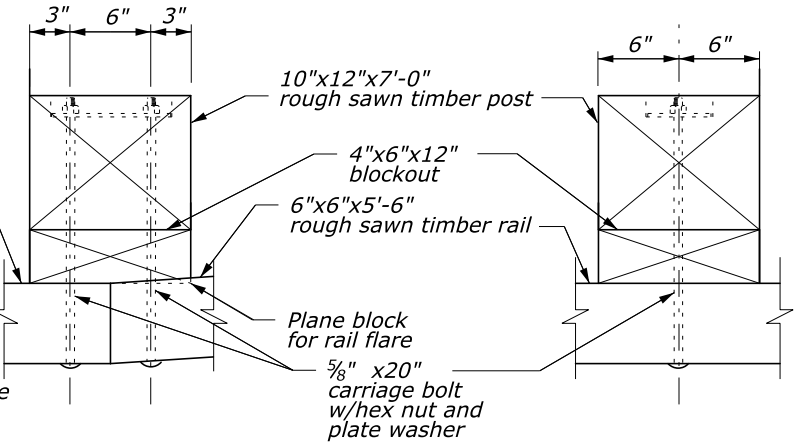
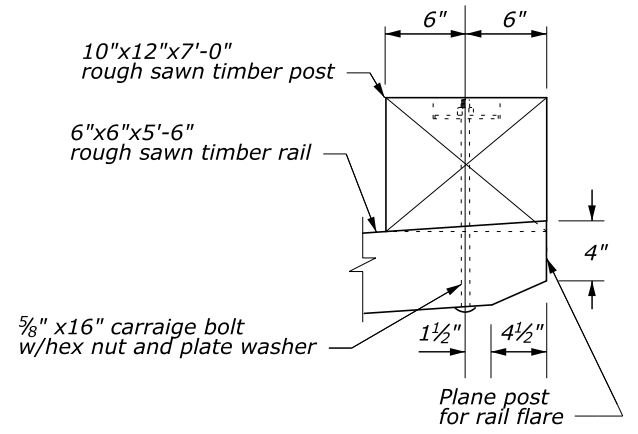
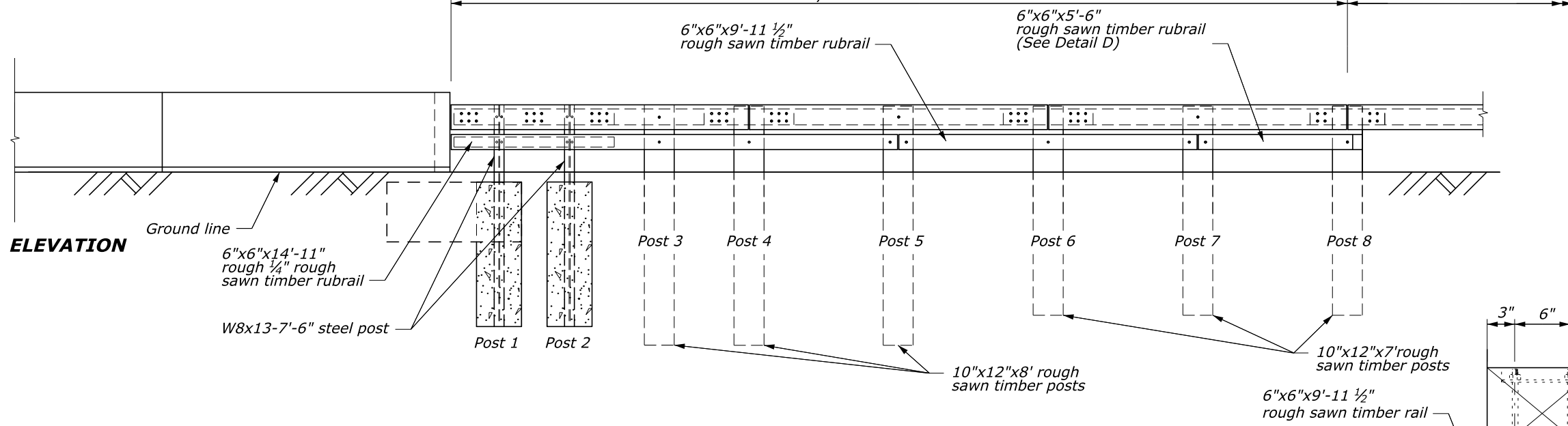
