



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N925 - CM
Indianapolis, Indiana 46204

PHONE: (317) 232-5456
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Michael R. Pence, Governor
Brandye L. Hendrickson,
Commissioner

AGENDA

May 21, 2015 Standards Committee Meeting

MEMORANDUM

May 7, 2015

TO: Standards Committee

FROM: Scott Trammell, Secretary

RE: Agenda for the May 21, 2015 Standards Committee Meeting

A Standards Committee meeting is scheduled for 09:00 a.m. on May 21, 2015 in the N955 Bay Window Conference Room. Please enter meeting through the double doors directly in front of the conference room.

The following items are listed for consideration:

A. GENERAL BUSINESS ITEMS

OLD BUSINESS

(No items on this agenda)

NEW BUSINESS

1. [EDITORIAL REVISION TO 805-T-201](#) ACCESSIBLE PEDESTRIAN SIGNALS/Ms. Phillips, [pg 04](#)
2. [EDITORIAL REVISION TO 100-C-203](#) INDIANA DEPARTMENT OF ADMINISTRATION M/WBE PARTICIPATION POLICY FOR INDIANA DEPARTMENT OF TRANSPORTATION CONSTRUCTION PROJECTS/Mr. Trammell, [pg 06](#)

B. CONCEPTUAL PROPOSAL ITEMS

OLD BUSINESS

(No items on this agenda)

NEW BUSINESS

(No items on this agenda)

C. STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS
PROPOSED ITEMS

OLD BUSINESS

(No items on this agenda)

NEW BUSINESS

Item No. 01 (2016 SS) Mr. Pankow pg 07
808.12 Method of Measurements

Item No. 02 (2016 SS) Mr. Boruff pg 11

Standard Drawings:

801-TCSN-0102	TRAFFIC CONTROL SIGNS
801-TCSN-02	TRAFFIC CONTROL SIGNS
801-TCSN-03	TRAFFIC CONTROL SIGNS
801-TCSN-04	TRAFFIC CONTROL SIGNS
801-TCSN-05	TRAFFIC CONTROL SIGNS
801-TCSN-06	TRAFFIC CONTROL SIGNS
801-TCSN-07	TRAFFIC CONTROL SIGNS
801-TCSN-0803	TRAFFIC CONTROL SIGNS
801-TCSN-09	TRAFFIC CONTROL SIGNS
801-TCSN-10	TRAFFIC CONTROL SIGNS
801-TCSN-1101	CONSTRUCTION SIGNS GENERAL NOTICE
801-TCSN-1204	TRAFFIC CONTROL SIGN DESIGN DETAILS
801-TCSN-12A05	TRAFFIC CONTROL SIGN DESIGN DETAILS
801-TCSN-1306	TRAFFIC CONTROL SIGN DESIGN DETAILS
801-TCSN-1407	TEMPORARY PANEL SIGN BREAKAWAY POST INSTALLATION
801-TCSN-1508	WOOD POST DESIGN FOR TEMPORARY PANEL SIGNS

Recurring Plan Details:

801-R-542d	WORKSITE ADDED PENALTY SIGN 78X42
801-R-543d	WORKSITE ADDED PENALTY SIGN 60X36
801-R-544d	WORKSITE ADDED PENALTY SIGN 48X48
801-T-203d	LANE ENDS WARNING SIGNS

Standard Drawings:

801-TCDV-0102	CHANNELIZING DEVICES
801-TCDV-0201	CHANNELIZING DEVICES INDEX SHEET TRAFFIC CONTROL DEVICES
801-TCDV-03	MERGING OR SHIFTING TAPER
801-TCDV-04	TYPE III BARRICADE
801-TCDV-05	TYPICAL CONSTRUCTION SIGNS MOUNTING
801-TCDV-06	TYPE III BARRICADE TYPICAL APPLICATION FOR ROADS CLOSURE FOR THRU TRAFFIC
801-TCDV-07	TYPE III BARRICADE TYPICAL APPLICATIONS FOR ROAD CLOSURE TO ALL TRAFFIC
801-TCDV-08	U CHANNEL STEEL POST SPLICE DETAIL
801-TCDV-09	BUZZ STRIP INSTALLATION TEMPORARY TRANSVERSE RUMBLE STRIP INSTALLATION

801-TCDV-10	WORKSITE SPEED LIMIT SIGN ASSEMBLY FOR INTERMITTENT USE
801-TCDV-11	WORKSITE SPEED LIMIT SIGN ASSEMBLY
801-TCDV-12	WORKSITE SPEED LIMIT SIGN ASSEMBLY LONGITUDINAL PLACEMENT
801-TCLG-01	TRAFFIC CONTROL LEGEND AND GENERAL NOTES

Item No. 03 (2016 SS) Mr. Goldner pg 78
Recurring Special Provision: *INSPECTION HOLE*
107-X-XXX

Item No. 04 (2016 SS) Mr. Goldner pg 83
Recurring Special Provision: CRUSHED GLASS AS BEDDING MATERIAL
211-R-415

cc: Committee Members
FHWA
ICA

GENERAL BUSINESS ITEM

1. EDITORIAL REVISION TO 805-T-201 ACCESSIBLE PEDESTRIAN SIGNALS

(Revision shown highlighted gray)

805-T-201 ACCESSIBLE PEDESTRIAN SIGNALS

(Revised xx-xx-xx)

The Standard Specifications are revised as follows:

SECTION 805, AFTER LINE 30, INSERT AS FOLLOWS:

Pedestrian push buttons shall be the type designated in the contract documents, APS or Non-APS.

SECTION 805, AFTER LINE 216, INSERT AS FOLLOWS:

When installing push buttons with accessible pedestrian signal, APS, features the Contractor shall verify that the audible tone is discernible from the mid-point of the crosswalk.

SECTION 805, BEGIN LINE 735, DELETE AS FOLLOWS:

The cost of the push button, pedestrian actuated signal sign, any accessible pedestrian signal components ~~as shown on the plans~~, and all hardware required to complete the installation shall be included in the cost of pedestrian push button.

SECTION 922, BEGIN LINE 816, DELETE AND INSERT AS FOLLOWS:

(b) Pedestrian Push-Button

Pedestrian push-button assemblies shall ~~be ADA compliant~~ *meet the standards of the MUTCD and Americans with Disabilities Act, ADA. Pedestrian push-button assemblies shall be vandal and weather resistant, be pressure activated with minimal movement, and cannot be stuck in a closed or constant call position. A red latching LED and audible tone shall be provided for confirmation of an actuation call.*

A type D certification in accordance with 916 shall be provided. Such certification shall contain the contract number, manufacturer's name, model name, supplier's name, location or intersection name, and for a type APS pedestrian push button, the sound level measurement of the audible features of the device.

1. Housing

The pedestrian push-button housing shall be constructed of cast aluminum or stainless steel and powder coated yellow, and furnished with suitable mounting hardware.

2. Latching LED

The normal state of the LED shall be off. When the push-button is pressure activated, the LED shall be lighted and remain on until the beginning of the walk phase. The latching relay shall be mounted in the signal cabinet, controlling two pedestrian phases.

3. Actuator

The actuator shall be stainless steel ~~or aluminum~~ *with a minimum diameter of 2 in. and a solid state electronic Piezo switch rated for a minimum of 20 million cycles*

GENERAL BUSINESS ITEM

1. EDITORIAL REVISION TO 805-T-201 ACCESSIBLE PEDESTRIAN SIGNALS

with no moving plunger or moving electrical contacts. The operating voltage shall be 12-24V AC/DC. The actuator's nominal operating force shall be approximately 1 not exceed 5 lb.

4. Sign

The pedestrian ~~information~~ sign shall be according to the R10-3e in accordance with the MUTCD, unless a different MUTCD sign code is indicated on the plans. ~~The legend on the sign shall either be all words or a combination of words and symbol to match the pedestrian signal.~~ The sign base shall be sheet aluminum in accordance with 919.01(b).

5. Accessible Pedestrian Push Buttons

When accessible pedestrian signals, APS, are specified the push-button shall have audible and tactile features. The push-button shall activate both the Walk interval and the APS. The color of the actuator shall contrast visually with the housing or mounting. A standard manufacturer's warranty shall be provided.

a. Audible Features

The pedestrian push-button assembly shall include an audible indication of the Walk interval by either tone or voice and shall be audible from the near side of the associated crosswalk. If the tone for the Walk interval is the same as the locator tone of the push-button it shall have a faster repetition rate than the associated locator tone. The volume of the audible features shall have automatic volume adjustment based on the ambient noise levels. Audible features shall be at least 2 dB but no more than 5 dB louder than ambient sound up to a maximum volume of 89 dB measured at 36 in. from the device. Audible features may be integral to the pedestrian push-button assembly or through a separate speaker housing.

When push buttons are separated by 10 ft or more, the audible indication shall be a tone.

When push buttons are separated by less than 10 ft, the indication shall be a voice message. When voice messages are used, they shall include a clear message that the walk interval is in effect and shall indicate to which crossing it applies.

The pedestrian push button shall have an audible locator tone feature. The locator tone shall have a duration of 0.15 seconds or less and shall repeat at 1 second intervals.

b. Tactile Features

The push button ~~assembly~~ shall incorporate a raised arrow. The arrow shall be raised 0.03125 in. minimum and shall be 1.5 in. minimum in length. The arrow color shall contrast with the background. The push button shall vibrate to indicate that the walk interval is in effect.

GENERAL BUSINESS ITEM

2. EDITORIAL REVISION TO 100-C-203 INDIANA DEPARTMENT OF ADMINISTRATION
M/WBE PARTICIPATION POLICY FOR INDIANA DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PROJECTS

100-C-203 INDIANA DEPARTMENT OF ADMINISTRATION M/WBE PARTICIPATION
POLICY FOR INDIANA DEPARTMENT OF TRANSPORTATION CONSTRUCTION PROJECTS

(Revised xx-xx-xx)

The Indiana Department of Administration, IDOA, and the Indiana Department of Transportation, INDOT, are committed to the participation of Minority and Women's Business Enterprises, MBE/WBE, in the State's procurement and contracting process. As a result, MBE and WBE participation is required or evidence is required of adequate Good Faith Efforts to obtain such participation as a specification in bids for construction services with subcontracting opportunities—effective January 1, 2006. ~~See in accordance with~~ Indiana Administrative Code 25 IAC-5-7-5. All Indiana Department of Transportation projects with 100% state funding will be governed by this provision.

The goals for participation of Minority and Women owned business in the performance of this contract shall be as stated on the proposal page of this Contract Information Book. Contract compliance shall be as set forth and presented on the internet web page found at <http://www.in.gov/idoa/mwbe/index.htm> and administered by the IDOA.

Mr. Pankow
Date: 5/21/15

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS
REVISION TO STANDARD SPECIFICATIONS

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Method of measurement is not in line with what is being done in the field to measure dotted lines. SiteManager Template has never worked because of the difficulty in the data entry process. Method of Measurement should match field processes.

PROPOSED SOLUTION: Calculate dotted line by counting the number of dotted lines and multiplying that number by the length of line showed on the plans.

APPLICABLE STANDARD SPECIFICATIONS: 808.12

APPLICABLE STANDARD DRAWINGS: 808-DLIM

APPLICABLE DESIGN MANUAL SECTION:

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS:

PAY ITEMS AFFECTED: LINE (LFT)

IMPACT ANALYSIS (attach report):

Submitted By: by Ellis Holder for Greg Pankow

Title: Operation Analyst

Organization: INDOT

Phone Number: 317-232-0678

Date: 04/28/2015

APPLICABLE SUB-COMMITTEE ENDORSEMENT:

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS
REVISION TO STANDARD SPECIFICATIONS

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? No

Will approval of this item affect the Approved Materials List? No

Will this proposal improve:

Construction costs? No

Construction time? Yes

Customer satisfaction? Yes

Congestion/travel time? No

Ride quality? No

Will this proposal reduce operational costs or maintenance effort? No/Yes;

Will this item improve safety:

For motorists? No

For construction workers? Yes

Will this proposal improve quality for:

Construction procedures/processes? Yes

Asset preservation? No

Design process? No

Will this change provide the contractor more flexibility? No

Will this proposal provide clarification for the Contractor and field personnel? Yes

Can this item improve/reduce the number of potential change orders? No

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

Is this item editorial? Yes

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda:

REVISION TO SPECIAL PROVISIONS

SECTION 808 PAVEMENT TRAFFIC MARKINGS

808.12 METHOD OF MEASUREMENTS

The Standard Specifications are revised as follows:

SECTION 808, BEGIN LINE 564, DELETE AND INSERT AS FOLLOWS:

808.12 Method of Measurement

Broken or dotted lines, placed or removed, will be measured as ~~1/4 of the total distance in linear feet of the broken or dotted line pattern after excluding gaps for intersections or other openings~~ *by counting the number of broken or dotted lines placed and multiplying the number of counted lines by the length of the broken or dotted line as shown on the plans.* Solid lines will be measured as the total distance in linear feet of solid lines placed or removed. The material, type, color, or width of broken, dotted, or solid lines to be removed will not be considered when measuring such lines for payment.

COMMENTS AND ACTION

808.12 METHOD OF MEASUREMENTS

DISCUSSION:

<p>Motion: Second: Ayes: Nays: FHWA Approval:</p>	<p>Action: _____ Passed as Submitted _____ Passed as Revised _____ Withdrawn</p>
<p>Standard Specifications Sections referenced and/or affected: 808.12 pg 831.</p>	<p>_____ 2016 Standard Specifications _____ Revise Pay Items List</p>
<p>Recurring Special Provision affected: NONE</p>	<p>_____ Create RSP (No. _____) Effective _____ Letting RSP Sunset Date:</p>
<p>Standard Drawing affected: NONE</p>	<p>_____ Revise RSP (No. _____) Effective _____ Letting RSP Sunset Date:</p>
<p>Design Manual Sections affected: NONE</p>	<p>_____ Standard Drawing Effective</p>
<p>GIFE Sections cross-references: NONE</p>	<p>_____ Create RPD (No. _____) Effective _____ Letting _____ GIFE Update</p>

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS
REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Certain information found in the 801-TCDV, TCLG, and TCSN standard drawings are either out-of-date, inconsistent with the MUTCD, or common practice. Within the TCDV series in particular, the merge and shift taper lengths are missing info for 60 and 70 mph speed limits, the dimensions for tubular markers should be more flexible, and the barricade layout for road closures that are open to local traffic show too many barricades. 801-TCLG-01 shows a crossover pavement design but all crossover pavement design is now determined by the Pavement Division. Within the TCSN series many of the signs can be deleted since they are shown in the Indiana MUTCD and Standard Highway Signs Book issued by FHWA.

PROPOSED SOLUTION: Update the TCDV, TCLG, and TCSN standard drawings series to eliminate the incorrect or unnecessary information.

APPLICABLE STANDARD SPECIFICATIONS: 801 and 923

APPLICABLE STANDARD DRAWINGS: (29) 801-TCDV-01, 801-TCDV-02, 801-TCDV-03, 801-TCDV-04, 801-TCDV-05, 801-TCDV-06, 801-TCDV-07, 801-TCDV-08, 801-TCDV-09, 801-TCDV-10, 801-TCDV-11, 801-TCDV-12, 801-TCLG-01, 801-TCSN-01, 801-TCSN-02, 801-TCSN-03, 801-TCSN-04, 801-TCSN-05, 801-TCSN-06, 801-TCSN-07, 801-TCSN-08, 801-TCSN-09, 801-TCSN-10, 801-TCSN-11, 801-TCSN-12, 801-TCSN-12A, 801-TCSN-13, 801-TCSN-14, 801-TCSN-15.

APPLICABLE DESIGN MANUAL SECTION: 83

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: 801-R-542d, 801-R-543d, 801-R-544d, 801-T-203d

PAY ITEMS AFFECTED: 801-6775 Maintaining Traffic (LS)

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Yes, endorsed by the Traffic Standards Subcommittee.

IMPACT ANALYSIS (attach report): Yes, attached.

Submitted By: Dave Boruff

Title: Manager, Office of Traffic Administration

Organization: INDOT

Phone Number: (317) 234-7975

Date: 4/29/15

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS
REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? No

Will approval of this item affect the Approved Materials List? No

Will this proposal improve:

Construction costs? Yes (allows better tubular markers)

Construction time? No

Customer satisfaction? Yes (improves traffic control plans)

Congestion/travel time? Yes (corrects channelization)

Ride quality? No

Will this proposal reduce operational costs or maintenance effort? No

Will this item improve safety:

For motorists? Yes (proper channelization)

For construction workers? Yes (improves traffic control plans)

Will this proposal improve quality for:

Construction procedures/processes? Yes (see above)

Asset preservation? No

Design process? Yes (see above)

Will this change provide the contractor more flexibility? Yes (more durable tubular markers can now be used)

Will this proposal provide clarification for the Contractor and field personnel? Yes

Can this item improve/reduce the number of potential change orders? Yes

Is this proposal needed for compliance with:

Federal or State regulations? Yes (MUTCD)

AASHTO or other design code? No

Is this item editorial? No

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda: N/A

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
801-TCSN-01 TRAFFIC CONTROL SIGNS (WITH MARKUPS)

Consolidate ten sheets into two - show only signs unique to Indiana

NOTES:

- 1- Sign XW21-3-A shall be placed as directed where road machinery is operating on or across pavement open to traffic.
- 2- See Standard Drawing E 801-TCSN-11 for additional general notes.
- 3- A 26 in. x 10 in. metal plate, covered with federal orange reflective material with black numerals designating predetermined distance, may be attached over the word "AHEAD" to more specifically denote the subject hazard.

INDIANA DEPARTMENT OF TRANSPORTATION	
TRAFFIC CONTROL SIGNS	
SEPTEMBER 2010	02
STANDARD DRAWING NO. E 801-TCSN-01	
	/s/ Richard L. VanCleave DESIGN STANDARDS ENGINEER DATE 09/01/10
	/s/ Mark A. Miller CHIEF HIGHWAY ENGINEER DATE 09/01/10

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
801-TCSN-02 TRAFFIC CONTROL SIGNS (WITH MARKUPS)

Consolidate ten sheets into two - show only signs unique to Indiana

GENERAL NOTES
1. See Standard Drawing E 801-TCSN-11 for additional general notes.

SURVEY CREW XW21-6-A (9)

FRESH OIL XW21-2 (9)
XW21-2-A (1)

WORKERS XW21-1 (9)

RIGHT LANE CLOSED AHEAD XW20-5 (R,L, or C) (10)

SHOULDER WORK XW21-5-A (10)

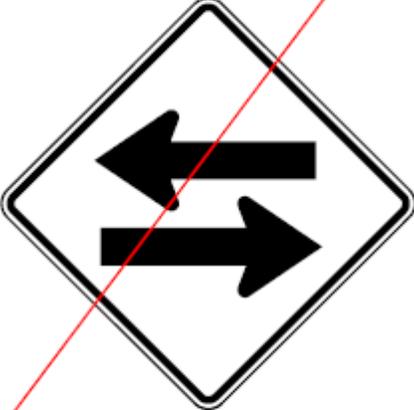
Worker silhouette sign XW20-7 (9)
(10)

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL SIGNS
SEPTEMBER 1997
STANDARD DRAWING NO. E 801-TCSN-02
L. JAMES CHAMBERS, CHIEF ENGINEER
No. 18095
STATE OF INDIANA
A/ Anthony S. Dransfield, DIRECTOR
A/ Bruce David, CHIEF ENGINEER
DESIGN ENGINEER

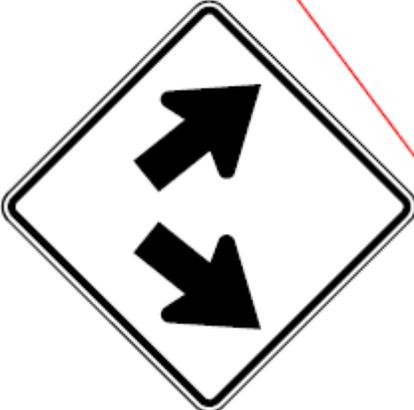
REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
801-TCSN-03 TRAFFIC CONTROL SIGNS (WITH MARKUPS)

GENERAL NOTES
1. See Standard Drawing E 801-TCSN-11 for additional general notes.

Consolidate ten sheets into two - show only signs unique to Indiana



XW6-3-B



XW12-1-C



XM4-9 (R or L)
XM4-9-B (R or L)



XM4-10 (R or L)

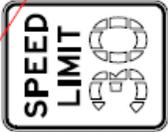
INDIANA DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL SIGNS JUNE 1995	STANDARD DRAWING NO. E 801-TCSN-03 JUNE 1995
DETAILS PLACED IN THIS FORMAT 11-8-98	
By: Anthony L. Urwinovich, P.E. 11-8-98 DESIGN ENGINEER	
By: Phyllis Boruff, P.E. 11-8-98 CHECK ENGINEER	
ORIGINALLY APPROVED 7-2-95	

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
801-TCSN-04 TRAFFIC CONTROL SIGNS (WITH MARKUPS)

Consolidate ten sheets into two - show only signs unique to Indiana

NOTES:

- Signs R11-2, R11-3, R11-4, R5-1-A and R5-1-B shall be printed on reflective sheeting background.
- See Standard Drawing E 801-TCSN-11 for additional general notes.



R2-1
R2-1-A (1)
R2-1-B (1)



R6-1 (R, or L)



R2-2a
R2-2c (1)



R6-2-A (R, or L)



R11-2



R11-3



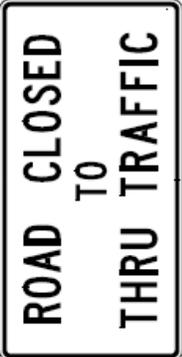
R5-1-A
R5-1-B (1)



R4-1
R4-1-B (1)



R12-1
R12-1-A (1)



R11-4

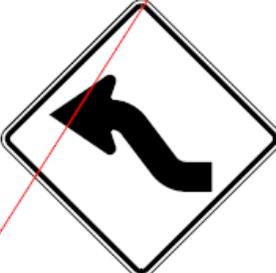
INDIANA DEPARTMENT OF TRANSPORTATION	
TRAFFIC CONTROL SIGNS	
SEPTEMBER 2010	
STANDARD DRAWING NO. E 801-TCSN-04	
	/s/ Richard L. VanCleave DESIGN STANDARDS ENGINEER DATE 09/01/10
/s/ Mark A. Miller CHIEF HIGHWAY ENGINEER DATE 09/01/10	

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCSN-05 TRAFFIC CONTROL SIGNS (WITH MARKUPS)

Consolidate ten sheets into two - show only signs unique to Indiana

NOTE:
 ① See Standard Drawing E 801-TCSN-11 for additional general notes.

LANE ENDS	
XWH-2	XWH-2-A
A	28
B	4
C	4
D	1
E	14
F	4
G	10
H	10



XW1-1-A (R or L)
XW1-1-B (R or L) ①



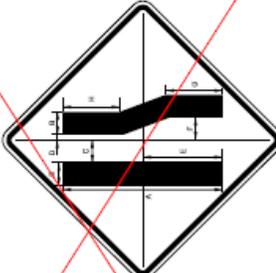
XW1-2-A (R or L)
XW1-2-B (R or L) ①



XW1-1-A (R or L)
XW1-1-B (R or L) ①



XW1-2-A (R or L)
XW1-2-B (R or L) ①



XWH-2 (R or L)
XWH-2-A (R or L) ①

INDIANA DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SIGNS

SEPTEMBER 2010

STANDARD DRAWING NO. E 801-TCSN-05



DESIGN STANDARDS ENGINEER

/s/ Richard C. VanCleave 09/01/10
DESIGN STANDARDS ENGINEER DATE

/s/ Mark A. Miller 09/01/10
CHIEF HIGHWAY ENGINEER DATE

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCSN-06 TRAFFIC CONTROL SIGNS (WITH MARKUPS)

Consolidate ten sheets into two - show only signs unique to Indiana

NOTE:
 ① See Standard Drawing E 801-TCSN-11 for additional general notes.

XW13-1-A
 (To be used below a warning sign only.)

XW3-5

XW3-5a

XW6-2a-A
XW6-2b-B ①

XW1-6
XW1-6-A ①

XWB-3-A

INDIANA DEPARTMENT OF TRANSPORTATION
 TRAFFIC CONTROL SIGNS
 SEPTEMBER 2011
 STANDARD DRAWING NO. E 801-TCSN-06

REGISTERED PROFESSIONAL ENGINEER
 NO. 9750
 STATE OF INDIANA
 RICHARD L. VAN CLEAVE
 DESIGN STANDARDS ENGINEER
 DATE 09/01/11

REGISTERED PROFESSIONAL ENGINEER
 NO. 9750
 STATE OF INDIANA
 MARK A. MILLER
 CHIEF HIGHWAY ENGINEER
 DATE 09/01/11

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
801-TCSN-07 TRAFFIC CONTROL SIGNS (WITH MARKUPS)

GENERAL NOTES

1. See Standard Drawing E 801-TCSN-11 for additional general notes.

Consolidate ten sheets into two - show only signs unique to Indiana

DIP
XWB-2-A
XWB-2-B ①

TRUCK CROSSING
XWB-6-A
XWB-6-B ①

LANE ENDS MERGE LEFT
XW9-2-A (R or L)

BUMP
XWB-1-A
XWB-1-B ①

SOFT SHOULDER
XWB-4-A
XWB-4-B ①

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL SIGNS
JUNE 1995

STANDARD DRAWING NO. E 801-TCSN-07
DETAILS PLACED IN THE FORM: 1-8-98

APPROVED
No. 18055
STATE OF INDIANA
OFFICIAL

By: Anthony L. Dransfield, Director
OFFICE OF TRANSPORTATION ENGINEERING

By: Thomas Boruff, Chief Drafting Engineer
OFFICE OF TRANSPORTATION ENGINEERING

DATE: 5-21-15

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
801-TCSN-08 TRAFFIC CONTROL SIGNS (WITH MARKUPS)

~~GENERAL NOTES~~
1. See Standard Drawing F. 801-TCSN-11 for additional general notes.



