



THURSTON COUNTY

W A S H I N G T O N

SINCE 1852

PUBLIC WORKS DEPARTMENT

SIGN AND MARKING PROCEDURES AND GUIDELINES

2022

FORWARD

The Revised Code of Washington (RCW) 47.36, Traffic Control Devices, requires the Washington State Department of Transportation (WSDOT) to adopt uniform standards for traffic control devices installed along state highways. The law also requires that traffic control devices along county roads fully conform to these adopted standards.

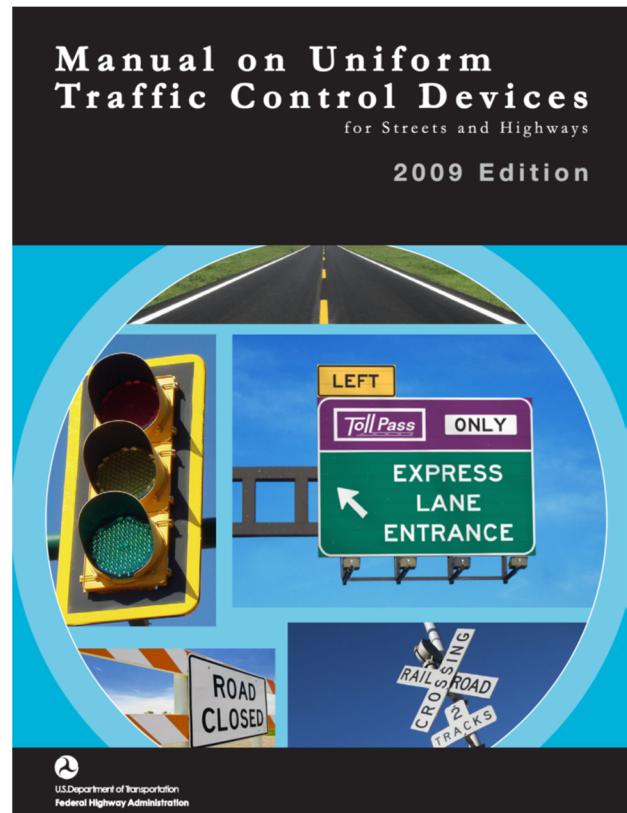
The Washington Administrative Code, WAC 468-95-010, officially adopted the Manual on Uniform Traffic Control Devices (MUTCD). The Washington state secretary of transportation duly adopted this document published by the Federal Highway Administration and approved by the Federal Highway Administrator as the national standard for all highways open to public travel. The manual includes in part many illustrations, some of which depend on color for proper interpretation.

The purpose of the following is to supplement the adopted standards for use at the local level. As intended by state law these procedures and guidelines are intended to promote uniformity in the installation and design of traffic control devices in Thurston County (TC).

These guidelines and procedures are not intended to provide for all situations but to be flexible in form and content. They are intended to assist but not substitute for competent work by design professionals.

This document was developed by the Transportation Engineering and Operations Division of the Public Works Department and staff can be contacted by called 360-867-2300 and are located at 9605 Tilley Road SE, Olympia WA 98512.

The following procedures and guidelines are for use by public and private entities for the purposes of designing and installing traffic control devices within Thurston County.



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GENERAL REQUIREMENTS

All traffic control devices shall be designed, manufactured, and installed in accordance with the Manual on Uniform Traffic Control Devices, the Washington State Department of Transportation (WSDOT) Sign Fabrication Manual, WSDOT Standard Specifications, WSDOT Standard Plans and County policies, procedures and guidelines. If conflicts arise between these procedures and the most current MUTCD the most current MUTCD adopted by the State of Washington will apply.

SIGNS

SIGN SIZES

The following represent minimum sizes for use on roads within Thurston County and applies to new or replaced signs. MUTCD as adopted by the State of Washington may have larger sizes for specific uses, signs, or types of roadways.

LARGER SIGNS MAY BE REQUIRED AND THE USER WILL NEED TO REVIEW THE MUTCD AND WASHINGTON STATE AMENDMENTS DURING THE SIGN SELECTION PROCESS TO ENSURE THE PROPER SIGN SIZE IS SELECTED.

Note: Some existing signs may not match the sizing referenced herein. Those signs will be updated as part of capital projects, development related improvements or at the end of the normal service life of the sign.

Regulatory Signs			
Sign or Plaque	Sign Designation	Reference	Size (Minimum) ¹
Stop Sign	R1-1	MUTCD/TC	30"

¹ Sign size is based on sign location. 30" signs shall be used internal to developments and at intersections with roadways less than 30 mph, otherwise 36" shall be used

School Area Signs			
Sign or Plaque	Sign or Plaque	Sign or Plaque	Sign or Plaque
School	School	School	School
School Bus Stop or Turn Ahead	S3-1 & S3-2	MUTCD	36"x36"

Warning Signs			
Sign or Plaque	Sign Designation	Reference	Size (Minimum)
Chevron Alignments	W1-8	MUTCD	24"x30"
All Diamond Warning Signs		MUTCD	36"x36"
Dead End w/ arrow (plaque)	W14-1p	WSDOT	36"x12"
No Outlet w/ arrow (plaque)	W14-2p	WSDOT	36"x12"
Downward Diagonal Arrow	W16-7p	WSDOT	30"x18"
Advanced Street Name (1-line)	W16-8p or D3-201	MUTCD/WSDOT	Varies x 12"
Ahead (plaque)	W16-9p	MUTCD	30"x18"

Street Name Signs¹			
Sign or Plaque	Sign Designation	Reference	Size (Minimum)
Overhead	D3	MUTCD	Varies x 24"
Multi-Lane Roads	D3	MUTCD	Varies x 15"
2-lane conventional Roads (post mounted)	D3	MUTCD	Varies x 12"
Residential Subdivisions (post mounted)	D3	MUTCD	Varies x 9"
Historical Street Names	D3-Historical	Thurston County	Varies x 9"

1 Contact Traffic Engineer or designee for street name signs that require or need multiple road names.

SIGN SHEETING TYPE AND COLOR

SIGN SHEETING

The values in the following table represent minimum sheeting types to be used for materials. Exceeding these specifications is acceptable. This is applicable only to new permanent sign installations or replacement of existing permanent signing.

Retroreflective Sheeting Materials (min.)		
Sign or Plaque	Sign Designation	ASTM D4956-09 Specification
Overhead	All	XI
Ground Mounted	All excepted as noted below	IV
School Zone	S-Series & W16-Series Placards (i.e., W16-7p, W16-9p, etc....)	XI
Bicycle, Trail Crossing, Pedestrian and Playground Signs	W11-1, W11-2, W11-15, W15-1 & W16-Series Placards (i.e., W16-7p, W16-9p, etc....)	XI

SIGN COLOR

The values in the following table represent sheeting color types for specific signing applications. This is applicable only to new permanent sign installations.

Sign Colors		
Sign or Plaque	Sign Designation	Color
School Zone	S-Series & W16-Series Placards (i.e., W16-7p, W16-9p, etc....)	Florescent Yellow/Green
Bicycle, Trail Crossing and Non-Vehicular Warning Signs	W11-1, W11-2, W11-15, W15-1 & W16-Series Placards (i.e., W16-7p, W16-9p, etc....)	Florescent Yellow/Green

SIGN MOUNTING MATERIALS AND APPLICATION

For larger signs where a single post is not sufficient, timber or steel post and anchor systems shall be used. See WSDOT Standard Plan Details G22.10-04 and G24.40-07. All multi-post systems must be approved by the County Traffic Engineer prior to installation.