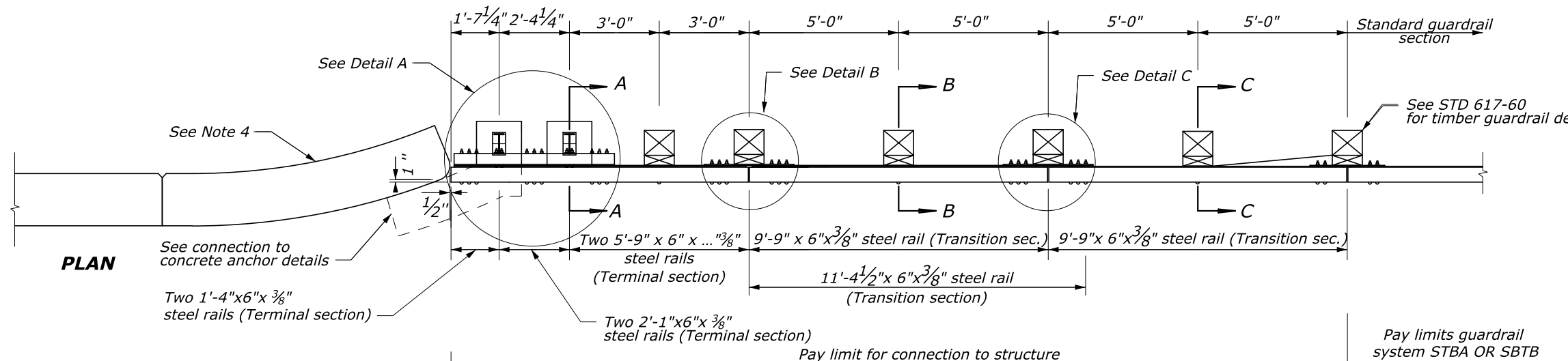
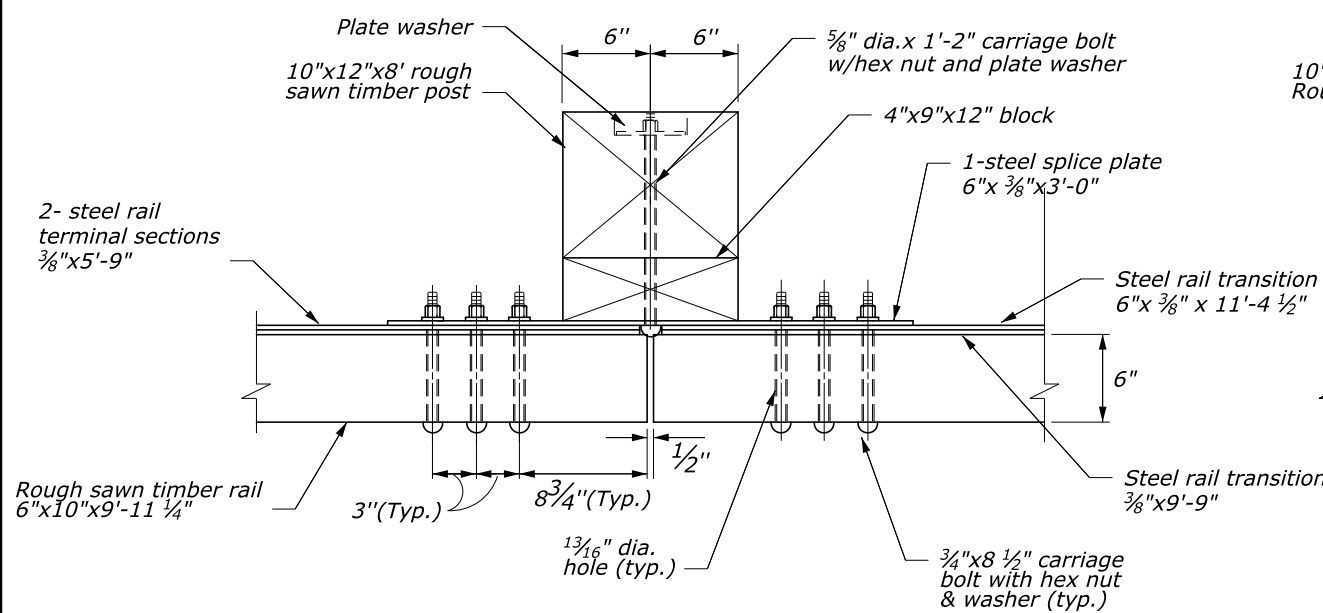


