124 Project Quality Control Plan

124.1 General

Quality Assurance and Quality Control are two processes used to ensure the public receives a quality product. Quality Assurance is the responsibility of, and performed by the Central Office. Quality Control is a responsibility of the District Offices, and is performed by the Districts and their Agents (Consultants), as appropriate.

Modification for Non-Conventional Projects:

Delete ***FDM 124.1*** and insert the following:

124.1 General

See the RFP for Quality Management Plan (QMP) requirements which describes the Quality Control (QC) procedures to be utilized to verify, independently check, and review all design drawings, specifications, and other contract documents. The QMP must establish a Quality Assurance (QA) program to confirm that the Quality Control procedures are followed. In addition to the QMP all Category 2 Bridge Designs must be verified by an Independent Peer Review. See RFP for requirements.

The Department reserves the right to conduct an audit of the Design Build Firm's QMP process to ensure the submitted plan for the project is being properly executed. Similarly, the Department reserves the right to conduct an audit of the Independent Peer Review to ensure that independent verification of the design and plans is being properly executed. All documentation for QA/QC and independent peer review (e.g., check prints, design calculations) must be kept on file until construction of the project is complete at a minimum.

124.2 Quality Assurance

Quality Assurance is the planned, coordinated and continued activities performed to measure processes against predetermined critical requirements. The objective of Quality Assurance is the continual improvement of the total delivery process to enhance quality, productivity and user satisfaction.

124.2.1 Authority

Section 20.23(4)(a), Florida Statutes (***F.S.***) requires a Quality Assurance Process. It requires the Central Office to establish departmental policies, rules, procedures and standards and to monitor the implementation in order to ensure uniform compliance and quality performance by the District and Central Office units that implement transportation programs. Also, ***Section 334.048, F.S.*** states the Legislative intent with respect to the Central Office role in the Department's management accountability and monitoring systems, including corrective actions when appropriate.

124.2.2 Accountability

The State Roadway Design monitoring plan identifies the process, critical areas, criteria used to measure compliance, report format, method of monitoring and tracking, and procedure for follow-up of unresolved issues. The results of the Quality Assurance monitoring activities are reported to management in exit interviews and reports. The reports identify areas needing improvement, provide feedback on the effectiveness and appropriateness of established policies, procedures and standards, and recognize areas of outstanding quality. The reports are also used to share improvement ideas between districts, and to maintain consistency in process and practice.

The Central Office must furnish all the planned and systematic actions necessary to provide adequate direction to the Districts so that all design products will be the result of predetermined requirements. This involves the establishment of design policies, procedures, standards and guidelines, training, and the monitoring and review of District compliance with these items.

The Central Office must review each design process and its associated components for assurance that the Districts have adequate control measures in place and are complying with policy, procedures, standards, guidelines and processes. The Central Office review will also identify areas of excellence, noncompliance, and need.

124.2.3 Critical Areas to be Monitored

Critical areas to be monitored by the Central Office are based on well-established roadway design policy and practice. These policies, guidelines and accepted practices formulate the criteria used to measure compliance in the areas critical to quality. The minimum frequency of review for a critical area is three years; however, latitude is allowed for the depth and frequency of reviews, based on the individual District's observed performance, review findings or the needs of District management.

The State Roadway Design monitoring plan for Quality Assurance lists the following critical areas to be monitored.

(1) Initial Engineering Design Process (See ***FDM 110***)
   (a) Quality Control Activities,
   (b) Scope Activities,
   (c) Standards Activities,
   (d) Design Support Activities,
   (e) Project Activities.

(2) Final Engineering Design Process (See ***FDM 111***)
   (a) Quality Control Activities,
   (b) Review Initial Engineering Design Activities,
   (c) Engineering Activities,
   (d) Support Activities.

(3) Update Engineering Design Process (See ***FDM 112***)
   (a) Quality Control Activities,
   (b) Scope Activities,
   (c) Standards Activities,
   (d) Engineering Activities,
   (e) Support Activities.

124.2.4 Documentation

The Quality Assurance findings and recommendations will be documented in a report that will be distributed to the District Secretaries and other affected offices. A brief summary of the data will also be entered in the Quality Assurance Reporting (QAR) database. Summaries of significant issues will be prepared quarterly for upper management.

124.2.5 Training

Training and assistance are also a mandated role of the Central Office units and the Quality Assurance program.

(1) Development:

The Central Office Roadway Design will formulate a training plan based upon District requests or needs as determined by the Quality Assurance reviews.

(2) Delivery:

The Central Office will manage or conduct training courses for District and Consultant personnel as requested, with schedules and locations sensitive to budgets and production schedules.

124.3 Quality Control

Quality Control is the process performed to ensure conformance with valid requirements. This process includes quality planning, training, providing clear decisions and directions, constant supervision, immediate review of completed activities for accuracy and completeness, and documenting all decisions, assumptions and recommendations.

Each District must have a District Quality Control Plan for Roadway Design and the other production units, which addresses broad overall quality initiative. The District Quality Control Plan must identify the organization, responsibility, and accountability used to perform and document overall quality control, including the requirement for a Project Quality Control Plan on all projects. All Project Quality Control Plans must address any project specific scope of service needs and be approved by the Department Project Manager or District Design Engineer as appropriate.

In-house and consultant designers and reviewers must recognize quality is the result of several processes. It requires many individuals performing many appropriate activities at the right time during the plans development process. Quality control does not solely consist of a review after a product is completed. Quality requires performing all activities in

conformance with valid requirements, no matter how large or small their overall contribution to the design process. Good CADD techniques, attention to details and ensuring the plans are correct and useful to the contractor are also essential to quality.

124.3.1 Authority

Section 334.048, F.S. requires a Quality Control Process. It requires that each District must be accountable for ensuring their District's quality of performance and compliance with all laws, rules, policies, and procedures related to the operation of the department.

124.3.2 Accountability

(1) The District must follow established design policies, procedures, standards and guidelines in the review and preparation of all design products; and review Consultant prepared individual engineering and design for compliance and good engineering practice.

(2) The Consultant is an agent for the District with the primary responsibility for preparation of contract plans. Consultants must ensure quality and adherence to established design policies, procedures, standards and guidelines in the review and preparation of all design products for compliance and good engineering practice as directed by the District Project Quality Control Plan.

124.3.3 Critical Areas to be Monitored

The District must monitor the Quality Control efforts used by in-house and Consultant staff. The District must assure project scopes include an adequate Project Quality Control Plan.

124.3.4 Documentation

The Districts must maintain a file containing the current District Quality Control Plan and furnish Central Office Design with a copy to be used as part of the critical areas to be reviewed. Every project file will contain a Project Quality Control Plan at the beginning of the Initial Engineering Design Process.

124.3.5 Training

The District must identify and coordinate the training needs of in-house and Consultant staff through the appropriate Central Office units.