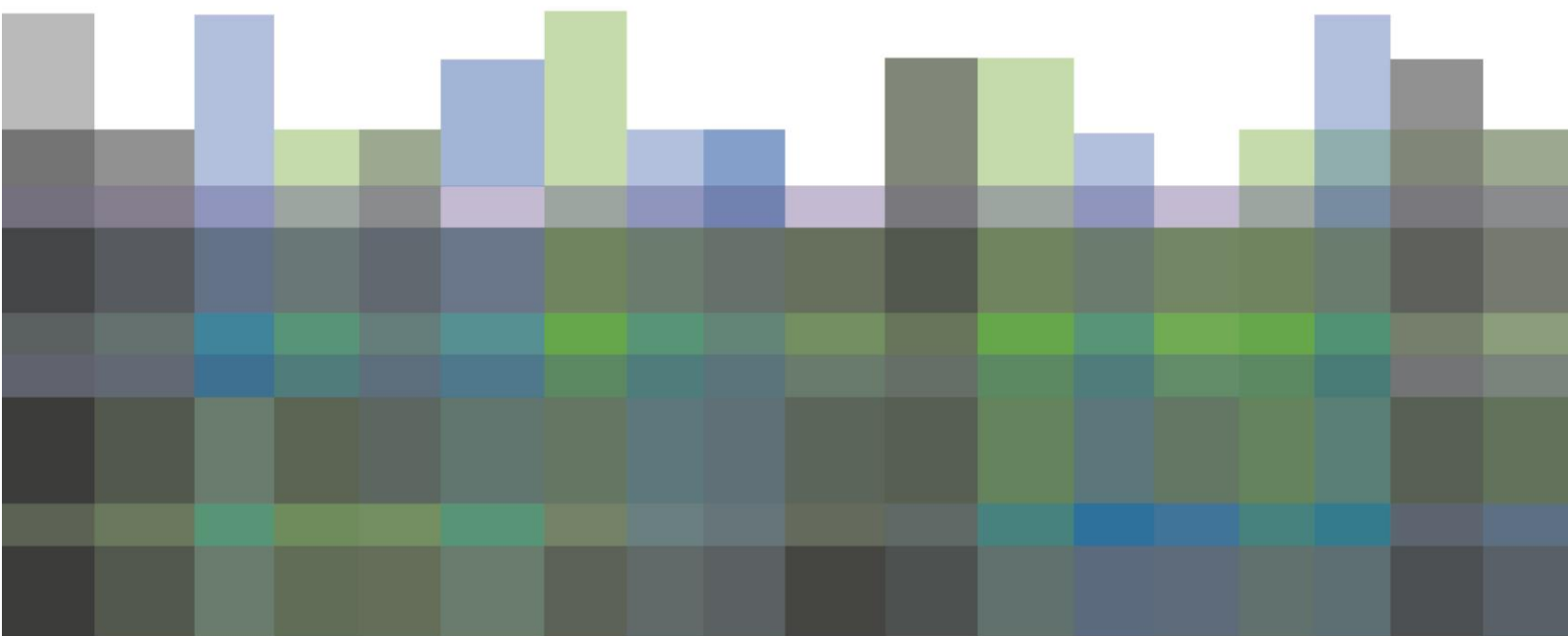
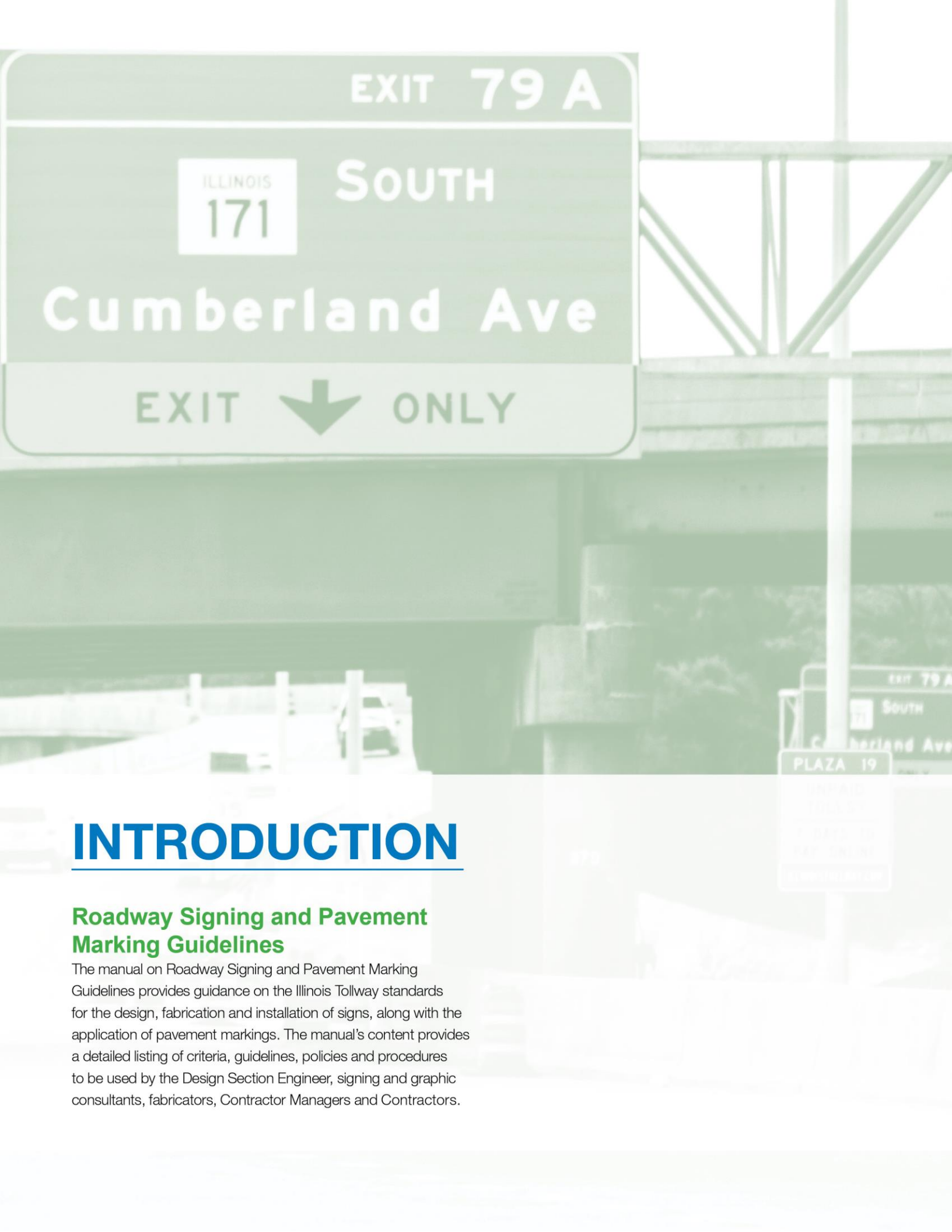


March 2025

Roadway Signing and Pavement Marking Guidelines

ILLINOIS STATE TOLL HIGHWAY AUTHORITY





EXIT 79 A

ILLINOIS
171

SOUTH

Cumberland Ave

EXIT  ONLY

EXIT 79 A

SOUTH

Cumberland Ave

PLAZA 19

UNPAID
TOLLS

7 DAYS TO
PAY ONLINE

ILLINOIS TOLLWAY

INTRODUCTION

Roadway Signing and Pavement Marking Guidelines

The manual on Roadway Signing and Pavement Marking Guidelines provides guidance on the Illinois Tollway standards for the design, fabrication and installation of signs, along with the application of pavement markings. The manual's content provides a detailed listing of criteria, guidelines, policies and procedures to be used by the Design Section Engineer, signing and graphic consultants, fabricators, Contractor Managers and Contractors.

The Roadway Signing and Pavement Marking Guidelines dated March 2025 replaces the version issued March 2024.

Major Revision Highlights:

Section 1.0: Introduction and Overview	
Article 1.3	Clarified the definition of “auxiliary lane”.
Section 2.0: Sign Specifications	
Article 2.6	Added evaluation criteria and updated guidance for overhead sign illumination.
Article 2.7	Revised guidance regarding E(modified) font. Added design guidance regarding arrow types and sizes.
Article 2.9	Added reference to Article 4.3 for sign border criteria.
Article 2.11	Added information regarding the Tollway TOLL pictograph for mainline and ramp facilities.
Article 2.12	Added guidance and information regarding Tollway Sign Shop fabrication limitations for extruded aluminum channel signs. Updated references to IDOT specifications for reflective sheeting.
Article 2.16	Updated CAD software references to current software versions.
Section 3.0: Sign Placement – Major Applications	
Article 3.1.4	Added article for language concerning FAA Regulations
Article 3.2.2 Article 3.2.3 Article 3.2.15	Revised warning advisory speed sign language to be in accordance with Article 6.6.
Article 3.2.11 Article 3.2.12	Revised split arrow sign to be consistent with MUTCD (11th Edition).
Section 4.0: Guide Signs	
Article 4.3	Added sign sizing guidance for consistency with Tollway Sign Shop fabrication limitations. Added sign panel border design guidance.
Article 4.4	Added design guidance for fonts on guide signs.
Article 4.6	Added design guidance for spacing elements on guide signs.
Article 4.7.4	Revised to allow Narrow Exit Gore Sign when barrier wall is present on both ramp and mainline.

Section 6.0: Warning Signs	
<u>Article 6.6</u>	Revised criteria for exit ramp warning sign guidance for all exit ramp types.
Article 6.8.1	Removed article; Exit and Ramp Advisory Speed Signs are now incorporated into the 11 th Edition of the MUTCD.
<u>Formerly Article 6.8.2</u> <u>Current Article 6.8.1</u>	Renumbered article number and illustration number.
<u>Formerly Article 6.8.3</u> <u>Current Article 6.8.2</u>	Renumbered article number and illustration number.
<u>Formerly Article 6.8.4</u> <u>Current Article 6.8.3</u>	Renumbered article number and illustration number.
<u>Formerly Article 6.8.5</u> <u>Current Article 6.8.4</u>	Renumbered article number and illustration number.
<u>Formerly Article 6.8.6</u> <u>Current Article 6.8.5</u>	Renumbered article number and illustration number.
<u>Formerly Article 6.8.7</u> <u>Current Article 6.8.6</u>	Renumbered article number and illustration number.
<u>Formerly Article 6.8.8</u> <u>Current Article 6.8.7</u>	Renumbered article number and illustration number.
Section 7.0: Plaza Signs	
<u>Article 7.6.12</u>	Revised Tollway “Split Arrow” sign to standard “Double Arrow” sign (W12-1) from 11 th Edition of the MUTCD.
Section 9.0 Information Signs	
<u>Article 9.7.9</u>	Added design guidance for consistency with Tollway Sign Shop sign fabrication limitations.
<u>Article 9.7.30</u>	Revised text to be consistent with revised *999 HELP sign design.
<u>Article 9.7.31</u>	Revised text to be consistent with revised Call *999 for Roadside Assistance (H.E.L.P.) sign design.
Section 12.0: Pavement Marking Layout	
<u>Article 12.6</u>	Added additional requirements for pavement markings in toll plazas.
<u>Article 12.14</u>	New article that provides design guidance on shoulder pavement marking diagonals, which is dependent on shoulder width.
Section 13.0 Engineering Study	
<u>Article 13.2</u>	Removed Engineering Study #8 Taper Type Exit Warning Signs. This information has been superseded by revised requirements included in Article 6.6. Subsequent engineering studies have been renumbered accordingly.

Section 14.0: References	
Article 14.1	New Article.
Appendix A	
SP-IT5B	Revised illustration to clarify wrong-way signage without turn lane channelization.
SP-IT5C	New illustration for Exit Ramp Standard Wrong Way Signage with turn lane channelization.
SP-IT21	New illustration for evaluating Overhead Sign Illumination for Sag Vertical Curves.
Appendix D	
Illustration W-IT1 Illustration W-IT2	Removed illustrations W-IT1 (Combination Horizontal Alignment and Exit Advisory Speed) and W-IT2 (Combination Horizontal Alignment and Ramp Advisory Speed) since these are now incorporated into the 11 th Edition of the MUTCD. Renumbered all subsequent illustration numbers.
Appendix E	
Illustration P-IT18	Removed illustration P-IT18 (Split Arrow) sign because it is now incorporated into 11th Edition of the MUTCD.
Appendix G	
Illustration I-IT21	Revised *999 HELP (with sponsor) sign panel detail.
Illustration I-IT22	Revised Call *999 for HELP sign panel detail.
Appendix H	
PM-IT7	Revised illustration to clarify wrong-way arrow pavement markings usage and placement.
Appendix I	
Engineering Study #8	Engineering study #8 (Taper Type Exit Warning Signs) removed. Renumbered all subsequent engineering studies.

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SECTION 1.0 INTRODUCTION AND OVERVIEW

1.1 Purpose and Approach

The *Illinois Tollway Roadway Signing and Pavement Marking Guidelines* (RSPMG) are written for the following qualified professionals, who may be unfamiliar with the Illinois State Toll Highway Authority (Tollway), in assisting them to quickly comprehend the Illinois Tollway standards for the design, fabrication, and installation of signs unique to the Illinois Tollway:

- Designers
- Signing and Graphic Consultants
- Fabricators
- Installation Contractors
- Construction Managers

Designer: The person (or consultant team) responsible for performing a design task for an Illinois Tollway project. Although this is typically the Design Section Engineer (DSE), it can also include a person (or consultant team) hired by a Contractor to perform design as part of a Value Engineering Proposal or part of a Performance Based Design. This document will use the term “Designer”, which covers anyone performing design, and will only use the term “DSE” when discussing tasks specific to the DSE.

All signing on the Illinois Tollway should use symbols to convey messages as opposed to text, wherever possible.

In general, signs should be used where specific regulations apply, where hazards are not self-evident or where information is needed to inform the motorist. Sign selection, design, and placement should be based on an engineering study or the application of engineering judgment in conformance with the *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD). Each sign should be displayed only for the specific purpose as stated in the MUTCD.

1.2 Abbreviations and Acronyms

AASHTO	American Association of State Highway and Transportation Officials
AET	All Electronic Tolling
ANSI	American National Standards Institute
CIS	Crash Investigation Site
DSE	Design Section Engineer
ETC	Electronic Toll Collection
FHWA	Federal Highway Administration
HMA	Hot Mix Asphalt
IDOT	Illinois Department of Transportation
IPO	I-PASS Only
IPOPO	I-Pass or Pay Online
ISTHA	Illinois State Toll Highway Authority, also Illinois Tollway
LED	Light Emitting Diode
MPH or mph	Miles per Hour

<i>MUTCD</i>	Manual on Uniform Traffic Control Devices for Streets and Highways
<i>NCHRP</i>	National Cooperative Highway Research Program
<i>ORT</i>	Open-Road Tolling
<i>PCMS</i>	Portable Changeable Message Sign or DMS
<i>RPM</i>	Raised Pavement Marker
<i>RSPMG</i>	Roadway Signing and Pavement Markings Guidelines
<i>RV</i>	Recreational Vehicle
<i>USDOT</i>	United States Department of Transportation
<i>VPH or vph</i>	Vehicles per Hour

1.3 Definitions

This section contains definitions of frequently used terms as well as definitions with special or specific meanings as it applies to Illinois Tollway work. Whenever in this Manual the following proper nouns are used, their intent and meaning, both the singular and plural thereof, shall be as follows:

AASHTO: American Association of State Highway Transportation Officials.

AASHTO Roadside Design Guide: A guide that presents a synthesis of current information and operating practices related to roadside safety. It is developed and maintained by the American Association of State Highway Transportation Officials (AASHTO) Subcommittee on Design, Technical Committee for Roadside Safety.

Advisory Speed: A recommended speed for all vehicles operating on a section of highway and based on the highway design, operating characteristics, and conditions.

All Electronic Toll (AET): AET operation is any form of tolling that does not involve manual payment of tolls (e.g., by cash, coin or credit card) and in which payment locations are unstaffed. AET may apply to an entire facility or to a specific payment location. On the Illinois Tollway, AET facilities require drivers to either have an I-PASS transponder, or to go online and pay there after using the facility. Compare to ETC.

Auxiliary Lane: An added lane for acceleration, deceleration, or weaving that is typically between 2 miles and ¼ mile in length. In certain situations, a mainline lane may become a mandatory exit only lane. In this condition, the mainline lane becomes an auxiliary lane.

Barrier Warrant: A Barrier Warrant consists of criterion that identifies an area of concern which should be shielded by a traffic barrier, if judged to be practical. The warrant shall be based on Illinois Tollway /AASHTO Roadside Design Guide guideline.

Changeable Message Sign: A sign that can display more than one message (one of which might be a “blank” display), changeable manually, by remote control, or by automatic control. Electronic-display changeable message signs are referred to as Dynamic Message Signs (DMS) in the National Intelligent Transportation Systems (ITS) Architecture and are referred to as Variable Message Signs in the National Electrical Manufacturers Association (NEMA) standards publication.

Chief Engineering Officer: The individual responsible for the Engineering Division of the Illinois Tollway.

Clear Zone: The Clear Zone is defined by AASHTO Roadside Design Guide as “The unobstructed, traversable area provided beyond the edge of the through traveled way for the recovery of errant vehicles.” See the Illinois Tollway Traffic Barrier Guidelines for detailed definition and application of the clear zone by the Illinois Tollway.

Community: Any municipality, or unincorporated County, within Illinois acting as a unit of local government.

Consulting Engineer: The Engineer or firm of Engineers retained by the Illinois Tollway for the purpose of carrying out the duties imposed on the Consulting Engineer pursuant to the terms and conditions of the contract between the Consulting Engineer and the Illinois Tollway and any trust indenture, and any additional requirements, entered, by, or on behalf of the Illinois Tollway. Also referred to as the General Engineering Consultant (GEC).

Contractor: The individual, partnership, firm or corporation (or any combination thereof) that, after being selected by the Illinois Tollway as the successful bidder, has entered the Construction Contract with the Illinois Tollway.

Crashworthy: A characteristic of a roadside appurtenance that has been successfully crash tested for a certain test level in accordance with a national standard such as the NCHRP Report 350, Recommended Procedures for the Safety Performance Evaluation of Highway Features for previous installations or AASHTO Manual for Assessing Safety Hardware for any new installations. See Illinois Tollway Traffic Barrier Guidelines Section 8.0.

Designer: The person (or consultant team) responsible for performing a design task for an Illinois Tollway project. Although this is typically the Design Section Engineer (DSE), it may also include a person (or consultant team) hired by a Contractor to perform design as part of a Value Engineering Proposal or part of a Performance Based Design. This document shall use the term “Designer” which covers anyone performing design and shall only use the term “DSE” when discussing tasks specific to the DSE.

Design Section Engineer (DSE): The Engineer or firm of Engineers and their duly authorized employees, agents and representatives retained by the Illinois Tollway to prepare the Contract Plans for a Design Section.

Downstream: The direction going with the flow of traffic.

Dropped Lane: On a conventional roadway, a through lane that becomes a mandatory turn lane. On a freeway, expressway, or tollway, 1) a through lane that becomes a mandatory exit lane, or 2) an auxiliary lane between successive entrance and exit ramps of adjacent interchanges from which drivers must exit at the downstream interchange. The end of an acceleration lane and reductions in the number of through lanes that do not involve a mandatory turn or exit are not considered dropped lanes.

Edge of Pavement (EOP): The longitudinal joint between roadway pavement and shoulder pavement. In many locations, the outside lane of roadway pavement was built 1’ wider, or even 2’ wider than it is striped.

Also, Lane 1 could be 14’ wide and striped at 12’.

For barrier warrant calculations, offsets are referenced from the direction of traffic flow and measured from the edge of the traveled way.

Electronic Toll Collection (ETC): A system for automated collection of tolls from moving or stopped vehicles through wireless technologies such as radio-frequency communication or optical scanning. ETC systems are classified as one of the following: (1) systems that require users to have registered toll accounts, with the use of equipment inside or on the exterior of vehicles, such as a transponder or barcode decal, that communicates with or is detected by roadside or overhead receiving equipment, or with the use of license plate optical scanning, to automatically deduct the toll from the registered user account, or (2) systems that do not require users to have registered toll accounts because vehicle license plates are optically scanned and invoices for the toll amount are sent through postal mail to the address of the vehicle owner. The use of the color purple as a sign background is reserved for use with type (1) ETC system. On the Illinois Tollway, ETC was previously mixed with cash collection at payment locations however, all cash options have been removed from the tollway. Compare to AET collection.

Engineering Judgment: The evaluation of available pertinent information and the application of appropriate principles, provisions, and practices as contained in this Manual and other sources, for the purpose of deciding upon the applicability, design, operation, or installation of a traffic control device. Engineering judgment shall be exercised by an engineer, or by an individual working under the supervision of an engineer, through the application of procedures and criteria established by the engineer. Documentation of engineering judgment is not required.

Engineering Study: The comprehensive analysis and evaluation of available pertinent information and the application of appropriate principles, provisions, and practices as contained in this Manual and other sources, for the purpose of deciding upon the applicability, design, operation, or installation of a traffic control device. An engineering study shall be performed by an engineer, or by an individual working under the supervision of an engineer, through the application of procedures and criteria established by the engineer. An engineering study shall be documented.

Expressway: A divided highway with partial control of access.

Freeway: A divided highway with full control of access.

Guideline: A Guideline is an official recommendation indicating how something should be done or what sort of action should be taken in a particular circumstance.

Guide Sign: A sign that shows route designations, destinations, directions, distances, services, points of interest, or other geographical, recreational, or cultural information.

Highway: A general term for denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.

Illinois Tollway Supplemental Specifications: The Illinois Tollway Supplemental Specifications to the Illinois Department of Transportation (IDOT) Standard Specifications for Road and Bridge Construction adopted April 1, 2016.

Illustration: Sheet showing layout individual signs prepared using GuideSIGN®, which include font, text sizes and pictographs or symbols used.

Interchange: A system of interconnecting roadways providing for traffic movement between two or more highways that do not intersect at grade.

Intermediate Interchange: An interchange with an urban or rural route that is not a major or minor interchange.

Major Interchange: An interchange with another freeway or expressway, or an interchange with a high-volume multi-lane highway, principal urban arterial, or major rural route where the interchanging traffic is heavy or includes many road users unfamiliar with the area.

Manual on Uniform Traffic Control Devices for Streets and Highways (*MUTCD*): FHWA National Manual on Uniform Traffic Control Devices for Streets and Highways and as amended by the State of Illinois Department of Transportation (IDOT) supplement to the *MUTCD*. Publication which defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public traffic. The *MUTCD* is published by the Federal Highway Administration (FHWA) under 23 Code of Federal Regulations (CFR), Part 655, Subpart F.

May: A permissive or provisional condition. No requirement for design or application is intended.

Minor Interchange: An interchange where traffic is local and very light, such as interchanges with land service access roads. Where the sum of the exit volumes is estimated to be lower than 100 vehicles per day in the design year, the interchange is classified as local.

Multi-Lane: More than one lane moving in the same direction. A multi-lane street, highway, or roadway has a basic cross-section comprised of two or more through lanes in one or both directions. A multi-lane approach has two or more lanes moving toward the intersection, including turning lanes.

Municipality: Any community, or the unincorporated County, within Illinois acting as a unit of local government.

Open-Road Tolling (ORT): A system designed to allow electronic toll collection (ETC) from vehicles traveling at normal highway speeds. Open-Road Tolling might be used on toll roads or toll facilities in conjunction with toll plazas. Open-Road Tolling is also typically used on managed lanes and on toll facilities that only accept payment by ETC.

Overhead Sign: A sign that is placed such that a portion or the entirety of the sign or its support is directly above the roadway or shoulder such that vehicles travel below it. Typical installations include signs placed on cantilever arms that extend over the roadway or shoulder, on sign support structures that span the entire width of the pavement, on mast arms or span wires that also support traffic control signals, and on highway bridges that cross over the roadway.

Physical Gore: A longitudinal point where a physical barrier or the lack of a paved surface inhibits road users from crossing from a ramp or channelized turn lane or channelized entering lane to the adjacent through lane(s) or vice versa.

Plaque: A traffic control device intended to communicate specific information to road users through a word, symbol, or arrow legend that is placed immediately adjacent to a sign to supplement the message on the sign. The difference between a plaque and a sign is that a plaque cannot be used alone.

Post-Mounted Sign: A sign that is placed to the side of the roadway such that no portion of the sign or its support is directly above the roadway or shoulder.

Project: The proposed development that is the subject of the Services stipulated in the Agreement. It may be comprised of one or more Design or Construction Sections.

Project Engineer: A member of the DSE staff responsible for the design of a singular discipline identified within the Contract Documents.

Project Manager (PM): The representative of the Chief Engineering Officer assigned to be the primary technical and administrative liaison between the Illinois Tollway and its various Contractors, Construction Managers, Designers of Record, Program Manager, and Consulting Engineers.

Raised Pavement Marker (RPM): A device mounted on or in a road surface that has a height generally not exceeding approximately 1 inch above the road surface for a permanent marker, or not exceeding approximately 2 inches above the road surface for a temporary flexible marker, and that is intended to be used as a positioning guide and/or to supplement or substitute for pavement markings.

Regulatory Sign: A sign that gives notice to road users of traffic laws or regulations.

Retroreflectivity: A property of a surface that allows a large portion of the light coming from a point source to be returned directly back to a point near its origin.

Road User: A vehicle operator within the Illinois Tollway, other highway, or roads open to public travel.

Roadway: A Roadway consists of all lanes, auxiliary lanes and shoulders in one direction of travel.

Shall: A mandatory condition. Where certain requirements in the design or application of the device are described with the “shall” stipulation, it is mandatory when an installation is made that these requirements be met.

Should: An advisory condition. Where the word “should” be used, it is considered to be advisable usage, is subject to engineering study in most cases, and is recommended but not mandatory.

Sign: Any traffic control device that is intended to communicate specific information to road users through a word, symbol, and/or arrow legend. Signs do not include highway traffic signals, pavement markings, delineators, or channelization devices.

Sign Assembly: A group of signs, located on the same support(s) that supplement one another in conveying information to road users.

Sign Illumination: Either internal or external lighting that shows similar color by day or night. Street or highway lighting shall not be considered as meeting this definition.

Sign Legend: All word messages, logos, pictographs, and symbol and arrow designs that are intended to convey specific meanings. The border, if any, on a sign is not considered to be a part of the legend.

Sign Panel: A separate panel or piece of material containing a word, symbol, and/or arrow legend that is affixed to the face of a sign.

Signal Backplate: A thin strip of material that extends outward from and parallel to a signal face on all sides of a signal housing to provide a background for improved visibility of the signal indications.

Signing: Individual signs or a group of signs, not necessarily on the same support(s), that supplement one another in conveying information to road users.

Speed Limit: The maximum (or minimum) speed applicable to a section of highway as established by law or regulation.

Standard Drawings: The Illinois Tollway's standard details for items such as drainage appurtenances, signs, pavement, guardrail, etc., listed by the Design Section Engineer in the Index of Drawings in the Contract Plans and inserted into the Contract Plans by the Illinois Tollway prior to advertising.

Standard Specifications: The most recent edition of Illinois Department of Transportation (IDOT) "Standard Specifications for Road and Bridge Construction".

Supplemental Specifications: Additions and revisions to the Standard Specifications published by IDOT that are adopted subsequent to issuance of the Standard Specifications for Road and Bridge Construction.

Symbol: The approved design of a pictorial representation of a specific traffic control message for signs, pavement markings, traffic control signals, or other traffic control devices, as shown in the *Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD)*.

Theoretical Gore: A longitudinal point at the upstream end of a neutral area at an exit ramp or channelized turn lane where the channelizing lines that separate the ramp or channelized turn lane from the adjacent through lane(s) begin to diverge, or a longitudinal point at the downstream end of a neutral area at an entrance ramp or channelized entering lane where the channelizing lines that separate the ramp or channelized entering lane from the adjacent through lane(s) intersect each other.

Through Lane: A lane that carries mainline traffic for typically one mile or more.

Toll Booth: A shelter where a toll attendant is stationed to collect tolls or issue toll tickets. A toll booth is located adjacent to a toll lane and is typically set on a toll island.

Toll Lane: An individual lane located within a toll plaza in which a toll payment is collected, or, for toll-ticket systems, a toll ticket is issued.

Toll Plaza: The location at which tolls are collected consisting of a grouping of toll booths, toll islands, toll lanes, and, typically, a canopy. Toll plazas might be located on highway mainlines or on interchange ramps. A mainline toll plaza is sometimes referred to as a barrier toll plaza because it interrupts the traffic flow.

Traffic Control Devices: Traffic Control Devices are all signs, lights, signals, markings, channelizing devices and barriers placed on or adjacent to the roadway used to regulate, warn or guide motorists.

Upstream: The direction going against the flow of traffic.

Utility: The privately, publicly or cooperatively owned lines, facilities and systems for transporting persons or property, for producing, transmitting or distributing communications, electric power, light, heat, gas, oil, crude products, water, steam, waste, sewerage, storm water not connected with highway drainage, and other similar commodities, including publicly owned fire and police signal systems and street lighting systems or any part thereof which directly or indirectly serve the public. The term “utility” shall also mean the utility company, inclusive of any wholly owned or controlled subsidiary.

Value Engineering: Method of evaluation done by the Contractor to provide a written proposal to the Illinois Tollway for modifying the Contract Documents to provide innovative, alternative, and/or lower cost construction without impairing the essential functions and characteristics of the facility including, but not limited to, service life, reliability, economy of operation, ease of maintenance, necessary standardized features, desired appearance, or Illinois Department of Transportation (IDOT) and Illinois Tollway design standards. Refer to Supplemental Specifications Article 104.07 and Capital Program Procedure P5150.

Vehicle: Every device in, upon, or by which any person or property can be transported or drawn upon a highway, except trains and light rail transit operating in exclusive or semi-exclusive alignments. Light rail transit equipment operating in a mixed-use alignment, to which other traffic is not required to yield the right-of-way by law, is a vehicle.

Warning Sign: A sign that gives notice to road users of a situation that might not be readily apparent.

1.4 Relationship to Other Manuals

The RSPMG is devised in accordance with the guidelines given in both the national *MUTCD, 2023 Edition*, published by the U.S. Department of Transportation (USDOT), and the *Illinois Supplement to the MUTCD*, published by the State of Illinois Department of Transportation (IDOT). Whereas the Illinois Supplement covers a wide range of facilities as required for the statewide design purposes, these guidelines are designed to specifically address signing and pavement marking unique to the Illinois Tollway System. The RSPMG also governs trailblazing signing and off-network signing related to Illinois Tollway routes. In the event of conflict between the directives in these guidelines and state or federal standards, the user should consult the Illinois Tollway staff for appropriate resolution.

Since the Illinois Tollway System connects with interstate highways serving three different states, a significant amount of interstate traffic requires the use of uniform signing that is easily recognizable to both in-state and out-of-state travelers. For this reason, the national *MUTCD* was referenced in conjunction with the Illinois Supplement to produce this text.

Letter and message spacing for sign layout shall be based on the current edition of the Federal Highway Administration’s (FHWA) *Standard Highway Signs and Markings* book. The FHWA’s *Standard Alphabets for Traffic Control Devices* shall also be used for selecting the proper letter series. Reference is made to the American Association of State Highway and Transportation

Officials (AASHTO) *List of Control Cities for Use in Guide Signs on Interstate Highways* for the determination and use of control cities on Illinois Tollway guide signs when associated with an interstate highway. In general, sign supports are based on the latest edition of AASHTO's *Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals*.

Certain circumstances might dictate that other agency standards and guidelines be used in conjunction with the RSPMG. For example, a sign might need to be attached to an overpass belonging to IDOT. In such a case, the sign design should follow the RSPMG but the attachment details would require IDOT's review and approval.

Due to the nature of the Illinois Tollway System, there are numerous signing situations that are not addressed in the *MUTCD*. Most of these signing situations deal with the toll plaza areas, oasis areas and special application signs that are unique to the Illinois Tollway. Since none of these signs are standard signs from the *MUTCD*, all of these shall be designed and fabricated according to the guidelines set forth here and with reference to the *MUTCD* and the *Standard Highway Signs and Markings* book.

For guidance on signing used in construction zones, Designers shall refer to the *Illinois Tollway Roadway Traffic Control and Communications Manual*.

1.5 Sign Classifications

The following general classifications of sign types are used by the Illinois Tollway:

1. **Guide Signs** provide directions to the driver regarding traffic lanes, exits, interchanges, routes and destinations. Guide signs are placed in advance of, or at the point where, a decision is to be made regarding a change in direction of travel. The signing shall furnish drivers with clear instruction for orderly progress to their destinations.
2. **Regulatory Signs** inform the driver of traffic laws or regulations and indicate the applicability of legal requirements that might not otherwise be apparent.
3. **Warning Signs** alert the driver to potentially hazardous conditions on or adjacent to the roadway that might not otherwise be readily apparent.
4. **Plaza Signs** advise and direct drivers to and through toll plazas. These can be guide, regulatory, or warning signs, or combinations of the three types, all aimed at plaza area traffic control.
5. **All Electronic Toll Signs** provide traffic control for cashless toll payment using electronic transponders. Most of these signs are combinations of guide, regulatory, and warning signs.
6. **Information Signs** identify services, communities, structures and crossroads, and identify the presence of off-road destinations at certain exits. These signs are ancillary to safe use of the roadway. These are a subgroup of Guide signs in the *MUTCD*.
7. A specific subcategory of **Information Signs** is **Traffic Generator Signs**. These are supplemental guide signs that may show destinations not displayed on the major guide signs. The Illinois Tollway shall review all such signs and has sanctioning power regarding the implementation of new traffic generator signs. The following is a general list of traffic generator signs:
 - Cultural Facilities: Museums, Performing Arts
 - Government Facilities: Courts, Motor Vehicle, Law Enforcement Agencies
 - Higher Educational Facilities

- Recreational Facilities
- Transit Facilities
- Points of Interest
- Airports
- Municipalities

Traffic Generator signs are **not** addressed in this document. Consult the latest edition of the *Traffic Generator and Specific Service Sign Policy Guide* for guidance on use and design.

1.6 Sign Naming

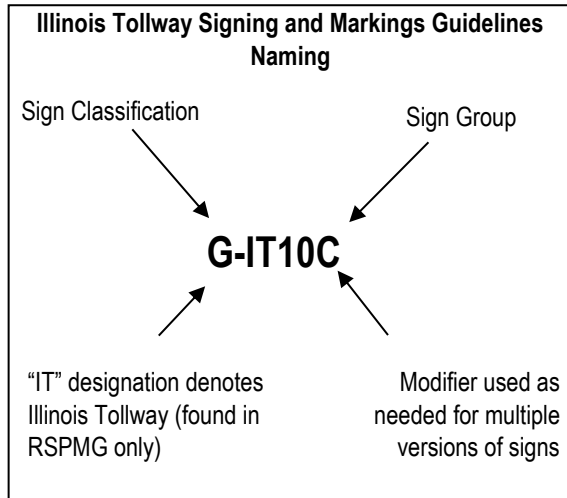


Figure 1-1 Sign Naming Conventions

All national standard signs are designated in the *MUTCD* with letters and numbers such as R2-1. The beginning letter often indicates the general type of sign, such as “R” for regulatory or “W” for warning. The first number indicates a sign group, and the number after the hyphen is the designation of the sign within its group.

State of Illinois standard signs that differ from those in the *MUTCD* have a letter and number designation beginning with the letter “I,” such as I100, to distinguish them from the signs found in the *MUTCD*. For example, instead of a W10-11 sign in the *MUTCD*, Illinois replaces it with a different sign designated W10-I100.

Illinois Tollway standard signs may or may not differ from those in the *MUTCD* and the Illinois Supplement.

The Illinois Tollway uses the following beginning letters to indicate sign classification:

- G = Guide**
- R = Regulatory**
- W = Warning**
- P = Plaza (Ramp and/or Mainline)**
- AET = All Electronic Toll**
- I = Information**

This is followed by “IT” for Illinois Tollway and a number indicating a sign group that may in turn be followed by an upper-case letter indicating variations on the group, e.g., G-IT2A and G-IT2B.

1.6.1 Roadway and Interchange Classifications

All Illinois Tollway facilities are considered to be freeways. The Illinois Tollway does not maintain or own any expressways. For the purposes of guide sign lettering and number sizes as detailed in the MUTCD, Illinois Tollway Interchanges fall into the following categories described in MUTCD Section 2E.11:

1. Major – Freeway to Freeway (interstate to interstate)
2. Intermediate – All other interchanges on the Illinois Tollway

1.7 Terminology

The RSPMG uses the words “shall”, “should”, and “may” throughout the text. To clarify the meanings intended in this guideline by the use of these words, the following definitions apply:

SHALL – a mandatory condition. Where certain requirements in the design or application of the device are described with the “shall” stipulation, it is mandatory when an installation is made that these requirements be met. A deviation will be considered only if a documented engineering study is completed and is not guaranteed.

SHOULD – an advisory condition. Where the word “should” be used, it is considered to be advisable usage, subject to engineering study in most cases, and is recommended but not mandatory. General Illinois Tollway practice is to support significant deviations from a “should” condition with written documentation.

MAY – a permissive or provisional condition. No requirement for design or application is intended, and typically conveys a design option.

The basic guidelines set forth in this text should be considered as generalizations without reference to actual field conditions. All dimensions and distances shall be viewed as the allowable minimums (or maximums, as stated) and shall be adhered to wherever possible.

SECTION 2.0 SIGN SPECIFICATIONS

2.1 Sign Purpose

The purpose of signing is to provide clear, concise information and movement directives to motorists traveling on the Illinois Tollway by consistent and effective signing. The Illinois Tollway generally adheres to the national *MUTCD*, the *Standard Highway Signs and Markings* book, and the *Illinois Supplement to the national MUTCD* for typical signs. However, the Illinois Tollway has a number of signs that are unique to the Illinois Tollway and are specified here in the RSPMG.

Signing and pictographs unique to the Illinois Tollway were redesigned as part of the Open-Road Tolling (ORT) program, based on national best practices with input from engineering, planning, and communications staff, and with the overall twin goals of increased comprehensibility and safety. The aesthetics of the new signing complements the new Illinois Tollway architecture and is an intended counterpoint to the natural landscape. The new I-Pass pictograph illustrates the relationship between the various aesthetic tools for image-making: the heroic “I” is architectural in character. The roadway curve embedded in the “I” conveys motion and speed and natural, more organic forms seen in the landscape.

2.2 Sign Design

The Illinois Tollway distinguishes between Guide Signs (G-series), Regulatory Signs (R-series), Warning Signs (W-series), Plaza Signs (P-series), All Electronic Toll (AET-series), and Information Signs (I-series). Information Signs are a subgroup of Guide Signs that typically identify structures and crossroad routes, and the presence of special destinations at certain exits. These signs are usually ancillary to safe use of the roadway.

Road users shall be guided with consistent signing on the approaches to interchanges, whether driving through rural or urban areas. Since geographical, geometric and operating factors regularly create significant differences between urban and rural conditions, the signing needs to take the specific conditions into account.

Message layouts for each sign are provided in the sign illustrations sections of these Guidelines. Messages shall not differ from the messages presented in this document unless a specific situation warrants a change. In this case, it is left to the Designer to determine what an appropriate message layout should be, given the constraints of the specific situation and subject to the approval of the Illinois Tollway. The Designer shall use clear, simple language to convey the full meaning and intent of the altered sign. Consistent signing shall be used throughout the Illinois Tollway System.

2.3 Sign Shape

Most signs utilized on the Illinois Tollway System are rectangular in shape, although Warning Signs may be diamonds. Standard *MUTCD* and IDOT signs such as STOP and YIELD signs that are not rectangular may also appear as part of sign assemblies on the Illinois Tollway.

2.4 Sign Size

The size of specific signs should be determined by the message displayed on the sign and any physical constraints at the sign location. Sign messages shall be sized according to the *MUTCD* and the direction presented herein.

2.5 Sign Color

The background color of signs used on the Illinois Tollway System shall follow the *MUTCD* standards. Refer to Illinois Tollway Special Provision, “Retroreflective Sheeting for Information Signs”.

2.6 Sign ReflectORIZATION and Illumination

For all active design projects, the Illinois Tollway shall replace all signs with diamond grade equivalent sheeting, as described in Article 2.12. In general, all toll plaza signs should also be replaced in this manner. Designers shall adhere to the IDOT Standard Specifications 720 & 1091 as well as to the direction by the Illinois Tollway Project Manager (PM) in compliance with this directive.

Prismatic sheeting (see Article 2.12 for sign sheeting materials) will now be used unless otherwise directed by the Illinois Tollway. This will eliminate the installation of sign luminaires on overhead sign structures span type, overhead sign structures cantilever type, and bridge-mounted structures except as noted below. Sheeting color shall comply with the standard color tolerance chart issued by USDOT (see Title 23 of the Code of Federal Regulations, Part 655, Appendix to Subpart F, Tables 1 through 6) and FHWA, and with all specifications outlined in ASTM D 4956. Intensity is to follow ASTM E 810 and applicable sections of ASTM D 4956-04.

Refer to Illinois Tollway Special Provisions, “Retroreflective Sheeting for Information Signs”.

The Illinois Tollway has eliminated the installation of sign luminaires on most overhead signs. The current policy is only to install luminaires on overhead sign structures where sight distance or physical roadway geometric conditions warrant their use. If the project involves meeting the following condition and the evaluation shows that sign illumination is required, the Designer shall refer to Illinois Tollway *Structure Design Manual* and Illinois Tollway *Guidelines for Roadway Illumination*.

- Headlight illumination of overhead signs could be limited when the overhead sign is located in proximity of a sag vertical curve ($L_{curve} \leq 1,000$ feet). When this condition applies, a headlight profile analysis/exhibit should be completed by the DSE to evaluate if sign illumination is required. Illustration SP-IT21 located in Appendix A provides guidance and parameters regarding overhead sign illumination evaluation near sag vertical curves. If the evaluation shows that the headlights do not fully illuminate the sign then overhead sign illumination should be provided.

The installation of flashing beacons will continue to be required for signage indicating the end of the Illinois Tollway system and in conjunction with ramp queue detection warning signs (W-IT4). Additionally, flashing beacons shall also be required at existing plaza barriers.

2.7 Sign Message

The message of Illinois Tollway signs shall use the minimum number of words, pictographs, symbols and diagrams to convey a message safely and consistently to roadway users. The size of lettering shall follow *MUTCD* minimum sizing for various signs and Illinois Tollway-specified font and sizes as shown on the GuideSIGN© layouts and sign illustrations included in these Guidelines. Symbols and pictographs, if used, should be sized proportionately to the sign or surface on which they are mounted such that an attractive relationship between background 'open space' and the symbol is created.

Font: All lettering type styles and spacing requirements shall follow the *MUTCD* standards (tables 2E-2 through 2E-4) and the *Standard Highway Signs and Markings* book and current supplements.

Due to the January 25, 2016, Federal Register Vol. 81, No. 15 Notice by the FHWA, Clearview Font is no longer to be used for new sign installations or for sign replacements.

The Illinois Tollway has a standardized letter style and spacing for signs to promote uniform application. The Illinois Tollway uses E Modified fonts on all guide signs per the following requirements:

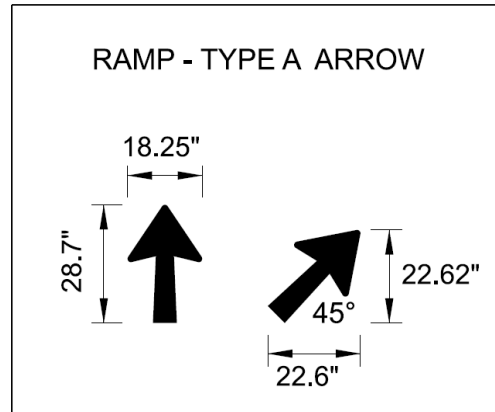
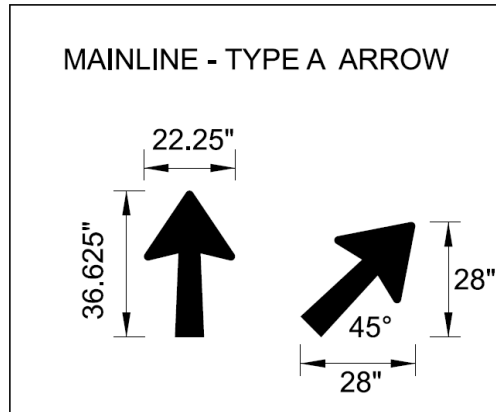
1. E Modified font shall be used for mixed-case lettering (places, names, and destinations). For any text that is all upper-case or special characters, refer to the sign illustrations for font type.
2. When numbers are used as part of a street name, such as 75th Street, E Modified font shall be used. For all other cases, refer to the sign illustrations for font type.
3. Lower-case letter loop heights for E Modified fonts shall be 75% of the corresponding upper-case letter heights.
4. E Modified font spacing shall follow the spacing tables specific to the E Modified font.

For additional guidance on font type selection, see Section 4.0 and the drawings included in the appendices.

Arrows and Symbols shall be in accordance with the direction provided below and the *Standard Highway Signs and Markings* book and its latest Supplements. Ramp and mainline arrow sizes are included in the figures below.

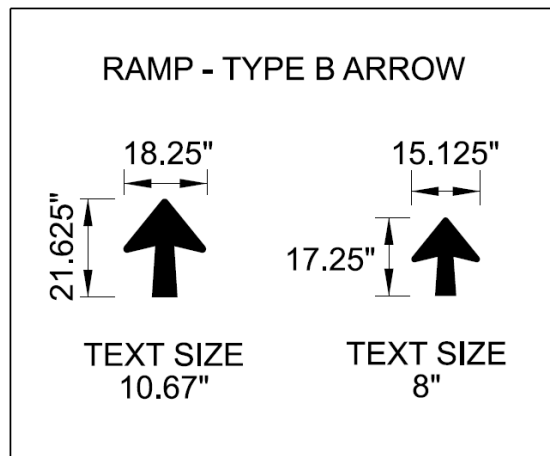
Type A Arrow

- Used on guide signs to indicate the direction to a specific destination or group of destinations.
- For tapered or parallel exits without auxiliary lanes the arrow shall be placed at 45 degrees next to the destination text on the same side of the exit ramp.
- To indicate a through movement for a group of destinations, arrow should be placed in a vertical upward-pointing orientation to the side of the destination text.
- Type A Extended direction arrow may be used on guide signs where added emphasis is needed relative to the amount of legend on the sign. (See Appendix Illustrations).



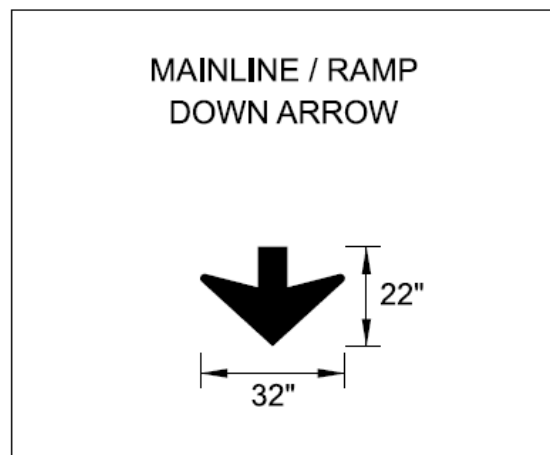
Type B Arrow

- Used on guide signs in a vertical, upward-pointing orientation placed to the side of a single destination or group of destinations.



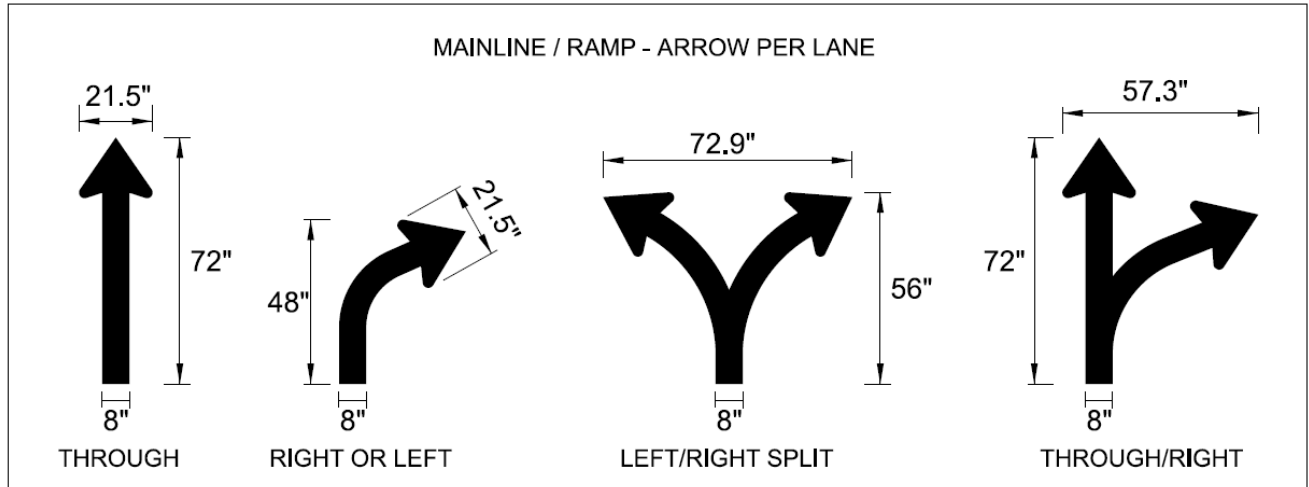
Down Arrow

- Used on overhead signs to indicate a lane to be followed.
- Arrows should be centered on the travel lane and point downward.
- Only one down arrow per lane is allowed.



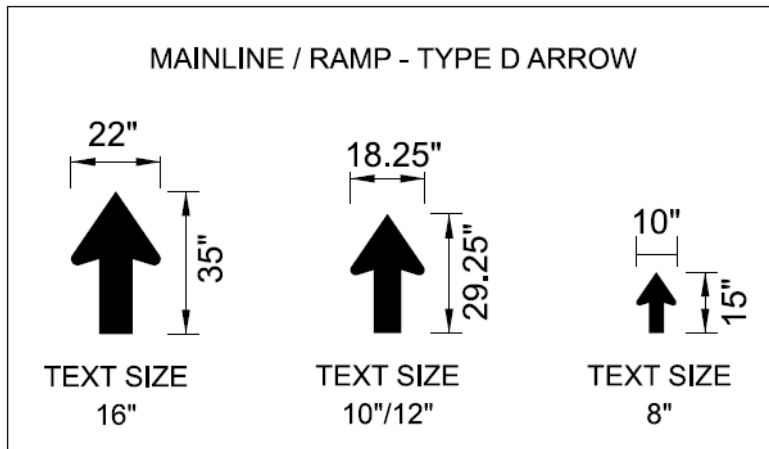
Arrow Per Lane Directional Arrows

- Diagrammatic arrows used on arrow-per-lane overhead guide signs to indicate the destination and movement of a lane
- Arrows should be centered on the travel lane.
- Only one arrow is allowed per lane.
- Tollway exceeds the minimum dimensions specified in the MUTCD.



Type D Arrow

- May be used on post-mounted guide signs to indicate direction.



2.8 Sign Legend

Sign legends shall follow the *MUTCD* which provides guidelines on how to properly space letters in a word, words in a line, lines with other lines, and the proper spacing of edges. These rules shall be followed to ensure that uniformity is attained in all signs.

2.9 Sign Borders

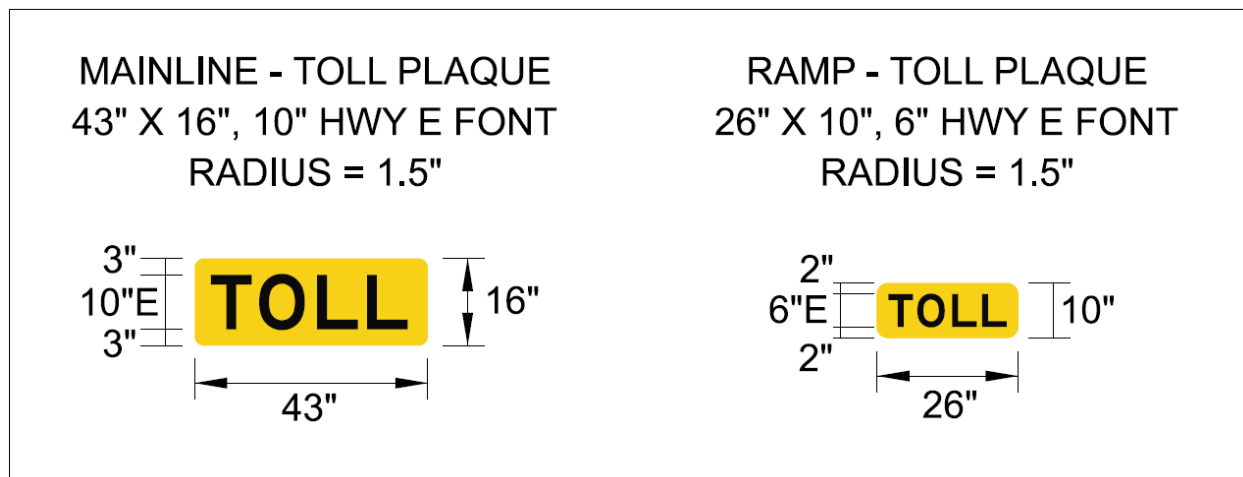
All sign borders shall follow the *MUTCD* standards and the *Standard Highway Signs and Markings* book and its latest Supplements. See additional guidance in Article 4.3 regarding sign border radii and thickness on custom extruded steel guide signs.

2.10 Diagrammatic Signs

Diagrammatic signs are used to show a graphic view of an exit or entry lane configuration. Diagrammatic signs shall follow the *MUTCD* and the *Standard Highway Signs and Markings* book and the current Supplement guidelines and standards for the design and use of diagrammatic signs. In general, diagrammatic signs on the Illinois Tollway are limited to specific applications.

2.11 Sign Symbols and Pictographs

Symbols shall be used, in lieu of words, wherever practical and effective on Illinois Tollway signs. The I-Pass pictograph should be used to assist roadway users in selecting appropriate lanes to pay tolls. Symbols shall follow the *MUTCD* and the standards of the *Standard Highway Signs and Markings* book and current Supplement. The TOLL pictograph shall conform to the dimensions shown below for mainline and ramp applications on guide signs. See Appendix G Illustration I-IT5D for additional information.



2.12 Sign Materials

Flat Sheet Aluminum Signs: Flat sheet aluminum signs should be designed in vertical and horizontal increments of six inches. Flat sheet aluminum signs are made from a blank aluminum sheet covered with reflective sheeting. Messages shall be direct-applied or silk-screened onto the reflective material in a sign shop. Signs that are 60" x 48" or smaller can be constructed with only a single sheet of aluminum blank material; larger signs are made from extrusions.

Extruded Aluminum Channel Signs: Extruded aluminum channel signs should be designed in vertical increments of 12" and horizontal increments of 6"; the maximum sign width that Illinois Tollway Sign Shop can fabricate in a single extrusion length is 42'. Note that exit number plaques (E1-5P) mounted above guide signs are 30" in height and cannot be fabricated by the Tollway.

Sign Shop; therefore, these signs must be fabricated by the contractor. Signs over 42' in length will be fabricated in multiple panels and assembled. The sign design shall locate the joint between multiple panels in a location where there is minimal text and symbols. The joint shall be indicated on the sign panel detail in the plans. Extruded aluminum channel signs are made from 12" high channels placed one on top of the other to form a single sign of the desired height. The sign face is covered with reflective sheeting. The legend and border are generally demountable copy or direct applied reflective sheeting following *MUTCD* standards. This sign material is normally used for large Guide Signs. Refer to Illinois Tollway Standard F10 for connection and mounting details.

Plywood Signs: Plywood signs may only be used for temporary sign installations used for temporary traffic control measures. The plywood should conform to Standard Specifications. The sign material is covered with reflective sheeting and the legend and borders are made of cutout letters and characters from reflective sheeting materials following *MUTCD* standards. Designers shall refer to the guidelines set forth in the *Illinois Tollway Roadway Traffic Control and Communications Manual*.

Reflective Sheeting: All signs shall use ASTM D4956 retroreflective sheeting classification Type XI and shall meet the minimum maintained retro reflectivity levels as specified in Article 1091.03 of the IDOT Standard Specifications for the life of the sign. No additional luminaires shall be required for roadway signs on cantilevers or span structures except as noted in Article 2.6.

2.13 Sign Supports

The design and installation of sign supports shall conform to *Illinois Tollway Standard Drawings* and the latest edition of AASHTO's *Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals*. In addition, sign supports shall meet the performance criteria contained in the *National Cooperative Highway Research Program (NCHRP) Report 350, Recommended Procedures for the Safety Performance Evaluation of Highway Features*, and *Manual for Assessing Safety Hardware (MASH)*.

Overhead Sign Installations: Overhead signs will prove valuable at many locations. The factors justifying the erection of overhead sign displays are enumerated in the *MUTCD*. Overhead signs on the Illinois Tollway shall provide vertical clearance as indicated in the *Illinois Tollway Structure Design Manual* in Section 24.0. The Designer should refer to the appropriate *Illinois Tollway Standard Drawings*, Sign Structure Base Sheets, and design criteria for overhead sign structure span type and overhead sign structure cantilever type for both new and replacement signs to ensure signs do not exceed structure capacity.

Overhead Sign Structure Span Type: A standard overhead sign structure span type should be used where large signs are required to span multiple roadway lanes or when more than one sign is needed at a location. Refer to Illinois Tollway Standard Drawing F1 and Base Sheet M-OHS-720. Base Sheets should be included in all design submittals.

Overhead Sign Structure Cantilever Type: A standard overhead sign structure cantilever type may be used for some applications where only a single sign or two small signs are needed at a location. Refer to Illinois Tollway Standard Drawing F4 and Base Sheet M-OHS-721. Base Sheets should be included in all design submittals.

Overhead Bridge Mounts: Overcrossing bridge structures can often serve as support for overhead signs, and under some circumstances, may be the only practical solution that will

provide adequate viewing distance. Use of such bridge structures as sign supports will eliminate the need for additional foundations and sign supports along the roadside and is the preferred mounting method where feasible. Such signs thus can enhance both safety and economy. Refer to Illinois Tollway Base Sheets M-BRG-503 and M-BRG-504. Overhead bridge mounts shall be coordinated with the owner of the structure (IDOT or other agencies).

Ground-Mounted Steel Channel Bar Posts (U-Channel): Ground-Mounted Steel Channel Bar Posts are frequently used to install regulatory, warning and small guide signs along the Illinois Tollway. See AASHTO's *Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals* as well as MUTCD Section 2A.18 to determine the required size and number of posts for each sign installation. Refer to IDOT Standard Specifications Articles 1006.29 and 1006.09, and IDOT Highway Standard Drawing 729001 for installation details.

Ground-Mounted Wood Posts: Wood posts are commonly used to install Guide and Information Signs along the Illinois Tollway. Braced wood supports are not allowed for Illinois Tollway ground mounted post supports unless shielded.

The support material shall be 4"x6" Southern Pine No.2 or Douglas Fir No. 2. Determining the number of supports and maximum sign panel dimension sizes shall be based on the criteria found in AASHTO's *Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals*.

The table below shows Illinois Tollway current use of wood posts.

See Illinois Tollway Wood Sign Post Requirements Table in *Chapter 13 – Engineering Studies* regarding the number of sign posts required based on sign size and post size allowed for signing on Ground-Mounted Wood Posts. See IDOT Standard Specifications Article 730.03 for installation details.

See *Chapter 13 – Engineering Studies* for background regarding sign post size and number requirements. The requirements therein have been modified to limit wood sign post sizes to 4"x6" only because the studies presented recommend that additional tethering be used for 6"x6" and 6"x8" posts located within 7' of an additional post and 4"x6" posts provide similar design strengths to 6"x6" and 6"x8" posts. In cases where larger temporary signs are required, the sign and supports shall be designed and placed at locations where it is shielded by barrier or guardrail.

Wood posts are installed without a concrete foundation.

Posts installed in soil (no foundation) should be placed in a vertical hole not exceeding 12" in diameter and not less than 5' deep. The support should be placed in the center of the hole and backfilled with stone screenings. The supports shall be spaced as shown in Illinois Tollway Standard F9.

Flat sheet aluminum and plywood signs are attached to wood posts with 3/8" x 7" stainless steel bolts. Extruded aluminum channel signs are attached to the post with aluminum angles and post clips.

Illinois Tollway Wood Post Mounted Signs

Sign Example	Code	Sign Size		4" x 6" Douglas Fir No. 2 or Southern Pine No. 2
		Dimension s (W x H) (Feet)	Area (ft ²)	
Interstate Route Sign (1 or 2 digits)-Min size	M1-1	2 x 2	4	1
Interstate Route Sign (1 or 2 digits)-Oversized	M1-1	3 x 3	9	1
Merge	W4-1	4 x 4	16	1
-		7 x 4	28	2
Exit Gore (no exit number)	E5-1	6 x 5	30	2

Breakaway Sign Supports: Breakaway supports shall be designed to yield when struck by a vehicle thereby minimizing injury to the occupants of the vehicle and damage to the vehicle. All roadside signs on high-speed highways located within the suggested clear zone width given in the current AASHTO *Roadside Design Guide* shall be placed on breakaway supports unless they are located behind a barrier or crash cushion. Support outside the clear zone may need to be breakaway and shall be based on a barrier warrant. The design of breakaway posts shall be based on *Illinois Tollway Standard Drawing F9* and the latest edition of AASHTO's *Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals*.

2.14 Foundations

Concrete foundations are required to support large signs and overhead sign support structures. The design and construction of foundations should conform to *Illinois Tollway Standard Drawings* Section F, except where soil conditions or site constrictions make other types of foundations a better choice. Generally, foundations should meet the requirements of the latest edition of AASHTO's *Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals*. The foundation shall include adequate steel reinforcement and anchor bolts to be attached to the sign support system. A soils investigation and structural foundation design is required to determine the proper foundation design and is the responsibility of the Designer. The most common types of foundations are listed below, but other special designs may be necessary in certain circumstances:

Caissons (Drilled Shafts): If the proper soil conditions exist, the caisson foundation may be applicable for use in vertical overhead sign structure cantilever type supports where the horizontal shear is carried in bending by a single pole.

Piles: In special cases, pile foundations may be used when adequate bearing pressures for spread footings do not exist at reasonable depths below the ground surface. They are particularly favorable when dewatering and caving of excavations are found to be problems. Resistance to uplift is dependent upon the skin friction between pile and soil. A soils investigation shall be performed to determine friction values.

2.15 Sign Installation

Mounting Heights: All ground mounted Illinois Tollway signs shall be installed with minimum vertical clearance, measured from the bottom edge of the sign to the top of edge of traveled way pavement elevation adjacent to the sign, following Illinois Tollway Standard F9 and *MUTCD* standards. If a secondary sign panel is mounted below another sign, the combined sign assembly shall be installed at mounting heights necessary to achieve vertical clearance below the sign, following Illinois Tollway Standard F9 and *MUTCD* standards. Overhead mounted signs on the Illinois Tollway shall provide a vertical clearance as indicated in the Illinois Tollway *Structure Design Manual*, Section 24.0.

Lateral Offset: The minimum and maximum lateral clearance outside the usable roadway shoulder for ground-mounted signs or for overhead sign supports, either to the right or left side of the roadway, shall be as indicated in Illinois Tollway Standard Drawing F9. The minimum clearance shall also apply outside of a gutter. Unless located well outside the clear zone, the signs shall be mounted on crashworthy supports or shielded by appropriate crashworthy barriers.

Site Grading and Sign Location: The Designer and sign installer shall have a sound working knowledge of the *AASHTO Roadside Design Guide*. This guide contains information and guidance on many aspects of safer roadside design for public streets and highways.

Roadside hardware for sign supports should not be located in or near ditch bottoms or on the back slope near drainage channels where erosion and freezing could affect the proper operation of the structural supports.

Signs may be erected on level or moderately sloping ground, following *MUTCD* standards. The earth should be graded smooth, with no rock or debris protruding from the ground level. The area should be clear of trees or other heavy vegetation that might interfere with the view and erection of the sign.

Signs on Noise Abatement Walls: Signs mounted on noise abatement walls should be avoided unless sign supports are included as part of the initial design of the wall. Signs may be installed perpendicular to the noise abatement wall. At a location where there is an offset in the noise abatement wall, the sign should be installed parallel to the noise abatement wall. A free-standing sign in front of the noise abatement wall (roadside) is preferred.

Noise abatement walls are typically required in narrow right-of-way conditions and signing adjacent to noise abatement walls is frequently located within the suggested clear zone given in the *AASHTO Roadside Design Guide*. In these conditions, a barrier wall or guardrail shall be provided in accordance with Barrier Warrant Analysis, in addition to the horizontal and vertical clearances required above.

Signs on Median or Barrier Walls: In tight right-of-way or lane configurations, signs may be located on median or barrier walls if the required safe lateral and vertical clearances can be maintained. Signs which require modification to be narrower shall be designed and submitted to the Illinois Tollway Sign Shop, Chief Engineering Officer, and Illinois Tollway PM for approval.

Signs on Bridges: Signs may be located on a bridge abutment perpendicular to the roadway if the mounting surface is large enough to accommodate the sign and permits a minimum of 12" of mounting surface to be visible on all sides of the signs. Approval to mount signs on bridge abutments must be obtained by the controlling agency prior to installation.

Signs at Overhead Installations: If overhead signs are needed, the number of signs at these locations shall be limited to only those essential in communicating guide information to the road user. Exit Direction signs for a single exit and the Advance Guide signs shall have only one panel with one or two destinations. Regulatory Signs, such as speed limits, shall not be used in conjunction with overhead guide signs. At overhead locations, more than one sign may be installed to advise drivers of multiple exit conditions at an interchange. However, there shall not be more than three guide signs displayed at any one location either on the overhead structure or its support, as recommended by the *MUTCD*. Structural load capacity on cantilever and span structures with overhead signs shall be evaluated according to Section F of the Illinois Tollway Standard Drawings.

2.16 Sign Software and Format

All sign illustrations, diagrams, and sign panel reports included in the RSPMG were created with GuideSIGN© Version 8.1 for Microstation© Connect Edition / Open Roads Designer Connect Edition. Sign panel reports created by Designers and submitted for review and approval to the Illinois Tollway should be in GuideSign© or SignCAD© format similar to the reports presented in this document.

SECTION 3.0 SIGN PLACEMENT – MAJOR APPLICATIONS

3.1 General Guidelines

3.1.1 Context

Road users shall be guided with consistent signing on the approaches to interchanges whether driving through rural or urban areas. Since geographical, geometric and operating factors regularly create significant differences between urban and rural conditions, the signing should take these conditions into account.

The Illinois Tollway roadways extend through rural, suburban and urbanized areas. As such, the roadway cross-sections vary greatly including flat, at-grade sections, depressed roadways, and elevated viaducts, although flat cross sections are predominant on the Illinois Tollway. In those areas, existing landscape can be minimal or quite lush, to screen developed areas outside of the roadway. Recent and often uncontrolled development and signing adjacent to many Illinois Tollway sections, however, create a visually chaotic corridor, which competes with Illinois Tollway signing.

For purposes of signing per the *MUTCD*, a Service Interchange on the Illinois Tollway is normally considered an Intermediate Interchange, except in a few limited cases. The DSE is responsible for checking with the Illinois Tollway PM to identify the *MUTCD* classification of a subject Service Interchange.

Note that only Service Interchange Signing is addressed in the Sign Placement illustrations in this chapter through the placement of Advanced Guide signs, Exit Direction signs, and Regulatory signs. System Interchanges (freeway to freeway) are unique facilities that must be addressed on an individual basis. Consult *MUTCD* Section 2E.50 and the Illinois Tollway PM when undertaking System Interchange design.

For interchanges that are closely spaced, less than 800' between interchanges, Interchange Sequence signs should be used instead of the Advanced Guide signs for the affected interchanges. Designers shall refer to *MUTCD* Section 2E.21 for guidance.

Missing signs in a series shall be brought to standard. Contact the Illinois Tollway PM for additional guidance.

3.1.2 Applications

The sign placement diagrams and sign illustrations included in these guidelines were selected to cover a range of conditions most often encountered on the Illinois Tollway to show how the *MUTCD* and Illinois Tollway standards are coordinated for new or replacement sign applications. These guidelines are not intended to be applied to existing signs; that is, these guidelines are not a retroactive standard. They may be used, however, to evaluate existing signs for safety, clarity, placement and overall serviceability. The final decision to redesign and replace existing signs is the responsibility of the Illinois Tollway, which includes the Sign Shop and Incident Manager. The standards and guidelines provided in the *MUTCD* should be followed in all sign applications.

3.1.3 Approach

A sign shall be located where it commands attention and placed in advance of the point, object, or situation to which it applies. Its location, combined with suitable legibility, shall be such that a driver traveling at normal speed has adequate time to make the proper response. The placement of signs should follow *MUTCD* standards and guidelines.

There are a wide variety of roadway configurations on the Illinois Tollway mainline, and at exits and interchanges, for which sign placement is critical to safe motorist negotiation of the roadway. The following placement descriptions enumerate typical conditions on the Illinois Tollway mainline, at entrance and exit ramps, and at interchanges, oases, and plazas.

Sign selection, design, and placement should be made based on an engineering study, and the application of engineering judgment in conformance with the *MUTCD*. This work is the responsibility of the Designer. The intent of these diagrams is to serve as a guide to designers and provide uniformity throughout the Illinois Tollway System.

3.1.4 Application & Approach Adjustments – FAA Regulations

A sign shall meet FAA Regulations at all times. Refer to *Code of Federal Regulations*, Title 14, Chapter I, Subchapter E, Part 77 (*Safe, Efficient Use, and Preservation of the Navigable Airspace*) for construction or alterations requirements. If proposed signage is within any of the noted areas, sign application and sign approach shall need to be adjusted to conform to FAA regulations. Additionally, signs shall also meet the regulations of the local airport authority. When the local airport authority regulations are more restrictive than the FAA regulations, the local airport authority regulations shall govern.

3.2 Illustrations

All Sign Placement illustrations follow the text below and a list of illustrations is included in the appendix. The illustration identifier is listed in parentheses following each application name.

Exact placement of signs on the ramps varies from case to case. In general, signs should be placed at least 500' apart. Regulatory signs along the mainline and at the beginning and end of ramps shall be staggered between the median light poles while holding proper dimensional offsets along the outside shoulder based on required distances shown in this manual. Cases without median lighting should be median mounted and spaced 500' apart. The following paragraphs detail the typical sequence of signs encountered while driving through each roadway configuration.

3.2.1 Diamond Interchange (Illustration SP-IT2A-C)

Signing for diamond interchanges with non-interstate highways should include, as a minimum, overhead signing at the theoretical gore, and advance ground mounted signing at the ½ mile and 1-mile locations. Where the interchange spacing is greater than 5 miles, an advance sign at 2 miles shall be added.

Advance Guide Signs: The first advance interchange sign is typically 2 miles from the theoretical gore of the interchange, bearing the upcoming exit number, route number, and cross street name. The second and third signs should be at 1 mile and ½ mile from the theoretical gore.

Exit Gore Sign: An EXIT sign with a diagonally upward-pointing arrow and exit number shall be placed in each of the exit gore areas.

Regulatory Sign: A STOP sign shall be placed at the end of the exit ramp, if applicable. Follow applicable engineering studies for exact placement.

Warning Sign: A STOP AHEAD sign or SIGNAL AHEAD sign may be placed on the ramp before the crossroad to give motorists advance notice and to ensure a safe stop. A YIELD AHEAD sign may also be used if warranted.

Regulatory Signs: WRONG WAY, 1-WAY and DO NOT ENTER signs shall be placed at the end of every exit ramp to advise motorists not to enter. NO RIGHT TURN and NO LEFT TURN signs may also be appropriate on the crossroad to help eliminate wrong way turns. See *MUTCD* Section 2E.59.

Warning Sign: If a speed-reducing curve of 15 miles per hour (mph) or greater exists on an exit ramp, CHEVRONS shall be used to delineate the curvature of the ramp. Also, if a speed-reducing curve of 20 mph or greater exists on an exit ramp, a RAMP ADVISORY SPEED sign shall be placed on the ramp far enough in advance to allow sufficient time to slow down and to safety maneuver on the ramp. If a parallel deceleration lane is present, an EXIT ADVISORY SPEED sign shall be used to provide exiting drivers with an opportunity to slow down to a more reasonable speed for the ramp prior to reaching the theoretical gore.

Crossroad Guide Sign and Trailblazer Marker Sign: Crossroad guide signs and trailblazer assemblies shall be used on the crossroad at an interchange in advance of an entrance ramp.

Regulatory Sign: A MOTOR VEHICLES ONLY sign shall be installed on the right shoulder of all entrance ramps at the beginning of the ramp.

Regulatory Sign: A YIELD sign shall be placed at the end of the entrance ramp where an acceleration lane is not provided, or where one is provided and is not the standard length.

Warning Sign: A MERGE sign shall be placed at a location along the major roadway in advance of the point where traffic merges from an entrance ramp and where it does not obstruct the driver's view of vehicles on the entering roadway.

Regulatory and Route Signs: A series of signs shall be placed along the mainline roadway following the occurrence of an interchange entrance ramp. A SPEED LIMIT sign shown at 1000' past the gore shall be placed at the end of an acceleration lane where the 10" edge line meets the 4", 5" or 6" edge line. In areas of the six-county metropolitan area where greater than 60 mph is permitted, a supplemental speed limit sign for slower speed vehicles shall be placed 500' from the SPEED LIMIT sign. The signs shall be spaced at intervals of 500' when possible.

Regulatory Sign: A NO TRUCKS X LEFT LANES sign shall be placed 1500' from the theoretical gore. An additional NO TRUCKS X LEFT LANES sign shall be staggered downstream along the median where applicable.

Regulatory Sign: A SLOWER TRAFFIC KEEP RIGHT sign shall be placed 2000' from the theoretical gore.

Regulatory Sign: An EMERGENCY STOPPING ONLY – 2 HOUR LIMIT sign shall be placed 2500' from the theoretical gore.

Route Sign: A confirmation route sign shall be placed 3000' from the theoretical gore.

Regulatory Sign: An AHEAD only sign shall be placed along the center median of the crossing road as shown in 3-SP-IT2B.

3.2.2 Cloverleaf Interchange (Illustration SP-IT3)

Advance signing for Cloverleaf Interchanges shall direct mainline motorists to the exit and interchange for a crossroad. Regulatory signs along the mainline and at the beginning and end of ramps shall be staggered between the median light poles while holding proper dimensional offsets along the outside shoulder based on required distances shown in this manual. The following paragraphs detail the typical sequence of signs encountered while driving through this roadway configuration.

Advance Guide Signs: The first advance interchange sign is typically 2 miles from the theoretical gore of the interchange, bearing the upcoming exit number, route number, and cross street name. The second and third signs should be at 1 mile and ½ mile from the theoretical gore.

Second Exit Direction and Advance Guide Signs with Advisory Speed: Above the mainline lanes, separate guide signs for the next two interchanges should be mounted bearing the exit number, route number (if applicable), cross street name, and distance to the respective interchange. Exit advisory speed signage shall be in accordance with Article 6.6 of this manual.

Exit Gore Sign: An EXIT sign with a diagonally upward-pointing arrow and exit number shall be placed in each of the exit gore areas.

Regulatory Sign: A YIELD sign shall be placed at the end of entrance ramps where an acceleration lane is not provided, or where one is provided and is not the standard length. A YIELD AHEAD sign may also be used.

Warning Sign: If a speed-reducing curve of 15 mph or greater exists on an exit ramp, CHEVRONS shall be used to delineate the curvature of the ramp. Also, if a speed-reducing loop ramp 20 mph or greater exists on an exit ramp, a combination HORIZONTAL ALIGNMENT/RAMP ADVISORY SPEED sign shall be placed on the ramp far enough in advance to allow sufficient time to slow down and to safety maneuver on the ramp. If a parallel deceleration lane is present, an EXIT ADVISORY SPEED sign shall be used to provide exiting drivers with an opportunity to slow down to a more reasonable speed for the ramp prior to reaching the theoretical gore.

Crossroad and Trailblazer Guide Signs: Guide signs and trailblazer assemblies shall be used on the crossroad at an interchange and in advance of an entrance ramp.

Regulatory Sign: A MOTOR VEHICLES ONLY sign should be installed on the right shoulder of all entrance ramps at the beginning of the ramp.

Warning Sign: A Merge sign shall be placed at a location along the major roadway in advance of the point where traffic merges from an entrance ramp and where it does not obstruct the driver's view of vehicles on the entering roadway.

Regulatory and Route Signs: A series of signs shall be placed along the mainline roadway following the occurrence of an interchange entrance ramp. A SPEED LIMIT sign shown at 1000' past the gore shall be placed at the end of an acceleration lane where the 10" edge line meets the 4", 5" or 6" edge line. In areas of the six-county metropolitan area where 60 mph or greater is permitted, a supplemental speed limit sign for slower speed vehicles shall be placed 500' from the SPEED LIMIT sign. The signs shall be spaced at intervals of 500' when possible.

Regulatory Sign: A NO TRUCKS X LEFT LANES sign shall be placed 1500' from the theoretical gore. An additional NO TRUCKS X LEFT LANES sign shall be staggered downstream along the median where applicable.

Regulatory Sign: A SLOWER TRAFFIC KEEP RIGHT sign shall be placed 2000' from the theoretical gore.

Regulatory Sign: An EMERGENCY STOPPING ONLY – 2 HOUR LIMIT sign shall be placed 2500' from the theoretical gore.

Route Sign: A confirmation route sign shall be placed 3000' from the theoretical gore.

3.2.3 Cloverleaf Interchange with Full Collector/Distributor Roadways (Illustration SP-IT4)

Advance signing for collector/distributor interchanges shall direct mainline motorists to the exit and interchange for a crossroad and adjacent community (or communities). The signs indicated here are supplemental to those listed for the Cloverleaf Interchange (SP-IT3) and should be designed and installed in accordance with the *MUTCD*. Regulatory signs along the mainline and at the beginning and end of ramps shall be median mounted while holding proper dimensional offsets along the outside shoulder based on required distances shown in this manual. The following paragraphs detail the typical sequence of signs encountered while driving through this roadway configuration.

Advance Guide Signs: The first advance interchange sign is typically 2 miles from the theoretical gore of the interchange, bearing the upcoming exit number, route number, and cross street name. The second and third signs should be at 1 mile and ½ mile from the theoretical gore.

Exit Direction Signs: The next sign in the sequence shall be an Exit Direction sign on a cantilever in the vicinity of the theoretical gore. The sign shall include the route name and number as well as the cross-street name. The next sign set, located at the collector/distributor road exit theoretical gore, should be an Exit Direction sign for the first exit and a pull-through Advance Guide sign for the second exit, as shown.

Advisory Speed Warning Signs: Exit advisory speed signage shall be in accordance with Article 6.6 of this manual.

Bridge Signs: The second Exit Direction sign and a pull-through sign to the mainline shall be placed overhead on the bridge structure as shown.

Exit Gore Sign: An EXIT sign with a diagonally upward-pointing arrow and exit number shall be placed in each of the exit gore areas.

Regulatory and Route Signs: A series of signs shall be placed along the mainline roadway following the occurrence of an interchange entrance ramp. A SPEED LIMIT sign shown at 1000' past the gore shall be placed at the end of an acceleration lane where the 10" edge line meets the 4", 5" or 6" edge line. In areas of the six-county metropolitan area where 60 mph or greater is permitted, a supplemental speed limit sign for slower speed vehicles shall be placed 500' from the SPEED LIMIT sign. The signs shall be spaced at intervals of 500' when possible.

Regulatory Sign: A NO TRUCKS X LEFT LANES sign shall be placed 1500' from the theoretical gore. An additional NO TRUCKS X LEFT LANES sign shall be staggered downstream along the median where applicable.

Regulatory Sign: A SLOWER TRAFFIC KEEP RIGHT sign shall be placed 2000' from the theoretical gore.

Regulatory Sign: An EMERGENCY STOPPING ONLY – 2 HOUR LIMIT sign shall be placed 2500' from the theoretical gore.

Route Sign: A confirmation route sign shall be placed 3000' from the theoretical gore.

3.2.4 Partial Cloverleaf Interchange (Illustration SP-IT5A-B)

Advance signing for partial cloverleaf interchanges is similar to a cloverleaf interchange in one direction of travel and similar to a diamond interchange in the other direction. While these configurations should be referenced when making sign configuration decisions, the relative locations of Advance Guide signs and Mainline Confirmation Trailblazers have been diagrammed here for convenience.

3.2.5 Mainline Exit with Mandatory Exit Lane(s) (Illustrations SP-IT6A-B)

The Illinois Tollway has a number of exits that have mandatory exit lanes. These are classified as follows:

- 1) A *dropped lane* is either (a) a through lane that must exit at an interchange, or (b) an auxiliary lane between successive entrance and exit ramps of adjacent interchanges from which drivers must exit at the downstream interchange. Through lanes in the first case typically exist for a mile or more, while in the second case the dropped lane may be less than a mile and may be much shorter.
- 2) An *auxiliary exit lane* that is more than about 500 feet long but less than about a mile. The Illinois Tollway has several such lanes that are about ¼ to ½ mile long.

For purposes of signing, these cases are treated similarly. SP-IT6A illustrates a single exit lane case, and SP-IT6B illustrates a double exit lane case.

Signing for shorter auxiliary exit lane cases (less than about 500 feet) should be designed on a site-by-site basis as a function of geometry and traffic volumes.

First Advance Guide Sign: The first Advance Guide sign should be cantilevered from the right shoulder at about 1 mile from the theoretical gore, and shall include the exit number, route shield, street name and distance. If the mandatory exit lane(s) exist at this location, an EXIT ONLY panel with centered downward-pointing arrow(s) shall be included. A further upstream Advance Guide sign may also be included depending on characteristics of the interchange exit.

Second Advance Guide Sign: A second Advance Guide sign should be provided between the first Advance Guide sign and the theoretical gore and provide the same information, except the distance may be omitted if the sign is less than about ½ mile from the theoretical gore. This sign should be placed at a location where the mandatory exit lane(s) exist and thus include an EXIT ONLY panel with centered downward-pointing arrow(s). In the case of an auxiliary lane that is less than 1 mile long between successive entrance and exit ramps of adjacent interchanges, the Advance Guide sign immediately downstream of the entrance ramp should typically contain the distance message.

Exit Direction Sign: The Exit Direction sign shall be placed at the theoretical gore including the EXIT ONLY panel with the appropriate number of diagonal up-and-away arrows.

Exit Gore Sign: An EXIT sign with a diagonally upward-pointing arrow and exit number shall be placed in the exit gore area.

3.2.6 Mainline Multi-Lane Exit with Mandatory Exit Lane and an Option Lane (Illustrations SP-IT7A-B)

Some Illinois Tollway interchanges involve one (possibly more) mandatory exit lane(s) plus an optional exit lane. Signing for these needs to take account of whether the interchange is classified as Major or Intermediate. Sign layout also depends on the length of dropped lane or auxiliary lane – see Section 3.2.5 for definitions of dropped lane and auxiliary exit lane. Consult the Illinois Tollway PM to determine if the interchange is classified as Major or Intermediate, and to develop the sign design. Other signs typically should not be placed between the Advance Guide and Exit Direction sign set.

SP-IT7A illustrates signing for a Major interchange, while SP-IT7B illustrates signing for an Intermediate interchange.

Major Interchanges: Major interchanges should use advance overhead arrow per lane signs (OAPL) as illustrated on SP-IT7A at ½, 1 and 2 miles from the theoretical gore where geometrics allow. These signs shall include the exit number, route shields, TOLL (where applicable), cardinal directions and control destinations, plus the illustrated upward oriented lane use arrows. If the interchange has one or more advanced OAPL signs, the distance to the theoretical gore should be included on the first advance OAPL sign in the sequence and may be included on subsequent advance signs. The last OAPL sign shall be located at or near the divergence point from the mainline for the mandatory exit lane, and not at the theoretical gore. A confirmation route sign shall be placed on the mainline shoulder approximately 500 feet past the theoretical gore.

Intermediate Interchanges: For Intermediate interchanges (see SP-IT7B), the first Advance Guide sign should be placed about 1 mile before the theoretical gore on a cantilever mount, and shall include the exit number, route shield, street name and distance. If the mandatory exit lane exists at this location, a panel with a downward-pointing arrow shall be provided. A second similar Advance Guide sign should be placed at an intermediate location where the mandatory exit lane exists and should include a downward-pointing arrow. The distance may be omitted if the sign is less than about ½ mile from the theoretical gore. In the case of a dropped auxiliary lane that is less than 1 mile long between successive entrance and exit ramps of adjacent interchanges, the first Advance Guide sign immediately downstream of the entrance ramp should typically contain the distance message. The Exit Direction sign shall be placed at the theoretical gore and shall include two diagonal up-and-away arrows centered over the option lane and the mandatory exit lane.

Exit Gore Sign: An EXIT sign with a diagonally upward-pointing arrow and exit number shall be placed in the exit gore area.

3.2.7 Oasis (Illustration SP-IT8)

An Oasis provides general motorist services, such as food, fuel and phone, in addition to motorist information. An Oasis is accessed off the Illinois Tollway mainline as an exit without paying a toll. The signs should be laid out in such a way as to have traffic moving through the Oasis in one direction. Therefore, wherever there is a possibility of a vehicle going the wrong way, a regulatory sign should be placed to direct traffic in the proper direction.

Oasis Advance Motorist Services Signs: Two information signs shall be placed in advance of an Oasis. The signs should display the NAME OF THE OASIS / OPEN XX HOURS, and the distance to the Oasis, XX MILES. These signs should also display the shields and/or logos of the restaurants and gas stations that provide services at the Oasis. The following paragraphs detail the typical sequence of signs encountered while driving on the mainline approach to an Oasis and on the exit ramp servicing the Oasis from the mainline.

Exit Direction Motorist Services Information Sign: At the beginning of the deceleration lane for an Oasis, an overhead or ground-mounted sign should be placed. This sign will be an information sign similar in design to an exit direction sign. The name of the Oasis and corporate logos of the services provided at the Oasis should appear on the sign. A diagonally upward-pointing arrow should be oriented to indicate the direction of the ramp.

Oasis Exit Gore Sign: A sign displaying the message OASIS (with a diagonally upward-pointing arrow) shall be placed in the gore area to mark the exit to the Oasis.

Oasis Supplemental Guide Sign: Approximately halfway up the Oasis ramp on the right should be the sign TRUCKS / BUSES / KEEP / RIGHT.

Oasis Supplemental Guide Sign: At the end of the ramp, the motorists are faced with their first decision point. At this location, the CARS / PICKUPS (arrow up and to the left) / TRUCKS / BUSES (arrow up and to the right) sign should be posted both at the lane split as well as the right-hand side of the roadway before the split.

Oasis Supplemental Guide Sign: At this point, the truck and bus traffic will be exposed to one more decision point which should be marked with the sign TRUCK / FUEL / LEFT LANE / TRUCK / PARKING / RIGHT / LANE. This sign should be a ground-mounted sign by the side of the roadway.

Oasis Supplemental Guide Sign: The car traffic will be faced with another decision point as well, which should be marked with an information sign PHONES / FOOD (diagonally upward-pointing arrow to the left) / FUEL / FOOD (diagonally upward-pointing arrow to the right). This sign should be mounted in the island at the decision point.

3.2.8 Stand Alone Crash Investigation Site (Illustration SP-IT9 A-B)

The Crash Investigation Site (CIS) signing should alert and direct motorists to a safer site adjacent to the mainline. Location of these sites will be as directed and approved by the Illinois Tollway.

CIS Information Sign: The first signs in the sequence should be shoulder-mounted and placed at a distance of 1 mile in advance (and 2 miles for rural areas) from the CIS area.

CIS Information Sign: The next sign in the sequence should be shoulder-mounted and placed at a distance of ½ mile in advance from the CIS area.

CIS Information Sign: The next sign in the sequence should be shoulder-mounted and placed at the access point to the investigation site as determined by CIS access conditions. The sign shall include a directional arrow pointing in the direction of the site.

CIS Site Sign: Another CIS sign shall be placed within the investigation site, stating the direction, name of the Illinois Tollway, mile marker, number to report a crash to Illinois State Police, and the emergency 911 number.

3.2.9 Diverging Diamond Interchange (Illustration SP-IT14A-B)

Advance signing for Diverging Diamond Interchanges (DDI) shall direct mainline motorists to the exit and interchange for a crossroad. Regulatory signs along the mainline and at the beginning and end of ramps shall be staggered based on required distances shown in this manual. The following paragraphs detail the typical sequence of signs encountered while driving through this roadway configuration.

Advance Guide Signs: The first advance interchange sign is typically 2 miles from the theoretical gore of the interchange, bearing the upcoming exit number, route number, and cross street name. The second and third signs should be at 1 mile and ½ mile from the theoretical gore.

Second Exit Direction and Advance Guide Signs: Above the mainline lanes, separate guide signs for the next two interchanges should be mounted bearing the exit number, route number (if applicable), cross street name, and distance to the respective interchange.

Exit Gore Sign: An EXIT sign with a diagonally upward-pointing arrow and exit number shall be placed in each of the exit gore areas.

Guide Sign: An additional guide sign on the exit ramp with the crossroad name and directions shall be placed between 50' to 100' before the intersection.

Directional Regulatory Signs: Due to the possibility of wrong-way movements by unfamiliar drivers, 1-WAY, DO NOT ENTER and WRONG WAY signs are needed as per geometry and sight lines, along with KEEP LEFT and KEEP RIGHT symbolic signs.

Regulatory Sign: A MOTOR VEHICLES ONLY sign should be installed on the right shoulder of all entrance ramps at the beginning of the ramp.

Warning Sign: A MERGE sign shall be placed at a location along the major roadway in advance of the point where traffic merges from an entrance ramp and where it does not obstruct the driver's view of vehicles on the entering roadway.