XW105-1-A



XW109-1



XW106-2-A



XW106-1-A



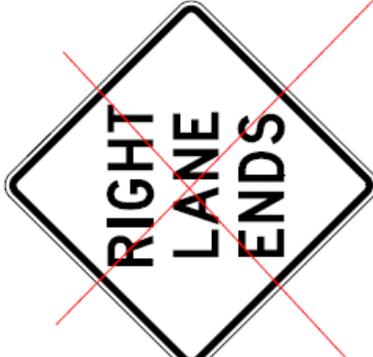
XW20-1a

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL
SIGNS
JUNE 1985
02
STANDARD DRAWING NO. E 801-TCSN-08
DETAILS PLACED IN THE FORM: 11-8-88
L. DREWY, ICA No. 18055 STATE OF INDIANA REGISTERED PROFESSIONAL
A/ Anthony L. Drenovich, P.E., P.E. SECTION CHIEF, ENGINEERING SECTION
A/ Kevin Boruff, P.E., P.E. SECTION CHIEF, ENGINEERING SECTION
DESIGN: J. J. JONES

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

801-TCSN-09 TRAFFIC CONTROL SIGNS (WITH MARKUPS)

Consolidate ten sheets into two - show only signs unique to Indiana



XW5-a-A (R or L)
XW5-a-B (R or L) ①



Move to 801-TCSN-01

XW103-1



XW104-1
To be used below an XW005-1 Sign only.
Move to 801-TCSN-01

NOTE:

① See Standard Drawing E-801-TCSN-11 for additional general notes.

INDIANA DEPARTMENT OF TRANSPORTATION	
TRAFFIC CONTROL SIGNS	
SEPTEMBER 2010	
STANDARD DRAWING NO. E 801-TCSN-09	
	/s/ Richard L. VanCleave 09/01/10 DESIGN STANDARDS ENGINEER DATE /s/ Mark A. Miller 09/01/10 CHIEF HIGHWAY ENGINEER DATE

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

801-TCSN-10 TRAFFIC CONTROL SIGNS (WITH MARKUPS)

GENERAL NOTES

~~1. See Standard Drawing E 801-TCSN-11 for additional general notes.~~

Consolidate ten sheets into two - show only signs unique to Indiana

Move to 801-TCSN-01

Move to 801-TCSN-01

XW101-1
XW101-1-A

XW102-1
XW102-1-A

~~UTILITY WORK AHEAD sign (diamond shape) with callouts 10 and 1. Below it are codes XW108-1 and XW108-1-A.~~

XW108-1
XW108-1-A

INDIANA DEPARTMENT OF TRANSPORTATION	
TRAFFIC CONTROL SIGNS	
JUNE 1985	
STANDARD DRAWING NO. E 801-TCSN-10	
DETAILS PLACED IN THE FORMAT 11-15-88	
/s/ Anthony L. Urzua, P.E. 8-88 MECHANICAL ENGINEER - CIVIL	
/s/ Perce Zezudi, P.E. 8-88 CIVIL ENGINEER - CIVIL	
OFFICALLY APPROVED 7-02-96	

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCSN-11 CONSTRUCTION SIGNS GENERAL NOTES (WITH MARKUPS)

GENERAL NOTES:

- 1 ~~1~~ This sign shall be used on expressways, freeways, and other roadways with design speeds of 50 mph or more.
- 2 ~~2~~ The minimum vertical and horizontal clearances for construction signs shall be as on Standard Drawing E 801-TCDV-05.
- 3 ~~3~~ The minimum horizontal clearance for construction signs on curbed roadway sections shall be 2'-0" from the face of the curb to the near edge of the sign.
- 4 ~~4~~ The minimum depth for wood or steel posts shall be 4 ft.
- 5 ~~5~~ See Standard Drawing E 801-TCDV-08 for U-Channel Steel Post Splice Detail.
- 6 ~~6~~ This sign shall be removed, covered, or turned to face away from the roadway during non-working hours.
- 7 ~~7~~ This sign may be ordered to read "500 FT", "1000 FT", or "1500 FT" in place of the word "Ahead". Such signs may be used in place of, or in conjunction with, the indicated sign.

INDIANA DEPARTMENT OF TRANSPORTATION		
TRAFFIC CONTROL SIGNS - INDEX SHEET CONSTRUCTION SIGNS GENERAL NOTES		
SEPTEMBER 2010	01	
STANDARD DRAWING NO. E 801-TCSN-11		
	<i>/s/ Richard L. VanCleave</i> DESIGN STANDARDS ENGINEER	09/01/10 DATE
	<i>/s/ Mark A. Miller</i> CHIEF HIGHWAY ENGINEER	09/01/10 DATE

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
801-TCSN-12 SIGN DESIGN DETAILS (WITH MARKUPS)

Add column for MUTCD sign code and rearrange sign order to regulatory, warning, and then guide signs.

SIGN NUMBER	SIGN MESSAGE	POST DESIGN		SIGN SIZE	SIGN COLOR		BORDER WIDTH	LETTER HEIGHT 3/8" x 1/2"	LETTER HEIGHT 1/2" x 3/8"	LETTER HEIGHT 3/8" x 1/2"	LETTER HEIGHT 1/2" x 3/8"	WORD OR LINE	PCT.	ARROW SIZE		CORNER RADIUS	NUMBERS OF POSTS		
		WOOD	STEEL		BACKGROUND	COPY								HEAD	SHAFT		ONE	TWO	
XCD-1	"Road Construction Ahead - 1/2 Mile"	*	B	60 x 36	Orange	Black	3/4"	6 - Series C			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X			
XCD-2	"Road Construction Ahead - 1/4 Mile"	*	B	60 x 24	Orange	Black	1/2"	6 - Series C			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X			
XCD-2a	"Road Construction Ahead - 1/4 Mile"	*	B	48 x 24	Orange	Black	1/2"	6 - Series C			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X			
XCD-4	"Road Construction Ahead - 1/4 Mile"	*	B	48 x 18	Orange	Black	1/2"	6 - Series C			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X			
XCD-5	"Road Construction Ahead - 1/4 Mile"	*	B	48 x 36	Orange	Black	3/4"	6 - Series C			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X			
XCD-5-B	"Road Construction Ahead - 1/4 Mile"	*	B	48 x 16	Orange	Black	1/2"	6 - Series C			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X			
XWD-6	"Lane Restrictions On Or After *** 2007"	*	B	60 x 30	Orange	Black	3/4"	8 - Series C	5 - Series C	5 - Series C	5 - Series C			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XWD-6a	"Lane Restrictions On Or After *** 2007"	*	B	72 x 36	Orange	Black	7/8"	8 - Series C	5 - Series C	5 - Series C	5 - Series C			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-2 (R or L)	"Detour" (above black arrow)	*	B	30 x 24	Orange	Black	1/2"	10 - Series D	"Detour"		7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X			
XW-2-B (R or L)	"Detour" (above black arrow)	*	B	48 x 48	Orange	Black	3/4"	10 - Series D	"Detour"		7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X			
XW-3 (R or L)	"U-turn symbol"	*	A	36 x 36	Orange	Black	3/4"	3/4"	3/4"	3/4"	3/4"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-3-B (R or L)	"U-turn symbol"	*	A	48 x 48	Orange	Black	1 1/4"	3/4"	3/4"	3/4"	3/4"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-4 (R or L)	"Curve symbol"	*	A	36 x 36	Orange	Black	3/4"	3/4"	3/4"	3/4"	3/4"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-4-B (R or L)	"Curve symbol"	*	A	48 x 48	Orange	Black	1 1/4"	3/4"	3/4"	3/4"	3/4"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-5 (R or L)	"Reverse turn symbol"	*	A	36 x 36	Orange	Black	3/4"	3/4"	3/4"	3/4"	3/4"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-5-B (R or L)	"Reverse turn symbol"	*	A	48 x 48	Orange	Black	1 1/4"	3/4"	3/4"	3/4"	3/4"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-6 (R or L)	"Reverse curve symbol"	*	A	36 x 36	Orange	Black	3/4"	3/4"	3/4"	3/4"	3/4"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-6-B (R or L)	"Reverse curve symbol"	*	A	48 x 48	Orange	Black	1 1/4"	3/4"	3/4"	3/4"	3/4"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-7 (R or L)	"Straight ahead symbol"	*	B	60 x 24	Orange	Black	3/4"	3/4"	3/4"	3/4"	3/4"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-7-B (R or L)	"Straight ahead symbol"	*	B	48 x 24	Orange	Black	3/4"	3/4"	3/4"	3/4"	3/4"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-8 (R or L)	"Lane ends merge symbol"	*	A	36 x 36	Orange	Black	3/4"	3/4"	3/4"	3/4"	3/4"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-8-B (R or L)	"Lane ends merge symbol"	*	A	48 x 48	Orange	Black	1 1/4"	3/4"	3/4"	3/4"	3/4"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-9 (R or L)	"Divided highway ends symbol"	*	A	36 x 36	Orange	Black	3/4"	3/4"	3/4"	3/4"	3/4"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-9-B (R or L)	"Divided highway ends symbol"	*	A	48 x 48	Orange	Black	1 1/4"	3/4"	3/4"	3/4"	3/4"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-10 (R or L)	"Arrow - Speed Limit"	*	B	48 x 48	Orange	Black	7/8"	5/8"	5/8"	5/8"	5/8"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-10a (R or L)	"Arrow - Speed Limit"	*	B	36 x 36	Orange	Black	7/8"	5/8"	5/8"	5/8"	5/8"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-10-B (R or L)	"Arrow - Speed Limit"	*	B	48 x 48	Orange	Black	1 1/4"	5/8"	5/8"	5/8"	5/8"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-11 (R or L)	"HH - Speed Zone Ahead"	*	A	36 x 36	Orange	Black	3/4"	3/4"	3/4"	3/4"	3/4"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X
XW-11-B (R or L)	"HH - Speed Zone Ahead"	*	A	48 x 48	Orange	Black	1 1/4"	3/4"	3/4"	3/4"	3/4"			7 x 8	1 1/4 x 1/2	2 1/4"	2 1/4"	X	X

*Wood post permitted.

NOTES:

- Spacing between letters of this word or line shall be reduced by this percentage as shown in the FHWA document, Standard Highway Signs.
- See Standard Drawing E 801-TCSN-11 for additional general notes.
- All dimensions are in inches.

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL
SIGN DESIGN DETAILS
(Sheet 1 of 2)

SEPTEMBER 2011 04
STANDARD DRAWING NO. E 801-TCSN-12

REGISTERED PROFESSIONAL ENGINEER
No. 9750
STATE OF INDIANA
RICHARD L. VAN CLEAVE
DESIGN STANDARDS ENGINEER
DATE 09/01/11

REGISTERED PROFESSIONAL ENGINEER
No. 11111
STATE OF INDIANA
Mark A. Miller
CHIEF HIGHWAY ENGINEER
DATE 09/01/11

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
801-TCSN-12A SIGN DESIGN DETAILS (WITH MARKUPS)

Add column for MUTCD sign code and rearrange sign order to regulatory, warning, and then guide signs.

SIGN NUMBER	SIGN MESSAGE	POST DESIGN		SIGN SIZE	SIGN COLOR	BACKGROUND	COPY	BORDER WIDTH	MARKING WIDTH	LETTER HEIGHT SERIES-LINE 1	LETTER HEIGHT SERIES-LINE 2	LETTER HEIGHT SERIES-LINE 3	WORD OR LINE ①	PCT. ①	ARROW SIZE HEAD	ARROW SIZE SHIRT	CORNER RADIUS	NUMBER OF PASTS ONE
		4 x 4 WOOD	STEEL															
XW6-3-B	(Two way traffic symbol)	* B		48 x 48	Orange	Orange	Black	1 1/4	3/4	10 - Series D					11.50 x 13.34	23.12 x 6	3	X
XW6-3-A	"Bump"	* A		36 x 36	Orange	Orange	Black	3/4	1/2	10 - Series D							2 1/4	X
XW6-3-B	"Bump"	* B		48 x 48	Orange	Orange	Black	1 1/4	3/4	12 - Series D							3	X
XW6-3-A	"DIP"	* A		36 x 36	Orange	Orange	Black	3/4	1/2	10 - Series E							2 1/4	X
XW6-3-B	"DIP"	* B		48 x 48	Orange	Orange	Black	1 1/4	3/4	12 - Series E							3	X
XW6-3-A	"Reverent Ends"	* A		36 x 36	Orange	Orange	Black	3/4	1/2	6 - Series C							2 1/4	X
XW6-3-B	"Soft Shoulder"	* B		36 x 36	Orange	Orange	Black	3/4	1/2	6 - Series C							2 1/4	X
XW6-4-A	"Soft Shoulder"	* A		48 x 48	Orange	Orange	Black	1 1/4	3/4	8 - Series C							3	X
XW6-4-B	"Soft Shoulder"	* B		36 x 36	Orange	Orange	Black	3/4	1/2	6 - Series C							2 1/4	X
XW6-5-A	"Truck Crossing"	* A		36 x 36	Orange	Orange	Black	3/4	1/2	6 - Series C							2 1/4	X
XW6-5-B	"Truck Crossing"	* B		48 x 48	Orange	Orange	Black	1 1/4	3/4	8 - Series C							3	X
XW6-6-A (R or L)	"Lane Ends"	* A		36 x 36	Orange	Orange	Black	3/4	1/2	6 - Series D							2 1/4	X
XW6-6-B (R or L)	"Lane Ends"	* B		48 x 48	Orange	Orange	Black	1 1/4	3/4	8 - Series D							3	X
XW6-7-A (R or L)	"Lane Ends"	* A		48 x 48	Orange	Orange	Black	1 1/4	3/4	8 - Series D							3	X
XW6-7-B (R or L)	"Lane Ends"	* B		36 x 36	Orange	Orange	Black	3/4	1/2	6 - Series D							2 1/4	X
XW6-8-A	"Road Closed Ahead"	* A		36 x 36	Orange	Orange	Black	3/4	1/2	4 - Series E							1 1/2	X
XW6-8-B	"Road Closed Ahead"	* B		48 x 48	Orange	Orange	Black	1 1/4	3/4	7 - Series C							3	X
XW6-9-A	"Road Construction Ahead"	* A		36 x 36	Orange	Orange	Black	3/4	1/2	8 - Series C							3	X
XW6-9-B	"Road Construction Ahead"	* B		48 x 48	Orange	Orange	Black	1 1/4	3/4	8 - Series C							3	X
XW6-10-A	"Road Work Ahead"	* A		36 x 36	Orange	Orange	Black	3/4	1/2	8 - Series C							3	X
XW6-10-B	"Road Work Ahead"	* B		48 x 48	Orange	Orange	Black	1 1/4	3/4	8 - Series C							3	X
XW6-11-A	"Road Work Ahead"	* A		48 x 48	Orange	Orange	Black	1 1/4	3/4	7 - Series D							3	X
XW6-11-B	"Road Work Ahead"	* B		36 x 36	Orange	Orange	Black	3/4	1/2	7 - Series D							3	X
XW6-12-A	"Road Work Ahead"	* A		48 x 48	Orange	Orange	Black	1 1/4	3/4	7 - Series D							3	X
XW6-12-B	"Road Work Ahead"	* B		36 x 36	Orange	Orange	Black	3/4	1/2	7 - Series D							3	X
XW6-13-A	"Road Work Ahead"	* A		48 x 48	Orange	Orange	Black	1 1/4	3/4	7 - Series D							3	X
XW6-13-B	"Road Work Ahead"	* B		36 x 36	Orange	Orange	Black	3/4	1/2	7 - Series D							3	X
XW6-14-A	"Shoulder Work"	* A		36 x 36	Orange	Orange	Black	3/4	1/2	6 - Series C							3 1/4	X
XW6-14-B	"Shoulder Work"	* B		48 x 48	Orange	Orange	Black	1 1/4	3/4	6 - Series C							3 1/4	X
XW6-15-A	"Sloped Crown"	* A		36 x 36	Orange	Orange	Black	3/4	1/2	6 - Series C							2 1/4	X
XW6-15-B	"Sloped Crown"	* B		48 x 48	Orange	Orange	Black	1 1/4	3/4	6 - Series C							2 1/4	X

*Wood post permitted.

NOTES:

- ① Spacing between letters of this word or line shall be reduced by this percentage as shown in the FHWA document, Standard Highway Signs.
2. See Standard Drawing E 801-TCSN-12A for additional general notes.
3. All dimensions are in inches.

INDIANA DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL
SIGN DESIGN DETAILS
(sheet 2 of 2)

SEPTEMBER 2011 05

STANDARD DRAWING NO. E 801-TCSN-12A

REGISTERED PROFESSIONAL ENGINEER
NO. 9750 STATE OF INDIANA
RICHARD L. VAN CLEAVE

DESIGN STANDARDS ENGINEER
09/01/11 DATE
/s/ Richard L. VanCleave

REGISTERED PROFESSIONAL ENGINEER
NO. 9750 STATE OF INDIANA
MARK A. MILLER

CHIEF HIGHWAY ENGINEER
09/01/11 DATE
/s/ Mark A. Miller



REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCSN-13 SIGN DESIGN DETAILS (WITH MARKUPS)

SIGN NUMBER	SIGN MESSAGE	POST DESIGN 4 x 4 WOOD STEEL	SIGN SIZE	SIGN COLOR	BORDER WIDTH	MARGIN WIDTH	LETTER HEIGHT SERIES-LINE 1	LETTER HEIGHT SERIES-LINE 2	LETTER HEIGHT SERIES-LINE 3	LETTER HEIGHT SERIES-LINE 4	ARROW SIZE		CORNER NO. OF POSTS	
											BACKGROUND	COPY	HEAD	SHAFT
XW101-1	"Mowing Crews Ahead"	*	A 36 x 36	Orange	3/4	1/2	6 - Series C	7 1/2 x 8 1/2	2 1/4	2	X			
XW101-1-A	"Mowing Crews Ahead" _____ Miles"	*	B 48 x 48	Orange	1 1/4	3/4	8 - Series C	7 1/2 x 8 1/2	2 1/4	3	X			
XW102-1	"Mowing Crews Next _____ Miles"	*	A 36 x 36	Orange	3/4	1/2	6 - Series C	7 1/2 x 8 1/2	2 1/4	2	X			
XW102-1-A	"Mowing Crews Next _____ Miles"	*	B 48 x 48	Orange	1 1/4	3/4	8 - Series C	7 1/2 x 8 1/2	2 1/4	3	X			
XW103-1	"Watch For Stopped Traffic"	*	A 36 x 36	Orange	1 1/4	3/4	7 - Series C	7 1/2 x 8 1/2	2 1/4	2	X			
XW104-1	"Right Turn (Installation)"	*	B 48 x 48	Black	1 1/4	3/8	6 - Series C	7 1/2 x 8 1/2	2 1/4	3	X			
XW105-1-A	"Right Turn (Part Open)"	*	B 48 x 48	Black	1 1/4	3/4	7 - Series C	7 1/2 x 8 1/2	2 1/4	3	X			
XW106-1-A	"Exit Closed"	*	B 48 x 48	Orange	1 1/4	3/4	7 - Series C	7 1/2 x 8 1/2	2 1/4	3	X			
XW106-2-A	"Exit Open"	*	B 48 x 48	Orange	1 1/4	3/4	7 - Series C	7 1/2 x 8 1/2	2 1/4	3	X			
XW108-1-A	"Utility Work Ahead"	*	A 36 x 36	Orange	3/4	1/2	6 - Series D	7 1/2 x 8 1/2	2 1/4	2	X			
XW108-2-A	"Utility Work Ahead" _____ Miles"	*	B 48 x 48	Orange	1 1/4	3/4	8 - Series D	7 1/2 x 8 1/2	2 1/4	3	X			
XW109-1-A	"Exit (above black arrow)"	*	B 48 x 48	Black	1 1/4	3/4	12 - Series D	7 1/2 x 8 1/2	2 1/4	3	X			
R2-1	"Speed limit _____"	*	A 24 x 30	White	1/2	3/8	4 - Series E	7 1/2 x 8 1/2	2 1/4	2	X			
R2-1-B	"Speed limit _____"	*	B 48 x 60	White	1/2	3/8	8 - Series E	7 1/2 x 8 1/2	2 1/4	3	X			
R3-2-A (R or L)	"(No _____ turn symbol)"	*	A 30 x 30	White	3/4	3/8	6 - Series D	7 1/2 x 8 1/2	2 1/4	2	X			
R3-2-C (R or L)	"(No _____ turn symbol)"	*	B 48 x 48	White	1 1/4	3/4	6 - Series D	7 1/2 x 8 1/2	2 1/4	3	X			
R4-1	"Do Not Pass"	*	A 24 x 30	White	1/2	3/8	10 - Series D	7 1/2 x 8 1/2	2 1/4	2	X			
R4-1-B	"Do Not Pass" (inside symbol)"	*	B 48 x 60	White	1 1/4	3/4	10 - Series D	7 1/2 x 8 1/2	2 1/4	3	X			
R5-1-A	"Do Not Enter" (inside symbol)"	*	A 36 x 36	Red	Radius 17 1/2	1/2	6 - Series D	7 1/2 x 8 1/2	2 1/4	2	X			
R5-1-B	"Do Not Enter" (inside white arrow)"	*	B 48 x 48	Red	Radius 23 1/2	1/2	6 - Series D	7 1/2 x 8 1/2	2 1/4	2	X			
R6-1 (R or L)	"One Way" (inside white arrow)"	*	A 36 x 36	Black & White	---	3/8	4 - Series D	7 1/2 x 8 1/2	2 1/4	2	X			
R6-2-A (R or L)	"One Way" (above black arrow)"	*	A 24 x 30	White	1/2	3/8	6 - Series D	7 1/2 x 8 1/2	2 1/4	2	X			
R11-2	"Road Closed"	*	B 48 x 30	White	3/4	3/8	8 - Series D	7 1/2 x 8 1/2	2 1/4	3	X			
R11-3	"Road Closed _____ Miles Ahead"	*	B 60 x 30	White	3/4	3/8	8 - Series D	7 1/2 x 8 1/2	2 1/4	3	X			
R11-4	"Local Traffic Only"	*	B 60 x 30	White	3/4	3/8	6 - Series C	7 1/2 x 8 1/2	2 1/4	2	X			
R12-1	"Road Closed To Thru Traffic"	*	A 24 x 30	White	1/2	3/8	4 - Series D	7 1/2 x 8 1/2	2 1/4	2	X			
R12-1-A	"Weight Limit _____ Tons"	*	B 36 x 48	White	3/4	1/2	6 - Series D	7 1/2 x 8 1/2	2 1/4	3	X			
R14-1	"When Fishing - Plaque"	*	---	Black	1/2	3/8	5 - Series D	7 1/2 x 8 1/2	2 1/4	2	X			
R2-Y12	"End Work Site Speed Limit"	*	A 24 x 36	White	1/2	3/8	4 - Series D	7 1/2 x 8 1/2	2 1/4	2	X			
R2-Y12-B	"End Work Site Speed Limit"	*	B 36 x 34	White	1 1/4	3/4	6 - Series D	7 1/2 x 8 1/2	2 1/4	3	X			

* Wood post permitted.

Add column for MUTCD sign code and rearrange sign order to regulatory, warning, and then guide signs.