Tops of all foundations shall be finished to the final ground line unless otherwise shown in the plans or staked by engineer.

SIGN APPLICATIONS -POSTS/BASES

Posts/Bases by Installation Type			
Installation Type	Part	Materials	Reference
Single-Post Installation	Post	2.5" Square perforated steel tube (12 gauge)	WSDOT Standard Specification 9-06.16
	Base ¹ – in native surfaces	Precast Concrete Base	See County Details
		3" Square Steel Tube (7 gauge) 36" length (4" exposed) Option: 24" length (4" exposed) ²	See County Details & WSDOT Standard Specification 9-06.16
	Base – in hardscaped areas	Slip base – SB-3A	WSDOT Standard Plans G-24.40-07 and WSDOT Standard Specification 9-06.16

Posts/Bases by Installation Type			
Installation Type	Part	Materials	Reference
Multi-Post Installation	Post	Contact Traffic Engineer's Office	WSDOT Standard Specification 9-06.16
	Base – in native surfaces	Precast Concrete Base	See County Details
		3" Square Steel Tube (7 gauge) 36" length (4" exposed) Option: 24" length (4" exposed) ²	See County Details & WSDOT Standard Specification 9-06.16
	Base – in hardscaped areas	Slip base – SB-3A	WSDOT Standard Plans G-24.40-07 and WSDOT Standard Specification 9-06.16
Banded to Post Installation - For use when attached to streetlight posts.	Hardware	Stainless steel clamps, brackets, bolts, bands, washers etc.	See County Details
Wood Post Installation – For use in temporary/construction situations	Post	Contact Traffic Engineer's Office	WSDOT Standard Plan G-22.10-04 & WSDOT Standard Specification 9-28.14(1)
	Base – Direct Bury	Compacted Native Backfill	WSDOT Standard Plan G-22.10-01, G-22.10-02 & WSDOT Standard Specification 9-28.14(1)

1 Flat face on base should face traffic

2 24" option for use with small signs and site-specific applications only

SIGN AND MOUNTING MATERIALS

Signs, Post and Mounting Materials		
Description	Materials	Reference
Signs	0.125 Aluminum Alloy (signs larger than 36") 0.080 Aluminum Alloy (signs 20"-36") 0.063 Aluminum Alloy (signs below 20")	WSDOT Standard Specifications 9-28.8
	Standard radius on all corners, standard holes (centered top and bottom), ³	
Hardware	5/16" washers, 5/16" stainless steel bolts, aluminum rivets, etc.	WSDOT Standard Specification 9-06.16

3 Except for Chevrons

VISI-SHIELD ON POST

Visi-shields shall be placed on sig posts only at the recommendation of the County Traffic Engineer. These locations shall have a recorded crash history.

Visi-Shield Materials		
Description	Materials	Reference
Visi-Shield	Type IV sheeting on 0.020 Aluminum Alloy Type XI sheeting on 0.020 Aluminum Alloy ¹	ASTM D4956-09 Specification

1 Type XI sheeting for use with fluorescent yellow/green signs

SIGN PLACEMENT

Sign placement shall conform to the MUTCD and/or as directed by the Thurston County Traffic Engineer or designee.

Signs are not to be located within the sidewalk without approval of the engineer. If signs are in the sidewalk they shall be placed at the back of the walkway unless determined otherwise and approved by the engineer.

Street name signs are typically posted at all intersections and on all sides of the post and attached with a minimum of two rivets. For example, each street name will have two sign blades mounted to either side of the post. See details for further information. Double sided road name signs mounted on post caps are NOT allowed.

All posts shall be installed in a straight and plumb position.

STREET NAME SIGN REQUIREMENTS

Description	Requirements
Lettering Style	Mixture of upper- and lower-case Letters
Lettering Type	Alphabet B
Background Color	Green for public Roads Blue for Private Roads (lanes)
Legend (lettering or copy) & Boarder Color	White, 1/2"

Road naming shall comply with Chapter 13.44 of the Thurston County Code. The Thurston County Addressing Official shall approve all street names, block numbers and addresses. Please call 360-786-7590 to begin the process. The addressing official will need a site plan of the proposed project with proposed road names clearly identified.



PRIVATE ROAD SIGNING



Thurston County does not furnish, install, or maintain stop signs or street name signs for private roadways that intersect with county roads. Citizens may install their own signs at such intersections, in accordance with the MUTCD and applicable county standards and policies (Public Works Policy 809)

FUTURE ROAD EXTENSIONS

Road stub outs in new subdivisions intended to be extended in the future should have a sign installed indicating the intent to extend the roadway. See County Details.

END OF COUNTY ROAD SIGNING

End of County Road Signs are used to mark the end of the publicly maintained portion of a roadway. Typically, they would be considered for installation in instances where there is no appreciable difference in the physical makeup of the roadway or at the discretion of the Traffic Engineer or designee.

SPEED LIMIT SIGNS

SPEED LIMIT AND RESTRICTIONS

See Chapter 12.105 of the Thurston County Code

RESIDENTIAL DEVELOPMENTS OR PLATTED SUBDIVISIONS

Speed Limit signs are generally only posted at the entry points to the subdivision.

WARNING SIGNS

DEAD END SIGNS

The Dead-End sign may be used at the entrance of a single road or street that terminates in a dead end or cul-de-sac. If used, the W14-1a (i.e., placard) shall be used unless otherwise specified.

NO OUTLET SIGNS

The No Outlet sign may be used at the entrance to a road or road network from which there is no other exit. In these instances, Dead End signs would not be used on the road network beyond the No Outlet Sign. If used the 14-2a, (i.e., placard) shall be used unless otherwise specified.

PAVEMENT MARKINGS

STRIPING

Long line striping shall have a 5" gap between parallel yellow lines.

RAISED PAVEMENT MARKERS

Raised or recessed reflective pavement markers are typically only installed on arterial and collector roadways to supplement existing painted markings. When used the spacing is as follows:

Centerline – 80' Rural, 40' Urban

Changes in alignment (i.e., horizontal or vertical curves) – 20'

Turn lanes/Gore/Tapers/Transitions – 10'

Wide Lines – 10'

Adjacent Medians (raised or painted) – 10'

Two-way-left-turn-lanes (TWLTL) – 40'

STOP LINES

Stop lines shall be used in the following situations:

- At all approaches to signalized intersections
- On all approaches to multi-way stop intersections
- On all approaches where channelization exists
- At railroad crossings as required by the MUTCD
- Stop lines may be required at other locations as directed by the County Traffic Engineer or when otherwise required by the MUTCD.

When used stop lines shall be solid 24" white lines at intersections with collectors and arterials roadways, signalized intersections, multi-way stops and approaches with channelization, otherwise 12" stop lines are acceptable.

CROSSWALKS

Crosswalk markings, when required, shall be longitudinal (parallel to traffic flow) lines (see figure 3B-16 in the MUTCD).

Other pavement markings required for projects shall also match requirements of the MUTCD as adopted by the State of Washington, current versions of WSDOT Standard Plans and Standard Specifications and/or as directed by the Thurston County Traffic Engineer.

ARROWS

Arrow symbols for High-Speed Roadways, per WSDOT Standard Plan M-24.20-02, shall be used on all roadways requiring arrow channelization.

PAVEMENT MARKING MATERIALS

Materials shall be from approved materials listed in the Washington Department of Transportation (WSDOT) Qualified Products List (QPL), unless otherwise specified.

