THE AUTHORITY CONSTRUCTION PROJECT ADMINISTRATION MANUAL (ACPAM)

1.0 Introduction

1.1 Purpose and Definitions

Standard operating procedures are required on large construction programs to promote uniformity and efficiency among its constituent parts. The Authority Construction Project Administration Manual (ACPAM) has been developed for this purpose and to provide guidelines to the Resident Engineer and field staff for the administration of construction contracts. The ACPAM also defines the various responsibilities of agencies directly involved in the construction process.

Construction Management: Construction Management is the management of a large, single construction project. The project may include a large, single construction contract or multiple, smaller construction contracts. Construction Management will be the responsibility of the Authority, who may authorize a designated Construction Management Consultant (CMC) to perform some of these functions. This guide will refer to the Authority when referring to either the Orlando-Orange County Expressway Authority or the designated CMC.

Construction Engineering and Inspection ("CEI") Consultant: The CEI Consultant provides construction engineering and inspection services during the construction phase of a project. These services usually include monitoring of the construction work through inspection and testing, monitoring progress against the construction schedule, producing, checking and recommending interim and final payments; administration and evaluation of changes, coordination of utility companies, coordination with and response to concerns from adjacent property owners, and providing documentary records that the project has been built in substantial and reasonable conformity with the Contract plans and specifications. The CEI management will typically include a Resident Engineer who will be supported, depending upon the size of the project, with secretarial/administrative staff, Project Engineer, Office Engineer, and Inspectors. The Resident Engineer may supervise a single project, or multiple projects.

Resident Engineer/Sr. Project Engineer: The person responsible for the execution of the construction phase services under the CEI Agreement. The term "Resident/Sr. Project Engineer" or abbreviation "RE/PE" when used in conjunction with an action, activity or a response does not necessarily imply that the action, activity or response is to be performed by the RE. It is understood that the RE may delegate such tasks to other members of the field staff. However, the RE will remain responsible and accountable for the performance of those tasks.

The Authority: The Orlando-Orange County Expressway Authority (OOCEA) is the owner and final authority on the decisions and direction for the administration of the CEI Contracts and the management of the Construction Projects.

1.2 Scope

The scope of the ACPAM includes the direction that must be integrated with individual contract requirements, client requirements and other manuals in a way that will provide maximum uniformity while maintaining and permitting reasonable flexibility.

The Resident Engineer is expected to use mature judgment in the use of the ACPAM and in the use of other relevant Manuals. The Resident Engineer's reporting responsibilities will vary depending upon the type of project.

This guide contains policies and procedures designed to provide uniformity and effectiveness in the day- to-day administration and management of all Orlando-Orange County Expressway Authority ("Authority") Construction Contracts.

The policies and procedures address:

1) Documentation and monitoring of construction activities that verifies to the Authority that the

provisions of the Construction Contract(s) document(s) are being reasonably fulfilled

2) Continuity of involvement of the Authority's General Engineering Consultant ("GEC") and EOR in submittal reviews, document interpretations and construction observations to verify that the requirements of the Construction Contract(s) document(s) are being reasonably met.

3) A structure for the Construction Contractor(s) to organize project procedures and ensure a common understanding of the lines of communication among all participants

4) Claims/disputes identification, notification, documentation, recommendation and resolution.

The reporting relationships and responsibilities of the Authority, the GEC, the EOR, the CEI, and the construction contractor(s) are clearly indicated in the guide.

1.3 Revision Process

The Authority is responsible for maintaining the guide in a current and pertinent state. These responsibilities include providing new policies and procedures and/or revisions to the field promptly. Revisions will include date of issue and revision number.

It is the intent that this guide be a "living document." Regular reviews by the users should lead to suggestions for improvements, modifications, additions or deletions. Suggestions are welcome and should be forwarded to the Authority or designee. Suggested modifications will be reviewed and, where desirable, incorporated in periodic revisions.

Suggestions or comments relating to the content of this manual should be forwarded to: Orlando-

Orange County Expressway Authority
Attn: Director of Construction and Maintenance
4974 ORL Tower Rd
Orlando, FL 32807

1.4 Responsibility of CEI

The Resident Engineer must carefully study the CEI Agreement ("Agreement") and ensure that the services specified in the Agreement and Scope are performed and/or provided. The Resident Engineer or the senior representative on the project must also monitor the work of their staff closely. Periodically, but not less than at the 30, 60 and 90 percent complete stages of the project, the Resident Engineer shall implement an internal quality audit of their field and office operations. Records of the findings of this review are to be available within the CEI Project files and when requested, be sent to the Director of Construction at the Authority for review. The CMC will provide IA reviews of the CEI progress periodically and will utilize these reviews to ensure the QA process is functioning as intended.

1.5 Abbreviations

The following abbreviations are used in this Manual:

PIC	Principle in Charge
RE	Resident Engineer
PE	Project Engineer
OE	Office Engineer
SDE	Section Design Engineer (often referred to as the Engineer of Record (EOR) or Architect/Engineer (A/E)) EOR Engineer of Record
GEC	General Engineering Consultant

CMC	Construction Management Consultant
CEI	Construction Engineering and Inspection Consultant
FDOT	Florida Department of Transportation
OOCEA	Orlando Orange County Expressway Authority (Authority)

2.0 Organization

2.1 Purpose

This section is provided to outline the required flow of documentation, and to describe some of the roles and responsibilities for each of the entities involved in the execution of the Contract.

2.2 Responsibilities

Orlando-Orange County Expressway Authority ("Authority") - The Authority is the agency responsible for the operation, maintenance, and expansion of the expressway system in the Central Florida area. This expansion work is conducted under the direct control of Authority staff. The Authority's staff may administer the Construction Program through the services of the CMC.

Construction Management Consultant ("CMC") – The CMC is the firm contracted by the Authority to perform Independent Assurance throughout all aspects of construction, and to document the performance of the overall construction process. The CMC provides reviews of various project related documentation at determined intervals, as well as field reviews of construction practices to ensure quality for the Authority.

Construction Engineering & Inspection Consultant ("CEI") - Through its Resident Engineer, the CEI is directly responsible for the daily construction contract administration, construction engineering, inspection, and verification testing of the Authority's construction contracts in accordance with these policies, procedures, and accepted practices. The CEI's specific responsibilities are to certify and/or verify that:

1) The work is constructed in reasonable conformity with the contract documents, and that proper/safe construction practices are employed throughout the life of the contract.
2) The Contractor(s) complies with all contract requirements, including all governmental, environmental, and permitting requirements.
3) The work is completed on schedule and within budget.
4) Completed work has been verified prior to payment.
5) Field inspections, testing, and sampling are conducted and documented regularly.
6) The Contractor's Quality Control Program meets the project's Quality Assurance objectives.
7) Effective communications exist between the Authority and the Contractor(s).
8) Acceptable public relations are maintained between the Contractor(s), CEI, the Authority and the public.
9) The Contractor(s) is notified of all revisions to the contract. All Supplemental Agreements are submitted with complete documentation to the Authority and approved prior to the contractor performing the work.
10) A claim history summary is maintained and merit evaluations of all Contractors' claims are provided.
11) Claims are equitably and promptly adjudicated according to the resolution outlined in the specifications.
12) All project construction actions, meetings and contacts with the public, private individuals, or organizations are accurately and completely documented.
13) All records and documents required by the Authority, including daily logs, measured quantities, audio/visual documented reports, diaries, and a current as constructed (as-built) final set of project drawings are regularly maintained.
14) All project closeout documentation is complete for turnover to the Authority within 30 days of project

acceptance.

15) All requirements set forth in the CMC/CEI contract are met.

Contractor -The Contractor(s) is responsible for the construction of the roads and structures within the time frame, and in accordance with the plans and specifications, of the contract. The Contractor's day-to-day interface with the Authority will be through the CEI.

General Engineering Consultant ("GEC") -acts as an extension of the Authority's staff in managing design. This responsibility includes managing and administering the individual Section Design Engineers and related contracts for design and post design services.

Engineer of Record (EOR) - The Section Design Engineer (SDE) or Engineer of Record (EOR) is responsible for the preparation of the design, drawings, specifications, and estimated quantity of work for each contract package. The SDE/EOR works under the direction of the GEC.

2.3 Lines of Communication

1) The Resident Engineer will report to the Authority and provide information/materials to all Authority staff in the timeframe requested.

2) The Authority, CEI (Resident Engineer) and Contractor shall designate, in writing, their primary project contact person. Should any change occur that would cause a change of the primary contact person, immediate written notification should follow.

3) Communications will follow the organizational channels outlined herein.

4) Materials, testing or specification questions should be directed to the CMC for determination, and in the event of a disagreement may be referred to the Director of Construction for final determination.

5) Formal Communications, defined as those having substantial impact on the project, will be in writing. Oral discussions, falling into the substantive category, will also be confirmed in writing to all parties present and affected by such discussion. The Authority will be notified of any item that may result in a change to scope, schedule or cost.

6) RFI's (Request for Information) – all RFI's that cannot be answered at the CEI level will be forwarded to the EOR and/or the GEC. In general, design related items will be sent to the EOR and items that may require a preference response will be forwarded to the GEC. In all instances, the GEC will be advised in advance of the RFI content and the CEI/GEC will determine which party shall provide a response to the RFI. The GEC will be made aware of the response and may intercede in the process if the response is not adequate or in the best interest of the project. Responses to RFI's will be returned to the CEI and then forwarded to the Contractor. The CEI will forward the response to the Authority representative and update the RFI log. During the RFI process, the CEI will contact the Authority representative and keep them informed of the RFI question and the response. If upper level strategy is required to formulate a response, then there will be discussions between the Authority representatives and the GEC. This level will also provide a program level of communication to provide continuity to the Authority's program.

7) Shop Drawings- All submittals/shop drawings from the Contractor or returned to the Contractor will be through the CEI. The CEI will maintain a shop drawing/submittal log. The CEI will maintain a file with a copy as submitted and an approved copy. The file will also include copies that are returned for corrections. For submittals to be reviewed by the EOR, the CEI will send the submittals to the EOR, and a copy of the submittal to the GEC. For submittals to be reviewed by the GEC, no copies of the submittal will be sent to the EOR. The GEC will establish a list of the required submittals and whether they should be sent to the GEC or EOR for review.

2.4 Project Manuals

CEI's will ensure that their field office has a current copy of the following manuals or computer listings available:

1) Authority Construction Project Administration Manual (ACPAM).
2) OOCEA Contract General Specifications, Special Provisions, Addendums, and Technical Specifications for Roadway and Bridge Construction Projects.
3) OOCEA Emergency Response Manual.
4) The FDOT Standard Specifications for Road and Bridge Construction, required edition and supplements thereto.
5) FDOT's current Construction Project Administration Manual ("CPAM").
6) The current FDOT Roadway and Traffic Design Standards.
7) The current FDOT Structures Standards
8) The current FDOT Field Sampling and Testing Manual.
9) The current FDOT Materials Directives. The directives convey certain practices and procedures relating to the sampling and testing of materials entering into construction projects.
10) Each of the FDOT's following estimate preparation aids.
    a) FDOT Basis of Estimates.
    b) FDOT Standards for Final Estimates.
    c) FDOT (Sample) Computation Manual.
11) The current Manual on Uniform Traffic Control Devices for Streets and Highway ("MUTCD").
12) Federal Regulations, Part 1926, Occupational Safety and Health Regulations for Construction.
13) FDOT Qualified Products List ("QPL")
14) OOCEA CEI Guidelist

2.5 CEI Contacts and Interface

The CEI's contact with the various entities shall be governed in accordance with the following:

1) Contact with the Authority: CEI's contact with the Authority may occur through the designated CMC as directed by the Authority.
2) Contact with the Contractor(s): The CEI will conduct their relations with the Contractor(s) in a professional and business-like manner. Where disagreements cannot be resolved, the Resident Engineer will refer the matter to the Authority or the CMC depending on the nature of the issue. All correspondence and communications with the Contractor will be through the CEI.
3) Contact with Utilities: The CEI will provide coordination between Utility owners and the Contractor on all necessary utility location and/or Utility relocation.
4) Contact with the Public: When the CEI receives notice concerning accidents, damages, noise, road or area conditions, obstruction, perceived unsafe conditions, etc., the CEI will keep the Authority informed of the status and make a record of such in their daily log and file an Incident/Accident Report. When notices are received, the CEI will make an immediate response, take appropriate action, personally follow-up to verify that the situation is resolved, and document every step from notification through resolution. The CEI will relay information of such incidents to the Authority, who, in turn, will rely on such to keep the public informed.
5) Contact with the Media: The CEI will treat the media courteously. However, the CEI shall at all times, be governed by their CEI/Authority agreement. When the media visits any jobsite the CEI will notify the

Authority as soon as possible, by informing the Authority's Director of Construction or in his absence, the Public Information Officer. The Authority's designated representatives authorized to issue position statements or releases to the media are the Director of Construction and the Public Information Officer.

6) Contact with the SDE/EOR: When the CEI contacts the SDE/EOR, the CEI will keep the Authority and GEC informed with copies of correspondence

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2.6 Required Meetings

Meetings will be used to review progress, coordinate significant changes in policies and procedures, identify and/or resolve actual or potential problems, or other reasons.

1) Minutes, signed by the RE, will be maintained in a concise manner addressing specific results, actions required, and individuals or firms responsible for taking, or affecting, such action. Dates will be established for appropriate follow-up and are to be included in the minutes.
2) A copy of the minutes will be sent to all attendees within three (3) business days after the date of any meeting with a request that any discrepancies with the minutes be expressed in writing to the RE within five (5) calendar days of receipt of the minutes.
3) Copies of the minutes will be retained in the Official Contract File and should be available for review by the Authority as required.

The following procedures outline the minimum requirements for meetings held with the Contractor(s):

1) Preliminary Activities: The preparation and distribution of a meeting agenda at least three (3) business days in advance of a scheduled meeting consisting of the following items:
   a) Review and approval of previous meeting minutes.
   b) Listing of those invited to attend.
   c) Location of meeting
   d) A detailed list of items to be discussed
   e) Listing of Action Items and associated responsibility.
2) Meeting Specifics:
   a) Schedule a regular time on a weekly or bi-weekly basis or as often as deemed necessary.
   b) Held in the CEI office.
   c) Chaired by the Resident Engineer.
   d) Attended by appropriate members of the CEI's and Authority/CMC's staff, Contractor(s), utility owners and others as required.
   e) All meetings shall be audiorecorded. These recordings will be used to prepare meeting minutes. Hard copies, if not kept electronically, shall be labeled with the date of the meeting and retained at the project site for the duration of the project.
3) Post Activities: In order to ensure the consistency of minutes throughout the project, a brief description of action items with the responsibilities appropriately assigned and completion dates properly identified must be included.

<u>CEI (Resident Engineer)/Contractor(s) Weekly Coordination Meeting:</u> The discussion shall include:

1) Utilities relocation and/or conflicts.
2) Fiber Optic Network Location, Maintenance, and Protection

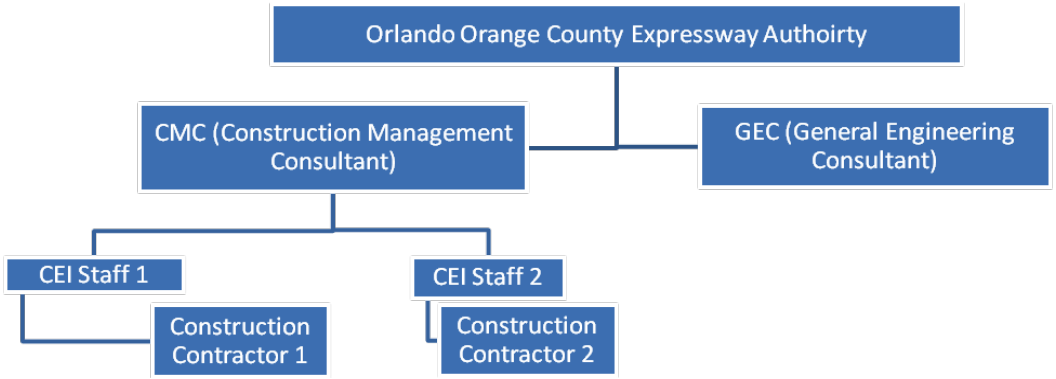
3) Review of project (Contract) progress and a cursory schedule review.
4) Review of current, unresolved, or anticipated problems.
5) Review of Supplemental Agreements, Force Account Work, and Claims and Status of Submittals, as required.
6) Status of Incidents/Accidents.
7) List of upcoming events and the two (2) week look ahead schedule.
8) Status of Outstanding Issues
9) QC Concerns
10) M.O.T.
11) Erosion Control
12) Safety issues.

CEI (Resident Engineer)/Contractor(s) Monthly Schedule Meeting: The discussion shall include:

1) Identification of any changes to the critical path.
2) Progress along the critical path.
3) Activities that have portions of their float consumed.
4) Progress of utility relocations and/or potential conflicts.
5) Review of current, unresolved, or anticipated problems that may impact the progress of the project.
6) Review of impacts related to submittals, changes to the Work and claims.
7) List of upcoming events.
8) Progress toward milestones.
9) Schedule updates and approvals.

2.7 Organization Chart

Typical Authority/CEI/Contractor Functional Organization Chart



3.0 Pre-Construction

3.1 Preconstruction Activities

3.1.1 Purpose and Definitions

The purpose of the Pre-Construction Activities is to prepare for the start of construction by all parties involved including the Authority, the Contractor, the CEI, utility companies, City, County, FHWA, Coast Guard, police, Highway Patrol, Sheriff, Department of Environmental Protection, each agency issuing a permit of any kind for the work, etc.

The following definitions are referenced in this section:

Pre-Bid Meeting: a meeting between the prospective bidders and the Authority to review any unusual aspects of the plans and specs, to answer clarification questions for all bidders, and to

Provide an open forum for all project participants to discuss the requirements of the project.

Pre-Award Meeting: a meeting between the selected contractor and the Authority prior to contract award to review the contract documents and reach an understanding concerning the scope and schedule requirements.

Preconstruction Conference: A meeting held between all interested parties prior to beginning any construction work on the project. The Contractor's representatives, Authority representatives and all other parties having an interest in the project are expected to attend.

3.1.2 Pre-Bid Meeting

The Pre-Bid Meeting is held after the Advertisement has been made and before the construction bid due date. The CEI manages the meeting with the assistance of the GEC and the Authority if requested. The meeting is sometimes called a Bid Clarification Meeting because one of its main purposes is to answer questions and clarify any misunderstandings concerning the scope, schedule, or specifications concerning the construction bid. This meeting is not recorded; however, questions should be answered in writing. A Typical agenda would include:

1) Opening Remarks/Sign-in/Introductions
2) Project Description/Organization
3) Instruction to Bidders (incl. Bid Requirements, Pre-Award Meeting, M/WBE Requirements, Bid Security)
4) General Specifications (incl. fuel price adjustments)
5) Technical Specifications
6) Special Provisions
7) Project Specifics
8) Questions from Bidders
9) Open Floor/Questions

3.1.3 Pre-Award Meeting

The Pre-Award meeting is held after the Contractor is selected but before award of the contract. At this meeting, the plans, specifications and other Contract Documents, which were used by the Contractor in preparing their offer, is reviewed. Items that could be the cause of potential claims are identified and the Authority makes corrections and interpretations, as the Authority deems necessary to reflect the intent of the plans and specifications.

The Project Engineer will request that the Contractor submit a list of plan errors, omissions or ambiguities and any other items that need to be discussed at the pre-award meeting to clarify the Plans and Special Provisions. In addition, the Project Engineer will ask the contractor if they intend to request any alternates or substitutions

for material items included in their bid. The Special Provision concerning Owner Direct Purchase of Materials (ODPM) Option will be discussed. A Memorandum of Agreement is signed at the pre-award meeting to document all clarifications discussed at the meeting.

3.1.4 Preconstruction Conference

A meeting held between all interested parties prior to beginning any construction work on the project. The Contractor's representatives, the Authority representatives and all other parties having an interest in the project are expected to attend.

Affected Parties, Including But Not Limited To:

1) Utility Companies
2) City
3) County
4) Federal Highway Administration
5) Police, Highway Patrol, Sheriff
6) Florida Department of Transportation District Representatives
7) Contractor Representatives
8) Subcontractor Representatives
9) Contractor Supplier Representatives
10) Special Interest Representatives
11) Engineer of Record
12) The Authority/CMC
13) Any agency having permitting authority
14) Emergency Medical Personnel
15) Dispute Review Board

The Project Engineer shall schedule and conduct a preconstruction conference after receipt of a copy of the Notice of Award and prior to any work beginning. The scheduled date of the conference shall be selected to accommodate the interests of all affected parties. Notice of the scheduled date must include a brief description of the project. The project description must be written in terms easily understood by the general public.

A utility coordination meeting will also be held with the Contractor and all utility companies. This meeting should be held as soon as possible after receipt of a copy of the Notice of Award. The purpose of the meeting is to determine the utilities' progress/status of proposed relocation.

The preconstruction conference notice shall contain the date, time and the location of the meeting. The notice shall be sent to the parties known to have an interest in the proposed project. The notice addressed to the Contractor shall contain a list of items they are required to bring to the conference or submit prior to the conference such as; erosion control and storm water pollution prevention plans, maintenance of traffic plan, proposed work schedule, certificate for maintenance of traffic supervisor, vehicle registration affidavit, Quality Control Plan, etc. The Project Engineer will prepare an agenda similar to one shown below. The agenda should include certain submittal requirements as required per the Contract.

The minutes of the preconstruction conference shall be reduced to typewritten form as soon as practical. A copy of the completed minutes shall be sent to all attendees of the preconstruction conference and any other interested parties within fourteen (14) days from the date of the meeting with a request that any errors and omissions in the minutes be returned to the writer within fourteen (14) days. All preconstruction construction dialogue must be recorded by tape recorder or video. The tape recording will be retained as part of the project records.

3.1.5 Sample Preconstruction Conference Agenda

1) Project Description.
2) Delineation of lines of authority. Names and emergency telephone numbers for the Contractor, the Authority and others will be entered into the record.
3) Proposed Starting Dates - Contractors and subcontractors -- flextime (selected projects) - lead-in time and number of shifts or extra hours they propose to be working, etc.
4) Each utility representative to give an up-to-date report of the status of utility adjustments, relocations, removal and new installation. In addition the utility representative shall furnish the names and phone numbers of contact persons who will be available on call. A Contractor/utility meeting schedule shall also be established.
5) Maintenance of traffic plans review and discussion. Discuss if Contractor plans to use the Authority designed TCP or will submit an alternate TCP for approval.
6) Construction schedules, progress chart submittals. When appropriate, establish meeting schedules (weekly-monthly) and locations to discuss job progress and to determine controlling work items for the next review period.
7) Business and Community Impact Plan.
8) Emergency Management Manual for hurricanes or other emergency evacuation plans should be discussed (i.e., securing project, responsibilities, etc.). Project-specific evacuation plans should be developed as soon as possible and give details as to phases or major activities that could possibly be affected.
9) Partnering session with approved facilitator if required.
10) Dispute Review Board.
11) Insurance policy requirements.
12) Contractor's Vehicles registered in State of Florida. The Contractor's affidavit is due on the first working day of the project.
13) Erosion control and storm water pollution prevention plans and discussion.
14) Environmental permits review and discussion. NPDES Requirements.
15) Establish agreement to the accuracy of the existing ground elevations to be used to calculate earthwork quantities. CEI will follow-up with formal letter to contractor.
16) Special requirements when the Contractor is required to furnish borrow pits (if applicable).
17) Contractor's request for an endangered species biological investigation (if applicable).
18) Discuss the monthly estimate procedure, and required submittals for each estimate.
19) CEI or materials testing – procedures, relationships, responsibilities
20) For Mass Concrete elements that are identified in the project plans, the Project Engineer will establish the following:
    a) The Contractor shall submit proposed Mass Concrete Temperature Control Plans for review and acceptance by the Authority at least ten working days prior to the proposed Mass Concrete placement.
    b) Rejected Plans must be resubmitted, addressing the Authority's comments. A re- submittal of the Plan may require an additional ten working days for review and acceptance by the Authority.
21) When a project includes bridge construction or drilled shaft, the following items are to be considered:

a) Level II Concrete Plan

b) Pile Installation Plan.

c) Drilled Shaft Installation Plan.

22) Shop drawing submittal procedure:

a) Structural

b) Nonstructural

c) Toll Plaza

23) Unusual or important specs or project features.

24) Copy of the QP–2 Certification for the Contractor performing any lead-based painting work (prime or sub-contractor).

25) The requirements of the Quality Control (QC) Plan, the identification of key personnel from the Contractor, QC firm and the CEI, and the establishment of lines of Communication.

26) A discussion on QC testing requirements for Concrete, Embankment, Structural Backfill, Stabilized Subgrade, Limerock Base and any other specific testing requirements.

27) A brief discussion should be held regarding asphalt placement, and the requirement for a pre-paving meeting to be held in accordance with the specifications. Additional information regarding this meeting is available in ACPAM Section 4.8

28) A discussion on payment for stock piled materials, Certification and Request for Payment for Stockpiled Materials

29) Requirements for submitting requests to sublet, specialty work, Certification of Sublet Work, and Notice of Rental Agreement.

30) Submittal procedure and notice requirements for time extensions, claims, and extra work.

31) Contract time extensions requests - adjustments - initiating time extension requests - justifications for time extensions (controlling work items affected - conditions beyond Contractor's control, no weather-related-justifications, etc.).

