CHAPTER 5. PROJECT ACCOMPLISHMENT

500. INTRODUCTION. The construction phase of any project begins upon completion of the environmental engineering package; the electronics engineering installation phase begins with completion of the electronic engineering package. Prior to the construction and/or installation phase(s), all items specified in the Engineering Checksheets, Chapter 4, Figure 4-2, shall be completed. The accomplishment phase of a project is marked by the beginning of actual on-site construction or installation work. Requirements will exist for the Resident Engineer (RE), Work Order Carrier (WOC), Technical On-site Representative (TOR), or Contracting Officers' Representative (COR) to routinely coordinate his/her activities with the local Airway Facilities sector, Air Traffic offices, or other officials having an interest on the project. This chapter will delineate coordination requirements and define the extent of involvement of the local Airway Facilities sector and define the responsibilities for the various organizations on support of activities required to carry the project forward through final acceptance for operation and maintenance.

501. RESPONSIBILITIES.

a. The Airway Facilities Division, AAL-400, serves as the overall F&E Program Manager to ensure that all projects and programs are implemented in a timely manner, satisfy all predefine and programmed operational requirements, and are designed and installed on compliance with all applicable agency standards.

b. The Program Support Branch, AAL-420, plans and provides for the training, staffing, and fiscal support needed to incorporate new facilities and equipment into the NAS. AAL-420 also processes updates to the regional FERS reports which reflect the current status of all F&E projects.

c. The Planning and Program Management Section, AAL-454, monitors the progress of all projects during the accomplishment phase, and acts as the focal point for coordination of all project schedule changes. Upon receipt of written requests and adequate justification from the engineering sections, sectors, or other regional divisions, AAL-454 shall initiate any required funding adjustments or reprogram actions to ensure that projects satisfy operational needs. Requirements for additional funding will be forwarded to AAL-30 through AAL-420. AAL-450 also acts as the focal point within the division for coordination of all planning activities with other divisions, regional Aviation Policy and International Affairs Staff, and with out-of-agency principals such as airport sponsors, telephone companies, and the military services.

d. The Environmental Section, AAL-451, and the Electronics Section, AAL-452, are responsible for all engineering required to implement approved F&E projects. These sections manage and direct their respective F&E field work forces and coordinate all activities related to the accomplishment of F&E projects up to final acceptance for maintenance and operation. They also specify all materials and services required to support accomplishment; initiate supply actions through established supply, procurement, and contracting channels; and assure proper provisioning, use, and capitalization of required materials and services.

e. The Maintenance Branch. AAL-460, is responsible for maintaining an overview of all F&E projects activities and their impact on the maintenance and operation of commissioned facilities in the NAS. They provide engineering oversight support to Airway Facilities sectors and develop appropriate project maintenance and operations standards. They also plan and provide for leased communications and frequency management services support for F&E projects.

f. The Airway Facilities sectors are responsible for participation in various aspects of project accomplishment. The sectors monitor construction and installation activities and, in conjunction with the Establishment Branch engineering sections, coordinate at the local level all aspects of F&E project activities which may impact commissioned facilities and services. They participate with installation personnel on tune-up, flight inspection, and commissioning of all new facilities and services. They chair the Joint Acceptance Board during final acceptance and commissioning and are subsequently responsible for the maintenance and operation of all assigned NAS facilities and equipment. As such, they are the final custodians of all related personal and real property provided under the F&E program. When designated, or assigned by the Airway Facilities Division, sector personnel serve as contracting officer's representatives (CORs) or technical on-site representatives (TORs) and accomplish portions or all aspects of F&E projects.

502. PROJECT CHANGES DURING ACCOMPLISHMENT. All concerned organizations should be aware that, upon reaching the accomplishment phase of a project, the precise scope of the project has been clearly defined and agreed upon during the program management phase and formal concurrence of all affected organizations has been documented. Since the engineering design has been completed and fully coordinated, the design is considered frozen at this point. Neither can there be any deviations from Washington standards daring project accomplishment by installation or sector personnel. Thus, changes on scope or significant design changes should not be suggested or considered at this point since such untimely changes would result on any or all of the following:

a. Cost overruns; i.e., the inability to accomplish the project within budgeted funds.

b. Unacceptable delays an project completion, with attendant adverse impact on scheduling and planning which may affect other projects and related activities.

c. Expensive and unnecessary claims from contractors, resulting from last-minute change orders.

d. Reduction on the quality of the end product, since quality control, planning, and the review processes are disrupted by last-minute changes. Project changes may be submitted during the construction/installation phase of a project, if the proposed changes result on overall project savings or improvements to the end product. These changes must, however, have minimal impact on project schedules and contractual obligations. Project change requests shall be submitted to the Environmental Section, AAL-451, and/or the Electronics Section, AAL-452, on AL Form 6000-10, Engineering Change Proposal.

503. PROJECT COORDINATION CONFERENCES. Individual project coordination, depending upon complexity, will involve varying numbers of organizations and people. An individual project may require more or less coordination than those delineated below. The chairperson of the coordination team (usually the supervisor of the responsible Construction or Installation Unit, AAL-451 or AAL-452) shall determine the specific coordination requirements for each project and shall accomplish the necessary coordination with the principal organizations involved in the project.

a. In-House Final Project Review Conference Prior to Preconstruction or Preinstallation Conference. Prior to the preconstruction or preinstallation conference with the contractor, FAA project personnel and the chairperson of the coordination team shall arrange an 1p-house conference of team members and, as required, other personnel. When meeting is scheduled, it should be held at the involved field office or at the project work site to facilitate participation by working level personnel. The coordination team chairperson or his/her designee will make every effort to notify the coordination team members at least 1 week in advance of the conference. Whenever notification cannot be made 1 week in advance, the team members will be notified by telephone as far in advance as possible.

(1) Purpose of Review. The purpose of the in-house final project review, prior to the preconstruction or preinstallation conference, is to:

(a) Review in detail the engineering package, installation plan, and project schedule.

(b) Review the status of each of the items specified in the checklist included In Chapter 4 of this order which should have been completed at this point.

(c) Identify problems and uncompleted action items which will impact or prevent project accomplishment.

(2) Conference Participants. Participants in the in-house final project review should include:

(a) The project RE, WOO, TOR, or COR.

(b) The involved AF and AT field and regional coordination team members (or their designees), and their designated staff and working-level personnel.

(c) The sector AMTS or other representative designated by the sector manager.

(d) Other regional office personnel as deemed necessary by the review team chairperson to ensure that all pertinent details and concerns are considered prior to the start of work.

(3) Resolution of Problems and Uncompleted Action Items. The coordination team chairperson shall take or initiate the actions necessary to resolve identified problems and to complete delinquent project items. The chairperson shall ensure that a complete set of minutes of the conference is recorded and copies of the minutes are distributed to all team members.

b. Preconstruction Conference (Contract Construction). A resident engineer from the Environmental Section, AAL-451, will usually be assigned to act as the Contracting Officer's Representative (COR) to oversee the contractor's work during the construction phase of a project. Airway Facilities sector personnel occasionally may be designated as CORs on certain FEE projects. The contracting officer will initiate a conference with the contractor prior to the start of construction. The coordination team chairperson or his/her designee will make every effort to notify the appropriate coordination team members and the representatives of other involved organizations at least 1 week in advance of the conference. If a 1 week notification cannot be provided to the team members, they will be notified by telephone as far on advance as possible. The contracting officer (or his/her designated representative, usually the resident engineer) shall determine the agenda and chair the preconstruction conference. The conference will cover specified contract requirements and should not be a forum for the discussion of In-house project problems or for rounding changes to contract terms unless such changes have previously been discussed with and approved by the contracting officer.

(1) Purpose of Conference. The purpose of the preconstruction conference is to:

(a) Review specific contract requirements with the turn-key or regional oontractor.

(b) Provide details of how the work is to be accomplished, who is responsible for various phases of the work, the project work schedule, and the impact on AF, AT, or sponsor operations.

(c) Establish a list of names and telephone numbers of representatives of the involved organizations for coordination of project work, resolution of problems, scheduling shutdowns, etc.

(d) Make arrangements with the sponsor and/or the local Airway Facilities office representatives for access to the job site by the resident engineer (RE) and contractor personnel.

(e) Outline the RE's responsibilities in overseeing the construction project and the need to ensure that construction is not impeded in any way.

(2) Conference Participants. Attendance at the preconstruction conference should be limited to those organizations which are involved on or will need to interface with the resident engineer and/or the contractor during the project work. Conference participants will be determined by the contracting officer and the coordination team chairperson. Participants In the conference will usually include:

(a) The contracting officer and project resident engineer.

(b) AF and AT field and regional coordination team members (or their designees), as appropriate for the project, and their designated staff and working level personnel.

(c) The sector AMTS or other designated representative of the section manager.

(d) Other regional office representatives, such as specialists n real estate, material management, frequency management, etc., as determined appropriate by the coordination team chairperson.

(e) The airport Sponsor or base commander and/or their designated staffs, when their property will be involved on the project work.

c. Preinstallation Conference (Contract/Turnkey Installation). Usually a technical on-site representative (TOR) will be assigned by the Electronics Section, AAL-452, to monitor contractor installation work and to accept the electronic equipment from the contractor. The TOR, with the assistance of sector personnel, is responsible for the completion of specified tests and the documentation of required performance data to ensure proper operation of the equipment prior to FAA acceptance. Airway Facilities sector personnel may be designated to serve as TORs on certain contract installation projects. The TOR, or other person designated by the coordination team chairperson, shall conduct a preinstallation conference at the involved Airway Facilities field office or at the job site prior to the arrival of the installation contractor. The coordination team chairperson or his/her designee will make every effort to notify the involved coordination team members and representatives of other organizations, as appropriate, at least 1 week on advance of the scheduled conference. If the members cannot be notified 1 week on advance, they shall be notified by telephone as far on advance as possible.

(1) Purpose of Conference. The purpose of the contract preinstallation conference is to:

(a) Review In detail the project installation plan, the work to be accomplished by the contractor, the project work schedule, and the impact on AF, AT, or sponsor operations.

(b) Designate who is responsible for various phases of project work; i.e., the contractor, TOR, local AF personnel, etc.

(c) Provide the Airway Facilities sector representative details of participation required of sector personnel during the project In maintaining n-use equipment affected by the project, accomplishing modifications, performing equipment tests, documenting performance data, etc.

(d) Develop, with recommendations from the local AF and AT representatives, if appropriate, a schedule of equipment outages necessary to accomplish the project and a plan for the continuity of service as dictated by operational requirements.

(e) Establish coordination procedures and designate representatives from each organization to serve as coordinators for the project work.

(f) Arrange with the sponsor and/or local Airway Facilities office representative for access to the job site by the TOR and contractor personnel.

(g) Outline the TOR's responsibilities in overseeing the installation project and the need to ensure that the contractor's work is not impeded in any way.

(2) Conference Participants. Attendance at a preinstallation conference should be limited to those organizations which will be affected by the project work or will need to interface with the TOR during the project. Participants in the conference usually will include:

(a) The project TOR.

(b) Airway Facilities and Air Traffic field and regional coordination team members (or their designees), as appropriate for the project, and their designated staff and working-level personnel.

(c) The sector AMTS or other designated representative of the sector manager.

(d) Other regional office representatives as determined by the coordination team chairperson.

(e) The airport sponsor or base commander and/or their designated staffs if their property or operations will be impacted by the project work.

d. Preinstallation Conference (Installation by Regional F&E Personnel). Usually a work order carrier (WOC) will be assigned by the Electronics Section, AAL-452, to install and/or oversee the installation of equipment assigned for accomplishment by regional F&E personnel. Airway Facilities sector personnel are sometimes assigned the responsibility to accomplish certain regional F&E projects or portions of projects. The WOC or other person designated by the coordination team chairperson shall conduct a preinstallation conference at the involved AF field office or the job site prior to the start of installation work. The coordination team chairperson or his/her designee will make every effort to notify the involved team members at least 1 week on advance of the scheduled conference. If a 1-week notification cannot be provided, the team members will be notified by telephone as far In advance as possible.

(1) Purpose of Conference. The purpose of the preinstallation conference, for installation projects accomplished by regional F&E personnel, is to:

(a) Review in detail the installation plan, the project work schedule, and the impact on Airway Facilities, Air Traffic, or sponsor operations.

(b) Provide the Airway Facilities sector representative details of the participation required of sector personnel during the project for maintaining in-use equipment affected by the project, accomplishing modifications, performing equipment tests, documenting performance data, etc.

(c) Establish coordination procedures and designate representatives from each organization to serve as coordinators for the project work.

(d) Arrange with the sponsor and/or local Airway Facilities office representative for access to the job site by F&E personnel.

(e) Develop, with recommendations f D the local Airway Facilities and Air Traffic representatives, if appropriate, a schedule of equipment outages necessary to accomplish the project and a plan for the continuity of service as dictated by operational requirements.

(2) Conference Participants. Participants in the preinstallation conference for an F&E project accomplished by regional F&E personnel will usually Include:

(a) The project WOC.

(b) The involved Airway Facilities and Air Traffic field and regional coordination team members (or their designees), as appropriate, and their designated staff and working-level personnel.

(c) The sector AMTS or other representative designated by the sector manager.

(d) Other regional office personnel as deemed necessary by the coordination team chairperson to ensure that all pertinent details and concerns are considered prior to the start of work.

e. Additional Conferences During Project Implementation. The coordination team chairperson will schedule and conduct additional conferences of coordination team members as needed during the project construction or installation to:

(1) Resolve problems In project implementation.

(2) Make necessary adjustments In the project plan.

(3) Coordinate and prepare for equipment/service cutover.

(4) Prepare for flight inspections, equipment/system tests, or operational readiness demonstrations.

504. PERIODIC PROGRESS REVIEWS. During the course of a project, the resident engineer, work order carrier, technical on-site representative, or contracting officers representative will accomplish the following as a means of keeping the

sector representative informed on the project status, problem areas, and Scheduling:

a. Keep sector representative apprised of requirements for equipment/system shutdowns.

b. Keep the sector representative advised of project status and planned work activities.

505. COORDINATION DURING CONSTRUCTION AND INSTALLATION.

a. Sector Responsibilities. The sector representative is responsible for keeping the sector manager and other appropriate local personnel informed on the project status, significant problems, and items requiring the attention of the RE/TOR/WOC/COR or coordination team chairperson. The sector representative shall consult with the RE/TOR/WOC/COR prior to referring any matter to the team chairperson.

b. F&E Personnel Responsibilities. The WOC, RE, TOR, or COR shall work through the designated sector representative an a day-to-day basis for interfacing with the local AT organization and/or the airport sponsor/base commander an matters which impact ongoing operations, security, scheduling shutdowns of facilities or runways, issuance of NOTAMS, etc. The WOC, RE, TOR, or COR shall keep his/her supervisor informed on project status and matters which will impact or delay the completion of the construction or installation; the supervisor will, an turn, keep the coordination team chairperson informed.

c. Coordination Between F&E and Operations Personnel. While F&E work is in progress at a site, AF sector personnel shall refrain from disturbing any equipment or otherwise interfering with work on progress except when expressly coordinated with the RE, WOC, TOR, or COR. F&E personnel shall likewise refrain from disturbing any existing operational equipment without first carefully coordinating all such activities with the local Airway Facilities sector representative. Where F&E work involves operational equipment and requires coordination with the local Air Traffic organization, the coordination shall be accomplished by the local Airway Facilities sector representative. When all parties agree and it is feasible to do so, specific arrangements may be made at the start of a project for certain aspects of this coordination to be conducted directly by the RE/WOC/TOR/COR, so long as procedures are established to ensure that all parties are properly informed on a timely manner and such coordination involving commissioned facilities is properly documented.

d. Coordination With Contractor. Any direct coordination with a contractor shall be handled through the RE/WOC/TOR/OOR or others who have been officially designated by the contracting officer as the on-site contracting officer's representative (COR) or technical on-site representative (TOR). Operations personnel shall not, under any circumstances, become directly involved with a contractor unless they have been directed to do so through the appropriate chain of command which shall include the contracting officer.

506. REPORTING AND COORDINATING SCHEDULE CHANGES. Project scheduling is established during the engineering phase and every effort should be made by all involved parties to adhere to established schedules. When situations arise at the job site which will impact the overall project schedule, it shall be the responsibility of the RE/WCC/TOR/COR to immediately inform the contracting officer and the local sector representative, and report the situation and circumstances to his/her supervisor, who will, on turn, notify the coordination team chairperson. The chairperson may also become aware of factors originating at the regional or Washington Office level which will impact project schedules. It shall be the chairpersons responsibility upon becoming aware of any need for a scheduling adjustment, to immediately initiate a review of the schedule and to adjust the total project schedule on coordination with team members and the concerned regional office branches. The revision of the project schedule shall be based upon realistic and, where possible, historical data. The chairperson shall initiate the revision, publication, and dissemination of such schedule changes through the normal F&E Reporting System (FERS) and to all concerned factions, including airport sponsors/base commanders.

507. SCHEDULING SHUTDCWNS AND SERVICE INTERRUPTIONS OF ELECTRONIC FACILITIES, LIGHTING/VISUAL AIDS AND AIRPORT RUNWAYS. The coordination team chairperson is responsible for ensuring coordination of extended shutdowns on accordance with the current issue of Order AL 6020.4, Facility Shutdown, Commissioning, and Decommissioning Committee.

508. PARTICIPATION OF OPERATIONS PERSONNEL IN F&E WORK. Participation of operations funded (AF sector) personnel on progress reviews, coordination activities, and on tune-up and JAI activities is considered normal operations work. Circumstances may occasionally dictate that operations personnel become actively involved on the actual installation work. Such situations are discussed on detail In the current issue of FAA Order 1380.26, Cross Utilization of Regional Operations and F&E Operations Funded Manpower.

a. Accomplishment of F&E Work by Sector Personnel. Basically, Order 1380.26, Cross Utilization of Regional Operations and F&E Operations Funded Manpower requires that when conditions dictate the use of operations funded manpower for F&E work, the Establishment Branch shall initiate a request an writing to the affected sector manager or branch manager. This request shall specify what operations assistance is required. A work order will be issued citing source of F&E funds for accomplishment, project scope, description of work, and when required, a complete construction/installation package. Whenever it is necessary to designate a sector representative as a COR, WOC, TOR, or RE on project work, the Establishment Branch Manager shall ensure that adequate technical information is provided to support the work, in addition to complying with the procedures for funding and requesting operations assistance described n FAA Order 1380.26. This shall include providing a copy of pertinent work order, specifications and drawings, appropriate documentation/instructions to the TOR/COR, when applicable, and sufficient detailed technical guidance to enable the designee to perform a creditable function on behalf of the contracting officer and/or engineering section.

b. Labor Distribution Report. Sector personnel working on assigned F&E projects shall complete AL Form 2766-13, Labor Distribution Report, and submit this form through the first-level supervisor to AAL-420.

509. PRELIMINARY AND COMMISSIONING FLIGHT INSPECTIONS.

a. Scheduling Responsibilities. The Establishment Branch is responsible for scheduling both preliminary (preparatory) and commissioning flight inspections required for facilities installed under F&E projects. Flight inspection schedules shall be closely coordinated with the Airspace and Procedures Branch, AAL-220, the involved sector/sector field office, and, where Air Traffic participation is required, with the local Air Traffic facility manager through the local Airway Facilities sector representative. This coordination is necessary to assure the availability of operations manpower to participate in the flight inspection, to obtain from the local Airway Facilities and Air Traffic managers that the facility is ready for flight inspection, and to arrange for flight inspection needs in the operating Air Traffic environment. After initial scheduling has been accomplished, the construction/installation unit supervisor is responsible for coordinating any change In schedules with all concerned on a timely basis.

b. Preparation for Flight India, Outran. The F&E RE/WOC/TOR/COR will be assisted by designated sector personnel In the equipment tune-up, testing, and collection of data prior to flight inspection. A preliminary Facility Reference Data File, outlined In Order 6030.45, shall be completed prior to flight inspection with a statement added that all work required prior to the flight inspection has been accomplished. The forms shall be reviewed for accuracy and completeness by the sector field office manager, unit supervisor or others designated by the sector manager. The sector designee and the RE/WOC/TOR/COR shall date and initial this document prior to the accomplishment of the flight inspection.

c. Flight Inspection Requirements. Flight inspections shall be conducted as required by and In accordance with Order OAP 8200.1, United States Standard Flight Inspection Manual, and other applicable flight inspection, and maintenance technical directives. The commissioning flight inspection for any facility/system (navaid, radar, communications or visual lighted aids) shall not be performed until all equipment/facility initial standards and tolerances, specified In applicable maintenance technical handbooks, are achieved or an approved NAS Change Proposal (NCP) or Configuration Control Decision (OCD) is obtained for requirements which cannot be met.

d. Participation In Flight Inspections. Participants In a commissioning flight inspection shall always include the RE/WOC/TOR/OOR, a sector representative, and, where radar facilities are involved, an Air Traffic representative. Air Traffic representation should be requested In advance by the project engineer and/or construction/installation unit supervisor using established channels of communications through the Air Traffic Division.

e. Facility NCPs/OCDs to Permit Accomplishment of Flight Inchitian. Prior to any commissioning flight inspection, the RE/WOC/TOR/OOR shall advise

the Supervisor, Environmental Section, AAL-451, or the Supervisor, Electronics , - 2, through established channels, as appropriate, of any equipment/facility initial standard or tolerance which cannot be met. Flight inspection will not proceed until an approved NCP/CCD, or assurances that these will be approved or are not needed, are received from proper authorities. Authorization to proceed with the flight inspection under these conditions can only be given by the supervisors of the Environmental/Electronics Sections, AAL-451 or AAL-452, as appropriate, or higher authority. All NCP/CCD actions taken by AAL-451 or AAL-452 shall be coordinated with AAL-460.

510. PREACCEPTANCE PLANNING.

a. General. Projects to establish, relocate, and improve National Airspace System (NAS) facilities require the involvement and participation of several FAA offices with different responsibilities. These offices have special concerns about various aspects of the projects. Joint Acceptance Inspections (JAIs) are conducted to gain the consensus of involved offices that projects have been completed in accordance with applicable standards and specifications and facilities established under these projects are capable of providing the services required within established standards and tolerances.

b. Joint Acceptance Board. In accordance with the latest version of Order 6030.45, Facility Reference Data File, a JAI board shall be established for each project accomplished by FAA personnel or following acceptance of a construction project or equipment installation completed under contract. The board will have full authority to determine the conditions of acceptability in accordance with the established standards and specifications. An Airway Facilities sector representative designated by the sector manager shall serve as chairman of the JAI Board.

c. Preparation for JAI. Prior to convening a JAI board, all final equipment tune-up, testing, and documentation shall be completed. The resident engineer, work order carrier, or technical an-site representative shall request, through the sector representative, participation and assistance by sector engineers/technicians/mechanics on completing, as required: final tune-up and adjustment, equipment testing, checkout of leased telecommunications, preparation of FAA Form 198, ground resistance measurements, and facility flight inspection. The RE/WOC/TOR/COR shall notify the sector representative at least 1 week on advance of the need for sector participation to allow time for workload planning. The sector manager is responsible for furnishing the manpower necessary to complete these tasks on a timely manner. The sector manager shall make every effort to assign capable personnel with the required training and certification authority to participate on these tasks. On new engine generator installations, the sector is responsible for furnishing trained and competent personnel to initially start, adjust, and complete the test run in coordination with and at the request of the RE.

d. Documentation Needed.

(1) Project Diary.

(2) As-built Drawings (red line prints).

(3) Equipment Installation Record, AL Form 6000-5.

(4) AF Modification Record, FAA Form 6032-1.

(5) Equipment Waiver or NCP.

(6) Record of Cable Testing.

(7) Facility General Reference Data Record, FAA Form 6030-15.

(8) Technical Reference Data Cover, FAA Form 6030-16.

(9) Technical Reference Data Record, FAA Form 6030-17.

(10) FAA Transmitter Authorization, FAA Form 6050-1.

(11) Real Property Record, FAA Form 4660-9.

e. Advance Notification of JAI. The RE/WCC/TOR/COR is responsible for notifying the construction/installation unit supervisor at least 10 days prior to a proposed partial or full JAI. The Environmental/Electronics Section is, on turn, responsible for formally notifying all required participants on accordance with the current edition of Order 6030.45, Facility Reference Data File. Prior to formal notification of the JAI participants, the responsible section shall ensure that all required actions will be completed prior to the start of the JAI and that the facility will be ready for acceptance by the user and, if so intended, ready for commissioning at the completion of the JAI. The following actions should be accomplished by the Environmental/Electronics Section prior to formal JAI notifications:

(1) Review all action items assigned during the preconstruction/pre-installation coordination meeting to assure that all assigned action items have been completed.

(2) Assure that the RE/WOC/TOR/COR and the sector representative, along with the local AT and AF representatives, have conducted a preliminary inspection using the JAI checklist contained in the latest edition of Order 6030.45, Facility Reference Data File. Punch list of items requiring correction prior to JAI time will be generated with sufficient time allowed for correction of all items on the punch list.

(3) Assure that approved NCPs/CCDs have been obtained and copies have been provided to the sector representative for all conditions where initial standards and tolerances specified in applicable maintenance technical orders or other established criteria cannot be met.

(4) On construction projects, assure that the Real Property Owned Unit Records (RPOURs) have been completed and are ready for submission to AAL-52 and that they will be available for review and submission during the JAI. (See the current issue of Order 4660.1, Real Property Handbook.)

(5) Assure that the RE/WOC/TOR/COR has completed and has available for review and submission during the JAI a listing (FAA Form 4800-1, Report of Excess Property of all excess F&E materials to be excessed on-site and a listing (AL Form 6000-5) for equipment removed from service as required by pertinent directives, showing description, quantity, NSN, cost, and condition codes. (See the current issue of Order 4800.2, Utilization and Disposal of Excess and Personal Property, and Order 4650.7, Management of Project Materiel.)

(6) A Mete and comprehensive cutover plan, where applicable, detailing all required activities and responsibilities during the cutover to new facilities has been developed by the responsible construction/installation unit supervisor with participation by all organizations involved. This plan shall be n writing and shall address all activities which will take place during the JAI and transition to new or modified facilities or services.

(7) Verify that the RE/WOC/TOR/COR has provided the sector representative an itemized listing of equipment installed, equipment not installed, and equipment removed on AL Form 6000.5.

(8) Assure that all leased communications services are validated as complete and notification is given to the Frequency Management/Leased Communication Section, AAL-464, to begin payment.

511. CONDUCTING CONTRACT ACCEPTANCE INSPECTIONS (CAls) AND THEIR RELATIONSHIP TO JOINT ACCEPTANCE INSPECTIONS (JAIs)

a. The Contract Acceptance Inspection (CAI) and Joint Acceptance Inspection (JAI) are two separate inspections. These activities are not usually conducted concurrently, except for very small projects. The CAI is the acceptance by the agency of a constructed facility or installed equipment from the construction contractor or equipment installation contractor. The JAI is the acceptance of the constructed facility or installed equipment for maintenance and operation by the using organization from regional establishment personnel A JAI is also required on all projects accomplished by sector and other FAA personnel.

b. Local Airway Facilities sector personnel are encouraged to become familiar with facilities and equipment through the resident engineer or technical on-site representative during construction or equipment installation. Advice, comments, and other input from local sector personnel shall be solicited for the CAI by the resident engineer and technical on-site representative for inclusion in the project "punch list" to avoid as many problems as possible during the following JAI. This pre-JAI punch list shall be developed with participation of designated sector personnel, the AMTS, and other agency personnel as required to accomplish a proper and thorough acceptance Inspection.

c. The time period between the CAI and JAI will depend on the complexity of the project and the quality of work completed by the construction contractor or equipment installation contractor prior to the CAI. The CAI will normally be conducted after the development of the pre-JAI punch list.

d. The construction/installation unit supervisor is responsible for reviewing the punch list and making a technical determination whether:

(1) The construction/installation contractor is responsible for correcting a deficiencies covered under terms of the contract.

(2) The construction/installation contractor has met all contract requirements and the equipment performance is satisfactory.

(3) Technical adherence determination will be forwarded to the contracting officer as a recommendation on contractor responsibility for further action as appropriate.

512. CONDUCTING JOINT ACCEPTANCE INSPECTIONS (JAI's).

a. JAI Accomplishment. A JAI shall be conducted upon completion of all projects for use on or on support of the National Airspace System (NAS). A facility reference data file (FRDF) shall be established for a new facility or updated at an existing facility. The FRDF will contain the facility technical reference data, JAI, facility drawings, facility technical documentation, flight inspection reports, technical inspection reports, and superseded background information. The JAI and FRDF will, respectively, be accomplished and established In accordance with the latest issue of Order 6030.45, Facility Reference Data File.

b. Assignment of JAI Exception Action Items. The Chairman of the JAI board in consultation with the RE/WOC/TOR/COR, is responsible for assigning clearance actions for exceptions identified during the JAI. If the full efforts of all organizational elements have been applied throughout the planning, engineering, construction/installation phases, and on the preparation of the pre-JAI punch list, the exceptions should be minimal In number. However, even with the utmost effort and care, same exceptions can be expected, especially on large projects. It is incumbent upon the Joint Acceptance Board Chairperson to carefully weigh all pertinent factors on assigning exception clearance actions. The clearance actions should be assigned to the office, either the Airway Facilities sector or the responsible Environmental/Electronics Section, which can accomplish the actions In the most expeditious, efficient, and effective manner. The guidelines listed below should be followed on making assignments for exception clearance actions:

(l) The exception clearance action should be assigned to the responsible Environmental/Electronics Section if the action can be accomplished more effectively and efficiently with section resources.

(2) The exception clearance action should be assigned to the sector if sector resources are available and the exception clearance action can be accomplished by sector personnel more expeditiously or at a lower cost. Clearance action assignments to the sector may include: correcting minor discrepancies, or coordinating, monitoring, and reporting clearance actions accomplished by the contractor and others. The assistance of sector personnel will, on many instances, reduce or eliminate additional travel costs which would be required for engineering personnel to accomplish clearance actions.

(3) If exception clearance actions can be expedited by or require the combined efforts of both the Establishment Branch and the sector, specific action assignments should be made to each organization.

c. JAI Report Distribution. The chairman of the joint acceptance board shall forward the JAI Report to the responsible AF sector office for review. The sector office shall distribute the JAI Report an accordance with the current issue of Order 6030.45, Facility Reference Data File.

d. JAI Monitoring and Follow-up. The Environmental Section, AAL-451, and the Electronics Section, AAL-452, as applicable, shall be responsible for appropriate correspondence associated with clearing JAI exceptions. The Maintenance Branch, AAL-460, shall be responsible for the overall monitoring and follow-up of JAI reports on accordance with Chapter 6 of this order and Order 6030.45, Facility Reference Data Files. AAL-460 also serves as the focal point for questions from the field regarding the JAI program.

e. Single and Sequential Construction (P&S) and Installation (Electronic) F&E Projects for Establishment of a Facility. At least one final JAI shall be completed for each plant and structure or electronic F&E project, including projects accomplished by sector personnel. Partial JAIs may be accomplished as required by project size, complexity, operational requirements, etc. Where both construction and electronic installation is involved, one final JAI shall cover all plant and structure (P&S) work requirements and one final JAI shall cover the installation and operation of the electronic equipment, including the compatibility of the plants and structures with the electronic equipment and their capability to support the electronic installation. The final electronic JAI shall not be used as an occasion to reinspect, repeat, or expand on the scope of work which was included on the plants and structures JAI. The final electronic JAI shall, however, address the total operational readiness of the entire facility for commissioning. Deficiencies identified on the compatibility or an the capability of the plants and structures to support the electronic installation may result on exceptions which will require action by the Environmental Section, AAL-451. The engineering sections shall implement procedures for handling P&S exception items identified during the final (electronic) JAI and for identifying, monitoring, tracking, and reporting corrective actions.

f. Multiple F&E Projects for Establishment of Single-Integrated System/ Facility. In cases, where multiple F&E projects are required to establish a single integrated system or facility, a partial JAI shall be conducted for each increment prior to its commissioning. A final overall JAI shall then be conducted for the integrated system or facility.

g. In-service Transitions (Cutovers). For projects requiring "in-service" transitions from old to new or modernized facilities, the Establishment Branch shall prepare transition (cutover) plans fully coordinated with affected AT and AF field and regional organizations. These transition plans shall include provisions for the incremental evaluation and documentation of the system's overall readiness and suitability for use on an operational environment and suitability for use In (operational readiness demonstration). The JAI for these projects shall be conducted on planned and coordinated phases, reflecting

transition milestones. A negative determination by any member of the JAI team as to the operational readiness of the system at any transition phase shall be cause for halting the transition until identified problems are resolved.

513. ANCILLARY SUPPORT SERVICES FOR NEW FACILITIES.

a. Airway Facilities Sector Responsibilities. The Airway Facilities sector is responsible for initiating procurement requests or other actions required to provide ancillary services or materials to support the commissioning and operation of a new or modernized facility. Requests for services or materials such as those listed below shall be initiated by the sector sufficiently on advance of the proposed commissioning date to ensure availability when required. Normally, 120-day advance submittals are required for procurement requests. Examples of items or services which may be required are:

(1) Administrative telephone services.

(2) Janitorial, minor maintenance, and grounds maintenance services.

(3) Sufficient fuel for newly installed engine generator fuel tanks is sufficient to support operations. Close coordination between the sector representative and the construction unit supervisor is required to plan and procure the necessary fuel through a single delivery, when feasible. Normally, the F&E project will only provide for a minimum amount of fuel required to complete testing of a plant. The remainder shall be provided from operations funds by the Airway Facilities sector. Refer to the current issue of Order AL 6000., Environmental Engineering Handbook, and Order 6980.11, Maintenance of Engine Generators.

(4) Requesting all required publications and directives required to establish a facility reference data file. The Maintenance Branch, AAL-460, shall be responsible for assisting the sector on obtaining required publications not available In a timely manner through normal distribution channels.

b. Establishment Branch Responsibilities. The Environmental/Electronics Sections, AAL-451 and AAL-452, are responsible for initiating actions to provide certain services and materials necessary for provisioning a new or modernized facility. Examples of these services and materials which may be required are:

(1) Property/space leases.

(2) Utilities contracts.

(3) Leased communications.

(4) Schedule "A&B" materials.

(5) ISSACs.

(6) Test equipment.

(7) Items required by national or regional directives, such as safety equipment, emergency lights, etc.

(8) Building numbers.

514. REQUISITIONING, HANDLING, AND STORAGE OF PROJECT MATERIALS. Directions and guidance for project materiel management are contained in Chapter 4 of this order and in the current issue of Order 4650.7, Management of Project Materiel. The responsibilities for project materiel management are as follows:

a. Property Management Section, AAL-52B, is the official property custodian of all F&E property received for assigned projects and is responsible for:

(1) Receiving and promptly reporting receipt of all project materials.

(2) Inspecting shipments and reporting shortages or damage within the limitations described on Order 4650.7, Management of Project Materiel.

(3) Ensuring that all F&E materials are tagged and identified with the job order number, project title, and location for the appropriate project, as required by Order 4650.7, and are properly and securely stored pending use.

(4) Maintaining accountability for all F&E material received. F&E installation personnel will be required to sign for all property received from the complex at the beginning of the accomplishment phase. All project material transferred to F&E personnel will be listed on FAA Form 4650-12.

(5) Shipping F&E project material to the job site as requested by AAL-451, AAL-452, or AAL-454. All project materials shipped to the job site will be listed on FAA Form 4650-12.

(6) Declaring excess, transferring and disposing of any property not utilized on a force account F&E project, declaring excess and disposing of any unused F&E materials identified by the RE/W0C/TOR at the conclusion of an contract F&E project. These actions shall be accomplished In accordance with the provisions of the current issue of Order 4800.2, Utilization and Disposal of Excess Personal Property, and Order 4650.7, Management of F&E Project Materiel.

b. Establishment Branch Responsibilities. During the course of an F&E project, the Environmental/Electronics Sections are responsible for the following material management functions:

(1) Requisitioning nationally-furnished project materials and equipment as listed on the project materiel lists (PML's) and providing a copy of the PML to the sector as early as feasible for establishment of the sector's pending F&E project file.

(2) Developing specifications and initiating procurement of any regionally-procured material and/or services.

(3) Initiating requisitions for schedule "A&B" items and ISSAC's sufficiently in advance to support commissioning.

(4) Assuring that adequate materials are provided to achieve a finished facility which can be maintained in accordance with pertinent directives.

(5) Exercising good judgment and coordinating with the sector as to timeliness of the procurement actions to ensure availability of materials, when needed, while avoiding unrealistic or unnecessary storage problems.

(6) Funding commercial storage, where required for F&E project materials.

(7) Initiating the capitalization process and to assure the availability of PMCs during the JAI to support a joint sector and WOC/RE/TOR inventory of installed materials.

(8) Provide AAL-52B, AAL-454, and the sectors a list of unused project materials.

c. Coordination. Project engineers and construction/installation unit supervisors shall coordinate with the designated sector representative before shipments of material are initiated. Shipping instruction shall be confirmed, and arrangements finalized for on-site storage and off-loading, prior to the shipment of materials to the job site.

d. Excess F&E Project Material Equipment. Unused p reject materials and equipment at the job site will be identified on FAA Form 4650-12 and returned to the Logistics Support Complex. A copy will be forwarded to AAL-454 and a determination made whether the unused equipment is to be transferred to other p injects, MC-6, MC-3, or excessed. Requests for material transfers and disposal will be forwarded to AAL-52B.

e. Decommissioning, Dismantling, and Relocation. On projects which involve relocation or decommissioning and dismantling of existing facilities, it shall be the responsibility of the p reject engineer to ensure that all required dismantling is completed and, through coordination with the sector representative, that final disposition of all materials is accomplished prior to closeout of a project Decommissioning and dismantling action shall be accomplished In accordance with Chapter 6 of this order.

515. Closeout Documentation. Upon completion of an F&E p Eject, the Environmental Section, AAL-451, and the Electronics Section, AAL-452, will forward project documents listed below to the following organizations:

a. I'm yam/Planning Section, AAL-454.

(1) Copies of Facility Reference, Data File, Form 6030-15 through 25.

(2) Copies of the Equipment Installation Record, AL Form 6000-5.

(3) Real Property Record, FAA Form 4660-9.

(4) Project Diary.

(5) Signed and Completed AFD Work Order, AL Form 6030.6.

(6) Section engineering and installation/construction files for inclusion in the official project file.

b. Engineering Services Section, AAL-453. Copies of all as-built red lined drawings. Shall be forwarded to AAL-453 for drafting. Copies of as-built record drawings for projects constructed on airport property must be forwarded to the airport sponsor, through AAL-58, within 90 days of project completion. If record drawings cannot be furnished within 90 days of project completion, copies of red lined as-built drawings will be forwarded to the airport sponsor through AAL-58.

516. QUALITY CONTROL (QC). Quality control during the implementation phase is accomplished through overview of construction/installation activities by the RE, WOC, TOR, or COR, periodic regional on-site reviews conducted by FEE supervisory personnel; and through feedback incorporated in the JAI process. The pre-JAI punch list and the JAI checklist, published in the current issue of Order 6030.45, Facility Reference Data File, shall serve as final QC standards prior to the JAI. The JAI includes documented QC activities for ensuring that new or improved facilities meet national and regional standards for construction, installation operation, and maintenance.

a. Establishment Branch Responsibilities. The Supervisor of the Environmental and Electronics Sections, AAL-451 and AAL-452, are responsible for establishing, Implementing, and monitoring on-site construction and installation evaluation programs. Information obtained during these evaluations shall be used to develop and incorporate improvements In the overall FEE process. Supervisors conducting these evaluations shall ensure that problems identified are fully addressed and evaluated, In order to achieve needed changes and improvements.

b. Resident Engineer (RE) and Contracting Officers Representative (COR); Work Order Carrier (WCC); Technical On-Site Representative (TOR); Responsibilities. The QC activities performed by REs/WOCs/TORs/CORs are important activities In the QC process. Resident engineer/work order carriers/technical on-site representatives/contracting officers representatives shall:

(1) Conduct on-site QC activities prescribed by the engineering sections for construction and installation projects.

(2) Ensure that the project materials and equipment meet specifications.

(3) Ensure that construction/installation is accomplished In accordance with the design standards.

(4) Provide feedback on deficiencies and recommendations for improvements to his/her supervisor.

c. Supervisory On-Site Construction/Installation Evaluation. Approximately, 20 percent of all F&E projects shall be randomly selected for on-site evaluation by responsible supervisory personnel of the engineering sections. The evaluation should, when possible, be conducted at or near the project completion (during preparation of the pre-JAI punch list or the JAI) so that the project work can be fully evaluated. The evaluator shall also review the project JAI report(s) and utilize the findings for final preparation of the On-Site Construction/Installation Report, AL Form 6000-14. The purpose of the on-site supervisory evaluation shall be to:

(1) Investigate the quality of work produced by F&E personnel.

(2) Evaluate the effectiveness of coordination between appropriate F&E field project engineers and local AF, AT, and airport sponsors.

(3) Identify and investigate problems related to the quality of the engineering plans and specifications; material availability, handling storage, and security; and safety on the job site, etc.

(4) Discuss with and solicit feedback from F&E personnel local AF and AT personnel, and airport sponsors concerning problems and deficiencies related to the project.

d. AL Form 6000-14, Construction/Installation Project Evaluation Report. A report of each on-site evaluation shall be recorded on AL Form 6000-14 which is available through normal regional supply channels. (See Figure 5-1.)

e. Distribution of Construction/Installation Project Evaluation Report and Follow-up Action Assignments. A copy of each supervisory evaluation report, along with the supervisor's planned actions regarding any identified deficiencies, shall be forwarded to the Manager, Evaluation Staff, AAL-405, for follow-up and compilation of statistical information. The Manager, Evaluation Staff, AAL-405, shall be responsible for monitoring these reports and identifying any chronic problems which may surface and for providing, through appropriate supervisory channels, recommendations to correct the problems identified. An information copy of each report shall also be provided to the Airway Facilities sector, the Maintenance Branch, AAL-460, and to the RE/WOC/TOR/COR.

f. Sector Request for Supervisory Evaluation. A sector manager may request a supervisory evaluation visit on a particular project where it has been determined that a special need exists. Requests shall be directed to the Establishment Branch Manager, AAL-450.

517.-599. RESERVED.

This Page Intentionally Left Blank

FIGURE 5-1. SAMPLE AL FORM 6000-14.

CONSTRUCTION/INSTALLATION PROJECT EVALUATION REPORT

PROJECT TITLE: _____

F&E JOB #: _____

EVALUATOR NAME/TITLE: _____

1. Workmanship: Comments:	EXC		SAT		MARGINAL		UNSAT	
2. Compliance with construction/ installation design standards, engineering plan and/or contract, and applicable FAA directives:	EXC		SAT		MARGINAL		UNSAT	
3. Adaptation of standard design to meet site peculiar conditions:	EXC		SAT		MARGINAL		UNSAT	
4. Compliance of materials/equipment	EXC		SAT		MARGINAL		UNSAT	

FIGURE 5-1. SAMPLE AL FORM 6000-14 (Cont.)

CONSTRUCTION/INSTALLATION PROJECT EVALUATION REPORT

5. Performance of equipment/system facility:	EXC		SAT		MARGINAL		UNSAT	
6. Coordination of project work:	EXC		SAT		MARGINAL		UNSAT	
7. JAI Report exceptions:	EXC		SAT		MARGINAL		UNSAT	
8. Deviations from national criteria:	EXC		SAT		MARGINAL		UNSAT	

FIGURE 5-1. SAMPLE AL FORM 6000-14 (Cont.)

CONSTRUCTION/INSTALLATION PROJECT EVALUATION REPORT

9. Problem/deficiences identified by RE/WOC/TOR/Contracting Officer, local AF and AT personnel, contractors and sponsors:	EXC		SAT		MARGINAL		UNSAT	
a. Engineering plans and specifications:								
b. Availability of materials:								
c. Handling and storage of project materials:								
d. Security of project site and materials:								
e. Safety of project work site:								
10. Restoration and cleanup of work site:	EXC		SAT		MARGINAL		UNSAT	
11. Acceptability of constructed facility or installed equipment for maintenance, operation, and commissioning:	EXC		SAT		MARGINAL		UNSAT	

FIGURE 5-1. SAMPLE AL FORM 6000-14 (Cont.)

CONSTRUCTION/INSTALLATION PROJECT EVALUATION REPORT

12 . Accomplishment of project coordination conference:	EXC ☐ SAT ☐ MARGINAL ☐ UNSAT ☐
13. Recommendations of RE/WOC/TOR/COR local AF and AT personnel, and sponsor for project improvement:	
14. Evaluator 'a recommendations for improvement in the design and accomplishment of future projects:	
15. Evaluator's recommendations or planned actions to correct deficiencies or problems identified with this project:	

FIGURE 5-1. SAMPLE AL FORM 6000-14 (Cont.)

CONSTRUCTION/INSTALLATION PROJECT EVALUATION REPORT

PROJECT TITLE: _____

FEE JOB #: _____

ITEM	CONTINUED