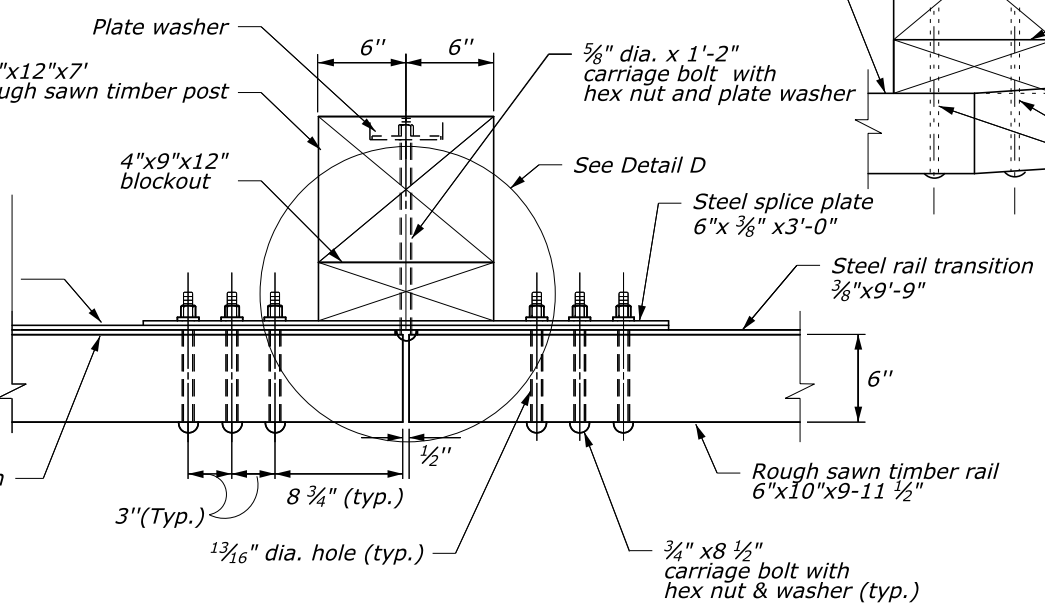
- Notes:
1. See Detail 617-68, sheet 2 of 3 for Sections A-A through C-C, and post connection Detail A. See Detail 617-68, sheet 3 of 3, for steel rail details.
  2. Use weathering steel for all structural steel and fastener hardware.
  3. Test Level 2 Steel - Backed Timber transition connections are to be paid for under a separate pay item, Connection to Structure, item 61706 in the bid schedule.
  4. Transition shown for curved end structure. For transition to a straight parapet end, install the timber rail so that the face of the timber rail is offset 1-inch towards the roadway.



