inspection, and will have limited access to the installation. The Government will not be responsible for any cost or lost time associated with obtaining

daily passes or added vehicle inspections incurred by non-participants in the NCACS.

### **Contract Minimum Safety Requirements**

The Contractor shall provide a Site Safety & Health Officer (SSHO) whose primary duty and responsibility is to prepare and enforce the Contractor's safety program on this contract. For contracts \$200,000/year or less or contracts of minimal safety risk, the SSHO shall have satisfactory experience in preparing and enforcing safety programs on contracts of similar size and complexity in the past, and **the SSHO must have completed the OSHA 10-hour construction safety class or equivalent within the last three years.** The SSHO may be the same person as the project manager but shall have fulfilled the pre-requisite qualification and experience.

For contracts greater than \$200,000/year but less than \$2M/year or contracts of medium safety risk the SSHO shall have completed three years of satisfactory experience in preparing and enforcing safety programs on contracts of similar size and complexity in the past, and shall have completed the OSHA 30-hour construction safety class or equivalent within the last three years. The SSHO may be the same person as the project manager but shall have fulfilled the pre-requisite qualification and experience.

### **EM 385-1-1 Minimum Requirements** **Extracted from Appendix A**

#### **10. RISK MANAGEMENT PROCESSES.**

Detailed project-specific hazards and controls shall be provided by an Activity Hazard Analysis (see attached) for each major phase/activity of work.

#### **11. ABBREVIATED APP for LIMITED-SCOPE SERVICE, SUPPLY AND R&D CONTRACTS.**

If service, supply and R&D contracts with limited scopes are awarded, the contractor may submit an abbreviated Accident Prevention Plan. This APP shall address the following areas **at a minimum.** If other areas of the EM 385-1-1 are pertinent to the contract, the contractor must assure these areas are addressed as well.

- a. Title, signature, and phone number of the plan preparer.
- b. Background Information to include: Contractor; Contract number; Project name; Brief project description, description of work to be performed, and location (map); The project description shall provide a means to evaluate the work being done (see AHA

requirements in 01.A.13) and associated hazards involved. Contractor's APP shall address the identified hazards involved and the control measures to be taken.

c. Statement of Safety and Health Policy detailing their commitment to providing a safe and healthful workplace for all employees.

d. Responsibilities and Lines of Authorities - to include a statement of the employer's ultimate responsibility for the implementation of his SOH program; Identification and accountability of personnel responsible for safety at all levels to include designated site safety and health officer (SSHO) and associated qualifications. The District SOHO will review the qualifications for acceptance.

e. Training - new hire SOH orientation training at the time of initial hire of each new employee and any periodic retraining/recertification requirements.

f. Procedures for job site inspections - assignment of responsibilities and frequency.

g. Procedures for reporting man-hours worked and reporting and investigating any accidents as soon as possible but not more than 24 hours afterwards to the Contracting Officer/Representative (CO/COR). An accident that results in a fatal injury, permanent partial or permanent total disability shall be immediately reported to the Contracting Officer.

h. Emergency Planning. Employees working alone shall be provided an effective means of emergency communication. This may be cellular phone, two-way radio or other acceptable means. The selected means of communication must be readily available and must be in working condition.

i. Drinking Water provisions, toilet and washing facilities.

j. First Aid and CPR training (at least two employees on each shift shall be qualified/certified to administer first aid and CPR) and provision of first aid kit (types/size).

k. Personal Protective Equipment.

(1) WORK CLOTHING - Minimum Requirements. Employees shall wear clothing suitable for the weather however minimum requirements for work shall be short-sleeve shirt, long pants (excessively long or baggy pants are prohibited) and leather work shoes. If analysis determines that safety-toed (or other protective) footwear is necessary (i.e., mowing, weedeating, chain saw use, etc), they shall be worn.

(2) Eye and Face Protection. Eye and face protection shall be worn as determined by an analysis of the operations being performed HOWEVER, all involved in chain saw use, chipping, stump grinding, pruning operations, grass mowing, weedeating and blowing operations shall be provided safety eyewear (Z87.1) as a minimum.

(3) Hearing Protection. Hearing protection must be worn by all those exposed to high noise activities (to include grass mowing and trimming, chainsaw operations, tree chipping, stump grinding and pruning).