Pavement Marking Materials		
Description	Materials	Reference
Long Line Striping (i.e., Yellow centerline and white edge line)	Low Voc Waterborne Paint	WSDOT Standard Specifications 9-34.2(5).
Dashed, Dotted Lines and Wide Lines in Channelized Areas, painted islands, lines adjacent to raised islands or curbing.	WSDOT Extruded Type A or Type B Pre-Formed Fused Thermoplastic	WSDOT Standard Specifications 9-34. Accepted Materials for Type B is Premark® by Flint Trading Company
Traffic symbols, stop lines, crosswalks, or similar type markings	Type B Pre-Formed Fused Thermoplastic	WSDOT Standard Specification 9-34.3(2)
	Skid Resistance (use on all symbols, stop bars or similar type markings)	
Raised Rumble Bars	WSDOT Type B Heat Fused Plastic	Use Premark® Rumble Bars by Flint Trading Company.

ITS DEVICES

SCHOOL BEACON SYSTEMS

Signing within an established school zone shall conform with Chapter 7 of the MUTCD. The following table outlines the requirements of the flashing beacons used when a School Speed Limit (S5-1) sign is included within the established school zone.

School Beacon Specifications	
Manufacture	TAPCO – Traffic and Parking Control Co., Inc
Beacon Type ¹	Three Amber Beacons: Two 12" Beacons in front and one 8" Beacon in back

¹ Beacon Type may be altered based on engineering judgement and if approved by the Traffic Engineer

RRFB CROSSING SYSTEMS

At crossings where RRFB crossing equipment has been approved by the Traffic Engineer, the equipment shall meet the requirements outlined in the table below.

RRFB Crossing Specifications	
Manufacture	TAPCO – Traffic and Parking Control Co., Inc
Flasher Type	Back to Back RRFB Amber light bars

When a crossing is located within a school zone, the Traffic Engineer will use engineering judgement to determine if equipment should be included that would allow the School Beacons to communicate with the RRFB's as further warning to the public of the crossing.

TRAFFIC CALMING

See Policy Public Works Policy 816

TRAFFIC CONTROL DEVICES PLANS

For projects requiring an engineered plan, traffic control devices plans shall be prepared by an engineer, licensed in the State of Washington, and contain the following elements:

Show locations of all traffic control devices on a sheet(s) designated for this purpose (markings, signs, etc....).

Provide a traffic control devices schedule that will clearly identify the type of device, location, and material requirements. For signs this would also include street names, block numbers, quadrant, and size.

For projects that do not require engineered plan, a simplified approach may be used as follows:

If the roadway to be named runs north/south or nearly so, then submit a written street name and assignment of addressing request to the addressing official.

Upon acceptance the Addressing Official and Public Works will provide a completed form with information necessary to order and install any required signing (see exhibits for an example).

If the roadway to be named runs east/west or nearly so, then submit a written request for addressing assignment and road number. Upon acceptance the Addressing Official and Public Works will provide a completed form with information necessary to order and install any required signing (see exhibits for an example).

Road naming shall comply with **Chapter 13.44** of the Thurston County Code. The Thurston County Addressing Official shall approve all street names, block numbers and addresses. Please call 360-786-7590 to begin the process. The addressing official will need a site plan of the proposed project with proposed road names clearly identified.

PLEASE NOTE ALL PUBLIC ROADS IN NEW DEVELOPMENTS SHALL BE NAMED REGARDLESS OF THE NUMBER OF LOTS SERVED.

The approved street names and other traffic control devices shall appear on the record drawings certified by the design engineer.

A note shall be added to this plan sheet requiring a pre-construction conference prior to installation.

REFERENCES

Manual on Uniform Traffic Devices: Hard copies or CD Versions of the Manual on Uniform Traffic Devices and cost information are available from the following organizations:

American Association of State Highway Organizations at:

<https://bookstore.transportation.org/>

Institute of Traffic Engineers at:

http://ecommerce.ite.org/IMIS/iCommerce/Bookstore/Search_BookStore/iCommerce/Orders/SearchBookStore.aspx

American Traffic Safety Services Association at: <http://www.atssa.com/>

Washington Department of Transportation Publications. Copies of WSDOT publications may be downloaded at by visiting their website at <http://www.wsdot.wa.gov/publications/manuals/>

Sign Fabrication Manual

Standard Plans

Standard Specifications for Road, Bridge and Municipal Construction

Qualified Product List

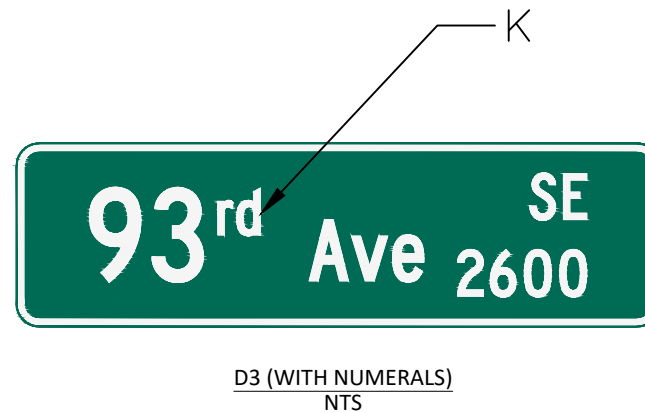
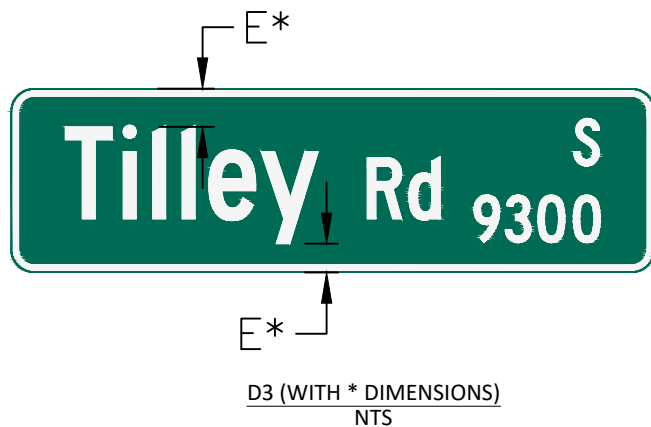
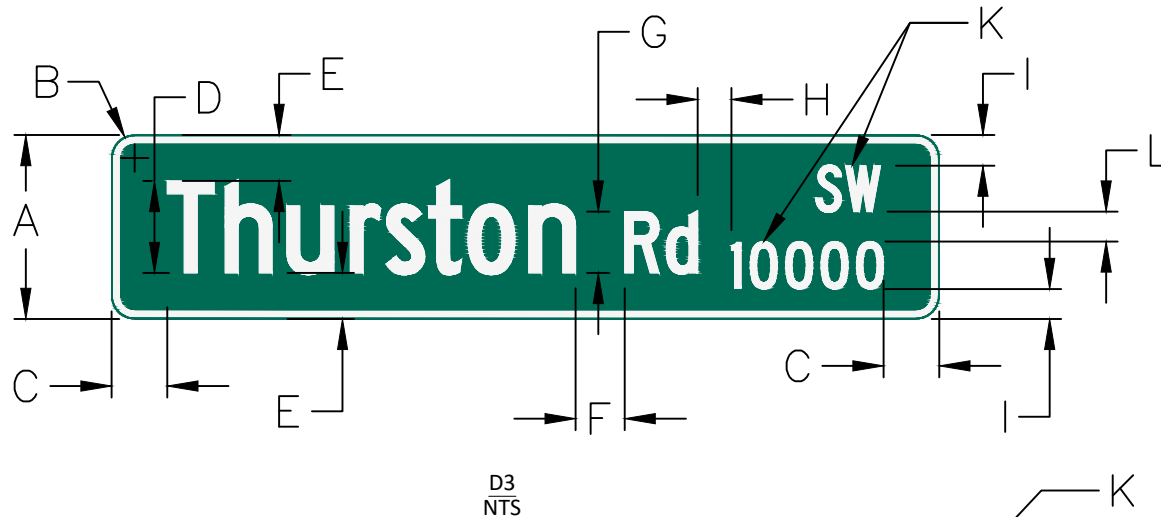
Washington State Administrative Code, WAC 468-95.