Regulatory and Route Signs: A series of signs shall be placed along the mainline roadway following the occurrence of an interchange entrance ramp. A SPEED LIMIT sign shown at 1000' past the gore shall be placed at the end of an acceleration lane where the 10" edge line meets

the 4", 5" or 6" edge line. In areas of the six-county metropolitan area where 60 mph or greater is permitted, a supplemental speed limit sign for slower speed vehicles shall be placed 500' from the SPEED LIMIT sign. The signs shall be spaced at intervals of 500' when possible.

Regulatory Sign: A NO TRUCKS X LEFT LANES sign shall be placed 1500' from the theoretical gore. An additional NO TRUCKS X LEFT LANES sign shall be staggered downstream along the median where applicable.

Regulatory Sign: A SLOWER TRAFFIC KEEP RIGHT sign shall be placed 2000' from the theoretical gore.

Regulatory Sign: An EMERGENCY STOPPING ONLY – 2 HOUR LIMIT sign shall be placed 2500' from the theoretical gore.

Route Sign: A confirmation route sign shall be placed 3000' from the theoretical gore.

3.2.10 Single Point Urban Interchange (Illustration SP-IT15)

Advance signing for Single Point Urban Interchanges (SPUI) should direct mainline motorists to the exit and interchange for a crossroad. Regulatory signs along the mainline and at the beginning and end of ramps shall be staggered based on required distances shown in this manual. The following paragraphs detail the typical sequence of signs encountered while driving through this roadway configuration.

Advance Guide Signs: The first advance interchange sign is typically 2 miles from the theoretical gore of the interchange, bearing the upcoming exit number, route number, and cross street name. The second and third signs should be at 1 mile and ½ mile from the theoretical gore.

Second Exit Direction and Advance Guide Signs: Above the mainline lanes, separate guide signs for the next two interchanges should be mounted bearing the exit number, route number (if applicable), cross street name, and distance to the respective interchange.

Exit Gore Sign: An EXIT sign with a diagonally upward-pointing arrow and exit number shall be placed in each of the exit gore areas.

Guide Sign: An additional guide sign on the exit ramp with the crossroad name and directions shall be placed between 50' to 100' before the intersection.

Directional Regulatory Signs: Due to the possibility of wrong-way movements by unfamiliar drivers, 1-WAY, DO NOT ENTER and WRONG WAY signs are needed as per geometry and sight lines, along with KEEP RIGHT symbolic sign.

Regulatory Sign: A MOTOR VEHICLES ONLY sign should be installed on the right shoulder of all entrance ramps at the beginning of the ramp.

Warning Sign: A MERGE sign shall be placed at a location along the major roadway in advance of the point where traffic merges from an entrance ramp and where it does not obstruct the driver's view of vehicles on the entering roadway.

Regulatory and Route Signs: A series of signs shall be placed along the mainline roadway following the occurrence of an interchange entrance ramp. A SPEED LIMIT sign shown at 1000'

past the gore shall be placed at the end of an acceleration lane where the 10" edge line meets the 4", 5" or 6" edge line. In areas of the six-county metropolitan area where 60 mph or greater is permitted, a supplemental speed limit sign for slower speed vehicles shall be placed 500' from the SPEED LIMIT sign. The signs shall be spaced at intervals of 500' when possible.

Regulatory Sign: A NO TRUCKS X LEFT LANES sign shall be placed 1500' from the theoretical gore. An additional NO TRUCKS X LEFT LANES sign shall be staggered downstream along the median where applicable.

Regulatory Sign: A SLOWER TRAFFIC KEEP RIGHT sign shall be placed 2000' from the theoretical gore.

Regulatory Sign: An EMERGENCY STOPPING ONLY – 2 HOUR LIMIT sign shall be placed 2500' from the theoretical gore.

Route Sign: A confirmation route sign shall be placed 3000' from the theoretical gore.

3.2.11 AET Converted – Mainline Plaza with no Exit (Illustration SP-IT16A-B)

These mainline toll plazas are functionally operated as ORT only with the toll plaza area closed off to traffic via striping alone. The toll plaza signing shall provide safe, efficient movement of traffic through the ORT toll area, and provide guidance for any stray vehicles that end up in the toll plaza areas. This signing should be specific to the needs of the plaza yet assist with uniform signing of toll plazas throughout the Illinois Tollway system. A typical mainline plaza will have non-stop tolling for all users without leaving the mainline through the ORT lanes using I-Pass or Pay Online (IPOPO). Where legacy toll plaza structures exist, the approach lanes will be striped as shoulders and separated from the mainline tolling area by a bifurcated roadway. The toll collection in all lanes will be recorded from the moving vehicle and will allow vehicles to pass through the collection area without stopping. All lanes will have identical toll collection through I-Pass or Pay Online in the ORT and any open lanes in the toll plaza area. Advance signing shall accommodate the high rate of speed encountered on the Illinois Tollway and shall direct motorists to remain on the mainline at the bifurcation point. Advance signing for a mainline toll plaza shall consist of a series of overhead and ground mount signs. The actual number of lanes will vary and lane usage will vary, depending upon the composition of traffic. Mainline restrictions for lane use, i.e., trucks, campers, and RV's will remain throughout the mainline plaza vicinity. The following paragraphs detail the typical sequence of signs encountered while driving through this roadway configuration.

Pay Toll 2 Miles Sign: The first sign in the sequence should be ground-mounted on the right side of the roadway 2 miles from the plaza theoretical gore (if applicable), or approximately 1 mile in advance of the ORT gantry. The sign provides the initial notification to traffic that a toll will be collected ahead and notes the I-PASS and EZ-PASS payment acceptance.

Toll Ahead Sign: The second sign in the sequence should be placed on an overhead structure, centered over the roadway approximately 1 mile from the plaza theoretical gore (if applicable), or approximately 1 mile in advance of the ORT gantry. Depending on constraints, this sign can be located anywhere within ½ mile and 1 ½ miles from the theoretical gore or ORT gantry. The sign shall be white on green TOLL AHEAD on top and black on white IPOPO message on the bottom of the plaza advance sign.

Regulatory Signs: EMERGENCY STOPPING ONLY – 2 HOUR LIMIT signs should be placed along the shoulder of the plaza.

Regulatory Signs: 15 MPH signs should be placed on the left side and on the right side of each AET lane, with arrows pointing diagonally downward in toward the lane. At least one DO NOT STOP sign should be included with one of the 15 MPH signs.

Mainline AET Signs: The next sign in the sequence shall be placed on an overhead structure, centered over the roadway, at the plaza theoretical gore (if applicable), or approximately 1,500 ft in advance of the ORT gantry. The sign shall be black on a white IPOPO message on the top and overhead arrows per lane on a green background on the bottom of the sign.

Plaza Sign: A DOUBLE ARROW (W12-1) sign should be placed in the median along the mainline and the plaza, closest to oncoming traffic.

Plaza Signs: An UNPAID TOLL Sign shall be placed downstream of AET lanes at the discretion of the Illinois Tollway. If space permits, placement should be on both sides of the mainline. Placement of this sign is site specific and varies.

Plaza Signs: The IPOPO pictograph shall consist of the I-PASS symbol blue and white on a purple background on top with black on white OR PAY ONLINE on the bottom. This pictograph shall be placed on the canopy above any lane(s) that are open to traffic. WIDE and LOAD signs shall be located on both sides of a wide load lane.

Warning Sign: A MERGE sign shall be placed on the right-hand side of the mainline in advance of the plaza merge area.

Plaza Sign: The sign shall be white on green with the PLAZA and the internal Tollway number of the plaza on the first line, followed by CARS I-PASS with the I-PASS rate for cars on the second line, and CARS ONLINE with the online rate for cars on the third line.

3.2.12 AET Converted - Mainline Plaza with Exit (Illustration SP-IT17A-B)

A mainline plaza with an interchange exit will have non-stop lanes dedicated to all through traffic using IPOPO with all traffic destined for the exit separated from the mainline toll plaza area by a bifurcated roadway. I-Pass or Pay Online will also be usable through all open lanes of the plaza. The toll plaza signing shall provide safe, efficient movement of traffic through the ORT toll area. This signing should be specific to the needs of the plaza yet assist with uniform signing of toll plazas throughout the Illinois Tollway system. Advance signing shall accommodate the high rate of speed encountered on the Illinois Tollway and shall direct motorists into the proper lanes at the bifurcation point. Advance signing for a mainline toll plaza shall consist of a series of overhead and ground mount signs, including Advance Guide signs for the interchange. The actual number of lanes will vary, and lane usage will vary, depending upon the composition of traffic. Additional guide signs shall be provided downstream of the plaza. The following paragraphs detail the typical sequence of signs encountered while driving through this roadway configuration.

Pay Toll 2 Miles Sign: The first sign in the sequence should be ground-mounted on the right side of the roadway 2 miles from the plaza theoretical gore. The sign provides the initial notification to traffic that a toll will be collected ahead and notes the I-PASS and EZ-PASS payment acceptance.

Toll Ahead Sign: The second sign in the sequence should be placed on an overhead structure, centered over the roadway a distance of approximately 1 mile from the plaza theoretical gore. Depending on constraints, this sign can be located anywhere within ½ mile and 1 ½ miles from

the theoretical gore. The sign shall be white on green TOLL AHEAD on top and black on white IPOPO message on the bottom of the plaza advance sign.

I-Pass or Pay Online Signs: The first sign in the sequence for the exit ramp shall be ground-mounted on the right side of the roadway 2 miles from the plaza theoretical gore. The second sign in the sequence should be a post-mounted sign indicating the upcoming interchange exit at approximately 1½ miles from the plaza theoretical gore with a black on yellow KEEP RIGHT message on the bottom. The third sign in the sequence should be ground-mounted on the right side the roadway, at 1 mile from the plaza theoretical gore with a black on white I-PASS OR PAY ONLINE message on the top, the distance of 1 MILE within the body of the sign panel, and black on yellow KEEP RIGHT on the bottom of the exit advance guide sign. The fourth sign in the sequence shall be ground-mounted on the right side the roadway, at 1 mile from the plaza theoretical gore with a black on white I-PASS OR PAY ONLINE message on the top, the distance of 1/2 MILE within the body of the sign panel, and black on yellow KEEP RIGHT on the bottom of the exit advance guide sign.

Next in the sequence shall be an overhead structure at the plaza theoretical gore with two sign panels. The left-hand sign should be centered over the mainline lanes with one downward arrow centered on each lane. The sign shall be black on white I-Pass or Pay Online message on the top and overhead arrows per lane on a green background on the bottom of the sign. The right-hand sign should be a standard exit direction guide sign centered over the exit lanes with one arrow pointing diagonally upward, in the direction of the exit and with a black on white I-PASS OR PAY ONLINE message on the top.

Regulatory Signs: EMERGENCY STOPPING ONLY - 2 HOUR LIMIT signs should be placed along the shoulder of the plaza.

Regulatory Signs: 15 MPH signs should be placed on the left side and on the right side of each AET lane, with arrows pointing diagonally downward in toward the lane. At least one DO NOT STOP sign should be included with one of the 15 MPH signs.

Mainline AET Signs: The next sign in the sequence shall be placed on an overhead structure, centered over the roadway, at the plaza theoretical gore. The sign shall be black on white I-Pass or Pay Online message on the top and overhead arrows per lane on a green background on the bottom of the sign.

Plaza Sign: A DOUBLE ARROW (W12-1) sign should be placed in the median along the mainline and the plaza, closest to oncoming traffic.

Plaza Signs: An UNPAID TOLL Sign shall be placed downstream of AET lanes at the discretion of the Illinois Tollway. If space permits, placement should be on both sides of the mainline. Placement of this sign is site specific and varies.

Plaza Signs: The IPOPO pictograph shall consist of the I-PASS symbol blue and white on a purple background on top with black on white OR PAY ONLINE on the bottom. This pictograph shall be placed on the canopy only above any lane(s) that are open to traffic. WIDE and LOAD signs shall be located on both sides of a wide load lane.

Warning Sign: A MERGE sign shall be placed on the right-hand side of the mainline in advance of the plaza merger area.

Guide Sign: The overhead exit guide sign shall be placed near the exit takeoff point /merge lane takeoff point and centered over the roadway. The sign shall be an Exit Direction sign with the exit number, street name, cardinal direction, and arrow pointing diagonally upward in the direction of the exit lane.

Exit Gore Sign: A post-mounted sign with exit number and arrow pointing diagonally upward in the direction of the exit lane shall be provided.

Plaza Sign: The sign shall be white on green with the PLAZA and the internal Tollway number of the plaza on the first line, followed by CARS I-PASS with the I-PASS rate for cars on the second line, and CARS ONLINE with the online rate for cars on the third line.

3.2.13 AET Converted - Exit Ramp Plaza (Illustration SP-IT18)

The toll plaza signing shall provide safe, efficient movement of traffic through the toll area, minimize the time spent in the toll areas, and provide uniform signing of toll plazas throughout the Illinois Tollway system. An unattended plaza that accepts I-Pass or Pay Online is typical for the Illinois Tollway with all lanes being non-stop. The progression of signs on an exit ramp shall be the same regardless of ramp length. Wherever possible, a minimum of 200' between signs should be maintained. The following paragraphs detail the typical sequence of signs encountered while driving through this roadway configuration.

Next Exit Sign: The next exit sign should be posted at approximately 1 mile from the plaza theoretical gore. Depending on site constraints, this sign can be located anywhere within ½ mile and 1 ½ miles from the theoretical gore. The sign shall be white on green NEXT EXIT on top and black on white IPOPO message on the bottom.

Advance Guide Signs: A set of overhead signs (3 maximum) shall be placed near the theoretical gore directing road users to the exit or to proceed on the main roadway to next exits. The sign panel for the exit should be a standard exit direction guide sign centered over the exit lanes with one arrow pointing diagonally upward, in the direction of the exit and with a black on white I-PASS OR PAY ONLINE message on the top.

Exit Gore Sign: A post-mounted sign with exit number and arrow pointing diagonally upward in the direction of the exit lane shall be provided.

Warning Sign: A ramp advisory speed limit sign (W13-XX) shall be included as per MUTCD guidance for advisory exit and ramp speed signs.

Toll Ahead Sign: The toll ahead sign should be ground mounted on the right side of the exit ramp prior to the plaza. The sign shall be white on green TOLL AHEAD on top and black on white I-Pass or Pay Online message on the bottom.

Regulatory Signs: 15 MPH signs should be placed on the left side and on the right side of each AET lane, with arrows pointing diagonally downward in toward the lane. At least one DO NOT STOP sign should be included with one of the 15 MPH signs.

Plaza Signs: The IPOPO pictograph shall consist of the I-PASS symbol blue and white on a purple background on top with black on white OR PAY ONLINE on the bottom. This pictograph shall be placed on the canopy only above any lane(s) that are open to traffic. WIDE and LOAD signs shall be located on both sides of a wide load lane.

The plaza should be identified with the message PLAZA XX on a sign mounted above the canopy fascia.

Plaza Signs: The sign shall be white on green with the PLAZA and the internal Tollway number of the plaza on the first line, followed by CARS I-PASS with the I-PASS rate for cars on the second line, and CARS ONLINE with the online rate for cars on the third line. Depending on space constraints, this sign can be located either before or after the plaza.

Plaza Signs: An UNPAID TOLL Sign shall be placed downstream of AET lanes at the discretion of the Illinois Tollway. If space permits, placement should be on both sides of the exit ramp. The placement of this sign is site specific and varies.

Regulatory Signs: DO NOT ENTER, WRONG WAY, and 1-WAY signs shall be included at the exit ramp intersection in conformance with *MUTCD* guidance for wrong-way traffic control at interchange ramps. NO LEFT TURN and NO RIGHT TURN signs may be included on the crossroad as an additional measure to discourage wrong way turns.

3.2.14 AET Converted - Entrance Ramp Plaza (Illustration SP-IT19A-B)

The toll plaza signing shall provide safe, efficient movement of traffic through the toll area, minimize the time spent in the toll areas, and provide uniform signing of toll plazas throughout the Illinois Tollway system. An unattended plaza that accepts I-Pass or Pay Online is typical for the Illinois Tollway with all lanes being non-stop. The progression of signs on an entrance ramp shall be the same regardless of ramp length. Wherever possible, a minimum of 200' between signs should be maintained. The following paragraphs detail the typical sequence of signs encountered while driving through this roadway configuration.

Trailblazer Signs: Trailblazer signs along with an IPOPO sign shall be placed on all connecting routes, approximately ½ mile and ¼ mile from the entrance ramp.

Directional Guide Sign: Entrance Direction Guide signs shall be placed on the right shoulder of the crossroad at the intersection with the entrance ramp. This sign indicates that a toll is approaching and that you can pay with an I-Pass or Online.

Regulatory Signs: The first sign on the ramp, restricting usage of the Illinois Tollway to motor vehicles only, shall be post-mounted on the right shoulder.

Toll Ahead Sign: The toll ahead sign should be ground mounted on the right side of the entrance ramp prior to the plaza. The sign should be white on green TOLL AHEAD on top and black on white IPOPO message on the bottom.

Regulatory Signs: 15 MPH signs should be placed on the left side and on the right side of each AET lane, with arrows pointing diagonally downward in toward the lane. At least one DO NOT STOP sign should be included with one of the 15 MPH signs.

Plaza Signs: The IPOPO pictograph shall consist of the I-PASS symbol blue and white on a purple background on top with black on white OR PAY ONLINE on the bottom. This pictograph shall be placed on the canopy only above any lane(s) that are open to traffic. WIDE and LOAD signs shall be located on both sides of a wide load lane.

The plaza should be identified with the message PLAZA XX on a sign mounted above the canopy fascia.

Plaza Signs: The sign shall be white on green with the PLAZA and the internal Tollway number of the plaza on the first line, followed by CARS I-PASS with the I-PASS rate for cars on the second line, and CARS ONLINE with the online rate for cars on the third line. Depending on space constraints, this sign can be located either before or after the plaza.

Plaza Signs: An UNPAID TOLL Sign shall be placed downstream of AET lanes at the discretion of the Illinois Tollway. If space permits, placement should be on both sides of the entrance ramp. The placement of this sign is site specific and varies.

3.2.15 Typical All Electronic Toll Signing (Illustration SP-IT20A-D)

Advance signing for an AET interchange shall accommodate the high rate of speed encountered on the Illinois Tollway and shall direct motorists into the proper lanes for entering and exiting the AET system. Advance signing for an AET interchange shall consist of a series of overhead and ground mount signs, including Advance Guide signs for the interchange. The following paragraphs detail the typical sequence of signs encountered while driving through this roadway configuration.

Advance Guide Signs: The first advance interchange sign is typically 2 miles from the theoretical gore of the interchange, bearing the upcoming exit number, route number, and cross street name. The second and third signs should be at 1 mile and ½ mile from the theoretical gore.

Next Exit Sign: The next exit sign should be post mounted anywhere within ½ mile and 1 mile from the theoretical gore. The sign shall be white on the green NEXT EXIT on top and black on white IPOPO message on the bottom.

Advance Guide Signs: A set of overhead signs (3 maximum) shall be placed near the theoretical gore directing road users to the exit or to proceed on the main roadway to next exits. The sign panel for the exit should be a standard exit direction guide sign centered over the exit lanes with one arrow pointing diagonally upward, in the direction of the exit and with a black on white IPOPO message on the top.

Exit Gore Sign: An EXIT sign with a diagonally upward-pointing arrow and exit number shall be placed in each of the exit gore areas.

Plaza Signs: The sign shall be white on green with the PLAZA and the internal Tollway number of the plaza on the first line, followed by CARS I-PASS with the I-PASS rate for cars on the second line, and CARS ONLINE with the online rate for cars on the third line. Depending on space constraints, this sign can be located either before or after the plaza.

Plaza Signs: An UNPAID TOLL Sign shall be placed downstream of AET lanes at the discretion of the Illinois Tollway. If space permits, placement should be on both sides of the exit ramp. Placement of this sign is site specific and varies.

Regulatory Sign: A STOP sign shall be placed at the end of the exit ramp, if applicable. Follow applicable engineering studies for exact placement.

Warning Sign: A STOP AHEAD sign or SIGNAL AHEAD sign may be placed on the ramp before the crossroad to give motorists advance notice and to ensure a safe stop. A YIELD AHEAD sign may also be used if warranted.

Regulatory Signs: WRONG WAY, 1-WAY and DO NOT ENTER signs should be placed at the end of every exit ramp to advise motorists not to enter. NO RIGHT TURN and NO LEFT TURN signs may also be appropriate on the crossroad to help eliminate wrong way turns. See *MUTCD* Section 2E.59.

Advisory Speed Warning Signs: Exit advisory speed signage shall be in accordance with Article 6.6 of this manual.

IPOPO Crossroad Guide Sign and IPOPO Trailblazer Marker Sign: Crossroad guide signs with an IPOPO banner and trailblazer assemblies with an IPOPO sign shall be used on the crossroad at an interchange in advance of an entrance ramp.

Regulatory Sign: A MOTOR VEHICLES ONLY sign shall be installed on the right shoulder of all entrance ramps at the beginning of the ramp.

Regulatory Sign: A YIELD sign shall be placed at the end of the entrance ramp where an acceleration lane is not provided, or where one is provided and is not the standard length.

Warning Sign: A MERGE sign shall be placed at a location along the major roadway in advance of the point where traffic merges from an entrance ramp and where it does not obstruct the driver's view of vehicles on the entering roadway.

Regulatory and Route Signs: A series of signs shall be placed along the mainline roadway following the occurrence of an interchange entrance ramp. A SPEED LIMIT sign shown at 1000' past the gore shall be placed at the end of an acceleration lane where the 10" edge line meets the 4", 5" or 6" edge line. In areas of the six-county metropolitan area where greater than 60 mph is permitted, a supplemental speed limit sign for slower speed vehicles shall be placed 500' from the SPEED LIMIT sign. The signs shall be spaced at intervals of 500' when possible.

Regulatory Sign: A NO TRUCKS X LEFT LANES sign shall be placed 1500' from the theoretical gore. An additional NO TRUCKS X LEFT LANES sign shall be staggered downstream along the median where applicable.

Regulatory Sign: A SLOWER TRAFFIC KEEP RIGHT sign shall be placed 2000' from the theoretical gore.

Regulatory Sign: An EMERGENCY STOPPING ONLY – 2 HOUR LIMIT sign shall be placed 2500' from the theoretical gore.

Route Sign: A confirmation route sign shall be placed 3000' from the theoretical gore.

SECTION 4.0 GUIDE SIGNS

4.1 Guide Sign Application

Guide signs provide directions to the driver, including traffic lanes, exits, interchanges, routes and destinations. Guide signs are placed in advance of or at the point where a decision is to be made regarding a change in direction of travel. The signing shall furnish drivers with clear instruction for orderly progress to their destinations.

Guide signs shall serve distinct functions:

Give directions to destinations, or to streets or highway routes at interchanges, or to interchanges.

Furnish advance notice of the approach to interchanges or exits.

Direct road users into appropriate lanes in advance of diverging or merging movements.

Identify routes and direction on those routes.

Show distances to destinations.

Indicate access to general motorist services, rest, scenic, and recreational areas.

Provide other information of value to the road user.

Guide signs are used on the mainline and ramps to guide the motorist to other routes of travel.

4.2 Guide Sign Location

Reference is made to Chapter 2E of the *MUTCD*, “Guide Signs – Freeways and Expressways” for design and layout considerations for guide signs on the Illinois Tollway. As stated previously in Article 3.1.1, for signing purposes, Service Interchanges on the Illinois Tollway are considered Intermediate Interchanges.

The identification of entrances to the Illinois Tollway from crossroads should be given adequate attention. Signing on the approaches to interchanges shall be consistent with the design and traffic conditions of the crossroad. Judgment and careful attention to details on the placement of required guide signing shall be exercised in the vicinity of ramps and intersections with frontage roads to avoid giving motorists confusing, misleading, or conflicting information. Since the Illinois Tollway does not typically have jurisdiction of crossroads, installation of Guide signs shall conform to the criteria of the governing agency and, therefore, the Designer shall coordinate work with Local, County, and/or IDOT agencies.

All major Guide signs shall be spaced so that road users are not overloaded with a group of signs at a single location. On the mainline, Guide signs should be placed at least 800’ minimum from any other type of major Guide sign, and 1000’ spacing is strongly preferred. Specific locations not stated in these guidelines should adhere to or exceed the guidelines in the *MUTCD*.

In the immediate vicinity of the toll plazas and in Oasis areas, the preceding guidelines may not be achievable. However, the signs shall be placed such that they are in full view of motorists approaching the toll plaza area.

4.3 Guide Sign Shape, Color, Size and Border

Most signs shall be rectangular in shape and sized according to the messages on the face of the signs. When signs are mounted adjacent to each other, sizes and shapes should be the same, if practical, for visual simplicity. Guide sign panel sizes are determined by the components of the sign and do not have fixed dimensions. Guide sign sizes of extruded aluminum channels shall conform to the requirements specified in Article 2.12.

Per *MUTCD* standards, the minimum lettering sizes of places, streets or highway names on an overhead or ground-mounted Guide sign depends on the interchange classification. Letter sizes and spacing should be as specified in *MUTCD* Section 2E.12 and the corresponding tables in that section. In special case when there is a barrier wall present on an exit ramp with traffic on both sides of the barrier wall, refer to Article 4.7.4 for size of Exit Gore signs.

Guide signs shall comply with the *MUTCD* standards, having a green background with a white legend and border. Note that regulatory, warning, plaza, electronic toll and information signs should adhere to the border widths and radii dimensions shown in the sign panel illustrations in the appendices.

Sign panel border widths shall adhere to the following:

- 1" for sign dimensions ≤10' x 6'
- 2" for sign dimensions >10' x 6'

Sign panel corner radii shall adhere to the following:

- 6" for a minimum sign dimension height of 6 feet or less
- 12" for a minimum sign height of 7 feet or greater

4.4 Guide Sign Messages and Fonts

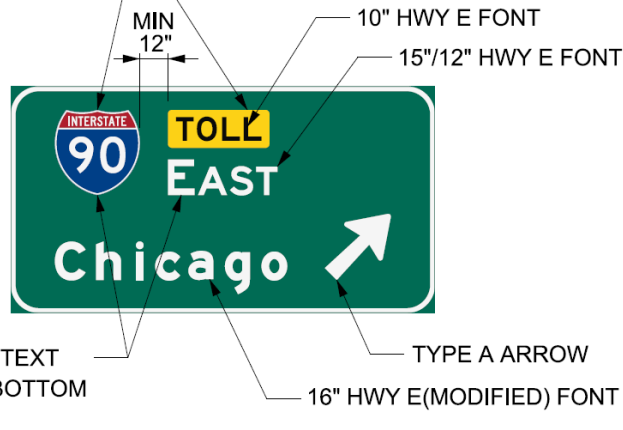
No more than two destination names or street names should be shown on any Guide sign. A city name and street name on the same sign shall be avoided. Where multiple signs are placed on the same supports, destinations or names shall be limited to one per sign, or to a total of three in the display. Sign legends may include symbols, route numbers, arrows, cardinal directions, exit numbers, and arrow directions. Sign legends shall not exceed three lines of copy, exclusive of the exit number and action message or distance.

When the TOLL pictograph is used on a guide sign adjacent to a route shield, it shall be top aligned vertically and placed to the right of the route shield with a minimum spacing of 12 inches. When the TOLL pictograph is used on a guide sign with a route shield and cardinal direction, the TOLL pictograph shall be vertically aligned to the top of the shield and the cardinal direction aligned to the bottom of the shield. The shield and cardinal direction shall be to the right of the route shield with a minimum spacing of 12 inches.

Generally all guide signs shall use Highway Font E except for destination text which shall use Highway E(modified) font. Exceptions are noted in the appendix illustrations and in the sign descriptions in this manual. Clearview has been discontinued by the FHWA and shall never be used on any sign. Existing signs with Clearview fonts shall be removed and replaced with new panels meeting current standards if the contract allows.

See example figures below for additional information.

TOP OF TOLL PICTOGRAPH SHALL LINE UP VERTICALLY WITH TOP OF ROUTE SHIELD



KEEP TOLL PICTOGRAPH VERTICALLY ALIGNED WITH TOP OF ROUTE SHIELD EVEN WHEN NO CARDINAL DIRECTION IS SPECIFIED



4.5 Guide Sign Control Destinations

In dealing with interchanges where the intersecting road is an interstate route, signs shall consist of the intersecting interstate number and the control destination(s) for the intersecting interstate route.

On the Illinois Tollway system, the following control destinations are typically used: INDIANA, IOWA, WISCONSIN, WEST SUBURBS, SOUTH SUBURBS, AURORA, BLOOMINGTON, CHICAGO, DEKALB, JOLIET, MILWAUKEE, O'HARE, and ROCKFORD.

Should a unique interchange location be encountered where the above control destinations do not apply, AASHTO's *List of Control Cities for Use in Guide Signs on Interstate Highways* should be referenced. This publication provides a list of control cities for interstate routes to be used on Guide signs.

For interchanges where the intersecting road is not an interstate, signs should consist of the intersecting road route number, if applicable, and the intersecting road or street name. Community names shall not be used on Guide signs for interstate routes. A separate sign indicating the community's name may be placed in advance of the interchange exit ramp.

4.6 Guide Sign Layouts

Since each Guide sign and Guide sign application is unique, sign layout details cannot be provided for all cases in these guidelines. In general, all signs within a certain area and with a similar purpose should be designed in a similar fashion.

Guide sign uppercase and lowercase letter height is based on the sign type and font. The recommended spacing for text or symbols from panel edges is the text letter height on the sign; however, this spacing shall be at least 8 inches for all guide signs. When letter height is 8 inches on a guide sign, the spacing from the panel edge may be reduced to 3 inches with a 1 inch border.

4.7 Guide Sign Descriptions

The Guide sign illustrations in this chapter are described in the following sections, which detail the Guide sign application, color, legend, layout and placement. All Guide sign illustrations follow the text below and a list of illustrations is included at the end of the chapter. The illustration identifier is listed in parentheses following each sign name.

4.7.1 Interchange Advance Guide Signs (Illustrations G-IT1A-G)

Application: Advance signs give notice in advance of the exit point of the principal destinations served by the upcoming exits or interchanges and the distance to that point. Exits terminate at intersections where the motorist will stop. The bottom line of the sign should state the appropriate distance to the exit gore. If the sign is located less than $\frac{1}{2}$ mile from the exit, the distance shown should be to the nearest $\frac{1}{4}$ mile. The distance to the subsequent interchange should be displayed to the nearest $\frac{1}{2}$ mile if the distance to the interchange is 5 miles or less and to the nearest mile if the distance is greater than 5 miles.

Color: The Advance signs should have a green background with white legend and border. Abbreviations may be used in accordance with *MUTCD* Section 1D.08, but they should be kept to a minimum.

Legend: Advance signs shall include a route shield and cardinal direction above the street name, the distance in miles, and toll (if applicable). If a toll plaza is located on the ramp, then Toll information shall also be included. The bottom line of the sign should state the appropriate distance to the exit gore. These signs shall also include the control destination and the distance in miles. The legend shall have a numeral followed by the word MILES or MILE. If the sign is located less than $\frac{1}{2}$ mile from the exit, the distance shown shall be to the nearest $\frac{1}{4}$ mile. Legends may include:

- Shield, Street Name, X Mile
- 2 Shields, Street Name, X Miles
- Shield, X Miles
- Bipartite Shields, Toll, Cardinals, Control Destinations, XX Miles
- Shield, 2 Street Names, X Miles
- To, Street Name, Right X Mile
- 2 Shields, 2 Street Names, XX Miles
- Bipartite Shields, Cardinal, 2 Community Names, X Mile
- Shield, Control Destinations, X Miles

Diagrams and Symbols: Shields shall be used for route numbers. For left exits, a Left Exit Number plaque shall be added to the left-hand edge of the sign. Advance signs for multi-lane exits and splits with an option lane shall follow guidance provided in Article 3.2.5.

Layout: The shield and cardinal direction, if applicable, shall be centered horizontally on the top row. Above the cardinal direction, the word TOLL if applicable shall be placed to the right of the shield. Underneath the shield and cardinal direction, the control destination should be listed. The control destination should be centered horizontally on the sign.

Placement: For major and intermediate interchanges, Advance Interchange signs should be placed overhead in advance of the exit at ½ mile, at 1 mile, and at 2 miles, if spacing permits. At minor interchanges, only one Advance Interchange sign shall be used and located at ½ or 1 mile from the exit gore. Typically, Advance Interchange signs for the next two interchanges should be placed on the left-hand side of an overhead truss at the exit ramp of each interchange. Advance Interchange and Exit Direction signs should be placed on overhead trusses, with no more than three signs, with the Exit Direction sign on the right. The most distant interchange sign should generally be placed on the left-hand side of the truss, and the next interchange sign on the right-hand side. Where there is less than 800' between interchanges, Interchange sequence signs should be used instead of Advance Interchange signs.

4.7.2 Mainline Distance Plaque Next Exit (Illustrations G-IT2A-B)

Application: When the distance to the next interchange is long, Mainline Distance plaques can be used to inform road users of the distance to the next interchange.

Color: Mainline Distance plaques should have a green background with a white legend and border.

Legend: The legend shall be NEXT EXIT XX MILES.

Diagrams and Symbols: None.

Layout: One or two lines as shown on the illustrations.

Placement: The Mainline Distance plaques should be used only where the distance between successive interchanges is more than 5 miles.

4.7.3 Crossroad Signs (Illustrations G-IT3A-F)

Application: Crossroad signs guide motorists to the Illinois Tollway from an intersecting road.

Color: These signs should have a green background with a white legend and border.

Legend: The sign shall include the interstate shield, cardinal direction, and the word TOLL. The control destination and either action messages (NEXT RIGHT, SECOND RIGHT OR AHEAD) or an appropriate arrow should also be included. In cases where there are more than one interstate and/or routes shown on the sign, the word TOLL shall be black in text color on a yellow background which spans across the width of all shields and route symbols shown on the sign.

Diagrams and Symbols: Shields shall be used for routes. An appropriate arrow should indicate the direction of the ramp. All spacing of arrows should be used in accordance with guidelines in

the current edition of the FHWA's *Standard Highway Signs and Markings* book. The layout of arrows should be similar to the layout for Exit Direction signs as specified in *MUTCD*.

Layout: All legend elements should be centered horizontally on the sign.

Placement: Crossroad signs are placed on the right-hand side of connecting road, or on a median, in advance of the entrance ramp to the Illinois Tollway.

4.7.4 Exit Gore Signs (Illustrations G-IT4A-G)

Application: The Exit Gore sign indicates the exiting point or the place of departure from the main roadway.

Color: Exit Gore signs should have a green background with a white legend and border.

Legend: The legend EXIT should be centered horizontally on the top line, and the exit number in the next line. Exit numbers for ramps will be provided by the Illinois Tollway.

Diagrams and Symbols: A diagonally upward-pointing arrow, slanting to the left (or right, if a single left lane exit is to be indicated) should be used.

Layout: Below the legend, the exit number and the arrow should be centered horizontally.

Size: The size of the Exit Gore signs shall be according to illustrations G-IT4A-G, except for a special case when there is a barrier wall present on an exit ramp with traffic on both sides of the barrier wall, the width of the Exit Gore sign shall be no wider than the width of the bottom of the barrier. For these situations, the Narrow Exit Gore Sign (MUTCD E5-1c) shall be used. The dimensions of the sign and fonts shall be designed by the Engineer and shown on the plans and adhere to the latest version of the FHWA's *Standard Highway Signs and Markings*.

Placement: The Exit Gore sign should be placed at the gore.

4.7.5 Exit Direction Signs (Illustrations G-IT5A-F)

Application: Exit Directions signs repeat the route and destination information that was displayed on the Advance Guide sign(s) for the next exit, and thereby assures road users of the destination served and indicates whether they exit to the right or left for that destination. Exit Direction signs should be used at major and intermediate interchanges. Using an arrow is preferable to the words Keep Left or Keep Right. Exit direction signs should include ramp advisory speeds when they are used at cloverleaf interchanges, where conditions provide limited visibility to curvature of the exit ramp, or where space for other advisory speed warning signs are limited.

Color: The Exit Direction sign should have a green background with a white legend and border. When a ramp advisory speed is used, it shall be black with a yellow background, as specified in the MUTCD.

Legend: The Exit Direction sign shall display the route shield, cardinal direction, and the word TOLL (if applicable). Underneath the shield and cardinal direction, the destination or destinations should be listed. Destinations include either control cities or intersecting road names. The destination should be centered horizontally on the sign. Legends may include:

- Shield, Toll, Cardinal, Control Destination, Directional Arrow
- Shield, Cardinal, Street Name, Directional Arrow
- To, Shield, Cardinal, 2 Street Names, Directional Arrow
- 2 Shields, Cardinal, Street Name, Directional Arrow
- 2 Shields, Street Name, Directional Arrow

Diagrams and Symbols: Diagrams should not be used at the exit direction location. Exit Direction signs only differ from Advance Guide signs in that they do not have a distance(s) listed on them, but instead shows a direction using an arrow. The shield and cardinal direction format shall be the same as for Advance Guide signs.

Layout: When an Exit Direction sign is used on an exit ramp, the destination or destinations should be centered below the cardinal direction and shield and next to a diagonally upward-pointing arrow. The arrow should be oriented such that it indicates the direction of the ramp. The arrow should be placed such that the bottom of the arrow is level with the bottom of the legend or legends. When a ramp advisory speed is used, the speed should be placed underneath the destination.

Placement: An Exit Direction sign should be placed overhead in the vicinity of the theoretical gore. The sign should be mounted on the same sign truss as the Interchange Advance Guide signs that designate the next two subsequent interchanges. The Exit Direction sign should be mounted on the truss on the side that the ramp exits.

4.7.6 Keep Left / Keep Right Signs (Illustrations G-IT6A-B)

Application: The Keep Left/Keep Right signs may be used in advance of the Exit Direction sign to help drivers preposition in the correct lane.

Color: Keep Left/Keep Right Exit signs have a green background with white legend and border.

Legend: Refer to illustrations.

Diagrams and Symbols: Route shields shall be used.

Layout: All legend elements should be centered horizontally on the sign, with the words KEEP LEFT or KEEP RIGHT on the bottom line.

Placement: A Keep Left/Keep Right sign may be placed in advance of the Exit Direction sign as needed depending on the site conditions.

4.7.7 Exit Direction Sign Exit Only Panel with Diagonal Arrow (Illustrations G-IT7A-C)

Application: The Exit Only Panel with diagonal arrow shall be used on overhead Exit Direction signs to advise road users of dropped lane(s) or auxiliary exit only lane(s) situations. See Articles 3.2.5 and 3.2.6 for further guidance.

Color: The EXIT ONLY panel shall have a yellow background with black legend and borders.

Legend: The legend shall be EXIT ONLY.

Diagrams and Symbols: The number of arrows on each sign shall correspond to the number of mandatory exit lanes at the location of each sign.

Layout: The legend should be centered horizontally on the panel.

Placement: The EXIT ONLY panel should be used on all Exit Direction signs at the signing of a mandatory exit.

4.7.8 Exit Number Plaques (Illustrations G-IT8A-K)

Application: Exit Number Plaques displaying interchange numbering shall be used on Exit Direction signs, Exit Gore signs, and 2-3 Advance Guide signs within approximately 2 miles of the theoretical gore for each freeway interchange exit (see *MUTCD* Sections 2E.23, 2E.41 and 2E.51). Interchange numbering shall use the reference locations sign exit numbering method. Suffix letters shall be used for multi-exit interchanges.

Color: The Exit Number Plaque shall have a green background with a white legend and border. In cases where the exit is left, the word LEFT shall be placed in the top left corner of the panel on a yellow background with a black legend.

Legend: The panel shall contain the word EXIT and the interchange number (and suffix letter if necessary). Exit numbers for ramps will be provided by the Illinois Tollway.

Diagrams and Symbols: None.

Layout: The text should be displayed in a single-line format. If used, the word LEFT shall be centered over the word EXIT.

Placement: The exit number plaque should be placed on the top right of each Advance Guide sign and Exit Direction sign. If the exit is on the left, the plaque should be placed on the top left of each Advance Guide sign and Exit Direction sign.

4.7.9 Advance Guide Sign Exit Only Panel with Down Arrow (Illustrations G-IT9A-C)

Application: An Exit Only Panel with Down Arrow(s) shall be included at the bottom of all Advance Guide signs for interchange dropped lanes and auxiliary exit only lanes. See Articles 3.2.5 and 3.2.6 for further guidance.

Color: The Exit Only panel shall have a yellow background with black legend and border.

Legend: The Exit Only Panel shall have a downward pointing arrow between the words EXIT and ONLY, or, the words EXIT ONLY between two downward pointing arrows, if there are two exit lanes.

Diagrams and Symbols: The down arrow(s) should be centered above the travel lane.

Layout: All legend elements should be centered horizontally on the panel.

Placement: The Exit Only Panel with down arrows should be used for mandatory exit lanes on all Mainline Advance Guide and selectively on Intersection Advance Guide signs.

4.7.10 Mainline Plaza Lane(s) Signs (Illustrations G-IT12A-B)

Application: The Mainline Plaza Lane sign is mounted overhead to give lane guidance to *I-Pass*, *E-ZPass*, and other users in advance of toll plaza canopy to select the appropriate lane(s). All Mainline Plaza Advance signs shall be illuminated with luminaires.

Color: The signs should be square or rectangular with green background and white border.

Legend: The legend should read *I-Pass* (in pictograph), *E-ZPass* (in pictograph), 'Or Pay Online' and Left Lane as shown on the sign illustrations. If there are two lanes, the legend should read: Left Lanes.

Diagrams and Symbols: The *I-Pass* and *E-ZPass* pictograph should be used.

Layout: The legend is centered horizontally on the sign.

Placement: One Mainline lane sign should be centered over the left lane or left lanes or ground mounted at each plaza, approximately ¼ mile in advance of the plaza canopy.

4.7.11 Post-Interchange Distance Signs (Illustrations G-IT13A-C)

Application: If there is less than 800' between interchanges, Post-Interchange Distance signs should be used instead of the Advance Guide signs. If used, Post-Interchange Distance signs should be used over the entire length of a route in an urban area. They should not be used on a single interchange basis. Post-Interchange Distance signs identifying the next two or three interchanges may be used. Post-Interchange Distance signs should not be substituted for Exit Direction signs.

Color: The Post-Interchange Distance signs have a green background with white legend and border.

Legend: The Post-Interchange Distance signs should have interstate shields and miles listed with the closest interchange on the top line. The third, or bottom line, shall contain the name of and distance to a control city (if any) that has national significance for travelers using the route.

Diagrams and Symbols: Route shields shall be used.

Layout: The shields, control destinations, and/or road names should be left-justified, and the mileage should be right justified.

Placement: Post-Interchange Distance signs are installed in a series and display the next two or three interchanges by name or route number with distances to the nearest ¼ mile. If used, the first sign in the series should be located in advance of the first Advance Interchange Guide sign. Post-Interchange Distance signs should be ground mounted on the right shoulder.

4.7.12 Major Interchange Option Lane Exit and Split Signs (Illustrations G-IT14A-B)

Application: These signs alert motorists to a lane split or divergence in the roadway ahead that involves an option lane.

Color: Mainline Split signs shall have a green background with white legend and border.

Legend: The legend shall include the route shields, plus cardinal directions and TOLL where applicable. Control destinations for both roadways at the bifurcation should also be included. The sign shall also include a top plaque, with a green background and white legend indicating the exit number.

Diagrams and Symbols: An upward-pointing arrow should be centered directly over each lane and an arrow shaft splitting into two arrow heads should be used to convey the lane split or divergence.

Layout: The messages should be arranged symmetrically with one arrow per lane centered directly over the lane.

Placement: See Article 3.2.6 for discussion of sign placement.

4.7.13 Mainline Pull-Through Lane Signs (Illustrations G-IT15A-B)

Application: A Mainline Pull-Through Lane sign is used where a through-movement at an interchange is not evident, and it is needed to guide road users traveling through the interchange.

Color: A Mainline Pull-Through Lane sign should have a green background with a white legend and border.

Legend: The legend shall include an interstate shield, cardinal direction, and the word TOLL, if required, above the cardinal direction. The control destination should also be included.

Diagrams and Symbols: Route shields shall be used and one pull-through arrow should be provided for each lane continuing through.

Layout: The legend should be centered horizontally on the sign.

Placement: The Mainline Pull-Through Lane sign should be placed overhead with the pull-through arrows centered over each lane.

4.7.14 Oasis Supplemental Signs (Illustrations G-IT16A-D)

Application: On the Oasis site, several Oasis Supplemental signs are needed to guide cars and trucks to separate areas and to guide cars to food or fuel. Where Oasis Supplemental signs of other background colors exist, they need not be substituted until replacement for maintenance purposes is required.

Color: The Oasis Supplemental signs should have a blue background with white legend and border.

Legend: The legend should be centered horizontally on the top two lines. Legends may include:

- Cars, Pickups, Trucks, Buses, Dual Upward Directional Arrows
- Phones, Food, Fuel, Food, Dual Upward Directional Arrows
- Truck Fuel, Left Lane, Truck Parking, Right Lane
- Trucks, Buses, Keep Right

Diagrams and Symbols: When applicable, directional arrows should be centered horizontally below the legend. Each arrow should be oriented such that it indicates the direction of travel.

Layout: The sign layout may be bi-partite with two words and one arrow on each panel. The legend should be centered both horizontally on each panel.

Placement: The Oasis Supplemental signs should be placed at island gores and where motorists encounter a decision point. This is a non- Illinois Tollway sign and the Oasis Facility Lessee shall be responsible for placement, fabrication, and maintenance.

4.7.15 To Illinois Tollway Sign (Illustration G-IT17)

Application: The To Illinois Tollway sign should be used at the re-entry ramp from each Oasis to the mainline.

Color: The sign should have a green background with white legend and border.

Legend: TO TOLLWAY should be centered horizontally on the top line.

Diagrams and Symbols: An upward-pointing arrow should be centered horizontally below the legend.

Layout: Both the legend and arrow should be centered horizontally.

Placement: The To Illinois Tollway sign should be placed at the entrance point to the re-entry ramp from the Oasis parking areas. This is a non- Illinois Tollway sign and the Oasis Facility Lessee shall be responsible for placement, fabrication, and maintenance.

4.7.16 Supplemental Mainline Guide Signs (Illustrations G-IT18A-F)

Application: Supplemental Mainline Guide signs provide information, including movement directions, to motorists about upcoming communities. Supplemental Mainline signs are used only in addition to other Guide signs. The lettering and sign size should be smaller than other Guide signs. Supplemental Mainline signs can be used to provide information regarding destinations accessible from an interchange, other than places shown on the standard interchange signing. These places include communities served by more than one interchange. If community interchanges are not conveniently identifiable or if there are more than two interchanges to be identified for a community, the NEXT X EXITS sign may be used.

Color: Supplemental Mainline signs should be rectangular in shape and have a green background with a white legend and border.

Legend: The Supplemental Mainline sign legend includes the community destination name(s) with exit number or action messages below. A Supplemental Mainline sign should not list more than three destinations. Legends may include:

- 2 Community Names, Next Right, Community Name, Second Right
- Community Name, Exit XX A, Community Name, Exit XXB
- Community Name, Exit XX
- 2 Community Names, Exit XX

Diagrams and Symbols: None.

Layout: The legend should be centered horizontally on the sign.

Placement: Supplemental Mainline signs should be placed so as not to interfere with required regulatory and warning signs or sequences of typical Guide signs. No more than one Supplemental Mainline sign should be used on each exit or interchange, and it should be installed as an independent Guide sign assembly. Where two or more Advance Guide signs are used, the Supplemental Mainline sign should be installed approximately midway between two of the Advance Guide signs. If only one Advance Guide sign is used, the Supplemental Mainline sign should follow it by at least 800’.

4.7.17 Trailblazer Assembly and Route Confirmation Signs (Illustrations G-IT19A-C)

Application: Trailblazer Assembly signs are Guide signs with a directional arrow which guides motorists in adjoining communities to the Illinois Tollway system. Trailblazer Assembly signs may be used on an off-network roadway leading to the Illinois Tollway or as a route confirmation sign on the mainline. There are three types of Trailblazer Assembly signs: Type I, Type II, and Type III.

Color: The Trailblazer Assembly signs will be a series of standard *MUTCD* marker signs and shall have a blue background with a white border and legend.

Legend: The legend for the Type I and Type II Trailblazer signs should follow standards detailed in *MUTCD* Section 2D.10. When used to guide motorists in adjoining communities to the Illinois Tollway system, the legend shall include the cardinal direction, TOLL, interstate and a directional arrow. The cardinal direction may be removed if the Trailblazer sign is directing the motorist to a full interchange. When used as a confirmation sign on the mainline, only the cardinal direction, TOLL, interstate shield and directional arrow are required. The legend for the Type III Trailblazer sign should contain a series of sign panels displaying the cardinal direction and interstate shield.

Diagram and Symbols: Standard *MUTCD* arrows shall be used to convey directional instructions to motorists. Route shields shall also be used.

Layout: Components of the Type I Trailblazer Assembly sign are horizontally centered and placed in the following order from top to bottom: TOLL, cardinal direction, interstate shield, directional arrow on one continuous panel. Components of the Type II Trailblazer Assembly sign are horizontally centered and placed in the following order from top to bottom: TO, TOLL, cardinal direction, interstate shield, directional arrow on one continuous panel.

Components of the Type III Trailblazer Assembly sign are horizontally centered and placed in the following order from top to bottom: cardinal direction, interstate shield.

Placement: Trailblazer Assembly signs may be displayed on a non-toll roadway, a section of Interstate Highway System at the last exit before entering a toll section, at the interchange or connection with a toll facility, and at other locations near the toll facility to assist motorists in finding the Illinois Tollway entrance. In general, placement of Trailblazer Assembly and Route Confirmation signs on medians are not desirable. Type I and Type II Trailblazer Assembly signs may be located at the first major cross-street from the Illinois Tollway entrance. Type III Trailblazer Assembly signs may be located along the mainline after an entrance ramp, where motorists are

already on the Illinois Tollway. Trailblazer Assembly signs may be placed beyond these limits if it is anticipated that a large number of motorists will use the route to access the Illinois Tollway. When used to assist motorists in finding the Illinois Tollway entrance, Trailblazer Assembly signs should be placed between 300'-500' from the approaching intersection. Type I and Type II confirmation Trailblazer Assembly signs shall be installed 25'-200' beyond the far shoulder or curb of the intersecting roadway. Type III Trailblazer Assembly signs are serving as route confirmations signs on the mainline.

SECTION 5.0 REGULATORY SIGNS

5.1 Regulatory Sign Application

Regulatory Signs inform the driver of traffic laws, regulations, indicate the applicability of legal requirements that would not otherwise be apparent, and are essential to the safe and efficient use of the roadway.

There are three types of standard regulatory signs used on the Illinois Tollway System: (1) right-of-way signs including stop and yield signs, (2) speed signs, and (3) movement signs. Other types of regulatory signs are acceptable for use at other locations as long as they are used in accordance with the *MUTCD*.

5.2 Regulatory Sign Location

Regulatory Signs shall be placed at the point at which the regulation becomes effective and, if needed, at periodic points within the regulated area. Regulatory signs should be placed at uniform distances. Normally, the sign should be placed on the right-hand side of the roadway. On the Illinois Tollway, it is acceptable to place regulatory signs at other locations (on the left-hand side or overhead) in addition to the right-hand side of the roadway. Such circumstances where this may be applicable are: immediately after a major interchange, where a large number of vehicles have joined the traffic stream, when the number of lanes in one direction is more than two, or near large weaving areas. Signs placed in locations other than the right-hand side should be considered as supplementary signs.

Spacing of mainline and ramp regulatory signs should be a minimum of 500' from the nearest sign, independent of the type of sign. Distances between identical regulatory signs, such as Speed Limit signs, No Trucks X Left Lanes, and Slower Traffic Keep Right signs should be no more than 5 miles. Regulatory signs that are continuously in effect should be placed within 1500' of the end of an acceleration lane at all interchanges.

Other types of regulatory signs shall be placed at the point that the regulation takes effect. In the immediate vicinity of the toll plazas and Oasis areas, the preceding guidelines do not apply. However, the signs should be placed such that they are in full view of motorists for whom the signs are intended.

5.3 Regulatory Sign Shape, Color and Size

Regulatory Signs shall be rectangular, except for right-of-way series signs. Right-of-way signs shall be either octagonal with a white legend on a red background (stop sign) or triangular with a red legend and white background (yield sign).

All Oasis regulatory signing should be the size designated as freeway size in the *Standard Highway Signs and Markings* book. Plaza regulatory signing should be freeway size unless signing is to be placed within the plaza administration area. These signs should be designated as "standard" size. Regulatory signs unique to the Illinois Tollway should be sized by the size of the messages and by the particular application of the sign as per *MUTCD* standards.

5.4 Regulatory Sign Messages

The sign message should clearly indicate the requirements imposed by the regulation and should be easily visible and legible to the vehicle operator. All messages for standard regulatory signs shall conform to the provisions of the *MUTCD*.

5.5 Regulatory Sign Layout

The legend shall be centered both horizontally and vertically on the sign. The overall layout of the regulatory signs shall be as illustrated in the *MUTCD*, the *Standard Highway Signs and Markings* book and the *RSPMG*. All standard regulatory signs shall be fabricated in accordance with the *Standard Highway Signs and Markings* book.

5.6 Other Regulatory Signs

Regulatory signs other than those illustrated in these guidelines may be required; the *MUTCD* and *Standard Highway Signs and Markings* book should be consulted for message, size and description of such signs.

5.7 Regulatory Sign Descriptions

All Regulatory sign illustrations follow the text below and a list of illustrations is included at the end of the chapter. The illustration identifier is listed in parentheses following each application name.

5.7.1 Do Not Enter Sign (Illustration R-IT1)

Application: The Do Not Enter sign is a movement regulatory sign, which informs motorists of open or closed toll lanes at Plazas. This sign is used for temporary closings and in lieu of the gate.

Color: The background should be white and the border should be black.

Legend: The legend should be black and include the words AUTHORITY VEHICLES ONLY.

Diagrams and Symbols: The standard *MUTCD* Do Not Enter symbol shall be used.

Layout: The legend should be centered horizontally on the sign.

Placement: The Do Not Enter sign should be placed on the right-hand curb of the tollbooth lane closest to the plaza building.

5.7.2 Fasten Seat Belts Sign (Illustration R-IT2)

Application: The Fasten Seat Belts sign is used at Plazas downstream from toll booths and at the exit from plaza parking lots to remind motorists and Illinois Tollway employees to buckle up.

Color: The background should be white and the border should be black.

Legend: The legend should be black and include the words FASTEN SEAT BELTS.

Diagrams and Symbols: None.

Layout: The legend should be centered horizontally on the sign.

Placement: The Fasten Seat Belts sign should be placed on the downstream end of the toll booth island, and on the shoulder or parking lot median adjacent to the parking lot exit to the Illinois Tollway and to the Plaza service road. This sign may be used at Oases on the shoulder of the downstream Illinois Tollway access road.

5.7.3 Plaza Service Road / No Outlet Sign (Illustration R-IT3)

Application: The Plaza Service Road / No Outlet sign is a movement regulatory sign, which alerts drivers that the Plaza access road is a dead end and provides no access to the Illinois Tollway.

Color: The background should be white and the border should be black.

Legend: The legend should be black and include the words PLAZA XX, SERVICE ROAD, NO OUTLET, and AUTHORITY VEHICLES ONLY.

Diagrams and Symbols: The Illinois Tollway Logo shall be used.

Layout: The legend should be centered horizontally on the sign.

Placement: The Plaza Service Road / No Outlet sign should be placed on the inbound shoulder of the service road within sight of the intersection, with clear visibility to motorists, before they decide to make the turn into the service road.

5.7.4 Lane Closed (X) Sign (Illustration R-IT4)

Application: The Lane Closed (X) sign is a movement regulatory sign, which alerts motorists to a toll booth lane closure.

Color: The background should be red and (X) should be white.

Legend: The legend should not include words.

Diagrams and Symbols: The Illinois Tollway standard (X) should be used.

Layout: The legend should be centered vertically and horizontally on the sign.

Placement: The Lane Closed (X) sign shall be attached to the lane closure gate, upstream from the tollbooth.

5.7.5 Oversized Vehicles Use Right Lane Sign (Illustration R-IT5)

Application: The Oversized Vehicles Use Right Lane sign is a movement regulatory sign, which directs drivers of oversized vehicles to a specific lane. This sign may also be used at Oases.

Color: The background should be white and the border should be black.

Legend: The legend should be black and include the words OVERSIZED VEHICLES USE RIGHT LANE.

Diagrams and Symbols: None.

Layout: The legend should be centered vertically and horizontally on the sign.

Placement: The Oversized Vehicles Use Right Lane Sign, if needed, should be shoulder-mounted at Plazas, upstream from the toll booths, after the I-PASS pull-through sign.

5.7.6 Parking 2 Hour Limit Sign (Illustration R-IT6)

Application: The Parking 2 Hour Limit sign restricts automobile parking at Oases and Plazas.

Color: The background should be white and the border should be black.

Legend: The legend should be black and include the words PARKING 2 HOUR LIMIT.

Diagrams and Symbols: None.

Layout: The legend should be centered horizontally on the sign.

Placement: The Parking 2 Hour Limit sign should be mounted in the parking lot medians, or on the centerline of parking spaces, as needed, to be visible to motorists in controlling individual spaces or groups of parking spaces.

5.7.7 No U-Turn Except Authority Vehicles Sign (Illustration R-IT7)

Application: The No U-Turn Except Authority Vehicles sign is a movement regulatory sign informs motorists that U-turns are prohibited except by Illinois Tollway or emergency personnel.

Color: The background should be white and the border should be black.

Legend: The legend should be black and include the words EXCEPT AUTHORITY VEHICLES.

Diagrams and Symbols: The standard *MUTCD* No U-Turn symbol shall be used.

Layout: The legend should be centered horizontally on the sign.

Placement: The No U-Turn Except Authority Vehicles sign should be mounted in the infield of the mainline at driveways connecting opposite lanes of traffic, or, if needed, at plazas and Oases on shoulders or medians.

5.7.8 Engine Braking Prohibited Sign (Illustration R-IT8)

Application: The Engine Braking Prohibited sign is a movement sign which instructs truck drivers to keep traffic noise at a minimum in residential or noise-sensitive sections of the Illinois Tollway.

Color: The background should be white and the border should be black.

Legend: The legend should be black and include the words ENGINE BRAKING PROHIBITED.

Diagrams and Symbols: None.

Layout: The legend should be centered horizontally on the sign.

Placement: The Engine Braking Prohibited sign should be shoulder-mounted at the commencement of the Illinois Tollway section where noise sensitivity exists.

5.7.9 End Truck Restriction Sign (Illustration R-IT9)

Application: The End Truck Restriction sign is a movement regulatory sign typically used on the mainline to inform truck drivers that special speed limits or lane assignments, for example, are no longer in effect.

Color: The background should be white and the border should be black.

Legend: The legend should be black and include the words END TRUCK RESTRICTION.

Diagrams and Symbols: None.

Layout: The legend should be centered horizontally on the sign.

Placement: The End Truck Restriction sign should be shoulder-mounted at the location where restrictions are lifted.

5.7.10 No Trucks Left Lane and No Trucks X Left Lanes Signs (Illustration R-IT10B)

Application: The No Trucks Left Lane and No Trucks X Left Lanes signs are movement regulatory signs, which direct truck drivers into specific lanes. This sign is typically used on the Mainline, but may be used at Plazas or Oases, if needed.

Color: The background should be white and the border should be black.

Legend: The legend should be black and include the words NO TRUCKS LEFT LANE or NO TRUCKS X LEFT LANES.

Diagrams and Symbols: None.

Layout: The legend should be centered horizontally on the sign.

Placement: The No Trucks Left Lane or No trucks X Left Lanes sign should be shoulder-mounted in advance of Illinois Tollway section where trucks are assigned. Additionally, the No Trucks Left Lane or No Trucks X Left Lanes sign should be staggered along median at 200-300 feet past the signs mounted on the right side of the roadway.

5.7.11 Emergency Stopping Only / 2 Hour Limit Sign (Illustration R-IT11)

Application: The Emergency Stopping / 2 Hour Limit sign is a movement regulatory sign, which restricts vehicle parking or standing on the mainline shoulder. This sign may also be used at Oases and Plazas.

Color: The background should be white and the border should be black.

Legend: The legend should be black and include the words EMERGENCY STOPPING ONLY 2 HOUR LIMIT.

Diagrams and Symbols: None.

Layout: The legend should be centered horizontally on the sign.

Placement: The Emergency Stopping / 2 Hour Limit Sign should be shoulder-mounted downstream from every entrance ramp on the mainline, or in the parking lot medians, or on the centerline of parking spaces, as needed to be visible to motorists in controlling individual spaces or groups of parking spaces at Oases and Plazas.

5.7.12 Motor Vehicles Only Sign (Illustration R-IT12)

Application: The Motor Vehicles Only sign is a movement regulatory sign, which prohibits pedestrians and cyclists from entering and using the Illinois Tollway.

Color: The background should be white and the border should be black.

Legend: Refer to illustration.

Diagrams and Symbols: None.

Layout: The legend should be centered vertically and horizontally on the sign.

Placement: The Motor Vehicles Only sign should be placed on the entrance ramp shoulder downstream from any toll plaza and before the Merge sign into the Mainline.

5.7.13 Illinois Tollway Properties; No Dumping, No Trespassing Sign (Illustration R-IT13)

Application: The Illinois Tollway Properties; No Dumping, No Trespassing sign is a movement regulatory sign, which alerts motorists that the signed area is private property where the listed activities are prohibited.

Color: The background should be white and the border should be black.

Legend: The legend should be black and include the words NO DUMPING, NO TRESPASSING, ILLINOIS STATE TOLL HIGHWAY AUTHORITY PROPERTY.

Diagrams and Symbols: None.

Layout: The legend should be centered vertically and horizontally on the sign.

Placement: The Illinois Tollway Properties; No Dumping, No Trespassing sign should be shoulder-mounted as needed at a safe, appropriate interval along the mainline, most commonly in rural areas. This sign is supplemental in nature and should not interfere with the location of or visibility of essential signs. Spacing should be at least 500' from any other signs.

5.7.14 State Law Signs (Illustration R-IT14A-B)

Application: The Minor Crash sign and the Move Over – Slow Down sign are movement regulatory signs, which alert and direct motorists to move their vehicle from the lane in the event of a crash or move over and reduce speed for all stopped vehicles with flashing lights.

Color: The background should be white and the border should be black. The top line with the words STATE LAW shall be black text on a yellow background.

Legend: The legend should be black and include the words STATE LAW, MINOR CRASH MOVE VEHICLES FROM TRAFFIC LANE or STATE LAW, MOVE OVER – SLOW DOWN FOR ALL STOPPED VEHICLES WITH FLASHING LIGHTS.

Diagrams and Symbols: None.

Layout: The legend should be centered vertically and horizontally on the sign.

Placement: The State Law signs should be shoulder-mounted signs. Placement of these signs should be prioritized as follows: 1) downstream from all mainline locations where jurisdictional authority changes to the Illinois Tollway, 2) downstream from all system-to-system interchange entrances, 3) downstream from service interchange entrances with a minimum distance of 5-miles until the next service interchange, and 4) at existing gaps along the Illinois Tollway system where there are no or minimal 'State Law' signs. The Move Over – Slow Down sign shall take precedence over the Minor Crash sign and placed first. If there is additional spacing for an additional State Law sign, the Minor Crash shall be placed a minimum of 300 feet downstream from the Move Over – Slow Down sign.

5.7.15 Truck Enforcement Site (Illustration R-IT15)

Application: The Truck Enforcement Site (Weight-In-Motion) is movement regulatory sign typically used on the mainline to inform truck drivers that there is a Weigh-In-Motion location upstream of the sign location.

Color: The background should be white and the border should be black. The words TRUCK ENFORCEMENT SITE shall be black text on a yellow background.

Legend: Refer to the illustration.

Diagrams and Symbols: None.

Layout: The legend should be centered vertically and horizontally on the sign.

Placement: The Truck Enforcement Site sign should be a shoulder-mounted sign located 500 feet downstream of the Weigh-In-Motion Truck Enforcement Areas.

5.7.16 Minimum Speed Limit Plaque (Illustration R-IT16)

Application: The Minimum Speed Limit Plaque is a movement regulatory sign, which alerts motorists that there is a minimum speed limit to be maintained on the mainline.

Legend: Refer to the illustration.

Diagrams and Symbols: None.

Layout: The legend should be centered vertically and horizontally on the sign.

Placement: The Minimum Speed Limit Plaque should be shoulder-mounted below the regulatory R2-1 Speed Limit sign located at the terminal section of entrance ramps after the merge.

5.7.17 Speed Limit for Large Vehicles (Illustration R-IT17)

Application: The Speed Limit for Large Vehicles sign is a movement regulatory sign that alerts motorist that the speed limit for large vehicles is 60 mph on the mainline. This includes trucks over 4 tons, motor homes, campers, and trailers. This sign is only to be used within the six-county metropolitan area where speed limits exceed 60 mph.

Legend: Refer to the illustration. Diagrams and Symbols: None.

Layout: The sign is divided into two sections. The legend should be centered in each section.

Placement: The sign should be shoulder-mounted 500 feet downstream from the regulatory R2-1 Speed Limit sign. When this sign is used, the regulatory sign sequence distances should be adjusted accordingly to meet spacing requirements.

5.7.18 Wrong Way Sign Assembly (Illustration R-IT18)

Application: The Wrong Way Sign Assembly consists of two movement regulatory signs that alert motorists when they are traveling the wrong way on a one-way segment of roadway. This sign assembly is to be used on all exit ramps to supplement Do Not Enter (R5-1) and One Way (R6-1) signs, and prevent wrong way drivers, as recommended in NCHRP 500 volume 20 and described in this manual.

Legend: Refer to the illustration.

Diagrams and Symbols: None.

Layout: The sign assembly consists of two 24"x36" Wrong Way (R5-1a) signs attached to a sign post with a red retroreflective strip. The lowest sign in the assembly should be placed at a minimum mounting height of three feet, measured vertically from the bottom of the sign to the elevation near the edge of the pavement, per MUTCD Section 2E.59. The top sign should be mounted to obtain two feet of clearance from the bottom of the top sign to the top of the bottom sign.

Placement: This sign assembly should be shoulder mounted along both sides of the tollway exit ramp, facing a user who is traveling in the wrong direction.

5.7.19 Do Not Stop Sign (Illustration R-IT19)

Application: The Do Not Stop sign is a movement regulatory sign, which informs motorists to not stop at AET toll lanes at Plazas.

Color: The background should be white and the border should be black.

Legend: The legend should be black and include the words DO NOT STOP.

Diagrams and Symbols: None.

Layout: The legend should be centered vertically and horizontally on the sign.

Placement: The Do Not Stop sign should be placed on either side of the plaza lane along with a 15 MPH (P-IT5A/B) sign.

5.7.20 Authorized Vehicles Only Sign (Illustration R-IT20A-B)

Application: The Authorized Vehicles Only sign is a movement regulatory sign, which informs motorists that a toll plaza is for authorized vehicles only.

Color: The background should be white and the border should be black.

Legend: The legend should be black and include the words AUTHORIZED VEHICLES ONLY.

Diagrams and Symbols: Standard *MUTCD* arrows shall be used to convey directional instructions to motorists.

Layout: The legend should be centered horizontally on the sign.

Placement: The Authorized Vehicles Only sign should be placed above the striped-out lane for AET plazas.

5.7.21 Wrong Way Sign (Illustration R-IT21)

Application: The Wrong Way sign is a movement regulatory sign, which alerts motorists when they are traveling the wrong way on a one-way segment of roadway. This sign assembly is to be used on all exit ramp plazas.

Color: The background should be red and the border should be white.

Legend: The legend should be white and include the words WRONG WAY.

Diagrams and Symbols: None.

Layout: The legend should be centered horizontally on the sign.

Placement: The Wrong Way sign should be placed on the back side of exit ramp plaza canopies or on the backside of exit ramp monotubes.

SECTION 6.0 WARNING SIGNS

6.1 Warning Sign Application

Warning signs alert the driver to potentially hazardous conditions on or adjacent to the roadway that would not otherwise be readily apparent.

6.2 Warning Sign Location

Since warning signs are primarily for the benefit of the driver who is unacquainted with the road, it is very important that care be given to their placement. Warning signs should be placed an adequate distance in advance of the condition. The actual advance warning sign location should be determined by the normal approach speed and the time needed for the driver to perceive, identify, decide, and perform any necessary maneuver as well as the availability of space for the sign.

These factors are described further in the *MUTCD* along with suggested minimum sign placement distances displayed in Table 2C-3 of the *MUTCD*, “*Guidelines for Advance Placement of Warning Signs*”. The sign placement should be considered so that the driver has time to react to the sign message and take any action necessary to pass safely through or avoid a potential hazard.

In cases where individual warning signs in a series like W1-8 (Chevron Alignment sign) need to be replaced, the same size sign as the existing others in that series shall be installed. When new signs are proposed for new projects, all signs in that series shall have dimensions based on table 2C-1 of the *MUTCD*. Contact the Illinois Tollway PM for additional guidance.

6.3 Warning Sign Shape, Color and Size

All warning signs shall be rectangular or diamond in shape and have a black legend and border on yellow background. If a standard sign is required that is not included in these guidelines, the largest size for the particular sign application as stated in FHWA’s *Standard Highway Signs and Markings* book should be used. Standard warning signs for use other than mainline or ramps should be sized according to the “standard” size in the *Standard Highway Signs-and Markings* book and latest supplements.

6.4 Warning Sign Messages

All messages for standard warning signs shall be designed in accordance with the *MUTCD* and *Standard Highway Signs and Markings* book.

6.5 Warning Sign Layout

All standard warning signs shall be fabricated in accordance with the FHWA’s *Standard Highway Signs and Markings* book.

6.6 Exit Ramp Warning Sign Guidance

The following guidance shall be applied at all Illinois Tollway Exit Ramps:

- a. Taper Exit Ramps designed to meet Illinois Tollway Standards with less than or equal to a 10-mph design speed differential between the mainline and first curve beyond the deceleration taper do not require an Advisory Exit Speed (W13-2) sign. Chevron Alignment (W1-8) signs are optional and should be placed along the outside of the first curve after the deceleration taper, spaced as recommended per MUTCD Table 2C-5.
- b. Taper Exit Ramps with a speed differential between the mainline and the first curve equal to 15mph shall include Chevron Alignment (W1-8) signs, spaced as recommended per MUTCD Table 2C-5. Advisory Exit Speed (W13-2) signs are recommended, but not required. If used, the advisory exit speed sign, should be installed on the right side of the roadway along the deceleration lane or at the painted nose of the theoretical gore to provide enough time for the road user to decelerate for the exiting maneuver. If used, the advisory exit speed shall be based on the design speed of the first curve beyond the deceleration taper. The sign size should be in accordance with the freeway size per MUTCD Table 2C-1.
- c. Taper Exit Ramp Terminals with 20 mph or greater design speed differential between the mainline and the first curve beyond the deceleration taper shall include the following signage:
 - 1. Advisory Exit Speed (W13-2) sign, placed on the right side of the roadway along the deceleration lane or at the painted nose of the theoretical gore to provide enough time for the road user to decelerate for the existing maneuver. The advisory exit speed shall be based on the design speed of the first curve beyond the deceleration taper. The sign size shall be oversized per MUTCD Table 2C-1 (48" x 60").
 - 2. Chevron Alignment (W1-8) signs placed along the outside of the first curve after the deceleration taper, spaced as recommended per MUTCD Table 2C-5.
- d. For Taper Exit Ramp Terminals: Additional curves beyond the first curve after the deceleration taper shall include appropriate chevron alignment signs (per MUTCD Section 2C.07) wherever the differential design speed equals or exceeds 15 mph between consecutive curves.
- e. All Exits with Hairpin Curves (horizontal alignment change of approximately 135 degrees to 210 degrees) shall include the following signage:
 - 1. Combination Horizontal Alignment Hairpin Curve/Advisory Exit Speed (W13-8) sign placed on the right side of the roadway at the PC of the deceleration curve (3-degree curve approximately 300' long). The advisory speed shall be based on the design speed of the sharpest curve along the exit ramp. The sign size shall be oversized per MUTCD Table 2C-1 (48" x 84") and shall include the enhanced conspicuity 6" border (yellow and black diagonal pattern). If space allows, an additional W13-8 sign may be placed at the advance placement distance indicated for Condition B in MUTCD Table 2C-3 along the right side of the roadway without the enhanced conspicuity border.
 - 2. Chevrons Alignment (W1-8) signs placed along the outside of the curve and spaced as recommended per MUTCD Table 2C-5.
 - 3. A Confirmation Advisory Speed Plaque (W13-1aP) shall be mounted below the Exit Gore Sign (E5-1, E5-1a).
 - 4. The exit guide sign located at the gore (either overhead or ground mounted) shall include an advisory speed panel (E13-2). The advisory speed shall be based on the design speed of the sharpest curve along the exit ramp. The exit guide sign shall not have any other warning messages present on the sign (i.e. EXIT ONLY). If other warning messaging is required, then the E13-2 advisory speed panel shall be omitted.

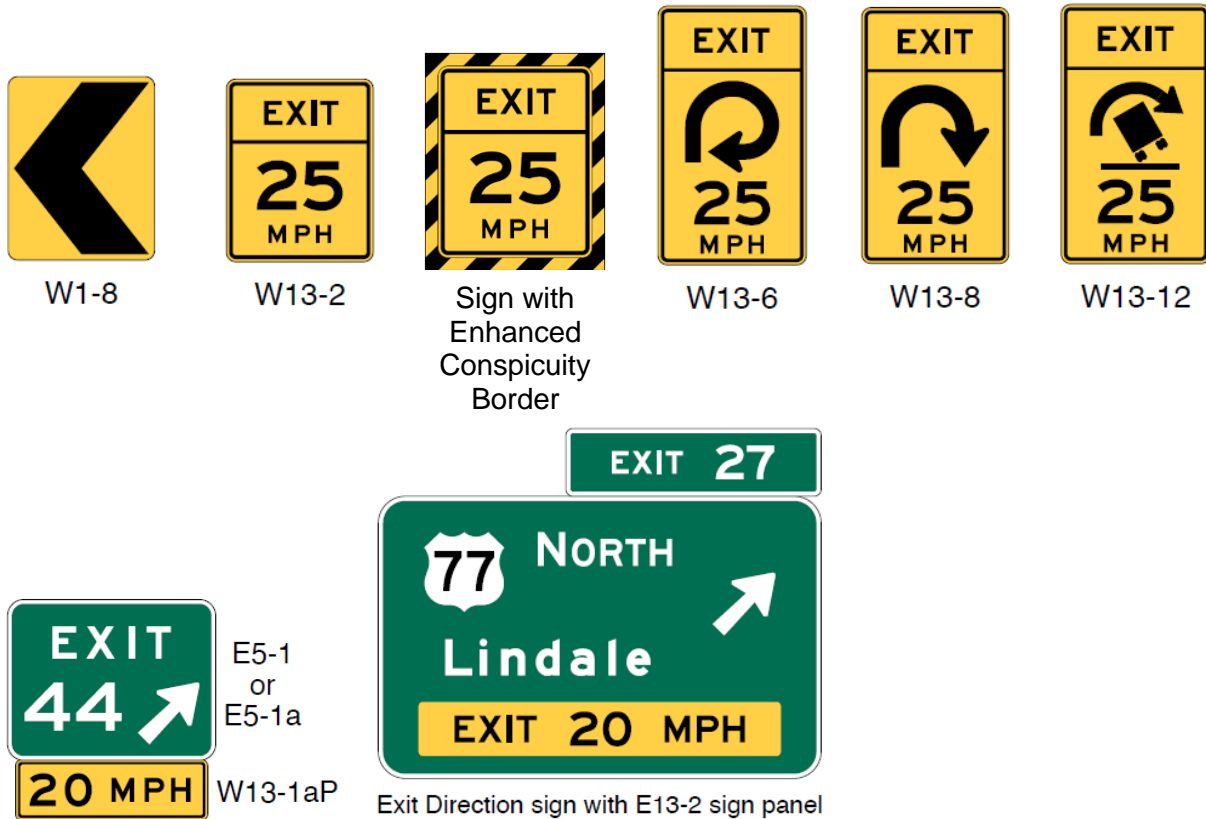
- f. Parallel Exit Ramp Terminals -- Loop Ramps (horizontal alignment change of more than 210 degrees) shall include the following signage:
 - 1. Combination Horizontal Alignment 270-degree Loop/Advisory Exit Speed (W13-6) sign placed on the right side of the roadway at the PC of the deceleration curve (3-degree curve approximately 300' long). The advisory speed shall be based on the design speed of the sharpest curve along the exit ramp. The sign size shall be oversized per MUTCD Table 2C-1 (48" x 84") and shall use the enhanced conspicuity 6" border (yellow and black diagonal pattern). The advisory speed shall be based on the design speed of the sharpest curve along the exit ramp. If space allows, an additional W13-6 sign may be placed at the advance placement distance indicated for Condition B in MUTCD Table 2C-3 along the right side of the roadway without the enhanced conspicuity border.
 - 2. Chevrons Alignment (W1-8) signs placed along the outside of the curve and spaced as recommended per MUTCD Table 2C-5.
 - 3. A Confirmation Advisory Speed Plaque (W13-1aP) shall be mounted below the Exit Gore Sign (E5-1, E5-1a).
 - 4. The exit guide sign located at the gore (either overhead or ground mounted) shall include an advisory speed panel (E13-2). The advisory speed shall be based on the design speed of the sharpest curve along the exit ramp. The exit guide sign shall not have any other warning messages present on the sign (i.e. EXIT ONLY).
- g. Auxiliary Lane Exit Ramp Terminals to Loop Ramps (horizontal alignment change of more than 210 degrees with auxiliary lane ½ mile or greater in length) shall include the following signage:
 - 1. Combination Horizontal Alignment 270-degree Loop/Advisory Exit Speed (W13-6) sign placed at the painted gore. The (W13-6) located near the gore only shall use the enhanced conspicuity 6" border (yellow and black diagonal pattern). The advisory speed shall be based on the design speed of the sharpest curve along the exit ramp. The sign size shall be oversized per MUTCD Table 2C-1 (48" x 84"). An additional W13-6 sign shall be placed at the advance placement distance indicated for Condition B in MUTCD Table 2C-3 along the auxiliary lane without the enhanced conspicuity border.
 - 2. Chevrons Alignment (W1-8) signs placed along the outside of the curve and spaced as recommended per MUTCD Table 2C-5.
 - 3. A Confirmation Advisory Speed Plaque (W13-1aP) shall be mounted below the Exit Gore Sign (E5-1, E5-1a).

When Chevrons are used, the size shall be 36" wide x 48" high typical.

The One Direction Large Arrow Sign (W1-6) shall not be used to substitute or supplement chevrons and/or delineators.

On hairpin turn and loop ramps only, the Combination Truck Rollover/Advisory Exit Speed Sign (W13-12) should be used to supplement the above required warning signage where there are past incidents of truck rollover and/or high truck volumes. If used, the W13-12 sign should be located on the right side of the roadway, downstream of the horizontal alignment warning signs and near the beginning of the curve.

Exit Ramp Warning Signage Figures and Codes



6.7 Plaza Warning Sign Guidance

The following guidance shall be applied at Illinois Tollway toll plazas that may encounter pedestrian activity:

Place signs at applicable/appropriate locations as per MUTCD and Americans with Disabilities Act (ADA) guidelines where pedestrians may be in proximity of Illinois Tollway toll plazas, including, but not limited to parking facilities adjacent to Customer Service Centers at Illinois Tollway 'Gateway' toll plazas (where traffic enters the Illinois Tollway system).

6.8 Warning Sign Descriptions

All Warning sign illustrations not identified as standard MUTCD signs shall follow the text below and a list of illustrations is included at the end of the chapter. The illustration identifier is listed in parentheses following each application name.

6.8.1 Warning Live Traffic Sign (Illustration W-IT1)

Application: The Warning Live Traffic sign is a warning sign used to alert any potential pedestrians in proximity to Illinois Tollway toll plazas of the continuous flow of traffic at the toll plaza.

Color: The background should be yellow and the border should be black.

Legend: The legend should be black and include the words WARNING LIVE TRAFFIC.

Diagrams and Symbols: None.

Layout: The legend should be centered horizontally on the sign.

Placement: The Warning Live Traffic sign shall be placed where pedestrians may be in proximity of Illinois Tollway toll plazas, including, but not limited to parking facilities adjacent to Customer Service Centers at Illinois Tollway ‘Gateway’ toll plazas (where traffic enters the Illinois Tollway system).

6.8.2 Ramp Queue Warning Sign (Illustration W-IT2)

Application: The Ramp Queue Warning sign should be used with flashing beacons to alert motorists of downstream ramp congestion ahead.

Color: The background should be yellow and the border should be black.

Legend: The legend should be black and include the words CAUTION RAMP CONGESTION AHEAD WHEN FLASHING.

Diagrams and Symbols: None.

Layout: The legend should be centered horizontally on the sign.

Placement: The Ramp Queue Warning Sign should be placed on the right shoulder upstream of ramps with active or proposed traffic queue detection systems. Consult the Illinois Tollway PM to determine if the sign is warranted.

6.8.3 Diamond Maximum Width Sign (Illustration W-IT3)

Application: The Diamond Maximum Width sign should be the first sign in the series for an open IPOPO narrow lane that cannot accommodate wide loads (i.e., width less than 12-ft).

Color: The background should be yellow and the border should be black.

Legend: Refer to the illustration.

Diagrams and Symbols: Standard *MUTCD* arrows should be used.

Layout: The legend should be centered vertically and horizontally on the sign.

Placement: The Diamond Maximum Width sign should be ground mounted on the ramp in advance of the plaza/toll facility with a W16-9P “AHEAD” plaque on the bottom of the assembly.

6.8.4 Rectangle Maximum Width Sign (Illustration W-IT4)

Application: The Rectangle Maximum Width sign should be the second sign in the series for an open IPOPO narrow lane that cannot accommodate wide loads (i.e., width less than 12-ft).

Color: The background should be yellow and the border should be black.

Legend: Refer to the illustration.

Diagrams and Symbols: Standard *MUTCD* arrows should be used.

Layout: The legend should be centered vertically and horizontally on the sign.

Placement: The Rectangle Maximum Width sign should be canopy mounted over an open IPOPO narrow lane. If the sign cannot be placed on the overhead canopy due to space/mounting constraints, the W-IT3 (diamond) sign should be mounted to the adjacent column or support.

6.8.5 Trucks Keep Right Ahead Sign (Illustration W-IT5)

Application: The Trucks Keep Right Ahead sign is a warning sign used to alert trucks which lane to use approaching a toll plaza with vehicle width restrictions.

Color: The background should be yellow and the border should be black.

Legend: The legend should be black and include the words TRUCKS KEEP RIGHT AHEAD.

Diagrams and Symbols: None.

Layout: The legend should be centered vertically and horizontally on the sign.

Placement: The Trucks Keep Right Ahead sign should be ground mounted in advance of the plaza/toll facility with vehicle width restrictions.

6.8.6 Vehicles Entering Highway Sign (Illustration W-IT6)

Application: The Vehicles Entering Highway sign is a warning sign used to alert motorists of vehicles entering the roadway in the vicinity of toll plazas with adjacent parking facilities.

Color: The background should be yellow and the border should be black.

Legend: The legend should be black and include the words VEHICLES ENTERING HIGHWAY.

Diagrams and Symbols: None.

Layout: The legend should be centered vertically and horizontally on the sign.

Placement: The Vehicles Entering Highway sign should be ground mounted in advance of the parking entrance at a plaza/toll facility.

6.8.7 Shoulder Narrows Sign (Illustration W-IT7)

Application: The Shoulder Narrows sign is a warning sign used to alert motorists of narrow shoulders.

Color: The background should be yellow and the border should be black.

Legend: The legend should be black and include the words SHOULDER NARROWS.

Diagrams and Symbols: None.

Layout: The legend should be centered vertically and horizontally on the sign.

Placement: The Shoulder Narrows sign should be ground mounted in advance of narrow shoulders.

SECTION 7.0 PLAZA SIGNS

7.1 Plaza Sign Application

Plaza signs are used on mainline and ramp plazas along toll highways to inform the motorist of limited-access freeway or expressway facilities. Generally, Plaza signs apply to a route or facility on which all lanes are tolled. ETC and/or ORT may also be used on mainline and ramp facilities, either in addition to or in place of collecting toll payments at toll plazas. Plaza signs should be designed in accordance with the general requirements in Chapters 4, 5, and 9 of the *RSPMG* and *MUTCD* Chapters 2E and 2F. Signs for toll plazas should provide road users with advance and toll plaza lane-specific information regarding:

- a. The amount of the toll, the types of payment accepted, and the type(s) of registered ETC accounts accepted for payment.
- b. Which lane or lanes are required or allowed to be used for each available payment type.
- c. Restrictions on the use of a toll plaza lane or lanes by certain types of vehicles (such as cars only or no trucks).

Reference is made to Chapter 2E of the *MUTCD*, “Guide Signs – Freeways and Expressways” and Chapter 2F, “Toll Road Signs” for design and layout considerations for plaza signing on the Illinois Tollway.

7.2 Plaza Sign Location

The identification of entrance ramp plazas to the Illinois Tollway from crossroads should be given adequate attention. Signing on the approaches to toll collection plazas should be consistent with the design and traffic conditions of the crossroad. Judgment and careful attention to details on the placement of required plaza signing must be exercised in the vicinity of mainline and ramp plazas to avoid giving motorists confusing, misleading, or conflicting information. Specific locations not stated in these guidelines should adhere to or exceed the guidelines in the *MUTCD*; however, the signs should be placed such that they are in full view of motorists approaching the toll plaza area.

7.3 Plaza Sign Shape, Color and Size

Plaza signs vary in shape, size, and color, but should be sized according to the messages they display. When signs are mounted adjacent to each other, sizes and shapes should be the same, if practical, for visual simplicity. For mainline and ramp facilities with an ETC account, an I-Pass and/or EZ Pass pictograph shall be used.

7.4 Plaza Sign Messages

Plaza sign legends may include pictographs, toll information, lane designations, and warning messages such as “PAY TOLL AHEAD” or “NO ATTENDANT.”

7.5 Plaza Sign Layout

Plaza sign layout details cannot be provided for all cases in these guidelines. In general, all signs within a certain area and with a similar purpose should be designed in a similar fashion.

7.6 Plaza Sign Descriptions

The Plaza sign illustrations in this chapter are described in the following sections, which detail the Plaza sign application, color, legend, layout and placement. All Plaza sign illustrations follow the text below and a list of illustrations is included at the end of the chapter. The illustration identifier is listed in parentheses following each sign name.

7.6.1 Mainline and Ramp Plaza: I-Pass Panel (Illustration P-IT2)

Application: *I-Pass* panels are used at the Electronic Toll Plazas to indicate that the lanes are used for *I-Pass* toll payments only.

Color: The background is purple and the border is white.

Legend: None

Diagrams and Symbols: The *I-Pass* pictograph shall be used.

Layout: The *I-Pass* pictograph should be centered horizontally on the panel.

Placement: The *I-Pass* panel is placed as needed on toll collection signs.

7.6.2 Mainline and Ramp Plaza: Toll Plaza Name - Plaza Number Sign (Illustration P-IT4)

Application: The Toll Plaza Name - Plaza Number sign is a supplemental Plaza sign, which displays the toll plaza name and toll plaza number to Illinois Tollway users.

Color: The background should be blue and the border should be white.

Legend: The legend should be white and include the name of the toll plaza and the number.

Diagrams and Symbols: None.

Layout: The legend should be centered vertically and horizontally on the sign.

Placement: The Toll Plaza Name – Toll Plaza Number Sign should be located on the center of the toll booth canopy.

7.6.3 Mainline and Ramp Plaza: IPO 15 MPH Signs (Illustrations P-IT5A-C)

Application: The IPO 15 MPH sign is a speed safety sign, which alerts motorists to reduce speed at IPO lane(s) at cash plazas.

Color: The background should be white and the border should be black.

Legend: The legend, 15 MPH, should be black.

Diagrams and Symbols: Diagonally downward-pointing directional arrows (left or right) should be used.

Layout: The legend should be centered horizontally on the sign.

Placement: The IPO 15 MPH Signs, both left-pointing and right-pointing, should be placed upstream from the IPO canopy on the island and median barriers.

7.6.4 Mainline and Ramp Plaza: Tollbooth Illinois Tollway and I-Pass Banners (Illustrations P-IT7A-C)

Application: Tollbooth Illinois Tollway and *I-Pass* banners shall be placed on the top portion of each individual toll booth, with the intent of directing Illinois Tollway users to access the Illinois Tollway's website and encourage use of the *I-Pass*.

Color: The signs shall have a blue background and no border.

Legend: The legend shall be white and include either Illinoistollway.com or Get *I-Pass* & Get Going, getipass.com.

Diagrams and Symbols: None.

Layout: The legend is to be centered horizontally on the signs.

Placement: The Illinois Tollway sign shall encompass the upper 9" of the plaza canopy's left and right sides, placed parallel to the flow of traffic. The front and back of the booth, which is perpendicular to the flow of traffic, shall display the I-Pass Banner Sign.

7.6.5 Mainline Plaza: Wide and Load Signs (Illustrations P-IT8A-B)

Application: Wide and Load signs indicate to drivers the availability of a lane capable of handling vehicles with a wide load.

Color: The background shall be yellow and the border shall be black.

Legend: The legend WIDE and LOAD shall be black.

Diagrams and Symbols: None.

Layout: The legend should be centered horizontally on the sign.

Placement: Wide and Load signs are mounted on the plaza canopy over the wide load lane. The Wide sign shall be placed to the left of the IPass sign and the Load sign to the right of the IPass sign.

