

PROJECT QUALITY CONTROL PLAN

SR 501 (Clearlake Road) Project Development and Environment (PD&E) Study

From south of Michigan Avenue (MP 2.140) to west of Industry Road (MP 4.554)

Brevard County, Florida

Financial Project ID No. 433605-1-22-01

Prepared For:

**Florida Department of Transportation
District Five
Fort Lauderdale, Florida**



Prepared By:

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1.0 Introduction

At Scalar, our mission is to provide quality engineering, planning, and consulting services to the Florida Department of Transportation (FDOT) through responsive and innovative applications of practical experience, technical competence, and state-of-the-art technology. Providing a level of service at a higher standard requires a well-defined and administered Quality Control Plan.

Quality Control (QC) is the responsibility of those in charge of production, including Task Leaders and the Task Manager, to determine that established procedures are followed and the requirements of the Scope of Services are met. Quality Assurance (QA) involves those actions that verify that a project-specific Quality Control Plan is being implemented and that the services being provided meet client requirements. Disciplined managers carry out the quality assurance function by review and approval of the quality control plan, performing random checks of its use, and reviewing finished products before their release using checklists based on client requirements. The results are documented and included in the project files.

A well-defined QC Plan addresses three key questions:

- What items are subject to a QC review?
- Who is responsible for reviewing the documents and ensuring that the process is followed?
- How is the process defined?

The plan outlined below addresses each question above and outlines the process that the Scalar Project Team will adhere to. Implementation of this plan will ensure a successful project for the FDOT.

2.0 Project Deliverables

The deliverable documents that will be prepared for the SR 501 (Clearlake Road) PD&E Study and subject to a QC review include the following:

Engineering Documents

Public Involvement Plan
Draft Preliminary Engineering Report
Final Preliminary Engineering Report (Signed and Sealed)
Conceptual Design Roadway Plan Set
Typical Section Package

Responsible Consultant

Laura Turner Planning Services (LTPS)
Scalar Consulting Group Inc.
Scalar Consulting Group Inc.
Scalar Consulting Group Inc.
Scalar Consulting Group Inc.

Engineering Documents Cont.

Location Hydraulics Report
Drainage/Pond Siting Report
Geotechnical Report
Value Engineering Information Report
Lighting Justification Report

Responsible Consultant

Scalar Consulting Group Inc.
Scalar Consulting Group Inc.
Radise International
FDOT & Scalar Consulting Group Inc.
Scalar Consulting Group Inc.

Environmental Documents

Categorical Exclusion (CE) Type II/SEIR Document
Section 4(f) DOA
Noise Study Report
Air Quality Report
Contamination Screening Evaluation Report
Conceptual Stage Relocation Plan

Natural Environmental Reports (Endangered Species
Biological Assessment, Wetlands Evaluation Report)
Cultural Resource Assessment Survey

Responsible Consultant

Scalar Consulting Group Inc.
Scalar Consulting Group Inc.
KB Environmental
KB Environmental
E-Sciences
Florida Property Consultants Group
(FPCG)
Quest Ecology

SEARCH

3.0 Project Staffing and Responsibilities

The Scalar Project Team is comprised of qualified technical professionals dedicated to the production, review, and successful completion of this PD&E Study in Brevard County, Florida. For each project deliverable, an Originator and Quality Reviewer (QR) are identified in **Table 1**. The implementation of this plan is dependent on two qualified professionals (licensed if required) to ensure that the work conforms to the requirements outlined in the Scope of Services and follows FDOT guidelines. Participant responsibilities are outlined below:

Quality Control Manager

Ms. Catherine Winter, P.E., of SCALAR, will serve as Quality Control Manager. She will be responsible for completing the Quality Assurance Review and verifying that all Quality Control requirements have been adhered to prior to any submittals. Mr. Paul Sebert, AICP, of E-Sciences will serve as the Environmental Document QC Manager. Mr. Sebert will review all environmental documents and the Preliminary Engineering Report.