32) Discuss actions to be taken if an unpaid bill letter is received by the Authority.

33) If a Consultant is providing the construction engineering and inspection or materials testing; discuss the procedures, relationships and responsibilities that exist between the Consultant, the Authority and the Contractor.

34) Warranties, Warranty/Maintenance Bond, Guaranteed Specifications, if required.

35) Third party claims and the process of using an independent reviewer of the claims.

36) (If applicable) Provide a copy of the specific procedures, along with applicable forms, concerning Owner Direct Purchase Materials. Notify contractor that procedures and forms are through the CMC.

3.1.6 Initial Survey and Control Points

The Authority provides control points and benchmarks as identified in the Plans along the line of the Project to facilitate the proper layout of the work.

1) The CEI will accompany the Contractor when the Contractor’s surveyor takes initial x-sections.

2) The CEI will verify that the Contractor is taking shots in appropriate places.

3) The CEI will accompany the Contractor and the Surveyor-of-Record to uncover or reset control points.

3.1.7 Initial and Final Project Condition Reports

Prior to the start of construction, a joint review will be performed with representatives of Maintenance and Construction. This review will determine and document the condition of items such as highway lighting, signing, striping, drainage, pavement surface and turf prior to construction. The review should extend beyond the construction limits to include adjacent features that may be damaged during construction.

Any items that are not in the construction scope to be repaired or replaced must also be identified and the condition documented such that the condition at final acceptance of the project can be verified to match the condition prior to construction. The CEI will generate an Initial Project Condition Report and provide a copy to Maintenance, the Contractor and include a copy in the Final Closeout Manual.

3.2 PROJECT SCHEDULING

3.2.1 Purpose and Definitions

The project schedules required on each project should be working documents used by the Contractor to plan and direct the construction project. The Contractor must coordinate their own work with that of the Subcontractors and utilities. The schedule is a management and communications tool that will be used to anticipate and prevent problems from occurring.

The following definitions are referenced in this section:

Baseline Schedule: The required schedule of work activities that is initiated by the Contractor. This schedule defines the Contractor's plan to complete the construction project within the allotted time consistent with the contract documents.

Controlling Work Items: Refer to Section 1 of the Standard Specifications. In a Critical Path Method Schedule, these work items or activities are on the critical path.

Preliminary Schedule: The barchart schedule submitted at the Preconstruction Meeting that details the contractors activities for the first 120 days of the project. The bar chart does not have to be CPM generated.

Updated Schedule: A schedule is updated by the addition of actual start dates, actual finish dates, percent complete to activity data, added activities, changes in sequence, and project duration.

3.2.2 Contractor's Schedule Review

The Contractor submits his Preliminary Schedule during the Pre-Construction Conference. The Preliminary Schedule details the contractor’s planned work for the first 120 days of the project and shows summary activities for the remainder of the work covering the entire scope of the project. The Preliminary Schedule does not need to be CPM generated and does not need to show critical paths. The

CEI should review the schedule to check that all scope for the project is included and that the correct schedule milestone dates are shown.

Within 90 days of the Notice to Proceed, the Contractor prepares a Baseline Schedule in accordance with contract documents. The Contractor's schedule is submitted to the Project Engineer. The Project Engineer, reviews the schedule, and if it meets contract requirements, submits a letter of acceptance to the contractor. If the schedule does not reflect a reasonable or feasible plan to construct the project in then authorized contract time or the schedule is not prepared according to the specifications, the schedule will be returned to the Contractor for modification.

The following items should be checked:

1) The schedule reflects the phases in the MOT plan.
2) Activities are broken-out by phase.
3) Phases are in correct sequence.
4) Order of the activities is logical.

5) The schedule contains all milestones specified.
6) Utility work is shown and is consistent with relocation schedules supplied by the utilities.
7) Activity durations appear reasonable.
8) Level of detail reflects the complexity of the project.
9) Complete and concise description of the Contractor's Construction Plan.
10) The submittal is complete as per the contract documents and contains preparation (Contractor's time) review and approval, and fabrication and delivery (manufacturer's/supplier's time) activities for each category of submittal required.
11) Activities include procurement time for material including shop drawing submittal and approval process.
12) All non-workdays are shown.
13) Check constrained activities.

If the schedule submitted by the Contractor shows an early completion date, the schedule should be reviewed thoroughly. The early completion date shown on the schedule could be attributable, in whole or in part, to errors in logic, unrealistic production rates, or the absence of critical activities. A schedule may not be rejected solely on the basis of having a completion date earlier than that shown on the contract.

All schedule rejections should be in writing detailing the reasons for rejection. Schedule acceptance must be in writing.

3.2.3 Baseline Schedule Acceptance and Updates

After acceptance, this schedule becomes the baseline schedule. This baseline schedule is the progress schedule by which progress of the project is gauged. Copies of the baseline schedule will be kept in the Project Engineer's Office.

When the contract specifies a CPM Schedule, the schedule should be updated on a monthly basis to coincide with the progress payment period. These updates should include all approved time extensions, and supplemental agreements. The schedule update process should include updating the activity actual start and finish dates, percent completion, remaining duration, and adjusting schedule logic to correct for activities being performed out of sequence. The Contractor should not change an activity original duration for any reason. The updates should be reviewed for accuracy and any significant revisions in logic or duration from the baseline schedule must be addressed in writing when found to be in conflict with the contract. Copies of updates will be kept at the Project Engineer's Office.

3.2.4 Revisions to the Baseline Schedule

When the contract time is significantly altered by time extensions or supplemental agreements, the Authority may request the Contractor to submit a revised schedule. Requests for revised schedules should be in writing and their subsequent acceptance must be in writing.

The Contractor’s proposed revision shall include all transmittals, reports, diagrams, and bar charts listed in the specifications, unless the Authority requests otherwise in writing. In its required narrative report, the Contractor shall state whether or not the proposed changes affect the longest path of the accepted baseline schedule or the proposed updated baseline schedule, which contains progress.

The CEI has 15 calendar days to review and transmit a written notice of acceptance or rejection of the Contractor’s proposed revision. If the CEI rejects the proposed revision, he needs to state the reasons for rejection in the written notice. The Contractor shall have 5 calendar days to re-submit the proposed revision to the Authority. Upon acceptance of the proposed revision to the accepted baseline schedule, the proposed revision to the baseline schedule shall become the accepted baseline schedule. The Contractor should incorporate the revision into the next scheduled updated baseline schedule.

3.2.5 Required Schedule Submittals

Preliminary Schedule and Narrative

The Baseline Schedule Submittal should include the following documents:

1) Transmittal
2) Schedule Narrative
3) Longest Path Bar Chart
4) Area Code Bar Chart
5) Activity ID Report showing Predecessors and Successors
6) Cash Flow Curve
7) Tabular Revenue Report
8) Primavera Schedule Backup

The Schedule Updates submitted each month should include the following documents:

1) Transmittal
2) Schedule Narrative
3) Longest Path Bar Chart
4) Area Code Bar Chart
5) Primavera Schedule Backup

The Contractor needs to submit a Two-Week Look Ahead Schedule produced weekly using a spreadsheet program. This will be submitted weekly at the weekly project progress meeting.

3.2.6 Withholding Progress Payments

Specifications for project schedules allow the withholding of a portion of the progress payments to the

Contractor if the Contractor fails to finalize either the initial or a revised schedule in the time specified in the specifications. If a Contractor is making a good faith effort at developing a schedule, withholding payments may not be appropriate. If a Contractor is not making a good faith effort, the project personnel can use withholding payment to convince a Contractor that the Authority is sincere in its desire to have a good schedule. A good schedule implies good coordination and good communication.

3.3 QUALITY CONTROL PLAN

3.3.1 Purpose

Certain materials require production under an approved Quality Control Plan to ensure that these materials, whether manufactured or processed, or procured from suppliers or subcontractors, meet the requirements of the contract. For these materials, the Contractor must submit a Quality Control Plan (QCP) within 21 calendar days after the award of the contract in accordance with Section 105 of the Technical Specifications for approval to the CEI.

3.3.2 Review and Approval

The CEI has a total 21 calendar days from the date of receipt of the QCP by the Project Engineer to respond to the Contractor. The CEI must provide the Contractor with a detailed explanation of all items that are not accepted in the plan of any exist. No phase of work covered under the QC program can begin until the Project Engineer or designee has approved the QCP for that phase of work. If a portion of the QCP is in compliance, the Contractor may begin work for that phase, but not for phases that are non- compliant.

3.3.3 Disapproval

The following conditions may result in the disapproval of the QCP, in part or all inclusive:

1) Failure to comply with the requirements of Section 105 of the Standard Specifications.
2) Repeated failure of materials to meet Specification requirements.
3) Failure to take immediate corrective action relative to deficiencies in the performance of the QC program.
4) Notification from the Authority or CMC of disapproval of a QCP.

The CEI or designee shall notify the Contractor within 2 working days of finding a condition or conditions warranting the disapproval of the QCP. Notification of such disapproval shall clearly state area(s) of concern and non-compliance with the Specifications and requirements of the Contract.

If at any time the Contractor is not in compliance with the approved Quality Control Plan, or a part thereof, affected portions of the plan will be disapproved. The contractor must cease work in the affected operations, and submit a revision to the CEI. If the QCP, or any part, must be revised, the Contractor must submit the revision to the CEI. The CEI will review the revision, forward to the CMC, and respond within seven calendar days of receipt.

3.3.4 Quality Control Plan Review Checklist

105-4.2 Personnel:

Does the plan list qualified people with their Training Identification Numbers (TIN) for all technicians performing sampling, testing, and inspection for both field and laboratory test.? Are all qualified personnel along with their qualifications listed? The PE should check the database on CTQP website for validation of qualifications on a random basis.

Does the QC Plan list a Quality Control (QC) Manager who has full authority to act as the Contractor's agent to institute any and all actions necessary for the successful implementation of the QC Plan? Confirm that the designated QC Manager has the required qualifications, speaks and understands English, and is either on the jobsite daily, or is available within four hours notice to administer the QC Plan.

105-4.3 Raw Materials

105-4.3.1 – Sources

Does the QCP identify the suppliers of raw materials? Are the locations and plant and pit numbers supplied when appropriate?

105-4.3.2 – Certification

Does the QCP describe the methods of verifying compliance of certification with the specifications?

105-4.3.3 - Disposition of Failing Materials

Does the QCP incorporate the system for controlling non-conforming materials, including procedures for identification, isolation, and disposition?

105-4.4 – Storage Facilities for Raw Materials

Does the QCP describe the measures and methods, including bedding details, for preventing segregation, contamination, and degradation?

105-4.5 – Production Equipment

Does the QCP describe calibration frequencies, maintenance schedule and procedures for production equipment?

105-4.6 – Plant Requirements

105-4.6.1 – Plant Identification

Does the QCP identify the plants and incorporate the Plant's mailing address, physical address including county and X-Y coordinates of the plant, telephone and fax numbers, E-mail address, primary contact at the plant, responsible person in charge, approved facility number provided by FDOT, Owner information, and

Vendor Number and other information as required? Is the Plant is listed on the approved list. This information can be referenced from the QCP.

105-4.6.2 – Process Control System

Does the QCP incorporate the methods and measures established to ensure Contract compliance for the produced materials that are supplementary to the Quality Control sampling and testing program described in the Contract. Do these methods and measures include inspection schedule, additional sampling and testing, maintenance schedule, etc.?

105-4.6.3 – Loading and Shipping Control

Does the QCP incorporate Producer's methods and measures for preventing segregation, contamination, and degradation during loading and shipping operations.

105-4.6.4 – Types of Products Generated

Does the QCP describe the products the plant is approved to produce under FDOT guidelines?

105-4.7 – Other Requirements

105-4.7.1 – Copy of Certifications

Does the QCP incorporate examples of certifications issued by the plant/Contractor approved by the Authority and does it identify the individual who would provide these certifications?

105-4.7.2 – Statement of Compliance

Does the QCP include a statement of compliance with all quality requirements set forth by the Authority including Contract Documents and FDOT manuals?

105-4.7.3 - Information on Producer's Quality Control Plan

Does the QC Plan incorporate approved Producer's QC Plans?

105-4.7.4 – Describe Documentation Procedure

Does the QCP identify the location of document storage to enable Authority review? The document storage should include quality control charts, qualification/accreditation records, inspection reports, and other pertinent/supporting documents for the approved QC Plan.

105-4.8 – Final Manufactured Product – Plant Operations

105-4.8.1 – Storage

Does the QCP describe the methods and duration for storage when storage of produced materials is required? It should describe measures and methods for preventing segregation, contamination, and degradation during storage.

105-4.8.2 – Disposition of Failing Materials

Does the QCP describe the methods and measures for identifying and controlling the failing materials?

105-4.9 – Final Manufacture Product – Field Operations

105-4.9.1 – Transportation

Does the QCP describe the method of delivery from the point of production/storage to the point of placement?

105-4.9.2 – Storage

Does the QCP describe the methods and duration for storage when storage of produced materials is required? It should describe measures and methods for preventing segregation, contamination, and degradation during storage.

105-4.9.3 – Placement

Does the QCP describe the methods and identify the type of equipment used in incorporation of materials into the project?

105-4.9.4 – Disposition of Failing Materials

Does the QCP describe the methods and measures for identifying and controlling the failing materials?

105-4.10 – Testing Laboratories

Does the QCP identify all testing laboratories to be used on the contract and do these laboratories comply with the Laboratory Qualification Program?

3.4 DISPUTE REVIEW BOARD

3.4.1 Purpose

The purpose of this procedure is to provide for uniformity in the use of Dispute Review Boards (DRB).

3.4.2 Member Selection

Projects with contract specific DRBs require the appointment of the three members. The process of appointing the three members should be completed early enough that the members can attend the pre- construction meeting. The RE will select an appointee from the Authority's list of candidate members.

The name of the proposed DRB member selected by the RE should be reviewed by the Authority prior to submitting to the Contractor for review. In selecting a member, keep in mind, we are not looking for someone who will take the Authority's side, but someone knowledgeable of the type of work that will understand the issues that may come up and who is able to knowledgeably evaluate a dispute. The RE should review the resume and disclosure statement, other DRB workload (recommend 10 days per month or fewer that are committed to DRB meetings) and availability of the members, the Contractor selected member and the proposed chairperson. Copies of these resumes should also be forwarded to the Authority. When the Contractor submits its appointee, the RE should seek the advice of the Authority before approving the appointment. When the two members, already appointed, appoint a third, the RE should again seek the advice of the Authority before approving the third member. In both cases, the RE and the Authority should carefully review the resume of the appointee and solicit references if unknown.

3.4.3 Three-Party Agreement

A contract specific DRB requires a three party agreement be executed before the preconstruction meeting. This document is included in the construction contracts and the RE should take the lead in getting this agreement executed. The DRB and Contractor should execute 2 copies of the agreement. The copies should then be sent to the Authority for execution. The agreement will be returned to the RE for distribution, one original retained by the Authority, the other original to the Contractor, and one copy each to the DRB members.

3.4.4 Meeting

Meeting frequency should be determined on a project-by-project basis. Meetings should be held monthly at least for the first six months to familiarize the DRB, as problems often become apparent in the early part of a project. If the project is behind schedule, or the Contractor is submitting numerous Notices of Intent to Claim, monthly meetings may be necessary. Projects that are running smoothly with few claims and on schedule should evaluate the meeting frequency. When possible, DRB meetings should be scheduled to coincide with regular periodic progress meetings. DRB meetings are scheduled well in advance. RE must assure that these meetings occur when scheduled. The RE should not cancel a meeting without adequate notice. On a contract specific DRB, all three members should attend each scheduled periodic meeting. In the event that one member of the Board is unable to attend a regular scheduled meeting, the Chairman should attempt to reschedule the meeting. Should rescheduling not be possible, the other two members may attend the meeting without the third member. Only the members attending should be compensated. No hearing will be conducted without all three members present. The CEI will take minutes of the

regular periodic meetings, including that portion devoted to DRB discussion.

3.4.5 Use of the DRB

On all matters that relate to Dispute Review Boards, communicate only with the Chairman. All personnel on the project should understand that there should be no communication with any DRB member outside of a meeting. The only exception is communication between the parties and the DRB Chairman relating to scheduling meetings or administrative matters relating to a hearing.

On rare occasions, the Authority or the Contractor may bring an issue that is unusually complex or request that a detailed analysis be developed. In this instance it may be appropriate for the DRB to request additional compensation.

It is important that there be agreement among all parties as to what the expectations and compensation will be as it relates to the number of days the DRB members are to be compensated and level of detail of the recommendation, prior to presenting the issue to the DRB. The default of a Contractor does not terminate the Three Party Agreement. The Dispute Review Board is still in existence and all parties have the same responsibilities as existed prior to a default. If a Contractor refuses to participate in a hearing, they should be reminded that the hearing is a condition precedent to any other forum of resolution. The hearing should then take place absent the Contractor. The Authority will not refuse to participate in a hearing unless determined appropriate after consultation with appropriate legal consultants. The only exception would be if all parties agree that the issue is one over which the Authority has no jurisdiction or the issue involves a third party which cannot come before the DRB. An issue should only be brought to the DRB for resolution after a claim has been received by the contractor and been denied, or partially denied.

3.4.6 Payment

The Authority and Contractor share the fees of all three Board Members for services rendered under the Three Party Agreement. An allowance pay item has been established in the Contract for the Contractor's share of the fees. Funds remaining in the pay item, if any, at the completion of the Project, will belong to the Authority. The Contractor pays the members of the DRB in total and the Authority reimburses the Contractor for the Authority's share using this pay item. Invoices must be prepared by the DRB Chairman and submitted to the Contractor, with a copy sent to the Project Engineer showing the date and nature of the services provided and support and document the quantity for the estimate, particularly when the services provided were not in attendance at a regularly scheduled meeting. Normally the pay quantity for a meeting is 1.0, however, the pay quantity recorded as a percentage. No payment is made until the Three Party Agreement is executed. It is possible that a DRB meeting could occur after the Contractor has submitted a qualified acceptance letter. In that case, the RE will process another estimate to reimburse the Contractor for payments to the individual members.

3.5 ADMINISTRATION OF CEI CONTRACTS

3.5.1 Role of the CEI

The Authority has representation in administering construction projects through Professional Services contracts. Hence, the CEI Resident Engineer and CEI Project Engineer act and speak as the Authority's representative when managing the construction projects on a day to day basis.

3.5.2 Pre-Service Phase

A pre-service conference is required on all CEI contracts following execution of the CEI contract and prior to the pre-construction conference. Generally, those in attendance will be representatives of the Authority and the Consultant CEI Engineer to discuss administration of the Consultant contract. The Authority will be responsible for the meeting. The pre-services meeting can be optional if the Firm is already performing services for the Authority and the Authority does not believe the pre-services meeting is needed.

Subjects covered at the conference will include, but not be limited to:

1) The Authority's lines of authority concerning administration of the CEI contract and the

administration of the construction contract.

2) CEI's schedule (with datelines determined) for establishing field offices, assigning personnel and equipment.

3) Terms of the CEI contract (e.g., approval of CEI's personnel qualifications, approval of personnel and equipment assignments, rates, etc.). Clarify any portions of the CEI Scope of Services which are unclear to any parties.

4) Invoice procedure.

5) The coordination between the Authority and Consultant CEI for processing CEI supplemental amendments and CEI invoices.

6) Review the process for the CEI to contact the Design Consultant for post-design services and clarification or correction of plans and specifications.

7) Discuss Disadvantaged Business Enterprise (DBE) and On-the-Job Training (O.J.T.) monitoring and documentation submission requirements.

8) The CEI Performance Evaluation Procedure.

9) Partnering concept and method of reimbursing Contractor.

10) Action required by CEI prior to start of construction.

11) Review of the critical items for successful administration of the construction contract.

12) Consultant CEI's Quality Control (Q.C.) Review process. A complete and concise record (including the names, titles, addresses, and telephone numbers of all participants) of the proceedings of the meeting shall be prepared by the CEI and approved by the Authority. Record of the meeting shall be distributed to all participants and other interested parties within 2 weeks following adjournment of the meeting.

3.5.3 Personnel Approvals

Although the CEI's are contracted to provide full-time construction contract administration and inspection, the Authority is to be in responsible charge of the project(s) at all times. The Authority administers the CEI Contract(s) and monitors the activities of the CEI(s) engaged in construction contract administration.

The Authority shall compare the personnel proposed by the Consultant with the Technical Proposal for any changes in personnel. Replacements for the original personnel must have equal or better qualifications than the personnel being replaced. The Authority reviews and approves all subsequent additions and deletions to CEI staffing of a project and all salary increases. The Authority shall approve actual required overtime worked when invoices are approved each month. All approvals are subject to the terms of the CEI contract. All salary and personnel approvals shall be in writing.

3.5.4 Office Space and Equipment

The CEI Office and equipment shall be approved by the Authority in accordance with the CEI contract. The CEI will make every reasonable attempt to locate their office near the contractor's field office.

3.5.5 Invoices

The Authority shall review and process CEI monthly and final Invoices. The invoices need to include timesheets, documentation of expenses, and should include all approved amendments. Total invoiced value cannot exceed the current CEI contract value.

3.5.6 CEI Performance Evaluation

The Authority shall maintain a continuing overview of Consultant performance of duties by periodic reviews of records, inspection procedures, testing procedures, sampling procedures, etc. Any and all concerns with the CEI's performance will be provided through written communication from the Authority/CMC detailing the items of

concern. Once the areas have been addressed, the Authority/CMC will re-review the corrections and provide a finalized report of the corrections provided that they are approved. Any remaining issues will also be documented.

The review areas of each CEI contract may consist of but not limited to:

Personnel - The Authority shall review Consultant staffing to determine if the individuals assigned to the project are those identified in the technical proposal, and that project staffing is in accordance with the approved staffing plan. All replacement personnel shall have been properly approved and be equally or better qualified to perform in their respective positions, and their rates of pay must be in accordance with the CEI contract requirements.

Equipment - The Authority shall check to insure all equipment as required in the CEI contract has been provided, is in proper operating condition, is being maintained and calibrated, and is adequate for ongoing and projected construction activities.

Field Documentation and Record Keeping – The Authority shall review earthwork, concrete and asphalt records throughout the life of the project to ensure that the record keeping practices being used by the CEI and the Contractor's Quality Control are acceptable.

Construction Contract Administration - The Authority shall determine if the CEI staff has the appropriate construction contract, plans, specifications, design standards, Department procedures, and other pertinent documents available in the project office and that the Consultant is complying with material testing, inspection, documentation, and contract administration requirements.

The Authority shall prepare and submit a final evaluation on the Consultant CEI's work performance within 30 days after completion and acceptance of basic services. The CMC cannot perform this action since they are a consultant as well, and should not rank other consultants.

4.0 Construction Administration

4.1 Daily and Weekly Reports of Construction

4.1.1 Purpose and Definitions

The ***Daily Inspection Report*** is to be completed by each inspector doing construction inspection each day and covers the work of all Contractors, subcontractors, tiered subcontractors and utility companies that the technician observes during that day's operations. One daily work report per inspector, per day, per contract, is required.

The following definitions are referenced in this section:

> **Daily Inspection Report:** the original source document from which the work accomplished by the Contractor, associated pay item increases and other project events are recorded daily. **Engineer's Weekly Summary:** This document provides a summary that gives project status and documents significant events, conditions or circumstances, which immediately affect, or have future impact on, the project or contract.
>
> **Work Plan - Controlling Item of Work:** This documents the Contractor's planned schedule of work identifying those items of work that will control the over-all progress of the Contractor's work effort.

4.1.2 Daily Inspection Report

A ***Daily Inspection Report*** is completed by each inspector responsible for the inspection of work during each contract workday. The prime Contractor, subcontractor, subordinate subcontractor, rental company, or utility company may perform the work. Additional forms, or additional pages can be used but user should appropriately number all the pages.

A Daily should be prepared for every contract day for the Prime Contractor, regardless, whether the Prime is working on the project or not. A Daily should also be prepared for every subcontractor and utility company on the project. In the event that the subcontractor leaves the project for a long period, a Daily need not be prepared for the subcontractor during the period of absence, provided, it is noted on the Daily for the day the subcontractor last worked that the subcontractor intended to leave the project and on the Daily for the day the subcontractor resumes work that the subcontractor did not perform any work for the period with specific dates. Dailies prepared for utility companies performing work should be prepared similar to that for subcontractors. A new week starts on a Monday and ends on a Sunday. Information to be collected includes but is not limited to the following:

1) Project Number,
2) Date,
3) Contract Day,
4) Contract Number,
5) Contractor's, subcontractor's, rental company's or utility company's name,
6) Operation (work) being performed,
7) Location of reported operations,
8) Time each operation begins and ends,
9) Number of Contractor, subcontractor or utility company personnel,
10) Materials received (general description),
11) Equipment idle or active
    a) The "Equipment ID" space will be used to record a unique identifier for a single piece of equipment whenever necessary to track a specific piece of equipment or a unique group identifier when grouping several like pieces of equipment together. Otherwise, the equipment should be recorded similar to the format used by Blue Book.

b) "# of Pieces" will be used to record the number of pieces of equipment present on or at the job site. If "Equipment ID" was for a unique piece of equipment then the quantity shown would be one, otherwise it would be the total number contained within the group identified by the "Equipment ID".

c) "# Used" will be used to record the number of pieces on or at the job site that is being actively used that day.

d) "Total Hours Used" is the total number of hours that the identified equipment is being used.

12) Pay Item Number for the work being performed.