**DETAIL D**  
**RUBRAIL CONNECTION PLAN**



**DETAIL B**  
**POST CONNECTION PLAN**



**DETAIL C**  
**POST CONNECTION PLAN**

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
EASTERN FEDERAL LANDS HIGHWAY DIVISION

U.S. CUSTOMARY DETAIL

**STEEL-BACKED TIMBER GUARDRAIL  
TEST LEVEL 2 TRANSITION TO  
STRAIGHT OR CURVED-END STRUCTURE**

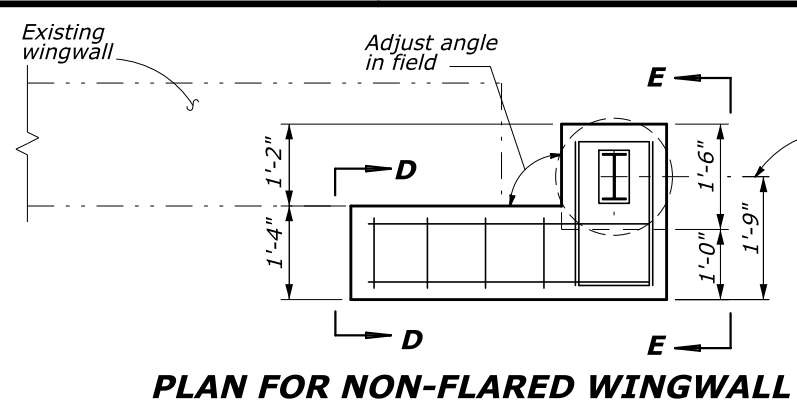
Sheet 1 of 3

APPROVED: MAY 2011  
REVISED: SEPTEMBER 2014

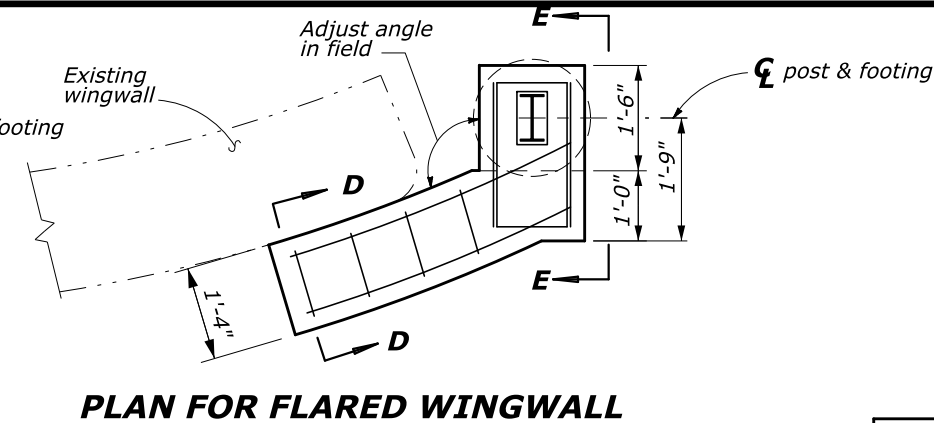
DETAIL APPROVED FOR USE

DETAIL  
E617-68

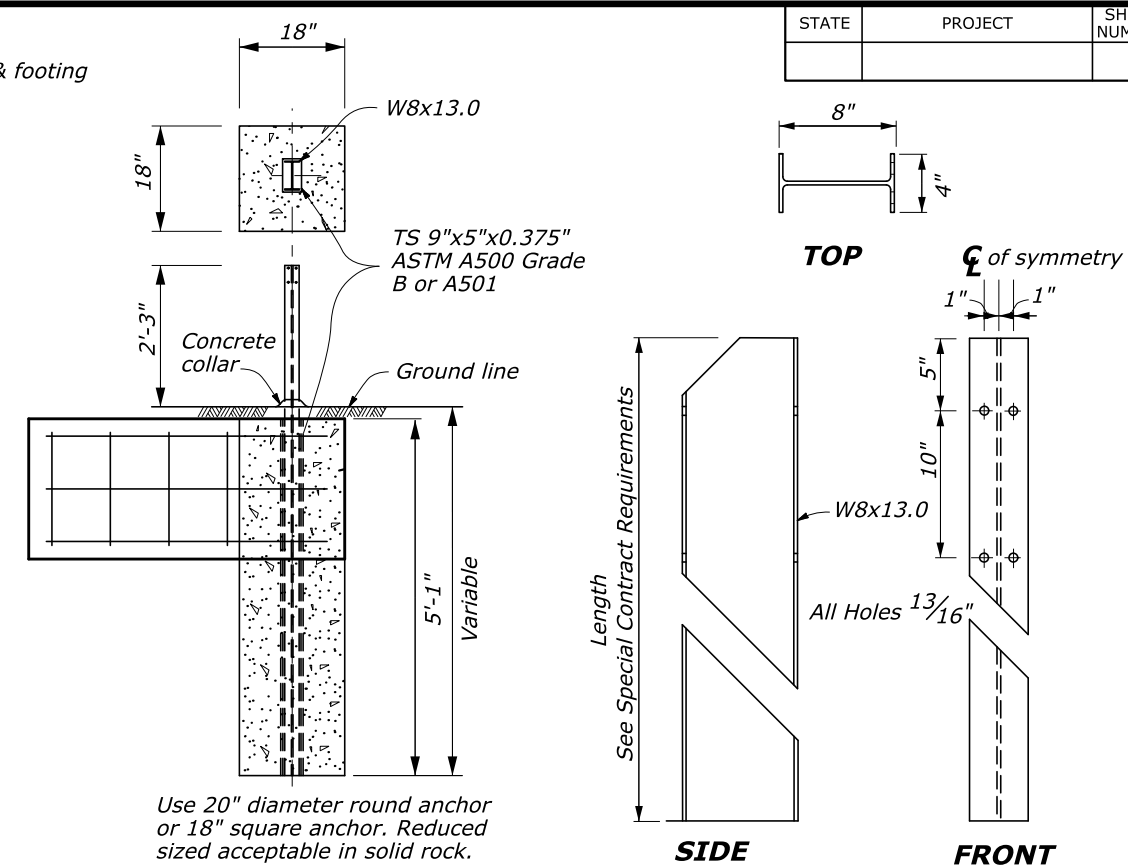
01-Dec-2014 02:36 PM \$TME\$ H:\Team\_Folders\HFD\06\FP\_14\_Detail\_Review\ALL\_FPH4\_DCH\61768\_detail.dgn



