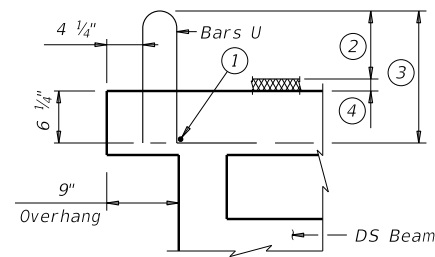
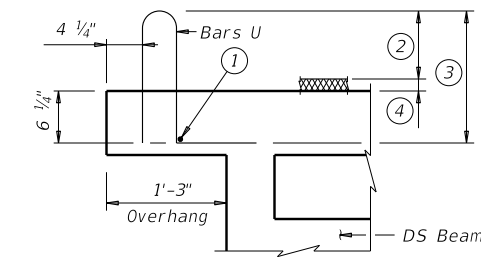


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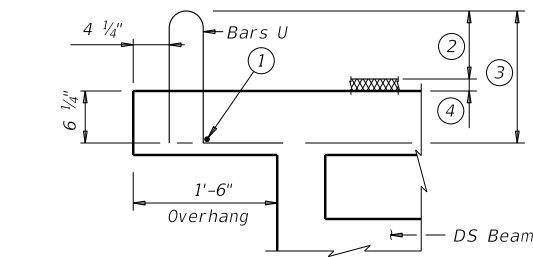
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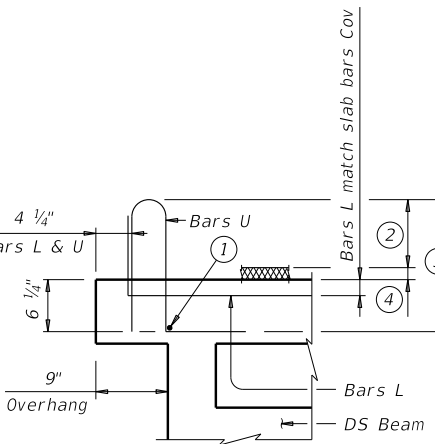
T221, T222, T551, T552, C221 & SSTR RAILS



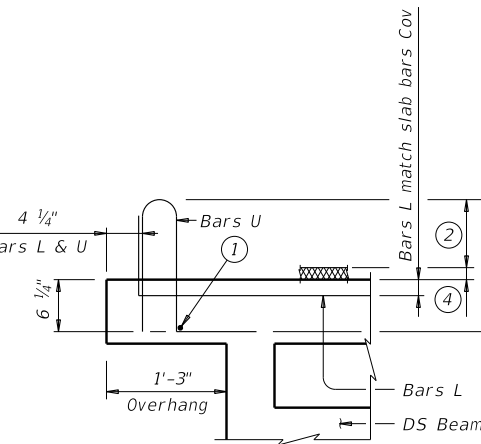
T223 & C223 RAILS



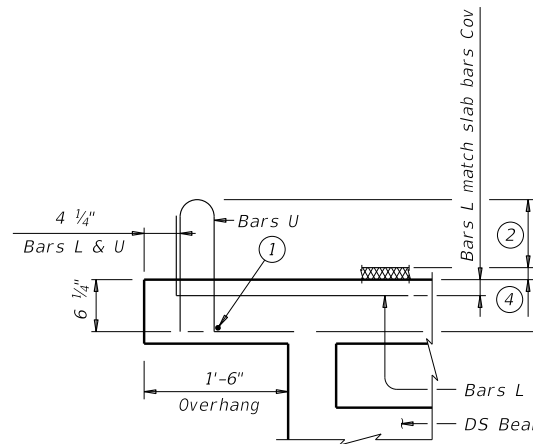
T402 & C402 RAILS



T411 & C411 RAILS



TYPICAL ANCHORAGE PLACEMENT



- ① Place additional #4 longitudinal bar. Bar embedded in beams must be provided by the beam fabricator, included as part of railing reinforcement. Bar shown is required to control alignment of rail anchorage steel. Bar shown may be placed outside of beam at the fabricators option and removed prior to shipping.
- ② See Rail standard for projection from finished grade or top of sidewalk.
- ③ Bar length shown on rail standard, increased 2" minimum for overlay (varies due to beam camber) or adjust bar length for a raised sidewalk. On bridges with significant beam camber, variable length rail anchor bars U or V may be required to maintain adequate projection into rail. See optional rail anchorage details for some rails that offer optional anchorage with a constant bar length.
- ④ Two course surface treatment and ACP overlay thickness varies due to beam camber (2" minimum).

