

Functional Quality Management Plan - - District 3 Traffic

I. Introduction

This Functional Quality Management Plan (FQMP) serves as a supplement to the North Region Quality Management Plan (NR QMP) by establishing a QMP necessary to Traffic Operations project delivery, not already contained in the NR QMP, or the Lead Unit Project Specific Quality Control Plan.

This FQMP is intended to provide guidance to project delivery staff, in Traffic Operations and other divisions, to assure the quality of Traffic's deliverables for each project, by providing a Functional Quality Control Plan (FQCP) and Functional Programmatic Quality Control Tools.

II. Functional Quality Control Plan

Traffic Operation's Functional Quality Control (FQC) Plan describes Traffic's tasks and deliverables, as well as Traffic's Quality Milestones (QM) and Quality Control Elements (QCE) identified for each project delivery phase. The FQC Plan is to be customized for each project, and will be incorporated into each Project Specific Quality Control (PSQC) Plan.

A. PID Phase

1. Tasks

Traffic Operations will perform preliminary studies (operational analysis, safety analysis, signing & striping and electrical design review of project for deficiencies, TMP data sheet, TOS needs assessment, etc) during the PID phase to assist the PDT in determining scope and cost of project alternatives.

2. Deliverables

Traffic's deliverable for this phase is a Traffic Data Sheet (PID). Each assigned functional senior in Traffic will provide preliminary study results, preliminary scope and estimate of traffic items they are responsible for, estimated support resource needs, and a Quality Assurance Certification. The Traffic Data Sheet (PID) will summarize the results and recommendations of the preliminary studies; Preliminary scope of traffic items; Preliminary estimate of cost of traffic items; and estimated capital outlay support resource needs and assumptions.

3. Quality Milestones and Corresponding Quality Control Elements

- a. Begin Project Assignments
 - i. Assign Traffic's Project Team
 - ii. Attend PDT Kickoff Meeting
 - iii. Attend PDT Field Review
 - iv. Coordinate with Traffic Staff in Project's Source District
 - v. Create Traffic's Project Specific Functional Quality Control Plan

- b. Begin Preliminary Traffic Studies
 - i. Coordinate with Lead Unit Prior to Submittal of Traffic Data Sheet Request
 - ii. Determine Types of Traffic Studies Required
 - iii. Coordinate with Source District Staff Prior to Beginning Studies
 - iv. Perform Preliminary Traffic Studies
 - v. Determine Preliminary Scope and Cost of Traffic Items
 - vi. Perform Internal Peer and Senior Review
 - vii. Review Draft Studies, Scope and Cost with Source District Traffic Staff
 - viii. Review Draft Studies, Scope and Cost with Lead Unit and PDT
 - ix. Finalize Preliminary Traffic Studies, Scope and Cost
 - x. Deliver Finalized Studies, Scope and Cost to Source District

- c. Create Traffic Data Sheet (PID)
 - i. Summarize Results of Preliminary Studies
 - ii. Summarize Preliminary Scope of Traffic Items
 - iii. Summarize Preliminary Cost Estimate
 - iv. Identify Support Resource Needs and Assumptions
 - v. Perform Internal Peer/Senior Review of Draft TDS
 - vi. Update Draft TDS
 - vii. Perform Office Chief Review of Draft TDS and QA Certifications
 - viii. Finalize TDS for Office Chief Signature
 - ix. Review and Document Lessons Learned
 - x. Save Copies and Backup Data/Calculations
 - xi. Deliver Traffic Data Sheet (PID) and QA Certifications to Lead Unit

- d. Participate in and Respond to Comments Generated in Regional Reviews
 - i. Safety Review
 - ii. Constructability Review
 - iii. Draft PID Reviews (Functional and Management)

B. PA&ED Phase

1. Tasks

Traffic Operations will perform detailed traffic and engineering studies (operational analysis, safety analysis, signing & striping and electrical design review of project for scope and cost of traffic items, TMP data sheet, TOS needs assessment, etc) during the PA&ED phase to assist the PDT in determining scope and cost of project alternatives and to assist in selecting the preferred alternative.

2. Deliverables

Traffic's deliverable for this phase is a Traffic Data Sheet (PA&ED). Each assigned functional senior in Traffic will provide complete study results, updated scope and estimate of traffic items they are responsible for, updated estimated support resource needs, and a Quality Assurance Certification. The Traffic Data Sheet (PA&ED) will summarize the results and recommendations of the completed studies; updated scope

of traffic items; updated estimate of cost of traffic items; and estimated capital outlay support resource needs and assumptions.