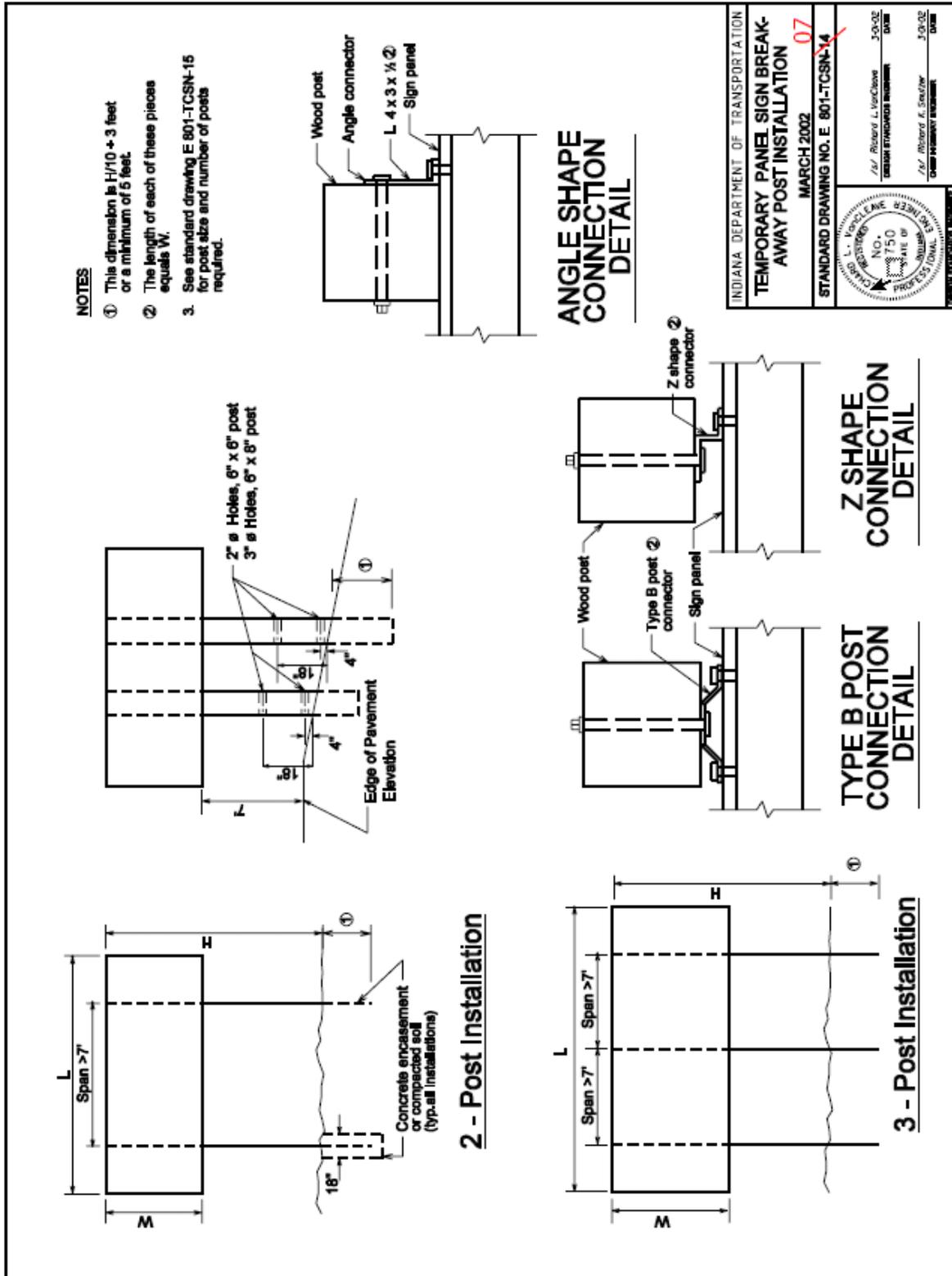
INDIANA DEPARTMENT OF TRANSPORTATION
 TRAFFIC CONTROL
 SIGN DESIGN DETAILS
 SEPTEMBER 2012
 STANDARD DRAWING NO. E 801-TCSN-13
 06
 /s/ Richard L. VanCleave
 SUPERVISOR, ROADWAY STANDARDS
 DATE 09/04/12
 /s/ Mark A. Miller
 CHIEF ENGINEER
 DATE 09/04/12

NOTES:

- See Standard Drawing E 801-TCSN-11 for General Notes.
- All dimensions are in inches.

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

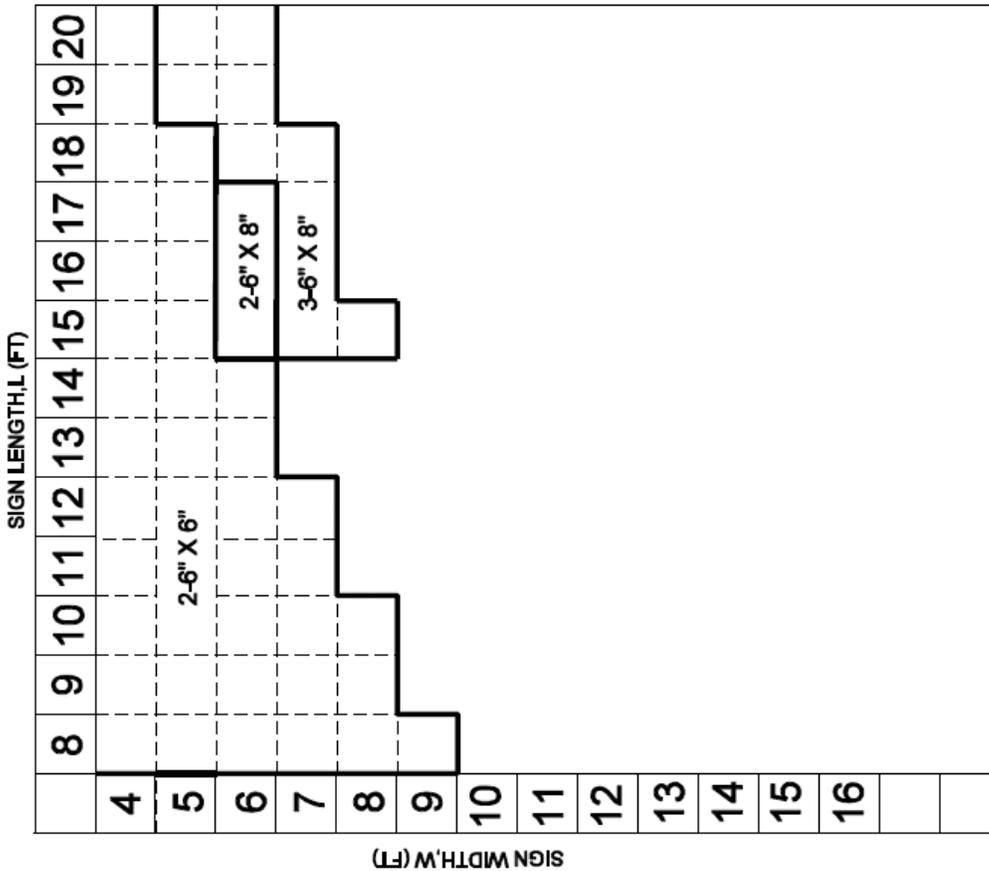
801-TCSN-14 TEMPORARY PANEL SIGN BREAKAWAY POST INSTALLATION (WITH MARKUPS)



REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

801-TCSN-15 WOOD POST DESIGN FOR TEMPORARY PANEL SIGNS (WITH MARKUPS)

NOTES:
No more than one post can be located in a 7 foot wide path.



INDIANA DEPARTMENT OF TRANSPORTATION
WOOD POST DESIGN FOR TEMPORARY PANEL SIGNS
 MARCH 2002 **08**
 STANDARD DRAWING NO. E 801-TCSN-15

Richard L. Vorclaw
 REGISTERED PROFESSIONAL ENGINEER
 NO. 9750
 STATE OF INDIANA
 DESIGNER

/s/ Richard L. Vorclaw
 DESIGN ENGINEER
 DATE 5-01-02

/s/ Richard K. Smutz
 CHIEF HIGHWAY ENGINEER
 DATE 3-01-02

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCSN-01 CONSTRUCTION SIGNS GENERAL NOTES (PROPOSED DRAFT)

GENERAL NOTES

1. The minimum vertical and horizontal clearances for construction signs shall be as on Standard Drawing E 801-TCDV-05.
2. The minimum horizontal clearance for construction signs on curbed roadway sections shall be 2'-0" from the face of the curb to the near edge of the sign.
3. The minimum depth for wood or steel posts shall be 4 ft.
4. See Standard Drawing E 801-TCDV-08 for U-Channel Steel Post Splice Detail.
5. This sign shall be removed, covered, or turned to face away from the roadway during non-working hours.
6. This sign may be ordered to read "500 FT", "1000 FT", or "1500 FT" in place of the word "Ahead". Such signs may be used in place of, or in conjunction with, the indicated sign.

INDEX	
SHEET NO.	SUBJECT
1	Index
2	Traffic Control Signs
3	Traffic Control Signs
4	Traffic Control Sign Design Details
5	Traffic Control Sign Design Details
6	Traffic Control Sign Design Details
7	Temporary Panel Sign Breakaway Post Installation
8	Wood Post Design For Temporary Panel Signs

INDIANA DEPARTMENT OF TRANSPORTATION				
CONSTRUCTION SIGNS GENERAL NOTES SEPTEMBER 2015				
STANDARD DRAWING NO. E 801-TCSN-01				
<table border="1" style="width: 100%;"> <tr> <td style="width: 80%; text-align: center;">DESIGN STANDARDS ENGINEER</td> <td style="width: 20%; text-align: center;">DATE</td> </tr> <tr> <td style="width: 80%; text-align: center;">CHIEF ENGINEER</td> <td style="width: 20%; text-align: center;">DATE</td> </tr> </table>	DESIGN STANDARDS ENGINEER	DATE	CHIEF ENGINEER	DATE
DESIGN STANDARDS ENGINEER	DATE			
CHIEF ENGINEER	DATE			

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCSN-02 TRAFFIC CONTROL SIGNS SHEET 1 (PROPOSED DRAFT)

NOTES:
 1. See Standard Drawing E 801-TCSN-01 for general notes.

INDIANA DEPARTMENT OF TRANSPORTATION
 TRAFFIC CONTROL SIGNS
 (Sheet 1 of 2)
 SEPTEMBER 2015
 DRAFT

STANDARD DRAWING NO. E 801-TCSN-02

DESIGN STANDARDS ENGINEER _____ DATE _____
 CHIEF HIGHWAY ENGINEER _____ DATE _____

DESIGN STANDARDS ENGINEER _____

⑤ MOWING CREWS NEXT 5 MILES XWZ1-6b XWZ1-6b-A XWZ1-6b-B

⑥ MOWING CREWS AHEAD XWZ1-6b XWZ1-6b-A

⑥ ROAD REPAIRS NEXT 5 MILES XWZ0-1 XWZ0-1-A

⑥ WATCH FOR STOPPED TRAFFIC XW103-1

RECKLESS DRIVING MAX 8 YRS XWZ-6b XWZ-6b-A XWZ-6b-B

SPEEDING MAX \$1000 XWZ-6b XWZ-6b-A XWZ-6b-B

SPEEDING MAX \$1000 RECKLESS DRIVING MAX 8 YRS XWZ-6 XWZ-6-A

END CONSTRUCTION XG20-2

OVERHEAD SIGN INSTALLATION XW3-4S

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
801-TCSN-03 TRAFFIC CONTROL SIGNS SHEET 2 (PROPOSED DRAFT)

NOTES:
1. See Standard Drawing E 801-TCSN-01 for general notes.



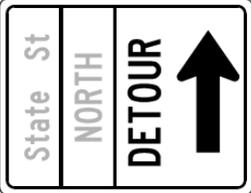
XW109-1



XW20-YWL(C)



XW20-YWR(B)



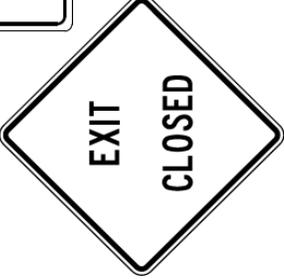
XM4-9e



XM4-9d



XW20-YWR(A)



XW106-1-A



XW105-1-A



XW106-2-A

INDIANA DEPARTMENT OF TRANSPORTATION	
TRAFFIC CONTROL SIGNS (Sheet 2 of 2)	
SEPTEMBER 2015 DRAFT	
STANDARD DRAWING NO. E 801-TCSN-03	
DESIGN STANDARDS ENGINEER	DATE
CHIEF HIGHWAY ENGINEER	DATE

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCSN-04 TRAFFIC CONTROL SIGN DESIGN DETAILS, SHEET 1 (PROPOSED DRAFT)

SIGN NUMBER	SIGN MESSAGE	POST DESIGN 1 X 4 STEEL WOOD	SIGN SIZE	SIGN COLOR BACKGROUND COPY	BORDER WIDTH	LETTER HEIGHT SERIES - LINE 1	LETTER HEIGHT SERIES - LINE 2	LETTER HEIGHT SERIES - LINE 3	WORD OR LINE	PCT. ⊙	CORNER RADIUS	NO. OF POSTS	
												1	2
R2-1	Speed Limit	* A	24 X 30	White		See Standard Highway Signs Book for Fabrication Details						X	
R2-1-B	Speed Limit	* B	48 X 60	White		See Standard Highway Signs Book for Fabrication Details						X	
R2-2-A (R or L)	(Movement Prohibition)	* A	30 X 30	White	Black	See Standard Highway Signs Book for Fabrication Details						X	
R2-2-C (R or L)	(Movement Prohibition)	* B	48 X 48	White	Black	See Standard Highway Signs Book for Fabrication Details						X	
R4-1	Do Not Pass	* A	24 X 30	White	Black	See Standard Highway Signs Book for Fabrication Details						X	
R4-1-B	Do Not Pass	* B	48 X 60	White	Black	See Standard Highway Signs Book for Fabrication Details						X	
R5-1-A	Do Not Enter	* A	36 X 36	Red	White	See Standard Highway Signs Book for Fabrication Details						X	
R5-1-B	Do Not Enter	* B	48 X 48	Red	White	See Standard Highway Signs Book for Fabrication Details						X	
R6-1 (R or L)	One Way (Inside White Arrow)	* A	36 X 36	White	Black	See Standard Highway Signs Book for Fabrication Details						X	
R6-2-A (R or L)	One Way (Above White Arrow)	* A	24 X 30	Black & White	Black	See Standard Highway Signs Book for Fabrication Details						X	
R11-2	Road Closed	* B	48 X 30	White	Black	See Standard Highway Signs Book for Fabrication Details						X	
R11-3	Road Closed - Local Traffic Only	* B	60 X 30	White	Black	See Standard Highway Signs Book for Fabrication Details						X	
R11-4	Road Closed to Thru Traffic	* B	60 X 30	White	Black	See Standard Highway Signs Book for Fabrication Details						X	
R17-1	Weight Limit - Trns	* A	24 X 30	White	Black	See Standard Highway Signs Book for Fabrication Details						X	
R17-1-A	Weight Limit - Trns	* B	36 X 48	White	Black	See Standard Highway Signs Book for Fabrication Details						X	
R17-1-B	Weight Limit - Trns	* C	48 X 20	White	Black	See Standard Highway Signs Book for Fabrication Details						X	
S4-4	When Flashing Plaque	* A	36 X 36	Orange	Black	See Standard Highway Signs Book for Fabrication Details						X	
XW1-1-A (R or L)	(Turn Symbol)	* A	48 X 48	Orange	Black	See Standard Highway Signs Book for Fabrication Details						X	
XW1-1-B (R or L)	(Turn Symbol)	* B	36 X 36	Orange	Black	See Standard Highway Signs Book for Fabrication Details						X	
XW1-2-A (R or L)	(Curve Symbol)	* A	36 X 36	Orange	Black	See Standard Highway Signs Book for Fabrication Details						X	
XW1-2-B (R or L)	(Curve Symbol)	* B	48 X 48	Orange	Black	See Standard Highway Signs Book for Fabrication Details						X	
XW1-3-A (R or L)	(Reverse Turn Symbol)	* A	36 X 36	Orange	Black	See Standard Highway Signs Book for Fabrication Details						X	
XW1-3-B (R or L)	(Reverse Turn Symbol)	* B	48 X 48	Orange	Black	See Standard Highway Signs Book for Fabrication Details						X	
XW1-4-A (R or L)	(Reverse Curve Symbol)	* A	36 X 36	Orange	Black	See Standard Highway Signs Book for Fabrication Details						X	
XW1-4-B (R or L)	(Reverse Curve Symbol)	* B	48 X 48	Orange	Black	See Standard Highway Signs Book for Fabrication Details						X	
XW1-6	(Single Headed Arrow)	* B	48 X 24	Orange	Black	See Standard Highway Signs Book for Fabrication Details						X	
XW1-6-A	(Single Headed Arrow)	* A	60 X 20	Orange	Black	See Standard Highway Signs Book for Fabrication Details						X	
XW2-6	Added Worksite Penalties	* B	60 X 36	Orange	Black	7/8 5/8 5/8	5 - Series C	5 - Series C	5 - Series C		2 1/4	X	
XW2-6-A	Added Worksite Penalties	* A	78 X 42	Orange	Black	7/8 5/8 5/8	5 - Series C	5 - Series C	5 - Series C		2 1/4	X	
XW2-6-B	Added Worksite Penalties	* B	30 X 30	Orange	Black	3/4 1/2 3/4	4 - Series C	4 - Series C	4 - Series C		1 7/8	X	
XW2-6a	Speeding Max \$1000	* A	36 X 36	Orange	Black	7/8 5/8 5/8	5 - Series C	5 - Series C	5 - Series C		2 1/4	X	
XW2-6a-B	Speeding Max \$1000	* B	48 X 48	Orange	Black	1 1/4 3/4 3/4	6 - Series C	6 - Series C	6 - Series C		3	X	
XW2-6b	Speeding Max \$1000	* A	30 X 30	Orange	Black	3/4 1/2 3/4	4 - Series C	4 - Series C	4 - Series C		1 7/8	X	
XW2-6b-B	Speeding Max \$1000	* B	36 X 36	Orange	Black	7/8 5/8 5/8	5 - Series C	5 - Series C	5 - Series C		2 1/4	X	
XW2-6b-A	Reckless Driving Max 8 Yrs	* A	36 X 36	Orange	Black	1 1/4 3/4 3/4	6 - Series C	6 - Series C	6 - Series C		3	X	
XW2-6b-B	Reckless Driving Max 8 Yrs	* B	48 X 48	Orange	Black	1 1/4 3/4 3/4	6 - Series C	6 - Series C	6 - Series C		3	X	

INDIANA DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SIGN DESIGN DETAILS
 (Sheet 1 of 3)

SEPTEMBER 2015

STANDARD DRAWING NO. E 801-TCSN-04

DESIGN STANDARDS ENGINEER DATE

CHIEF ENGINEER DATE

NOTES:

- Spacing between letters of this word or line shall be reduced by this percentage as shown in the FHWA document, Standard Highway Signs.
- See Standard Drawing E 801-TCSN-01 for additional general notes.
- All dimensions are in inches.

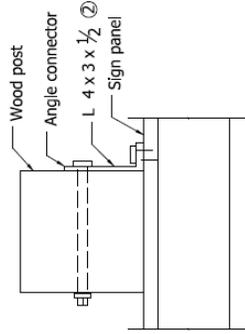
*Wood post permitted.

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

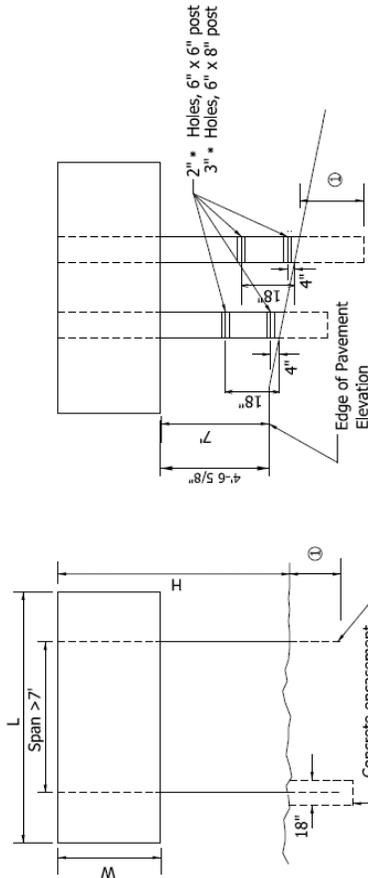
801-TCSN-07 TEMPORARY PANEL SIGN BREAKAWAY POST INSTALLATION (PROPOSED DRAFT)

NOTES

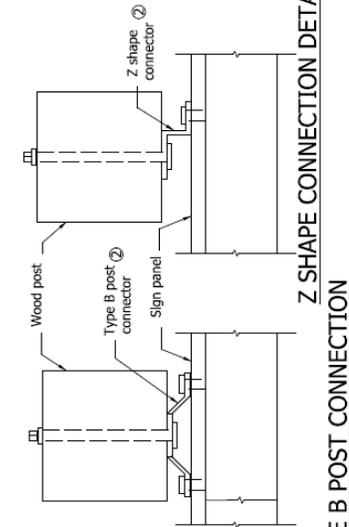
- ① This dimension is $H/10 + 3$ feet or a minimum of 5 feet.
- ② The length of each of these pieces equals W .
3. See standard drawing E 801-TCSN-15 for post size and number of posts required.



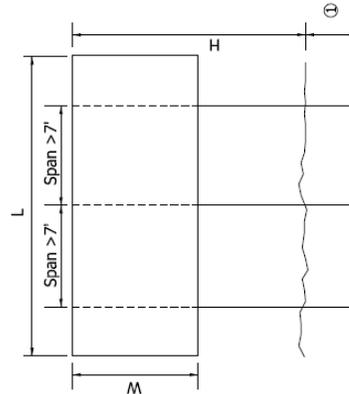
ANGLE SHAPE CONNECTION DETAIL



2 - POST INSTALLATION



Z SHAPE CONNECTION DETAIL



3 - POST INSTALLATION

INDIANA DEPARTMENT OF TRANSPORTATION

TEMPORARY PANEL SIGN
BREAKAWAY POST INSTALLATION
SEPTEMBER 2015
DRAFT

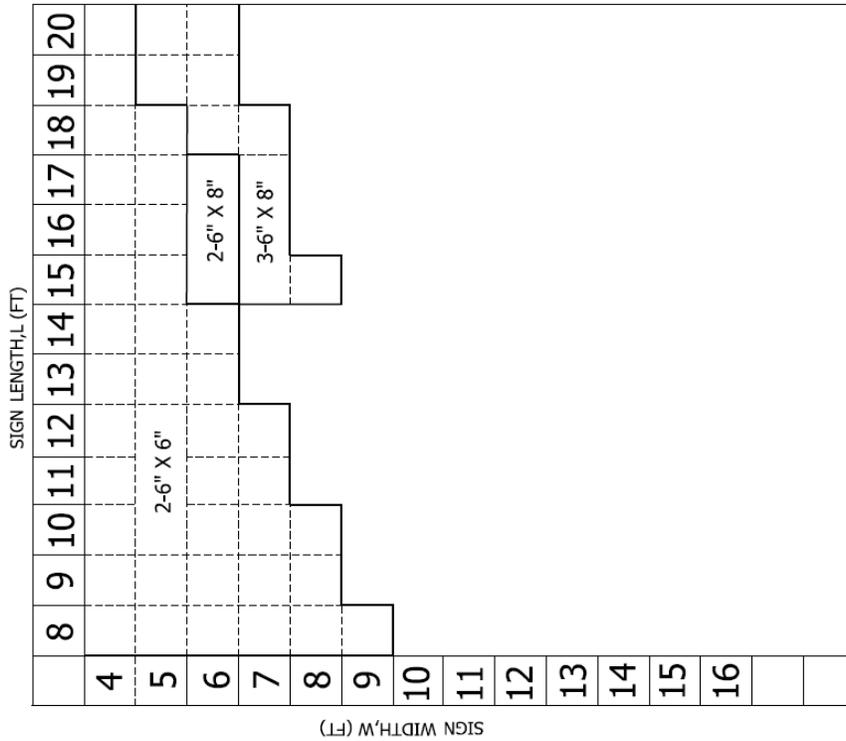
STANDARD DRAWING NO. E 801-TCSN-07

DESIGN STANDARDS ENGINEER	DATE
CHIEF HIGHWAY ENGINEER	DATE

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCSN-08 WOOD POST DESIGN FOR TEMPORARY PANEL SIGN (PROPOSED DRAFT)

NOTES:

1. No more than one post can be located in a 7 foot wide path.

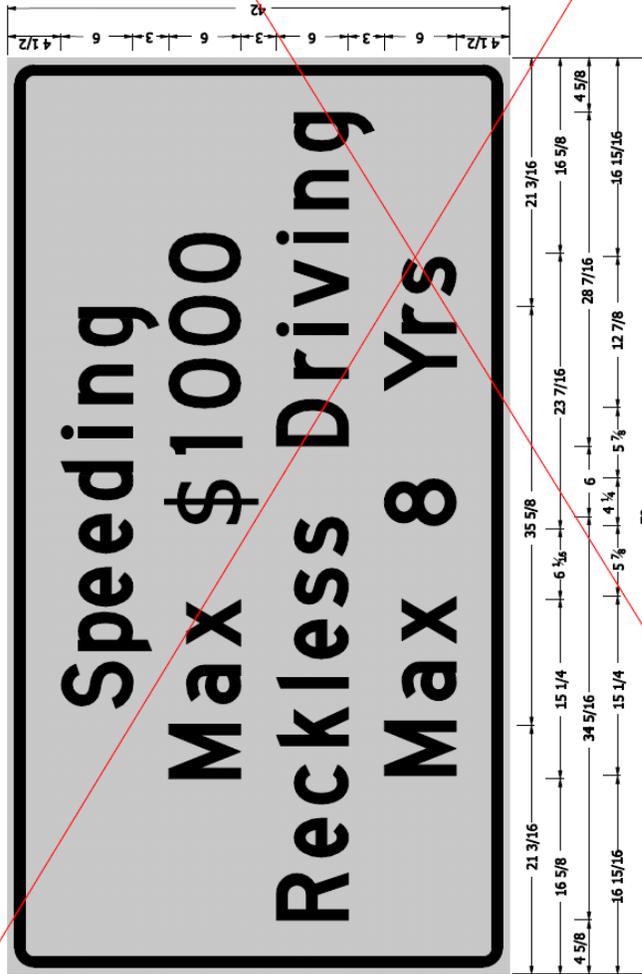


INDIANA DEPARTMENT OF TRANSPORTATION	
WOOD POST DESIGN FOR TEMPORARY PANEL SIGNS	
SEPTEMBER 2015	
STANDARD DRAWING NO.	E 801-TCSN-08
DESIGN STANDARDS ENGINEER	DATE
CHIEF ENGINEER	DATE