(4) Head Protection. Hard hats shall comply with ANSI Z89.1 and shall be worn by all workers when a head hazard exists. At a minimum, hard hats shall be worn when performing activities identified in (2) above.

(5) High Visibility Apparel shall comply with ANSI/ISEA 107, Class 2 requirements at a minimum and shall be worn by all workers exposed to vehicular or equipment traffic.

(6) Protective Leg chaps shall be worn by all chainsaw operators.

(7) Gloves of the proper type shall be worn by persons involved in activities that expose the hands to cuts, abrasions, punctures, burns and chemical irritants.

(8) If work is being performed around water and drowning is a hazard, PFDs must be provided and worn as appropriate.

l. Machine Guards and safety devices. Lawn maintenance equipment must have appropriate guards and safety devices in place and operational.

m. Hazardous Substances. When any hazardous substances are procured, used, stored or disposed, a hazard communication program must be in effect and MSDSs shall be available at the worksite. Employees shall have received training in hazardous substances being used. When the eyes or body of any person may be exposed to corrosives, irritants or toxic chemicals, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within 10 seconds of the worksite.

n. Traffic control shall be accomplished in accordance with DOT's MUTCD.

o. Control of Hazardous Energy (Lockout/Tagout). Before an employee performs any servicing or maintenance on any equipment where the unexpected energizing or startup of the equipment could occur, procedures must be in place to ensure adequate control of this energy.

p. Driving, working on (i.e., working with equipment/mowers) while on slopes, working from/in boats/skiffs, etc shall also be considered and dealt with accordingly.

q. Fall Protection - full text as required by the EM385-1-1.

SECTION 07 92 00

JOINT SEALANTS

02/16

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM C1193	(2013) Standard Guide for Use of Joint Sealants
ASTM C1311	(2014) Standard Specification for Solvent Release Agents
ASTM C1521	(2013) Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints
ASTM C509	(2006; R 2015) Elastomeric Cellular Preformed Gasket and Sealing Material
ASTM C734	(2015) Low-Temperature Flexibility of Latex Sealants After Artificial Weathering
ASTM C834	(2014) Latex Sealants
ASTM C919	(2012) Use of Sealants in Acoustical Applications
ASTM C920	(2014a) Standard Specification for Elastomeric Joint Sealants
ASTM D1056	(2014) Standard Specification for Flexible Cellular Materials - Sponge or Expanded Rubber

- ASTM D1667 (2005; R 2011) Flexible Cellular Materials - Poly (Vinyl Chloride) Foam (Closed-Cell)
- ASTM D217 (2010) Cone Penetration of Lubricating Grease
- ASTM D2452 (2015) Standard Test Method for Extrudability of Oil- and Resin-Base Caulking Compounds
- ASTM D2453 (2015) Standard Test Method for Shrinkage and Tenacity of Oil- and Resin-Base Caulking Compounds
- ASTM E84 (2015b) Standard Test Method for Surface Burning Characteristics of Building Materials

SCIENTIFIC CERTIFICATION SYSTEMS (SCS)

- SCS Scientific Certification Systems (SCS)Indoor Advantage

UNDERWRITERS LABORATORIES (UL)

- UL 2818 (2013) GREENGUARD Certification Program For Chemical Emissions For Building Materials, Finishes And Furnishings

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are [for Contractor Quality Control approval.][for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] Submittals with an "S" are for inclusion in the Sustainability Notebook, in conformance with Section 01 33 29 SUSTAINABILITY REPORTING. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-03 Product Data

Sealants; G[, [\_\_\_\_]]

Primers; G[, [\_\_\_\_]]

Bond Breakers; G[, [\_\_\_\_]]

Backstops; G[, [\_\_\_\_]]

SD-06 Test Reports

Field Adhesion; G[, [\_\_\_\_]]

SD-07 Certificates

Sealant; G[, [\_\_\_\_]]

Primers; G[, [\_\_\_\_]]

Bond Breakers; G[, [\_\_\_\_]]

Volatile Organic Compounds (VOC) Content; G[, [\_\_\_\_\_]]

#### SD-11 Closeout Submittals

Volatile Organic Compounds (VOC) Content ; S

### 1.3 PRODUCT DATA

Include storage requirements, shelf life, curing time, instructions for mixing and application, and accessories. Provide manufacturer's Material Safety Data Sheet (MSDS) for each solvent, primer and sealant material proposed.

