State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

Serious drought.
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To: ALL USERS OF THE BRIDGE
STANDARD DETAILS SHEETS (XS)

Date: October 6, 2014

File: **http://www.dot.ca.gov/hq/esc/techpubs/**

From: SHANNON POST, Chief
Office of Design and Technical Services
Structure Policy and Innovation
Division of Engineering Services

Subject: **BRIDGE STANDARD DETAIL SHEETS (XS) – OCTOBER 2014 POSTING**

We are pleased to announce the October 2014 posting to the Bridge Standards Detail Sheets (XS) webpage. The next posting is January 2015.

Summary Table:

Number of Sheets	Type of Revision
27	Minor Revisions
0	Major Revisions
34	New Sheet
4	Archive
12	No action taken

Attached is a detailed description of the revisions to each sheet.

The Division of Engineering Services develops and maintains XS Sheets. The detail sheets are intended to be inserted directly into either the District PS&E package or the Structure PS&E package. The details are "Project Plans" for contract administration purposes in accordance with Section 5-1.02 "Contract Components", of the Standard Specifications.

The XS Sheets can be found at:
http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

Send general questions regarding the usage of XS sheets to "DES Design and Technical Services @ dot.ca.gov". Send technical questions to the applicable Technical Specialist or Technical Committee Manager.

Attachment
(1) Summary of Revisions to Bridge Standard Detail Sheets (XS) October 2014.

Attachment: Summary of Revisions to Bridge Standard Detail Sheets (XS)
October 2014

XS Sheet Number	XS Sheet Title	Previous Approval	Type of Revision	Summary of Revisions
Section 3	**BRIDGE STRUCTURE APPROACHES**			
xs3-010-1	Structure Approach Type N (45D) Details No. 1	July 2011	No Action Taken	Updates planned for January 2015 posting
xs3-010-2	Structure Approach Type N (45D) Details No. 2	July 2011	No Action Taken	Updates planned for January 2015 posting
xs3-110	Structure Approach Drainage Details	July 2011	No Action Taken	Updates planned for January 2015 posting
xs3-120	Structure Approach Type N (30S)	July 2011	No Action Taken	Updates planned for January 2015 posting
xs3-130	Structure Approach Type R (30S)	July 2011	No Action Taken	Updates planned for January 2015 posting
xs3-140	Structure Approach Type N (30D)	July 2011	No Action Taken	Updates planned for January 2015 posting
xs3-150	Structure Approach Type R (30D)	July 2011	No Action Taken	Updates planned for January 2015 posting
xs3-160	Structure Approach Type EQ (10)	July 2011	No Action Taken	Updates planned for January 2015 posting
xs3-170	Structure Approach Type R (10S)	July 2011	No Action Taken	Updates planned for January 2015 posting
xs3-180	Structure Approach Type R (10D)	July 2011	No Action Taken	Updates planned for January 2015 posting
Section 8	**BRIDGE JOINT SEALS**			
xs8-070-1	Seismic Joint (Type I, Full Channel) Cross Section		New Sheet	This is a new Bridge Standard Detail sheet when the maximum service joint demand is equal to 4 inches and access to the joint is from the top. These Bridge Standard Detail sheets should be inserted into the design plans when the Seismic Joint (Type I, Full Channel) are used.
xs8-070-2	Seismic Joint (Type I, Full Channel) Deck Plate Details No. 1		New Sheet	
xs8-070-3	Seismic Joint (Type I, Full Channel) Deck Plate Details No. 2		New Sheet	
xs8-070-4	Seismic Joint (Type I, Full Channel) Channel Assembly Details No. 1		New Sheet	
xs8-070-5	Seismic Joint (Type I, Full Channel) Channel Assembly Details No. 2		New Sheet	
xs8-070-6	Seismic Joint (Type I, Full Channel) Support Plate Details		New Sheet	
xs8-070-7	Seismic Joint (Type I, Full Channel) Reinforcement Details		New Sheet	
xs8-070-8	Seismic Joint (Type I, Full Channel) Construction Sequence		New Sheet	

