TASIG

Texas Ancillary Structures Interest Group

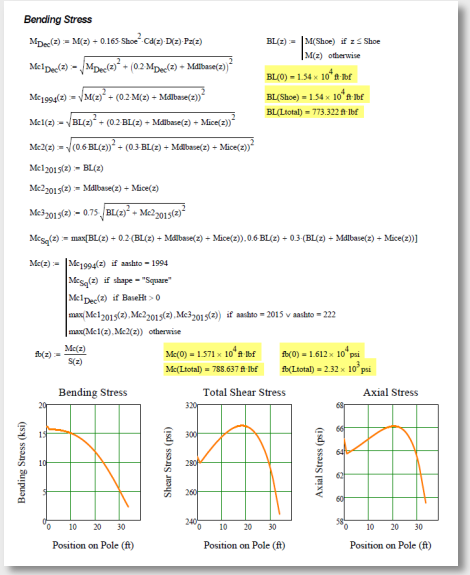
Welcome to the annual meeting

Texas Department of Transportation

September 19, 2024

Texas Ancillary Structures Interest Group (TASIG)

Overview: This is a joint owner-industry forum aimed at guiding, advancing and improving ancillary structure aspects such as:



Design

Fabrication

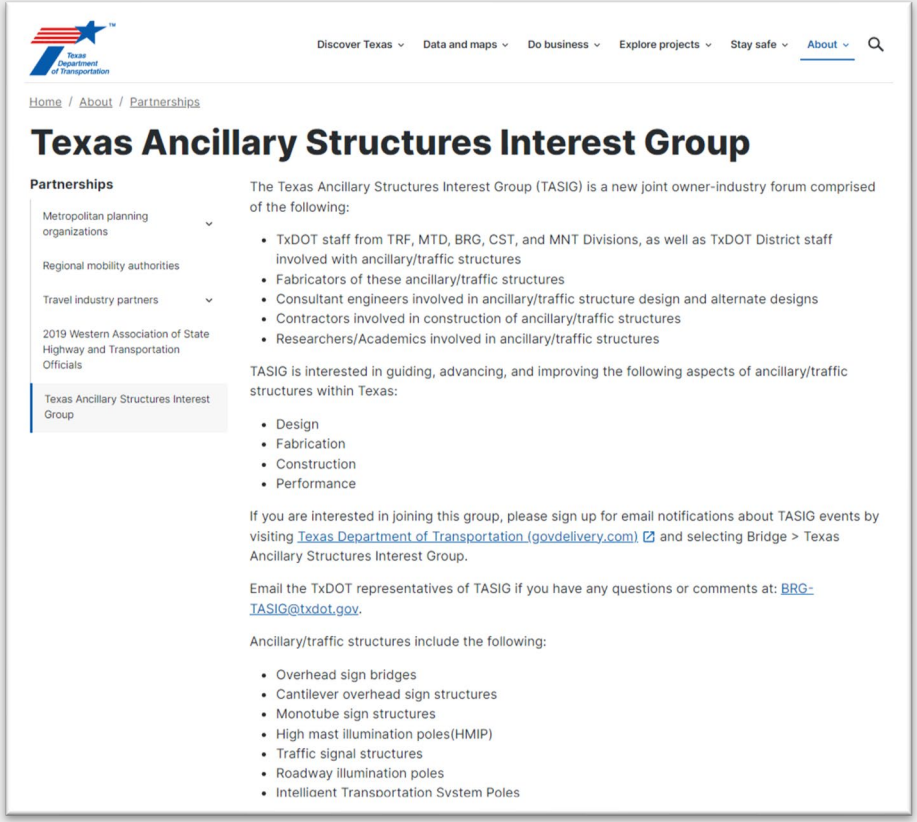
Construction

Texas Ancillary Structures Interest Group (TASIG)

Goals:

- Industry feedback, industry education
- Advance design/details/fabrication/construction
- Address procedural and performance issues

Texas Ancillary Structures Interest Group (TASIG)



Texas Department of Transportation

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Texas Ancillary Structures Interest Group

Partnerships

- Metropolitan planning organizations
- Regional mobility authorities
- Travel industry partners
- 2019 Western Association of State Highway and Transportation Officials
- Texas Ancillary Structures Interest Group

The Texas Ancillary Structures Interest Group (TASIG) is a new joint owner-industry forum comprised of the following:

- TxDOT staff from TRF, MTD, BRG, CST, and MNT Divisions, as well as TxDOT District staff involved with ancillary/traffic structures
- Fabricators of these ancillary/traffic structures
- Consultant engineers involved in ancillary/traffic structure design and alternate designs
- Contractors involved in construction of ancillary/traffic structures
- Researchers/Academics involved in ancillary/traffic structures

TASIG is interested in guiding, advancing, and improving the following aspects of ancillary/traffic structures within Texas:

- Design
- Fabrication
- Construction
- Performance

If you are interested in joining this group, please sign up for email notifications about TASIG events by visiting Texas Department of Transportation (govdelivery.com) and selecting Bridge > Texas Ancillary Structures Interest Group.

