



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

100 North Senate Avenue
Room N925
Indianapolis, Indiana 46204

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Michael R. Pence, Governor
Karl B. Browning, Commissioner

AGENDA

March 20, 2014 Standards Committee Meeting

MEMORANDUM

March 3, 2014

TO: Standards Committee

FROM: Scott Trammell, Secretary

RE: Agenda for the March 20, 2014 Standards Committee Meeting

A Standards Committee meeting is scheduled for 09:00 a.m. on March 20, 2014 in the N955 Bay Window Conference Room. Please enter meeting through the double doors directly in front of the conference room.

OLD BUSINESS

(No items on this agenda)

NEW BUSINESS

1. Approval of the Minutes from the February 20, 2014 meeting

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

<u>Item No. 01 3/20/14 (2014 SS)</u>	<u>Mr. Pankow</u>	<u>pg 03</u>
910.07(b)	Ground Reinforcement	
<u>Item No. 01 3/20/14 (2014 SS)</u>	<u>Mr. Boruff</u>	<u>pg 06</u>
802-SNGP-01	SIGN PLACEMENT <i>WIDE FLANGE SIGN SUPPORT</i>	
802-SNGP-0202	SIGN PLAN <i>DETAILSPANEL SIGN CONNECTION DETAILS</i>	
802-SNGP-0203	WIDE FLANGE SIGN SUPPORT <i>BASE CONNECTION</i>	
802-SNGP-04	SIGN DETAILS <i>PLATE AND SHIM DETAILS</i>	
802-SNGP-05	SIGN DATA TABLES <i>WIDE FLANGE SIGN</i>	
802-SNGP-06	SIGN DATA TABLES <i>POST SUPPORT DATA TABLES</i>	
802-SNGP-07	WIDE FLANGE SIGN <i>POST SUPPORT FOUNDATION DATA</i>	
802-SNGP-10A06	PANEL SIGN POST CLIP	
802-SNGP-12SNGP-07	WIDE FLANGE POST SELECTION TABLE	
802-SNGP-11SNDH-01	SIGN PLACEMENT <i>DIVIDED HIGHWAY INTERSECTION MEDIAN WIDTH < 30 FT</i>	
802-SNGP-12	SIGN PLACEMENT	
802-SNGP-13SNDH-02	SIGN PLACEMENT <i>DIVIDED HIGHWAY INTERSECTION MEDIAN WIDTH ≥ 30 FT</i>	
802-SNGP-14	SIGN PLACEMENT	

cc: Committee Members
FHWA
ICA

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS

REVISION TO STANDARD SPECIFICATIONS

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: The current 910 material specification for ground reinforcement for MSE wall components allows galvanizing in accordance with ASTM B 695. This is not in accordance with AASHTO.

PROPOSED SOLUTION: Delete the reference to ASTM B 695

APPLICABLE STANDARD SPECIFICATIONS: 910.07

APPLICABLE STANDARD DRAWINGS: none

APPLICABLE DESIGN MANUAL SECTION: none

APPLICABLE SECTION OF GIFE: none

APPLICABLE RECURRING SPECIAL PROVISIONS:

PAY ITEMS AFFECTED: none

Submitted By: Greg Pankow

Title: State Construction Engineer

Organization: INDOT

Phone Number: 2-5502

Date: February 13, 2014

APPLICABLE SUB-COMMITTEE ENDORSEMENT: None

REVISION TO STANDARD SPECIFICATIONS

SECTION 910 - METAL MATERIALS
910.07(b) GROUND REINFORCEMENT

The Standard Specifications are revised as follows:

SECTION 910, BEGIN LINE 502, DELETE AND INSERT AS FOLLOWS:

Ground-reinforcement units shall be hot rolled from bars to the required shape and dimensions. Physical and mechanical properties of the units shall be in accordance with ASTM A 572, grade 65. Tie strips shall be shop fabricated with hot-rolled steel in accordance with the minimum requirements of ASTM A 1011, grade 50. Galvanization for ground-reinforcing units and tie strips shall be in accordance with ASTM A 123, coating grade 85 or ~~ASTM B 695, class 80, for strip-type reinforcements or ASTM A 641, class 5 or class C, for bar mat or grid-type reinforcements.~~ All ground-reinforcement units and tie strips will be inspected to ensure that they are true to size and free from defects which can impair their strength and durability.

COMMENTS AND ACTION

SECTION 910 - METAL MATERIALS
910.07(b) GROUND REINFORCEMENT

<p>Motion: Second: Ayes: Nays:</p> <p>Standard Specifications Sections affected: 910.07(b) pg 909</p> <p>Recurring Special Provision affected: 731-B-205 MSE RETAINING WALL REQUIREMENTS</p> <p>Standard Sheets affected: NONE</p> <p>Design Manual Sections affected: NONE</p> <p>GIFE Sections cross-references: NONE</p>	<p>Action: <input type="checkbox"/> Passed as Submitted <input type="checkbox"/> Passed as Revised <input type="checkbox"/> Withdrawn</p> <p><input type="checkbox"/> 2016 Standard Specifications Book <input type="checkbox"/> Revise Pay Items List</p> <p><input type="checkbox"/> Create RSP (No. _____) Effective _____ Letting RSP Sunset Date: _____</p> <p><input type="checkbox"/> Revise RSP (No. _____) Effective _____ Letting RSP Sunset Date: _____</p> <p>Standard Drawing Effective _____ <input type="checkbox"/> Create RPD (No. _____) Effective _____ Letting <input type="checkbox"/> Technical Advisory</p> <p>GIFE Update Req'd.? Y <input type="checkbox"/> N <input type="checkbox"/> By _____ Addition or _____ Revision</p> <p>Frequency Manual Update Req'd? Y <input type="checkbox"/> N <input type="checkbox"/> By _____ Addition or _____ Revision</p> <p>Received FHWA Approval? _____</p>
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REVISION TO STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND DRAWINGS

REVISION TO STANDARD DRAWINGS

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Standard Drawings 802-SNGP-13 and 802-SNGP-14 showing Sign Placement for divided highway intersections with medians 30 ft or wider do not include the ONE WAY signs in the median that are required by the 2011 IMUTCD.

Additionally there is an opportunity to reduce the number of drawings in this series as:

1. 802-SNGP-11 and 802-SNGP-12 show identical signing
2. 802-SNGP-13 and 802-SNGP-14 also show identical signing
3. 802-SNGP-05, 802-SNGP-06, 802-SNGP-07 which show sign post and foundation data can be condensed.

Lastly, 802-SNGP-11 thru -14 concern sheet signs only while the remainder of the drawings in the series detail panel signs and panel sign (wide flange) supports. At the same time 802-SNGS-12, containing the wide flange support selection chart, is the only panel sign related drawing in the 802-SNGS series which otherwise consists of sheet sign details.

PROPOSED SOLUTION: Revise Standard Drawing 802-SNGP-13 and place in a new series, 802-SNDH. Also move 802-SNGP-11 into the new series and eliminate 802-SNGP-12 and 802-SNGP-14.

Condense 802-SNGP-05 thru -07 into one drawing.

Move 802-SNGS-12 to the 802-SNGP panel sign series.

APPLICABLE STANDARD SPECIFICATIONS: N/A

APPLICABLE STANDARD DRAWINGS: 802-SNGP-01 through 14. Standard drawing 802-SNGS-12

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: N/A

PAY ITEMS AFFECTED: N/A

Mr. Boruff
Date: 3/20/14

REVISION TO STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND DRAWINGS

REVISION TO STANDARD DRAWINGS

(continued)

Submitted By: David Boruff

Title: Manager, Office of Traffic Administration

Organization: INDOT

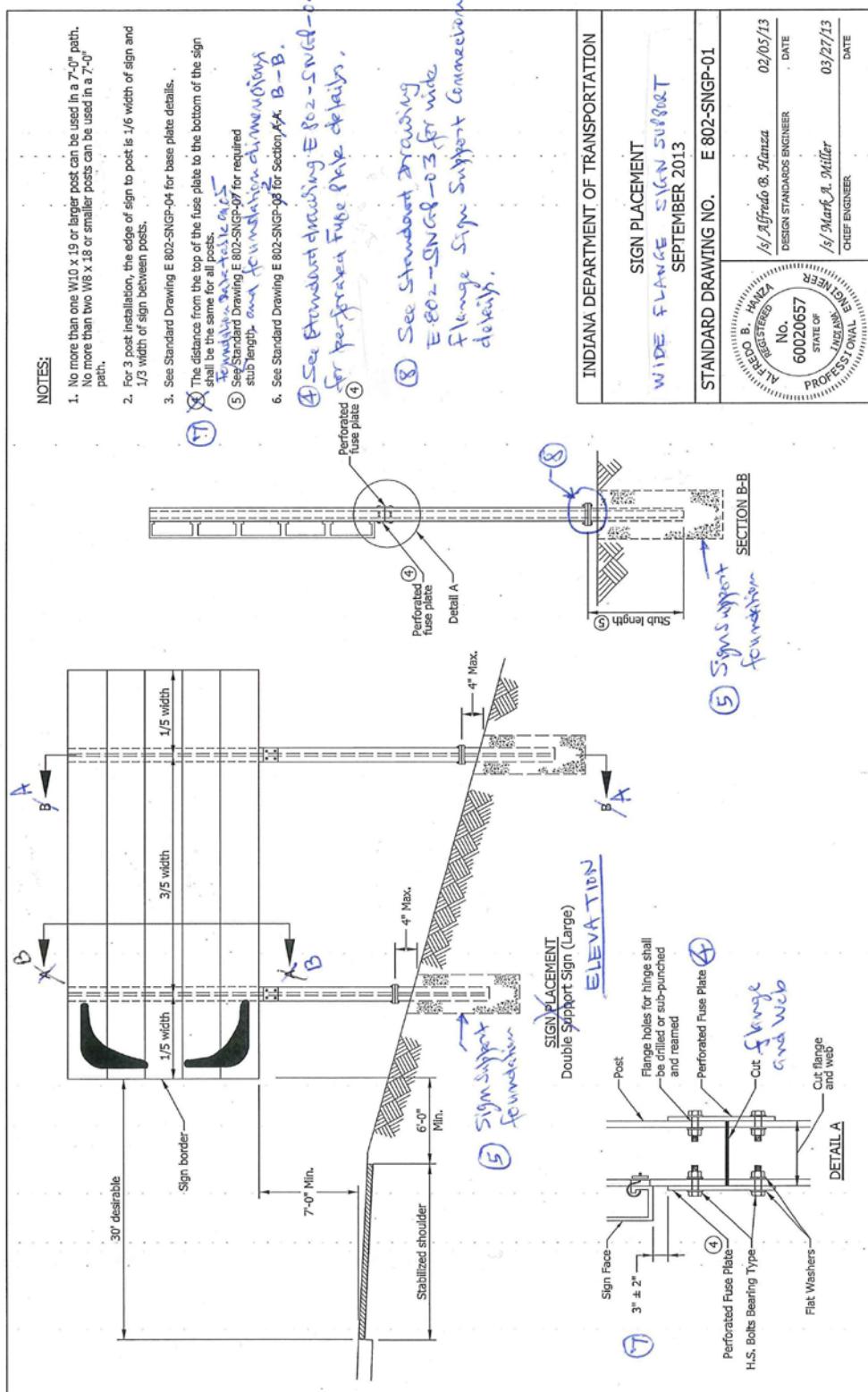
Phone Number: 317-234-7975

Date: 2-24-2014

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Standard Sub Committee for Traffic Control Devices and the Standards and Policy Office.