13) Weather conditions (AM and PM),

a) Use terms such as: clear, partly cloudy, heavy clouds, light rain, heavy rain, intermittent showers, etc.

b) State length of time, i.e., all day, 4 hours, 8:00 - 10:00 A.M., etc.

c) Report soil conditions: dry soil, wet soil, extremely wet soil.

d) Working conditions

e) Effects of weather on major work items,

f) Any delays, including any items of work affected; any extraordinary work being performed; unusual or unexpected conditions such as flooding, sinkhole, etc.

14) Remarks include anything pertinent to the progress of the projects such as: Instructions given to the Contractor or subcontractor or their representatives.

15) Work or materials rejected and why.

16) Any discussions with representatives of the Contractor, subcontractor or utility company

17) Observations by the technician of significant importance to the project progress

18) Lane closure, traffic disruption, etc.

19) Contacts with property owners, media, etc.

20) CPM activity ID # (when applicable)

21) Observations by the technician of unacceptable Contractor quality control practices

22) All notes must be objective. Opinions are not permissible when recording activities, observations or discussions.

The ***Daily Inspection Report*** is completed and signed by the inspector responsible for inspection of the activity with the ACTUAL number of hours the technician is on the project being recorded. The Project Engineer is to review and initial the reports.

Note the section titled ***"Estimated Work Performed"***. This section is for recording estimated quantities for each unit of a pay item worked on a daily basis. The Project Engineer is responsible for summarizing all estimated pay quantities. Although the recording of estimated quantities is required on a daily basis, the summary of these quantities and submittal frequency is left up to the Authority provided the monthly cutoff timetable is met. This section is for recording "estimated pay item quantities".

Provide the Contractor with a copy of each Daily Inspection Report and the Engineer's Weekly Summary.

4.1.3 Engineer's Weekly Summary

The ***Engineer's Weekly Summary,***, is to be completed by each Project Engineer for each project or contract. The weekly period is from Monday through Sunday. A summary is completed every week including periods of no work.

The summary must give project status and document significant events, conditions or circumstances which

immediately affect, or have future impact on, the project or contract. The summary includes completion percentages for job progress and elapsed time. The Engineer must note items such as:

1) Contractor's or subcontractor's progress versus schedule or work plan,
2) The day of the week the Contractor or subcontractor stopped work or began work,
3) The day of the week the Contractor elected not to work or was unable to work at least 50% of the normal work day on a pre-determined controlling item of work item due to adverse weather conditions.
4) The items which change the plans, specifications or contract which could lead to:
    a) Contractor claim
    b) Request for a time extension
    c) A supplemental agreement.
5) For utility relocation construction, it is important to note the contract agreement number, the beginning date and the ending date of work.
6) Contractor made repairs to work damaged by weather
7) State if a particular subcontractor finished all the contract work and has left the project for good. If the Prime or the Sub has not been on a project, state accordingly the last date they worked on the project.
8) Other items affecting the contract or project.

4.1.4 Office Logs and Reports

Various logs shall be maintained by the CEI during the course of the Project such as:

1) Submittal Log
2) Sublet Log
3) Shop Drawing Log - The CEI staff must maintain a tracking log on either a hard copy spreadsheet or with the preferred method of a computer spreadsheet. The spreadsheet should have the appropriate project identification information at the top of the sheet and should be entitled "Shop Drawing Transmittal Log". Typical spreadsheet shall contain the following information for the normal review process; other information related to the CEI staff submittal dates may be required if the CEI staff receives submittals directly:
    a) Submittal/Transmittal Number
    b) Submittal Description
    c) Date the Contractor submitted to the Engineer of Record
    d) Engineer of Record review status: i.e. Approved, Approved as Noted, Not Approved
    e) Date the Engineer of Record submitted to the GEC
    f) GEC review status
    g) Date the GEC sent out submittal back to the Contractor
    h) Total duration of the review
    i) Comments
4) Request for Information Log
5) Outstanding Issue Log - Each log shall be identified and dated on the first and each succeeding page. These logs are to be maintained and reviewed by the CEI for submittal and review by the

Authority when requested. These logs shall be reviewed at the weekly coordination meetings with the Contractor.

6) Notice of Failing Test Report (NFTR) Log – This log contains a summary of NFTR's for the duration of the project, and a brief description of the resolution of the report. For details regarding NFTR usage refer to ACPAM Section 4.9 for clarification.

4.1.5 Field Reports

Field book notes are site source documents. It is important when preparing records of this type to assume that all persons who will use your notes have no familiarity at all with the work you are recording. Field books are extremely important as site source records for establishing pay quantities. They may be required as evidence in any arbitration or lawsuit. They should be tracked carefully to avoid loss and provide a measure of accountability for those project personnel to whom they are issued.

1) Only standard bound field books will be used.
2) The front cover of each field book shall be identified with bold letters to show Project Number, Contract Number, Field Book Number, State Road Number, and the general contents of that book.
3) Each field book shall be clearly indexed with a complete list of the contents beginning on the first lined page, which is to be numbered one (1). All following pages that are used to record notes shall be numbered sequentially in the upper right corner of each right hand page.
4) The date, weather conditions, and the name(s) of the field party shall be shown on the field book page at the beginning of each day's notes. Well documented field records are indispensable when the Authority is involved in litigation. (Also identify pay item number, original/final sections etc.)
5) Never erase in any field book. Corrections shall be made by striking through the incorrect data and inserting the correct data close to it. **All such corrections shall be initialed and dated by the person making the correction.**
6) Do not cut or otherwise remove pages from any field book. If an entire page is found in error, mark the original page **VOID** and show a note referring to the page where that item of work was corrected.
7) Keeping notes on loose-leaf or scratch pads and transferring them to the field books is prohibited. Field notes shall be entered directly into the field books at the time and the place the work is originally done. The exception to this rule is measurements entered directly on Latitude and Departure sheets or directly on the Final Computation Book Forms. In all cases, erasures as detailed in (5) above, is prohibited.
8) Field records shall always be legible with sufficient sketches and explanatory notes to convey the intent to a person who is not familiar with the job. Good sketches are most important when recording final measurements. The details of the sketches do not need to be elaborate, but shall be sufficient to clearly show the extent of the work as well as any exceptions.
9) Use standard symbols and abbreviations. Keep the notes simple and avoid making ambiguous statements.
10) Show all of the pertinent measurements and observations. Use a degree of accuracy that will be consistent with operations. If there is any doubt about the need for data, record it. Review the data for accuracy and completeness before leaving the field.
11) When practical, record all the notes for one item in the same book and at the same place in the book. This may necessitate the use of a few more field books, but it will avoid confusion and transposition errors.
12) A complete summary shall be made for each item at the end of its field notes. This item summary total will then be checked twice and initialed by those persons doing the final estimate and entered on the summary sheet of the computation book. At this time, the summary and the field books shall be

properly cross-referenced.

13) Keep the calculations and measurements for JPA and non- JPA items in separate field books.

14) When more than one job is constructed under the same contract, separate field books shall be set up for each job and the measurements and other data shall be kept separate for each Job.

15) Field records for projects let under separate contracts shall never be recorded in the same field book. Field books shall contain only records related to a single contract.

16) All field Books shall have a unique number assigned.

17) Do not cramp notes. Neatness and legibility give credence to the accuracy of field notes and the calculations which they support.

18) The alignment field book shall be submitted with the final estimate package. It shall contain all the necessary information for horizontal control for new construction projects and major widening projects.

19) Field books used for recording alignment and pile driving data are to be retained until the structure that they were incorporated in is removed. Special care shall be exercised in labeling alignment and piling field books as a permanent record. Separate field books shall be kept for these purposes, with front outside covers labeled with a large red letter "P" and circled in red to indicate a permanent record.

20) For roadway plan quantity items (e.g., embankment, excavation, stabilization and limerock), the CEI is to establish procedures that are reviewable and verifiable to ensure that estimated quantities paid on the monthly progress estimates are accurate. The CMC will review the CEI's procedures and methods prior to the start of construction, and periodically during the life of the project, to ensure that periodic payments for plan quantity items are accurate.

4.2 Pay Estimates

4.2.1 Purpose

This procedure provides a uniform standard for processing progress payments to the contractors and summarizes the legal documents, affidavits, and other documents required for the preparation, checking, and payment of final estimates.

Progress estimates will be prepared and submitted monthly for each project to determine the amount payable to the Contractor. Certification by the contractor that they have paid their subcontractors and suppliers of material and equipment their proportionate share from the last progress payment is required each month (link CG-E01 Certification Disbursement of Previous Periodic Payment to Subcontractors). It is the responsibility of the CEI to check the Contract and Specification requirements to ascertain that each monthly estimate package is complete with all essential documents. Any outstanding documents must be requested from the Contractor with instructions to forward them to the Authority. It is the CEI's responsibility to inform the Contractor of the Authority's required documents to process the monthly payment. All contract documents are to be time/date stamped when received by the Authority or their designee.

4.2.2 Time of Submittal

Monthly progress estimates will be prepared and submitted for each project underway as determined by the Authority but no later than the seventh of every month. Dates may be adjusted in some situations to allow for holidays and other factors. Some projects allow payments twice a month as an incentive for exceptional Contractor performance.

4.2.3 Preparation of Estimate

The monthly progress estimate will be prepared to show the quantity changes for all items completed, partially completed or stockpiled for use on the project. For items underway, the estimate of work completed will be done using the Florida Department of Transportation's Preparation & Documentation Manual Attachment 3-1 ***Standard***

Basis for Estimating Pay Items.

There are three sections of the pay estimate:

1) Contract Work – Payment for work performed in accordance with the original pay items.
2) SA Work – Payment for work performed in accordance with pay items on executed Supplemental Agreements.
3) Extra Work – Payment for work performed after Authority approval but prior to SA Execution. (It is important to remember to transfer payment from Extra Work to SA Work once the SA has been executed.)

The following steps are those the CEI should follow in preparation of the Pay Estimate:

1) The monthly payment shall be for work performed in the field and approved stockpiled materials. In special applications, the Contractor may be compensated under the category of "Extra Work", for work covered by a Supplemental Agreement that is in process. No supplemental agreement work will be paid under S.A. work until the Supplemental Agreement is fully executed.
2) The Contractor shall submit to the Project Engineer a Request for Payment of stockpiled materials eligible for reimbursement. See paragraph 4.2.4 below.
3) On a daily basis, the CEI will make accurate measurements, calculations and document this in the CEI Computation Books, Field Books, or other Site Source Records. These daily observations and records are summarized monthly as a part of the Contractor pay estimate processing.
4) Monthly Retainage shall be withheld on monthly Pay Estimate consistent with the Contract. See paragraph 4.2.5 below.
    a) Contractor's Certificate of Disbursement of Previous Payments
    b) Construction Compliance with Specifications and Plans
    c) DBE Payment Certifications
    d) Monthly DBE Status Report
    e) Payment Documentation Log (if the project has a Joint Project Agreement(JPA))
    f) Work Order Log (link form)
    g) Fuel Adjustment Calculations/Backup (if applicable)
    h) Owner Direct Material Purchase Payment (if applicable)
    i) ODPM Stockpile Material Log and Worksheet(s)(if applicable)
    j) Stockpile Material Log (if applicable)
    k) Certification and Request for Payment for Stockpile Materials (if applicable)
    l) Contractor's Certification of Quantities Bituminous and Polymer Material (if applicable)
    m) Any exceptions to the estimate and/or recommendations for additional retainage be withheld

4.2.4 Stockpiled Material

Partial payment for stockpiled material, when requested by the contractor, will be in accordance with ***Section 7.6.5*** of the ***General Specifications***. The contractor is required to submit a Certification and request for Payment for Stockpiled Materials Form (link form no 700-010-42) which is signed by both the contractor and verified by CEI. It is mandatory that documentation be maintained to justify the quantity changes for the monthly progress estimates. The use of the inspector's daily report of construction on weekly estimate worksheets or daily ledger will prove to be helpful and may be considered adequate documentation; however, any method that provides complete and accurate records of pay quantity changes is acceptable for the monthly estimate.

4.2.5 Projected Cash Curves

If the project specifications require the Contractor to revenue load the CPM schedule (General Specifications 6.3.3.4.5) the CEI shall prepare a graph of the projected earnings versus actual earnings and submit this with the last pay estimate of **each** month,. The graph of time and monies will include 2 or 3 'S' curves based on the following criteria:

1) The Contractor's projected earnings generated from the current approved baseline schedule. The Contractor's projected earnings revenue/cost data is defined as the average of the early and late start revenues from the Contractor's CPM.
2) The actual total earnings for each pay estimate including supplemental agreements, extra work, fuel and or bituminous adjustments and stockpile materials (both regular and ODPM)
3) If the pay estimate includes stockpiled materials – the third curve will be the actual total earnings **excluding** the stockpiled material monies (both regular and ODPM).

The horizontal axis will be the time in month and year and the vertical axis will be the revenue/cost in millions. The graph will include a legend identifying each curve

4.2.6 Retainage

Retainage shall be in accordance with ***Section 7.6*** of the ***General Specifications***. When retainage is be held from the contractor the CEI will include retainage tracking log (link form) with the pay estimate. Some contracts may have special provision requirements, which change the standard schedule. The standard schedule of Retainage is:

% Contract Amount Completed	Amount Retained
0 to 75	None
75 to 100	10% of value of Work completed exceeding 75% of Contract Amount

After the Contractor has furnished to the Authority all submittals required by the Contract and the CEI has determined that the measurement and computation of pay quantities is correct, the Retainage may be reduced to $1000 plus any amount the Authority elects to deduct for Defective Work.

4.2.7 Liquidated Damages

When the contract time is exceeded, liquidated damages must be withheld from the contractor. The contractor is charged for the defaulting days, which are the calendar days between expiration of the present contract time and the cutoff date of the estimate. This amount is to be calculated and entered on the estimate worksheet. When supplemental agreements and time extensions are pending that would add sufficient contract time so that the contract time is not exceeded, liquidated damages may not be assessed pending execution of these instruments.

If liquidated damages are assessed against the contractor a summary of Liquidated Damages must be submitted with each pay estimate. The summary should show the last chargeable day, the current day, substantial completion date, final completion date, milestone dates and the total number of days charged at any variable rates per the contract.

4.2.8 Contractor's Monthly Payments Process Procedure:

1) The standard monthly cut off is on the 25th of each month
2) The CEI submits the estimate to CMC or Authority designee within seven (7) working days after the cut-off date
3) CMC or Authority designee submits the estimate to the Authority within three working days of receipt of the estimate.
4) The Authority will release the estimate checks on the last working day of the month in which they receive the estimates. For example, the check for the February 25th cut off will be released on

March 31st.

5) Contractors may pick up their check from the Authority's office at 4974 ORL Tower Road, Orlando, FL 32807. However, this is only allowed after the contractor has contacted OOCEA's Contract Support Specialist at 407-690-5000 to make the necessary arrangements.

6) If contractors do not pick up their check then the check shall be mailed the last working day of the month.

7) Contractors may also have their checks deposited electronically. To do so, they must complete the Authority's Electronic Funds Transfer form (ETF), forward to their bank, and return to the Authority.

Note: For the monthly 25th estimate cut off dates, the contractor must submit the required monthly estimate documentation forms to the CEI within three (3) working days after the cut off to prevent delays to the above process.

4.2.9 Contractor's Semi-Monthly Cut Off Process Procedure:

For the first (additional) pay estimate of the month:

1) The standard semi-monthly cut off is on the 9th or 10th of each month

2) The CEI submits the estimate to the CMC or Authority designee within seven working days after the cut off

3) CMC or Authority designee submits the estimate to the Authority within three (3) working days of receiving the estimate

4) The Authority will release the checks on the last working days of the month in which they receive the estimate

For the second (standard) pay estimate of the month:

1) The standard semi-monthly cut off will occur on the 25th of each month

2) The CEI submits the estimate to the CMC or Authority designee within seven (7) working days after the cut off.

3) CMC or Authority Representative submits the estimate to the Authority within three working days of receipt of the estimate.

4) The Authority will release the checks on the Friday of the week between the 15th and 20th of the month in which they receive the estimate

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4.3 Subletting of Contracts and Rental Agreements

4.3.1 Certification of Sublet Work

The prime Contractor will submit a ***Certification of Sublet Work, (link Form No. CG-P04),*** before a subcontractor begins work. When a ***Certification of Sublet Work*** is submitted, a review to insure item numbers are correct, legible, and work clearly identifiable, shall be performed by the CEI. The CEI will approve or disapprove the sublet and return a copy to the Contractor. This information is made available to others and shall be written and/or typed in a manner that can be clearly understood. If the Contractor sublets a part of a contract item, the Authority will use only sublet proportional cost in determining the percentage of subcontracted normal work.

When a subcontractor (Firm "A") fails to complete work and another subcontractor (Firm "B") is authorized to complete the remaining portion of the work, a sublet certification identifying work actually performed by the subcontractor (Firm "A") shall be submitted to revise the first certification. This revision will replace/modify the original certification and should be so specified. A new certification shall be submitted by the replacement subcontractor (Firm "B") reflecting work to be performed, whether totally or partially.

4.3.2 Documentation by CEI

Certification of sublet work will be retained by the CEI and kept on file until the project has been final accepted. A copy of each certification to sublet shall be made a part of the final project records.

Regardless of the prices agreed upon with the subcontractor, the total amount shown on the sublet certification form shall be the same as those in the contract with the Authority where it is proposed to sublet all work in a pay item. If it is proposed to sublet only part of the work in a pay item, such item shall be designated with "P" and the unit price shown shall be the actual price agreed upon with the subcontractor.

4.3.3 Rental Agreements

When the Contractor proposes to accomplish any work on the project using rental equipment, he shall notify the CEI in writing in accordance with ***Section 6-2*** of the ***General Specifications***. The exception to this requirement is when the Contractor rents a piece of equipment (without operators) from an equipment dealer or from a firm whose principal business is renting or leasing equipment. Under those circumstances, the notice provisions herein set forth need not be followed.

The Contractor may rent the equipment with or without an operator. When equipment is rented with an operator, it must be the type of equipment that substantially requires the constant attention of a trained operator. Renting of a crew, including non-operator personnel, is not permitted, with the exception of when a crew is required specifically for maintenance and operation of the equipment, and is in no way associated with the work being performed.

The Contractor may notify the CEI using ***Notice of Rental Agreement(link Form No. CG-P07),*** or similar format as long as it contains all of the required information. The notice must contain a listing and description of the equipment, a description of the work to be performed with the equipment, an indication of whether the rental includes an operator, project information, the name of the prime Contractor and the name of the company from which the equipment is being rented.

A ***Notice of Rental Agreement,*** should not be used as a substitute for a subcontractor agreement. When a task job, or work item requires a supervised crew, i.e., a crew with a supervisor, foreman, lead man or other work directing personnel, then a ***Notice of Rental Agreement*** does not apply. A ***Certification of Sublet Work***, is required.

An equipment rental agreement is not required when MOT items are leased from a company whose principal business is renting or leasing MOT items. When MOT items are initially delivered, installed, maintained, moved, and retrieved by an independent company, then a ***Certification of Sublet Work*** is needed. If MOT items are initially delivered, maintained and retrieved by an independent company but installed and moved by the prime Contractor's personnel then a ***Certification of Sublet Work*** is not required.

The CEI is responsible for verifying the information contained on the ***Notice of Rental Agreement***. Both the physical equipment and the equipment operator shall be verified on a periodic basis. The Project Engineer is responsible for seeing that the information contained in the "equipment and personnel" section of the ***Daily Inspection Report,*** is accurate and complete. By comparing the information contained on ***Daily Inspection Report*** and ***Notice of Rental Agreement,*** the type, location and status of the rental equipment and hours, wages and status of the equipment operator can be verified.

When the Project/ Engineer receives the ***Notice of Rental Agreement,*** from the Contractor and is satisfied that it meets all the requirements, they will keep the original for review by the Authority when required and it should be retained with the other original project documents.

4.4 Shop and Erection Drawing Process

4.4.1 Purpose

To make the CEI staff aware of what their responsibilities are with regard to administration of the construction project shop and erection drawing process. Shop drawings include all working, shop and erection drawings, associated trade literature, calculations, schedules, manual or similar documents submitted by the Contractor to define some portion of the Work. The type of Work includes both permanent and temporary Work. The process for handling all Shop and Erection Drawings will follow section 3.1.4 in the General Specifications of the

Construction Documents/Contract (3.1.4).

4.4.2 Responsibilities

This process primarily involves the Contractor, Engineer of Record (EOR), the CEI and the Authority if necessary, and is governed by General Specification 3.1.4. The details of what is required of these groups during the process are covered very comprehensively in the Contract Documents. These may contain requirements that are not covered in the Standard Specifications or Plans Preparation Manual.

The role of the CEI staff in this process is to encourage the groups involved to stay on schedule with the process, to continually monitor which group is in possession of shop and erection drawings and to develop and maintain up-to-date tracking logs as submittals progress through each stage of review and approval. These logs should be in order according to date and the topics clearly identified on the logs to avoid confusion. Simply utilizing a sequential numbering system for all submittals will not be acceptable. A standing agenda item for discussion of the status of shop and erection drawings should be part of weekly construction progress meetings. At these meetings, the CEI will ask the Contractor if the process is on schedule to ensure that pending approvals are not delaying the Contractor's progress and any schedule problems should be corrected as soon as possible. Also at the meeting, the priority of submittals should be reviewed and adjustments to priorities agreed to with the Contractor. This ensures that the Engineer of Record and the Authority reviews submittals that are most important to the Contractor as quickly as possible and that less important submittals are given lower priority. Review durations are set in general specification 3.1.4.The CEI staff will continually monitor the progress of reviews and contacts reviewers to remind them when the deadline for completing reviews is approaching. In the event that a review is continually delayed without explanation by the reviewer, the CEI will inform the Authority.

The CEI staff will be completely familiar with the approved shop and erection drawings in order to ensure that the project is built accordingly. Shop drawing reviews by the CEI staff are critical since these drawings are usually detailed and complex, which requires careful observation in the field to ensure accuracy of construction. The CEI staff must also ensure that all approved submittal documents are incorporated in the final As-Built drawings where appropriate.

4.4.3 Flow of the Process

CEI Responsibilities

For typical projects, the CEI staff receives copies of submittal transmittal letters from the groups involved in the process in order to be able to track the progress of submittal reviews. With this arrangement, the CEI staff does not receive the actual submittals until the process is complete but is made aware of where they have been sent and who has possession. The CEI staff shall confirm receipt of submittals by the various parties involved in order to accurately track their location and review duration. The approving EOR or when required, the Authority, will make the final distribution of approved submittals.

For projects that are complex and/or have a large volume of shop drawings and for which approval is on the critical path of the project, the CEI staff should consider direct handling of all the submittals at all review process stages in order to exercise a higher level of control over the transmittal process. In this case, the Contractor would send submittals to the CEI staff and not to the EOR. The CEI staff would then transmit the submittals to the EOR and if necessary to the Authority. Once all reviewers approve the submittal, the submittals will be sent back to the CEI for final distribution. If submittals are not approved, they will also be to the CEI for appropriate action and for distribution.

The CEI must keep a continually updated "Shop and Erection Drawing Tracking Log" within the physical files and a current tracking log on a computer spreadsheet. Both Logs should have the appropriate project information at the top of the sheet and should be entitled "Shop and Erection Drawing Tracking Log".

The tracking log shall contain the following information for the typical review process; however, other information related to CEI controlled submittals may be required if the CEI receives submittals directly:

1) Submittal/Transmittal Number: Each group may have a different number for the same submittal so all numbers should be recorded.

2) Submittal Description: Example – "MSE Wall Drawing, Wall Number 5".

3) Date the Contractor submitted to the EOR.

4) EOR review status: This is an indication of what the results of the review are, such as: Approved, Approved as Noted, Approved as Corrected, Revise and Resubmit or Not Approved.

5) Date the EOR submitted to the Authority when required.

6) Authority status when required.

7) Date the EOR or when required the Authority sent the submittal back to the Contractor.

8) Total duration of the review.

9) Comments: These may have to do with involvement of reviewers that are not usually part of the process, supplementary documents, final distribution of submittals to specific recipients and any other information that warrants documentation due to some unique circumstance of the specific submittal being reviewed.