Email the TxDOT representatives of TASIG if you have any questions or comments at: BRG-TASIG@txdot.gov.

Ancillary/traffic structures include the following:

- Overhead sign bridges
- Cantilever overhead sign structures
- Monotube sign structures
- High mast illumination poles(HMIP)
- Traffic signal structures
- Roadway illumination poles
- Intelligent Transportation System Poles

TASIG Email:

BRG-TASIG@txdot.gov

TASIG Website:

https://www.txdot.gov/inside-txdot/division/bridge/ancillary-structures.html

2024 TASIG AGENDA

TASIG
Texas Ancillary Structures Interest Group

Time	Topic	Speaker
9:00 AM	Welcome to TASIG 2024	Courtney Holle
9:05 AM	TxDOT Updates on Ancillary Structures	TxDOT
9:30 AM	2024 Specification Updates	Rafael Riojas
9:50 AM	Open Discussion	
10:30 AM	**Break**	
10:45 AM	Research Updates Presentation	Dr. Todd Helwig
11:10 AM	Open Discussion	
11:45 AM	**Lunch**	
1:00 PM	Geotechnical Updates	Ryan Eaves
1:15 PM	Open Discussion	
1:45 PM	**Break**	
2:00 PM	Resources Presentation	Courtney Holle
2:15 PM	Open Discussion	
2:55 PM	Closing Remarks	Courtney Holle
3:00 PM	Adjourn	

User Name: Guest
Wifi Password: Headsupphonesdown

TxDOT UPDATES

Texas Department of Transportation

TRAFFIC

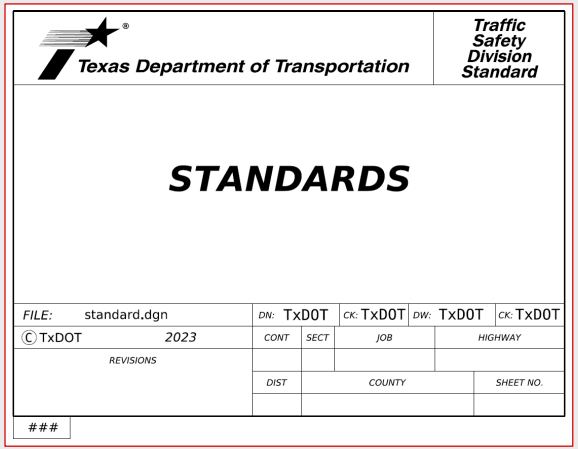
Policy & Standards Updates

Rafael Riojas, P.E. - Traffic Safety Division - Policy and Standards Branch Mgr

Texas Department of Transportation

September 19, 2024

Standards


Texas Department of Transportation

Traffic Safety Division Standard

STANDARDS

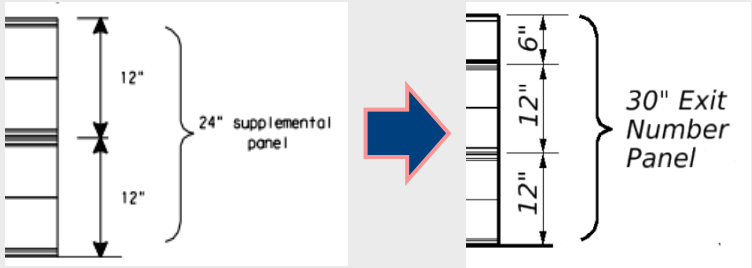
FILE: standard.dgn		DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT		
© TxDOT 2023		CONT	SECT	JOB	HIGHWAY		
REVISIONS							
		DIST	COUNTY			SHEET NO.	
###							

- SIGN MOUNTING DETAILS (SMD) - LARGE ROADSIDE SIGNS
- SUMMARY OF LARGE SIGNS (SOLS)
- HIGH MAST ILLUMINATION DETAILS (HMID)
- Removed Standards
- In Progress / Upcoming

SIGN MOUNTING DETAILS (SMD) - LARGE ROADSIDE SIGNS

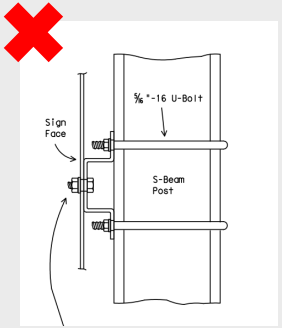
- Sheets have been reorganized and reformatted for clarity and flow.
- Post sizes W10x26 and W6x12 removed, due to research results related to roadside signs.
- Exit panel dimensioning updated to conform with the Standard Highway Sign Designs for Texas (SHSD).
- Removed optional note on cope detail, to reinstate requirement.