Revised Code of Washington, RCW 47.36.

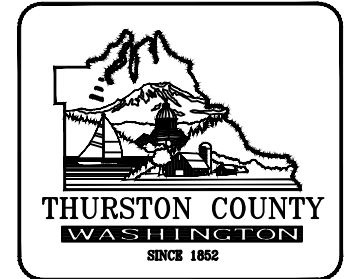
Thurston County Code, 13.44TCC. The county code may be viewed at
[Code of Ordinances | Thurston County, WA | Municode Library](#)

Thurston County Road Standards. The county road standards may be viewed at
[Thurston County Road Standards \(thurstoncountywa.gov\)](#)

EXHIBITS



REVISIONS	DATE



THURSTON COUNTY
PUBLIC WORKS

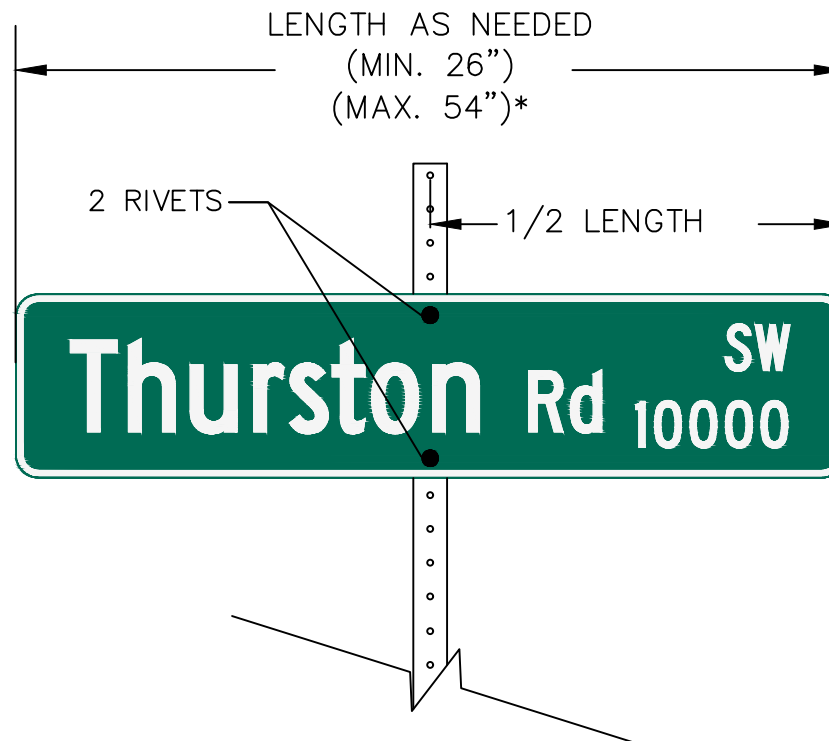
STREET NAME
SIGNS

SHEET 1 OF 13
NOT TO SCALE

JUNE 2022



D3 12-INCH HIGH (WITH ARROW, 6" B-FONT)
NTS



* WIDTH CAN NOT EXCEED 54" WITHOUT
APPROVAL FROM THE ENGINEER.

TYPICAL SIGN INSTALLATION DETAIL
NTS

REVISIONS	DATE



THURSTON COUNTY
PUBLIC WORKS

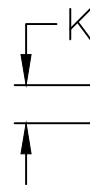
STREET NAME
SIGNS

SHEET 2 OF 13
NOT TO SCALE

JUNE 2022

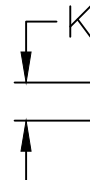


D3 15-INCH HIGH
NTS



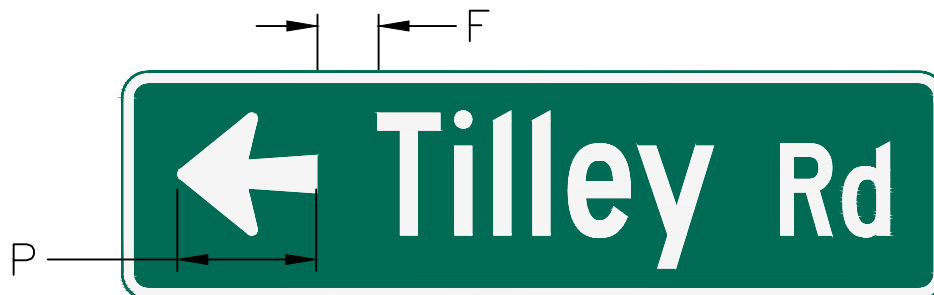
Nunn Rd
Historical Name

D3 9-INCH HIGH (HISTORICAL)
NTS
NOTE: BROWN BACKGROUND



Springer Rd
Historical Name

D3 12-INCH HIGH (HISTORICAL)
NTS
NOTE: BROWN BACKGROUND



D3 15-INCH HIGH
NTS
NOTE: ARROWS AS REQUIRED BY ENGINEER

REVISIONS	DATE



THURSTON COUNTY
PUBLIC WORKS

STREET NAME
SIGNS

SHEET 3 OF 13

NOT TO SCALE

JUNE 2022

STREET SIGN DIMENSION TABLE (INCHES)

SIGN TYPE	A (SIGN HEIGHT)	B (RADIUS)	BORDER WIDTH	C (HORIZ. GAP)	D (TEXT HEIGHT)	E (VERT. GAP)	E* (VERT. GAP)	F (SPACING)
D3 9-INCH HIGH #	9	1 ½	½	(**)	4	2 ½	1 ½	(***)
D3 12-INCH HIGH	12	1 ½	½	(**)	6	3	2	(***)
D3 15-INCH HIGH	15	1 ¾	¾	(**)	8	SEE I AND I*	SEE I AND I*	(***)
D3 (OVERHEAD)	21	3	1	(**)	12	SEE I AND I*	SEE I AND I*	(***)

FOR USE INTERNALLY WITHIN SUBDIVISIONS ONLY

STREET SIGN DIMENSION TABLE (INCHES), CONT.