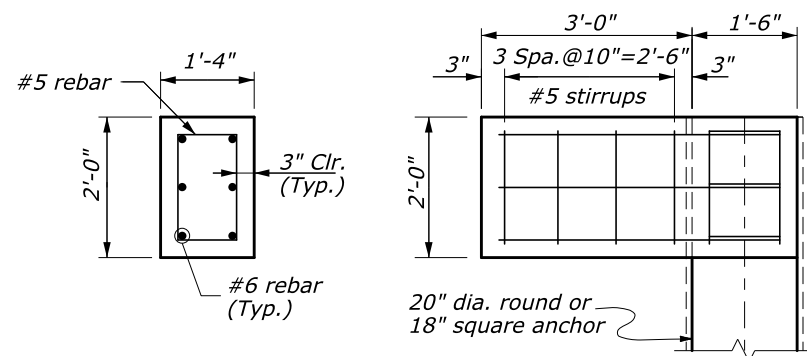
**PLAN FOR NON-FLARED WINGWALL**



**PLAN FOR FLARED WINGWALL**

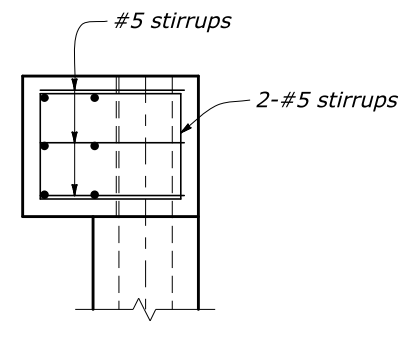


Use 20" diameter round anchor or 18" square anchor. Reduced sized acceptable in solid rock.