W10x26 and W6x12

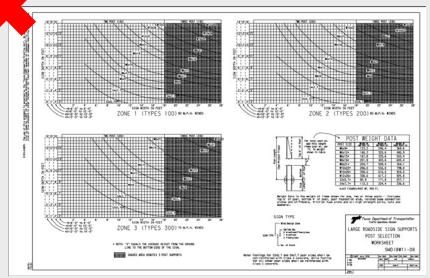


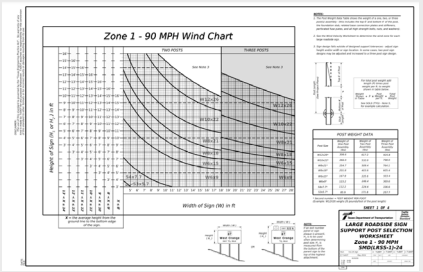
SIGN MOUNTING DETAILS (SMD) - LARGE ROADSIDE SIGNS

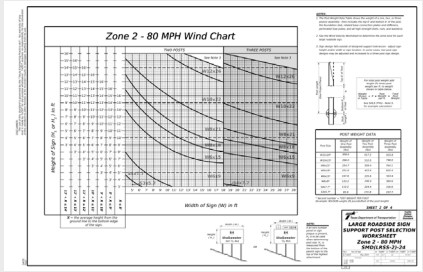
- SMD (TY G)-08 removed
  - support and clamp detail no longer standard.
  - Non-reinforced foundation detailed dimensions moved to SMD(2-1)-23.

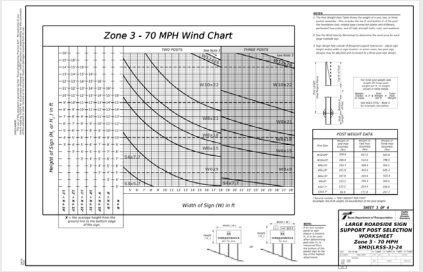


- SMD (8W1)-08 removed
  - Replaced by the new Large Roadside Sign Support (SMD(LRSS(1-3))).
    - which include revised wind loading zone charts that meet MASH standards and reduce the likelihood of wind related fuse plate failures.









SIGN MOUNTING DETAILS (SMD) - LARGE ROADSIDE SIGNS

- Maximum Sign Support Spacing Table(s) revised.
  - Added the option for W6x12 sign supports, for increased sign depths.
  - Added the option for a 60%-40% split, on COSS & OSB structures.
- Removed Sign Walkway & Lighting Brackets.

MAXIMUM SIGN SUPPORT SPACING "Si" (FEET)

"d" Deepest Sign in Group (Ft.)	EXTRUDED ALUMINUM SIGN PANELS															
	WITH EXIT NUMBER PANELS								WITHOUT EXIT NUMBER PANELS							
	WITH WALKWAYS				WITHOUT WALKWAYS				WITH WALKWAYS				WITHOUT WALKWAYS			
	WIND ZONE				WIND ZONE				WIND ZONE				WIND ZONE			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
15	4.5	7	8	10	5	7	8	10	7	8	9	10	8.5	10	10	10
14	6	7.5	9.5	10	6	7.5	9.5	10	8	9	10	10	10	10	10	10
13	7.5	9	10	10	7.5	9	10	10	9	10	10	10	10	10	10	10
12	8.5	10	10	10	8.5	10	10	10	10	10	10	10	10	10	10	10
11 or less	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

TABLE 2

SPLIT 54%-46%

MAXIMUM SIGN SUPPORT SPACING

Bracket Type	"d" Deepest Sign in Group (feet)	EXTRUDED ALUMINU			
		WITH EXIT NUMBER PANELS			
		WIND ZONE			
		1	2	3	4
S4x7.7	17	3.5	4.5	5.5	7
	16	4	5	6	8
	15	5	7	8	10
	14	6	7.5	9.5	10
	13	7.5	9	10	10
	12	8.5	10	10	10
	< 11	10	10	10	10
W6x12	20	6.5	8	9.5	10
	19	7.5	9	10	10
	18	8	10	10	10
	17	9	10	10	10
	16	10	10	10	10
	15	10	10	10	10
	14	10	10	10	10
	13	10	10	10	10
	12	10	10	10	10
	< 11	10	10	10	10