Project Manager

Mr. Aniruddha Gotmare, P.E., will serve as the Project Manager and will supervise the Scalar Project Team including all sub-consultants. Mr. Gotmare will be the single point of contact for the FDOT.

Originator

The originator and supporting staff of engineers, designers and technicians will originate the plans and reports utilizing appropriate quality-focused production and review methods.

Quality Reviewer (QR)

The QR performs detailed checking of all documents and plans for technical adequacy, conformance to applicable standards, form and format as well as specific accuracy checks as applicable for the type of document under review. Each designated QR in **Table 1** is qualified to be an originator for that task and understands the requirements to perform the work.

Table 1 – Project Staffing List

Element / Task	Deliverable	Originator / Company	Quality Reviewer (QR)
ROADWAY			
Preliminary Engineering	Report	Mary Hayden, E.I. (SCALAR)	Paul Sebert, AICP, (E-Sciences)
Public Involvement Plan	Document	Laura Turner (LTPS)	Mary Hayden, E.I. (SCALAR)
Geometry & Alignment	Concept Plans	Truong Trinh, P.E. (SCALAR)	Aniruddha Gotmare, P.E. (SCALAR) / Jay Winter, P.E. (SCALAR)
Typical Sections	Package	Truong Trinh, P.E. (SCALAR)	Jay Winter, P.E. (SCALAR)
Location Hydraulics	Report	John Whitaker, P.E. (SCALAR)	Jay Winter, P.E. (SCALAR)
Drainage/Pond Siting	Report	John Whitaker, P.E. (SCALAR)	Aniruddha Gotmare, P.E. (SCALAR) / Jay Winter, P.E. (SCALAR)
Value Engineering	Report	FDOT	Aniruddha Gotmare, P.E. (SCALAR)
Lighting Justification	Report	Aniruddha Gotmare, P.E. (SCALAR)	Jay Winter, P.E. (SCALAR)

Table 1 – Project Staffing List Cont.

Element / Task	Deliverable	Originator / Company	Quality Reviewer (QR)
ENVIRONMENTAL			
Type II CE/SEIR	Document	Mary Hayden, E.I. (SCALAR)	Aniruddha Gotmare, P.E. (SCALAR)
Section 4(f) DOA	Report	Mary Hayden, E.I. (Scalar)	Aniruddha Gotmare, P.E. (Scalar)
Noise Study	Report	Wayne Arner (KBE)	Carrol Fowler (KBE)
Air Quality	Report	Wayne Arner (KBE)	Carrol Fowler (KBE)
Contamination Screening Evaluation	Report	Flormari Blackburn (E- Sciences)	David Mahnken (E- Sciences)
Conceptual Stage Relocation Plan	Report	Nicholas Truncone (FPCG)	Templin/Crahan (FPCG)
Natural Environmental Reports (ESBA, WER)	Report	David Gordon, Frank Kahoun III, MS (Quest)	Vivienne Handy, PWS (Quest)
Cultural Resource Assessment	Report	Jason Burns (SEARCH)	Beth Chambless (SEARCH)
GEOTECH			
Geotech	Report	Akash Bisson, P.E. (Radise)	Kumar Allady, P.E. (Radise)

4.0 Production and Submittal Review Procedure

Prior to each submittal to the FDOT, the designated originator indicates that the checking process is complete and that the item is ready for review. The QR then performs a thorough review to ensure that all aspects of the work product are complete and free from errors and omissions and that any revisions or adjustments to the work item are complete and correct. This review process will follow the Standard Checking Procedure (**Appendix A**), verified by the QC Tracking Stamp (**Appendix A**), as a check and balance process that documents the quality review (checking), concurrence (back checking) incorporation and verification (rechecking) of the work and documents produced. The Standard Checking Procedure is summarized below:

- The originator completes his/her review and indicates that the document or plan set is complete and ready for review.
- The QR performs a thorough review of the document or plan set and informs the originator of any comments.

