

**SIGN DESIGNER / REVIEWER CHECKLIST**

The following checklist provides both the sign designer and the TE/L&D Manager guidelines for preparing sign plans during the different phases of design. The checklist is designed to correlate with the Concurrent Engineering Process discussed in the [TEDM Section I – General, Chapter 2](#).

Project Name: _____
Project No: _____ UPC / PPMS No: _____
TE/L&D Manager: _____
Sign Designer: _____
Advertisement Date: _____

**SCOPING TEAM MEETING****DATE OF MEETING:** \_\_\_\_\_

➤ *The following actions should take place prior to or during the Scoping Team Meeting.*

- 1) Ensure that adequate space for signing has been incorporated into the conceptual roadway typical section(s).
- 2) Ensure that the limits of survey will accommodate the signing design.
- 3) Identify the potential for overhead sign structures.
- 4) Identify other design elements that require early coordination with the sign design, (roadway lighting, traffic signals, pavement markings, etc.).
- 5) Determine the agency and contact person that will own and maintain the signs.
- 6) Determine the agency and contact person that will be responsible for sign design and plans.
- 7) Prepare project budget estimate.

**Scoping review completed by:** \_\_\_\_\_**Dated reviewed:** \_\_\_\_\_

**PRELIMINARY FIELD INSPECTION TEAM MEETING      DATE OF MEETING: \_\_\_\_\_**

➤ *The following actions should take place prior to or during the Preliminary Field Inspection Team Meeting.*

- 1) Send the Sign Design Questionnaire to the agency responsible for maintaining signs (District, Residency, Municipality, etc). [\[Appendix IIB-1\]](#)

Sent To: \_\_\_\_\_ Date Sent: \_\_\_\_\_

- 2) Evaluate the roadway geometry and typical sections to ensure that appropriate right of way and (or) easements have been provided for signs and sign pole installation.
- 3) Update project budget estimate.

**Pre-F.I. review completed by:** \_\_\_\_\_

**Dated reviewed:** \_\_\_\_\_

**PUBLIC HEARING TEAM MEETING      DATE OF MEETING: \_\_\_\_\_**

➤ *The following actions should take place prior to or during the Public Hearing Team Meeting.*

- 1) Perform a sign inventory to identify existing signs and structures.
- 2) Develop sign base plans.
- 3) Develop conceptual sign plans showing major overhead and guide sign messages and locations.
- 4) Coordinate with District for sign messages and placement of guide signs.
- 5) Determine if any overhead structures will require lighting.
- 6) Determine availability of electrical power if overhead structures are to be lighted. [\[Appendix VB-3\]](#)
- 7) Verify right of way and (or) easements are provided for proposed sign infrastructure.
- 8) Coordinate sign design with structure and bridge designer when signs are to be located on bridges.
- 9) Coordinate sign design with landscape, utility, median barriers, retaining walls, noise walls, etc.
- 10) Ensure coordination of all TCD plans.
- 11) Update project budget estimate.

**Public Hearing review completed by:** \_\_\_\_\_

**Dated reviewed:** \_\_\_\_\_

**FIELD INSPECTION TEAM MEETING**

**DATE OF MEETING:** \_\_\_\_\_

- *The following actions should take place prior to or during the Field Inspection Team Meeting.*

**Sign Plan General Overview**

- 1) Address public hearing comments.
- 2) Update conceptual sign design plans with current roadway & utility design plans.

**Sign Plan Coordination Issues**

- 1) Verify signs do not conflict with overhead or underground utilities.
- 2) Coordinate sign plans with Highway Signs Programs Section of Traffic Engineering Division.
- 3) Review sign locations for compatibility with noise walls, median barriers, retaining walls, landscaping, etc.
- 4) Verify the proposed or existing grade is accessible for maintenance and suitable for sign installation.
- 5) Coordinate electrical service items for those sign structures requiring sign lighting.

**Construction Cost Estimate**

- 1) Update project budget estimate.