7.6.6 Ramp Plaza: Pay Toll This Ramp Sign (Illustration P-IT11)

Application: The Pay Toll This Ramp sign is used to alert motorists to an upcoming ramp plaza at an exit or interchange.

Color: The sign should have a green background with a white border, yellow top panel with a black border, and white bottom panel with a black border.

Legend: The legend shall be black and white and include Pay Toll This Ramp, Toll, Cardinal, Control Destination, and Toll Panel.

Diagrams and Symbols: Shields should be used for routes and a Cross Arrow pointing in the direction of the Ramp. *I-Pass* pictograph and 'OR PAY ONLINE' text are used on the bottom toll panel; however, the *I-Pass* pictograph is used with the purple background color because this sign is not ETC exclusive.

Layout: The legend is centered horizontally on the sign.

Placement: Pay Toll This Ramp signs should be placed at a decision point prior to entering the toll plaza ramp.

7.6.7 Mainline and Ramp Plaza: Vehicle Tolls Sign and Car Tolls (Illustration P-IT13A)

Application: The Vehicle Tolls Sign is a supplemental information sign, which list the tolls to be paid by vehicle type.

Color: The background should be white and the border should be black. The sign may have a top panel with a black background.

Legend: Refer to illustration.

Diagrams and Symbols: None.

Layout: The legend should be centered horizontally on the sign.

Placement: The Vehicle Tolls Sign should be ground mounted before the tollbooth at the limits of the tollway.

7.6.8 Mainline and Ramp Plaza: Unpaid Toll and Toll Paid Signs (Illustrations P-IT14A)

Application: The Unpaid Toll sign offers drivers a reminder to pay tolls that were skipped over.

Color: The sign shall have green and yellow backgrounds.

Legend: Refer to illustrations.

Diagrams and Symbols: None.

Layout: The legend should be centered horizontally on the signs.

Placement: The sign shall be placed downstream of IPO and AET collection lanes at the discretion of the Illinois Tollway. If space permits, placement should be on both sides of the mainline. The narrow version should be used on concrete barrier medians where the sign encroaches on the shoulder. This direction was previously given on the Elgin O'Hare corridor by the Design Corridor Manager (DCM) and Illinois Tollway in the Elgin O'Hare Western Access Update to All Electronic Toll Signage (Version e) Tech Memo. Contact Tollway PM to obtain this information.

7.6.9 Mainline Plaza: Overhead Open-Road Tolling Signage (Illustration P-IT15)

Application: The ORT Plaza sign is an informational sign that identifies the Mainline Plaza Name and Number.

Color: The background shall be blue and there shall be no border.

Legend: Refer to illustrations.

Diagrams and Symbols: The "I" symbol shall be used and centered.

Layout: The legend should be centered horizontally on the sign.

Placement: The ORT Plaza sign shall be installed on the first ORT monotube and centered above the ORT lanes.

7.6.10 Advance Toll Sign (Illustration P-IT16)

Application: The Advance Toll Sign indicates the approaching exit as well as the presence of AET only.

Color: The background consists of green background with a yellow panel on the top.

Legend: The legend should be black and white and include the words PAY TOLL 2 MILES, ACCEPTED ALL LANES.

Diagrams and Symbols: The *I*-Pass pictograph and the E-Z Pass pictograph shall be used.

Layout: The legend should be centered horizontally on each respective panel of the sign.

Placement: Advance Toll signs are ground mounted or overhead 2 miles prior to the exit.

7.6.11 Exit Ramp Avoid Fines, 14 Days to Pay Signs (Illustration P- IT17A-B)

Application: The Avoid Fines and 14 Days to Pay signs are meant to promote the on-line payment method for AET facilities.

Color: The background consists of yellow and green panels with a black and white border as shown in the illustration. One sign is for exit ramps with AET collection and the other is for exit ramps with no toll collection.

Legend: The legend should be white and black and include AVOID FINES, 14 DAYS TO PAY, ILLINOISTOLLWAY.COM.

Diagrams and Symbols: None.

Layout: The legend should be centered horizontally on each respective panel of the sign.

Placement: The Avoid Fines, 14 Days to Pay sign shall be ground mounted at all exit ramps on AET facilities.

7.6.12 Mainline and Plaza: Double Arrow (MUTCD W12-1)

Application: The Double Arrow sign is meant to advise roadway users that there is a divide between mainline traffic and plaza traffic.

Color: The background should be yellow and the border should be black.

Legend: Refer to the Standard Highway Signs publication and its current supplements.

Diagrams and Symbols: Refer to the Standard Highway Signs publication and its current supplements.

Placement: The Double Arrow sign shall be ground mounted in between in the median between the mainline and the plaza travel pathways. It should be placed closest to the diverging point, but not to overhang the median limits.

SECTION 8.0 ALL ELECTRONIC TOLL SIGNS

8.1 All Electronic Toll Sign Application

All Electronic Toll (AET) operation is any form of tolling that does not involve manual payment of tolls (e.g., by cash, coin or credit card) and in which payment locations are unstaffed. AET may apply to an entire facility or to a specific payment location. On the Illinois Tollway, AET facilities require drivers to either have an I-PASS transponder, or to go online and pay there after using the facility.

8.2 All Electronic Toll Sign Shape, Color and Size

AET signs shall be rectangular in shape and sized according to the messages on the face of the signs. When signs are mounted adjacent to each other, sizes and shapes should be the same, if practical, for visual simplicity. The *I-Pass* pictograph shall have a purple background while the remaining portions of such signs shall comply with regulatory, warning, or guide sign requirements.

8.3 All Electronic Toll Sign Descriptions

The AET sign illustrations in this chapter are described in the following sections, which detail the sign application, color, legend, layout and placement. Sign illustrations follow the text below, and a list of illustrations is included at the end of the chapter. The illustration identifier is listed in parentheses following each sign name.

8.3.1 Toll Ahead Sign (Illustrations AET-IT1-3)

Application: Toll Ahead signs indicate the approaching presence of AET only or PAY ONLINE.

Color: The background consists of white and green panels with a black and white border as shown in the illustration.

Legend: The legend should be white and black and include TOLL AHEAD OR PAY ONLINE.

Diagrams and Symbols: The *I-Pass* pictograph shall be used.

Layout: The legend should be centered horizontally on each respective panel of the sign.

Placement: Toll Ahead sign shall be mounted overhead or ground mounted prior to an AET facility. The 6' x 18' sign should be used for overhead mainline installations. The 6' x 14' sign should be used for ground mounted mainline installations. The 5' x 12' sign should be used for ground mounted ramp installations.

8.3.2 Toll Rate Sign (Illustration AET-IT4)

Application: The Toll Rate sign lists the toll rates just paid at an AET plaza.

Color: The background shall be green with a white border as shown in the illustration.

Legend: The legend should be white and include PLAZA XXX, CARS I-PASS \$X.XX, CARS ONLINE \$X.XX. Rates shown on the signs should be coordinated with the Toll Plaza.

Diagrams and Symbols: None.

Layout: The legend should be centered horizontally on the sign.

Placement: The Toll Rate Sign shall be ground mounted past any AET collection point on the mainline or ramp.

8.3.3 I-Pass or Pay Online Sign (Illustration AET-IT5)

Application: The I-Pass or Pay Online sign is meant to promote the on-line payment method for AET facilities.

Color: The background consists of purple and white panels.

Legend: The legend OR PAY ONLINE should be black on white.

Diagrams and Symbols: The *I-Pass* pictograph shall be used.

Layout: The legend and symbols should be centered horizontally on each respective panel of the sign.

Placement: Sign should be placed only on the last two trailblazers before the AET entrance ramp. The “I” with an OR PAY ONLINE panel shall be mounted in combination with trailblazer signs when traffic is being directed to an AET facility from a surface street.

8.3.4 Advance Guide Sign to an All Electronic Toll Facility Sign (Illustration AET-IT6)

Application: The Advance Guide sign to an AET facility indicates an approaching exit to an AET facility from another freeway, expressway or toll facility.

Color: The background consists of white and green panels with a white and black border as shown in the illustration.

Legend: The legend should be white and black and include EXIT X, OR PAY ONLINE, TOLL, X Miles.

Diagrams and Symbols: The *I-Pass* pictograph shall be used.

Layout: The legend should be centered horizontally on each respective panel of the sign.

Placement: Advance Guide signs to an AET facility are typically mounted overhead.

8.3.5 Crossroad All Electronic Toll Signs (Illustration AET-IT7-9)

Application: The Crossroad AET signs in this Article serve the same purpose as the signs in Article 4.7.3 *Crossroad Signs* in this manual but also guide drivers to AET facilities. These signs are used for both tolled and non-tolled entry ramps. The choice between AET-IT7 and -IT8 depends on site conditions. See Article 4.7.3 of this manual for additional guidance.

Color: The background consists of white and green panels with a white and black border as shown in the illustration.

Legend: The legend should be white and black and include OR PAY ONLINE. See Article 4.7.3 of this manual for additional Legend guidance.

Diagrams and Symbols: The *I-Pass* pictograph shall be used.

Layout: The legend should be centered horizontally on each respective panel of the sign.

Placement: See Article 4.7.3 of this manual and Illustration SP-IT20A for placement guidance.

8.3.6 Advance Guide Sign (Illustration AET-IT10)

Application: The Advance Guide sign in this section serves the same purpose as the guide signs in *Article 4.7.1 Interchange Advance Guide Signs* in this manual for exits that include AET collection. See Article 4.7.1 of this manual for additional guidance.

Color: The background consists of white and green panels with a white and black border as shown in the illustration.

Legend: The legend should be white and black and include OR PAY ONLINE. See Article 4.7.1 of this manual for additional Legend guidance.

Diagrams and Symbols: The *I-Pass* pictograph shall be used. See Article 4.7.1 of this manual for additional Diagrams and Symbols guidance.

Layout: The legend should be centered horizontally on each respective panel of the sign.

Placement: See Article 4.7.1 of this manual for placement guidance.

8.3.7 Exit Direction Sign (Illustration AET-IT11)

Application: The Exit Direction sign in this section serves the same purpose as the signs in *Article 4.7.5 Exit Direction Signs* of this manual for exits that include AET collection. See Article 4.7.5 of this manual for additional guidance.

Color: The background consists of white and green panels with a white and black border as shown in the illustration.

Legend: The legend should be white and black and include OR PAY ONLINE. See Article 4.7.5 of this manual for additional Legend guidance.

Diagrams and Symbols: The *I-Pass* pictograph shall be used. See Article 4.7.5 of this manual for additional Diagrams and Symbols guidance.

Layout: The legend should be centered horizontally on each respective panel of the sign.

Placement: See Article 4.7.5 of this manual for placement guidance.

8.3.8 Plaza Gantry Sign (Illustration AET-IT12)

Application: The Plaza Gantry sign is meant to promote the on-line payment method for AET facilities.

Color: The background shall be white with a black border as shown in the illustration.

Legend: The legend should be black and include OR PAY ONLINE.

Diagrams and Symbols: The I-Pass pictograph shall be used.

Layout: The legend should be centered horizontally on each respective panel of the sign.

Placement: The Plaza Gantry sign shall be mounted overhead at all plaza gantries for AET facilities.

8.3.9 Advance Guide I-Pass or Pay Online with 15 MPH Signs (Illustration AET-IT13-17)

Application: The Advance Guide sign to an AET facility indicates an approaching exit to an AET facility with a 15 MPH speed limit.

Color: The background consists of white, green, and yellow panels with a white and black border as shown in the illustrations.

Legend: The legend should be white and black.

Diagrams and Symbols: The I-Pass pictograph and standard *MUTCD* arrows shall be used to convey directional instructions to motorists.

Layout: The legend should be centered horizontally on each respective panel of the sign.

Placement: The Advance Guide signs shall be overhead or ground mounted approaching AET facilities.

8.3.10 I-Pass or Pay Online Pull-Through Signs (Illustration AET-IT18-21)

Application: The I-Pass or Pay Online Pull-Through signs are mounted overhead to give the road user guidance at the separation between ORT lanes and the AET toll plaza.

Color: The background consists of white and green panels with a white and black border as shown in the illustrations.

Legend: The legend should be white and black.

Diagrams and Symbols: The I-Pass pictograph, standard *MUTCD* pull-through arrows, and route shields shall be used.

Layout: The legend should be centered horizontally on each respective panel of the sign. The pull-through arrows should be centered over each lane.

Placement: One Mainline I-Pass or Pay Online Pull-Through sign should be placed over the mainline lanes continuing through the ORT lanes.

8.3.11 Toll Ahead All Lanes Sign (Illustrations AET-IT22)

Application: The Toll Ahead All Lanes sign indicates the approaching presence of AET only or PAY ONLINE for all lanes approaching one or more plazas.

Color: The background consists of white and green panels with a black and white border as shown in the illustration.

Legend: The legend should be white and black and include TOLL AHEAD ALL LANES OR PAY ONLINE.

Diagrams and Symbols: The *I-Pass* pictograph shall be used.

Layout: The legend should be centered horizontally on each respective panel of the sign.

Placement: The Toll Ahead All Lanes sign shall be mounted overhead prior to an AET facility.

8.3.12 Next Exit I-Pass or Pay Online Sign (Illustrations AET-IT23)

Application: The Next Exit I-Pass or Pay Online sign indicates the approaching presence of AET only or PAY ONLINE in advance of an exit ramp plaza.

Color: The background consists of white and green panels with a black and white border as shown in the illustration.

Legend: The legend should be white and black and include NEXT EXIT OR PAY ONLINE.

Diagrams and Symbols: The *I-Pass* pictograph shall be used.

Layout: The legend should be centered horizontally on each respective panel of the sign.

Placement: The Next Exit I-Pass or Pay Online sign shall be ground mounted prior to an AET exit ramp plaza.

8.3.13 Plaza Gantry I-Pass or Pay Online Sign (Illustration AET-IT24)

Application: The I-Pass or Pay Online sign is meant to promote the on-line payment method for AET facilities.

Color: The background consists of purple and white panels.

Legend: The legend OR PAY ONLINE should be black on white.

Diagrams and Symbols: The *I-Pass* pictograph shall be used.

Layout: The legend and symbols should be centered horizontally on each respective panel of the sign.

Placement: The I-Pass or Pay Online sign should be placed on Plaza Gantries above all open AET lanes.

8.3.14 Toll Ahead All Lanes and Exits Sign (Illustrations AET-IT25)

Application: The Toll Ahead All Lanes and Exits sign indicates the approaching presence of AET only or PAY ONLINE for all lanes and exits.

Color: The background consists of white and green panels with a black and white border as shown in the illustration.

Legend: The legend should be white and black and include TOLL AHEAD ALL LANES AND EXITS OR PAY ONLINE.

Diagrams and Symbols: The *I-Pass* pictograph shall be used.

Layout: The legend should be centered horizontally on each respective panel of the sign.

Placement: The Toll Ahead All Lanes sign shall be mounted overhead prior to an AET facility with an associated interchange exit ramp.

SECTION 9.0 INFORMATION SIGNS

9.1 Information Sign Application

Information Signs are signs that give identification and directional information about services, tolling, and other destinations of interest to motorists, but are not signs essential to safe and efficient use of the roadway.

For safe use of the Illinois Tollway, especially in dense or densely developing suburban areas, Information Signs shall be limited to:

- Crossroads:** street name or route identification
- General motorist services:** phone, food, fuel, lodging
- Transit services and facilities**

For application criteria, see the *Traffic Generator and Specific Service Sign Policy Guide*.

Major traffic generators may be included on Information Signs in advance of exits, but shall be limited to cultural facilities, governmental facilities, law enforcement agencies, higher educational facilities, recreational facilities, transit facilities, points of interest, airports, and municipalities.

9.2 Information Sign Location

Information Signs are supplemental and should be placed to not adversely affect the safe viewing and comprehension of regulatory, warning or guide signs. Generally, Information Signs should be located in advance of exits, on exit ramps, or at plazas and Oases, and should be severely limited in quantity on any section of the roadway. Multiple Information Signs shall be staggered and not placed together on a single mounting.

9.3 Information Sign Shape, Color and Size

Information Signs are generally rectangular in shape and sized according to the message displayed on the face of the signs. Since these signs are supplemental in nature, they should not be excessive in size. Due to the different types of information these signs provide, several different background colors may be used.

- Blue** – Gas, Food, Lodging, Attractions, and 24-Hour Pharmacies
- Brown** – Recreational, Cultural Interest, and Points of Interest
- Green** – Crossroad identification, mileposts, park-ride guide, waterway, county line, and airport
- White** – Illinois Tollway and tolling information signs

The messages of Information Signs should be expressed in a minimum number of words, using generic names or symbols when possible. For example, the word “COURTHOUSE” on a NEXT RIGHT sign is sufficient to direct motorists to exit the Illinois Tollway. Information Signs may display arrows or diagrams as well as directional words such as KEEP RIGHT.

9.4 Information Sign Layout

Information Sign layouts shall center legends horizontally on the sign. Symbols and pictographs shall be sized proportionally to create an attractive appearance – neither too small nor too large to be easily comprehended.

9.5 Information Sign Approvals

Information Signs are strictly supplemental to Regulatory, Warning and Guide signs. The Illinois Tollway Chief Engineering Officer or designee shall approve all proposed Information Signs and shall not allow any Information Signs if the safe use of the roadway is compromised by such signage. Information Sign Application Form and Traffic Generator Sign policy are available on the Illinois Tollway Website.

9.6 Other Information Signs

Other Information signs and signing shall be in accordance with the *MUTCD*.

9.7 Information Sign Descriptions

All Information sign illustrations follow the text below and a list of illustrations is included at the end of the chapter. The illustration identifier is listed in parentheses following each application name.

9.7.1 Crash Investigation Site Signs (Illustrations I-IT1A – I-IT1E)

Application: The CIS sign is a movement information sign, which alerts and directs motorists to move their vehicle from the lane in the event of a crash.

Color: The background should be blue and the border should be white.

Legend: Refer to illustrations.

Diagrams and Symbols: A directional arrow may be used pointing in the direction of the site.

Layout: The legend should be centered horizontally on the sign.

Placement: The CIS sign should be shoulder-mounted 2 (in rural areas), 1, and 1/2 mile in advance of the site. An additional CIS sign stating the name of the plaza or milepost, Illinois Tollway name, phone number to report a crash, and an emergency number should be placed at the CIS location. Refer to illustrations SP-IT9A & SP-IT9B for more placement information.

9.7.2 Milepost Marker Variations (Illustration I-IT2)

Application: Milepost Markers are reference location signs that are placed on the Illinois Tollway to assist road users in estimating their progress, to provide means for identifying the location of emergency incidents and traffic crashes, and to aid in the Illinois Tollway maintenance and servicing (see *MUTCD* Section 2H.11-12).

Color: Milepost Markers should be green with a white legend and border.

Legend: The cardinal direction should be displayed horizontally across the top of the sign. The mileage should be a whole number with fractional numbers at quarter-mile locations.

Diagrams and Symbols: Shields should be used for routes.

Layout: The legend elements should be centered horizontally on the signs.

Placement: Milepost Markers should be placed at quarter-mile intervals. Milepost Markers should be placed according to *MUTCD* standards. Where sound walls exist, Milepost Markers can be mounted on the walls and on the median barrier wall.

9.7.3 Airport Signs

Application: Airport signs may be implemented if the airport is defined by the Illinois Tollway as regional and the majority of users reside outside of the immediate area. The airport must be within 5 miles of the Illinois Tollway in urban conditions and within 10 miles of the Illinois Tollway in rural conditions.

Color: Airport signs shall have a green retroreflective background with white lettering and border.

Diagrams and Symbols: The airport symbol can be used in combination with the supplemental guide sign for commercial airports only. Standard *MUTCD* symbols should be used.

Layout: The legend should be centered vertically and horizontally on the sign.

Placement: Airport Signs should be placed in advance of the exit or interchange needed to access the service. Additional destination community or wayfinding signs on the ramp may be needed to give the motorist additional directions. These signs are not permitted on sound walls. Placement of these signs should not interfere with the placement of any other necessary Illinois Tollway signing and should not compromise the safety or efficiency of traffic flow. For additional Airport sign outlines, see *MUTCD* Section 2H.02.

9.7.4 Alternate Transportation Signs (Illustrations I-IT3A-D)

Application: Where alternate transportation by rail or bus is available within 3 miles of an exit or intersection, Alternate Transportation signs may be used to guide motorists. Park-Ride facilities must be located adjacent to the Illinois Tollway and be governmentally owned and operated as part of a carpool, vanpool, or other public transportation program. In areas having carpool matching services, Carpool Information signs may be provided adjacent to highways. The transit facilities must have greater than 1,000 general use parking spaces for daily patron use.

Color: Alternate Transportation signs vary in shape and size. All should have a blue background with the exception of the Park-Ride sign that has a green background. Alternate Transportation signs have a white legend and border.

Legend: Alternate Transportation signs should identify the nature of the transit service offered, may display Internet addresses or telephone numbers, and may use directional arrows or exit messages such as interchange numbers, NEXT EXIT or THIS EXIT. Three (3) logos should be the maximum number allowed on one sign. Legends may include the following:

- Amtrak (logo)
- CTA (logo)
- METRA (logo)
- Pace (logo)
- Suburban Transit Information
- Share the Drive
- Park-Ride

Diagrams and Symbols: Standard *MUTCD* symbols and transportation agency logos should be used.

Layout: The legend should be centered horizontally on the sign.

Placement: Alternate Transportation signs should be placed in advance of the exit or interchange needed to access the service. Supplemental Guide signs on the ramp may be needed to give the motorist additional directions. These signs are not permitted on sound walls. Placement of these signs should not interfere with the placement of any other necessary Illinois Tollway signing and should not compromise the safety or efficiency of traffic flow.

9.7.5 Carpool and Ridesharing Signs

See Alternate Transportation Signs I-IT3A-D and *MUTCD* Section 2I.14.

9.7.6 Educational Institution Signs

Educational Institutions signs must follow the requirements of the *Traffic Generator and Service Sign Policy Guide* and the *MUTCD*. Educational Institution signs shall not compromise the safe use of the roadway system, and therefore must be reviewed and approved by the Illinois Tollway.

9.7.7 Emergency Management Signs

Emergency Management signs shall be in accordance with *MUTCD Chapter 2N*. Temporary Construction signs and signing shall be placed in accordance with *MUTCD*.

9.7.8 General Service Signs

General Service signs (also known as Motorist Service signs) shall be placed in accordance with *MUTCD* Chapter 2I.

9.7.9 Identification Signs (Illustrations I-IT4A-E)

Application: Identification signs provide the name of a county, crossroad, memorial highway, or waterway. Bridge signs identify a crossroad by route number or street name where there is no exit or no exit Guide sign identifying the crossroad. If an Illinois Tollway is officially designated as a Memorial Highway, a Memorial Highway sign may be installed on the mainline. Memorial Highway names, however, should not appear on Guide signs.

Color: Identification Signs may have a green or brown background with a white border and legend.

Size: The Illinois Tollway sign shop uses standardized sizes for identification signs to expedite production on flat sheet aluminum. All identification signs shall be 3 feet in height, and the width shall be either 3 feet or 4 feet. If the sign will not fit within these dimensions after using the allowable font options below, then an Extruded Aluminum Channel Sign is required and flat sheet aluminum material cannot be used. The Extruded Aluminum Channel Sign shall be mounted on wood posts or breakaway steel sign supports dependent on its size.

Legend: Abbreviations such as CO, RTE, RD, AVE, and ST are acceptable (See *MUTCD* Section 1D.08). No punctuation should follow abbreviations. The legend may include the following:

- Interstate Route Number
- Crossroad Name
- Waterway Name
- Name County

Font: 8" E(modified) is the preferred font for these signs and shall be used unless abbreviated messaging does not fit on a 4'x3' or 3'x3' sign panel. 8" Highway Font D may be used to fit the legend on the above panel sizes. 8" Highway Font C shall only be used if Highway Font D does not fit the legend on the above panel sizes.

Diagrams and Symbols: Insert profile image or pictograph image as described in illustration.

Layout: The legend should be centered horizontally on the sign.

Placement: Identification signs should be placed on the shoulder of the mainline. County Identification signs are placed precisely at the border of each county. Crossroad Identification signs should be placed on the right-hand side of bridge abutments only if there is no exit or interchange to the crossroad. A Memorial Highway sign should be limited to one sign at an appropriate location in each route direction. Identification of waterways should be placed just before the motorist will view the site being identified. Also, identification of all navigable rivers and lakes that are crossed by the Illinois Tollway should be signed at the beginning of each crossing, per the judgement of the Illinois Tollway on the importance of the waterway. Identification signs are not permitted on sound walls. Identification signs should not interfere with the placement of any other necessary Illinois Tollway signing and should not compromise the safety or efficiency of traffic flow.

9.7.10 Law Enforcement Agency and Courthouse Signs

Signage for Law Enforcement Agencies and Courthouses must follow the requirements of the *Traffic Generator and Service Sign Policy Guide* and the *MUTCD*.

Law Enforcement Agency and Courthouse signs shall not compromise the safe use of the roadway system, and therefore must be reviewed and approved by the Illinois Tollway.

9.7.11 Pictographs (Illustrations I-IT5A-D)

Application: Pictographs are used as graphic elements on Illinois Tollway buildings, and on Regulatory, Guide and Information Signs. The EZ Pass pictograph is to be used at Illinois Tollway entrance ramps from other highways to inform motorists that their EZ Pass is honored on the Illinois Tollway system. Pictographs may be used as free-standing, architectural or sculptural elements.

Color: The pictograph should have the shape, color and size(s) depicted in the illustrations.

Legend: The legend of pictographs may spell out words, be a graphic element without words, or a combination of words and graphic elements, such as:

- Cash (\$)
- IPASS
- EZ PASS
- TOLL

Diagrams and Symbols: Pictographs used on the Illinois Tollway are official agency symbols and should conform to these guidelines.

Layout: See illustrations.

Placement: The Illinois Tollway logo should be surface mounted on a plaza, Oasis, and other Illinois Tollway building walls, and may be a free-standing element in large, landscaped areas. The I-Pass pictograph and cash pictograph are used on the canopy of plazas, on plaza signs, and on Advance Tolling Guide signs. The EZ Pass pictograph is only used on signs at select locations near a major entrance to the Illinois Tollway. These signs are not permitted on sound walls. Placement of these signs should not interfere with the placement of any other necessary Illinois Tollway signing and should not compromise the safety or efficiency of traffic flow.

9.7.12 Motorist Communications Signs

Motorist Communications signs shall be placed in accordance with *MUTCD* Chapters 2H and 2I.

9.7.13 Municipal Signs

Municipal signs must follow the requirements of the *Traffic Generator and Service Sign Policy Guide* and the *MUTCD*.

Placement of these signs should not interfere with the placement of any other necessary Illinois Tollway signing and should not compromise the safety or efficiency of traffic flow.

9.7.14 Point of Interest Signs

Points of Interest signs must follow the requirements of the *Traffic Generator and Specific Service Sign Policy Guide* and the *MUTCD*.

Point of Interest signs shall not compromise the safe use of the roadway system, and therefore must be reviewed and approved by the Illinois Tollway.

9.7.15 Radio Information Signs

Radio-Weather Information signs may be used in areas where difficult driving conditions commonly result from weather systems. Radio-Traffic Information signs may be used with traffic management systems. See *MUTCD* Section 2I.09 for additional information regarding Radio Information Signs.

9.7.16 Symbols

See *MUTCD* Section 2A.09 for general information on symbol design.

9.7.17 Tourist Information Signs

Tourist Information signs should be placed to indicate the presence of Tourist Information centers located within rest areas on freeways and expressways. See *MUTCD* Chapter 2I.08 for additional information.

9.7.18 Sponsorship Signs (Illustration I-IT6)

Application: Sponsorship signs (also known as Acknowledgment signs) shall be placed in accordance with *MUTCD* Chapter 2, Section 2H.13.

Color: Sponsorship signs shall have one panel. The sign panel shall have a blue background with white text. There shall be a white border.

Diagrams and Symbols: Depends on the sponsor.

Layout: The legend should be centered vertically and horizontally on the sign.

Placement: The Sponsorship sign should be ground mounted and may be a free-standing element in large, landscaped areas. Placement of these signs should not interfere with the placement of any other necessary Illinois Tollway signing and should not compromise the safety or efficiency of traffic flow.

9.7.19 Blue Board Signage Program

The Blue Board signage program includes categories for lodging and attractions and involves mounting business sign panels on large blue board signs in advance of rural interchange exits and along exit ramps to alert motorists of available businesses/facilities.

Additional information regarding The Blue Board Signage Program can be found on the Illinois Tollway website under *Doing Business > Information Signage Guidelines > Traffic Generator and Information Signage Guidelines*.

9.7.20 Welcome to the Illinois Tollway Signage (Illustration I-IT7)

Application: Welcome to the Illinois Tollway signs help show road users that they are entering Illinois Tollway operated roadway and the methods of payment accepted at the facilities.

Color: Welcome signs shall have three panels comprised into one. The top and bottom panels shall have a green background with white text and the center panel shall have a white background with black text. There is no border. The method of payment signs shall have a white background with black legend and border.

Diagrams and Symbols: The I-Pass and E-Z Pass symbols are used. See Illustration for additional guidance.

Layout: The legend should be centered vertically and horizontally on the sign.

Placement: Welcome signs shall be placed at entrance ramps from other highways and at the beginning limits of all Illinois Tollway operated roadway. Placement of these signs should not interfere with the placement of any other necessary Illinois Tollway signing and should not compromise the safety or efficiency of traffic flow.

9.7.21 Tollway Ends Thank You Signage (Illustration I-IT8)

Application: Tollway Ends Thank You signs help show road users that they are leaving Illinois Tollway operated roadway and to thank road users for using the Illinois Tollway system.

Color: Thank You signs shall have one panel. The sign panel shall have a green background with white text. There shall be a white border.

Diagrams and Symbols: The Illinois Tollway symbol is used. See Illustration for additional guidance.

Layout: The legend should be centered vertically and horizontally on the sign.

Placement: Thank You signs shall be placed at exit ramps originating from the Illinois Tollway and heading into other highway systems. Thank You signs shall also be placed at the end limits of all Illinois Tollway operated roadway. Placement of these signs should not interfere with the placement of any other necessary Illinois Tollway signing and should not compromise the safety or efficiency of traffic flow.

9.7.22 Oasis Distance Sign (Illustration I-IT9)

Application: The Oasis Distance sign alerts motorists to an upcoming Oasis more than 5 miles ahead.

Color: The Oasis Distance sign should have a blue background with white legend and border.

Legend: The legend will include the name of the plaza, e.g., Lincoln Oasis, and XX Miles to the nearest ½ mile.

Diagrams and Symbols: None.

Layout: The legend will be centered horizontally on the sign.

Placement: An Oasis Distance sign should be placed at the main entrances to the Illinois Tollway system, and at least 5 miles from the named Oasis.

9.7.23 Oasis Advance Sign (Illustration I-IT10)

Application: The Oasis Advance sign alerts motorists to an upcoming Oasis.

Color: The Oasis Advance sign should have a blue background with white legend and border.

Legend: The first line of the sign should state the Oasis name. Below the Oasis name should be a symbol or symbols of the service or services provided. Directly underneath, if applicable, there should be a legend OPEN 24 HOURS. The bottom line of the sign should state the mileage to the Oasis. Distances to the services should also be displayed on the sign or the legend THIS EXIT.

Oasis signs should have the name of the specific services located at an Oasis and may have a logo depicting the services provided. Only services provided at an Illinois Tollway Oasis should be identified.

Diagrams and Symbols: The logo of the primary food provider and the primary fuel provider, only, may be displayed on the Oasis Advance sign. There should not be more than six logo symbols on one sign.

Layout: The legend should be centered horizontally on the sign.

Placement: The Oasis Advance signs are placed on the shoulder of the mainline at the distances noted, measured from the theoretical gore at the exit to the sign, or as needed for distances less than $\frac{1}{4}$ mile. This is a non-Illinois Tollway sign and the Oasis Facility Lessee shall be responsible for placement, fabrication, and maintenance.

9.7.24 Oasis Exit Direction Sign (Illustration I-IT11)

Application: The Oasis Exit Direction sign is used in advance of the Oasis Exit Gore sign.

Color: The sign should have a blue background with white legend and border.

Legend: This sign should be consistent with the Oasis Advance sign except all legends below the logo or logos should be eliminated and a diagonally upward-pointing arrow should be placed next to the logos, on the right-hand side. The arrow should be oriented such that it indicates the direction of the ramp. The arrow should be centered vertically such that the bottom of the arrow is level with the bottom of the logo or logos.

Diagrams and Symbols: Only the logos of the primary food provider and the primary fuel provider may be displayed on the Oasis Exit Direction sign. Generally, there should not be more than two logo symbols on one sign.

Layout: The legend should be centered horizontally on the sign.

Placement: An overhead or ground mounted Oasis Exit Direction sign should be placed at the beginning of the deceleration lane for an Oasis, or overhead near the theoretical gore if there is less than 300 feet from the upstream end of the deceleration lane to the theoretical gore. This sign is placed in addition to an Oasis Exit Gore sign at the gore. This is a non-Illinois Tollway sign and the Oasis Facility Lessee shall be responsible for placement, fabrication, and maintenance.

9.7.25 Oasis Exit Gore Sign (Illustration I-IT12)

Application: The Oasis Exit Gore sign shall be used at the exit ramp to each Oasis.

Color: The sign should have a blue background with white legend and border.

Legend: OASIS should be displayed on the top line.

Diagrams and Symbols: Below the legend, an arrow should be centered horizontally.

Layout: Both the legend and arrow should be centered horizontally on the sign.

Placement: The Oasis Exit Gore sign should be placed at the gore. This is a non-Illinois Tollway sign and the Oasis Facility Lessee shall be responsible for placement, fabrication, and maintenance.

9.7.26 Hospital Sign Variations (Illustration I-IT13)

Application: A mainline Hospital sign is used to guide motorists from the Illinois Tollway system to a hospital. There are two different types of Hospital signs on the Illinois Tollway system that can be used in combination with the hospital signing detailed in the *MUTCD*. The larger version is preferred. However, the narrow version can be used when there is insufficient lateral space.

Color: The Hospital signs shall have a blue background with a white legend and border.

Legend: The legend for the hospital signs includes an H with and identified exit number below.

Diagrams and Symbols: None.

Layout: The sign is comprised of two sections. The legend should be horizontally centered within each section of the sign. The H shall be located within the top section of the sign, and the exit number shall be located within the bottom section of the sign.

Placement: When used, the Hospital sign shall be located within one mile in advance of the exit. The smaller/narrow version of the sign may be used when lateral space is limited.

9.7.27 Customer Service Center Signs (Illustration I-IT14-17)

Application: Customer Service Center signs are used to guide motorists to Customer Service Centers at Illinois Tollway 'Gateway' toll plazas.

Color: The Customer Service Center signs shall have a blue background with a white legend and border.

Legend: The legend should be white.

Diagrams and Symbols: None.

Layout: The legend should be centered horizontally and vertically on the sign.

Placement: The Customer Service Center signs shall start 1 Mile in advance of the Customer Service Center and shall be ground mounted.

9.7.28 Customer Service Center Parking Signs (Illustration I-IT18-19)

Application: Customer Service Center Parking signs are used to guide motorists to Customer Service Center Parking Lots at Illinois Tollway 'Gateway' toll plazas.

Color: The Customer Service Center Parking signs shall have a blue background with a white legend and border.

Legend: The legend should be white.

Diagrams and Symbols: Standard *MUTCD* arrows shall be used to convey directional instructions to motorists.

Layout: The legend should be centered horizontally on the sign.

Placement: The Customer Service Center Parking signs shall be placed before the parking lot and at the entrance and shall be ground mounted.

9.7.29 Oversized Vehicles Plaza Assistance Sign (Illustration I-IT20)

Application: The Oversized Vehicles Plaza Assistance sign should be used in advance of a plaza with a closed 'WIDE LOAD' lane to direct oversized vehicles to call for assistance.

Color: The Oversized Vehicles Plaza Assistance sign shall have a blue background with a white legend and border.

Legend: The legend should be white.

Diagrams and Symbols: None.

Layout: The legend should be centered horizontally on the sign.

Placement: The Oversized Vehicles Plaza Assistance sign should be ground mounted on the ramp facing traffic just in advance of the plaza on the side of the closed 'WIDE LOAD' lane.

9.7.30 Call *999 For Roadside Assistance (with sponsor) Help Service Patrol Sign (Illustration I-IT21)

Application: The Call *999 For Roadside Assistance Help Service Patrol signs are used to inform motorists of the help services provided by the Illinois Tollway.

Color: The Call *999 For Roadside Assistance Help Service Patrol signs shall have a blue background with a white legend and border. Any sponsorship sign will have a white background with a various color legend and border.

Legend: The legend shall be white. The legend include the Illinois tollway logo, shield of route, and "Call *999 For Roadside Assistance". "Sponsored by" and the company name will be included on the lower portion.

Diagrams and Symbols: The Illinois Tollway Logo and route Shield symbols are used. See Illustration for additional guidance.

Layout: The sign (I-IT21) is comprised of two sections. The legend should be horizontally centered within each section of the sign.

Placement: When used, the Call *999 For Roadside Assistance Help Service Patrol sign shall be located along the Illinois Tollway system within two miles from the system entrance ramp. Space between either the Call *999 For Roadside Assistance Help Service Patrol Sign (with sponsor) or the Call *999 for Roadway Assistance Sign (H.E.L.P.) Highway Emergency Lane Patrol (I-IT22) Sign should be placed at approximately every 10-15 miles but shall not to exceed 20 miles in spacing.

9.7.31 Call *999 for Roadside Assistance Sign (H.E.L.P) Highway Emergency Lane Patrol (Illustration I-IT22)

Application: The Call *999 for Roadway Assistance (H.E.L.P.) signs are used to inform motorists of the help services provided by the Illinois Tollway.

Color: The Call *999 for Roadway Assistance (H.E.L.P) signs shall have a blue background with a white legend and border.

Legend: The legend shall be white. The legend include the Illinois tollway logo, shield of route, and “Call *999 for Roadway Assistance (H.E.L.P.) Highway Emergency Lane Patrol”.

Diagrams and Symbols: The Illinois Tollway Logo and route Shield symbols are used. See Illustration for additional guidance.

Layout: The sign (I-IT22) is comprised of one section. The legend should be horizontally centered within each section of the sign.

Placement: When used, the Call *999 for Roadway Assistance (H.E.L.P.) sign shall be located within two miles from the system entrance ramp. Space between either the Call *999 for Roadway Assistance Help Service Patrol Sign (with sponsor) or the Call *999 Help Service Patrol Sign (I-IT21) Sign should be placed at approximately every 10-15 miles but shall not to exceed 20 miles in spacing.

SECTION 10.0 DYNAMIC MESSAGE SIGNS

10.1 Dynamic Message Sign Application

Dynamic Message Signs (DMS) have a large number of applications including, but not limited to, the following:

- A. Incident management and route diversion
- B. Warning of adverse weather conditions
- C. Lane, ramp, and roadway control
- D. Travel times
- E. Warning situations
- F. Traffic regulations
- G. Speed control
- H. Destination guidance

10.2 Dynamic Message Sign Design

See *MUTCD* Chapter 2L for information regarding the design of DMS.

10.3 Dynamic Message Sign Messages: Length and Units of Information

See *MUTCD* Chapter 2L for information regarding the messages displayed on DMS.

10.4 Dynamic Message Sign Descriptions

A DMS is a traffic control device that can display one or more alternative messages. DMS shall display only traffic operational, regulatory, warning, and guidance information. Advertising messages shall not be displayed on a DMS or its supports or other equipment. DMS may be used by State and local highway agencies to display safety messages, transportation-related messages, emergency homeland security messages, and America's Missing: Broadcast Emergency Response (AMBER) alert messages.

SECTION 11.0 PAVEMENT MARKING GUIDELINES

11.1 General Information

Pavement markings on roadways open to public travel have important functions in providing guidance and information to motorists. Illinois Tollway motorists should be guided with consistent pavement markings on the approaches and departures throughout the Illinois Tollway system, including Mainlines, Toll Plazas, ORT lanes, IPO lanes, lane drops, lane reductions, and channelizing lanes. Designers shall follow pavement marking layout guidelines provided in the Illinois Tollway standard drawings and the *MUTCD* as applicable. Supplemental marking layout guidelines, for markings that are unique to the Illinois Tollway roadway system, are described in Chapter 12. This chapter focuses on pavement marking material selection for both new striping and maintenance striping. When calculating productivity for new or maintenance striping contracts, designers and planners should be cognizant of typical atmospheric and moisture conditions at the time of marking placement, as weather conditions can delay placement or impact the time required for placement.

11.2 Material Selection for New Pavements

Research conducted on Illinois Tollway roadways has shown that multi-polymer pavement markings are the optimum performing, most durable pavement marking for both weather and traffic conditions typical at the Illinois Tollway. Durable, longer-lasting markings mean roadways have a longer period of continuously effective lane delineation and therefore a safer driving environment. Longer-lasting markings also mean fewer traffic disruptions for future roadway re-striping. However, multi-polymers' cure times are exceptionally sensitive to lower temperatures, making their placement difficult for late-season construction completion. Fast cure epoxy and late season pavement markings, while not quite as durable as multi-polymers, have shown to adhere better to the pavement at cooler temperatures.

Therefore, designers should plan to place permanent, recessed multi-polymer pavement markings from April 15 through October 15, provided that the ambient temperature at the time of placement is at or above 45° F. Temporary, surface applied markings shall be placed from October 16 through April 14 or when the ambient temperature at the time of placement is below 45° F.

For any project in which the Designer does not anticipate permanent, recessed multi-polymer markings to be fully placed before October 16th, then temporary, surface-applied epoxy pavement markings should be placed up to the date of November 15th, and the ambient temperature at the time of placement must be 35° F and rising. For any project in which the Designer anticipates temporary markings to be placed after November 15th or when the ambient temperature at the time of placement is 25° to 34° F, then temporary, surface-applied late season pavement markings should be placed. Based on current standards, there are no markings that can be placed below 25° F. Placement dates and associated marking materials are presented again in the table below.

Pavement Marking Material Selection for New Construction

On New Pavement		
April 15* to October 15	October 16 to November 15	November 16 to April 14
Multi-Polymer	Epoxy (Temporary)	Late Season (Temporary)
*Provided that the ambient temperature at time of placement >45°F		

The following spring, the temporary markings shall be removed with the groove installation and then the permanent, multi-polymer markings placed in the groove. Removing the temporary marking and placement of the permanent marking may be accomplished by requiring the Contractor to return to the job site in the spring or through a separate pavement marking contract.

If the striping being placed after October 15 is intended to be temporary markings for Maintenance of Traffic (MOT), until construction resumes in the spring, the temporary marking material shall still be a late season or epoxy, depending on the placement conditions and dates, in order to provide the safest option for traffic during winter months. If such temporary MOT markings are not to be replaced with recessed permanent markings, then the temporary markings shall be removed only by the water blasting method with vacuum recovery, not by grinding or sand blasting. For more details on multi-polymer, epoxy, and late season pavement marking material requirements and installation requirements, refer to Illinois Tollway Standard Specifications or IDOT Standard Specifications for the respective marking type.

Designers should also note that it is Illinois Tollway policy that all lane and edge line markings on newly constructed pavement shall be recessed. Due to Plaza locations being subject to change more frequently, Pavement Markings placed within Plaza areas shall not be recessed. Refer to Illinois Tollway special provisions for requirements for installing a groove for recessing pavement markings.

11.3 Material Selection for Maintenance Striping

When considering pavement marking materials for maintenance striping (refreshing existing markings), the options depend on the pavement's remaining service life (RSL). When the pavement's RSL is five or less years (i.e., the pavement is scheduled for re-surfacing or reconstruction within five years), there are more cost-effective options than multi-polymer. Epoxy should provide five years' service when placed in a groove, and it typically costs less than multi-polymer. Therefore, when the pavement's RSL is greater than five years, multi-polymer markings should be used for maintenance striping, but when the RSL is five or less years, existing pavement marking type or epoxy should be used. Just like striping on new pavements, placement dates for multi-polymer are limited to April 15 through October 15. Regardless of the cut-off placement dates or the pavement's RSL, epoxy markings should be placed when the ambient temperature at the time of placement is less than 45° F but at least 35° F and rising. Since polyurea is not used for permanent markings on the Illinois Tollway and the marking type is not compatible with existing epoxy or multi-polymer markings, polyurea markings will not be used for maintenance except in

emergency applications when the ambient temperatures are below 35° F at the time of placement. The table below summarizes the pavement marking material guidelines for maintenance striping.

Pavement Marking Material Selection for Maintenance Striping

Maintenance Striping			
April 15* to October 15 Multi-Polymer	April 15 to October 15		October 16 to April 14
	Pavement Service Life Remaining ≤ 5 years	Pavement Service Life Remaining >5 years	Any Pavement Age
Asphalt	Epoxy or Existing Pavement Marking Type	Multi-Polymer*	Epoxy
Concrete	Epoxy or Existing Pavement Marking Type	Multi-Polymer*	Epoxy
*Provided ambient temperature at time of placement >45°F			

SECTION 12.0 PAVEMENT MARKING LAYOUT

12.1 General Guidelines

Pavement markings on roadways open to public travel have important functions in providing guidance and information to motorists. Illinois Tollway motorists should be guided with consistent pavement markings on the approaches and departures throughout the Illinois Tollway system, including Mainlines, Toll Plazas, ORT lanes, IPO lanes, lane drops, lane reductions, and channelizing lanes. Designers shall follow pavement marking layout guidelines provided in the Illinois Tollway standard drawings and the MUTCD as applicable. This chapter presents supplemental marking layout guidelines, for markings that are unique to the Illinois Tollway roadway system. Chapter 11 provides guidance on pavement marking material selection and material placement cut-off dates.

12.2 Mainline Pavement Markings –Current Standards (Illustrations PM-IT1A-D)

Pavement markings for new construction on the mainline shall be installed in accordance with Illinois Tollway Standard Drawing D5. For rehabilitation type projects, designers may need to refer to the previous Illinois Tollway Pavement Marking standards included in this chapter but shall consult with the Illinois Tollway PM to determine which standards to use. Illustrations are included for a 5-lane typical section of Interstate (I)-294, I-94; 4-lane typical section of I-294, I-94, I-88; 3-lane typical section of I-355; and 2-lane typical section of I-94 Edens Spur.

12.3 Dotted Line and Channelizing Line for Exit and Entrance Ramps

Pavement markings for Dotted Line and Channelizing Lines for Exit and Entrance Ramps shall be installed on roadways in accordance with Illinois Tollway Standard Drawing D6. The Designer shall also refer to *MUTCD* Section 3B for additional requirements and general guidance.

12.4 Lane-Drop Markings at Exit, Split, and Auxiliary Lane

Pavement markings for Lane-Drop Markings at Exit, Split and Auxiliary Lanes shall be installed on roadways in accordance with Illinois Tollway Standard Drawing D6. The Designer shall also refer to *MUTCD* Section 3B for additional requirements and general guidance.

12.5 Lane-Reduction Transition Markings (Illustrations PM-IT2A-C)

Lane-reduction transition markings are used where the number of through lanes is reduced because of the narrowing of the roadway. Pavement markings for lane-reduction transitions are not used for lane drops. Lane-reduction arrow markings should be used in long parallel acceleration lanes based on engineering judgment.

12.6 Plaza Pavement Markings

Toll Plazas are unique in geometry and layout, resulting in pavement markings that are specific to every location. Refer to Illinois Tollway Base Sheet M-RDY-417 for Mainline Toll Plaza Pavement Marking Details and M-RDY-418 for Ramp Toll Plaza Pavement Marking Details.

For Mainline Toll Plazas the pavement markings through the ORT lanes shall be 6" White Solid Lane Lines, beginning at 600' in advance of the ORT monotube and ending at 200' after the ORT monotube. There will be no grooving at the continuously reinforced concrete (CRC) pavement section under the monotube.

For Ramp Toll Plazas the pavement markings through the ORT lanes shall be 6" White Solid Lane Lines, beginning at 200' in advance of the ORT monotube and ending at 200' after the ORT monotube. There will be no grooving at the continuously reinforced (CRC) pavement section under the monotube.

Permanent and temporary pavement markings shall not be installed over plaza loops. Shoulder diagonals shall be omitted through the CRC pavement section under the monotube area. Solid lines shall be gapped across any transverse loops, a plan note indicating this shall be included on the pavement marking plans at plaza locations.

12.7 AET Converted Plaza Pavement Marking (Illustration PM-IT3)

AET converted Toll Plazas are unique in geometry and layout, resulting in pavement markings that are specific to each location. Plaza pavement markings are specific to the open lanes at the plaza and should be approved by the engineer. Where there are multiple lanes open there should be 200' of gore striping between open lanes on the approach side of the toll plaza. There should be a 200' solid white line between the open lanes on the departure side of the toll plaza. Lanes that are being closed at the toll plaza should be stripped out with diagonals spaced at 50 feet.

12.8 Interstate Shield Pavement Markings (Illustrations PM-IT4A-B)

Pavement markings simulating Interstate, U.S., State and other official highway route shield signs with appropriate route numbers but elongated for proper proportioning when viewed as a marking, may be used to guide road users to their destinations. Designers shall refer to *MUTCD* Section 3B.20 for pavement marking requirements,

For Illinois Tollway pavement marking details, refer to illustrations for Interstate Shield Detail Type I and Type II. The application and placement of Interstate Shield Markings will be as directed by the Illinois Tollway.

12.9 Plowable Raised Pavement Lane Marker Installation

RPMs shall be installed on Illinois Tollway projects in unlit areas. Existing RPM's that are removed during pavement patching contracts will be replaced independent of any roadway lighting. Where installed, RPMs shall be in accordance with Illinois Tollway Standard Drawing D8.

12.10 Weigh-In-Motion Enforcement Area (Illustration PM-IT5)

Pavement markings and signing in the Weigh-In-Motion (WIM) enforcement areas should alert and direct truck drivers to a truck enforcement site adjacent to the mainline. Location of these sites will be as directed and approved by the Illinois Tollway.

12.11 Preferential Lane Pavement Markings (Illustration PM-IT6)

Preferential lane pavement markings establish a lane on a shoulder for special uses per MUTCD Section 3E.03. Preferential lane pavement markings for new construction shall be as directed by the Illinois Tollway. For rehabilitation type projects, designers shall refer to Illustration PM-IT6 for pavement markings on I-90 east of Barrington Road. Additional signage may be required as directed by the Illinois Tollway.

12.12 Letters and Symbols

Pavement markings for Letter and Symbols shall be installed on roadways in accordance with Illinois Tollway Standard Drawings D5 and D6. The Designer shall also refer to *MUTCD* Section 3B for additional requirements and general guidance.

12.13 Speed Reduction Pavement Markings

Pavement markings for speed reduction applications shall be installed on exit loop ramps in accordance with Illinois Tollway Standard Drawing D6. The Designer shall also refer to *MUTCD* Section 3B for additional requirements and general guidance.

12.14 Shoulder Pavement Markings

Diagonal pavement markings shall be applied to shoulders less than standard width but for widths greater than or equal to 4 feet. Shoulders less than 4 feet wide from the edge paint line to the edge of shoulder, curb line, barrier etc., shall not have diagonal pavement markings applied.

SECTION 13.0 ENGINEERING STUDIES

13.1 Engineering Study

MUTCD defines Engineering Study as the comprehensive analysis and evaluation of available pertinent information, and the application of appropriate principles, provisions, and practices as contained in the *MUTCD* Manual and other sources, for the purpose of deciding upon the applicability, design, operation, or installation of a traffic control device. To bring Illinois Tollway practice into overall conformance with the Illinois adopted version of the 2023 *MUTCD*, the Engineering Studies address several issues pertinent to Illinois Tollway signing. The intent is to answer questions and issues regarding sign practice for universal application to Illinois Tollway signing. It is incumbent upon designers to check whether any of the practices and policies discussed here have been superseded or updated.

13.2 Engineering Study Descriptions

The Illinois Tollway is applying the use of engineering studies to modify parts of the *MUTCD* guidance, as follows:

1. Electronic Toll Collection (ETC) Only: Use of “ONLY” messaging on ETC plaza lanes and auxiliary signs
2. Table: Traffic Generator Sign Categories per *MUTCD* and the Illinois Tollway
3. Illinois Tollway Sign Issues:
 - a. Option Lane Exits at Intermediate and Minor Interchanges
 - b. Interchange Exit Numbering
 - c. Stop Sign Sizes at Toll Booths
4. Wood Posts for Sign Structures
5. Sign Support Research
6. Illinois Tollway Wood Sign Post Requirements
7. Ramp and Mainline Toll Plaza Sign Color
8. Engineering Study for Manual Side Signing at Mainline Toll Plazas with a Grass Median Between ORT and Manual Lanes
9. Engineering Study for Static Signing Requirements for Entrance Lanes and Related Conditions
10. Criteria Changes for Sign Lighting on AET Overhead Signs
11. Maximum Width Versus Wide Load Signage

Designers on Illinois Tollway projects shall follow this practice unless directed otherwise by the Illinois Tollway PM.

SECTION 14.0 REFERENCES

14.1 Reference Sections

Section	Description	Reference
Article 2.6 – Sign Reflectorization and Illumination	Vertical sag curve	<i>State of California Department of Transportation, Traffic Operations Policy Directive, Number 14-02 Revision 1 – December 11, 2014</i>
Article 2.6 – Sign Reflectorization and Illumination	Retroreflectivity parameters for overhead signs	<i>FHWA Publication No. FHWA-RD-03-082 Minimum Retroreflectivity Levels for Overhead Guide Signs and Street-Name Signs</i>

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APPENDIX A Sign Placement Illustrations

Sign Placement (SP) Illustration List

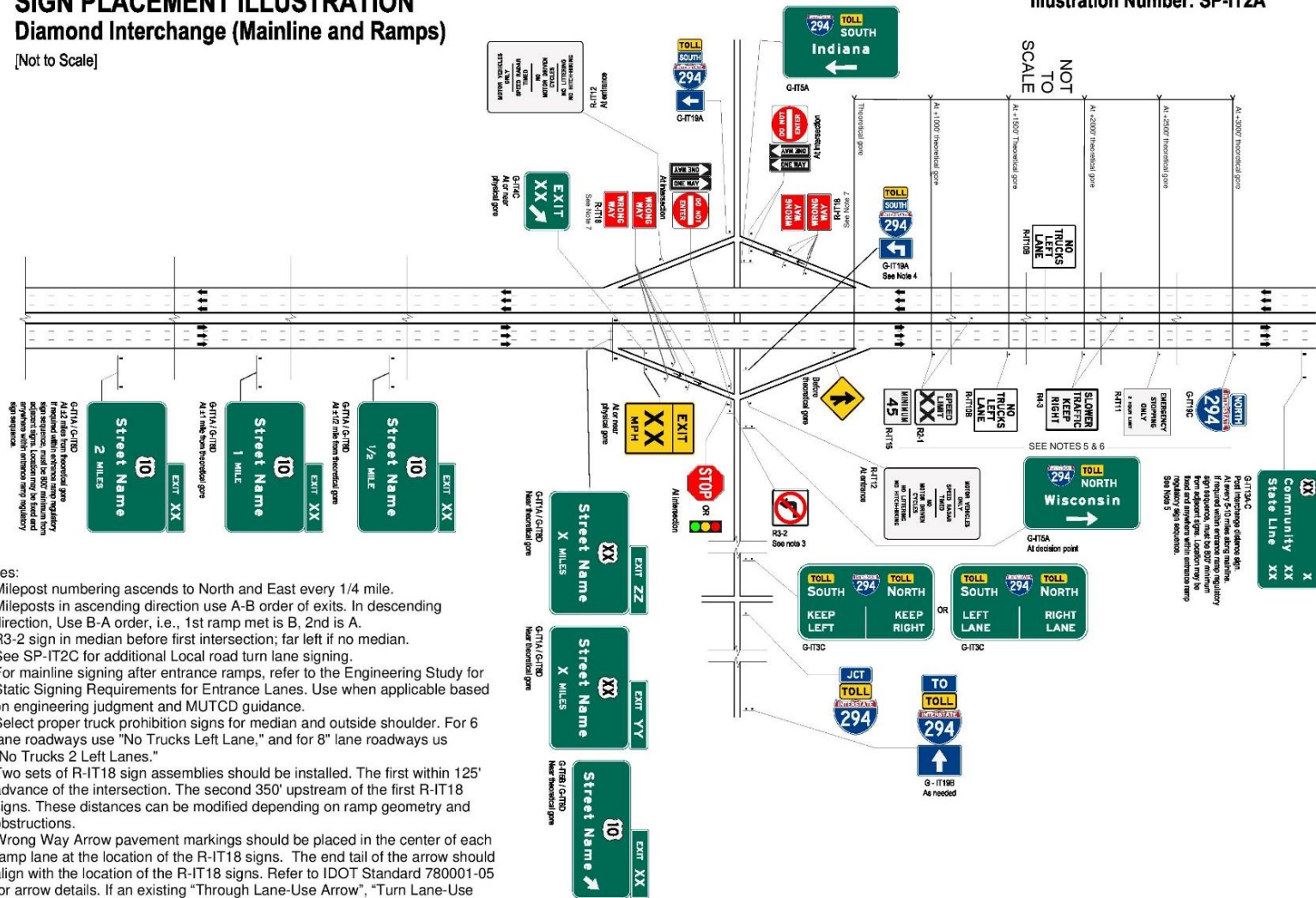
Number	Placement	Legend
SP-IT2A	Interchange	Diamond Interchange (Mainline and Ramps)
SP-IT2C	Interchange	Diamond Interchange Crossroad Turn Lanes and Pavement Marking (Local Roads)
SP-IT3	Interchange	Cloverleaf Interchange
SP-IT4	Interchange	Cloverleaf Interchange with Full Collector/Distributor Roadways
SP-IT5A	Interchange	Partial Cloverleaf Interchange (Mainline and Ramps)
SP-IT5B	Ramp	Exit Ramp Standard Wrong Way Signage (without turn lane channelization)
SP-IT5C	Ramp	Exit Ramp Standard Wrong Way Signage (with turn lane channelization)
SP-IT6A	Exit	Mainline Exit with Single Dropped Lane or Auxiliary Exit Lane
SP-IT6B	Exit	Mainline Exit with Multiple Dropped Lanes or Auxiliary Exit Lanes
SP-IT7A	Exit	Mainline Multi-Lane Exit with Option Lane for Major Interchange
SP-IT7B	Exit	Mainline Multi-Lane Exit with Option Lane for Intermediate Interchange
SP-IT8	Oasis	Oasis
SP-IT9A	Mainline	Crash Investigation Site (CIS) Mainline (Urban)
SP-IT9B	Mainline	Crash Investigation Site (CIS) Toll Plaza
SP-IT14A	Mainline	Diverging Diamond Interchange
SP-IT14B	Local	Diverging Diamond Interchange (Local Road Signage)
SP-IT15	Mainline	Single Point Urban Interchange
SP-IT16A	Plaza	AET Converted – Mainline Plaza with no Exit
SP-IT16B	Plaza	AET Converted – Mainline Plaza Detail
SP-IT17A	Plaza	AET Converted – Mainline Plaza with Exit
SP-17B	Plaza	AET Converted – Mainline Plaza Detail with Exit
SP-IT18	Plaza	AET Converted – Exit Ramp Plaza
SP-IT19A	Plaza	AET Converted – Entrance Ramp Plaza
SP-IT19B	Plaza	AET Converted – Ramp Plaza Detail
SP-IT20A	Interchange	Typical All Electronic Toll Signing
SP-IT20B	Plaza	Typical All Electronic Toll Plaza Detail (Front Side)
SP-IT20C	Plaza	Typical All Electronic Toll Plaza Detail (Back Side)
SP-IT20D	Plaza	Typical All Electronic Toll Plaza Detail (Backside & Frontside)
SP-IT21	Sign Illumination	Overhead Sign Illumination Criteria for Sag Vertical Curves

SIGN PLACEMENT ILLUSTRATION

Diamond Interchange (Mainline and Ramps)

[Not to Scale]

Illustration Number: SP-IT2A



Notes:

1. Milepost numbering ascends to North and East every 1/4 mile.
2. Mileposts in ascending direction use A-B order of exits. In descending direction, Use B-A order, i.e., 1st ramp met is B, 2nd is A.
3. R3-2 sign in median before first intersection; far left if no median.
4. See SP-IT2C for additional Local road turn lane signing.
5. For mainline signing after entrance ramps, refer to the Engineering Study for Static Signing Requirements for Entrance Lanes. Use when applicable based on engineering judgment and MUTCD guidance.
6. Select proper truck prohibition signs for median and outside shoulder. For 6 lane roadways use "No Trucks Left Lane," and for 8" lane roadways us "No Trucks 2 Left Lanes."
7. Two sets of R-1T18 sign assemblies should be installed. The first within 125' advance of the intersection. The second 350' upstream of the first R-1T18 signs. These distances can be modified depending on ramp geometry and obstructions.
8. Wrong Way Arrow pavement markings should be placed in the center of each ramp lane at the location of the R-1T18 signs. The end tail of the arrow should align with the location of the R-1T18 signs. Refer to IDOT Standard 780001-05 for arrow details. If an existing "Through Lane-Use Arrow", "Turn Lane-Use Arrow", or "Turn and Through Lane-Use Arrow" exists at the location of the Wrong Way Arrow marking, the Wrong Way Arrow can be omitted.
9. Signs shown here on one side only. Sign placement on opposite side of roadway is similar.

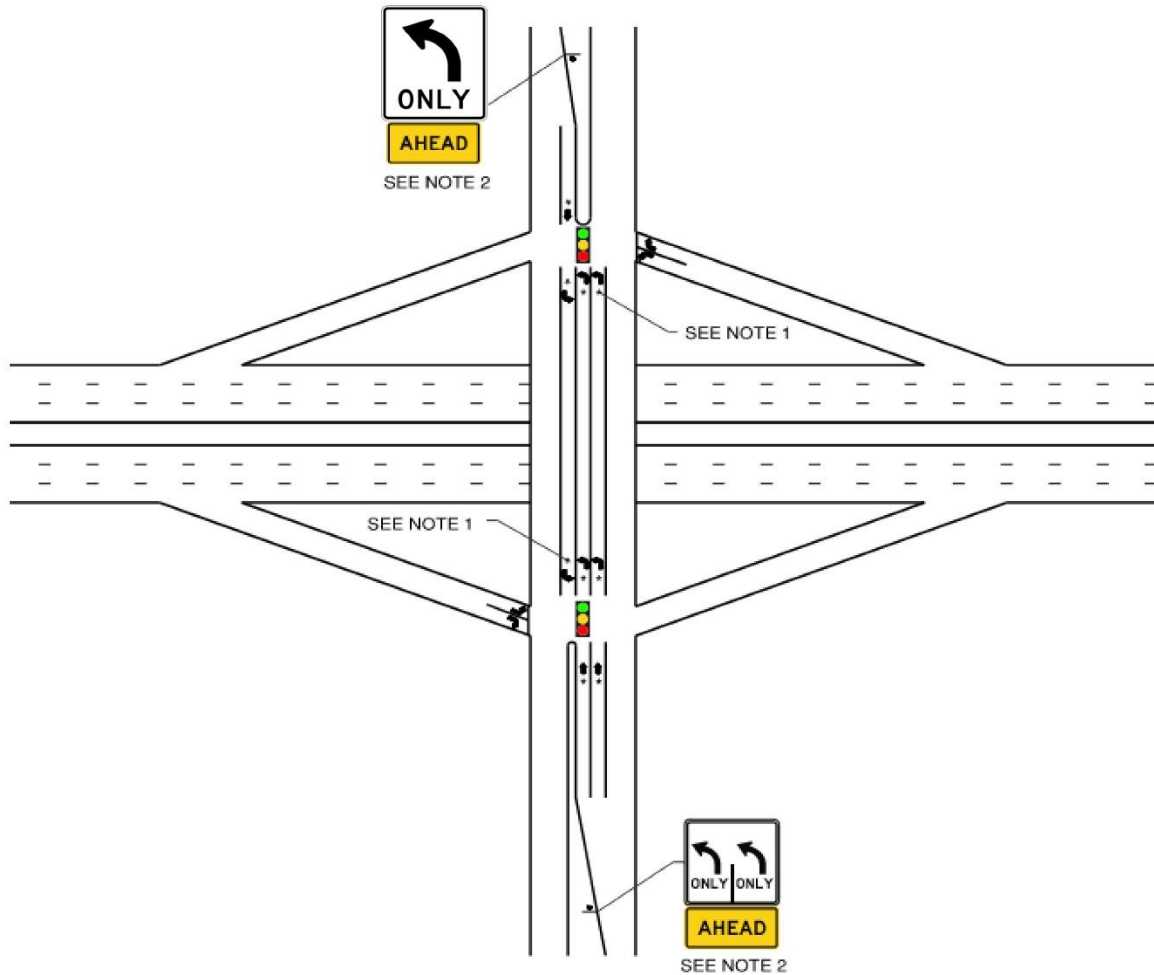
APPENDIX A - SP-IT2A

SIGN PLACEMENT ILLUSTRATION**Diamond Interchange Crossroad Turn Lanes and
Pavement Markings (Local Roads)**

[Not to scale]

Illustration Number

SP-IT2C

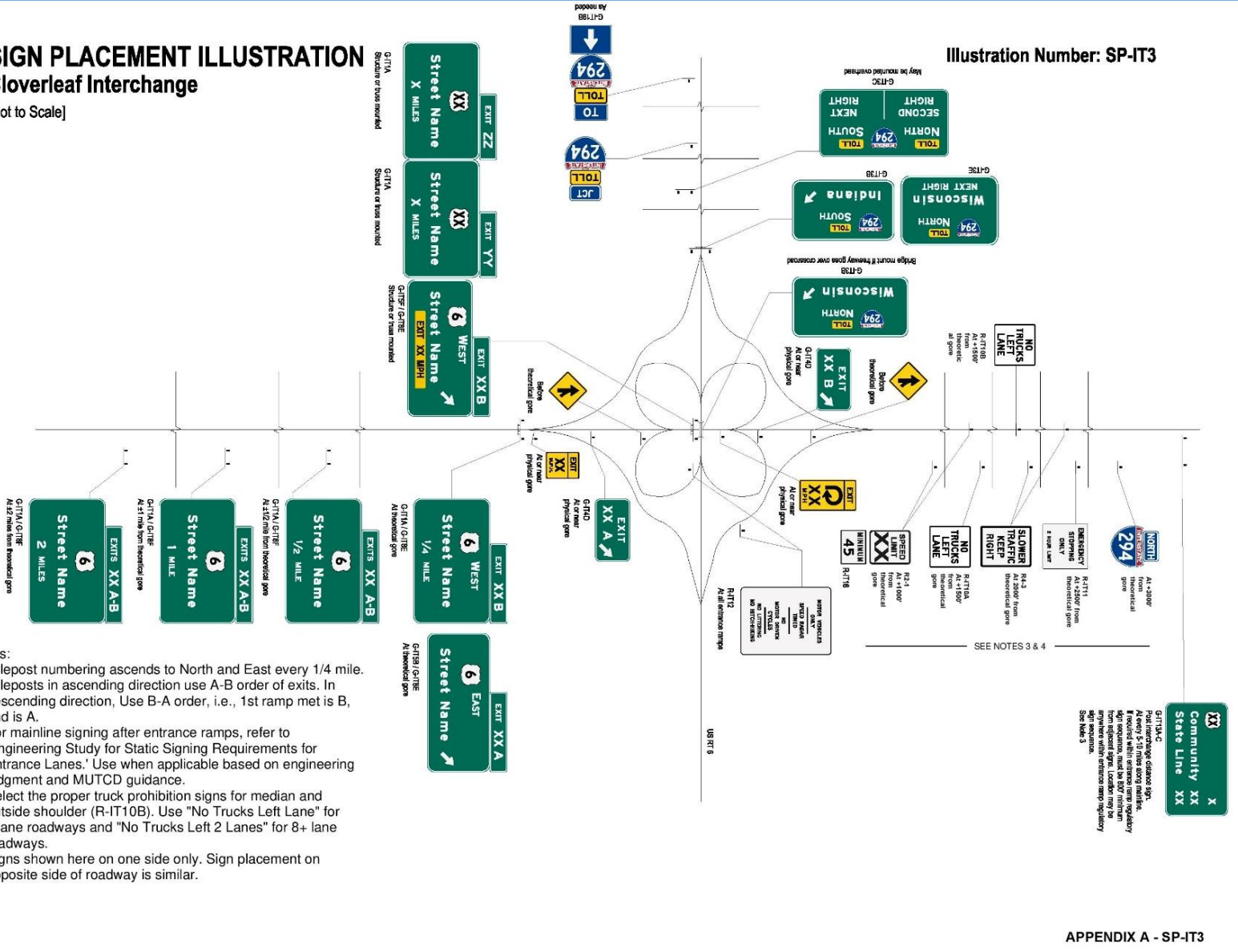
**NOTES:**

1. THE * MEANS TO INCLUDE "ONLY" AS PART OF THE PAVEMENT MARKINGS.
 2. R3-5 OR R3-8 (SPECIAL) AND W16-9P SIGNS START OF LEFT TURN LANE(S) TAPER.
 3. SEE SP-IT2A FOR ADDITIONAL MAINLINE AND RAMP SIGNING.
- PAVEMENT MARKINGS SHOULD BE PER LOCAL STANDARDS (IE. IDOT, COUNTY, ETC.)

4. LOCAL ROAD

SIGN PLACEMENT ILLUSTRATION Cloverleaf Interchange

[Not to Scale]

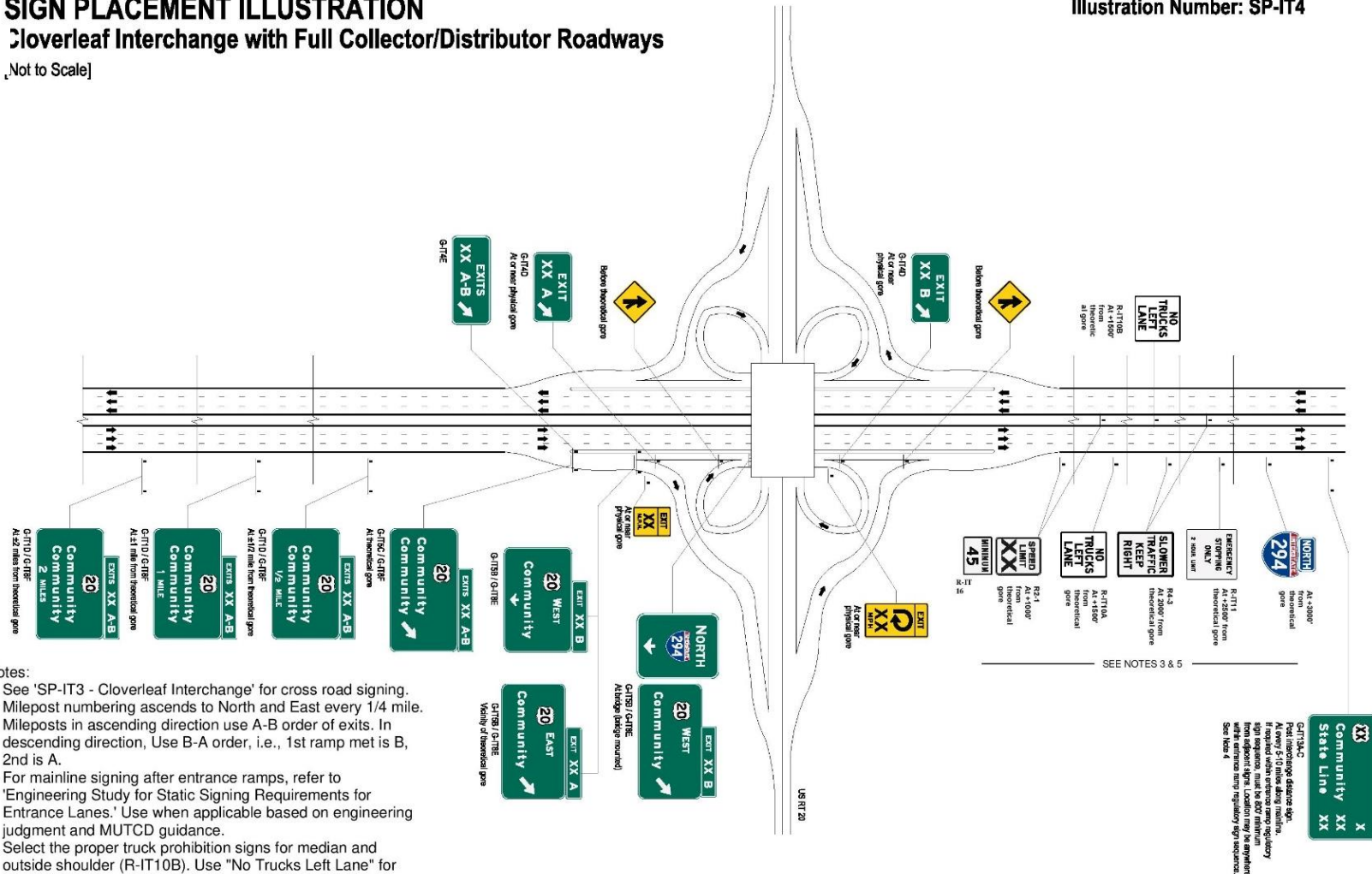


SIGN PLACEMENT ILLUSTRATION

Cloverleaf Interchange with Full Collector/Distributor Roadways

[Not to Scale]

Illustration Number: SP-IT4



- Notes:**
1. See 'SP-IT3 - Cloverleaf Interchange' for cross road signing.
 2. Milepost numbering ascends to North and East every 1/4 mile.
 3. Mileposts in ascending direction use A-B order of exits. In descending direction, Use B-A order, i.e., 1st ramp met is B, 2nd is A.
 4. For mainline signing after entrance ramps, refer to 'Engineering Study for Static Signing Requirements for Entrance Lanes.' Use when applicable based on engineering judgment and MUTCD guidance.
 5. Select the proper truck prohibition signs for median and outside shoulder (R-IT10B). Use "No Trucks Left Lane" for 6 lane roadways and "No Trucks Left 2 Lanes" for 8+ lane roadways.
 6. Signs shown here on one side only. Sign placement on opposite side of roadway is similar.

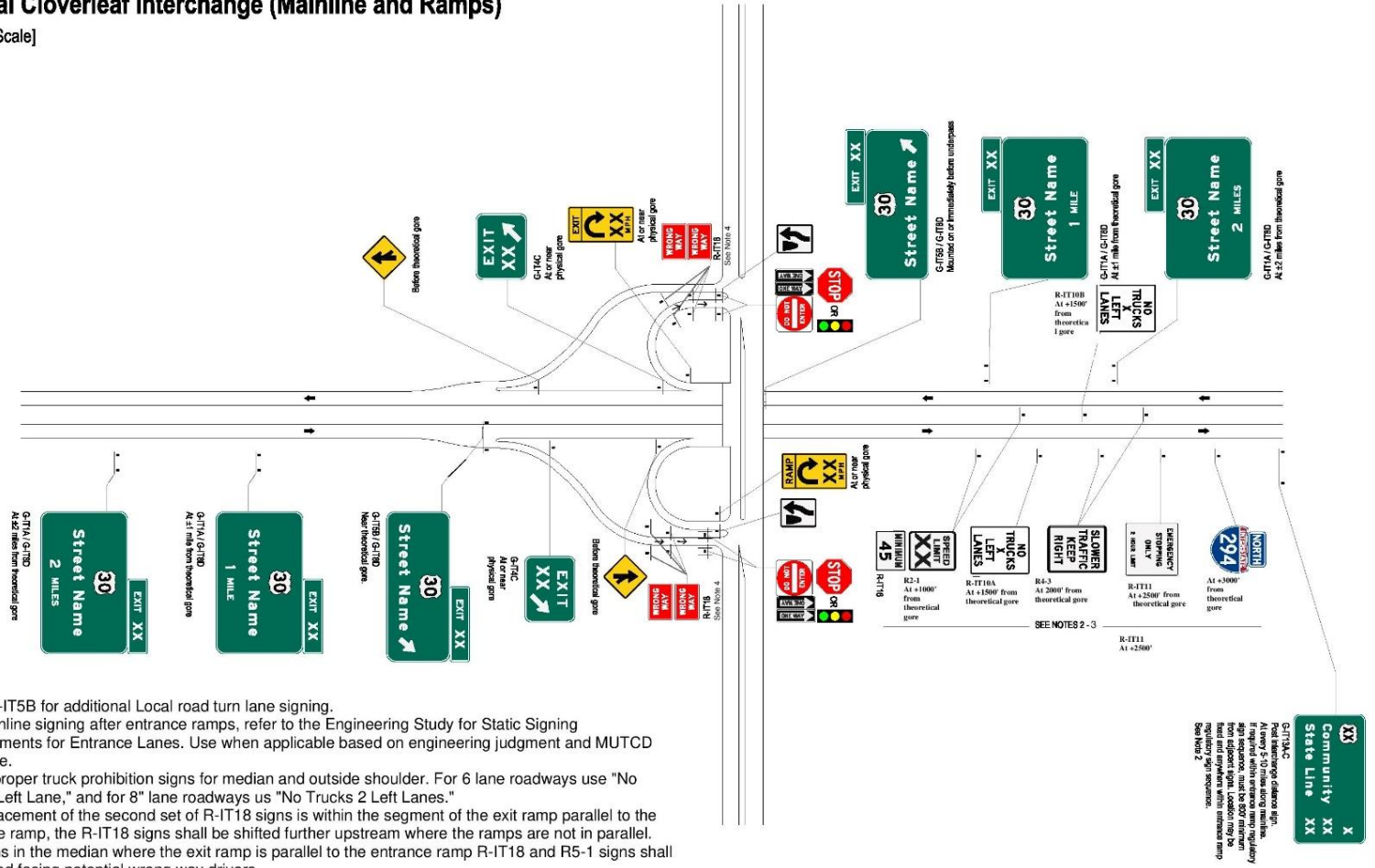
APPENDIX A - SP-IT4

SIGN PLACEMENT ILLUSTRATION

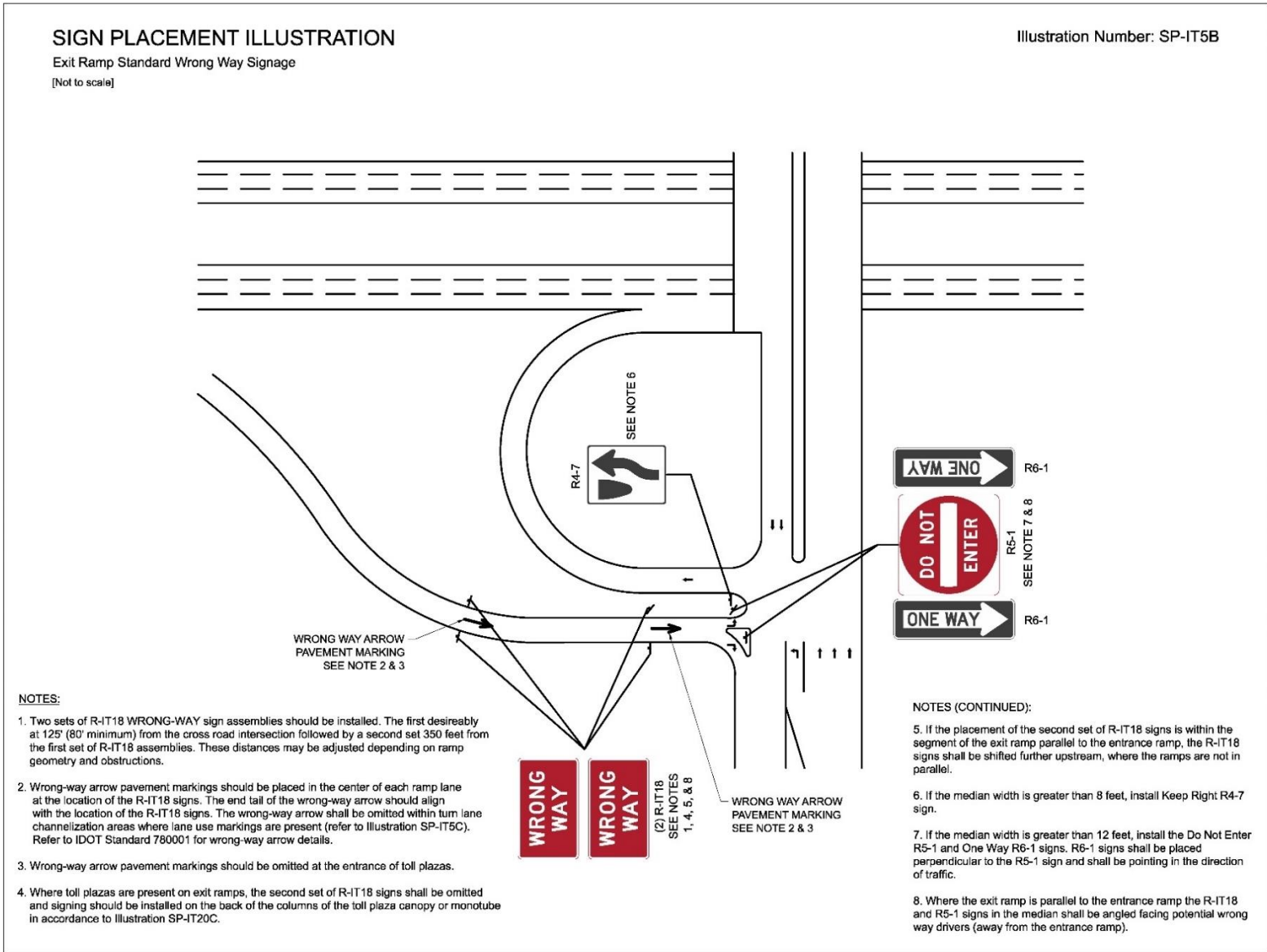
Partial Cloverleaf Interchange (Mainline and Ramps)

[Not to Scale]

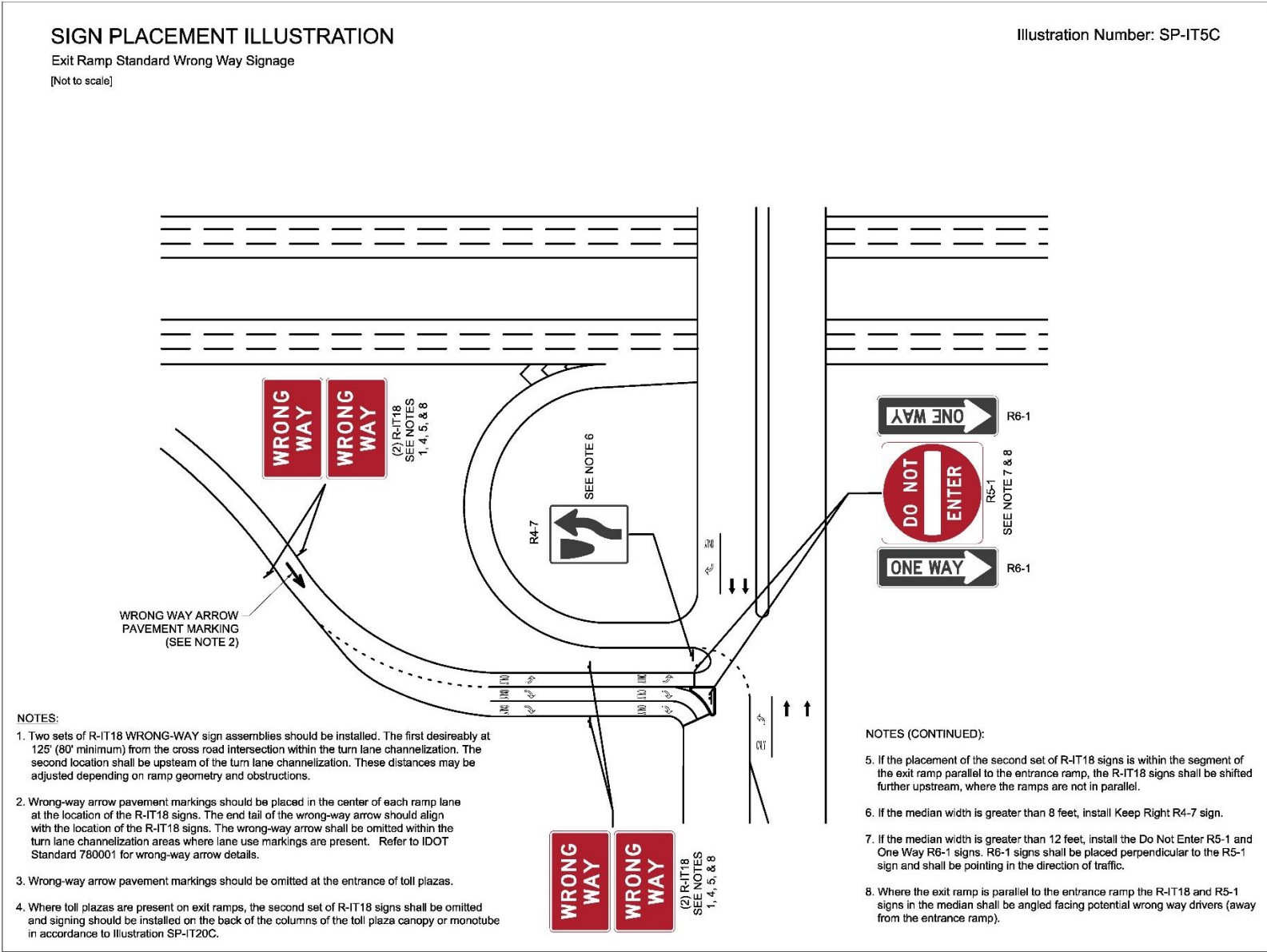
Illustration Number: SP-IT5A



- Notes:
1. See SP-IT5B for additional Local road turn lane signing.
 2. For mainline signing after entrance ramps, refer to the Engineering Study for Static Signing Requirements for Entrance Lanes. Use when applicable based on engineering judgment and MUTCD guidance.
 3. Select proper truck prohibition signs for median and outside shoulder. For 6 lane roadways use "No Trucks Left Lane," and for 8" lane roadways us "No Trucks 2 Left Lanes."
 4. If the placement of the second set of R-IT18 signs is within the segment of the exit ramp parallel to the entrance ramp, the R-IT18 signs shall be shifted further upstream where the ramps are not in parallel.
 5. For signs in the median where the exit ramp is parallel to the entrance ramp R-IT18 and R5-1 signs shall be angled facing potential wrong way drivers.
 6. Wrong Way Arrow pavement markings should be placed in the center of each ramp lane at the location of the R-IT18 signs. The end tail of the arrow should align with the location of the R-IT18 signs. Refer to IDOT Standard 780001-05 for arrow details. If an existing "Through Lane-Use Arrow", "Turn Lane-Use Arrow", or "Turn and Through Lane-Use Arrow" exists at the location of the Wrong Way Arrow marking, the Wrong Way Arrow can be omitted.
 7. Signs shown here on one side only. Sign placement on opposite side of roadway is similar.



APPENDIX A - SP-IT5B



APPENDIX A - SP-IT5C

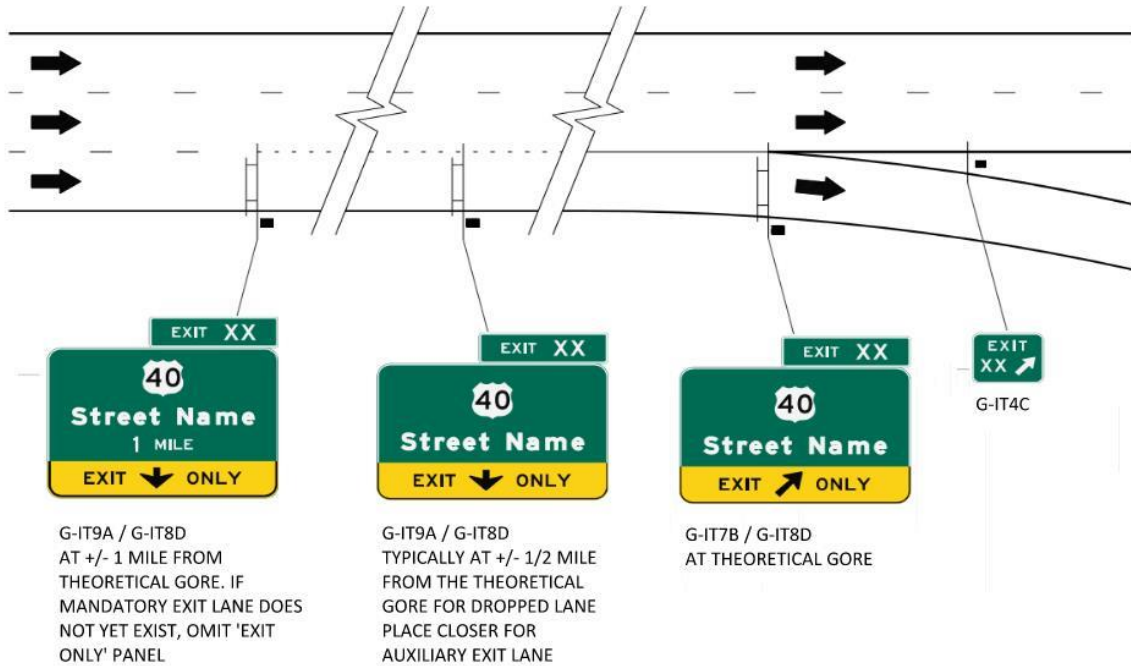
SIGN PLACEMENT ILLUSTRATION

Illustration Number

SP-IT6A

Mainline Exit with Single Dropped Lane or**Auxiliary Exit Lane (see Note 1)**

[Not to scale]

**NOTES:**

1. SEE SECTION 3.2.6 FOR DEFINITIONS OF DROPPED LANE AND AUXILIARY EXIT LANE.
2. SEE CHAPTER 12 FOR REQUIRED PAVEMENT MARKINGS.
3. FOR AUXILIARY EXIT LANES OF LESS THAN ~500', TREAT ON SITE-SPECIFIC BASIS.