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

RECURRING PLAN DETAILS 801-R-542d WORKSITE ADDED PENALTY SIGN 78X42
(WITH MARKUPS)

Delete RPD and show sign on 801-TCSN-01 with fabrication details on 801-TCSN-04



6 D UPPER AND LOWER; 2.250" Radius, 0.675" Border, 0.625" Indent, Black on Orange;
[Speeding] D; [Max \$1000] D; [Reckless Driving] D; [Max 8 Yrs] D;

-XG 20-Z
XW2-6-A

9-03-07

INDIANA DEPARTMENT OF TRANSPORTATION
WORKSITE ADDED
PENALTY SIGN 78 x 42

E 801-R-542d

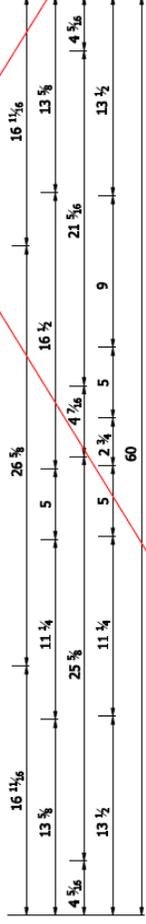
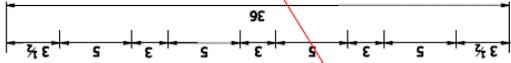
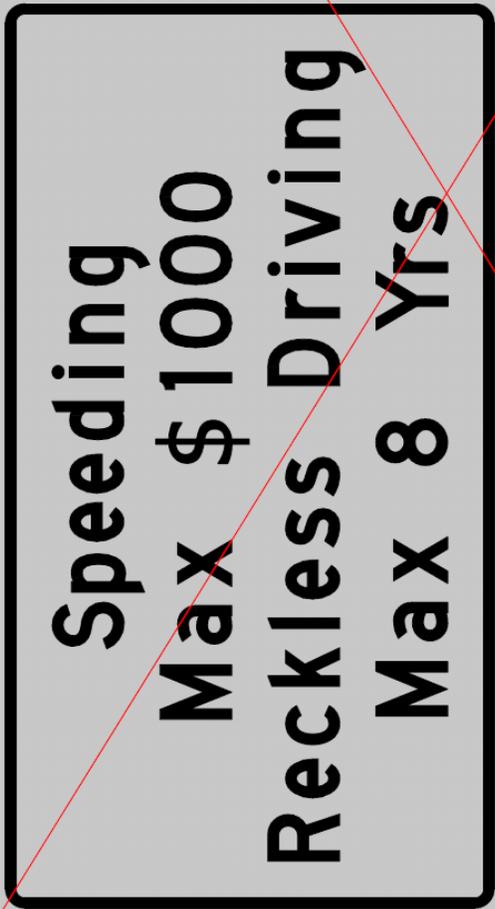
REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

RECURRING PLAN DETAILS 801-R-543d WORKSITE ADDED PENALTY SIGN 60X36
(WITH MARKUPS)

9-03-07

INDIANA DEPARTMENT OF TRANSPORTATION
WORKSITE ADDED
PENALTY SIGN 60 x 36

Delete RPD and show sign on 801-TCSN-01 with fabrication details on 801-TCSN-04



5 C UPPER AND LOWER; 2.250" Radius, 0.875" Border, 0.625" Indent, Black on Orange;
[Speeding] C; [Max \$1000] C; [Reckless Driving] C; [Max 8 Yrs] C;

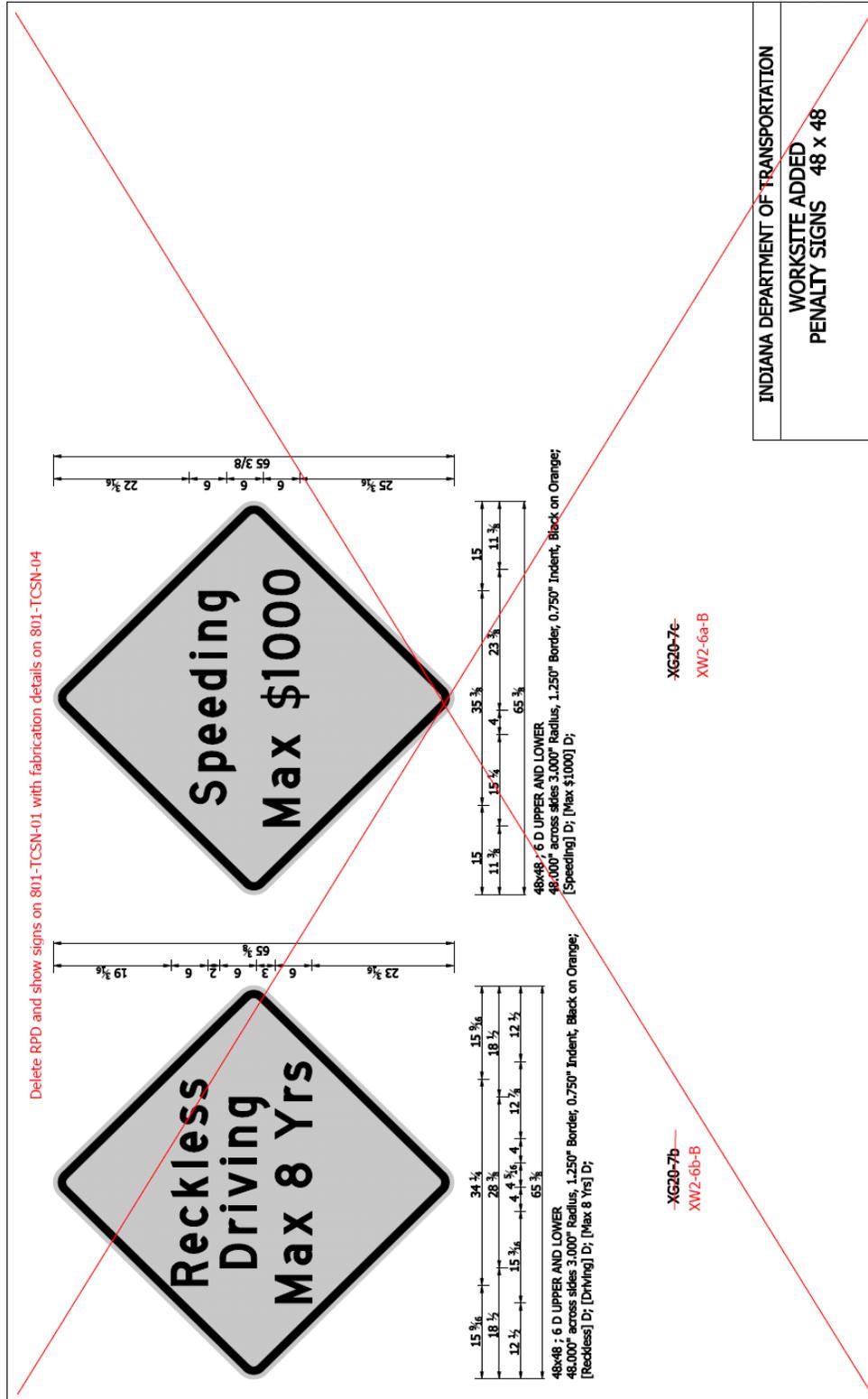
XG 20-7a
XW2-6

E 801-R-543d

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

RECURRING PLAN DETAILS 801-R-544d WORKSITE ADDED PENALTY SIGN 48X48
(WITH MARKUPS)

9-03-07



E 801-R-544d

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

RECURRING PLAN DETAILS 801-T-203d LANE ENDS WARNING SIGNS (WITH MARKUPS)

Eff. for Lettings On or After 05-01-14

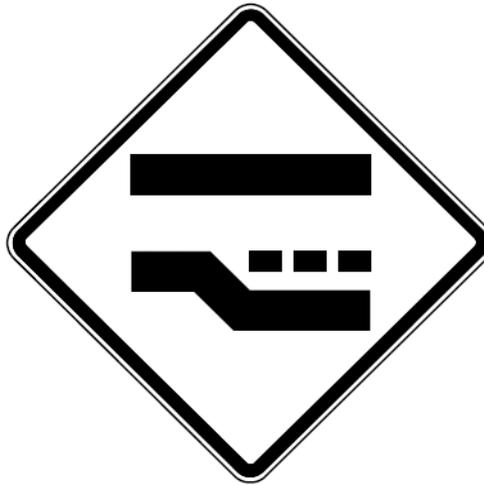
NOTES:

- The XW4-2 series signs depicted in the following Standard Drawings shall be superseded by the versions shown on this sheet and are further detailed in the Standard Highway Signs and Markings Book, 2004 edition.

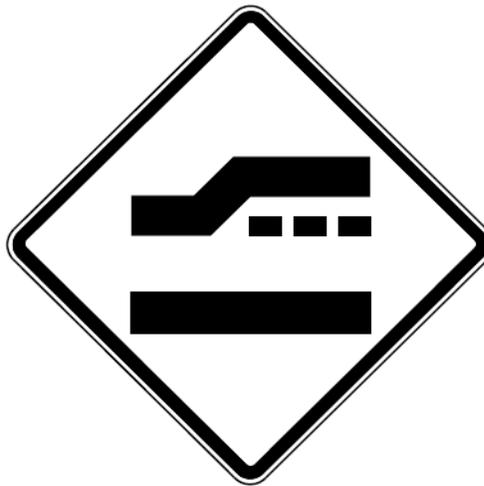
- 801-TCCO-01
- 801-TFOA-03
- 801-TCLC-01
- 801-TCLC-02
- 801-TCLC-03
- 801-TCLC-04
- 801-TCLC-05
- 801-TCLC-06
- 801-TCLC-09
- 801-TCLC-10
- 801-TCLC-11
- 801-TCLC-13
- 801-TCLC-15
- 801-TCLC-16
- ~~801-TCTC-05~~
- 801-TCTC-06
- 801-TCTC-09
- 801-TCTC-10

The color and support post details provided on Standard Drawing E 801-TCSN-~~13~~ shall apply.

05



XW4-2(L)
XW4-2-A(L)



XW4-2(R)
XW4-2-A(R)

INDIANA DEPARTMENT OF TRANSPORTATION

LANE ENDS WARNING SIGNS

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

RECURRING PLAN DETAILS 801-T-203d LANE ENDS WARNING SIGNS (PROPOSED DRAFT)

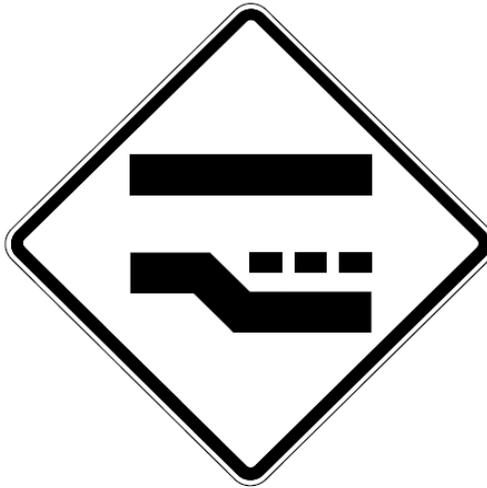
Eff. for Lettings On or After 09-01-15

NOTES:

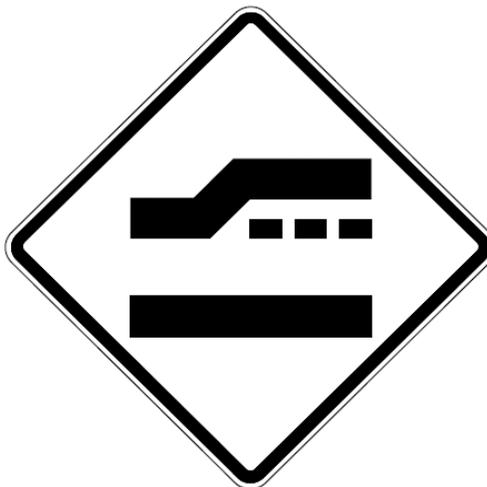
1. The XW4-2 series signs depicted in the following Standard Drawings shall be superseded by the versions shown on this sheet and are further detailed in the Standard Highway Signs and Markings Book, 2004 edition.

801-TCCO-01
 801-TFOF-03
 801-TCLC-01
 801-TCLC-02
 801-TCLC-03
 801-TCLC-04
 801-TCLC-05
 801-TCLC-06
 801-TCLC-09
 801-TCLC-10
 801-TCLC-11
 801-TCLC-13
 801-TCLC-15
 801-TCLC-16
 801-TCTC-06
 801-TCTC-09
 801-TCTC-10

The color and support post details provided on Standard Drawing E 801-TCSN-05 shall apply.



XW4-2(L)
XW4-2-A(L)



XW4-2(R)
XW4-2-A(R)

INDIANA DEPARTMENT OF TRANSPORTATION

LANE ENDS WARNING SIGNS

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

BACKUP 01. MUTCD EXCERPT. 2009 EDITION

Table 6F-1. Temporary Traffic Control Zone Sign and Plaque Sizes (Sheet 1 of

Sign or Plaque	Sign Designation	Section	Conventional Road	Freeway or Expressway	Minimum
Stop	R1-1	6F.06	30 x 30*	—	—
Stop (on Stop/Slow Paddle)	R1-1	6E.03	18 x 18	—	—
Yield	R1-2	6F.06	36 x 36 x 36*	—	30 x 30 x 30
To Oncoming Traffic (plaque)	R1-2aP	6F.06	36 x 30	48 x 36	24 x 18
Wait on Stop	R1-7	6E.05	24 x 30	24 x 30	—
Go on Slow	R1-8	6E.05	24 x 30	24 x 30	—
Speed Limit	R2-1	6F.12	24 x 30*	36 x 48	—
Fines Higher (plaque)	R2-6P	6F.12	24 x 18	36 x 24	—
Fines Double (plaque)	R2-6aP	6F.12	24 x 18	36 x 24	—
\$XX Fine (plaque)	R2-6bP	6F.12	24 x 18	36 x 24	—
Begin Higher Fines Zone	R2-10	6F.12	24 x 30	36 x 48	—
End Higher Fines Zone	R2-11	6F.12	24 x 30	36 x 48	—
End Work Zone Speed Limit	R2-12	6F.12	24 x 36	36 x 54	—
Movement Prohibition	R3-1,2,3,4,18,27	6F.06	24 x 24*	36 x 36	—
Mandatory Movement (1 lane)	R3-5	6F.06	30 x 36	—	—
Optional Movement (1 lane)	R3-6	6F.06	30 x 36	—	—
Mandatory Movement (text)	R3-7	6F.06	30 x 30*	—	—
Advance Intersection Lane Control	R3-8	6F.06	Varies x 30	—	—
Do Not Pass	R4-1	6F.06	24 x 30	36 x 48	—
Pass With Care	R4-2	6F.06	24 x 30	36 x 48	—
Keep Right	R4-7	6F.06	24 x 30	36 x 48	—
Narrow Keep Right	R4-7c	6F.06	18 x 30	—	—
Stay in Lane	R4-9	6F.11	24 x 30	36 x 48	—
Do Not Enter	R5-1	6F.06	30 x 30*	36 x 36	—
Wrong Way	R5-1a	6F.06	36 x 24*	42 x 30	—
One Way	R6-1	6F.06	36 x 12*	54 x 18	—
One Way	R6-2	6F.06	24 x 30*	36 x 48	—
No Parking (symbol)	R8-3	6F.06	24 x 24	36 x 36	—
Pedestrian Crosswalk	R9-8	6F.13	36 x 18	—	—
Sidewalk Closed	R9-9	6F.14	24 x 12	—	—
Sidewalk Closed, Use Other Side	R9-10	6F.14	24 x 12	—	—
Sidewalk Closed Ahead, Cross Here	R9-11	6F.14	24 x 18	—	—
Sidewalk Closed, Cross Here	R9-11a	6F.14	24 x 12	—	—
Road Closed	R11-2	6F.08	48 x 30	—	—
Road Closed - Local Traffic Only	R11-3a,3b,4	6F.09	60 x 30	—	—
Weight Limit	R12-1,2	6F.10	24 x 30	36 x 48	—
Weight Limit (with symbols)	R12-5	6F.10	24 x 36	36 x 48	—
Turn and Curve Signs	W1-1,2,3,4	6F.16	36 x 36	48 x 48	30 x 30
Reverse Curve (2 or more lanes)	W1-4b,4c	6F.48	36 x 36	48 x 48	30 x 30
One-Direction Large Arrow	W1-6	6F.16	48 x 24	60 x 30	—
Chevron	W1-8	6F.16	18 x 24	30 x 36	—
Stop Ahead	W3-1	6F.16	36 x 36	48 x 48	30 x 30
Yield Ahead	W3-2	6F.16	36 x 36	48 x 48	30 x 30
Signal Ahead	W3-3	6F.16	36 x 36	48 x 48	30 x 30
Be Prepared to Stop	W3-4	6F.16	36 x 36	48 x 48	30 x 30
Reduced Speed Limit Ahead	W3-5	6F.16	36 x 36	48 x 48	30 x 30

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 BACKUP 01. MUTCD EXCERPT. 2009 EDITION

Table 6F-1. Temporary Traffic Control Zone Sign and Plaque Sizes (Sheet 2 of :

Sign or Plaque	Sign Designation	Section	Conventional Road	Freeway or Expressway	Minimum
XX MPH Speed Zone Ahead	W3-5a	6F.16	36 x 36	48 x 48	30 x 30
Merging Traffic	W4-1,5	6F.16	36 x 36	48 x 48	36 x 36
Lane Ends	W4-2	6F.24	36 x 36	48 x 48	30 x 30
Added Lane	W4-3,6	6F.16	36 x 36	48 x 48	30 x 30
No Merge Area (plaque)	W4-5P	6F.16	18 x 24	24 x 30	—
Road Narrows	W5-1	6F.16	36 x 36	48 x 48	30 x 30
Narrow Bridge	W5-2	6F.16	36 x 36	48 x 48	30 x 30
One Lane Bridge	W5-3	6F.16	36 x 36	48 x 48	30 x 30
Ramp Narrows	W5-4	6F.26	36 x 36	48 x 48	30 x 30
Divided Highway	W6-1	6F.16	36 x 36	48 x 48	30 x 30
Divided Highway Ends	W6-2	6F.16	36 x 36	48 x 48	30 x 30
Two-Way Traffic	W6-3	6F.32	36 x 36	48 x 48	30 x 30
Two-Way Traffic	W6-4	6F.76	12 x 18	12 x 18	—
Hill (symbol)	W7-1	6F.16	36 x 36	48 x 48	30 x 30
Next XX Miles (plaque)	W7-3aP	6F.53	24 x 18	36 x 30	—
Bump	W8-1	6F.16	36 x 36	48 x 48	30 x 30
Dip	W8-2	6F.16	36 x 36	48 x 48	30 x 30
Pavement Ends	W8-3	6F.16	36 x 36	48 x 48	30 x 30
Soft Shoulder	W8-4	6F.44	36 x 36	48 x 48	30 x 30
Slippery When Wet	W8-5	6F.16	36 x 36	48 x 48	30 x 30
Truck Crossing	W8-6	6F.36	36 x 36	48 x 48	30 x 30
Loose Gravel	W8-7	6F.16	36 x 36	48 x 48	30 x 30
Rough Road	W8-8	6F.16	36 x 36	48 x 48	30 x 30
Low Shoulder	W8-9	6F.44	36 x 36	48 x 48	30 x 30
Uneven Lanes	W8-11	6F.45	36 x 36	48 x 48	30 x 30
No Center Line	W8-12	6F.47	36 x 36	48 x 48	30 x 30
Fallen Rocks	W8-14	6F.16	36 x 36	48 x 48	30 x 30
Grooved Pavement	W8-15	6F.16	36 x 36	48 x 48	30 x 30
Motorcycle (plaque)	W8-15P	6F.54	24 x 18	30 x 24	—
Shoulder Drop Off (symbol)	W8-17	6F.44	36 x 36	48 x 48	30 x 30
Shoulder Drop-Off (plaque)	W8-17P	6F.44	24 x 18	30 x 24	—
Road May Flood	W8-18	6F.16	36 x 36	48 x 48	24 x 24
No Shoulder	W8-23	6F.16	36 x 36	48 x 48	30 x 30
Steel Plate Ahead	W8-24	6F.46	36 x 36	48 x 48	30 x 30
Shoulder Ends	W8-25	6F.16	36 x 36	48 x 48	30 x 30
Lane Ends	W9-1,2	6F.16	36 x 36	48 x 48	30 x 30
Center Lane Closed Ahead	W9-3	6F.23	36 x 36	48 x 48	30 x 30
Grade Crossing Advance Warning	W10-1	6F.16	36 dia.	—	—
Truck	W11-10	6F.36	36 x 36	48 x 48	30 x 30
Double Arrow	W12-1	6F.16	30 x 30	—	—
Low Clearance	W12-2	6F.16	36 x 36	48 x 48	30 x 30
Advisory Speed (plaque)	W13-1P	6F.52	24 x 24	30 x 30	18 x 18
On Ramp (plaque)	W13-4P	6F.25	36 x 36	36 x 36	—
No Passing Zone (pennant)	W14-3	6F.16	48 x 48 x 36	64 x 64 x 48	40 x 40 x 30
XX Feet (plaque)	W16-2P	6F.16	24 x 18	30 x 24	—
Road Work (with distance)	W20-1	6F.18	36 x 36	48 x 48	30 x 30

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 BACKUP 01. MUTCD EXCERPT. 2009 EDITION

Table 6F-1. Temporary Traffic Control Zone Sign and Plaque Sizes (Sheet 3 of 3)

Sign or Plaque	Sign Designation	Section	Conventional Road	Freeway or Expressway	Minimum
Detour (with distance)	W20-2	6F.19	36 x 36	48 x 48	30 x 30
Road (Street) Closed (with distance)	W20-3	6F.20	36 x 36	48 x 48	30 x 30
One Lane Road (with distance)	W20-4	6F.21	36 x 36	48 x 48	30 x 30
Lane(s) Closed (with distance)	W20-5,5a	6F.22	36 x 36	48 x 48	30 x 30
Flagger (symbol)	W20-7	6F.31	36 x 36	48 x 48	30 x 30
Flagger	W20-7a	6F.31	36 x 36	48 x 48	30 x 30
Slow (on Stop/Slow Paddle)	W20-8	6E.03	18 x 18	—	—
Workers	W21-1,1a	6F.33	36 x 36	48 x 48	30 x 30
Fresh Oil (Tar)	W21-2	6F.34	36 x 36	48 x 48	30 x 30
Road Machinery Ahead	W21-3	6F.35	36 x 36	48 x 48	30 x 30
Slow Moving Vehicle	W21-4	6G.06	36 x 18	—	—
Shoulder Work	W21-5	6F.37	36 x 36	48 x 48	30 x 30
Shoulder Closed	W21-5a	6F.37	36 x 36	48 x 48	30 x 30
Shoulder Closed (with distance)	W21-5b	6F.37	36 x 36	48 x 48	30 x 30
Survey Crew	W21-6	6F.38	36 x 36	48 x 48	30 x 30
Utility Work Ahead	W21-7	6F.39	36 x 36	48 x 48	30 x 30
Mowing Ahead	W21-8	6G.06	36 x 36	48 x 48	30 x 30
Blasting Zone Ahead	W22-1	6F.41	36 x 36	48 x 48	30 x 30
Turn Off 2-Way Radio and Cell Phone	W22-2	6F.42	42 x 36	42 x 36	—
End Blasting Zone	W22-3	6F.43	42 x 36	42 x 36	36 x 30
Slow Traffic Ahead	W23-1	6F.27	48 x 24	48 x 24	—
New Traffic Pattern Ahead	W23-2	6F.30	36 x 36	48 x 48	30 x 30
Double Reverse Curve (1 lane)	W24-1	6F.49	36 x 36	48 x 48	30 x 30
Double Reverse Curve (2 lanes)	W24-1a	6F.49	36 x 36	48 x 48	30 x 30
Double Reverse Curve (3 lanes)	W24-1b	6F.49	36 x 36	48 x 48	30 x 30
All Lanes	W24-1cP	6F.49	24 x 24	30 x 30	—
Road Work Next XX Miles	G20-1	6F.56	36 x 18	48 x 24	—
End Road Work	G20-2	6F.57	36 x 18	48 x 24	—
Pilot Car Follow Me	G20-4	6F.58	36 x 18	—	—
Work Zone (plaque)	G20-5aP	6F.12	24 x 18	36 x 24	—
Exit Open	E5-2	6F.28	48 x 36	48 x 36	—
Exit Closed	E5-2a	6F.28	48 x 36	48 x 36	—
Exit Only	E5-3	6F.29	48 x 36	48 x 36	—
Detour	M4-8	6F.59	24 x 12	30 x 15	—
End Detour	M4-8a	6F.59	24 x 18	24 x 18	—
End	M4-8b	6F.59	24 x 12	24 x 12	—
Detour	M4-9	6F.59	30 x 24	48 x 36	—
Bike/Pedestrian Detour	M4-9a	6F.59	30 x 24	—	—
Pedestrian Detour	M4-9b	6F.59	30 x 24	—	—
Bike Detour	M4-9c	6F.59	30 x 24	—	—
Detour	M4-10	6F.59	48 x 18	—	—

