1. STRUCTURAL STEEL TUBING USED IN THE FABRICATION OF MONOTUBES SHALL EITHER BE COLD-FORMED WELDED OR SEAMLESS TUBING CONFORMING TO THE ASTM A500, GRADE C (MEETING ZONE 2 CHARPY V-NOTCH REQUIREMENTS) OR HOT-FORMED WELDED OR SEAMLESS TUBING CONFORMING TO ASTM A501, GRADE B OR ASTM A618, GRADE 1B AND III, (PLUS MEETING ZONE 2 CHARPY V-NOTCH REQUIREMENTS). WHEN STRUCTURAL TUBING CONFORMING TO THE REQUIREMENTS SHOWN ABOVE IS NOT READILY AVAILABLE, MATERIAL MEETING API 5L, PSL 2, GRADE X46 OR HIGHER, MAY BE SUBSTITUTED.

2. BASE PLATES AND FLANGE PLATES TO BE STRUCTURAL STEEL CONFORMING TO THE SPECIFICATIONS OF ASTM DESIGNATION: A36.

3. ALL FLANGE BOLTS TO CONFORM TO THE SPECIFICATIONS OF ASTM A325, AND INSPECTED USING DIRECT TENSION INDICATORS TO CONFORM TO THE SPECIFICATIONS OF ASTM A959, TYPE 325. ALL WASHERS TO CONFORM TO THE SPECIFICATIONS OF ASTM F436. ALL ANCHOR BOLTS TO CONFORM TO THE SPECIFICATIONS OF ASTM F436. ALL ANCHOR BOLTS TO CONFORM TO THE SPECIFICATIONS OF ASTM F1554-GRADE 55 AND TO BE TIGHTENED AND INSPECTED USING DIRECT TENSION INDICATORS CONFORMING TO THE SPECIFICATIONS OF ASTM F2437 (TYPE 1 GRADE 55). ALL ANCHOR BOLT NUTS TO CONFORM TO THE SPECIFICATIONS OF ASTM F563-GRADE A. ALL ANCHOR BOLT WASHERS TO CONFORM TO THE SPECIFICATIONS OF ASTM F436.

4. HOT-DIP GALVANIZE ALL TUBE MEMBERS PER ASTM A123. GALVANIZE ALL NUTS. BOLTS AND FASTENERS FOR SIGN STRUCTURES AFTER FABRICATION PER ASTM A123 OR ASTM A153.

5. STAMP STRUCTURE IDENTIFICATION ON UPRIGHT OF STRUCTURE WITH THE FOLLOWING INFORMATION: JP#, STRUCTURE LENGTH, DATE MANUFACTURED AND MANUFACTURER'S NAME.

6. WELDING OF STEEL TO CONFORM TO THE REQUIREMENTS OF AWS D1.1 (LATEST REVISION). GRIND ALL AREAS TO BE WELDED TO BRIGHT METAL. COMPLETE ALL WELDING AND REQUIRED NON-DESTRUCTIVE TESTING BEFORE MATERIAL IS GALVANIZED. TEST ALL CIRCUMFERENTIAL AND STIFFENER WELDS NON-DESTRUCTIVELY USING THE ENHANCED MAGNETIC PARTICLE METHOD ACCORDANCE WITH ODOT STANDARD SPECIFICATION 720.03B. MAXIMUM WELD UNDERCUT SHALL BE 0.01".

7. CONSTRUCT SIGN STRUCTURES TRUE TO DIMENSIONS FREE KINKS, TWISTS, BENDS, AND UNIFORM IN APPEARANCE. ASSEMBLE COMPLETED SECTIONS IN THE SHOP AND CORRECT ANY DIMENSIONS OUT OF TOLERANCE.

8. MAST ARMS TO BE TEMPORARILY SUPPORTED TO TAKE ALL LOAD OFF OF THE FIELD SPLICES WHILE BOLTS ARE BEING TIGHTENED IN ORDER TO FIRMLY SEAT THE FLANGE PLATES.

9. POSTS FOR TUBULAR SIGN STRUCTURES TO BE FORMED TO A 10' RADIUS BY FABRICATION METHODS WHICH WILL NOT CRIMP OF BUCKLE THE INTERIOR RADIUS OF THE PIPE BEND.

10. CLIPS, EYES OR REMOVABLE BRACKETS TO BE AFFIXED TO ALL POSTS AND MAST ARMS, 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. BRACKETS ON TUBULAR SIGN STRUCTURES TO BE REMOVED AFTER ERECTION. DETAILS OF SUCH DEVICES TO BE SHOWN ON THE SHOP DRAWINGS.

