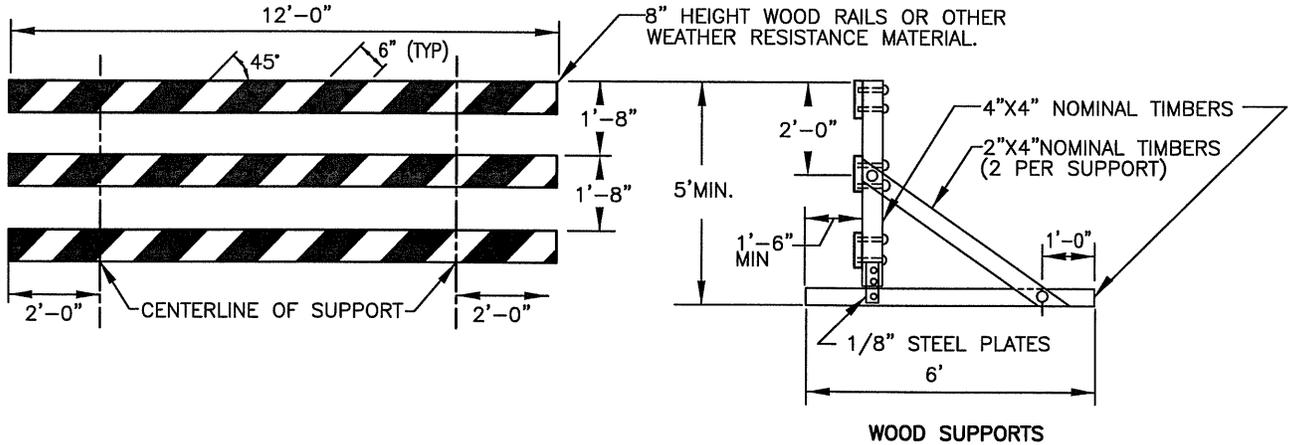
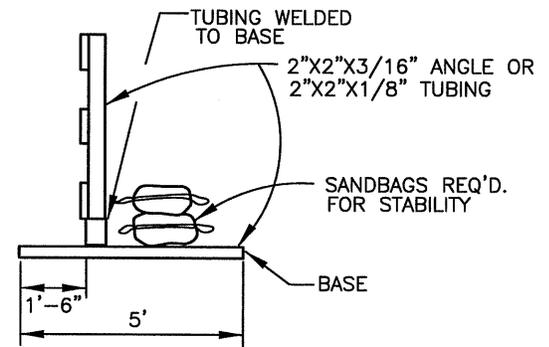


NOTE:
USE TYPE 'B' HIGH INTENSITY FLASHING
YELLOW LIGHTS AS REQ'D.