REVISION TO STANDARD DRAWINGS

802-SNGP-01 SIGN PLACEMENT (WITH MARKUPS)

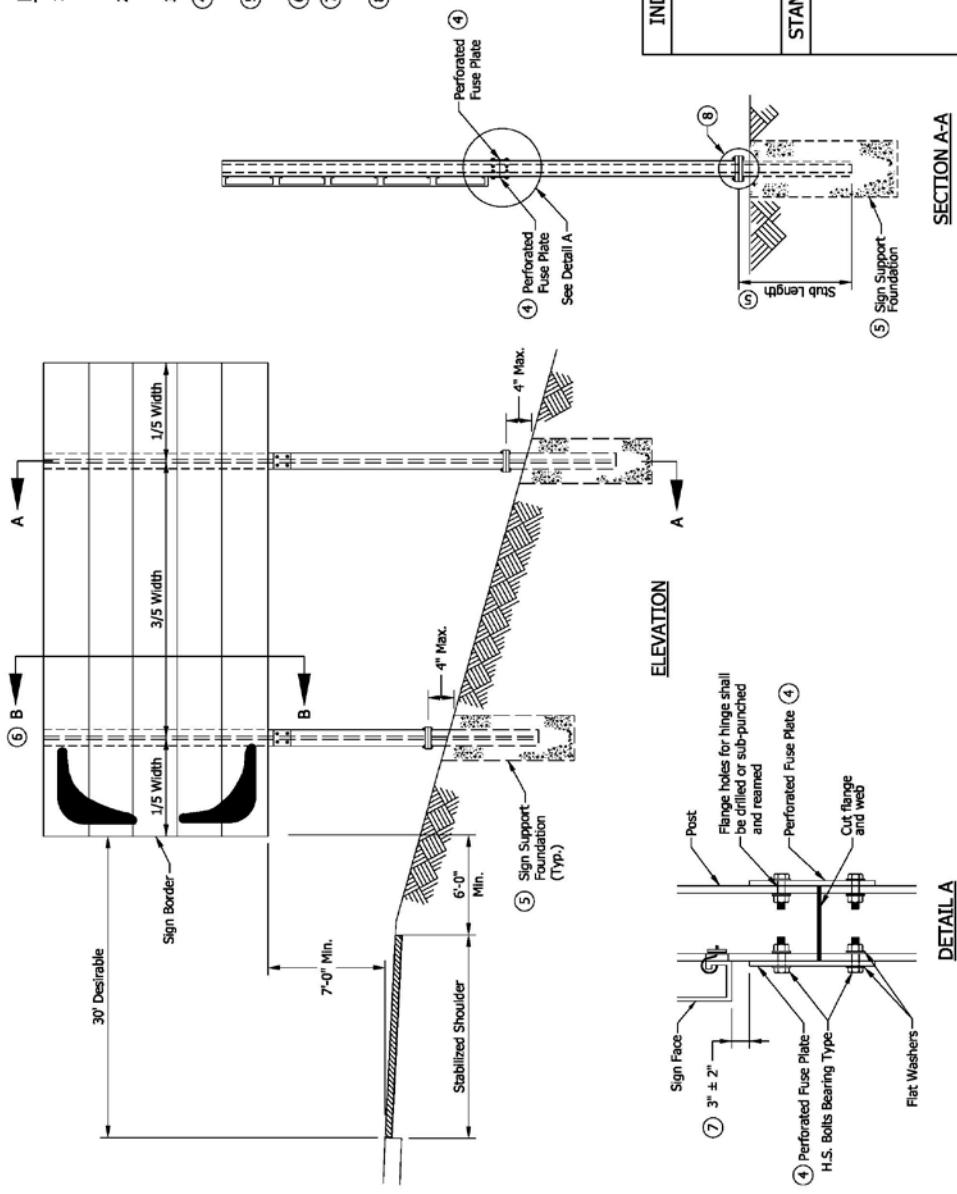


REVISION TO STANDARD DRAWINGS

802-SNGP-01 SIGN PLACEMENT WIDE FLANGE SIGN SUPPORT (DRAFT)

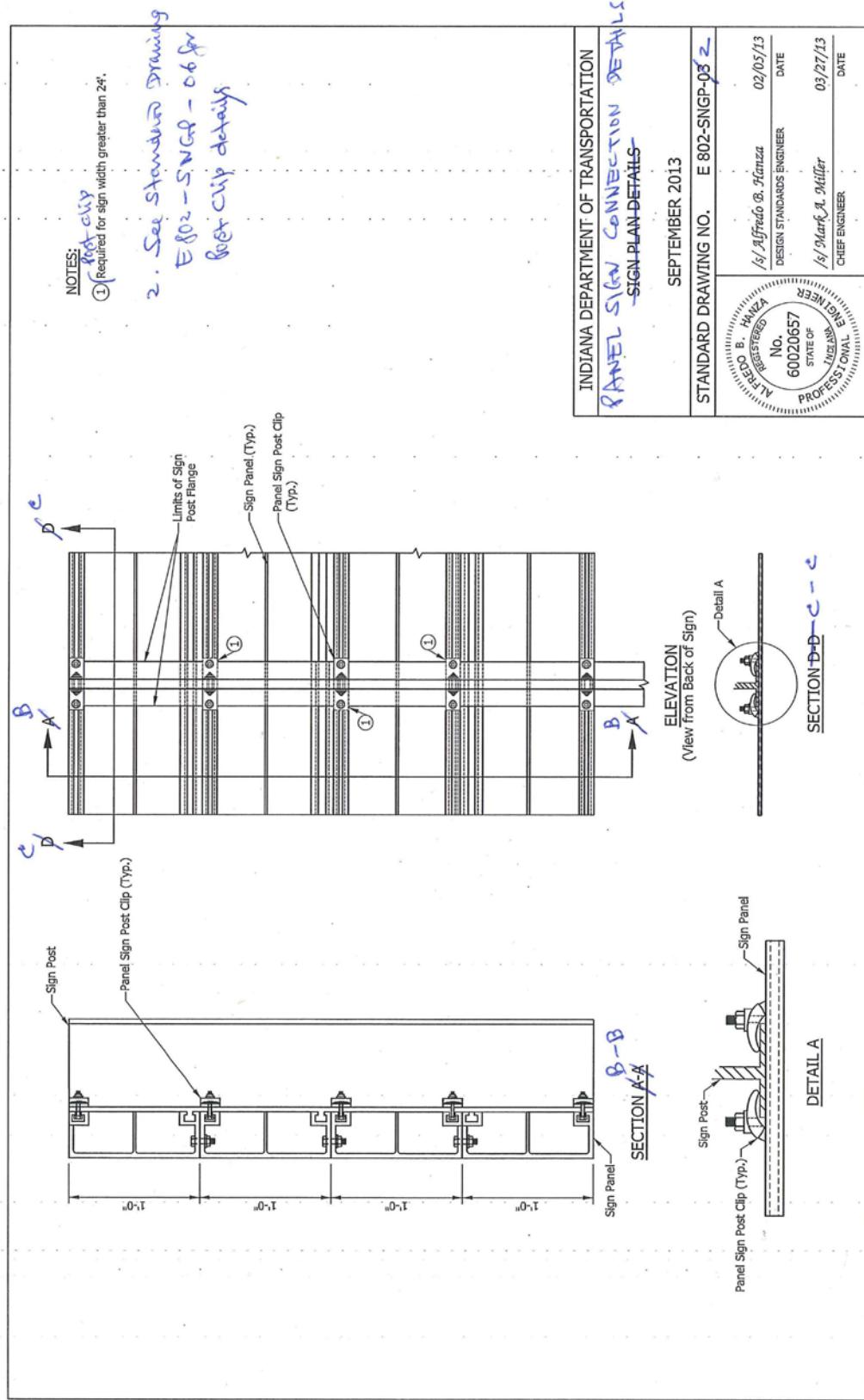
NOTES:

- No more than one W10 x 19 or larger post can be used in a 7'-0" path. No more than two W8 x 18 or smaller posts can be used in a 7'-0" path.
- For 3-post installation, the edge of sign to post is 1/6 width of sign and 1/3 width of sign between posts.
- See Standard Drawing E 802-SNGP-04 for base plate details.
- See Standard Drawing E 802-SNGP-04 for Perforated Fuse Plate Detail.
- See Foundation Data table on Standard Drawing E 802-SNGP-05 for required stub length and foundation dimensions.
- See Standard Drawing E 802-SNGP-02 for Section B-B.
- The distance from the top of the fuse plate to the bottom of the sign shall be the same for all posts.
- See Standard Drawing E 802-SNGP-03 for Wide Flange Sign Support Connection details.