4.4.4 Shop and Erection Drawing Submittal List

The following is a typical list of Shop and Erection Drawing Submittals, who should review each submittal and where the submittal is specified in the contract documents:

Shop Drawing/Submittal	Reviewer	Specification
Precast Box Culverts	CEI	410-4.2 FDOT
Street Lighting Photometric	EOR	715-2 FDOT
Traffic Signalization Items	EOR	603-7 FDOT
Transformer Pads	CEI	715-2 FDOT
Communication Pull Box Cut Sheets	CEI	631-2.1, 638-2.2 Contract Documents
Light Pole Design Calculations	EOR	715-2, 992-1.3 FDOT
Underdeck Luminary Cut Sheets	EOR	715-2 FDOT
Light Pole Box Cut Sheets	EOR	715-2 FDOT
Pole Cable Distribution System	EOR	715-2 FDOT, 992-12 FDOT
Load Center Details	EOR	715-2 FDOT
Sign Master Luminary Cut Sheet	EOR	715-2 FDOT
Embedded Conduit & Junction Box	CEI	715-2 FDOT
Fiber Optic Conduit System	GEC	631-2 Contract Documents
Structure Bearing Pads	CEI/EOR	932-2.2.6, 932-2.3 FDOT
Signage	EOR & GEC	3.1.4.2 (Concurrent Review) Overhead
Span Trusses & Cantilever Structures	EOR	3.1.4.2
Beam Layout, Strand Detensioning Calculations	EOR	450-5 FDOT
Equipment	CEI/GEC	455-5.2, 455-10.1 FDOT
Plan	CEI/GEC	455-10.1 FDOT
Drilled Shaft Installation Plan	CEI	455-15.1.2 FDOT
Typical Fence Details	CEI	550-3.5 FDOT
FCC - FDPE Post	GEC	631-2.1 Contract Documents
Signal Equipment & Materials	CEI/GEC	603-7 FDOT
Coating	CEI	400-15.2.6.2 FDOT
Stay-in-Place Metal Forms	CEI	400-5.7.1 FDOT
Multi-Post Ground Mounted Signs	EOR & GEC	3.1.4.2 (Concurrent Review) Contract

MSE Wall Shop Drawings	EOR	548-6.1 FDOT
Architectural Panels	EOR & GEC	SP-34 Contract Documents
MOT	CEI	102 Contract Documents, 102-2.6, 102-3.1102-12.1 FDOT
Erosion Control	CEI	104-3 Contract Documents, 104-5 FDOT
Asphalt Mix Designs	CEI	4.3.3 Contract Documents, 334-3.2.1 FDOT
Toll Plaza Submittals		
Rebar: Footings, Walls, Gatorheads, Beams	CEI	TSP
Masonry	CEI	TSP
Concrete Mix Designs	CEI	TSP
Precast Drainage Structures	CEI	TSP
Electrical	EOR	TSP
Double T's	EOR	TSP
Plumbing	EOR	TSP
HVAC	EOR	TSP
Metal Doors & Frames	EOR	TSP
Structural Steel	EOR	TSP
Welding Certifications	CEI	TSP
Armstrong VCT Samples with Base	EOR	TSP
Lightning Protection	EOR	TSP
Computer Floor Systems	EOR	TSP
STO Coating Samples	EOR	TSP
Signage	EOR & GEC	TSP (Concurrent Review)
Insulation, Roofing, Flashing & Sheet Metal	EOR	TSP

4.5 JOINT PARTICIPATION AGREEMENTS

4.5.1 Purpose and Definitions

Joint Participation Agreements (JPA's) are primarily any agreement between the Authority and a utility owner, local municipality or State Agency to perform work for the outside party in conjunction with a construction project administered by the Authority. For the purpose of this section, the outside party will be referred to as the utility owner or utility project.

In order to expedite construction projects, the Authority may let utility projects as part of the Authority's construction contract. This allows the contractor to better coordinate the installation of the utility owner's facilities with his own work. The utility owner will generally deposit their share of the cost of doing the utility work prior to awarding the contract. However, some JPA's require the utility owner to pay the Authority based on the construction contracts monthly estimates. It is important to obtain and review the JPA for these details.

4.5.2 Administration of JPA's During Pre-Construction

The Project Engineer (PE) will obtain and review a copy of all JPA's prior to the contract letting. After the project is let and the contract amount is known, the utility owners may decide to perform the work outside the JPA, in which case the JPA will become null and void and the work will be deleted from the construction contract. Should the utility owner decide to perform their own work, close coordination with the utility shall be made to ensure the work does not delay the work of the Authority's contractor.

If the utility owner decides to proceed in accordance with the JPA, a separate meeting, immediately after the letting, will be scheduled with each utility owner to establish a point of contact, confirm the information provided in the JPA,

review the plans and specifications for the work, and review procedures for extra work, payment, over and under run of pay-items, inspection requirements and final close out of the JPA. The original estimate for the JPA should be reviewed and compared with the bid amount for the JPA. Minutes of these meetings shall be prepared and sent to all who attended. The utility owners that are participants in the JPA's shall be invited to the Pre-Construction Conference.

4.5.3 Administration of JPA's During Construction

When the final settlement of these agreements is to be based on final measurements and bid prices, construction personnel shall adhere to the following format:

1) Refer to JPA to identify the need for final measurements to be taken by the CEI or other parties.
2) The PE shall itemize the measurements for the final quantities in accordance with the agreement and as delineated on the construction plans.
3) The summary of quantities for JPA's will be accounted for separately from the other items of work. Extensions will be made of the contract bid prices and then totaled. This summary is submitted with each pay estimate and along with the final plans to the Authority and the utility owner.
4) Revised plan sheets are to be submitted and explanations made for all field revisions.

If extra work is required in the performance of the JPA, the same procedures are to be employed as if the cost for the extra work were to be borne by the Authority. However, prior to final agreement with the contractor on the cost and performance of the work, the PE shall obtain written approval of the work and associated costs from the utility owner. Variation of this process will only be allowed if so stated in the JPA.

If a claim is filed that involves a JPA, the PE will encourage the utility owner to participate in the resolution process. Regardless if the utility owner participates or not, the PE shall, in writing, notify the utility owner of their potential financial responsibility for the claim and keep the utility owner informed of the resolution process with all decisions rendered.

The PE will invite the utility owner to participate in the inspection of the work throughout the life of the project. When the work is complete the PE will request, in writing, the utility owner to accompany the CEI in the semi-final inspection, identification of punch list items and subsequent final inspection. The final acceptance of the overall project may not be made until the utility owner has accepted their portion of the work in writing. Variations of this process will only be allowed if so stated in the JPA.

4.5.4 Closeout of JPA'S

Upon completion and acceptance of the Utility work, the PE will determine the Final Estimate and forward a copy to the utility owner with a copy of the as built plans requesting their concurrence with the final costs. The Estimate should be labeled Tentative and list all unresolved claims and all outstanding supplemental agreements, if any. The Final Estimate may be sent to the utility owner prior to final acceptance of the project if the work is complete on the JPA portion of the work.

Review the JPA for additional close out requirements and notify proper personnel of pending project completion and final action requirements. These additional requirements may be right of way transfers, notification of maintenance responsibilities, transfer of as built plans, final payments, maintenance bonds, etc.

4.6 MAINTENANCE OF TRAFFIC

4.6.1 Purpose and Definitions

To establish a uniform standard for inspection and review of ***Maintenance of Traffic (MOT)*** operations used in construction projects. The Authority has representation in administering construction projects through engineering contracts. The authority of the CEI's personnel is identical to the Authority's project personnel.

The following abbreviations are used in this section:

MOT – Maintenance of Traffic is the uniform standard for inspection and review of traffic control.

TCP – Traffic Control Plan is the approved plan submitted by the Contractor for safely maintaining traffic flow during construction.

WTS – Worksite Traffic Supervisor is the Contractor's designated individual responsible for review of all MOT to ensure proper installation and adequate traffic control devices, including monitoring of lights.

4.6.2 Traffic Control Plan

A Traffic Control Plan (TCP) is included with each Authority construction contract. The Contractor will furnish a letter to the Resident Engineer stating whether they plan to use the Authority designed TCP or will submit an alternate TCP for approval. The alternate TCP must be signed and sealed by a Professional Engineer licensed in the State of Florida and shall be reviewed, discussed and approved by the Resident Engineer.

The submission of the alternate TCP will include a 11" x 17" set of plan sheets which indicate the type and location of all signs, lights, channeling devices, striping, barriers and geometrics of transitions and detours to be used for the safe passage of pedestrians, bicyclists and vehicular traffic through the project and for the protection of the workers. The plan will indicate conditions and setups for each phase of the Contractor's activities.

When the Contractor proposes a modification to the TCP, particular attention should be given to the utility adjustment plan of the project. If the proposed TCP modification affects the scheduled adjustment of utilities in any measure, the Contractor must obtain written approval from the affected utilities. The Authority should be given the opportunity to review and comment on the modified TCP submittal.

The Resident Engineer shall consult/get approval from the Authority before approving/ disapproving the proposed alternate TCP. If the Contractor's proposed TCP does not affect the utility adjustment plan and is equal to or better than the Authority's plan and is at no additional cost to the Authority, the alternative proposal will be given consideration.

The TCP approval letter must include a statement to the effect that any additional costs, delay or increase to the cost of utility adjustments will be borne by the Contractor. The change will be documented by a supplemental agreement with the Contractor's revised plan drawings.

In no case will the Contractor begin work using an alternate TCP until the Resident Engineer has approved such plan. Modifications to the TCP that will change traffic patterns will also be submitted to the Authority for approval. No modifications to the approved plan will be allowed, except for enhancements, or in case of emergencies, until the Resident Engineer has approved such modification. These modifications may be documented by supplemental agreement. Enhancements to the TCP will not involve changing traffic patterns.

4.6.3 Initial Inspection and Evaluation of Work Zone

The Worksite Traffic Supervisor (WTS) will conduct weekly, daytime and nighttime, inspections within the limits of the project of all traffic control devices concerning traffic flow, pedestrian, bicyclist's and business accommodations. The WTS will submit a comprehensive weekly report, Form No. 700-010-08,

Maintenance of Traffic (MOT) Review Report, to the CEI for review and include the condition of all traffic control devices (including pavement markings) being used. This MOT Review Report is to be submitted at least one day prior to the weekly construction meeting to allow the CEI time to evaluate the report and discuss at the weekly construction meeting. In addition, the WTS will perform the initial evaluation on new phases of construction by driving through the work zone and observing how traffic moves through the work zone. This drive through inspection will be done in all lanes, both directions, on crossroads, during the day and night and from all entry and exit points within the zone. Detours, if any, should also be driven. The evaluation will also include inspection of signs and devices for the desired sight distance, maintenance and spacing. A newly implemented work zone TCP may not function as well as it was intended to function. To lessen hazards to motorists and workers, traffic controls will be inspected and evaluated by the WTS immediately after the TCP is implemented, and after each phase change, using Form No. 700-010-08, Maintenance of Traffic (MOT) Review Report.

An audio recorder, video camera or a photograph are good methods to document immediate thoughts or observations. Signs should be evaluated to see if they communicate their messages and are properly located. Any sight distance problems should be noted and corrections made to the location of the devices. The location and length of tapers and the spacing of devices should be checked. Any existing signs or signals that are not needed shall be covered. All proposed pavement markings should have been applied. Non-applicable pavement markings shall be removed if the work zone is stationary and will be in place for sufficient duration.

Bicycle paths through the work zone should be well marked and signed. Bicycle paths should not be directed through pedestrian walkways. Pedestrian paths should be clean of debris, well protected with positive barriers and/or separated from traffic, and be ADA compliant. Business entrances should be well maintained, and designated with devices through construction areas.

Entrances should be signed appropriately so as to give advance notice to the motorist.

Any unsafe driving actions should be identified and corrective action taken to achieve a smooth traffic flow through the work zone. Any enhancements to the TCP should be documented in the project diary, and coordinated with potentially affected parties (e.g., utilities).

4.6.4 Weekly Night and Day Inspections

The CEI will perform an inspection of work zone area and record any deficiencies found. The CEI will provide the original report to the Contractor weekly unless deficiencies are found. If deficiencies are found, the report shall be submitted to the Contractor and the Authority within 24 hours of such inspection.

The CMC personnel will review the MOT Review Report, periodically and should confirm the notations on the report (positive and negative findings) by conducting a field project inspection of the work zone. If additional deficiencies are found that were not included in the MOT Review Report, such deficiencies will be discussed with the CEI and noted on the MOT Review Report. The CEI will document on the original Review Report and the Daily Diary the date corrective action was completed.

4.6.5 Recommended Action to Shut Down a Project Due to MOT Discrepancies

Following the above inspection (as described in Section 4.6.4) made by the CEI, the Contractor will be verbally notified immediately of deficiencies found. A written list of deficiencies using Form No. 700-010-08, MOT Review Report, will be given to the Contractor within 24 hours with a notification setting a 48-hour maximum limit for complete corrective action to be taken. Any discrepancy noted that is considered a severe hazard and life threatening will require immediate corrective action by the Contractor.

Failure to correct the hazard immediately is basis to shut down the project and obtain other means to correct the hazard. The Authority/CMC should be consulted in the event of a project shut down directive. If corrective action on the deficiencies which the Contractor has been verbally notified has not been corrected within the 48-hour time limit, the Project Engineer shall deduct payment for the uncorrected areas from the date shown on the MOT Review Report until corrective action is made.

4.6.6 Reporting Traffic Crashes

A traffic crash occurring within the work zone is brought to the attention of the CEI through actual observation, notification by others, or through signs of a crash aftermath such as debris, etc. It may also be advisable to conduct a routine inquiry of local police departments and/or county traffic engineering departments for crash reports. The CEI will conduct an evaluation of the maintenance of traffic features in the immediate area of the crash site, if made aware of the crash.

1) If a fatality or any disabling injury occurs, or if there is a serious crash involving three or more people, notify the Authority by telephone immediately.

2) Any incident that causes an interstate highway to be closed for more than six hours, or a major roadway to be closed for more than 24 hours, except for closures (maintenance, construction, etc.) where the public has been notified in advance must be reported. Report these crashes to the Authority which will relay the information to appropriate parties.

3) The report should be prepared and distributed within two weeks of the crash. Documentation such as police reports and photographs may have to follow and should be collected and forwarded as received.

4) If one or more fatalities occur, submit a copy of the Crash Report to the Authority within five (5) working days.

4.6.7 MOT Evaluation at Crash Site

When the Project Engineer becomes aware that a crash occurred, all possible steps shall be taken to determine its cause and to make corrections that will reduce the probability of additional crashes.

However, where a crash occurs it does not automatically mean that a change in work zone traffic controls is required. Crashes usually are a result of a combination of factors.

The Project Engineer shall examine that relationship of the crash to the existing work zone traffic controls. Evaluate all warning signs, pavement markings, barricades, and lights in the immediate vicinity of the crash site. A night inspection is required if the crash occurred at night. If any enhancements or corrective measures are to be taken, list them in the crash report and document this action in the daily report.

No changes to the Traffic Control Plans shall be made which will change traffic patterns or movements without the approval of the Resident Engineer.

4.6.8 Other Requirements

1) The Contractor and CEI will inspect MOT operations provided by a utility company within the project limits throughout the project duration.

2) Authority personnel will report crashes occurring within the project limits as described in Section 4.6.6, Reporting Traffic Crashes.

3) The Contractor will coordinate with adjacent projects and make frequent inspections to ensure that there are no conflicts in the information and/or instructions given to the motoring public.

4) The Contractor will periodically check reflectivity of pavement markings and, in the event of failure, have the Contractor re-apply of the pavement markings as required by Section 710 of the FDOT Standard Specifications

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4.7 STRUCTURES

4.7.1 Purpose and Definitions

This section is provided to create a uniform process for the evaluation and inspection of structures and concrete and to outline the procedures for acceptance.

Noncomplying Components: Noncomplying components are components that have been damaged, that do not meet the specified tolerances, or that contain defects.

4.7.2 Administration

Prior to the start of concreting operations, the CEI must review and approve the Contractor's Quality Control Plan. The CEI shall also forward the QC Plan to the Authority's CMC for comment and review. The CEI will provide the acceptance/non-acceptance to the Contractor and outline any reasons for non- acceptance. All QC staff included in the Contractor's QC plan are to be verified by the CEI through the CTQP database (http://www.ctqpflorida.com) prior to their acceptance of the project.

If a new scope of work arises, an installation plan shall be submitted by the Contractor and approved by the CEI. All pre-activity meetings for new or approaching activities shall be scheduled well in advance to allow for discussion of pertinent topics to assure there are no delays for the activity. At this meeting all parties who are involved in the activity are to be present, including but not limited to the CEI, Contractor, CMC, material suppliers, utility owners, etc.

Only FDOT approved concrete mix designs are to be incorporated into the project. The mix design(s) for concrete being placed is/are to be submitted to and accepted by the CEI prior to the placement of such material. Tracking logs are to be used by the CEI to document lot numbers, date of placement. Also tracked are both CEI and Contractor's sample numbers, plastic properties, comparison of compressive strength results. If necessary, any resolution test results, detailed information of any discrepancies and/or any other remarks needed to fully document the placement.

Within 48 hours of completing any concreting activity, the Contractor is to supply the CEI completed concrete delivery tickets. No omissions or errors are to be present on the tickets at the time of CEI receipt. All failed materials will require submission of a Notice of Failing Test Report (NFTR) as per ACPAM section 4.9.3.

In the event of a disqualification of a producer's QC plan or suspension of a plant or mix design, the CMC will notify the CEI. The CEI will inform the Contractor immediately to reschedule concrete placements that are affected by the submissions. No concrete loads will be accepted on-site from a disapproved plant or from a suspended mix design. Once the plant or mix deficiency has been addressed the CMC will notify the CEI.

4.7.3 Foundations

Foundation construction will require that the Contractor monitor existing structures, freshly placed concrete and utilities to prevent damage that may be affected by vibrations, ground loss and ground heave or dewatering per specifications. A Specialty Engineer will survey all structures, utilities or specified objects in compliance with the plans and specifications. The CEI will approve the number and location of monitoring points. The CEI and Specialty Engineer will be notified immediately if any movements are detected.

4.7.3.1 Drilled Shafts

A drilled shaft installation plan (DSIP) shall be submitted at the preconstruction conference or at the latest, 30 days prior to drilled shaft construction. It is to be approved by the CEI and Geotechnical Engineer, if applicable. The plan shall provide detailed information about Contractor's methods of construction, equipment and personnel, etc. After CMC review of the DSIP a notification letter will be sent to the Contractor within 3 working days indicating acceptance, rejection or a request for additional information. Once the DSIP has been approved by the CEI they will then forward it to the CMC for their records.

All drilled shaft, miscellaneous shaft and test hole/shaft installations shall be documented using the Authority's drill shaft log. The CEI will assist with documentation or any other requests by the Geotechnical Engineer. The completed drill shaft log will be forwarded to the CMC after review by the Resident Engineer/PA. The CEI shall forward any Load Test Data Reports, Core Log Reports, CSL Testing Reports and any other data/reports to the Geotechnical Engineer immediately up receipt.

Installation of all drilled shafts, including miscellaneous shafts, are to be inspected by an experienced and qualified CTQP inspector producing accurate and completed logs. The CEI inspector shall have a copy of the DSIP, project plans, appropriate equipment and any other applicable materials at all times during the installation.

Drilled shaft lengths that are established by the Geotechnical Engineer will be forwarded to the Contractor within 7 days. The geotechnical engineer reserves the right to alter shaft lengths should they deem it necessary. If altered, the revised drilled shaft will be provided on to the Contractor via the CEI.

The Contractor is to record and document slump results on all loads of concrete. The Contractor will be informed immediately of any deviations from the DSIP and specifications. Any deviations or irregularities encountered during the installation shall be recorded and the information will be forwarded to the PA/Resident Engineer immediately. Completed shaft logs will be reviewed and signed by the monitoring inspector and the Resident Engineer/PA. The reviewed shaft logs shall be forwarded on to the CMC in a timely manner. The CEI shall inform the CMC of any drilled shafts that require further testing for acceptance.

4.7.3.2 Piling

If there are existing structures to remain within an area that could be impacted by vibration, the CEI will make sure that the structures are monitored by the Contractor to provide an accurate record should one be necessary in the

future. The CEI will ensure that the Contractor submits a Pile Installation Plan (PIP) at least 30 days prior to the driving of the initial test pile. The CEI will forward the PIP to the Geotechnical Engineer and CMC for review and comments within 3 working days. Within 5 working days of receiving the Geotechnical Engineer's comments and/or recommendations the CEI will inform the Contractor of acceptance, rejection or request additional information and/or changes that may be necessary for acceptance of PIP. A letter of rejection shall contain the reason(s) for rejection of the plan. No pile driving operations rations may commence until the PIP is accepted.

The Geotechnical Engineer will be notified of the test pile schedule as soon as the Contractor's schedule is received. Delivered test piles shall be inspected for length, quality, proper dunnage and proper QC and/or VT stamping if required. The pile number, cast date, length and any other pile information shall be recorded on the pile driving record and in a permanent field log book. The CEI shall be prepared to assist the Geotechnical Engineer during the test pile program. The test pile(s) shall be documented on the Authority's pile driving record. The test pile records shall contain all the data and observations pertaining to the driving of the test pile. Any special recording requested by the Geotechnical Engineer shall become part of the pile driving record. The completed records shall be forwarded on to the Geotechnical Engineer immediately. The CEI will make the completed records available to the CMC.

A letter of recommendation from the Geotechnical Engineer will be sent to the CEI that establishes production pile length and driving criteria. Upon receipt of the letter from the Geotechnical Engineer, the CEI shall approve the recommendation and send it to the Contractor in a timely manner. The driving criteria shall contain the required blow count, minimum stroke height, minimum tip elevation or depth requirements and any other special driving criteria. If using a diesel hammer, a chart of blow count versus stroke/pressure shall also be furnished and attached to the letter of recommendation. A copy of the PIP shall be attached to the letter so that all parties involved know that the same system used to install test piles is also used to install production piles.

Upon delivery of production piles, they shall be inspected for length, quality, proper dunnage and proper QC and/or VT stamping. The pile number, cast date, length and any other information should be recorded on the record and in a permanent field log book. Field personnel shall have a copy of the Driving Criteria, PIP, project plans and specifications with them at all times during the driving operation. Field personnel shall keep accurate and correct records of the pile driving operation using the Authority's pile driving record. All information recorded shall be accurate in regards to irregularities, unexpected occurrences, deviations from driving criteria or procedures, actual elevations, spalling, cracks, cushion changes, etc. The entire pile driving operation shall be in accordance with the Driving Criteria and PIP. Any deviation from the established criteria should result in the Resident Engineer and Geotechnical Engineer being contacted and informed of the status immediately. Complete records shall be reviewed by the Senior Inspector and Resident Engineer/PA. Records will also be made available for a review by the CMC.

4.7.4 Concrete Pre-placement

The Contractor will notify the CEI at least 24 hours prior to any structural concrete placement. Once notified, it is the responsibility of the CEI to provide an adequate number of inspectors for the operation. The CEI also needs to ensure that QC is present for the duration of all structural pours, whether or not VT is present. The CMC will be notified prior to the start of major activities. These activities are to include but are not limited to bridge deck pours, mass concrete, drilled shafts, beam settings, dry runs, and any other placements of significance.

The CEI will ensure that the Contractor has a CTQP Concrete Field Technician Level II responsible inspections associated with all bridge placements. The Contractor will perform the required inspection before a placement begins. These inspections will include but are not limited to false work, form placement, correct reinforcing steel bar size, correct reinforcing steel bar locations, correct chairs/bolsters and reinforcing steel bar clearances. False work will be free of any dirt, sawdust, oil, etc. The Contractor will record all inspections in an appropriate manner. These inspection records are to be made available to the CEI if requested. The CEI will perform independent inspections to verify that the Contractor is inspecting the reinforcing steel for the correct spacing, bends, splicing, clearance tolerances, bar size, use of appropriate chairs/bolsters, wire tying, et cetera. The CEI will also inspect the same items as the Contractor. Inspection by both the CEI and the Contractor will verify that the structural placement is in an acceptable condition before placement of concrete. If any discrepancies are found during the CEI's inspection, the Contractor must be notified immediately to allow the issues to be addressed prior to placement of concrete.

All permanent field books are to be permanently identified on the cover and spine with the OOCEA job number and OOCEA job name. Each bridge location shall be listed separately by bridge number and name on each page. Specific inspection documentation shall include but will not be limited to date, time, weather information, station location, distance left or right of center line, the inspectors printed and signed name and any other pertinent information.

The CMC will monitor these records and assure compliance with the following of the plans and specifications. In addition to making a historical record, the purpose of making and recording these measurements is to provide the basis for making corrections to deficient placements and corrections to construction techniques prior to subsequent structural placements so that deficiencies will not reoccur.

Mill certifications will be collected for structural steel that is delivered to the project. Mill certifications will be checked to ensure compliance with plans and specifications. The Contractor's method of storage of the reinforcing steel will be in a manner that does not contribute to surface deterioration. Any issues noted during this inspection must be made known to the Contractor's representative immediately so that corrective action can be taken.

The approved curing compound, stored in the approved manner and the appropriate curing compound equipment will be onsite (when necessary) before placement. The Contractor will provide a correctly constructed cure box of the appropriate size. The cure box must be able to contain the required Contractor's and CEI's samples with enough room to spare in the event that additional samples are cast. The Contractor will supply a high/low thermometer for all curing boxes. Provisions to maintain the temperature range in the cure box in accordance with the specifications will be available in the event that they are needed. The curing box must be in a secure location and in close proximity to the placement.

4.7.5 Placement of Concrete

The CEI will ensure that the Contractor has a CTQP Concrete Field Technician Level II responsible for quality control at all concrete placements.

Upon arrival of concrete to the site, it will be the responsibility of the Contractor's representative to review the concrete delivery ticket and determine that all of the information provided is correct prior to the discharge of concrete. The CEI will periodically review the tickets to ensure that the QC process is being performed effectively. Concrete that fails to meet the specifications upon delivery to the project should be rejected by the Contractor. In the event that the concrete fails plastic properties and/or is deficient and the Contractor elects to place concrete at their own risk the Contractor's representative and the CEI must document in great detail the station, offset and specific portion of the structure being poured. The CEI inspector will inform the Project Administrator/Resident Engineer immediately. The CEI should suggest that the Contractor casts samples of the failed material for strength testing to assist in an Engineering Analysis Review (EAR) if necessary. The CEI should also be prepared to cast samples testing, if necessary. The current lot is to be closed out at the conclusion of pouring the failed concrete with the next load beginning the following lot. Initial testing is required on the new lot.

4.7.6 Post Placement of Concrete

Curing methods of the concrete will be in the correct manner and for the duration called for in the plans and specifications.

