



SECTION 08360

SECTIONAL OVERHEAD DOORS

1. GENERAL

1.1. SECTION INCLUDES

- A. Overhead doors.
- B. Bi-fold doors.

1.2. RELATED SECTIONS

- A. Section 03300 - Cast-In-Place Concrete: Prepared opening in concrete. Execution requirements for placement of anchors in concrete wall construction.
- B. Section 04810 - Unit Masonry Assemblies: Prepared opening in masonry. Execution requirements for placement of anchors in masonry wall construction.
- C. Section 05500 - Metal Fabrications: Steel frame and supports.
- D. Section 06114 - Wood Blocking and Curbing: Rough wood framing and blocking for door opening.
- E. Section 07900 - Joint Sealers: Perimeter sealant and backup materials.
- F. Section 08710 - Door Hardware: Cylinder locks.
- G. Section 09900 - Paints and Coatings: Field painting.
- H. Section 16150 - Wiring Connections: Electrical service to door operator.

1.3. REFERENCES

- A. ASTM - C1048 Glass Tempered
- B. AA-6063-T6 - Standards for Aluminum Alloy and Temper.
- C. ASTM A513, Type 1 – Steel Tubes.
- D. ASTM A1008 – Sheet Steel for Covers.
- E. ASTM A36 – Steel Bars.
- F. ASTM A36 – Sheet Steel for Tracks/Channels.

1.4. PERFORMANCE REQUIREMENTS

- A. Wind Loads: Design and size components to withstand loads caused by pressure and suction of wind acting normal to plane of wall as calculated in accordance with applicable code.
  - 1. Design pressure of \_\_\_\_\_ lb/sq ft (\_\_\_\_\_ kPa).
  - 2. Maximum deflection of 1/300 of opening width.

- B. Single-Source Responsibility: Provide doors, tracks, motors, and accessories from one manufacturer for each type of door. Provide secondary components from source acceptable to manufacturer of primary components.

#### 1.5. SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation manuals.
  - 4. Owners Manual with service information
- C. Shop Drawings: Indicate plans and elevations including opening dimensions and required tolerances, accessories and anchors, jamb details, connection details, anchorage spacing, hardware locations, and installation details.
- D. Selection Samples: For each finish product specified, two complete sets of color charts representing manufacturer's full range of available colors and patterns.
- E. Verification Samples: For each finish product specified, two samples, minimum size 3 inches (150 mm) square, representing actual product, color, and patterns.
- F. Operation and Maintenance Data.
- G. Submit written agreement in manufacturer's standard form signed by manufacturer and installer agreeing to repair or replace defective doors that are warped, twisted, bowed or damaged as a result of defective product.

#### 1.6. QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum five years documented experience.
- B. Installer Qualifications: Authorized representative of the manufacturer with minimum five years documented experience and/or be a factory trained and authorized installation company.
- C. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories, Inc. acceptable to authority having jurisdiction as suitable for purpose specified.

#### 1.7. DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened labeled packaging until ready for installation.
- B. Store materials in a clean, dry, ventilated, weathertight, secure location.
- C. Protect materials from soiling, abuse, loss and moisture damage.

#### 1.8. PROJECT CONDITIONS

- A. Pre-Installation Conference: Convene a pre-installation conference just prior to commencement of field operations, to establish procedures to maintain optimum working conditions and to coordinate this work with related and adjacent work.
- B. Environmental Conditions: Prior to and during installation, environmental conditions shall be in accordance with door manufacturers latest published recommendations

for temperature, rain, wind, humidity, ventilation, and illumination.

- C. Opening shall be free and clear of debris, stored materials, scaffolding, and temporary walls as necessary for installers to perform the installation.

## 1.9. WARRANTY

- A. Manufacturer warrants to the original purchaser within two years from date of installation, if a product sold under this warranty proves to be defective in material or workmanship through normal use and service according to maintenance and operations instructions, as verified by inspection by persons authorized by Renlita Overhead Doors, Renlita Overhead Doors will replace or repair (at Renlita Overhead Doors option) the defective product.
- B. Manufacturer warrants the steel frame against rust, in painted non-damaged condition for a period of two years from original purchase. This warranty does not apply to scratched, dented, damaged or corroded areas of the frame.

## 2. PRODUCTS

### 2.1. MANUFACTURERS

- A. Acceptable Manufacturer: This Section is based on the products of Renlita Doors North America, LLC, which is located at [2430 Albert Broadfoot St Bonham, TX 75418](#). ASD. Tel: [903-583-7500](#). Fax: [903-583-7544](#). Web: [renlitausa.com](#).
- B. Substitutions: Not permitted.