TABLE 3

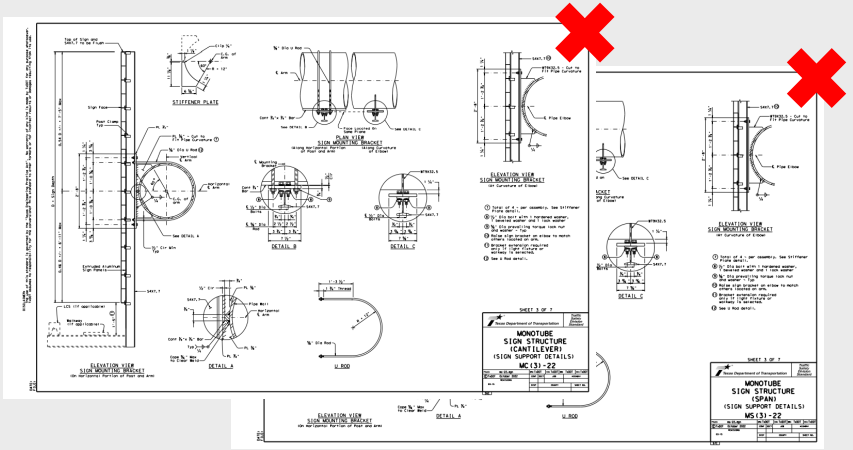
SPLIT 60%-40%

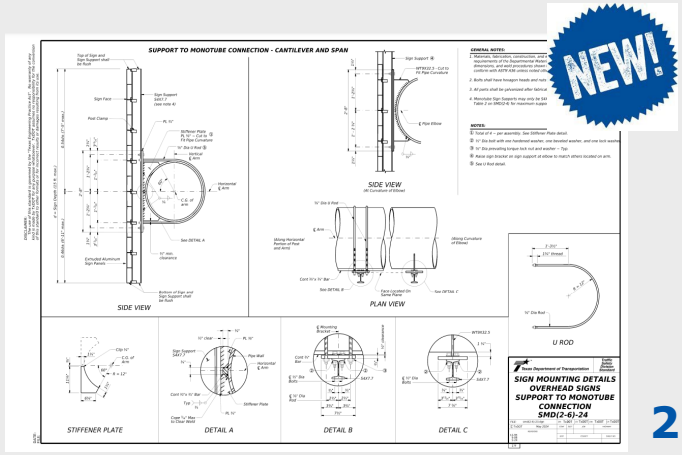
MAXIMUM SIGN SUPPORT SPACING "Si" (FEET)

Bracket Type	"d" Deepest Sign in Group (feet)	EXTRUDED ALUMINUM SIGN PANELS							
		WITH EXIT NUMBER PANELS				WITHOUT EXIT NUMBER PANELS			
		WIND ZONE				WIND ZONE			
		1	2	3	4	1	2	3	4
S4x7.7	15	3.5	4.5	5.5	7	6	7.5	9.5	10
	14	4	5	6.5	8	7.5	9.5	10	10
	13	5	6	7.5	9	9.5	10	10	10
	12	6	7	9	10	10	10	10	10
	< 11	7	8.5	10	10	10	10	10	10
W6x12	20	5	6	7	9.5	7	9	10	10
	19	5.5	6.5	8	10	8	10	10	10
	18	6	7.5	9	10	9.5	10	10	10
	17	7	8.5	10	10	10	10	10	10
	16	8	9.5	10	10	10	10	10	10
	15	9	10	10	10	10	10	10	10
	14	10	10	10	10	10	10	10	10
	13	10	10	10	10	10	10	10	10
	12	10	10	10	10	10	10	10	10
	< 11	10	10	10	10	10	10	10	10

SIGN MOUNTING DETAILS (SMD) - LARGE ROADSIDE SIGNS

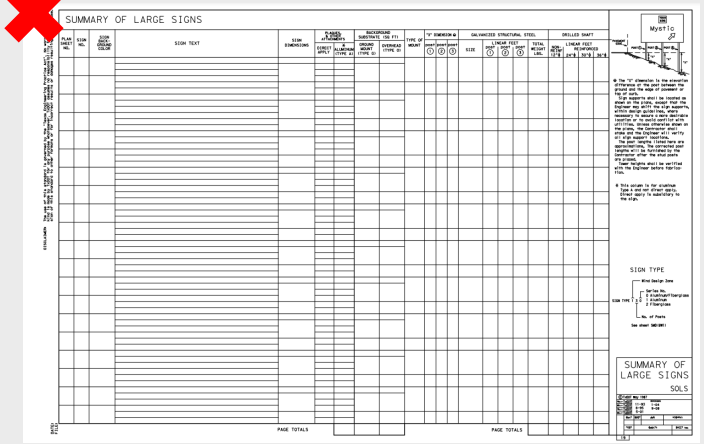
- MC(3)-22 and MS(3)-22 (Monotube)
  - Removed sheet 3 from MC-22 and MS-22.
- SMD(2-6)-24
  - Relocated support to monotube connection details for cantilever and span - for clarity and flow of application, as it relates to the installation of overhead signs, centralizing connection details.