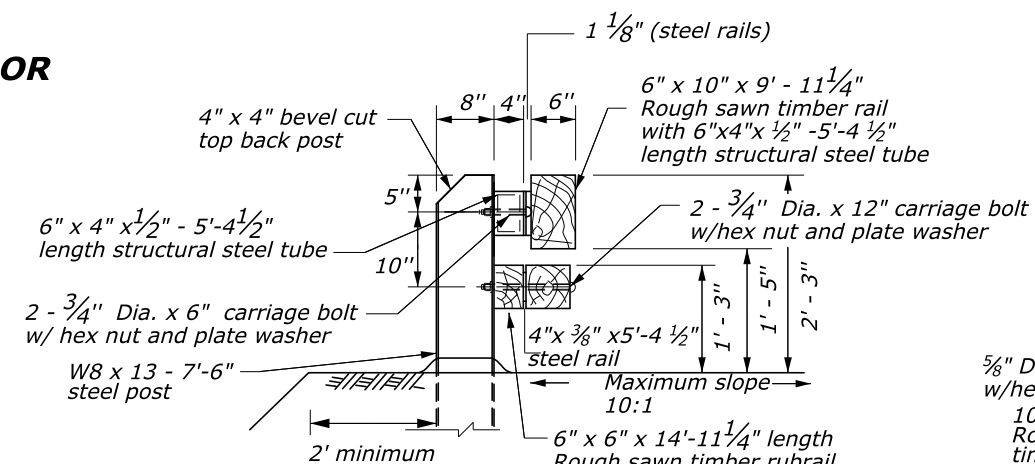
**SECTION D-D (Wingwall not shown)**

**ELEVATION (Wingwall not shown)**



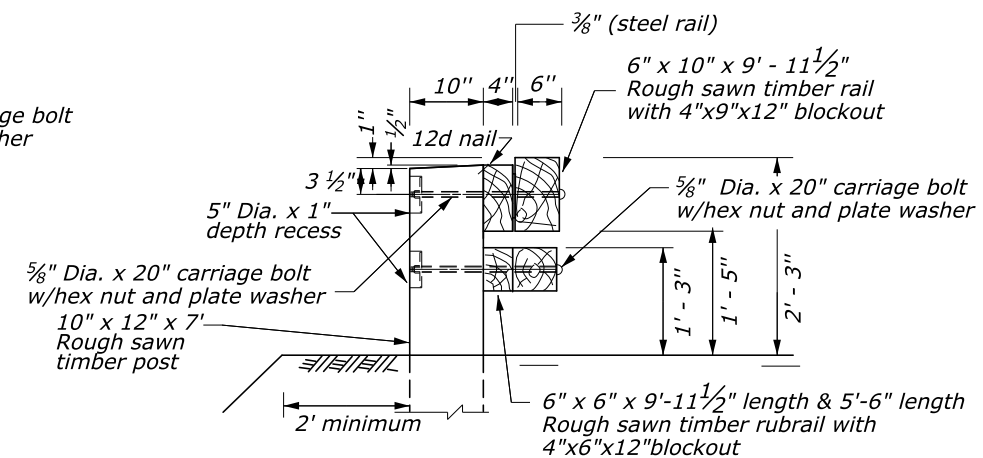
**SECTION E-E**

**CONNECTION TO CONCRETE ANCHOR (Post not shown)**

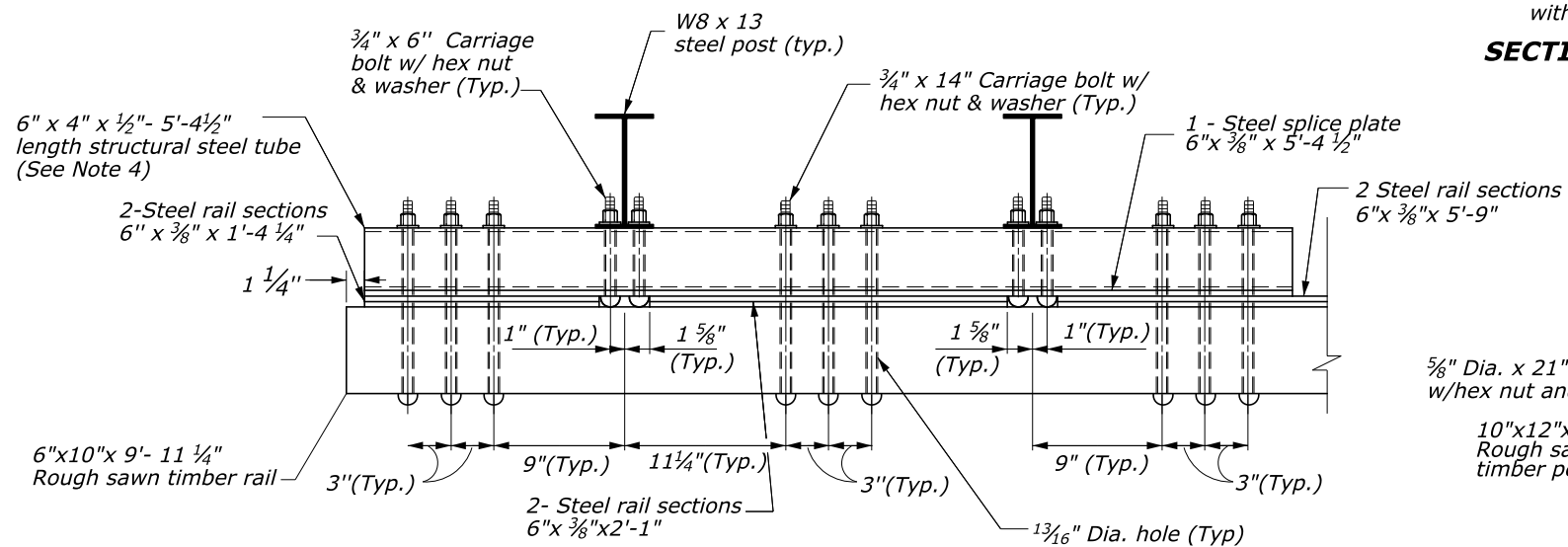


**SECTION A-A**

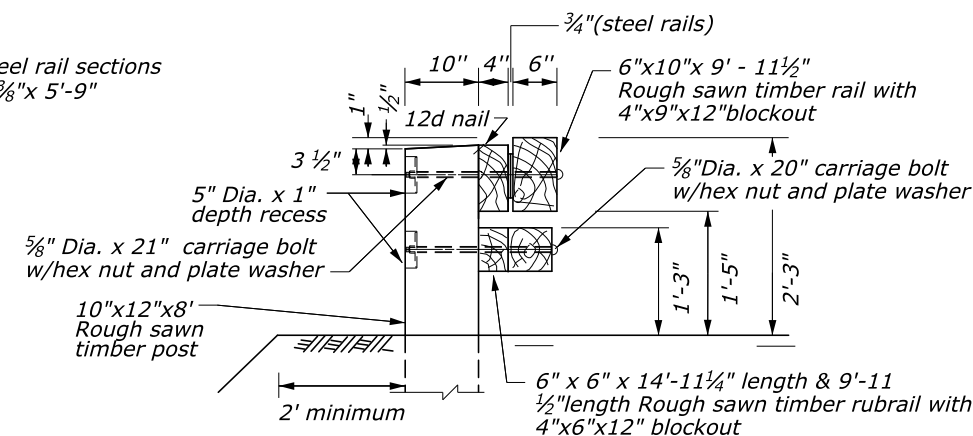
**CONCRETE ANCHOR FOR GUARDRAIL POST**



**SECTION C-C**



**DETAIL A POST CONNECTION PLAN**



**SECTION B-B**

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
EASTERN FEDERAL LANDS HIGHWAY DIVISION

U.S. CUSTOMARY DETAIL

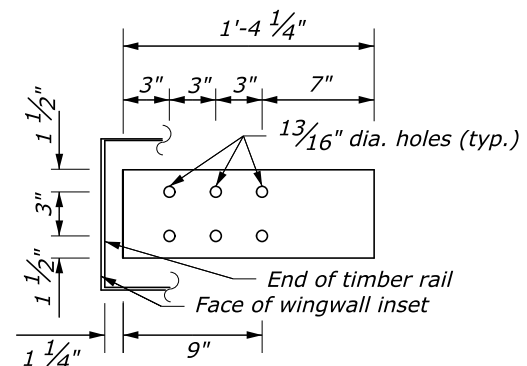
**STEEL-BACKED TIMBER GUARDRAIL  
TEST LEVEL 2 TRANSITION TO  
STRAIGHT OR CURVED-END STRUCTURE**

