

LEGEND

- (1) W6 X 25 WITH 1½" X 1½" HORIZONTAL SLOTTED HOLES ON EACH SIDE OF POST FOR BOLT NO. 6 AT TOP TWO RAILS. USE 1" DIA. HOLES FOR BOLT NO. 6 AT BOTTOM NO. 5A & FOR BOLT NO. 6A AT NO. 7. (LI BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- $\textcircled{2} \quad \text{plate 1} \cancel{1}^{''} \times 10^{''} \times 1^{1} \cdot 2^{''} \text{ with 1} \cancel{1}^{''} \times 1 \cancel{1}^{''} \cancel{1}$
- (3) ASTM A449 1" DIA. ANCHOR BOLTS WITH HEAVY HEX NUT AND 2" OL. HARDENED WASHER (LA GUIVANZE), A REQUIRED PER POST. THEAD 3" AND FLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THERADING. USE 11%" (LONG BOLT FOR CONCRETE DECKS. ON CONCRETE SAS AS SUPERSTRUCTURES, USE 1'3" LONG BOLT FOR SLAB THICKNESS > 10%" AND 11%" (LONG FOR THICKNESS S 16", USE 10% LONG IN ABUTTMENT WINGS, (AN EQUIVALENT THERADED ROD WITH HEAVY HEX NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQUIRED FOR CONSTRUCTABILITY.)
- 3 3 % x 10" x 1'-2" anchor plate (Galvanized) with 1½, " dia. Holes for anchor bolts no. 3.
- (SA) TS 5 X 3 X X^{*} STRUCTURAL TUBING. USE 1[™] DIA. HOLES FOR BOLT NO. 6 IN TOP RAIL (FRONT & BACK). USE 1X[™] X 1X[™] HOLEXONTAL SLOTTED HOLES FOR BOLT NO. 6 IN BOTTOM RAIL (FRONT & BACK) AND A 2[™] O.D. WASHER UNDER BOLT HEAD.
- W" DIA. A325 SLOTTED ROUND HEAD BOLT WITH HEX NUT, ½" X 1½" X 1½" WASHER, AND SPRING LOCK WASHER (2 REQUIRED AT RAIL TO POST LOCATIONS SHOWN).
- $\label{eq:constraint} \overleftarrow{(A)} \overset{W^*}{\chi} DIA. A 325 BOLT WITH HEX NUT AND SPRING LOCK WASHERS (1 REQUIRED AT RAIL TO ANGLE AND 2 REQUIRED AT ANGLE TO POST LOCATIONS SHOWN WITH <math display="inline">\overset{W^*}{\chi}_{6}^{**} x \, 1 \overset{W^*}{\chi} x \, 1 \overset{W^*}{\chi}^{**}$ washer).
- ⑦ L 5 X 5 X ½" STRUCTURAL ANGLE. ATTACH TO NO. 1 AND NO. 5 AS SHOWN.
- (8) TS 5 X 5 X ⁵/₁₆" X 2'-4" LONG SPLICE TUBE. 1 PER RAIL. USED IN NO. 5.
- (8A) 41/4" X 21/8" X 2'-4" LONG SPLICE BAR. 1 PER RAIL. USED IN NO. 5A.
- (④) ½" DIA. A325 FULLY THREADED BOLTS, 7½" LONG, WITH 2 WASHERS AND HEAVY HEX NUT ON EACH BOLT. NUT TO BE FINGER TIGHT. (4 REQUIRED PER SPLICE). USE 1" X 4" SLOTTED HOLES IN TOP AND BOTTOM OF NO. 5.
- (9A) ½" DIA. A325 FULLY THREADED BOLTS, 4½" LONG, WITH 2 WASHER AND HEAVY HEX NUT ON EACH BOLT. NUT TO BE FINGER TIGHT. (4 REQUIRED PER SPLICE). USE 1" X 4" SLOTTED HOLES IN TOP AND BOTTOM OF NO. 5A.
- (1) SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT"
- ROADWAY OPENING OR 2½" MIN. FOR STRIP SEAL EXP. JOINT & ½" OPENING FOR A1 ABUTMENT, ½" AT FIXED JOINTS. SPLICES ARE REQUIRED IN ANY RAILING SPAN BETWEEN POSTS THAT CONTAINS A SUPERSTRUCTURE EXPANSION JOINT.
- A PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE RAILS, SPLICE TUBES AND FILL PLATES.
- #6 BARS X 12'-0" LONG. BEND AS SHOWN. TIE TO TOP MAT OF STEEL. (DESIGNER TO PLACE THESE BARS IN BILL OF BARS FOR SUPERSTRUCTURE.)

NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE NY4", WHICH INCLUDES ALL ITEMS SHOWN. RAILING SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES

WHERE POSSIBLE.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS, ANGLES, SPLICE TUBES, SPLICE BARS AND STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS.

RAIL POST, BASE PIATES, SPLICE BAR, ANGLES, AND SPLICE PIATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A799 GRADE 50. STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE 80 of CWITH A CERTIFIED ψ = 50 KIS. ANCHOR PLATES & SHIMS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.

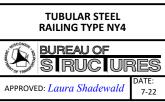
The nut securing the post base plate to the concrete shall be tightened to a snug fit and given an additional ${\cal Y}_8$ turn.

FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. CAULK AROUND PERIMETER OF NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER PLATE NO. 2 WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

SEE BRIDGE MANUAL 30.2 FOR ALLOWED USE.

RAILING WEIGHT = 75 LB/LF (BASED ON 8'-0" POST SPACING)



STANDARD 30.27