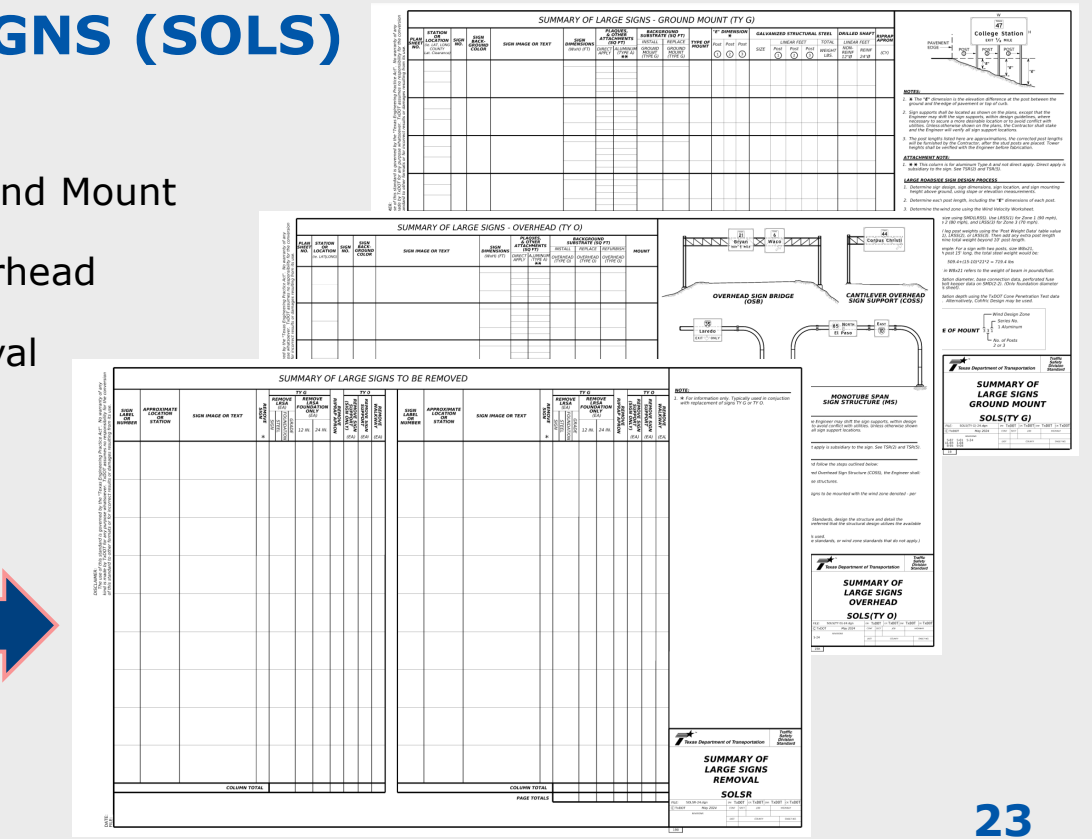




SUMMARY OF LARGE SIGNS (SOLS)

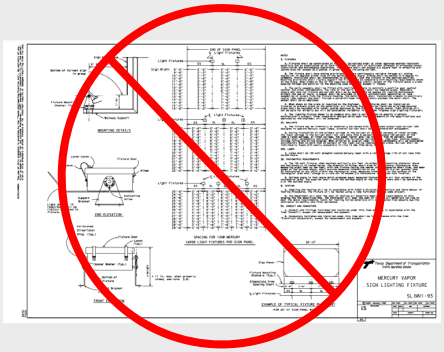
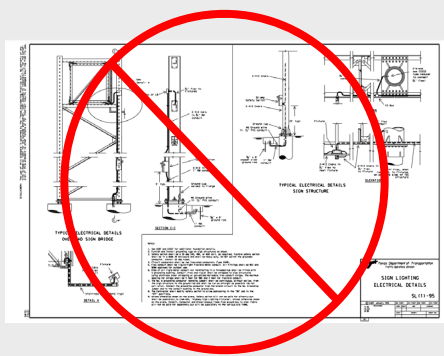
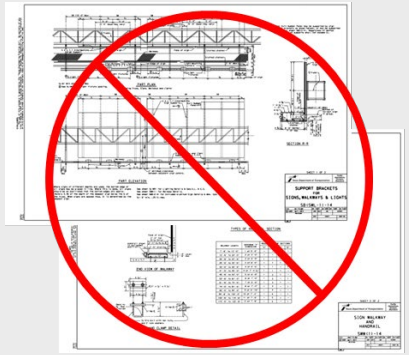
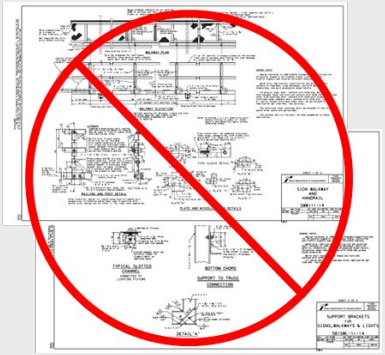
- Split into 3 sheets
  - Summary of Large Signs - Ground Mount
  - Summary of Large Signs – Overhead
  - Summary of Large Signs Removal