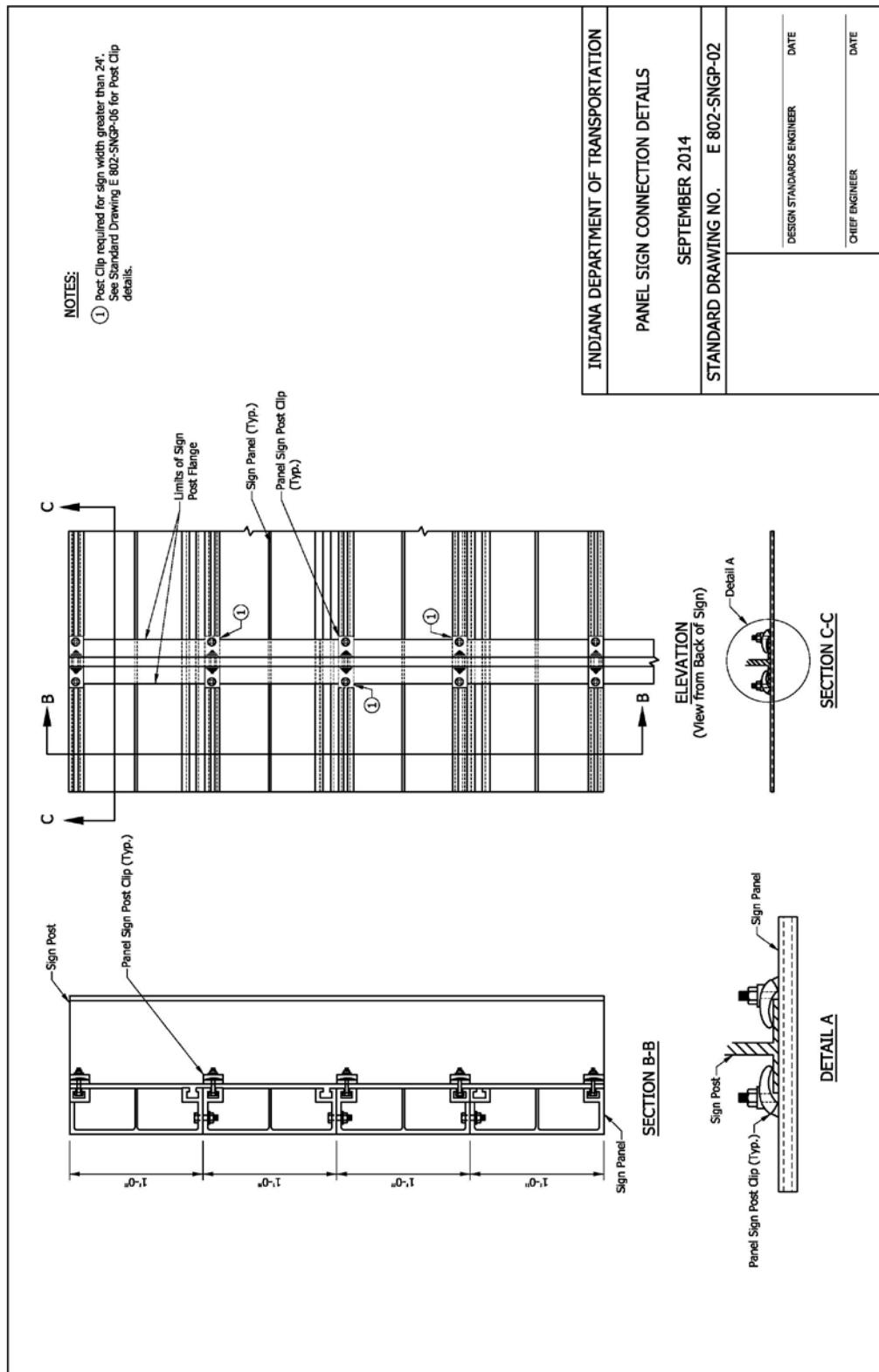
REVISION TO STANDARD DRAWINGS

802-SNGP-03 SIGN PLAN DETAILS (WITH MARKUPS)



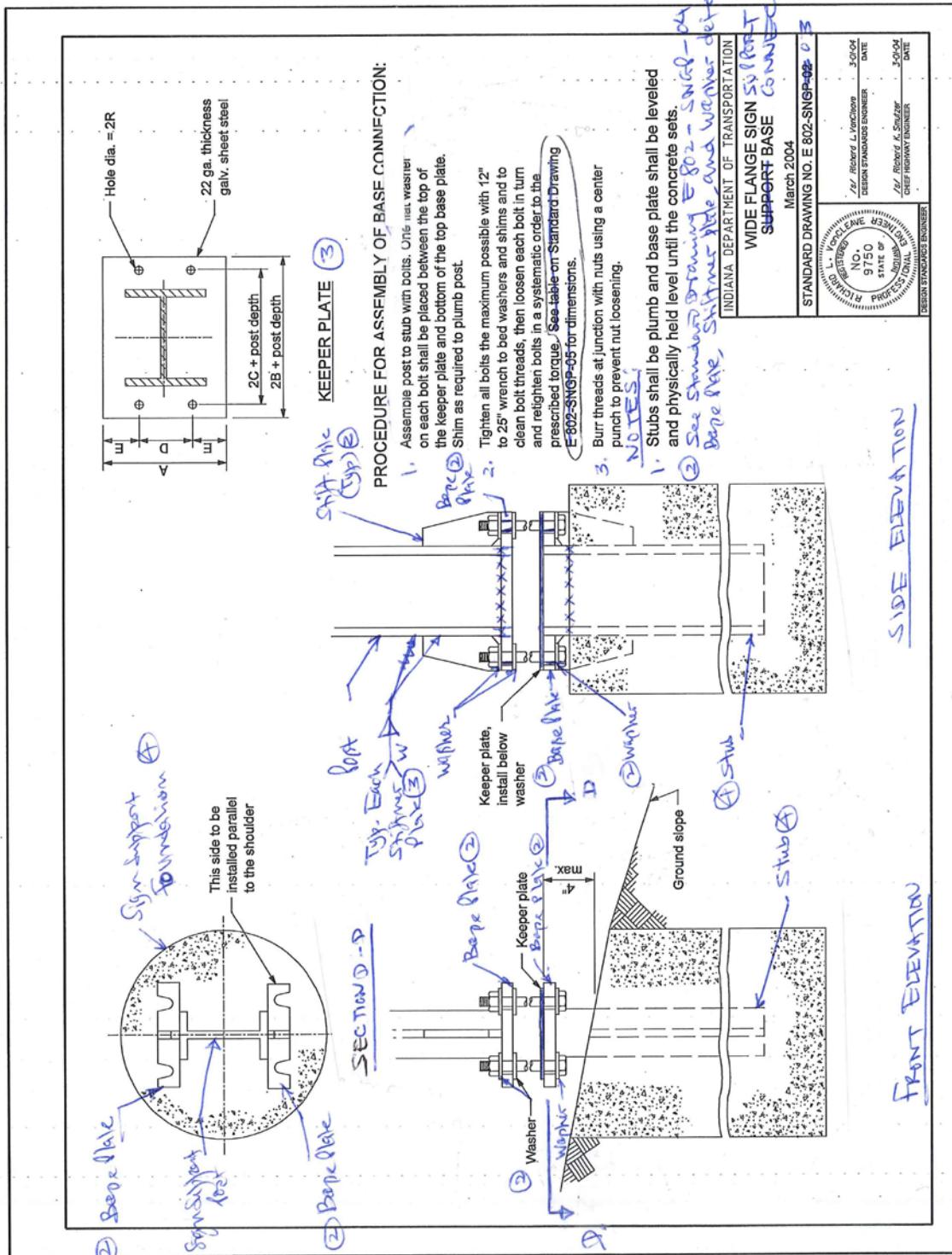
REVISION TO STANDARD DRAWINGS

802-SNGP-02 PANEL SIGN CONNECTION DETAILS (DRAFT)



REVISION TO STANDARD DRAWINGS

802-SNGP-02 WIDE FLANGE SIGN SUPPORT BASE (WITH MARKUPS)



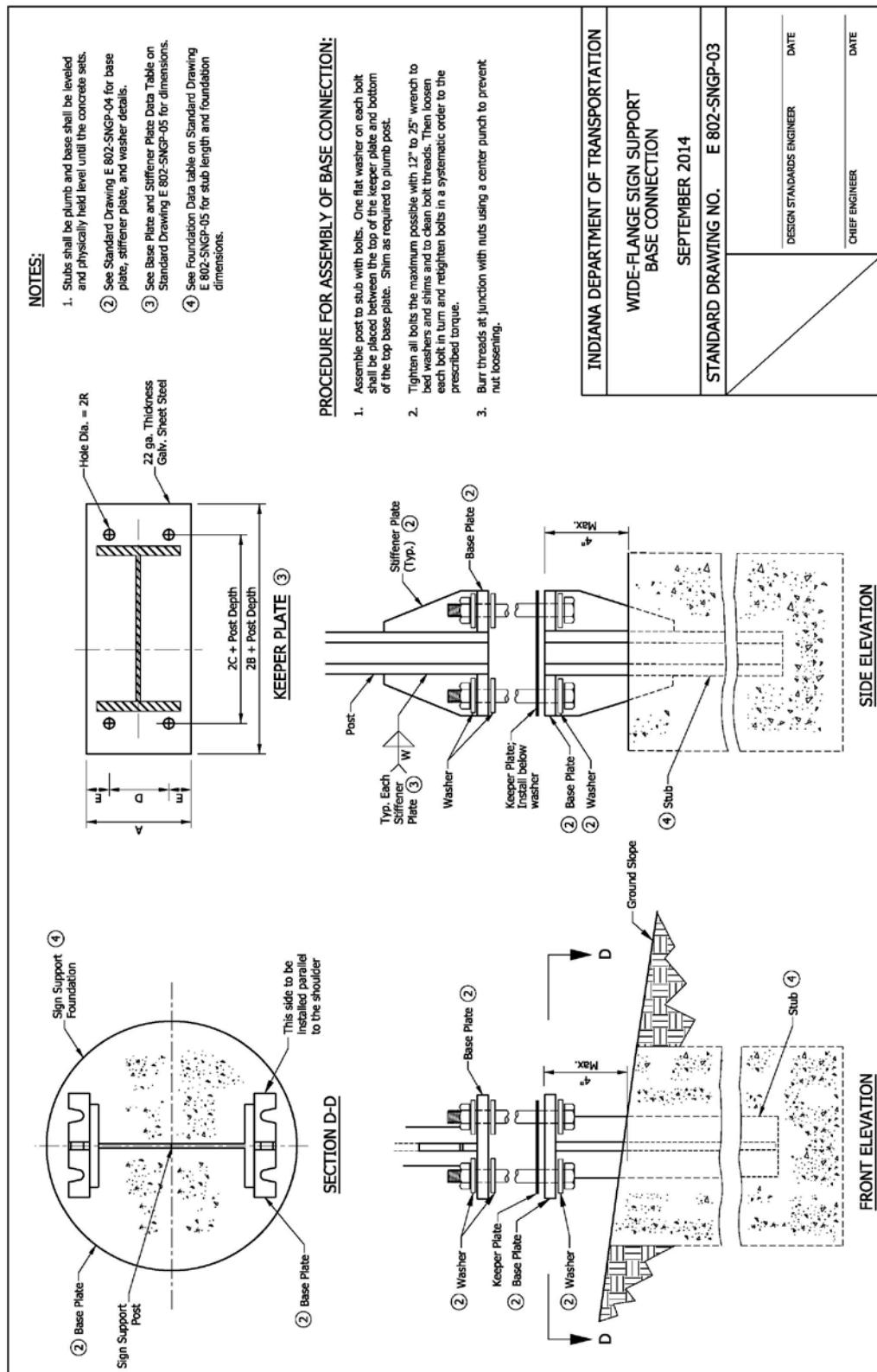
① See Foundation Table on Standard Drawing E-802-SNGP-05 for stub length and foundation dimensions.

② See Foundation Table on Standard Drawing E-802-SNGP-05 for dimensions. For dimensions, see dimensions.

③ See Base Plate and Signer Plate Data Table on Standard Drawing E-802-SNGP-05 for dimensions.