**F.I. review completed by:** \_\_\_\_\_

**Dated reviewed:** \_\_\_\_\_

**80% PLAN SUBMITTAL****DATE OF SUBMISSION:** \_\_\_\_\_

- *Advance to preliminary sign design plans for review by Maintaining Jurisdiction, Residency, District Traffic and Utility Sections and Central Office. Plans are approximately 80% complete such that the reviewer can provide guidance.*

**80% DESIGN ELEMENTS****Sign Plan Set General Overview****Stand alone Sign Plans**

- 1) Provide Title Sheet - includes latest design standard and specifications.
- 2) Provide Location Map.
- 3) Provide Revision Data Sheet.
- 4) Provide Survey & Alignment Data Sheets, if applicable.
- 5) Provide Maintenance of Traffic Sheets, if applicable.

**Requirements for all Sign Plans**

- 1) Use Sheet Cell from the VDOT Cell Libraries.
- 2) Incorporate design guidance provided in Sign Questionnaire. [[Appendix IIB-1](#)]
- 3) Provide Index of Sheets.
- 4) Provide Insertable Sheets.
- 5) Provide Sign Schedule Sheets.
- 6) Provide Sign Detail Sheets (Figure sheets, Elevation sheets, etc.).
- 7) Provide Notes for Safety Improvement Sheet. [[Appendix IIA-9](#)]
- 8) Show Project Data on plan sheets, (Project No., Series and Page No., etc.).
- 9) Show Scale, North Arrow, Match Lines, etc.

**Sign Plan Coordination Issues****Roadway Plans**

- 1) Ensure that poles, conduit and junction boxes are not in conflict with drainage structures, retaining wall tiebacks, noise wall footers, etc. [[Sec. V, Chapter 3, 3.4](#)]
- 2) Evaluate proposed or existing grades for suitable installation of the pole foundations and trenching of conduit. [[Sec. V, Chapter 3, 3.4](#)]
- 3) Reference associated roadway plan sheets in the reference box on sign plan sheet, (Series No. and Page No.). [[Appendix IIA-3](#)]

**Pavement Marking/Marker Plans**

- 1) Coordinate sign placement as they relate to pavement markings (e.g. stop bars, lane drops or exit only lanes, transitioning out lanes, railroad crossings, and school zones).
- 2) Reference associated pavement marking/marker plan sheets in the reference box on sign plan sheet, (Series No. and Page No.). [[Appendix IIA-3](#)]

**80% PLAN SUBMITTAL (CONTINUED)****Traffic Signal Plans**

- 1) Coordinate sign layout as they relate to the traffic signal infrastructure and design.
- 2) Include proposed signs mounted on signal mast arms and poles in the sign schedule.
- 3) Reference associated traffic signal plan sheets on the sign plan sheet, (Series No. and Page No.). [\[Appendix IIA-3\]](#)

**Lighting, Utilities & Bridges Plans**

- 1) Review sign locations on bridges with the structure and bridge designer.
- 2) Identify power source for sign lighting and show electrical service connection.
- 3) Coordinate power requirements and electrical distribution for the sign lighting with lighting designer.
- 4) Verify power provider approves sign electrical service connection location.
- 5) Ensure sign infrastructure (overhead sign structures, foundations, etc.) are not in conflict with overhead or underground utilities.
- 6) Reference associated lighting, utility and bridge plan sheets in the reference box on sign plan sheet, (Series No. and Page No.). [\[Appendix IIA-3\]](#)

**Sign Plan Layout****Existing Sign Information**

- 1) Show existing sign structures and messages at existing sign locations. (Signs are to be delineated with dash lines). [\[Appendix IIA-3\]](#)
- 2) Indicate type of sign or structure in top of ellipse symbol.
- 3) Indicate action for measurement / payment in bottom of ellipse symbol.
- 4) Orient sign messages on plan sheet to read in direction of travel.

**Proposed Sign Information**

- 1) Update sign plan base sheets with most current roadway design plan sheets.
- 2) Ensure all sign structures are located within right of way and (or) easements.
- 3) Show proposed sign structures and messages at proposed locations. (Signs are to be delineated with solid lines). [\[Appendix IIA-3\]](#)
- 4) Indicate sign number in top of circle symbol.
- 5) Indicate text number in bottom of circle symbol.
- 6) Orient sign messages on plan sheet to read in direction of travel.
- 7) Identify geometric, utility, retaining walls, guardrail and other possible conflicts for resolution with other design disciplines.
- 8) Locate all overhead sign structures outside of the clear zone or protect sign structures with guardrail or barriers.
- 9) Ensure plan sheet items match legend and notes are applicable.

**80% PLAN SUBMITTAL (CONTINUED)****Proposed Sign Information for Sign Lighting and Associated Electrical Service**

- 1) Ensure provisions are made for a sign lighting retrieval system.
- 2) Ensure junction boxes and conduits are proper size, type, and located within right of way when providing sign lighting and project does not include roadway lighting.
- 3) Provide electrical grounding conductors in all non-metallic conduits.
- 4) Identify electrical service type for overhead sign structures on plan sheet and ensure it matches Summary of Quantities pay item.

**Sign Detail Sheets**

- 1) Properly label Figure sheets with correct message, dimensions, text size and style indicated.
- 2) Provide a sign structure detail sheet, if required. [\[Appendix IIA-11\]](#)
- 3) Provide overhead sign structure elevation detail sheet, if required. [\[Appendix IIA-8\]](#)
- 4) Provide notes for safety improvement items sheet. Measurement and payment items not used are to be marked out with an “X” or deleted from sheet.
- 5) Provide “EXIT PANEL MOUNTING DETAIL SHEET”, if applicable.

**Sign Schedule Sheet**

- 1) Arrange order of signs in schedule in accordance with the priority given in the MUTCD (e.g. first –regulatory signs, second – warning signs, third – guide signs, etc.), whenever possible.
- 2) Cross-check all labeling information in the schedule with plan sheets. Special information for panels and structures are noted in the remarks column.
- 3) Verify all information indicated on the sign schedule is correct.

**Construction Cost Estimate**

- 1) Show all Standard and Non-Standard Pay Items in the Summary of Quantities sheet.
- 2) Unit quantities do not need to be shown on Summary of Quantities sheet for this submittal.
- 3) Prepare construction cost estimate.

**80% PLAN SUBMITTAL (CONTINUED)**

<b>Submit Plan To: (If Applicable)</b>	<b>Contact Person</b>	<b>Date Sent</b>
Municipality	_____	_____
VDOT, Residency	_____	_____
VDOT, District Traffic Engineering	_____	_____
VDOT, District Utilities Section	_____	_____
VDOT, CO – Traffic Engineering (L&D)	_____	_____
VDOT, CO – Traffic Engineering Division	_____	_____
VDOT, Scheduling and Construction	_____	_____
FHWA	_____	_____

**80% review completed by:** \_\_\_\_\_

**Dated reviewed:** \_\_\_\_\_

**QC PLAN SUBMITTAL****DATE OF SUBMISSION:** \_\_\_\_\_

- *Advance the 80% sign design plans to 100% design completion.*

**Respond / Incorporate Review Comments From:**

- 1) Municipality (if applicable)
- 2) VDOT, Residency
- 3) VDOT, District Traffic Engineering
- 4) VDOT, District Utilities Section
- 5) VDOT, CO – Traffic Engineering (L&D)
- 6) VDOT, CO – Traffic Engineering Division
- 7) VDOT, Scheduling and Construction
- 8) FHWA

**Constructability Check**

- 1) Ensure clear zone requirements are met.
- 2) Verify sign structures are breakaway or structures are outside of the deflection clearance of guardrails.
- 3) Update plans with other design disciplines to ensure that conflicts with drainage, utilities (overhead or underground) and landscaping have not been created with design revisions.
- 4) Verify right of way and (or) easements are sufficient to install sign infrastructure.

**Plan Sheets**

- 1) Finalize General Notes.
- 2) Ensure plan sheet call-outs are consistent with legend and Summary of Quantities pay items, and Transport pay items.
- 3) Verify each pay item is clearly identified.
- 4) Perform quantity take-offs and verify each pay item in the project is accounted for in the Summary of Quantities.

**Plan Detail Sheets**

- 1) Finalize Sign Panel Detail Sheets.
- 2) Finalize (Figure Sheet) Elevation Detail Sheets.
- 3) Finalize Special Plan Details (Median barrier mounting details, special sign mountings, etc.).
- 4) Include appropriate Insertable Sheets.
- 5) Finalize Notes for Safety Improvement Items Sheet.



**QC PLAN SUBMITTAL (CONTINUED)**

**Summary of Quantities / Special Provisions**

- 1) Finalize Summary of Quantities Sheet. [\[Appendix IIA-12\]](#), [\[Appendix IIA-13\]](#)
- 2) Verify measurement and payment for each pay item and ensure it matches the VDOT standard items or non-standard items as discussed in the Specifications, Special Provisions and/or Special Provision Copied Notes. [\[Sec. I, Chapter 3, 3.8\]](#)
- 3) Discuss in detail the Special Provisions and Special Provision Copied Notes with Traffic Engineering Division Specifications Section.

**Construction Cost Estimate**

- 1) Verify TRNS-PORT quantities match Summary of Quantities sheet.
- 2) Develop costs estimates per unit price for non-standard pay items and review with TE/L&D Manager.

**Plan Set Submitted (as necessary)**

- 1) Title Sheet (Stand alone project)
- 2) Location Map Sheet (Stand alone project)
- 3) Index of Sheets
- 4) Revision Data Sheets (Stand alone project)
- 5) Survey & Alignment Sheets (Stand alone project)
- 6) Maintenance of Traffic Sheets (Stand alone project)
- 7) General Notes (Stand alone project)
- 8) Insertable Sheets
- 9) Notes for Safety Improvement Items Sheet
- 10) Summary of Quantities Sheet
- 11) Sign Schedule Sheets
- 12) Non Standard Post and Ground Mount Structure Detail Sheet
- 13) Exit Panel Mounting Detail Sheets
- 14) Legend and Detail Sheets
- 15) Plan Sheets
- 16) Plan Detail Sheets

**Special Provisions Submitted**

- 1) Special Provisions: \_\_\_\_\_
- 2) Non-Standard Items: \_\_\_\_\_

**Up-Load Plans to Falcon in TIF format.**

**Date complete:** \_\_\_\_\_

- 1) Create Plan Index in Excel format.

**QA review completed by:** \_\_\_\_\_

**Dated reviewed:** \_\_\_\_\_

**PRE-ADVERTISEMENT CONFERENCE**

**DATE OF MEETING:** \_\_\_\_\_

➤ *Advancing 100% design plans and specifications to construction plan set.*

**Respond / Incorporate Review Comments From:**

- 1) Municipality (if applicable)
- 2) VDOT, Residency
- 3) VDOT, District Traffic Engineering
- 4) VDOT, District Utilities Section
- 5) VDOT, CO – Traffic Engineering (L&D)
- 6) VDOT, CO – Traffic Engineering Division
- 7) VDOT, Scheduling and Construction
- 8) FHWA

**Update Plans on Falcon.** **Date complete:** \_\_\_\_\_

**Up-Load Plans to Falcon in TIF format.** **Date complete:** \_\_\_\_\_

- 1) Update Plan Index.

**Revise Special Provisions.** **Date complete:** \_\_\_\_\_

**Update TRNS-PORT Cost Estimate.** **Date complete:** \_\_\_\_\_

- 1) Verify updated TRNS-PORT quantities match Summary of Quantities sheet.

**PAC review completed by:** \_\_\_\_\_

**Dated reviewed:** \_\_\_\_\_