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XS Sheet Number	XS Sheet Title	Previous Approval	Type of Revision	Summary of Revisions
xs8-080-1	Seismic Joint (Type I, Half Channel) Cross Section		New Sheet	This is a new Bridge Standard Detail sheet when the maximum service joint demand is equal to 4 inches and access to the joint is from the bottom. These Bridge Standard Detail sheetsshould be inserted into the design plans when the Seismic Joint (Type I, Half Channel) are used.
xs8-080-2	Seismic Joint (Type I, Half Channel) Deck Plate Details No. 1		New Sheet	
xs8-080-3	Seismic Joint (Type I, Half Channel) Deck Plate Details No. 2		New Sheet	
xs8-080-4	Seismic Joint (Type I, Half Channel) Channel Assembly Details No. 1		New Sheet	
xs8-080-5	Seismic Joint (Type I, Half Channel) Channel Assembly Details No. 2		New Sheet	
xs8-080-6	Seismic Joint (Type I, Half Channel) Support Plate Details		New Sheet	
xs8-080-7	Seismic Joint (Type I, Half Channel) Reinforcement Details		New Sheet	
xs8-080-8	Seismic Joint (Type I, Half Channel) Construction Sequence		New Sheet	
xs8-090-1	Seismic Joint Type II (Full Channel) Cross Section		New Sheet	This is a new Bridge Standard Detail sheet when the maximum service joint demand is equal to 13 inches and access to the joint is from the top. These Bridge Standard Detail sheetsshould be inserted into the design plans when the Seismic Joint Type II (Full Channel) are used.
xs8-090-2	Seismic Joint Type II (Full Channel) Deck Plate Details No. 1		New Sheet	
xs8-090-3	Seismic Joint Type II (Full Channel) Deck Plate Details No. 2		New Sheet	
xs8-090-4	Seismic Joint Type II (Full Channel) Channel Assembly Details No. 1		New Sheet	
xs8-090-5	Seismic Joint Type II (Full Channel) Channel Assembly Details No. 2		New Sheet	
xs8-090-6	Seismic Joint Type II (Full Channel) Support Plate Details		New Sheet	
xs8-090-7	Seismic Joint Type II (Full Channel) Reinforcement Details		New Sheet	
xs8-090-8	Seismic Joint Type II (Full Channel) Construction Sequence		New Sheet	

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XS Sheet Number	XS Sheet Title	Previous Approval	Type of Revision	Summary of Revisions
xs8-100-1	Seismic Joint Type II (Half Channel) Cross Section		New Sheet	This is a new Bridge Standard Detail sheet when the maximum service joint demand is equal to 13 inches and access to the joint is from the bottom. These Bridge Standard Detail sheets should be inserted into the design plans when the Seismic Joint Type II (Half Channel) are used.
xs8-100-2	Seismic Joint Type II (Half Channel) Deck Plate Details No. 1		New Sheet	
xs8-100-3	Seismic Joint Type II (Half Channel) Deck Plate Details No. 2		New Sheet	
xs8-100-4	Seismic Joint Type II (Half Channel) Channel Assembly Details No. 1		New Sheet	
xs8-100-5	Seismic Joint Type II (Half Channel) Channel Assembly Details No. 2		New Sheet	
xs8-100-6	Seismic Joint Type II (Half Channel) Support Plate Details		New Sheet	
xs8-100-7	Seismic Joint Type II (Half Channel) Reinforcement Details		New Sheet	
xs8-100-8	Seismic Joint Type II (Half Channel) Construction Sequence		New Sheet	
Section 10	**BRIDGE DECK DRAINS**			
xs10-010	Deck Drain - Type C	July 2011	No Action Taken	Updates planned for January 2015 posting
xs10-020	Deck Drain - Type D-2 Modified	July 2011	No Action Taken	Updates planned for January 2015 posting
Section 12	**EARTH RETAINING SYSTEMS**			
xs12-050	Cantilever Soldier Pile Wall Details	July 2014	Minor Revisions	Added Seismic Parameters to General Notes Other minor modifications to sheet nomenclature
xs12-060-1	Soldier Pile Wall with Walers-Details No. 1	July 2014	Minor Revisions	Extended finished grade line
xs12-060-2	Soldier Pile Wall with Walers-Details No. 2	July 2014	Minor Revisions	Added Seismic Parameters to General Notes
xs12-070	Soldier Pile Wall with Ground Anchors	July 2014	Minor Revisions	Added Seismic Parameters to General Notes Other minor modifications to sheet nomenclature

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XS Sheet Number	XS Sheet Title	Previous Approval	Type of Revision	Summary of Revisions
Section 14	**RETAINING WALLS WITH SOUNDWALLS**			
xs14-220-1	Retaining Wall Type 1SWB - Details No.1	July 2014	Minor Revisions	Increase rebar and decrease rebar spacing in a few locations in the stem. FG was added in retaining wall section.
xs14-220-2	Retaining Wall Type 1SWB - Details No.2	July 2014	Minor Revisions	Increase rebar and decrease rebar spacing in a few locations in the stem.
xs14-310-1	Retaining Wall Type 1SWP - Details No. 1	July 2014	Minor Revisions	Design note added.
xs14-320-1	Retaining Wall Type 1SWBP - Details No. 1	July 2014	Minor Revisions	Increase rebar and decrease rebar spacing in a few locations in the stem. Design note added.
xs14-320-2	Retaining Wall Type 1SWBP - Details No. 2	July 2014	Minor Revisions	Increase rebar and decrease rebar spacing in a few locations in the stem. Modified rebar in footing Added FG to pile footing section
xs14-350-1	Retaining Wall Type 5SWB - Details No.1	July 2014	Minor Revisions	Increase rebar and decrease rebar spacing in a few locations in the stem. Modified rebar in footing Design note added.
xs14-350-2	Retaining Wall Type 5SWB - Details No.2	July 2014	Minor Revisions	Increase rebar and decrease rebar spacing in a few locations in the stem.
xs14-360-1	Retaining Wall Type 5SWP - Details No. 1	July 2014	Minor Revisions	Added FG to pile footing section Design note added.
xs14-370-1	Retaining Wall Type 5SWBP - Details No. 1	July 2014	Minor Revisions	Increase rebar and decrease rebar spacing in a few locations in the stem. Design note added. Added FG to pile footing section Corrected misspelling in the table
xs14-370-2	Retaining Wall Type 5SWBP - Details No. 2	July 2014	Minor Revisions	Increase rebar and decrease rebar spacing in a few locations in the stem.
xs14-375-1	Retaining Wall Type 7B - Details No. 1	July 2014	Minor Revisions	Increase rebar and decrease rebar spacing in a few locations in the stem. Design note added.
xs14-375-2	Retaining Wall Type 7B - Details No. 2	July 2014	Minor Revisions	Increase rebar and decrease rebar spacing in a few locations in the stem. Modified rebar in footing
xs14-400-1	Retaining Wall Type 7SWP - Details No. 1	July 2014	Minor Revisions	Design note added.
xs14-410-1	Retaining Wall Type 7SWBP - Details No. 1	July 2014	Minor Revisions	Design note added.