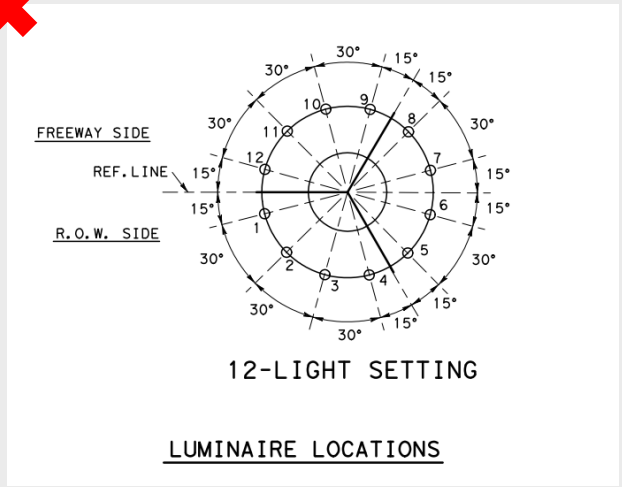
Removed Standards

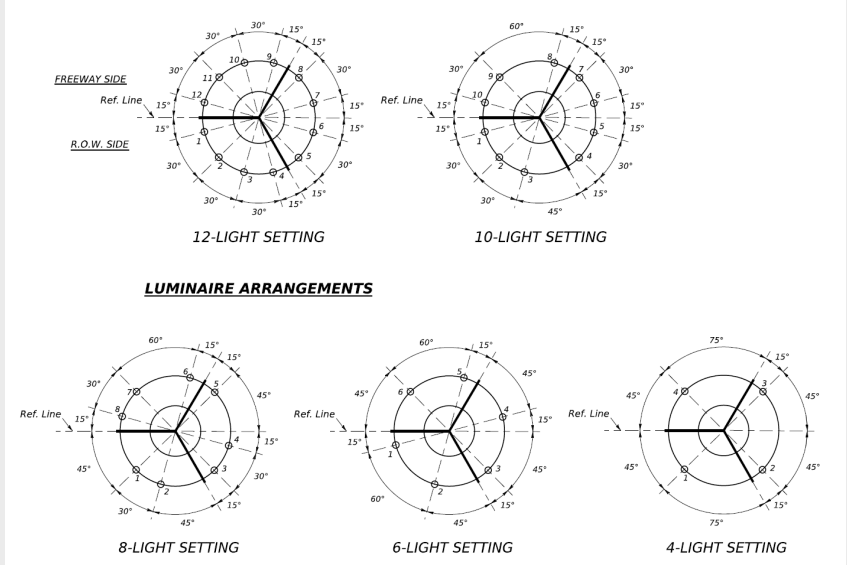
- SL(MV)-93 | Mercury Vapor Sign Lighting Fixture
- SL(1)-95 | Sign Lighting Electrical Details
- SWW(1)-14 | Sign Walkway and Handrail
- SB(SWL-1)-14 | Support Bracket for Signs, Walkways and Lights
  - Relocated relevant support to truss connection details to SMD(2-5)-24.

HIGH MAST ILLUMINATION DETAILS (HMID)

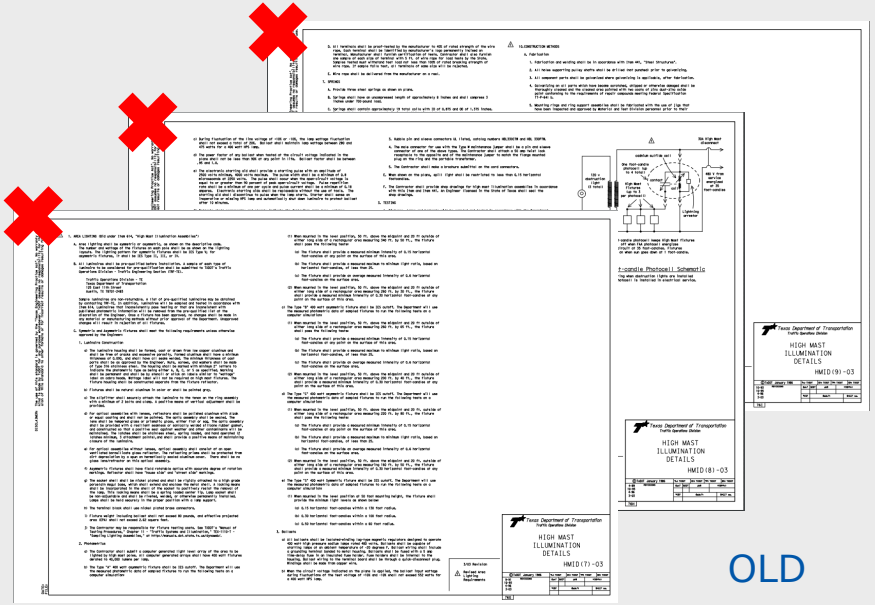
- Shifted from High Pressure Sodium to LED.
- Moved from a single 12-light configuration to multiple configurations.





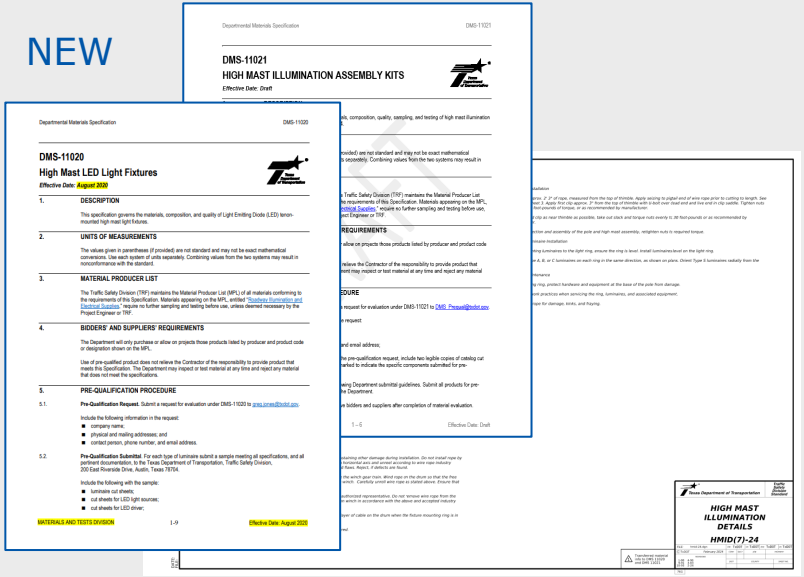
HIGH MAST ILLUMINATION DETAILS (HMID)