* See Table 2B-1 for minimum size required for signs facing traffic on multi-lane conventional roads

- Notes: 1. Larger signs may be used wherever necessary for greater legibility or emphasis
 2. Dimensions are shown in inches and are shown as width x height

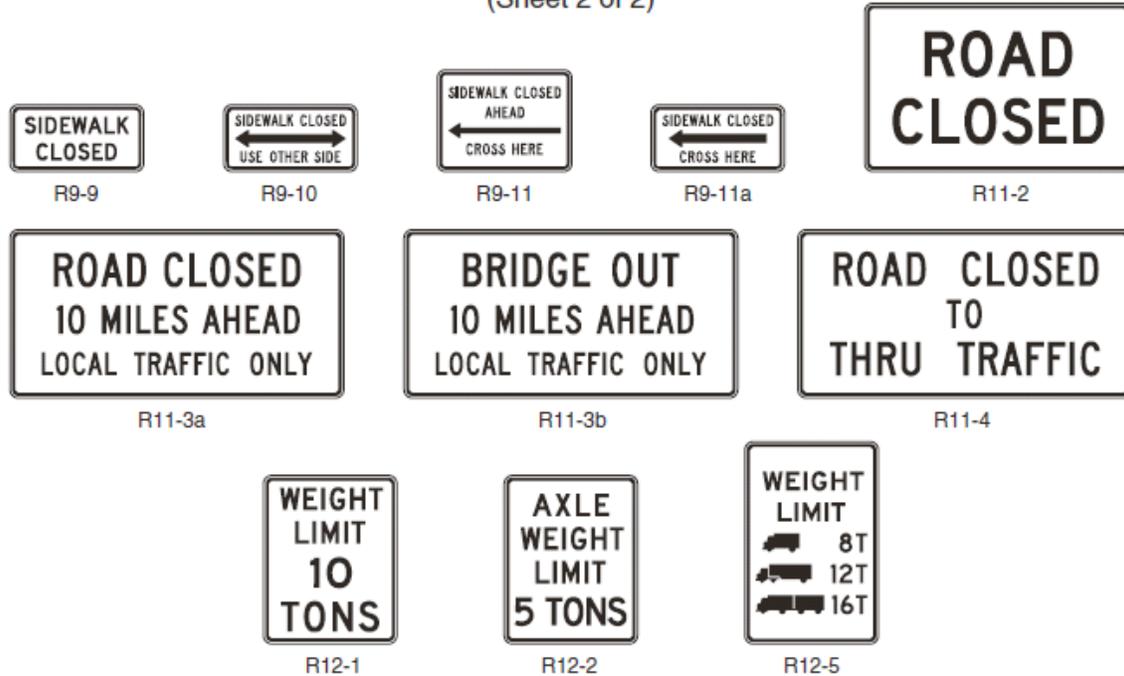
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Figure 6F-3. Regulatory Signs and Plaques in Temporary Traffic Control Zones
(Sheet 1 of 2)



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Figure 6F-3. Regulatory Signs and Plaques in Temporary Traffic Control Zones
 (Sheet 2 of 2)



Standard:

- 04 The ROAD (STREET) CLOSED sign shall not be used where road user flow is maintained through the TTC zone with a reduced number of lanes on the existing roadway or where the actual closure is some distance beyond the sign.

Section 6F.09 Local Traffic Only Signs (R11-3a, R11-4)

Guidance:

- 01 The Local Traffic Only signs (see Figure 6F-3) should be used where road user flow detours to avoid a closure some distance beyond the sign, but where local road users can use the roadway to the point of closure. These signs should be accompanied by appropriate warning and detour signing.

- 02 In rural applications, the Local Traffic Only sign should have the legend ROAD CLOSED XX MILES AHEAD, LOCAL TRAFFIC ONLY (R11-3a).

Option:

- 03 In urban areas, the legend ROAD (STREET) CLOSED TO THRU TRAFFIC (R11-4) or ROAD CLOSED, LOCAL TRAFFIC ONLY may be used.

- 04 In urban areas, a word message that includes the name of an intersecting street name or well-known destination may be substituted for the words XX MILES AHEAD on the R11-3a sign where applicable.

- 05 The words BRIDGE OUT (or BRIDGE CLOSED) may be substituted for the words ROAD (STREET) CLOSED on the R11-3a or R11-4 sign where applicable.

Section 6F.10 Weight Limit Signs (R12-1, R12-2, R12-5)

Standard:

- 01 A Weight Limit sign (see Figure 6F-3), which shows the gross weight or axle weight that is permitted on the roadway or bridge, shall be consistent with State or local regulations and shall not be installed without the approval of the authority having jurisdiction over the highway.

- 02 When weight restrictions are imposed because of the activity in a TTC zone, a marked detour shall be provided for vehicles weighing more than the posted limit.

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Figure 6F-4. Warning Signs and Plaques in Temporary Traffic Control Zones
(Sheet 1 of 3)



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Figure 6F-4. Warning Signs and Plaques in Temporary Traffic Control Zones
(Sheet 2 of 3)



REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
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Figure 6F-4. Warning Signs and Plaques in Temporary Traffic Control Zones (Sheet 3 of 3)



* An optional STREET WORK word message sign is shown in the "Standard Highway Signs and Markings" book.
 ** An optional STREET CLOSED word message sign is shown in the "Standard Highway Signs and Markings" book.
 *** An optional FLAGGER (W20-7a) word message sign is shown in the "Standard Highway Signs and Markings" book.
 **** An optional FRESH TAR word message sign is shown in the "Standard Highway Signs and Markings" book.

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Section 6F.23 CENTER LANE CLOSED AHEAD Sign (W9-3)

Guidance:

- 01 The CENTER LANE CLOSED AHEAD (W9-3) sign (see Figure 6F-4) should be used in advance of that point where work occupies the center lane(s) and approaching motor vehicle traffic is directed to the right or left of the work zone in the center lane.

Section 6F.24 Lane Ends Sign (W4-2)

Option:

- 01 The Lane Ends (W4-2) symbol sign (see Figure 6F-4) may be used to warn drivers of the reduction in the number of lanes for moving motor vehicle traffic in the direction of travel on a multi-lane roadway.

Section 6F.25 ON RAMP Plaque (W13-4P)

Guidance:

- 01 When work is being done on a ramp, but the ramp remains open, the ON RAMP (W13-4P) plaque (see Figure 6F-4) should be used to supplement the advance ROAD WORK sign.

Section 6F.26 RAMP NARROWS Sign (W5-4)

Guidance:

- 01 The RAMP NARROWS (W5-4) sign (see Figure 6F-4) should be used in advance of the point where work on a ramp reduces the normal width of the ramp along a part or all of the ramp.

Section 6F.27 SLOW TRAFFIC AHEAD Sign (W23-1)

Option:

- 01 The SLOW TRAFFIC AHEAD (W23-1) sign (see Figure 6F-4) may be used on a shadow vehicle, usually mounted on the rear of the most upstream shadow vehicle, along with other appropriate signs for mobile operations to warn of slow moving work vehicles. A ROAD WORK (W20-1) sign may also be used with the SLOW TRAFFIC AHEAD sign.

Section 6F.28 EXIT OPEN and EXIT CLOSED Signs (E5-2, E5-2a)

Option:

- 01 An EXIT OPEN (E5-2) or EXIT CLOSED (E5-2a) sign (see Figure 6F-5) may be used to supplement other warning signs where work is being conducted in the vicinity of an exit ramp and where the exit maneuver for vehicular traffic using the ramp is different from the normal condition.

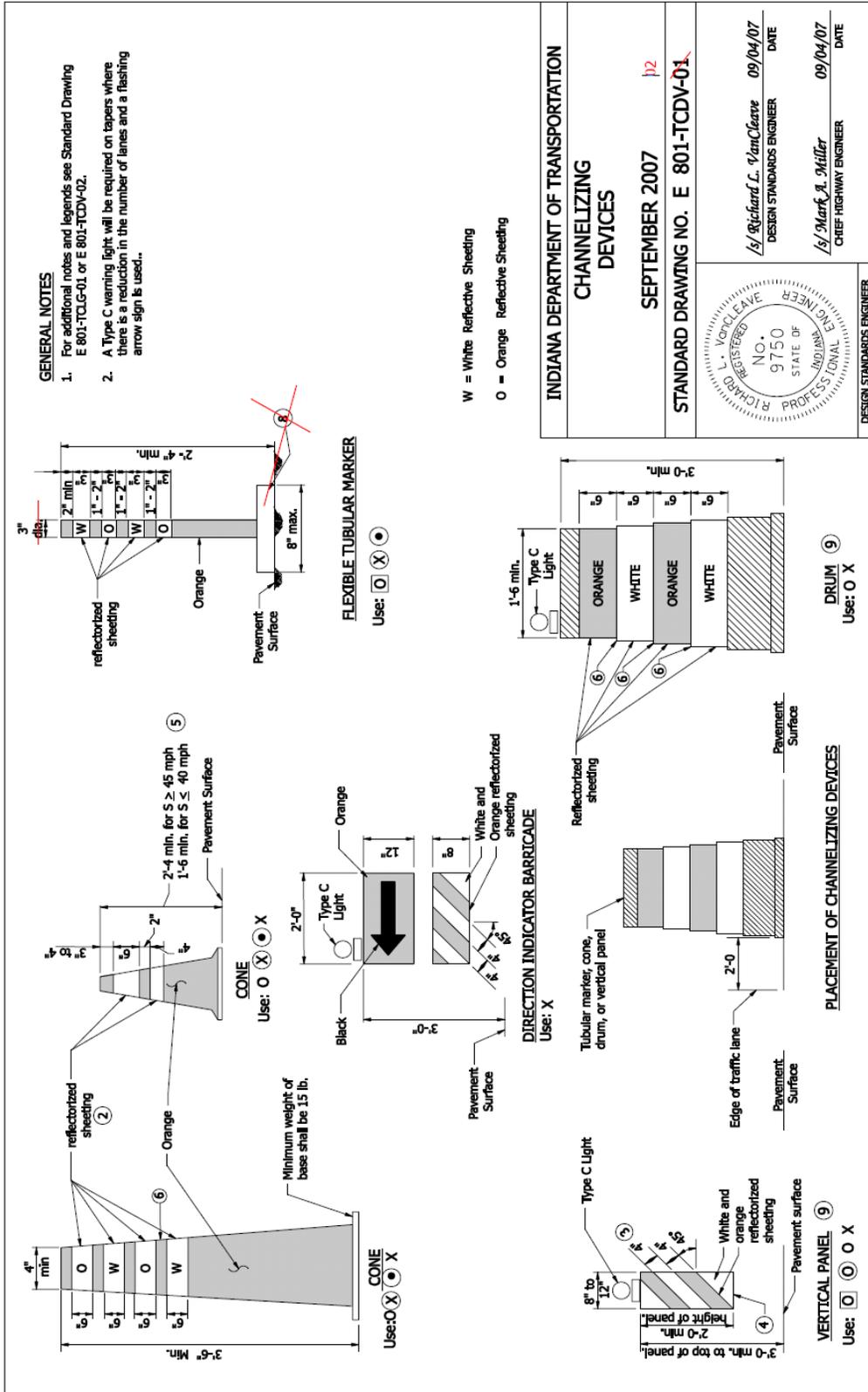
Guidance:

- 02 When an exit ramp is closed, an EXIT CLOSED sign panel with a black legend and border on an orange background should be placed diagonally across the interchange/intersection guide signs.

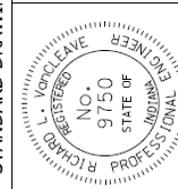
Figure 6F-5. Exit Open and Closed and Detour Signs



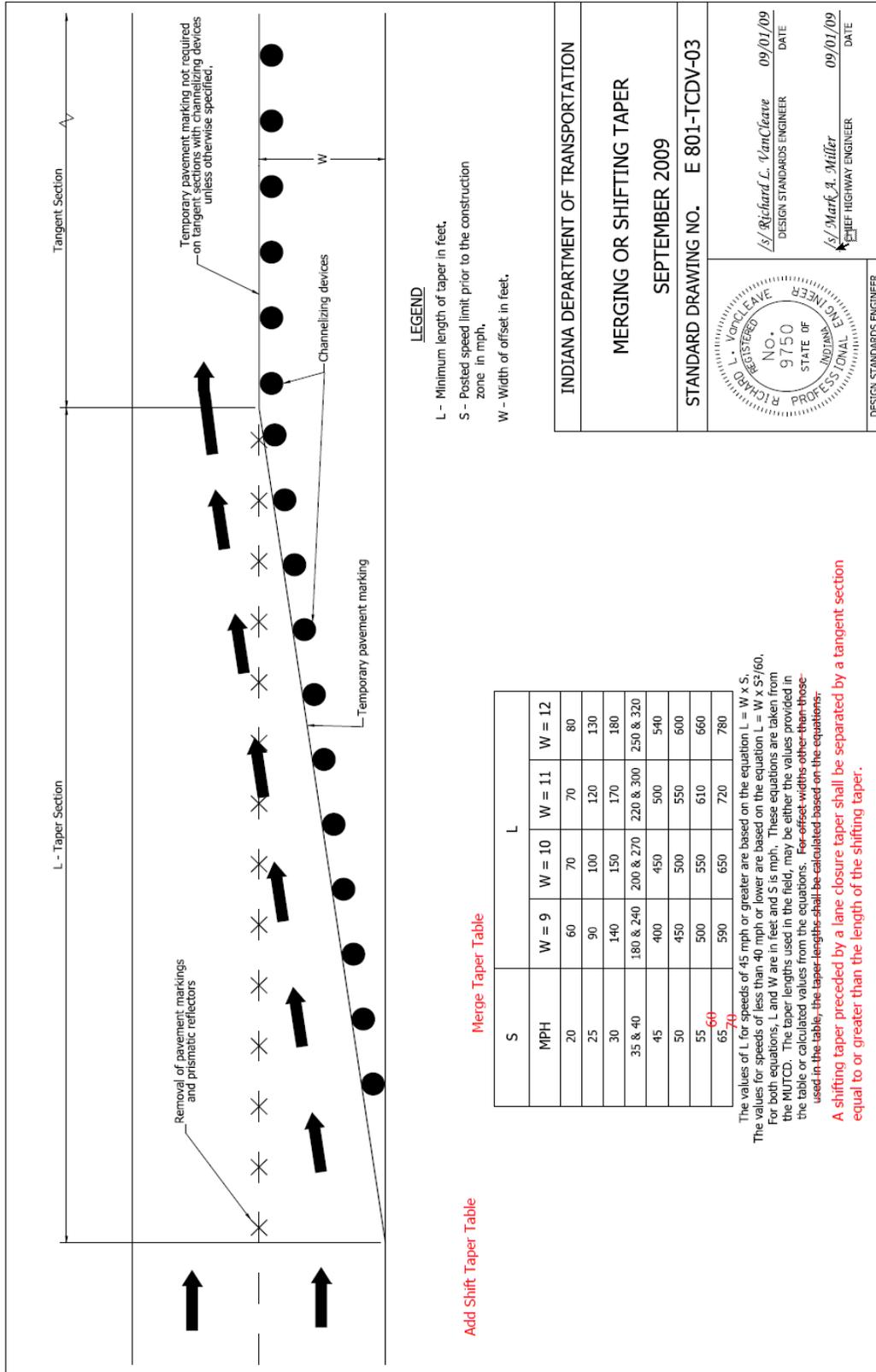
REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCDV-01 CHANNELIZING DEVICES (WITH MARKUPS)



REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCDV-02 CHANNELIZING DEVICES (WITH MARKUPS)

<p>GENERAL NOTES</p> <ol style="list-style-type: none"> 1. Unless otherwise specified, channelizing devices shall be spaced as shown on Standard Drawing E 801-TCLG-01. 2. Reflectorized bands may be omitted from cones for lane closures during daylight hours. 3. For vertical panels ^{equal to or} greater than 3 ft in height, the width of the stripes shall be 6 in. 4. Vertical panels used on an expressway or a freeway shall have a minimum reflective panel area of 270 in². Other roadways with a posted speed limit of 50 mph or greater shall also have a minimum reflective panel area of 270 in². 5. Cones shall have a minimum height of 2'-4" when used at night. 6. The maximum distance between the edges of adjacent reflective sheeting strips shall be 2 in. <i>All channelizing devices</i> 7. Panel and direction indicator barricades and supports shall meet NCHRP 350 crash evaluation criteria. 8. Minimum flexible tubular marker base area shall be 0.3 ft². 9. It is not necessary to delineate a drop-off of 3 in. or less adjacent to active travel lanes. Where channelizing devices are used to delineate drop-offs of 3 in. or less adjacent to active travel lanes, at least 33 in. of the device shall be above the adjoining pavement surface. Where channelizing devices are used to delineate a drop-off greater than 3 in. adjacent to active travel lanes, at least 27 in. of the device shall be above the adjoining pavement surface. In no case shall more than 9 in. of the device be below the adjoining pavement surface. 10. The proper orientation in respect to approaching vehicular traffic shall be maintained on vertical panels. <i>Channelizing devices</i>. Drums are the preferred channelizing device in a tight radius curve. <i>and at intersections.</i> 	<p>LEGEND</p> <p>O - Device may be used in tangent set-ups.</p> <p>X - Device may be used in taper or transition set-ups.</p> <p>⊗ - Devices may be used in two-way traffic set-ups to divide opposing lanes of traffic.</p> <p>● - Device may be used to divide two or more lanes of traffic in the same direction.</p> <p>⊙ - Device may be used to replace barricades and drums where space is limited.</p> <p>□ - Device may be used to delineate edge of pavement drop-off where space is limited.</p>
INDIANA DEPARTMENT OF TRANSPORTATION	
CHANNELIZING DEVICES	
SEPTEMBER 2009 01	
STANDARD DRAWING NO. E 801-TCDV-02	
	/s/ Richard L. VanCleave DESIGN STANDARDS ENGINEER 09/01/09 DATE
DESIGN STANDARDS ENGINEER	/s/ Mark A. Miller CHIEF HIGHWAY ENGINEER 09/01/09 DATE

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCDV-03 MERGING OR SHIFTING TAPER (WITH MARKUPS)



INDIANA DEPARTMENT OF TRANSPORTATION

MERGING OR SHIFTING TAPER

SEPTEMBER 2009

STANDARD DRAWING NO. E 801-TCDV-03

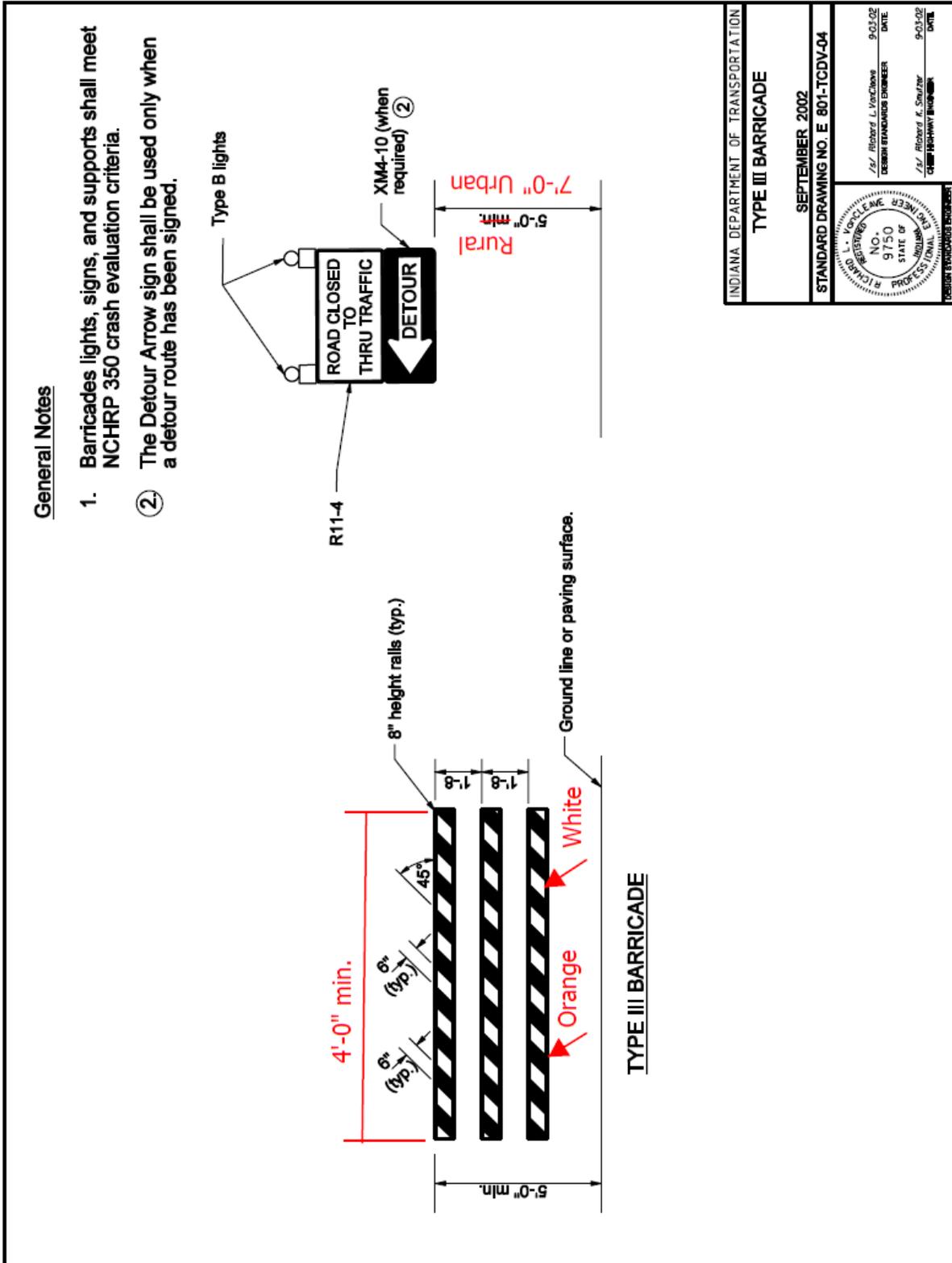
REGISTERED PROFESSIONAL ENGINEER
 NO. 9750
 STATE OF INDIANA

/s/ Richard L. VanCleave 09/01/09
 DESIGN STANDARDS ENGINEER DATE

/s/ Mark A. Miller 09/01/09
 CHIEF HIGHWAY ENGINEER DATE

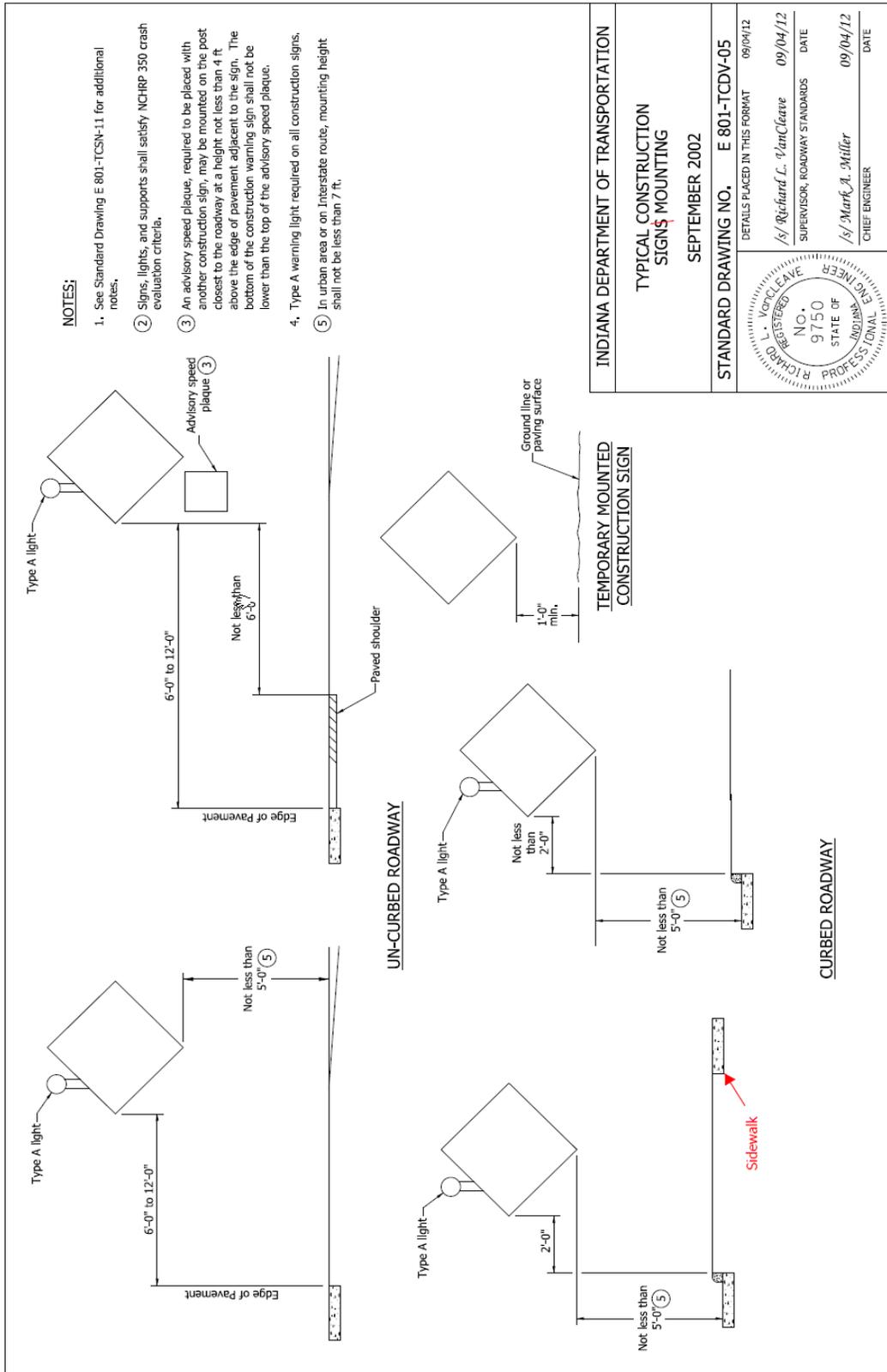
DESIGN STANDARDS ENGINEER

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCDV-04 TYPE III BARRICADE (WITH MARKUPS)