SIGN TYPE	G (TEXT HEIGHT)	H (HORIZ. GAP)	I (VERT. GAP)	I* (VERT. GAP)	K (TEXT HEIGHT)	L (VERT. GAP)	M (VERT. GAP)	N (CHEVRON SIZE)	P (ARROW SIZE)
D3 9-INCH HIGH #	4	2	1 ½	N/A	2	2	N/A	N/A	N/A
D3 12-INCH HIGH	4	3	2	N/A	3	2	N/A	N/A	7
D3 15-INCH HIGH	6	3	3 ½	N/A	3	2	(****)	½ OF A OR A*	9
D3 (OVERHEAD)	9	4	4 ½	6	4	4	(****)	½ OF A OR A*	9

O:\DESIGN\Engineering\Manuals, Standards, Guidelines\Road Standards Drawings\StreetSign-DETAILS\June 2022 Update\StreetNameSigns-DETAILS-Rev2.dwg

REVISIONS

DATE

THURSTON COUNTY
PUBLIC WORKSSTREET NAME
SIGNS

SHEET 4 OF 13

NOT TO SCALE

JUNE 2022

Union Mills Rd ^{SE} 1000

D3 SIGN (OVERHEAD)
NTS

NOTE: BLOCK NUMBERS AS REQUIRED BY ENGINEER

NOTES FOR STREET NAME SIGNS:

(*) USE FOR TEXT THAT HAS LOWER CASE G, J, P, Q AND Y.

(**) DIMENSION SHOULD BE APPROX. THE SAME AS THE LETTER HEIGHT, AT MINIMUM NO LESS THAN ONE-HALF LETTER HEIGHT.

(***) SEE SPACING TABLE BELOW

(****) MINIMUM HALF OF THE LARGEST LETTER

C-FONT SERIES IS THE DEFAULT FONT FOR STREET NAME SIGNS. IF THE REQUIRED TEXT AND ARROWS CAN NOT BE ACCOMMODATED WITHIN THE 54" MAX WIDTH OF THE SIGN, THEN B-FONT SERIES SHALL BE USED IN ORDER NOT TO EXCEED THE 54" WIDTH.

DIVIDERS WIDTH, WHERE USED, SHALL BE SAME AS BORDER WIDTH.

SIGN EXAMPLES SHOWN HERE ARE NOT DRAWN TO SCALE, BUT TO ILLUSTRATE THE LAYOUT OF THE LEGEND ITEMS.

(***)

F=SPACING BETWEEN WORDS, D=LETTER HEIGHT

B-FONT SERIES	C-FONT SERIES
$F=0.531*D$	$F=0.625*D$

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DATE



THURSTON COUNTY
PUBLIC WORKS

STREET NAME
SIGNS

SHEET 5 OF 13

NOT TO SCALE

JUNE 2022

STREET SIGNS NOTES:

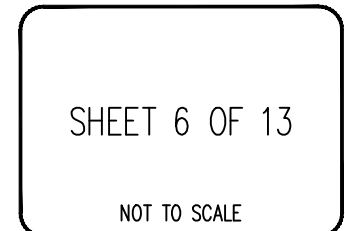
LETTERING REQUIREMENTS:

1. STANDARD LETTER SERIES "B" OR "C" FOR POST MOUNTED STREET NAME SIGNS.
2. USE STANDARD ROADWAY DESIGNATIONS AND AREA ABBREVIATIONS AS INDICATED.

SIGN MATERIAL REQUIREMENTS:

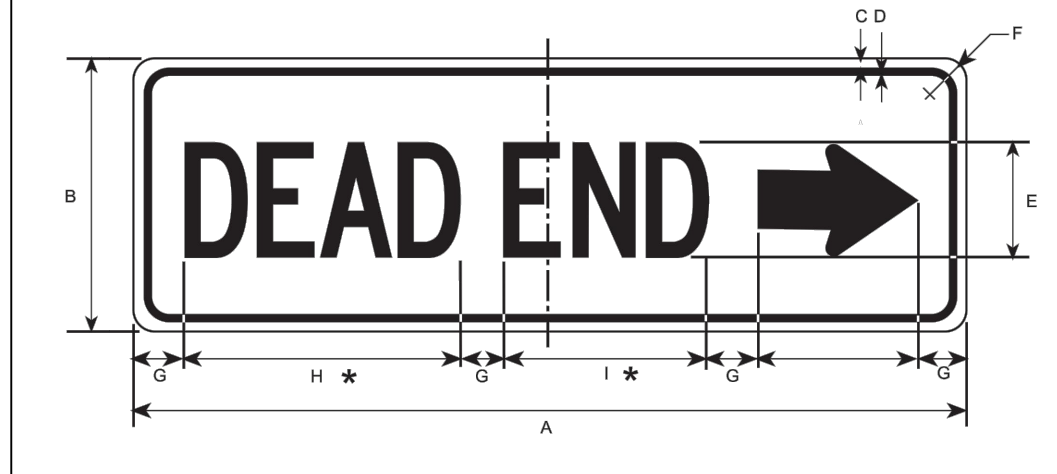
3. COLOR
 - 3.1 BACKGROUND
 - 3.1.1 GREEN FOR PUBLIC ROADS
 - 3.1.2 MEDIUM BLUE FOR PRIVATE ROADS
 - 3.2 LEGEND (LETTERING OR COPY) – WHITE
 - 3.3 BORDER (IF APPLICABLE) – WHITE
 4. ALUMINUM BLANKS
 - 4.1 GROUND AND OVERHEAD MOUNTED SIGNS SHALL BE CONSTRUCTED OF 0.125" ALUMINUM ALLOY PER WSDOT STANDARD SPECIFICATIONS SECTION 9–28.8 LATEST EDITION.
 5. BACKGROUND AND COPY
 - 5.1 GROUND MOUNTED SIGNS – TYPE IV SHEETING MICROPRISMATIC RETROREFLECTIVE MATERIAL
 - 5.2 OVERHEAD MOUNTED SIGNS – TYPE IX SHEETING MICROPRISMATIC RETROREFLECTIVE MATERIAL
- GENERAL NOTATIONS
6. ALL STREET SIGNS SHALL BE SINGLE SIDED WITH DOUBLE SIGN MOUNTING. SEE DOUBLE SIDED SIGN MOUNTING DETAIL FOR GROUND MOUNTED SIGNS. OVERHEAD SIGNS MOUNTING DETAILS PER WSDOT STANDARD PLAN G–30.10–00.
 7. ALL SIGNING MATERIALS AND HARDWARE SHALL CONFORM TO THE LATEST EDITIONS OF MUTCD AND WSDOT STANDARD SPECIFICATIONS.
 8. ALL HARDWARE AND FASTENERS SHALL BE STAINLESS STEEL UNLESS OTHERWISE SPECIFIED.
 9. STEEL SIGN POSTS AND SLEEVES SHALL BE SQUARE, PRE–PUNCHED, GALVANIZED STEEL TUBING, UNISTRUT, TELESAR OR APPROVED EQUAL FOUND IN THE WSDOT QUALIFIED PRODUCTS LIST (WSDOT QPL).
 10. FOR OVERHEAD ATTACHMENT DETAILS SEE THE LATEST EDITION OF WSDOT STANDARD PLANS.
 11. ENGINEER SHALL APPROVE FACE COPY PRIOR TO FABRICATIONS.