Sheet 2 of 3

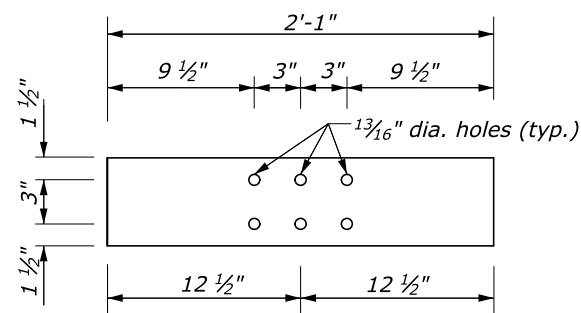
DETAIL APPROVED FOR USE

APPROVED: MAY 2011  
REVISED: SEPTEMBER 2014

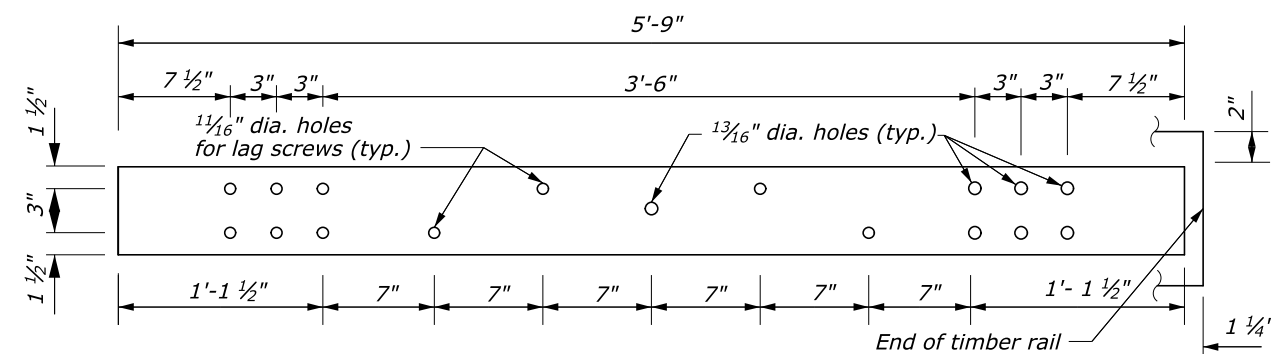
DETAIL  
E617-68



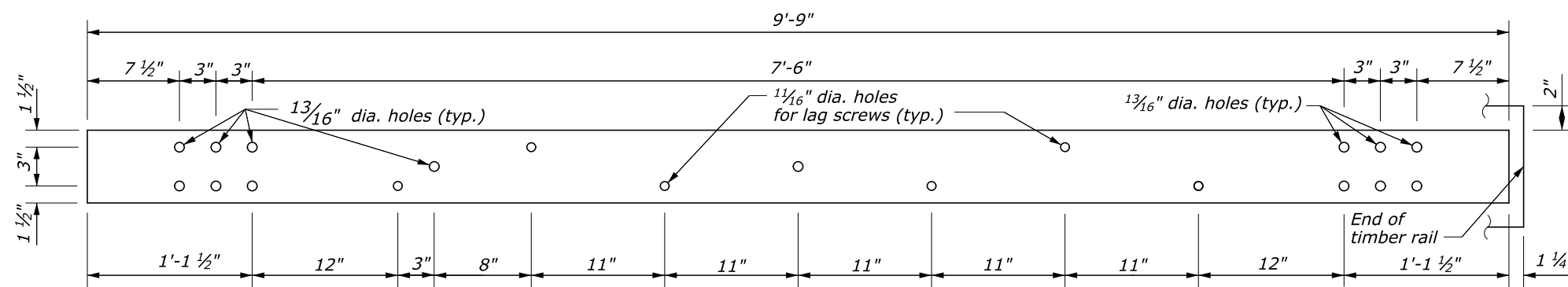
**TERMINAL SECTION 6" x 3/8" x 1'-4 1/4"**