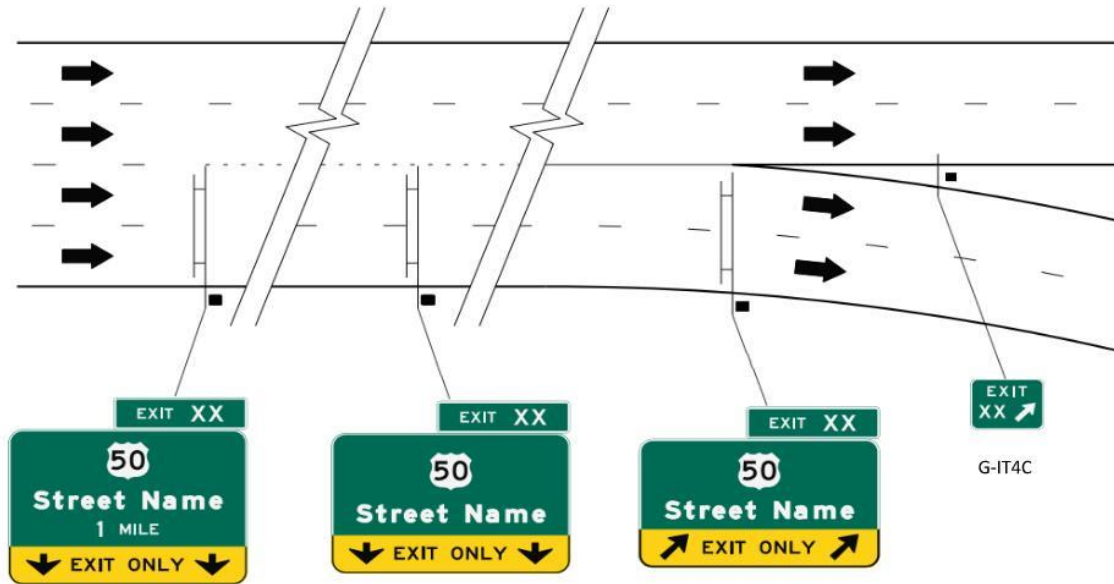
SIGN PLACEMENT ILLUSTRATION

Illustration Number

SP-IT6B

Mainline Exit with Multiple Dropped Lanes or**Auxiliary Exit Lanes (see Note 1)**

[Not to scale]



G-IT9B / G-IT8D
AT +/- 1 MILE FROM
THEORETICAL GORE. PROVIDE
"EXIT ONLY" PANEL AND
ARROWS PER NUMBER OF
MANDATORY EXIT LANES

G-IT9B / G-IT8D
TYPICALLY AT +/- 1/2 MILE
FROM THE THEORETICAL
GORE FOR DROPPED LANE,
CLOSER FOR AUXILIARY EXIT
LANE

G-IT7C / G-IT8D
AT THEORETICAL GORE

NOTES:

1. SEE SECTION 3.2.6 FOR DEFINITIONS OF DROPPED LANE AND AUXILIARY EXIT LANE.
2. SEE CHAPTER 12 FOR REQUIRED PAVEMENT MARKINGS.
3. FOR AUXILIARY EXIT LANES OF LESS THAN ~500', TREAT ON SITE-SPECIFIC BASIS.

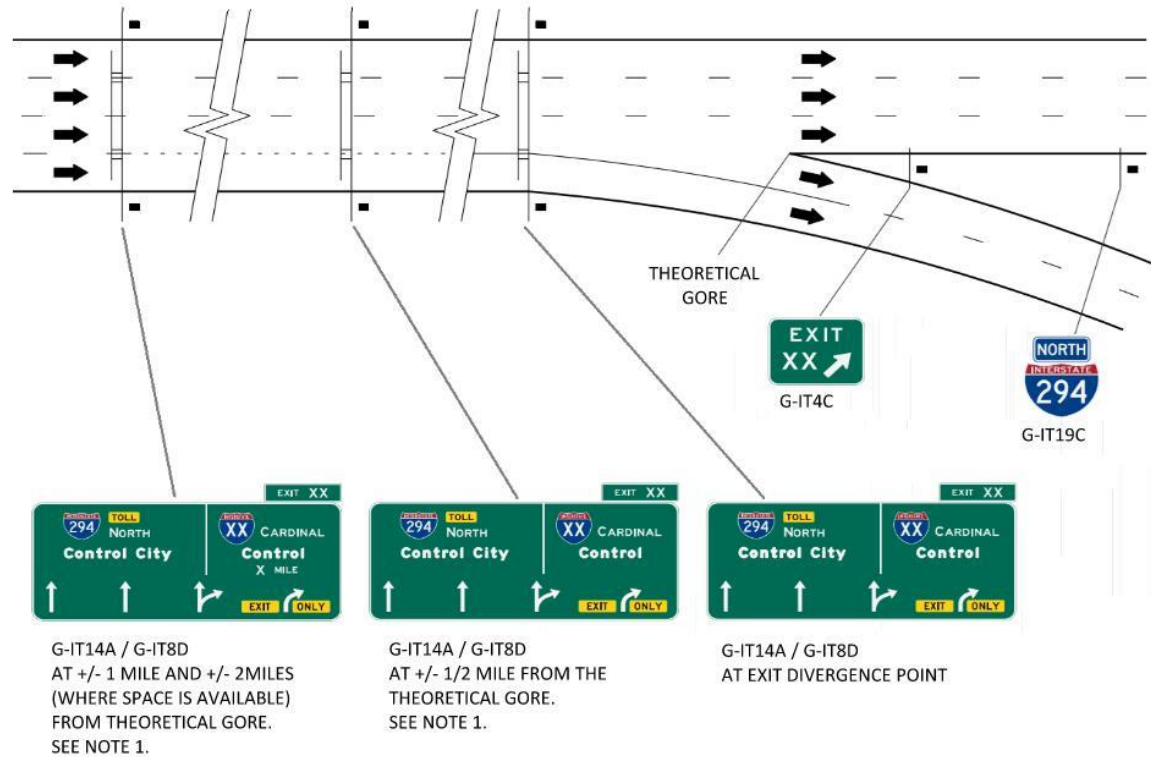
SIGN PLACEMENT ILLUSTRATION

Illustration Number

SP-IT7A

Mainline Multi-Lane Exit with Option Lane for Major Interchange Overhead Arrow per Lane (OAPL) Sign

[Not to scale]

**NOTES:**

1. ADVANCE OAPL SIGNS MIGHT NOT BE USED DEPENDING ON LENGTH OF MANDATORY EXIT LANE.
2. SEE CHAPTER 12 FOR REQUIRED PAVEMENT MARKINGS.

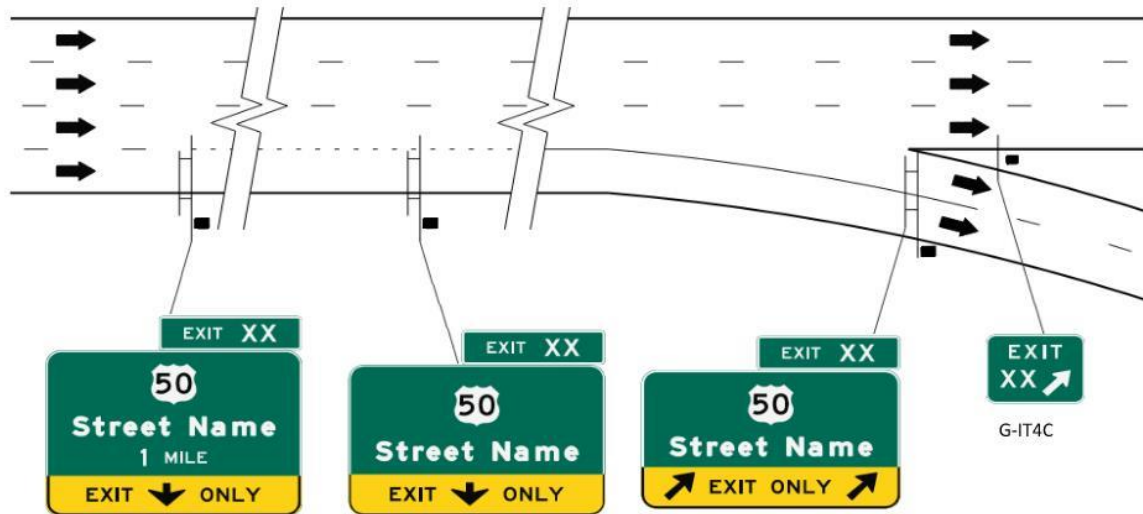
SIGN PLACEMENT ILLUSTRATION

Illustration Number

SP-IT7B

Mainline Multi-Lane Exit with Option Lane for Intermediate**Interchange, Dropped Lane and Auxiliary Exit Lane (See Note 1)**

[Not to scale]



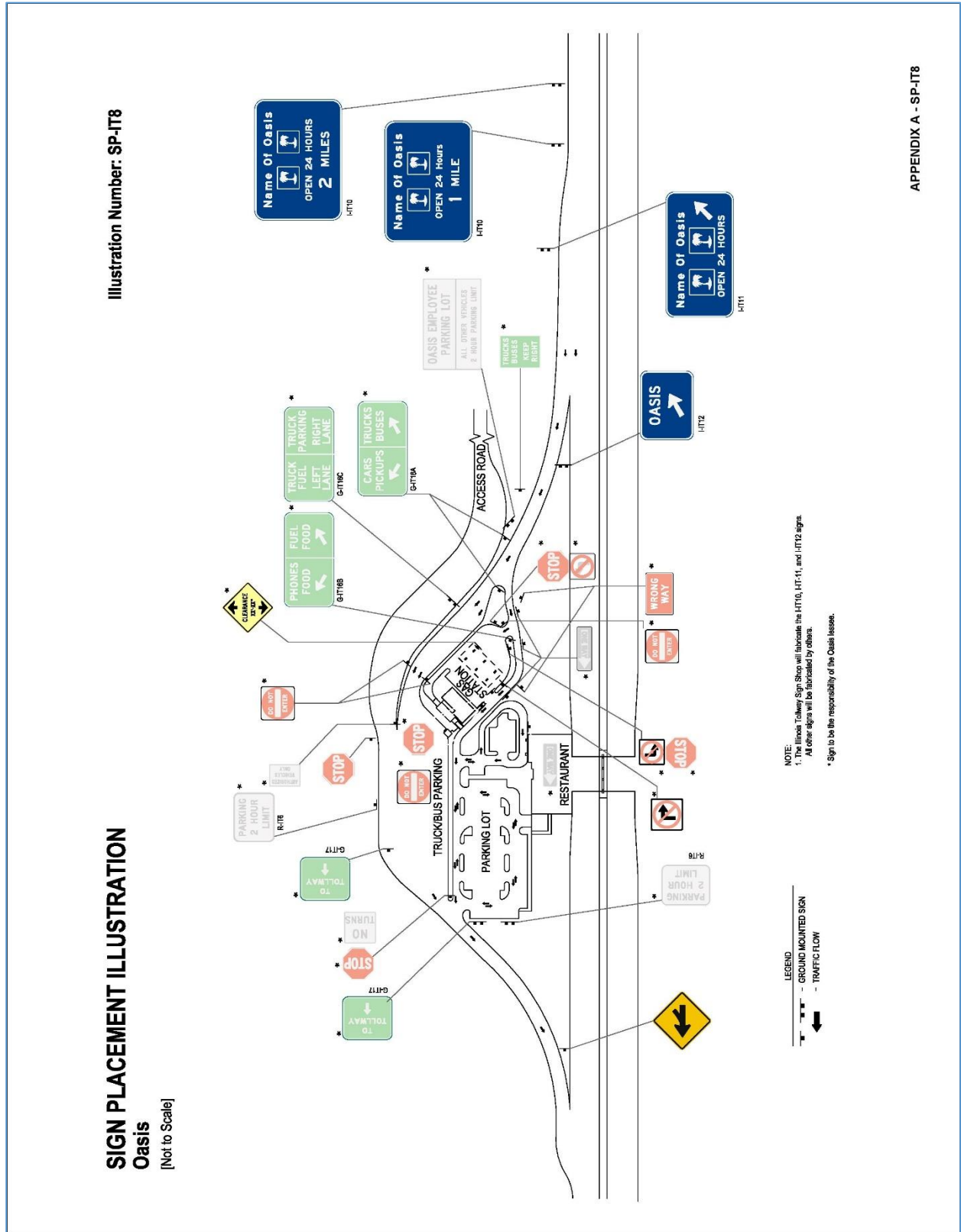
G-IT9A / G-IT8D
AT +/- 1 MILE FROM
THEORETICAL GORE. IF
MANDATORY EXIT LANE DOES
NOT YET EXIST, OMIT "EXIT
ONLY" PANEL.

G-IT9A / G-IT8D
TYPICALLY AT +/- 1/2 MILE
FROM THE THEORETICAL
GORE FOR DROPPED LANE,
CLOSER FOR AUXILIARY EXIT
LANE

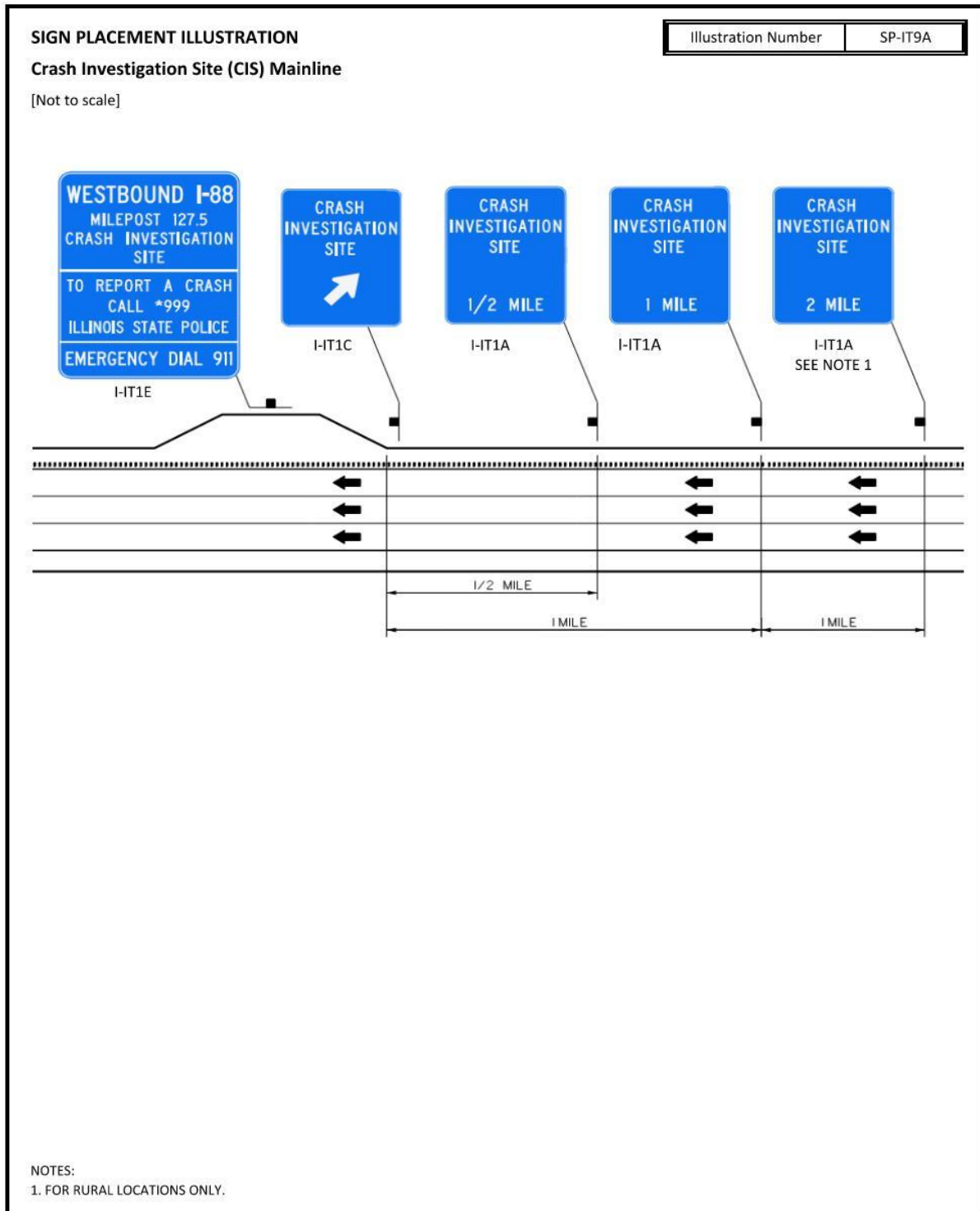
G-IT7C / G-IT8D
AT THEORETICAL GOR

NOTES:

1. SEE SECTION 3.2.6 FOR DEFINITIONS OF DROPPED LANE AND AUXILIARY EXIT LANE.
2. SEE CHAPTER 12 FOR REQUIRED PAVEMENT MARKINGS.
3. FOR AUXILIARY EXIT LANES LESS THAN ~500', TREAT ON SITE-SPECIFIC BASIS.



Appendix A – SP -IT9A



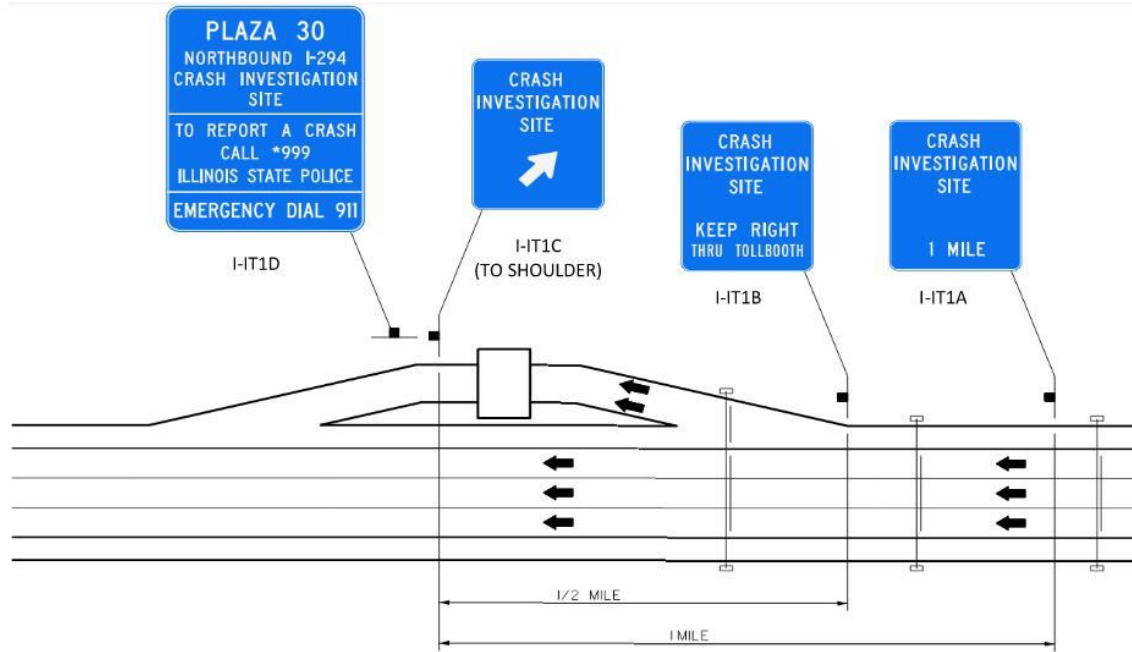
SIGN PLACEMENT ILLUSTRATION

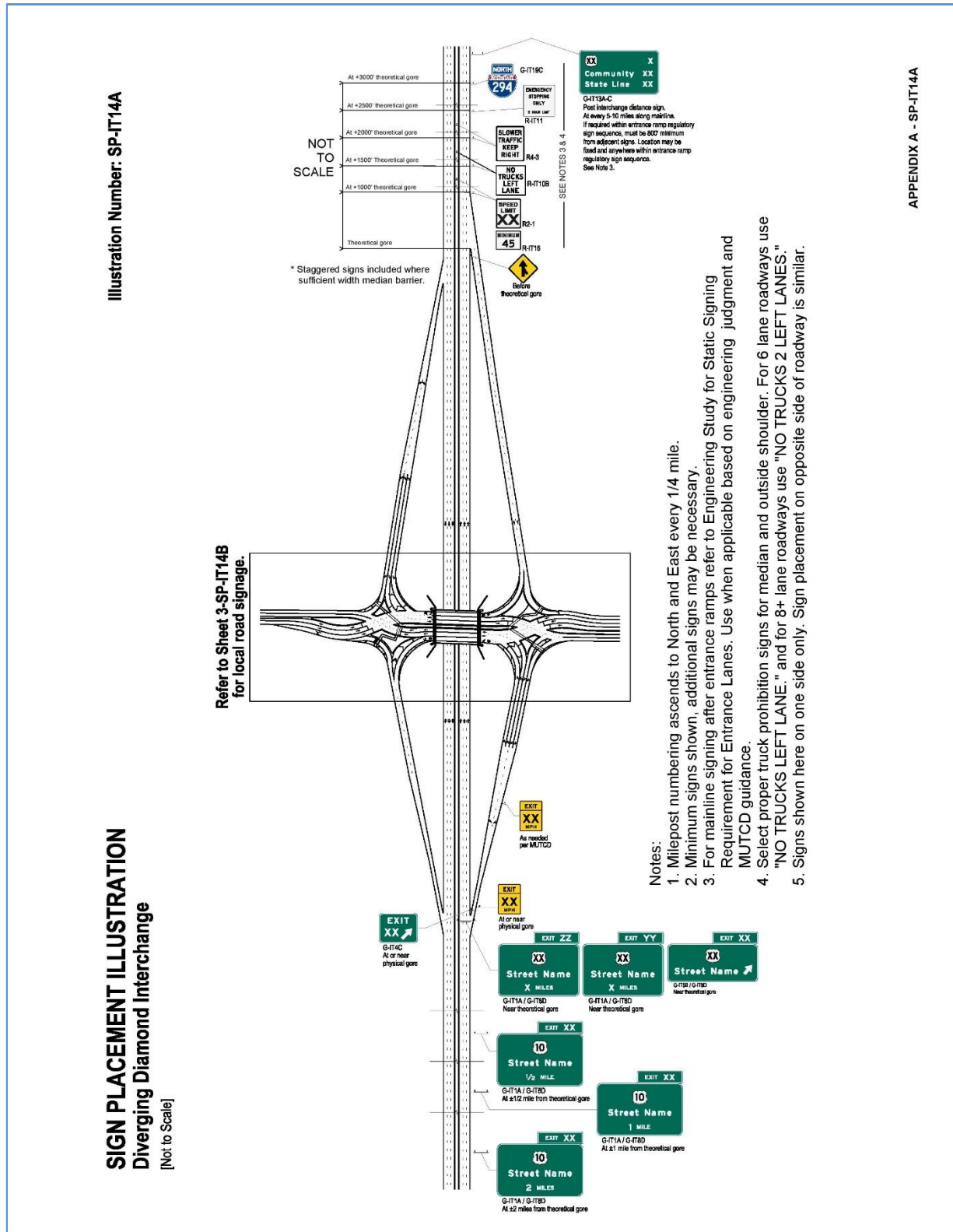
Crash Investigation Site (CIS) Toll Plaza

[Not to scale]

Illustration Number

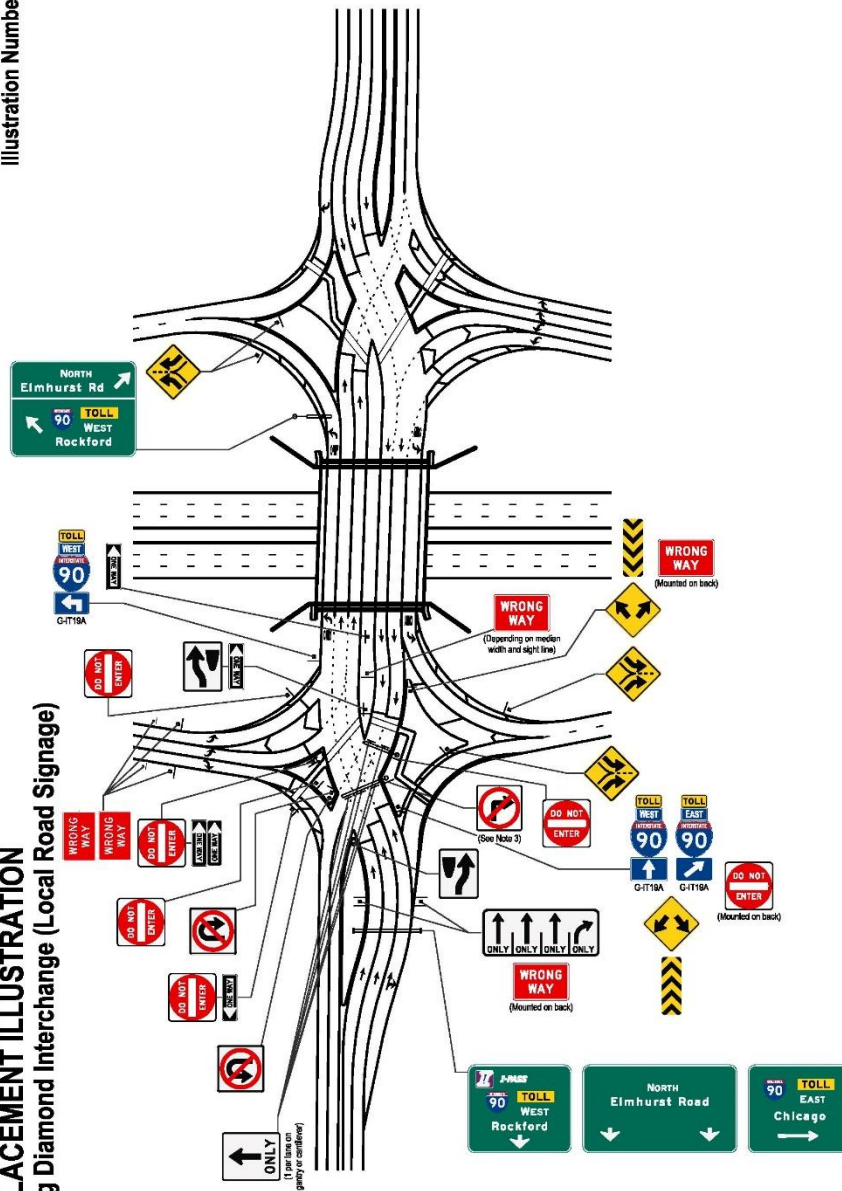
SP-IT9B





SIGN PLACEMENT ILLUSTRATION
Diverging Diamond Interchange (Local Road Signage)

Illustration Number: SP-IT14B



Notes:

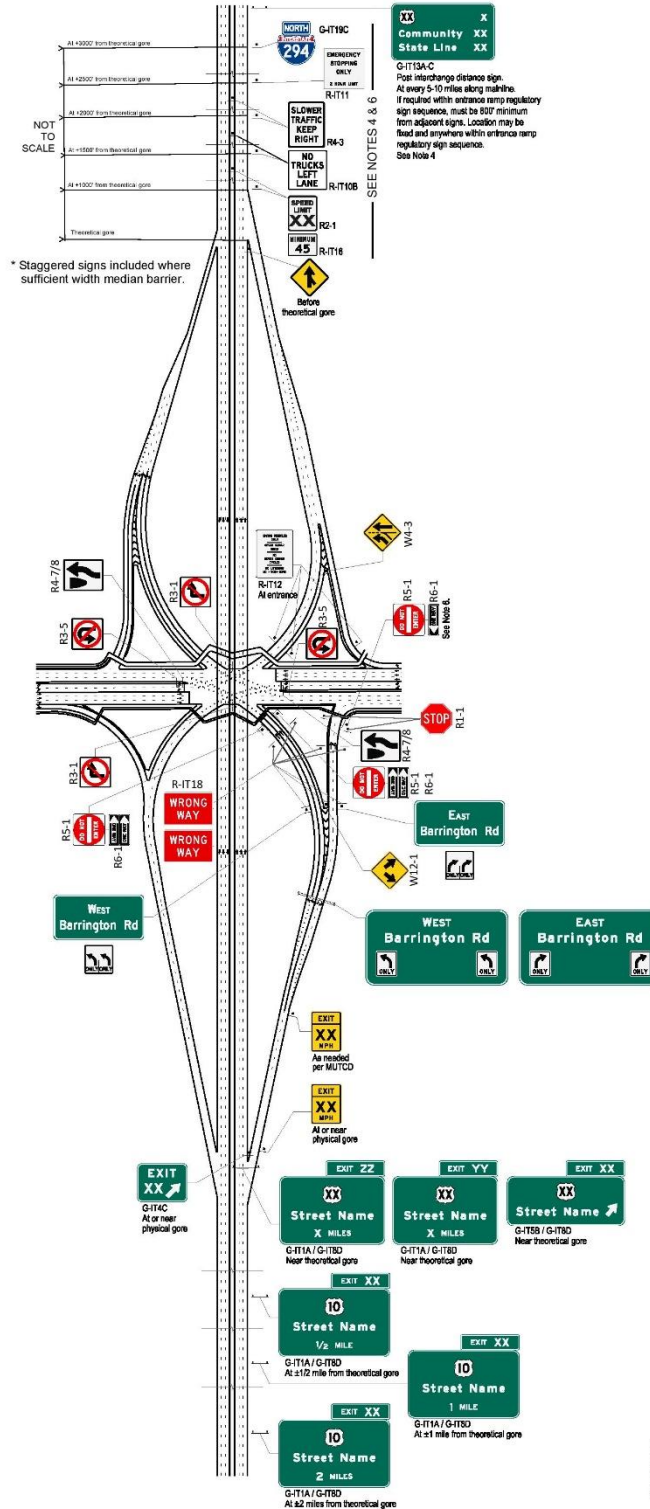
1. Signing shown focuses mainly on west leg and must be integrated with signalization.
2. Sign plan subject to site conditions, geometry and driver lines of sight.
3. Include if sufficient distance from eastbound island nose to avoid right turn confusion.
4. Signs shown here on one side only. Sign placement on opposite side of roadway is similar.

APPENDIX A - SP-IT14B

Illustration Number: SP-IT15

SIGN PLACEMENT ILLUSTRATION Single Point Urban Interchange

[Not to Scale]



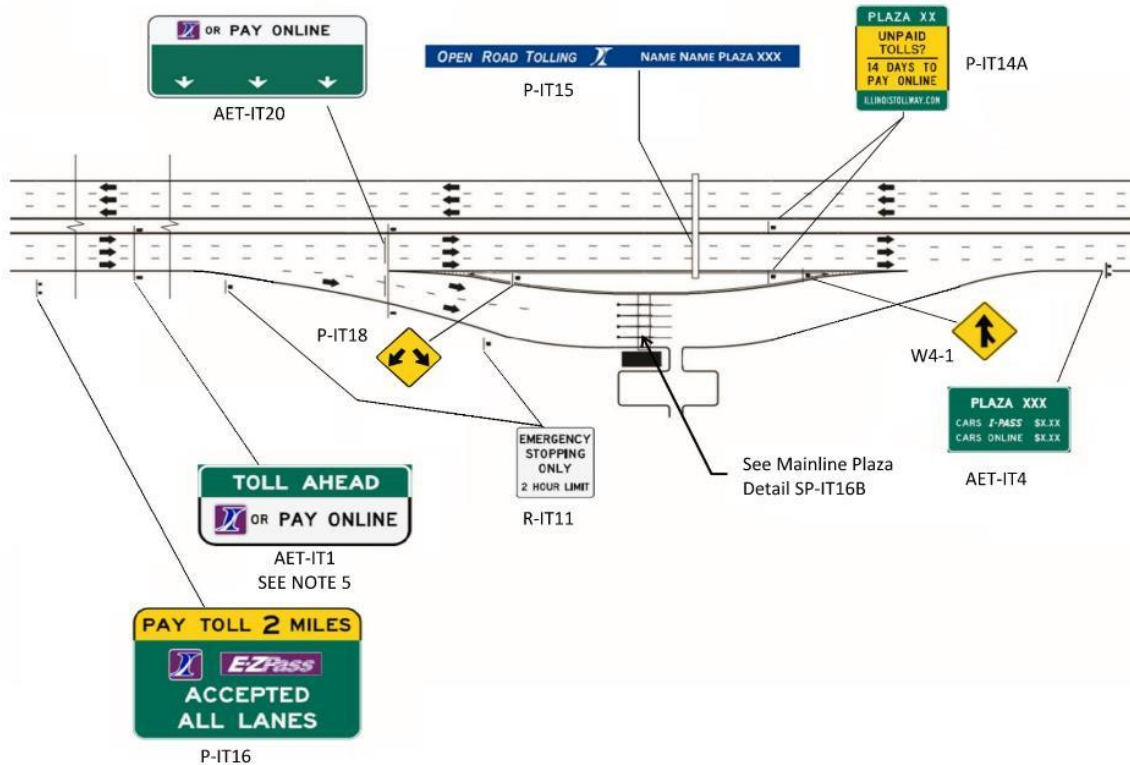
APPENDIX A - SP-IT15

SIGN PLACEMENT ILLUSTRATION**AET Converted - Mainline Plaza with No Exit**

[Not to scale]

Illustration Number

SP-IT16A

**NOTES:**

1. PAVEMENT MARKING TO CLOSE OFF PLAZA ENTRANCE TO BE APPROVED BY ENGINEER.
2. THE FIRST EMERGENCY STOPPING ONLY SIGN IS ONLY RECOMMENDED WHERE THERE ARE AUXILIARY LANES APPROACHING THE PLAZA THAT ARE STRIPED OFF.
3. CANOPY SIGNING SPECIFIC TO OPEN LANES AT PLAZA.
4. FOR MAINLINE PLAZA DETAILS, SEE ILLUSTRATION SP-IT16B.
5. DEPENDING ON SITE SPECIFIC CONDITIONS, THIS SIGN MAY NEED TO BE REPLACED WITH EITHER AET-IT22 OR AET-IT25.

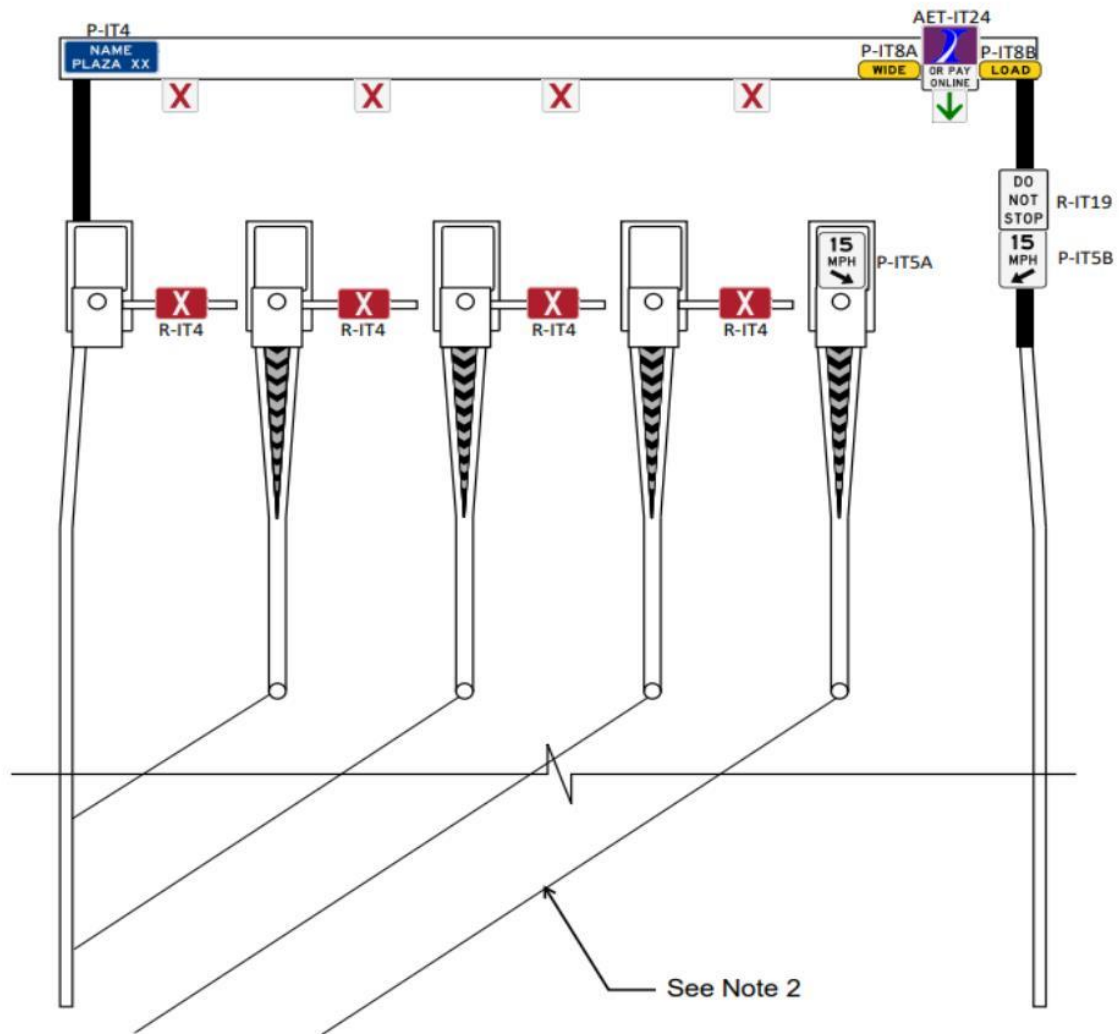
SIGN PLACEMENT ILLUSTRATION

Illustration Number

SP-IT16B

AET Converted - Mainline Plaza Detail

[Not to scale]

**NOTES:**

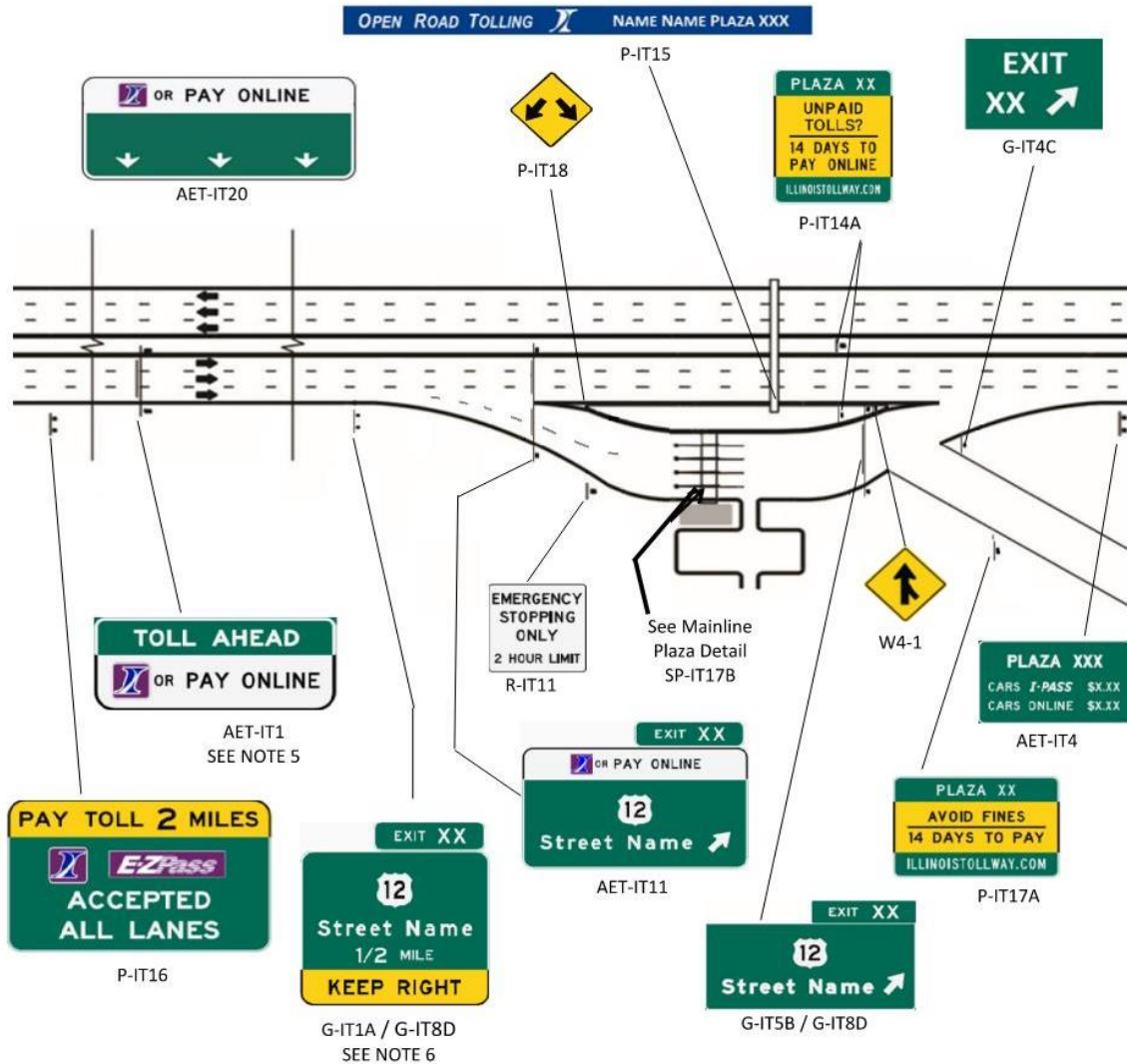
1. CANOPY SIGNING SPECIFIC TO OPEN LANES AT PLAZA. VERIFY SITE SPECIFIC CONDITIONS.
2. PAVEMENT MARKING TO CLOSE OFF PLAZA ENTRANCE TO BE APPROVED BY ENGINEER.

SIGN PLACEMENT ILLUSTRATION**AET Converted - Mainline Plaza with Exit**

[Not to scale]

Illustration Number

SP-IT17A

**NOTES:**

1. PAVEMENT MARKING TO CLOSE OFF PLAZA ENTRANCE TO BE APPROVED BY ENGINEER.
2. THE FIRST EMERGENCY STOPPING ONLY SIGN IS ONLY RECOMMENDED WHERE THERE ARE AUXILIARY LANES APPROACHING THE PLAZA THAT ARE STRIPED OFF.
3. CANOPY SIGNING SPECIFIC TO OPEN LANES AT PLAZA.
4. FOR MAINLINE PLAZA DETAILS, SEE ILLUSTRATION SP-IT17B.
5. DEPENDING ON SITE SPECIFIC CONDITIONS, THIS SIGN MAY NEED TO BE REPLACED WITH EITHER AET-IT22 OR AET-IT25.
6. SIGN G-IT1A MAY BE OVERHEAD MOUNTED IF WARRANTED BY SITE SPECIFIC CONDITIONS.

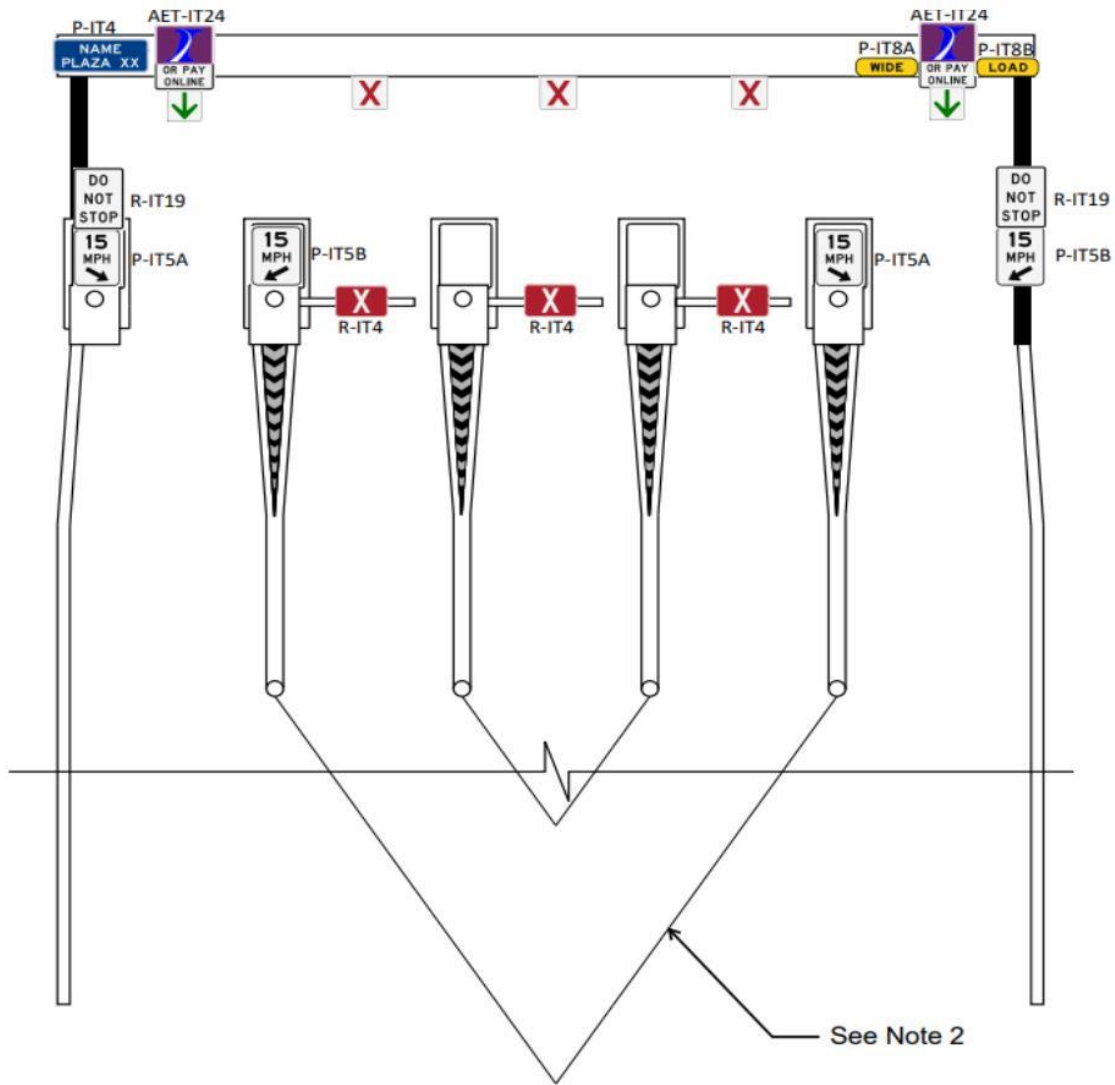
SIGN PLACEMENT ILLUSTRATION

Illustration Number

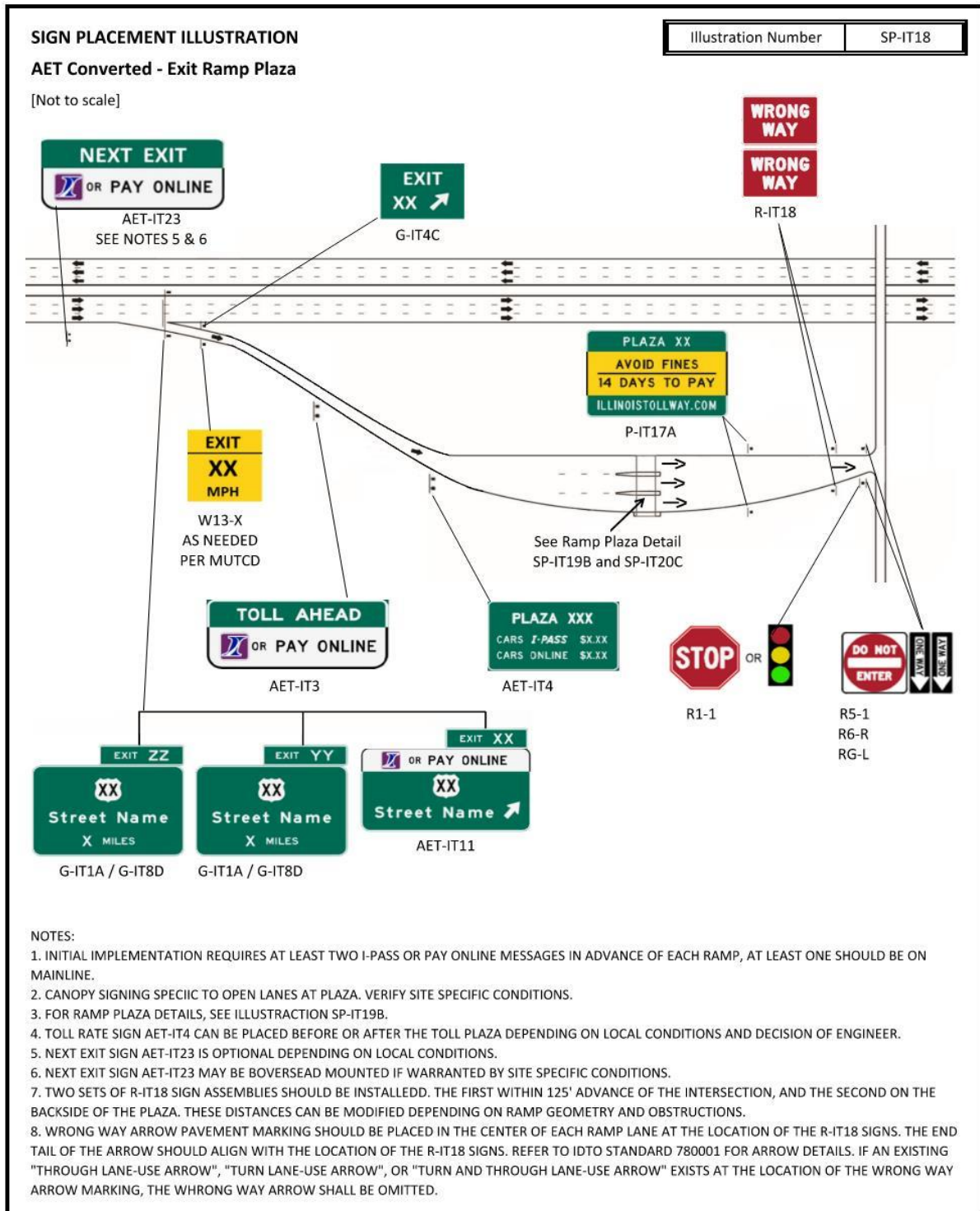
SP-IT17B

AET Converted - Mainline Plaza Detail with Exit

[Not to scale]

**NOTES:**

1. CANOPY SIGNING SPECIFIC TO OPEN LANES AT PLAZA. VERIFY SITE SPECIFIC CONDITIONS.
2. PAVEMENT MARKING TO CLOSE OFF PLAZA ENTRANCE TO BE APPROVED BY ENGINEER.



[Not to scale]

SP-IT19A

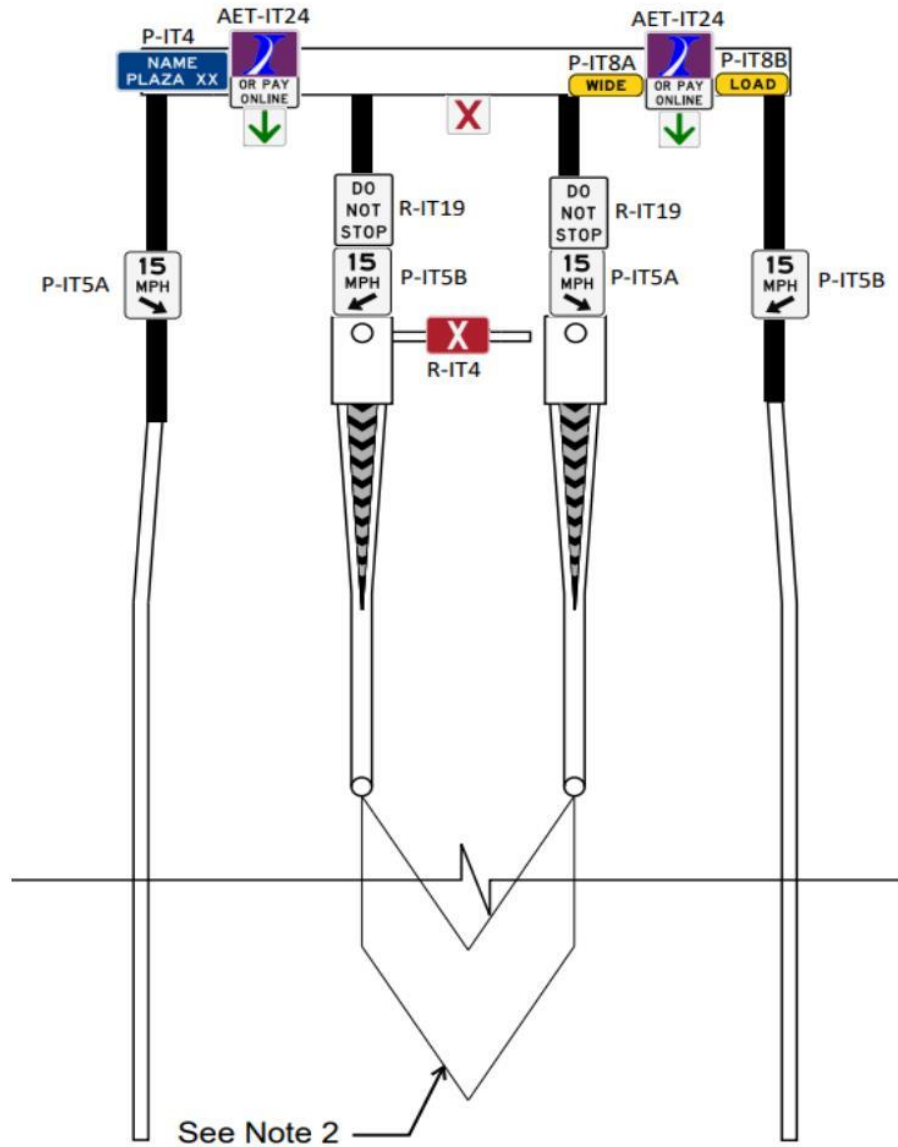


SIGN PLACEMENT ILLUSTRATION**AET Converted - Ramp Plaza Detail**

[Not to scale]

Illustration Number

SP-IT19B

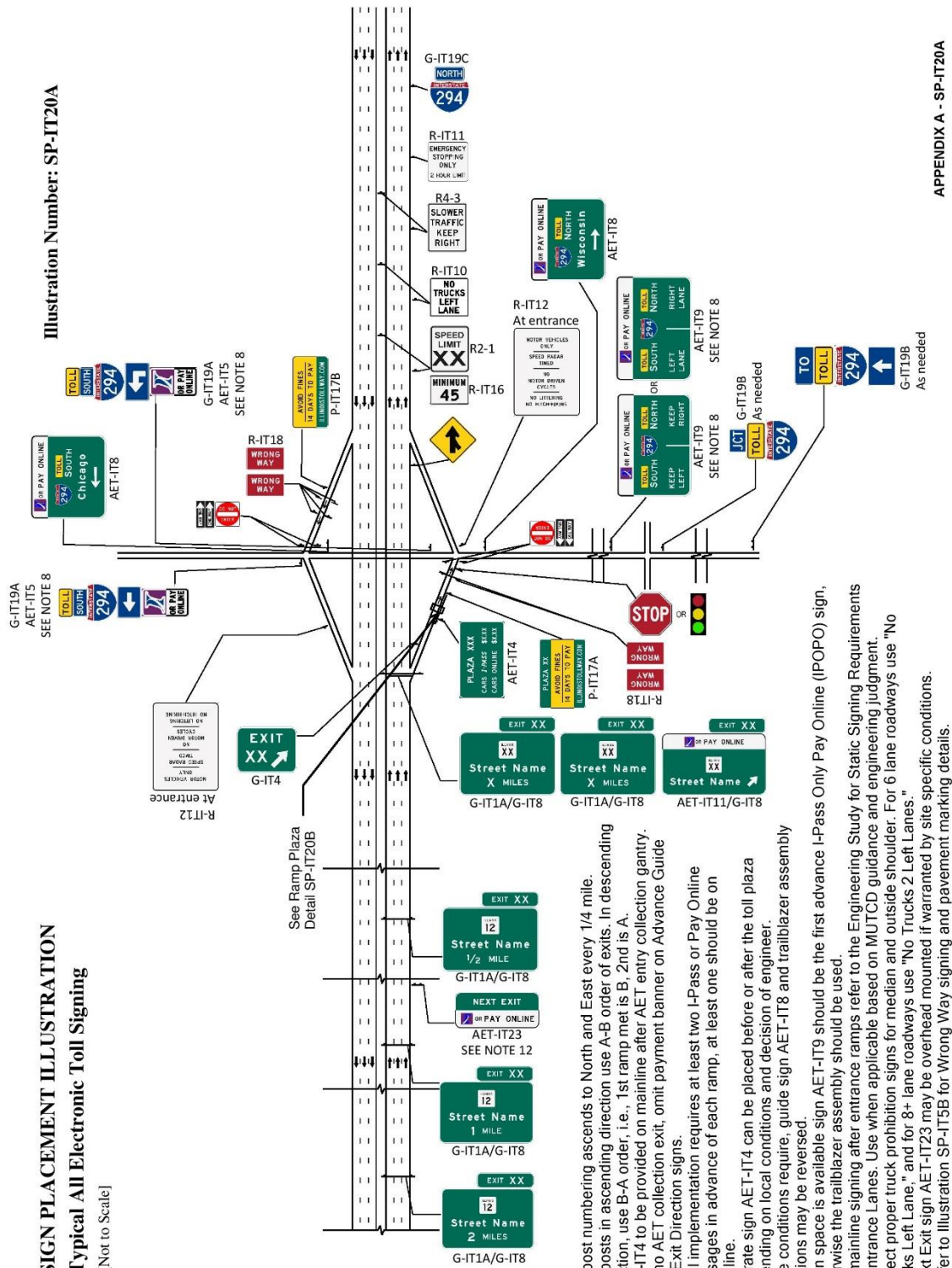
**NOTES:**

1. CANOPY SIGNING SPECIFIC TO OPEN LANES AT PLAZA. VERIFY SITE SPECIFIC CONDITIONS.
2. PAVEMENT MARKING TO CLOSE OFF PLAZA ENTRANCE TO BE APPROVED BY ENGINEER.

SIGN PLACEMENT ILLUSTRATION

[Not to Scale]

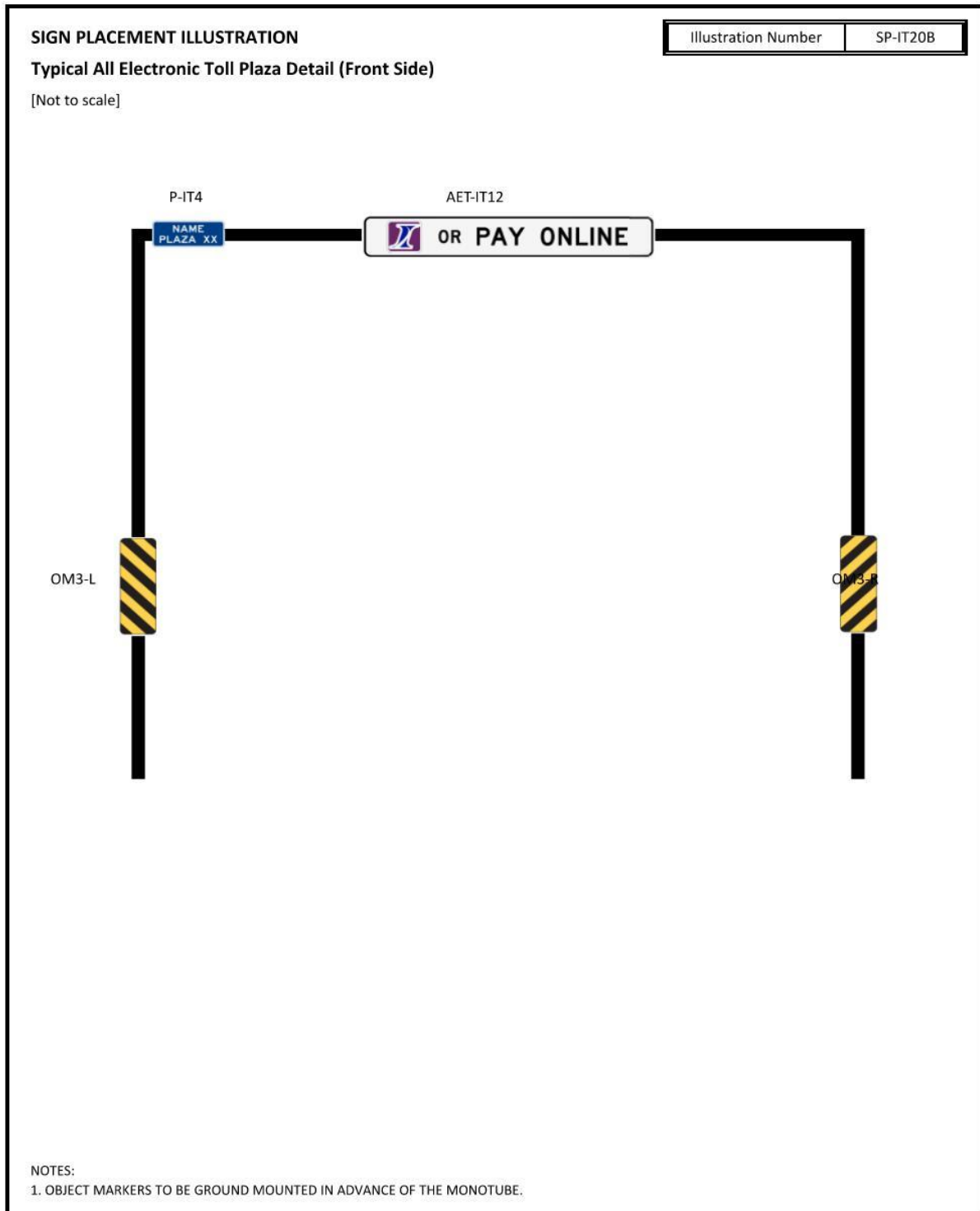
Illustration Number: SP-IT20A



APPENDIX A - SP-IT20A

Notes:

1. Milepost numbering ascends to North and East every 1/4 mile.
2. Mileposts in ascending direction use A-B order of exits. In descending direction, use B-A order, i.e., 1st ramp met is B, 2nd is A.
3. AET-IT4 to be provided on mainline after AET entry collection gantry.
4. For no AET collection exit, omit payment banner on Advance Guide and Exit Direction signs.
5. Initial implementation requires at least two I-Pass or Pay Online messages in advance of each ramp, at least one should be on mainline.
6. Toll rate sign AET-IT4 can be placed before or after the toll plaza depending on local conditions and decision of engineer.
7. If site conditions require, guide sign AET-IT8 and trailblazer assembly locations may be reversed.
8. When space is available sign AET-IT9 should be the first advance I-Pass sign, otherwise the trailblazer assembly should be used.
9. For mainline signing after entrance ramps refer to the Engineering Study for Entrance Lanes. Use when applicable based on MUTCD guidance
10. Select proper truck prohibition signs for median and outside shoulder "No Trucks Left Lane," and for 8+ lane roadways use "No Trucks 2 Left Lane
11. Next Exit sign AET-IT23 may be overhead mounted if warranted by site
12. Refer to Illustration SP-IT5B for Wrong Way signing and pavement markings

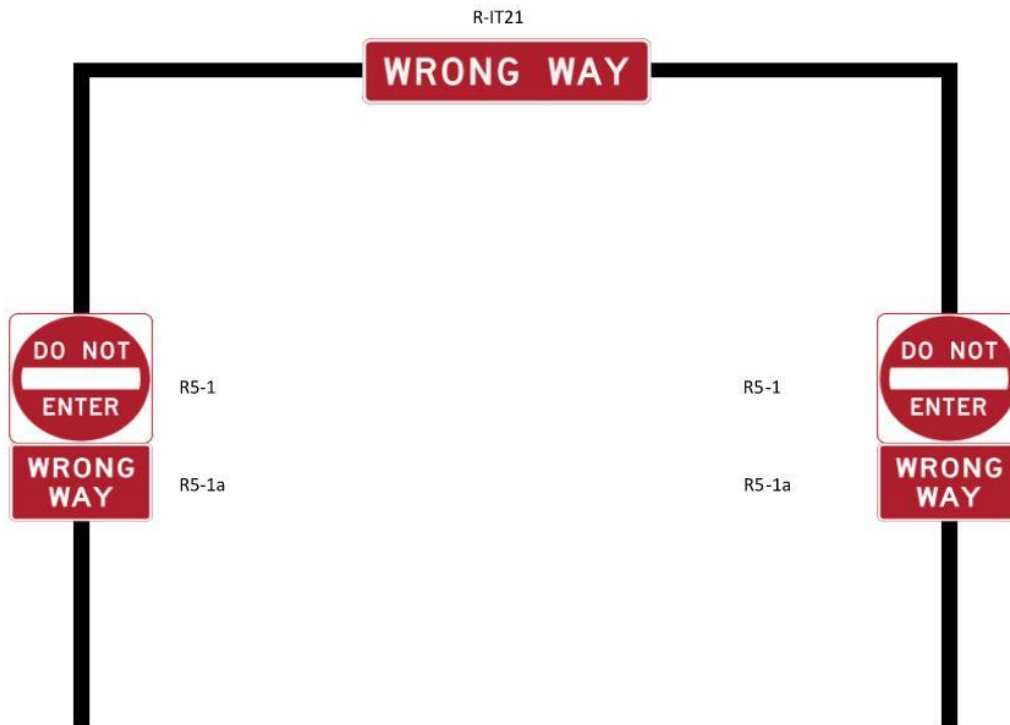


SIGN PLACEMENT ILLUSTRATION**Typical All Electronic Toll Plaza Detail (Back Side)**

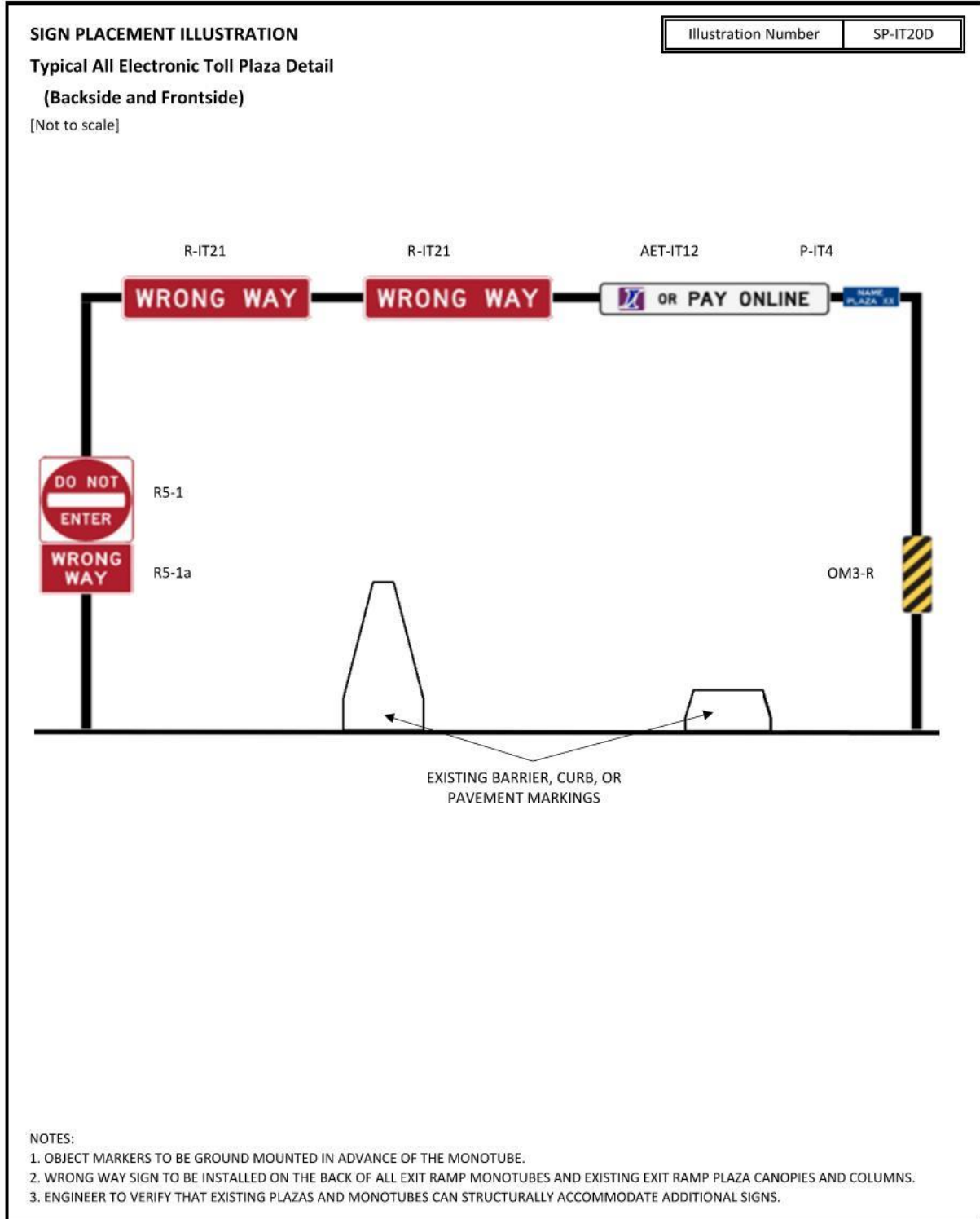
[Not to scale]

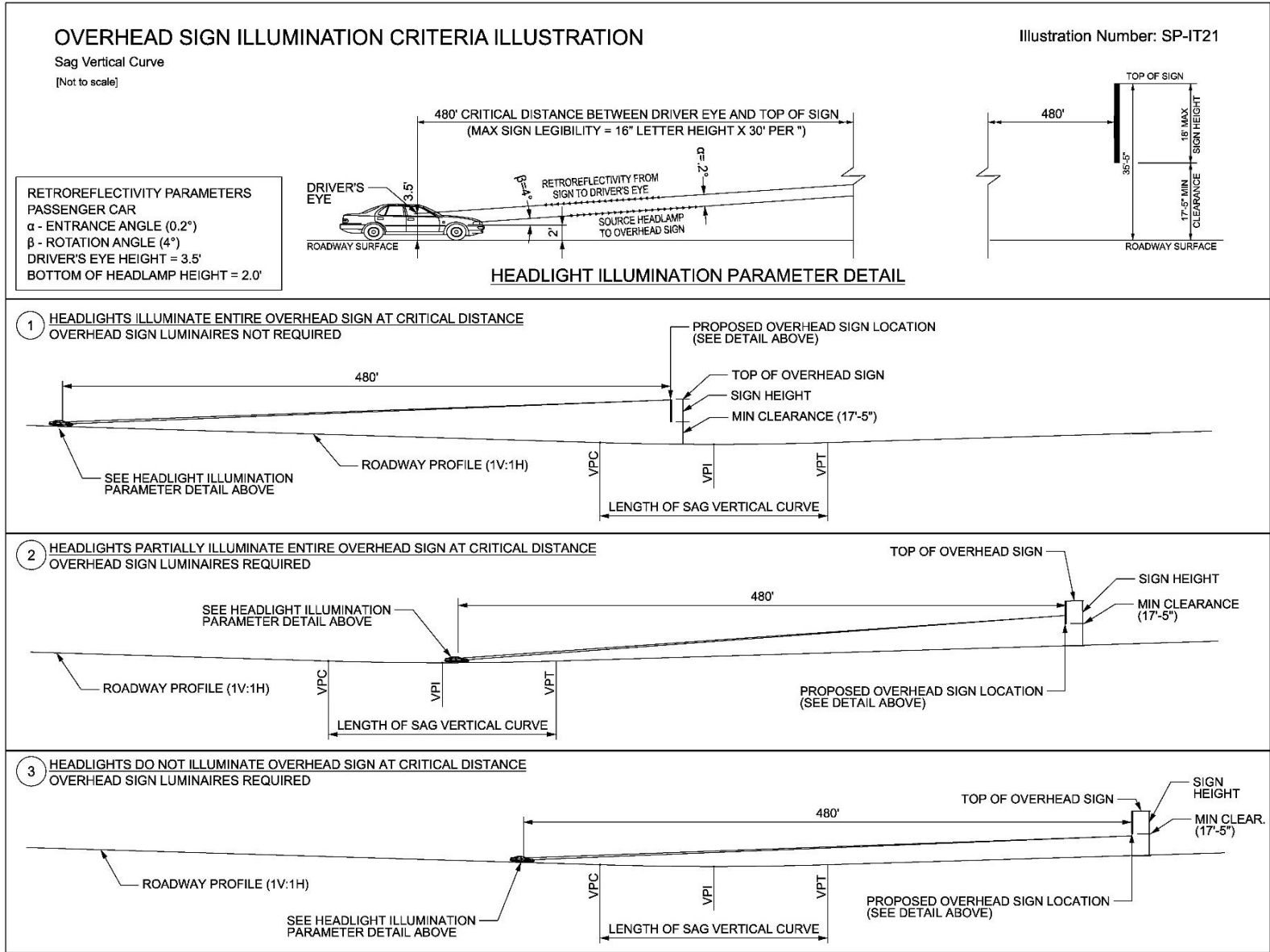
Illustration Number

SP-IT20C

**NOTES:**

1. WRONG WAY SIGNS TO BE INSTALLED ON THE BACK OF ALL EXIT RAMP MONOTUBES AND EXISTING EXIT RAMP PLAZA CANOPIES AND COLUMNS.
2. ENGINEER TO VERIFY THAT EXISTING PLAZAS AND MONOTUBES CAN STRUCTURALLY ACCOMMODATE ADDITIONAL SIGNS.





APPENDIX B Guide Sign Illustrations

Guide (G) Sign Illustration List

Number	Placement	Type	Legend
G-IT1A	Mainline	Advance Guide	Advance Exit: Shield, Street Name, X Mile
G-IT1B	Mainline	Advance Guide	Advance Exit: 2 Shields, Street Name, X Miles
G-IT1C	Mainline	Advance Guide	Advance Exit: Bipartite Shields, Toll, Cardinals, Control Destinations, XX Miles
G-IT1D	Mainline	Advance Guide	Advance Exit: Shield, 2 Street Names, X Miles
G-IT1E	Mainline	Advance Guide	Advance Exit: 2 Shields, 2 Street Names, XX Miles
G-IT1F	Mainline	Advance Guide	Advance Exit: Bipartite Shields, Cardinal, 2 Community Names, X Mile
G-IT1G	Mainline	Advance Guide	Advance Interchange and Exit: Shield, Control Destinations, X Miles
G-IT2A	Mainline	Advance Guide	Mainline Distance: Next Exit XX Miles (Type I)
G-IT2B	Mainline	Advance Guide	Mainline Distance: Next Exit XX Miles (Type II)
G-IT3A	Mainline	Entrance Direction	Crossroad: Shield, Toll, Cardinal, Control Destination, Cross Arrow (Type I)
G-IT3B	Mainline	Entrance Direction	Crossroad: Shield, Toll, Cardinal, Control Destination, Directional Arrow (Type II)
G-IT3C	Mainline	Advance Entrance Direction	Crossroad: Tolls, Cardinals, Shield, Action Messages (Type I)
G-IT3D	Mainline	Advance Entrance Direction	Crossroad: Bipartite Shields, Tolls, Cardinals, Control Destinations, Action Messages (Type II)
G-IT3E	Mainline	Advance Entrance Direction	Crossroad: Shield, Toll, Cardinal, Control Destination, Action Message (Type III)
G-IT3F	Mainline	Advance Entrance Direction	Crossroad: Shield, Toll, Cardinal, Control Destination, Cross Arrow
G-IT4A	Mainline	Exit Direction	Exit Gore: Exit, Single Digit Exit Number, Directional Arrow
G-IT4B	Mainline	Exit Direction	Exit Gore: Exit, Single Digit Exit Number and Letter, Directional Arrow
G-IT4C	Mainline	Exit Direction	Exit Gore: Exit, Double Digit Exit Number, Directional Arrow
G-IT4D	Mainline	Exit Direction	Exit Gore: Exit, Double Digit Exit Number and Letter, Directional Arrow
G-IT4E	Mainline	Exit Direction	Exit Gore: Exits, Double Digit Exit Number and Multi-Exit Interchange, Directional Arrow
G-IT4F	Mainline	Exit Direction	Exit Gore: Exit, Triple Digit Exit Number, Directional Arrow
G-IT4G	Mainline	Exit Direction	Exit Gore: Exit, Triple Digit Exit Number and Letter, Directional Arrow
G-IT5A	Mainline	Exit Direction	Exit Direction: Shield, Toll, Cardinal, Control Destination, Directional Arrow
G-IT5B	Mainline	Exit Direction	Exit Direction: Shield, Cardinal, Street Name, Directional Arrow
G-IT5C	Mainline	Exit Direction	Exit Direction: To, Shield, Cardinal, 2 Street Names, Directional Arrow
G-IT5D	Mainline	Exit Direction	Exit Direction: 2 Shields, Cardinal, Street Name, Directional Arrow
G-IT5E	Mainline	Exit Direction	Exit Direction: 2 Shields, Street Name, Directional Arrow
G-IT5F	Mainline	Exit Direction	Exit Direction: Shield, Cardinal, Street Name, Directional Arrow, Ramp Advisory Speed
G-IT6A	Mainline	Advance Guide	Keep Left/Keep Right Exit: Bipartite Shields, Tolls, Cardinals, Control Destinations, Keep Left, Keep Right

Number	Placement	Type	Legend
G-IT6B	Mainline	Advance Guide	Keep Right Exit: Shield, Toll, Cardinal, Control Destination, Keep Right
G-IT7A	Mainline	Exit Direction	Exit Only Panel: Left Exit Number Plaque, Shield, Toll, Cardinal, Control Destination, Exit Only Panel with Diagonal Arrow
G-IT7B	Mainline	Exit Direction	Exit Only Panel: 2 Shields, Cardinal, 2 Street Names, Exit Only Panel with Diagonal Arrow – 1 Lane
G-IT7C	Mainline	Exit Direction	Exit Only Panel: 2 Shields, Cardinal, 2 Street Names, Exit Only Panel with 2 Diagonal Arrows
G-IT8A	Mainline	Advance Guide & Exit Direction	Exit Number Plaque: Top Right, Exit, Single Number
G-IT8B	Mainline	Advance Guide & Exit Direction	Exit Number Plaque: Top Right, Exit, Single Number, Multi-Exit Interchange
G-IT8C	Mainline	Advance Guide & Exit Direction	Exit Number Plaque: Top Right, Exits, Single Number, Multi-Exit Interchange
G-IT8D	Mainline	Advance Guide & Exit Direction	Exit Number Plaque: Top Right, Exit, Double Number
G-IT8E	Mainline	Advance Guide & Exit Direction	Exit Number Plaque: Top Right, Exit, Double Number, Multi-Exit Interchange
G-IT8F	Mainline	Advance Guide & Exit Direction	Exit Number Plaque: Top Right, Exits, Double Number, Multi-Exit Interchange
G-IT8G	Mainline	Advance Guide & Exit Direction	Exit Number Plaque: Top Right, Exit, Triple Number
G-IT8H	Mainline	Advance Guide & Exit Direction	Exit Number Plaque: Top Right, Exit, Triple Number, Multi-Exit Interchange
G-IT8I	Mainline	Advance Guide & Exit Direction	Exit Number Plaque: Top Right, Exits, Triple Number, Multi-Exit Interchange
G-IT8J	Mainline	Advance Guide & Exit Direction	Exit Number Plaque: Top Right, Exits, Triple Number, Multi-Exit Interchange
G-IT8K	Mainline	Advance Guide & Exit Direction	Exit Number Plaque: Top Left, LEFT, Exit, Double Number
G-IT9A	Mainline	Exit Direction	Exit Only Panel with Down Arrow: Shield, Toll, Cardinal, Control Destination, Exit Only Panel for Dropped Lane and Auxiliary Exit Only Lane
G-IT9B	Mainline	Exit Direction	Exit Only Panel with Down Arrow: Shield, Street Name, Exit Only Panel for Dropped Lanes and Auxiliary Exit Only Lane
G-IT9C	Mainline	Exit Direction	Exit Only Panel with Down Arrow: 2 Shields, 2 Street Names, X Mile, Exit Only Panel for Dropped Lane and Auxiliary Exit Only Lane
G-IT12A	Mainline	Advance Guide	Mainline Plaza Lane: I-Pass Pictograph, E-ZPass Pictograph, Or Pay Online, Left Lane
G-IT12B	Mainline	Advance Guide	Mainline Plaza Lane: I-Pass Pictograph, E-ZPass Pictograph, Or Pay Online, Left Lanes
G-IT13A	Mainline	Advance Guide	Post-Interchange Distance: Shields, XX Miles
G-IT13B	Mainline	Advance Guide	Post-Interchange Distance: Shields and/or Control Destination, XX Miles

Number	Placement	Type	Legend
G-IT13C	Mainline	Advance Guide	Post-Interchange Distance: Shields and/or Road Name, XX Miles
G-IT14A	Mainline	Advance Guide	Major Interchange Option Lane Exit: Bipartite Shields, Toll, Cardinals, Control Destinations, X Mile, Overhead Arrows-per-Lane, Exit, Only
G-IT14B	Mainline	Advance Guide	Mainline Split with Option Lane: Bipartite Shields, Toll, Cardinals, Control Destinations, X Mile, Overhead Arrows-per-Lane, Exit, Only
G-IT15A	Mainline	Advance Guide	Mainline Pull-Through Lane: Shield, Cardinal, Control Destination, 2 Pull-Through Arrows
G-IT15B	Mainline	Advance Guide	Mainline Pull-Through Lane: Shield, Toll, Cardinal, Control Destination, 4 Pull-Through Arrows
G-IT16A	Oasis	Supplemental	Oasis Supplemental: Cars, Pickups, Trucks, Buses, Dual Upward Directional Arrows
G-IT16B	Oasis	Supplemental	Oasis Supplemental: Phones, Food, Fuel, Food, Dual Upward Directional Arrows
G-IT16C	Oasis	Supplemental	Oasis Supplemental: Truck Fuel, Left Lane, Truck Parking, Right Lane
G-IT16D	Oasis	Supplemental	Oasis Supplemental: Trucks, Buses, Keep Right
G-IT17	Oasis	Supplemental	To Tollway: To, Tollway, Directional Arrow
G-IT18A	Mainline	Supplemental	Supplemental Mainline: 2 Community Names, Next Right, Community Name, Second Right
G-IT18B	Mainline	Supplemental	Supplemental Mainline: Community Name, Exit XX A, Community Name, Exit XX B
G-IT18C	Mainline	Supplemental	Supplemental Mainline: Community Name, Exit XX
G-IT18D	Mainline	Supplemental	Supplemental Mainline: 2 Community Names, Exit XX
G-IT18E	Mainline	Supplemental	Supplemental Guide: Shield, X Miles
G-IT18F	Mainline	Supplemental	Supplemental Guide: To, Street Name, Right X Mile
G-IT19A	Crossroads	Advance Guide	Trailblazer Assembly: Toll, Cardinal, Shield, Directional Arrow (Type I)
G-IT19B	Crossroads	Advance Guide	Trailblazer Assembly: To or JCT Toll, Cardinal, Shield, Directional Arrow (Type II)
G-IT19C	Crossroads	Advance Guide	Trailblazer Assembly: Cardinal, Shield (Type III)

Appendix B – G-IT1A

GUIDE SIGN ILLUSTRATION

Advance Guide: Shield, Street Name, X Mile

[Not to scale]



SIGN NUMBER	G-IT1A
MUTCD CITATION	2E.33
WIDTH x HEIGHT	VARIES x 10'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT
M1_4	0	93	69.5	36	36

NOTES:

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

1. SIGN WIDTH WILL VARY BASED ON SIZE OF STREET NAME.
2. SEE G-IT8 FOR INFORMATION ON EXIT NUMBER PLAGUE.

LETTER POSITIONS (X)																	LEN.	SERIES/ SIZE
O	g	d	e	n		A	v	e	n	u	e							EM 2000
19.9	36.7	52.2	67.7	83.2	93.8	109.8	128.0	143.6	159.1	176.0	191.6						182.2	16/12
2	M	I	L	E	S													E 2000
78.8	100.9	112.9	117.3	126.5	135.4												64.8	15, 10

[Not to scale]



SIGN NUMBER	G-IT1B
MUTCD CITATION	2E.33
WIDTH x HEIGHT	VARIES x 10'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT
M1_4	0	54.2	69.5	36	36
M1_4	0	106.2	69.5	36	36

NOTES:

1. SIGN WIDTH WILL VARY BASED ON SIZE OF STREET NAME.
2. SEE G-IT8 FOR INFORMATION ON EXIT NUMBER PLAGUE.

[illegible]

Appendix B – G-IT1C

GUIDE SIGN ILLUSTRATION

Advance Guide: Bipartite Shields, Toll, Cardinals,
Control Destinations, XX Miles

[Not to scale]

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	23.2	88.0	48	48
M1_1	0	91.2	88.0	60	48
M1_1	0	246.6	88.0	48	48

SIGN NUMBER	G-IT1C
MUTCD CITATION	2E.33 & 2F.13
WIDTH x HEIGHT	VARIES x 13'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green, Yellow
LEGEND/BORDER	TYPE: Reflective
	COLOR: White, Black/White



Dimensions are inches, tenths.

Letter locations are panel edge to lower left corner.

NOTES:

1. SIGN WIDTH WILL VARY BASED ON SIZE OF STREET NAME.
2. SEE G-IT8 FOR INFORMATION ON EXIT NUMBER PLAQUE.

LETTER POSITIONS (X)																LEN.	SERIES/ SIZE
T	O	L	L														E 2000
178.2	186.8	199.7	210.7													43.6	12
T	O	L	L														E 2000
320.9	331.6	344.4	355.5													43.6	12
E	A	S	T														E 2000
196.2	334.4	347.7	361.5													57.4	18, 15
W	E	S	T														E 2000
312.6	334.4															60.2	18, 15
I	n	d	i	a	n	a											EM 2000
35.8	48.8	88.0	87.2	97.4	118.6	138.0										115.4	20/15
I	o	w	a														EM 2000
278.5	287.5	305.1	329.5													64.2	20/15
1	1/2	M	I	L	E	S											E 2000
146.3	160.7	199.1	213.5	218.8	229.8	240.5										103.9	18, 12

[Not to scale]



SIGN NUMBER	G-IT1D
MUTCD CITATION	2E.33
WIDTH x HEIGHT	VARIES x 12'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT
M1-I100A	0	67.4	95.5	36	36

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

1. SIGN WIDTH WILL VARY BASED ON SIZE OF STREET NAMES.
2. SEE G-IT8 FOR INFORMATION ON EXIT NUMBER PLAGUE.

[illegible]

Appendix B – G-IT1E

GUIDE SIGN ILLUSTRATION

Advance Guide: 2 Shields, 2 Street Names, X Miles

[Not to scale]



SIGN NUMBER	G-IT1E
MUTCD CITATION	2E.33
WIDTH x HEIGHT	VARIES x 12'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT
M1-I100A	0	40.5	95.5	36	36
M1-I100A	0	91.7	95.5	36	36

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

- NOTES:
1. SIGN WIDTH WILL VARY BASED ON SIZE OF STREET NAMES.
 2. SEE G-IT8 FOR INFORMATION ON EXIT NUMBER PLAGUE.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
C	i	c	e	r	o		A	v	e										EM 2000
18.6	36.0	44.2	58.3	73.8	84.2	95.1	111.1	129.3	144.8									136.8	16/12
1	2	7	t	h		S	t												EM 2000
34.4	43.2	58.8	75.0	88.4	99.0	115.0	131.3											105.3	16/12
2	M	I	L	E	S														E 2000
54.6	76.8	88.8	93.2	102.4	111.3													64.8	15, 10

Appendix B – G-IT1F

GUIDE SIGN ILLUSTRATION

Advance Guide: Bipartite Shields, Toll, Cardinals,
Control Destinations, XX Miles

[Not to scale]

SYMBOL	ROT	X	Y	WID	HT
M1_I100A	0	19.6	95.5	36	36
M1_I100A	0	227.9	95.5	36	36

SIGN NUMBER	G-IT1F
MUTCD CITATION	2E.33 & 2F.13
WIDTH x HEIGHT	VARIES x 103'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green, Yellow
LEGEND/BORDER	TYPE: Reflective
	COLOR: White, Black/White



Dimensions are inches, tenths.
Letter locations are panel edge to lower left corner.

