

DATE: FEBRUARY 14, 1997
TO: ALL BRIDGE WORKSHEET USERS
FROM: S. W. HORTON
SUBJECT: CDOT STAFF BRIDGE WORKSHEET REVISIONS

The Staff Bridge Worksheets have recently been updated. This update involves 118 sheets, 39 in English units and 79 sheets in metric units. All of these drawings are in ACAD version 13.

With this update all metric sheets have been converted to the new CDOT drawing border where the drawing information is located across the bottom of the sheet instead of in the upper and lower right-hand corners. Because the worksheets in English units will eventually be phased out they have not been converted to the new border format.

CDOT has recently adopted CRSI's soft metric conversion for reinforcing steel, ASTM A615M for the yield strength of reinforcing steel, and 30 MPa Class D Concrete (see Staff Bridge Technical Memorandum #20, 10/2/96). With this worksheet submittal, all metric worksheets have now been revised accordingly.

Reminder: The Staff Bridge Worksheets can be copied from the CDOT computer system. The path name for the VAX directory containing the worksheets is PATH7:[PCSA.BRGSTDS]. In-house users can also access the drawings with Pathworks through DHQ20V\BRGSTDS. This and other memorandums discussing changes to the Staff Bridge Worksheets can be accessed through CDOT's All-in-One Bulletin Board System (BBS) under the "Staff Bridge-Preconstruction-Miscellaneous" menu choices.

The following is a summary of the revisions.

B-INDEX-1 & 2: Updated indexes.

B-000-00: Updated the AASHTO specifications reference from 15th edition to 16th edition. Changed Class A Concrete references to Class B. CDOT's standard specifications (see CDOT's Supplemental Standard Specifications for Construction, 12/1/96) use "Class B" instead of "Class A" to reference 3000 psi concrete.

B-100-5: New worksheet. This bridge deck elevation sheet allows for the full bridge geometry output to be placed in the plans.

B-206-1 & 2: Note to designer/detailer expanded to include guidelines for supporting end of drain outlet.

B-206-3 & 4: Minor detailing changes and rewording. Clarified extent of structural earthwork calculations along wingwalls.

B-507-1 & 2: Added polypropylene fibers as an alternate to using welding wire fabric. Noted that the filters at weep holes shall be included in the payment for the slope paving.

B-509-1B: Corrected distance from edge of flange to anchor bolt on fixed bearing. Corrected the font used for fractions.

B-512-1: Added cross section showing the details of the reinforced elastomeric bearing pad.

B-512-2: Added anchor bolts to list of materials included in the 504 pay item. Called out limits of stainless steel plate.

B-518-1, M1C, M1S & M3: Updated rebar mark numbers. On B-518-M1C, also corrected wording of note referring to placement of expansion device prior to deck pour.

B-601-1A, 1EA & 1EC: Modified shape of sleeper, eliminating keys at edges of bearing seats, to simplify forming and prevent approach slab from riding up on the keys in the event of extreme joint openings. Modified vertical rebar dimension in Sleeper Section. On B-601-1A, also updated approved list of joints by deleting Koch from the name of the BJS System, and adding a new joint system: Pavetech Int. Matrix 502. On B-601-1EA & 1EC, also corrected rebar mark number in "Section Through Expansion Device".

B-606-3 & 3W: Updated notes, splices, and anchorage's for consistency with the Type 10 Bridge Rail.

B-606-8A & 8B: New worksheets. These sheets contain Type 8 bridge rail details which have not been maintained since 1992. As such they require thorough review and possible revision before they can be used on a project.

B-606-10, 10H & 10R: Minor revision to note regarding expansion devices. Added requirement for flat washers to be used with the lock washers at the rail to post connection.

Changed note requiring submittal of two sets of shop drawings to three sets of working drawings. Added backing plates to the note calling out A36 steel items. Added note that installed rods shall not project more than two inches beyond the nut on Bridge Rail Type 10R. On 2/96 qualified the 12.5' post spacing as a maximum spacing, and corrected the end of thrie-beam to end of bridge rail dimension to 29.5".

B-606-10B: On 2/96 corrected thrie-beam slot to end of bridge rail dimension to 6.75".

B-606-3 & 5: Revised design data to specify only the yield strength of the structural steel materials and removed the redundant reference to the AASHTO specifications.

B-618-1 through 6: Updated rebar mark numbers.

B-618-BT: New worksheet. CDOT is discontinuing the use of the G54 and G68 precast girders and is adopting new BT54 and BT 63 sections (see Staff Bridge Technical Memorandum # 21, February 1997). CDOT's precast I-girder sections are now all bulb-tees (BT), available in 42", 54", 63", 72" & 84" depths. This new worksheet with B-618-DF provides all of CDOT's precast I-girder details, and replaces B-618-42, 54, 68, 72 & 84.

B-618-42, 54, 68, 72 & 84: Deleted.

B-618-BX, DF & SL: Changed worksheet titles for better correlation with pay item descriptions. On B-618-DF, also deleted references to G-girders and added BT-girder type descriptions.

All Metric Worksheets (79 sheets): Traditional drawing border replaced with new CDOT border. Old CRSI hard metric reinforcing steel designations replaced with the new CRSI soft metric designations. 35 MPa Class D concrete replaced with 30 MPa. 400 MPa reinforcing steel yield strength replaced with 420 MPa. Revisions discussed above for English worksheets also made on the corresponding metric worksheets.

C-602-BL: In addition to the above, added note establishing 18,288 mm as the stock rebar length for bar list calculations. This note revises the metric CDOT Standard Specifications for Construction. The 18,288 mm corresponds to the actual manufacturer stock length of 60 feet.

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Please review these changes to the worksheets. Contact Mark Leonard if you or any member of your office has any questions or comments on the worksheets, these changes, or if there are any additional changes you would recommend.

Attachment: 118 revised worksheets

SWH/MAL/md

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