

SECTION 11 14 13.19
TURNSTILES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Turnstiles of the following styles:
 - 1. Swing gate

1.2 RELATED SECTIONS

- A. Section 05 75 13 Metal and Glass Railing System

1.3 REFERENCES

- A. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- 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 methods.
- C. Shop Drawings: Plan layout of multi-turnstile installation with ADA compliance designed and indicated. Coordination of signal required for fire alarm activation of turnstile.
- D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years experience manufacturing similar products.
- B. Installer Qualifications: Minimum 2 years experience installing similar products.
- C. Mock-Up: Provide a mock-up for evaluation of installation and working application workmanship.
 - 1. Provide mock-up configuration designated by Architect.
 - 2. Do not proceed with remaining work until work is approved by Architect.
 - 3. Rework mock-up area as required to produce acceptable work.

1.6 PRE-INSTALLATION MEETINGS

- A. Convene minimum two weeks prior to starting work of this section.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
- B. Handling: Handle materials to avoid damage.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.9 SEQUENCING

- A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.10 WARRANTY

- A. Manufacturer shall warrant turnstile for a minimum period of five years from date of installation or ten million cycles whichever is exceeded first.
 - 1. Through testing and field experiences, Aeroturn mechanisms shall be expected to exceed 10,000,000 cycles.
 - 2. Parts and labor to repair or replace at factory shall be included in the 5 year warranty, provided:
 - 3. Electronic components are fully warranted for one year from date of installation.
 - 4. Damage or Malfunction Reported:
 - a. Upon investigation, if the damage or malfunction was caused by Aeroturn. Repair shall be made at factory of returned turnstile.
 - b. If the components are not damaged in any way but have malfunctioned causing the Turnstile to not work properly, then phone diagnosis and technician support to the fullest extent possible in support of turnstile functionality.
 - 5. Not Included: Trips to site by Aeroturn for diagnosis, repair or replacement.
 - a. Site repairs in excess of 150 miles of factory are billed out at 1 Aeroturn man/day.
 - b. If failed component(s) is under warranty then cost of part is waived.
 - c. If malfunction is isolated at the site and was not caused by Aeroturn component(s) at billed 1 Aeroturn man/days.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Turnstiles.us: tel. 303-670-1099
- B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 TURNSTILES - GENERAL

- A. Turnstiles shall be capable of a minimum of 10 million continuous duty cycles without scheduled maintenance or service of any type.

- B. Turnstiles mechanics shall be capable of indoor/outdoor application with all-weather - heat, cold, rain, dry, dusty or gritty environments.
- C. Turnstile mechanism shall be engineered for ultra-quiet operation.
- D. Turnstiles shall be capable of Continuous Motion Control. Barrier motion is under the control of the unit at all times through the cycle. This motion can be overridden by the user at any point during passage. A safety clutch shall be engineered and installed that is force adjustable.

2.3 TURNSTILES

- A. Product: Rotary as manufactured by Aeroturn LLC.
 - 1. Turnstile to be integrated with a building Access Control System to grant or deny access to the facility.
 - 2. The pedestrian passageway can be bi-directional at all times.
 - 3. The passageway can be directionally controlled as to not allow passage in opposite direction of a positive card read. This feature prevents invalid access into the facility.
 - 4. The Arm and Hub Assembly shall be capable of being replaced without disassembly of any portion of the turnstile cabinet. The Arm and Hub Assembly shall be mechanically assembled and maintain assembly at all times. All replacement of Arm and Hub Assemblies shall take place in the passageway without rear or side access to turnstile cabinet.
 - 5. Additional visual and audible outputs available.
 - 6. The turnstile shall provide automatic resetting of the lane.
 - 7. Operation shall be capable of allowing one single passage per valid card read. Passageway shall be directionally sensitive.
 - 8. Components and assemblies are designed specifically for the turnstile model. Power supplies, on-board ups, circuit breakers can be DIN rail rigidly mounted inside the cabinet. Control board, interface board and programmable CNT relay can be mounted on an equipment plate inside the cabinet.
 - 9. Pedestrian throughput shall be dependent on the access control technology.
 - 10. Entrance/Exit control is performed by a dry contact closure of no more than 200ms. Fire Open control is performed by breaking the normally closed wire pair/circuit provided at the turnstile control board. Push button/panel and exit control shall be available.
 - 11. A continuous duty (capable of 20 million rotations) patented damper shall be coupled with mechanism to provide safety to the pedestrian in case of authorized or unauthorized contact with the arm and hub assembly. Damper shall provide the same function in both directions without damaging the turnstile mechanism.
 - 12. The turnstile shall be capable of providing a clear passageway lane without the lower 2 arms protruding into the passageway.
 - 13. Rotary Turnstile shall have an available manual key emergency open override at the turnstile cabinet.
 - 14. Turnstile shall have a passageway odometer internally or remotely mounted.
 - 15. Turnstile cabinets shall have replaceable components without mandatory replacement of entire cabinet due to damage.

2.4 FABRICATION

- A. Turnstiles shall be put through a thorough 10,000 cycle factory burn-in to minimize early electronic component field failures.
- B. Aeroturn Turnstiles shall be capable of 10 million cycles without scheduled service or

maintenance.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 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.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions, approved submittals and in proper relationship with adjacent construction. Test for proper operation and adjust until satisfactory results are obtained.

3.4 FIELD QUALITY CONTROL

- A. Contact factory prior to attempting to repair Turnstiles. If damage occurs during a service attempt by non-certified personnel, warranty is voided.

3.5 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION