



Public Involvement Map Information Guide

Introduction

The goal of public engagement is to create meaningful opportunities for communication to and from the public on NCDOT projects during the development process. The guidance in this document is a result of a work group consisting of representation from Public Involvement, Roadway Design, Division and our consultant partners. The intent is to align with Departmental initiatives to create efficiency by providing consistency in our workflow and products. Some of the outcomes of this coordination are as follows: a description of the standard mapping products and when they should be used, best practices for development of the products, and checklists to assist those producing and reviewing corridor public hearing maps and design public meeting/hearing maps. The group also generated revised legends for design public meeting/hearing maps and corridor public hearing maps.

Map Products

1) Enhanced Study Area Map and/or Information Boards – These are used before designs are developed to inform the public of and engage the public in the project. The map shows what design options are being investigated within the study area. The information boards provide the details about the project that are relevant to the decision-making process. Figures 1A and 1B are provided as examples. The Public Involvement, Community Studies and Visualization website is under construction. Once it has been launched, additional illustrations of public involvement products will be made available there. The map and information boards can either be used together or as stand-alone products depending on the project needs. The following are key features of the study area maps and information boards:

- Key map of project segments, if applicable
- Boundary of the study area should be shown on the map
- Types of improvements being considered along the main line and at intersecting roadways should be shown on the map
- Purpose and need with desirable outcomes for the project
- Overview of each project segment with details about the focus areas associated with each, if applicable
- 3D Perspective Typical of the mainline improvements with bullet points of key features
- Diagrams of the intersection and/or interchange options with a discussion of the benefits and drawbacks of each
- Labels referencing the corresponding information board
- Note: Horizontal design elements, such as alignments and edges of pavement, should not be shown.

Figure 1A - Example of an Enhanced Study Area Map

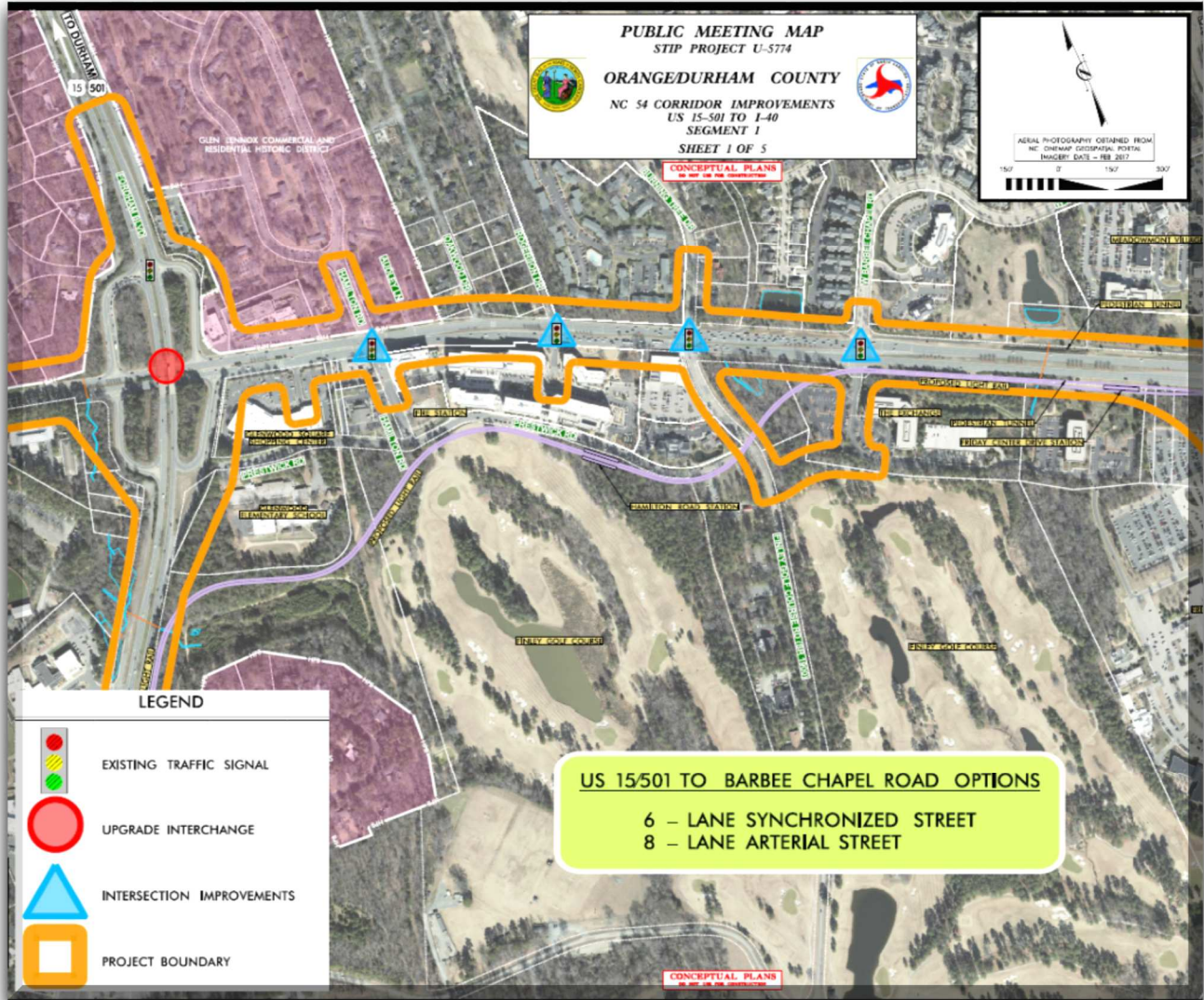


Figure 1B - Example of Informational Boards

54 **N.C. 54 IMPROVEMENTS**
 STIP Project No. U-5774
 North Carolina Department of Transportation

Segment 1

U.S. 15/501 to I-40

Proposed upgrades on N.C. 54 from U.S. 15/501 to I-40 will focus on...

- ▶ Capacity improvements along N.C. 54, including widening, intersection modifications, and access management
- ▶ Interchange improvements at U.S. 15/501 and I-40
- ▶ Increased connectivity on parallel routes to provide alternatives for local traffic

- ▶ Multimodal accessibility improvements, including access to transit stops and expansion of the existing bicycle and pedestrian network

- ▶ Coordination with the planned Durham-Orange (D-O) Light Rail Transit (LRT) project

54 **N.C. 54 IMPROVEMENTS**
 STIP Project No. U-5774
 North Carolina Department of Transportation

Segment 1

U.S. 15/501 to Barbee Chapel Road Options

6-Lane Synchronized Street

- ▶ Narrower footprint
- ▶ U-turns required
- ▶ Good level of service
- ▶ Some cross street closures
- ▶ Shorter pedestrian crossings
- ▶ Multi-stage pedestrian crossings

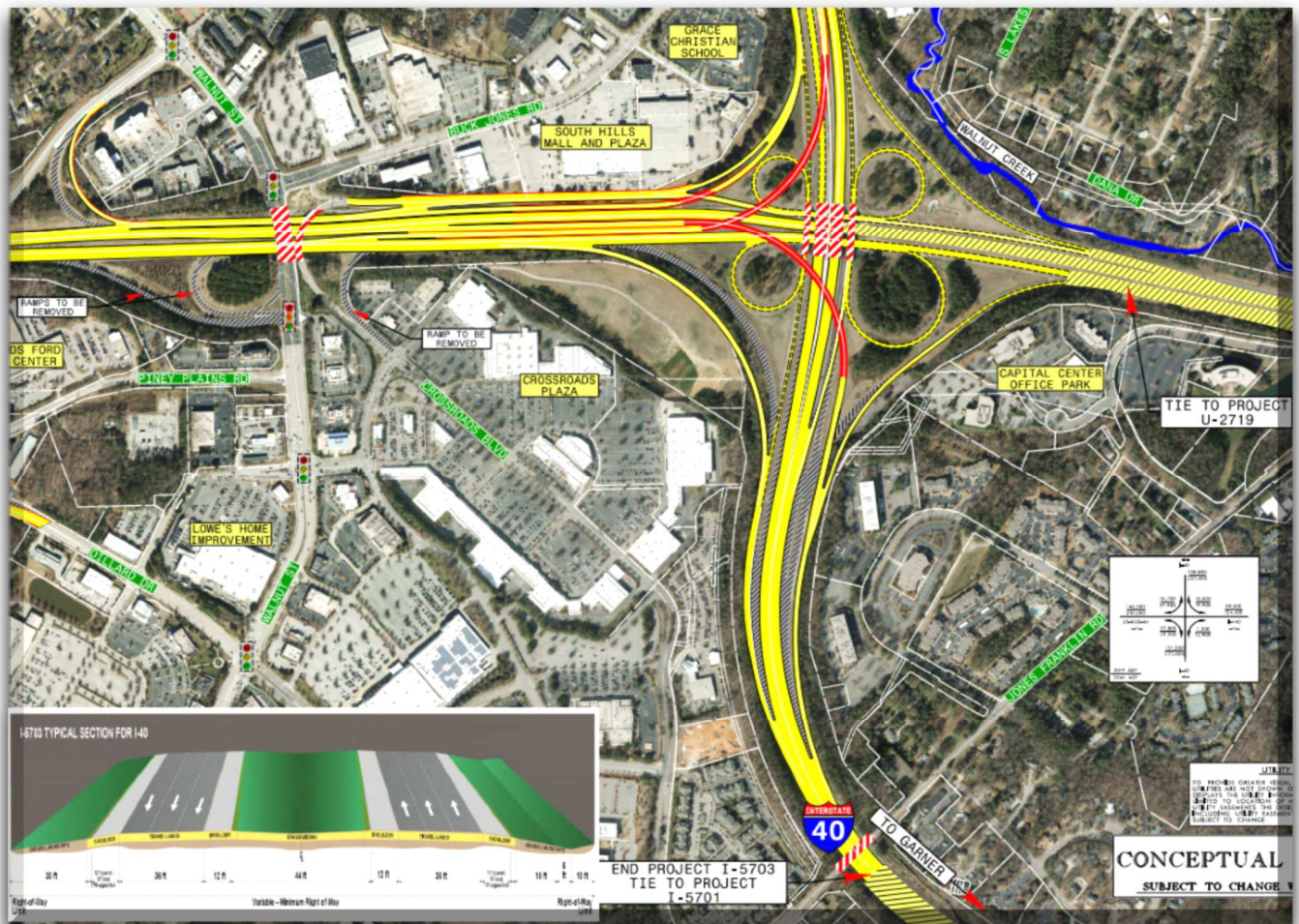
8-Lane Arterial Street

- ▶ Traditional signalized intersections
- ▶ Wider footprint
- ▶ Good level of service
- ▶ Longer signal cycles and delays
- ▶ Single-stage pedestrian crossings
- ▶ 8-Lane pedestrian crossing

2) **Conceptual Meeting Map** - The map is used to show the footprint of the proposed roadway and communicate to the public the flow of traffic through the proposed design options so that they can provide feedback. Figure 2A is provided as an example. The following are key features of the conceptual map:

- Horizontal design (alignment and edge of pavement layout only)
- Slope stakes and turn lanes (left/right) should not be shown
- Property lines and existing right of way should be shown
- 3D Perspective Typical of the mainline
- Traffic Diagrams for intersections
 - Average Daily Traffic (ADT) is defined as the total volume during a given time period (in whole days), divided by the number of days in that time period.
- The following items should be shaded on the map
 - Proposed pavement areas
 - Proposed structure(s), if applicable

Figure 2A - Example of Conceptual Map



3) Corridor Public Hearing Map – The map is used to solicit feedback from the public on the corridors being studied, the alternatives being studied within the corridor, and the impacts associated with each. Figure 3A is provided as an example. A checklist for the design public meeting/hearing map can be found on the Roadway Design Connect website. It provides the basic parameters for preparation of this mapping product. The legend (see Figure 3B) shows the representation of standard items which should be shown. The following are key features of the corridor public hearing map:

- Horizontal alignment and edge of pavement layout for -L- and -Y-lines
- Slope stakes
- Proposed right of way and/or control of access. Control of access definitions are as follows:
 - Full Control of Access -Connections to a facility provided only via ramps at interchanges. All cross-streets are grade-separated. No private driveway connections allowed. A control of access fence is placed along the entire length of the facility and at a minimum of 1000 feet beyond the ramp intersections on the Y lines (minor facility) at interchanges (if possible).
 - Limited Control of Access - Connections to a facility provided only via ramps at interchanges (major crossings) and at-grade intersections (minor crossings and service roads). No private driveway connections allowed. A control of access fence is placed along the entire length of the facility, except at intersections, and at a minimum of 1000 feet beyond the ramp intersections on the Y lines (minor facility) at interchanges (if possible).
 - Partial Control of Access - Connections to a facility provided via ramps at interchanges, at-grade intersections, and private driveways. Private driveway connections are normally defined as a maximum of one connection per parcel. One connection is defined as one ingress and one egress point. The use of shared or consolidated connections is highly encouraged. Connections may be restricted or prohibited if alternate access is available through other adjacent public facilities. A control of access fence is placed along the entire length of the facility, except at intersections and driveways, and at a minimum of 1000 feet beyond the ramp terminals on the minor facility at interchanges (if possible).
 - No Control of Access - Connections to a facility provided via ramps at interchanges, at-grade intersections, and private driveways. No physical restrictions, i.e., a control of access fence, exist. Normally, private driveway connections are defined as one connection per parcel. Additional connections may be considered if they are justified and if such connections do not negatively impact traffic operations and public safety.
- Property boundaries without property owner names
- Traffic diagrams for intersections
 - Average Daily Traffic (ADT) is defined as the total volume during a given time period (in whole days), divided by the number of days in that time period.
- Wetland boundaries
- Key map which shows the shaded areas for all corridors being studied

- The following items should be shaded on the map:
 - Study corridors
 - Proposed structure(s), if applicable
 - Existing railroad right of way
 - Cemeteries
 - Historic properties
 - Major utility easements
- The following are not shown in the legend but apply to every map where they are used:
 - Street labels should be white letters on a green background to mimic actual street signs
 - Landmarks should be black letters on a pale gold background.

Figure 3A - Example of Corridor Public Hearing Map

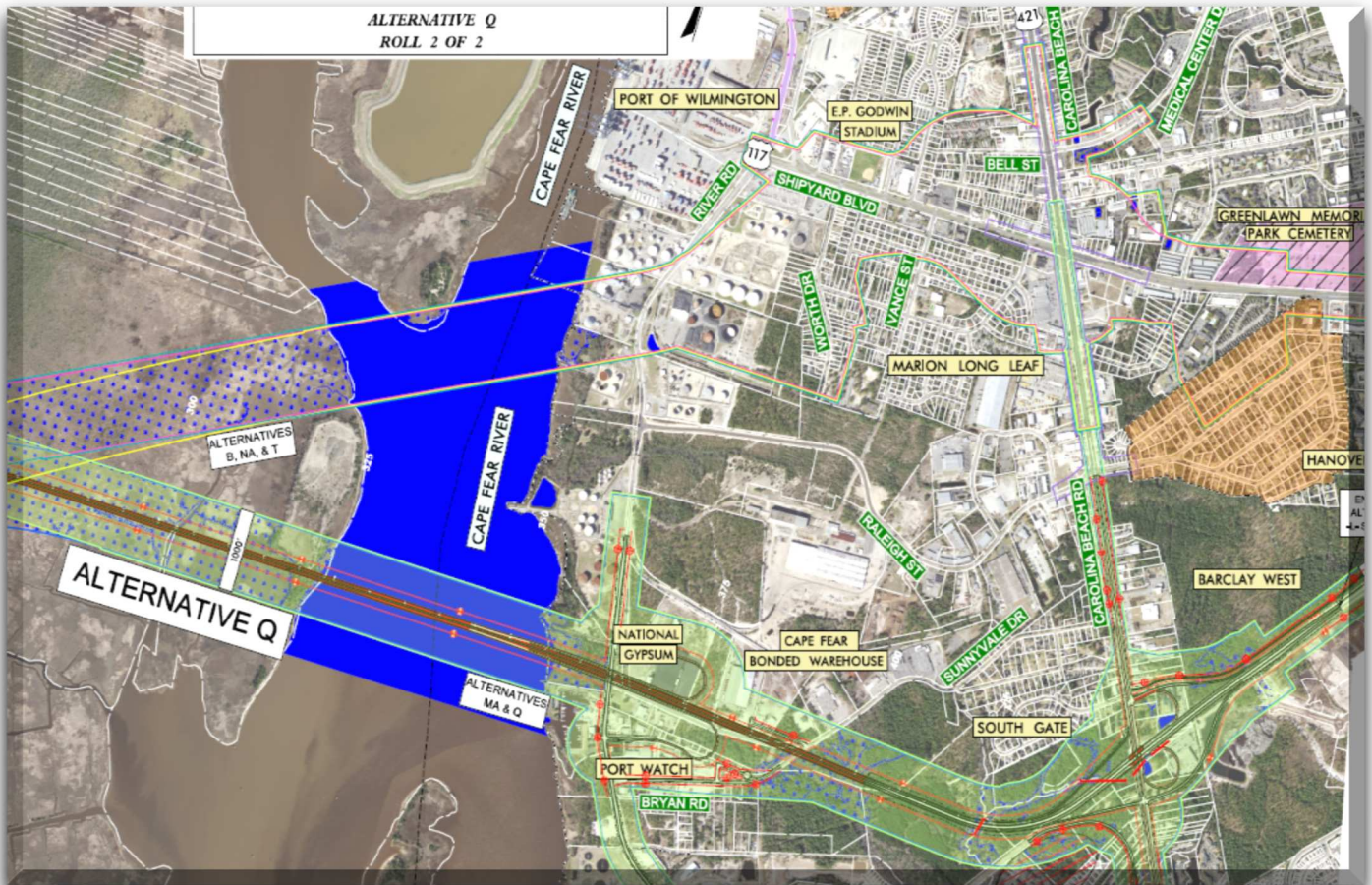












































Figure 3B - Legend for Corridor Public Hearing Maps

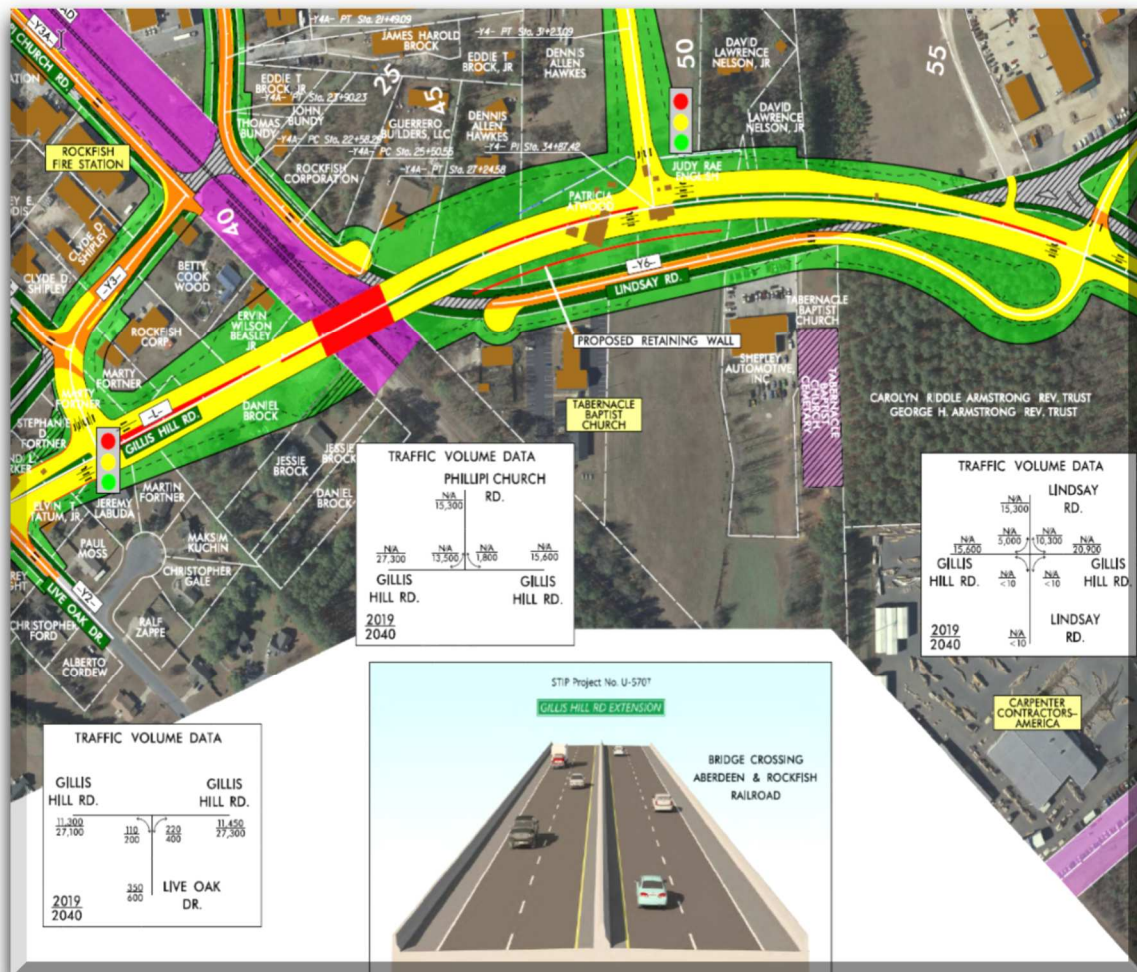
DRAFT CORRIDOR MAP LEGEND	PLOTS
<ul style="list-style-type: none">  ALTERNATE 1  ALTERNATE 2  ALTERNATE 3  ALTERNATE 4  ALTERNATE 5  ALTERNATE 6  ALTERNATE 7  ALTERNATE 8  ALTERNATE 9  ALTERNATE 10 	<p>TRANSLUCENT TRANSLUCENT TRANSLUCENT TRANSLUCENT TRANSLUCENT TRANSLUCENT TRANSLUCENT TRANSLUCENT TRANSLUCENT TRANSLUCENT</p>
<ul style="list-style-type: none">  ALTERNATE 1 STUDY LIMITS  ALTERNATE 2 STUDY LIMITS  ALTERNATE 3 STUDY LIMITS  ALTERNATE 4 STUDY LIMITS  ALTERNATE 5 STUDY LIMITS  ALTERNATE 6 STUDY LIMITS  ALTERNATE 7 STUDY LIMITS  ALTERNATE 8 STUDY LIMITS  ALTERNATE 9 STUDY LIMITS  ALTERNATE 10 STUDY LIMITS 	
<ul style="list-style-type: none">  LAKES, RIVER, STREAMS AND PONDS  PROPOSED RIGHT OF WAY  PROPOSED CONTROL OF ACCESS  PROPOSED PARTIAL CONTROL OF ACCESS  PROPOSED LIMITED CONTROL OF ACCESS  EXISTING CONTROL OF ACCESS  PROPERTY LINES  CITY AND TOWN LINES  COUNTY LINES 	<p>OPAQUE</p>
<ul style="list-style-type: none">  EXISTING UTILITY EASEMENT  HISTORIC PROPERTY  WETLAND  PARKS  CEMETERIES  RAILROAD RIGHT OF WAY  POTENTIAL NOISE ABATEMENT AREA  PROPOSED STRUCTURES  EXISTING STRUCTURES TO BE RETAINED  EXISTING PAVEMENT TO BE REMOVED 	<p>TRANSLUCENT TRANSLUCENT</p> <p>TRANSLUCENT TRANSLUCENT TRANSLUCENT</p>
<ul style="list-style-type: none">  $\frac{2008}{2030}$ PRESENT AVERAGE DAILY TRAFFIC (ADT) FUTURE AVERAGE DAILY TRAFFIC (ADT)  EXISTING TRAFFIC SIGNAL  TRANSMISSION TOWER 	

4) Design Public Meeting/Hearing Map – The map is used to solicit feedback from the public on the proposed design and the associated impacts that will be further developed into final plans. Figure 4A is provided as an example. A checklist for the design public meeting/hearing map can be found on the Roadway Design Connect website. It provides the basic parameters for preparation of this mapping product. The legend (see Figure 4B) shows the representation of standard items which should be shown. The following are key features of the design public meeting/hearing maps:

- Horizontal alignment and edge of pavement layout for -L- and -Y-lines
- Slope stakes
- Proposed right of way and/or control of access. Control of access definitions are as follows:
 - a. Full Control of Access -Connections to a facility provided only via ramps at interchanges. All cross-streets are grade-separated. No private driveway connections allowed. A control of access fence is placed along the entire length of the facility and at a minimum of 1000 feet beyond the ramp intersections on the Y lines (minor facility) at interchanges (if possible).
 - b. Limited Control of Access - Connections to a facility provided only via ramps at interchanges (major crossings) and at-grade intersections (minor crossings and service roads). No private driveway connections allowed. A control of access fence is placed along the entire length of the facility, except at intersections, and at a minimum of 1000 feet beyond the ramp intersections on the Y lines (minor facility) at interchanges (if possible).
 - c. Partial Control of Access - Connections to a facility provided via ramps at interchanges, at-grade intersections, and private driveways. Private driveway connections are normally defined as a maximum of one connection per parcel. One connection is defined as one ingress and one egress point. The use of shared or consolidated connections is highly encouraged. Connections may be restricted or prohibited if alternate access is available through other adjacent public facilities. A control of access fence is placed along the entire length of the facility, except at intersections and driveways, and at a minimum of 1000 feet beyond the ramp terminals on the minor facility at interchanges (if possible).
 - d. No Control of Access - Connections to a facility provided via ramps at interchanges, at-grade intersections, and private driveways. No physical restrictions, i.e., a control of access fence, exist. Normally, private driveway connections are defined as one connection per parcel. Additional connections may be considered if they are justified and if such connections do not negatively impact traffic operations and public safety.
- Property boundaries with property owner names
- Traffic diagrams for intersections
 - Average Daily Traffic (ADT) is defined as the total volume during a given time period (in whole days), divided by the number of days in that time period.
- Wetland boundaries
- Potential noise abatement areas
- Adjacent TIP Projects

- 3D Perspective Typical of the mainline and major Y lines
- Proposed and existing traffic signals
 - Proposed signals should only be shown if they are warranted within 5 years of the let date.
- Laneage based on Congestion Management recommendations
- Onsite detours, if applicable
- The following are not shown in the legend but apply to every map where they are used:
 - Slope stakes along with the cut and fill labels should plot as black.
 - Lane arrows for existing and proposed lanes should be black and be shown immediately before and after transitions where a lane is added or dropped.
 - Street labels should be white letters on a green background to mimic actual street signs
 - Landmarks should be black letters on a pale gold background.

Example of Design Public Meeting/Hearing Map
Figure 4A



Legend for Design Public Meeting/Hearing Maps
Figure 4B

DRAFT LEGEND		PLOTS
	BUILDINGS	OPAQUE
	EXISTING RIGHT OF WAY	OPAQUE
	PROPOSED RIGHT OF WAY	TRANSLUCENT
	PROPOSED EASEMENTS (DRAINAGE, CONSTRUCTION, AND UTILITY)	TRANSLUCENT
	EXISTING ROADWAY	OPAQUE
	EXISTING ROADWAY TO BE REMOVED	OPAQUE
	EXISTING ROADWAY TO BE RESURFACED	OPAQUE
	PROPOSED ROADWAY	OPAQUE
	TEMPORARY ROADWAY / DETOURS	OPAQUE
	FUTURE ROADWAY	OPAQUE
	PROPOSED STRUCTURES, ISLAND, SIDEWALK, CURB AND GUTTER	OPAQUE
	EXISTING STRUCTURES, ISLAND, SIDEWALK, CURB AND GUTTER TO BE RETAINED	OPAQUE
	EXISTING STRUCTURES TO BE REMOVED	OPAQUE
	LAKES, RIVER, STREAMS AND PONDS	OPAQUE
	RAILROAD RIGHT OF WAY	TRANSLUCENT
	EXISTING UTILITY EASEMENT	TRANSLUCENT
	CEMETERIES	TRANSLUCENT
	WETLANDS	
	PROPOSED SIDEPATH/GREENWAY	OPAQUE
	HISTORIC PROPERTY BOUNDARY	TRANSLUCENT
	PARKS	TRANSLUCENT
	PROPOSED CONTROL OF ACCESS	
	PROPOSED PARTIAL CONTROL OF ACCESS	
	PROPOSED LIMITED CONTROL OF ACCESS	
	EXISTING CONTROL OF ACCESS	
	PRESENT AVERAGE DAILY TRAFFIC (ADT) FUTURE AVERAGE DAILY TRAFFIC (ADT)	
	PROPERTY LINES	
	CITY AND TOWN LINES	
	COUNTY LINES	
	POTENTIAL NOISE ABATEMENT AREA	
	EXISTING TRAFFIC SIGNAL	
	EXISTING TRAFFIC SIGNAL TO BE REMOVED	
	PROPOSED TRAFFIC SIGNAL	
	PROPOSED EXPRESS LANE	TRANSLUCENT
	EXPRESS LANE ENTRY POINT	
	EXPRESS LANE EXIT POINT	
	PROPOSED TOLL GANTRY	
	(SPECIAL CASES)	
	TRANSMISSION TOWER	
	FEDERAL EMERGENCY REGULATORY COMMISSION (FERC) BOUNDARY	

Best Practices

- Map products should be shown on the most recent aerial photography available.
- The maps should not exceed 10' in length. Deviations from the maximum length of 10' should be coordinated with Public Involvement and the Roadway Design Unit ahead of time to make sure additional lengths can be reasonably accommodated in the facility and with the selected display methods.
- For clarity, the transparency of shapes on the map may need to be adjusted due to the differences in photography.
- For preliminary outreach efforts, especially when project impacts have not been determined, design options being presented to the public should be referred to as **Concepts**.
- On map products where slope stakes are shown, labels should be spaced at appropriate intervals, and should accurately convey where the slopes change from cut to fill.
- Proposed right of way and easements should be set using the following parameters:
 - Corridor Public Hearing Maps – Slope stakes plus 40'
 - Design Public Meeting/Hearing Maps – Slope stakes plus 25'
- Lane lines are not required for the entirety of the map. The following are options for how they should be displayed:
 - Show lane lines only at the approaches to intersections, turn lane tapers, and widening transitions
 - Use the lane line symbology from the Signing and Delineation plans (ie. solid lines, skips, mini skips).

Note: Lane lines should not be shown on corridor maps as their value is lost at the scales which these maps are produced.
- Property owner names should be shown in either of the following ways:
 - White letters on the photography
 - Black letters on a white background
 - Parcel numbers on the property. A chart should be provided which includes the parcel number and the associated property owner name.

Early coordination with Public Involvement and the Roadway Design Unit is encouraged if there are circumstances where the materials in this package do not specifically or clearly address an area of concern.