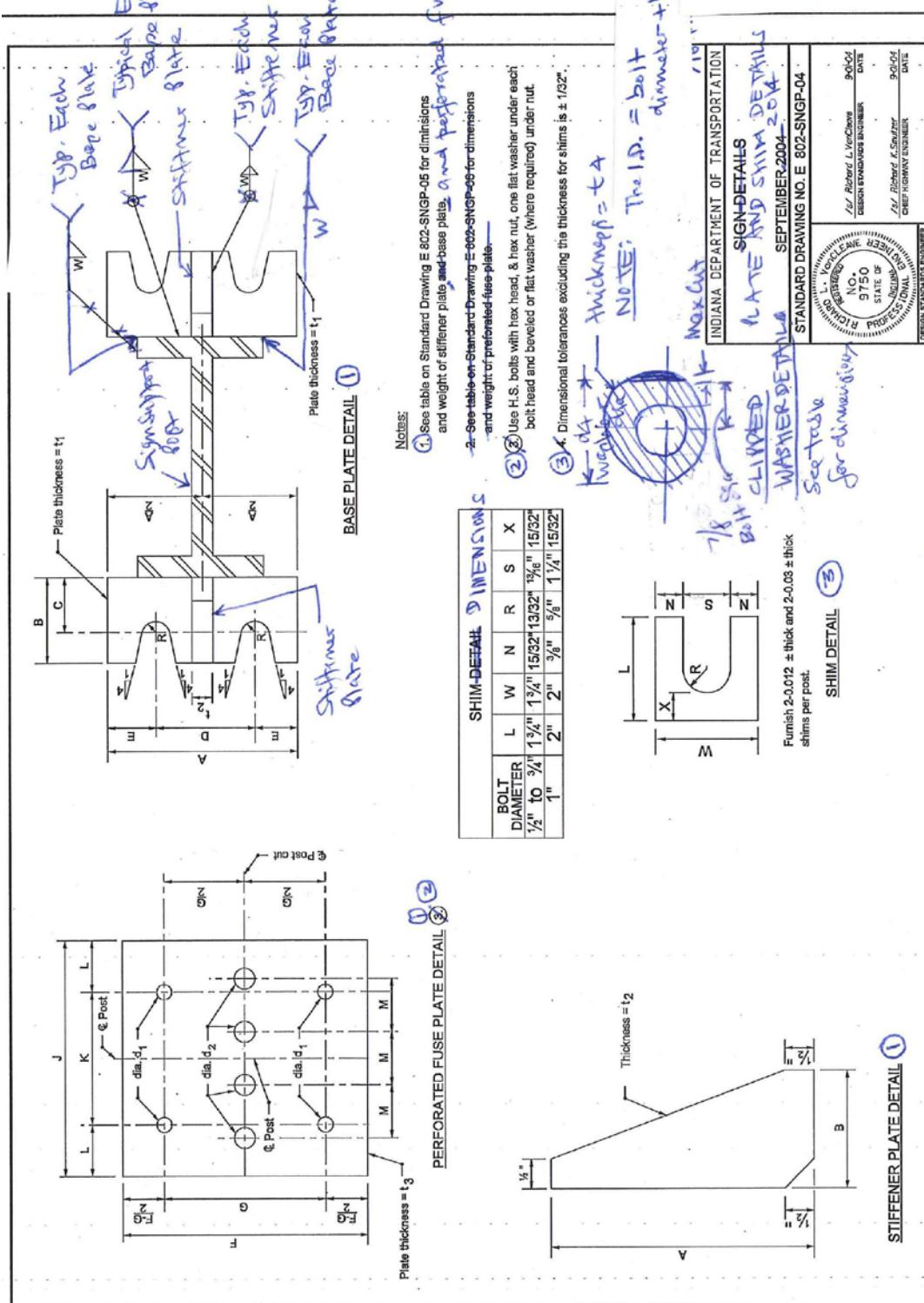
REVISION TO STANDARD DRAWINGS

802-SNGP-03 WIDE-FLANGE SIGN SUPPORT BASE CONNECTION (DRAFT)



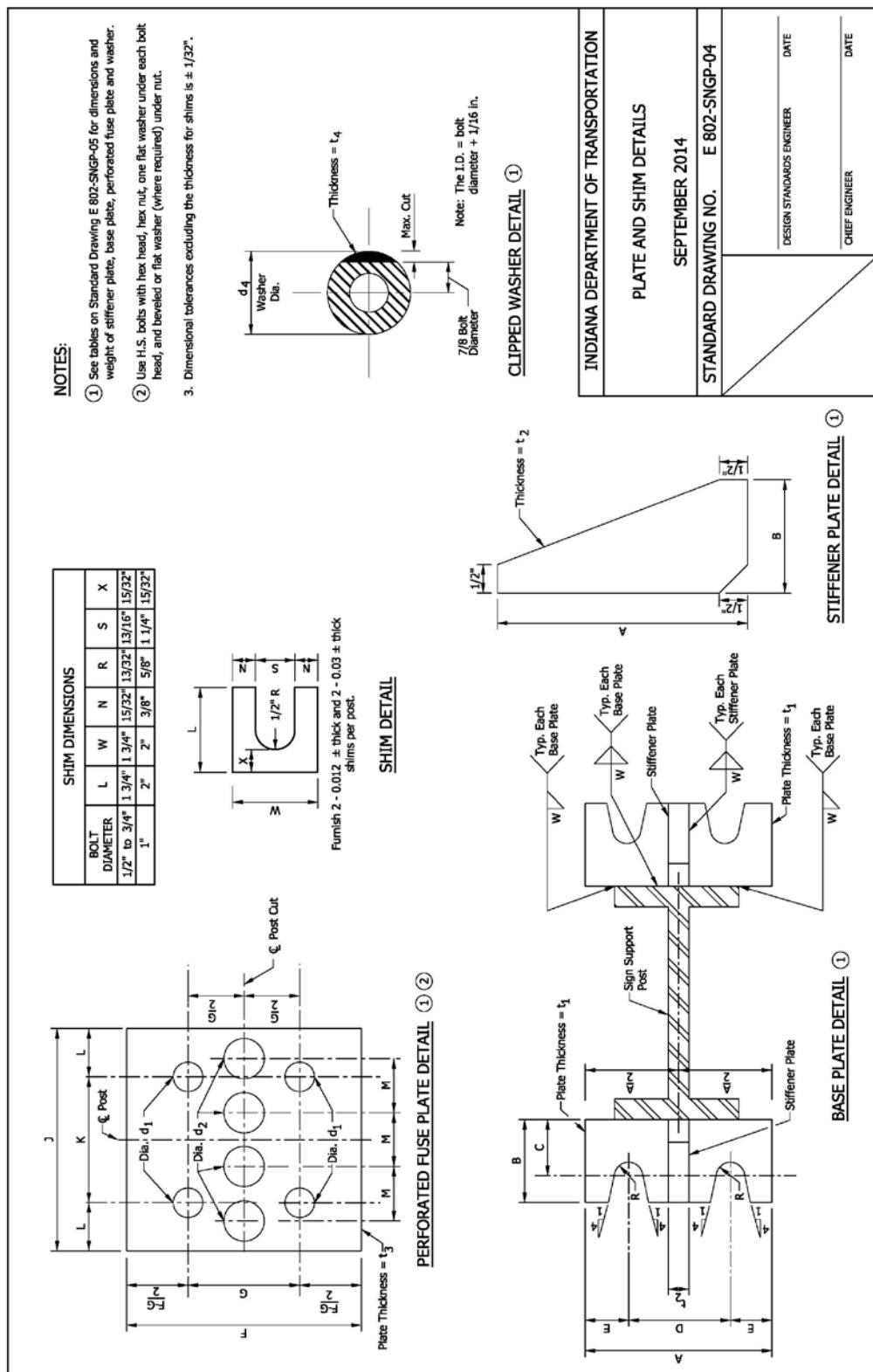
REVISION TO STANDARD DRAWINGS

802-SNGP-04 SIGN DETAILS (WITH MARKUPS)



REVISION TO STANDARD DRAWINGS

802-SNGP-04 PLATE AND SHIM DETAILS (DETAILS)



REVISION TO STANDARD DRAWINGS

802-SNGP-05 SIGN DATA TABLES (WITH MARKUPS)

BASE PLATE & STIFFENER PLATE DATA TABLE														
Post Size	Bolt Size	Torque in. - lb	Wt. of 4 Plates (One Post), lb	Wt. of 4 Stiffeners (One Post), lb	A	B	C	D	E	R	d4	t1	t2	W
W6 x 9	1/2" Ø x 2 1/4"	140	5.10	3.33	4 1/2"	2"	1 3/8"	2 1/2"	1"	9 23/32"	1 3/8"	1/2"	1/2"	3/16" 0.38"
W8 x 10	5/8" Ø x 2 1/2"	300	6.38	4.07	5"	2 1/4"	1 1/2"	2 7/8"	1 1/8"	11 3/32"	1 1/2"	1/2"	1/2"	3/16" 0.31"
W8 x 13	3/4" Ø x 3"	500	12.6	7.97	6"	2 1/2"	1 1/8"	3 1/8"	1 7/16"	13 3/32"	1 3/8"	3/4"	3/4"	1/4" 1/4"
W8 x 15	3/4" Ø x 3"	500	12.6	7.97	6"	2 1/2"	1 1/8"	3 1/8"	1 7/16"	13 3/32"	1 3/8"	3/4"	3/4"	1/4" 1/4"
W8 x 18	3/4" Ø x 3"	500	12.6	7.97	6"	2 1/2"	1 1/8"	3 1/8"	1 7/16"	13 3/32"	1 3/8"	3/4"	3/4"	1/4" 1/4"
W10 x 19	1" Ø x 3 1/4"	700	14.04	8.66	6"	2 9/16"	1 1/2"	3 5/8"	1 3/8"	17 3/32"	2 1/4"	3/4"	3/4"	5/16" 3/8"

Add PERFORATED FUSE PLATE DATA TABLE here from St. Dr. 802-SNGP-06

Add FOUNDATION DATA here from St. Dr. 802-SNGP-07

INDIANA DEPARTMENT OF TRANSPORTATION	SIGN DATA TABLES
SEPTEMBER 2002-2014	
STANDARD DRAWING NO. E 802-SNGP-05	
	

REVISION TO STANDARD DRAWINGS

802-SNGP-06 SIGN DATA TABLES (WITH MARKUPS)

Move this table to Standard Drawing 802-SNGP-06

PERFORATED FUSE PLATE DATA TABLE

Post Size	BOLT SIZE	Wt. of Plate* (One Post), lb	F	G	J	K	L	M	d ₁	d ₂	t ₃	Bolt Tension, lbs
W6 x 9	1/2" x 1 1/2"	1.01	4 1/4"	2"	4"	2 1/4"	7/8"	1"	9/16"	3/4"	1/4"	12000
W8 x 10	1/2" x 1 1/2"	1.01	4 1/4"	2"	4"	2 1/4"	7/8"	1"	9/16"	3/4"	1/4"	12000
W8 x 13	1/2" x 1 1/2"	1.01	4 1/4"	2"	4"	2 1/4"	7/8"	1"	9/16"	3/4"	1/4"	12000
W8 x 15	5/8" x 2 1/4"	1.72	5"	2 1/2"	4"	2 1/4"	7/8"	1"	11/16"	3/4"	3/8"	19000
W8 x 18	5/8" x 2 1/4"	2.27	5"	2 1/2"	5 1/4"	2 3/4"	1 1/4"	1 1/4"	11/16"	1 1/16"	3/8"	19000
W10 x 19	5/8" x 2 1/4"	1.72	5"	2 1/2"	4"	2 1/4"	7/8"	1"	11/16"	3/4"	3/8"	19000

* Gross weight with holes deducted from weight. Incidental weights of bolts and washers are not included in plain quantities.