After forms are removed, the Contractor and the CEI will inspect the structure for deficiencies including cracking, settlement, bug holes, spalls, et cetera. Thorough documentation of inspections of the structures will be performed periodically throughout the project including date, time, weather and the printed and signed name of the inspector in permanent field book. These inspections are considered site source documents and will be submitted with the final estimate records.

Tracking of the anticipated date of the strength specimen breaks from both the Contractor and CEI's laboratories will be on an appropriate concrete tracking log. Results from both laboratories will be received within 24 hours upon completion of the testing (weekends excluded). In the event of a non- comparison of concrete test results between the QC and VT cylinders, the CEI will notify the CMC immediately. At the discretion of the CMC, the "hold" cylinders cast by both QC and VT may need to be tested to determine acceptance of the hardened concrete. The

Contractor and CEI will be prepared to deliver samples to the resolution lab immediately if necessary at direction of the CMC.

4.7.7 Substructure Elements

Dry, dewatered, and wet excavations will monitored by the CEI to ensure that the excavation is being performed in accordance with the specifications. If dewatering is necessary, it will be inspected in accordance with a submitted dewatering plan. Confirmation that the Contractor has constructed the foundation(s) in a manner that the soils are firm, stable and meet or exceed the design bearing capacity will be recorded on a project daily. Density tests may be used to verify that soils are within the specifications.

The acceptance of formwork for footings, end-bent caps, back/wing walls, columns, pier caps, and any other substructure items will be verified by the CEI before concrete placement begins. Inspections will include dimensions, proper steel placement, steel clearances, alignment, bracing, ties, et cetera. During concrete placements, the CEI will observe the placement of concrete to ensure that the proper methods and techniques are used. In the event that the forms bulge or appear to change dimensions during the concrete placement, the CEI will inform the Contractor, and thoroughly document the issue. These events will be relayed to the Resident Engineer/PA immediately.

4.7.8 Mass Concrete

Due to the unique nature of this type of construction, it is recommended that a pre-activity meeting be held prior to placement of mass concrete elements to discuss applicable specifications, expectations, and methods of inspection. The CEI will notify the CMC in advance of this meeting so that they may be in attendance. A frequency for submitting the temperature results should also be established at this meeting. Mass concrete placements will require the Contractor to use a Specialty Engineer to follow the procedure outlined in Section 207 of the ACI Manual of Concrete Practice to formulate, implement, administer and monitor a temperature control plan. The Contractor is to submit both the mass concrete mix design and the proposed mass concrete plan to the CEI for review and acceptance. The CEI will forward the mass concrete plan to the CMC. The CEI will notify the Contractor of acceptance or rejection of the plan within ten working days. No mass concrete is to be placed without an approved plan.

The CEI will monitor the Contractor's temperature readings and documentation as well as take independent temperature readings. In the event that the temperature readings are outside the differential limit or exceed the maximum temperature, the Contractor will take immediate action as directed by the Specialty Engineer to retard further growth of the differential or maximum temperature. If the temperature control provisions fail to prevent excessive differences or maximum temperature through verifiable test results, a revised version of the previously accepted plan will be submitted. This will be required to ensure that future placements are in compliance. No other placements will commence until the CEI has accepted the revised plan.

4.7.9 Structural Steel Members

The CEI will have documentation of all plant Verification testing for members delivered to the project. Delivery of structural steel members will be inspected by the Contractor and verified as necessary by the CEI for compliance with the project plans, approved shop drawings and specifications.

Proper inspections of structural steel members will include but are not be limited to Rotational Capacity Tests, Verification of Direct Tension Indicator Device Performance and Turn-of-Nut Tightening. The Contractor should have a representative present during any Verification testing by the CEI.

When welds are required on the project, the CEI team will be responsible for randomly verifying that the welders provided are certified and all welds are inspected by a certified welding inspector. The Contractor will submit an Erection Plan to the CEI for the review which will include a Specialty Engineer's signature and Seal.

4.7.10 Prestressed Concrete Members

The CEI will have documentation of all plant Verification testing for members delivered to the project. Delivery of prestressed concrete members will be inspected by the Contractor for compliance with the project plans, approved shop drawings and specifications. Inspections by the Contractor will be verified by the CEI. Field inspections

include but are not limited to surface deficiencies, bug holes/honeycomb, spalls, chips, surface porosity and formed surface misshaping. The Resident Engineer/PA will be informed with any deficiencies requiring repairs. Repairs that are not covered in the specifications will require a submitted repair procedure to the Resident Engineer. These repairs may not commence before the Contractor receives the approved submittal from the Resident Engineer. The Contractor and CEI are to keep a record of all deficiencies and their repair methods.

Delivered prestressed concrete members will be handled in a manner that conform to the contract plans or approved shop drawings. The Contractor is to use the required pick points. The Contractor will use the proper dunnage and storing procedures for members in accordance with the specifications.

The CEI will ensure that the Contractor has prepared the prestressed concrete member, prepared the concrete substructure, prepared the bearing areas and placed the correct bearings in accordance with the contract documents and specifications. The Contractor will perform inspections at all phases of work. The Resident Engineer/PA will be notified immediately when nonconforming work or materials are not able to be brought in conformance with the contract documents using pre-established procedures.

Concrete diaphragms will only be formed and placed after the concrete prestressed members have been confirmed to be in accordance with the contract plans and specifications. This will be accomplished using the Contractor's as-builts and verified by the CEI. Concrete diaphragms will be placed at least 48 hours before bridge deck slabs are placed unless otherwise indicated in the plans.

4.7.10.1 Prestressed/Precast Concrete Non-Compliance Review Procedure

Noncomplying components containing specific defects or damage which are classified as minor are not subject to the disposition requirements in this procedure and must be repaired in accordance with General Specification 450-2.6.12.4. However, if for a minor defect, an alternate nonstandard repair method is proposed by the Contractor or if the defect will be encased within the diaphragm concrete then this procedure applies.

For defects covered by this procedure, the Contractor must comply with General Specification, 450-2.6.12.5, which requires the submittal of a repair proposal to the Project Engineer and specifies what the contents of the proposal shall be. Components in the casting yard, which require repairs, shall not be shipped to the project site until such repairs are complete and the member has been accepted by the Authority. If the component is repaired and determined to be acceptable to the Authority, the component shall be stamped indicating it meets specification requirements and any remedial work is acceptable. Producer stamped pre-stressed members arriving at the job site shall not be rejected by project personnel for reasons other than obvious shipping damage which makes the member unacceptable.

The Contractor's proposal will be in writing and consist of the following information:

1) A cover letter prepared on the Contractor's letterhead and addressed to the Project Engineer briefly describing the component, and the proposed credit to the contract proportionate to the defect or specification noncompliance.

2) A completed Noncomplying Prestressed/Precast Concrete Component Data Sheet, Form No. 700-030-10, prepared by the producer or Contractor and countersigned by the CEI to indicate agreement with the described defect or noncompliance feature. If not in agreement with the information or description, the CEI shall either reject the submittal indicating reason(s) for rejection or modify the submittal as necessary. In the latter event, the preparer shall initial and date the submittal indicating agreement or disagreement with the modifications.

The CEI will review the Contractor's proposal and enlist the assistance of the specialty engineers and the Engineer of Record as deemed appropriate. Upon completion of the evaluation, the CEI may accept the Contractor's proposed repair method and cost reduction, negotiate a more satisfactory cost or repair method, or reject the proposal. With approval by the CEI, structural or nonstructural defects that will be encased by the end diaphragm shall be filled with diaphragm concrete in lieu of patching at the casting yard. This does not include defects on the surface of the bottom flange that will be in contact with the bearing pad: these must be repaired prior to contact with the bearing pad. Beam end defects that begin within the limits of the diaphragm and extend beyond the limits of the diaphragm must be patched prior to diaphragm construction. Cleaning and preparation of all defects prior to diaphragm concrete

placement shall be in accordance with the specification or as approved by the Resident Engineer.

The CEI shall indicate acceptance in the response and distribute the proposal and the disposition to the CMC.

4.7.11 Bridge Deck Placements

The preconstruction meeting will be attended by the CEI, the Contractor, the Contractor's QC representatives, concrete producer and any other key personnel involved to discuss the operations and specification requirements. The CEI shall notify the CMC at least 5 days prior to a pre-operations meeting. During the meeting, any changes to the plan's bridge deck placement sequence should be an item for discussion. Any deviation of the sequence plan will follow the project's plans and/or notes. The EOR's approval may be needed in addition to other requirements before any bridge deck placements.

The CEI will observe the Contractor's method of construction during all phases of bridge deck construction. Verification of Contractor's inspections will be completed as the scope of work progresses.

Documentation of inspections will be recorded by both parties. The Resident Engineer/PA will be notified if deficiencies are not corrected in a timely manner.

Stay-in-place (SIP) metal forms are to be inspected to ensure that they are free of any defects, securely and properly installed and that they are free of any elements prior to any concrete placements.

Overhang false work installation and SIP installation will not be conducted when over live traffic. These activities will only commence once traffic is shifted to the prescribed lane(s) and is clear below the work area.

Bridge expansion joints and construction joints will be checked for compliance with plans and specifications. The use of Indices 21110, 21100 and their installation requirements will be reviewed and inspected before any bridge deck placements. Attention to the temperature requirements in the plans and specifications must be adhered to during installation of the expansion joints. Interaction between the bridge deck and approach slabs will be inspected to ensure that both are in compliance with the plans, Indexes and specifications. Verify with the plans vs. installed reinforcing steel for the existence, location for any light pole pilasters or other individual bridge plan specific items.

The CEI will inform the CMC of all screed demonstrations (dry run) and concrete deck pours in a timely manner. The CEI will update the CMC on any changes to the schedule of these items as they change. Completion of the Contractor's dry run will be verified by the CEI. Documentation of the dry run will be recorded in a permanent field book and will be submitted with the final estimate records. A minimum of two measurements will be taken at each test location. Test locations are to be performed at every bay at longitudinal intervals no greater than 10 ft. Overhangs will also be measured for the proper reinforcing steel clearances. The measurements will be taken from the bottom of the screed rollers. The first measurement will represent the expected concrete thickness cover above the top mat of reinforcing steel. The second measurement will represent the expected total bridge deck concrete thickness. Any deficiencies that cannot be corrected will be reported to the Resident Engineer/PA.

Concrete diaphragms will be placed at least 48 hours before bridge deck slabs are placed unless otherwise indicated in the plans. Placement of concrete during the bridge deck placement will be measured for thickness (wet run) using a thickness measurement tool. The measurement tool can be of various designs as long as it is capable of measuring the thickness of concrete accurately and consistently. The two measurements will be taken at a minimum of 500 ft^2 of bridge deck. The first measurement will represent the concrete thickness cover above the top mat of reinforcing steel. The second measurement will represent the total bridge deck concrete thickness. These measurements will be made as soon as the screed has made the final pass. Any deficiencies outside the plans and specifications will be reported to the Contractor immediately. Any deficiencies that cannot be corrected during the placement will be reported to the Resident Engineer/PA immediately. All measurements will be recorded in a permanent field book and submitted with the final estimate records.

The Contractor will have the proper equipment and personnel present for each concrete bridge placement. The Contractor is to have a CTQP Concrete Field Technician Level II responsible for the quality control of concrete all bridge placements. The Contractor is to also monitor the reinforcing steel for any changes that might become nonconforming to the plans and specifications during the placement. Repairs to any deficiencies will be made immediately. The CEI will record any deficiencies that are not corrected.

Concrete bridge deck placements of 50 cubic yards or less will have a minimum placement rate of 20 cubic yards and hour. Concrete bridge deck placements of greater than 50 cubic yards will have a minimum placement rate of 30 cubic yards and hour. The CEI will ensure that the Contractor is aware of any failure of these requirements during the operation. The CEI shall not permit placements until acceptable plans are in place for meeting the minimum placement rate.

The Contractor will have appropriate measures in place for any weather events that effect the concrete placement. The CEI will verify that the Wind Velocity Restrictions are within specifications before concrete placement.

Forms and reinforcing steel is to be sprayed with fresh cool water immediately before placement of concrete. Fresh concrete cannot be directly sprayed with water. The addition of water to aid in the finishing process should be kept to a minimum and applied with the use of a fogging application.

After the concrete placement is complete, the Contractor will cure the concrete bridge deck per the specifications. The CEI will inspect that the curing compound and the method of applying is within specifications. The CEI will continually inspect that all post placement curing blankets are wetted down immediately after satisfactorily placing them. The curing blankets will be maintained in a saturated condition throughout the 7 day curing period. The CEI shall ensure that the Contractor is using potable water for the wetting process.

4.7.11.2 Bridge Deck Thickness Documentation

The inspector shall record the thickness measurements in a permanent field notebook to be submitted with the final estimate records. The notebook shall contain the following information in addition to the financial identification number; contract number, etc. Each bridge shall be listed separately by bridge number and name. Information regarding the thickness measurements shall show the following under the appropriate span number: deck placement location (Station to Station), distance right or left of a centerline, date, time period (From am/pm to am/pm) and inspector's name. The average thickness of the concrete cover over the top mat of reinforcing steel and the average deck thickness shall be computed for each deck concrete placement.

The Authority will monitor these records and assure compliance with specified plan dimensions. In addition to making a historical record, the purpose of making and recording these measurements is to provide the basis for making corrections to deficient placements and corrections to construction techniques prior to subsequent deck placements so that deficiencies will not recur.

4.8 ASPHALT

4.8.1 Purpose

To provide a uniform procedure for verifying that all asphalt materials meet the requirements of the specifications including but not limited to; rolling straightedge, density, cross-slope and thickness prior to placing the friction course.

The Authority's intent is that a friction course be of uniform thickness that will not rut, distort or ravel, during the intended service life of the pavement. Therefore, it is absolutely necessary to ensure that the surface upon which the friction course will be placed and the friction course itself meets the acceptance tolerances as established in the specifications. It is the Contractor's responsibility to perform the straightedge testing and to take any action required to correct surface irregularities.

4.8.2 Pre-Paving Activities

Conduct a Pre-Paving Conference with the Contractor, Subcontractor(s), CEI staff, CMC staff, and asphalt plant inspection staff to discuss the requirements, scheduling, and procedures to be utilized for the project.

Provide the following information at the Pre-Paving Conference:

1) The proposed date of the paving operations
2) The locations of the plant(s) to be used
3) The maximum production rates of the plant(s) and the expected rate of production

4) The average haul distance
5) The anticipated paver speed in feet per minute
6) The number of trucks to be used
7) The width of the mat for each placement operation
8) The number and types of rollers for each placement operation
9) A sketch of the typical section showing the sequence of the paving for each placement operation
10) The type of controls to be used for each placement operations
11) The type of milling equipment and street sweeping equipment and when they will demonstrate it
12) Lighting plan if work is to be completed at night
13) Discuss the procedure for handling cores
14) Design mixes

No asphalt is to be placed on the project prior to this pre-paving meeting.

4.8.2.2 Friction Course Pre-Activities

Due to the critical nature of the friction course asphalt, a separate pre-friction course meeting shall be held prior to the start of any friction course placement on the project. Topics of discussion should include anticipated rate of placement, size and type of rollers, rolling patterns, temperature monitoring both of the trucks and the ambient conditions, applicable plant testing, and specification requirements. No friction course shall be placed on the project until this meeting has been held.

Concurrent with the Pre-friction Course meeting, also conduct the pre-striping meeting to discuss the requirements, and procedures for the application of the PPRT striping. The Contractor, Striping Sub- Contractor, CEI inspection staff, and CMC staff should be present at this meeting. Also, provide the training qualifications for the striping crew at this meeting.

4.8.3 Paving Activities

CEI Measurements:

The CEI will be responsible for ensuring that the Contractor adheres to the approved QC Plan throughout the paving operations. The CEI does have to record their independent measurements throughout this process, but for the purpose of verifying that the Quality Control data is accurate, not for acceptance. For example, the spread rates measured by VT are not to be used for pay, but should be compared to the QC spreadrates to ensure that the Contractor is accurately reporting their rates. This also applies to cross- slopes. It is not enough that the CEI has taken the required cross-slope measurements since these are not used for acceptance. The inspector in the field needs to ensure that the Contractor is taking these measurements as required, and that they are within the specified tolerance. It is essential that the CEI monitor the implementation of the approved plan, and inform the Contractor when it is not being followed. The only way that operations can be improved upon is if the reason for the issue is well documented and discussed. All inspection staff should have a copy of the approved plan with them during construction to make sure that it is being utilized in the field.

4.8.3.1 Temperature Control

The Contractor's Technician under the supervision of the CEI will take the temperature of the asphalt mix at the plant for each day, for each design mix on the first five loads and an average of once every five loads thereafter. The CEI shall monitor and review the plant temperature readings and take additional temperature measurements at a minimum frequency of once per day. The CEI will also take temperature readings at the same frequency as at the plant when the load arrives on the project.

The following procedures should be followed:

1) The frequency of the measurement may be increased, as deemed necessary by the CEI.

2) The Contractor's Technician on the respective delivery ticket shall record each temperature reading taken at the plant. The temperature measurements taken at the roadway shall be recorded by the CEI at the right hand side of the temperature reading taken at the plant on the front of the delivery ticket.

3) The CEI will verify Contractor's measurements periodically with a minimum frequency of twice per day.

4) Rejection of the hot mix asphalt on the basis of the mix temperature shall be made in accordance with the Standard Specifications and necessary corrective action shall be made immediately.

5) The CEI will record the temperature on the delivery tickets for the loads rejected, clearly write on the ticket for the rejected load "Rejected for Temperature", and notify the Authority's Technician of any such rejection.

The Contractor's Technician will monitor the next five loads produced after the adjustment has been made to determine if the corrective action is effective. The CEI will continue to monitor the loads until the average temperature of five successive loads is in compliance with the requirements of specifications at which time the Contractor's Technician can return to monitoring one out of every five loads.

4.8.4 Spreadrate Verification

The CEI will monitor the Contractor's spreadrate to ensure that the Contractor's process controls are functioning as intended. The CEI shall calculate the spreadrate at a minimum frequency of once per layer per day. The measurements are to be based on the average of 5 truckloads of mix at a minimum. In the event that the CEI measurement is outside of the 5% tolerance, the Contractor is to be notified immediately. The CEI may increase the spreadrate measurements when necessary to ensure the desired results are achieved; however it is not the intent to perform the same measurement frequency as the QC technician. Should the spreadrates not be verifiable on a consistent basis, the QC Plan needs to be reviewed and discussed with the Contractor to determine the issue with the spreadrates. Further failure to verify may result in suspension of the paving portion of the Contractor's Quality Control Plan.

4.8.5 Cross-slope Verification

The CEI will verify the Contractor's cross slope measurements by taking measurements at a minimum frequency of once every 200 feet during paving operations to ensure the cross slope is uniform and in compliance with the design cross slope. In the event that the measurements are out of tolerance, (+ .2% for travel lanes including turn lanes, and + .5% for shoulders) the CEI will notify the Contractor immediately so action can be taken to bring the operation back into compliance. The CEI will recheck the cross slope and if it is still out of tolerance, will notify the Contractor that their operation is out of control and proceed in accordance with the Contract Specifications regarding out of control operations.

4.8.6 Rolling Straightedge Verification

The straightedging will take place after the completion of the last structural layer and also after the completion of the friction course. The straightedging will be performed by a Contractor. The Contractor will notify the CEI the location and time of testing a minimum of 48 hours before beginning testing. The CEI shall notify the CMC Manager once notified by the Contractor. A standard 15-foot rolling straightedge will be used. The recommended procedures are as follows:

1) The CEI will be present and will accompany the Contractor's employee who will operate the rolling straightedge. The calibration of the 15-foot (4.572 m) rolling straightedge shall be performed in accordance with FM 5-509 and visually reviewed and verified before each testing day.

2) The CEI will continuously observe the indicator for highs and lows in excess of 3/16 inch (5 mm) and monitor the contractor's employee recording the locations and magnitude of each out-of- tolerance deficiency. The contractor's employee will mark the location on the pavement with spray paint or other marking method. The Daily Inspection Report will reflect this inspection.

3) After the straight-edging operation, the Contractor shall furnish the CEI a copy of the straightedging results together with the method of correction the Contractor plans to use.

4) The CEI shall be present during the corrective work and will ascertain that each surface

irregularity was eliminated or brought within the allowable tolerance as established in the specifications. The corrective work will be reported on the Daily Inspection Report.

5) The resolution of the deficient area(s) will be handled in compliance with the procedures specified below in Section 4.8.6.2

6) The CEI documents the corrected areas in Project File and lists the exceptions in Certification Statement and provides a copy to the Authority.

4.8.6.1 Asphalt Surface Deficiency Resolution

1) If the Contractor requests to leave the deficient area(s) uncorrected with the exception of full or partial pay, then the CEI must obtain the concurrence of the Authority, before notifying the Contractor of the decision.

2) If the Contractor plans to use corrective methods other than method

   a) Removing and Replacement or method

   b) Overlaying, as specified in ***Section 330 of the Standard Specifications for Road and Bridge Construction*** a written request for approval of the proposed methods must be submitted to the Authority. By memo of transmittal, CEI will send the Contractor's request and a copy of the list of surface irregularities to the Authority.

3) The CEI will approve or disapprove the Contractor's request for corrective action based on the Authority's comments. The CEI may rescind any approval if satisfactory acceptance test results are not being attained.

4) Regardless of the corrective method approved and used by the Contractor, CEI shall be present during the corrective work and will ascertain that each surface irregularity was eliminated or brought within the allowable tolerance as established in the specifications. The corrective work will be reported on Form No. CG-R02, Daily Inspection Report.

5) Upon verifying that all corrections have been accomplished, the CEI will notify the Contractor in writing about the Engineer's determination of pavement surface acceptance with copies to the CMC.

4.9 CONTROL OF MATERIALS

4.9.1 Purpose

The contract documents contain specifications or references for all materials that are to be incorporated into a project. The FDOT Field Sampling and Testing Manual (published by the State Materials Office) indicate who samples and tests each of these materials and at what frequency.

4.9.2 Method of Acceptance

A manufacturer or supplier provides written certification stating the material supplied meets Authority specification requirements at the time of delivery or prior to placement. The CEI shall verify that the materials supplied do in fact meet these requirements by reviewing the plans and specifications and comparing them to what has been supplied. The Qualified Products List (QPL) maintained by the Product Evaluation Section of the State Design Office in Tallahassee provides guidelines concerning material that may be accepted by visual examination. The QPL is generally accepted on Authority projects; however, the CEI should review the plans and specifications for exceptions. Not all items on the QPL list are approved for use on Authority projects.

Regardless of the method of acceptance, it is the CEI's responsibility to assure that only materials meeting or exceeding the specifications, or properly documented and approved exceptions, are incorporated into the project. A current record of samples taken and tests run is maintained during the project using a recording system developed by the CEI. The database shall as a minimum identify the type of material, the sample number, use and location of the material, the required test results, the actual test results, indication of Pass or Fail, and a comments section. The CEI will keep the database current at all times by insuring prompt entry of sample data, field and laboratory

test results. Prior to the start of construction, the CEI will provide the Authority or designee with an example of the CEI's method of tracking this data.

4.9.3 Notice of Failing Test Results (NFTR)

In the event that materials fail throughout the course of the project, it is imperative that these issues be documented. The NFTR form can be utilized to document these issues as they arise. Anytime that a laboratory test fails, and there is no resolution sample available this method of acceptance should be utilized. For example if a concrete strength specimen breaks below the specified tolerance, and there is no resolution data (non-verified lot) then this NFTR form would be used to document the failure, and the subsequent CEI rejection or acceptance of the material. Although the specifications may provide direction regarding failing materials (such as the concrete strength being within 5% and allowed to remain in place with a pay deduction), the CEI needs to complete this form and include it in an NFTR file for the project to documents the acceptance of the material. Structural items should be sent electronically to the Authority's CMC for review. Non-structural items such as failing plastic properties tests that are accepted by compressive strength that is at or above requirements does not need to be forwarded to the CMC; however they still need to be documented in the log and in the files.

In addition to these items, there needs to be resolutions to all test results that fail on the project. Items such as drilled shafts that have CSL testing performed need to be documented as well. This provides a singular place to note the acceptance of non-conforming materials that are used in the project, and ensures that no items that are not accepted are allowed to remain in the completed work.

4.9.4 Material Certifications and Final Records

During the preconstruction phase of the project, the CEI will be responsible for conforming the Sampling, Testing and Reporting Guide (STRG) to their project. This is accomplished by taking the spreadsheet that contains all pay items, and deleting the items that are not included on the project so that the CEI will know what certifications, and tests are required for each item on the project.

The CEI will be required, at project completion, to provide the Authority with detailed and orderly documentation of all materials certifications and test results on all materials used on the project. The format for this documentation should be similar to the example appended to this section. However, if the CEI has an existing format that they are more familiar with, and the format is concise and orderly, the CMC may allow it to be used. If the non-standard method is chosen, the CEI must provide this tracking system to the CMC for review during the early stages of the project to make sure that any suggested changes to the system are incorporated into the logs before too many samples have been entered, the records for Toll Plaza construction shall be submitted separately from roadway construction.

