**U.S. DEPARTMENT OF TRANSPORTATION**
FEDERAL AVIATION ADMINISTRATION
Air Traffic Organization Policy

**ORDER**
**JO 6480.7E**

**Effective Date:**
January 14, 2009

**SUBJ:** Airport Traffic Control Tower (ATCT) and Terminal Radar Approach Control (TRACON) Design Policy

**1. Purpose of This Order**. This order establishes the design policy for ATCT and TRACON facilities.

**2. Audience**. The audience for this order will typically consist of engineers and designers directly involved with the design and construction of ATCT and/or TRACON facilities. The engineers and designers may be Federal Aviation Administration (FAA) employees, or the employees of an architectural and engineering (A/E) firm working under a contract with the Government.

**3. Where Can I Find This Order**? This order is available on the MyFAA employee Web site at https://employees.faa.gov/tools_resources/orders_notices/.

**4. Cancellation**. This Order cancels FAA Order (FAAO) 6480.7D, Airport Traffic Control Tower and Terminal Radar Approach Control Facility Design Guidelines, dated August 11, 2004.

**5. Explanation of Policy Changes**. This revision extensively updates FAAO 6480.7D by eliminating prescriptive design requirements and establishing this order as a design policy document. Experience has shown that prescriptive design requirements become outdated over time, and tend to conflict with subsequent revisions to the model building codes (for example, International Building Code, National Fire Protection Agency, National Electric Code, Occupational Safety and Health Administration, etc.), resulting in confusion for the designer. Major and minor changes include the following subjects:

**a.** Renaming the order from ATCT/TRACON "Design Guidelines" to "Design Policy".

**b.** Elimination of FAA-specific, prescriptive requirements and guidelines.

**c.** Establishment of FAA policy with respect to ATCT/TRACON design.

**d.** Coordination of this order with the Standard Designs for ATCT and TRACON facilities.

**e.** Correction of organizational references that changed as a result of creation of the Air Traffic Organization (ATO).

**6. Action**. Terminal Services of the ATO is the line of business charged by the FAA Administrator to establish design policy pertaining to the establishment, replacement, relocation, modernization, and/or sustainment of ATCT and/or TRACON facilities. Terminal Services shall implement the policy of this order by developing standard drawings and specifications for ATCT and TRACON facilities, updating them on an annual basis, and utilizing them to the extent possible.

**7. Policy**. The underlying philosophy for ATCT /TRACON facility establishment, replacement, relocation, modernization, or sustainment is one of responsive, responsible, and defensible design with an overlying commitment to design principals and practices that are requirements-based, logical, and

conservative. Each design must respond to the users' needs, reflect a responsible use of public funds, and be defensible with respect to scope, cost, and appearance. Terminal Services shall implement the policy of this order by developing standard drawings and specifications for ATCT and TRACON facilities, updating them on an annual basis, and utilizing them to the extent possible.

**8. Procedures**. Project-specific requirements will be defined for each ATCT and/or TRACON project via a Requirements Document (RD) or a Project Scope Agreement (PjSA). Requirements for projects that establish, replace, relocate, and modernize will be documented in an RD, while requirements for sustainment projects will be documented in a PjSA.

**a.** The RD is the end result of a comprehensive analysis of the project scope, and includes the major design parameters such as:

(1) The number of controller positions in the ATCT cab, the TRACON, or both.

(2) Air Traffic and Technical Operations staffing.

(3) A complete list of equipment systems that will be purchased and installed in the facility.

(4) The type of power system that will be installed.

(5) Allowable spaces and room sizes.

(6) Project schedules.

(7) Cost estimates.

(8) NextGen or other special requirements.

**b.** Based on the size of the operation and other parameters, the RD will also identify which standard design(s) and floor plans will be utilized for a specific project. Each RD will receive director-level signatures to ensure the project has been fully-coordinated with all of the appropriate lines of business.

**c.** A Project Scope Agreement (PjSA) consists of a general description of the project parameters based on input from several sources including the local ATO and Technical Operations personnel. Many times, the design team responsible for the project will need to make an initial site visit to verify the applicability of items contained in the preliminary scope of work, and ensure that adequate funding is available to complete the items. If adequate funding is questionable, the scope of work items should be prioritized to ensure the most critical requirements are completed first.

**d.** The design effort for a specific project will typically begin after the RD or PjSA has been finalized and approved. Standard designs will typically be implemented to establish, replace, and relocate projects; however, modernization projects may be subjected to the standard design parameters to ensure space functionality and room sizes conform to the national standards and parameters. A standard ATCT or TRACON design will generally conform to the following three items: standard drawings, standard specifications, and Terminal Facilities Standard Designs A/E Project Manual. A brief description of each is included below:

(1) **Standard Drawings** - The standard drawings consist of general and architectural drawings that depict the basic floor plans and elevations of the standard facilities. The standard drawings include a low activity, intermediate activity, and major activity level ATCT design, and can be found on the ATO-T Knowledge Sharing Network Web site. Each ATCT design has varying control cab options that can be substituted to fit the particular operation at a specific airport. The standard designs also include varying administrative Base Building sizes as well as TRACON Base Building sizes that will fit most applications and operations. Terminal Services will, via the RD, tailor the standard designs as required to address specific project parameters.

(2) **Standard Specifications** - The standard specifications are in MasterSpec format and are intended to compliment the Standard Drawings. The Standard Specification must be site-adapted for each project based on the site-specific requirements. Site-adaptation of the specification includes selecting the appropriate sections that are required to define the work, and eliminating sections that are not necessary.

(3) **Terminal Facilities Standard Designs A/E Project Manual** - The Terminal Facilities Standard Designs A/E Project Manual outlines the FAA's design philosophy, engineering parameters, submittal requirements, and good design practices for both ATCT and TRACON facilities. The information contained in the manual is intended to supplement the FAA's design orders and standards, and incorporate many helpful lessons-learned that have been collected for all of the major engineering disciplines.

**9. Distribution**. This order is distributed to the ATO in Washington headquarters, as well as the Eastern, Central, and Western Service Areas; to the Mike Monroney Aeronautical Center; to the William J. Hughes Technical Center; to the Service Area Technical Operations and ATO organizations; and to all district offices in the service areas.

**10. Authority to Change This Order**. The Vice President of Terminal Services, ATO-T, may issue changes to this order as necessary. The Administrator reserves the authority to approve changes which establish policy, delegate authority, or assign responsibility.

/s/
David B. Johnson
Vice President, Terminal Services
Air Traffic Organization

1/14/09
Date Signed