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Section 16	**BARRIERS AND RAILINGS**			
xs16-035	Concrete Barrier Type 80, 732 & 736 Tubular Bicycle Railing Details	July 2014	Minor Revisions	Note 2, corrected to say "when radius is less that 950'" Note 5, revised "Tubular Hand Railing" to "Tubular Bicycle Railing" Revised "shall" to "must" in Notes 1, 2, 3, and 4. Delete redundant detail "Round Head Screw Detail" Elevation Detail, corrected note to "...Expansion Joint, See Note 3" Updated "TS" designation to "HSS" in Elevation view. Deleted type 25 concrete barrier from the choices on top left of the detail.
xs16-045	Concrete Barrier Type 736 Retrofit On Existing Bridge Deck and Wing Wall	July 2014	Minor Revisions	Few Modifications per IQA comments, come callouts were removed from overhang, a table was added and some notes were added.
xs16-092-1	Concrete Barrier Type 60SD Transitions at Bridge Column - Details No. 1		New Sheet	New sheet to protect bridge columns and bents in the roadway shoulders
xs16-092-2	Concrete Barrier Type 60SD Transitions at Bridge Column - Details No. 2		New Sheet	
xs16-140-1	Chain Link Railing Type 2 - Details No. 1	July 2014	Minor Revisions	Revised "Chain Link Fence" to "Chain Link Railing Type 2" in elevation view Revised "shall" to "must" in Notes 1 and 2 Made spelling corrections in Top Cable Anchorage Detail Corrected spelling in Note 4 Corrected diameter symbol in Note 8
xs16-140-2	Chain Link Railing Type 2 - Details No. 2	July 2014	Minor Revisions	Revised "Post" to "Posts" in Section A-A (Single Pipe Rail) Revised "shall" to "must" in Nut/Bolt Extension detail
xs16-170-1	Chain Link Railing Type 4 - Details No. 1	July 2014	Archive	Chain Link Railing Type 4 leans out over the bridge deck in front of the vehicular bridge barrier rail so it is a fixed blunt object that would be impacted by any . vehicle that was 5' in height or taller next to the barrier rail.
xs16-170-2	Chain Link Railing Type 4 - Details No. 2	July 2014	Archive	
xs16-180-1	Chain Link Railing Type 4 - ST-10 - Details No. 1	July 2014	Archive	
xs16-180-2	Chain Link Railing Type 4 - ST-10 - Details No. 2	July 2014	Archive	
xs16-200	Chain Link Railing Type 6	July 2014	Minor Revisions	Revised "shall" to "must" in Notes Corrected Post Anchorage Detail to reference note 14 in lieu of 15 Updated "TS" designation to "HSS" in Section A-A Corrected syntax in Note 3 to say "Curved posts may be rotated in plane within

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				post pockets to accommodate curved horizontal alignment".
xs16-210-1	Chain Link Railing Type 7L - Details No. 1	July 2014	Minor Revisions	Revised "Tubular Handrail" to "Tubular Handrailing" in Typical Post Detail and Elevation view Revised "shall" to "must" in Notes Corrected Note 7
xs16-210-2	Chain Link Railing Type 7L - Details No. 2	July 2014	Minor Revisions	Revised "See Note 12" to "See Note 11" in Section C-C Updated "TS" designation to "HSS" throughout sheet Revised "See Note 13" to "See Note 12" in Elevation End Post detail
xs16-220-1	Chain Link Railing Type 7 (MOD) - Details No. 1	July 2014	Minor Revisions	Revised "Tubular Handrail" to "Tubular Handrailing" in Typical Post Detail Revised "shall" to "must" in Note 2 Revised "TS" designation to "HSS" throughout sheet
xs16-220-2	Chain Link Railing Type 7 (MOD) - Details No. 2	July 2014	Minor Revisions	Revised "Tubular Handrail" to "Tubular Handrailing" in Tubular Handrailing Bracket Details Revised "TS" designation to "HSS" throughout sheet Revised "See Note 8" to "See Note 9" in the Elevation End Post detail.