4.9.5 Example Table of Contents for Final Material Manual

Table of Contents

Section 1 Project Engineer's Certification Statement

Section 2 Administration Control of Quality

- Non-Compliance Issues
- Notification of Failing Test Results, and Resolutions
  - NFTR Log
  - Earthwork
  - Structural Elements
  - Asphalt

Section 3 Drainage

- Pipe and Structures Certification

- Bridge Drain Certification
- Video Inspection Reports (Existing)
- Video inspection Reports (New)

Section 4 Concrete

- Pavement
- Concrete Finishes
- Sheet Piles
- Barrier Walls
- Misc. Concrete, Curb & Gutter, Sidewalk, Ditch and Slope Pavement
- Retaining Wall System
- Architectural Walls

Section 5 Bridge

- Stay in Place Forms
- Beams and Piling
- Bearing Pads
- Reinforcing Steel
- Expansion Joint Material
- Poly Sheeting for Piles
- Structural Steel
- Sealant
- Concrete
- Finishes

Section 6 Drilled Shafts

- Drilled Shaft Logs

Section 7 Lot Summaries QC/VT

- Concrete
- Asphalt
- Approved Mix Designs

Section 8 Reinforcing Steel

- Mill Tests and Certifications
- Concrete Pavement Dowel Bars (Joints)

Section 9 Intelligent Transportation Systems (DMS/FON)

- DMS
  - Warranty
  - Shop Drawings
  - Sign Product Data

- Stand Alone Acceptance Test
- Factory Acceptance Test

- FON
  - Warranty
  - Cable Product Data
  - Manhole Cover Certification
  - Final Proofing
  - OTDR Test Readings

Section 10 Lighting

- Luminaries Test Results
- Energy Service Self Inspecting Forms
- Power Service Certifications

Section 11 Signing

- Sheeting Warranty
- Shop Drawings
- Changeable Message Signs Certification
- Photometric Readings (Sign Luminaries)
- Sign Structure and Sign Panel Certifications

Section 12 Traffic Control

- Traffic Striping
  - Warranty
  - PPRT Certificate of Conformance
  - RPM Certificate of Compliance and QPL Verification
- Guardrail
  - Certificate of Compliance
  - Material Certification (Accessories)
  - Block Certification
  - End Anchorage Assembly and Guardrail Reflector Verification
  - Vehicle Impact Attenuators

4.10 Fiber Optic Network (FON) Splicing

4.10.1 Purpose and Definitions

To implement specific procedures during the planning and performing of splices on the existing Authority's FON system within the project limits.

4.10.2 FON Splicing Procedure

A minimum of two weeks prior to the splicing of the existing FON, the CEI shall ensure that the Contractor has inspected and prepared an as-built drawing that depicts how the various color fibers are spliced together. If it is

necessary for the Contractor to access the patch panels in the toll plazas, the CEI and a representative of the Authority must accompany the Contractor. Contact the Authority's Manager of Expressway Operations prior to any anticipated work beginning. Once the review of the existing fiber splices is completed, the Contractor shall turnover the prepared as-builts. At that time the EOR and or The Authority will review and ensure that the current system, according to the as-builts, will operate properly with the new splice diagram(s). Existing manholes should be inspected by the Contractor and CEI to ensure that a ladder is installed, the grounding is not damaged and existing ducts are capped. These existing manholes should also be photographed for documentation.

A minimum of one week prior to the FON splicing operation, the CEI is to conduct a pre-splice meeting attended by the Contractor, any subcontractors,a representative of the Authority and any other pertinent personnel. . Items discussed should include but are not limited to:

1) Comparing of the contractor's FON as-built drawings with the most current splice plan in the contract documents to ensure that field conditions agree with plan conditions.
2) Discussions should include: Date when the splice is to occur, location of splice, who will actually perform the splice, how long the splice is anticipated to last and how will the splice be performed. Confirm with the Authority the off-peak times when splice can be performed.

The CEI is to ensure that the contractor opens a Sprint ANS ticket a minimum of 1 hour and a maximum of 2 hours prior to the FON splicing operation. The Contractor shall provide a contact name and telephone number for who obtained the ticket and an emergency contact. Immediately prior to the FON splice, the Contractor will notify the Authority. If Sprint reports that both the NMS and SONET are free of alarms, the Authority will grant approval for the contractor to proceed with the FON splice. The contractor will inform the Authority once operations are complete. The Authority will verify with Sprint immediately after the FON splicing operation is complete that no NMS or SONET alarms were detected. The Authority will then confirm with the Contractor and the CEI that the FON system has returned to full operational status. Once all operations are complete, the Authority has confirmed that the FON system is operational and free of alarms; the Contractor will then close the open Sprint ANS ticket. The Contractor will inform the Authority that all operations are complete and that the open ticket is closed. The CEI will verify all communication between the Contractor and the Authority.

The CEI will document all construction procedures performed during the FON splicing operation on a separate Daily Report of Construction. A photograph will be taken by the CEI of the opened splice enclosure to ensure that the fiber is placed correctly. Photographs should be taken before and after the splicing operation.

4.11 Lighting Systems

4.11.1 Purpose and Definitions

To provide a uniform procedure to review and document the existing lighting system, load centers and fixtures/devices within and adjacent to the project limits, and confirm that fixtures/devices on these circuits can be maintained by the contractor at the preconstruction condition.

4.11.2 Lighting Circuitry Procedure

Prior to construction, the CEI is to review the project's existing lighting circuitry and perform the following operations:

1) Map out existing circuitry/system, load centers and fixtures/devices, within and adjacent to the project limits.
2) Confirm with the contractor that the condition of all fixtures/devices on these circuits can be maintained at the existing preconstruction condition.

After the review of the existing lighting system has been completed, and **prior** to **any** construction activities, the CEI is to perform a project walk-thru with the Authority's Maintenance Manager to review the condition of the roadway lighting. Any non-working lights or circuits should be repaired prior to the contractor assuming responsibility for the system. The Contractor will continue to inspect the lighting system for the duration of the project. These inspections results will be provided to and be verified by the CEI. Any non-working lights or circuits should be repaired

immediately by the Contractor assuming responsibility for the system. Any changes or repairs shall be documented by the CEI and forwarded on to the Authority's Maintenance Manager upon discovery. The CEI will inform the Authority's Maintenance Manager as soon as the Contractor completes an acceptable repair to the non-working item.

The Contractor and CEI will complete a final project walk-thru at the completion of the project. Any deficiencies will be corrected before preliminary acceptance. Once the system is determined to be acceptable, a final walk-thru will be performed with the Authority's Maintenance Manager. The Authority's Maintenance Manager will give the final acceptance of the system.

4.12 CONTRACT DELINQUENCY AND DEFAULT

4.12.1 Purpose

To establish the definition of default and reasons for declaration of default as applied to all construction contracts entered into between the Authority and Contractors; to establish remedies for completion of the defaulted contract; to establish cost liability and damage assessments; to establish details necessary for the pursuit of default proceedings.

A Contractor is in delinquency when the Contractor does not maintain satisfactory progress. Unsatisfactory progress is when the Contract time expires and the Contract Work is not complete, when specific milestone dates have expired and the work is not complete, or when the Contractor falls behind

15 percentage points or more from the dollar value of the planned work using the accepted working schedule for the Project.

Further explanations of this section are found in General Specification Article 6-9 and 6-10. The information provided here does not absolve or preclude and information contained in the General Specifications. It is the CEI's responsibility to be aware of the specific Contract Requirements.

4.12.2 Reasons for Default

The Authority will give notice in writing to the Contractor and his Surety of delay, neglect, or default, due to reasons stated in General Specifications, Section 6-9.1. The CEI may only recommend default to the Authority.

4.12.3 Recourse and Remedies

If the Contractor, within a period of ten (10) calendar days after receiving the notice described above, fails to proceed to correct the conditions of which complaint is made, the Authority shall, upon written certificate from the Engineer of the fact of such delay, neglect or default, and the Contractor's failure to correct such conditions, have full power and authority, without violating the contract, to take the prosecution of the work out of the hands of the Contractor and to declare the contract in default.

Upon declaration of default, the Authority shall look to the Surety for completion of the work. If the Surety refuses to complete the work, becomes unacceptable or unreliable in satisfactory completion of the work, the Authority will have full power to appropriate or use any and all materials and equipment on the site which are suitable and acceptable, and may enter into an agreement with others for the completion of the work under the contract, or may use other methods which in the opinion of the Authority are required for the completion of the work in an acceptable manner. If after the ten day notice period, and prior to any action by the Authority to otherwise complete the work under the contract, the Contractor should establish his intent to prosecute the work in accordance with the Authority's requirements, the Authority may elect to permit the Contractor to resume the work.

4.12.4 Cost Liability

All costs and charges incurred by the Authority because of the Contractor's default, including the costs of completing the work under the contract, shall be charged against the Contractor and the Surety. In case the expense so incurred by the Authority is less than the sum which would have been payable under the contract if it had been completed by the defaulting Contractor or the Surety, the defaulting Contractor or the Surety shall be entitled to receive the difference. In case the expense exceeds the sum that would have been payable under the contract, then the Contractor and the Surety shall be liable and shall pay the Authority the amount of the excess. In the event the

Authority elects to permit the defaulting Contractor to resume the work, any costs to the Authority incurred by the delay, or from any reason attributable to the delay, will be deducted from any monies due or which may become due under the contract. The Authority shall have no liability for anticipated profits for unfinished work on a contract that has been determined to be in default.

4.12.5 Determination of Number of Days of Default

For all contracts, regardless of whether the contract time is stipulated in calendar days or working days, default days shall be counted in calendar days.

4.12.6 Liquidated Damages During Default

Should the Contractor or, in case of his default, the Surety fail to complete the work within the time stipulated in the contract, or within such extra time as may have been granted by

the Authority, the Contractor or, in case of his default, the Surety shall pay to the Authority, not as a penalty but as liquidated damages, the amount so due as determined by General Specification, Article 6-10.

In case of default of the contract and the completion of the work by the Authority, the Contractor and his Surety shall be liable for the liquidated damages under the contract, but no liquidated damages shall be chargeable for any delay in the final completion of the work by the Authority due to any unreasonable action or delay on the part of the Authority. Permitting the Contractor to continue and to finish the work, or any part of it, after the expiration of the contract time allowed, including extensions of time granted the Contractor, shall in no way act as a waiver on the part of the Authority of the liquidated damages due under the contract.

4.12.7 Termination of Contractor's and Surety's Responsibility

The contract will be considered complete when all work has been completed and has been accepted, in writing by the Authority. In addition to liquidated damages, the Authority may recover from the Contractor amounts paid by the Authority for damages suffered by third parties.

4.13 CLAIMS AND DISPUTE RESOLUTION

4.13.1 Purpose and Definitions

To describe the contract administration procedure to be followed for documenting and analyzing construction contract claims to insure comprehensive and supportable recommendations are developed for use in the resolution of claims.

The following definitions are referenced in this section:

Basis for Estimate for a Contract Change Issue: This is a statement which is a required part of the Engineer's Estimate. This statement shows that the methods used to determine the costs and time impacts for those issues shown in the Engineer's Estimate were reasonable.

Construction Contract Claim (Claim): A written demand submitted to the Authority by the Contractor, in compliance with General Specification 2.4, seeking additional monetary compensation, time, or other adjustments to the contract, the entitlement or impact of which is disputed by the Authority.

Dispute: A disagreement between the Authority and the Contractor on which the Contractor has submitted, in accordance with General Specification 2.4 a notice of intent to seek additional compensation, time, or other adjustments but has not yet submitted a written claim.

Engineer's Estimate: The estimate of the actual cost and time impacts to the Contractor caused by a contract change without regard to whose fault the contract change is or the percentage of those cost and time impacts the Contractor may be entitled to recover. For each contract change issue, the Engineer's Estimate will show the pay items involved along with quantities, unit prices, any time impacts, and the basis for the estimate.

Entitlement Analysis: A document, signed and dated by the Engineer, containing statements as to each issue of a contract change, stating the reasons why the Contractor is, or is not, entitled to recover some or all of the

time and cost impacts calculated for that contract change issue in the Engineer's Estimate. The Entitlement Analysis for each issue should also include a numeric percentage of those cost and time impacts for which the reasons previously stated justify the Contractor's entitlement. Each contract change issue should include all the pay items associated with that issue.

Negotiated Settlement: The Authority recognizes that a contract change is not a claim if the most recently modified Entitlement Analysis and Engineer's Estimate completely justify the amount of the contract change. In this case the contract change is defined as a Negotiated Settlement and the Authority does not dispute the amount owed. This contract change will not be called a claim even though there may have been some initial disagreement on entitlement time, unit prices and quantities.

Statement of Claim Settlement Cost: The claim settlement costs are those costs disputed by the Authority but paid solely to avoid the risk of additional costs associated with resolving the claim by dispute review board, arbitration or litigation. Claim settlement costs are the sum calculated by subtracting from the Claim SA amount paid; that amount justified by the Engineer's Estimate and Entitlement Analysis Percentages. Specifically, that amount justified by the Engineer's Estimate and Entitlement Analysis is the summation, for all claim issues, of the most recently amended Entitlement Analysis percentage for each claim issue, multiplied by the most recently amended Engineer's Estimate of cost impact for that issue. The Statement of Claim Settlement Costs is simply a page, signed and dated by the engineer preparing it, which lists the claim issues, shows the calculation described above and includes the following: the relevant amounts for each issue, the total amount justified, the total amount paid and the resulting claim settlement cost. Even though a contract change may settle several disputed issues for amounts greater than justified in the Entitlement Analysis and Engineers Estimate**,** the contract change will have only one Claim Settlement Cost which is the sum of all such costs for the issues settled in the contract change.

4.13.2 Notice

Section 2.4 of the General Specifications requires that the Contractor provide notification in writing to the Project Engineer when the Contractor intends to file a claim and documentation of the work effort resulting from such claims. The notice must be given before the Contractor begins any work on which the claim is based. The notification by the Contractor allows the Project Engineer the opportunity to mitigate the impacts of the claim or begin documenting the impacts and actual costs associated with the claim. Failure of the Contractor to notify the Project Engineer before beginning work on disputed items of work waives the Contractor's right to claim. Enforcement of the notice requirement is important in the effective management of claims. If the Contractor indicates verbally during the prosecution of the work that added costs are being incurred, or changes to the contract document are occurring, the Project Engineer should instruct the Contractor to provide the required written notice of the intent to file any claims. A record of any verbal notices or possible notices should be recorded on the Daily Inspection Report form in the "Comments" section. It should be made clear to the Contractor that adequate written notice of intent to file a claim is required if it is to be considered. The Project Engineer can accept a notification of intent to file a claim only from the prime Contractor. That notice of intent should contain:

1) A statement as to what changed, including a description of the nature and extent of the change.
2) An indication of who directed or what caused the change.
3) A description of how the change has or will impact the Contractor, including reference to any impacted critical activities on the Contractor's latest accepted schedule update.
4) A statement of damages, or an estimate of damages if available, detailing the amount of compensation, time and/or other adjustment to the contract that is being requested.

The Authority shall be informed of any notification for the contractor of issues that may result in a change to the scope schedule or cost of the construction contract.

4.13.3 Claim Recognition

The Project Engineer is responsible for recognizing a claim situation, and usually makes the initial determination whether a change or demand made by the Contractor is contested and processed as a claim, or is

resolved by a routine supplemental agreement. The recognition of a claim or a change with the potential to escalate to a claim is extremely important so that steps can be taken to resolve the claim in a timely manner. Although claims occur for many different reasons, they are usually based upon a change or alleged change in the Contractor's operation.

When the CEI receives a claim letter from the Contractor it is their responsibility to review and respond in writing within seven days of receipt. To either acknowledge the receipt of a properly formatted claim letter, or to provide comments on the format of the claim letter so that the Contractor can provide any missing information. The CEI should include the requirements of General Specification Article 2.4.4 which allows the CEI/Authority thirty calendar days to respond to the claim, and that failure to respond to the claim within the allotted thirty days shall constitute a denial of the claim by the Authority.

4.13.4 Coordination

After receiving notice of a claim or becoming aware of a possible claim, the Project Administrator notifies the Resident Engineer. The Sr. Project Engineer will inform the Authority in writing of the claim.

If a claim involves a utility or JPA, the Project Administrator must also immediately notify the utility owner that the Contractor has notified the Authority of his intention to file a claim. This notification may be verbal, but must be immediately followed by a letter signed by the Project Engineer.

For additional assistance on difficult claims the Authority may contact their legal counsel in accordance with the Authority's guidelines on such contacts. The Authority shall approve any request for review by legal counsel.

4.13.5 Minimum Documentation

All contract claims need three (3) pieces of written documentation.

1) An Entitlement Analysis showing the percentage of entitlement for each of the various claim issues and the reasons why.
2) An Engineer's Estimate, which will be stated in dollars for extra work and days for delays.
3) A Statement of Claim Settlement Cost, which are those costs the Authority does not believe it owes the Contractor but is willing to pay to avoid the risks associated with not resolving the claim.

For all claims, the Entitlement Analysis and the Engineer's Estimate shall be done before starting negotiations with the Contractor. It is advisable, but not mandatory, that the Entitlement Analysis and the Engineer's Estimate be committed to writing before starting negotiations with the Contractor. It is mandatory that the Entitlement Analysis, the Engineer's Estimate and a Statement of Claim Settlement Cost (if there are any) shall be committed to writing before sending the contract change document to the Contractor for signature.

To be worthwhile, documentation must include all relevant facts and be objective in its coverage. Frequently the most valuable sources of information are the daily and weekly construction project reports produced by the CEI project staff. The Project Engineer should also review these daily and weekly construction project reports for completeness when a claim or disputed work is involved.

Concurrent documentation is often a major factor in determining the weight or impact of a given document during administrative and legal considerations. A brief note on the daily construction project report, which was made at the time of a particular occurrence, will often have more validity than a carefully worded, memo to the file prepared weeks or months after the fact. Project personnel are to make notes and comments on project records and documents to describe events or record their observations of the situation at the time of occurrence, and take dated photographs or video records of the conditions. **These notes should be objective and professional, relating to the facts, without bias or opinions.**

When the Project Engineer receives a notice of intent to make a claim from the Contractor, the Contractor's equipment, labor and material used on the disputed work **must be documented**. The Project Engineer must keep an accurate record of the types of equipment, including equipment serial numbers, and lengths of time it is used in performing disputed work, required to be on standby, or idled because of the disputed work. The number of workers, their job classification and time spent in performing the work related to the claim must be recorded as well as

materials and quantities used. On larger projects, with multiple claims, location of crews by foreman and station number should be recorded on the daily construction project report. Accurately tracking this information will allow the Contractor's statement of damages to be verified upon submittal.

4.13.6 Claim File

Once a claim has been identified by receipt of a written notice from the Contractor of the Contractor's intention to make a claim, the Project Engineer should establish a separate file for each claim and keep copies of all documents related to the claim. These claim files will serve as the primary source of information relating to the claim. These files should be kept current and orderly, such that a review of the files will provide a full understanding of the claim and a logical progression of events. Such claim files are privileged information to assure confidentiality of your analysis and recommendations during certain claim settlement investigations undertaken with direction of legal counsel.

Good documentation comes from many sources and in various forms. Some of the most important types of documentation are excerpts from the contract documents, and are frequently not made part of the supporting documentation in the claim file. When notice of intent to file a claim is given to the Authority, the first thing that the Project Engineer must do is research the contract documents to determine exactly what the contract says with respect to the claim. All pertinent drawings, notes, specifications, and special provisions should be included or referenced in the claim file. Project personnel must remain aware of the many sources, which can provide information regarding a claim, and make the required effort to review those sources and document the findings.

4.13.7 Contractor's Submission of Claim

The Contractor's notice requirements and the content of the Contractor's written claim submission, including the Contractor's certification of the truthfulness of that written claim submission, are stated in ***General Specification 2.4***. These requirements are to be enforced.

Within 60 days after the start of an occurrence of which the Contractor has submitted a notice of intent to file a claim, the Contractor should submit a claim package to the Project Engineer stating the amount of compensation and contract time or other adjustments to the contract that are being requested.

1) The Project Engineer should encourage the Contractor to submit the claim package for review as soon as possible. It is the prime Contractor's responsibility to submit claims. Claim packages will not be accepted from a subcontractor.

2) It is incumbent upon the Contractor to provide a complete claim package. The claim package should state the Contractor's position and the alleged reasons for the claim. The claim package should explain how the Contractor was impacted and the associated impacts costs.

3) If adequate detail is not provided in the Contractor's submission of the claim package, the Project Engineer should specify the additional information needed, and return the claim package to the Contractor as soon as possible, but in no case later than 30 days from the date of receipt of the claim package. The Contractor should determine the amount of damages asserted due in a claim situation and present those damages to the Engineer for review.

4) For claims against utilities, the Project Engineer shall forward a copy of the Contractor's claim package to the utility owner by certified mail with return receipt requested.

5) The Project Engineer should consult with the Authority and shall notify the utility owner in writing that the claim has been received. The intent of this letter is to allow the utility owner the opportunity to negotiate a settlement directly with the Contractor if desired.

4.13.8 Analysis of Claim Packages

Upon receipt of a complete claim package, the Project Engineer will review the claim and compile any additional documents deemed relevant and forward to the Authority for review.

The availability of facts will vary depending on the level of review. As a claim is processed for higher level review, all pertinent facts must be provided to the next level. The first level of review for a claim will usually be at the Project Engineer's level. It is at this level that all facts are documented from project records and the original

Entitlement Analysis and Engineer's Estimate are produced.

The initial source of information and facts are contained in the Contractor's claim package. The project records must be reviewed to determine if the facts presented by the Contractor can be verified, and to determine if the Contractor's information is incomplete or misleading. Relevant additional information and any conflicting information should be identified. The reviewer should separate the facts into three categories: those the Authority and the Contractor agree on; those which are unsubstantiated or incomplete; and those which are disputed by the Authority. For facts, which are disputed, the reviewer should identify what the correct facts are believed to be, with references to backup documentation.

Gathering and establishing of the facts should be done before beginning the two-step review process. The facts will need to be available to adequately perform each step.

The reviewer must first determine whether the claim has any basic merit, or whether it should be denied because there is no basis for entitlement. The reviewer should make this determination on the individual merits and available facts pertaining to the claim situation. When determining claim entitlement, the reviewer should address the following questions for each claim issue.

1) Did the Contractor provide the required notice of intent to claim?
2) Was there a change to the original contract requirement that led to the claim?
3) Who or what caused the identified change?
4) What were the impacts to the Contractor due to each identified change?
5) Were the impacts unexpected or unreasonable?
6) Could the Contractor have avoided any adverse impacts through proper action?
7) Was it reasonable to have anticipated the identified changes at the time of bid?
8) Did the Contractor attempt to mitigate the claim or its effects?
9) Was complete claim documentation provided in the timeframe outlined in the contract?
10) Determine any percentage of entitlement on each claim issue as follows:
    a) When the items above completely support the Contractor's position, percent entitlement would be one hundred percent.
    b) When the items above completely refute the Contractor's position, the percent entitlement would be zero percent.
    c) When items above support only a partial entitlement based on the fact that the Contractor was partially responsible for the claim issue state the partial percentage of the total cost and time impacts the Contractor is entitled to recover along with the reasons why.

4.13.9 Claim Settlement

Determining the extent of compensation is the second step in the analysis of a claim package after it has been determined that the Contractor has some entitlement for the claim. In this step the reasonable costs the Contractor incurred or will incur must be determined. The Contractor is responsible for providing a claim package, which includes a detailed breakdown of the costs incurred. The CEI needs to compare the Contractor's cost calculations with the Engineer's Estimate by pay item and verify their validity. These costs should relate to the impacts on the construction identified in step one which established the basis for eligibility.

4.13.10 Dispute Resolution

When the Contractor cannot accept the Authority's denial or settlement offer on a claim, then the appeal process will be ruled by the contract, General Specification Section 10.2.5. This section describes fully the steps required for appeal, presentation of arguments, and the dispute resolution.

4.14 MICRO CONTRACT ADMINISTRATION

4.14.1 Purpose

The Micro Contract program is designed to assist disadvantaged business owners by giving opportunities to become familiar with competitively bid work for a public agency and with the Authority's procedures and personnel. The goal is to develop a number of contractors qualified to perform the wide array of work the Authority might require.

4.14.2 Identify the Need

Micro Contracts provide an additional tool for the Authority to construct small projects in a timely manner. The maximum contract amount for Micro Contracts is $200,000. Consider using a micro contract in order to supplement extra work on a larger contract, when the extra work will not interfere with the progress of the larger contract. Inform the Authority when there may be an opportunity to use a micro contract for final direction. The Director of Construction and Maintenance will assist in identifying the need to proceed with a micro contract.

4.14.3 Bid Package

Once the need for a micro contract has been established, a Scope of Services should be written. It should include all of the information a contractor will need to perform the work, such as the following: clear direction, references to specifications, drawings, modified plan sheets, references to standard indexes, location, project limits, estimated quantities, duration, and method of compensation. After the scope is clearly defined a Bid Form will be created. This form will ensure that all bids are uniform. Create a spreadsheet with a list of pay items and their units (i.e. lump sum, each, linear foot) and let the contractors fill in bid prices. Most work should be paid on a lump sum basis, unless it is in everyone's best interest to pay on a per unit basis. The CEI should prepare an Engineer's Estimate for the Authority. Throughout the bidding process, the Procurement Manager at the Authority will be your contact person for Micro Contracts.