### 2.2. OVERHEAD DOORS

- A. Two Leaf Hinged Counterbalanced Overhead Doors: Two horizontal panels hinged together, weather lapped at horizontal joint; rising vertically on roller and track system fixed to building structure to stack in a folded position under lintel.
  - 1. Approved Product: S-2000, Hingeway Doors.
- B. Framework: Welded construction fabricated from rolled hollow section steel members with minimum wall thickness of 0.125 inch (3.1 mm). Beams shall be designed for maximum dead load deflection of 1/300th part of the span.
- C. Counter Balancing: Counterweight system with enclosed counterweights suspended by 7/19 flexible multi-strand steel cables with minimum safety factor of 6:1. Cable shall be guided in steel sheaves with a minimum sheave to cable diameter ratio of 19:1. Sheaves shall be capable of carrying design loads.
- D. Load is contained in the jambs and does not require a load bearing header or any additional lateral supports
- E. Mechanical pin lock fail-safe device that prevents door movement automatically in the event of a counterbalance or lifting device failure. Safety brake shall automatically reset once repairs are completed and be capable of repeated engagement without replacement of brake or components.
- F. Construct steel door sections from carbon steel hot rolled tube complying with ASTM A-500 Grade B and ASTM A-36.
- G. Counterweight Covers: Counterweights shall be protected and covered with a removable pressed sheet (aluminum or steel).
- H. Manual Operation: As indicated on the Drawings and Door Schedule.
  - 1. Provide a manual operating handle and safety device to be used to manually

open/close the door and to be stored in operating channel when door is in open position acting as a safety device preventing accidental closure of the door.

2. Any door that cannot be easily manually operated is unacceptable.
3. Door shall be equipped with keyed slide bar locking device located at lower panel adjacent to operating channel.

I. Size:

1. As indicated on Drawings.
2. Height: \_\_\_\_\_feet (\_\_\_\_\_ meters).
3. Width: \_\_\_\_\_feet (\_\_\_\_\_ meters).

J. Locking:

1. Internal slide locks, unless otherwise specified.

K. Escape and Access Doors: Outward opening doors with night latch.

2.3. GLAZING AND CLADDING

A. Glazing: Glazed in accordance with AS1288.

1. Glass: 1/4 inch (6.35 mm) laminated safety glass.
2. Glass: 3/8 inch (9.5 mm) laminated safety glass.
3. Glass: 1 inch (25 mm) dual pane insulated glass.
4. Tempered Glass: 1/8 inch (3 mm).
5. Tempered Glass: 1/4 inch (6.35 mm).
6. Acrylic Polycarbonate: 1/8 inch (3 mm).
7. Acrylic Polycarbonate: 3/16 inch (4.76 mm).
8. Acrylic Polycarbonate: 1/4 inch (6.35 mm).
9. Glazing Wedges: Co-extrusions, fitted between aluminum panels.
10. Glazing Beads: PVC extrusions.

B. Panels:

1. Panels: Wood.
2. Panels: Plywood.
3. Panels: Metal.
4. Panels: Galvanized steel sheet.
5. Panels: Perforated sheet metal.
6. Panels: Mesh.
7. Panels: Woven wire.
8. Panels: Composite.
9. Panels: Acrylic.
10. Panels: Insulated.
11. Panels: \_\_\_\_\_.

C. Thermal Ratings/Performance

1. Rating is dependent on glazing. Example simulations below:

MODEL	GLAZING	LOW-E COATING	U-FACTOR	SHGC	VT
S-2000	DUAL PANE 1" IG	SOLARBAN 50 ON SURFACE #2	.53	.31	.53
S-2000	DUAL PANE 1" IG	SOLARBAN 70XL ON SURFACE #2	.51	.22	.49
S-2000	DUAL PANE 1" IG	CARDINAL 27C ON SURFACE #2	.47	.25	.52
S-2000	DUAL PANE 1" IG	CARDINAL 366 ON SURFACE #2	.47	.22	.48
S-2000	TRIPLE PANE 1" IG	CARDINAL 356 ON SURFACE #2 AND CARDINAL 18C ON SURFACE #4	.41	.20	.43

## 2.4. FINISHES

- A. Finish, Ferrous Metals: All surfaces except working machine parts shall receive the following factory applied finish:
  - 1. Powder coating.
  - 2. Abrasive clean to SSP-SP5
  
- B. Finish, Aluminum: Provide the following factory applied finish:
  - 1. Clear anodized aluminum.
  - 2. Powder coating.
  