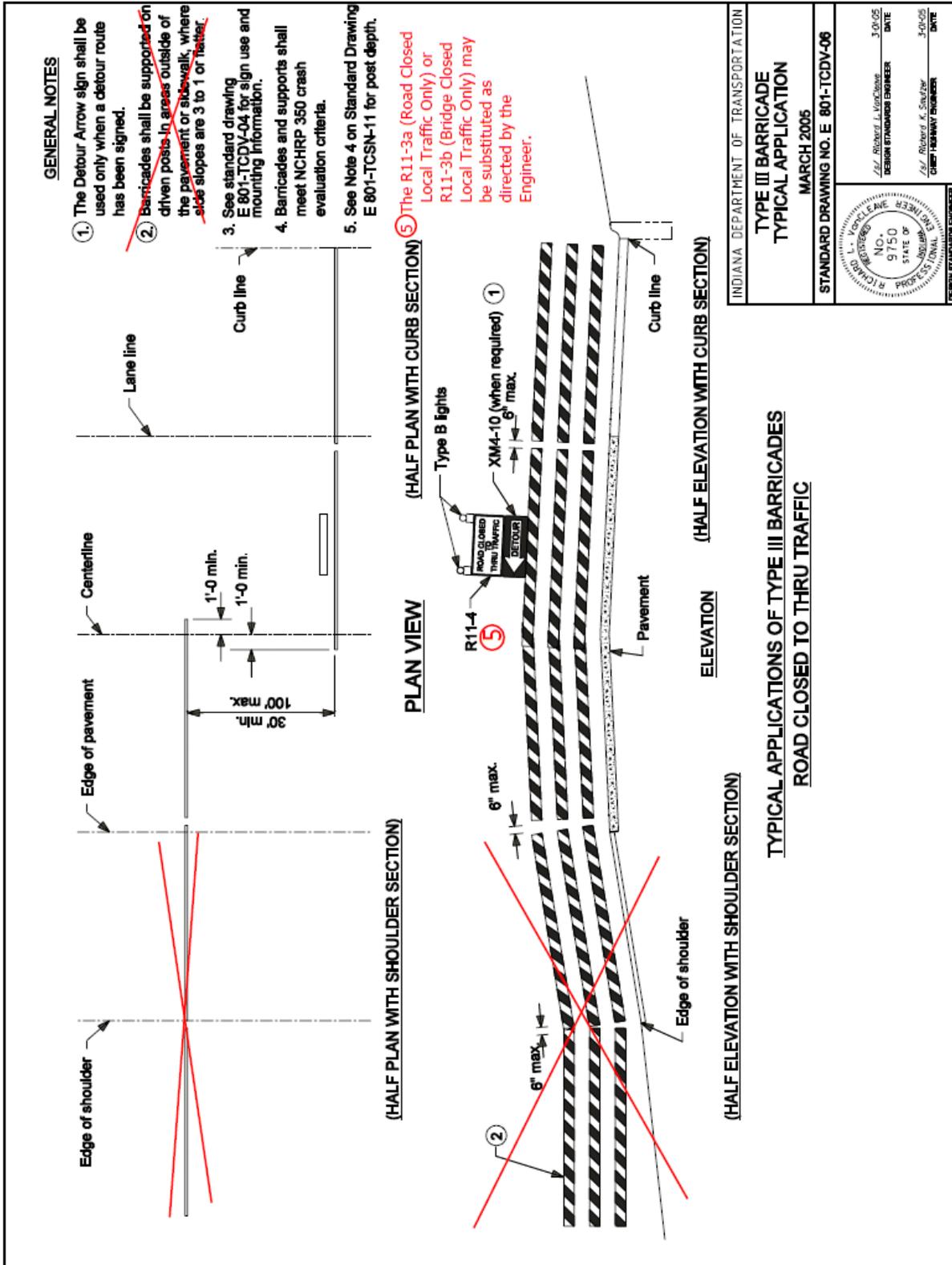
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801-TCDV-05 TYPICAL CONSTRUCTION SIGNS MOUNTING (WITH MARKUPS)



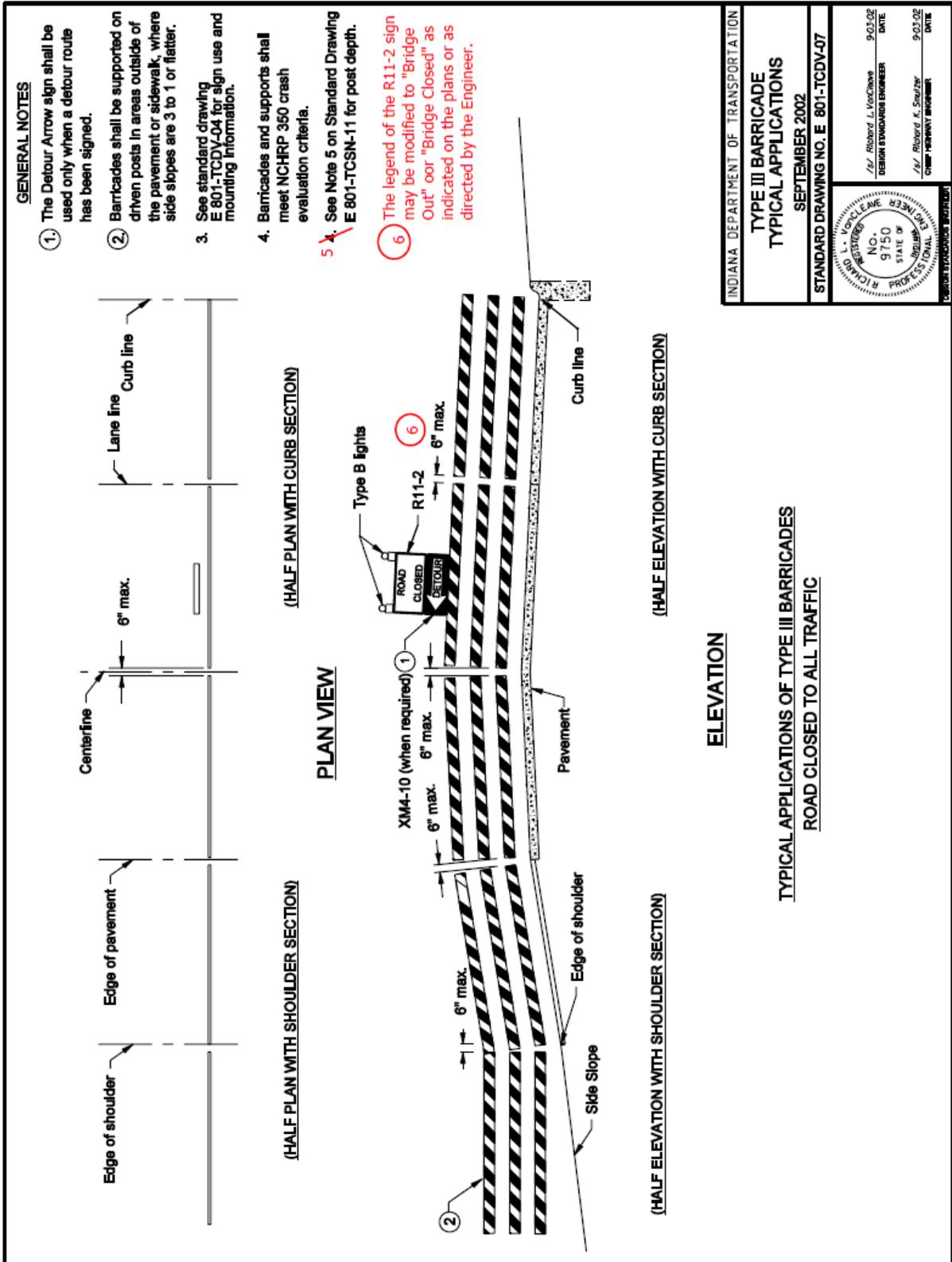
REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

801-TCDV-06 TYPE III BARRICADE TYPICAL APPLICATION (WITH MARKUPS)



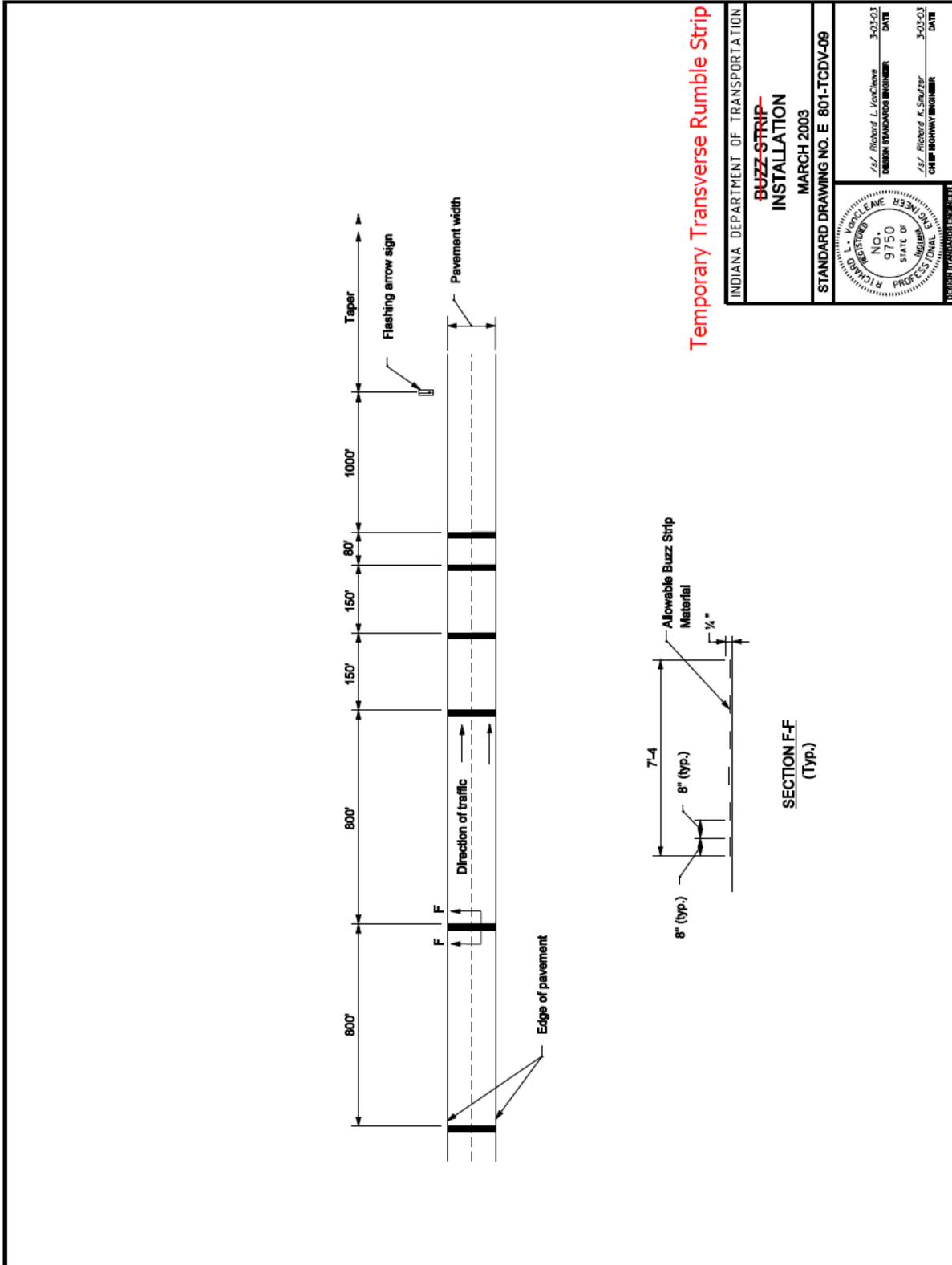
REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

801-TCDV-07 TYPE III BARRICADE TYPICAL APPLICATIONS (WITH MARKUPS)



Item No.02 5/21/15 (2016 SS) (contd.)
 Mr. Boruff
 Date: 5/21/15

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCDV-09 BUZZ STRIP INSTALLATION (WITH MARKUPS)



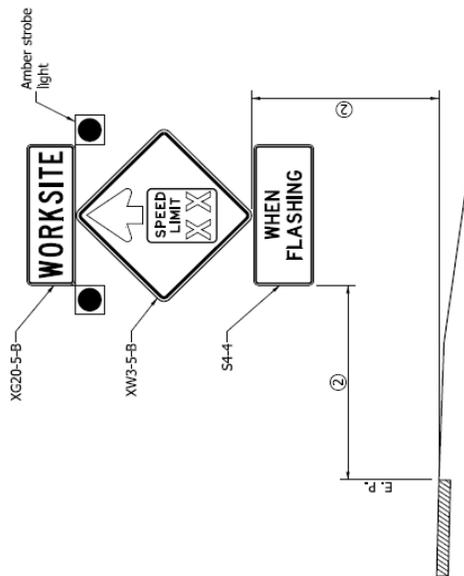
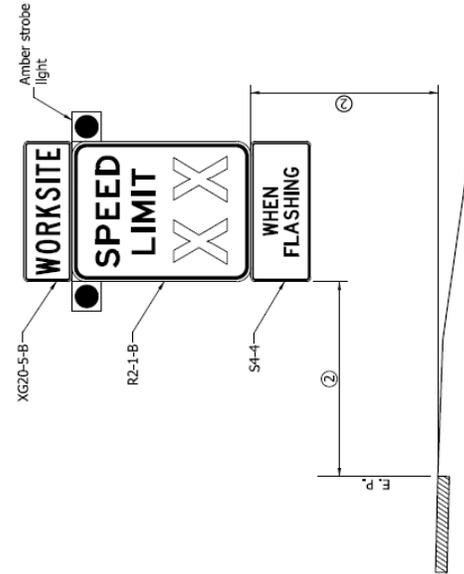
Temporary Transverse Rumble Strip

SECTION F-F
(Typ.)

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 EXISTING 801-TCDV-10 WORKSITE SPEED LIMIT SIGN ASSEMBLY FOR
 INTERMITTENT USE

NOTES:

1. If not trailer mounted, signs and supports shall satisfy NCHRP 350 crash evaluation criteria.
2. See Standard Drawing 801-TCDV-05 for lateral and vertical placement.
3. Advance warning sign speed limit shall match that on worksite speed limit sign.
4. The worksite speed limit shall be at least 10 mph below the posted speed limit for the roadway under construction.
5. Sign series shown is for freeway or expressway application.



WORKSITE SPEED LIMIT SIGN ASSEMBLY

REDUCED SPEED ADVANCE WARNING SIGN ASSEMBLY

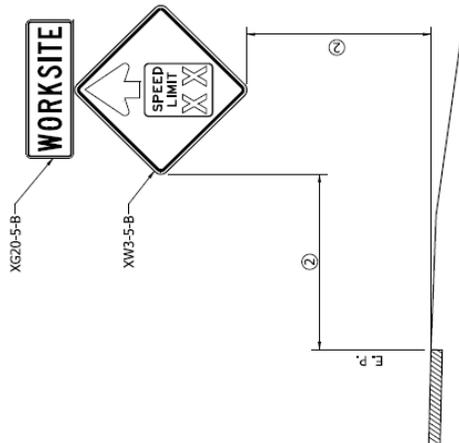
INDIANA DEPARTMENT OF TRANSPORTATION	
WORKSITE SPEED LIMIT SIGN ASSEMBLY FOR INTERMITTENT USE (When Workers Present) SEPTEMBER 2012	
STANDARD DRAWING NO. E 801-TCDV-10	
<i>/s/ Richard L. VanCleave</i> SUPERVISOR, ROADWAY STANDARDS	09/04/12 DATE
<i>/s/ Mark A. Miller</i> CHIEF ENGINEER	09/04/12 DATE



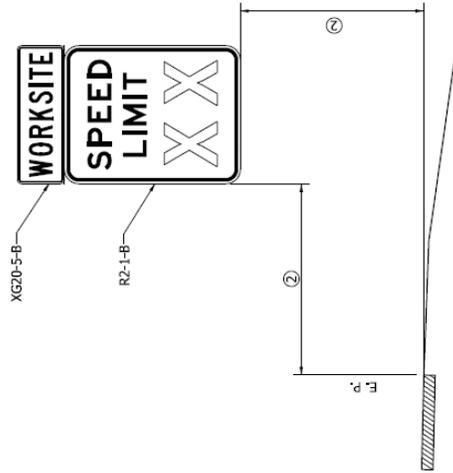
REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 EXISTING 801-TCDV-11 WORKSITE SPEED LIMIT SIGN ASSEMBLY

NOTES:

1. If not trailer mounted, signs and supports shall satisfy NCHRP 350 crash evaluation criteria.
2. See Standard Drawing 801-TCDV-05 for lateral and vertical placement.
3. Advance warning sign speed limit shall match that on worksite speed limit sign.
4. The worksite speed limit shall be at least 10 mph below the posted speed limit for the roadway under construction.
5. Sign series shown is for freeway or expressway application.



REDUCED SPEED ADVANCE
 WARNING SIGN ASSEMBLY



WORKSITE SPEED LIMIT
 SIGN ASSEMBLY

INDIANA DEPARTMENT OF TRANSPORTATION

WORKSITE SPEED LIMIT
 SIGN ASSEMBLY
 (For Continuous Use)
 SEPTEMBER 2012

STANDARD DRAWING NO. E 801-TCDV-11

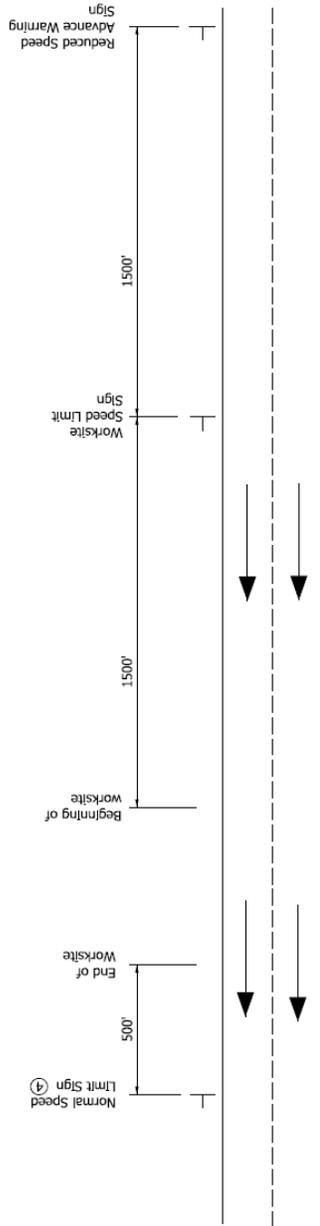


/s/ Richard L. VanCleave
 SUPERVISOR, ROADWAY STANDARDS
 DATE 09/04/12

/s/ Mark A. Miller
 CHIEF ENGINEER
 DATE 09/04/12

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

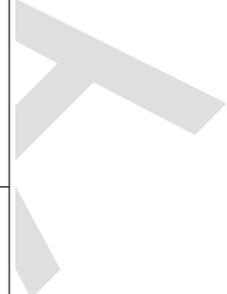
EXISTING 801-TCDV-12 WORKSITE SPEED LIMIT SIGN ASSEMBLY LONGITUDINAL PLACEMENT



NOTES:

1. Worksite speed limit sign assemblies shall be placed on both sides of the roadway only where all travel lanes approaching the construction site are open to traffic traveling in the same direction.
2. Worksite speed limit sign assemblies shall be placed 500 ft beyond each crossroad or the last entrance ramp for each interchange, at 2-mile intervals throughout the worksite, or adjacent to the existing normal speed limit signs.
3. See Standard Drawings E 801-TCDV-10 and -11 for additional notes on assembly requirements.
- ④ For a rural Interstate route application, a truck speed limit sign shall be used and placed immediately to the right of the normal speed limit sign.

INDIANA DEPARTMENT OF TRANSPORTATION	
WORKSITE SPEED LIMIT SIGN ASSEMBLY LONGITUDINAL PLACEMENT SEPTEMBER 2012	
STANDARD DRAWING NO. E 801-TCDV-12	
<i>/s/ Richard L. VanCleave</i> SUPERVISOR, ROADWAY STANDARDS	09/04/12 DATE
<i>/s/ Mark A. Miller</i> CHIEF ENGINEER	09/04/12 DATE



REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCDV-01 CHANNELIZING DEVICES (PROPOSED DRAFT)

GENERAL NOTES

1. Unless otherwise specified, channelizing devices shall be spaced as shown on Standard Drawing E 801-TCLG-01.
2. ReflectORIZED bands may be omitted from cones for lane closures during daylight hours.
3. For vertical panels equal to or greater than 3 ft in height, the width of the stripes shall be 6 in.
4. Vertical panels used on an expressway or a freeway shall have a minimum reflective panel area of 270 sq. in. Other roadways with a posted speed limit of 50 mph or greater shall have a minimum reflective panel area of 270 sq. in., also.
5. Cones shall have a minimum height of 2'-4" when used at night.
6. The maximum distance between the edges of adjacent reflective sheeting strips shall be 2 in.
7. All channelizing devices shall meet NCHRP 350 crash evaluation criteria.
8. It is not necessary to delineate a drop-off of 3 in. or less adjacent to active travel lanes. Where channelizing devices are used to delineate drop-offs of 3 in. or less adjacent to active travel lanes, at least 33 in. of the device shall be above the adjoining pavement surface. Where channelizing devices are used to delineate a drop-off greater than 3 in. adjacent to active travel lanes, at least 27 in. of the device shall be above the adjoining pavement surface and a Type C warning light shall be attached to the top of the device (on the pavement side). In no case shall more than 9 in. of the device be below the adjoining pavement surface.
9. The proper orientation in respect to approaching vehicular traffic shall be maintained on channelizing devices. Drums are the preferred channelizing device in a tight radius curve and at intersections.