4.14.4 Bid Process

The Scope of Services, Bid Form, and Engineer's Estimate should be submitted to the Authority. The Authority will initiate a Request for Bids and send it out to contractors. The Request for Bids will give the details from the scope, a scheduled time and location for a Pre-bid Meeting if the project warrants this, and a deadline for submitting bids. If a pre-bid meeting is held, circulate a sign-in sheet, ensure that all contractor's in attendance sign it, and keep a careful record of all details discussed in the meeting. Before bids are submitted, be sure that all prospective bidders have access to the same information i.e. any clarifications made during the pre-bid meeting or additional requirements included in the scope. Sealed bids will be sent to the Authority. Bids received before the deadline, will be opened and recorded at a bid opening. All bids that conform to the bid form will be compared, and the lowest bidder will be selected, assuming that there are no outstanding circumstances to prevent this.

4.14.5 Contract Administration

After the selection, prepare the Contract and Notice to Proceed for execution by the Authority and the Contractor. While the Micro Contract process is intended to be simple and efficient, proper administration and documentation are important. The Notice to Proceed will indicate when contract time will begin. This is especially important if your scope includes liquidated damages. It is essential that all parties clearly understand the scope involved with each micro contract. Before work begins, if the complexity of the project warrants, a pre-construction meeting should be held to ensure the contractor is aware of all that will be required of them. Jobsite inspection should be frequent enough to make certain that the work is being performed in accordance with the scope. Remember that this program is geared toward contractors who may have limited experience with certain types of work or with governmental contract management.

Try to help them understand the work and the process. Establishing correct practices from the beginning will prove to be beneficial in the end. Keep daily reports for each contractor and for each contract. Subcontracting of work is allowed so long as there is a verified, written, contractual agreement between the prime and the sub.

Quantities and measurements on items that are not lump sum can simply be recorded in tabular form and placed in

the project file. Micro Contracts should be kept as simple as possible. Any change in scope or significant change in quantity of work needs to be documented with a change order (example included in Forms Section of the ACPAM). It is not necessary to pay the original contract amount to 100% and document minor over and under runs with a change order. Simply pay the final quantities at the final measured amount.

Material testing requirements may be reduced on a project by project basis, depending on the complexity, quantity, or certifications provided. Adequate testing should be performed to ensure proper materials are being incorporated into the project. Determinations of the required amount of testing must be discussed with the CMC prior to implementation.

If the contractor requests a time extension, the Project Engineer shall review all relevant facts surrounding the request and make a recommendation to the Director of Construction and Maintenance. All time extensions will be in writing from the Authority to the contractor.

4.14.6 Payment

The default frequency for payment on Micro Contracts with durations of more than a month is work completed through the 25th will be paid the last day of the following month. However, pay requests can be processed at any time for work completed to date. A standard pay request (example included in Forms Section) should be submitted to the Administrative Assistant to the Director of Construction and Maintenance. All back-up material for the estimate will be kept in the CEI's project files.

4.14.7 Project Close-out

After the project has been completed, the final inspection performed, and the Final Acceptance granted in writing, the CEI shall obtain written confirmation from the contractor regarding agreement of final quantities. Final payment can then be made and project documentation should then be closed out. The CEI will retain the original copies of all files generated for the contract. A copy should be made and submitted to the Authority bound in a three ring binder for their records. Include all relevant files such as: a copy of the contract, request for bids, pre-bid documents, Scope of Services, bidders list, original bid tabulations, material test results and certifications, final contract amount, final contract time, any drawings, significant correspondence, weekly summaries, pay estimates, and contract amendments.

5.0 Contract Modifications

5.1 Time Extensions

5.1.1 Purpose and Definitions

Contract time extensions will be considered only for the reasons set forth under the terms of the contract. A time extension shall not be used to document a contract time reduction. A supplemental agreement or work order must be used for that purpose. Time extensions may be granted during the contract time period or authorized extensions of the contract time period.

A Claim for Delay can contain both a request for dollar compensation as well as a time extension. A Time Extension can be due for delay, differing site conditions, breach of Contract, or any other cause other than for extra work, as fully outlined in General Specification Section 2.4.2.2. The Time Extension can only be for delays that impact an activity on the Critical Path of the Project Schedule or for activities that subsequently become critical because of the delay.

5.1.2 Time Adjustment for Extra Work

Additional Work can also extend Contract Time if the added work falls on the Critical Path of the Schedule. This is not a time extension but is considered a time adjustment for additional work. The additional contract time will be added on the Supplemental Agreement as part of the compensation for the added work. If the Contractor deems that additional time is due for Work not identified in the Contract or in a Supplemental Agreement, the Contractor will notify the Authority in writing of his intention to make a claim as explained in General Specifications Section 2.4.2.1. The ACPAM Section 4.13 on Claims and Dispute Resolution covers this procedure.

5.1.3 Time Extension for Delay

The process for evaluating, documenting and making decisions to approve or deny time extensions is as follows:

1) Within ten calendar days after the start of a delay to the critical path, the Contractor shall notify the Authority that they intend to seek additional compensation and shall also submit a Time Impact Analysis in accordance with section 6.3.3.1 of the General Specifications. Failure to submit the required notice of time extension request in the time periods specified shall constitute an irrevocable waiver of any right to extension to the contract time for the subject delay.

2) The Project Engineer shall provide written acknowledgment of each Contractor's time extension request. If the information submitted is determined to be incomplete or fails to meet the requirements of the contract for consideration as a time extension request, the Project Engineer will reject it.

3) The Project Engineer will review the request and make a recommendation to the Authority. Upon the Authority's approval, the Project Engineer will send a letter to the Contractor granting the additional time or denying the request. The denial or approval should include a concise response explaining the findings and decision for each issue raised by the Contractor's request.

Each time extension approval letter shall include a standard disclaimer statement:

"By your acceptance of this time extension, you agree to pursue no further claim in connection with the above request. Please sign and return one copy of this letter, to acknowledge your agreement with these terms and conditions."

Terms and Conditions Accepted (Contractor's corporate name) By: Date:

5.1.4 Appeals and Claim Process

In the event the Contractor appeals the Authority's decision, the Authority will evaluate any new facts. All needed

coordination will be accomplished with the Authority's support staff and the CEI. The subsequent appeal process is described in the ACPAM Section 4.13.10 Dispute Resolution.

5.2 Supplemental Agreements and Unilateral Payments

5.2.1 Purpose and Definitions

To provide a uniform procedure to initiate, document, execute and distribute construction contract changes by Supplemental Agreements and Unilateral Payments. The following definitions are referenced in this section:

Dispute: A disagreement between the Authority and the Contractor on which the Contractor has submitted, in accordance with General Specification Section 2.4.2 a notice of intent to seek additional compensation but has not yet submitted a written claim in accordance with General Specification Section 2.4.3.

Engineer's Estimate: The estimate of the actual cost and time impacts to the Contractor caused by a contract change without regard to whose fault the contract change is or the percentage of those cost and time impacts the Contractor may be entitled to recover. For each contract change issue, the Engineer's Estimate will show the pay items involved along with quantities, unit prices, any time impacts, and the basis for the estimate.

Entitlement Analysis: A document, signed and dated by the Engineer, containing statements as to each issue of a contract change, stating the reasons why the Contractor is, or is not, entitled to recover some or all of the time and cost impacts calculated for that contract change issue in the Engineer's Estimate. The Entitlement Analysis for each issue should also include a numeric percentage of those cost and time impacts for which the reasons previously stated justify the Contractor's entitlement. Each contract change issue should include all the pay items associated with that issue.

Major Item of Work: Any item of work having an original contract value in excess of five (5) percent of the original total contract amount.

Minor Change: When the character of the work as altered is within the scope of the contract and such work is totally defined by existing items of work at previously established contract unit prices; and when no major item of work is increased in excess of one hundred twenty-five (125) percent or decreased below seventy-five (75) percent of the original total contract quantity.

Minor Overrun: Overrun in the quantity of one or more previously established pay items at contract unit price the sum of which totals five (5) percent or less of the original total contract amount.

Negotiated Settlement: The Authority recognizes that a contract change is not a claim if the most recently modified Entitlement Analysis and Engineer's Estimate completely justify the amount of the contract change. In this case the contract change is defined as a Negotiated Settlement and the Authority does not dispute the amount owed. This contract change will not be called a claim even though there may have been some initial disagreement on entitlement time, unit prices and quantities.

Significant Change: When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction; or When a major item of work is increased in excess of one hundred twenty-five (125) percent or decreased below seventy-five (75) percent of the original contract quantity.

Supplemental Agreement (SA): A request made to the Authority to authorize the contractor to proceed with additional work. The SA will contain the Engineer's Estimate, Entitlement Analysis, Contractor's request, the price proposal and explanations of changes.**Substantial**

Overrun: Overrun in the quantity of one or more pay items which totals more than five (5) percent of the original total contract amount.

5.2.2 Identifying the need for a Supplemental Agreement or Unilateral Payment

Supplemental Agreements or Unilateral Payments shall be used to:

1) Clarify the plans and specifications of a contract.
2) Provide for quantity differences that result in the Contractor's work effort that differ from the original total contract amount.
3) Provide for unforeseen work, grade changes, or alterations in plans that could not reasonably have been contemplated or foreseen in the original plans and specifications.
4) Change the limits of construction to meet field conditions.
5) Settle contract claims (for Supplemental Agreements only).
6) Make the project functionally operational in accordance with the intent of the original contract.
7) Give effect to the negotiated settlement of a dispute.

Unilateral Payments will be used to pay the Contractor for work performed on a project when:

1) The Contractor agrees to perform the work at an agreed upon cost but refuses to timely execute a Supplemental Agreement so as to allow timely payment for the work by the Authority or,
2) The Authority and the Contractor cannot agree on the cost of the work, and the Contractor refuses to execute a Supplemental Agreement or,
3) The Authority determines it is in its best interest to make a Unilateral Payment for work the Authority directed to be performed in lieu of pursuing a Supplemental Agreement.

5.2.3 Initiating Supplemental Agreements or Unilateral Payments

The Authority, the Contractor, or the CEI may initiate changes to the work. Upon identification of a potential change, the CEI will prepare a Work Order, for small changes, or a Supplemental Agreement, for more significant changes, and research the quantity and cost information to prepare an Engineer's Estimate. A copy of all correspondence, estimates and documentation will be forwarded to the Authority for approval. Approval of a Work Order or Supplemental Agreement authorizes the Contractor to proceed with the work.

The CEI staff will ensure that the terms of all Supplemental Agreements and Unilateral Payments are in the best interest of the Authority and comply with procedures, specifications and statutory requirements governing the Authority's projects. The Supplemental Agreements or Unilateral Payments may combine previously approved Work Orders or they may be processed as a separate change. All Supplemental Agreements and Unilateral Payments, including those initiated in response to contract claims, will be supported and documented by an Engineer's Estimate and an Entitlement Analysis setting forth a detailed itemization of all items of work described therein, associated quantities and respective unit prices, a comparative review of the Contractor's proposed costs, and the basis for the estimate of the cost of the contract change. Lump sum items shall not be used without detailed itemization stating the quantities and unit prices the lump sum item was based on.

All significant changes causing an increase or decrease in the unit cost of a pay item must be documented with a completely executed Supplemental Agreement or Unilateral Payment. Note that either of these types of contract changes will require an Entitlement Analysis stating the reason for and degree of the Contractor's entitlement (expressed as a percentage) to recover the reasonable quantity of additional compensation and contract time associated with the significant change. These types of contract changes will also require an Engineer's Estimate stating total reasonable quantity of additional compensation and contract time associated with the significant change.

At the end of the project, the original pay items are brought to 100% of plan quantity and all quantity overruns and underruns must be documented with a fully executed Supplemental Agreement or Unilateral Payment. The pay items that were added by Supplemental Agreement will also be shown at 100%. Throughout the life of the project, it is essential that an immediate, comprehensive analysis of the impact on the final contract amount of a substantial overrun or underrun in one or more pay items be made as soon as the probability of such a substantial overrun or underrun becomes apparent. Reasons for all overruns or underruns should be documented when those overruns or underruns occur or are anticipated. An accumulation of minor overruns could result in a substantial overrun requiring justification and documentation with a Supplemental Agreement or Unilateral Payment.

Note that any price adjustment for a significant change, as defined in the General Specifications as a "Major Item of Work", involving an increase in quantity will apply only to that portion of the work in excess of one hundred twenty-five (125) percent of the original contract quantity for that item. In case of a decrease in the original contract quantity below seventy-five (75) percent of the original contract quantity, the price adjustment will apply to the actual amount of work performed.

5.2.4 Establishing a Fair and Equitable Value for a Significant Change

Additional work of the type for which a contract unit price is provided shall be paid at such contract unit price unless the additional work constitutes a significant change. Additional work of the type for which no contract unit price is provided will be paid at negotiated prices or pursuant to General Specification 2.3.2.

When the cost is negotiated, the Engineer will prepare an Entitlement Analysis and an Engineer's Estimate including the associated basis for that Engineer's Estimate. The Engineer will typically attempt to negotiate with the Contractor, as outlined below, to resolve all outstanding issues, including time adjustments and attempt to reach an agreement on fair and equitable prices for a significant change. If an agreement on a fair and equitable price cannot be reached between the Engineer and the Contractor, the Engineer will determine the amount of a fair and equitable price for the work by the summation of entitlement for all outstanding issues. The amount paid for each outstanding issue is determined by multiplying the Entitlement Analysis percentage by the corresponding value calculated for that issue in the Engineer's Estimate.

For any contract change involving monetary compensation:

1) As soon as the potential need for additional work is established, the CEI should notify the Authority.
2) If the contract change is for additional work, the CEI should investigate the possibility of having another contractor perform the additional work thru a separate contract. This option should only be used if such work will not interfere with the contractor on the main project.
3) The CEI should prepare an Entitlement analysis and an Engineer's Estimate and then begin negotiations for the work. The CEI shall make an appropriate revision to the Entitlement Analysis percentage or the amount of the Engineer's Estimate if new information is recognized, supported, and documented during negotiations.
4) If negotiations result in agreement, the CEI should first determine if the work should be paid with a Work Order in accordance with Section 5.3 of this guide or a Supplemental Agreement. The CEI should then request approval from the Authority to enter into a Supplemental Agreement as described herein or a Work Order as described in Section 5.3, then authorized the contractor to proceed.
5) If the negotiations have not resulted in an agreement and the Authority may be liable for delays, the CEI should then immediately request approval from the Authority to issue a Unilateral Payment as described herein for the costs estimated to be due to the Contractor and then authorize the Contractor to perform the work. The contractor may then file a claim in accordance with section 2.4 of the General Specifications.

5.2.5 Determining and Documenting the Basis for Contract Time Adjustments

When the value of a contract is increased or decreased due to work added, work deleted, or a significant change, a statement of adjustment of contract time shall be included in the negotiations between the

Authority and the Contractor, and included in the Supplemental Agreement or Unilateral Payment documentation. Additional time should be commensurate with the estimated effects the changes will have on the controlling items of work shown on the approved work schedule in accordance with section 6.3 of the General Specifications.

When a Unilateral Payment is executed in lieu of a Supplemental Agreement additional contract time will be determined by the Engineer based on the impact to controlling items of work shown on the approved work schedule except when the approved work schedule is clearly not representative of actual project performance.

Any additional contract time due the Contractor for work paid by Unilateral Payment will be granted on the Unilateral Payment document. The Unilateral Payment document will include the reasons for all time adjustments.

Note that in case of a Supplemental Agreement, the Contractor will receive a fully executed copy only at the conclusion of the process. Occasionally, a Contractor will amend the terms of a Supplemental Agreement on the copies that the Contractor signs. This unilateral alteration of the Supplemental Agreement amounts to a counter offer that seeks to change the terms previously offered by the Authority. Such changes to a Supplemental Agreement will be rejected and a unilateral payment will be processed.

5.2.6 Executing and Processing Supplemental Agreements and Unilateral Payments

The steps for the CEI to obtain approval for a Supplemental Agreement are as follows:

1) Prepare the Engineer's Estimate and Entitlement Analysis
2) Prepare a draft copy of the Supplemental Agreement
3) Prepare language for Consent Agenda requesting Board Approval to enter into a Supplemental Agreement with the Contractor.
4) Once the Board has approved the Supplemental Agreement, forward four copies to the Contractor for his signatures and then to the Authority for their signatures.
5) Two original signed copies of the Supplemental Agreement are returned to the Contractor, one original is maintained in the CEI's project files, and one original is kept by the Authority.

When the Authority and the Contractor agree on a signed Supplemental Agreement, then the Contractor can begin performing the work. If the Authority and the Contractor cannot agree on the terms of a Supplemental Agreement, or the Contractor fails to timely execute Supplemental Agreement, the Authority has unilateral authority to pay the Contractor the sums the Authority determines to be due the Contractor for work performed on a project. The Authority shall make a Unilateral Payment considered fair and equitable by the Authority for work ordered and documented by the Authority on the Entitlement Analysis and Engineer's Estimate. Such payment shall be made by executing the Notification of Unilateral Payment form in lieu of the Supplemental Agreement document. The steps for the CEI to obtain approval for a Unilateral Payment Notification (UPN) are as follows:

1) Prepare the Engineer's Estimate and Entitlement Analysis
2) Prepare a draft copy of the Unilateral Payment Notification
3) Prepare language for Consent Agenda requesting Board Approval to enter into a Unilateral Payment Notification with the Contractor.
4) Return one copy of the UPN to the Contractor

If the Authority and the Contractor cannot agree on the cost of the work, and the Contractor has stated his refusal to execute any Supplemental Agreement for the issue, then a Supplemental Agreement need not be prepared. The Engineer will document the Contractor's refusal to execute a Supplemental Agreement. A Unilateral Payment may be used to resolve the issue. Such unilateral authority for the Authority to pay the Contractor does not preclude or limit the rights of the Authority or the Contractor to negotiate and agree on the cost of the work. By acceptance of any such Unilateral Payment, the Contractor does not waive any rights for payment by the Authority for additional sums that the Contractor claims are due for the work. A notice to proceed, with work to be documented with a Supplemental Agreement or Unilateral Payment, may be issued by the Resident Engineer that is tentatively approved by the Authority. After issuing the notice to proceed, the Engineer shall ensure timely preparation of the Supplemental Agreement.

A Unilateral Payment document shall be timely prepared and executed by the Authority and presented to the Contractor when required. Payment will be made based on a Unilateral Payment document only after completion of the work described therein to the satisfaction of the Engineer.

A Supplemental Agreement or Unilateral Payment must not be dated prior to the date of Board Approval. No

Unilateral Payment shall have the same number as a Supplemental Agreement to that contract. Only the Authority can delegate Supplemental Agreement approval and execution and Unilateral Payment approval and execution.

5.2.7 Obtaining a Revised Baseline Schedule

A Revised Baseline Schedule should be obtained at the time the Contractor executes a Supplemental Agreement or the CEI grants additional contract time by Unilateral Payment, unless the amount of time granted therein will have no appreciable effect upon the items controlling completion of the project, and no appreciable impact upon the project's scheduled completion date.

Generally, when a contract has a scheduled duration of ninety (90) days or more, and the time granted is fifteen (15) days or more, a revision to the Baseline Schedule should be requested. The contract duration, the amount of time granted, the status of work progress, and any special circumstances that may exist will also indicate the appropriateness of requesting a revised Baseline Schedule. When additional time is granted and a Revised Baseline Schedule is not included, the basis for that decision must be documented in the project files by the CEI.

5.3 Work Orders

5.3.1 Purpose and Definitions

To establish a uniform procedure for the initiation and execution of a Work Order and Contingency Work Order Allowance.

5.3.2 Identifying the Need for a Work Order

A Work Order may be used to document additional work or contract changes with the following restrictions/comments:

1) Work Orders shall not be written to include normal overruns of existing contract items for work at established contract unit prices shown in the contract documents.
2) Work Orders may be used, along with the appropriate approvals from the Authority, as documentation to effect a specification change.
3) The terms of the Work Order shall provide for full and complete settlement of all issues described therein.

5.3.3 Work Order Allowance

Work Orders are funded through a Contingency Work Order Allowance. A Contingency Work Order Allowance authorizing commitment of funds will be included in the original contract amount as a non bid item. As the Work Orders are written and deplete the Allowance, a Supplemental Agreement may be executed to replenish the Contingency Work Order Allowance. Unused Contingency Work Order

Allowance funds shall be included in the final Supplemental Agreement after final acceptance of all contract work.

All terms specified on the Work Order Form shall apply; no additional terms or disclaimers concerning costs of additional work shall be accepted. The terms of the Work Order shall not be modified. IF AN AGREEMENT FOR PERFORMANCE OF ADDITIONAL WORK OR A CONTRACT CHANGE CANNOT BE OBTAINED BETWEEN THE AUTHORITY AND THE CONTRACTOR WITHIN THE TERMS OF THE CONTINGENCY WORK ORDER ALLOWANCE, THE STANDARD SUPPLEMENTAL AGREEMENT OR THE UNILATERAL PAYMENT SHALL BE EXECUTED (Refer to Section 5.2).

5.3.4 Work Order Documentation and Execution

A Work Order for additional work shall be completely executed **prior** to allowing the Contractor to begin the additional work. A Work Order shall not be executed without sufficient funds remaining in the Contingency Work Order Allowance. The intent of this procedure is to allow unforeseen or minor changes to the work to be authorized by the Authority.

When additional work or a contract change is identified, a Work Order shall be executed with a complete DESCRIPTION of the additional work to be performed and the REASON why this work is necessary with references

to the contract for entitlement. A complete and informative Finding of Facts (link form) must be provided with the Work Order. The Work Order should identify the applicable category (see Section 5.3.5.)

The first Work Order authorizing additional work to be performed, or a contract change shall be Work Order No. 01; the second Work Order authorizing additional work to be performed, or a contract change shall be Work Order No. 02; etc. This numbering sequence shall be repeated for all Work Orders. A Work Order Summary Sheet (link form) shall be maintained by the CEI and shall be attached to the monthly pay estimate.

Work Order documents and their attachments shall address the following in sufficient detail to adequately explain the additional work to anyone not familiar with details of the project. The questions listed below should be answered fully in the Finding of Facts provided with the Work Order.

1) What work was done?
2) Why was the work necessary?
3) Is the Contractor due any entitlement? Cite references to the contract for entitlement.
4) What are the costs and why are they considered reasonable?

All costs for additional work shall be:

1) Negotiated and documented on the Work Order and attachments thereto, including the basis for all negotiated costs, or;
2) Based on material invoice costs and labor payroll costs including mark-ups shown in sub-article 4-3.2.3 of the Specifications. Work Sheets itemizing the costs will be attached. No disclaimers or clauses allowing the Contractor to reserve his rights to request other costs shall be accepted.

The total cost documented in any Work Order shall not exceed the limits defined above. More than one Work Order can document additional work associated with any incident. When the work associated with one incident is to be performed in phases, a separate Work Order may be executed to document the description, reason, and costs of each phase of the work, respectively.

Each Work Order shall contain the same total work description, reason, and total negotiated cost for the work described, and the portion of the total cost to be funded by the Contingency Work Order Allowance.

Adjustments may be necessary when the Authority and the Contractor agree to pay for the cost of the work associated with a Work Order based on agreed upon unit prices and estimated quantities and must then execute a lump sum Work Order before the work is performed. When this occurs, the agreed upon unit prices and estimated quantities should be stated in the description of work in the Work Order. When the net cost for the actual quantities of additional work exceeds the estimated amount shown in the Work Order, another Work Order may be drafted and executed to pay for that portion of the actual quantities exceeding the original estimated amounts from the first work order. The description of work in this adjustment Work Order should reference the original Work Order and should state the additional quantities and agreed on unit prices upon which it is based.

When the net cost for the actual quantities of additional work are less than the estimated amount shown in the Work Order, another Work Order should be executed in a negative amount to reduce the Contractor's final pay for that portion of the actual quantities under running the estimated amounts. The description of work in this adjustment Work Order should reference the original Work Order and should state the reduction in the original quantities and unit prices agreed on, upon which it is based.

The work order should pay only for the portion of extra work which cannot be paid for using overruns/underruns of existing pay items. For instance, if there is an increase in work which includes quantity overruns of an existing pay item, the work order should be only the remaining amount, as shown below:

Work Order Pay Item:	$5,000
Overrun of existing Pay Item:	$15,000
Total increase in work:	$20,000

The amount of the overrun of existing items should be noted on the Work Order with the total cost of the change also noted.

Note: When making progress payments on monthly estimates, negative work orders must be balanced with positive progress estimates to avoid any adverse impacts to the Contractor's cash flow.

5.3.4.1 Vehicle Impact Attenuator Repair Work Orders

When the Work Order is being written for impact attenuators, specific requirements must be met for consideration of payment. Pursuant to Technical Specification 102-3.2.2 the Contractor must provide before and after photographs of the attenuator to depict what has been repaired. These photographs must be included with the documentation for the Work Order for consideration of payment. Police reports must be provided as well when available. Also pursuant to this specification no additional mark-up will be allowed on the manufactures price for the parts. The CEI must verify that the damaged attenuator was installed at a location depicted in the project plans, and that it was not an additional attenuator that was installed for the Contractor's convenience. Attenuators that are damaged, and are not required per the plans are not to be compensated by the Authority. The documentation must include adequate invoicing regarding the new parts supplied. No compensation will be made for recycled or used parts included in the repair. If these parts are used they must be clearly identified on the manufacturer provided invoicing.

5.3.5 Replenishing the Contingency Work Order Allowance

A Supplemental Agreement will be executed to document the Work Orders previously written and to replenish the Work Order Allowance fund. The Supplemental Agreement need not provide all the details of the individual Work Orders, as the Work Orders provide sufficient documentation on their own. However each Work Order should be included in one of the following categories with totals listed for each category. A short description of the work and the Work Order number will help identify each Work Order.