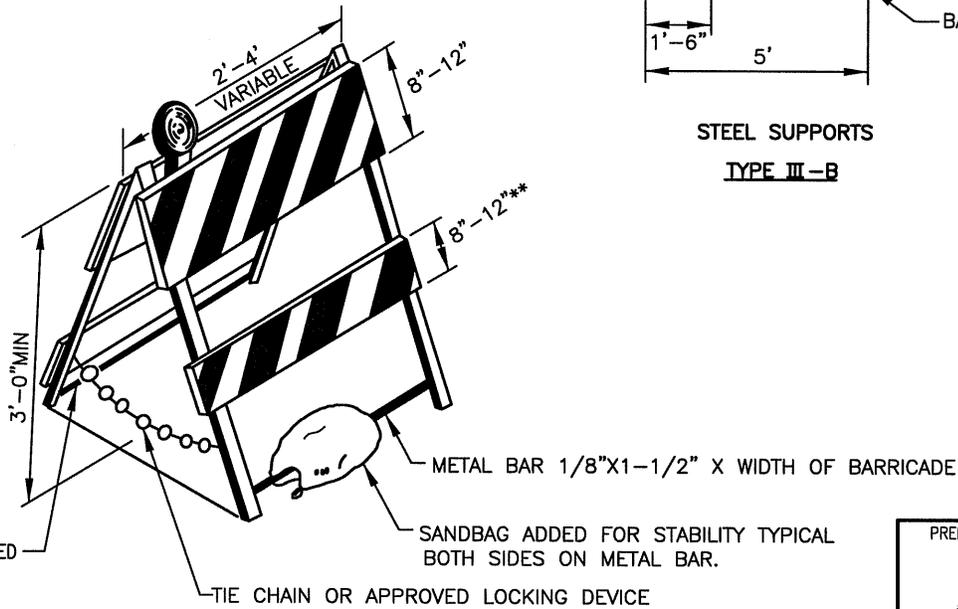


TYPE III-B

NOTE:
STRIPES SHALL ALTERNATING ORANGE AND WHITE RETROREFLECTIVE STRIPES
SLOPING DOWNWARD AT A 45 DEGREE ANGLE TOWARDS THAT SIDE OF THE
BARRICADE ON WHICH THE APPROACHING VEHICLE MUST PASS. (STRIPES AS
SHOWN INDICATE VEHICLE MUST PASS TO LEFT OF BARRICADE.)



**STEEL SUPPORTS
TYPE III-B**



METAL BAR (OR APPROVED
EQUAL) 1/8"X1-1/2"X
WIDTH OF BARRICADE

METAL BAR 1/8"X1-1/2" X WIDTH OF BARRICADE

SANDBAG ADDED FOR STABILITY TYPICAL
BOTH SIDES ON METAL BAR.

TIE CHAIN OR APPROVED LOCKING DEVICE

TYPE II

** BARRICADE TYPE II WITH A NON-STANDARD BOTTOM
RAIL MAY BE CONSIDERED AS A BARRICADE TYPE I

PREPARED BY: DLZ INDIANA, LLC



Brian K. Arterberry
4/23/07

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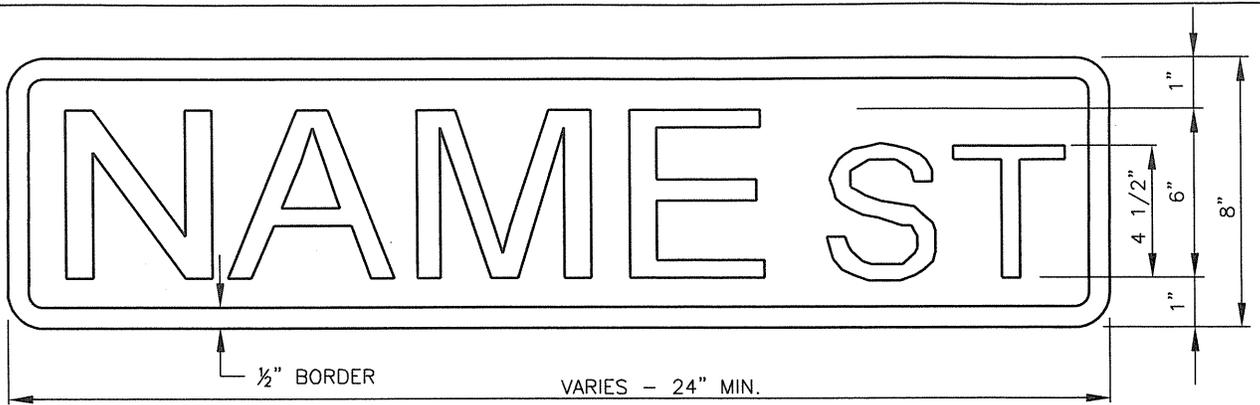
ENGINEERING STANDARDS

STANDARD BARRICADES

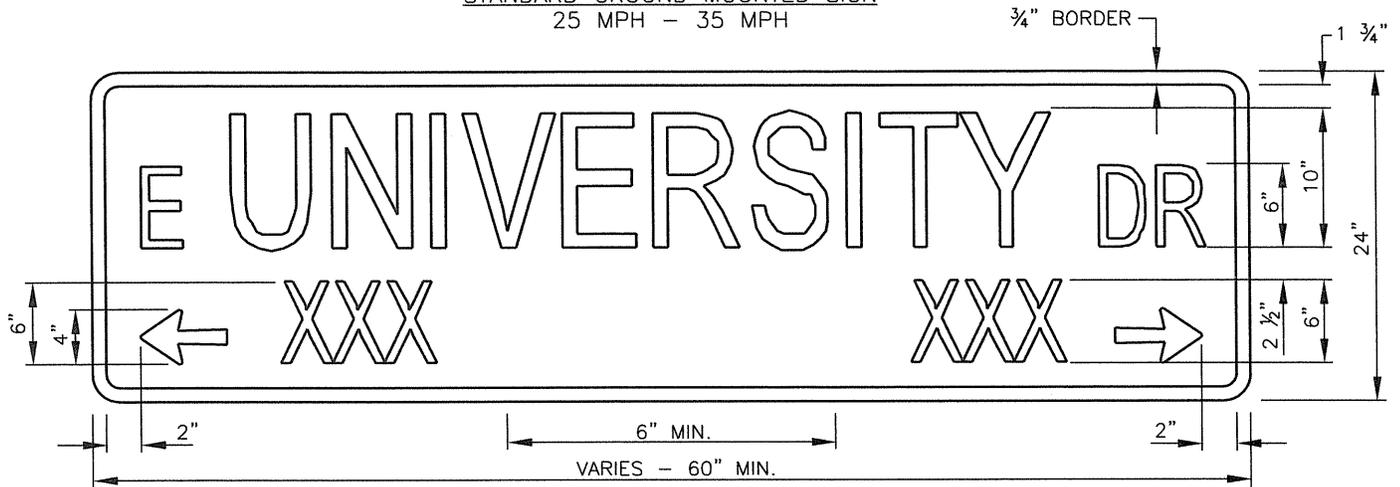
SHT. NO.

VIII-1

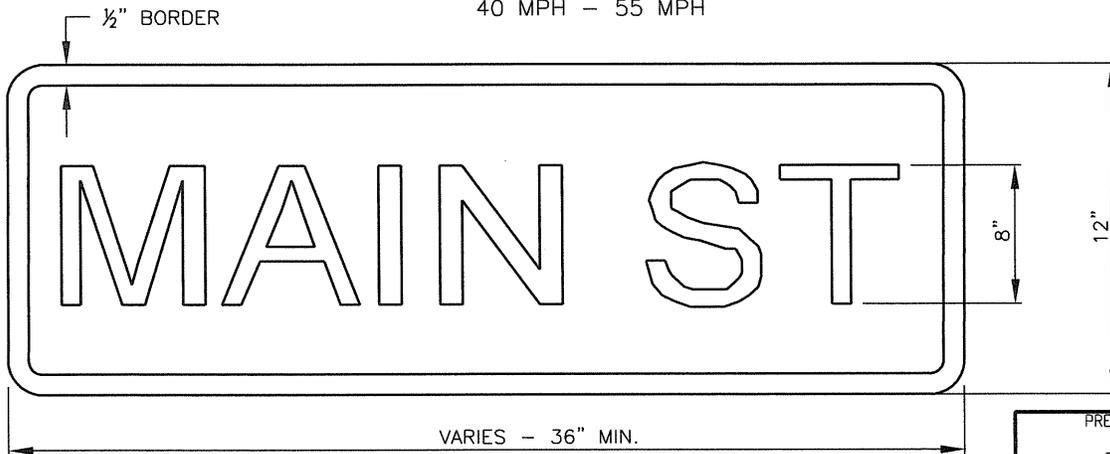
ITEM	REVISION	APPROVED DATE



STANDARD GROUND MOUNTED SIGN
25 MPH - 35 MPH



MAST ARM OR SPAN & CATENARY MOUNTED SIGN
40 MPH - 55 MPH

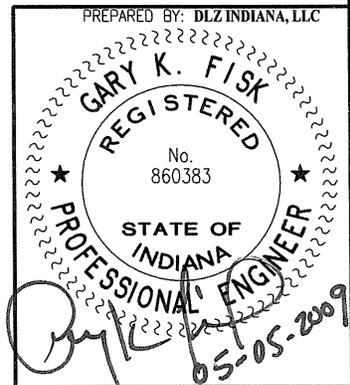


ALTERNATE* MAST ARM OR SPAN & CATENARY MOUNTED SIGN
30 MPH - 45 MPH

*USE REQUIRES APPROVAL BY CITY ENGINEER

MATERIALS:

- SHEETING: PRISMATIC SHEETING TYPE VI OR GREATER
- LETTERS = WHITE
- BACKGROUND = GREEN
- BORDER = WHITE
- BLANK: ALUMINUM, MIN. 0.125-IN THICK WITH ROUNDED CORNERS
- LETTERING: FHWA SERIES 'C' FONT



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ITEM	REVISION	APPROVED DATE
▲	MATERIALS LIST, GRND SIGN LETTER HT., ADDED SPD LMTS	5-05-09

ENGINEERING STANDARDS

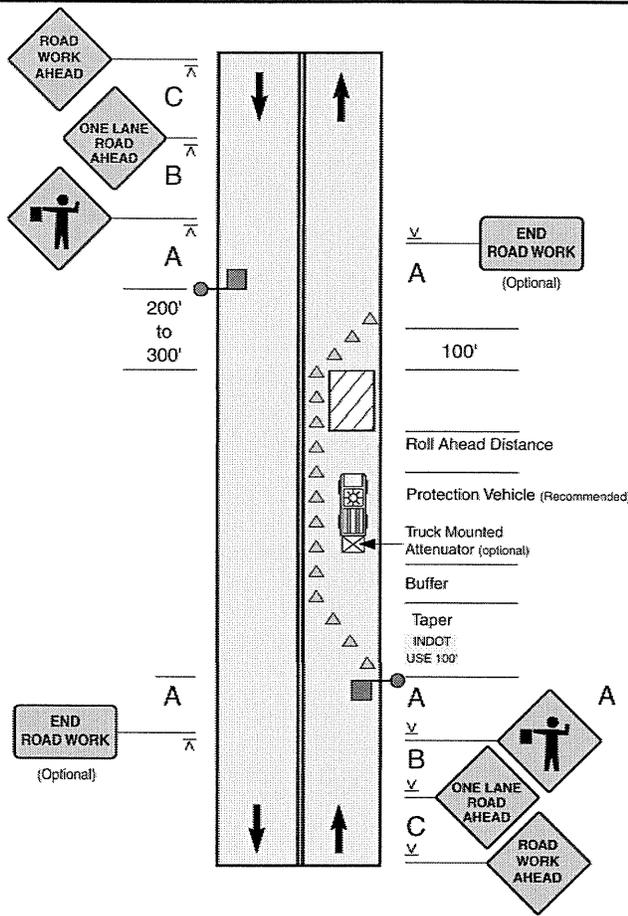
STREET NAME SIGNS

SHT. NO.

VIII-2

LANE CLOSURE ON A TWO-LANE ROAD (TWO FLAGGER OPERATION)

SHORT TERM STATIONARY – 1 TO 12 HOURS



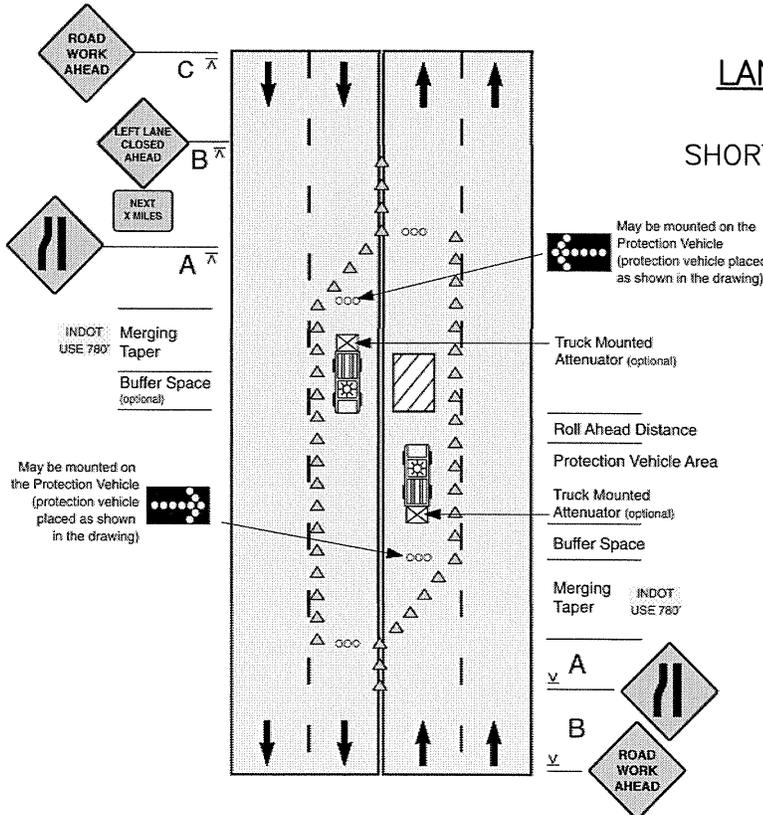
NOTES:

1. THE FLAGGER OR FLAGGERS SHALL USE APPROVED FLAGGING PROCEDURES ACCORDING TO THE MUTCD. IF THERE IS A SIDEROAD INTERSECTION WITHIN THE
2. WORK AREA, ADDITIONAL TRAFFIC CONTROL, SUCH AS FLAGGERS AND APPROPRIATE SIGNAGE, MAY BE NEEDED ON THE SIDEROAD APPROACHES.

Speed Limit (mph)	Sign Spacing A (ft)	Sign Spacing B (ft)	Sign Spacing C (ft)	Buffer
25	200	200	200	55
30	200	200	200	85
35	350	350	350	120
40	350	350	350	170
45	500	500	500	220
50	500	500	500	280
55	500	500	500	335

LANE CLOSURE ON A FOUR-LANE ROAD UNDIVIDED ROAD

SHORT TERM STATIONARY – 1 TO 12 HOURS



TAPER LENGTH FORMULA:

SPEED LIMIT	TAPER LENGTH (FT)
40 MPH OR LESS	$L = (WS^2) / 60$
45 MPH OR MORE	$L = WS$

WHERE: L=TAPER LENGTH (FT.)
W=WIDTH OF OFFSET (FT.)
S=POSTED SPEED LIMIT OR ANTICIPATED OPERATING SPEED (MPH)

NOTE:
MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT

PREPARED BY: DLZ INDIANA, LLC



Brian K. Arterberry
4/23/07

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CITY OF MISHAWAKA, INDIANA

ENGINEERING STANDARDS

MAINTENANCE OF TRAFFIC

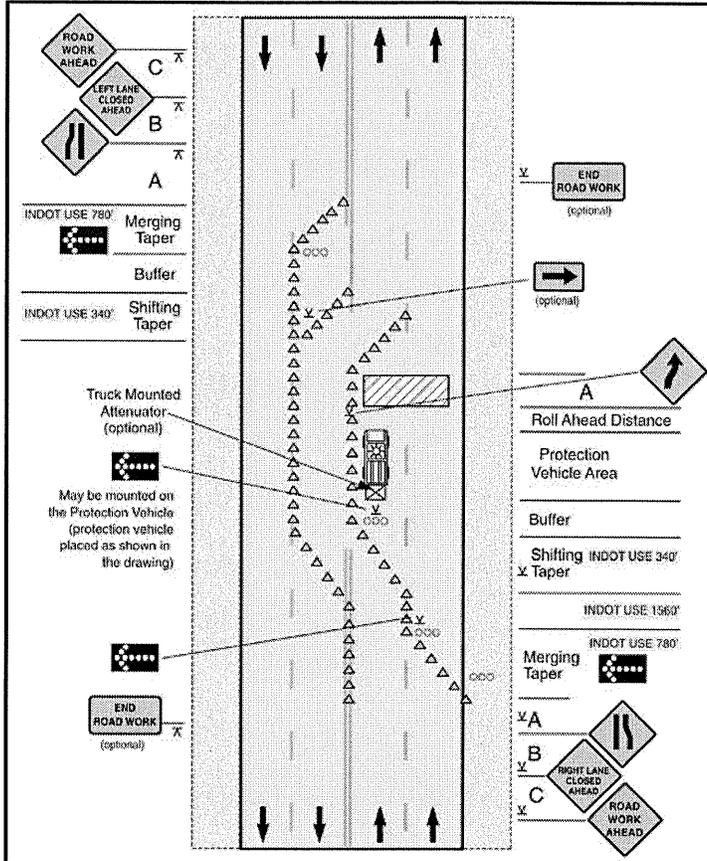
SHT. NO.

