

SECTION 08414

CUSTOM BRONZE ENTRANCE DOORS

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Work included: Provide custom fabricated bronze entrance doors. Door hardware as noted on the historic restoration plans.
- B. Related work:
 - 1. Lock cylinders are not included in this section.
 - 2. Glass and glazing are not included in this section.
 - 3. Sealants between frame and masonry are not included in this section.
 - 4. Structural members not within jambs, head members, transom bars and mullions are not included in this section.

1.02 QUALITY ASSURANCE

- A. The manufacturer must have been regularly engaged in the manufacture and installation of bronze doors and frames for a period of no less than ten (10) years.
- B. All door, frame and recessed pivot hinge boxes for new bronze doors and existing doors to be repositioned must be engineered and fabricated by the same manufacturer.
- C. In order to ensure proper coordination between all elements of the entrance system, the hardware including the hydraulic check must be engineered, cast, machined and assembled in the same facility with the engineering and fabrication of the door and frame material.
- D. The manufacturer must have a quality system registered to the ISO9001:2000 standard.

1.03 SUBMITTALS

- A. Shop drawings including elevations and plans, one-half size detail sections of typical composite members, hardware arrangement details and interaction with surrounding material.
- B. Two (2) finish samples shall be submitted; choose one of the following:
 - 1. Bronze, satin, lacquered.
 - 2. Bronze, satin, no lacquer.
 - 3. Bronze, polished, lacquered.
 - 4. Bronze, polished, no lacquer.

1.04 WARRANTY

- A. All finished hardware and material to carry manufacturer's standard warranty.

- B. All custom fabricator manufactured material furnished and installed to these specifications, including the door operating mechanisms, shall be warranted against defective material and workmanship for a period of ten (10) years after completion of installation.
1. This warranty is not intended to cover adjustments made necessary by the shifting or settling of the building structure.
 2. This warranty is not intended to cover the breakdown of protective coatings when furnished to the architect's specification and applied as directed. NOTE: Bronze is an extremely difficult material on which to apply a lacquer protective coating that has lasting qualities. Clean and apply a clear lacquer coating made of the best materials available. Material will be crated and protected against damage during shipment to the job site.
 3. All labor to replace warranted parts is by others.

PART II – PRODUCTS

2.01 ACCEPTABLE MANUFACTURER

- A. Ellison Bronze or approved equal.

2.02 MATERIALS AND ACCESSORIES

- A. Material: Shall be

1. Bronze (muntz metal, alloy #280) or naval brass (alloy #464).

- B. Finish: (Select one of the following):

1. Bronze, satin, lacquered.
2. Bronze, satin, no lacquer.
3. Bronze, polished, lacquered.
4. Bronze, polished, no lacquer.

- C. Doors:

1. Bronze door bodies shall be formed from a minimum of .09" thick material.
2. Formed bronze doors shall have .09" thick continuous channel frame welded into door body.
3. Seams between stiles and rails shall be welded and finished to an invisible joint.
4. The finish is to be applied to the door after fabrication to ensure a blemish-free finish.
5. Door thickness shall be 2" minimum, to match historic doors.
6. Stiles: 2-3/4" minimum, to match historic doors.
7. Top rail: 3-1/2" high or higher preferred; 2-3/4" minimum, to match historic doors.
8. Bottom rail: 6" minimum, to match historic doors.
9. All reinforcing material to be bronze and welded to door body. Aluminum, plastic or other glued-in reinforcements or stiffeners are unacceptable.

D. Frames:

1. Bronze frames shall be formed from a minimum of .09" thick material.
2. Minimum face dimension of frame to be 3".
3. Minimum depth of frame to be 5".
4. Consult factory for dimensions less than those above.
5. Frames shall be erected without the use of exposed screws where feasible.
6. The finish is to be applied to the frame after fabrication to ensure a blemish-free finish.
7. Portion of hinge jamb shall be removable for access to operating hardware.
8. As an option, the hinge shaft may be exposed if desired. If so, exposed hinge shafts to be clad in extruded bronze in matching finish to doors and/or frame.

E. Weatherstrip:

1. Shall be manufacturer's standard polypropylene pile.
2. Shall occur:
 - a. Vertically at meeting stiles on pairs of doors.
 - b. Concealed at door top and bottom rails.
 - c. At door stops at both hinge and strike jambs.
 - d. At both sides of exposed hinge shaft if used.

F. Finish hardware by door manufacturer (except lock cylinders):

1. Standard locking to be Adams-Rite deadlocks (or deadlatches with lever handles or push paddles) and flushbolts at pair of doors. (Most other types of mechanical locking and electronic locking also available – consult factory for compatibility.)
2. Standard push-pull hardware to be 1" diameter stainless steel, bronze or aluminum in all finishes.
3. Panic hardware (if required) shall be furnished by the door supplier. Concealed type exit device for pairs of doors, rim type exit devices for single doors of matching material and finish. Master keyed cylinders, if required, to be furnished by others. All hardware shall be finished to match doors
4. Recessed pivot box as manufactured by Rixson or approved equal.

PART III – EXECUTION

3.01 INSPECTION

- A. Prior to leaving factory, all doors and immediate framing shall be assembled and "hung". At this time, adjustment shall be made to provide proper perimeter clearance between door and frame and all coordination between door, frame and finish hardware shall be tested.

3.02 ERECTION

- A. All materials shall be installed by factory-trained erectors in strict accordance with installation data provided by factory and these specifications.
- B. All doors shall be adjusted after glazing contractor completes his work and readjusted when necessary prior to owner's acquisition of the building.

END OF SECTION