### 1.4 CERTIFICATIONS

Provide product third-party certification for low Volatile Organic Compounds (VOC) Content in accordance with UL 2818[ Gold], SCS (Scientific Certification Systems) Indoor Advantage[ Gold] or approved equal.

### 1.5 ENVIRONMENTAL CONDITIONS

Apply sealant when the ambient temperature is between 4 and 32 degrees C 40 and 90 degrees F.

### 1.6 DELIVERY AND STORAGE

Deliver materials to the jobsite in unopened manufacturers' sealed shipping containers, with brand name, date of manufacture, [color,] and material designation clearly marked thereon. Label elastomeric sealant containers to identify type, class, grade, and use. Handle and store materials in accordance with manufacturer's printed instructions. Prevent exposure to foreign materials or subjection to sustained temperatures exceeding 32 degrees C 90 degrees F or lower than 4 degrees C 0 degrees F. Keep materials and containers closed and separated from absorptive materials such as wood and insulation.

### 1.7 QUALITY ASSURANCE

#### 1.7.1 Compatibility with Substrate

Verify that each sealant is compatible for use with each joint substrate in accordance with sealant manufacturer's printed recommendations for each application.

#### 1.7.2 Joint Tolerance

Provide joint tolerances in accordance with manufacturer's printed instructions.

#### 1.7.3 Mock-Up

Provide a mock-up of each type of sealant using materials, colors, and techniques approved for use on the project. Approved mock-ups may be incorporated into the Work.

#### 1.7.4 Adhesion

Provide in accordance with ASTM C1193 or ASTM C1521.

PART 2 PRODUCTS

2.1 SEALANTS

Provide sealant products that have been tested, found suitable, and documented as such by the manufacturer for the particular substrates to which they will be applied.

2.1.1 Product Sustainability Criteria

Where allowed by performance criteria, provide sealants specified for interior use with reduced Volatile Organic Compounds (VOC) content. Provide documentation in accordance with Section 01 33 29 SUSTAINABILITY REPORTING paragraph REDUCE VOLATILE ORGANIC COMPOUNDS.

2.1.2 Interior Sealants

Provide [ASTM C834] [ASTM C920, Type S or M, Grade NS, Class 12.5, Use NT]. Location(s) and color(s) of sealant for the following. Note, color "as selected" refers to manufacturer's full range of color options

LOCATION	COLOR
a. Small voids between walls or partitions and adjacent lockers, casework, shelving, door frames, built-in or surface mounted equipment and fixtures, and similar items.	[As selected] Match existing [_____]
b. Perimeter of frames at doors, windows, and access panels which adjoin exposed interior concrete and masonry surfaces.	[_____]
c. Joints of interior masonry walls and partitions which adjoin columns, pilasters, concrete walls, and exterior walls unless otherwise detailed.	[_____]
d. Joints between edge members for acoustical tile and adjoining vertical surfaces.	[_____]
e. Interior locations, not otherwise indicated or specified, where small voids exist between materials specified to be painted.	[_____]

LOCATION	COLOR
f. Joints between bathtubs and ceramic tile; joints between shower receptors and ceramic tile; joints formed where non-planar tile surfaces meet.	[_____]
g. Joints formed between tile floors and tile base cove; joints between tile and dissimilar materials; joints occurring where substrates change.	[_____]
h. Behind escutcheon plates at valve pipe penetrations and showerheads in showers.	[_____]
i. [_____]	[_____]

2.1.3 Exterior Sealants

For joints in vertical surfaces, provide [ASTM C920](#), Type S or M, Grade NS, Class 25, Use NT. For joints in horizontal surfaces, provide [ASTM C920](#), Type S or M, Grade P, Class 25, Use T. Provide location(s) and color(s) of sealant as follows. Note, color "as selected" refers to manufacturer's full range of color options:

LOCATION	COLOR
a. Joints and recesses formed where frames and subsills of windows, doors, louvers, and vents adjoin masonry, concrete, or metal frames. Use sealant at both exterior and interior surfaces of exterior wall penetrations.	[Match adjacent surface color] [_____]
b. Joints between new and existing exterior masonry walls.	[_____]
c. Masonry joints where shelf angles occur.	[_____]
d. Joints in wash surfaces of stonework.	[_____]
e. Expansion and control joints.	[_____]
f. Interior face of expansion joints in exterior concrete or masonry walls where metal expansion joint covers are not required.	[_____]
g. Voids where items pass through exterior walls.	[_____]

LOCATION	COLOR
h. Metal reglets, where flashing is inserted into masonry joints, and where flashing is penetrated by coping dowels.	[ _____ ]
i. Metal-to-metal joints where sealant is indicated or specified.	[ _____ ]
j. Joints between ends of gravel stops, fasciae, copings, and adjacent walls.	[ _____ ]
k. [ _____ ]	[ _____ ]

2.1.4 Floor Joint Sealants

ASTM C920, Type S or M, Grade P, Class 25, Use T. Provide location(s) and color(s) of sealant as follows. Note, color "as selected" refers to manufacturer's full range of color options:

LOCATION	COLOR
a. Seats of metal thresholds for exterior doors.	[As selected] Match exist. [ _____ ]
b. Control and expansion joints in floors, slabs, ceramic tile, and walkways.	[ _____ ]

2.1.5 Acoustical Sealants

Rubber or polymer based acoustical sealant in accordance with ASTM C919 to have a flame spread of 25 or less and a smoke developed rating of 50 or less when tested in accordance with ASTM E84. Provide non-staining acoustical sealant with a consistency of 250 to 310 when tested in accordance with ASTM D217. Acoustical sealant must remain flexible and adhesive after 500 hours of accelerated weathering as specified in ASTM C734.

2.1.6 Preformed Sealants

Provide preformed sealants of polybutylene or isoprene-butylene based pressure sensitive weather resistant tape or bead sealants capable of sealing out moisture, air and dust when installed as recommended by the manufacturer. At temperatures from minus 34 to plus 71 degrees C 30 to plus 160 degrees F, sealants must be non-bleeding and have no loss of adhesion.

## 2.1.6.1 Tape

[\_\_\_\_\_] Tape sealant: Provide cross section dimensions of [\_\_\_\_\_] .

## 2.1.6.2 Bead

[\_\_\_\_\_] Bead sealant: Provide cross section dimensions of [\_\_\_\_\_] .

## 2.1.6.3 Foam Strip

Provide [\_\_\_\_\_] foam strip of polyurethane foam with cross section dimensions of [\_\_\_\_\_] . Provide foam strip capable of sealing out moisture, air, and dust when installed and compressed in accordance with manufacturer's printed instructions. Service temperature must be **minus 40 to plus 135 degrees C minus 40 to plus 275 degrees F**. Furnish untreated strips with adhesive to hold them in place. Do not allow adhesive to stain or bleed onto adjacent finishes. Saturate treated strips with butylene waterproofing or impregnate with asphalt.

## 2.2 PRIMERS

Non-staining, quick drying type and consistency as recommended by the sealant manufacturer for the particular application.

## 2.3 BOND BREAKERS

Type and consistency as recommended by the sealant manufacturer to prevent adhesion of the sealant to the backing or to the bottom of the joint.

## 2.4 BACKSTOPS

Provide glass fiber roving, neoprene, butyl, polyurethane, or polyethylene foams free from oil or other staining elements as recommended by sealant manufacturer. Provide 25 to 33 percent oversized backing for closed cell and 40 to 50 percent oversized backing for open cell material, unless otherwise indicated. Provide backstop material that is compatible with sealant. Do not use oakum[, [\_\_\_\_\_] ] or other types of absorptive materials as backstops.

## 2.4.1 Rubber

Provide in accordance with **ASTM D1056**, [Type 1, open cell,] [or] [Type 2, closed cell,] Class [A] [B] [D], Grade [\_\_\_], [round] [\_\_\_] cross section for [\_\_\_] cellular rubber sponge backing.

## 2.4.2 PVC

Provide in accordance with **ASTM D1667**, Grade [VO 12] [ ], open-cell foam, [round] [ ] cross section for [ ] polyvinyl chloride (PVC) backing.

## 2.4.3 Synthetic Rubber

Provide in accordance with **ASTM C509**, Option [I] [II], Type [I] [II] preformed [rods] [or] [tubes] for [\_\_\_\_\_] synthetic rubber backing.