NOTES:

- SIGN WIDTH WILL VARY BASED ON SIZE OF DESTINATION NAME.
- SEE G-IT8 FOR INFORMATION ON EXIT NUMBER PLAQUE.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
S	O	U	T	H														E 2000	
75.1	89.5	102.3	114.1	125.1														59.8 15, 12	
R	o	b	b	i	n	s												EM 2000	
33.7	49.5	65.3	80.9	96.4	106.0	121.2												98.1 16/12	
A	l	s	i	p														EM 2000	
217.1	237.1	245.0	260.5	270.1														63.5 16/12	
C	r	e	s	t	w	o	o	d										EM 2000	
19.6	37.0	47.4	61.2	75.1	86.8	106.3	120.7	135.1										126.1 16/12	
B	l	u	e		l	s	l	a	n	d								EM 2000	
179.7	197.1	206.7	222.2	232.8	248.8	255.7	271.2	279.4	296.3	311.8								142.7 16/12	
2	M	I	L	E	S													E 2000	
130.3	152.5	164.5	168.9	178.1	187.0													64.8 15, 10	

[Not to scale]



SIGN NUMBER	G-IT1G
MUTCD CITATION	2E.30 & 2E.33
WIDTH x HEIGHT	VARIES x 10'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	81	69.5	36	36

NOTES:

1. SIGN WIDTH WILL VARY BASED ON SIZE OF DESTINATION NAMES.
2. SEE G-IT8 FOR INFORMATION ON EXIT NUMBER PLaque.

[illegible]

Appendix B – G-IT3A

GUIDE SIGN ILLUSTRATION

**Crossroad: Shield, Toll, Cardinal, Control Destination,
Cross Arrow (Type I)**

[Not to scale]



SIGN NUMBER	G-IT3A
MUTCD CITATION	N/A
WIDTH x HEIGHT	VARIES x 8'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead or Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	17.1	61.8	30	24
A_Type A	90	41.7	10.2	18.3	28.7

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

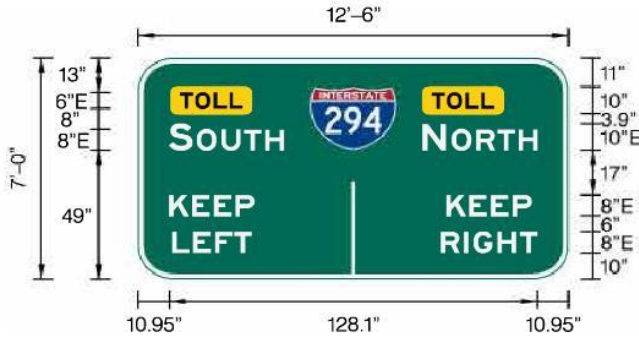
NOTE:
SIGN WIDTH WILL VARY BASED ON SIZE OF THE DESTINATION NAME.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
T	O	L	L															21.8	E 2000
59.1	64.4	70.9	76.4																6
S	O	U	T	H														39.8	E 2000
57.1	66.7	75.2	83.1	90.4															10, 8
I	n	d	i	a	n	a												76.9	EM 2000
17.1	24.3	37.2	51.3	58.1	72.3	85.2													13.3/10

Appendix B – G-IT3C

GUIDE SIGN ILLUSTRATION**Crossroad: Tolls, Cardinals, Shield,****Action Messages (Type I)**

[Not to scale]



SIGN NUMBER	G-IT3C
MUTCD CITATION	2D.45 & 2F.13
WIDTH x HEIGHT	12'-6" x 7'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead or Ground
BACKGROUND	TYPE: Reflective COLOR: Green, Yellow
LEGEND/BORDER	TYPE: Reflective COLOR: Black, White/White

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	60	44.0	30	24

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

NOTE:
"KEEP LEFT/KEEP RIGHT" MESSAGE CAN BE REPLACED BY "LEFT LANE/RIGHT LANE" DEPENDING ON SITE GEOMETRY.

LETTER POSITIONS (X)																LEN.	SERIES/ SIZE
T	O	L	L		T	O	L	L									E 2000
14.7	20.0	26.4	32.0		102.4	107.7	114.1	119.7								43.6	6
S	O	U	T	H													E 2000
10.9	20.5	29.1	36.9	44.3												39.8	10, 8
N	O	R	T	H													E 2000
99.1	109.3	117.9	125.2	132.6												40.0	10, 8
K	E	E	P														E 2000
10.9	18.9	26.5	34.1													29.6	8
K	E	E	P														E 2000
107.5	115.4	123.0	130.6													29.6	8
L	E	F	T														E 2000
11.9	19.3	26.9	33.5													27.6	8
R	I	G	H	T													E 2000
105.5	113.6	116.9	125.2	133.1												33.5	8

Appendix B – G-IT3D

GUIDE SIGN ILLUSTRATION**Crossroad: Bipartite Shields, Tolls Cardinals,
Control Destinations, Action Messages (Type II)**

[Not to scale]

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	17.4	50.6	30	24
M1_1	0	126.3	50.6	30	24

SIGN NUMBER	G-IT3D
MUTCD CITATION	2D.45
WIDTH x HEIGHT	VARIES x 7'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead or Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green, Yellow
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White/White



Dimensions are inches, tenths.
Letter locations are panel edge to lower left corner.

NOTES:
SIGN WIDTH WILL VARY BASED ON SIZE OF DESTINATION NAME.

LETTER POSITIONS (X)																LENGTH	SERIES/ SIZE
T	O	L	L														E 2000
60.6	65.9	72.3	77.8													21.8/21.8	6
S	O	U	T	H													E 2000
57.4	67.0	75.6	83.4	90.8												39.8/40	10, 8
I	n	d	i	a	n	a											EM 2000
18.0	25.2	38.1	52.3	59.1	73.2	86.1										76.9	13.3/10
W	i	s	c	o	n	s	i	n									EM 2000
119.1	136.4	143.0	154.7	166.4	179.6	192.3	205.2	213.2								102.9	13.3/10
K	E	E	P		L	E	F	T									E 2000
23.9	31.8	39.4	47.0	53.5	61.5	68.8	76.4	83.1								65.2	8
K	E	E	P		R	I	G	H	T								E 2000
135.0	142.9	150.5	158.1	164.6	172.6	180.7	184.4	192.3	200.1							71.1	8

Appendix B – G-IT3E

GUIDE SIGN ILLUSTRATION

**Crossroad: Shield, Tolls, Cardinal, Control Destination,
Action Message (Type III)**

[Not to scale]



SIGN NUMBER	G-IT3E
MUTCD CITATION	2D.45 & 2F.13
WIDTH x HEIGHT	VARIES x 7'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective COLOR: Green, Yellow
LEGEND/BORDER	TYPE: Reflective COLOR: Black, White/White

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	29	50.6	30	24

Dimensions are inches, tenths.
Letter locations are panel edge to lower left corner.

NOTE:
SIGN WIDTH WILL VARY BASED ON SIZE OF DESTINATION NAME.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
T	O	L	L																E 2000
71.1	76.5	82.9	88.4															21.8	6
N	O	R	T	H															E 2000
69.0	79.2	87.8	95.1	102.5														40.0	10, 8
W	i	s	c	o	n	s	i	n											EM 2000
15.4	32.7	39.3	51.0	62.7	75.9	88.6	101.5	109.5										102.9	13.3/10
N	E	X	T		R	I	G	H	T										E 2000
31.3	39.9	47	54.9	60.9	68.9	76.9	80.2	88.5	96.4									71.0	8

Appendix B – G-IT3F

GUIDE SIGN ILLUSTRATION**Crossroad: Shield, Tolls Cardinal, Control Destination,****Cross Arrow**

[Not to scale]

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	18.7	64.3	24	24
M1_1	0	67.5	64.3	24	24
M1_4	0	117.4	64.3	24	24
A_Extended	90	65.1	12.7	18.3	29.3

SIGN NUMBER	G-IT3F
MUTCD CITATION	2D.45, 2E.45 & 2F.13
WIDTH x HEIGHT	VARIES x 11'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead or Ground
BACKGROUND	TYPE: Reflective COLOR: Green, Yellow
LEGEND/BORDER	TYPE: Reflective COLOR: Black, White/White



Dimensions are inches, tenths.
Letter locations are panel edge to lower left corner.

NOTES:
SIGN WIDTH WILL VARY BASED ON SIZE OF DESTINATION NAME.

LETTER POSITIONS (X)															LEN.	SERIES/ SIZE
T	O	L	L													E 2000
73.7	79.0	85.5	91.0												21.8	6
E	A	S	T													E 2000
18.7	27.2	36.3	43.6												30.9	10, 8
S	O	U	T	H												EM 2000
59.6	69.2	77.8	85.6	93.0											39.8	10, 8
S	O	U	T	H												E 2000
109.5	119.1	127.6	135.5	142.8											39.8	10, 8
C	h	i	c	a	g	o										EM 2000
38.5	53.0	67.1	73.9	85.7	98.6	111.5									82.1	13.3/10

Appendix B – G-IT5B

GUIDE SIGN ILLUSTRATION

Exit Direction: Shield, Cardinal, Street Name,
Directional Arrow

[Not to scale]

SYMBOL	ROT	X	Y	WID	HT
M1_4	0	46.6	47.5	36	36
AR_Type A	315	192	12.5	18.3	29.3

SIGN NUMBER	G-IT5B
MUTCD CITATION	2E.36
WIDTH x HEIGHT	VARIES x 8'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White



Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

- NOTES:
1. SIGN WIDTH WILL VARY BASED ON SIZE OF DESTINATION NAME.
 2. SEE G-IT8 SERIES FOR INFORMATION ON EXIT NUMBER PLAQUE.

LETTER POSITIONS (X)																	LEN.	SERIES/ SIZE
E	A	S	T															E 2000
97.7	110.4	124.0	135.0														46.4	15,12
1	5	9	t	h		S	t	r	e	e	t							EM 2000
18.8	27.6	43.9	60.1	73.5	84.1	100.1	116.4	129.8	140.2	154.3	168.2						157.8	16/12

Appendix B – G-IT5C

GUIDE SIGN ILLUSTRATION**Exit Direction: To, Shield, Carinal, 2 Street Names,****Directional Arrow**

[Not to scale]

SYMBOL	ROT	X	Y	WID	HT
M1-I100A	0	45.7	69.0	36	36
AR_Type A	315	172.4	20.2	18.3	29.3

SIGN NUMBER	G-IT5C
MUTCD CITATION	2E.36
WIDTH x HEIGHT	VARIES x 10'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective COLOR: Green
LEGEND/BORDER	TYPE: Reflective COLOR: White/White



Dimensions are inches, tenths.
Letter locations are panel edge to lower left corner.

NOTES:

1. SIGN WIDTH WILL VARY BASED ON SIZE OF DESTINATION NAME.
2. SEE G-IT8 SERIES FOR INFORMATION ON EXIT NUMBER PLAQUE.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
T	O																		E 2000
16.4	25.3																	17.3	10
S	O	U	T	H															E 2000
101.2	115.6	128.4	140.2	151.2														59.8	15,12
C	i	c	e	r	o		A	v	e										EM 2000
20.3	37.7	45.9	59.9	75.5	85.9	96.7	112.7	131.0	146.5									136.8	16/12
1	2	7	t	h		S	t												EM 2000
36.0	44.8	60.5	76.7	90.1	100.7	116.7	133.0											105.3	16/12

Appendix B – G-IT5F

GUIDE SIGN ILLUSTRATION**Exit Direction: Shield, Cardinal Street Name,****Directional Arrow, Ramp Advisory Speed**

[Not to scale]

SYMBOL	ROT	X	Y	WID	HT
M1_4	0	22.4	75.1	36	36
AR_Type A	315	148.3	37.7	18.8	29.5

SIGN NUMBER	G-IT5F
MUTCD CITATION	2E.36
WIDTH x HEIGHT	VARIES x 10'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green, Yellow
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

**NOTES:**

1. SIGN WIDTH WILL VARY BASED ON SIZE OF DESTINATION NAME.
2. SEE G-IT8 SERIES FOR INFORMATION ON EXIT NUMBER PLAQUE.
3. WHERE CONDITIONS PROVIDE LIMITED VISIBILITY TO CURVATURE OF EXIT RAMP OR WHERE SPACE FOR OTHER ADVISORY SPEED WARNINGS ARE LIMITED, THIS SIGN MAY BE INSTALLED, AS DETERMINED BY ENGINEER.

Dimensions are inches, tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
E	A	S	T																E 2000
73.4	86.2	99.7	110.8															46.4	15,12
1	5	9	t	h		S	t												EM 2000
20.4	29.2	45.5	61.7	75.1	85.7	101.7	118.0											105.9	16/12
E	X	I	T		2	0		M	P	H									E 2000
35.2	45.9	58.8	63.0	72.0	83.0	98.7	111.3	123.3	137.7	150.5								121.5	12/15

Appendix B – G-IT6A

GUIDE SIGN ILLUSTRATION

Keep Left / Keep Right Exit: Bipartite Shields, Tolls,
Cardinals, Control Destinations, Keep Left, Keep Right
 [Not to scale]

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	17.1	67.0	45	36
M1_1	0	173.4	67.0	45	36

SIGN NUMBER	G-IT6A
MUTCD CITATION	2D.45 & 2F.13
WIDTH x HEIGHT	VARIES x 10'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead or Ground
BACKGROUND	TYPE: Reflective COLOR: Green, Yellow
LEGEND/BORDER	TYPE: Reflective COLOR: Black, White/White



Dimensions are inches, tenths.
 Letter locations are panel edge to lower left corner.

NOTE:
 SIGN WIDTH WILL VARY BASED ON SIZE OF DESTINATION NAME.

LETTER POSITIONS (X)																				LEN.	SERIES/ SIZE
T	O	L	L		T	O	L	L													E 2000
80.0	88.9	99.6	108.8		236.3	245.2	255.9	265.1												36.3	10
S	O	U	T	H																	E 2000
77.1	91.5	104.3	116.1	127.1																59.8	15,12
N	O	R	T	H																	E 2000
236.8	252.1	265.0	276.0	287.0																59.9	15,12
I	n	d	i	a	n	a															EM 2000
30.7	39.3	54.8	71.8	80.0	96.9	112.4														92.3	16/12
W	i	s	c	o	n	s	i	n													EM 2000
171.7	192.5	200.3	214.4	228.5	244.3	259.5	275.0	284.6												123.5	16/12
K	E	E	P		L	E	F	T													E 2000
35.9	45.8	55.3	64.8	72.9	82.9	92.1	101.6	109.9												81.5	10
K	E	E	P		R	I	G	H	T												E 2000
192.7	202.6	212.1	221.6	229.7	239.7	249.8	253.9	264.3	274.1											88.9	10

Appendix B – G-IT6B

GUIDE SIGN ILLUSTRATION

**Keep Right Exit: Shield, Toll, Cardinal,
Control Destinations, Keep Right**

[Not to scale]

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	22.2	67.0	45	36

SIGN NUMBER	G-IT6B
MUTCD CITATION	2D.45 & 2F.13
WIDTH x HEIGHT	VARIES x 10'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead or Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green, Yellow
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White/White



Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

NOTE:

SIGN WIDTH WILL VARY BASED ON SIZE OF DESTINATION NAME.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
T	O	L	L																E 2000
85.1	94.0	104.7	113.9															36.3	10
N	O	R	T	H															E 2000
82.2	97.5	110.4	121.4	132.5														59.9	15,12
W	i	s	c	o	n	s	i	n											EM 2000
22.2	43.0	50.9	65.0	79.0	94.9	110.1	125.6	135.2										123.5	16/12
K	E	E	P		R	I	G	H	T										E 2000
39.6	49.5	59.0	68.5	76.6	86.6	96.7	100.8	111.2	121.0									88.9	10

Appendix B – G-IT7A

GUIDE SIGN ILLUSTRATION

Exit Only Panel: Left Exit Number Plaque, Shield, Toll, Cardinal, Control Destinations, Exit Only Panel with Diagonal Arrow

[Not to scale]



SIGN NUMBER	G-IT6B
MUTCD CITATION	2E.24, 2E.31, 2E.36, & 2F.13
WIDTH x HEIGHT	VARIES x 11'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green, Yellow
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White / White, Black

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	25.2	80.0	45	36
AR_Type A	45	70.5	6.6	20	31.5

NOTE:

SIGN WIDTH WILL VARY BASED ON SIZE OF DESTINATION NAME, NOT SMALLER THAN THE MINIMUM WIDTH OF EXIT ONLY PANEL: 14'-6".

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																LEN.	SERIES/ SIZE
T	O	L	L														E 2000
87.3	96.2	106.9	116.1													36.3	10
N	O	R	T	H													E 2000
85.2	100.5	113.4	124.4	135.5												59.9	15,12
W	i	s	c	o	n	s	i	n									EM 2000
25.2	46.0	53.9	68.0	82.0	97.9	113.1	128.6	138.2								123.5	16/12
E	X	I	T														E 2000
19.0	30.2	44.2	49.6													39.5	10
O	N	L	Y														E 2000
107.3	120.2	133.3	142.9													47.8	12

Appendix B – G-IT7B

GUIDE SIGN ILLUSTRATION**Exit Only Panel: 2 Shields, Cardinal, 2 Street Names,****Exit Only Panel with Diagonal Arrow - 1 Lane**

[Not to scale]

SYMBOL	ROT	X	Y	WID	HT
M1_4	0	21.3	106.0	36	36
M1_4	0	73.3	106.0	36	36
AR_Type A	315	78	6.6	20	31.5

SIGN NUMBER	G-IT7B
MUTCD CITATION	2E.24
WIDTH x HEIGHT	VARIES x 13'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green, Yellow
LEGEND/BORDER	TYPE: Reflective
	COLOR: White, Black / White, Black



Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

NOTE:

SIGN WIDTH WILL VARY BASED ON SIZE OF STREET NAMES, NOT SMALLER THAN MINIMUM WIDTH OF EXIT ONLY PANEL: 14'-6".

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
E	A	S	T															E 2000	
124.3	137.1	150.7	161.7															46.4	15,12
9	5	t	h		S	t												EM 2000	
54.9	71.2	87.6	101.0	111.6	127.6	143.9												97.3	16/12
7	6	t	h		A	v	e											EM 2000	
42.7	58.8	82.1	88.4	99.0	115.0	133.2	148.8											116.6	16/12
E	X	I	T															EM 2000	
29.1	40.4	54.3	59.8															39.5	12
O	N	L	Y															EM 2000	
114.7	127.7	140.7	150.3															47.8	12

Appendix B – G-IT7C

GUIDE SIGN ILLUSTRATION**Exit Only Panel: 2 Shields, Cardinal, 2 Street Names,****Exit Only Panel with 2 Diagonal Arrows**

[Not to scale]

SYMBOL	ROT	X	Y	WID	HT
M1_4	0	33.3	106.0	36	36
M1_4	0	85.3	106.0	36	36
AR_Type A	315	22.9	6.6	20	31.5
AR_Type A	315	168.3	6.6	20	31.5

SIGN NUMBER	G-IT7C
MUTCD CITATION	2E.24
WIDTH x HEIGHT	VARIES x 13'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective COLOR: Green, Yellow
LEGEND/BORDER	TYPE: Reflective COLOR: White, Black / White, Black



Dimensions are inches, tenths.

Letter locations are panel edge to lower left corner.

NOTE:

SIGN WIDTH WILL VARY BASED ON SIZE OF STREET NAMES, NOT SMALLER THAN MINIMUM WIDTH OF EXIT ONLY PANEL: 14'-6".

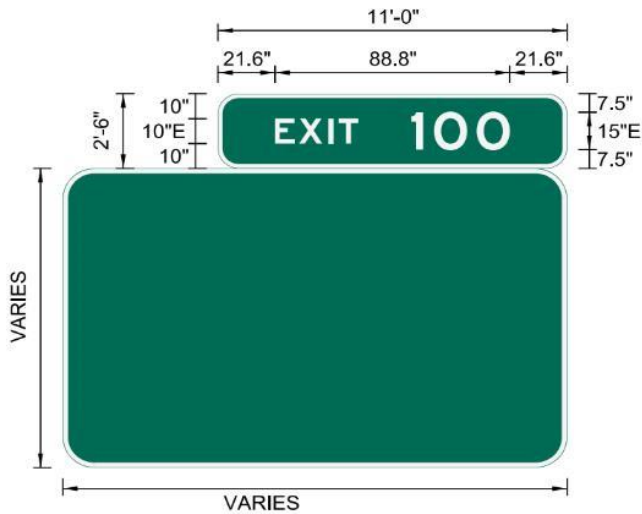
LETTER POSITIONS (X)																LEN.	SERIES/ SIZE
E	A	S	T														E 2000
136.3	149.1	162.7	173.7													46.4	15,12
9	5	t	h		S	t											EM 2000
59.4	75.7	92.0	105.4	116.0	132.0	148.3										97.3	16/12
7	6	t	h		A	v	e										EM 2000
49.7	65.8	82.0	95.4	106.0	122.0	140.2	155.8									116.6	16/12
E	X	I	T		O	N	L	Y									EM 2000
56.7	68.0	82.0	87.4	96.3	108.4	122.5	137.0	146.9								102.3	12

Appendix B – G-IT8G

GUIDE SIGN ILLUSTRATION

Exit Number Plaque: Top Right, Exit, Triple Number

[Not to scale]



SIGN NUMBER	G-IT8G
MUTCD CITATION	2E.31
WIDTH x HEIGHT	VARIES x VARIES
BORDER WIDTH	1.75"
CORNER RADIUS	8"
MOUNTING	Supplemental
BACKGROUND	TYPE: Reflective COLOR: Green
LEGEND/BORDER	TYPE: Reflective COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches, tenths.
Letter locations are panel edge to lower left corner.

- NOTE:
- INTERCHANGE EXIT NUMBERS SHALL BE DISPLAYED ON A SEPARATE PLAQUE AT THE TOP OF EACH ADVANCE GUIDE AND EXIT DIRECTION SIGN.
 - THIS SIGN MUST BE CONTRACTOR FABRICATED.

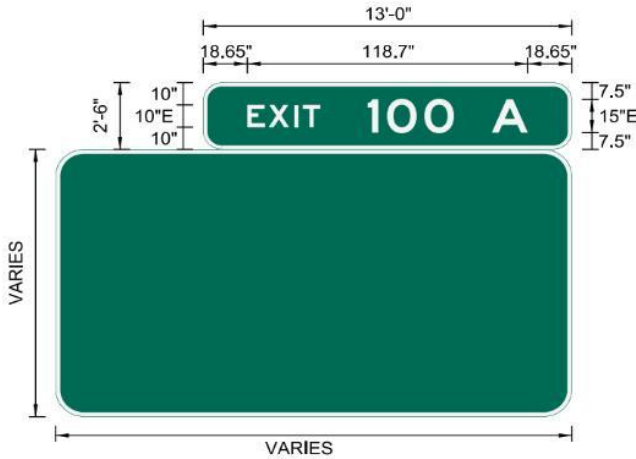
LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
E	X	I	T		1	0	0												E 2000
12.1	21.2	32.3	36.1		63.6	72.2	88.3											88.8	10,15

Appendix B – G-IT8H

GUIDE SIGN ILLUSTRATION

Exit Number Plaque: Top Right, Exit, Triple Number, Multi-Exit Interchange

[Not to scale]



SIGN NUMBER	G-IT8H
MUTCD CITATION	2E.31
WIDTH x HEIGHT	VARIES x VARIES
BORDER WIDTH	1.75"
CORNER RADIUS	8"
MOUNTING	Supplemental
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches, tenths.
Letter locations are panel edge to lower left corner.

- NOTE:
1. INTERCHANGE EXIT NUMBERS SHALL BE DISPLAYED ON A SEPARATE PLAQUE AT THE TOP OF EACH ADVANCE GUIDE AND EXIT DIRECTION SIGN.
 2. THIS SIGN MUST BE CONTRACTOR FABRICATED.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
E	X	I	T		1	0	0		A										E 2000
12.7	21.6	32.5	36.1		63.6	71.7	87.5		116.1									118.7	10,15

Appendix B – G-IT9A

GUIDE SIGN ILLUSTRATION

**Exit Only Panel with Down Arrow: Shield, Toll, Cardinal,
Control Destination, Exit Only Panel for Dropped Lane
and Auxiliary Exit Only Lane**

[Not to scale]

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	28.2	80.0	45	36
ARDOWN	0	68.6	8.0	32	22

SIGN NUMBER	G-IT9A
MUTCD CITATION	2E.24 & 2F.13
WIDTH x HEIGHT	VARIES x 11'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective COLOR: Green, Yellow
LEGEND/BORDER	TYPE: Reflective COLOR: Black, White / White, Black

**NOTES:**

- SIGN WIDTH WILL VARY BASED ON SIZE OF CONTROL CITY NAME, NOT SMALLER THAN MINIMUM WIDTH OF EXIT ONLY PANEL: 14'-6".
- ARROW TO BE CENTERED OVER LANE.

Dimensions are inches, tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
T	O	L	L																E 2000
91.1	100.0	110.7	119.9															36.3	10
N	O	R	T	H															E 2000
88.2	103.5	116.4	127.4	138.5														59.9	15,12
W	i	s	c	o	n	s	i	n											EM 2000
28.2	49.0	56.9	71.0	85.0	100.9	116.1	131.6	141.2										123.5	16/12
E	X	I	T																EM 2000
19.6	30.9	44.8	50.3															37.0	12
O	N	L	Y																EM 2000
112.6	125.6	138.6	148.2															47.8	12

Appendix B – G-IT9C

GUIDE SIGN ILLUSTRATION

Exit Only Panel with Down Arrow: 2 Shields , 2 Street Names, X Names, X Mile, Exit Only Panel for Dropped Lane and Auxiliary Exit Only Lane

[Not to scale]



SIGN NUMBER	G-IT9C
MUTCD CITATION	2E.24
WIDTH x HEIGHT	VARIES x 15'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green, Yellow
LEGEND/BORDER	TYPE: Reflective
	COLOR: White, Black / White, Black

SYMBOL	ROT	X	Y	WID	HT
M1_4	0	58	131.5	36	36
M1_4	0	110	131.5	36	36
ARDOWN	0	80.6	8.0	32	22

NOTES:

- SIGN WIDTH WILL VARY BASED ON SIZE OF STREET NAME, NOT SMALLER THAN MINIMUM EXIT ONLY PANEL WITH 2 PULL-THRU DOWN ARROWS: 18'-6".
- ARROW TO BE CENTERED OVER LANE.

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
9	5	t	h		S	t	r	e	e	t									EM 2000
27.4	43.8	60.1	73.5	84.1	100.1	116.4	129.8	140.2	154.2	168.2								149.1	16/12
7	6	t	h		A	v	e	n	u	e									EM 2000
19.7	35.8	52.0	65.4	76.0	92.0	110.2	125.8	141.3	158.2	173.8								164.6	16/12
1	M	I	L	E															E 2000
82.4	96.9	108.9	113.3	122.5														47.6	15,10
E	X	I	T																EM 2000
31.6	42.9	56.8	62.3															39.5	12
O	N	L	Y																EM 2000
124.6	137.6	150.6	160.2															47.8	12

Appendix B – G-IT12A

GUIDE SIGN ILLUSTRATION

**Mainline Plaza Lane: I-Pass Pictograph,
E-ZPass Pictograph, Or Pay Online, Left Lane**

[Not to scale]



SIGN NUMBER	G-IT12A
MUTCD CITATION	2F.13
WIDTH x HEIGHT	12'-0" x 10'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead or Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green, White
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT
IPASS Logo	0			48	60
EZPass Logo	0			48	15

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

NOTE:
ADJUSTMENTS SHALL BE MADE BY SIGN MANUFACTURE TO ENSURE
CENTERING OF LOGOS AND LETTERS.

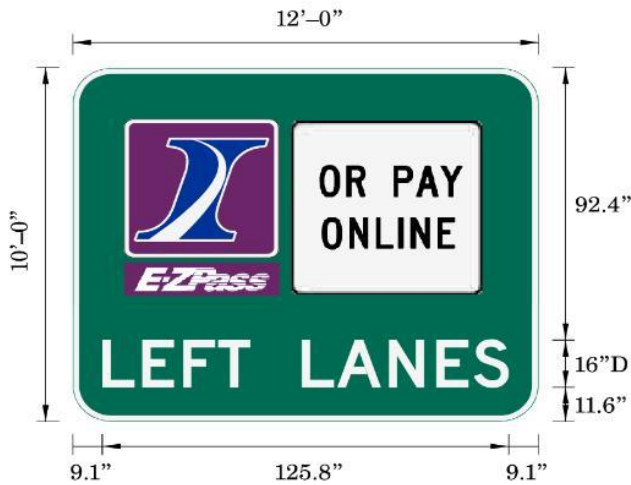
LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
O	R		P	A	Y														D 2000
N/A	N/A		N/A	N/A	N/A													N/A	N/A
O	N	L	I	N	E														D 2000
N/A	N/A	N/A	N/A	N/A	N/A													N/A	N/A
L	E	F	T		L	A	N	E											D 2000
15.4	27.7	40.3	51.2		77.1	88.0	104.0	118.7										113.3	16

Appendix B – G-IT12B

GUIDE SIGN ILLUSTRATION

**Mainline Plaza Lane: I-Pass Pictograph,
E-ZPass Pictograph, Or Pay Online, Left Lane**

[Not to scale]



SIGN NUMBER	G-IT12B
MUTCD CITATION	2F.13
WIDTH x HEIGHT	12'-0" x 10'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead or Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green, White
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT
IPass Only	0			48	60
EZPass Logo	0			48	15

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

NOTE:
ADJUSTMENTS SHALL BE MADE BY SIGN MANUFACTURE TO ENSURE
CENTERING OF LOGOS AND LETTERS.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
O	R		P	A	Y														D 2000
N/A	N/A		N/A	N/A	N/A													N/A	N/A
O	N	L	I	N	E														D 2000
N/A	N/A	N/A	N/A	N/A	N/A													N/A	N/A
L	E	F	T		L	A	N	E	S										D 2000
15.4	27.7	40.3	51.2		77.1	88.0	104.0	118.7	132.3									125.8	16

Appendix B – G-IT13A

GUIDE SIGN ILLUSTRATION

Post-Interchange Distance: Shields, XX Miles

[Not to scale]



SIGN NUMBER	G-IT13A
MUTCD CITATION	2E.39
WIDTH x HEIGHT	15'-0" x 13'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead or Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	19.9	105.0	36.1	36.1
M1_1	0	19.9	60.2	36.1	36.1
M1_1	0	15.4	15.3	45.1	36.1

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

NOTE:
PANEL STYLE: guide_fwy_Toll_Green.ssi
M.U.T.C.D.: 2009 Edition

[illegible]

Appendix B – G-IT13B

GUIDE SIGN ILLUSTRATION**Post-Interchange Distance: Shields and/or
Control Destination, XX Miles**

[Not to scale]



SIGN NUMBER	G-IT13B
MUTCD CITATION	2E.39
WIDTH x HEIGHT	VARIES x 13'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead or Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	15.4	105.0	36.1	36.1
M1_1	0	15.4	60.2	36.1	36.1

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

NOTE:
PANEL STYLE: guide_fwy_Toll_Green.ssi
M.U.T.C.D.: 2009 Edition

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
6																		10.9	E 2000
209.1																			13.3
1	2																	17.6	E 2000
201.7	208.4																		13.3
I	n	d	i	a	n	a												76.7	E 2000
20.0	27.2	40.1	54.2	61.0	75.1	88.0													13.3/10
1	5																	17.6	E 2000
201.7	208.4																		13.3

Appendix B – G-IT13C

GUIDE SIGN ILLUSTRATION

**Post-Interchange Distance: Shields and/or
Road Name, XX Miles**

[Not to scale]



SIGN NUMBER	G-IT13C
MUTCD CITATION	2E.39
WIDTH x HEIGHT	VARIES x 9'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead or Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	20	52.8	36	36

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

NOTE:
PANEL STYLE: guide_fwy_Toll_Green.ssi
M.U.T.C.D.: 2009 Edition

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
6																			E 2000
209.1																		10.9	13.3
I	n	d	i	a	n	a													E 2000
20.0	27.2	40.1	54.2	61.0	75.1	88.0												17.6	13.3/10
1	2																		E 2000
201.7	208.4																	17.6	13.3

Appendix B – G-IT14A

GUIDE SIGN ILLUSTRATION

**Major Interchange Option Lane Exit: Bipartite Shields,
Toll Cardinals, Control Destinations, X Mile,
Overhead Arrows-per-Lane, Exit, Only**

[Not to scale]

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	273.2 / 29.4	140	36	36
THRU	0	20.5 / 129.6	14.5	21	66
THRU_RIGHT	0	238.6	14.5	56	66
RIGHT_ONLY	0	370.7	14.5	36.3	45

SIGN NUMBER	G-IT14A
MUTCD CITATION	2E.21
WIDTH x HEIGHT	VARIES x 17'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green, Yellow
LEGEND/BORDER	TYPE: Reflective
	COLOR: White, Black/White



NOTES:

1. SIGN WIDTH WILL VARY BASED ON SIZE OF DESTINATION NAMES.
2. ARROWS TO BE CENTERED OVER TRAFFIC LANES.
3. SIGN WIDTH MAY VARY TO MATCH ARROWS WITH LANES.

Dimensions are inches.tenths.

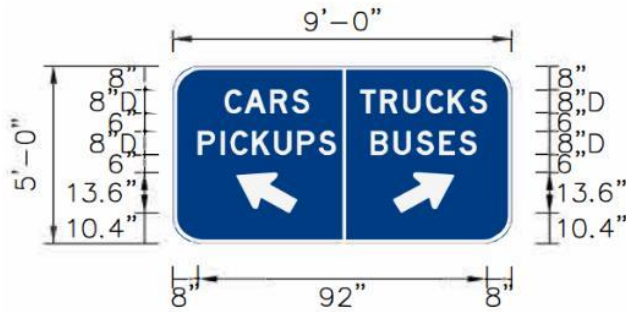
Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																			LENGTH	SERIES/ SIZE		
E	X	I	T	X	X															E 2000		
20.1	29.0	39.7	43.2	65.7	80.9															73.8	10,15	
T	O	L	L																		E 2000	
81.1	90.1	101.3	110.5																		36.8	12
C	A	R	D	I	N	A	L		C	A	R	D	I	N	A	L					E 2000	
78.4	92.8	107.0	119.2	131.6	136.9	148.7	163.0		321.9	336.3	350.6	362.7	375.2	380.5	392.2	406.5					93.6	15,12
C	o	n	t	r	o	l		C	i	t	y		C	o	n	t	r	o	l		EM 2000	
43.3	59.3	75.1	90.5	103.9	114.3	130.2	133.4	149.4	166.8	174.0	186.5		304.9	320.9	336.7	352.1	365.5	375.9	391.8	156.8/90.1	16/11.7	
X	M	I	L	E																	E 2000	
329.9	353.0	365.0	369.4	378.6																	56.2	15,10
E	X	I	T		O	N	L	Y													D 2000	
321.1	329.7	339.9	343.6		390.7	401.8	412.9	421.0													30/40.7	12

Appendix B – G-IT16A

GUIDE SIGN ILLUSTRATION**Oasis Supplemental: Cars, Pickups, Trucks, Buses,
Dual Upward Directional Arrows**

[Not to scale]



SIGN NUMBER	G-IT16A
MUTCD CITATION	2I.03
WIDTH x HEIGHT	9'-0" x 5'-0"
BORDER WIDTH	1.25"
CORNER RADIUS	8"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT
ARUP	60	20.3	10.4	14	21
ARUP	300	70.2	10.4	14	21

NOTES:

1. SIGN PANEL SHOWN IS FOR INFORMATION ONLY.
2. SIZES FOR GENERAL SIGNS SHALL BE PER MUTCD, SECTION 2I.
3. LESSEE RESPONSIBLE FOR PLACEMENT, FABRICATION AND MAINTENANCE OF ALL NON-TOLLWAY SIGNS WITHIN AN OASIS FACILITY.

Dimensions are inches.tenths.

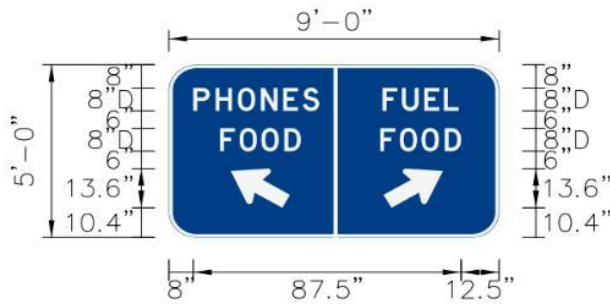
Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
C	A	R	S																D
16.5	22.9	31.1	38.0															26.9	8
T	R	U	C	K	S														D
59.8	66.1	73.4	80.7	87.6	94.6													40.3	8
P	I	C	K	U	P	S													D
8.0	15.3	18.4	25.3	32.4	39.6	46.5												43.9	8
B	U	S	E	S															D
63.1	70.4	77.6	84.9	91.3														33.6	8

Appendix B – G-IT16B

GUIDE SIGN ILLUSTRATION**Oasis Supplemental: Phones, Food, Fuel, Food,
Dual Upward Directional Arrows**

[Not to scale]



SIGN NUMBER	G-IT16B
MUTCD CITATION	2I.03
WIDTH x HEIGHT	9'-0" x 5'-0"
BORDER WIDTH	1.25"
CORNER RADIUS	8"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT
ARUP	60	20.3	10.4	14	21
ARUP	300	70.2	10.4	14	21

NOTES:

- SIGN PANEL SHOWN IS FOR INFORMATION ONLY.
- SIZES FOR GENERAL SIGNS SHALL BE PER MUTCD, SECTION 2I.
- LESSEE RESPONSIBLE FOR PLACEMENT, FABRICATION AND MAINTENANCE OF ALL NON-TOLLWAY SIGNS WITHIN AN OASIS FACILITY.

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

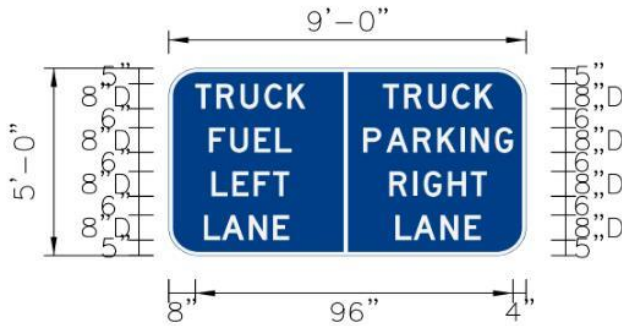
LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
P	H	O	N	E	S														D
8.0	15.3	22.6	30.1	37.4	43.8													41.2	8
F	U	E	L																D
69.8	76.2	83.5	89.9															24.9	8
F	O	O	D																D
16.8	23.1	30.3	37.8															26.4	8
F	O	O	D																D
69.1	75.5	82.6	90.2															26.4	8

Appendix B – G-IT16C

GUIDE SIGN ILLUSTRATION

Oasis Supplemental: Truck Fuel, Left Lane,
Truck Parking, Right Lane

[Not to scale]



SIGN NUMBER	G-IT16C
MUTCD CITATION	2I.03
WIDTH x HEIGHT	9'-0" x 5'-0"
BORDER WIDTH	1.25"
CORNER RADIUS	8"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT

NOTES:

- SIGN PANEL SHOWN IS FOR INFORMATION ONLY.
- SIZES FOR GENERAL SIGNS SHALL BE PER MUTCD, SECTION 2I.
- LESSEE RESPONSIBLE FOR PLACEMENT, FABRICATION AND MAINTENANCE OF ALL NON-TOLLWAY SIGNS WITHIN AN OASIS FACILITY.

Dimensions are inches, tenths.

Letter locations are panel edge to lower left corner.

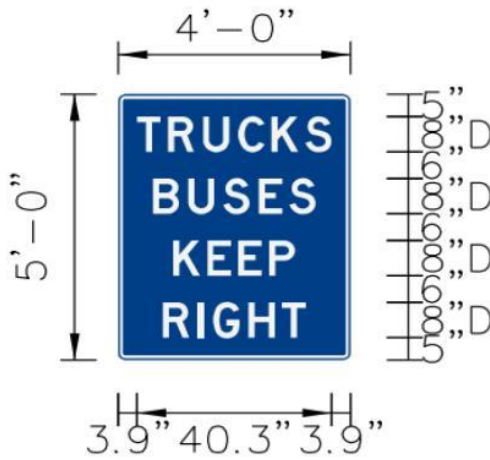
LETTER POSITIONS (X)																LEN.	SERIES/ SIZE
T	R	U	C	K													D
8.0	14.4	21.7	29.0	35.9												33.4	8
T	R	U	C	K													D
64.7	71.1	78.4	85.7	92.6												33.4	8
F	U	E	L														D
12.2	18.6	25.9	32.3													24.9	8
P	A	R	K	I	N	G											D
58.8	65.7	73.9	81.2	88.2	91.3	98.6										45.2	8
L	E	F	T														D
12.9	19.3	25.7	31.6													23.5	8
R	I	G	H	T													D
66.6	73.9	77.1	84.4	91.3												29.5	8
L	A	N	E		L	A	N	E									D
10.7	16.1	24.3	31.6		68.5	73.9	82.1	89.4								25.8	8

Appendix B – G-IT16D

GUIDE SIGN ILLUSTRATION

Oasis Supplemental: Truck Buses, Keep Right

[Not to scale]



SIGN NUMBER	G-IT16D
MUTCD CITATION	2I.03
WIDTH x HEIGHT	4'-0" x 5'-0"
BORDER WIDTH	1"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT

NOTES:

- SIGN PANEL SHOWN IS FOR INFORMATION ONLY.
- SIZES FOR GENERAL SIGNS SHALL BE PER MUTCD, SECTION 2I.
- LESSEE RESPONSIBLE FOR PLACEMENT, FABRICATION AND MAINTENANCE OF ALL NON-TOLLWAY SIGNS WITHIN AN OASIS FACILITY.

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

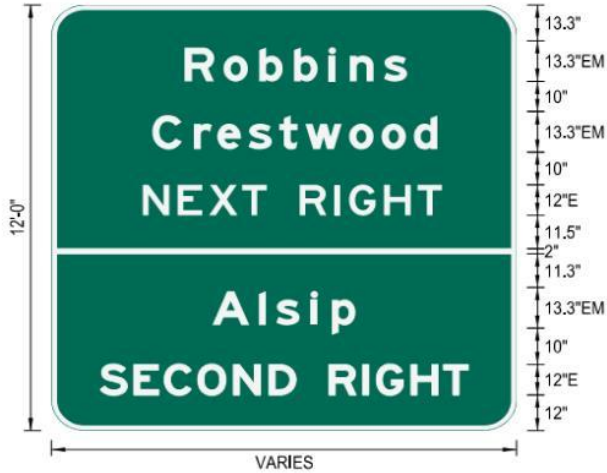
LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
T	R	U	C	K	S														D
3.9	10.3	17.6	24.8	31.7	38.8													40.3	8
B	U	S	E	S															D
7.2	14.5	21.8	29.1	35.4														33.6	8
K	E	E	P																D
11.4	18.4	24.8	31.2															25.2	8
R	I	G	H	T															D
9.3	16.5	19.7	27.0	33.9														29.5	8

Appendix B – G-IT18A

GUIDE SIGN ILLUSTRATION

**Supplemental Mainline: 2 Community Names,
Next Right, Community Name, Second Right**

[Not to scale]



SIGN NUMBER	G-IT18A
MUTCD CITATION	2E.35
WIDTH x HEIGHT	VARIES x 14'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead or Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

NOTES:

1. SIGN WIDTH WILL VARY BASED ON SIZE OF COMMUNITY NAMES.
2. TO BE USED WHEN NO INTERCHANGES DO NOT HAVE EXIT NUMBERS.

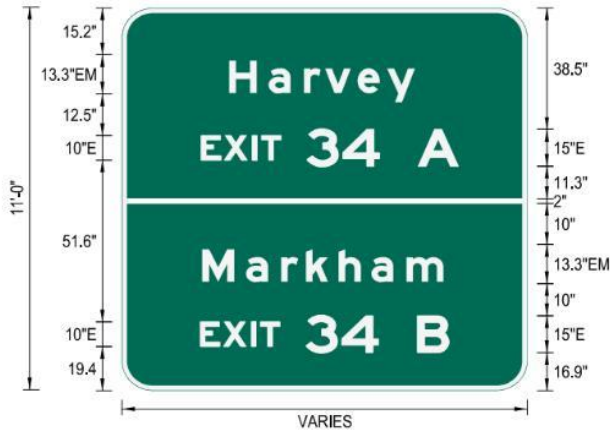
LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
R	o	b	b	i	n	s												EM 2000	
43.4	57.4	70.3	82.9	95.5	103.1	115.3												80.4 13.3/10	
C	r	e	s	t	w	o	o	d										EM 2000	
32.5	47.5	56.0	67.3	78.3	87.8	103.6	115.3	127.0										103.0 13.3/10	
N	E	X	T		R	I	G	H	T									E 2000	
30.0	42.6	53.9	65.9	74.7	86.7	99.4	104.5	117.2	129.2									108.0 12	
A	I	s	i	p														EM 2000	
58.1	75.0	81.2	93.7	101.3														51.7 13.3/10	
S	E	C	O	N	D		R	I	G	H	T							E 2000	
16.7	29.4	40.7	52.7	65.7	78.4	88.0	100.0	112.6	117.7	130.4	142.5							134.5 12	

Appendix B – G-IT18B

GUIDE SIGN ILLUSTRATION

**Supplemental Mainline: Community Name, Exit XX A,
Community Name, Exit XX B**

[Not to scale]



SIGN NUMBER	G-IT18B
MUTCD CITATION	2E.35
WIDTH x HEIGHT	VARIES x 11'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead or Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

NOTE:
SIGN WIDTH WILL VARY BASED ON SIZE OF COMMUNITY NAMES.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
H	a	r	v	e	y														EM 2000
42.3	57.5	71.0	79.2	91.7	103.0													71.4	13.3/10
E	X	I	T	3	4		A												E 2000
30.2	39.1	49.8	53.3	70.8	84.6	98.7	113.7											98.8	10,15
M	a	r	k	h	a	m													EM 2000
31.6	48.5	62.0	71.6	84.1	96.7	110.3												113.3	13.3/10
E	X	I	T	3	4		B												E 2000
30.2	39.1	49.8	53.3	70.8	84.6	98.7	113.7											92.7	10,15

Appendix B – G-IT18D

GUIDE SIGN ILLUSTRATION**Supplemental Mainline: 2 Community Names, Exit XX**

[Not to scale]



SIGN NUMBER	G-IT18D
MUTCD CITATION	2E.35
WIDTH x HEIGHT	VARIES x 7'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead or Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

NOTE:

SIGN WIDTH WILL VARY BASED ON SIZE OF COMMUNITY NAME.

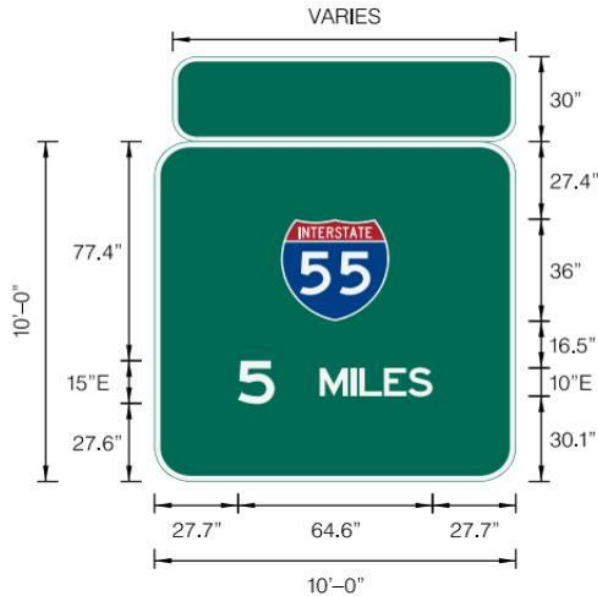
LETTER POSITIONS (X)																			LEN.	SERIES/ SIZE
H	a	z	e	l		C	r	e	s	t										EM 2000
17.4	31.5	44.6	56.7	69.6	72.2	85.5	100.0	108.7	120.1	131.7									121.2	13.3/9.7
M	a	r	k	h	a	m														EM 2000
30.9	46.6	60.7	70.6	83.5	96.4	110.5													94.2	13.3/9.7
E	X	I	T	3	4															E 2000
43.2	52.1	62.8	66.3	83.8	97.6														68.5	10,15

Appendix B – G-IT18E

GUIDE SIGN ILLUSTRATION

Supplemental Guide: Shield, X Miles

[Not to scale]



SIGN NUMBER	G-IT18E
MUTCD CITATION	2E.33 & 2E.35
WIDTH x HEIGHT	10'-0" x 10'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	42	56.6	36	36

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

NOTE:
SEE G-IT8 SERIES FOR INFORMATION ON EXIT NUMBER PLAQUE.

[illegible]

Appendix B – G-IT18F

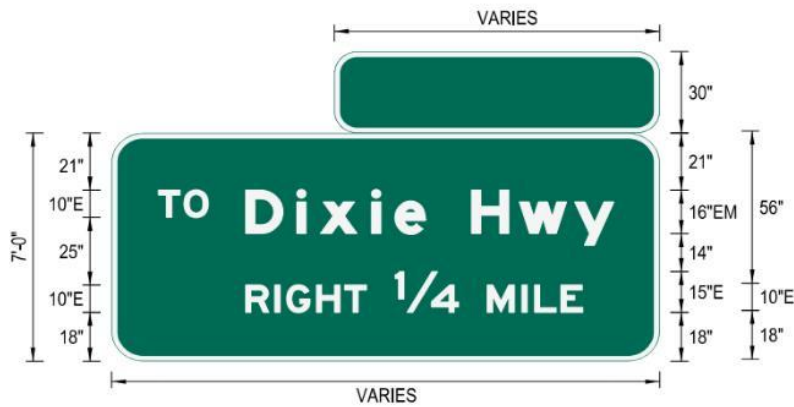
GUIDE SIGN ILLUSTRATION

Supplemental Guide: To, Street Name, Right X Mile

[Not to scale]

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	42	56.6	36	36

SIGN NUMBER	G-IT18F
MUTCD CITATION	2E.33 & 2E.35
WIDTH x HEIGHT	VARIES x 7'-0"
BORDER WIDTH	2"
CORNER RADIUS	10"
MOUNTING	Overhead of Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White / White



Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

NOTES:

- SIGN WIDTH WILL VARY BASED ON SIZE OF STREET NAME.
- SEE G-IT8 SERIES FOR INFORMATION ON EXIT NUMBER PLAQUE.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
T	O																		E 2000
22.9	31.8																	17.3	15,10
D	i	x	i	e		H	w	y											EM 2000
53.2	71.0	79.2	96.9	105.1	115.6	131.6	148.3	167.5										127.8	16/11.7
R	I	G	H	T	1/4	M	I	L	E										E 2000
53.2	63.3	67.4	77.8	87.6	105.1	137.1	149.1	153.5	162.7									117.0	10,15

APPENDIX C Regulatory Sign Illustrations

Regulatory I Sign Illustration List

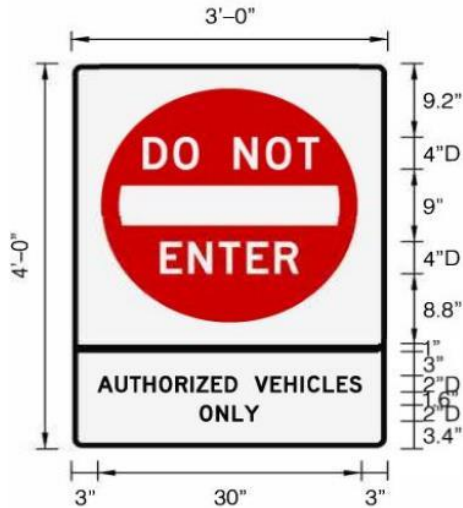
Number	Placement	Legend
R-IT1	Plaza	Do Not Enter
R-IT2	Plaza	Fasten Seat Belts
R-IT3	Plaza	Tollway Logo, Plaza XX, Service Road, No Outlet, Authority Vehicles Only
R-IT4	Plaza	Lane Closed (X)
R-IT5	Plaza	Oversized Vehicles Use Right Lane
R-IT6	Parking	Parking 2 Hour Limit
R-IT7	Mainline	No U-Turn Except Authority Vehicles
R-IT8	Mainline	Engine Breaking Prohibited
R-IT9	Mainline	End Truck Restriction
R-IT10	Mainline	No Trucks Left X Lanes, No Trucks Left Lane
R-IT11	Mainline	Emergency Stopping Only / 2 Hour Limit
R-IT12	Ramp	Motor Vehicles Only
R-IT13	Mainline	Tollway Properties: No Dumping, No Trespassing
R-IT14A	Mainline	State Law, Minor Crash, Move Vehicles from Traffic Lane
R-IT14B	Mainline	State Law, Move Over – Slow Down, for All Stopped Vehicles, with Flashing Lights
R-IT15	Mainline	Truck Enforcement Site
R-IT16	Mainline	Minimum Speed Limit Plaque
R-IT17	Mainline	Speed Limit for Large Vehicles
R-IT18	Ramp	Wrong Way Sign Assembly
R-IT19	Plaza	Do Not Stop
R-IT20A	Mainline	Advance Guide: Authorized Vehicles Only, Directional Arrow, Overhead
R-IT20B	Mainline	Advance Guide: Authorized Vehicles Only, Down Arrow, Overhead
R-IT21	Plaza	Wrong Way

Appendix C – R-IT1

REGULATORY SIGN ILLUSTRATION

Plaza: Do Not Enter

[Not to scale]



SIGN NUMBER	R-IT1
MUTCD CITATION	2A.06
WIDTH x HEIGHT	3'-0" x 4'-0"
BORDER WIDTH	0.5"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White, Red
LEGEND/BORDER	TYPE: Reflective
	COLOR: White, Black/Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																				LEN.	SERIES/ SIZE
D	O		N	O	T															D	
8.3	11.7		18.5	22.2	25.7															19.9	4
E	N	T	E	R																D	
10.1	13.3	16.8	20.0	23.1																15.7	4
A	U	T	H	O	R	I	Z	E	D		V	E	H	I	C	L	E	S		D 2000	
3.0	5.0	6.7	8.2	10.0	11.9	13.6	14.2	15.9	17.5		20.9	22.7	24.3	26.1	26.9	28.7	30.2	31.6		30.0	2
O	N	L	Y																	D 2000	
14.6	16.5	18.3	19.7																	6.8	2

Appendix C – R-IT3

REGULATORY SIGN ILLUSTRATION

**Plaza: Tollway Logo, Plaza XX, Service Road, No Outlet,
Authority Vehicles Only**

[Not to scale]



SIGN NUMBER	R-IT3
MUTCD CITATION	2A.06
WIDTH x HEIGHT	4'-0" x 4'-0"
BORDER WIDTH	0.5"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT
Tollway Logo	0	3.8	35.3	18	9

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

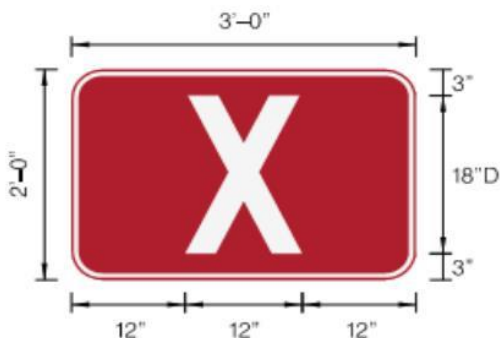
LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
P	L	A	Z	A														18.2	D 2000
26.3	30.0	33.1	37.2	40.7														4.5	
X	X																	6.6	D 2000
32.1	35.6																	4.5	
S	E	R	V	I	C		R	O	A	D								43.0	D 2000
2.5	6.3	9.9	13.3	17.4	19.1		30.4	34.2	38.0	42.5								4.5	
N	O		O	U	T	E	T											32.5	D 2000
7.7	11.9		19.5	23.7	27.4	34.3	37.5											4.5	
A	U	T	H	O	R	T	Y												D 2000
9.7	13.7	17.1	20.1	23.7	27.5	32.1	34.8											28.5	4
V	E	H	I	C	L	E	S		O	N	L	Y							D 2000
3.1	6.7	9.9	13.6	15.1	18.7	21.8	24.6		31.4	35.1	38.8	41.5						41.8	4

Appendix C – R-IT4

REGULATORY SIGN ILLUSTRATION

Plaza: Lane Closed (X)

[Not to scale]



SIGN NUMBER	R-IT4
MUTCD CITATION	2A.06
WIDTH x HEIGHT	3'-0" x 2'-0"
BORDER WIDTH	0.5"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Red
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches,tenths.
Letter locations are panel edge to lower left corner.

NOTE:
FOR USE ON TOLL PLAZA SWING GATE

[illegible]

Appendix C – R-IT6

REGULATORY SIGN ILLUSTRATION

Oasis: Parking 2 Hour Limit

[Not to scale]



SIGN NUMBER	R-IT6
MUTCD CITATION	2A.06
WIDTH x HEIGHT	6'-0" x 5'-0"
BORDER WIDTH	1"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

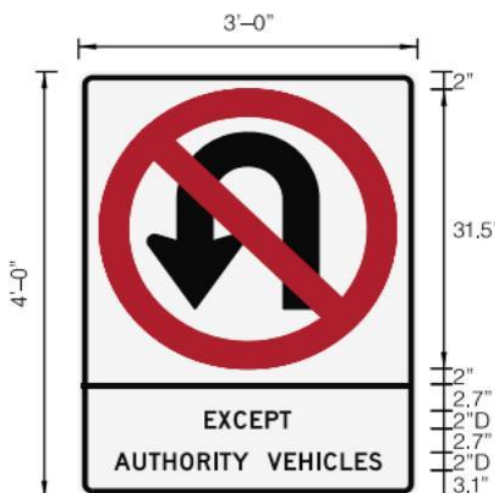
SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
P	A	R	K	I	N	G													D 2000
14.2	20.2	28.2	35.0	41.9	45.1	52.3												43.5	8
2		H	O	U	R														D 2000
15.6		29.0	36.2	43.6	51.0													40.9	8
L	I	M	I	T															D 2000
23.5	29.7	32.9	41.0	43.5														25.0	8

[Not to scale]



SIGN NUMBER	R-IT7
MUTCD CITATION	2A.06
WIDTH x HEIGHT	3'-0" x 4'-0"
BORDER WIDTH	0.5"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT
R3-4	0	2.3	14.5	31.5	31.5

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

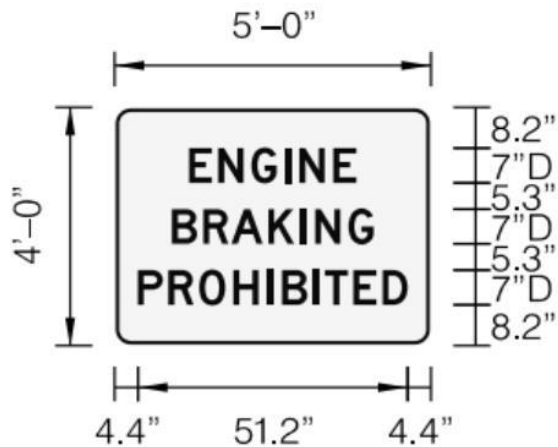
[illegible]

Appendix C – R-IT8

REGULATORY SIGN ILLUSTRATION

Mainline: Engine Braking Prohibited

[Not to scale]



SIGN NUMBER	R-IT8
MUTCD CITATION	2A.06
WIDTH x HEIGHT	5'-0" x 4'-0"
BORDER WIDTH	1"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

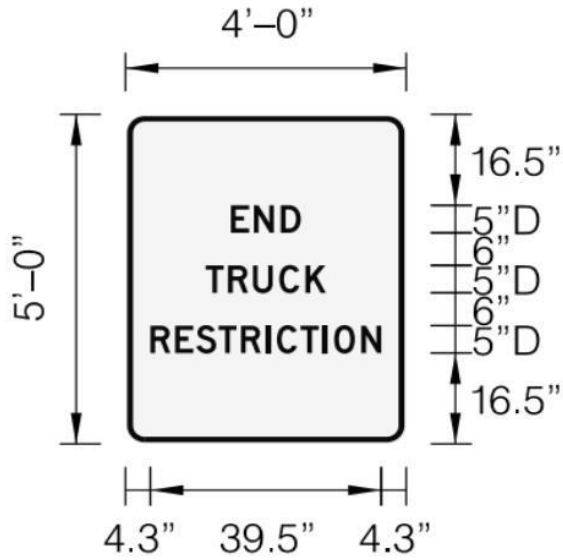
LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
E	N	G	I	N	E														D 2000
14.1	19.7	26.0	32.3	35.1	41.5													31.7	7
B	R	A	K	I	N	G													D 2000
10.9	16.8	22.1	29.1	35.2	38.0	44.3												38.2	7
P	R	O	H	I	B	I	T	E	D										D 2000
4.4	10.2	16.0	22.5	29.0	31.8	37.7	39.9	45.3	50.8									51.2	7

Appendix C – R-IT9

REGULATORY SIGN ILLUSTRATION

Mainline: End Truck Restriction

[Not to scale]



SIGN NUMBER	R-IT9
MUTCD CITATION	2A.06
WIDTH x HEIGHT	4'-0" x 5'-0"
BORDER WIDTH	1"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.

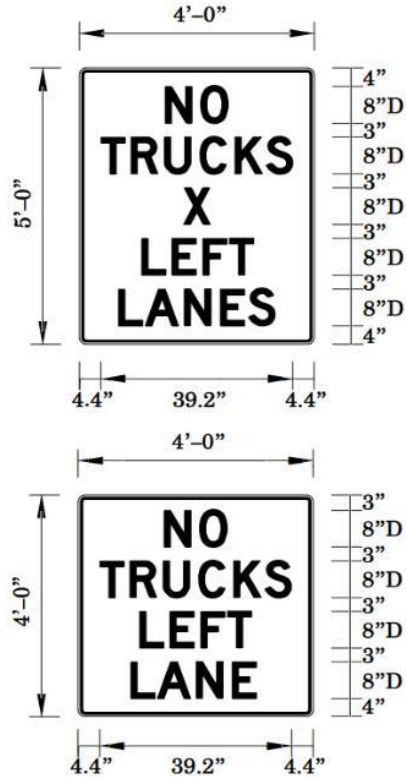
Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																	LEN.	SERIES/ SIZE
E	N	D																D 2000
18.0	22.0	26.6															12.0	5
T	R	U	C	K														D 2000
13.7	17.6	21.8	26.3	30.8													20.6	5
R	E	S	T	R	I	C	T	I	O	N								D 2000
4.3	8.5	12.1	15.9	19.8	24.0	25.9	30.0	33.8	35.7	40.4							39.5	5

REGULATORY SIGN ILLUSTRATION

Mainline: No Trucks X Left Lanes, No Trucks Left Lanes

[Not to scale]



SIGN NUMBER	R-IT10
MUTCD CITATION	2A.06
WIDTH x HEIGHT	4'-0" x 5'-0", 4'-0" x 4'-0"
BORDER WIDTH	0.5"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

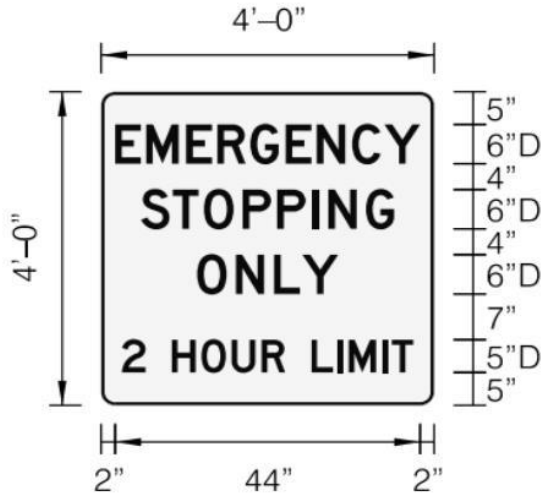
LETTER POSITIONS (X)																	LEN.	SERIES/ SIZE
N	O																	D 2000
17.6	24.8																12.9	8
T	R	U	C	K	S													D 2000
4.4	10.6	17.4	24.6	31.8	38.2												39.2	8
X																		D 2000
21.3																	5.4	8
L	E	F	T															D 2000
12.6	18.7	25	30.5														22.9	8
L	A	N	E	S														D 2000
8	13.4	21.4	28.8	34.6													32.0	8
L	A	N	E															D 2000
11.1	16.6	24.6	31.9														25.8	8

Appendix C – R-IT11

REGULATORY SIGN ILLUSTRATION

Mainline: Emergency Stopping Only / 2 Hour Limit

[Not to scale]



SIGN NUMBER	R-IT11
MUTCD CITATION	2A.06
WIDTH x HEIGHT	4'-0" x 4'-0"
BORDER WIDTH	1"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.

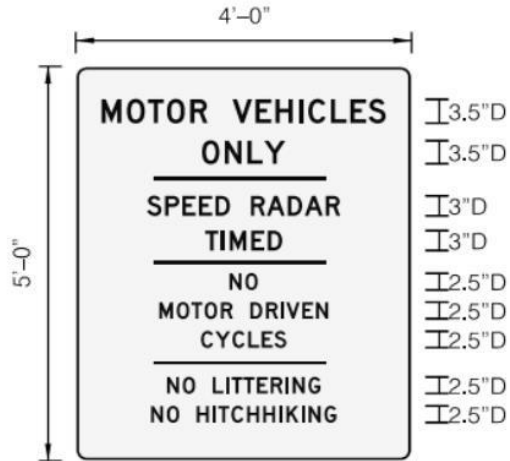
Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																				LEN.	SERIES/ SIZE
E	M	E	R	G	E	N	C	Y													D 2000
2.0	6.5	12.3	16.8	21.5	26.6	31.1	36.2	40.8												44.0	6
S	T	O	P	P	I	N	G														D 2000
5.8	10.3	14.8	20.4	25.4	30.4	32.8	38.2													36.5	6
O	N	L	Y																		D 2000
13.8	19.4	24.9	29.0																	20.3	6
2		H	O	U	R		L	I	M	I	T										D 2000
3		10.2	14.4	18.8	23.1		30.3	34	35.7	40.5	41.9									42.0	5

REGULATORY SIGN ILLUSTRATION

Ramp: Motor Vehicles Only

[Not to scale]



SIGN NUMBER	R-IT12
MUTCD CITATION	2A.06
WIDTH x HEIGHT	4'-0" x 5'-0"
BORDER WIDTH	1"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches, tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																				LEN.	SERIES/ SIZE
M	O	T	O	R		V	E	H	I	C	L	E	S								D 2000
3.7	7.3	10.3	13.0	16.4		22.4	25.7	28.6	31.9	33.2	36.5	39.2	41.8							44.0	3.6
O	N	L	Y																		D 2000
18.1	21.3	24.5	26.9																	36.5	3.5
S	P	E	E	D		R	A	D	A	R											D 2000
10.2	12.8	15.3	17.6	20.0		25.0	27.3	30.3	32.7	35.7										20.3	3
T	I	M	E	D																	D 2000
18.5	20.8	22	25.1	27.4																42.0	3
N	O																				D 2000
22	24.2																				2.5
M	O	T	O	R		D	R	I	V	E	R										D 2000
12	14.5	16.6	18.4	20.8		25	27.2	29.3	30.1	32.4	34.4										2.5
C	Y	C	L	E	S																D 2000
17.9	19.9	22.4	24.7	26.6	28.4															42.0	2.5
N	O		L	I	T	T	E	R	I	N	G										D 2000
13.1	15.3		19.6	21.5	22.3	24	25.9	27.9	30	31	33.3										2.5
N	O		H	I	T	C	H	H	I	K	I	N	G								D 2000
10.8	13		17.3	19.6	20.4	22.3	24.5	26.8	29.1	30.1	32.3	33.3	35.5								2.5

[Not to scale]



SIGN NUMBER	R-IT13
MUTCD CITATION	2A.06
WIDTH x HEIGHT	2'-0" x 2'-0"
BORDER WIDTH	0.5"
CORNER RADIUS	1.5"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

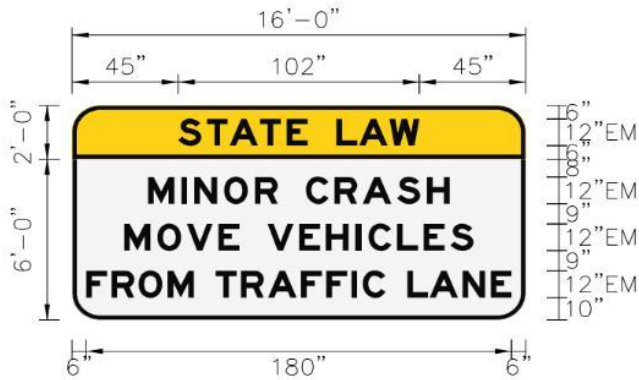
Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

[illegible]

REGULATORY SIGN ILLUSTRATION

Mainline: State Law, Minor Crash, Move Vehicles From Traffic Lane

[Not to scale]



SIGN NUMBER	R-IT14A
MUTCD CITATION	2A.06 & 2B.65
WIDTH x HEIGHT	16'-0" x 8'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Yellow, White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.

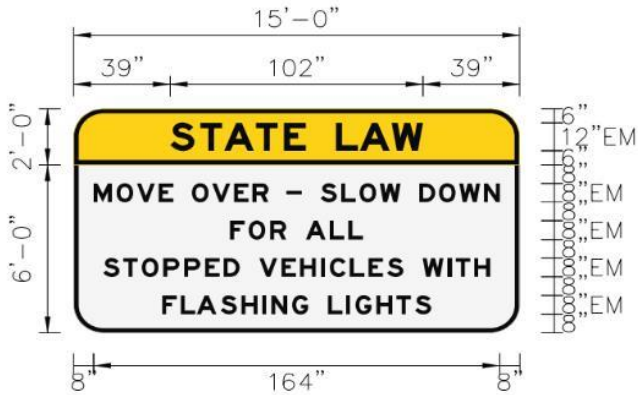
Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																				LEN.	SERIES/ SIZE
S	T	A	T	E		L	A	W												EM	
45.0	57.1	66.7	79.6	90.9	99.7	111.9	121.6	134.4												102.0 12	
M	I	N	O	R		C	R	A	S	H										EM	
32.2	46.3	51.8	64.4	77.4	87.0	99.0	111.0	123.1	137.6	150.2										127.6 12	
M	O	V	E		V	E	H	I	C	L	E	S								EM	
22.1	36.2	48.6	62.0	70.8	82.8	96.1	107.4	120.1	125.5	137.6	148.8	160.0								147.8 12	
F	R	O	M		T	R	A	F	F	I	C		L	A	N	E				EM	
6.0	16.7	28.2	40.5	51.6	60.8	71.5	83.0	96.9	107.6	118.3	123.1	132.7	141.9	151.3	165.3	177.2				180.0 12	

REGULATORY SIGN ILLUSTRATION

Mainline: State Law, Move Over-Slow Down, For All Stopped Vehicles, With Flashing Lights

[Not to scale]



SIGN NUMBER	R-IT14B
MUTCD CITATION	2A.06 & 2B.65
WIDTH x HEIGHT	15'-0" x 8'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Yellow, White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches, tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																				LEN.	SERIES/ SIZE	
S	T	A	T	E		L	A	W												EM		
39.0	51.1	60.7	73.6	84.9	93.7	105.9	115.6	128.4												102.0	12	
M	O	V	E		O	V	E	R		-		S	L	O	W		D	O	W	N	EM	
8.0	17.3	25.5	34.3	40.2	47.8	55.9	64.8	72.2	78.6	86.1	92.1	99.7	108.0	115.4	123.6	132.0	139.6	147.5	155.7	165.6	164.0	8
F	O	R		A	L	L															EM	
63.1	70.7	79.3	85.7	93.7	103.4	110.9															53.6	8
S	T	O	P	P	E	D		V	E	H	I	C	L	E	S		W	I	T	H	EM	
12.0	20.0	27.5	36.2	44.6	53.1	60.6	67.0	75.0	83.9	91.4	99.8	103.5	111.5	119.0	126.5	132.9	140.9	151.0	154.2	161.7	156.2	8
F	L	A	S	H	I	N	G		L	I	G	H	T	S							EM	
35.7	43.3	49.7	59.3	67.8	76.2	79.8	88.3	94.7	102.7	110.2	113.8	122.2	130.3	137.8							108.6	8

Appendix C – R-IT15

REGULATORY SIGN ILLUSTRATION

Mainline: Truck Enforcement Site (Weigh-In-Motion
Location)

[Not to scale]



SIGN NUMBER	R-IT15
MUTCD CITATION	2A.06
WIDTH x HEIGHT	7'-0" x 4'-0"
BORDER WIDTH	1"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

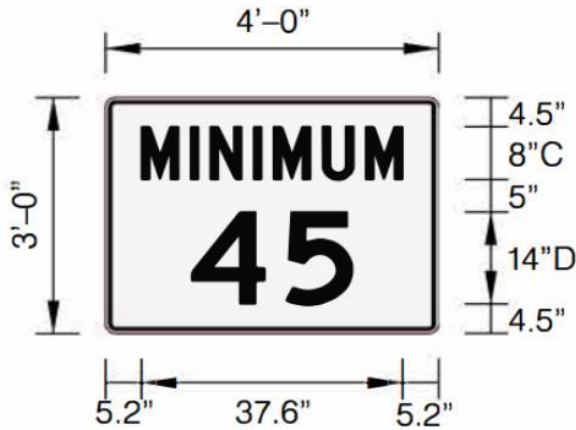
LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
T	R	U	C	K															D 2000
25.5	31.7	38.5	45.7	52.9														33.0	8
E	N	F	O	R	C	E	M	E	N	T									D 2000
5.3	11.6	19.0	25.0	32.4	39.1	46.3	52.6	60.8	67.1	73.7								73.4	8
A	R	E	A																D 2000
28.4	36.4	43.2	48.8															27.2	8

Appendix C – R-IT16

REGULATORY SIGN ILLUSTRATION

Mainline: Minimum Speed Limit

[Not to scale]



SIGN NUMBER	R-IT16
MUTCD CITATION	2B.16
WIDTH x HEIGHT	4'-0" x 3'-0"
BORDER WIDTH	0.5"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

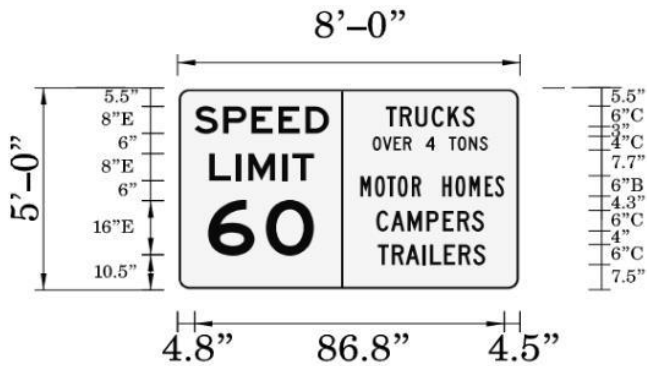
SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
M	I	N	I	M	U	M													C 2000
5.2	12.2	15.1	21.4	24.2	31.3	37.5												37.6	8
4	5																		D 2000
12.5	26.0																	23.1	14

REGULATORY SIGN ILLUSTRATION**Mainline: Speed Limit for Large Vehicles**

[Not to scale]



SIGN NUMBER	R-IT17
MUTCD CITATION	2B.16
WIDTH x HEIGHT	5'-0" x 8'-0"
BORDER WIDTH	0.63"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches, tenths.

Letter locations are panel edge to lower left corner.

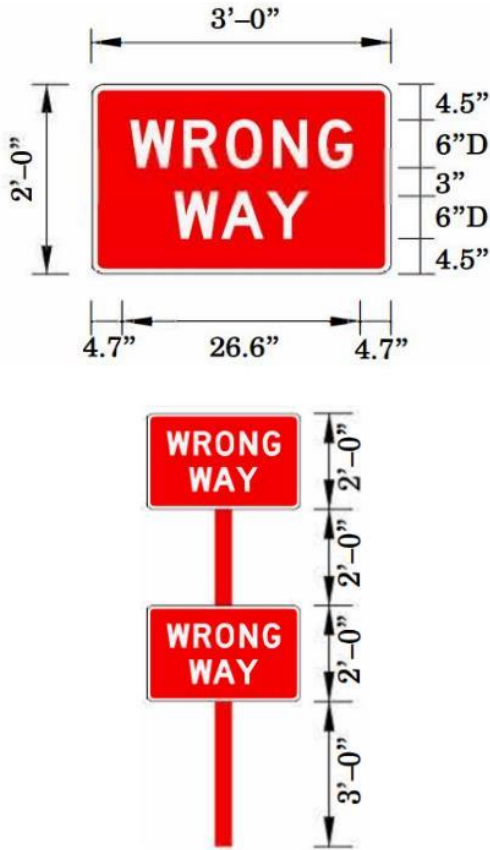
LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
S	P	E	E	D															E 2000
4.8	12.9	20.7	28.3	35.9														37.6	8
L	I	M	I	T															E 2000
8.9	16.3	19.8	29.4	32.2														29.3	8
6	O																		E 2000
8.6	24.8																	29.6	16
T	R	U	C	K	S														C 2000
58.4	62.3	66.6	71.2	75.8	79.8													24.8	6
O	V	E	R		4		T	O	N	S									C 2000
54.7	57.5	60.6	63.3	65.5	69.5	72.0	76.0	78.5	81.7	84.6								32.2	4
M	O	T	O	R		H	O	M	E	S									B 2000
51.3	55.4	58.8	61.7	65.6	68.2	74.2	77.9	81.8	86.1	89								40.3	6
C	A	M	P	E	R	S													C 2000
55.7	59.8	64.5	69.8	74.3	78.4	82.5												30.1	6
T	R	A	I	L	E	R	S												C 2000
56.1	60	63.9	68.6	70.8	74.7	78.8	82.8											30.1	6

Appendix C – R-IT18

REGULATORY SIGN ILLUSTRATION

Ramp: Wrong Way Sign Assembly

[Not to scale]



SIGN NUMBER	R-IT18
MUTCD CITATION	2B.41
WIDTH x HEIGHT	3'-0" x 2'-0"
BORDER WIDTH	0.75"
CORNER RADIUS	1.5"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Red
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

NOTE:

RED RETROREFLECTIVE STRIPS THAT ARE 4" IN WIDTH SHOULD BE INSTALLED ON THE SIGN POSTS FOR THE WRONG WAY SIGN ASSEMBLIES.

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

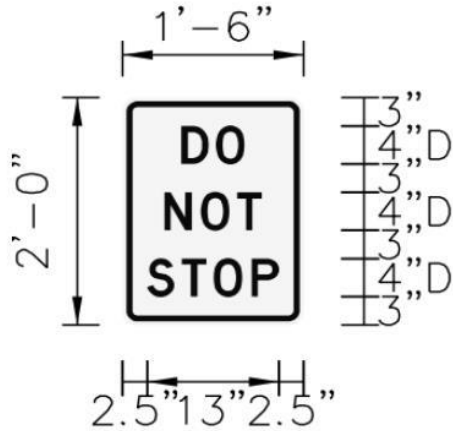
LETTER POSITIONS (X)																	LEN.	SERIES/ SIZE
W	R	O	N	G														D 2000
4.7	11.1	16.2	21.8	27.3													26.6	6
W	A	Y																D 2000
9.9	15.6	21.0															16.1	6

Appendix C – R-IT19

REGULATORY SIGN ILLUSTRATION

Plaza: Do Not Stop

[Not to scale]



SIGN NUMBER	R-IT19
MUTCD CITATION	2A.06
WIDTH x HEIGHT	1'-6" x 2'-0"
BORDER WIDTH	0.63"
CORNER RADIUS	1.13"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

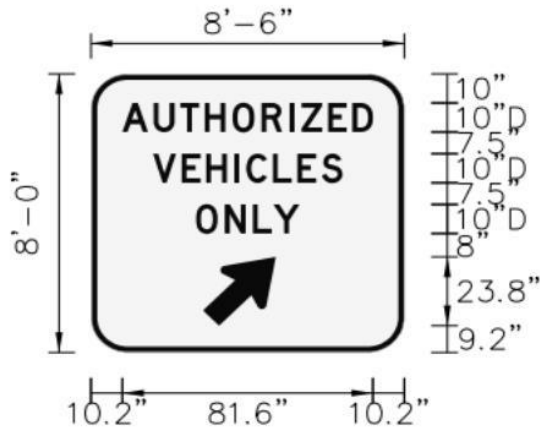
Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
D	O																	6.3	4
5.9	9.3																		
N	O	T																9.7	4
4.2	7.8	11.4																	
S	T	O	P															13.1	4
2.5	5.9	9.1	12.9																

REGULATORY SIGN ILLUSTRATION

**Advance Guide: Authorized Vehicles Only,
Directional Arrow, Overhead**

[Not to scale]



SIGN NUMBER	R-IT20A
MUTCD CITATION	2A.06 & 2B.39
WIDTH x HEIGHT	8'-6" x 8'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT
ARROW	315	36.4	9.2	20	30

Dimensions are inches, tenths.
Letter locations are panel edge to lower left corner.

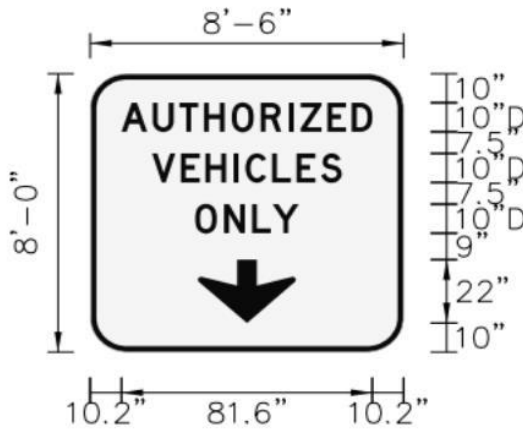
LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
A	U	T	H	O	R	I	Z	E	D										D
102.0	20.4	29.0	37.0	46.1	55.5	64.6	68.5	77.1	85.1									81.6	10
V	E	H	I	C	L	E	S												D
20.2	29.5	37.5	46.6	50.5	59.2	67.1	75.1											61.7	10
O	N	L	Y																D
34.2	43.6	52.7	59.4															33.7	10

Appendix C – R-IT20B

REGULATORY SIGN ILLUSTRATION

Advance Guide: Authorized Vehicles Only,
Down Arrow, Overhead

[Not to scale]



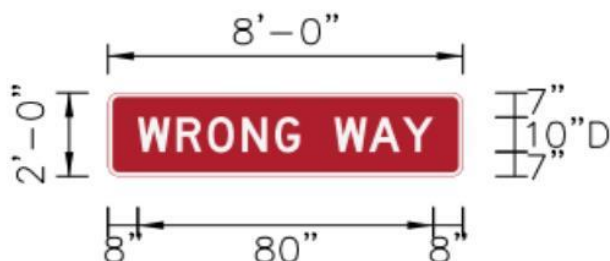
SIGN NUMBER	R-IT20B
MUTCD CITATION	2A.06 & 2B.39
WIDTH x HEIGHT	8'-6" x 8'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT
ARROW	0	35.1	10	32	22

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																LEN.	SERIES/ SIZE
A	U	T	H	O	R	I	Z	E	D								D
102.0	20.4	29.0	37.0	46.1	55.5	64.6	68.5	77.1	85.1							81.6	10
V	E	H	I	C	L	E	S										D
20.2	29.5	37.5	46.6	50.5	59.2	67.1	75.1									61.7	10
O	N	L	Y														D
34.2	43.6	52.7	59.4													33.7	10

[Not to scale]



SIGN NUMBER	R-IT21
MUTCD CITATION	2A.06
WIDTH x HEIGHT	8'-0" x 2'-0"
BORDER WIDTH	1.25"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Red
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

[illegible]

APPENDIX D Warning Sign Illustrations

Warning (W) Sign Illustration List

Number	Placement	Legend
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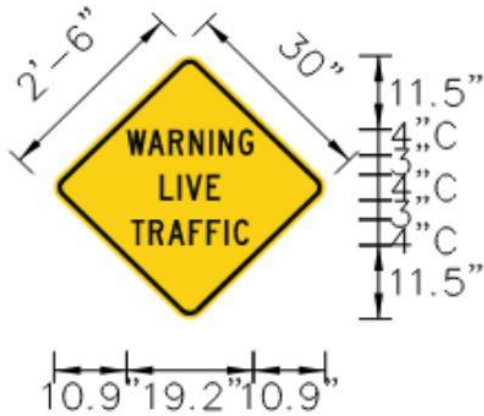
W-IT1	Plaza	Warning Live Traffic
W-IT2	Ramp	Ramp Queue Warning
W-IT3	Plaza	Diamond Maximum Width
W-IT4	Plaza	Rectangle Maximum Width
W-IT5	Ramp	Trucks Keep Right Ahead
W-IT6	Plaza	Vehicles Entering Highway
W-IT7	Plaza	Shoulder Narrows

Appendix D – W-IT1

WARNING SIGN ILLUSTRATION

Toll Plaza: Warning Live Traffic

[Not to scale]



SIGN NUMBER	W-IT3
MUTCD CITATION	2A.06
WIDTH x HEIGHT	2'-6" x 2'-6"
BORDER WIDTH	0.75"
CORNER RADIUS	1.875"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Yellow
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.

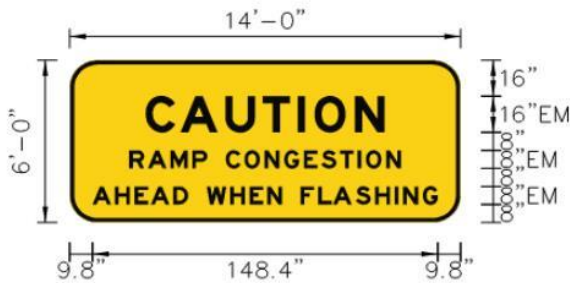
Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																LEN.	SERIES/ SIZE
W	A	R	N	I	N	G											C
19.1	24.7	30.3	35.6	40.9	43.4	48.7										33.4	7
L	I	V	E														C
27.9	32.6	34.7	40.2													15.8	7
T	R	A	F	F	I	C											C
20.4	25.1	30.1	35.6	40.3	45.0	47.4										30.9	7

Appendix D – W-IT2

WARNING SIGN ILLUSTRATION**Ramp: Ramp Queue Warning**

[Not to scale]



SIGN NUMBER	W-IT4
MUTCD CITATION	N/A
WIDTH x HEIGHT	14'-0" x 6'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Yellow
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

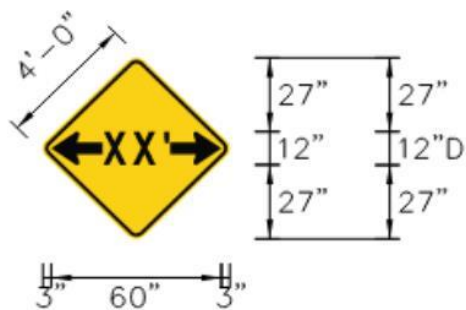
LETTER POSITIONS (X)																				LEN.	SERIES/ SIZE
C	A	U	T	I	O	N														EM	
32.6	47.6	66.9	83.0	98.0	105.3	122.6													102.8	16	
R	A	M	P		C	O	N	G	E	S	T	I	O	N						EM	
25.6	33.6	43.3	52.7	59.1	67.1	75.1	83.8	92.2	100.7	108.2	116.2	123.7	127.4	136.0					116.8	8	
A	H	E	A	D		W	H	E	N		F	L	A	S	H	I	N	G		EM	
9.8	19.5	27.9	34.9	44.5	50.9	58.9	69.0	77.4	84.9	91.3	99.3	106.8	113.2	122.9	131.3	139.8	143.4	151.8	148.4	8	

Appendix D – W-IT3

WARNING SIGN ILLUSTRATION

Plaza: Diamond, Max. Width Sign

[Not to scale]



SIGN NUMBER	W-IT5
MUTCD CITATION	2A.06
WIDTH x HEIGHT	4'-0" x 4'-0"
BORDER WIDTH	1.25"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Yellow
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT
ARROW	90	3	27	12	18
ARROW	90	44.5	27	12	18

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

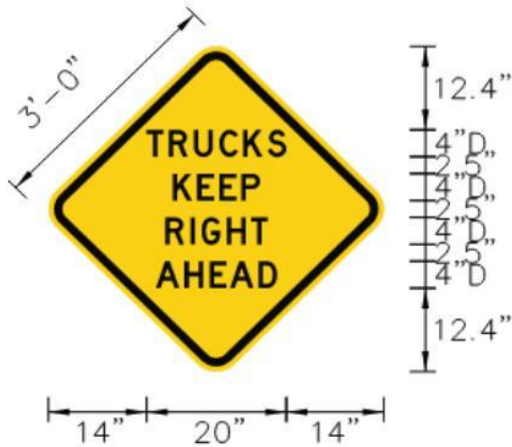
[illegible]

Appendix D – W-IT5

WARNING SIGN ILLUSTRATION

Ramp: Trucks Keep Right Ahead

[Not to scale]



SIGN NUMBER	W-IT7
MUTCD CITATION	2A.06
WIDTH x HEIGHT	3'-0" x 3'-0"
BORDER WIDTH	0.875"
CORNER RADIUS	2.25"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Yellow
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)															LEN.	SERIES/ SIZE
T	R	U	C	K	S											D
14.1	17.3	21.0	24.6	28.0	31.6										20.1	4
K	E	E	P													D
17.9	21.4	24.6	27.8												12.6	4
R	I	G	H	T												D
16.8	20.5	22.0	25.7	29.1											14.8	4
A	H	E	A	D												D
15.5	19.6	23.2	26.1	30.2											17.5	4

Appendix D – W-IT6

WARNING SIGN ILLUSTRATION

Ramp: Vehicles Entering Highway

[Not to scale]



SIGN NUMBER	W-IT8
MUTCD CITATION	2A.06
WIDTH x HEIGHT	3'-0" x 3'-0"
BORDER WIDTH	0.875"
CORNER RADIUS	2.25"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective COLOR: Yellow
LEGEND/BORDER	TYPE: Reflective COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

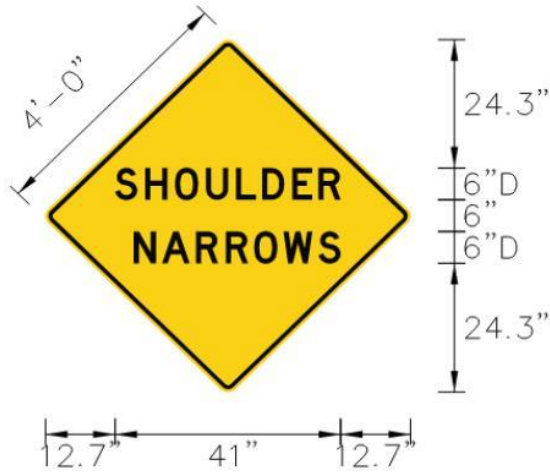
LETTER POSITIONS (X)																	LEN.	SERIES/ SIZE
V	E	H	I	C	L	E	S											D
11.7	15.5	18.7	22.3	23.9	27.4	30.5	33.7										24.7	4
E	N	T	E	R	I	N	G											D
11.8	15.0	18.4	21.6	24.8	28.5	30.0	33.7										24.6	4
H	I	G	H	W	A	Y												D
12.6	16.3	17.8	21.5	24.9	28.7	32.3											23.1	4

Appendix D – W-IT7

WARNING SIGN ILLUSTRATION

Mainline: Shoulder Narrows

[Not to scale]



SIGN NUMBER	W-IT9
MUTCD CITATION	2A.06
WIDTH x HEIGHT	4'-0" x 4'-0"
BORDER WIDTH	0.875"
CORNER RADIUS	2.25"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Yellow
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																LEN.	SERIES/ SIZE
S	H	O	U	L	D	E	R										D
12.7	18.2	23.6	29.3	34.7	39.5	45.0	49.8									41.1	6
N	A	R	R	O	W	S											D
16.1	21.3	27.4	32.9	38.0	43.4	49.8										37.3	6

APPENDIX E Plaza Sign Illustrations

Plaza (P) Sign Illustration List

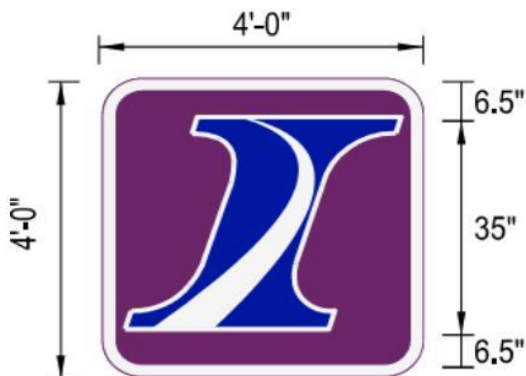
Number	Placement	Legend
P-IT2	Plaza	Mainline and Ramp: I-Pass Pictograph on Purple Background
P-IT4	Plaza	Mainline and Ramp: Toll Plaza Name – Plaza Number
P-IT5A	Plaza	Mainline and Ramp: IPO 15 MPH, Directional Arrow
P-IT5B	Plaza	Mainline and Ramp: IPO 15 MPH, Directional Arrow
P-IT5C	Plaza	Mainline and Ramp: IPO 15 MPH, Dual Directional Arrows
P-IT7A	Plaza	Mainline and Ramp: Tollbooth Illinois Tollway Banner, illinoistollway.com (Type I)
P-IT7B	Plaza	Mainline and Ramp: Tollbooth Illinois Tollway Banner, illinoistollway.com (Type II)
P-IT7C	Plaza	Mainline and Ramp: Tollbooth I-Pass Banner; Get I-Pass & Get Going, getipass.com
P-IT8A	Plaza	Mainline: Wide Sign
P-IT8B	Plaza	Mainline: Load Sign
P-IT11	Plaza	Ramp: Pay Toll This Ramp, Shield, Toll, Cardinal, Control Destination, Cross Arrow, Toll Panel
P-IT13A	Plaza	Tollbooth: Vehicle Tolls
P-IT14A	Plaza	Mainline and Ramp: Plaza XX, Unpaid Tolls? 14 Days to Pay Online, illinoistollway.com
P-IT15	Plaza	Overhead Open Road Tolling Signage
P-IT16	Plaza	Advance Toll: Pay Toll 2 Miles, I-Pass and E-Z Pass Pictographs, Accepted All Lanes
P-IT17A	Plaza	Plaza Exit Ramps: Avoid Fines, 14 Days to Pay
P-IT17B	Plaza	Non-Plaza Exit Ramps: Avoid Fines, 14 Days to Pay

Appendix E – P-IT2

PLAZA SIGN ILLUSTRATION

Mainline and Ramp: I-Pass Pictograph on Purple Background

[Not to scale]



SIGN NUMBER	P-IT2
MUTCD CITATION	2F.03, 2F.13
WIDTH x HEIGHT	4'-0" x 4'-0"
BORDER WIDTH	1"
CORNER RADIUS	3"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Purple
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
IPASS Logo	0	3.4	19.2	41.2	35

Dimensions are inches,tenths.
Letter locations are panel edge to lower left corner.