- C. Finish, Color:
  - 1. As designated in Door Schedule
  - 2. As selected from manufacturer's full range of available colors.
  - 3. Custom color.
  - 4. Manufacturer/Color:\_\_\_\_\_.

## 2.5. MOTORS\*\* NOTE TO SPECIFIER \*\* Retain one of the following two paragraphs. Delete this Article if no motorized doors. Coordinate with Division 11 for control systems and Division 16 for electrical work.

- A. Approved Product: Chamberlain Liftmaster 3900 Series Jackshaft Operator.
  - 1. On board logic controllers. Force memory and automatic obstruction sensing.
  - 2. Motor: 24 volt DC.
  - 3. Sealed motor system.
  - 4. No railings or trolleys; ultra quiet.
  - 5. Battery backup – available option
  - 6. Mounts beside door or remote mount with additional adapter kit
  - 7. LED wall controls with keypad security option
  - 8. Warranty: 5 years.
  
- B. Industrial Jackshaft Operator: Chamberlain Liftmaster Series J Industrial Jackshaft Operator.
  - 1. Maintenance warning system notifies users when scheduled maintenance is due.
  - 2. Motor: 1/2 HP switchless motor with the following:
    - a. 115 volt. (please select either A or B)
    - b. 208/230 volt.
    - c. Single phase. (Please select either option C or D)
    - d. Three phase.
    - e. Separated high voltage wiring.
    - f. Diagnostic LEDs.
  - 3. Photo eye safety sensors.
  - 4. Touchscreen wall controls with optional keypad security
  - 5. Warranty: 2 years.
  
- C. Commercial Jackshaft Operator – ZAP 8825D - Superdrive
  - 1. Maintenance warning system notifies users when scheduled maintenance is due.

2. Motor: switchless DC motor with the following:
  - a. 120 volt.
  - b. Single phase.
  - c. Separate 8800 series 3 control panel.
  - d. Diagnostic LEDs.
  - e. Adjustable force memory, motor power settings.
  - f. Automatic self-adjusting up/down stop system.
  - g. Battery Backup available upon request.
3. Photo eye safety sensors.
4. Automatic obstruction sensing; motor reverses if door bottom contacts an obstruction.
5. Touchscreen wall controls with optional keypad security
6. Warranty: 2 years.

D. Doors shall be electronically operated with control systems as specified in Section 11150.

E. Provide electrical service and wiring connection as specified in Division 16 for future electric operation.

## 2. EXECUTION

### 2.5. EXAMINATION

- A. Do not begin installation until openings have been properly prepared.
- B. Verify wall openings are ready to receive work and opening dimensions and tolerances are within specified limits.
- C. Verify electric power is available and of correct characteristics.
- D. If preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### 2.6. PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

### 2.7. INSTALLATION

- A. Inserts and Anchorages: Furnish inserts and anchoring devices suitable for the installation of the units and consistent with the manufacturer's installation requirements. Coordinate delivery with other work to avoid delay.
- B. Install overhead doors, operating equipment, hardware, seals, stops, anchors, inserts, supports and track in accordance with approved shop drawings and the manufacturer's printed instructions.
- C. Coordinate installation with adjacent work to ensure proper clearances and allow for maintenance.

- D. Anchor assembly to wall construction and building framing without distortion or stress.
- E. Securely brace door tracks suspended from structure. Secure tracks to structural members only.
- F. Fit and align door assembly including hardware.
- G. Coordinate installation of electrical service. Complete power and control wiring from disconnect to unit components.

#### 2.8. CLEANING AND ADJUSTING

- A. Lubricate, test and adjust door assembly to smooth operation free from warp twist or distortion and in full contact with weather-stripping.
- B. Clean doors, frames and glass.
- C. Remove temporary labels and visible markings.

#### 2.9. PROTECTION

- A. Do not permit construction traffic through overhead door openings after adjustment and cleaning.
- B. Protect installed products until completion of project.
- C. Touch-up, damaged coatings and finishes and repair minor damage before Substantial Completion.

#### 2.10. MAINTENANCE

- A. Post Installation Maintenance:
  - 1. Contractor and installer shall provide Owner with complete company name, address phone number, fax number and assigned contact for emergency repairs and scheduled maintenance for the installed door(s).
- B. Training/Instruction for Owner for Operation and System Maintenance:
  - 1. Manufacturer shall instruct Owner's representative in regular tenant provided maintenance and operation of installed doors.

END OF SECTION