CONSTRUCTION NOTES:

Rail anchorage bars may be field bent as required to clear rail reinforcing or provide minimum cover shown on standard rail detail sheets.
 DS beam rail anchorage hardware embedded in the beams must be provided by the beam fabricator and reflected in the DS beam shop drawings.
 Round or chamfer 1/16" all exposed edges of steel shims by grinding prior to galvanizing.
 The use of adhesive anchors are not allowed, unless directed otherwise by the Engineer.

MATERIAL NOTES:

Galvanize all steel components of steel rail system.
 Provide Grade 60 reinforcing steel.
 Epoxy coat or galvanize reinforcing steel shown on this standard, if rail reinforcement is epoxy coated or galvanized.
 Provide steel shims conforming to ASTM A36.

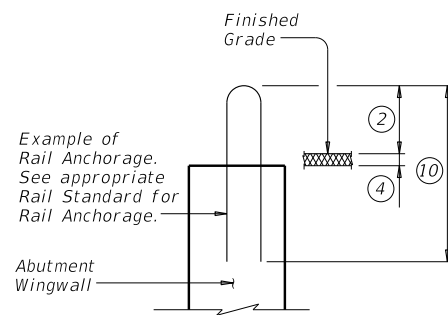
GENERAL NOTES:

Designed in accordance with AASHTO LRFD Specifications.
 This standard is for use with structures with a 2" Min two course surface treatment and ACP overlay. See Span Details for estimating two course surface treatment and ACP overlay thickness due to camber and to aid in making adjustments to anchorage projection lengths.
 This standard only applies to rails at the outside edge of the bridge with an 8" deep overhang on exterior beams and not in conditions where interior rails and median barriers are used.
 See Rail standard sheets for approved speed restrictions, notes and details not shown.
 This standard does not support the use of Type T1F, T2P, T1W, T66, T221P, T224, T80HT, T80SS, C1W, C2P, C412, C66, PR11, PR22 and PR3 Rails on DS beam bridges with two course surface treatment and ACP overlay.
 Cost of furnishing and installing steel shims for rails is included in unit price bid for "Railing".

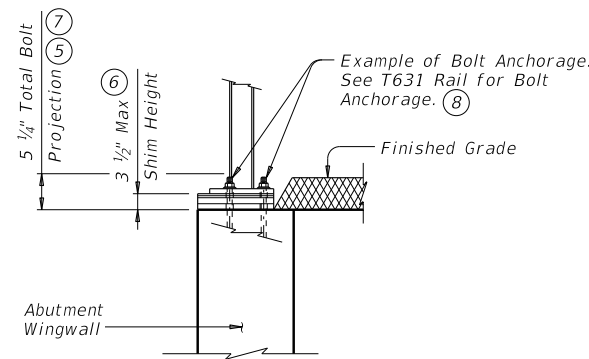
Cover dimensions are clear dimensions, unless noted otherwise.
 Reinforcing bar dimensions shown are out-to-out of bar.

SHEET 1 OF 2

		Bridge Division Standard	
RAIL ANCHORAGE DETAILS PRESTRESSED CONCRETE DECKED SLAB BEAMS DSBRA			
FILE: DSB-DSBRA-20.dgn	DN: AEE	CK: TxDOT	DW: JTR
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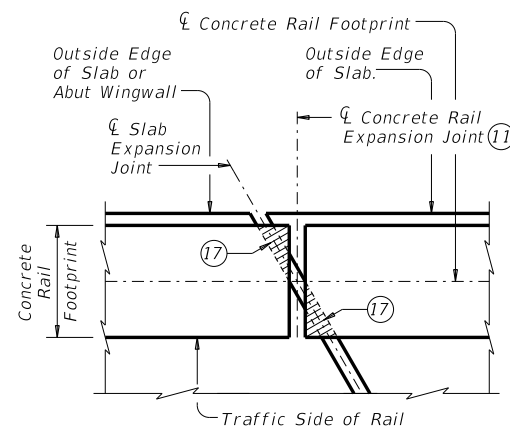
CONCRETE PARAPET RAILS