REVISIONS	DATE



W14-1P

4/99



W14-1P SIGN (WSDOT SIGN)

NTS

* SEE WSDOT SIGN FABRICATION MANUAL FOR ARROW DETAILS

*SPACING HAS BEEN REDUCED TO 50%

COLORS:

LEGEND - BLACK (NON-REFLECTIVE)

BACKGROUND - YELLOW (REFLECTIVE)

W14-1P DIMENSIONS (INCHES)

A	B	C	D	ARROW	E	F	G	H	I
36	12	1/2	3/4	4 X 5	5C	1 1/2	2	13	10

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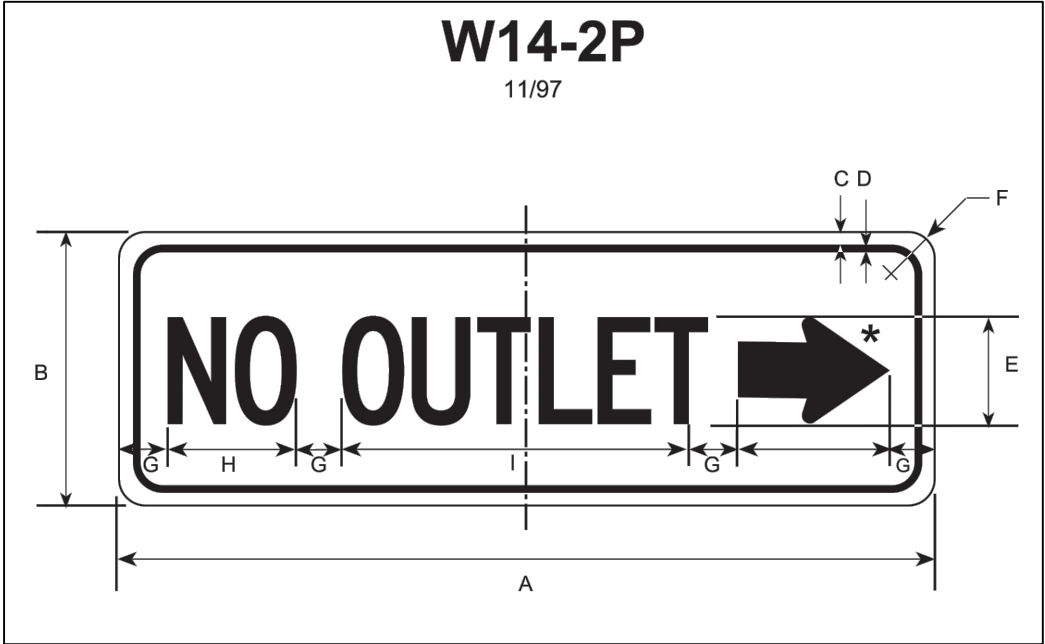
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W14-2P SIGN (WSDOT SIGN)
NTS
* SEE WSDOT SIGN FABRICATION MANUAL FOR ARROW DETAILS
SPACING HAS BEEN REDUCED TO 50%

COLORS:
LEGEND - BLACK (NON-REFLECTIVE)
BACKGROUND - YELLOW (REFLECTIVE)