11. BOLTS WITH DIAMETERS EXCEEDING BY UP TO 1/4 INCH THE DIAMETER OF THE BOLTS SHOWN ON THE PLANS MAY BE USED, PROVIDED THAT THE REQUIRED CLEARANCES AND EDGE DISTANCE ARE NOT REDUCED BELOW THAT REQUIRED FOR THE LARGER BOLT.

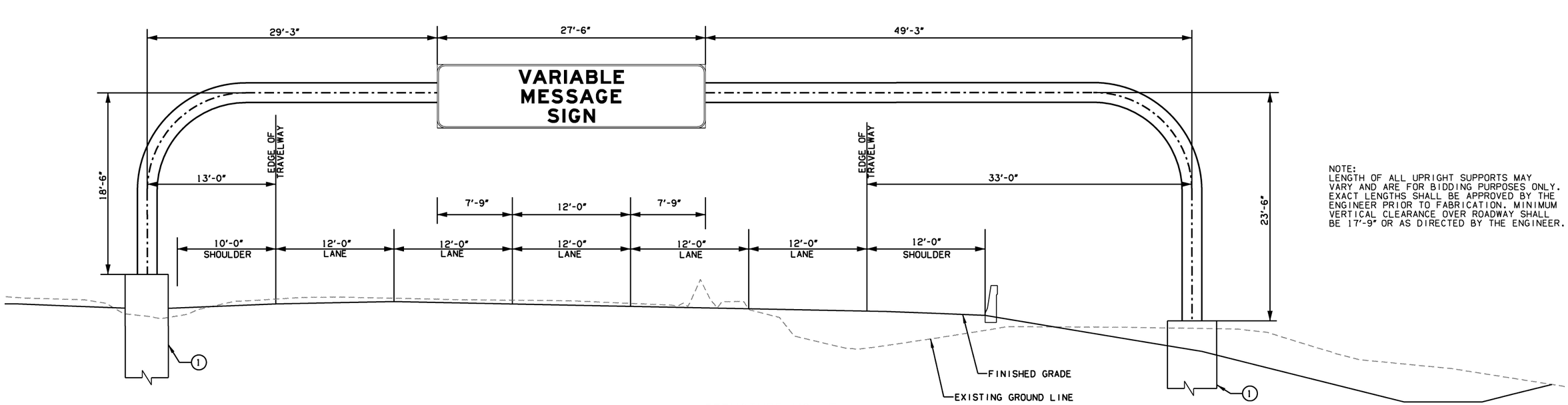
12. FABRICATE ALL SIGN STRUCTURES TO THE LARGEST PRACTICAL SECTIONS PRIOR TO GALVANIZING. SPLICE LOCATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL AND THE CONTRACTOR SHALL NOT COMMENCE FABRICATION UNTIL SUCH SPLICE LOCATIONS ARE APPROVED.

13. CANTILEVER SIGN STRUCTURES TO HAVE A REMOVABLE CAP ON THE END OF THE HORIZONTAL MEMBER OF THE STRUCTURE.

(1) MONOTUBE SIGN STRUCTURES SHALL BE SUPPORTED BY DRILLED SHAFT FOUNDATIONS AT ALL LOCATIONS. AT MEDIAN SUPPORT LOCATIONS, A PEDESTAL SHALL BE PROVIDED AS SHOWN ON "MEDIAN BARRIER TRANSITIONS DETAILS."

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	21899(04)			

REVISIONS	
DESCRIPTION	DATE



NOTE:
LENGTH OF ALL UPRIGHT SUPPORTS MAY VARY AND ARE FOR BIDDING PURPOSES ONLY. EXACT LENGTHS SHALL BE APPROVED BY THE ENGINEER PRIOR TO FABRICATION. MINIMUM VERTICAL CLEARANCE OVER ROADWAY SHALL BE 17'-9" OR AS DIRECTED BY THE ENGINEER.

STRUCTURE NO. 7
STA. 789+17

DESIGN	KSK	12/14
DRAWN	APS	12/14
CHECKED	NDT	12/14
APPROVED		
SQUAD	GARVER	

TULSA & ROGERS COUNTIES

SPECIAL SIGN LAYOUT DETAILS (SHEET 4 OF 4)

STATE JOB NO. 21899(04) SHEET NO. 211