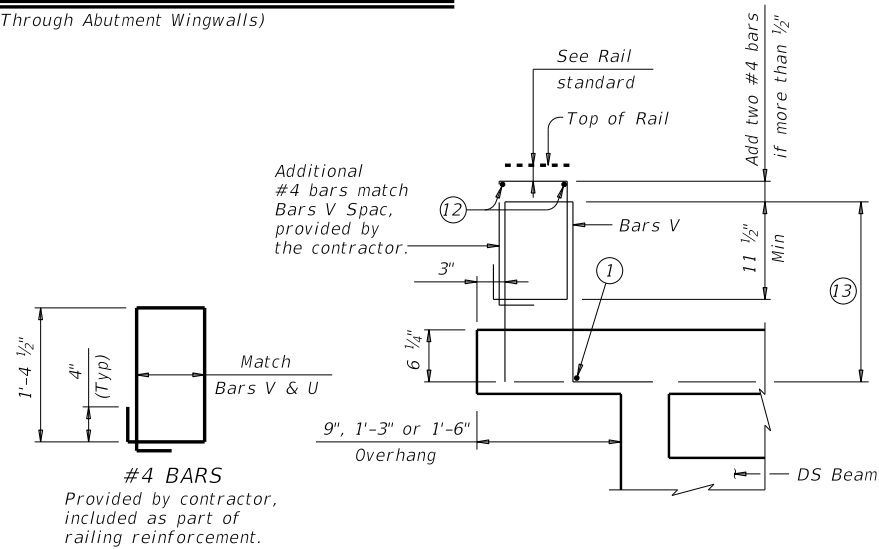
T631LS & T631 RAILS (16)(18)

EXAMPLE OF RAIL ANCHORAGES ON WINGWALLS

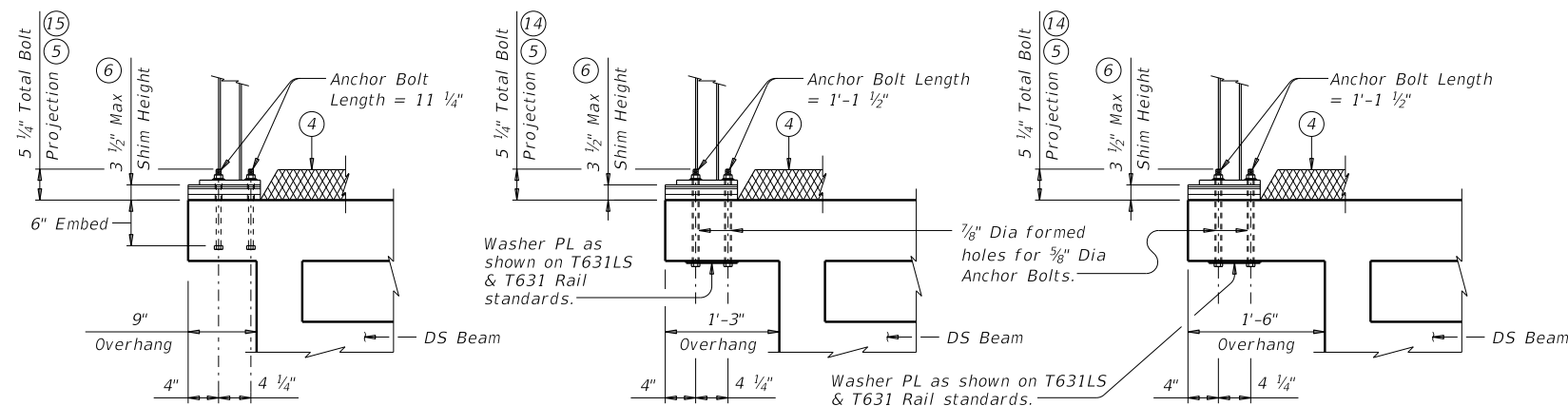
(Showing Sections Through Abutment Wingwalls)



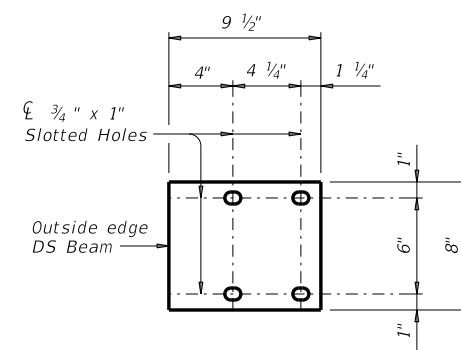
PLAN OF CONCRETE RAILS AT EXPANSION JOINTS



OPTIONAL RAIL ANCHORAGE FOR T402 & C402 RAILS



T631LS & T631 RAILS (9)(18)
TYPICAL ANCHORAGE PLACEMENT



T631LS & T631 RAIL STEEL SHIMS
Shim thickness must be 1/4" or 3/4" Plate (ASTM-A36) only, provided by the contractor.

- ①
- ②
- ④
- ⑤
- ⑥
- ⑦
- ⑧
- ⑨
- ⑩
- ⑪
- ⑫
- ⑬
- ⑭
- ⑮
- ⑯
- ⑰
- ⑱ The use of adhesive anchors are not allowed, unless directed o

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