NOTES:

1. See Standard Drawing E 802-SNGP-01 through 07 for details and notes for posts, bolts, washers, etc.

INDIANA DEPARTMENT OF TRANSPORTATION

SIGN DATA TABLES

SEPTEMBER 2008

STANDARD DRAWING NO. E-802-SNGP-06

	
DESIGN STANDARDS ENGINEER	DATE
	
CHIEF HIGHWAY ENGINEER	DATE
DESIGN STANDARDS ENGINEER	

Item No. 02 03/20/14 (2014 SS) (contd.)
Mr. Boruff
Date: 3/20/14

REVISION TO STANDARD DRAWINGS

802-SNGP-07 WIDE FLANGE SIGN POST SUPPORT FOUNDATION DATA (WITH
MARKUPS)

Move this table to St. Dr. 802-SNGP-07

FOUNDATION DATA					
Type	Post Size	Stub Length	Dia.	Depth	
VII	W6 x 9	2'-0	20"	5'	
VIII	W8 x 10	2'-0	20"	5'	
IX	W8 x 13	2'-0	20"	5'	
X	W8 x 15	2'-6	24"	6'	
XI	W8 x 18	2'-6	24"	6'	
XII	W10 x 19	2'-6	24"	7'	

INDIANA DEPARTMENT OF TRANSPORTATION
WIDE FLANGE SIGN POST
SUPPORT FOUNDATION DATA
STANDARD DRAWING NO. 802-SNGP-07
MARCH 2004

Architectural Drawing No. 91710
State of Indiana
Professional Engineer
Design Standards Engineer
Chief Highway Engineer
Design Standards Engineer

REVISION TO STANDARD DRAWINGS

802-SNGP-05 WIDE FLANGE SIGN POST SUPPORT DATA TABLES (DRAFT)

BASE PLATE AND STIFFENER PLATE DATA TABLE

Post Size	Bolt Size	Torque In. - lb	Wt of 4 Plates (One Post), lb	Wt of 4 Stiffeners (One Post), lb	A	B	C	D	E	R	d ₄	t ₁	t ₂	t ₃	W	t ₄
W6 x 9	1/2" Ø x 2 1/4"	140	5.10	3.33	4 1/2"	2"	1 3/8"	2 1/2"	1"	9/32"	1 3/8"	1/2"	1/2"	3/16"	0.31"	0.38"
W8 x 10	5/8" Ø x 2 1/2"	300	6.38	4.07	5"	2 1/4"	1 1/2"	2 7/8"	1 1/2"	11/32"	1 1/16"	1/2"	1/2"	3/16"	1/4"	
W8 x 13	3/4" Ø x 3"	500	12.6	7.97	6"	2 1/2"	1 1/2"	3 1/8"	1 7/16"	13/32"	1 3/4"	1/4"	1/4"	3/8"		
W8 x 15	3/4" Ø x 3"	500	12.6	7.97	6"	2 1/2"	1 1/2"	3 1/8"	1 7/16"	13/32"	1 3/4"	1/4"	1/4"	3/8"		
W8 x 18	3/4" Ø x 3"	500	12.6	7.97	6"	2 1/2"	1 1/2"	3 1/8"	1 7/16"	13/32"	1 3/4"	1/4"	1/4"	3/8"		
W10 x 19	1" Ø x 3 1/4"	700	14.04	8.66	6"	2 3/4"	1 1/2"	3 5/8"	1 3/16"	17/32"	2 1/4"	3/4"	3/4"	5/16"	3/8"	

PERFORATED FUSE PLATE DATA TABLE

Post Size	Bolt Size	Wt of Plate* (One Post), lb	F	G	J	K	L	M	d ₁	d ₂	t ₃	Bolt Tension, lbs
W6 x 9	1/2" Ø x 1 1/2"	1.01	4 1/4"	2"	4"	2 1/4"	7/8"	1"	9/16"	3/4"	1/4"	12000
W8 x 10	1/2" Ø x 1 1/2"	1.01	4 1/4"	2"	4"	2 1/4"	7/8"	1"	9/16"	3/4"	1/4"	12000
W8 x 13	1/2" Ø x 1 1/2"	1.01	4 1/4"	2"	4"	2 1/4"	7/8"	1"	9/16"	3/4"	1/4"	12000
W8 x 15	5/8" Ø x 2 1/4"	1.72	5"	2 1/2"	4"	2 1/4"	7/8"	1"	11/16"	3/4"	3/8"	19000
W8 x 18	5/8" Ø x 2 1/4"	2.27	5"	2 1/2"	5 1/4"	2 3/4"	1 1/4"	1 1/4"	11/16"	1 1/16"	3/8"	19000
W10 x 19	5/8" Ø x 2 1/4"	1.72	5"	2 1/2"	4"	2 1/4"	7/8"	1"	11/16"	3/4"	3/8"	19000

*Gross weight with holes deducted from weight. Indental weight of bolts and washers is not included in plan quantities.

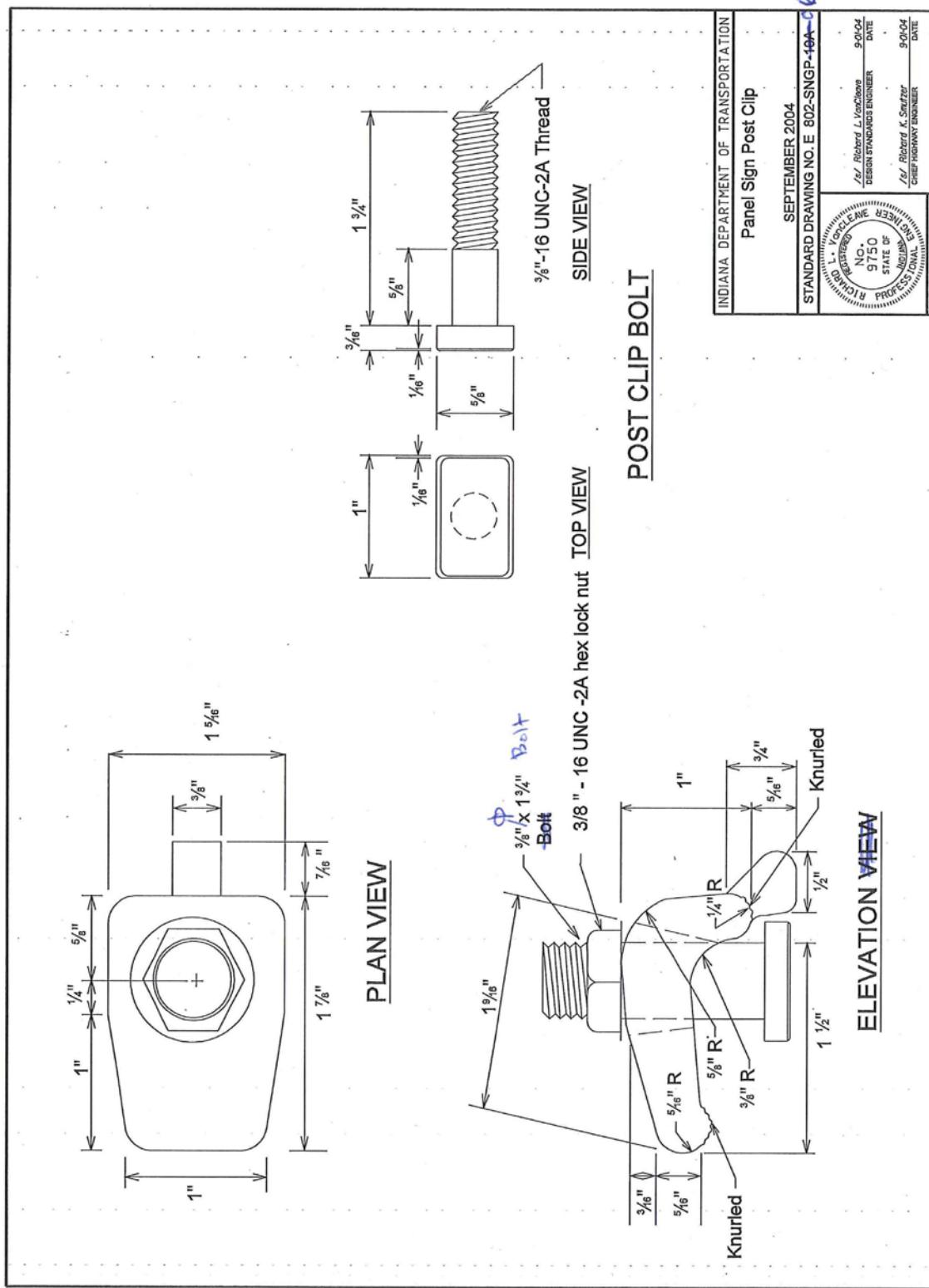
FOUNDATION DATA

Type	Post Size	Stub Length	Dia.	Depth
VII	W6 x 9	2'-0"	20"	5'
VIII	W8 x 10	2'-0"	20"	5'
IX	W8 x 13	2'-0"	20"	5'
X	W8 x 15	2'-6"	24"	6'
XI	W8 x 18	2'-6"	24"	6'
XII	W10 x 19	2'-6"	24"	7'

INDIANA DEPARTMENT OF TRANSPORTATION	
WIDE FLANGE SIGN SUPPORT DATA TABLES	
SEPTEMBER 2014	
STANDARD DRAWING NO. E 802-SNGP-05	
DESIGN STANDARDS ENGINEER	DATE
CHIEF ENGINEER	DATE