W14-2P DIMENSIONS (INCHES)									
A	B	C	D	ARROW	E	F	G	H	I
36	12	1/2	3/4	4 X 5	5C	1 1/2	2	13	10

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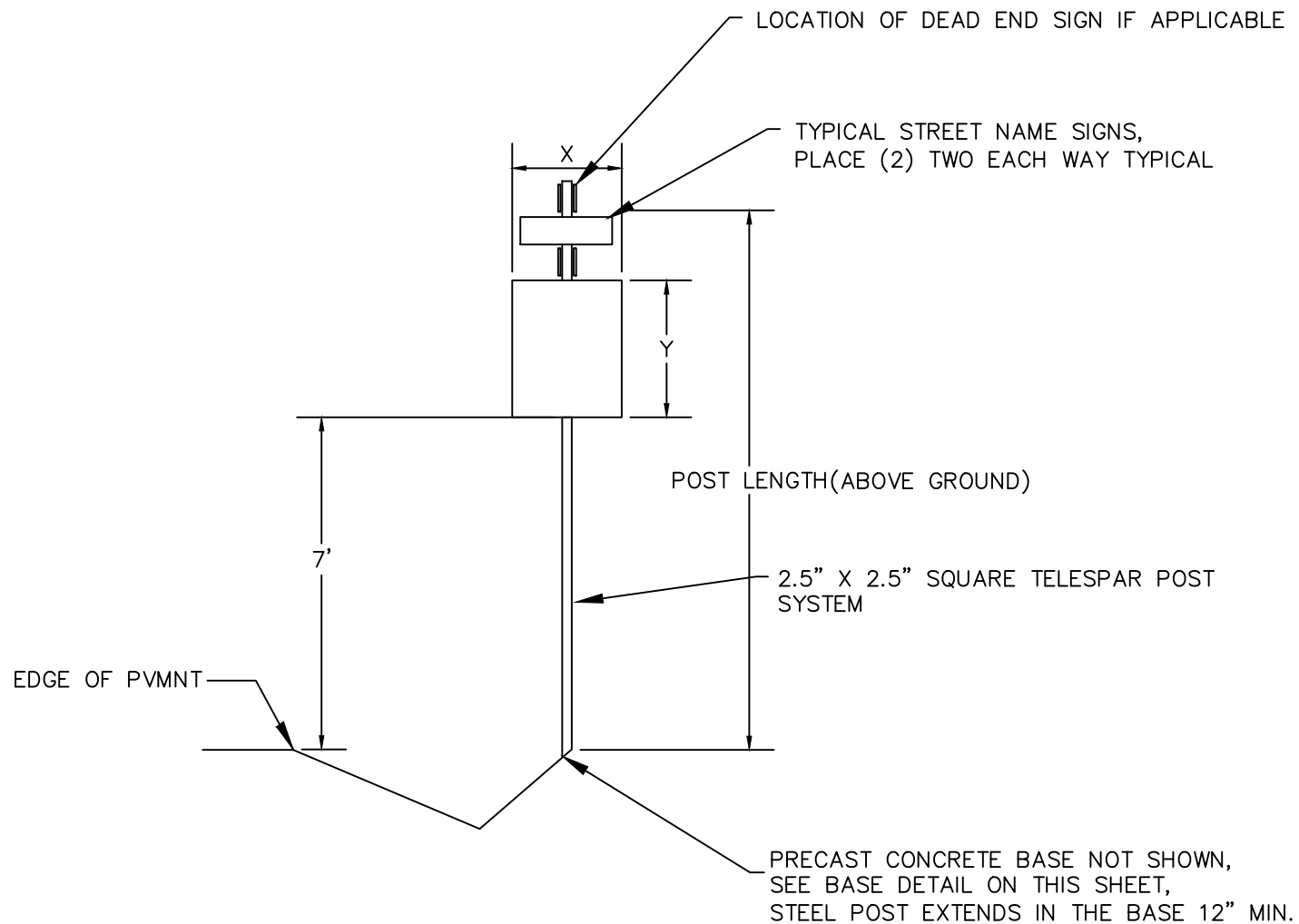
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2.5"X2.5" STEEL SQUARE POST - SIGN INSTALLATION DETAIL
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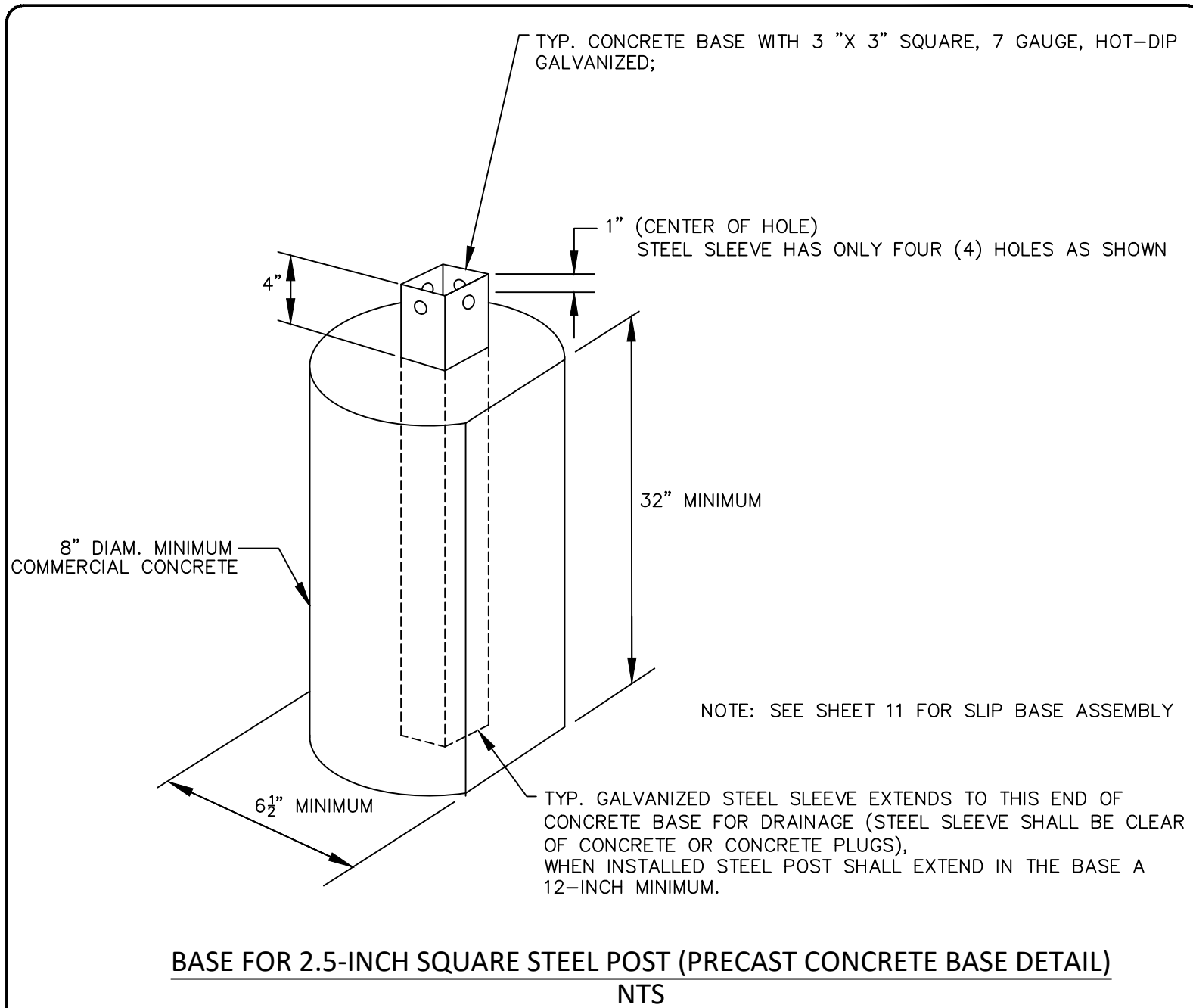
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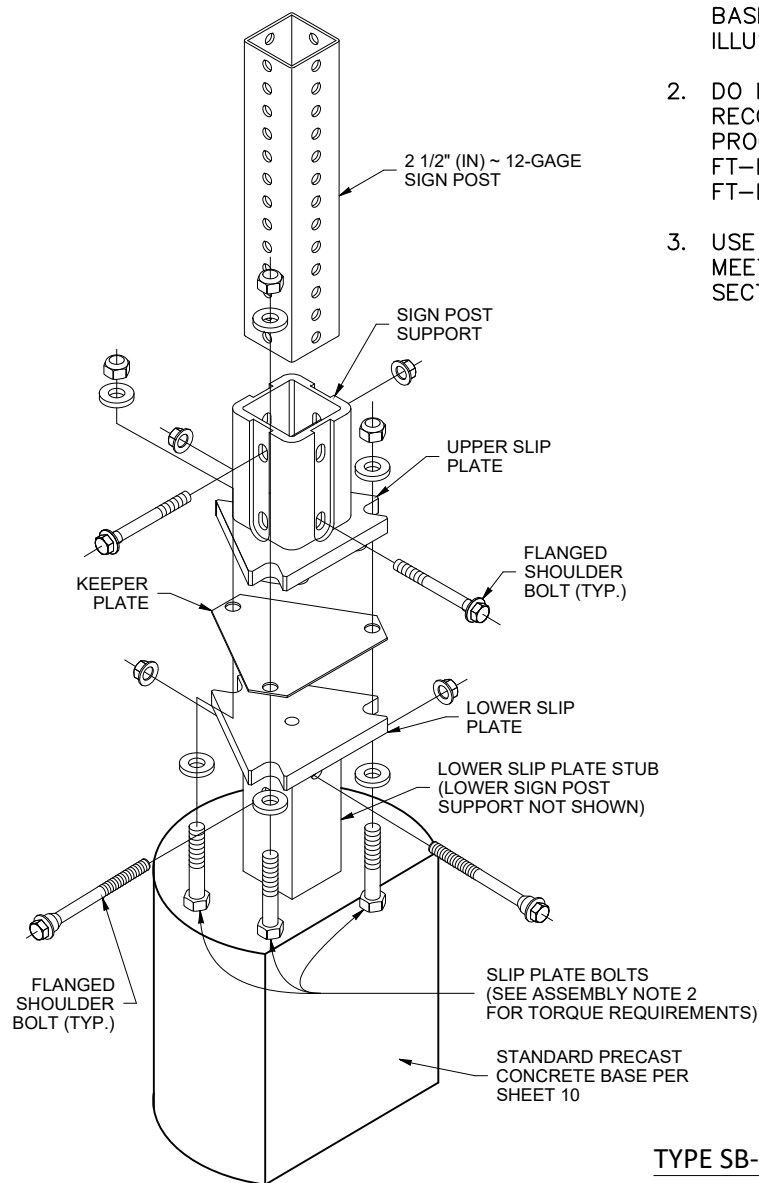
SHEET 10 OF 13

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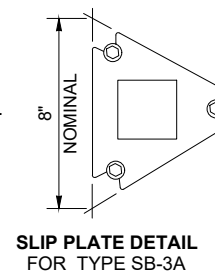
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ASSEMBLY NOTES

1. DIMENSIONS FOR THESE PARTS USED TO ASSEMBLE THE BASE CONNECTIONS ARE INTENTIONALLY NOT SHOWN. BASE CONNECTIONS ARE PATENTED, MANUFACTURED PRODUCTS THAT ARE IN COMPLIANCE WITH NCHRP 350 CRASH TEST CRITERIA. THE BASE CONNECTION DETAILS ARE SHOWN ON THIS PLAN ONLY TO ILLUSTRATE HOW THE PARTS ARE ASSEMBLED.
2. DO NOT TIGHTEN ANY SINGLE SLIP PLATE BOLT TO THE RECOMMENDED TORQUE BEFORE PRETIGHTENING THE OTHER BOLTS. PROGRESSIVELY TIGHTEN THE THREE SLIP PLATE BOLTS IN 10 FT-LB INCREMENTS, ALTERNATELY, TO A FINAL TORQUE OF 40 FT-LBS ON EACH.
3. USE ONLY SLIP BASE MAUFACTURER SUPPLIED HARDWARE THAT MEETS THE REQUIREMENTS OF WSDOT STANDARD SPECIFICATIONS SECTIONS 9-06 AND 9-28.