VIII-3

ITEM	REVISION	APPROVED DATE

HALF ROAD CLOSURE ON MULTILANE ROADWAY

SHORT TERM STATIONARY – 1 TO 12 HOURS



Speed Limit (mph)	Sign Spacing A (ft)	Sign Spacing B (ft)	Sign Spacing C (ft)	Buffer
25	200	200	200	55
30	200	200	200	85
35	350	350	350	120
40	350	350	350	170
45	500	500	500	220
50	500	500	500	280
55	500	500	500	335

TAPER LENGTH FORMULA:

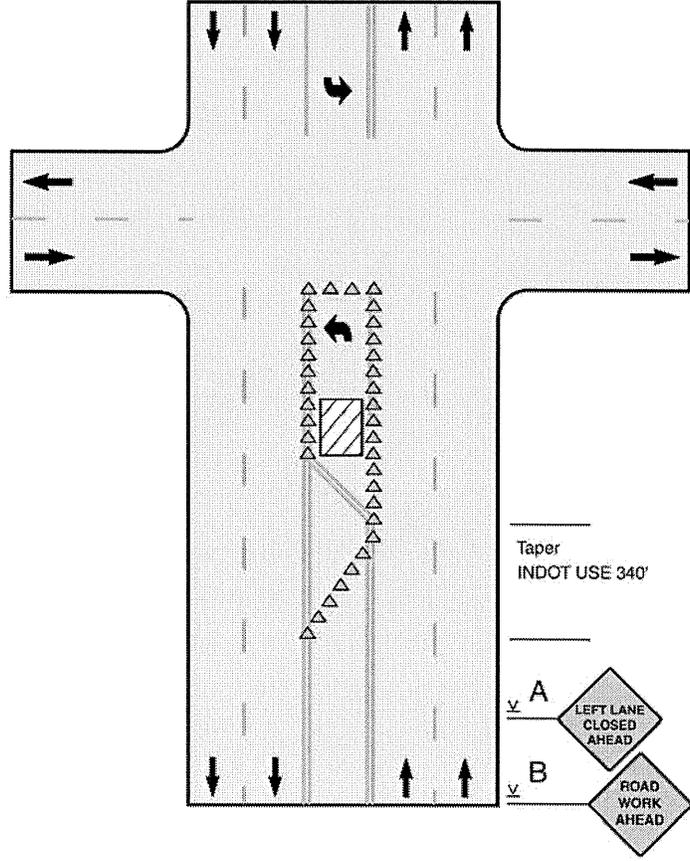
SPEED LIMIT	TAPER LENGTH (FT)
40 MPH OR LESS	$L = (WS^2) / 60$
45 MPH OR MORE	$L = WS$

WHERE: L=TAPER LENGTH (FT.)
 W=WIDTH OF OFFSET (FT.)
 S=POSTED SPEED LIMIT OR ANTICIPATED OPERATING SPEED (MPH)

NOTE:
 MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT

TURN LANE CLOSURE AT A SIGNALIZED INTERSECTION

SHORT TERM STATIONARY – 1 TO 12 HOURS



- NOTES:**
1. LANE MAY BE OPENED BEYOND WORK AREA.
 2. THE LENGTH OF THE TAPERS MAY BE ADJUSTED WHEN USED IN CLOSE PROXIMITY TO CROSSROADS, CURVES, OR OTHER INFLUENCING FACTORS.

PREPARED BY: DLZ INDIANA, LLC

Brian K. Arterbery
 4/23/07

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ITEM	REVISION	APPROVED DATE



CITY OF MISHAWAKA, INDIANA

ENGINEERING STANDARDS

MAINTENANCE OF TRAFFIC

SHT. NO.
VIII-4