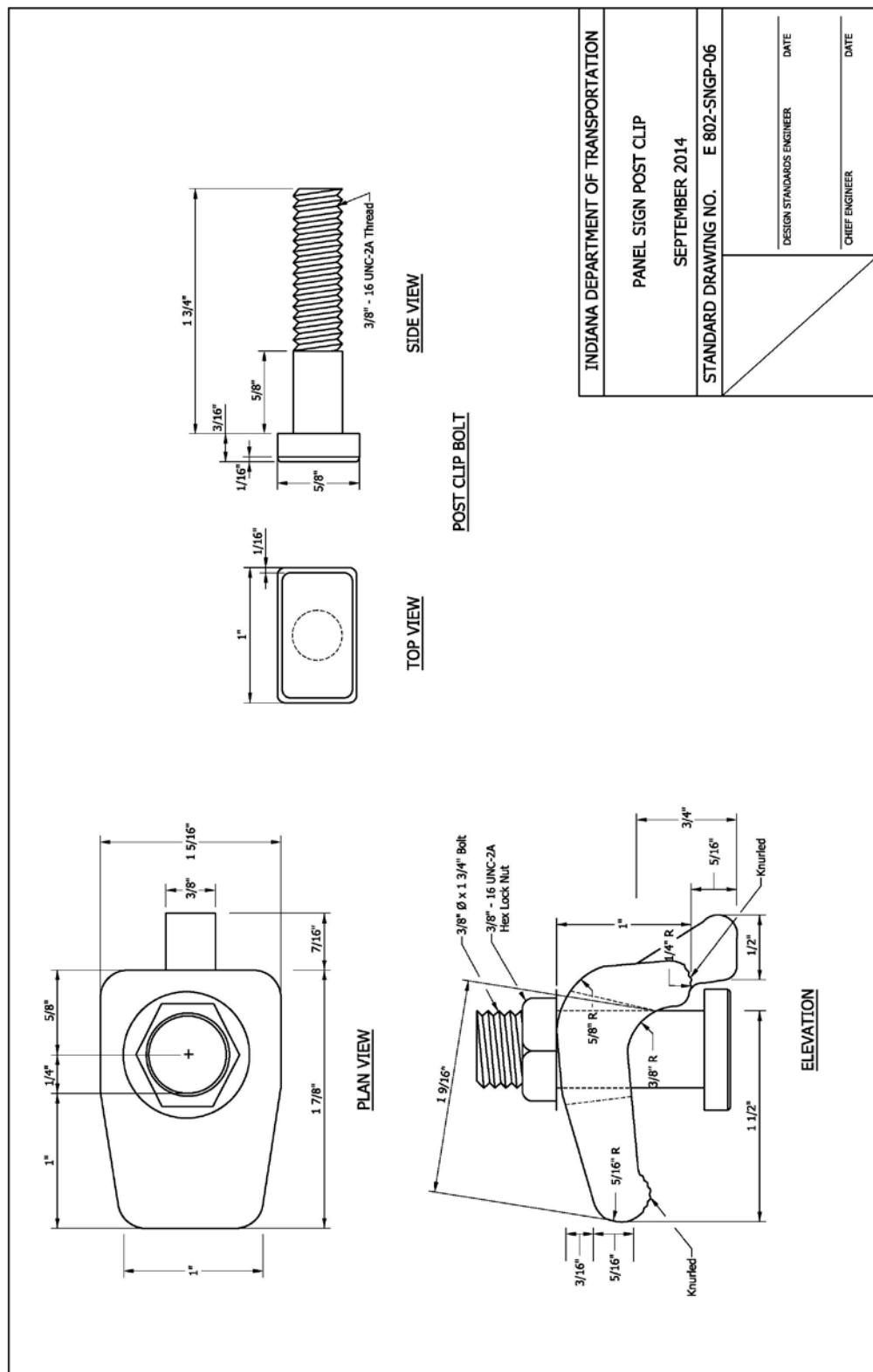
REVISION TO STANDARD DRAWINGS

802-SNGP-10A PANEL SIGN POST CLIP (WITH MARKUPS)



REVISION TO STANDARD DRAWINGS

802-SNGP-06 PANEL SIGN POST CLIP (DRAFT)



Item No.02 03/20/14 (2014 SS) (contd.)
Mr. Boruff
Date: 3/20/14

REVISION TO STANDARD DRAWINGS

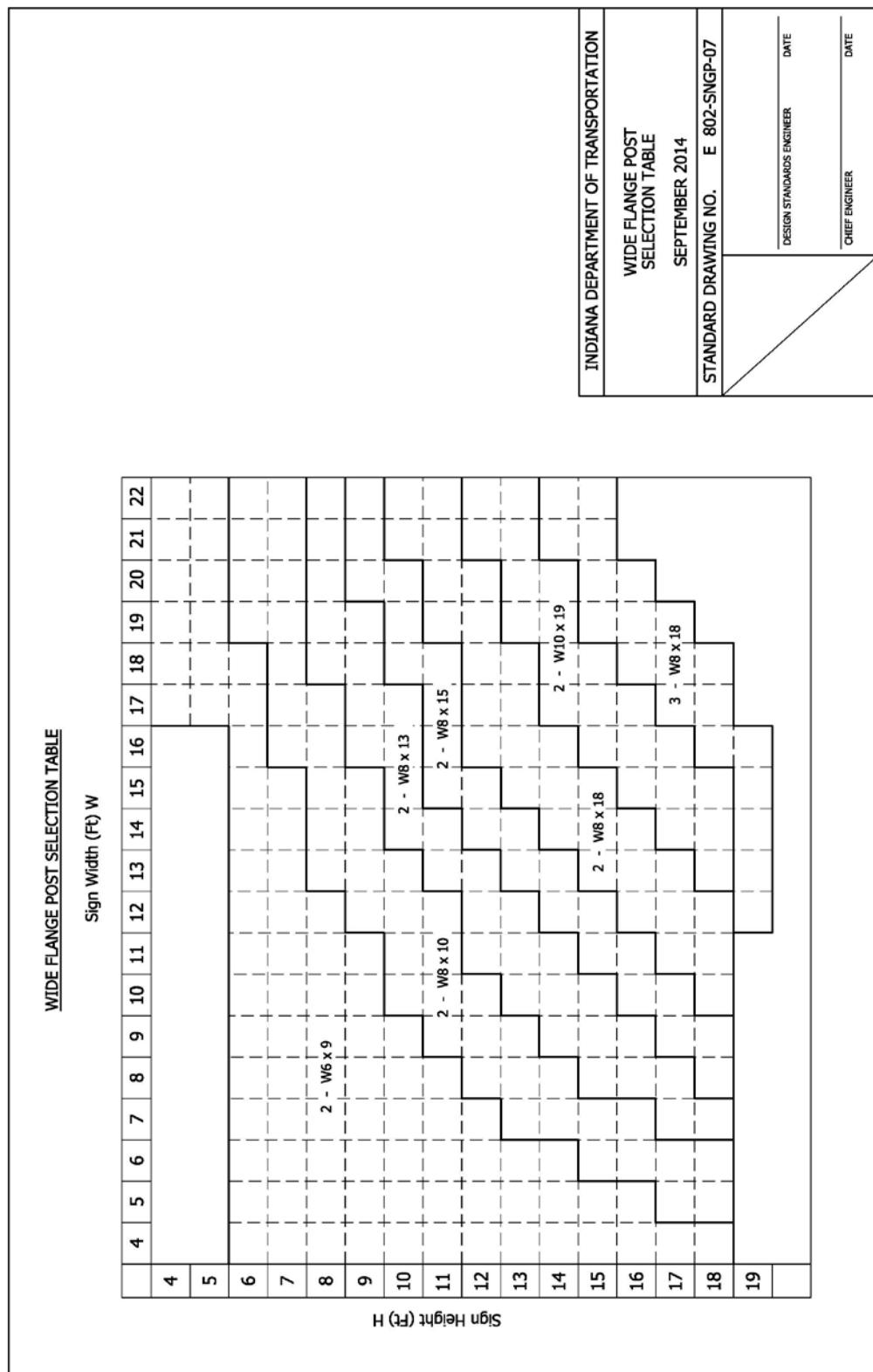
802-SNGS-12 WIDE FLANGE POST SELECTION TABLE (WITH MARKUPS)

25N68-07

Item No. 02 03/20/14 (2014 SS) (contd.)
Mr. Boruff
Date: 3/20/14

REVISION TO STANDARD DRAWINGS

802-SNGP-07 WIDE FLANGE POST SELECTION TABLE (DRAFT)