1) Expenses and Reimbursement According to the Specifications – Examples of items in this category are payment for DRB Expenses or Partnering.
2) Owner Requested Alterations of Work – This category includes payment for extra work items that have no change in scope of the original contract, but a pay item does not exist in the original contract. An example for this category may be changes to milling depth.
3) Unforeseen Additional Work – This category is for extra work not requested by the owner but required in order to make the project functionally operational.
4) Owner Requested Added Work – this category includes payment for extra work requested by the owner for work that was not contemplated by the original contract, a change in scope.

6.0 Project Closeout

6.1 Project Acceptance

6.1.1 Definitions

Substantial Completion: All pay item work is complete; the only remaining work to be performed is the punch list.

Semifinal Inspection: An inspection conducted by the Engineer after notice from the Contractor and within seven days of Substantial Completion.

Final Acceptance: Acceptance of a project by the Authority after all items of work has been completed satisfactorily.

6.1.2 Preliminary Field Inspection

When the Project Engineer determines that the project is 90% complete, they may notify the Contractor and a representative of the maintaining unit that the project is near completion. If the Contractor agrees, then the Project Engineer will meet with the Contractor's representative and a representative of the maintaining unit to review the project and determine if the project is sufficiently complete to warrant a preliminary field inspection. This field inspection is a recommendation; it is not a requirement of the specifications. It should be undertaken in the spirit of cooperation to insure a timelier and problem- free, semifinal inspection. The preliminary field inspection should generate a deficiency list from which the contractor may use to assist in completing the project in a more efficient manner. All deficiency lists should be transmitted to the contractor stating that this is not a punch list, but a deficiency list for his use in completing the project efficiently. If the project contains overhead sign structures and/or bridges, the CEI shall be responsible for requesting the appropriate FDOT and Authority representatives to schedule an inspection of these structures.

6.1.3 Substantial Completion and Semifinal Inspection

After the Contractor has notified the Project Engineer that the project or portion of the project is

complete, and the Project Engineer agrees that all the pay item work is complete, the Project Engineer shall notify the contractor and a representative of Maintenance, in writing, that the project has attained Substantial completion. The Project Engineer, Sr. Project Engineer, Maintenance and the Contractor and will perform the semifinal inspection within seven (7) days of Substantial Completion. As part of the semi-final inspection, representatives from Maintenance and Construction will perform a joint review of the project with special emphasis on the condition of the items identified in the Initial Project Condition Report (Section 3.1.7). If discrepancies between the Initial and Final Project Condition Reports are identified that cannot be resolved in the field, the discrepancies must be escalated to OOCEA's Maintenance Manager and Director of Construction. The CEI will generate a Final Project Condition Report, with resolutions of discrepancies if any, and provide a copy to Maintenance and the Contractor, and include a copy in the Final Closeout Manual. If, at the semifinal inspection, all construction provided for and contemplated by the contract is found complete to the Engineer's satisfaction, such inspection shall constitute the final inspection, as prescribed in herein. If, however, any work is found unsatisfactory, in whole or in part, the Engineer shall compile a "punch list" of work to be completed. A copy of the "punch list" will be furnished to the Contractor, with the indication that the work so noted must be completed prior to final inspection and acceptance. Time shall continue to be charged on the project. Any "punch list(s)" furnished to the Contractor shall state that it is not to be construed as the "final" list. It shall also state that items damaged beyond the control of the Contractor and prior to the final inspection must be corrected prior to final acceptance. It shall also state that the Contractor is still responsible for maintenance, including mowing, of the facility until final acceptance.

Some projects may require representatives from the FDOT, Local Municipalities, Utilities or another specific field of expertise to participate in the semifinal inspection, and it is the responsibility of the CEI to notify the appropriate agencies of this inspection. Other interested governmental agencies will be invited to participate.

6.1.4 Final Inspection

Whenever all materials have been furnished, all work has been performed, and all the Construction contemplated by the contract has been satisfactorily completed, the Contractor shall request that the Authority make the final inspection according to Section 3.9 of the General Specifications. When the

Contractor has completed the "punch list" items, the Engineer shall notify the contractor in writing of their findings and also that Contract Time will continue to be charged until all items are complete. If all punch list items are found satisfactorily complete, proceed to Final Acceptance, Section 6.1.5.

6.1.5 Final Acceptance

When the Authority is satisfied that all items of work are completed satisfactorily as called for in the contract, including resolution of all third party claims, the project will be accepted. The responsibility for final acceptance cannot be delegated to a CEI. However, a CEI Sr. Project Engineer can make the recommendation for final acceptance to the Authority. If the Authority, including Construction and

Maintenance, concurs, the CEI will notify the Contractor in writing that the Project has been final accepted. This notification shall also inform the Contractor of their requirements in order to close out the project. These requirements may be listed in several locations in the specifications and permits. A thorough review should be performed to include all the requirements. The requirements are located in section 7.9 of the General Specifications, Acceptance and Payment, and section 3.3.1 of the General Specifications, Record Drawings.

6.1.6 Notice of Final Acceptance and Maintenance Responsibilities

The following data shall be transmitted to the Authority and the Contractor immediately after Final Acceptance.

1) Notice of Beginning of Construction;
2) Notice of Substantial Completion
3) Notice of Completion of Construction and Final Acceptance
4) Liquidated Damages withheld.

6.1.7 Final Warranty Expiration

Several items on the project may have a 12 month warranty that would extend beyond Final Acceptance.

Either a CEI or another Authority representative, in conjunction with a representative from Maintenance, shall perform a Final Warranty Inspection one (1) month prior to the warranty expiration, any deficiencies noted in this inspection must be immediately brought to the attention of the Authority's Director of Construction.

6.2 Final Estimates Preparation

6.2.1 Purpose

This chapter introduces procedures for assembly of required final estimates documentation that will assist those charged with the responsibility of recording final quantities and preparing final estimates. It will also show how to compile final measurement requirements and techniques to ensure that items specified to be final measured are accurately and efficiently done.

Information contained in this chapter explains the procedures to be used by CEI offices for documenting final pay quantities. It is intended to help CEI personnel determine the pay item information that is to be documented, reviewed, and forwarded with the final estimates package to the Authority.

6.2.2 Pre-Planning

The CEI must begin preparation of the Final Estimate at the beginning of the project with proper methods and calculations to support the Final Estimate. The Project Engineer (PE) for the final estimate must be familiar with the standard, general, and technical specifications, method of measurement, and payment for each pay item on the project. Accurate and up-to-date field records must be kept as the project progresses to ensure that final estimates

are compiled in an efficient and timely manner.

The following rules shall be observed:

1) Always check to ensure there is a computation book for each project before construction begins.

2) At the pre-construction conference, the CEI will establish agreement with the contractor to the accuracy of the existing ground elevations to be used to calculate earthwork quantities. Prior to clearing and grubbing operations, the CEI will request a formal letter from the contractor accepting the original cross-sections.

3) Final Measured Concept Items - After a contract item appears for payment on the Authority's monthly or progress estimate, that quantity along with supporting measurements and computations are required to be complete and in the CEI's office ready for review. The following requirements are:

    a) Site Source Records, Daily Log Sheets, Tabulation Forms, etc., will be in the CEI's office to support monthly payments made.

    b) Field Books will be available in the CEI's office to support monthly payments made. (A copy can be left in the CEI's office to show documentation of monthly payment.) Original measurements are to be turned in when they are completed.

    c) Final "As-Built" Plans will be updated as work progresses and be available for review in the CEI's office to support monthly payments made.

    d) Computer output forms, automatic printer tickets, etc., shall be made available in the CEI's office to support monthly payments made.

        i) NOTE: If monthly payments are based on estimated quantities/contractor's invoice, it will be so noted on the weekly workbook or other methods of tracking and made available to support monthly payments.

4) Plan Quantity Concept Items - The computation sheet in the computation book or matrix in the plans shall show the location, quantity and traverse/chain name. A location sketch that identifies the area, the quantity, and the reference baseline/centerline name can be helpful. (Note: labeling of the chain points and curves and computer outputs, are not required to be placed in the computation book. The Engineer of Record must keep all supporting information in his/her files until the Contractor has accepted and received final payment.)

5) Prior to construction, the CEI is to check all plan quantity bid items to determine if any plan errors exceeded 10% of plan quantity or 10,000.00. At the completion of the required plan quantity checks, if any substantial deviations from plan quantity are confirmed, the contractor shall be advised of these plan errors in writing at the preconstruction conference or when the errors are detected. If a question arises during the construction of a project involving quantities for one or more of the plan quantity items, then address and correct the quantities in the following manner:

    a) Quantity Errors of Minor nature: An example of this would be if the Engineer of Record left out 1000 LF of curb and gutter. A simple correction here would suffice.

    b) Quantity Errors of Major Nature: An example of this would be if the Engineer of Record left out the southwest quadrant of an intersection. Errors of a major nature are to be resolved by the Engineer of Record. The CEI will request in writing that the Engineer of Record provide detailed documentation or verify the concern for the plan quantity item(s) in question, and provide any supplementary pages such as revised computation sheets or matrices.

    c) The Engineer of Record must produce the backup documentation within 5 working days of the request from construction.

6) Any question on pay item interpretation, adjustment, extra work, etc., for any item shall be resolved with the Contractor as it occurs. Do not wait until the end of project.

7) Final "As-Built" Plans, payment records (e.g., tabulation forms, field books, etc.,) and required documents (e.g., SAs, monthly payment certifications, etc.,) shall be kept current as the contract progresses.

8) Final measured items shall be reviewed to make a determination of which type of measurements, sketches, and/or calculations are necessary to document final payment.

9) Removal items (e.g., existing pavement (if a separate pay item), guardrail, pavement markings, etc.) shall be pre-measured and recorded before that item is removed.

10) Decisions regarding earthwork items cross sections shall be made before clearing and grubbing work has started. If cross sections are waived, then the waiver forms shall be submitted.

11) A computation book sheet is required and/or plan matrix for each contract item is required on projects other than Lump Sum.

6.2.3 Final Quantities

Generally, surface measured items and linear measured items are addressed in this section. Specific requirements for final measurements of pay quantities are found in the Specifications and Special Provisions.

Final Measure Items: On many items, quantities for progress and final estimates must be documented by final measurements as the work is actually accomplished. The monthly estimates show the quantities completed through each period, and therefore have the final measurements recorded as individual pay items are completed. When the project is completed, field books are submitted along with the other estimate data to substantiate the final quantities. Final measurement of pay quantities in field books will generally fall into one of the following categories:

Area Measurements: When items are paid for on the basis of the area of the finished work, the dimensions for calculating these areas shall be documented in the field records. This shall be done in accordance with one of the following methods, as per the Specifications:

1) The length shall be the station-to-station dimension shown on the plans or the station- to-station dimension actually constructed within the project limits as designated by the Engineer. The width shall be the width actually constructed within the neat lines shown in the plans or designated by the Engineer within the project limits.

2) The length and width as measured in place, usually with length measured along the centerline of the construction work, and width measured at a right angle to the tangent of the centerline.

3) Stations and offsets must be recorded and used as latitudes and departures to calculate area. Curve corrections to account for a curved baseline must be applied to area calculations. When the baseline used for measuring areas is neither the project's centerline of construction nor a baseline for stationing shown in the plans, then the baseline must be straight lined with beginning and ending points referenced to the centerline of construction by station and offset as mentioned earlier.

4) The coding forms and output of geometry programs must be included in the computation book as documentation for final area measurements when utilized. (If the computer programs are used, the calculations shall be checked and the actual site source measurements submitted with the computer output.)

Linear Measurements: The dimension documented for items paid for on the basis of linear foot shall be the length shown on the plans or the length actually field measured along the finished surface of the item as required.

Volumetric measurements: Field quantities for items paid for on the basis of volume = cubic yards or cubic feet, are usually determined by one of the following methods:

1) Concrete quantities are generally paid for on the Plan Quantity basis unless authorized field changes have been made or unless final field measurements are dictated by the particular pay item

such as miscellaneous concrete for contingent use.

2) Cross Section notes are recorded along both the original surface and the surface of the completed work either by field parties or as determined by aerial photography and the volumes are calculated by hand or by use of the computer facilities. Cross sections with end area and volume computations can also be used in calculating buildup volumes of spalled concrete members.

Per Each Measurement: Items paid for as a unit, such as fence gates, etc., shall be tabulated by location in the final records.

Lump Sum Items: Where the pay quantity for an item is designated to be a lump sum and the plans show an estimated plan quantity, compensation for that item will be adjusted proportionately when a plan change results in a significant increase or decrease in the quantity from the estimated plan quantity. When the plans do not provide adjustments for contingencies, establishment of a new unit price through a Supplemental Agreement shall compensate for changes in the cost of completing the item.

Plan Quantity Items: The current documentation requirements are as follows:

1) The computation book sheet or plan matrix will show the location, quantity, and the traverse/chain name.

2) CEI will include computation book sheet(s) for plan matrix item if not included in computation book provided by EOR, for the final estimate. A location sketch- identifying the area, the quantity, and the referenced baseline/centerline name. The location sketch that identifies the area, the quantity, and the reference baseline/centerline name should be contained in the CADD files submitted to the Authority

3) The designer must keep all supporting information in their files in accordance with the Authority's document retention requirements, but no case until after the Contractor has accepted and received final payment.

4) Should a dispute arise involving quantities for one or more of the plan quantity items, the CEI will request in writing, that the Designer provide detailed documentation or verify the concern for the plan quantity item(s) in question. The backup documentation must be produced within five (5) working days of the request from construction.

5) The plan quantity concept, where properly utilized, will eliminate re-measurement and recalculation. Plan quantities cannot be accepted by the PE until the control points for developing the item on the physical project are checked. Some of these controls for roadway items are:

   a) Centerline lengths down the project

   b) Radii length

   c) Intersection angles between the project and other roadways

   d) Project widths, etc.

6) CEI is not required to make detailed calculation entries when no changes are made.

7) Plan errors do happen. When an error is found, it shall be corrected with proper documentation and references made to location.

8) If plan quantity items increase or decrease, field measurements and/or revised computations must be submitted with the Final Estimates.

9) For deviation from the Plan Dimensions: Refer to Section 7.3.4 of the General Specifications.

10) When changes in limits are authorized, the CEI must show the revised quantities by showing revisions alongside the original designer's calculations. If an area is added, another form showing the calculations for these quantities can be added to the original calculations. (Do not remove, erase, etc. designer work strike-through and initial any changes.)

11) Some method must be employed by the CEI to prove or revise the Plan Quantity; some of the

suggested methods are as follows:

a) Field measure.

b) Scale from plans

c) Station to station calculations

d) Joint counts (with cut-offs deducted)

12) Plan Quantity Items on multi-project contracts are to be evaluated per contract total, not per project total. Evaluation for multi project contracts must employ a correction to the "contract total."

Note: If each project had been on a separate contract, the revised final measured quantity would have been paid. However, when two or more projects are on the same contract and the total combined change falls within the Plan Quantity Parameters, no change is made to the Plan Quantity. If plan quantities change on multi-project contracts, the CEI should apply the change properly to each project.

13) The Plan Quantities for Asphalt and Base need to be adjusted for density adjustments, lot failures, and thickness according to the specifications.

Note: the core thickness measurements need to be measured and recorded to the nearest 1/16" by the CEI, as required by the Authority.

14) The CEI must make their own analysis of the accuracy of plan quantity items. It is not the intent of the Plan Quantity concept to require laborious measurements and is intended to save man hours through less field survey work.

Each Day Item for Engineer's Field Office: This item shall be documented by project personnel on the appropriate form. Payment will be made for each day the field office is available for use by Authority personnel beginning ten (10) days before contract time begins and up to thirty (30) days after final acceptance, unless the Authority requests removal earlier in writing. The Contractor will be given ten (10) days notice before he removes the office.

6.2.4 Explanations of Overruns and Underruns:

As discussed in Section 5.2.3, Initiating Supplemental Agreements or Unilateral Agreements, at the end of the project, the original pay items and pay items that were added by Supplemental Agreement are brought to 100% of plan quantity. All pay item increases or decreases to plan quantity, not previously addressed by supplemental agreements throughout the life of the project, are then explained in a final Supplemental Agreement or Unilateral Payment.

A final overrun/underrun spreadsheet of all supplemental agreements executed throughout the life of the project, including the final supplemental agreement, is to be included in the Document Summary Manual, Section 10, and justification of Over/Underruns. Copies of this spreadsheet are located on the Authority's construction website.

Note: If the Authority does not require that all of the contract bid items be brought to 100% of plan quantity at the end of the project, a separate explanation for bid items with overrun/underruns may be required.

General guidelines for documenting and submitting explanations of overruns and underruns are listed below:

1) Each contract item's overrun/underrun shall be summarized from the brief notes and remarks recorded in the Computation Book at the time the final quantities were calculated.

2) Contracts that include more than one project will have the Overrun and Underrun explanations broken down for each project.

3) Supplemental Agreements that alter the original plan quantities should be tabulated as explanations of Overruns and Underruns for the appropriate items.

4) Final quantities are subject to change during the checking of the estimate. This may also necessitate a change or correction in the explanation of an Overrun or Underrun. Therefore, any advance copies furnished before the estimate is checked shall be plainly marked as tentative.

6.2.5 Contractor's Close-out Requirements

After final quantity reconciliation, SA incorporation and liquidated damage assessment, the CEI issues the final Pay Estimate to the Authority. A copy of the final estimate will be sent to the Contractor with a request for the following final close-out documentation:

1) Contractor's Final Release (Form CG-F02)
2) Form 21-A Execution of Affidavit and Surety Release (Form CG-F03)
3) Certification of Disbursement of Previous Payments to Release Final Payment (Form CG-F05)
4) Record of Construction Materials Affidavit (Form CG-F06)
5) Contractor's Acceptance of Final Payment (Form CG-F07)
6) Full and complete claim documentation as described in GS 2.4.3 within 30 calendar days of the Contractor's receipt of the Authority's final estimate. Failure of the Contractor to submit this constitutes a full, complete, absolute and irrevocable waiver by the Contractor of any right to additional compensation for matters related to final quantities.
7) As-Built drawings which consist of full sized set of blue prints in good condition with all changes marked in red, accurately plotted.
8) A benchmark in the vicinity of each outfall structure and recorded in the as-built plans in accordance with SP-5 Permit Conditions.
9) All required certifications, warranties, names to be contacted for warranty repairs, maintenance bonds, and other similar requirements of the Contract.
10) All required Training, Operation and Maintenance Manuals, product information and source, and replacement products.

6.3 Document Summary Manual

6.3.1 Purpose

The construction projects will have a Document Summary Manual which is based on the index provided below. This manual is required for each construction project, and serves as a quick reference guide for the Authority following the closeout of the project so that they have reference material to help resolve issues should any arise.

6.3.2 Timing and Format of the Manual

The CEI needs to begin assembling the items for the Document Summary Manual in the early stages of the project, as documents become available. Items such as the Advertisement and Notice to Proceed are available early in the project and can go directly into the Document Summary Manual. This manual can serve as a reference book for key project material throughout the duration of the contract.

The manual should be assembled using a three-ring binder (3") with tabs separating each major section. Large sections, such as warranties or Supplemental Agreements, can be assembled in a separate binder and referenced by the specific section in the Document Summary Manual. The documents inserted in the manual need to be either originals or clean readable copies. One original (OOCEA) and one copy will be forwarded to the CMC at project completion.

6.3.3 Content and Sample Outline

The following listing shows the contents and sample outline of the Document Summary Manual

1) MAPS – showing the location of the Project
2) ADVERTISEMENT – from the newspaper clipping
3) BID TABULATION – from the General Design Consultant

4) ENGINEER'S ESTIMATE– from the General Design Consultant
5) CONTRACT WITH BONDS & INSURANCE – a complete copy of the Executed Contract
6) LETTER OF AWARD & NOTICE TO PROCEED – from the Authority to the Contractor
7) APPROVED SUBCONTRACTOR LOG
8) APPROVED SUPPLEMENTAL AGREEMENTS & CHANGE ORDERS (attach Final Compiled Consent Agenda, Final CPR Log & Work Order Log)
9) FINAL PAY ESTIMATE
10) JUSTIFICATION OF OVER/UNDER RUNS
11) CONTRACTOR'S FINAL AS-BUILT SCHEDULE
12) FINAL SHOP DRAWING LOG
13) PENDING CLAIMS, CEI ACCEPTANCE LETTER, INITIAL AND FINAL PROJECT CONDITION REPORTS, & NOTICE OF BEGINNING/COMPLETION.
14) CONTRACTOR CERTIFICATIONS:
    a) Form 21-A Final Release & Consent of Surety
    b) Final Certification of Previous Payment
    c) Certification of Materials
    d) Contractor's Acceptance of Final Payment
    e) Contractor's Certification of Pond Locations
15) WARRANTIES, GUARANTEES AND MANUALS
16) BOX INVENTORY FORMS

6.4 Document Retention

6.4.1 Purpose and Definitions

To assist each CEI with the Authority in complying with applicable public record laws and meeting

requirements for Authority's public records retention, management and distribution, public records requests, and micrographic and electronic records.

Active Records: Those records, which still have sufficient administrative, fiscal, legal, or historical value to warrant their continued storage in an easily accessible area.

Agency: Any state, county, district, municipality, department, division, board, bureau commission, or other separate unit of government created or established by law.

Document: A public record, assembled or created, which is needed to trace the actions, steps or decisions of an agency in connection with official business.

Duplicate (or Convenience) Records: Reproductions of (master) copies, prepared simultaneously or separately, which are designated as not being the official copy.

Inactive Records: Those records which have lost some of their value or have been superseded by new records, but which have not reached their specified retention. These records can be stored off-site until final disposition is warranted.

Official Record Plans: The plans that have been signed and sealed by the Engineer of Record.

Permanent or Long-term Records: Records that have been determined to have sufficient historical or other

value to warrant continued preservation. Records with retention of 10 years or more should be stored electronically as permanent records to ensure the preservation and availability of information for the required retention period.

Retention Period: The period of time necessary to retain records before they have outlived their administrative, legal, fiscal, or historical usefulness.

6.4.2 List of Deliverables

The CEI needs to assemble the following Permanent Records for submittal to the Authority after final acceptance, and after the Final Estimate and the Document Summary Manual have been completed.

FINAL PLANS

1) Final Plans with inserted Shop and Erection Drawings, attach any RFI's pertinent to a page revision to the back of the affected plan sheet for clarity. Provide at a minimum two copies of these records, one delivered to the GEC and one for the Authority. Provide any additional copies as directed by the Authority.
2) Field Books (Pile Driving Records, Bridge Deck Thickness Records (screed demonstrations ("dry" and "wet" runs)), Drilled Shaft Logs, Structural Bolt and Welding Inspection Records and any other inspections documented in a permanent field/log book)
3) Final Measurement Items
4) Final As-builts
5) Any Plan Quantity Revisions due to plan changes/revisions and/ or plan errors

FINAL ESTIMATE Computation Books

Field Books used as site source records for inspections or payment.

Reference Pay Item Files (for items needing complex calculations, backup, or adjustments)

Contract Time Folder (Contract Time Log, Final Acceptance, NTP, and time adjustments) Supplemental Agreements, Field Supplemental Agreements Work Orders and/or Field Work Orders

MATERIAL ACCEPTANCE

1) The Project Material Certification Letter
2) A Project Administrator's Material Statement
3) Material Acceptance Manuals (
4) Material Acceptance Letters (Including NFTR/DDM forms and or logs if applicable)
5) Earthwork Density Log Book
6) Certifications for pre-stressed concrete units, including piling, beams, etc.
7) Toll Plaza Material and Equipment Acceptance Manuals (if required)
8) Dynamic Message Sign Documentation Manuals

DOCUMENT RECORDS

1) Document Summary Manual (as described in ACPAM Section 6.3)
2) Complete set of final Construction Documents, with addendums
3) Construction Daily/Weekly Reports (Originals)
4) Aerial Photos (Photos and/or Photo CDs)
5) Final certification by the CEI stating that the project was completed in accordance with the contract,

project plans, and Specifications.

6) Include the final acceptance letters of the ITS/Lighting/Signalization from the Authority or any other maintaining agency.

6.4.3 Boxing and Labeling

All project closeout documentation (as listed above) is to be submitted to the Authority following each project's completion. Please use the following type of boxes, box inventory form and labels to comply with the Authority's file storage procedures:

Box Type for files: Box size 1.2 (Letter, with interior dimensions: 10"x12"x15") with lift-off lid.

Box Type for oversized documents: Box size 2.4 (Legal, interior dimensions 10"x24"x15") with lift-off lid.

Box Inventory Form: The Authority will supply the Box Inventory Form. Contact the CMC Contract

Support Specialist for current Box Inventory Form and to arrange for a final inspection of the boxes in your office. After the final number of boxes is confirmed and the CEI has completed all of the Box Inventory Forms, the CEI is to e-mail a copy of these Box Inventory Forms to the CMC Contract Support Specialist . The Box Inventory Form is to be included inside each box with a copy of the form taped to the top of the box.

Contact the Authority or CMC prior to delivery of boxes. The boxes will be delivered to the Authority's office at 4974 ORL Tower Road Orlando, Florida..

6.4.4 CEI File Retention Duration Requirements

The CEI is responsible for maintaining, storing, and retrieving the records for such period as specified in the FDOT General Records Schedule GS1-L for Local Government Agencies. These may be but are not limited to Duplicate (or Convenience) Records, Inactive Records, or Drafts and Working Papers.