INDEX

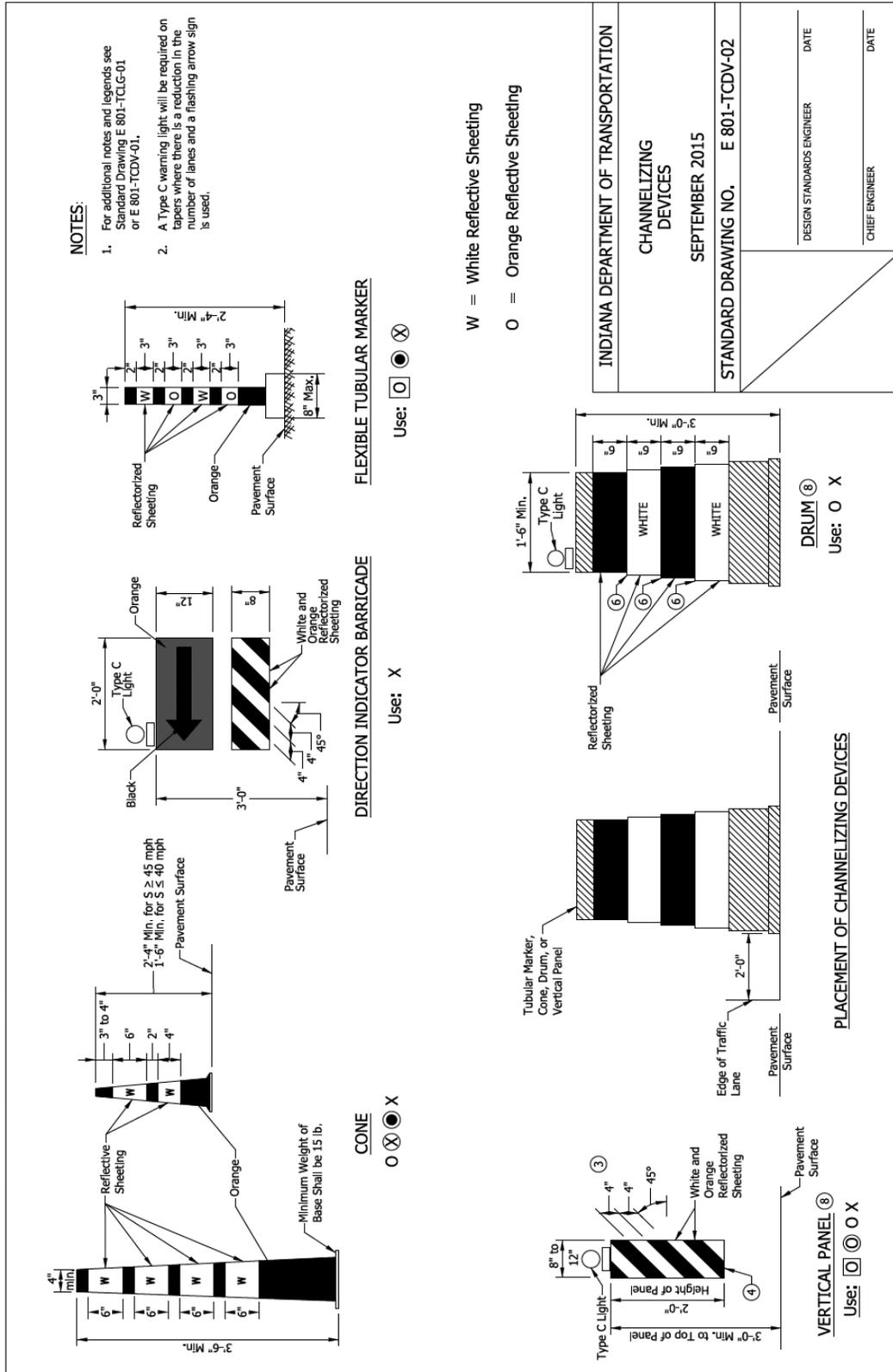
SHEET NO.	SUBJECT
1	Index
2	Channelizing Devices
3	Merging or Shifting Taper
4	Type III Barricade
5	Typical Construction Sign Mounting
6	Type III Barricade Application for Road Closure for Thru Traffic
7	Type III Barricade Application for Road Closure to All Traffic
8	U Channel Steel Post Splice Detail
9	Temporary Transverse Rumble Strip Installation
10	Worksite Speed Limit Sign Assembly for Intermittent Use
11	Worksite Speed Limit Sign Assembly for Continuous Use
12	Worksite Speed Limit Sign Assembly Longitudinal Placement

LEGEND

- - Device may be used in tangent set-ups.
- X - Device may be used in tangent set-ups.
- ⊗ - Devices may be used in two-way traffic set-ups to divide opposing lanes of traffic.
- ⦿ - Device may be used to divide two or more lanes of traffic in the same direction.
- ⊙ - Device may be used to replace barricades and drums where space is limited.
- ◻ - Device may be used to delineate edge of pavement drop-off where space is limited.

INDIANA DEPARTMENT OF TRANSPORTATION	
INDEX SHEET TRAFFIC CONTROL DEVICES SEPTEMBER 2015	
STANDARD DRAWING NO. E 801-TCDV-01	DATE
DESIGN STANDARDS ENGINEER	DATE
CHIEF ENGINEER	DATE

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCDV-02 CHANNELING DEVICES (PROPOSED DRAFT)



REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCDV-03 MERGING OR SHIFTING TAPER (PROPOSED DRAFT)

NOTE:
 1. The taper lengths used may be either of the values provided in the table, or the value calculated from the equation.

LEGEND
 L - Minimum length of taper in feet.
 S - Posted speed limit prior to the construction zone in mph.
 W - Width of lane or shift in feet.

INDIANA DEPARTMENT OF TRANSPORTATION
 MERGING OR SHIFTING TAPER
 SEPTEMBER 2015
 STANDARD DRAWING NO. E 801-TCDV-03

DESIGN STANDARDS ENGINEER _____ DATE _____
 CHIEF ENGINEER _____ DATE _____

SHIFTING TAPER

S	Min. Taper Length L/2			
	W = 9	W = 10	W = 11	W = 12
20	30	35	40	40
25	50	55	60	65
30	70	75	85	90
35	95	105	115	125
40	120	135	150	160
45	205	225	250	270
50	225	250	275	300
55	250	275	305	330
60	270	300	330	360
65	295	325	360	390
70	315	350	385	420

For W not shown in the table, L is one half that required for a merging taper.
 A shifting taper preceded by lane closure taper shall be separated by a tangent section equal to or greater than the length of the shifting taper.

MERGING TAPER

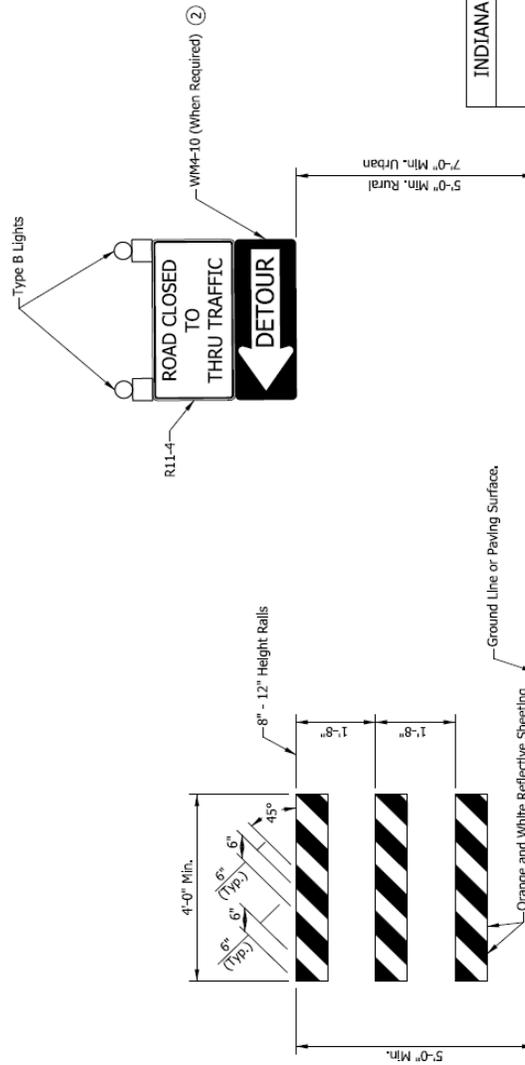
S	Min. Taper Length L/1			
	W = 9	W = 10	W = 11	W = 12
20	60	70	75	80
25	95	105	115	125
30	135	150	165	180
35	185	205	225	245
40	240	270	295	320
45	405	450	500	540
50	450	500	550	600
55	495	550	605	660
60	540	600	660	720
65	585	650	715	780
70	630	700	770	840

For W not shown in the table, L = W x S for a speed of 45 mph or greater.
 L = W x S²/60 for a speed of 40 mph or lower.

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCDV-04 TYPE III BARRICADE (PROPOSED DRAFT)

NOTES:

1. Barricade lights, signs, and supports shall meet NCHRP 350 crash evaluation criteria.
- ② The Detour Arrow sign shall be used only when a detour route has been signed.



TYPE III BARRICADE

INDIANA DEPARTMENT OF TRANSPORTATION

TYPE III BARRICADE

SEPTEMBER 2015

STANDARD DRAWING NO. E 801-TCDV-04

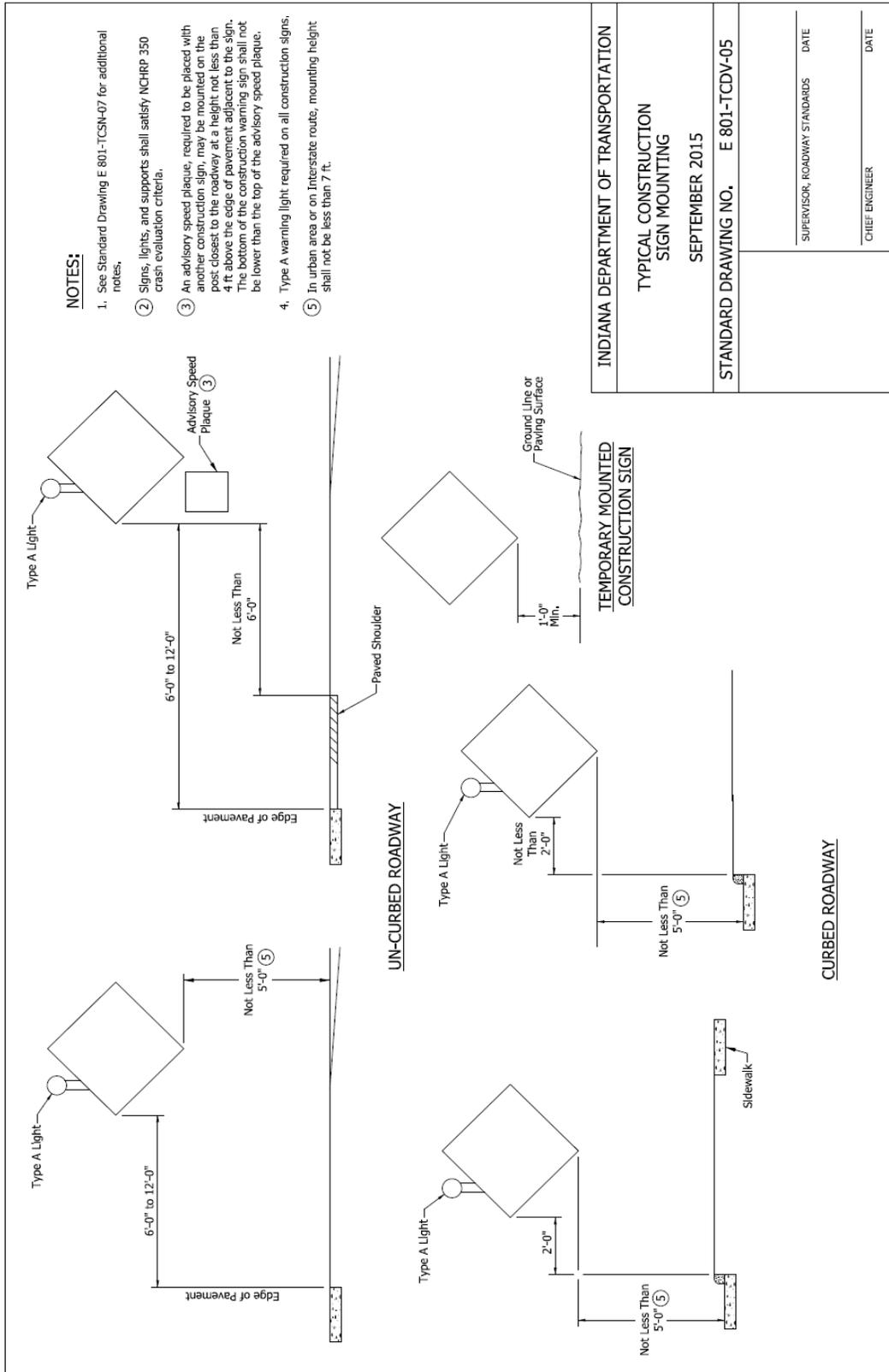
DESIGN STANDARDS ENGINEER

DATE

CHIEF ENGINEER

DATE

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCDV-05 TYPICAL CONSTRUCTION SIGN MOUNTING (PROPOSED DRAFT)

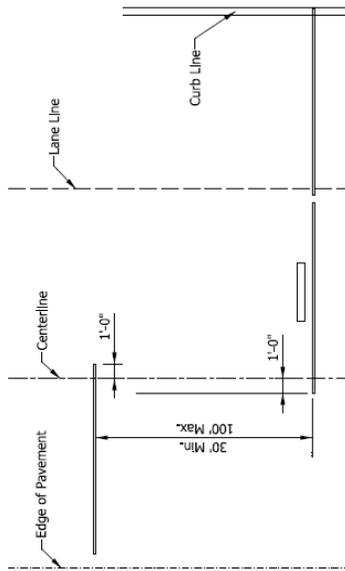


REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

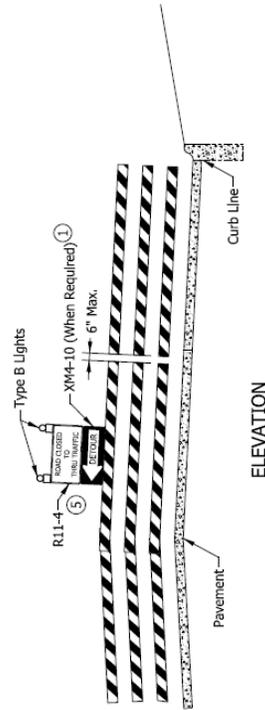
801-TCDV-06 TYPE III BARRICADE APPLICATION FOR ROADS CLOSED TO THRU TRAFFIC (PROPOSED DRAFT)

NOTES:

- 1 The Detour Arrow sign shall be used only when a detour route has been signed.
- 2 See Standard Drawing E 801-TCDV-04 for sign use and mounting information.
3. Barricades and supports shall meet NCHRP 350 crash evaluation criteria.
4. See Note 4 on Standard Drawing E 801-TCSN-07 for post depth.
- 5 The R11-4a ("ROAD CLOSED/LOCAL TRAFFIC ONLY") or R11-3b ("BRIDGE CLOSED/LOCAL TRAFFIC ONLY") sign may be substituted for the R11-4 signs as directed on the plans or by the engineer.



PLAN VIEW



ELEVATION

TYPICAL APPLICATIONS OF TYPE III BARRICADES
"ROAD CLOSED TO THRU TRAFFIC"

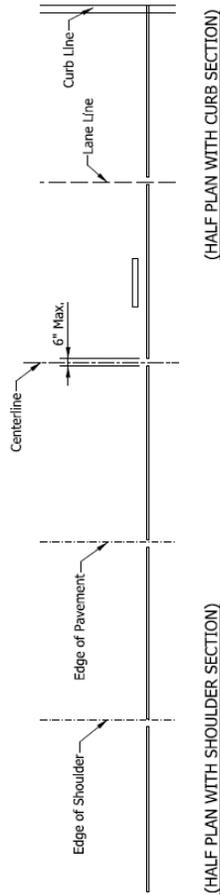
INDIANA DEPARTMENT OF TRANSPORTATION	
TYPE III BARRICADE APPLICATION FOR ROADS CLOSED TO THRU TRAFFIC	
SEPTEMBER 2015	
STANDARD DRAWING NO.	E 801-TCDV-06
DESIGN STANDARDS ENGINEER	DATE
CHIEF ENGINEER	DATE

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

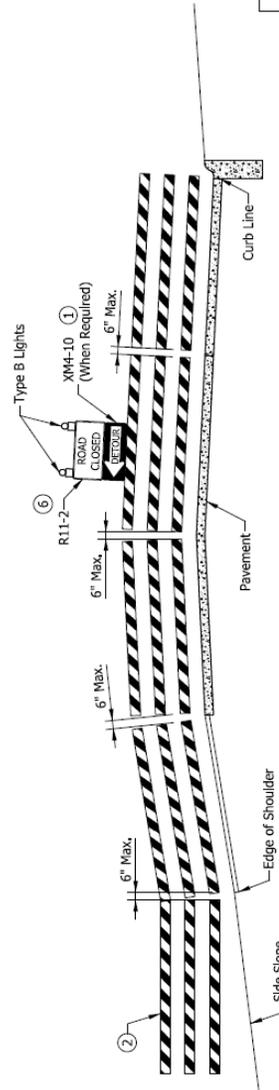
801-TCDV-07 TYPE III BARRICADES TYPICAL APPLICATIONS (PROPOSED DRAFT)

NOTES:

- ① The Detour Arrow sign shall be used only when a detour route has been signed.
- ② Barricades shall be supported on driven posts in areas outside of the pavement or sidewalk, where side slopes are 3 to 1 or flatter.
3. See Standard Drawing 801-TCDV-04 for sign use and mounting information.
4. Barricades and supports shall meet NCHRP 350 crash evaluation criteria.
5. See Note 5 on Standard Drawing 801-TCSN-07 for post depth.
- ⑥ The Legend of the R11-2 may be modified to "BRIDGE CLOSED" as indicated on the plans or directed by the engineer.



PLAN VIEW



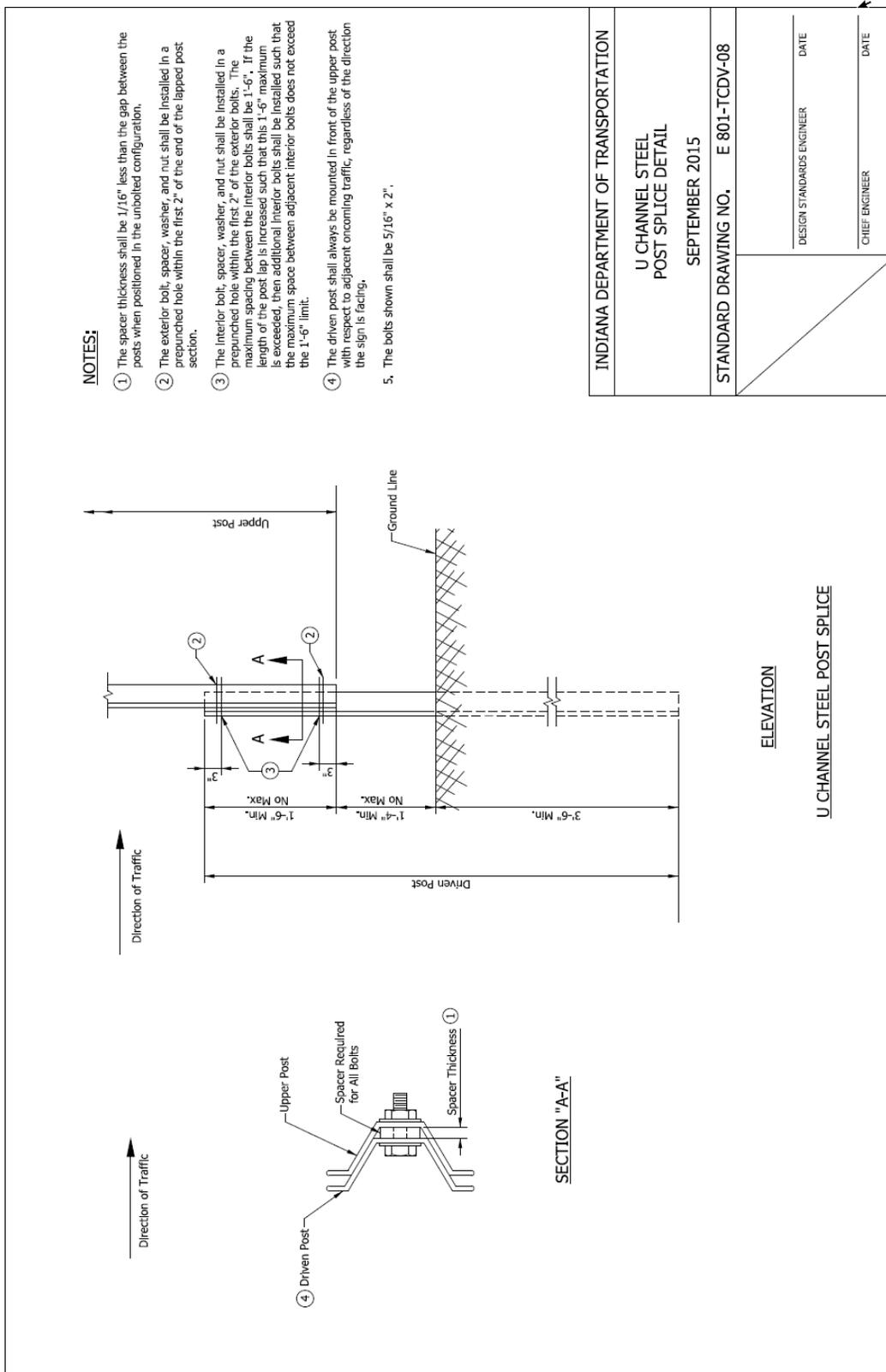
ELEVATION

TYPICAL APPLICATIONS OF TYPE III BARRICADES
ROAD CLOSED TO ALL TRAFFIC

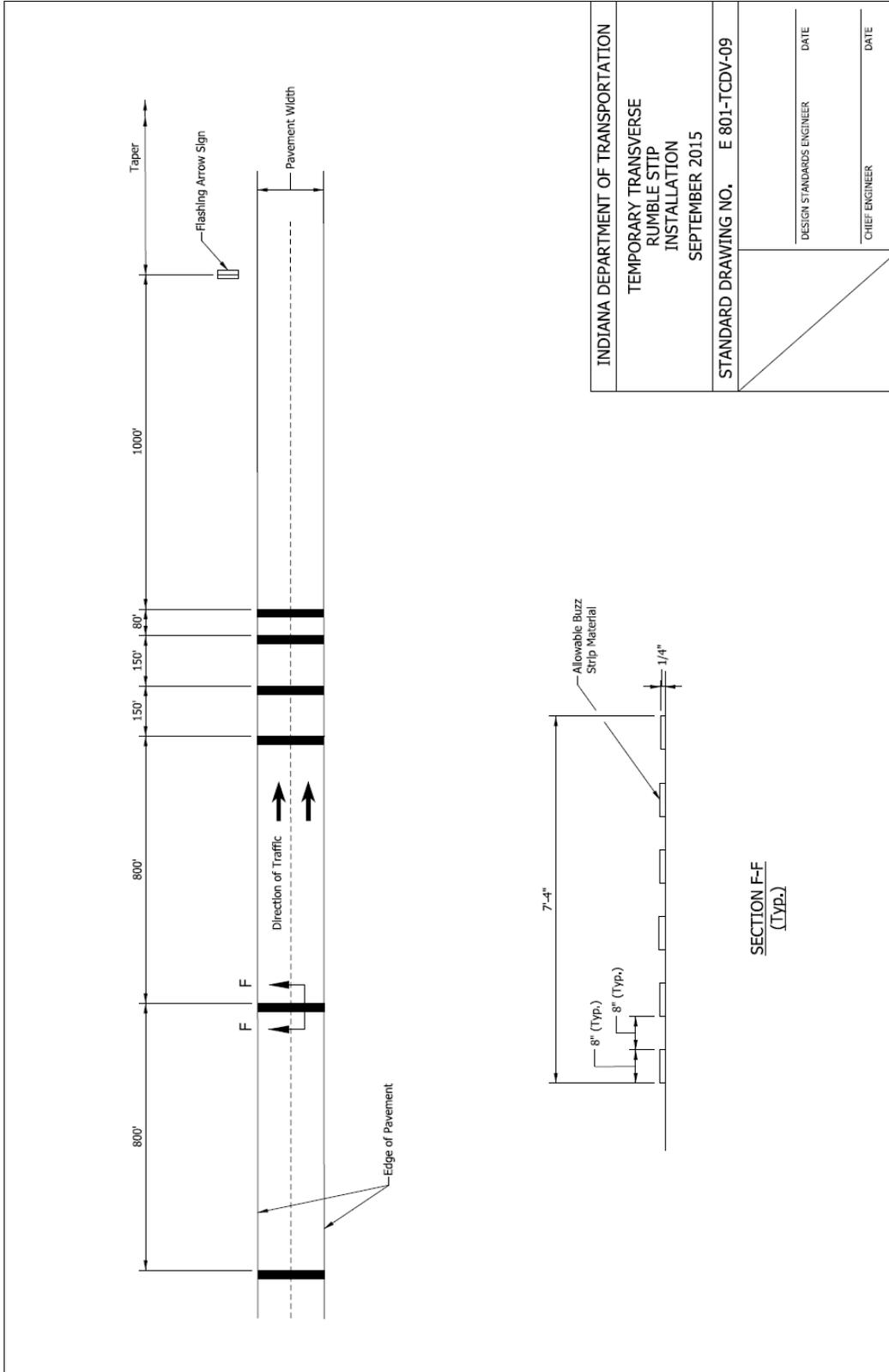
INDIANA DEPARTMENT OF TRANSPORTATION	
TYPE III BARRICADES TYPICAL APPLICATIONS	
SEPTEMBER 2015	
STANDARD DRAWING NO. E 801-TCDV-07	
DESIGN STANDARDS ENGINEER	DATE
CHIEF ENGINEER	DATE

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

801-TCDV-08 U CHANNEL STEEL POST SPLICE DETAIL (PROPOSED DRAFT)



REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCDV-09 TEMPORARY TRANSVERSE RUMBLE STRIP INSTALLATION (PROPOSED DRAFT)

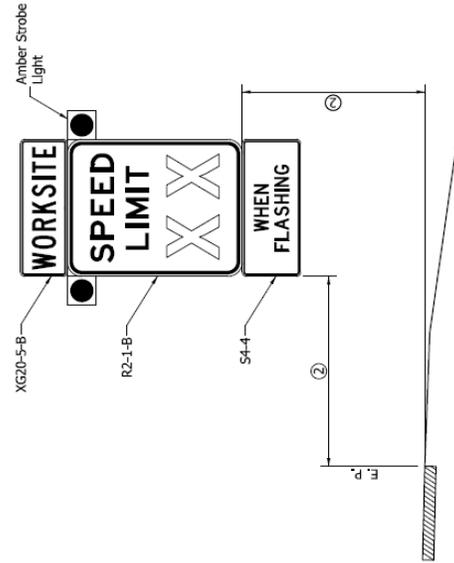


REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

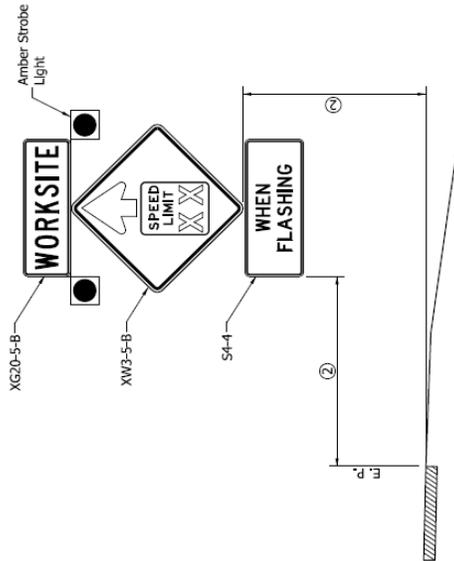
801-TCDV-10 WORKSITE SPEED LIMIT SIGN ASSEMBLY FOR INTERMITTENT USE
(PROPOSED DRAFT)

NOTES:

1. If not trailer mounted, signs and supports shall satisfy NCHRP 350 crash evaluation criteria.
2. See Standard Drawing 801-TCDV-05 for lateral and vertical placement.
3. Advance warning sign speed limit shall match that on worksite speed limit sign.
4. The worksite speed limit shall be at least 10 mph below the posted speed limit for the roadway under construction.
5. Sign series shown is for freeway or expressway application.