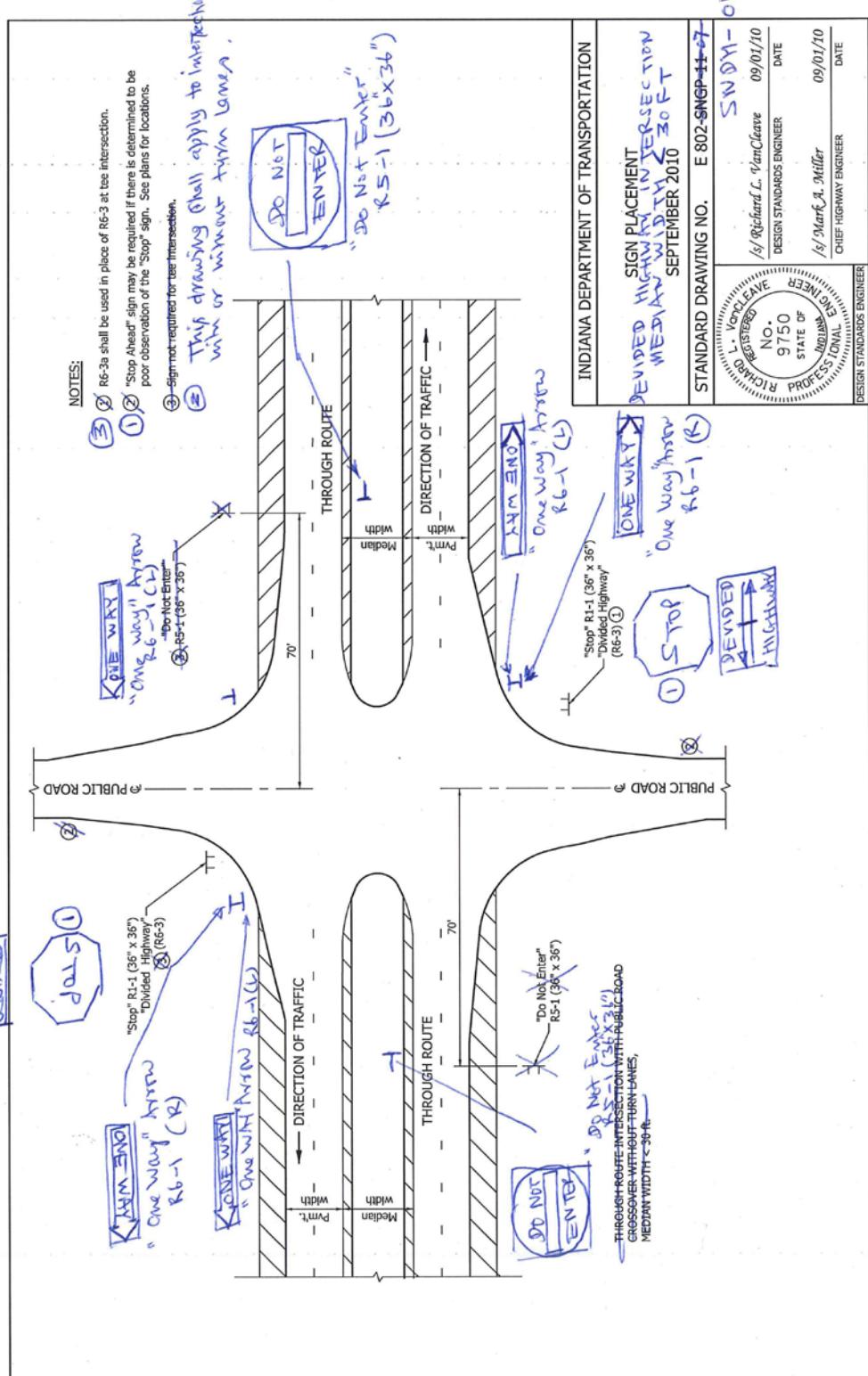


Mr. Boruff

Date: 3/20/14

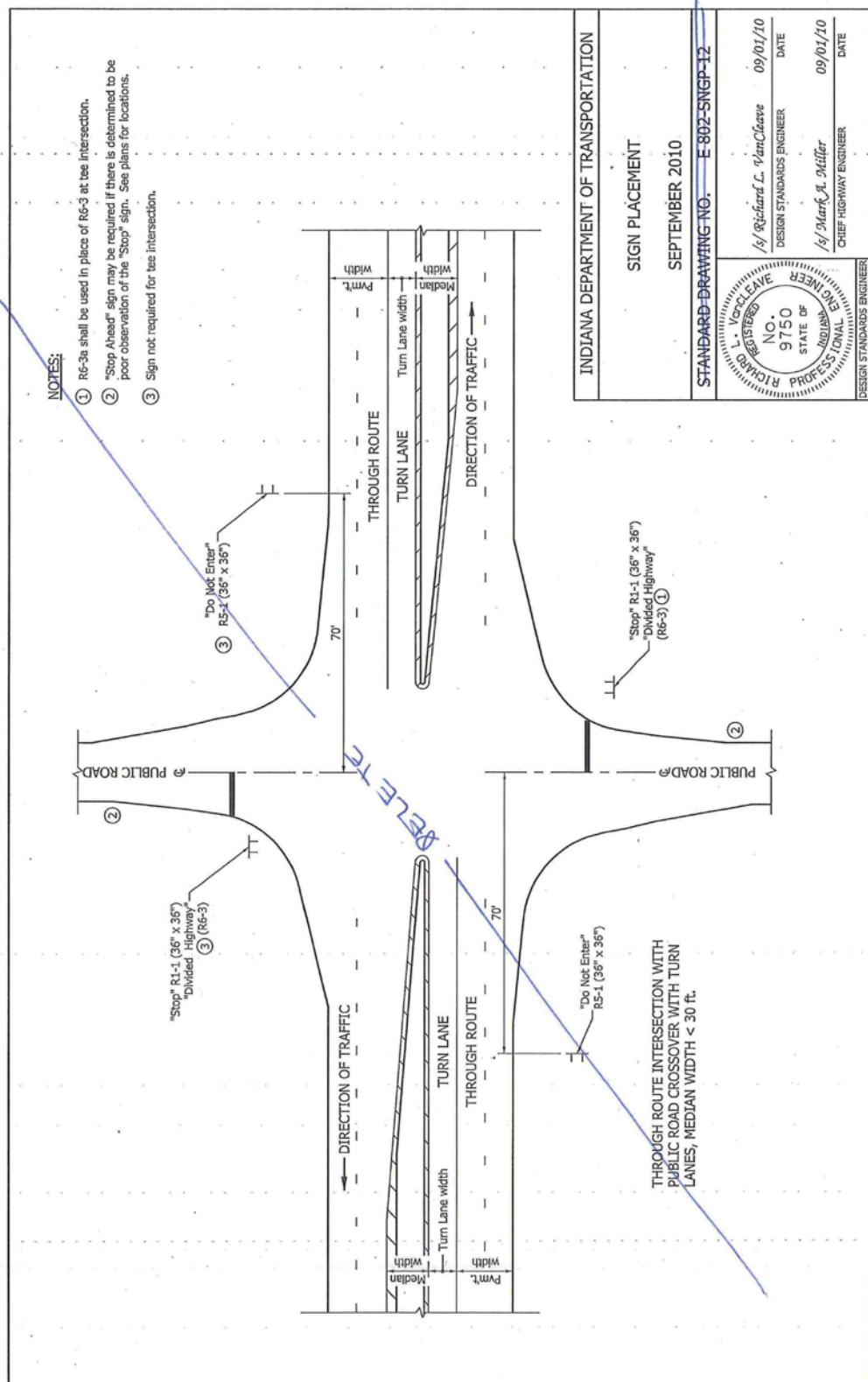
REVISION TO STANDARD DRAWINGS

802-SNGP-11 SIGN PLACEMENT (WITH MARKUPS)



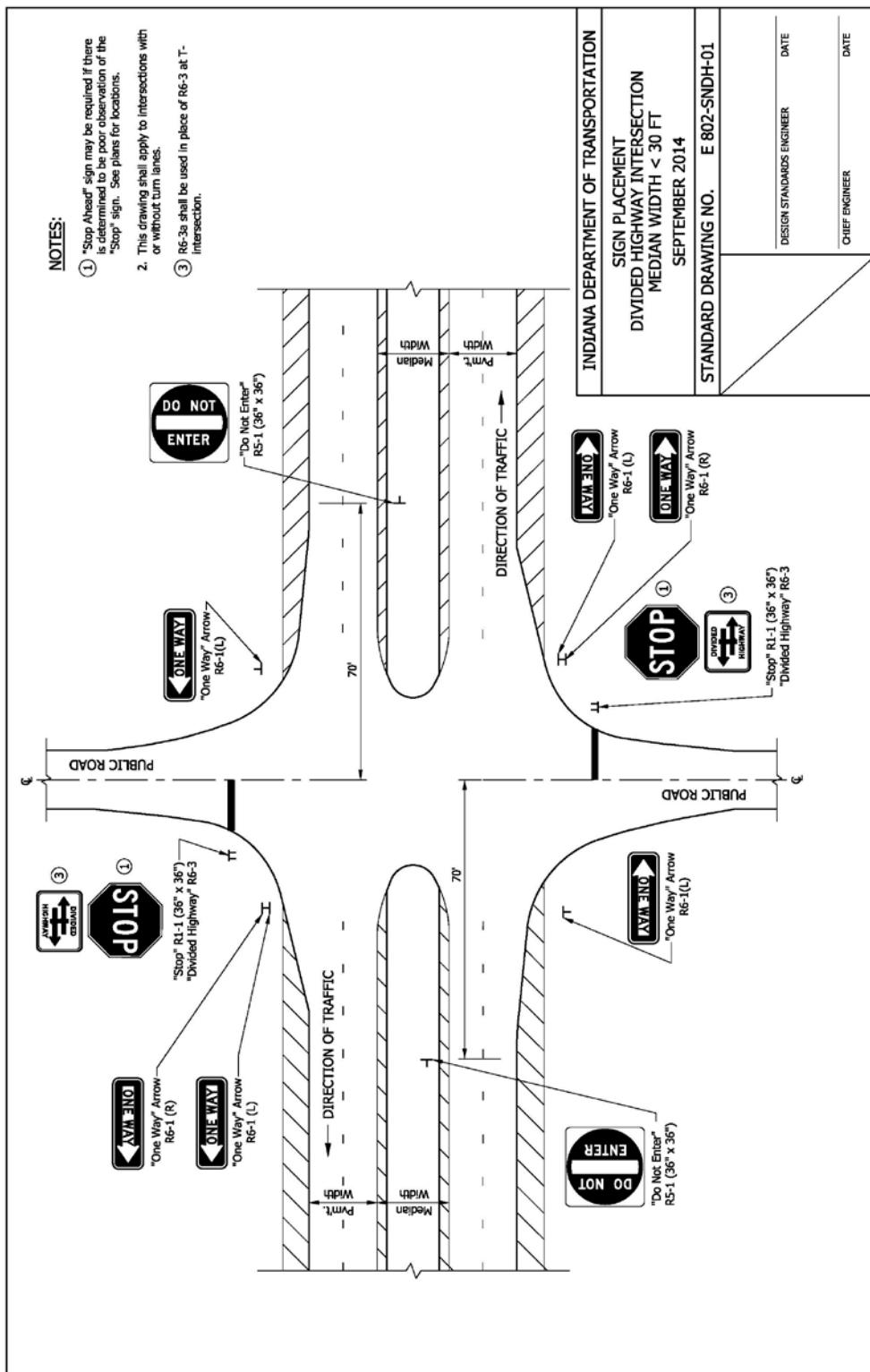
REVISION TO STANDARD DRAWINGS

802-SNGP-12 SIGN PLACEMENT (WITH MARKUPS)