TYPE SB-3A SLIP BASE ASSEMBLY
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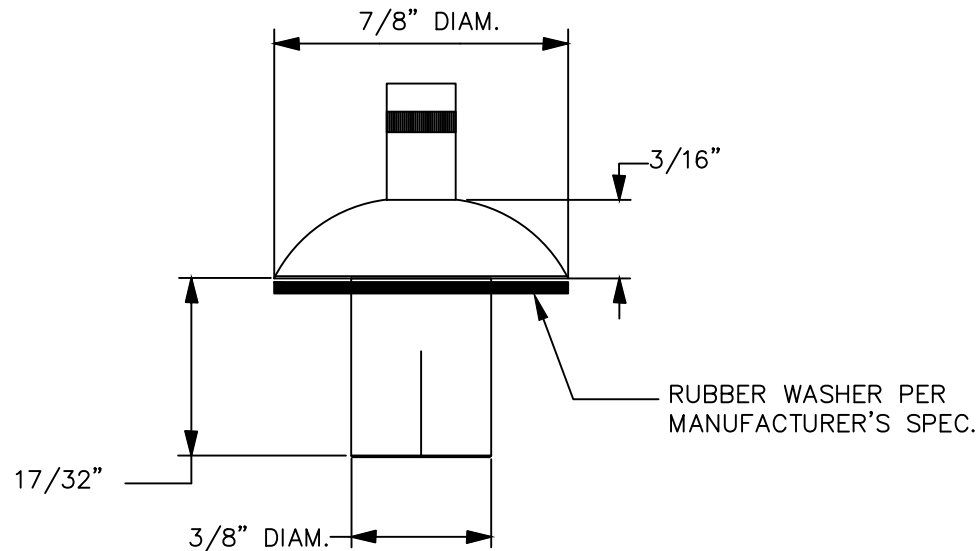
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CONSTRUCTION NOTES

1. FOR CODE REFERENCES AND STANDARD SIGN LAYOUT DETAILS SEE WASHINGTON STATE "SIGN FABRICATION MANUAL" AND MUTCD LATEST EDITIONS.
2. ALL SIGN INSTALLATION HARDWARE SHALL BE TAMPER-RESISTANT.
3. ALL STEEL POSTS SHALL BE 2.5" X 2.5" SQUARE, 12 GAUGE STEEL TUBE, TELESAR POST SYSTEM.



NOTE: 1) USE ALUMINUM DRIVE RIVETS TO FASTEN 2.5"x2.5" POST TO SLEEVE, SIGNS TO POST;

DRIVE RIVET MATERIAL: ALUMINUM

GRIP RANGE: NOMINAL 3/16" IN A 3/8" DIA HOLE

TYPICAL ALUMINUM DRIVE RIVET DETAIL

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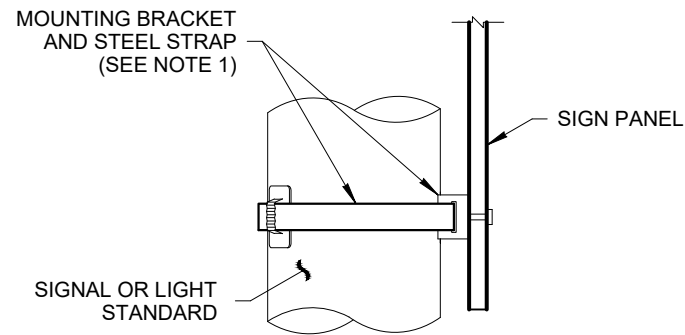
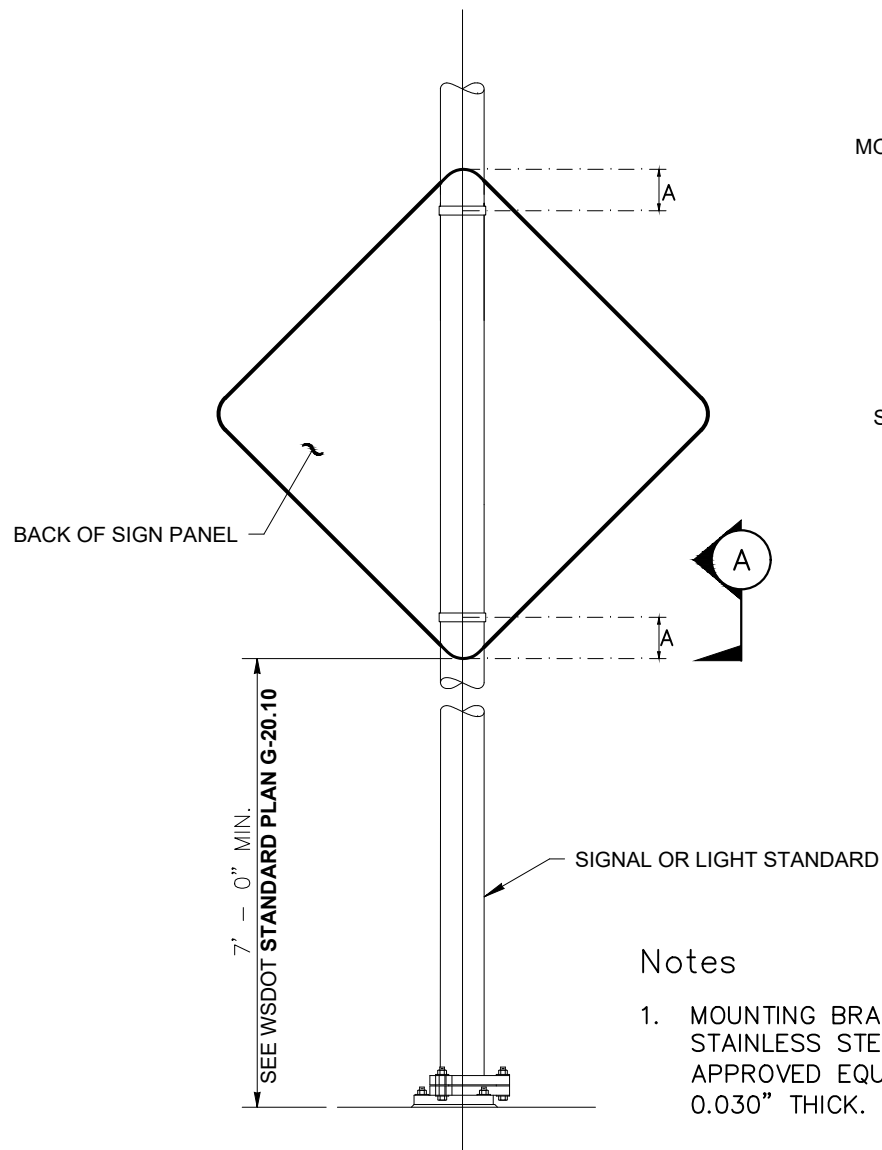
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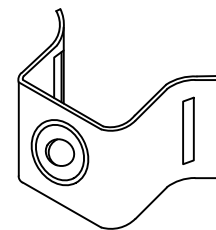
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SECTION A



MOUNTING BRACKET DETAIL

Notes

1. MOUNTING BRACKETS WITH STEEL STRAPS SHALL BE BAND-IT STAINLESS STEEL BAND AND BUCKLE SYSTEM PRODUCT OR AN APPROVED EQUAL. STEEL STRAPS SHALL BE 3/4" WIDE AND 0.030" THICK.
2. DISTANCE "A" VARIES.

SIGN INSTALLATION ON SIGNAL OR LIGHT STANDARD

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POLE MOUNTING
BRACKET

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NOT TO SCALE (NTS)

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