NOTE:
FOR USE AS A PANEL ON ANOTHER SIGN.

[illegible]

Appendix E – P-IT5A

PLAZA SIGN ILLUSTRATION**Mainline and Ramp: IPO 15 MPH, Directional Arrow**

[Not to scale]



SIGN NUMBER	P-IT5A
MUTCD CITATION	2A.06 & 2F.05
WIDTH x HEIGHT	1'-6" x 2'-0"
BORDER WIDTH	0.75"
CORNER RADIUS	1.75"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

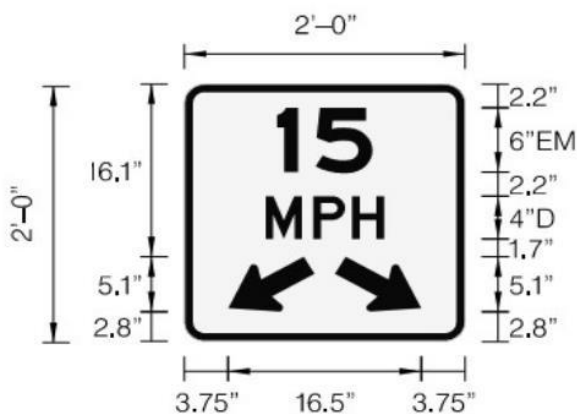
SYMBOL	ROT	X	Y	WID	HT
AR_Type D	240	4.4	1.9	5	10

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																LEN.	SERIES/ SIZE
1	5																EM 2000
4.2	8.4															8.2	6
M	P	H															EM 2000
3.9	8.0	11.3														10.1	4

[Not to scale]



SIGN NUMBER	P-ITSC
MUTCD CITATION	2A.06 & 2F.05
WIDTH x HEIGHT	2'-0" x 2'-0"
BORDER WIDTH	0.75"
CORNER RADIUS	1.75"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT
AR_Type D	120	3.7	2.8	5	8
AR_Type D	240	12.9	2.7	5	8

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

[illegible]

Get I-Pass & Get Going, getipass.com

[Not to scale]



SIGN NUMBER	P-IT7C
MUTCD CITATION	2A.06, 2F.18
WIDTH x HEIGHT	3'-6" x 0'-9"
BORDER WIDTH	0"
CORNER RADIUS	0"
MOUNTING	Tollbooth
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/None

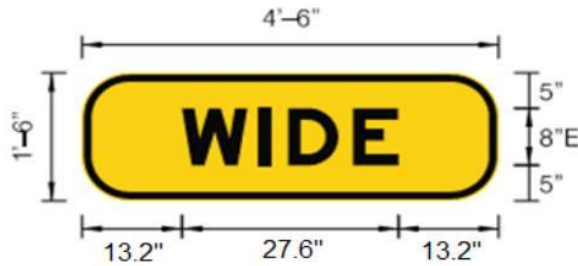
SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

[illegible]

[Not to scale]



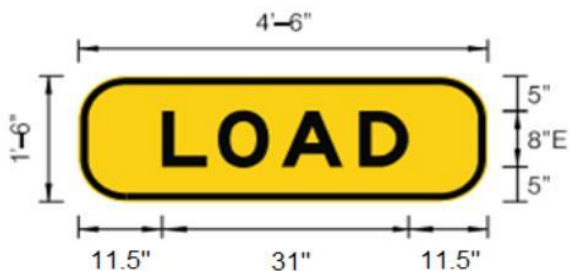
SIGN NUMBER	P-IT8A
MUTCD CITATION	2A.06, 2F.16
WIDTH x HEIGHT	4'-6" x 1'-6"
BORDER WIDTH	0.625"
CORNER RADIUS	1.5"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Yellow
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

[illegible]

[Not to scale]



SIGN NUMBER	P-IT8B
MUTCD CITATION	2A.06, 2F.16
WIDTH x HEIGHT	4'-6" x 1'-6"
BORDER WIDTH	0.625"
CORNER RADIUS	1.5"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Yellow
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

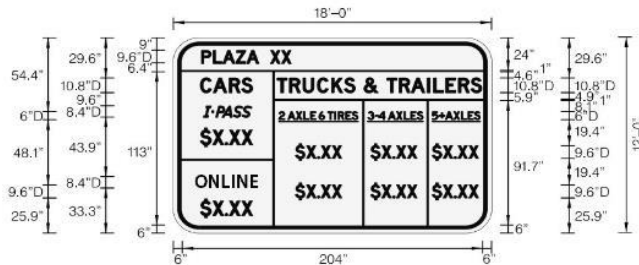
[illegible]

Appendix E – P-IT13A

PLAZA SIGN ILLUSTRATION

Toll Booth: Vehicle Tolls

[Not to scale]



SIGN NUMBER	P-IT13A
MUTCD CITATION	2A.06
WIDTH x HEIGHT	18'-0" x 12'-0"
BORDER WIDTH	1.5"
CORNER RADIUS	6"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

Dimensions are inches, tenths.

Letter locations are panel edge to lower left corner.

NOTE:

MANUFACTURE SHALL CENTER NOT AVAILABLE (N/A) LETTER LOCATIONS.

LETTER POSITIONS (X)																					LEN.	SERIES/ SIZE
P	L	A	Z	A		X	X														D 2000	
13.1	27.1	33.6																		60.9	9.6	
C	A	R	S		T	R	U	C	K	S	&	T	R	A	I	L	E	R	S		D 2000	
18.4	27.1	37.9	46.3		70.5	78.8	88.0	97.7	107.4	116.1	129.4	145.0	153.3	161.6	172.4	176.7	185.0	193.5	201.9	174.1	10.8	
/	.	P	A	S	S																D 2000	
8.4	14.4	16.8	20.4	28.8	34.8															N/A	8.4	
2	A	X	L	E		6	T	I	R	E	S		3	-	4	A	X	L	E	S	D 2000	
71.6	77.7	83.3	88.4	93.0		98.7	104.8	109.4	111.8	116.9	121.2		132.1	136.9	139.3	145.8	151.4	156.5	161.1	165.5	91.2	6
S	+	A	X	L	E	S															D 2000	
175.6	180.4	184.7	190.3	195.4	200.0	204.3															32.8	6
\$	X	.	X	X																	D 2000	
18.3	26.7	35.1	38.0	46.4																	35.4	10.8
\$	X	.	X	X		\$	X	.	X	X		\$	X	.	X	X					D 2000	
82.8	90.3	97.7	100.3	107.8		134.0	141.5	148.8	151.4	158.9		175.7	183.2	190.6	193.1	200.6					94.5	9.6
O	N	L	I	N	E																D 2000	
N/A	N/A	N/A	N/A	N/A	N/A																N/A	8.4
\$	X	.	X	X																	D 2000	
18.3	26.7	35.1	38.0	46.4																	35.4	10.8
\$	X	.	X	X		\$	X	.	X	X		\$	X	.	X	X					D 2000	
82.8	90.3	97.7	100.3	107.8		134.0	141.5	148.8	151.4	158.9		175.7	183.2	190.6	193.1	200.6					94.5	9.6

PLAZA SIGN ILLUSTRATION**Mainline and Ramps: Plaza XX, Unpaid Tolls?****14 Days to Pay Online, IllinoisTollway.com**

[Not to scale]



SIGN NUMBER	P-IT14A
MUTCD CITATION	2A.06, 2F.18
WIDTH x HEIGHT	4'-0" x 5'-0", 3'-0" x 5'-0",
BORDER WIDTH	0.75"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green, Yellow
LEGEND/BORDER	TYPE: Reflective
	COLOR: White, Black

SYMBOL	ROT	X	Y	WID	HT

NOTE:

FOR 3-DIGIT PLAZA NUMBERS, 5" B FONT SHALL BE USED
FOR "PLAZA"

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																			LEN.	SERIES/ SIZE			
P	L	A	Z	A		X	X				P	L	A	Z	A		X	X				D/C	
7.1	11.6	15.0	20.1	24.1	28.3	33.3	37.6				4.0	7.7	10.5	14.4	17.6	20.8	25.4	29.1				5.0	34/28
U	N	P	A	I	D						U	N	P	A	I	D							D
12.1	16.6	21.2	25.5	30.6	32.6						6.1	10.6	15.2	19.5	24.6	26.6						5.0	24
T	O	L	L	S	?						T	O	L	L	S	?							D
12.3	16.5	21.5	25.3	28.8	32.9						6.3	10.5	15.5	19.3	22.8	26.9						5.0	23
1	4		D	A	Y	S		T	O		1	4		D	A	Y	S		T	O			C/B
6.8	10.6	14.9	19.1	21.5	25.5	29.5	32.9	34.3	38.2		3.5	5.2	7.6	12.1	14.9	17.8	21.1	23.2	27.7	30.2	5.0		34.5/29
P	A	Y		O	N	L	I	N	E		P	A	Y		O	N	L	I	N	E			C/B
6.8	10.6	14.9	19.1	21.5	25.5	29.5	32.9	34.3	38.2		3.8	6.6	9.5	12.2	17.3	20.5	23.6	26.2	27.8	30.9	5.0		34.5/29
I	L	L	I	N	O	I	S	T	O	L	L	W	A	Y	.	C	O	M					B
5.0	6.1	8.2	10.2	11.3	13.6	19.1	17.2	19.4	21.4	23.9	25.9	27.6	30.2	32.5	35.0	36.4	38.6	41.4			4.0		38
I	L	L	I	N	O	I	S	T	O	L	L	W	A	Y	.	C	O	M					B
3.0	4.0	5.6	7.1	8.1	10.0	11.9	12.9	14.6	16.2	18.1	19.7	21.0	23.0	24.8	26.7	27.9	29.6	31.5			3.0		30

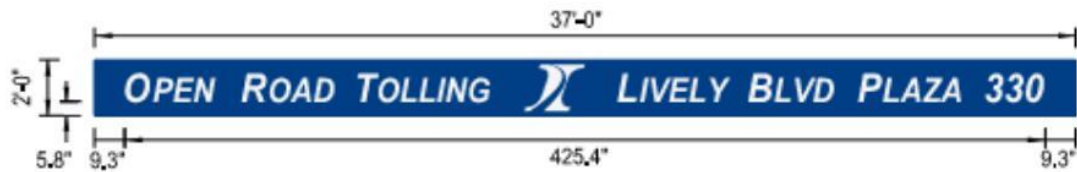
Appendix E – P-IT15

PLAZA SIGN ILLUSTRATION**Overhead Open Road Tolling Signage**

[Not to scale]

SIGN NUMBER	P-IT15
MUTCD CITATION	N/A
WIDTH x HEIGHT	37'-0" x 2'-0"
BORDER WIDTH	0"
CORNER RADIUS	0"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/Blue

SYMBOL	ROT	X	Y	WID	HT
Tollway Logo	0	193	2	24.7	20



Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																	LEN.	SERIES/ SIZE
O	P	E	N		R	O	A	D		T	O	L	L	I	N	G		ARIAL BOLD ITALIC
9.3	21.5	31.3	41.1		64.1	76.3	86.2	97.7		120.2	13.5	141.3	150.2	159.0	163.2	174.4	174.1	12.5/10.5
L	I	V	E	L	Y		B	L	V	D		P	L	A	Z	A		ARIAL BOLD ITALIC
226.1	235.5	240.6	249.4	259.2	269.2		291.6	303.3	313.2	322.0		344.5	356.1	364.2	375.2	383.7		12.5/10.5
3	3	0																ARIAL BOLD ITALIC
406.3	416.2	425.8															209.7	12.5/10.5

Appendix E – P-IT16

PLAZA SIGN ILLUSTRATION

Advance Toll: Pay Toll 2 Miles, I-Pass and E-Zpass

Pictograph, Accepted All Lanes

[Not to scale]



SIGN NUMBER	P-IT16
MUTCD CITATION	2A.06, 2F.07 & 2F.13
WIDTH x HEIGHT	19'-0" x 12'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead or Ground
BACKGROUND	TYPE: Reflective
	COLOR: Yellow, Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White

SYMBOL	ROT	X	Y	WID	HT
Ipass	0	40	62.1	33	33
EZPass	0	88.1	70.7	100.1	23.9

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

NOTE:
TOLLWAY SIGN SHOP TO DETERMINE TEXT PLACEMENT
DIMENSIONS FOR THE SIGN.

LETTER POSITIONS (X)																	LEN.	SERIES/ SIZE
P	A	Y		T	O	L	L		2		M	I	L	E	S			EM 2000
10.6	231.0	38.5		66.7	79.2	94.2	107.1		129.6		157.8	174.6	180.7	193.6	206.1		206.8	14, 20
A	C	C	E	P	T	E	D											EM 2000
52.2	70.7	86.9	103.5	118.7	133.0	147.7	162.9										123.7	16
A	L	L		L	A	N	E	S										EM 2000
44.8	63.8	78.6		106.6	119.8	138.9	156.0	170.2									138.4	16

Appendix E – P-IT17A

PLAZA SIGN ILLUSTRATION**Plaza Exit Ramps: Avoid Fines, 14 Days to Pay**

[Not to scale]



SIGN NUMBER	P-IT17A
MUTCD CITATION	2A.06 & 2F.18
WIDTH x HEIGHT	6'-0" x 4'-0"
BORDER WIDTH	0.75"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective COLOR: Green, Yellow
LEGEND/BORDER	TYPE: Reflective COLOR: White, Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																				LEN.	SERIES/ SIZE
P	L	A	Z	A		X	X													D	
19.0	23.6	27.0	32.1	36.1	40.3	45.3	49.6													33.9	5
A	V	O	I	D		F	I	N	E	S										D	
15.0	19.5	24.1	28.8	30.8	34.2	39.2	43.2	45.1	49.7	53.7										42.1	5
1	4		D	A	Y	S		T	O		P	A	Y							D	
6.6	8.8	12.5	17.5	21.8	26.3	31.4	34.8	39.8	43.8	47.3	52.3	56.6	61.1							58.7	5
I	L	L	I	N	O	I	S	T	O	L	L	W	A	Y	.	C	O	M		C	
6.0	7.7	11.0	14.3	16.0	19.8	23.7	25.4	28.9	32.3	36.2	39.5	42.2	46.3	49.6	53.3	55.3	58.9	62.8		60.0	5

Appendix E – P-IT17B

PLAZA SIGN ILLUSTRATION

Non-Plaza Exit Ramps: Avoid Fines, 14 Days to Pay

[Not to scale]



SIGN NUMBER	P-IT17B
MUTCD CITATION	2A.06 & 2F.18
WIDTH x HEIGHT	6'-0" x 3'-0"
BORDER WIDTH	0.75"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green, Yellow
LEGEND/BORDER	TYPE: Reflective
	COLOR: White, Black

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																				LEN.	SERIES/ SIZE
A	V	O	I	D		F	I	N	E	S											D
15.0	19.5	24.1	28.8	30.8	34.2	39.2	43.2	45.1	49.7	53.7										42.1	S
1	4		D	A	Y	S		T	O		P	A	Y								D
6.6	8.8	12.5	17.5	21.8	26.3	31.4	34.8	39.8	43.8	47.3	52.3	56.6	61.1							58.7	S
I	L	L	I	N	O	I	S	T	O	L	L	W	A	Y	.	C	O	M			C
6.0	7.7	11.0	14.3	16.0	19.8	23.7	25.4	28.9	32.3	36.2	39.5	42.2	46.3	49.6	53.3	55.3	58.9	62.8		60.0	S

APPENDIX F All Electronic Toll Collection Sign Illustrations

All Electronic Toll (AET) Collection Sign Illustration List

Number	Placement	Legend
AET-IT1	Electronic Toll	Toll Ahead: Toll Ahead, I-Pass Pictograph, Or Pay Online, Overhead Mainline
AET-IT2	Electronic Toll	Toll Ahead: Toll Ahead, I-Pass Pictograph, Or Pay Online, Ground Mounted Mainline
AET-IT3	Electronic Toll	Toll Ahead: Toll Ahead, I-Pass Pictograph, Or Pay Online, Ground Mounted Ramp
AET-IT4	Electronic Toll	Mainline or Ramp: Toll Rate Sign
AET-IT5	Electronic Toll	Ramp: I-Pass Pictograph, Or Pay Online on Purple Background
AET-IT6	Electronic Toll	Advance Guide to AET Facility: I-Pass Pictograph, Or Pay Online, Shield, Toll, XX Miles
AET-IT7	Electronic Toll	Crossroad: I-Pass Pictograph, Or Pay Online, Shield, Toll, Cardinal, Cross Arrow
AET-IT8	Electronic Toll	Crossroad: I-Pass Pictograph, Or Pay Online, Shield, Toll, Cardinal, Control Destination, Cross Arrow
AET-IT9	Electronic Toll	Crossroad: I-Pass Pictograph, Or Pay Online, Tolls, Cardinals, Shield, Action Messages (Type I)
AET-IT10	Electronic Toll	Advance Guide: I-Pass Pictograph, Or Pay Online, Shield, Street Name, X Mile
AET-IT11	Electronic Toll	Exit Direction: I-Pass Pictograph, Or Pay Online, Shield, Cardinal, Street Name, Directional Arrow
AET-IT12	Electronic Toll	Plaza Gantry: I-Pass or Pay Online
AET-IT13	Electronic Toll	Advance Guide: I-Pass or Pay Online, All Lanes, 15 MPH, Overhead
AET-IT14	Electronic Toll	Advance Guide: I-Pass or Pay Online, All Lanes, 15 MPH, Ground Mounted
AET-IT15	Electronic Toll	Advance Guide: I-Pass or Pay Online, 15 MPH, Directional Arrow, Overhead
AET-IT16	Electronic Toll	Advance Guide: I-Pass or Pay Online, 15 MPH, Down Arrow, Overhead
AET-IT17	Electronic Toll	Advance Guide: I-Pass or Pay Online, 15 MPH, Down Arrow, Ahead, Overhead
AET-IT18	Electronic Toll	Advance Guide: I-Pass or Pay Online, 2 Down Arrows, Overhead
AET-IT19	Electronic Toll	Advance Guide: I-Pass or Pay Online, I-88 West, 2 Down Arrows, Overhead
AET-IT20	Electronic Toll	Advance Guide: I-Pass or Pay Online, 3 Down Arrows, Overhead
AET-IT21	Electronic Toll	Advance Guide: I-Pass or Pay Online, 4 Down Arrows, Overhead
AET-IT22	Electronic Toll	Toll Ahead: Toll Ahead All Lanes, I-Pass or Pay Online, Overhead
AET-IT23	Electronic Toll	Toll Ahead: Next Exit, I-Pass or Pay Online, Ground
AET-IT24	Electronic Toll	Plaza Gantry: I-Pass Pictograph, Or Pay Online on Purple Background
AET-IT25	Electronic Toll	Toll Ahead: Toll Ahead All Lanes and Exits, I-Pass or Pay Online

Appendix F – AET-IT2

ALL ELECTRONIC TOLL SIGN ILLUSTRATION**Toll Ahead: Toll Ahead, I-Pass Pictograph, Or Pay
Online, Ground Mounted Mainline**

[Not to scale]



SIGN NUMBER	AET-IT2
MUTCD CITATION	2A.06 & 2F.13
WIDTH x HEIGHT	14'-0" x 6'-0"
BORDER WIDTH	2"
CORNER RADIUS	9"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green, White
LEGEND/BORDER	TYPE: Reflective
	COLOR: White, Black

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	11.3	7.0	24	24

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																	LEN.	SERIES/ SIZE
T	O	L	L		A	H	E	A	D									EM 2000
25.5	36.2	49.0	60.1		81.1	95.3	108.2	118.5	132.8								117.0	12
O	R		P	A	Y		O	N	L	I	N	E						D 2000
39.3	46.7		62.2	71.0	82.0		102.3	113.4	124.5	133.7	138.5	149.6					117.7	8, 12

Appendix F – AET-IT3

ALL ELECTRONIC TOLL SIGN ILLUSTRATION**Toll Ahead: Toll Ahead, I-Pass Pictograph, Or Pay
Online, Ground Mounted Ramp**

[Not to scale]



SIGN NUMBER	AET-IT3
MUTCD CITATION	2A.06 & 2F.13
WIDTH x HEIGHT	12'-0" x 5'-0"
BORDER WIDTH	2"
CORNER RADIUS	9"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green, White
LEGEND/BORDER	TYPE: Reflective
	COLOR: White, Black

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	10	7.0	24	24

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
T	O	L	L		A	H	E	A	D										EM 2000
23.3	32.2	42.8	52.0		69.6	81.5	92.2	100.8	112.7									97.4	10
O	R		P	A	Y		O	N	L	I	N	E							D 2000
36.0	42.5		55.3	62.7	71.8		88.4	97.7	106.9	114.6	118.6	127.8						98.0	7, 10

Appendix F – AET-IT4

ALL ELECTRONIC TOLL SIGN ILLUSTRATION**Mainline or Ramp: Toll Rate Sign**

[Not to scale]



SIGN NUMBER	AET-IT4
MUTCD CITATION	N/A
WIDTH x HEIGHT	6'-0" x 4'-0"
BORDER WIDTH	0.75"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

NOTE:
PRICES FOR EACH PLAZA SHOULD BE COORDINATED THROUGH
THE ILLINOIS TOLLWAY.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
P	L	A	Z	A		X	X	X											D 2000
14.2	19.2	23.2	28.8	33.4		44.5	49.2	53.8										43.7	6
C	A	R	S		I	●	P	A	S	S		\$	x	.	x	x			D 2000
3.3	6.8	11.4	15.3		22.9	24.7	29.1	33.0	37.6	41.5		52.1	56.1	59.7	61.8	65.7		65.5	4.5
C	A	R	S		O	N	L	I	N	E		\$	x	.	x	x			D 2000
3.3	6.8	11.4	15.3		22.9	27.1	31.2	34.8	36.6	40.7		52.1	56.1	59.7	61.8	65.7		65.5	4.5

[Not to scale]



SIGN NUMBER	AET-IT5
MUTCD CITATION	2F.13
WIDTH x HEIGHT	2'-0" x 3'-6"
BORDER WIDTH	1"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Purple, White
LEGEND/BORDER	TYPE: Reflective
	COLOR: White, Black

SYMBOL	ROT	X	Y	WID	HT

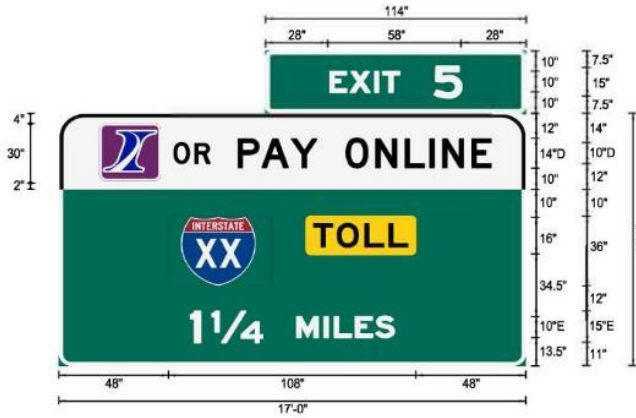
NOTE:
AUXILIARY SIGNAGE TO DIRECT MOTORIST TO AET FACILITY.

[illegible]

Appendix F – AET-IT6

ALL ELECTRONIC TOLL SIGN ILLUSTRATION**Advance Guide to AET Facility: I-Pass or Pay Online,
Shield, Toll, XX Miles**

[Not to scale]



SIGN NUMBER	AET-IT6
MUTCD CITATION	2A.06 & 2F.13
WIDTH x HEIGHT	17'-0" x 10'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green, White
LEGEND/BORDER	TYPE: Reflective
	COLOR: White, Black

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	14	86.0	30	30
M1_1	0	48	38.0	36	36

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

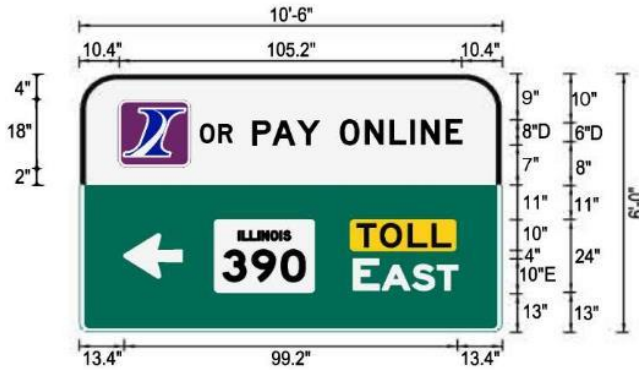
NOTE:
FOR USE ON CROSSING FREEWAY OR TOLL FACILITY.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
E	X	I	T		S													58.0	E 2000
28.0	36.8	47.6	51.4		73.8														10, 15
O	R		P	A	Y		O	N	L	I	N	E						139.0	D 2000
51.0	60.3		79.1	89.4	102.2		126.2	139.2	152.1	162.9	168.5	181.4							10, 14
T	O	L	L															36.3	E 2000
108.0	115.1	123.7	131.0																10
1	1/4		M	I	L	E	S											88.2	E 2000
57.9	67.8		102.9	115.0	119.8	128.8	138.8												15, 10

Appendix F – AET-IT7

ALL ELECTRONIC TOLL SIGN ILLUSTRATION**Crossroad: I-Pass or Pay Online, Shield, Toll,****Cardinal, Cross Arrow**

[Not to scale]



SIGN NUMBER	AET-IT7
MUTCD CITATION	2A.06 & 2F.13
WIDTH x HEIGHT	10'-6" x 6'-0"
BORDER WIDTH	2"
CORNER RADIUS	9"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White, Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	10.4	50.0	18	18
ARSHRT	180	13.4	17.9	17.2	14.2
M1-I100A	0	40.6	13.0	30	24

Dimensions are inches.tenths.
 Letter locations are panel edge to lower left corner.

NOTE:
 THE WIDTH OF HIS SIGN VARIES BASED ON THE DIRECTION TEXT
 LENGTH. THIS SIGN SHALL BE 10'-6" WHEN USING EAST AND
 WEST OR 11'-0" WHEN USING NORTH OR SOUTH.

LETTER POSITIONS (X)																LEN.	SERIES/ SIZE
O	R		P	A	Y		O	N	L	I	N	E					D 2000
37.4	43.0		53.0	59.0	66.2		79.1	86.6	93.9	100.1	103.3	110.6				78.2	6, 8
T	O	L	L														E 2000
82.5	89.5	97.8	104.9													28.1	6
E	A	S	T														E 2000
80.6	89.0	98.3	106.0													31.3	10/8

Appendix F – AET-IT8

ALL ELECTRONIC TOLL SIGN ILLUSTRATION**Crossroad: I-Pass or Pay Online, Shield, Toll,****Cardinal, Control Destination, Cross Arrow**

[Not to scale]



SIGN NUMBER	AET-IT8
MUTCD CITATION	2A.06 & 2F.13
WIDTH x HEIGHT	VARIES x 8'-6"
BORDER WIDTH	2"
CORNER RADIUS	6"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White, Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	7	80.0	18	18
M1_1	0	14.5	50.0	22	22
AR_A_Extended	90	44.7	10.0	13.5	30.6

Dimensions are inches.tenths.
 Letter locations are panel edge to lower left corner.

NOTES:

- SIGN WIDTH WILL VARY BASED ON SIZE OF CONTROL CITY NAME.
- SIGN TO BE CONTRACTOR FABRICATED.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
O	R		P	A	Y		O	N	L	I	N	E						D 2000	
27.5	32.9		43.1	49.8	58.1		72.0	80.0	88.0	94.9	98.3	106.3					84.4	6, 8	
T	O	L	L															E 2000	
47.4	53.0	60.0	65.8														22.7	6	
E	A	S	T															E 2000	
46.4	54.4	62.9	69.8														29.0	10, 8	
C	h	i	c	a	g	o												EM 2000	
29.2	40.1	50.7	55.8	64.6	74.3	84.0											61.6	10/7.3	

Appendix F – AET-IT9

ALL ELECTRONIC TOLL SIGN ILLUSTRATION

**Crossroad: I-Pass or Pay Online, Toll, Cardinals,
Shield, Action Messages (Type I)**

[Not to scale]



SIGN NUMBER	AET-IT9
MUTCD CITATION	2D.45 & 2F.13
WIDTH x HEIGHT	12'-6" x 9'-0"
BORDER WIDTH	2"
CORNER RADIUS	6"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White, Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	11	86.0	18	18
M1_1	0	60	44.0	30	24

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

NOTE:

"KEEP LEFT /KEEP RIGHT" MESSAGE CAN BE REPLACED BY "LEFT LANE/RIGHT LANE" DEPENDING ON SITE GEOMETRY.

LETTER POSITIONS (X)																	LEN.	SERIES/ SIZE
O	R		P	A	Y		O	N	L	I	N	E						D 2000
38.0	45.5		58.9	66.3	75.4		92.0	101.3	110.5	118.2	122.2	131.4					99.6	6, 8
T	O	L	L		T	O	L	L										E 2000
14.7	20.0	26.4	32.0		102.4	107.7	114.1	119.7									43.6	6
S	O	U	T	H		N	O	R	T	H								E 2000
10.9	20.5	29.1	36.9	44.3		99.1	109.3	117.9	125.2	132.6							80.0	10, 8
K	E	E	P															EM 2000
10.9	18.9	26.5	34.1														29.6	8
K	E	E	P															EM 2000
107.5	115.4	123	130.6														29.6	8
L	E	F	T															EM 2000
11.9	19.3	26.9	33.5														27.6	8
R	I	G	H	T														EM 2000
105.5	113.6	116.9	125.2	133.1													33.5	8

Appendix F – AET-IT10

ALL ELECTRONIC TOLL SIGN ILLUSTRATION**Advance Guide: I-Pass or Pay Online, Shield,****Street Name, X Mile**

[Not to scale]



SIGN NUMBER	AET-IT10
MUTCD CITATION	2E.33
WIDTH x HEIGHT	VARIES x 13'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White, Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	15	120.0	30	30
M1_4	0	81	67.6	36	36

NOTES:

- SIGN WIDTH WILL VARY BASED ON SIZE OF STREET NAME.
- SEE G-IT8 SERIES FOR INFORMATION ON EXIT NUMBER PLAQUE.

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																	LEN.	SERIES/ SIZE
O	R		P	A	Y		O	N	L	I	N	E						D 2000
48.0	57.3		76.1	86.4	99.2		123.2	136.2	149.1	159.9	165.5	178.4					139.0	10, 14
S	t	r	e	e	t		N	a	m	e								EM 2000
19.2	35.6	49.0	59.4	73.5	87.4	95.7	111.7	128.7	145.6	168.2							159.5	16/12
X		M	I	L	E													EM 2000
68.4		96.5	108.5	112.9	122.1												61.2	15, 10

[Not to scale]



SIGN NUMBER	AET-IT11
MUTCD CITATION	2E.36
WIDTH x HEIGHT	VARIES x 12'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White, Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	24	110.0	30	30
M1_4	0	75.2	56.5	36	36
AR_Type A	315	205.6	23.0	20	31.5

1. SIGN WIDTH WILL VARY BASED ON SIZE OF STREET NAME.
2. INTERCHANGE EXIT NUMBERS SHALL BE DISPLAYED ON A SEPARATE PLAQUE AT THE TOP OF EACH ADVANCE GUIDE AND EXIT DIRECTION SIGN.

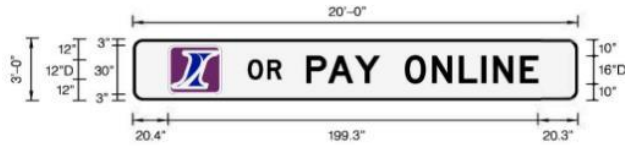
Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

[illegible]

Appendix F – AET-IT12

ALL ELECTRONIC TOLL SIGN ILLUSTRATION**Plaza Gantry: I-Pass or Pay Online**

[Not to scale]



SIGN NUMBER	AET-IT12
MUTCD CITATION	N/A
WIDTH x HEIGHT	20'-0" x 3'-0"
BORDER WIDTH	2"
CORNER RADIUS	5"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, Black

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	20.4	2.9	30	30

Dimensions are inches.tenths.

Letter spacings are to start of next letter.

LETTER POSITIONS (X)																	LEN.	SERIES/ SIZE
	O	R																D 2000
60.4	9.5	6.7	163.4														16.2	12
	P	A	Y		O	N	L	I	N	E								D 2000
90.6	11.8	14.6	13.8	16.0	14.9	14.7	12.3	6.4	14.7	9.9	20.3						129.1	16

[Not to scale]



SIGN NUMBER	AET-IT13
MUTCD CITATION	2F.13
WIDTH x HEIGHT	18'-0" x 9'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White, Green, Yell.
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	21.7	74.0	30	30

Letter locations are panel edge to lower left corner.

[illegible]

Appendix F – AET-IT14

ALL ELECTRONIC TOLL SIGN ILLUSTRATION

**Advance Guide: I-Pass or Pay Online, All Lanes,
15 MPH, Ground Mounted**

[Not to scale]



SIGN NUMBER	AET-IT14
MUTCD CITATION	2F.13
WIDTH x HEIGHT	14'-0" x 9'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective COLOR: White, Green, Yell.
LEGEND/BORDER	TYPE: Reflective COLOR: Black, White

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	11	77.0	24	24

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																	LEN.	SERIES/ SIZE
O	R																	D
40.5	48.0																16.2	8
P	A	Y		O	N	L	I	N	E									D
59.0	69.3	80.1	90.2	102.2	113.5	124.5	134.0	138.8	149.7								114.4	12
A	L	L		L	A	N	E	S										EM
23.1	40.0	53.2	63.4	77.4	88.7	105.6	120.3	133.5									121.8	14
1	S	M	P	H														E
50.7	59.0	80.9	95.1	107.7													66.6	15, 12

Appendix F – AET-IT15

ALL ELECTRONIC TOLL SIGN ILLUSTRATION**Advance Guide: I-Pass or Pay Online, 15 MPH,****Directional Arrow, Overhead**

[Not to scale]



SIGN NUMBER	AET-IT15
MUTCD CITATION	2F.13
WIDTH x HEIGHT	18'-0" x 9'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White, Green, Yell.
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White, Black

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	21.7	74.0	30	30
AR_Type A	45	94.2	5.0	22.2	35.6

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
O	R																		D
55.3	64.7																	16.2	10
P	A	Y		O	N	L	I	N	E										D
79.9	92.0	104.6	116.4	130.4	143.6	156.3	167.5	173.0	185.8									114.4	14
1	5	M	P	H															E
74.7	83.0	105.0	119.1	131.7														66.6	15, 12

Appendix F – AET-IT16

ALL ELECTRONIC TOLL SIGN ILLUSTRATION**Advance Guide: I-Pass or Pay Online, 15 MPH,****Down Arrow, Overhead**

[Not to scale]



SIGN NUMBER	AET-IT16
MUTCD CITATION	2F.13
WIDTH x HEIGHT	18'-0" x 9'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White, Green, Yell.
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White, Black

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	21.7	74.0	30	30
ARROW	0	92.1	8.0	32	22

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
O	R																	16.2	10
55.3	64.7																		
P	A	Y		O	N	L	I	N	E									114.4	14
79.9	92.0	104.6	116.4	130.4	143.6	156.3	167.5	173.0	185.8										
1	5	M	P	H														66.6	15, 12
74.7	83.0	105.0	119.1	131.7															

Appendix F – AET-IT17

ALL ELECTRONIC TOLL SIGN ILLUSTRATION**Advance Guide: I-Pass or Pay Online, 15 MPH,****Down Arrow, Ahead, Overhead**

[Not to scale]



SIGN NUMBER	AET-IT17
MUTCD CITATION	2F.13
WIDTH x HEIGHT	18'-0" x 11'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White, Green, Yell.
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White, Black

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	21.7	98.0	30	30
ARROW	0	92.1	8.0	32	22

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
O	R																	16.2	10
55.3	64.7																		
P	A	Y		O	N	L	I	N	E									114.4	14
79.9	92.0	104.6	116.4	130.4	143.6	156.3	167.5	173.0	185.8										
1	5	M	P	H														66.6	15, 12
74.7	83.0	105.0	119.1	131.7															
A	H	E	A	D														61.7	12
77.2	91.7	104.3	114.8	129.3															

Advance Guide: I-Pass or Pay Online, 2 Down Arrows, Overhead

Diagram of a variable message sign (VMS) showing dimensions and layout. The sign is rectangular with a white top section and a green bottom section. The top section contains a blue and white logo on the left and the text "OR PAY ONLINE" in black. The green section contains two white downward-pointing arrows. Dimensions are provided in feet and inches.

Overall dimensions: 18'-0" (width) x 6'-0" (height).

Section dimensions (from top to bottom):

- White top section: 14" high.
- Green bottom section: 38.5" high.

Text and graphics dimensions:

- Logo width: 21.7"
- Text "OR PAY ONLINE" width: 172.6"
- Text "OR PAY ONLINE" height: 12"
- Arrow height: 22"
- Arrow width: 11.5"

Sign body dimensions: 144" (width) x 36" (margin on each side).

SIGN NUMBER	AET-IT18
MUTCD CITATION	2F.15
WIDTH x HEIGHT	18'-0" x 9'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White, Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	21.7	74.0	30	30
ARDOWN	0	20	11.5	32	22
ARDOWN	0	164.1	11.5	32	22

Letter locations are panel edge to lower left corner.

[illegible]

ALL ELECTRONIC TOLL SIGN ILLUSTRATION

**Advance Guide: I-Pass or Pay Online, I-88 West,
2 Down Arrows, Overhead**

[Not to scale]



SIGN NUMBER	AET-IT19
MUTCD CITATION	2E.12 & 2F.15
WIDTH x HEIGHT	VARIES x 13'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White, Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	21.7	122.0	30	30
M1_1	0	52	71.0	36	36
ARROW	0	20	9.0	32	22
ARROW	0	164.1	9.0	32	22

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																LEN.	SERIES/ SIZE
O	R																D
55.3	64.7															16.2	10
P	A	Y		O	N	L	I	N	E								D
79.9	92.0	104.6	116.4	130.4	143.6	156.3	167.5	173.0	185.8							114.4	14
W	E	S	T														E
103.0	120.2	131.5	143.5													49.3	15, 12
I	o	w	a														EM
82.2	90.9	104.7	123.7													51.6	16/12

Advance Guide: I-Pass or Pay Online, 3 Down Arrows, Overhead

Diagram of a rectangular overhead sign with dimensions and layout. The sign is divided into two main horizontal sections. The top section is white and contains a blue square logo with a white stylized 'P' on the left, followed by the text 'OR PAY ONLINE' in black. The bottom section is green and contains three white downward-pointing arrows. Dimensions are provided in inches. The overall height is 6'-0" (72"). The top section is 13" high, and the bottom section is 38.5" high. The sign is 144" wide. The top section is 30" wide on the left and 30" wide on the right. The bottom section is 144" wide. The sign is 11.5" high at the bottom. The sign is 11.5" high at the bottom. The sign is 11.5" high at the bottom.

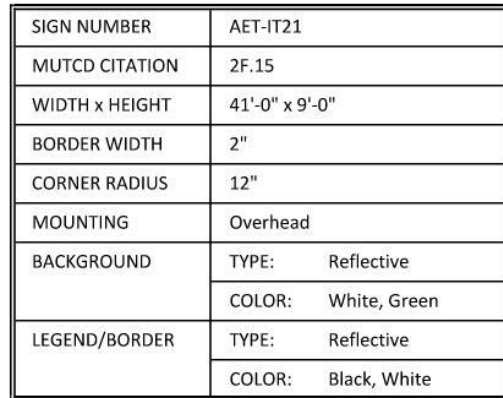
SIGN NUMBER	AET-IT20
MUTCD CITATION	2F.15
WIDTH x HEIGHT	29'-0" x 9'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White, Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	70.6	74.0	30	30
ARDOWN	0	14	11.5	32	22
ARDOWN	0	158.1	11.5	32	22
ARDOWN	0	302.1	11.5	32	22

Letter locations are panel edge to lower left corner.

[illegible]

[Not to scale]



Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

MARCH 2025 | ILLINOIS TOLLWAY

ALL ELECTRONIC TOLL SIGN ILLUSTRATION

Toll Ahead: Toll Ahead All Lanes, I-Pass or Pay Online,

Overhead

[Not to scale]



SIGN NUMBER	AET-IT22
MUTCD CITATION	2A.06 & 2F.13
WIDTH x HEIGHT	25'-0" x 6'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White, Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	63.7	4.0	30	30

Dimensions are inches,tenths.

Letter locations are panel edge to lower left corner.

[illegible]

[Not to scale]



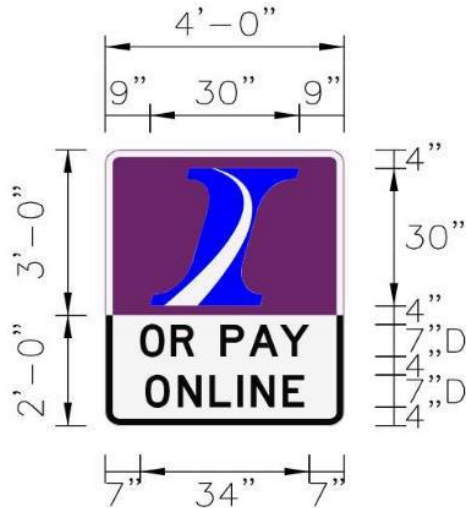
SIGN NUMBER	AET-IT23
MUTCD CITATION	2A.06 & 2F.13
WIDTH x HEIGHT	14'-0" x 6'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White, Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	11	7.0	24	24

Letter locations are panel edge to lower left corner.

[illegible]

[Not to scale]



SIGN NUMBER	AET-IT24
MUTCD CITATION	2F.13
WIDTH x HEIGHT	4'-0" x 5'-0"
BORDER WIDTH	1.5"
CORNER RADIUS	3"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Purple, White
LEGEND/BORDER	TYPE: Reflective
	COLOR: White, Black

SYMBOL	ROT	X	Y	WID	HT
IPass Logo	0	9	26.0	30	30

Letter locations are panel edge to lower left corner.

[illegible]

Appendix F – AET-IT25

ALL ELECTRONIC TOLL SIGN ILLUSTRATION

**Toll Ahead: Toll Ahead, All Lanes and Exites,
I-Pass or Pay Online, Overhead**

[Not to scale]



SIGN NUMBER	AET-IT25
MUTCD CITATION	2A.06 & 2F.13
WIDTH x HEIGHT	23'-0" x 8'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White, Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black, White

SYMBOL	ROT	X	Y	WID	HT
ARROW	0	51.7	4.0	30	30

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																			LEN.	SERIES/ SIZE
T	O	L	L		A	H	E	A	D											EM
69.1	82.3	97.5	110.6	120.9	134.9	151.8	166.6	178.8	195.7										137.8	14
A	L	L		L	A	N	E	S		A	N	D		E	X	I	T	S		EM
13.9	30.7	43.8	54.0	67.6	78.8	95.6	110.2	123.3	134.5	148.0	164.8	179.4	190.6	204.1	217.2	232.1	237.6	250.7	248.2	14
O	R																			D
85.3	94.7																		16.2	10
P	A	Y		O	N	L	I	N	E											D
109.9	122.0	134.6	146.4	160.4	173.6	186.3	197.5	203.0	215.8										114.4	14

APPENDIX G Information Sign Illustrations

Information (I) Sign Illustration List

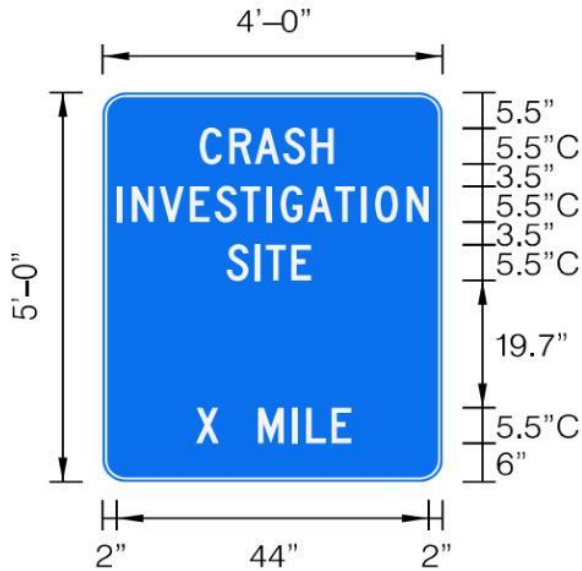
Number	Placement	Legend
I-T1A	Mainline	Crash Investigation Site: X Mile
I-T1B	Mainline	Crash Investigation Site: Keep Right, Thru Tollbooth
I-T1C	Mainline	Crash Investigation Site: Directional Arrow
I-T1D	Mainline	Crash Investigation Site: Information for Plaza Sites
I-T1E	Mainline	Crash Investigation Site: Information for Stand Alone Sites
I-T2	Mainline	Milepost Marker Variations
I-T3A	Exit	Alternate Transportation: Transportation Agency Logos
I-T3B	Exit	Alternate Transportation: Suburban Transit Information
I-T3C	Mainline	Alternate Transportation: Share the Drive
I-T3D	Mainline	Alternate Transportation: Park-Ride
I-T4A	Bridge	Identification: Interstate Route XX
I-T4B	Bridge	Identification: XX th Street
I-T4C	Feature	Identification: Waterway Name
I-T4D	Boundary	Identification: Name County
I-T4E	Mainline	Identification: Memorial Highway
I-T5A	Pictograph	Pictograph: Cash (for standard sign panels in this manual)
I-T5B	Pictograph	Pictograph: I-Pass (for standard sign panels in this manual)
I-T5C	Pictograph	Pictograph: EZ Pass on Purple Background
I-T5D	Pictograph	Pictograph: Toll on Yellow Background
I-T6	Mainline	Sponsorship Sign
I-T7	Mainline	Tollway Approach: Welcome, AET Payment (IL-390, I-90, I-94)
I-T8	Mainline	Identification: Tollway Exit Thank You
I-T9	Mainline	Oasis Distance: Name Oasis, XX Miles
I-T10	Mainline	Oasis Advance: Name of Oasis, Prime Food Symbol, Prime Fuel Symbol, Open 24 Hours, XX Miles
I-T11	Mainline	Oasis Exit Direction: Name of Oasis, Prime Food Symbol, Prime Fuel Symbol, Directional Arrow, Open 24 Hours
I-T12	Oasis	Oasis Exit Gore: Oasis, Directional Arrow
I-T13	Mainline	General Services: Hospital
I-T14	Mainline	Advance Guide: Customer Service Center, 1 Mile, Ground Mounted
I-T15	Mainline	Advance Guide: Customer Service Center, Keep Right, Ground Mounted
I-T16	Mainline	Advance Guide: Customer Service Center, Next Right, Ground Mounted
I-T17	Mainline	Advance Guide: Customer Service Center, Right Lane, Ground Mounted
I-T18	Plaza	Advance Guide: Customer Service Center, Parking, Ground Mounted, Up/Right Arrow

Number	Placement	Legend
I-IT19	Plaza	Advance Guide: Customer Service Center, Parking, Ground Mounted, Right Arrow
I-IT20	Plaza	Plaza: Oversized Vehicles, Plaza Assistance
I-IT21	Mainline	General Services: *999 Help Service Patrol, Sponsored
I-IT22	Mainline	General Services: Call *999 for Roadside Assistance

Appendix G – I-IT1A

INFORMATION SIGN ILLUSTRATION**Crash Investigation Site: X Mile**

[Not to scale]



SIGN NUMBER	I-IT1A
MUTCD CITATION	Chapter 2I
WIDTH x HEIGHT	4'-0" x 5'-0"
BORDER WIDTH	0.33"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches, tenths.

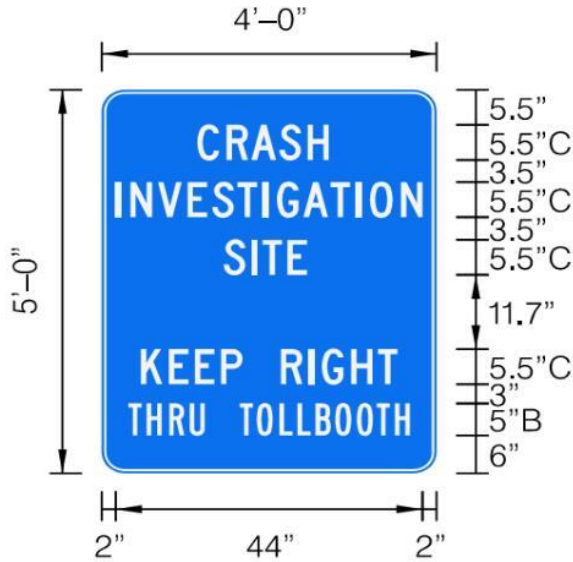
Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																			LEN.	SERIES/ SIZE
C	R	A	S	H																C 2000
13.7	17.9	21.5	25.5	29.5															18.9	5.5
I	N	V	E	S	T	I	G	A	T	I	O	N								C 2000
2.0	4.1	8.0	12.3	15.8	19.5	231.0	25.1	28.9	32.8	36.5	38.5	42.9							44.0	5.5
S	I	T	E																	C 2000
17.5	21.5	23.0	26.6																11.9	5.5
X		M	I	L	E															C 2000
13.2		21.9	26.8	28.7	32.3														21.9	5.5

Appendix G – I-IT1B

INFORMATION SIGN ILLUSTRATION**Crash Investigation Site: Keep Right, Thru Tollbooth**

[Not to scale]



SIGN NUMBER	I-IT1B
MUTCD CITATION	Chapter 2I
WIDTH x HEIGHT	4'-0" x 5'-0"
BORDER WIDTH	0.33"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

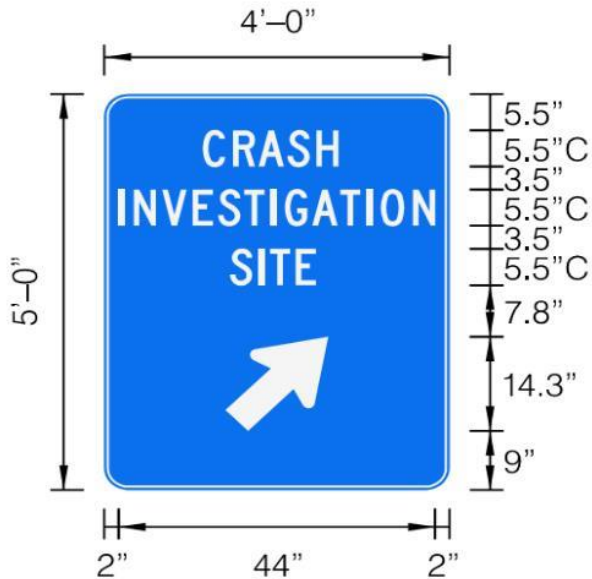
SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																				LEN.	SERIES/ SIZE
C	R	A	S	H																	C 2000
13.7	17.9	21.5	25.5	29.5																18.9	5.5
I	N	V	E	S	T	I	G	A	T	I	O	N									C 2000
2.0	4.1	8.0	12.3	15.8	19.5	231.0	25.1	28.9	32.8	36.5	38.5	42.9								44.0	5.5
S	I	T	E																		C 2000
17.5	21.5	23.0	26.6																	11.9	5.5
K	E	E	P		R	I	G	H	T												C 2000
5.6	9.6	13.4	17.1		25.7	29.7	31.6	35.8	39.6											36.8	5.5
T	H	R	U		T	O	L	L	B	O	O	T	H								B 2000
3.8	6.4	9.7	12.6		19.8	22.2	25.5	28.1	30.7	33.5	36.6	39.4	42.0							40.4	5

[Not to scale]



SIGN NUMBER	I-IT1C
MUTCD CITATION	Chapter 2I
WIDTH x HEIGHT	4'-0" x 5'-0"
BORDER WIDTH	0.33"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
AR_Type D	315	16.9	9	12	18

[illegible]

Appendix G – I-IT1D

INFORMATION SIGN ILLUSTRATION

Crash Investigation Site: Information for Plaza Sites

[Not to scale]



Dimensions are inches, tenths.

Letter locations are panel edge to lower left corner.

SIGN NUMBER	I-IT1D
MUTCD CITATION	Chapter 2I
WIDTH x HEIGHT	4'-0" x 5'-0"
BORDER WIDTH	0.33"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
AR_Type D	315	16.9	9	12	18

LETTER POSITIONS (X)																					LEN.	SERIES/ SIZE
P	L	A	Z	A		3	0														C 2000	
9.9	13.7	16.5	20.2	23.4		31.6	35.2													28.3	5	
N	O	R	T	H	B	O	U	N	D		I	-	2	9	4						C 2000	
4.6	7.3	10.1	12.4	14.7	17.5	20.0	22.8	25.6	28.3		34.0	35.0	36.5	38.9	41.2					38.8	3.5	
C	R	A	S	H		I	N	V	E	S	T	I	G	A	T	I	O	N			C 2000	
2.0	4.7	7.0	9.6	12.2		18.1	19.4	21.9	24.6	26.9	29.2	31.5	32.8	35.2	37.7	40.0	40.0	41.3	44.1	44.1	3.5	
S	I	T	E																		C 2000	
20	22.7	23.8	26.2																	8.0	3.5	
T	O		R	E	P	O	R	T		A		C	R	A	S	H					C 2000	
2.3	4.5		10.1	12.6	15.0	17.6	20.4	22.7		28		33.7	36.4	38.6	41.2	43.8				43.4	3.5	
C	A	L	L		*	9	9	9													C 2000	
13.3	15.7	18.4	20.6		25.7	28	30.4	32.7												21.4	3.5	
I	L	L	I	N	O	I	S		S	T	A	T	E		P	O	L	I	C	E	C 2000	
3	4	6.2	8.3	9.3	11.8	14.4	15.3		19.7	21.9	23.9	26.3	28.4		32.7	35.1	37.6	39.8	40.8	43.2	42.0	3.5
E	M	E	R	G	E	N	C	Y		D	I	A	L		9	1	1				C 2000	
2	4.5	7.8	10.4	13	15.9	18.4	21.2	23.8		29.3	32.1	33.1	36.1		41.1	43.7	45.2			44.0	4	

Appendix G – I-IT1E

INFORMATION SIGN ILLUSTRATION

Crash Investigation Site: Information for
Stand Alone Sites

[Not to scale]



Dimensions are inches, tenths.

Letter locations are panel edge to lower left corner.

SIGN NUMBER	I-IT1E
MUTCD CITATION	Chapter 2I
WIDTH x HEIGHT	4'-0" x 5'-0"
BORDER WIDTH	0.33"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
AR_Type D	315	16.9	9	12	18

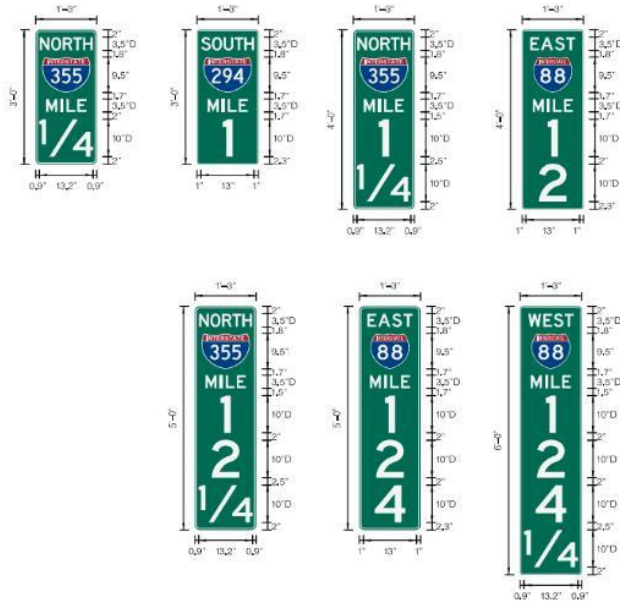
LETTER POSITIONS (X)																				LEN.	SERIES/ SIZE	
W	E	S	T	B	O	U	N	D		I	-	8	8								C 2000	
2.2	6.6	9.6	12.7	15.8	19.2	22.9	26.5	30.2		36.8	38.1	40.2	43.4							44.0	5	
M	I	L	E	P	O	S	T		1	2	7	.	5								C 2000	
8.7	11.8	13.0	15.3	17.7	20.3	22.9	25.1		30.4	31.8	34.0	36.5	37.4							30.6	3.5	
C	R	A	S	H		I	N	V	E	S	T	I	G	A	T	I	O	N			C 2000	
2.0	4.7	7.0	9.6	12.2		18.1	19.4	21.9	24.6	26.9	29.2	31.5	32.8	35.2	37.7	40.0	40.0	41.3	44.1		44.1	3.5
S	I	T	E																		C 2000	
20	22.7	23.8	26.2																	8.0	3.5	
T	O		R	E	P	O	R	T		A		C	R	A	S	H					C 2000	
2.3	4.5		10.1	12.6	15.0	17.6	20.4	22.7		28		33.7	36.4	38.6	41.2	43.8				43.4	3.5	
C	A	L	L		*	9	9	9													C 2000	
13.3	15.7	18.4	20.6		25.7	28	30.4	32.7												21.4	3.5	
I	L	L	I	N	O	I	S		S	T	A	T	E		P	O	L	I	C	E	C 2000	
3	4	6.2	8.3	9.3	11.8	14.4	15.3		19.7	21.9	23.9	26.3	28.4		32.7	35.1	37.6	39.8	40.8	43.2	42.0	3.5
E	M	E	R	G	E	N	C	Y		D	I	A	L		9	1	1				C 2000	
2	4.5	7.8	10.4	13	15.9	18.4	21.2	23.8		29.3	32.1	33.1	36.1		41.1	43.7	45.2				44.0	4

Appendix G – I-IT2

INFORMATION SIGN ILLUSTRATION

Milepost Marker Variations

[Not to scale]



Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

SIGN NUMBER	I-IT2
MUTCD CITATION	2H.05 & 2H.06
WIDTH x HEIGHT	1'-3" x VARIES
BORDER WIDTH	0.25"
CORNER RADIUS	1"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

LETTER POSITIONS (X)																	LEN.	SERIES/ SIZE
N	O	R	T	H														D 2000
1.0	3.8	6.7	9.2	11.6													13.0	3.5
M	I	L	E															D 2000
2.6	6.2	7.6	10.3														9.8	3.5
1																		D 2000
6.3																	2.5	10
2																		D 2000
4.1																	6.8	10
1/4																		D 2000
0.9																	13.2	10

INFORMATION SIGN ILLUSTRATION

SIGN NUMBER

I-IT3A

Alternate Transportation: Transportation Agency Logos

[Not to scale]

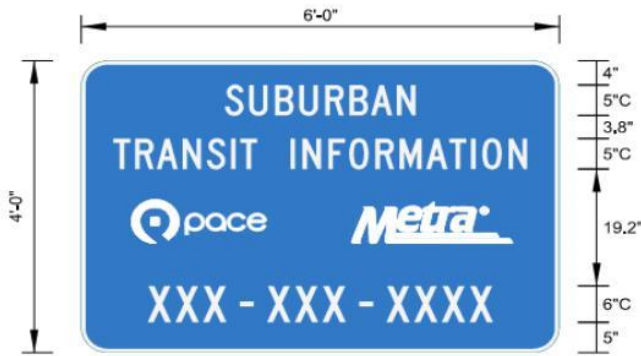
**NOTE:**

LOGO AND/OR PICTOGRAPHS SHOWN ARE FOR INFORMATION ONLY. DSE TO VERIFY THAT LOGO AND/OR PICTOGRAPH IS CURRENTLY IN USE BY THE CORRESPONDING AGENCY

Appendix G – I-IT3B

INFORMATION SIGN ILLUSTRATION**Alternate Transportation: Suburban Transit Information**

[Not to scale]



SIGN NUMBER	I-IT3B
MUTCD CITATION	Chapter 2I
WIDTH x HEIGHT	6'-0" x 4'-0"
BORDER WIDTH	1"
CORNER RADIUS	6"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

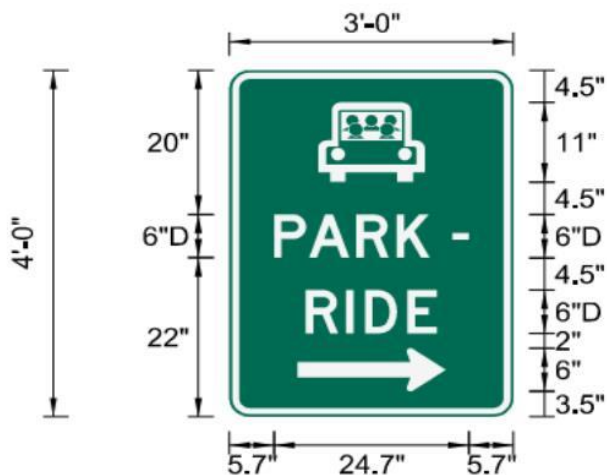
SYMBOL	ROT	X	Y	WID	HT
Pace	0	7	18	22	8.3
Metra	0	40.7	18	24.3	6.7

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

NOTE:
DESIGNER TO VERIFY AND SHOW NUMBER TO BE USED ON SIGN.

LETTER POSITIONS (X)																				LEN.	SERIES/ SIZE
S	U	B	U	R	B	A	N														C 2000
21.7	25.3	29.2	32.9	36.8	40.4	43.7	47.6													28.7	5
T	R	A	N	S	I	T		I	N	F	O	R	M	A	T	I	O	N			C 2000
4.9	8.1	11.4	15.3	18.9	22.6	24.0		31.5	33.3	37.2	40.4	44.3	48.0	52.0	55.5	58.7	60.4	64.4		62.3	5
X	X	X	-	X	X	X	-	X	X	X	X										C 2000
10.0	14.0	18.0	23.5	27.6	31.6	35.5	41.1	45.2	49.2	53.2	57.2									51.2	6

[Not to scale]



SIGN NUMBER	I-IT3D
MUTCD CITATION	2D.48
WIDTH x HEIGHT	3'-0" x 4'-0"
BORDER WIDTH	1"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

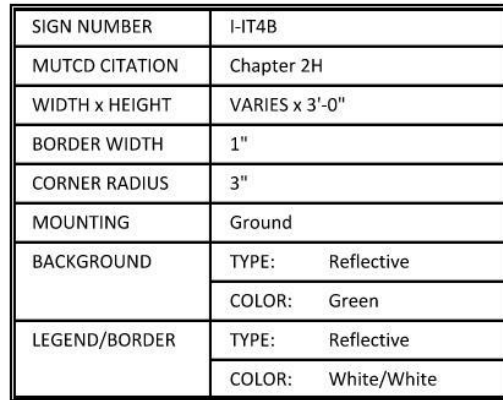
SYMBOL	ROT	X	Y	WID	HT
Park and Ride	0	19	16.1	22.1	18
AR_Thru	270	8.6	3.5	6	18.9

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

[illegible]

[Not to scale]



NOTE:
SIGN WIDTH WILL VARY BASED ON SIZE OF ROUTE NAME

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[Not to scale]



SIGN NUMBER	I-IT4D
MUTCD CITATION	Chapter 2H
WIDTH x HEIGHT	VARIES x 3'-0"
BORDER WIDTH	1"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

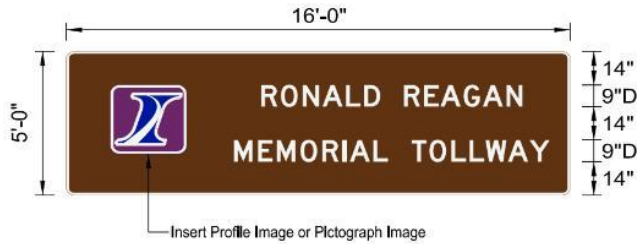
NOTE:
SIGN WIDTH WILL VARY BASED ON SIZE OF COUNTY NAME

[illegible]

Appendix G – I-IT4E

INFORMATION SIGN ILLUSTRATION**Identification: Memorial Highway**

[Not to scale]



SIGN NUMBER	I-IT4E
MUTCD CITATION	2M.10
WIDTH x HEIGHT	16'-0" x 5'-0"
BORDER WIDTH	1"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Brown
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

NOTES:

1. MINIMUM SIZE OF PICTOGRAPH IS 30 INCHES
2. MAXIMUM SIZE OF PICTOGRAPH IS 36 INCHES

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
R	O	N	A	L	D		R	E	A	G	A	N							D 2000
74.3	81.8	90.2	97.6	106.6	113.6		128.7	136.3	142.6	151.4	158.7	167.7						99.5	9
M	E	M	O	R	I	A	L		T	O	L	L	W	A	Y				D 2000
63.9	73.1	80.2	89.2	97.6	105.2	108.0	117.0		131.6	138.4	146.7	153.7	159.8	168.3	176.5			120.3	9

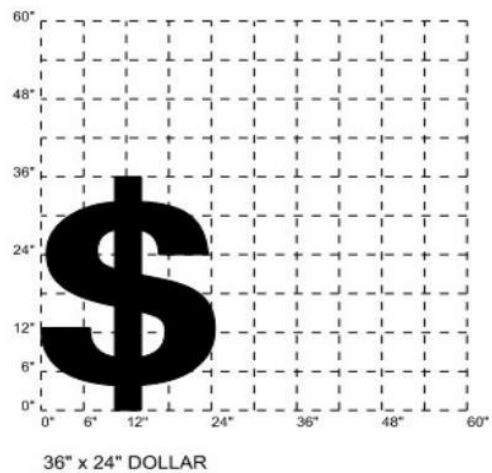
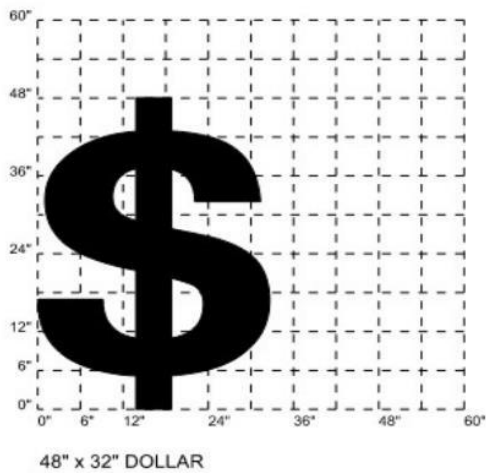
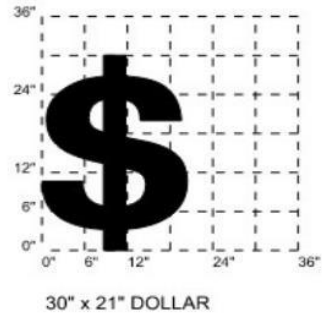
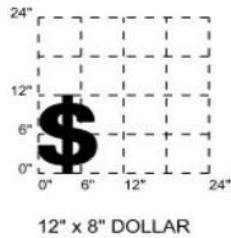
INFORMATION SIGN ILLUSTRATION

SIGN NUMBER

I-IT5A

**Pictograph: Cash (for standard sign panels
in this manual)**

[Not to scale]



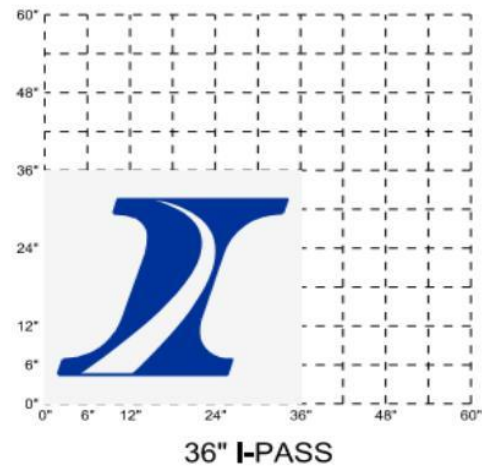
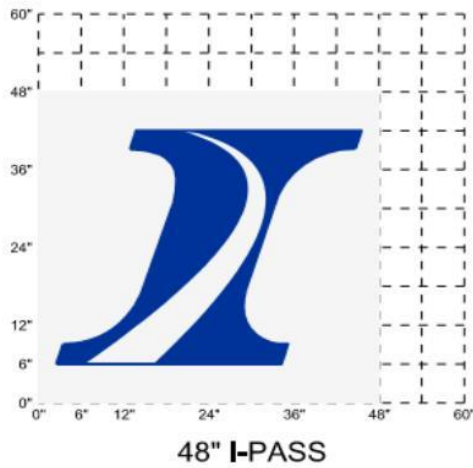
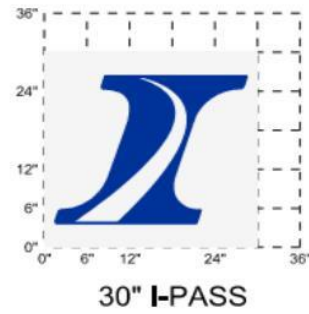
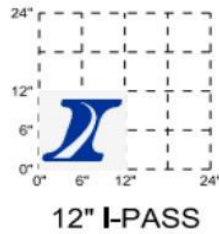
INFORMATION SIGN ILLUSTRATION

SIGN NUMBER

I-IT5B

**Pictograph: I-Pass (for standard sign panels
in this manual)**

[Not to scale]



NOTE:
DEPENDING ON THE APPLICATION, LOGO BACKGROUND COLOR
MAY BE WHITE OR PURPLE

Appendix G – I-IT5C

INFORMATION SIGN ILLUSTRATION

SIGN NUMBER

I-IT5C

Pictograph: EZ Pass on Purple Background

[Not to scale]

**NOTE:**

E-Z PASS IS PURPLE IN COLOR WHEN ON WHITE BACKGROUND

Appendix G – I-IT5D

INFORMATION SIGN ILLUSTRATION

SIGN NUMBER

I-IT5D

Pictograph: TOLL on Yellow Background

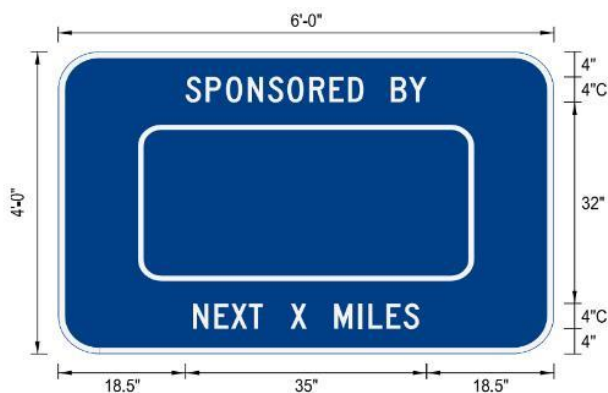
[Not to scale]



NOTE:
SIZE VARIES BY SIGN.

Sponsorship Sign

[Not to scale]



SIGN NUMBER	I-IT6
MUTCD CITATION	Chapter 2H
WIDTH x HEIGHT	6'-0" x 4'-0"
BORDER WIDTH	1"
CORNER RADIUS	6"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

NOTE:
THE AREA RESERVED FOR THE SPONSOR ACKNOWLEDGEMENT
LOGO SHALL NOT EXCEED 1/3 OF THE TOTAL AREA OF THE SIGN
AND SHALL BE A MAXIMUM OF 8 SQUARE FEET.

[illegible]

Appendix G – I-IT7

INFORMATION SIGN ILLUSTRATION

Tollway Approach: Welcome, AET Payment

[Not to scale]



SIGN NUMBER	I-IT7
MUTCD CITATION	N/A
WIDTH x HEIGHT	15'-0" x 11'-0"
BORDER WIDTH	0.25"
CORNER RADIUS	2.25"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green, White
LEGEND/BORDER	TYPE: Reflective
	COLOR: White, Black

SYMBOL	ROT	X	Y	WID	HT
IPASS Logo	0	13.1	27.3	27.9	34.9
EZPass Logo	0	13.1	16.1	27.9	9.3
Tollway Logo	0	11.1	39	104	54.1

Dimensions are inches, tenths.
Letter spacing are to start of next letter.

LETTER POSITIONS (X)																				LEN.	SERIES/ SIZE
	W	E	L	C	O	M	E														D 2000
26.9	12.5	9.5	9.0	10.6	11.2	12.2	7.5													72.4	12
	I	L	L	I	N	O	I	S	T	O	L	L	W	A	Y	.	C	O	M		C 2000
15.5	2.9	5.2	5.2	2.9	6.1	6.3	2.5	5.2	5.0	6.3	5.2	4.6	6.6	5.6	5.7	2.3	5.9	6.3	5.3	95.1	8
	A	L	L		L	A	N	E	S												C 2000
5.2	5.5	4.5	3.6	7	4.0	5.5	5.5	4.4	3.9											43.8	7
	O	R		P	A	Y															D 2000
6.5	7.4	5.4	8	5.9	7.3	6.9														41.0	8
	O	N	L	I	N	E															D 2000
8.8	7.4	7.4	6.2	3.2	7.4	5														36.5	8

Appendix G – I-IT8

INFORMATION SIGN ILLUSTRATION

Tollway Approach: Welcome, AET Payment

[Not to scale]



SIGN NUMBER	I-IT8
MUTCD CITATION	N/A
WIDTH x HEIGHT	14'-0" x 8'-0"
BORDER WIDTH	1"
CORNER RADIUS	6"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green, White
LEGEND/BORDER	TYPE: Reflective
	COLOR: White, Black

SYMBOL	ROT	X	Y	WID	HT
Tollway Logo	0	45.8	28	76.9	40

Dimensions are inches, tenths.
Letter spacing are to start of next letter.

LETTER POSITIONS (X)																				LEN.	SERIES/ SIZE
	T	H	A	N	K		Y	O	U												E 2000
39.0	9.2	9.8	11.9	10.7	8.3	10.0	11.6	10.7	8.1											90.3	10
	U	N	P	A	I	D		T	O	L	L	?									C 2000
10.3	5.5	5.5	4.8	5.5	2.5	3.9	7.0	4.4	5.5	4.5	4.2	4.3								57.6	7
	I	L	L	I	N	O	I	S	T	O	L	L	W	A	Y	.	C	O	M		C 2000
74.9	2.5	4.5	4.6	2.5	5.3	5.5	2.2	4.5	4.4	5.5	4.6	4.0	5.7	4.9	5.0	2.0	5.2	5.5	4.7	83.2	7

Appendix G – I-IT9

INFORMATION SIGN ILLUSTRATION**Oasis Distance: Name Oasis, XX Miles**

[Not to scale]



SIGN NUMBER	I-IT9
MUTCD CITATION	2I.05
WIDTH x HEIGHT	10'-0" x 8'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
L	i	n	c	o	l	n													EM 2000
14.7	30.1	39.7	55.2	69.3	85.1	94.7												90.6	16/12
O	a	s	i	s															EM 2000
27.0	43.8	59.0	74.6	82.4														65.9	16/12
S	1/2	M	I	L	E	S													EM 2000
10.4	30.0	67.0	79.0	83.4	92.6	101.5												99.2	15, 10

[Not to scale]



SIGN NUMBER	I-IT10
MUTCD CITATION	Chapter 2I
WIDTH x HEIGHT	14'-0" x 10'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
Interstate Oasis	0	47.7	57.7	30	30
Interstate Oasis	0	95.9	57.7	30	30

1. SIGN PANEL SHOWN IS FOR INFORMATION ONLY.
2. SIZES FOR GENERAL SERVICE SIGNS SHALL BE AS PER MUTCD, SECTION 2I.

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

[illegible]

[Not to scale]



SIGN NUMBER	I-IT11
MUTCD CITATION	Chapter 2I
WIDTH x HEIGHT	14'-0" x 8'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
Interstate Oasis	0	39.1	35.6	30	30
Interstate Oasis	0	87.3	35.6	30	30
AR_Type A	315	136.3	33.9	17.2	27.1

1. SIGN PANEL SHOWN IS FOR INFORMATION ONLY.
2. SIZES FOR GENERAL SERVICE SIGNS SHALL BE AS PER MUTCD, SECTION 2I.

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

[illegible]

Oasis Exit Gore: Oasis, Directional Arrow

SIGN NUMBER	I-IT12
MUTCD CITATION	Chapter 2I
WIDTH x HEIGHT	6'-0" x 5'-0"
BORDER WIDTH	2"
CORNER RADIUS	8"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

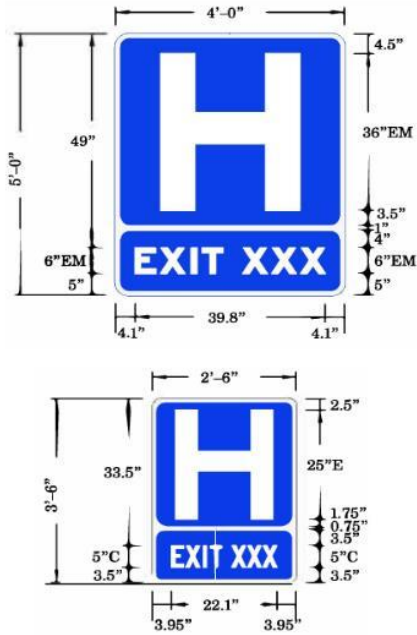
SYMBOL	ROT	X	Y	WID	HT
ARMED	30	25.6	12.4	14.4	22.7

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

[illegible]

INFORMATION SIGN ILLUSTRATION**General Services: Hospital**

[Not to scale]



Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

SIGN NUMBER	I-IT13
MUTCD CITATION	2A.06, 2I.02
WIDTH x HEIGHT	4'-0" x 5'-0", 2'-6" x 3'-6"
BORDER WIDTH	1", 0.75"
CORNER RADIUS	3", 1.5"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
ARMED	30	25.6	12.4	14.4	22.7

NOTES:

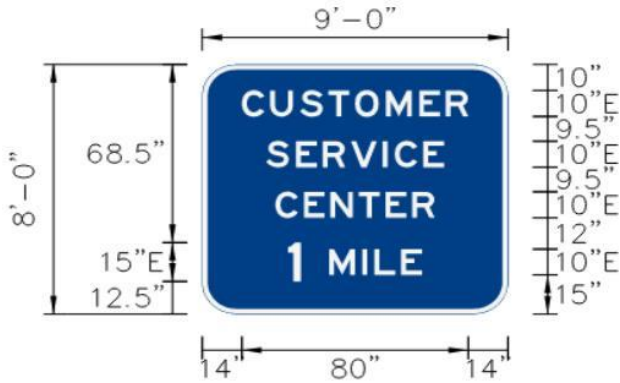
1. THE WIDE VERSION SHALL USE 6" C FONT FOR 4 CHARACTER EXIT NUMBERS.
2. THE NARROW VERSION SHALL BE USED WHEN LATERAL SPACE IS LIMITED. 5" C FONT SHALL ALSO BE USED FOR 4 CHARACTER EXIT NUMBERS.

LETTER POSITIONS (X)																LEN.	SERIES/ SIZE
H																	EM 2000
9.4																29.2	36
E	X	I	T	X	X	X											EM 2000
11.8	20.6	27.6	35.4	49.4	56.4	63.4										20.3	6
H																	E 2000
4.9																39.8	25
E	X	I	T	X	X	X											C 2000
4.0	7.0	10.6	12.0	16.6	19.8	23.1										22.1	5

Appendix G – I-IT14

INFORMATION SIGN ILLUSTRATION**Customer Service Center Advance: Customer Service
Center, 1 Mile, Grount Mounted**

[Not to scale]



SIGN NUMBER	I-IT14
MUTCD CITATION	Chapter 2I
WIDTH x HEIGHT	9'-0" x 8'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
C	U	S	T	O	M	E	R												E
14.0	24.0	34.6	44.6	54.0	64.9	76.6	86.0											80.0	10
S	E	R	V	I	C	E													E
22.6	33.2	42.6	52.6	63.7	68.0	78.1												62.8	10
C	E	N	T	E	R														E
25.9	35.9	45.3	55.4	64.8	74.2													56.3	10
1	M	I	L	E															E
30.4	44.8	56.6	60.9	70.3														47.2	15, 10

INFORMATION SIGN ILLUSTRATION**Customer Service Center Advance: Customer Service
Center, Keep Right, Grount Mounted**

[Not to scale]



SIGN NUMBER	I-IT15
MUTCD CITATION	Chapter 2I
WIDTH x HEIGHT	9'-0" x 8'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
C	U	S	T	O	M	E	R												E
14.0	24.0	34.6	44.6	54.0	64.9	76.6	86.0											80.0	10
S	E	R	V	I	C	E													E
22.6	33.2	42.6	52.6	63.7	68.0	78.1												62.8	10
C	E	N	T	E	R														E
25.9	35.9	45.3	55.4	64.8	74.2													56.3	10
K	E	E	P		R	I	G	H	T										E
9.2	19.4	28.8	38.2	46.2	56.1	66.6	70.9	81.4	91.5									89.6	10

Appendix G – I-IT16

INFORMATION SIGN ILLUSTRATION

Customer Service Center Advance: Customer Service
Center, Next Right, Grount Mounted

[Not to scale]



SIGN NUMBER	I-IT16
MUTCD CITATION	Chapter 2I
WIDTH x HEIGHT	9'-0" x 8'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
C	U	S	T	O	M	E	R												E
14.0	24.0	34.6	44.6	54.0	64.9	76.6	86.0											80.0	10
S	E	R	V	I	C	E													E
22.6	33.2	42.6	52.6	63.7	68.0	78.1												62.8	10
C	E	N	T	E	R														E
25.9	35.9	45.3	55.4	64.8	74.2													56.3	10
N	E	X	T		R	I	G	H	T										E
9.0	19.5	28.9	38.9	46.3	56.3	66.8	71.1	81.6	91.7									90.0	10

Appendix G – I-IT17

INFORMATION SIGN ILLUSTRATION

Customer Service Center Advance: Customer Service
Center, Right Lane, Grount Mounted

[Not to scale]



SIGN NUMBER	I-IT17
MUTCD CITATION	Chapter 2I
WIDTH x HEIGHT	9'-0" x 8'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches.tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
C	U	S	T	O	M	E	R												E
14.0	24.0	34.6	44.6	54.0	64.9	76.6	86.0											80.0	10
S	E	R	V	I	C	E													E
22.6	33.2	42.6	52.6	63.7	68.0	78.1												62.8	10
C	E	N	T	E	R														E
25.9	35.9	45.3	55.4	64.8	74.2													56.3	10
R	I	G	H	T		L	A	N	E										E
8.7	19.2	23.5	34.0	44.1	51.4	61.4	69.4	81.4	92.0									90.6	10

Customer Service Center Advance: Customer Service Center, Parking, Grount Mounted, Up/Right Arrow

SIGN NUMBER	I-IT18
MUTCD CITATION	Chapter 2I
WIDTH x HEIGHT	9'-0" x 5'-0"
BORDER WIDTH	1.25"
CORNER RADIUS	8"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
AR90R1	0	44	8	20	20

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

[illegible]

INFORMATION SIGN ILLUSTRATION

Customer Service Center Advance: Customer Service Center, Parking, Grount Mounted, Right Arrow

[Not to scale]



SIGN NUMBER	I-IT19
MUTCD CITATION	Chapter 2I
WIDTH x HEIGHT	9'-0" x 5'-0"
BORDER WIDTH	1.25"
CORNER RADIUS	8"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
ARLONG	0	38.6	11.6	13.5	31

Dimensions are inches.tenths.
Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																		LEN.	SERIES/ SIZE
C	U	S	T	O	M	E	R		s	E	R	V	I	C	E				E
8.2	14.2	20.5	26.6	32.2	38.7	45.7	51.4	56.2	62.2	68.5	74.1	80.1	86.8	89.4	95.4			91.6	6
C	E	N	T	E	R		P	A	R	K	I	N	G						E
14.4	20.4	26.1	32.1	37.8	43.4	48.2	54.2	60.2	67.5	73.8	79.9	82.5	88.8					79.2	6

Appendix G – I-IT20

INFORMATION SIGN ILLUSTRATION

Plaza: Oversized Vehicles, Plaza Assistance

[Not to scale]



SIGN NUMBER	I-IT20
MUTCD CITATION	Chapter 2I
WIDTH x HEIGHT	4'-0" x 5'-0"
BORDER WIDTH	0.33"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Blue
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are inches, tenths.

Letter locations are panel edge to lower left corner.

LETTER POSITIONS (X)																					LEN.	SERIES/ SIZE
P	L	A	Z	A		X	X													C		
10.3	14.1	16.9	20.9	24.2	27.3	32.3	36.1													28.7	5	
N	O	R	T	H	B	O	U	N	D		I	-	2	9	4					C		
3.7	6.4	9.1	11.6	14.0	16.6	19.1	21.9	24.5	27.2	29.1	32.6	33.8	37.2	39.7	42.2					40.6	3.5	
O	V	E	R	S	I	Z	E	D		V	E	H	I	C	L	E	S			C		
2.8	5.4	8.2	10.5	13.0	15.7	16.9	19.4	21.7	23.6	27.1	29.9	32.2	34.9	36.1	38.6	40.9	43.3			42.4	3.5	
F	O	R		A	S	S	I	S	T	A	N	C	E							C		
7.1	9.5	12.2	14.1	17.6	20.4	22.9	25.6	26.8	29.3	31.2	34	36.7	39.2							33.8	3.5	
C	A	L	L		*	9	9	9												C		
14.2	16.5	19.3	21.6	23.4	24.7	26.9	29.4	31.9												19.6	3.5	
I	L	L	I	N	O	I	S		S	T	A	T	E		P	O	L	I	C	E	C	
3	4	6.2	8.4	9.4	11.8	14.4	15.4	17.3	19.8	22.2	24.1	26.4	28.6	30.3	32.8	35.2	37.7	39.9	40.9	43.3	42.0	3.5
E	M	E	R	G	E	N	c	Y		D	I	A	L		9	1	1			C		
1	3.6	6.9	9.5	12.3	15.2	17.8	20.7	23.3	25.8	29.2	32.1	33.2	36.3	38.3	41.8	44.7	46.2			46.0	4	

Appendix G – I-IT21

INFORMATION SIGN ILLUSTRATION
General Services: *999 Help Service Patrol, Sponsored
[NOT TO SCALE]



- NOTES:
- 1. SIGN ASSEMBLY SHALL BE MADE UP OF TWO SIGN PANELS SO THAT SPONSOR CAN BE CHANGED WITHOUT REPLACING THE ENTIRE SIGN.
 - 2. INTERSTATE SHIELD SHOWN IS FOR I-88. THE SHIELD SHALL MATCH THE ROUTE WHERE THE H.E.L.P. SIGN IS TO BE INSTALLED.

Dimensions are inches.tenths
Letter Locations are panel edge to lower left corner.

