

**GENERAL NOTES:**

UNLESS NOTED OTHERWISE ON THE DRAWINGS, CONSTRUCT THE SIGN STRUCTURE TO CONFORM WITH THE FOLLOWING REQUIREMENTS:

1. CONSTRUCTION SPECIFICATIONS: STATE OF NEVADA STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION, AND THE SPECIAL PROVISIONS THERETO.
2. DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 4th EDITION, 2001.
3. LOADING
  - A. IMPORTANCE FACTORS ( $I_f$ ): 1.0
  - B. DRAG COEFFICIENT ( $C_d$ ): 0.45 - 2.0 DEPENDING ON SHAPE OF MEMBER AND WIND VELOCITY
  - C. MAXIMUM DEAD LOAD OF DMS: 4000 lb
  - D. MAXIMUM WIND LOAD:  $23.4 \text{ psf} * C_d * I_f$
  - E. LIVE LOAD: 500 lb
  - F. NATURAL WIND GUSTS:  $5.2 \text{ psf} * C_d * I_f$
  - G. GALLOPING:  $21.0 \text{ psf} * I_f$
  - H. TRUCK GUSTING:  $18.8 \text{ psf} * C_d * I_f$
  - I. WALKWAY LOAD: DEAD LOAD + 500 lb  
CONCENTRATED LIVE LOAD
  - J. WIND SPEED 90 MPH
  - K. ICE LOAD 3 psf
  - L. SEISMIC ACCELERATION COEFFICIENT 0.40
  - M. SOIL TYPE FOR SEISMIC DESIGN III
4. STRUCTURAL STEEL
  - A. STRUCTURAL STEEL PLATES AND SHAPES SHALL CONFORM TO AASHTO M270 GRADE 36 OR ASTM A36.
  - B. STEEL PIPE SHALL CONFORM TO ASTM A53, TYPE S, GRADE B.
  - C. STEEL TUBING SHALL CONFORM TO ASTM A500, GRADE B.
  - D. HOT DIP GALVANIZE STRUCTURAL STEEL AFTER FABRICATION IN ACCORDANCE WITH ASTM A123.
5. UNIT STRESSES
  - A. STRUCTURAL STEEL :  $F_y = 36 \text{ ksi}$
  - B. CONCRETE PEDESTAL CLASS A OR AA:  $F'_c = 4000 \text{ psi}$   
CONCRETE PILE CLASS D OR DA:  $F'_c = 4000 \text{ psi}$
  - C. REINFORCING STEEL : ASTM A615 GRADE 60