## 2.4.4 Neoprene

#### 2.4.5 Butyl Rubber Based

Provide in accordance with [ASTM C1311](#), from a single component, with solvent release. color [as selected from manufacturer's full range of color choices] [\_\_\_\_\_].

#### 2.4.6 Silicone Rubber Base

Provide in accordance with ASTM C920, from a single component, with solvent release, Non-sag, Type [\_\_\_\_\_], Grade [\_\_\_\_\_], Class [25] [\_\_\_\_\_]. Color [as selected from manufacturer's full range of color choices] [\_\_\_\_\_].

### 2.5 CAULKING

For interior use and only where there is little or no anticipated joint movement. Provide in accordance with [ASTM D2452](#) and [ASTM D2453](#), Type [\_\_\_\_\_], for [\_\_\_\_\_] oil and resin-based caulking.

### 2.6 CLEANING SOLVENTS

Provide type(s) recommended by the sealant manufacturer and in accordance with environmental requirements herein. [Protect adjacent aluminum and bronze surfaces from solvents].

## PART 3 EXECUTION

### 3.1 FIELD QUALITY CONTROL

Perform a field adhesion test in accordance with manufacturer's instructions and [ASTM C1193](#), Method A or ASTM C1521, Method A, Tail Procedure. Remove sealants that fail adhesion testing; clean substrates, reapply sealants, and re-test. Test sealants adjacent to failed sealants. Submit [field adhesion](#) test report indicating tests, locations, dates, results, and remedial actions taken.

### 3.2 SURFACE PREPARATION

Prepare surfaces according to manufacturer's printed installation instructions. Clean surfaces from dirt, frost, moisture, grease, oil, wax, lacquer, paint, or other foreign matter that would destroy or impair adhesion. Remove oil and grease with solvent; thoroughly remove solvents prior to sealant installation. Wipe surfaces dry with clean cloths. When resealing an existing joint, remove existing caulk or sealant prior to applying new sealant. For surface types not listed below, provide in accordance with sealant manufacturer's printed instructions for each specific surface.

#### 3.2.1 Steel Surfaces

Remove loose mill scale by sandblasting or, if sandblasting is impractical or would damage finished work, scraping and wire brushing. Remove protective coatings by sandblasting or using a residue free solvent. Remove resulting debris and solvent residue prior to sealant installation.

#### 3.2.2 Aluminum or Bronze Surfaces

Remove temporary protective coatings from surfaces that will be in contact with sealant. When masking tape is used as a protective coating, remove tape and any residual adhesive prior to sealant application. For removing protective coatings and final cleaning, use non-staining solvents recommended by the manufacturer of the item(s) containing aluminum or bronze surfaces.

3.2.3 Concrete and Masonry Surfaces

Where surfaces have been treated with curing compounds, oil, or other such materials, remove materials by sandblasting or wire brushing. Remove laitance, efflorescence and loose mortar from the joint cavity. Remove resulting debris prior to sealant installation.

3.2.4 Wood Surfaces

Ensure wood surfaces that will be in contact with sealants are free of splinters, sawdust and other loose particles.

3.2.5 Removing Existing Hazardous Sealants

For sealants applied prior to 1979, or that have been tested and found to contain polychlorinated biphenyls (PCBs), remove and dispose of these sealants in accordance with Section 02 84 33 REMOVAL AND DISPOSAL OF POLYCHLORINATED BIPHENYLS (PCBs).

3.3 SEALANT PREPARATION

Do not add liquids, solvents, or powders to sealants. Mix multicomponent elastomeric sealants in accordance with manufacturer's printed instructions.