SIGN NUMBER	I-IT21
WIDTH x HGHT.	10'-0" x 6'-0"
BORDER WIDTH	1"
CORNER RADIUS	6"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective COLOR: Blue, White
LEGEND/BORDER	TYPE: Reflective COLOR: Black/White

SYMBOL	ROT	X	Y	WID	HT
IL Tollway Logo	0	3.1	32	22.8	12
M1_1	0	104.9	32	12	12

LETTER POSITIONS (X)																		LENGTH		SERIES/SIZE		
C	A	L	L		*	9	9	9													E 2000	
30.7	38.3	47.8	55.2		69.2	74.8	82.4	90											65.8	8		
F	O	R		R	O	A	D	S	I	D	E										E 2000	
14.8	21.9	30.5		45	52.8	60.6	70.2	78	86.1	89.6	97.9								89.1	8		
A	S	S	I	S	T	A	N	C	E												E 2000	
22	31.1	38.7	46.8	49.8	57.2	63.8	73.3	81.6	90										73.9	8		
H	.	E	.	L	.	P	.		S	U	P	P	O	R	T	E	D		B	Y	E 2000	
25.2	29.1	30.5	34	35.4	38.7	40.1	43.6		48.4	52.4	56.7	60.6	64.4	68.7	72.4	76	79.8		87.1	90.8	69.6	4

Appendix G – I-IT22

INFORMATION SIGN ILLUSTRATION
General Services: Call *999 for Roadside Assistance
(NOT TO SCALE)



SIGN NUMBER	I-IT22
WIDTH x HGHT.	14'-0" x 7'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective COLOR: Blue
LEGEND/BORDER	TYPE: Reflective COLOR: White

SYMBOL	ROT	X	Y	WID	HT
IL Tollway Logo	0	10	64	22.8	12
M1_1	0	146	64	12	12

NOTES:
1. INTERSTATE SHIELD SHOWN IS FOR I-88. THE SHIELD SHALL MATCH THE ROUTE WHERE THE H.E.L.P. SIGN IS TO BE INSTALLED.

LETTER POSITIONS (X)																				LENGTH	SERIES/SIZE	
C	A	L	L		*	g	g	g													EM 2000	
44.7	54	65.9	74.9	82.3	92.3	99.7	109.8	119.9											83.3	10		
F	O	R		R	O	A	D	S	I	D	E										E 2000	
28.3	37.2	47.9	56	66	75.8	85.6	97.5	107.3	117.4	121.8	132.2									111.4	10	
A	S	S	I	S	T	A	N	C	E		(H	.	E	.	L	.	P	.)	E 2000	
4.3	15.6	25.1	35.2	39	48.2	56.5	68.4	78.8	89.2	96.7	106.7	111.7	121.5	125	133.6	137.1	145.4	148.9	157.8	160.4	159.4	10
H	i	g	h	w	a	y		E	m	e	r	g	e	n	c	y					C 2000	
9.3	15.4	17.7	23.2	28.1	36.1	40.7	45.7	53.7	59	66.8	71.9	75.2	80.5	85.6	90.8	95.2				90.9	8/6	
L	a	n	e		P	a	t	r	o	l											C 2000	
108.2	112.8	118	123.2		135.3	140.8	145.4	149	152.3	157.6										54.4	8/6	

APPENDIX H Pavement Marking Illustrations

Pavement Marking Illustrations List

Number	Placement	Legend
PM-IT1A	Mainline	Tollway Pavement Markings Previous Standards for I-294, I-94, I-90
PM-IT1B	Mainline	Tollway Pavement Markings Previous Standards for I-294, I-94, I-88
PM-IT1C	Mainline	Tollway Pavement Markings Previous Standards for I-355
PM-IT1D	Mainline	Tollway Pavement Markings Previous Standards for I-94 – Edens Spur
PM-IT2A	Mainline	Lane-Reduction Transition Markings
PM-IT2B	Ramp	Lane-Reduction Transition Markings Entrance Ramp
PM-IT2C	Ramp	Lane-Reduction Transition Markings Entrance Ramp, Single Lane
PM-IT3	Ramp	AET Converted Plaza Pavement Markings
PM-IT4A	Mainline	Interstate Shield Detail (Type I)
PM-IT4B	Mainline	Interstate Shield Detail (Type II)
PM-IT5	Mainline	Weigh-In-Motion Enforcement Area (WIMEA)
PM-IT6	Mainline	Preferential Lane Pavement Markings for I-90
PM-IT7	Ramp	Wrong Way Pavement Markings Exit Ramp

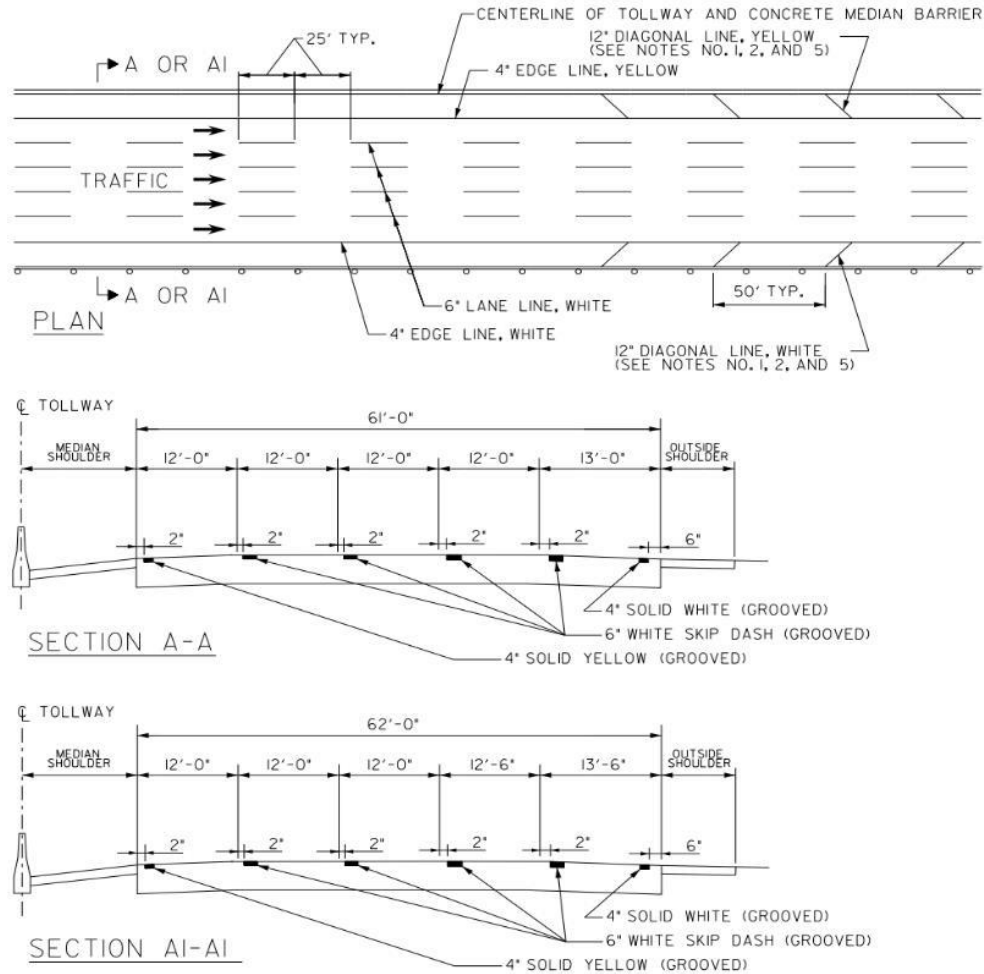
PAVEMENT MARKING ILLUSTRATION

Illustration Number

PM-IT1A

Tollway Pavement Marking Previous Standards for**I-294, I-94, I-90 (5 Lanes)**

[Not to scale]

**NOTES:**

1. DIAGONAL SHOULDER STRIPING REQUIRED WHERE ASPHALT SHOULDER WIDTH IS LESS THAN STANDARD.
2. ROADWAY MARKING MATERIALS TO BE USED ON FINISHED CONCRETE SURFACE AND HOT-MIX ASPHALT SURFACE SHALL BE AS SHOWN ON THE PLANS.
3. WHERE THE GUARDRAIL ENCROACHES ON THE SHOULDER, THE DIAGONAL MARKINGS SHALL EXTEND AS CLOSE TO THE FACE OF THE RAIL AS POSSIBLE.
4. ALL LANE LINES AND EDGE LINES SHALL BE GROOVED, ON ROADWAY SURFACES.
5. DIAGONAL STRIPING SHALL BE SURFACE APPLIED.
6. GORE STRIPING (CHEVRON) SHALL BE SURFACED APPLIED.
7. ALL LANE LINES AND EDGE LINES SHALL BE SURFACE APPLIED ON BRIDGES.

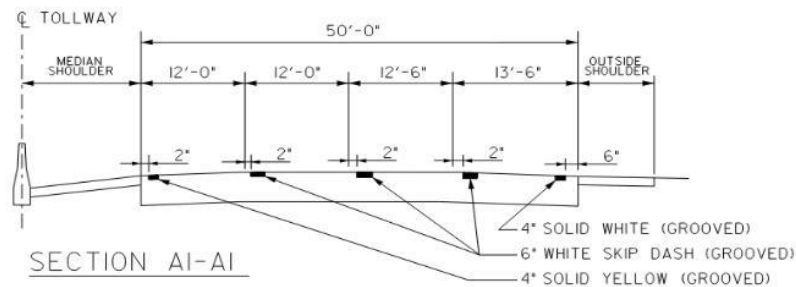
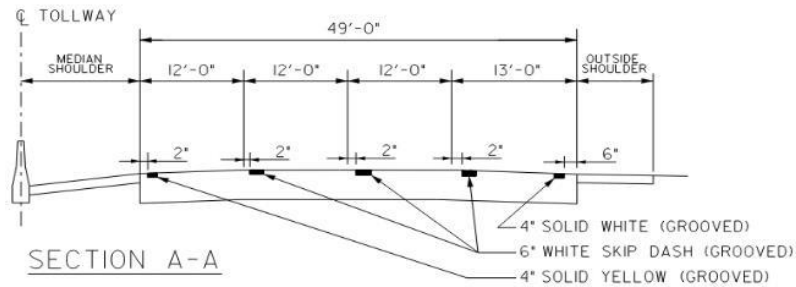
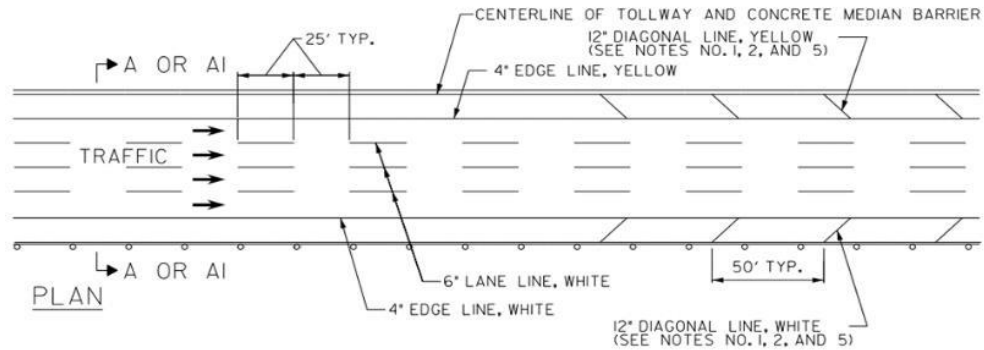
PAVEMENT MARKING ILLUSTRATION

Illustration Number

PM-IT1B

Tollway Pavement Marking Previous Standards for**I-294, I-94, I-88 (4 Lanes)**

[Not to scale]

**NOTES:**

1. DIAGONAL SHOULDER STRIPING REQUIRED WHERE ASPHALT SHOULDER WIDTH IS LESS THAN STANDARD.
2. ROADWAY MARKING MATERIALS TO BE USED ON FINISHED CONCRETE SURFACE AND HOT-MIX ASPHALT SURFACE SHALL BE AS SHOWN ON THE PLANS.
3. WHERE THE GUARDRAIL ENCROACHES ON THE SHOULDER, THE DIAGONAL MARKINGS SHALL EXTEND AS CLOSE TO THE FACE OF THE RAIL AS POSSIBLE.
4. ALL LANE LINES AND EDGE LINES SHALL BE GROOVED, ON ROADWAY SURFACES.
5. DIAGONAL STRIPING SHALL BE SURFACE APPLIED.
6. GORE STRIPING (CHEVRON) SHALL BE SURFACED APPLIED.
7. ALL LANE LINES AND EDGE LINES SHALL BE SURFACE APPLIED ON BRIDGES.

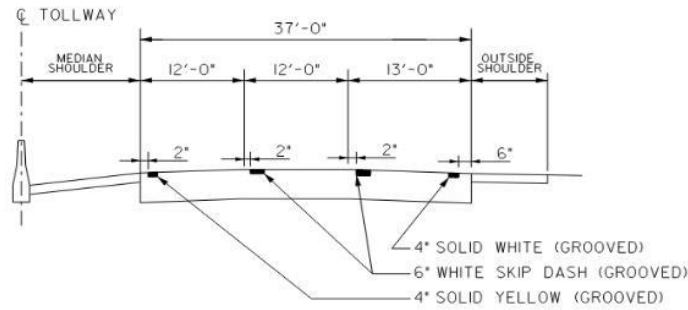
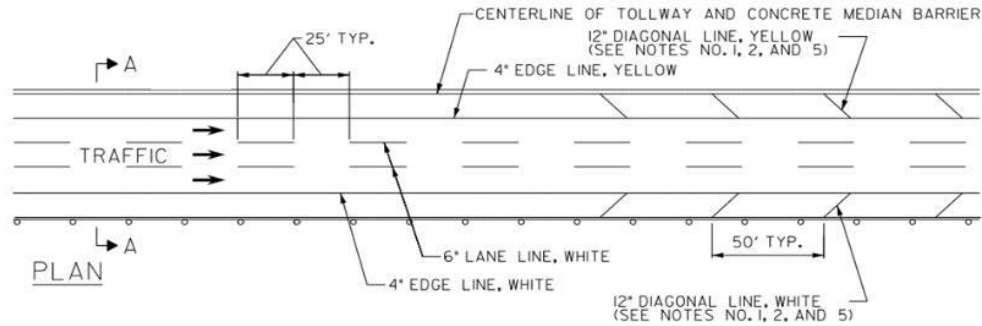
PAVEMENT MARKING ILLUSTRATION

Illustration Number

PM-IT1C

Tollway Pavement Marking Previous Standards for
I-355 (3 Lanes)

[Not to scale]


SECTION A-A
NOTES:

1. DIAGONAL SHOULDER STRIPING REQUIRED WHERE ASPHALT SHOULDER WIDTH IS LESS THAN STANDARD.
2. ROADWAY MARKING MATERIALS TO BE USED ON FINISHED CONCRETE SURFACE AND HOT-MIX ASPHALT SURFACE SHALL BE AS SHOWN ON THE PLANS.
3. WHERE THE GUARDRAIL ENCROACHES ON THE SHOULDER, THE DIAGONAL MARKINGS SHALL EXTEND AS CLOSE TO THE FACE OF THE RAIL AS POSSIBLE.
4. ALL LANE LINES AND EDGE LINES SHALL BE GROOVED, ON ROADWAY SURFACES.
5. DIAGONAL STRIPING SHALL BE SURFACE APPLIED.
6. GORE STRIPING (CHEVRON) SHALL BE SURFACED APPLIED.
7. ALL LANE LINES AND EDGE LINES SHALL BE SURFACE APPLIED ON BRIDGES.

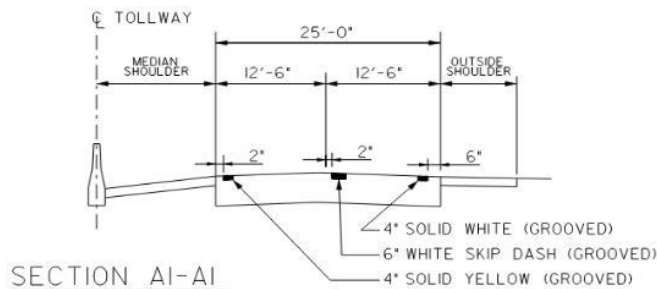
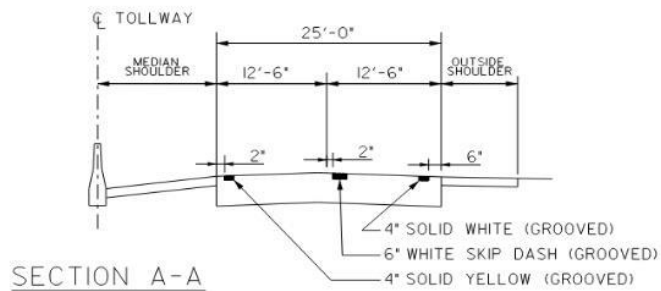
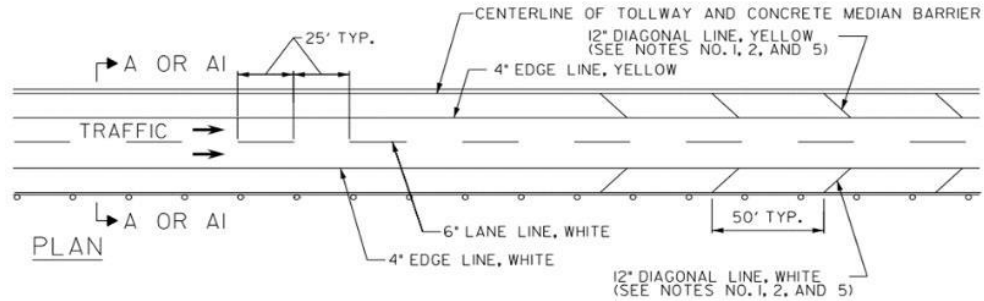
PAVEMENT MARKING ILLUSTRATION

Illustration Number

PM-IT1D

Tollway Pavement Marking Previous Standards for**I-94 Edens Spur (2 Lanes)**

[Not to scale]

**NOTES:**

1. DIAGONAL SHOULDER STRIPING REQUIRED WHERE ASPHALT SHOULDER WIDTH IS LESS THAN STANDARD.
2. ROADWAY MARKING MATERIALS TO BE USED ON FINISHED CONCRETE SURFACE AND HOT-MIX ASPHALT SURFACE SHALL BE AS SHOWN ON THE PLANS.
3. WHERE THE GUARDRAIL ENCROACHES ON THE SHOULDER, THE DIAGONAL MARKINGS SHALL EXTEND AS CLOSE TO THE FACE OF THE RAIL AS POSSIBLE.
4. ALL LANE LINES AND EDGE LINES SHALL BE GROOVED, ON ROADWAY SURFACES.
5. DIAGONAL STRIPING SHALL BE SURFACE APPLIED.
6. GORE STRIPING (CHEVRON) SHALL BE SURFACED APPLIED.
7. ALL LANE LINES AND EDGE LINES SHALL BE SURFACE APPLIED ON BRIDGES.

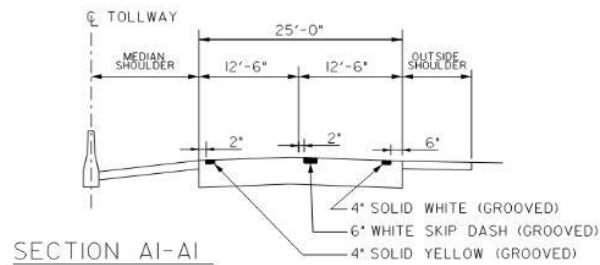
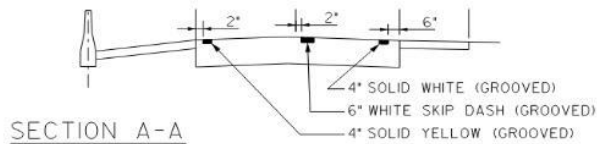
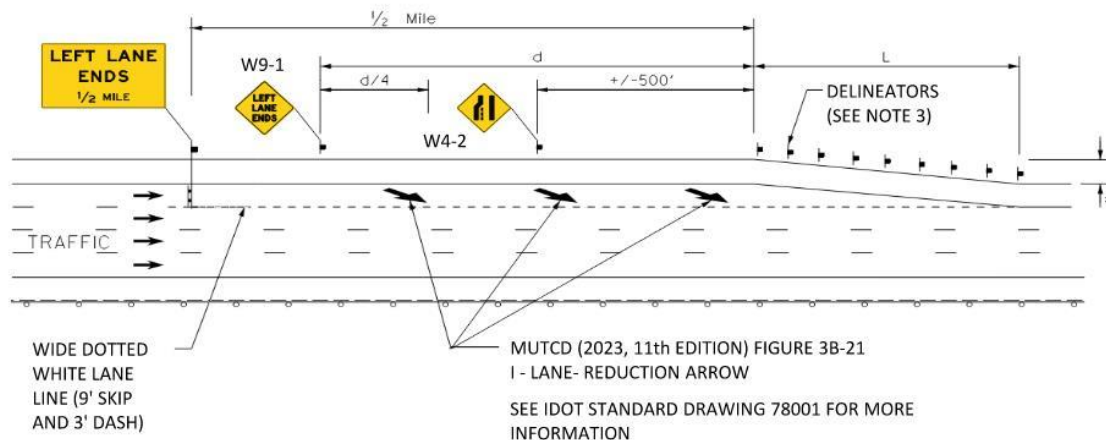
PAVEMENT MARKING ILLUSTRATION

Lane Reduction Transition Markings

[Not to scale]

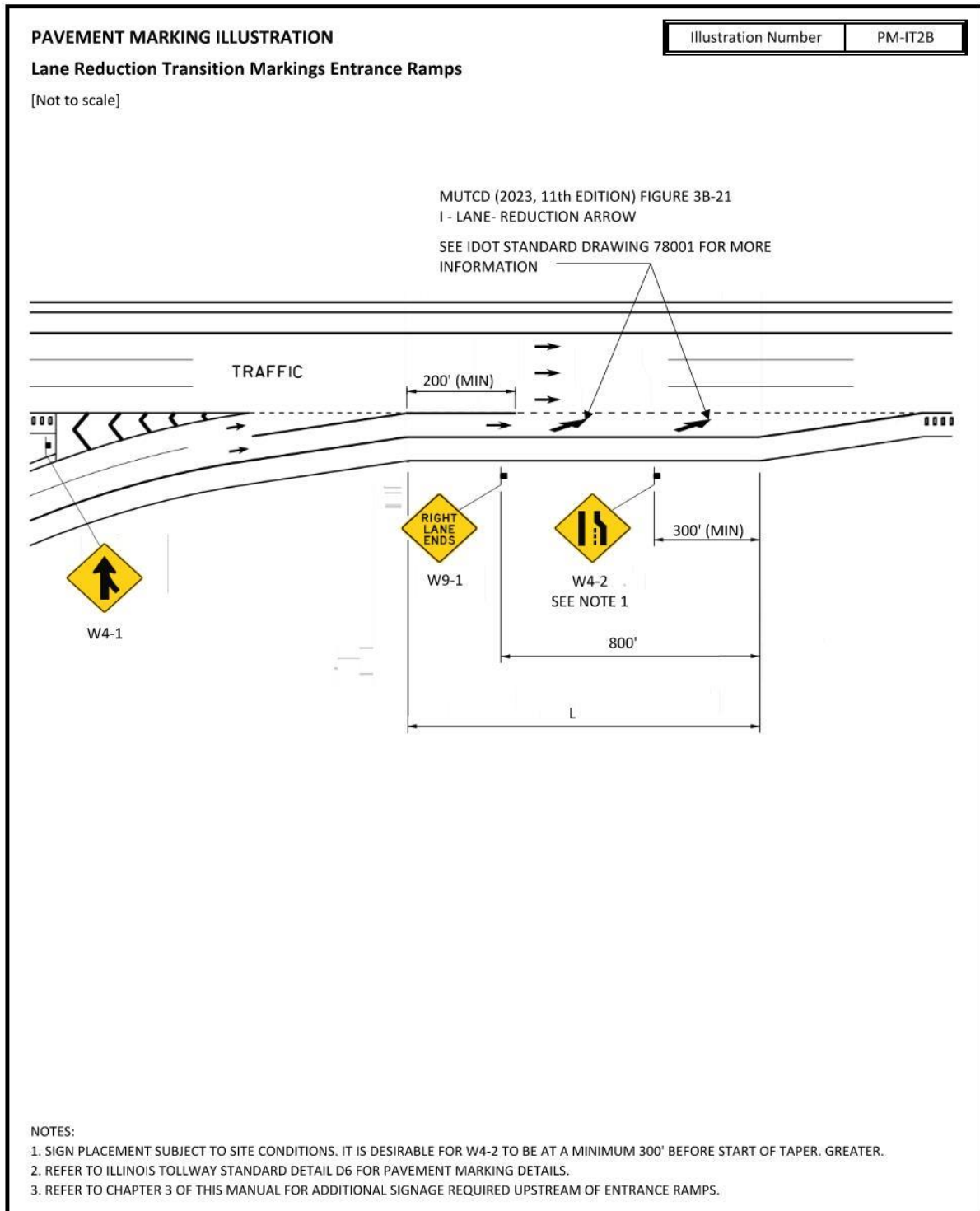
Illustration Number

PM-IT2A



NOTES:

- EQUATION: $L = WS$, FOR SPEEDS 45 MPH OR GREATER.
--- L = LENGTH OF TAPER IN FEET
--- S = POSTED 85TH-PERCENTILE, OR STATUTORY SPEED IN MPH
--- W = OFFSET IN FEET
- d = ADVANCE WARNING DISTANCE (SEE MUTCD 2023, 11TH EDITION SECTION 2C.04)
--- d = APPROX. 1000 FT BASED ON FIELD CONDITIONS
- DELINEATOR SPACING AT 50 FT C-C PER ILLINOIS TOLLWAY STANDARD DRAWING D4
- ADVANCE "LEFT LANE ENDS" AT 1/2 MILE. W4-2 +/- 500 FT BEFORE TAPER STARTS.



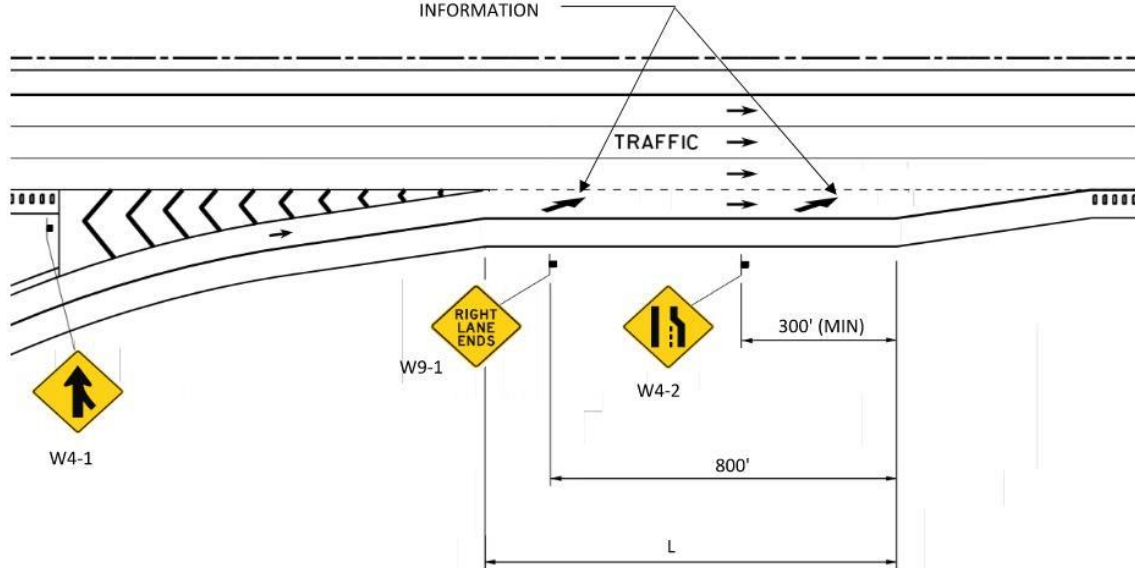
PAVEMENT MARKING ILLUSTRATION

Illustration Number

PM-IT2C

Lane Reduction Transition Markings Entrance Ramps,**Single Lane**

[Not to scale]

MUTCD (2023, 11th EDITION) FIGURE 3B-21
I - LANE- REDUCTION ARROWSEE IDOT STANDARD DRAWING 78001 FOR MORE
INFORMATION**NOTES:**

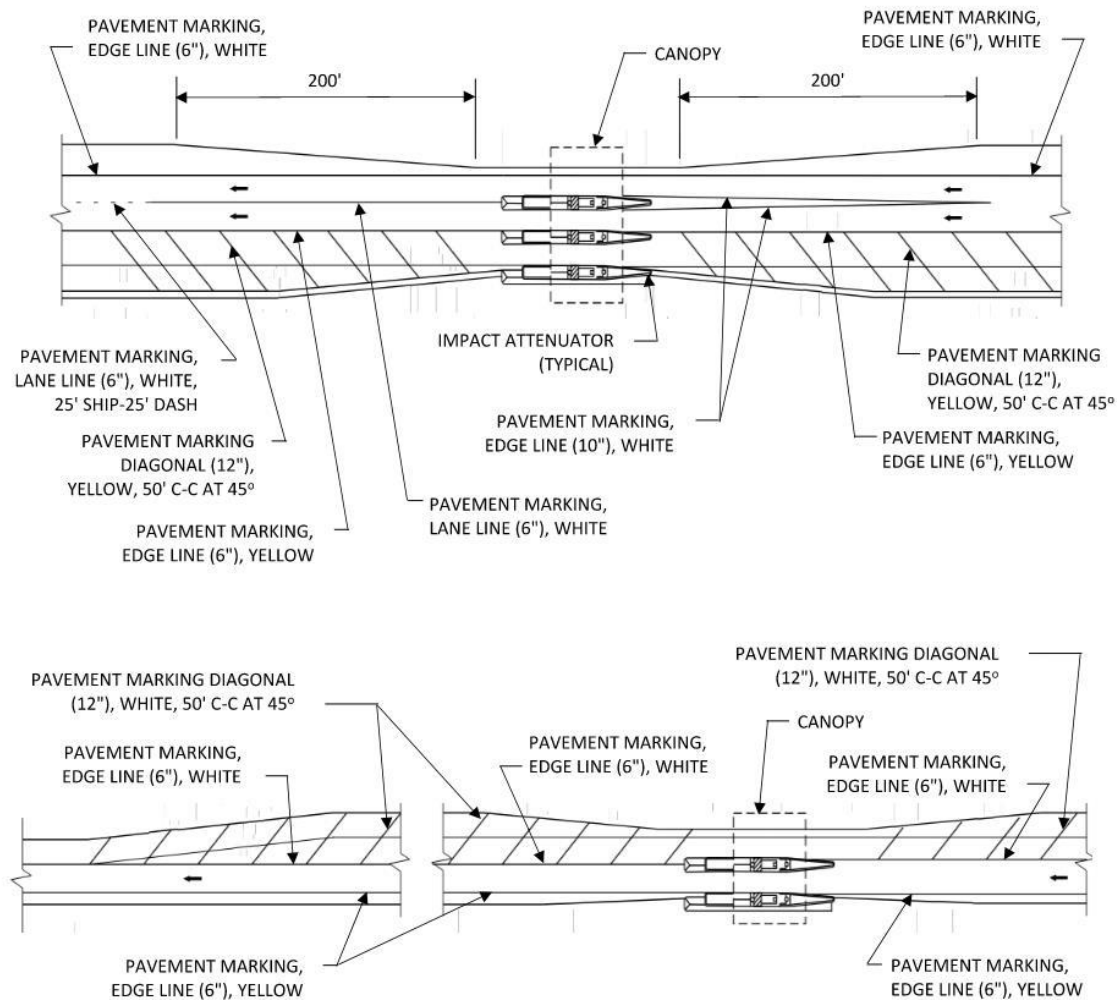
1. FOR USE WHERE L EXCEEDS 1,000 FEET. WHEN $L < 1000$ FT, CONSULT ILLINOIS TOLLWAY PM FOR DIRECTION.
2. SIGN PLACEMENT SUBJECT TO SITE CONDITIONS. IT IS DESIRABLE FOR W4-2 TO BE AT A MINIMUM 300 FT BEFORE START OF TAPER.
3. REFER TO ILLINOIS TOLLWAY STANDARD DETAIL D6 FOR PAVEMENT MARKING DETAILS.
4. REFER TO CHAPTER 3 OF THIS MANUAL FOR ADDITIONAL SIGNAGE REQUIRED UPSTREAM OF ENTRANCE RAMPS.

PAVEMENT MARKING ILLUSTRATION**AET Converted Pavement Markings: Plaza**

[Not to scale]

Illustration Number

PM-IT3

**NOTES:**

1. PLAZA PAVEMENT MARKINGS ARE SPECIFIC TO OPEN LANES AT PLAZA. VERIFY SITE SPECIFIC CONDITIONS WITH ILLINOIS TOLLWAY.
2. PAVEMENT MARKING TO CLOSE ANY TOLL PLAZA LANE TO BE APPROVED BY ENGINEER.

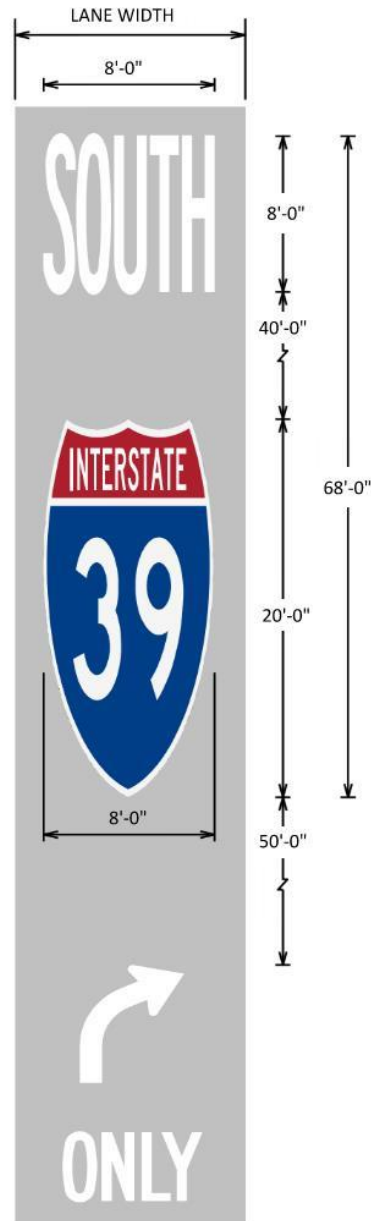
PAVEMENT MARKING ILLUSTRATION

Interstate Shield Detail (Type I)

[Not to scale]

Illustration Number

PM-IT4A



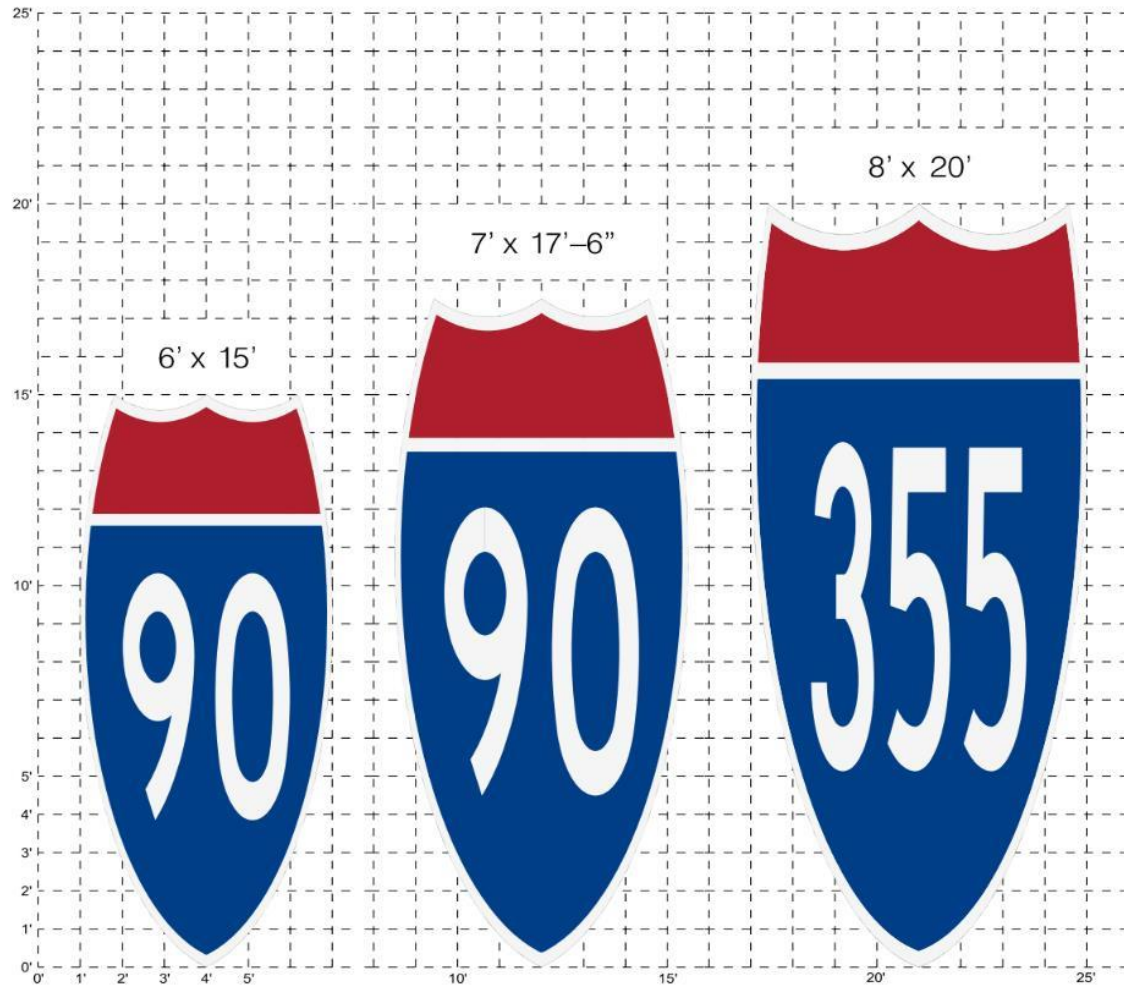
PAVEMENT MARKING ILLUSTRATION

Interstate Shield Detail (Type II)

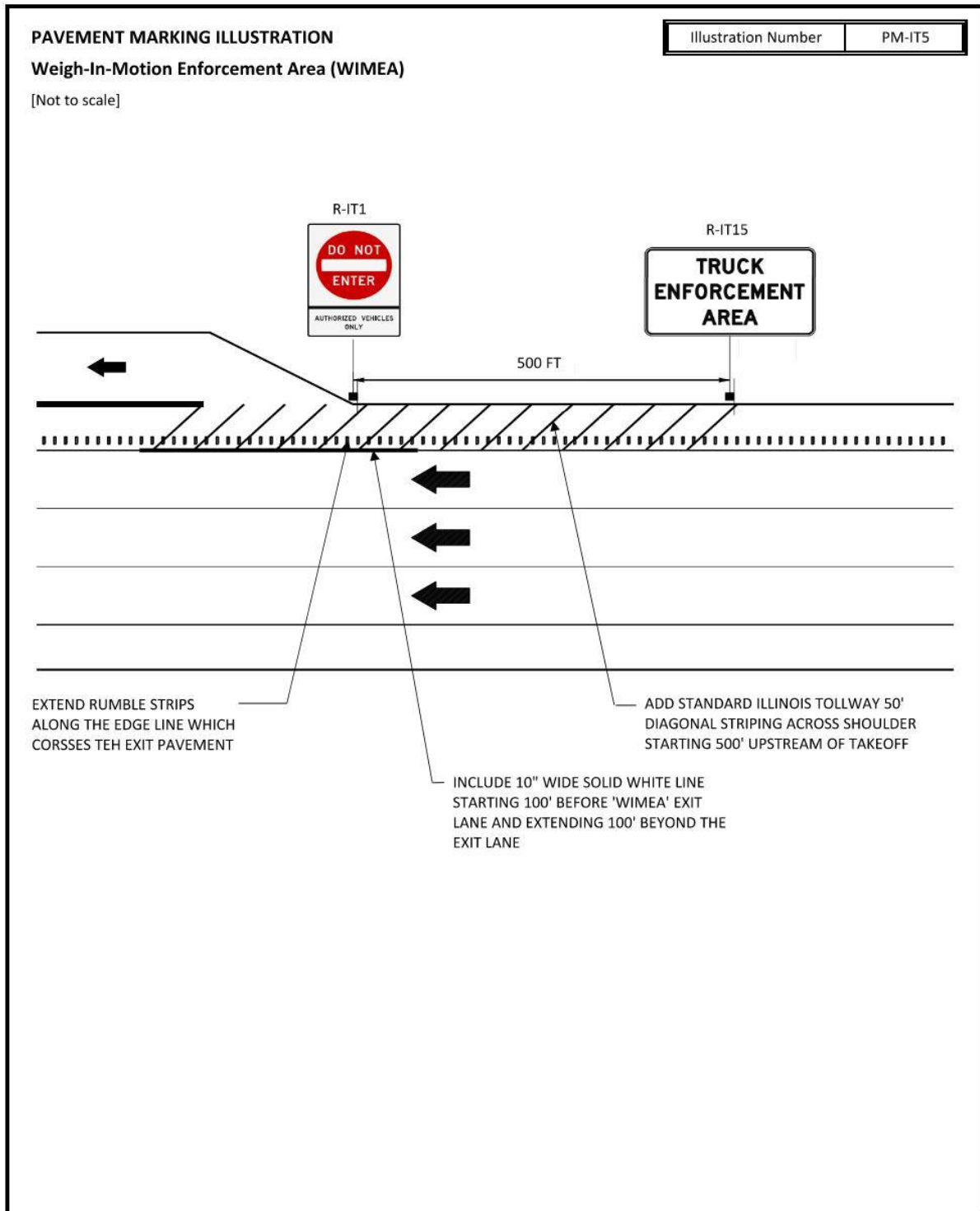
[Not to scale]

Illustration Number

PM-IT4B



Appendix H – PM-IT5



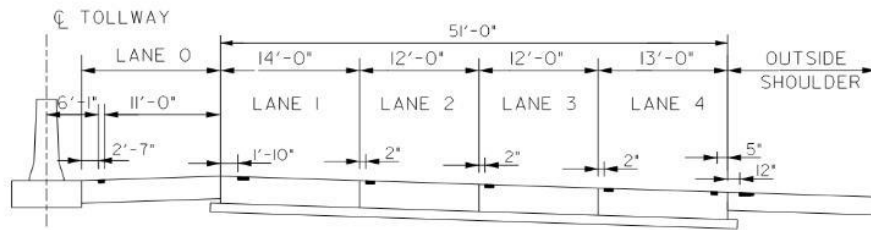
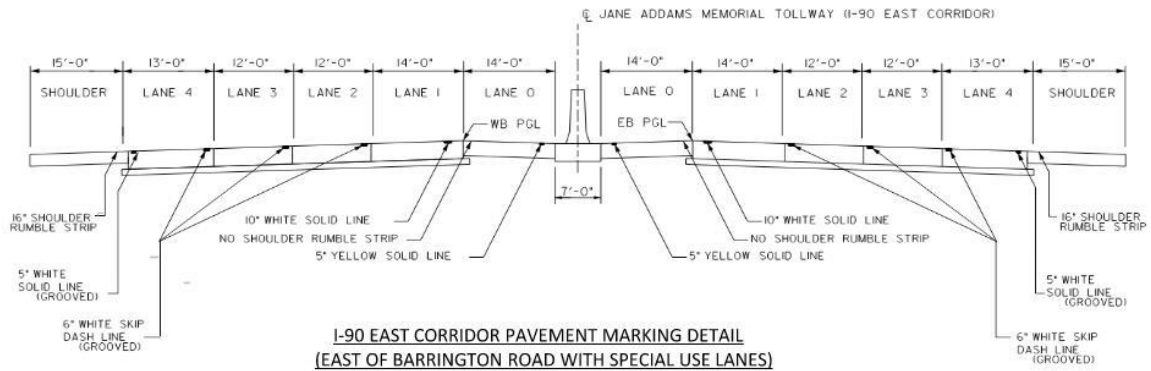
PAVEMENT MARKING ILLUSTRATION

Illustration Number

PM-IT6

Preferential Lane Pavement Marks for I-90

[Not to scale]

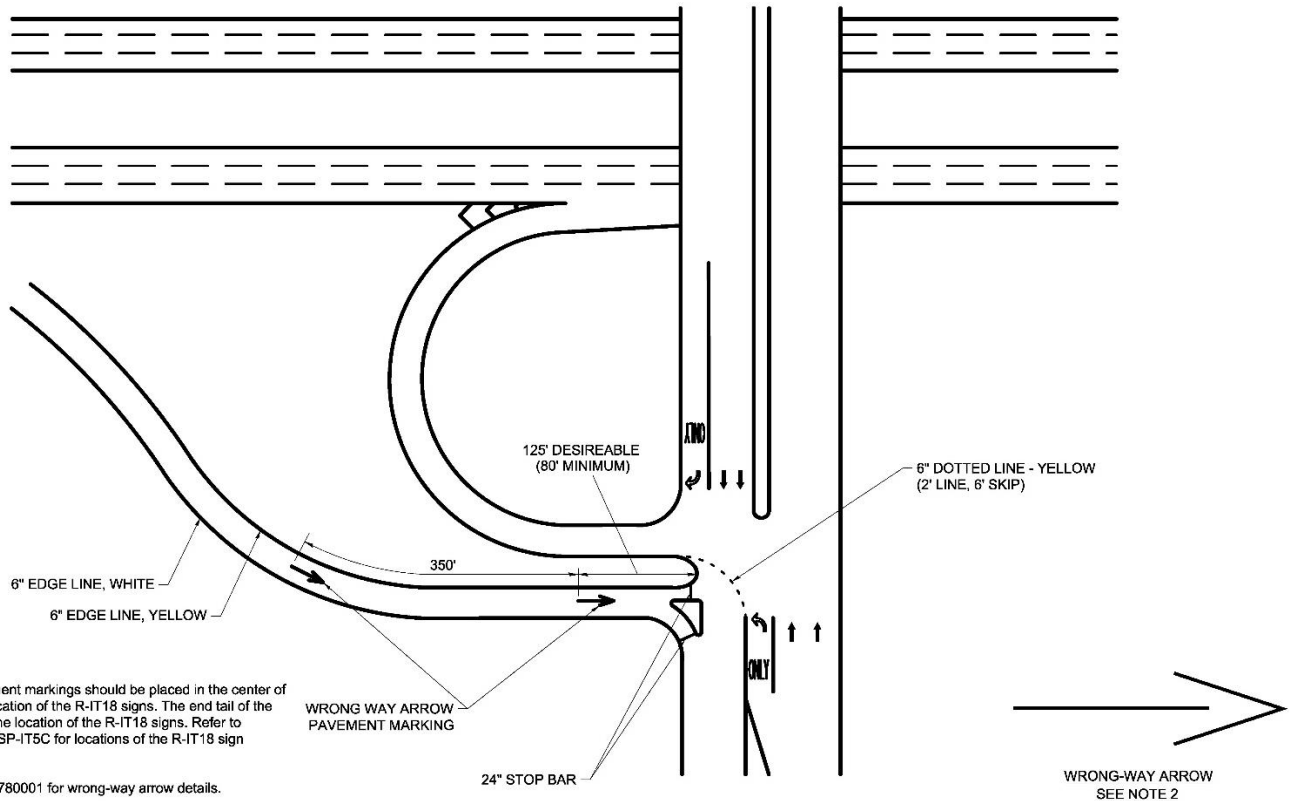


PAVEMENT MARKING ILLUSTRATIONS

Wrong Way Pavement Markings: Exit Ramp

[Not to scale]

Illustration Number: PM-IT7



NOTES:

1. Wrong-way arrow pavement markings should be placed in the center of each ramp lane at the location of the R-IT18 signs. The end tail of the arrow should align with the location of the R-IT18 signs. Refer to Illustration SP-IT5B and SP-IT5C for locations of the R-IT18 sign assemblies.
2. Refer to IDOT Standard 780001 for wrong-way arrow details.
3. Wrong-way arrow pavement markings should be omitted at the entrance of toll plazas.
4. The wrong-way arrow closer to the cross road intersection shall be omitted within the turn lane channelization areas where lane use markings are present. See Illustration SP-IT5C.

APPENDIX I Engineering Studies

Engineering Studies List

Number	Date	Subject
1	8/2/2012	ETC Only: Use of "ONLY" Messaging on ETC Plaza Lanes and Auxiliary Lanes
2	8/3/2012	Table: Traffic Generator Sign Categories per MUTCD and Illinois Tollway Illinois Tollway Sign Issues:
3	10/15/2012	a) Option Lane Exits at Intermediate and Minor Interchanges b) Interchange Exit Numbering c) Stop Sign Sizes at Toll Booths
4	1/9/2013	Wood Posts for Sign Structures
5	10/10/2014	Sign Support Research
6	3/30/2015	Illinois Tollway Wood Sign Post Requirements
7	10/6/2015	Ramp and Mainline Toll Plaza Sign Color
8	1/28/2019	Engineering Study for Manual Side Signing at Mainline Toll Plazas with a Grass Median between ORT and Manual Lanes
9	3/19/2019	Engineering Study for Static Signing Requirements for Entrance Lanes & Related Conditions
10	3/4/2021	Criteria Changes for Sign Lighting on All Electronic Tolling (AET) Overhead Signs (Attachments not Included)
11	4/7/2021	Maximum Width Versus Wide Load Signage



801 Warrenville Road, #260, Lisle, IL 60532
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Memorandum

To: Adam Lintner, Steve Musser

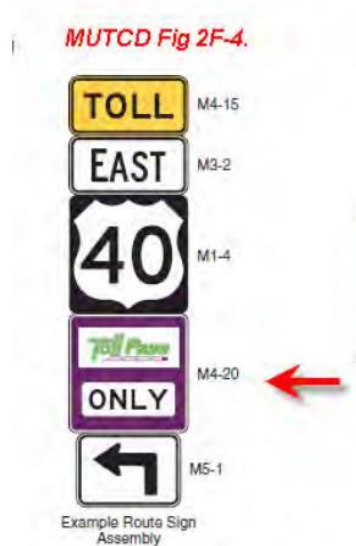
From: Jim Powell

Date: August 2, 2012

Subject: Use of "ONLY" Messaging on ETC Lanes

At the July 31, 2012 Sign Guidelines review meeting with Epstein Global representatives, a question came up regarding placement of the required "ONLY" message on ETC plaza lane signs per the 2009 *Manual on Uniform Traffic Control Devices (MUTCD)*, specifically whether the "ONLY" message was required ("shall" condition) to be a panel within the ETC plaza lane sign or not. Section 2F.12 seems to imply that the "ONLY" is required to be a panel within ETC Account-Only signing.

After researching Section 2F further, it turns out that this is **not** the case. There are several places in Section 2F that require use of "ONLY" with the ETC pictograph as a "regulatory message." The only place where this is required to be on a panel within a larger sign is on ETC Account-Only Auxiliary Signs (Section 2F.12) that direct drivers from a non-toll highway to a toll facility, e.g.:



Memo-ETC ONLY_2Aug2012

A. Lintner & S. Musser
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All other references are to either the more generic "regulatory message" or in one case a header panel or plaque (Sec 2F.17 Guide Signs for Entrances to ETC Account-Only Facilities). Thus for the at issue case of a toll plaza sign, the "ONLY" can be a plaque below the "I-PASS" sign, as discussed at the meeting and will be in conformance with the *MUTCD*:



cc: John Benda

Appendix I - Engineering Study #2 - Table: Traffic Generator Sign Categories per MUTCD and Illinois Tollway, Sheets 1 of 1

Table: Traffic Generator Sign Categories per <i>MUTCD</i> and Illinois Tollway			
	<u>(white text on blue background)</u> Application Area	<u>(white text on brown background)</u> Application Area	
MUTCD	Gas Food Lodging <u>Camping Attractions 24-Hr Pharmacy</u> Recommended for Rural Areas Only	Recreational and Cultural Interest Signs: <ul style="list-style-type: none"> • General applications • Accommodations (of recreational nature) • Services • Land Recreation • Water Recreation • Winter Recreation <hr/> Urban and Rural	
Illinois Tollway*	<u>Attractions (Sec 4.9) & Lodging (Sec 4.10)</u> Rural Only	(Sec 4.2), adds Points of Interest subgroup (Sec 4.3)	types of Blue Board signs on the Tollway for non-Tollway entities. For use in rural areas only.

*See Illinois Tollway *Traffic Generator and Information Signage Policy Guide* for cited Sections.



Memorandum

To: Steve Musser (Tollway) & Bridget Malinowski (AECOM)
 From: Jim Powell
 Date: October 15, 2012
 Subject: Tollway Sign Issues

Pursuant to review and update of the Illinois Tollway's *Signage Guidelines*, which includes updates to bring Tollway practice into overall conformance with the Illinois adopted version of the 2009 *Manual on Uniform Traffic Control Devices (MUTCD)*, this memo addresses several issues pertinent to Tollway signing. The intent is to answer questions and issues regarding sign practice for universal application to Tollway signing. It must be noted that both national and local practice may change over time, and it is incumbent upon designers to check whether or not any of the practices and policies discussed here have been superseded or updated.

Option Lane Exits at Intermediate and Minor Interchanges (MUTCD Sec 2E.23)

Background

The MUTCD contains the below Guidance statement, meaning that this is recommended practice that "should" be used:

Section 2E.23 Signing for Intermediate and Minor Interchange Multi-Lane Exits with an Option Lane

Support:

- 01 Intermediate and minor multi-lane exits might have an operational need for the presence of an option lane for only the peak period during which excessive queues might otherwise develop if the option lane were not available. In such cases, the Overhead Arrow-per-Lane or Diagrammatic guide signing described for option lanes in Sections 2E.21 and 2E.22 might not be practical, depending on the level of use of the option lane and the spacing of nearby interchanges, particularly in non-rural areas.

Guidance:

- 02 *Signing for an intermediate or minor interchange that has a multi-lane exit with an option lane that also carries the through route should use the same basic principles as those for a conventional exit. In such cases, the option lane is not signed on the Advance Guide signs. For such exits that involve the addition of an auxiliary lane that is not present at the Advance Guide sign locations, but do not involve a lane drop (see Figure 2E-12), a sequence of post-mounted or overhead-mounted Advance Guide signs should be used, located in accordance with the interchange classification (see Section 2E.32). The Exit Direction sign should be located at the theoretical gore and display a diagonally upward-pointing directional arrow above each lane that departs from the mainline alignment. The Exit Direction sign should not contain the EXIT ONLY legend.*
- 03 *For such interchanges that also have a lane drop (see Figure 2E-11), the Advance Guide and Exit Direction signs should follow the provisions of Section 2E.24. The Exit Direction sign should be located at the theoretical gore and should contain the EXIT ONLY (E11-1e) sign panel.*
- 04 *The presence of the option lane should be conveyed by the use of post-mounted lane-use (R3-8 Series) signs (see Section 2B.22). When used, the R3-8 signs should be of an appropriate size for their application to optimize their conspicuity. The signs should be located in succession with the Advance Guide signs, where the option and exit lanes have developed (see Figure 2E-11). In cases where the exiting lane or lanes have not developed and the option lane is created by the addition of an auxiliary lane that exits, the R3-8 signs should be located only adjacent to where the lanes have been fully developed and not in advance of the lane or along its transition (see Figure 2E-12).*

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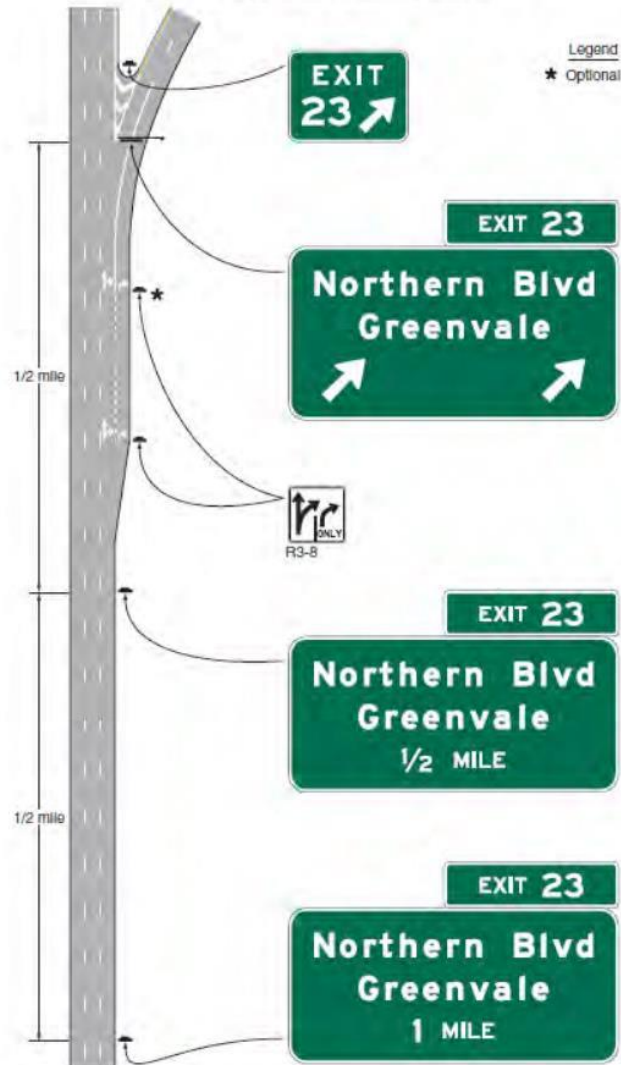
Figure 2E-11. Example of Signing for a Two-Lane Intermediate or Minor Interchange Exit with an Option Lane and a Dropped Lane



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Mr. Steve Musser & Ms. Bridget Malinowski
October 15, 2012
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Figure 2E-12. Example of Signing for a Two-Lane Intermediate or Minor Interchange Exit with Option and Auxiliary Lanes



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Tollway Practice

The MUTCD further states that Guidance can be overridden based on engineering judgment, and that such judgment does not need to be formally documented:

Sec 1A.13, p10: "B. Guidance—a statement of recommended, but not mandatory, practice in typical situations, with deviations allowed if engineering judgment or engineering study indicates the deviation to be appropriate. All Guidance statements are labeled, and the text appears in unbold type. The verb "should" is typically used..."

Sec 1A.13, p 14: "64. Engineering Judgment—the evaluation of available pertinent information... Documentation of engineering judgment is not required."

The Tollway, however, generally states the reasons for exercising engineering judgment that runs counter to the *MUTCD*, and that practice is followed here.

In this case, Illinois Tollway staff in coordination with CDM Smith have reviewed this guidance and are applying engineering judgment to modify parts of the *MUTCD* guidance, as follows:

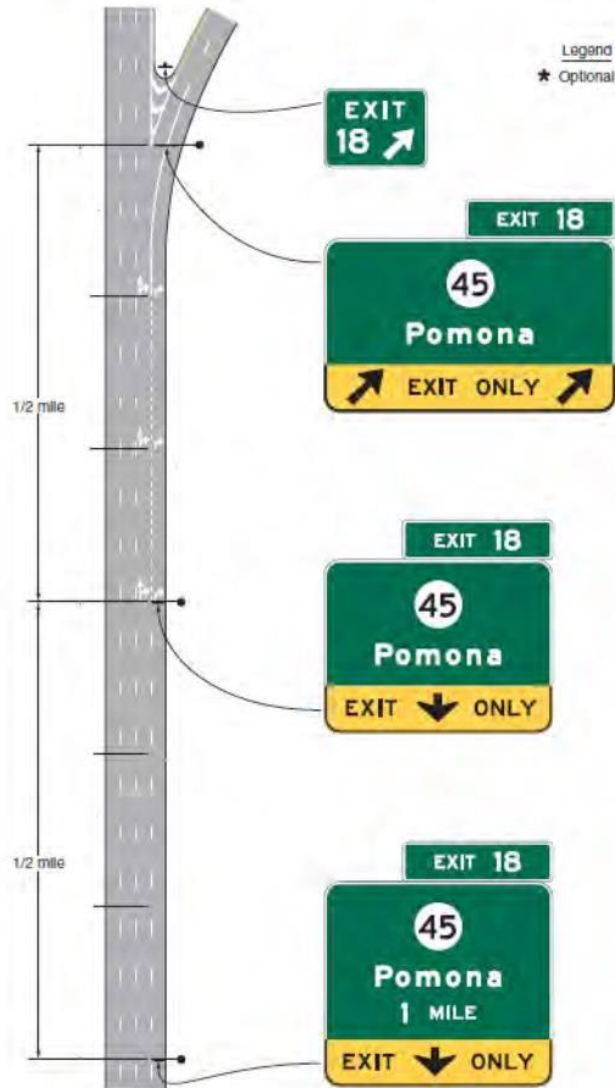
- Use of the R3-8 ground mounted sign is considered inappropriate for the Tollway because 1) such signs are normally associated with surface streets, not freeway and tollway facilities, and 2) ground mounted signs like this often may not be visible to drivers when trucks occupy the outside lane or lanes.
- Tollway practice is to always use an "EXIT ONLY" (black/yellow) legend and arrows when the Exit Direction sign is at or very near the theoretical gore in both cases of an auxiliary lane and a lane drop. This is based on the perceived need for clear and accurate guidance at Tollway exits, many of which occur in an environment of competing backgrounds.
- In summary, option lane exit signing for Intermediate and Minor interchanges (interchange type as determined by the Tollway) is to follow *MUTCD* Figure 2E-11 but without R3-8 ground mounted signs, as illustrated on the next page.

Designers on Tollway projects shall follow this practice unless directed otherwise by the Tollway Project Manager.

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Tollway Practice: Option Lane Exit Signing for Intermediate and Minor Interchanges



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Interchange Exit Numbering (*MUTCD* Sec 2E.31)

The *MUTCD* states the following with respect to interchange exit numbering:

Sec 2E.31: Standard: Interchange numbering shall be used in signing each freeway interchange exit. Interchange exit numbers shall be displayed with each Advance Guide sign, Exit Direction sign, and Exit Gore sign. The exit number shall be displayed on a separate plaque at the top of the Advance Guide or Exit Direction sign...

Advance Guide signs then are discussed per:

Section 2E.33 Advance Guide Signs

Support:

An Advance Guide sign (see Figure 2E-22) gives notice well in advance of the exit point of the principal destinations served by the next interchange and the distance to that interchange.

Guidance:

For major and intermediate interchanges (see Section 2E.32), Advance Guide signs should be placed at ½ mile and at 1 mile in advance of the exit with a third Advance Guide sign placed at 2 miles in advance of the exit if spacing permits...

Figure 2E-22. Examples of Interchange Advance Guide Signs, Exit Number Plaques, and LEFT Plaque



Note: Delete word EXIT(S) if exit number is used.

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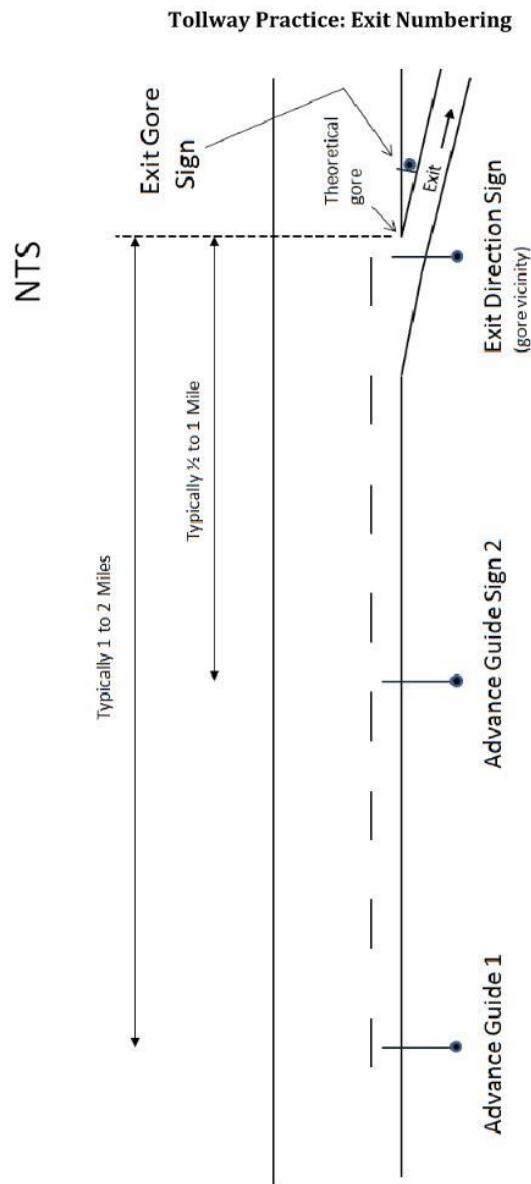
Mr. Steve Musser & Ms. Bridget Malinowski
October 15, 2012
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Tollway Practice

The issue on the Tollway is classification of signs as Advance Guide vs. Supplemental Guide, since at some Tollway exits there are signs well in advance of the exit (over about 3 miles) that have legend that is the same as Advance Guide signs in closer proximity to the exit. This section discusses distinguishing between Advance Guide signs that do include exit numbering and Supplemental Guide signs that should not include such numbering. The figure on the next page lays out Tollway practice to incorporate exit numbering on guide signs approaching and at Tollway exits.

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 October 15, 2012
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Exit Numbering shall be included on the Exit Gore Sign, the Exit Direction Sign, and **TWO** Advance Guide Signs ideally within 2 Miles of the theoretical gore.

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Stop Sign Sizes at Toll Booths (*MUTCD* Sec 2A.11)

Section 2A.11 of the *MUTCD* states: "...the sign dimensions shall not be less than the minimum dimensions specified in this Manual." Section 2B.03 goes on to prescribe minimum stop sign (R1-1) dimensions of 30" x 30" for single lane approaches. The Tollway, however, uses a 15" x 15" foam board sign on toll gate arms, as illustrated below.



Engineering Study

In the case of toll arm stop sign, the smaller stop sign is supplemental to the gate arm and a standard size stop sign mounted on the right side of such toll plaza lanes (not shown in picture). The toll arm stop sign is used solely to improve driver recognition of the need to stop. The need for supplemental signing is based on Tollway experience with motorists knocking down or crashing through gate arms, and a standard 30" x 30" metal stop sign would be too heavy for the gate arm mechanism. Under the circumstances, the reduced size is acceptable because it is not the operative, mandatory traffic control device conveying the required regulatory message.

CDM Smith
801 Warrenville Road, Suite 260
Lisle, IL 60532



Memorandum

To: Steve Musser, Jeff Schneberg (Tollway), Bridget Malinowski,
Matt Pregmon (AECOM)

From: Peter R. Dombrowski SE PE

Date: January 9, 2013

Subject: Engineering Study of Wood Posts for Sign Structures.

Epstein completed the requested review of utilizing wood posts specifically for larger signs placed in the gore areas.

Architecture
Interiors
Engineering
Construction

In summary, the engineering study focused on specific conditions that the Illinois Tollway utilizes for these sign posts while eliminating overly conservative assumptions embedded into various codes. This was achieved by the following:

1. Member size is limited to 6"x6" wood posts to accommodate the equipment of the in-house maintenance staff.
2. Material properties were limited to Southern Pine No. 2. The material properties of the Douglas-Fir as an option were not equivalent. Crash test data was also limited to So. Pine No. 2 or equivalent. To maintain the economics and standard of practice, the study sets for a specific material property, but also allows ISHTA to approve alternative materials that meet the minimum bending stress requirement.
3. Properties of the 6"x6" member were taken directly from the NDS manual for the allowable bending stress.
4. Dimensions for spacing of posts are rounded to the nearest 3" increment to keep fabrication and installation simple for maintenance crews.
5. Latest design study calculation hold a 5'-0" sign plate height and 11'-6" average overall, this allows for wider signs to be fabricated within this study as long as the 3'-9" maximum post spacing is not violated.

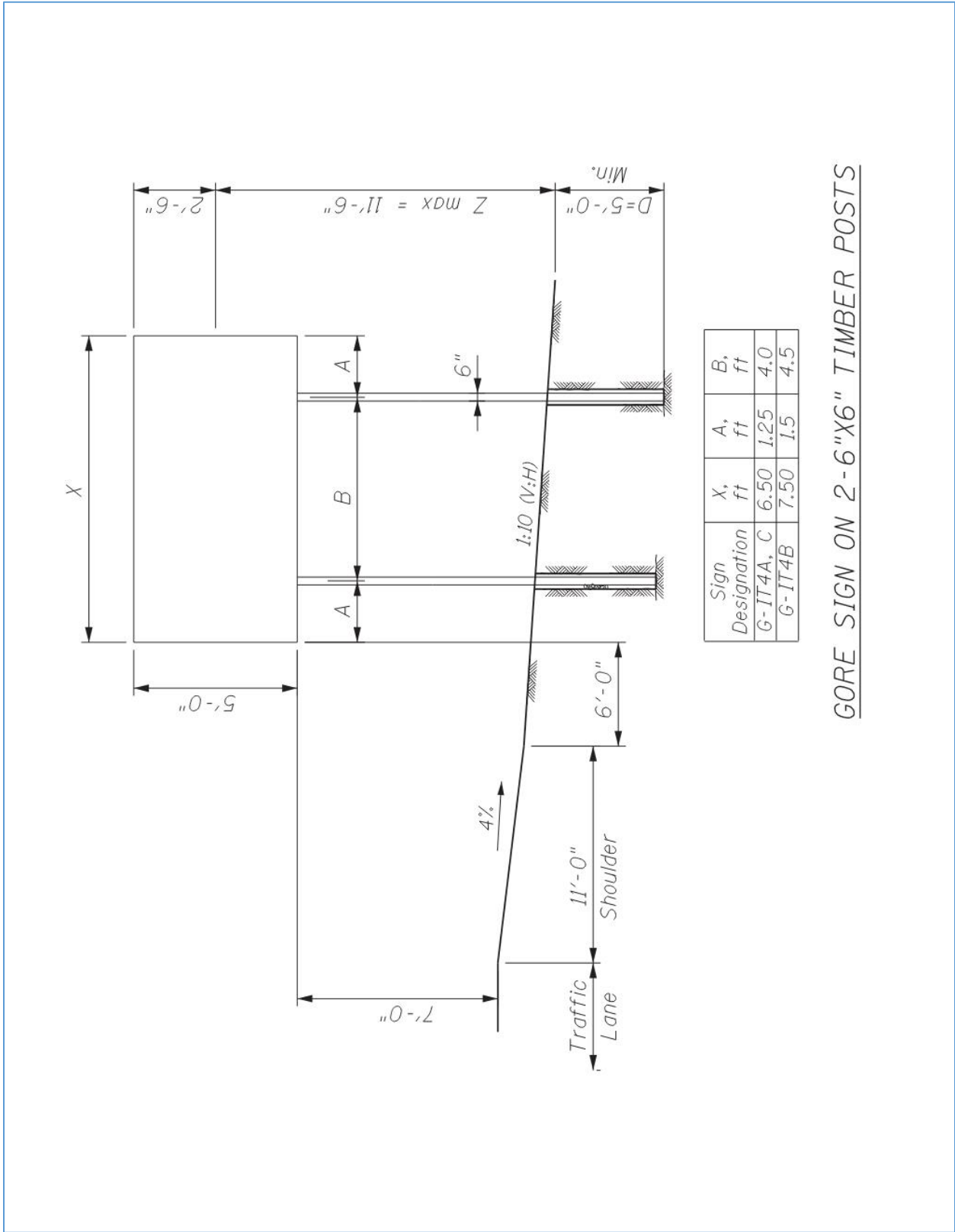
The summary table indicates the minimum wood post size for the exit gore signs analyzed.

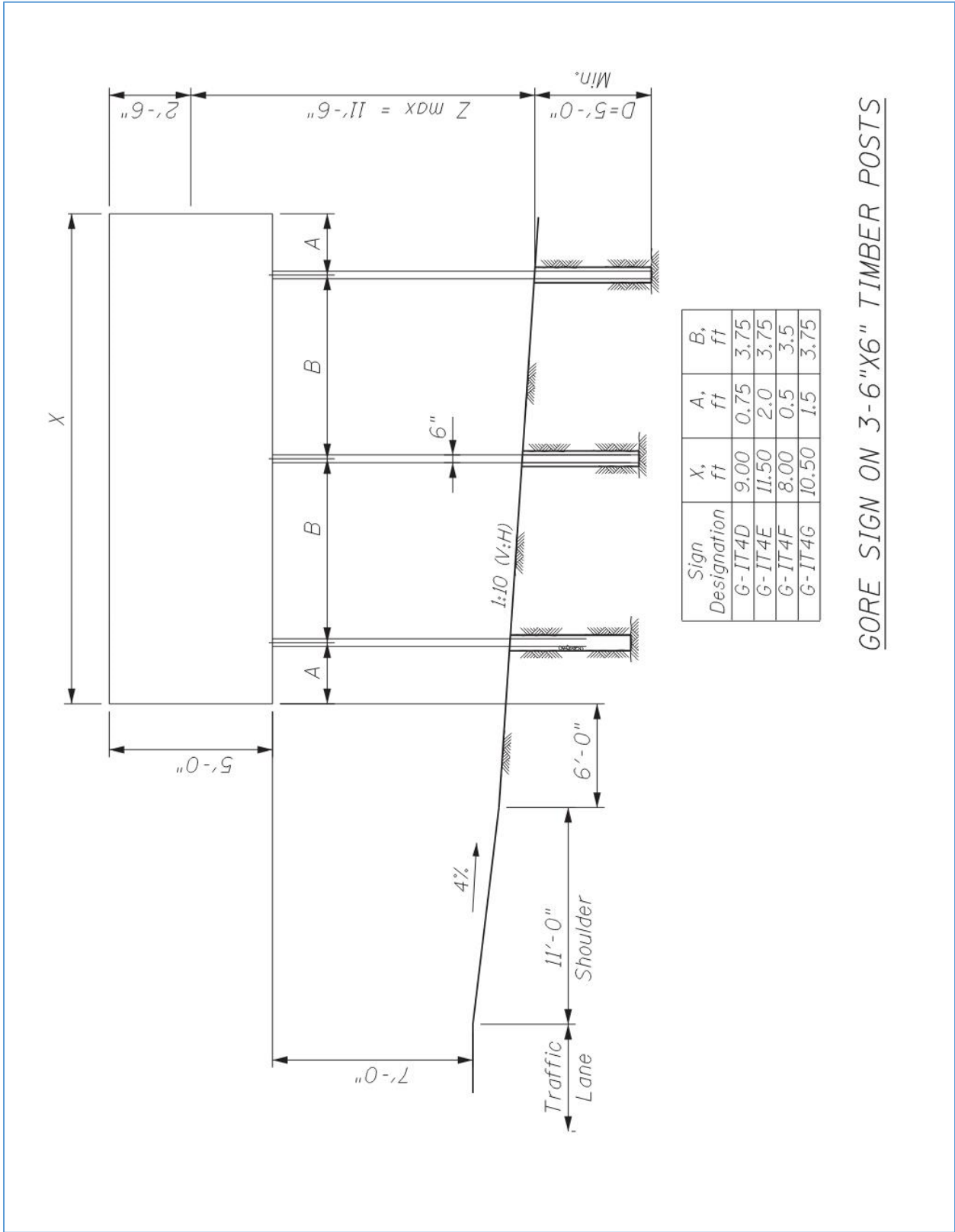
CC: V. Iniguez, T. Pelletier (Epstein)

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HANSO**MEMORANDUM**

TO: Illinois Tollway

FROM: Hanson Professional Services

DATE: 10/10/2014

SUBJECT: Sign Support Research

The Tollway has requested additional research be generated for different wood post sizes, wood type, and number of posts recommended by other agencies, research boards, and State Departments of Transportation for use with signs.

The **goals** of this memorandum are the following:

1. Summarize the material, number, and size of wood post supports to use for various sign sizes based on existing resources from other agencies, researchers, and State Departments of Transportation.
2. Highlight acceptable methods to make sign posts breakaway.
3. Illustrate in a table what the Tollway Sign Shop's current standard practices are versus results calculated using AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals Manual (6) 2013 equations.
4. Highlight examples of speed limit sign supports used by neighboring states.

Material, size, and number of supports to use for various sign sizes

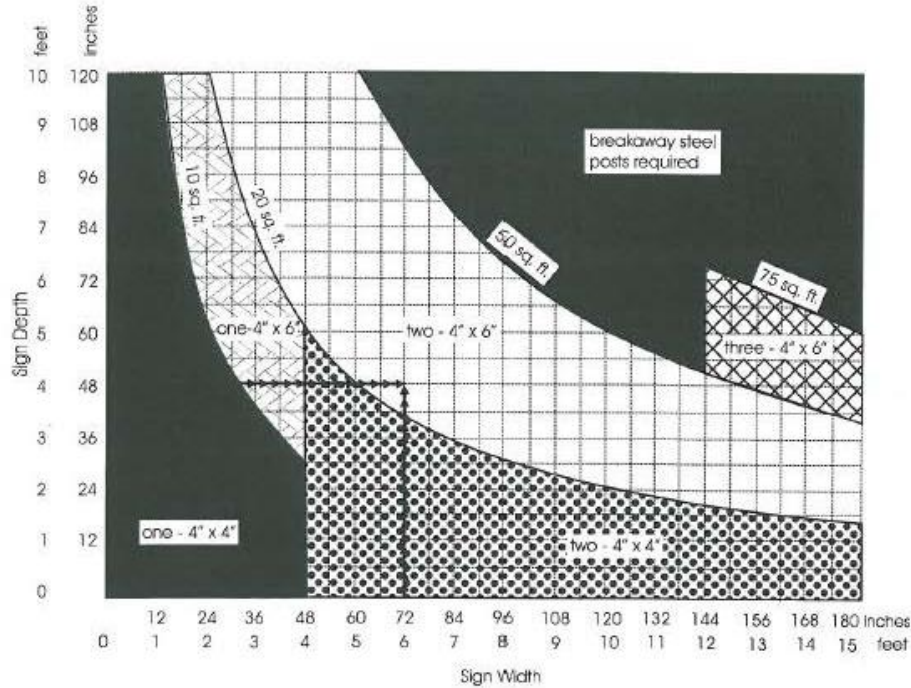
Breakaway, or "crashworthy", sign support systems have been extensively tested by the following entities at the Federal Outdoor Impact Laboratory (FOIL) based on the two reports listed below:

- U.S. Department of Transportation – Federal Highway Administration (FHWA) Report, September 3, 1993
- Transportation Research Board (TRB) 14-479 - Development of a Crashworthy Support System for Large Temporary Guide Signs, Report by R.P. Blingh and D.R. Arrington, August 1, 2013

Testing conditions administered by these entities for various breakaway sign supports were kept as constant as possible and were measured in accordance to the Manual for Assessing Safety Hardware (MASH) and the National Cooperative Highway Research Program (NCHRP) Report 350 evaluation criteria. Within the "clear zone" of a roadway, roadside signs of all types must meet breakaway standards unless mounted on, or protected by a barrier or guardrail.

Data from the Iowa State University Institute for Transportation (ISUIT):

According to the document "Sign Posts and Supports" by the Center for Transportation Research and Education, Iowa State University Institute for Transportation dated 2001(<http://www.ctre.iastate.edu/pubs/itcd/signposts.pdf>), the following graph and table (see Figure 1) was generated for use in determining the number and size of wood and steel posts needed for various sign sizes.

**Determination of sign post size and number**

<u>Sign Area</u>	<u>Post Number and Size</u>
less than 10 sq. feet	one or two 4x4s
10-20 sq. feet	one 4x6 or two 4x4s
20-50 sq. feet	two 4x6s
50-75 sq. feet	three 4x6s or steel
greater than 75 sq. feet	steel posts

Figure 1. Number and Size of Sign Posts (source: ISUIT 2001)

Small signs (less than 50 SQFT) are commonly supported with either wood or steel posts. Larger signs (greater than 50 SQFT) may be mounted on specially designed steel or aluminum structures such as trusses, bridges, or cantilever supports. Wood posts are available in standard sizes of 4"x4", 4"x6" and larger. Major types of steel sign posts for small signs include U-channel, round pipe, and square tube. In addition to the graph in Figure 1, the dimensions in the same figure can be used as a guide to select the size and number of wood posts, "Sign Posts and Supports" by the Center for Transportation Research and Education, Iowa State University Institute for Transportation dated 2001(<http://www.ctre.iastate.edu/pubs/itcd/signposts.pdf>).

For stability reasons, a maximum width of 4' is recommended for signs to be mounted onto a single post. The recommended sign width for a three-post assemble is 12' to avoid having two posts within the path of an errant vehicle, "Sign Posts and Supports" by the Center for Transportation Research and Education, Iowa State University Institute for Transportation dated 2001(<http://www.ctre.iastate.edu/pubs/itcd/signposts.pdf>).

Posts for smaller signs with less than 10 SQFT of area should be installed with approximately 4' below the ground surface. For larger signs and longer post lengths, the portion below the

ground surface should be a minimum of 5', "Sign Posts and Supports" by the Center for Transportation Research and Education, Iowa State University Institute for Transportation dated 2001 (<http://www.ctre.iastate.edu/pubs/itcd/signposts.pdf>).

All wood posts 4"x6" or larger must be modified to meet breakaway requirements if located within the clear zone. This modification can be achieved by drilling two holes near the bottom section of the post above the ground surface (see Figure 2), "Sign Posts and Supports" by the Center for Transportation Research and Education, Iowa State University Institute for Transportation dated 2001 (<http://www.ctre.iastate.edu/pubs/itcd/signposts.pdf>).

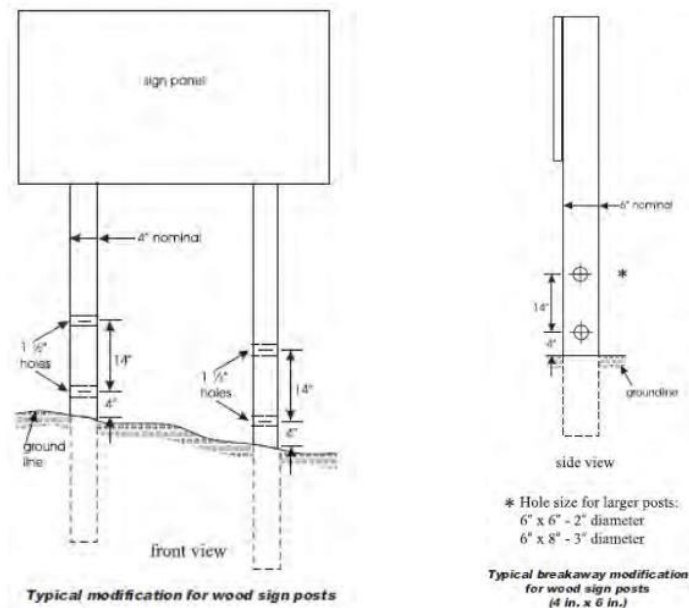


Figure 2. Wood Sign Post Breakaway Modifications (Source: ISUIT 2001)

Data from the Wisconsin Department of Transportation (WisDOT):

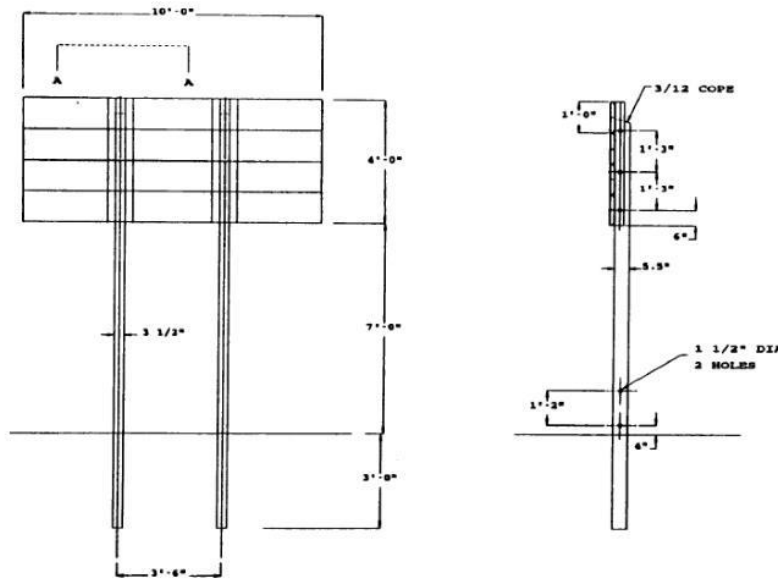
According to the document "Evaluation of Wood Species and Preservatives for WisDOT Sign Posts" prepared by Stan Lebow, Robert Ross, Sam Zelinka, and Carol Clausen of the USDA, Forest Service, Forest Products Laboratory dated October 2013 (<http://wisdotresearch.wi.gov/wp-content/uploads/WisDOT-Policy-Research-0092-13-15-final-report.pdf>), the type of wood support material usually varies across different states, but in general, two species are typically used:

- Southern Yellow Pine
- Douglas Fir

In comparison, the Illinois Department of Transportation (IDOT) Standard Specifications for Road and Bridge Construction adopted January 1, 2012 state wood supports shall be either Southern Pine No. 2 or Douglas Fir No. 2. Other state agencies cite to follow the AASHTO Standard Specification M 168 or the American Wood Protection Association (AWPA) standards for allowable wood species rather than listing individual species.

Data from the U.S. Department of Transportation and Federal Highway Administration:

According to the document "Testing of Small and Large Sign Supports" prepared by the U.S. Department of Transportation and Federal Highway Administration dated September 3, 2013 (http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/breakaway/pdf/ss36.pdf), The crash test guidelines have been updated and have replaced the NCHRP Report 230 with the NCHRP Report 350. Additionally, according to Section 7 of the AASHTO support specifications, breakaway devices are to be tested with an 1800-pound vehicle at 20 mph and at 60 mph. The NCHRP Report 350 recommends a maximum velocity change of 16.4 fps. In Appendix A of the US DOT/FHWA 2013 document, Figure 3 shows a sketch of a small sign support for testing is provided and states the distance from the ground surface to the bottom of the sign being 7ft (see Figure 3).



Acceptable – Dual 89-mm x 140-mm (4-in x 6-in) Southern Yellow Pine Wood Posts in Soil, Modified with two 38-mm (1.5-in) Holes, Two Posts Hit

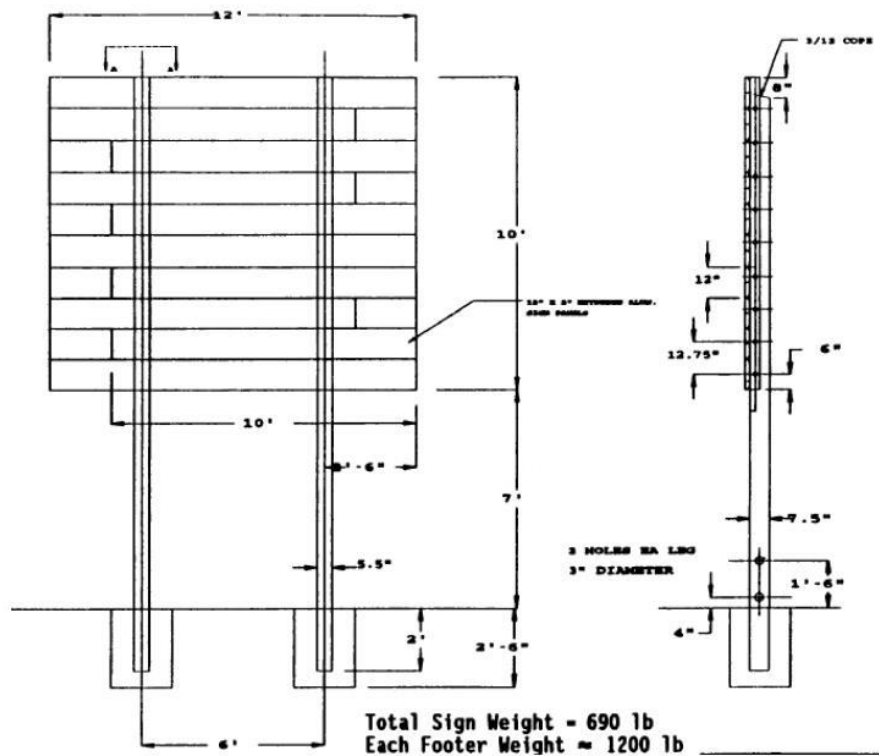
Test Number	92F009	92F010
Soil Type	S-2 (Weak)	S-2 (Weak)
Embedment length, mm (in)	914 (36)	914 (36)
Impact Speed, km/h (mps)	32.2 (20.1)	94.3 (58.6)
Velocity Change, m/s (fps)	4.36 (1.43)	2.29 (7.5)
Occupant Impact, m/s (fps)	2.62 (8.6)	2.29 (7.5)
Stub Height, mm (in)	(see text)	< 100 mm (4 in)

Figure 3. Sketch and Table of Small Sign Support: 92F009 & 92F010
(Source: US DOT/FHWA 2013)

The sign support systems tested under the second phase of the study which has been judged to be acceptable for use on NHS projects are listed in section V A of the above referenced document. The test results indicated that the dual modified (Southern Yellow Pine with 2, 1.5" diameter holes in each post) 4" x 6" wood post support set in soil meet the FHWA breakaway

requirements and is acceptable for use on NHS projects when requested by a State. A single 4" x 6" post (Southern Yellow Pine with 1, 1.5" diameter hole) is also acceptable.

A single 6" x 8" post (Southern Yellow Pine in concrete foundation with 2, 3" diameter holes) is also acceptable (see Figure 4).