- Consolidated notes contained in OLD HMID(7), HMID(8), and HMID(9) into NEW HMID(7) & DMS-11020 and DMS-11021



OLD

NEW

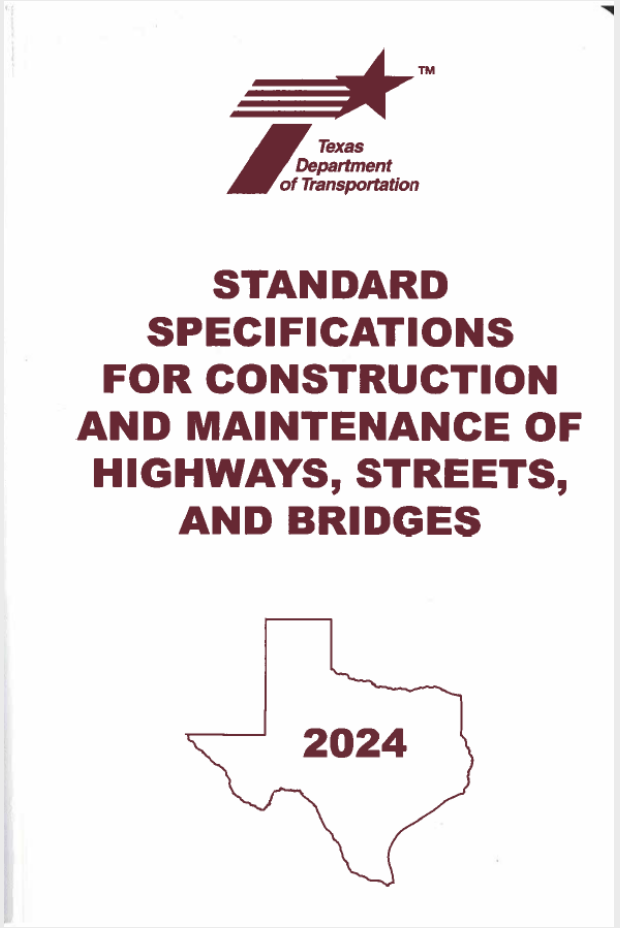


In Progress / Upcoming

SMD	SOSS	RFBA & SPRFBA
TSR	ED	HMIP & HMIF
OSB	COSS	

2024 Specification Book

- TxDOT has revised the specifications for projects letting in Fiscal Year 2025/September 2024
- The book will be available for purchase in one size, 6x9". Information on price and how to purchase will be posted at a later date.



2024 Specification Book

- There are useful links under ADDITIONAL RESOURCES

Additional resources

- Special Specification/Provisions change memos
- Required Specification checklists
- Item 8 Delayed Start Provisions Request (Standard Operating Procedure) Memo - Nov. 20, 2023
- Construction and Maintenance Specifications Style Guide
- Subject Matter Experts (SME) Reference List for 2014 Standard Specifications
- Departmental Materials Specifications (DMS)
- Material producer lists
- Buy America material classification sheet
- Local Government Standard Specifications and Special Provisions
- Engineering and Safety Operations 2024 Spec Book Memo - April 12, 2024
- Historical bridge and road specifications
- 2024 Spec Training Seminar
- 2024 Specification Changes

Texas Department of Transportation

BRIDGE (STRUCTURES)

TxDOT Ancillary Structure Standards
BRG maintains the *structural aspects* of:

Standard Description	Standards	Current Design Spec.	Upcoming Design Spec.
High Mast Illumination Assy	HMIP, HMID	LTS-3 (1994)	LTS-6
Roadway Illumination Assy	RIP, RID	LTS-6 (2013)	LRFD-LTS
Overhead Sign Structures	OSB, HOSB, COSS, HCOSS	LTS-3 (1994)	LRFD-LTS
Monotube Sign Structures	MS, MC	LTS-6 (2013)	
Traffic Signal Poles	SP, SMA, DMA, MA, MAC, MAD, TS, LUM, CFA, LMA	LTS-3 (1994)	LRFD-LTS
Wind and Ice Maps	WV & IZ	LTS-3 (1994) & LTS-6 (2013)	LRFD-LTS

https://www.dot.state.tx.us/insdtdot/orgchart/cmd/cserve/standard/toc.htm

TxDOT Ancillary Structure Standards
BRG maintains the *structural aspects* of:

Special Details	Standards	Current Design Spec.
DMS Attachment Details	DMS-TM & DMS-HZ	LTS-3 (1994)
Connection between concrete column & truss sign support	Upcoming	LTS-6 (2013)
Bridge Railing Sign Mount	SMD(BR)	LTS-6 (2013)
Sign Mounting Details	SMD	LTS-3 (1994)