6. BOLTED CONNECTIONS.
  - A. ACCOMPLISH ALL STRUCTURAL HIGH STRENGTH BOLTING, EXCEPT ANCHOR BOLTS, USING AASHTO M164 BOLTS.
  - B. USE A HARDENED FLAT WASHER BETWEEN THE NUT AND THE CONNECTED PART.
  - C. USE HIGH STRENGTH BOLTS WITH DTI'S OR TENSION CONTROL INDICATORS INSTALLED PER SUBSECTION 506.03.07 OF THE STANDARD SPECIFICATIONS.
  - D. FABRICATE ANCHOR BOLTS FROM MATERIAL CONFORMING TO AASHTO M314 GRADE 36 AND SUPPLEMENTARY REQUIREMENT S1.
  - E. HOT-DIP GALVANIZE ALL STEEL PARTS IN ACCORDANCE WITH ASTM A153, EXCEPT AS SHOWN FOR ONLY THE TOP 12" FOR ANCHOR BOLTS, AND AS SPECIFIED FOR HIGH STRENGTH BOLTING.
  - F. HIGH STRENGTH BOLTS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C, OR MECHANICALLY GALVANIZED IN ACCORDANCE WITH ASTM B695, CLASS 50. WASHERS, NUTS, AND BOLTS IN ANY ASSEMBLY SHALL BE GALVANIZED BY THE SAME PROCESS. LUBRICATE THREADS WITH A DYED LUBRICANT.
7. WELDED CONNECTIONS
  - A. WELDS SHALL BE CONTINUOUS, UNLESS OTHERWISE NOTED ON THE PLANS.
  - B. WELD IN ACCORDANCE WITH SECTION 506 OF THE STANDARD SPECIFICATIONS.
  - C. USE ONLY WELDERS QUALIFIED ACCORDING TO ANSI/AASHTO/AWS D1.1-2000, SECTION 4 FOR THE TYPE OF JOINT, ELECTRODE, POSITION OF THE JOINT, AND THE MATERIAL THICKNESS.
  - D. USE ONLY PREQUALIFIED JOINTS.
  - E. TEST ALL FULL PENETRATION GROOVE WELDS ULTRASONICALLY IN ACCORDANCE WITH SECTION 6, PART F OF ANSI/AASHTO/AWS D1.1-2000. ACCEPT OR REJECT EACH WELD DISCONTINUITY ON THE BASIS OF ITS INDICATION RATING AND ITS LENGTH IN ACCORDANCE WITH SECTION 9.3.
  - F. HAVE ALL FILLET WELDS VISUALLY INSPECTED BY QUALIFIED PERSONNEL. ANY WELDS FOUND TO HAVE INCOMPLETE FUSION, OVERLAP OR CRACKS WILL BE REJECTED.
8. GROUTING
  - A. SHIM BASE PLATES TO FINISH ELEVATION AND COMPLETELY FILL PLATE AREA WITH A HIGH STRENGTH, NON-FERROUS, NON-SHRINK GROUT.
  - B. FORMULATE GROUT TO COMPLY WITH THE ASTM C1107.
  - C. TAPER ALL FINISHED SURFACES AT 45 DEGREE +/-.
9. REFER TO NDOT STANDARDS SPECIFICATIONS SECTIONS 502, 505, 506 AND 509 FOR ADDITIONAL INFORMATION.
10. MINIMUM VERTICAL ROADWAY CLEARANCE IS 18 FEET TO THE BOTTOM OF THE STRUCTURAL FRAME AND WALKWAY BRACKETS.
11. CONSTRUCT SIGN STRUCTURES TRUE TO DIMENSIONS, FREE FROM KINKS, TWISTS OR BENDS, AND UNIFORM IN APPEARANCE. ASSEMBLE THE COMPLETED SECTIONS IN THE SHOP AND CHECK FOR STRAIGHTNESS, ALIGNMENT, AND DIMENSION. CORRECT ANY VARIATIONS AS APPROVED.

12. AFFIX CLIPS, EYES, OR REMOVABLE BRACKETS TO ALL POSTS AND TRUSSES, AS NECESSARY, TO SECURE THE SIGN DURING SHIPPING AND FOR LIFTING AND MOVING DURING ERECTION. THIS IS TO PREVENT DAMAGE TO THE FINISHED GALVANIZED OR PAINTED SURFACES. REMOVE BRACKETS ON TUBULAR SIGN STRUCTURES AFTER ERECTION. SHOW DETAILS OF SUCH DEVICES ON THE SHOP DRAWINGS.
13. ALL DETAILS OF THE SINGLE-POST CANTILEVER SIGN SHALL BE AS CALLED FOR IN SHEETS T-39.1.2 THRU T39.1.9.
14. FABRICATE ALL SIGN STRUCTURES INTO THE LARGEST PRACTICAL SECTIONS PRIOR TO GALVANIZING.
15. GROUND ALL STRUCTURES IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES.
16. NPS = NOMINAL PIPE SIZE.
17. 30 DAYS PRIOR TO FABRICATION, SUBMIT TO NDOT (6) SIX SETS OF SHOP DRAWINGS, WHICH MUST COMPLY WITH THE REQUIREMENTS OF SUB SECTION 105.02 OF THE STANDARD SPECIFICATIONS.
18. PROVIDE A SUPPLIER DESIGNED CONNECTION FOR THE DMS SIGN TO THE OVERHEAD SIGN STRUCTURE. THE DESIGN, INCLUDING MATERIAL SPECIFICATIONS IS TO BE STAMPED BY A NEVADA REGISTERED PROFESSIONAL CIVIL OR STRUCTURAL ENGINEER.

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NEVADA DEPARTMENT OF TRANSPORTATION

**SINGLE POST DMS  
OVERHEAD SIGN  
GENERAL NOTES**

Signed Original On File	M-1.1	(623)
CHIEF BRIDGE ENGINEER	ADOPTED 12/06	REVISION