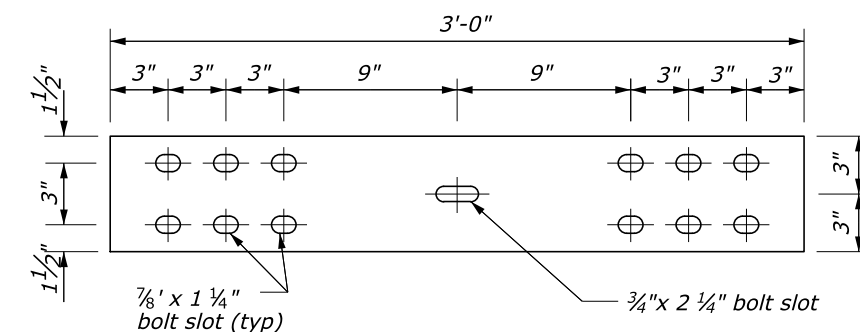
**TERMINAL SECTION 6" x 3/8" x 2'-1"**



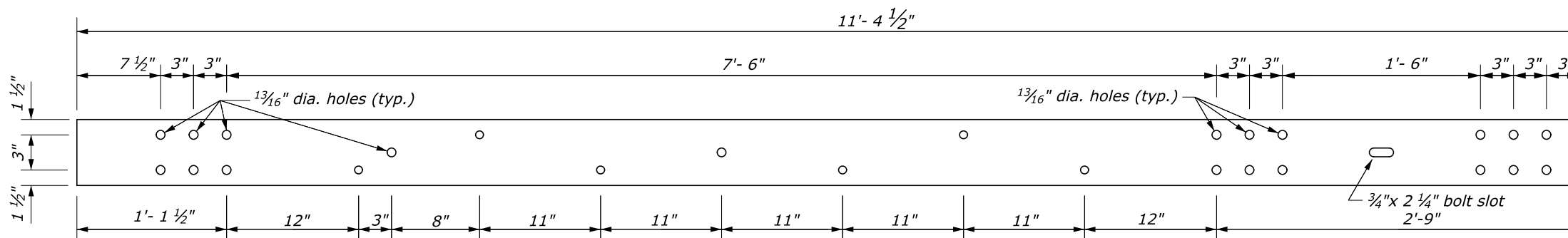
**TERMINAL SECTION 6" x 3/8" x 5'-9"**



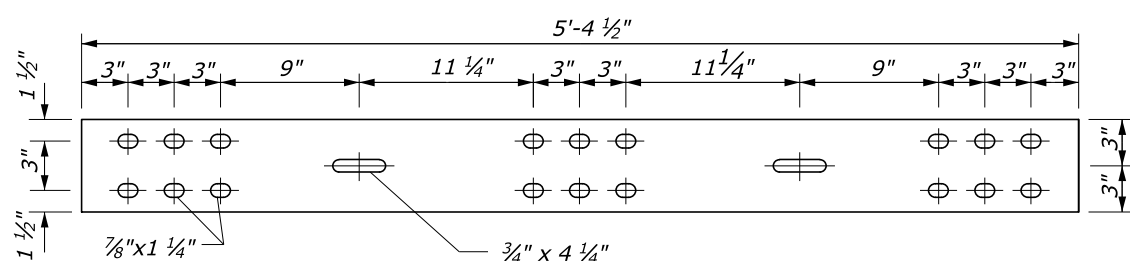
**TRANSITION SECTION 6" x 3/8" x 9'-9"**



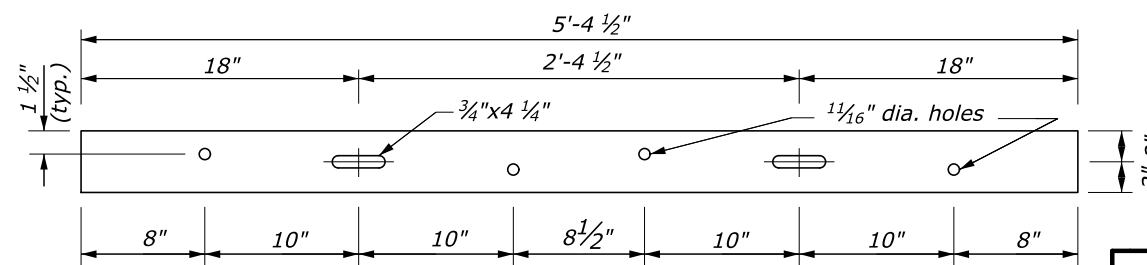
**STEEL SPLICE PLATE 6" x 3/8" x 3'-0"**



**TRANSITION SECTION 6" x 3/8" x 11'-4 1/2"**



**STEEL SPLICE PLATE 6" x 3/8" x 5'-4 1/2"**



**TERMINAL SECTION (rubrail) 4" x 3/8" x 5'-4 1/2"**

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION EASTERN FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY DETAIL <b>STEEL-BACKED TIMBER GUARDRAIL TEST LEVEL 2 TRANSITION TO STRAIGHT OR CURVED-END STRUCTURE</b>	
Sheet 3 of 3	
DETAIL APPROVED FOR USE	DETAIL
APPROVED: MAY 2011 REVISED: SEPTEMBER 2014	E617-68