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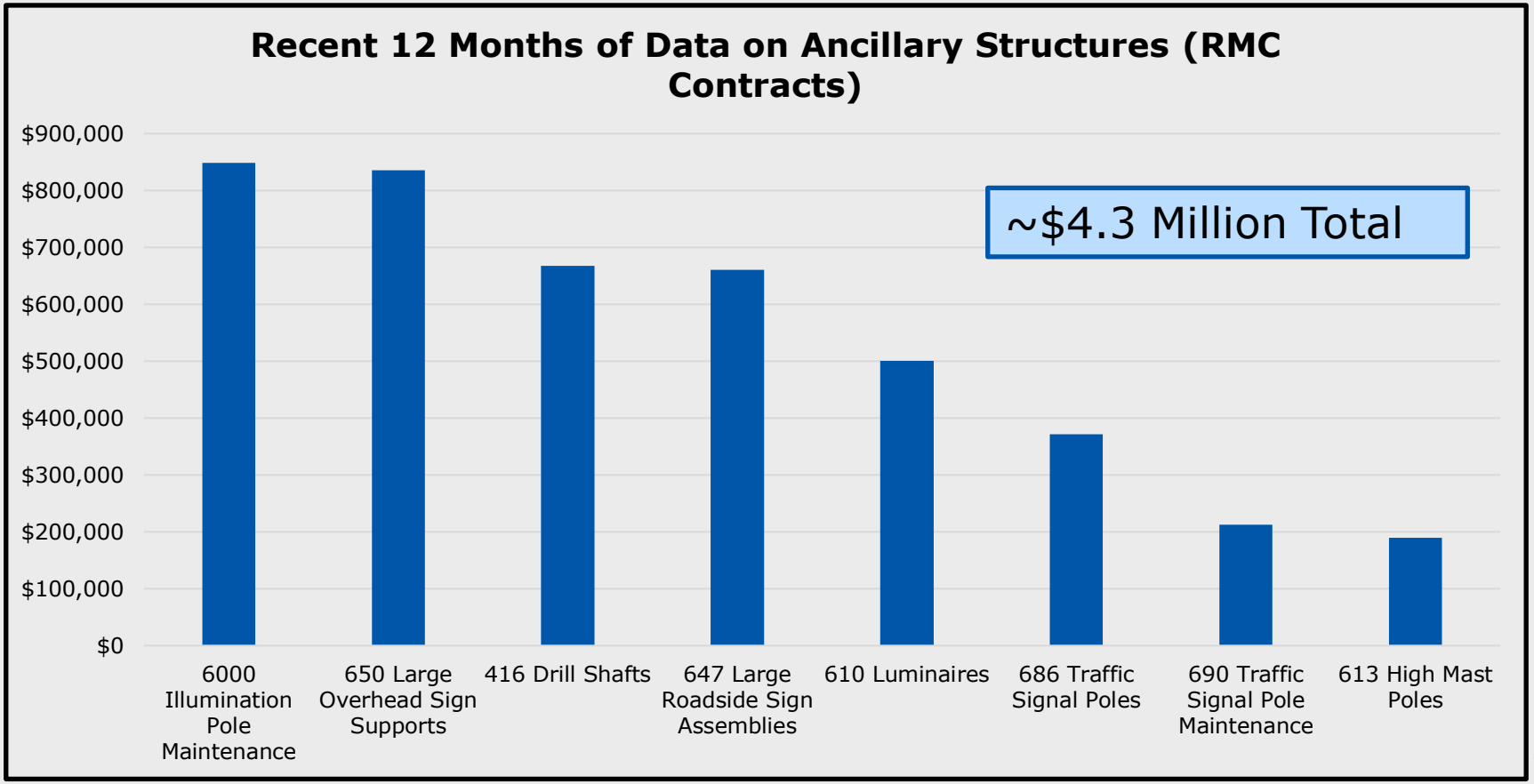
MAINTENANCE


Recent 12 Months of Data on Ancillary Structures (RMC Contracts)
$900,000
$800,000
$700,000
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$0
~$4.3 Million Total
6000 Illumination Pole Maintenance
650 Large Overhead Sign Supports
416 Drill Shafts
647 Large Roadside Sign Assemblies
610 Luminaires
686 Traffic Signal Poles
690 Traffic Signal Pole Maintenance
613 High Mast Poles

Other Observations

- TxDOT's maintenance budget increased from $1.3B to $1.6B in FY 24
- Much of the illumination maintenance continues to be related to LED upgrades
- The overhead sign structure work occurred on 4 contracts in 3 districts: Dallas, Houston, and Waco
- More than 50% of the drill shaft work was for sign mounts (both roadside and overhead)
- Majority of the large roadside sign work and luminaire work was for new sign/luminaire installs
- Only 2 contracts installed high mast poles (Pharr and Houston)

Texas Department of Transportation

HMIP/COSS CONTRACT FINDINGS