Acceptable - Single 140-mm x 190 (6-in x 8-in) Southern Yellow Pine Wood Post in Concrete Foundation. Modified with Two 75-mm (3-in) Holes. One Post of Dual Posts Hit

Test Number	92F020	92F021
Soil Type	Concrete in S-2	Concrete in S-2
Embedment length, mm (in)	610 (24)	610 (24)
Impact Speed, km/h (mps)	34.5 (21.4)	97.4 (60.5)
Velocity Change, m/s (fps)	2.26 (7.4)	0.91 (3.0)
Occupant Impact, m/s (fps)	2.26 (7.4)	0.91 (3.0)
Stub Height, mm (in)	90 (3.5)	90 (3.5)

Figure 4. Sketch and Table of Small Sign Support: 92F020 & 92F021
(Source: US DOT/FHWA 2013)

In Appendix B of "Testing of Small and Large Sign Supports" prepared by the U.S. Department of Transportation and Federal Highway Administration dated September 3, 2013 (http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/breakaway/pdf/ss36.pdf), there is a table labeled as "Summary of Sign Support Systems Tested and/or Accepted. Within Appendix B, noteworthy types of support systems tested included wood post systems, steel U-channel systems, slip base systems, 2" diameter schedule 40 steel pipe, 1.75" square perforated steel tube, and 3" diameter fiberglass posts. Noteworthy items that are accepted are two – 4" x 4" unmodified wood posts placed in all soil (no concrete foundation) types, two – 4" x 6" modified with 1.5" diameter holes for wood posts placed in all soil (no concrete foundation) types, and two – 6" x 8" modified with 3" diameter holes for wood posts placed in all soil (no concrete foundation) types (see table 1).

Table 1. FHWA Summary of Sign Supports

Appendix B: Summary of Sign Support Systems Tested and/or Accepted

Wood Post Systems

Size	# of Posts	Hole Size	OK In All Soils?	OK in S-1 Soil?	OK W/Conc.Fdn?	Test Numbers
4" x 4"	2	None	Yes	Yes	No *	90F015, 050, 054, 055, 92F015
4" x 6"	1	None	No	Not Tested	Yes *	90F037, 91F032, 033
4" x 6"	2	1.5"	Yes	Yes	Not Tested	92F009, 010
4" x 6"	2	None	No	Not Tested	No *	90F037, 92F014
6" x 8"	1	3"	Yes	Yes	Yes *	90F045, 046, 92F020, 021
5" Top Diameter	1	2"	Not Tested	Not Tested	Yes, Soilcrete	92F016, 026

* Wood posts placed in cylindrical concrete foundation with steel sleeve. Foundation set in S-2 soil.

(Source US DOT/FHWA 2013)

Data from the Texas A&M Transportation Institute:

According to the document "Development of a Crashworthy Support System for Large Temporary Guide Signs" prepared by Rodger P. Bligh, Ph.D., P.E. and Dusty R. Arrington of the Texas A&M Transportation Institute dated August 1, 2013 (<http://docs.trb.org/prp/14-4791.pdf>), a temporary direct embed wood post support system for large guide signs was developed and successfully crash tested in accordance with MASH guidelines. The design considers wind loads, foundation requirements, and impact performance. The direct embedded support posts eliminate the need for reinforced concrete foundations. Variations of different post size, grade, and spacing were used in the testing. Previous research from, "Testing of Small and Large Sign Supports" prepared by the U.S. Department of Transportation and Federal Highway Administration dated September 3, 2013 (http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/breakaway/pdf/ss36.pdf), has shown that weakening wood posts through the use of drilled holes at strategic locations has enhanced crashworthiness without sacrificing a significant percentage of their wind load capacity. Numerous wood sign support configurations were crash tested and evaluated as part of a national pool-funded study titled "Testing of Small and Large Sign Supports" performed in the early 1990s. The testing was conducted at the Federal Highway Administration's Federal Outdoor Impact Laboratory (FOIL). Most posts tested were of the Southern Yellow Pine (SYP) species. Support posts were tested in single and multiple support configurations. Some tests involved impacting one or two posts in a dual or multiple support installations. This is an important distinction because the behavior of the sign support system is different depending on whether or not all posts in an installation are impacted.

According to the Texas A&M study, supports successfully tested and considered eligible for use on the National Highway System (NHS) include:

- A single, unmodified 4" x 6" SYP post
- Dual 4" x 6" SYP posts with two - 1.5" diameter holes drilled through the post along its strong axis at heights of 4" and 18" above grade
- Dual 6" x 8" SYP posts with two - 4" diameter weakening holes at 4" and 18" above grade drilled perpendicular to the roadway and one - 3 5/8" weakening hole parallel to the roadway. A design modification is required for high-speed impacts. It involves drilling a small hole through the wood support parallel to the sign panel above and below the weakening hole. A 1/4 - inch diameter cable is used to form a loop through the holes. Upon fracture of the support through the upper weakening hole, the cable will restrict rotation of the support toward the impacting vehicle (see Figure 5).

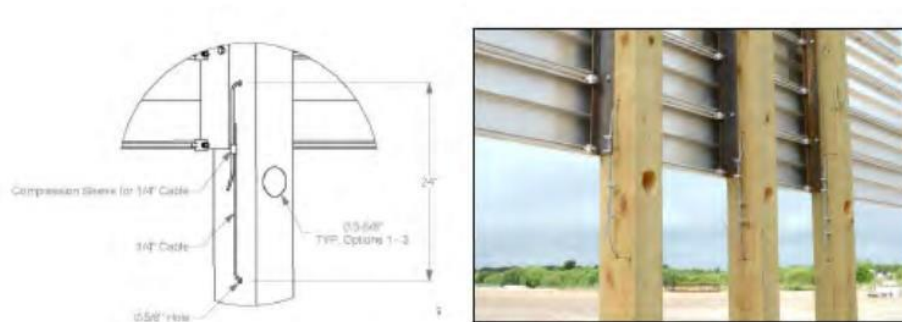


Figure 5. Cable Thru Weakening Hole (Source: Texas A&M/ TTI 2013)

According to "Development of a Crashworthy Support System for Large Temporary Guide Signs" prepared by Rodger P. Bligh, Ph.D., P.E. and Dusty R. Arrington of the Texas A&M Transportation Institute dated August 1, 2013 (<http://docs.trb.org/prp/14-4791.pdf>), in addition to being crashworthy, sign supports must also meet wind load requirements described in the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals (6) 2013. The recommended minimum design life for roadside sign structures is 10 years. As illustrated in the AASHTO manual a 90 mph design wind speed with a 10 year reoccurrence interval was used by TTI in design. This AASHTO value was used to determine the required number of support posts and the maximum hole size that can be used to weaken the support to help facilitate fracture during vehicle impacts. In Texas, the minimum mounting height for signs is 7 ft. measured relative to the pavement surface. Because signs are typically installed in roadside slopes beyond the shoulder, a range of mounting heights from 7 to 10 feet was considered.

There are two grades of wood that is considered for sign posts, grade 1 and grade 2. Post size and grade directly affect the material strength of the post. Grading for Southern Pine posts are determined by the Southern Pine Inspection Bureau Grading Rules (SPIBGR) and Douglas Fir posts are determined by the West Coast Lumber Inspection Bureau Standard Grading Rules (WCLIBSGR), (IDOT - Standard Specifications for Road and Bridge Construction, January 1, 2012).

An example table is provided. Table 1 (see Figure 7) in "Development of a Crashworthy Support System for Large Temporary Guide Signs" prepared by Rodger P. Bligh, Ph.D., P.E. and Dusty R. Arrington of the Texas A&M Transportation Institute dated August 1, 2013 (<http://docs.trb.org/prp/14-4791.pdf>), represents the results of the sign support analysis which considers a 16' wide x 8' tall (128ft²) sign. It shows that for grade 2 timber posts with a wind velocity of 90 mph and a sign mounting height of 7ft require:

- 4"x6" post size – use 5 posts spaced at a minimum of 3.20 ft. with a maximum hole size of 1.83 inches.
- OR
- 6"x8" post size – use 3 posts spaced at a minimum of 5.33 ft. with a maximum hole size of 3.8 inches.

Table 1. Sign Support Requirement Analysis

	Wind Velocity (mph)	Sign Mounting Height (ft)	Post Size (in)	Max Hole Size (in)	Number of Posts	Minimum Post Spacing (ft)	Number of Posts Impacted
Grade 1	100	10	4x6	1.98	6	2.67	3
			6x8	3.91	3	5.33	2
		7	4x6	2.7	5	3.20	2.3
			6x8	5.39	3	5.33	2
	90	10	4x6	2.39	5	3.20	2.3
			6x8	5.26	3	5.33	2
		7	4x6	2.58	4	4.00	2
			6x8	4.31	2	8.00	1
Grade 2	100	10	4x6	2.15	8	2.00	3.4
			6x8	4.33	5	3.20	2.3
		7	4x6	0.42	6	2.67	3
			6x8	4.46	4	4.00	2
	90	10	4x6	2.93	7	2.29	3
			6x8	4.23	4	4.00	2
		7	4x6	1.83	5	3.20	2.3
			6x8	3.8	3	5.33	2

Figure 7. Example TTI Sign Support Comparison
(Source: Texas A&M/TTI 2013)

Neighboring States examples with R2-1 & R2-4a signs:

Wisconsin using 2 wood supports:



I-43 & Elm View Rd

I-94 & 10th Ave

I-90 & WIS 16

(Source: Google Earth 2014)

Note: Correspondence with the Wisconsin Department of Transportation (WisDOT) Bureau of Structures (BOS) noted that similar calculations per the AASHTO – Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals Manual (6) 2013 were used to determine the number of wood supports used on their signs (as shown above). Villanueva Matt and Hille Jay (WisDOT), (personal communication, June 17, 2014).

Minnesota using 4 telespar sign supports:

I-35 & MN 23 east

I-694 & 34TH St N

I-35W & Cleveland Ave N

(Source: Google Earth 2014)

Iowa using 1 I-beam post (see note):I-80 & US 6 east / Iowa 14 – Newton,
Monroe

I-380 & S Raymond Rd



I-80 & US 59

(Source: Google Earth 2014)

Note: Per an email correspondence with Zachary Abrams of Iowa DOT, the I-beam posts shown in the photos for Speed Limit Sign Assemblies with "Minimum Speed" have been discontinued in favor of 4"x6" Rectangular Steel Tube. Typically, however, districts are given discretion to use either wood posts or telespar for most small sign applications. Large signs using steel I-beams (typically over 100 square feet) are limited to either W8x21 or W12x26 beams mounted in concrete foundations. Breakaway details are given on Iowa DOT Standard Road Plan SI-113, Sheet 2. Quill Mike and Abrams Zachary (Iowa DOT), (personal communication, March 2, 2015).

Comparison of Tollway Sign Shop Wood Supports vs. AASHTO Criteria (Attachment 1):

The attached table illustrates the results based on evaluating sign support sizes using equations from the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals Manual (6) 2013. The results shown in the table are strictly based from the formulas and standards represented from the AASHTO manual.

Illinois Department of Transportation (IDOT) Policy:

The Bureau of Operations is responsible for installation of signage. According to a conversation with the Bureau of Operations Engineering Standards Unit Chief, there is no IDOT

policy regarding material or quantity of sign posts apart from those specifically detailed in the IDOT Sign Structures Manual (which deals with large bridge and truss mounted sign structures). Regarding smaller scale, post-mounted signs, each IDOT district has the authority to decide what to use based on preference and experience.

In IDOT District One—responsible for the Chicagoland area—expressway signs larger than 10 square feet are mounted on wood posts when speed limits are greater than 55 mph. According to the District 1 sign shop manager, Bill Doherty, a second post is added for signs more than 48" wide. Mr. Doherty stated that wood posts are a more time consuming install, as they require auguring and coring, whereas telespar posts can typically be pushed into the ground using the down pressure of their Digger Derrick truck boom. He added that in his opinion and experience, both wood and steel hold up well to wind, plows and weather as long as they aren't struck or impacted directly. Quill Mike and Doherty Bill (IDOT), (personal communication, February 24, 2015).

Missouri Department of Transportation (MoDOT) Electronic Signpost Selection Guide:

The MoDOT Engineering Policy Guide Section 903.3 deals with post mounted signing. The online version includes a link to a Signpost Selection Guide, an excel document that can be used to assist in determining the number and sizes of posts based on sign size and post material. The cover page is shown in Figure 8. A table is included with general guidelines for material selection based on the square footage and width of the sign. The example of a freeway sized R2-1 Speed Limit sign using wood posts (where inputs were a 4 ft width and 5 ft height) is shown in Figure 9. The same example using pipe posts is shown in Figure 10. The Selection Guide program also has calculators for PSST and channel posts.

SIGN POST SELECTION GUIDE

Post Selection Worksheets For:

- Channel / Wood / PSST Posts
- Pipe Posts
- Structural Posts with Post Spacing

Select The Appropriate Worksheet Based Off
the General Sign Selection Table Below:

General Sign Selection Table

	Sign Area SQ FT	Sign Width FT
Wood	up to 50	up to 8
Channel	up to 30	up to 8
PSST	up to 24	up to 6
Pipe	up to 30	up to 8
Structural	21 - 540	5 to 30

- Both Sign Area and Width Must Be Valid
for Post Selection

Revised July 2005

Figure 8. MoDOT Sign Post Selection Guide cover page

Wood Mounted Sign Post Selector

2004-2005

Sign: R2-1 Speed Limit

Instructions
-Fill in all shaded boxes.
-Press the Enter key after each selection.

Sign Dimensions	width ft 4 height ft 5	Number of Posts: 2 Post Size: 4X6 in. Sign Size: 20 sq. ft. Sign Type: Flat Sheet
------------------------	---	--

The diagram illustrates a wood-mounted sign post. It features a rectangular sign with rounded corners mounted on two vertical posts. The posts are positioned 2 feet (24 inches) apart. Each post has a diameter of 6 inches. The sign is 4 feet wide and 5 feet high. The posts are located 0 feet (0 inches) from the centerline of the roadway. The sign is mounted on a wooden post that is 4x6 inches in size. The sign size is 20 square feet, and the sign type is a flat sheet. The diagram also shows the minimum clearance requirements: 7 feet for urban areas and 5 feet for rural areas.

Figure 9. MoDOT Signpost Selection Guide wood post example

Hanson Professional Services Inc.

Form QAP 17.2.3, Rev. 4

Pipe Mounted Post Selector

2004-2005

Sign: R2-1 Speed Limit

Instructions
 -Fill in all shaded boxes.
 -Press the Enter key after each selection.
 -This worksheet automatically calculates post size for rectangular signs only.
 -For Warning, Yield, and Stop signs use the Pipe Post Selection Table.

Sign Dimensions

width ft	4
height ft	5

Number of Posts: **2**
 Post Size: **2.5** in
 Sign Size: **20** sq. ft.
 Sign Type: **Flat Sheet**

Warning, Yield, and Stop Signs

Sign Size	Sign Type	Post Required
36" x 36"	Warning Signs ¹	1-2.5" Post
36" x 36"	Warning Signs ²	1-3" Post
48" x 48"	Warning Signs ³	1-4" Post
48" x 48"	Yield Signs ⁴	1-4" Post
60" x 60"	Yield Signs ⁴	1-4" Post
36" x 36"	Stop Signs ¹	1-2.5" Post
36" x 36"	Stop Signs ²	1-3" Post
48" x 48"	Stop Signs ^{3,4}	1-4" Post

1 - without plaques
 2 - with plaques
 3 - with or without plaques
 4 - with or without one-way signs mounted above

Pipe Post Notes

- Max sign width on one pipe post = 3' 6"
- Max sign width on two pipe posts = 6 ft
- Max sign sq ft on pipe post = 30 sq ft
- Pipe post size = inside pipe diameter
- For signs widths between sizes shown, go to next largest width (example: a sign that is 2-1/2' wide, use the chart for a sign width

Figure 10. MoDOT Signpost Selection Guide pipe mounted sign example

Ohio Department of Transportation (ODOT) and Turnpike:

According to a conversation with an Ohio Turnpike highway & traffic engineer, in regards to all signage, the Turnpike follows standards set forth by ODOT in their Traffic Engineering Manual (TEM). He went on to state, however, although allowed by the ODOT TEM (Section 221-5), the Turnpike does not use any wood sign posts, relying instead on steel drive posts and steel beams. Quill Mike and Bonnett Travis (Ohio Turnpike), (personal communication, October 9, 2014)

According to Jason Yeray, an engineer with ODOT, within the remainder of the state, "Districts commonly use wood posts (4x4, 4x6, 6x6, and 6x8) for larger Extrusheet signs due to ease of installations." He added that they also commonly use U-Channel Yielding posts, with some districts using only #3 due to extra durability in windier areas and long life expectancy. Quill Mike and Yeray Jason (ODOT), (personal communication March 2, 2015).

The ODOT TEM presents two useful figures regarding wood post selection and installation.

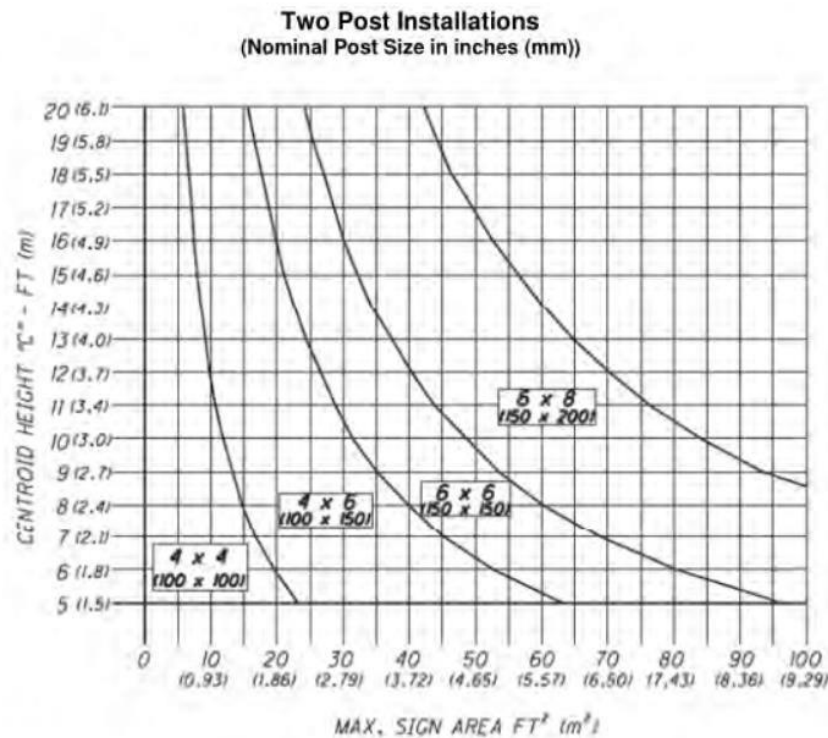


Figure 12. Solid wood post selection chart for two post installations
(Source: ODOT Traffic Engineering Manual, 2014)

New York Thruway and New York State DOT (NYSDOT)

According to a conversation with New York Thruway Traffic Engineer Robert Cournoyer, the Thruway has adopted all NYSDOT standards and specifications in regards to signage (the 645 series of NYSDOT standards sheets). Although standard Sheet 645-02 allows for wood posts on route marker assemblies (considered a "Type A" post), Mr. Cournoyer stated that the Thruway does not use wood sign posts anywhere along their routes.

Pennsylvania Turnpike and Pennsylvania DOT (PennDOT)

According to Tom Macchione of the Pennsylvania Turnpike Signing Department, the Turnpike follows PennDOT standards for signage as spelled out in PennDOT Pub 111 (Pavement Markings and Signing Standards, June 2013). In practice, the Turnpike typically uses steel sign posts for large guide signs, and wood posts for smaller signs such as speed limits, stop signs, etc. Since the PennDOT Standards require a galvanized mounting sleeve embedded in a concrete footing, Mr. Macchione stated that maintenance crews have found that wood post replacement into those sleeves is fairly simple and efficient. He went on to say that the Turnpike has found that the wood posts are more durable against snow removal loading than metal channel and square tube counterparts.

Sections TC-8702C and TC-8702E of Pub 111 detail PennDOT wood post selection and installation standards, and are based on the 2001 AASHTO Standards Specifications for Structural Supports, using a 90 mph design speed. Post selection tables for single and double posts are shown in Figure 13 and Figure 14, respectively. The sign width (W), height (H), and distance between top of the footing and bottom of the sign (L_B) are the variables. Importantly, as stated above, PennDOT and the Turnpike require galvanized sleeves embedded in concrete footings for all wood signs, an example of which is shown in Figure 15. Lastly, typical mounting for common sign sizes is shown in Figure 16.

DESIGN CRITERIA:

- DESIGN BASED ON 2001 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS INCLUDING 2002 INTERIM SPECIFICATIONS WITH THE FOLLOWING DESIGN CRITERIA:
 - BASIC WIND SPEED (V) = 90 MPH (3-SECOND GUST)
 - WIND IMPORTANCE FACTOR (I_r) = 0.71 (10 YEAR DESIGN LIFE)
 - FATIGUE IS NOT CONSIDERED FOR ROADSIDE SIGNS.
- EMBEDMENT OF FOOTINGS IS BASED ON FIGURES 13-3 AND 13-4 AS OUTLINED IN THE AASHTO SPECIFICATIONS.

POST SELECTION TABLE - ONE POST								
W (FT)	L _B (FT)	HEIGHT "H" (FT)						
		2	3	4	5	6	7	8
2	6	P1	P1	P1	P1	P1	P2	P2
	7	P1	P1	P1	P1	P1	P2	P3
	8	P1	P1	P1	P1	P2	P2	P3
	9	P1	P1	P1	P1	P2	P3	P3
	10	P1	P1	P1	P2	P3	P3	P3
	11	P1	P1	P1	P2	P3	P3	P3
3	6	P1	P1	P1	P1	P2	P3	P3
	7	P1	P1	P1	P2	P3	P3	P3
	8	P1	P1	P1	P2	P3	P3	P3
	9	P1	P1	P2	P3	P3	P3	P3
	10	P1	P1	P2	P3	P3	P3	-
	11	P1	P1	P3	P3	P3	-	-
4	6	P1	P1	P1	P2	P3	P3	P3
	7	P1	P1	P2	P3	P3	P3	-
	8	P1	P1	P2	P3	P3	P3	-
	9	P1	P2	P3	P3	P3	-	-
	10	P1	P2	P3	P3	P3	-	-
	11	P1	P3	P3	P3	-	-	-
5	6	P1	P1	P2	P3	P3	P3	-
	7	P1	P1	P2	P3	P3	-	-
	8	P1	P2	P3	P3	P3	-	-
	9	P1	P2	P3	P3	-	-	-
	10	P1	P3	P3	P3	-	-	-
	11	P2	P3	P3	-	-	-	-
6	6	*	P2	P3	P3	P3	-	-
	7	*	P2	P3	P3	-	-	-
	8	*	P2	P3	P3	-	-	-
	9	*	P3	P3	-	-	-	-
	10	*	P3	P3	-	-	-	-
	11	*	P3	-	-	-	-	-
7	6	*	P2	P3	P3	-	-	-
	7	*	P2	P3	P3	-	-	-
	8	*	P3	P3	-	-	-	-
	9	*	P3	P3	-	-	-	-
	10	*	P3	-	-	-	-	-
	11	*	P3	-	-	-	-	-
8	6	*	P2	P3	P3	-	-	-
	7	*	P3	P3	-	-	-	-
	8	*	P3	P3	-	-	-	-
	9	*	P3	-	-	-	-	-
	10	*	P3	-	-	-	-	-
	11	*	P3	-	-	-	-	-

LEGEND:

P1 = 4"x6" POST
 P2 = 6"x6" POST
 P3 = 6"x8" POST
 * USE TWO POSTS (SEE SHEET 2)

POST SELECTION EXAMPLE

FOR A SIGN WHERE
 W = 2'-0"
 H = 2'-0"
 L_B = 11'-0"

ONE P1 = 4"x6" WOOD POST IS REQUIRED.

Figure 13. PennDOT single wood post size selection table
 (PennDOT Pub 111, 2013)

Appendix I - Engineering Study #5 - Sign Support Research, Sheets 17 of 19

POST SELECTION TABLE - TWO POSTS						
W (FT)	L _B (FT)	HEIGHT "H" (FT)				
		2	3	4	5	6
6	6	P1	P1	P1	P1	-
	7	P1	P1	P1	-	-
	8	P1	P1	P1	-	-
	9	P1	P1	-	-	-
	10	P1	P1	-	-	-
	11	P1	-	-	-	-
	12	P1	-	-	-	-
	13	-	-	-	-	-
	14	-	-	-	-	-
	15	-	-	-	-	-
7	6	P1	P1	P1	-	-
	7	P1	P1	P1	-	-
	8	P1	P1	-	-	-
	9	P1	P1	-	-	-
	10	P1	-	-	-	-
	11	P1	-	-	-	-
	12	P1	-	-	-	-
	13	-	-	-	-	-
	14	-	-	-	-	-
	15	-	-	-	-	-
8	6	P1	P1	P1	-	-
	7	P1	P1	-	-	-
	8	P1	P1	-	-	-
	9	P1	-	-	-	-
	10	P1	-	-	-	-
	11	-	-	-	-	-
	12	-	-	-	-	-
	13	-	-	-	-	-
	14	-	-	-	-	-
	15	-	-	-	-	-
9	6	P1	P1	P2	P3	P3 *
	7	P1	P1	P2	P3	P3 *
	8	P1	P2	P3	P3 *	P3 *
	9	P1	P2	P3	P3 *	P3 *
	10	P1	P2	P3	P3 *	P3 *
	11	P1	P3	P3 *	P3 *	-
	12	P2	P3	P3 *	-	-
	13	P2	P3	P3 *	-	-
	14	P3	P3 *	-	-	-
	15	P3	P3 *	-	-	-
10	6	P1	P1	P2	P3	P3 *
	7	P1	P1	P2	P3	P3 *
	8	P1	P2	P3	P3 *	P3 *
	9	P1	P2	P3	P3 *	P3 *
	10	P1	P3	P3 *	P3 *	-
	11	P2	P3	P3 *	-	-
	12	P2	P3	P3 *	-	-
	13	P3	P3 *	-	-	-
	14	P3	P3 *	-	-	-
	15	P3	-	-	-	-

* SEE NOTE 1.

POST SELECTION TABLE - TWO POSTS						
W (FT)	L _B (FT)	HEIGHT "H" (FT)				
		2	3	4	5	6
11	6	P1	P1	P2	P3	P3 *
	7	P1	P2	P3	P3 *	P3 *
	8	P1	P2	P3	P3 *	P3 *
	9	P1	P3	P3 *	P3 *	-
	10	P2	P3	P3 *	-	-
	11	P2	P3	P3 *	-	-
	12	P3	P3 *	-	-	-
	13	P3	P3 *	-	-	-
	14	P3	P3 *	-	-	-
	15	P3	-	-	-	-
12	6	P1	P2	P3	P3 *	P3 *
	7	P1	P2	P3	P3 *	P3 *
	8	P1	P2	P3	P3 *	P3 *
	9	P2	P3	P3 *	-	-
	10	P2	P3	P3 *	-	-
	11	P2	P3	-	-	-
	12	P3	P3 *	-	-	-
	13	P3	P3 *	-	-	-
	14	P3	-	-	-	-
	15	P3	-	-	-	-
13	6	P1	P2	P3	P3 *	-
	7	P1	P2	P3	P3 *	-
	8	P1	P3	P3 *	-	-
	9	P2	P3	P3 *	-	-
	10	P2	P3	P3 *	-	-
	11	P3	P3 *	-	-	-
	12	P3	P3 *	-	-	-
	13	P3	P3 *	-	-	-
	14	P3	-	-	-	-
	15	P3	-	-	-	-
14	6	P1	P2	P3	P3 *	-
	7	P1	P2	P3	P3 *	-
	8	P1	P3	P3 *	-	-
	9	P2	P3	P3 *	-	-
	10	P2	P3	-	-	-
	11	P3	P3 *	-	-	-
	12	P3	P3 *	-	-	-
	13	P3	-	-	-	-
	14	P3	-	-	-	-
	15	P3	-	-	-	-
15	6	P1	P2	P3	P3 *	-
	7	P1	P3	P3 *	-	-
	8	P2	P3	P3 *	-	-
	9	P2	P3	-	-	-
	10	P3	P3 *	-	-	-
	11	P3	P3 *	-	-	-
	12	P3	-	-	-	-
	13	P3	-	-	-	-
	14	P3	-	-	-	-
	15	P3	-	-	-	-

LEGEND:
P1 = 4"x6" POST
P2 = 6"x6" POST
P3 = 6"x8" POST

POST SELECTION EXAMPLE
FOR A SIGN WHERE
W = 6'-0"
H = 2'-0"
L_B = 13'-0"
TWO P1 = 4"x6" WOOD POSTS ARE REQUIRED.

NOTES:
1. POSTS IN THE SELECTION TABLE WITH AN "*" MUST HAVE A MINIMUM CLEAR SPACING OF 1'-0" BETWEEN POSTS BY INCREASING THE 3/5 W SPACING. THE REMAINING SIGN WIDTH "*" SHOULD BE EQUALLY DISTRIBUTED TO THE OVERHANGS.
2. SEE SHEET 1 FOR ADDITIONAL NOTES.
3. SEE SHEET 4 FOR SECTIONS AND ERECTION DETAILS.

Figure 14. PennDOT double wood post size selection table (PennDOT Pub 111, 2013)

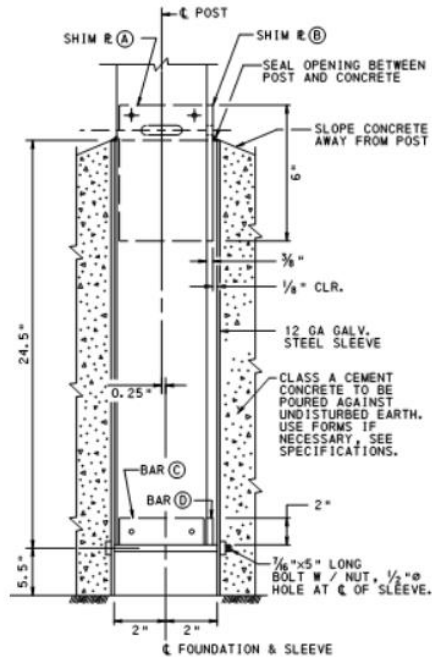


Figure 15. Example galvanized steel sleeve and concrete footing detail for wood posts
(PennDOT Pub 111, 2013)

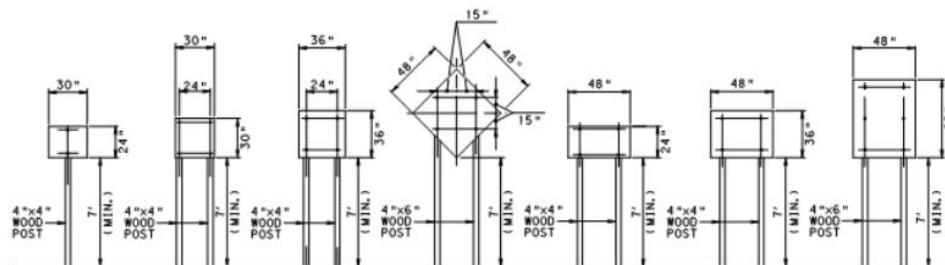


Figure 16. Typical wood sign post sizes for common sign types
(PennDOT Pub 111, 2013)

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Appendix I - Engineering Study #6 - Illinois Tollway Wood Sign Post Requirements, Sheets 1 of 2

Illinois Tollway Wood Sign Post Requirements

Hanson Professional Services has researched eight departments of transportation in an effort to find standard criteria for wooden sign posts. Based on their investigation, there is no single standard followed by each agency or state department of transportation for wood post material, wood post size, or number of wood posts.

Since there is not a standard and the Tollway has not experienced an issue with existing signs failing due to wind, the Illinois Tollway has elected to use the AASHTO loading formula with a reduced wind speed of 50 MPH based on field observations. Below are the Wood Sign Post requirements calculated from that criteria.

The following exceptions apply:

- The reduced wind-speed should only be used for the signs listed in the table below.
- Signs greater than 4' wide must be mounted on two posts for stability.
- Signs less than 12' wide should be mounted on a maximum of two posts in order to maintain the breakaway feature.
- Only 4"x6" or 6"x6" posts shall be used, as 6"x8" posts require additional tethering.

Sign Example	Code	Sign Size		Current Tollway Standard Use	
		Dimensions (W x H) (Feet)	Area (ft ²)	4"x6" Douglas Fir No. 2 or Southern Pine No. 2	6"x6" Douglas Fir No. 2 or Southern Pine No. 2
Interstate Route Sign (1 or 2 digits)-Min size	M1-1	2x2	4	1	
Interstate Route Sign (1 or 2 digits)-Oversized	M1-1	3x3	9	1	
Merge	W4-1	4x4	16	1	
Speed Limit	R2-1	4x5	20		1
-		5x4	20		1
-		6x4	24		1
-		7x4	28	2	
Exit gore (no exit number)	E5-1	6x5	30	2	
Combined speed limit	R2-4a	4x8	32		1
3-Digit exit number	E5-1a	8x5	40		2
-		10x4	40		2
-		7x6	42		2
2-Digit exit number (with single letter suffix)	E5-1a	9x5	45		2
1-Digit exit number (with dual letter suffix)	E5-1a	10x5	50		2
-		9x6	54		2

Sources:

AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals (Sixth Edition 2013)
Manual on Uniform Traffic Control Devices for Streets and Highways (Including Revision 1 dated May 2012 and Revision 2 dated May 2012, Edition 2009)

Assumptions:

P_z (Wind Pressure (psf)) = $0.00256 \times K_z \times G \times V^2 \times I_z \times C_d$
 K_z (Height and Exposure Factor) = 1
 G (Gust Effect Factor) = 1.14
 V (Basic Wind Speed) = 50; 50MPH used based on field observations
 I_z (Wind Importance Factor) = 0.71
 C_d (Drag Coefficient) = 1.12
 Height of sign centroid = $7\text{ft} + H/2$ with H = sign height
 For Wood Dead Load (DL) calculations, assume 4 psf for Sign weight

Notes:

The results on this table are found based on the Group II load combinations
 Group II = DL + W
 Posts shall be made breakaway

Prepared 3/30/2015

Appendix I - Engineering Study #6 - Illinois Tollway Wood Sign Post Requirements, Sheets 2 of 2

[illegible]

-Manual on Uniform Traffic Control Devices for Streets and Highways (Including Revision 1 dated May 2012 and Revision 2 dated May 2012, Edition 2009)

$$P_z (\text{Wind Pressure (psf)}) = 0.00256 \times K_z \times G \times V^2 \times I_r \times C_d$$

V (Basic Wind Speed) = 50; 50MPH used based on field observations (for use with this table only)

$$C_d \text{ (Drag Coefficient)} = 1.19$$

For Wood Dead Load (DL) calculations, assume 4 psf for sign weight

Secondary bending effects are ignored

Signs greater than 6' wide mounted on two posts for stability

All signs in this table mounted on no more than two posts to maintain breakaway feature



Memorandum

To: Adam Lintner, Bridget Malinowski

From: Jim Powell

Date: October 6, 2015

Subject: Ramp and Mainline Toll Plaza Sign Color

This memo addresses color for Ramp and Mainline Toll Plaza signs on the Tollway. Figure 1 presents Tollway standard layouts for such signs that use white on blue colors.

MUTCD Color Direction

Section 1A.12 of the *MUTCD* defines general meaning of colors as follows:

Standard:

- 03 The general meaning of the 13 colors shall be as follows:
- A. Black—regulation
 - B. Blue—road user services guidance, tourist information, and evacuation route
 - C. Brown—recreational and cultural interest area guidance
 - D. Coral—unassigned
 - E. Fluorescent Pink—incident management
 - F. Fluorescent Yellow-Green—pedestrian warning, bicycle warning, playground warning, school bus and school warning
 - G. Green—indicated movements permitted, direction guidance
 - H. Light Blue—unassigned
 - I. Orange—temporary traffic control
 - J. Purple—lanes restricted to use only by vehicles with registered electronic toll collection (ETC) accounts
 - K. Red—stop or prohibition
 - L. White—regulation
 - M. Yellow—warning

What this text does **not** include is specific direction on appropriate color for toll plaza signs, which are essentially informational in nature. Such signs do not indicate permitted movements or provide direction guidance, thus do not clearly associate with the color green. Chapter 2F. of the *MUTCD*, Toll Road Signs, provides direction on payment methods for toll facilities but does not address toll plaza identifier signs.

From: J Powell
October 6, 2015
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MUTCD Section 2A.10 discusses Sign Colors calling for colors to be used for specific uses, but also states:

Support:

02 As a quick reference, common uses of sign colors are shown in Table 2A-5. Color schemes on specific signs are shown in the illustrations located in each appropriate Chapter.

Table 2A-5 is attached. As can be seen and as highlighted, Blue is identified as providing Information. Ramp and Mainline Toll Plaza signs are informational, thus the use of blue is consistent with the table.

Summary

Tollway Ramp and Mainline Toll Plaza signs using white on blue text on the Tollway follows guidance provided in the *MUTCD*.

cc: Jonathan Hart

From: J Powell
 October 6, 2015
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Figure 1 – Tollway Toll Plaza Signs

TYPICAL MAINLINE TOLL PLAZA SIGN

provided by B. Leisten 6 Aug 2015



RAMP TOLL PLAZA SIGNS



*As developed for
 Tollway by CH2M
 Hill, 16 Jan 2015*

From: J Powell
October 6, 2015
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2009 Edition

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Table 2A-5. Common Uses of Sign Colors

Type of Sign	Legend								Background											
	Black	Green	Red	White	Yellow	Orange	Fluorescent Yellow-Green	Fluorescent Pink	Black	Blue	Brown	Green	Orange*	Red	White	Yellow*	Purple	Fluorescent Yellow-Green	Fluorescent Pink	
Regulatory	X		X	X					X					X	X					
Prohibitive			X	X										X	X					
Permissive		X													X					
Warning	X															X				
Pedestrian	X															X		X		
Bicycle	X															X		X		
Guide				X							X									
Interstate Route				X					X					X						
State Route	X														X					
U.S. Route	X														X					
County Route					X				X											
Forest Route				X							X									
Street Name				X								X								
Destination				X								X								
Reference Location				X								X								
Information				X					X			X								
Evacuation Route				X					X											
Road User Service				X					X											
Recreational				X							X	X								
Temporary Traffic Control	X												X							
Incident Management	X												X						X	
School	X																		X	
ETC-Account Only	X																X***			
Changeable Message Signs																				
Regulatory			X***	X					X											
Warning					X				X											
Temporary Traffic Control					X	X			X											
Guide				X					X			X**								
Motorist Services				X					X	X**										
Incident Management					X			X	X											
School, Pedestrian, Bicycle					X		X		X											

Toll Plaza Sign Color Memo



Memorandum

To: Adam Lintner, P.E.

From: Yonnel Gardes
Ybette Ochoa
Jonathon Hart, AICP

Date: January 28, 2019

Subject: Engineering Study for Manual Side Signing at Mainline Toll Plazas with a Grass Median between the ORT and Manual Lanes

Engineering studies address various issues pertinent to signing on the Illinois Tollway, and they are used by Illinois Tollway to modify parts of the Manual on Uniform Traffic Control Devices (MUTCD) guidance in the Tollway Roadway Signing and Pavement Marking Guidelines (RSPMG).

This engineering study focuses on **signing for travelers approaching the manual side of Mainline Toll Plazas, in cases where there is grass median between the ORT and manual lanes**. Located between the gore and the toll plaza canopy, these signs provide lane information for toll payment type, remind cash customers to stop at the toll plaza, and inform cash customers of the prevailing toll rate.

The study starts with a description of relevant guidelines contained in the MUTCD document (2009 edition) and Illinois Tollway's RSPMG (2019 edition). It then discusses an alternative signing pattern that is recommended under the described conditions.

MUTCD Guidance

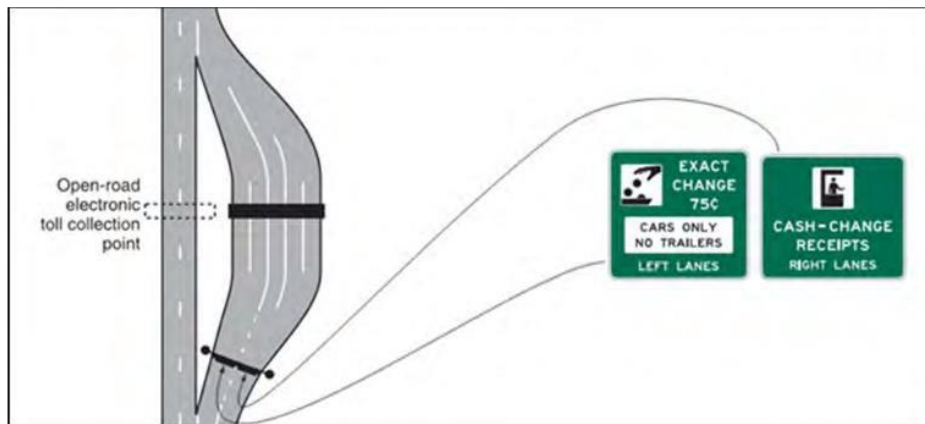
MUTCD Section 2F.15 provides guidance on Advance Signs for Toll Plazas on Diverging Alignments from Open-Road ETC Account-Only Lanes. Upstream of the gore, MUTCD guidance (paragraph 04) is as follows:

"Approximately 800 feet in advance of the toll plaza at a location that avoids or minimizes any obstruction of the toll plaza canopy signs (see Section 2F.16) and lane-use control signals, an additional set of overhead advance signs with lane information for the toll payment types should be provided."

DRAFT Manual Side Signing at ORT Toll Plaza
January 28, 2019
Page 2

Note that this is presented as guidance (“should” condition) rather than a requirement (“shall” condition). An example of guide signs is provided on Figure 2F-11 of the MUTCD, with the relevant signage shown on **Figure 1** below. The guide signs are mounted on a full truss over the manual side. These signs do not contain the “Stop Ahead” or “Stop at Tollbooth” message.

Figure 1 – MUTCD Manual Side Signing Guidelines



Source: MUTCD 2009 edition, Figure 2F-11. Examples of Guide Signs for a Mainline Toll Plaza on a Diverging Alignment from Open-Road ETC Lanes.

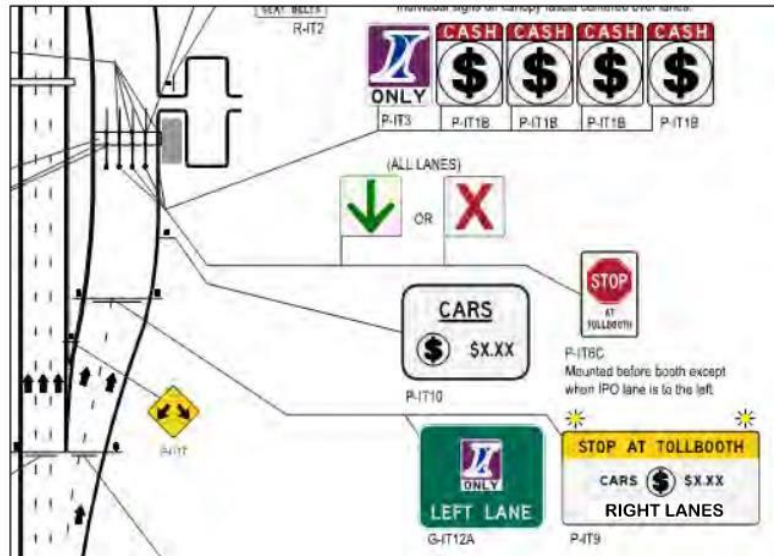
Illinois Tollway Guidelines

An excerpt of Tollway’s RSPMG is reproduced in **Figure 2**. In cases where there is no grass median (and typically the presence of a barrier wall) between the ORT and manual lanes, downstream of the gore centered over the right lanes and in advance of the toll plaza canopy, the manual side should have an overhead sign.

On the right side of the overhead structure, the “Stop at Tollbooth” sign (P-IT9) shall be placed centered over the right lanes of the plaza. Dimensions for this sign are 21 feet by 10 feet. Mounted on the same full truss, to the left, shall be the Mainline Plaza IPO Lane Sign (G-IT12A). Dimensions for this sign are 12 feet by 10 feet. At plazas with no IPO lane, the G-IT12A sign is omitted and the bottom line of the P-IT-9 sign reads “ALL LANES” (per Illustration Number SP-IT10A). All mainline plaza advance signs shall be illuminated with luminaires (page 4-5, section 4.7.10-12), with two flashing beacons above the P-IT9 “Stop at Tollbooth” sign.

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Figure 2 – Illinois Tollway Manual Side Signing Guidelines



Source: RSPMG 2019 Edition; Illustration Number: SP-IT11A; Mainline Plaza with Interchange Exit and IPO Lanes

Note that the signing pattern described here and shown on **Figure 2** applies to toll plazas where the manual side has at least one lane reserved for I-PASS only customers (Illustration Number SP-IT11A in the RSPMG). In cases where the manual side has only cash lanes, signs G-IT12A and P-IT3 are not present (Illustration Number SP-IT10A).

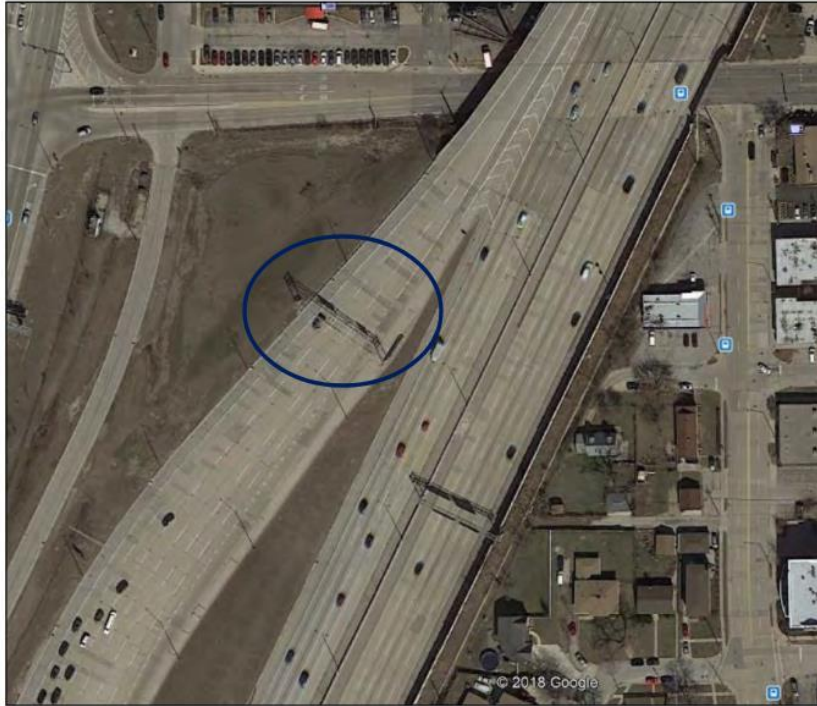
Recommended Alternative Signing Scheme

Signing at this location is important to warn cash paying vehicles that they need to stop ahead at the toll plazas. It is recognized that drivers using I-PASS lanes are typically frequent users who know the area well, while cash paying customers may not be as familiar. Several elements give reasons to revisit the use of a large overhead truss span structure for these signs in cases where there is not a barrier wall between the ORT and the manual lanes:

- **Safety** – The internal foundation of the overhead truss span structure sits in the grass median just beyond the exit gore. This constitutes a roadside obstacle in a potentially hazardous zone, unless there is barrier wall physically separating the ORT and manual lanes.

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Figure 3 – Sample Grass Median with Safety Attenuator for Overhead Gantry Protection



Source: Google Earth; March 2018 Irving Park Plaza aerial view

- **Cost Savings** – Replacing the large overhead structure with a lighter structure (cantilever or ground mounted) would provide cost savings.
- **Usage Pattern** – The “Stop at Tollbooth” sign is centered over the cash lanes of the plaza. In practice, the left-most cash lanes are very rarely open. The majority of traffic and eventual cash payments occur in the outside two or three lanes.
- **Current Practice on Other Facilities** – Even though the MUTCD suggests using an overhead truss span structure, there are many examples of tolling facilities throughout the country that do not follow this guidance statement, and where signs serving similar purposes are either ground-mounted or cantilever-mounted.

DRAFT Manual Side Signing at ORT Toll Plaza

January 28, 2019

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In all cases where there is a grass median between the ORT and manual lanes, the recommended signage is illustrated in **Figure 4**. As shown there are two possible cases:

- Case A, Mainline Plaza, No IPO lanes (supplemental to 3-SP-IT10A in the RSPMG, Illustration Number: SP-IT10A)
- Case B, Mainline Plaza, With IPO lanes (supplemental to 3-SP-IT11A in the RSPMG, Illustration Number: SP-IT11A)

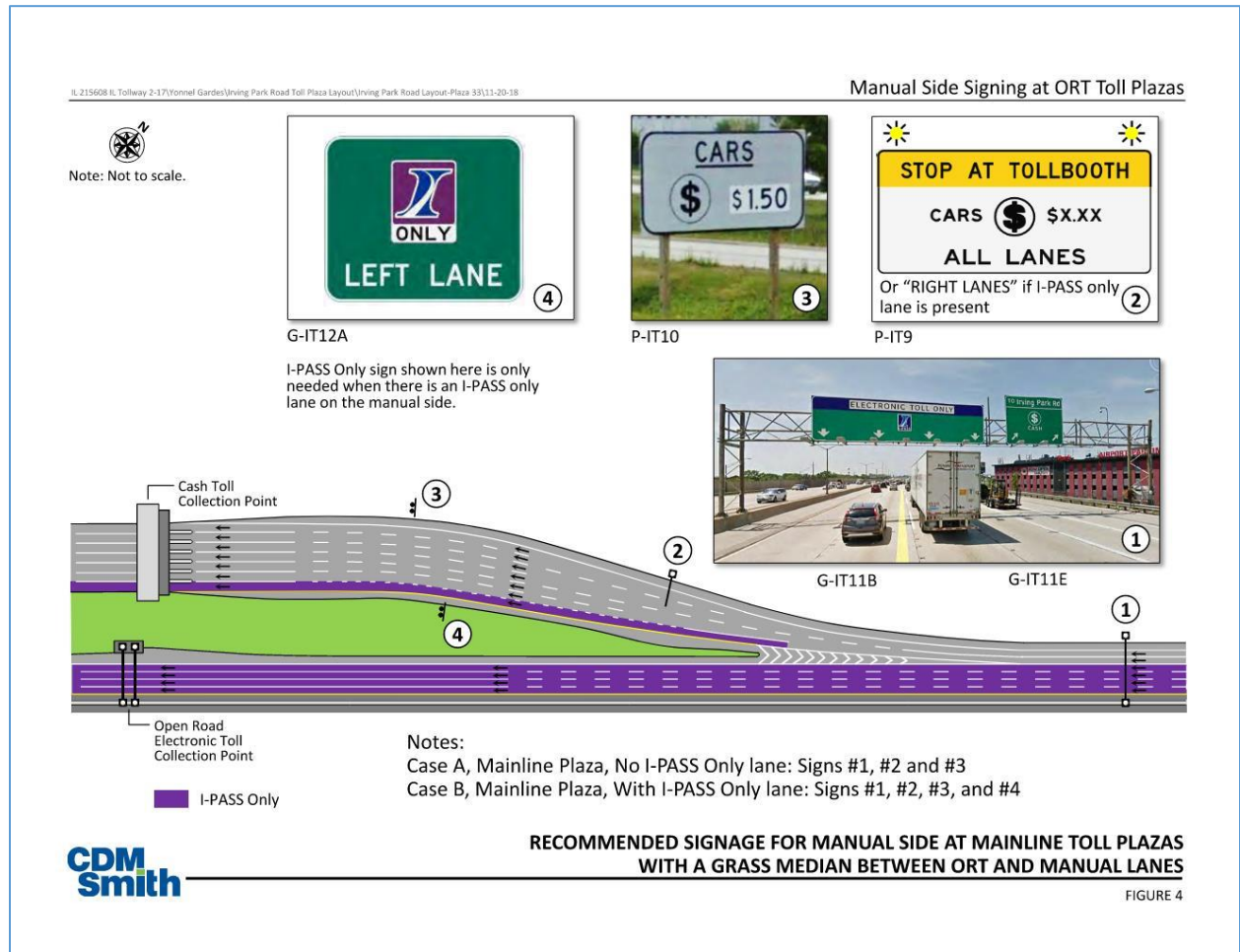
In both cases (A and B), the large overhead truss span structure is removed, thus eliminating a potential roadway obstacle in the grass median just beyond the gore. The truss sign is replaced by a cantilever structure for the "Stop at Tollbooth" sign, installed on the outside of the cash lanes. A standard cantilever-type structure is often used by the Tollway for applications where a single sign is needed. Based on the wind loading design for cantilevered signs, a cantilever support will be able to accommodate the same content and dimensions as P-IT9.

Regarding lighting, it is required to use warning beacons (flashing yellow) to supplement the "Stop at Tollbooth" sign in addition to the luminaires on all mainline toll plaza approach signs per Tollway current policy (page 2-2 Sec. 2.6, page 3-7 Sec 3.2.10 and page 3-8 Sec 3.2.11 in the RSPMG). Reports of vehicles not always stopping at the plaza cash lanes is a motive for recommending their usage to improve safety.

In Case B, the Mainline Plaza IPO Lane sign (G-IT12A) is no longer installed on the overhead structure. Instead, it is installed on a ground-mounted breakaway post located about halfway between the cantilever sign and the plaza canopy. Based on the IDOT sign structure manual (Page 2.5-6) ¹ the 12-foot by 10-foot sign panel can be supported by a breakaway support keeping the same content and dimensions.

cc: Jim Powell, PE
Jessie Carroll, PE

¹ <http://www.idot.illinois.gov/Assets/uploads/files/Doing-Business/Manuals-Guides-&-Handbooks/Highways/Bridges/Fabrication/Sign%20Structures%20Manual.pdf>





Memorandum

To: Adam Lintner, P.E.

From: Jim Powell, P.E.
Ybette Ochoa
Jonathon Hart, AICP

Date: March 19, 2019

Subject: Engineering Study for Static Signing Requirements for Entrance Lanes & Related Conditions

Per the Illinois Tollway request, CDM Smith has performed an engineering study of Static Signing Requirements for Entrance Lanes. The signing sequence and required signage was evaluated based on review of the *Manual on Uniform Traffic Control Devices* (MUTCD) and the AASHTO Green Book. This engineering study focuses on side-mounted and median-mounted static signs that are not cantilever-mounted or on overhead sign structures such as Lane-Use Control Signs, Dynamic Message Signs, etc.

This study cites the relevant MUTCD (2009 edition) and AASHTO *Green Book* standards and guidance, then identifies sign treatment for the various conditions.

MUTCD Standards and AASHTO Green Book Guidance

Roadside Sign Mounting Height

MUTCD Section 2C.27 states the following:

Section 2C.27 Low Clearance Signs (W12-2 and W12-2a)

Standard:

01 The Low Clearance (W12-2) sign (see Figure 2C-5) shall be used to warn road users of clearances less than 12 inches above the statutory maximum vehicle height.

Table 2-1b of the AASHTO design guide *Green Book*, ("A Policy on Geometric Design of Highways and Streets," 6th edition, 2011) states the design vehicle height of trucks to be 13.5 feet. This is the design vehicle height of vehicles on the Tollway. For the purposes of this study, the recommended minimum height of roadside (outside edge) signs that overhang shoulders is 14.5 feet.

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Median Sign Mounting

MUTCD Section 2A.19, paragraphs 02 & 03, state the following:

Section 2A.19 Lateral Offset

Standard:

02 Post-mounted sign and object marker supports shall be crashworthy (breakaway, yielding, or shielded with a longitudinal barrier or crash cushion) if within the clear zone.

Guidance:

03 For post-mounted signs, the minimum lateral offset should be 12 feet from the edge of the traveled way. If a shoulder wider than 6 feet exists, the minimum lateral offset for post-mounted signs should be 6 feet from the edge of the shoulder.

A post-mounted sign (Section 1A.13) is defined to be:

150. Post-Mounted Sign—a sign that is placed to the side of the roadway such that no portion of the sign or its support is directly above the roadway or shoulder.

With respect to the median signs evaluated as part of this study, such signs are mounted to the median barrier on a post or structure. They are considered crashworthy due to placement on the median barrier. No portion of such a sign is to be above the shoulder. Engineering judgment is applied here regarding lateral offset since the signs will normally be less than 6 feet from the shoulder to address para. 03 above.

Sign Sizing

MUTCD Section 2A.11, paragraph 02, states the following:

Standard:

The sign dimensions prescribed in the sign size tables in the various Parts and Chapters in this Manual and in the “Standard Highway Signs and Markings” book (see Section 1A.11) shall be used unless engineering judgment determines that other sizes are appropriate. Except as provided in Paragraph 3, where engineering judgment determines that sizes smaller than the prescribed dimensions are appropriate for use, the sign dimensions shall not be less than the minimum dimensions specified in this Manual. The sizes shown in the Minimum columns that are smaller than the sizes shown in the Conventional Road columns in the various sign size tables in this Manual shall only be used on low-speed roadways, alleys, and private roads open to public travel where the reduced legend size would be adequate for the regulation or warning or where physical conditions preclude the use of larger sizes.

MUTCD Section 2A.11, paragraph 07, states the following:

Standard:

Where engineering judgment determines that sizes that are different than the prescribed dimensions are appropriate for use, standard shapes and colors shall be used and standard proportions shall be retained as much as practical.

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Sign Treatment Recommendations

Required Signing at Entrance Lanes (Cases 1 & 2)

Attachment A illustrates the basic set of signs to be included for entrance lanes (Case 1) and the condition where a guide sign is located in the entrance sign sequence (Case 2). It is desirable to include all five signs whenever possible, but as indicated, some signs may be omitted depending on site conditions. Overall direction on sign features is stated on page 3 of the attachment.

Median Sign Sizing for Narrow Median Cases

The Tollway has cases of narrow medians. The adjacent shoulder may have traffic on it as in the case of Active Traffic Management (ATM), and is also typically plowed in the winter, with plows running adjacent to the median. In those cases, the entrance signs addressed here shall be reduced in size to match the maximum width of the median barrier (typically the base of the barrier). Reducing the sign size ensures no encroachment on shoulder. For maximum conspicuity, letter sizes of the reduced sized signs shall be the same as on standard sized signs. Font style and letter spacing may be reduced to fit within the reduced width sign. Sec 2A.11, para. 07, allows some deviation from standard proportions.

Other Outside Edge Signing

Placement of other outside lane edge signing should avoid overhanging the traveled way (pavement and shoulders). If the signing cannot avoid overhanging traveled way, it shall be mounted at least 14.5 feet above pavement.

cc: Jessie Carroll, PE
Jeff Hochmuth, PE

At +3000' from theoretical gore

Median Priority

Last in sequence

North Interstate 294

G-IT19C

1B

At +2500' from theoretical gore

EMERGENCY STOPPING ONLY

2 HOUR LIMIT

R-IT11

2

1B

R4-3

At +2000' from theoretical gore

1B

R-IT10B

SLOWER TRAFFIC KEEP RIGHT

R4-3

2

At +1500' from theoretical gore

1B

R2-1/R-IT16 or R2-4A

NO TRUCKS LEFT LANE

R-IT10B

2

At +1000' from theoretical gore

SPEED LIMIT XX

R2-1

1A

MINIMUM 45

R-IT16

or

SPEED LIMIT XX

MINIMUM 45

On median barrier where insufficient width

R2-4A

Theoretical gore

* Median signs shall be located 200' to 300' past roadside signs, mounted to the median barrier on a post or structure.

NOT TO SCALE

Priority Legend

1B = Always place, relocate as necessary

Page 1 of 3

ATTACHMENT A (cont.)**CASE 2: GUIDE SIGN WITHIN
ENTRANCE SIGN SEQUENCE**

- Maintain Guide Sign 800' MIN. spacing from adjacent Guide signs. Guide Sign location may be anywhere in 5-sign sequence.
- Maintain 500' MIN. spacings of 5 entrance signs to each other and to any Guide sign.
- Follow Case 1 sequencing and apply priorities. Include roadside Priority 2 signs per site conditions in this rank order:
 - 1 - EMERGENCY STOPPING ONLY
 - 2 - NO TRUCKS (X) LEFT LANE(S)
 - 3 - SLOWER TRAFFIC KEEP RIGHT(1 = highest rank)

ATTACHMENT A (cont.)**ENTRANCE SIGN FEATURES**

- All 5 signs shall be located after every entrance as space permits. Each of the 5 at least every 5 miles.
- Priority 1A (Speed Limit signs) shall be located after every entrance.
- Priority 1B signs shall be located after every entrance.
- Outside barrier wall mounted signs that overhang shoulder (e.g., from TL-5 Noise Abatement Wall) shall be mounted at least 14'-6" above pavement.

TRUCK PROHIBITION SIGNS

Select proper prohibition sign based on number of lanes.

MEMO



To: Paul Kovacs
From: Ryan Hanks
Prepared by: Andrew Walton
Cc: Adam Lintner, Hope Garrett, Cindy Williams, Mike Valentino, Nick Laga, Gregory Reilly, Brian Rice
Date: March 4, 2021
Subject: Criteria Changes for Sign Lighting on All Electronic Tolling (AET) Overhead Signs

Executive Summary

The Illinois State Toll Highway Authority (Illinois Tollway) is considering changes to its current policy for the lighting of overhead roadway signs, specifically as it relates to the ongoing conversion of its toll facilities to cashless or all electronic tolling (AET). The Illinois Tollway has already eliminated installation of sign luminaires on most overhead signs, with exception of overhead toll plaza payment guide signs (and any other signs on the same truss). The current policy is to only install luminaires on mainline toll plaza approach signs, and other signs which require lighting based on geometry; however, this policy is being reconsidered now with the conversion to AET and the elimination of the driver decision to 'STOP' and utilize a cash toll booth versus using the I-Pass tolling facilities.

Due to considerations that the Illinois Tollway is already in compliance with IDOT policy and MUTCD retroreflectivity requirements on all overhead mainline toll plaza approach signs, and since the driver decision to 'STOP' and pay a cash toll has been eliminated by instituting AET, the GEC recommends updating the Illinois Tollway manuals for the Guidelines for Roadway Illumination (GRI) and the Roadway Signing and Pavement Marking Guidelines (RSPMG) to revise the policy for AET mainline toll plaza approach overhead sign structures. The GEC recommends only installing sign lighting (luminaires) on overhead sign structures approaching mainline toll plazas with continued cash toll collection. Sign lighting installation is also warranted for sight distance or other roadway geometric conditions where signs cannot be adequately illuminated by vehicle head lights, and where traffic will exit the Tollway system and come to a stop condition.



1) Introduction

The Illinois Tollway is currently in the process of converting all tolling facilities along I-88 and I-355 to cashless or all electronic tolling (AET). The decision to move forward with conversion of these toll facilities arose due to the need for social distancing to keep workers safe during the COVID-19 pandemic. Other parts of the system may be converted to AET in the future.

The Illinois Tollway's Traffic Engineering Consultant (TEC) submitted a memorandum titled *Proposed Signage Changes for All Electronic Tolling - I-88 & I-355 Mainline Plazas* (Revision 3 dated September 16, 2020) which provides additional background about this initiative. This memo is included as **Attachment 3** and discussed the proposed scope of work for all toll facilities and proposed changes to signing that would be required at ramp, mainline, and system interchange facilities connecting to I-88 & I-355. Individual memorandums for recommended revisions to signing at ramp, mainline, and system interchange facilities were also developed by the TEC and will not be discussed as part of this memorandum.

One issue that arose during ongoing discussions at Design Milestone Review (DMR) meetings for Job Order Contracts to convert to AET was how to address the luminaires on overhead sign structures that are currently required per Tollway policy for overhead toll plaza payment guide signs.

The GEC performed research on the national standards and specifications for roadway sign lighting requirements and examined the roadway sign lighting policy of other toll agencies, DOTs, and roadway facility managers for a comparison to current Tollway policy. This information is presented in the discussion section below.



2) Discussion

The following evaluation has been conducted and is detailed below for consideration of changes to the current Tollway policy for overhead roadway sign lighting as it pertains to all electronic tolling (AET):

- **Illinois Tollway Policy & Guidelines** – identify current Illinois Tollway policy and applicable reference guidelines for highway sign illumination
- **National Publications** – identify pertinent national publications discussing standards and guidelines pertaining to roadway/highway sign illumination
- **IDOT Policy** – identify Illinois Department of Transportation (IDOT) policy for highway sign illumination
- **Other Agencies Policy** – research roadway/highway sign illumination policy of various other toll agencies and Departments of Transportation (DOTs)

Illinois Tollway Policy & Guidelines

Current Illinois Tollway policy for roadway sign illumination is discussed in the Illinois Tollway's manuals for *Roadway Signing and Pavement Marking Guidelines (RSPMG)*¹ and *Guidelines for Roadway Illumination (GRI)*². Listed below are the sections discussing roadway sign illumination:

Roadway Signing and Pavement Marking Guidelines (RSPMG) ¹	
Applicable Section No.	Description
Section 2.6	Sign Reflectorization and Illumination
Section 2.12	Sign Materials (Reflective Sheeting)
Section 4.7.10	Mainline Plaza Advance Signs (Illustrations G-IT10A-D)
Section 4.7.11	Mainline Plaza Pull-Through and Exit to Cash Lanes Signs (Illustrations G-IT11A-F)
Section 4.7.12	Mainline Plaza IPO Lane Signs (Illustrations G-IT12A-B)
Section 8.3.1	Toll Ahead Sign (Illustrations AET-IT1-3)
Appendix I – Eng. Studies	Engineering Study for Manual Side Signing at Mainline Toll Plazas with a Grass Median between the ORT and Manual Lanes (January 28, 2019)

Guidelines for Roadway Illumination (GRI) ²	
Applicable Section No.	Description
Section 8.10	Overhead Sign Structure Illumination

As summarized in the sections of these manuals, the Illinois Tollway currently utilizes a high efficiency retroreflective sign sheeting which, in most cases, does not warrant the installation of



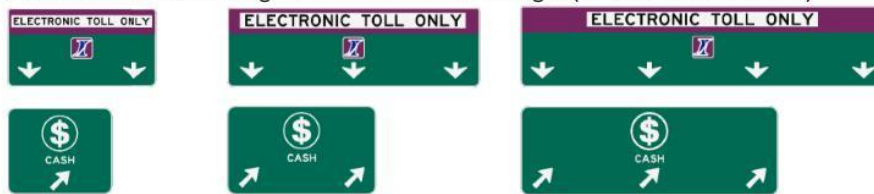
supplemental illumination for overhead sign structures. The Illinois Tollway has already eliminated installation of sign luminaires on most overhead signs; however, mainline toll plaza approach overhead sign structures (i.e., overhead toll plaza payment guide signs and any other signs on the same truss) still require supplemental illumination, as noted in the applicable sections of the RSPMG¹ above. Therefore, current policy is to only install luminaires on all mainline toll plaza approach signs, and other signs which require lighting based on geometry.

Overhead sign descriptions meeting current Tollway policy requirements for illumination include:

- Mainline Plaza Advance Signs (Illustrations G-IT10A-D)



- Mainline Plaza Pull-Through and Exit to Cash Lanes Signs (Illustrations G-IT11A-F)



- Mainline Cash Plaza IPO Lane Signs (Illustrations G-IT12A-B)



- Mainline Cash Plaza: Overhead Stop at Tollbooth Signs (Illustration P-IT9)



- Toll Ahead Sign (Overhead) (Illustration AET-IT1)





National Publications

Various toll agencies and state DOTs have differing policies when it comes to roadway sign illumination, but typically defer to the following national publications for standards and guidelines pertaining to roadway sign illumination:

FHWA Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD)³	
<i>Applicable Section No.</i>	<i>Description</i>
Section 2A.07	Retroreflectivity and Illumination
Section 2A.08	Maintaining Minimum Retroreflectivity
Section 2F.15	Advance Signs for Toll Plazas on Diverging Alignments from Open-Road ETC Account-Only Lanes

AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals⁴	
<i>Applicable Section No.</i>	<i>Description</i>
Section 2.4.2.3	Illumination and Reflectorization of Signs

LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals⁵	
<i>Applicable Section No.</i>	<i>Description</i>
Section 2.4.2.3	Illumination and Retroreflectivity of Signs

ANSI/IES RP-8-18: Recommended Practice for Design and Maintenance of Roadway and Parking Facility Lighting⁶	
<i>Applicable Section No.</i>	<i>Description</i>
Chapter 18, Section 18.2	Roadway Sign Lighting, Sign Lighting Economics

The most applicable section of the MUTCD³ discussing roadway sign lighting is Section 2A.07, which notes a standard that “*guide signs and object markers shall be retroreflective or illuminated to show the same shape and similar color by both day and night*” and notes the ‘Option’ to illuminate sign elements by the methods in Table 2A-1. The MUTCD does not explicitly state that signs must be illuminated and so this standard can be met by sign retroreflectivity requirements presented in Table 2A-2, of which the Illinois Tollway’s sign reflectorization policy is compliant with.

The publication that IDOT defers to, LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals⁵, notes that “*headed or prismatic retroreflectivity sheeting could be used to eliminate the need for sign illumination*”.



ANSI/IES RP-8-18⁶ is a joint publication developed by the American National Standards Institute (ANSI) and the Illuminating Engineering Society (IES) which provides guidance on roadway sign lighting but does not explicitly state that sign luminance must be provided by way of internal or external lighting. Section 18.2 provides discussion on the decision to provide external or internal lighting, and notes a recent study undertaken by the University of Ohio which determined that when microprismatic sheeting is used, sign lighting is not required. This publication also provides sign lighting illuminance levels and standards if external sign lighting is utilized but does not directly specify when to install internal or external sign lighting.

IDOT Policy

The Illinois Department of Transportation (IDOT) defers to the AASHTO⁴ publication listed above, which was superseded by the LRFD⁵ publication in 2015. Section 2.4.2.3 – Illumination and Retroreflectivity of Signs of these specifications states the following:

“Illumination and retroreflectivity of signs should conform with the provisions of the MUTCD.

Except where retroreflectivity is deemed adequate, all overhead sign installations should normally be illuminated. The lighting equipment should produce uniform illumination for the sign surface and the position of the lighting fixtures should not impair normal viewing of the sign or obstruct view of the roadway. Where internal illumination is used in conjunction with translucent materials, the colors of the sign should appear essentially the same by night and day.

Retroreflectivity levels are required to be maintained above minimum levels by use of a management or assessment method.

The Roadway Lighting Design Guide provides additional information. By an engineering study, headed or prismatic retroreflectivity sheeting could be used to eliminate the need for sign illumination.”



Other Agencies Policy

Provided below are publications used by various other toll agencies and DOTs followed by a summary of their respective policy for highway sign illumination:

Central Florida Expressway Authority (CFX)

Expressway Authority Standards for Preparation of Signing and Pavement Marking Plans⁷	
<i>Applicable Section No.</i>	<i>Description</i>
Section 4.4	Overhead Guide Sign Lighting

CFX policy is that all overhead guide signs including bridge mounted panels shall be lighted unless directed otherwise by the Authority or the Authority's GEC. Exceptions must be justified by the Consultant and approved by the Authority.

New Jersey Turnpike Authority (NJTA)

New Jersey Turnpike Authority - Design Manual⁸	
<i>Applicable Section No.</i>	<i>Description</i>
Section 3.6	Lighting

NJTA policy states that sign structures with static messages generally shall not be lit unless required via lighting warrant analysis. Guidance associated with the illumination of sign panels is discussed in Section 8 of the NJTA Design Manual.

Ohio Department of Transportation (ODOT)

Ohio Department of Transportation - Traffic Engineering Manual⁹	
<i>Applicable Section No.</i>	<i>Description</i>
Section 212-2	Sign Lighting for Overhead Guide Signs

ODOT policy is not to install sign lighting on new installations since research has shown that sign lighting is not necessary for overhead guide signs when Type H or J reflective sheeting is used for the reflective legends. Section 220-6 of the ODOT Traffic Engineering Manual requires that Type H or J sheeting be used for the reflective legends (including shields, arrows, and symbols) on overhead signs, therefore, sign lighting is not required and should not be used on new sign installations. For existing installations, sign lighting may remain; however, as existing signs are upgraded with legends to Type H or J reflective sheeting, the existing sign lighting should be removed, including physical removal of the luminaires and luminaire support assemblies.



New Mexico Department of Transportation (NMDOT)

New Mexico Department of Transportation - Signing and Striping Manual ¹⁰	
Applicable Section No.	Description
Section 2.1.9 (Page 2.1-7)	Retroreflection and Illumination [2A.08]
Section 2.5.2 (Page 2.5-1)	Retroreflection or Illumination [2E.05]

NMDOT policy states that the MUTCD requires traffic signs to be either retroreflective or illuminated to show the same shape and color both day and night and since it is more cost effective to make signs retroreflective than it is to illuminate them, NMDOT requires retroreflective sheeting material on all signs. Generally, sign lighting is only considered for overhead signs on freeways and expressways when the roadway geometry limits the headlight illumination of the signs. Specifically, overhead signs are illuminated when any of the following occur within 800-ft of the sign:

1. Horizontal curve to the left with a 1-degree or greater curve.
2. Horizontal curve to the right with a 2-degree or greater curve.
3. Sag vertical curve.

Ultimately, engineering judgment is used to determine the need for sign illumination.

Texas Department of Transportation (TxDOT)

TxDOT - Freeway Signing Handbook ¹¹	
Applicable Section No.	Description
Chapter 2, Section 5 (Page 2-13)	Principles of Freeway Signing, Freeway Signing Policies (Freeway Sign Illumination)

TxDOT policy is to not use overhead sign lighting unless a sign is positioned in a manner such that vehicle headlamps will not provide sufficient illumination to meet driver luminance needs. Appendix A of the TxDOT Freeway Signing Handbook provides a procedure to determine if sign lighting is needed and provides some background information and history of recent TxDOT sign illumination policy.

**Indiana Department of Transportation (INDOT)**

Indiana Department of Transportation - Indiana Design Manual¹²	
<i>Applicable Section No.</i>	<i>Description</i>
Part 5: Traffic and Safety Chapter 502, Section 502-1.01(3) - Illumination (Page 13)	Roadway Signing - General Criteria Illumination
Part 5: Traffic and Safety Chapter 502, Section 502-1.01(6).11 - Sign Lighting (Page 18)	Roadway Signing - General Criteria Overhead Sign, Sign Lighting

Indiana Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD)¹³	
<i>Applicable Section No.</i>	<i>Description</i>
Section 2A.07	Retroreflectivity and Illumination
Section 2A.08	Maintaining Minimum Retroreflectivity

INDOT policy is that all signs should be reflectorized and *may* also be illuminated. Most signs are designed to be illuminated by vehicular headlights and the sign message reflected back to the motorist. Therefore, external sign lighting and related appurtenances such as a sign lighting walkway are not be required and should not be shown on the plans. As standard practice INDOT no longer lights overhead signs. Sign lighting should only be specified upon direction from the district traffic engineer. If a lighting-support assembly or walkway must be retrofitted, sign-structure mounting height should be specified as described in Section 502-1.06(06).

However, conduit and grounding for overhead sign structures should still be specified to be installed in the foundations, with a structure handhole placed toward the base of the sign support.

The Indiana MUTCD¹³ replicates what is discussed for roadway sign lighting in Section 2A.07 of the FHWA MUTCD³, which notes a standard that “*guide signs and object markers shall be retroreflective or illuminated to show the same shape and similar color by both day and night*” and notes the ‘option’ to illuminate sign elements by the methods in Table 2A-1.



3) Recommendation

As noted above, the applicable section of the MUTCD discussing roadway sign lighting is Section 2A.07, which notes a standard that *“guide signs and object markers shall be retroreflective or illuminated to show the same shape and similar color by both day and night”* and notes the ‘option’ to illuminate sign elements by the methods in Table 2A-1. The MUTCD does not explicitly state that signs must be illuminated and so this standard can be met by sign retroreflectivity requirements presented in Table 2A-2, of which the Illinois Tollway’s sign reflectorization policy is compliant with.

Additionally, since IDOT policy defers to the LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals which states in Section 2.4.2.3 that *“headed or prismatic retroreflectivity sheeting could be used to eliminate the need for sign illumination”*, it would stand to reason that overhead sign illumination could be eliminated.

Due to considerations that the Illinois Tollway is already in compliance with IDOT policy and MUTCD retroreflectivity requirements on all overhead mainline toll plaza approach signs, and since the driver decision to ‘STOP’ and pay a cash toll has been eliminated by instituting AET, the GEC recommends updating the Illinois Tollway manuals discussing overhead sign illumination. Specifically, the sections of the *Guidelines for Roadway Illumination (GRI)* and the *Roadway Signing and Pavement Marking Guidelines (RSPMG)* listed above in the discussion section of this memorandum. The GEC recommends only installing sign lighting (luminaires) on overhead sign structures approaching mainline toll plazas with continued cash toll collection. Sign lighting installation is also warranted for sight distance or other roadway geometric conditions where signs cannot be adequately illuminated by vehicle head lights, and in advance of traffic exiting the Tollway system where the traffic flow comes to an eventual stop condition.

A similar recommendation was presented at the July 9th, 2020 Traffic Operations Safety Committee (T.O.S.C.) meeting by Tollway Geometrics Engineer Adam Lintner. The Tollway’s T.O.S.C. agreed that lights on mainline overhead “Toll Ahead – I-Pass or Pay Online” signs on AET facilities are not required and will be removed from the applicable 2021 Tollway Standards and future AET installations. See **Attachment 4** to this memorandum for the July 9, 2020 T.O.S.C. meeting minutes.



4) References

Below is the list of References used for the preparation of this Memorandum.

1. Roadway Signing and Pavement Marking Guidelines (RSPMG), Illinois Tollway, March 2020 Edition.
https://www.illinoistollway.com/documents/20184/473059/Signing+and+Marking+Manual_Mar2020.pdf/0a305beb-035f-4ee7-9baf-91203bde3ca0?version=1.8
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3. FHWA Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition w/ Revisions 1 and 2 (2012).
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5. AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 1st Edition (2015).
6. Recommended Practice for Design and Maintenance of Roadway and Parking Facility Lighting (ANSI/IES RP-8-18), American National Standards Institute (ANSI) / Illuminating Engineering Society (IES) published by IES (2018).
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5) Attachments

Below is the list of Attachments included with this Memorandum.

1. **Attachment 1**
AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals (Section 2.4.2.3 – Illumination and Retroreflectivity of Signs)
2. **Attachment 2**
ANSI/IES RP-8-18: Recommended Practice for Design and Maintenance of Roadway and Parking Facility Lighting (Chapter 18 – Roadway Sign Lighting)
3. **Attachment 3**
Proposed Signage Changes for All Electronic Tolling - I-88 & I-355 Mainline Plazas (Revision 3 dated September 16, 2020) memorandum prepared by CDM Smith.
4. **Attachment 4**
Meeting Minutes from the *Illinois Tollway Traffic Operations Safety Committee (T.O.S.C.)* – July 9, 2020 meeting (Section 4.00 – Construction Projects Update by A. Lintner).



Memorandum

To: Adam Lintner, PE
Laura Thompson, PE

From: Jeff Hochmuth, PE PTOE

Date: April 7, 2021

Subject: Maximum Width Versus Wide Load Signage

CDM Smith was tasked with looking for alternative signing to address wide loads. This included comparing maximum width signs (similar to those used in Illinois Tollway construction zones) versus the wide load signs at toll plaza lanes. The current Tollway wide load signs used at the Toll plazas are in compliance with the MUTCD, but the maximum width dimension signs are not addressed in the MUTCD. The focus is on those vehicles that are less than 12 feet. "Super width" permits are those greater than 12 feet. They require advance planning for routing and the vehicle must stay on that route. These "super width" loads should not need special signage as they are addressed by the specific approved routing to accommodate the width.

The MUTCD directly references height restriction signage but does not directly address width. This is likely because it is only a problem at select locations such as toll booths. Width is not typically a signing issue since roadways are built to the same standard (i.e., 12 feet wide). There is signage for road narrows, but this application is for transitions to one lane roads. MUTCD Section 2C.19 ROAD NARROWS Sign (W5-1) paragraph 01 provides the following guidance:

01 Except as provided in Paragraph 2, a ROAD NARROWS (W5-1) sign (see Figure 2C-5) should be used in advance of a transition on two-lane roads where the pavement width is reduced abruptly to a width such that vehicles traveling in opposite directions cannot simultaneously travel through the narrow portion of the roadway without reducing speed.

Restricted height conditions are not a good surrogate for vertical conditions. This is because vehicles behave differently vertically than horizontally. This is best illustrated by the fact that vertical curves on roadways are designed differently than horizontal curves. However, there are still concepts that could be modified and applied for restricted widths. Signage for low clearance follows a standard, based on maximum allowed vehicle height and is addressed in **Section 2C.27 Low Clearance Signs (W12-2 and W12-2a)**. The standard reads as follows:

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01 The Low Clearance (W12-2) sign (see Figure 2C-5) shall be used to warn road users of clearances less than 12 inches above the statutory maximum vehicle height.

As noted in the Federal Size Regulations for Commercial Motor Vehicles by the Federal Highway Administration, the “maximum width limit for CMVs (Commercial Motor Vehicles) on the NN (National Network) and reasonable access routes was originally established at 102 inches... To standardize vehicle width on an international basis, the 102-inch width limit was interpreted to mean the same as its approximate metric equivalent, 2.6 meters (102.36 inches).” 102 inches equates to 8.5 feet which matches the Tollway’s requirement that those vehicles between 8.5 feet and 12 feet get an over-width permit.

In addition, the following guidance is provided in section 2C.27:

02 The actual clearance should be displayed on the Low Clearance sign to the nearest 1 inch not exceeding the actual clearance. However, in areas that experience changes in temperature causing frost action, a reduction, not exceeding 3 inches, should be used for this condition.

03 Where the clearance is less than the legal maximum vehicle height, the W12-2 sign with a supplemental distance plaque should be placed at the nearest intersecting road or wide point in the road at which a vehicle can detour or turn around.

If maximum width is to be displayed, the guidance states it should be accurate to 1 inch. While it is unlikely that drivers would turn around on a limited access facility (vehicles will just continue to the next exit), the guidance does suggest that just one sign should be used before any decision point. This could be before a decision point in advance of the exit or at least prior to the toll canopy structure.

In general, the signs are expected to be diamond shaped. As an option, per section 2C.27:

06 The Low Clearance sign may be installed on or in advance of the structure. If a sign is placed on the structure, it may be a rectangular shape (W12-2a) with the appropriate legend (see Figure 2C-5).

Figure 1 provides the MUTCD recommended signage for low clearance. W12-2 does not work as well in the horizontal direction, but an example is shown. W12-2a is a typical height warning, so without some explanation that the dimension applies to width, it should not be used. Therefore, **Figure 2** shows the initial proposed signs.

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Figure 1: Low Clearance Signs (W12-2 and W12-2a)

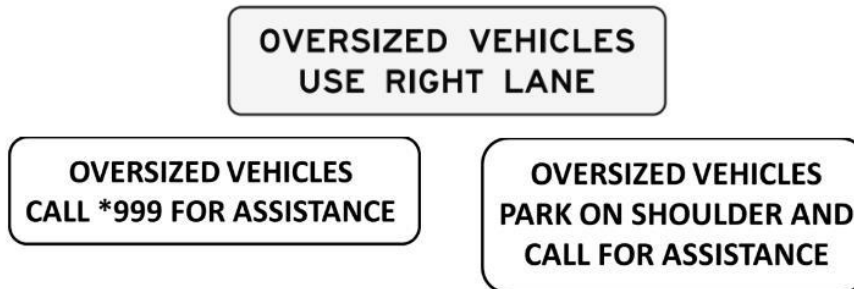


Figure 2: Proposed Maximum Width Signs



There are two approaches to consider. The first is on a tolled exit ramp from the tollway. No signage is necessary on the mainline. The first sign in the series should be the diamond warning sign with an "AHEAD" plaque on the bottom ground mounted on the ramp. The second sign should be a modification to the current tollway R-IT5 sign. The current and proposed signs are shown in **Figure 3**.

Figure 3: Current and Proposed Oversized Vehicle Signs



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Similar to the current Tollway I-IT1D sign for CIS, a modified sign should be placed on the side of the road near the closed wide load lane. **Figure 4** shows the current and proposed signs.

Figure 4: Current and Proposed Assistance Signs



Either the rectangular width sign or diamond sign shown in Figure 2 should be mounted on the canopy over the open, narrow lane. The layout of signs is shown in the appendix at the end of the memo. It is also recommended that the “wide” and “load” panels remain over the closed lane.

The second example is for entrance ramps from arterials to the Tollway. For these, the oversized sign should be considered optional if sign space is constrained as the vehicles should be entering at a very slow speed from the arterial and drivers should have more time to react. This is also shown in the appendix.

Please let us know if you wish to further discuss any of these details.

cc: Jessie Carroll, PE PTOE PMP
Jim Powell, PE PTOE
Laura Pinzon

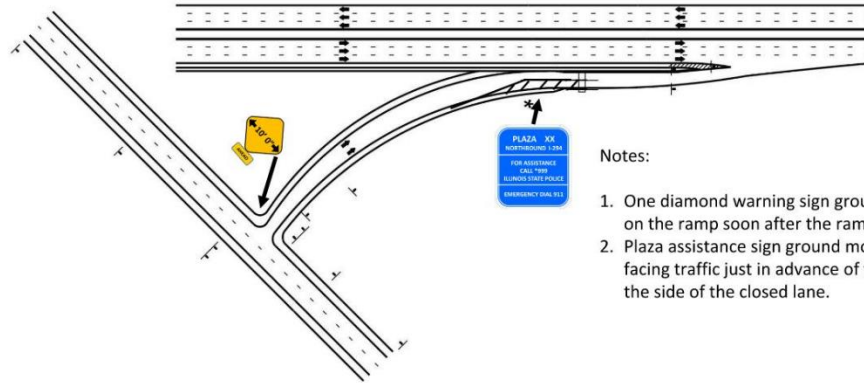
SIGN PLACEMENT ILLUSTRATION
Entrance Ramp Plaza - 2 Lanes

[Not to Scale]

Illustration Number: SP-IT12C

PROPOSED

With one IPO lane open
and second lane
permanently closed



Notes:

1. One diamond warning sign ground mount on the ramp soon after the ramp begins.
2. Plaza assistance sign ground mounted facing traffic just in advance of the plaza on the side of the closed lane.

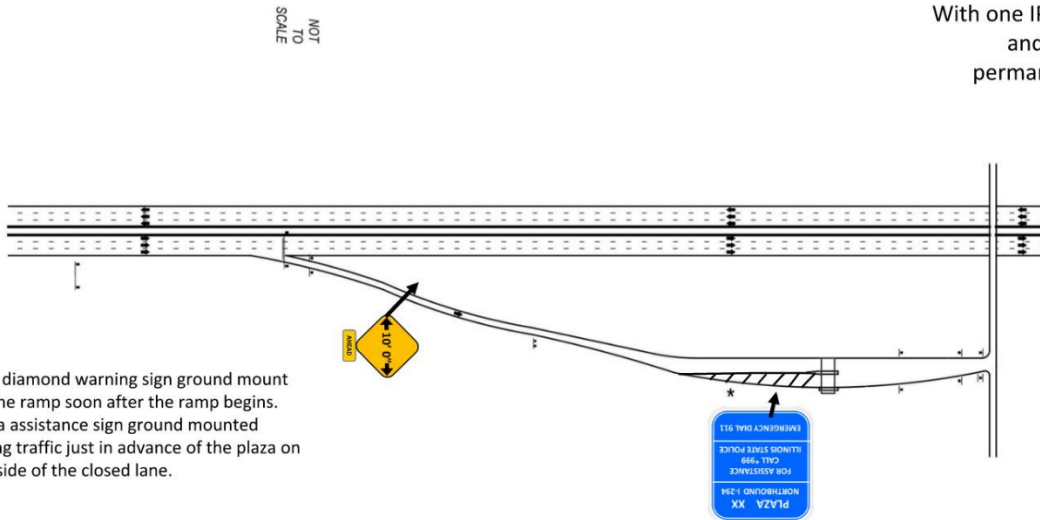
SIGN PLACEMENT ILLUSTRATION
Exit Ramp Plaza - 2 Lanes

[Not to Scale]

Illustration Number: SP-IT13B

PROPOSED

With one IPO lane open
and second lane
permanently closed



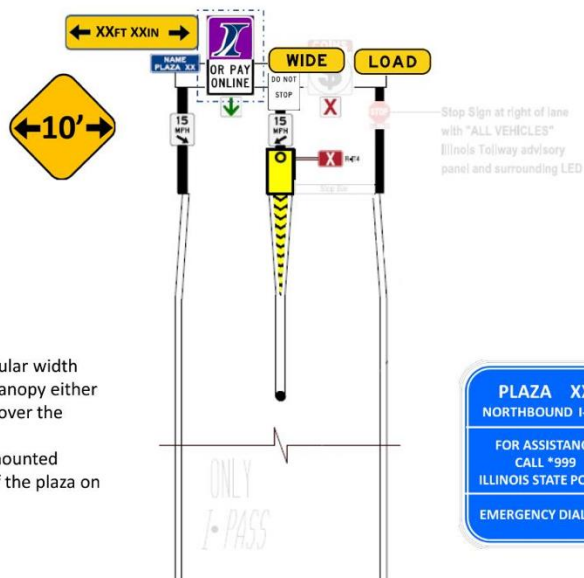
Notes:

1. One diamond warning sign ground mount on the ramp soon after the ramp begins.
2. Plaza assistance sign ground mounted facing traffic just in advance of the plaza on the side of the closed lane.

Illustration Number: SP-IT12D

(Not to Scale)

Keep IPO lane; close cash lane



Notes:

1. Either the diamond or rectangular width sign should be placed on the canopy either side of IPOPO pictograph, but over the open lane.
2. Plaza assistance sign ground mounted facing traffic just in advance of the plaza on the side of the closed lane.