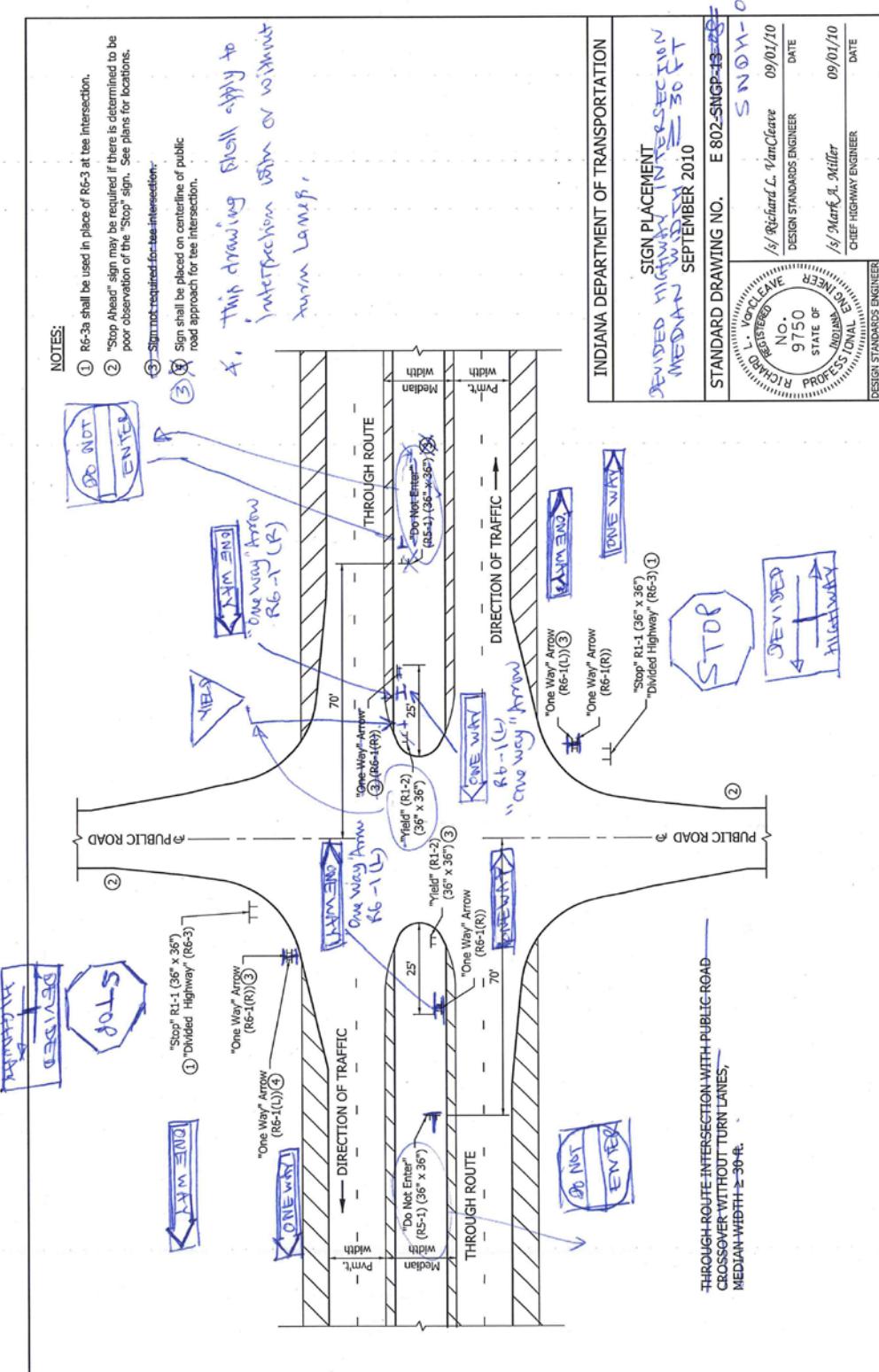
REVISION TO STANDARD DRAWINGS

802-SNDH-01 SIGN PLACEMENT DIVIDED HIGHWAY INTERSECTION MEDIAN WIDTH < 30 FT (DRAFT)



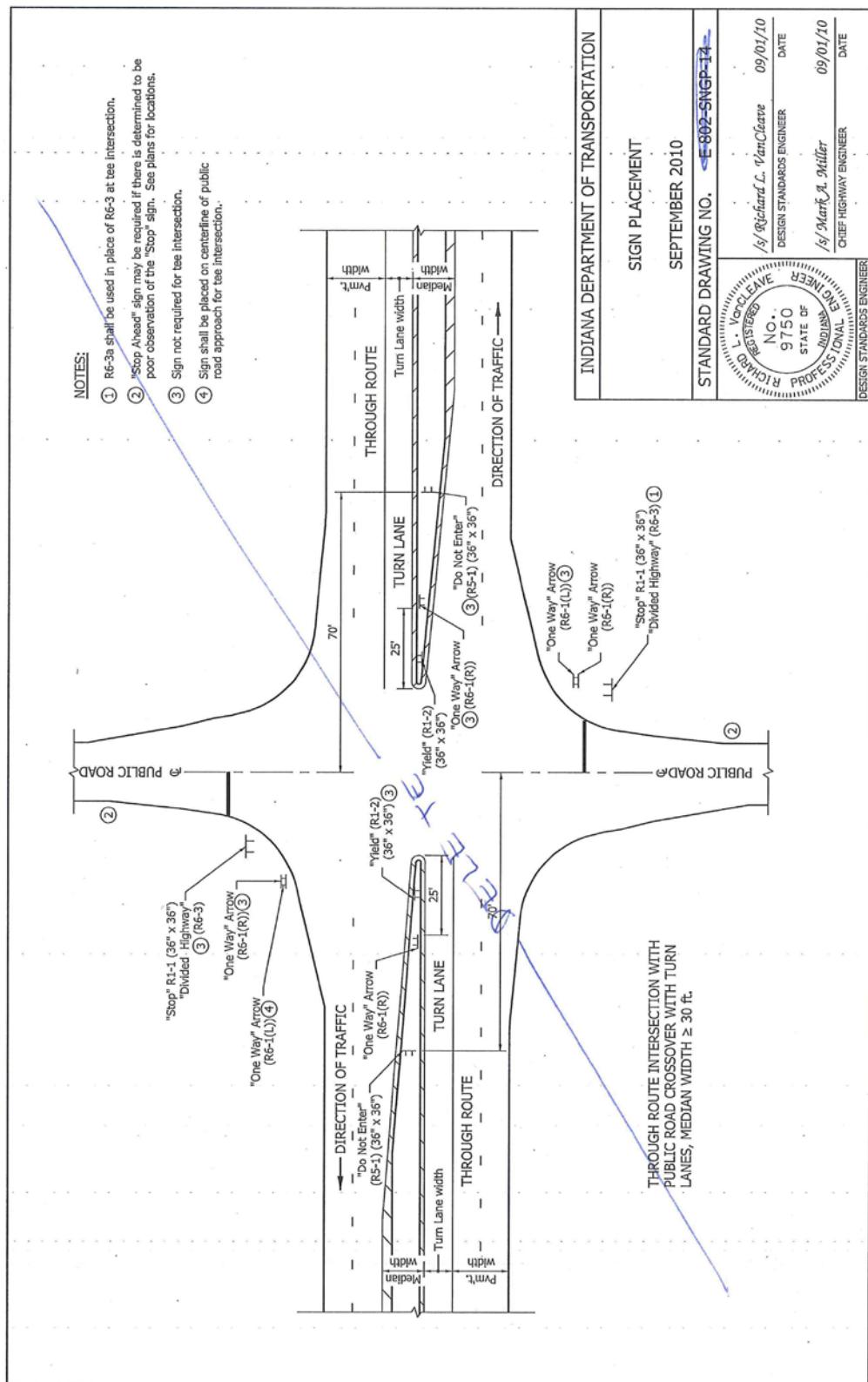
REVISION TO STANDARD DRAWINGS

802-SNDH-13 SIGN PLACEMENT (WITH MARKUPS)



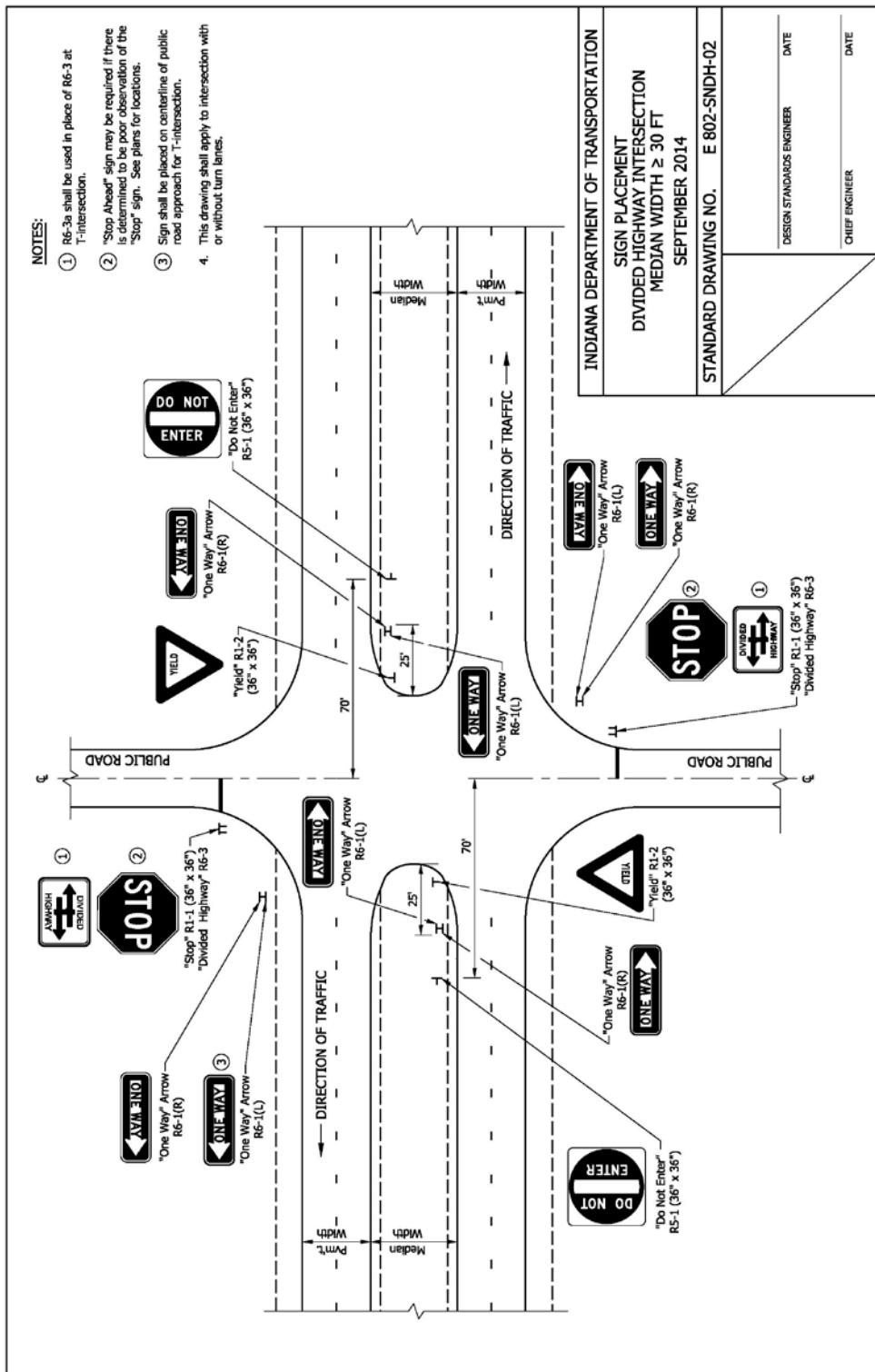
REVISION TO STANDARD DRAWINGS

802-SNGP-14 SIGN PLACEMENT (WITH MARKUPS)



REVISION TO STANDARD DRAWINGS

802-SNDH-02 SIGN PLACEMENT DIVIDED HIGHWAY INTERSECTION MEDIAN WIDTH
 > 30 FT (DRAFT)



Item No.02 03/20/14 (2014 SS) (contd.)
Mr. Boruff
Date: 3/20/14

COMMENTS AND ACTION

STANDARD DRAWINGS 802-SNGP 01 THRU -14; 802-SNDH-01 AND -02

Motion:	Action:
Second:	<input type="checkbox"/> Passed as Submitted
Ayes:	<input type="checkbox"/> Passed as Revised
Nays:	<input type="checkbox"/> Withdrawn
<hr/>	
Standard Specifications Sections affected:	<input type="checkbox"/> 2016 Standard Specifications Book
Recurring Special Provision possibly affected:	
Standard Sheets affected:	
Design Manual Sections affected:	
GIFE Sections cross-references:	
Received FHWA Approval? _____	