3.4 APPLICATION

3.4.1 Joint Width-To-Depth

Ratios Acceptable Ratios:

<u>JOINT WIDTH</u>	<u>JOINT DEPTH</u>	
	Minimum	Maximum
For metal, glass, or other nonporous surfaces:		
6 mm (minimum)	6 mm	6 mm
over 6 mm	1/2 of width	Equal to width
For wood, concrete, masonry, stone, or [____]:		
6 mm (minimum)	6 mm	6 mm
over 6 mm to 13 mm	6 mm	Equal to width
over 13 mm to 25 mm	50 mm	16 mm
Over 25 mm	prohibited	

<u>JOINT WIDTH</u>	<u>JOINT DEPTH</u>	
	Minimum	Maximum
For metal, glass, or other nonporous surfaces:		

1/4 inch (minimum)	1/4 inch	1/4 inch
over 1/4 inch	1/2 of width	Equal to width
For wood, concrete, masonry, stone, or [____]:		
1/4 inch (minimum)	1/4 inch	1/4 inch
over 1/4 inch to 1/2 inch	1/4 inch	Equal to width

<u>JOINT WIDTH</u>	<u>JOINT DEPTH</u>	
	Minimum	Maximum
over 1/2 inch to 1 inch	1/2 inch	5/8 inch
Over 1 inch	prohibited	

Unacceptable Ratios: Where joints of acceptable width-to-depth ratios have not been provided, clean out joints to acceptable depths and grind or cut to acceptable widths without damage to the adjoining work. Grinding is prohibited at metal surfaces.

3.4.2 Unacceptable Sealant Use

Do not install sealants in lieu of other required building enclosure weatherproofing components such as flashing, drainage components, and joint closure accessories, or to close gaps between walls, floors, roofs, windows, and doors, that exceed acceptable installation tolerances.

Remove sealants that have been used in an unacceptable manner and correct building enclosure deficiencies to comply with contract documents requirements.

3.4.3 Masking Tape

Place masking tape on the finished surface on one or both sides of joint cavities to protect adjacent finished surfaces from primer or sealant smears. Remove masking tape within 10 minutes of joint filling and tooling.

3.4.4 Backstops

Provide backstops dry and free of tears or holes. Tightly pack the back or bottom of joint cavities with backstop material to provide joints in specified depths. Provide backstops where indicated and where backstops are not indicated but joint cavities exceed the acceptable maximum depths specified in "Joint Width-to-Depth Ratios" Table.

3.4.5 Primer

Clean out loose particles from joints immediately prior to application of. Apply primer to joints in concrete masonry units, wood, and other porous surfaces in accordance with sealant manufacturer's printed instructions. Do not apply primer to exposed finished surfaces.

3.4.6 Bond Breaker

Provide bond breakers to surfaces not intended to bond in accordance with, sealant manufacturer's printed instructions for each type of surface and sealant combination specified.

#### 3.4.7 Sealants

Provide sealants compatible with the material(s) to which they are applied. Do not use a sealant that has exceeded its shelf life or has jelled and cannot be discharged in a continuous flow from the sealant gun. Apply sealants in accordance with the manufacturer's printed instructions with a gun having a nozzle that fits the joint width. Work sealant into joints so as to fill the joints solidly without air pockets. Tool sealant after application to ensure adhesion. Apply sealant uniformly smooth and free of wrinkles. Upon completion of sealant application, roughen partially filled or unfilled joints, apply additional sealant, and tool smooth as specified. Apply sealer over sealants in accordance with the sealant manufacturer's printed instructions.

### 3.5 PROTECTION AND CLEANING

#### 3.5.1 Protection

Protect areas adjacent to joints from sealant smears. Masking tape may be used for this purpose if removed 5 to 10 minutes after the joint is filled and no residual tape marks remain.

#### 3.5.2 Final Cleaning

Upon completion of sealant application, remove remaining smears and stains and leave the work in a clean and neat condition.

- a. Masonry and Other Porous Surfaces: Immediately remove fresh sealant that has been smeared on adjacent masonry, rub clean with a solvent, and remove solvent residue, in accordance with sealant manufacturer's printed instructions. Allow excess sealant to cure for 24 hour then remove by wire brushing or sanding. Remove resulting debris.
- b. Metal and Other Non-Porous Surfaces: Remove excess sealant with a solvent moistened cloth. Remove solvent residue in accordance with solvent manufacturer's printed instructions.

-- End of Section --

STANLEY



CAUTION STAND BACK

EMERGENCY EXIT

EMERGENCY EXIT

EMERGENCY EXIT  
PUSH HERE TO OPEN

EMERGENCY EXIT  
PUSH HERE TO OPEN









STANLEY

...New England  
ENTAL CLINIC  
VE READY

CAUTION STAND BACK

CAUTION: AUTOMATIC SLIDING DOOR  
Door may close without warning