3. Quality Milestones and Corresponding Quality Control Elements

- a. Update Project
 - i. Update Traffic's Project Team
 - ii. Review/Update Project Information
 - iii. Coordinate with Traffic Staff in Project's Source District
 - iv. Update Traffic's Project Specific Functional Quality Control Plan

- b. Begin Traffic Studies
 - i. Coordinate with Lead Unit Prior to Submittal of Traffic Data Sheet Request (PA&ED)
 - ii. Perform Traffic and Engineering Studies
 - iii. Update Scope and Cost of Traffic Items
 - iv. Perform Internal Peer and Senior Review
 - v. Review Draft Studies, Scope and Cost with Source District Traffic Staff
 - vi. Review Draft Studies, Scope and Cost with Lead Unit and PDT
 - vii. Finalize Traffic Studies, Scope and Cost
 - viii. Deliver Finalized Studies, Scope and Cost to Source District

- c. Create Traffic Data Sheet (PA&ED)
 - i. Summarize Results of Completed Studies
 - ii. Summarize Scope of Traffic Items
 - iii. Summarize Cost Estimate
 - iv. Update Support Resource Needs and Assumptions
 - v. Perform Internal Peer/Senior Review of Draft TDS
 - vi. Update Draft TDS
 - vii. Perform Office Chief Review of Draft TDS and QA Certifications
 - viii. Finalize TDS for Office Chief Signature
 - ix. Review and Document Lessons Learned
 - x. Save Copies and Backup Data/Calculations
 - xi. Deliver Traffic Data Sheet (PA&ED) and QA Certifications to Lead Unit

- d. Participate in and Respond to Comments Generated in Regional Reviews
 - i. Safety Review
 - ii. Constructability Review
 - iii. Draft PA&ED Reviews (Functional and Management)

C. Design Phase

1. Tasks

Traffic Operations prepares functional unit final plans, specifications, estimates and reports during the design phase.

2. Deliverables

Deliverables include Signing & Striping P&E; Electrical Design PS&E; and final Traffic Management Plans. Each assigned functional senior in Traffic will provide the final design products they are responsible for.

3. Quality Milestones and Corresponding Quality Control Elements

- a. Update Project
 - i. Update Traffic's Project Team
 - ii. Review/Update Project Information
 - iii. Coordinate with Traffic Staff in Project's Source District
 - iv. Update Support Resource Needs and Assumptions
 - v. Update Traffic's Project Specific Functional Quality Control Plan

- b. Begin Design Services
 - i. Coordinate with Lead Unit Prior to Submittal of Traffic PS&E Request
 - ii. Update Scope of Traffic Items
 - iii. Perform Signing & Striping and/or Electrical Design
 - iv. Prepare TMP
 - v. Update Cost of Traffic Items
 - vi. Prepare Specifications for Traffic Items
 - vii. Perform Internal Peer and Senior Review
 - viii. Review Final TMP, Signing & Striping P&E and/or Electrical PS&E with Source District Traffic Staff
 - ix. Review Final TMP, Signing & Striping P&E and/or Electrical PS&E with Lead Unit and PDT
 - x. Perform Final Internal Peer and Senior Review
 - xi. Finalize TMP, Signing & Striping P&E and/or Electrical PS&E
 - xii. Review and Document Lessons Learned
 - xiii. Save Copies and Backup Data/Calculations
 - xiv. Deliver complete TMP, Signing & Striping P&E and/or Electrical PS&E to Lead Unit

D. RTL Phase

1. Tasks

Traffic Operations participates in the draft PS&E, constructability, and safety reviews during the RTL Phase. Traffic works with the lead unit to resolve all traffic-related issues and respond to comments raised during these reviews and the NROE and ESCOE reviews. Traffic updates the final TMP, Signing & Striping P&E, and Electrical PS&E as necessary. Traffic also finalizes all correspondence and information for the Resident Engineer, and forwards this to the lead unit for inclusion in the project's Resident Engineer files.

2. Deliverables

Traffic's deliverables for the RTL phase include assuring Signing & Striping PS&E, Electrical Design PS&E, and the Traffic Management Plans meet Ready to List quality standards.

3. Quality Milestones and Quality Control Elements

- a. Participate in and Respond to Comments Generated in Regional Reviews
 - i. Safety Review
 - ii. Constructability Review
 - iii. Draft PS&E Review
 - iv. Review Any Changes with Source District Staff
- b. Deliver Completed Services
 - i. Deliver complete TMP, Signing & Striping P&E and/or Electrical PS&E to Lead Unit
 - ii. Review and Document Lessons Learned

III. Functional Programmatic Quality Control Tools

- A. Training**
- B. Checklists**
- C. Policies and Directives**

IV. Functional Quality Assurance

Each unit within Traffic will provide Functional Quality Assurance (FQA) with each deliverable, as appropriate, certifying the PSQC Plan has been adhered to.

NORTH REGION QUALITY MANAGEMENT PLAN

-DISTRICT 3 TRAFFIC-