WORKSITE SPEED LIMIT SIGN ASSEMBLY



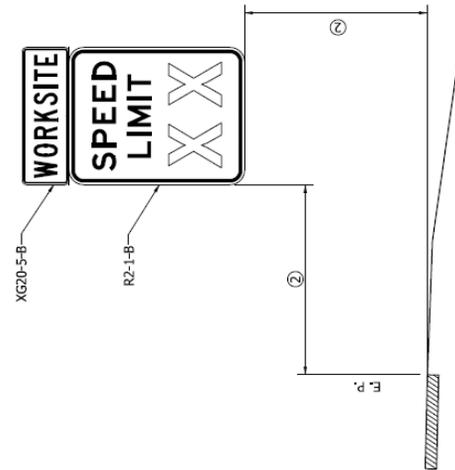
REDUCED SPEED ADVANCE WARNING SIGN ASSEMBLY

INDIANA DEPARTMENT OF TRANSPORTATION
WORKSITE SPEED LIMIT SIGN ASSEMBLY FOR INTERMITTENT USE (When Workers Present) SEPTEMBER 2015
STANDARD DRAWING NO. E 801-TCDV-10
SUPERVISOR, ROADWAY STANDARDS DATE
CHIEF ENGINEER DATE

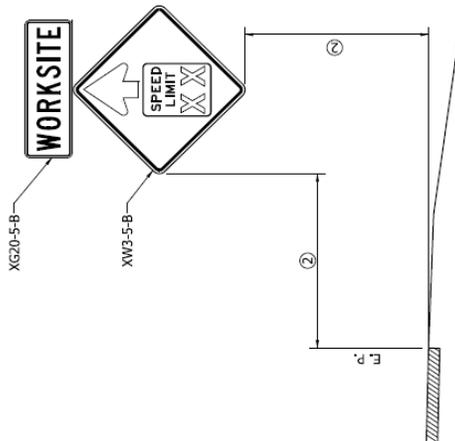
REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS
 801-TCDV-11 WORKSITE SPEED LIMIT SIGN ASSEMBLY (PROPOSED DRAFT)

NOTES:

1. If not trailer mounted, signs and supports shall satisfy NC-HRP 350 crash evaluation criteria.
- ② See Standard Drawing 801-TCDV-05 for lateral and vertical placement.
3. Advance warning sign speed limit shall match that on worksite speed limit sign.
4. The worksite speed limit shall be at least 10 mph below the posted speed limit for the roadway under construction.
5. Sign series shown is for freeway or expressway application.



WORKSITE SPEED LIMIT
SIGN ASSEMBLY

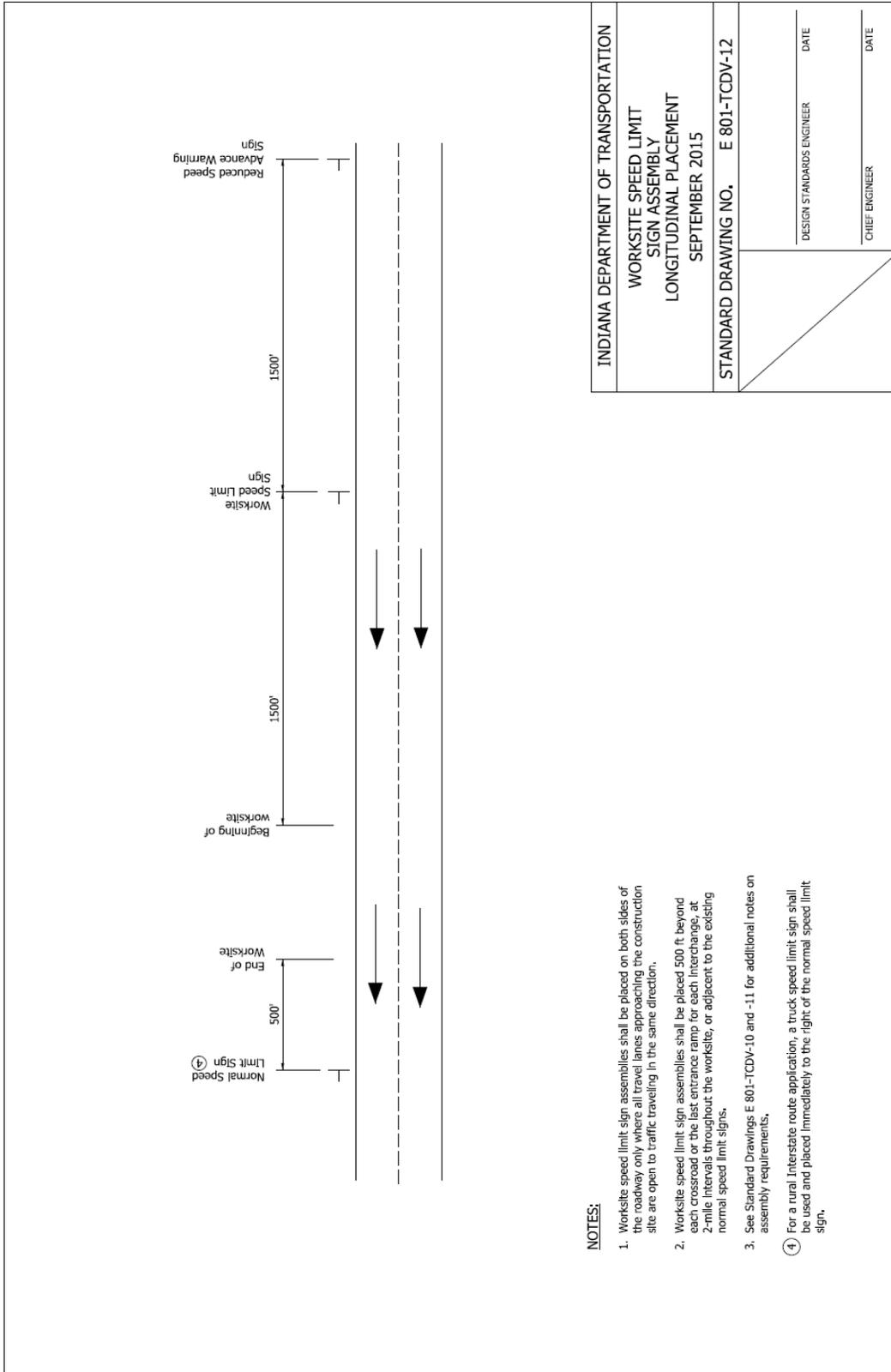


REDUCED SPEED ADVANCE
WARNING SIGN ASSEMBLY

INDIANA DEPARTMENT OF TRANSPORTATION	
WORKSITE SPEED LIMIT SIGN ASSEMBLY (For Continuous Use) SEPTEMBER 2015	
STANDARD DRAWING NO. E 801-TCDV-11	
DESIGN STANDARDS ENGINEER	DATE
CHIEF ENGINEER	DATE

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

801-TCDV-12 WORKSITE SPEED LIMIT SIGN ASSEMBLY LONGITUDINAL PLACEMENT
(PROPOSED DRAFT)



NOTES:

1. Worksite speed limit sign assemblies shall be placed on both sides of the roadway only where all travel lanes approaching the construction site are open to traffic traveling in the same direction.
2. Worksite speed limit sign assemblies shall be placed 500 ft beyond each crossroad or the last entrance ramp for each interchange, at 2-mile intervals throughout the worksite, or adjacent to the existing normal speed limit signs.
3. See Standard Drawings E 801-TCDV-10 and -11 for additional notes on assembly requirements.
- ④ For a rural Interstate route application, a truck speed limit sign shall be used and placed immediately to the right of the normal speed limit sign.

INDIANA DEPARTMENT OF TRANSPORTATION	
WORKSITE SPEED LIMIT SIGN ASSEMBLY LONGITUDINAL PLACEMENT SEPTEMBER 2015	
STANDARD DRAWING NO. E 801-TCDV-12	
DESIGN STANDARDS ENGINEER	DATE
CHIEF ENGINEER	DATE

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

801-TCLG-01 TRAFFIC CONTROL LEGEND AND GENERAL NOTES (WITH MARKUPS)

GENERAL NOTES

- ① Distances shown are typical except minimum distances may be varied based on field conditions.
2. The spacing of channelizing devices on tangents shall be as follows:
 - a. Where the posted speed limit is 50 m.p.h. or greater, the spacing shall be 100 ft.
 - b. Where the posted speed limit is less than or equal to 45 m.p.h., the spacing shall be 50 ft.
3. The spacing of channelizing devices on tapers shall be numerically equal in feet to the posted speed limit in mph.
4. The flashing arrow sign shall not be placed on a sidewalk. The flashing arrow sign shall be placed at a distance of L/3 from the beginning of the taper.
5. For temporary lane closures during daylight hours, cones or tubular markers may be used in lieu of drums.
6. Temporary pavement markings will not be required for temporary daylight lane closures.
7. ~~Minimum pavement section for 1000 trucks per day or less shall consist of 165 #/syd of HMA Surface, on 330 #/syd of HMA Intermediate, on 935 #/syd of HMA-Base, on 8 in subgrade treatment. If the truck count for the crossover is greater than 1000 trucks per day, the required pavement section will be provided elsewhere in the plans.~~

8. Temporary highway illumination, when specified, shall be as detailed elsewhere in the plans.
9. Once the crossovers have been removed, this line shall be restriped yellow, if the pavement is to again be used for one-way traffic.
10. For Temporary Crossover Type B, this line shall be removed when the traffic pattern is switched.
11. The advisory speed plate will not be required when the existing posted speed limit is less than 55 mph.
12. Spacing of channelizing devices at this location shall be 20 ft.
13. The "Two-Way Traffic" (XW6-3B) and "Do Not Pass" (R4-1-B) signs shall alternate every 2840 ft throughout the two-lane two-way operation.

LEGEND

● □	Flagger	—	Temporary Pavement Marking
▨	Work area	-*-	Removal of pavement markings and prismatic reflectors
⇐	Flashing arrow sign	⌈	Typical Sign Standard (Road Closure Sign Assembly)
●	Channelizing device	—	Type III-A or Type III-B Barricades as required
□ P	Police car (optional)	⇄	Double Headed Flashing Arrow Sign
⊥	Construction sign and supports	→	Direction of Traffic
	W =		Width of offset

SURFACE AREA OF ONE TYPE A TEMPORARY CROSSOVER SYS	
MEDIAN WIDTH, ft	TYPE A
60	1208
50	1041
40	880
36	814
30	713
26	648

INDIANA DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL
LEGEND AND GENERAL NOTES**

MARCH 2008

STANDARD DRAWING NO. E 801-TCLG-01

L. VINCIGUERRA
REGISTERED PROFESSIONAL ENGINEER
NO. 9750
STATE OF INDIANA

Richard L. Vinciguerra 3-09-08
DESIGN STANDARD ENGINEER DATE

Richard K. Smutzer 3-09-08
CHIEF HIGHWAY ENGINEER DATE

REVISION TO STANDARD DRAWINGS AND RECURRING PLAN DETAILS

801-TCLG-01 TRAFFIC CONTROL LEGEND AND GENERAL NOTES (PROPOSED DRAFT)

GENERAL NOTES

- 1 Distances shown are typical except minimum distances may be varied based on field conditions.
- 2 The spacing of channelizing devices shall be 100 ft. where the posted speed limit is 50 m.p.h., or greater.
- 3 The spacing of channelizing devices shall be 50 ft where the posted speed limit is less than or equal to 45 m.p.h.
- 4 The spacing of channelizing devices on tapers shall be numerically equal in feet to the posted speed limit in m.p.h.
- 5 The flashing arrow sign shall not be placed on a sidewalk. The flashing arrow sign shall be placed at a distance of L/3 from the beginning of the taper, where L is the merge taper, see Standard Drawing 801-TCM-03.
- 6 For temporary lane closures during daylight hours, cones or tubular markers may be used in lieu of drums.
- 7 Temporary pavement markings will not be required for temporary daylight lane closures.
- 8 Temporary highway illumination, when specified, shall be as detailed elsewhere in the plans.

SURFACE AREA OF ONE TYPE A TEMPORARY CROSSOVER SYS	
MEDIAN WIDTH, ft	TYPE A
60	1208
50	1041
40	880
36	814
30	713
26	648

- 9 Once the crossovers have been removed, this line shall be restriped yellow, if the pavement is to again be used for one-way traffic.
- 10 For Temporary Crossover Type B, this line shall be removed when the traffic pattern is switched.
- 11 The advisory speed plate will not be required when the existing posted speed limit is less than 55 mph.
- 12 Spacing of channelizing devices at this location shall be 20 ft.
- 13 The "Two-Way Traffic" (XW6-3B) and "Do Not Pass" (R4-1-B) signs shall alternate every 2640 ft. throughout the two-lane two-way operation.
- 14 For a bridge contract, this distance may be adjusted by the Engineer as required. However, it shall be as close to the minimum as possible.
- 15 Once the crossovers have been removed, this line shall be restriped broken white, if the pavement is to again be used for one way traffic.

LEGEND

- Flagger
- ▨ Work area
- Flashing arrow sign
- Channelizing device
- Police car (optional)
- ┆┆ Construction sign and supports
- W = Width of offset
- Temporary Pavement Marking
- Removal of pavement markings and prismatic reflectors
- ▭ Typical Sign Standard (Road Closure Sign Assembly)
- Type III-A or Type III-B Barricades as required
- Double Headed Flashing Arrow Sign
- ↑ Direction of Traffic
- ⊗ Low intensity construction warning light, Type A

INDIANA DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL
LEGEND AND GENERAL NOTES

SEPTEMBER 2015

STANDARD DRAWING NO. E 801-TCLG-01

DESIGN STANDARDS ENGINEER

DATE

CHIEF ENGINEER

DATE

COMMENTS AND ACTION

801-TCDV-01 THRU 12
 801-TCLG-01
 801-TCSN-01 THRU 15
 RPD 801-R-542d
 RPD 801-R-543d
 RPD 801-R-544d
 RPD 801-T-203d

DISCUSSION:

Motion: Second: Ayes: Nays: FHWA Approval:	Action: _____ Passed as Submitted _____ Passed as Revised _____ Withdrawn
Standard Specifications Sections referenced and/or affected: SECTION 801 AND 923	_____ 2016 Standard Specifications _____ Revise Pay Items List
Recurring Special Provision affected: NONE	_____ Create RSP (No. _____) Effective _____ Letting RSP Sunset Date:
Standard Drawing affected: SEE PROPOSAL	_____ Revise RSP (No. _____) Effective _____ Letting RSP Sunset Date:
Design Manual Sections affected: NONE	_____ Standard Drawing Effective
GIFE Sections cross-references: NONE	_____ Create RPD (No. _____) Effective _____ Letting _____ GIFE Update

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS
REVISION TO SPECIAL PROVISIONS

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Currently, the Unique Special Provision for Inspection Holes exists on the INDOT USP examples website. This Word document is subject to revision for specific projects and has resulted in various inconsistencies in utilizing this USP. These inconsistencies may result in more holes being dug than are necessary, increasing project costs.

PROPOSED SOLUTION: Revise the USP for use on any project where inspection holes are deemed necessary and make it a Recurring Special Provision to assist Districts and designers in reducing inconsistencies and confusion when requiring inspection holes to verify utility locations.

APPLICABLE STANDARD SPECIFICATIONS: 105, 107

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: N/A

PAY ITEMS AFFECTED: Current Unique Pay Items for Inspection Holes.

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Adhoc

IMPACT ANALYSIS (attach report): Yes

Submitted By: Rob Goldner

Title: Construction Technical Support Manager

Organization: Indiana Department of Transportation

Phone Number: 317-232-7758

Date: April 28, 2015

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS
REVISION TO SPECIAL PROVISIONS

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? No

Will approval of this item affect the Approved Materials List? No

Will this proposal improve:

Construction costs? Yes

Construction time? Possibly

Customer satisfaction? Possibly

Congestion/travel time? N/A

Ride quality? N/A

Will this proposal reduce operational costs or maintenance effort? N/A

Will this item improve safety:

For motorists? N/A

For construction workers? N/A

Will this proposal improve quality for:

Construction procedures/processes? Yes

Asset preservation? Yes

Design process? Possible

Will this change provide the contractor more flexibility? N/A

Will this proposal provide clarification for the Contractor and field personnel? Yes

Can this item improve/reduce the number of potential change orders? Yes

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

Is this item editorial? No

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda: To reduce confusion and unnecessary inspection holes and improve Department involvement in the process for potholing to verify utility locations and depths.

REVISION TO SPECIAL PROVISIONS

PROPOSED NEW 107-X-XXX INSPECTION HOLE

107-X-XXX INSPECTION HOLE

(Adopted xx-xx-15)

Description

This work shall consist of digging inspection holes prior to earth-disturbing activities, in accordance with 105.03, to verify the exact location of underground utilities that are in close proximity to the proposed construction.

Materials

Materials, tools, equipment, labor and incidentals shall be provided as required.

Construction Requirements

Utility locates and coordination shall be in accordance with 105.06 and 107.20.

Once utility locates are marked in the field, inspection holes shall be dug every 25 ft, or as directed, along the marked locates where the utility is within 2 ft of the proposed construction. The inspection holes shall be dug to a depth to either the underground utility or to a depth 1 ft below the proposed construction elevation, whichever is shallower. The inspection hole shall be as large as necessary to search for the marked underground utility within 2 ft horizontally of each side of the marked locate. If the utility is found, as directed, outside the 2 ft horizontal distance from the locate mark, then it shall be considered as an additional inspection hole.

The results of inspection holes shall be plotted on the plan sheets and provided in .pdf format to the Engineer within seven days of completing the inspection holes. The information on the plans shall include the utility found, size and material of the utility, station, offset and elevation of the top of the utility. If a utility is not found for a particular inspection hole, then the information shall include the station, offset, elevation and diameter of the inspection hole.

Once the Contractor no longer requires the inspection hole to remain open, it shall be backfilled and compacted with B borrow in accordance with 211. If the inspection hole is to remain open beyond the day that it was dug, it shall be marked and protected to provide warning that the hole exists.

Method of Measurement

Inspection holes for underground utility verification will be measured per each.

Basis of Payment

Inspection holes for underground utility verification will be paid for at the contract unit price per each.

REVISION TO SPECIAL PROVISIONS

PROPOSED NEW 107-X-XXX INSPECTION HOLE

Payment will be made under:

Pay Item	Pay Unit Symbol
Inspection Hole, 3 ft Deep or Less	EACH
Inspection Hole, Deeper Than 3 ft	EACH

The cost of digging, backfilling, B borrow, measuring, preparing and submitting results, coordination, and all necessary incidentals shall be included in the cost of inspection holes.

AGGENDATA

COMMENTS AND ACTION

107-X-XXX INSPECTION HOLE

DISCUSSION:

<p>Motion: Second: Ayes: Nays: FHWA Approval:</p>	<p>Action: <input type="checkbox"/> Passed as Submitted <input type="checkbox"/> Passed as Revised <input type="checkbox"/> Withdrawn</p>
<p>Standard Specifications Sections referenced and/or affected: 105 AND 107</p>	<p><input type="checkbox"/> 2016 Standard Specifications <input type="checkbox"/> Revise Pay Items List</p>
<p>Recurring Special Provision affected: PROPOSED NEW</p>	<p><input type="checkbox"/> Create RSP (No._____) Effective ____ Letting RSP Sunset Date:</p>
<p>Standard Drawing affected: NONE</p>	<p><input type="checkbox"/> Revise RSP (No._____) Effective ____ Letting RSP Sunset Date:</p>
<p>Design Manual Sections affected: NONE</p>	<p><input type="checkbox"/> Standard Drawing Effective</p>
<p>GIFE Sections cross-references: NONE</p>	<p><input type="checkbox"/> Create RPD (No._____) Effective ____ Letting <input type="checkbox"/> GIFE Update</p>

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS
REVISION TO SPECIAL PROVISIONS

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: RSP 211-R-415 was developed in 2002 and was added to the Menu and Basis for Use in 2005 with: "As determined necessary by the Office of Material Management." The intent of issuing this RSP was as a marketing tool to demonstrate that INDOT recognizes crushed glass as a bedding material for pipe and that it is an acceptable reuse application of a waste material. Current practices have shown that the use of crushed glass as bedding material on INDOT contracts is very low.

PROPOSED SOLUTION: To discontinue use of this RSP but to make it available on the INDOT web site as a unique provision. If so, a revision will be needed to clarify the unit of measurement and pay item that will be used for this material.

APPLICABLE STANDARD SPECIFICATIONS: 211

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: 211-R-415

PAY ITEMS AFFECTED: N/A

IMPACT ANALYSIS (attach report): N/A

Submitted By: Rob Goldner

Title: Construction Technical Support Manager

Organization: INDOT, Construction Management

Phone Number: 317-232-7758

Date: April 27, 2015

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad-hoc

REVISION TO SPECIAL PROVISIONS

211-R-415 CRUSHED GLASS AS BEDDING MATERIAL

211-R-415 CRUSHED GLASS AS BEDDING MATERIAL

(Adopted 09-01-05)

Description

This work shall consist of using 100% crushed glass as bedding material beneath pipes and storm sewers in accordance with 105.03. Adherence to the provisions herein does not preclude applicability of local, State, or Federal regulations and laws.

Materials

The source shall be recycled glass beverage and food containers that have been processed by equipment specifically designed to crush glass into aggregate. The resultant material shall be relatively free of bottle caps, labeling paper, clay balls, and other unsuitable materials. The crushed glass shall be in accordance with the following gradations.

Sieve	% Fines
1/2 in. (12.5 mm)	85 - 100
#4 (4.76 mm)	45 - 85
#10 (2 mm)	25 - 70
#40 (0.425 mm)	10 - 30
#200 (0.075 mm)	0 - 10

Crushed glass shall be Type III or Type IV per IDEM's restricted waste typing criteria.

The source shall be approved by the Department's Environmental Services Section. Sampling in accordance with AASHTO T 2, sieve analyses in accordance with AASHTO T 11 & 27, and standard proctor test in accordance with AASHTO T 99 shall be performed by a Department approved laboratory and test results submitted to the Department's Office of Materials Management for approval at least 3 days prior to use.

Method of Construction

Construction shall be in accordance with 200 and 700.

Method of Measurement

The method of measurement will be in accordance with 211.

Basis of Payment

Payment will be in accordance with 211.

COMMENTS AND ACTION

211-R-415 CRUSHED GLASS AS BEDDING MATERIAL

DISCUSSION:

<p>Motion: Second: Ayes: Nays: FHWA Approval:</p>	<p>Action: <input type="checkbox"/> Passed as Submitted <input type="checkbox"/> Passed as Revised <input type="checkbox"/> Withdrawn</p>
<p>Standard Specifications Sections referenced and/or affected: NONE Recurring Special Provision affected: 211-R-415 CRUSHED GLASS AS BEDDING MATERIAL Standard Drawing affected: NONE Design Manual Sections affected: NONE GIFE Sections cross-references: NONE</p>	<p><input type="checkbox"/> 2016 Standard Specifications <input type="checkbox"/> Revise Pay Items List <input type="checkbox"/> Create RSP (No. _____) Effective _____ Letting RSP Sunset Date: <input type="checkbox"/> Revise RSP (No. _____) Effective _____ Letting RSP Sunset Date: <input type="checkbox"/> Standard Drawing Effective <input type="checkbox"/> Create RPD (No. _____) Effective _____ Letting <input type="checkbox"/> GIFE Update</p>