- The originator indicates if he/she concurs with the proposed correction and revises the document or plan set as necessary.
- The originator reviews the document or plan set to ensure that all changes have been made.
- The QR performs a final review and verifies the incorporation of all agreed changes.



5.0 Sufficiency Review and Quality Assurance Procedures

Once the Standard Checking Procedure is complete, the Quality Manager will verify that the submittal was prepared and checked under the quality control requirements and ready for review by the Department. The Quality Manager will review the document to ensure that the scope and quality control requirements have been met. Once concurred, the Quality Manager will sign the Project Quality Control Log (**Appendix B**). Following the Quality Manager’s review, a determination will be made that all required production and review processes were performed according to the Scope of Services. The Quality Manager finalizes the Quality Assurance process by initialing all Quality Process Logs, check sets and review documents. The Scalar Project Manager will retain all check sets for Quality Assurance and audit reviews.

APPENDICES

- A. Quality Control Tracking Stamp and Standard Checking Procedure
- B. Project Quality Control Log

Appendix A

Quality Control Tracking Stamp and Standard Checking Procedure

Quality Control Tracking Stamp

A Quality Control Tracking Stamp (**Figure A.1**) will be used to track the completion of the checking procedure for all documents and plan sets submitted to the Florida Department of Transportation. The stamp will be applied by the originator. For each step of the submittal review procedure, the responsible person will “sign-off” and date in the appropriate location as a record that their part of the procedure has been carried out. The originator and Quality Reviewer (QR) responsible for each step have been identified in **Table 1**.

QUALITY CONTROL TRACKING STAMP				
QC		TASK OR DISCIPLINE		
ACTIVITY				
READY	ORIGINATOR:			
	DATE:			
REVIEWER CORRECT (YELLOW) CHANGE (RED)	REVIEWER:			
	DATE:			
CONCURRENCE ORIGINATOR (RED)	ORIGINATOR:			
	DATE:			
CHANGES MADE (YELLOW)	ORIGINATOR:			
	DATE:			
CHANGES VERIFIED (GREEN)	REVIEWER:			
	DATE:			

FIGURE A.1 - QUALITY CONTROL TRACKING STAMP

Standard Checking Procedure

The Scalar Project Team will utilize a color coded checking system. The system is described below and corresponds to the Quality Control Tracking Stamp provided above.

Ready: Originators to produce and document their checking of all work prepared under their supervision prior to each submittal review.

Reviewer: Reviewers are to document the thorough checking of all work before each submittal (yellow highlighting of all correct information, red for change).

Concurrence: Originators are to document their concurrence with all comments and revisions (red check mark for agreement, “X”-Out for disagreement with red “STET”). Disagreements are discussed before notation is made on plan sheet or report.

Changes Made: Originators are to document the checking of the incorporation of all agreed revisions (yellow highlighting indicates change incorporated).

Changes Verified: Reviewers are to document their verification of the proper incorporation of all agreed changes (green check next to incorporated changes).

Appendix B

Project Quality Control Log



PROJECT QUALITY CONTROL LOG

DELIVERABLE: _____

Project: SR 501 (Clearlake Road) PD&E Study From south of Michigan Avenue to west of Industry Road Location: Brevard County, Florida FPID No. 433605-1-22-01	Type of Submittal/Document: Scheduled Submittal Date:
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FDOT Project Manager: SCALAR Project Manager: Quality Control Team Leader: Originator: Quality Reviewer:	Jazlyn Heywood, P.E. Aniruddha Gotmare, P.E. Catherine Winter, P.E. _____ _____
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Activity	By:	Date:
Checking Complete (Originator)		
Document Checked (QR)		
Concurrence (Originator)		
Document Revised (Originator)		
Verification (QR)		
Production Copies Checked (Task Manager)		
QA Leader Check		
Submitted to Florida Department of Transportation		

FIGURE B.1 – PROJECT QUALITY CONTROL LOG