BACKGROUND: When the cutoff wall at outside of the end of the box culvert was relocated to underneath the end section of the box culvert it was incorrectly shown being below the 1'-0" thick bedding instead of immediately beneath the end section.

Sheet 5 – PRECAST CULVERT WITH PRECAST END SECTION: Cutoff wall needs to be positioned directly beneath the end section. Corrected detail is indicated with clouding in the attached 8½"x11” sheet.

Please note that implementation of this correction is immediate.

Direct any questions concerning the above issue to:

Gary P. Gordon, P.E.
PennDOT, Bureau of Project Delivery
Bridge Design and Technology Division
Phone: (717) 783-7551 Fax: (717) 787-2882
gagordon@pa.gov

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PROFILE

PRECAST CULVERT WITH PRECAST END SECTION

PRECAST END SECTION

8" END BAFFLE IF REQ'D.

2-THREADED INSERTS FOR #5 REINF. BAR, EACH END OF CURB

#3 EQ. SP.

#4 EQ. SP.

1'-0"

2" CLR.

#4 @ 12"

4" CLR.

4" CLR.

3'-6" MIN.

AN ALTERNATIVE CUTOFF WALL WITH GROUTED ROCK IS PERMITTED, SEE DETAIL A ON SHEET 6.

GALVANIZED STRAPS

OPTIONAL KEYED CONSTRUCTION JOINT, SEE SHEET 9 FOR DETAILS.

2 PLY BITUMINOUS BOND BREAKER

PRECAST END SECTION SEE DETAILS ON SHEET 7

e-Notification No. 56

BD-632M, SHT. 5
(APRIL 29, 2016)

PLACEMENT OF CUTOFF WALL DIRECTLY BENEATH CULVERT
**PennDOT e-Notification No. 58**

**July 8, 2016**

| Interim Revision to Bridge Standard Drawing(s) | BD-609M, PA STRUCTURAL MOUNTED GUIDE RAIL BARRIER, April 29, 2016, Sheet 1 – Correction of Barrier Weight and Clarification for NOTE 10. |

BACKGROUND: BDTD received a message which asked about the 181 lbs/ft barrier weight listed in Note 10 and also the amount of wearing surface present. The correct barrier weight was computed to be 220 lbs/ft for no wearing course (h=0).

Sheets 1 – NOTES:  Note 10 – replace ‘ARE 181 LBS/FT’ with ‘IS 220 LBS/FT FOR NO WEARING COURSE (h = 0), 270 LBS/FT FOR 2 ½” THICK WEARING COURSE AND 425 LBS/FT FOR 11” THICK WEARING COURSE.’ The corrected text is indicated with red markups in the attached 8½”x11” sheet.

Please note that implementation of this correction and clarification is immediate.

Direct any questions concerning the above issue to:

Guozhou Li, P.E.
PennDOT, Bureau of Project Delivery
Bridge Design and Technology Division
Phone: (717) 214-8773 Fax: (717) 787-2882
guli@pa.gov

Archived copies of all previously distributed e-Notifications can be obtained from the PENNDOT Bridge Standards website at [http://www.penndot.gov/ProjectAndPrograms/Bridges/Pages/Plans-and-Specifications.aspx](http://www.penndot.gov/ProjectAndPrograms/Bridges/Pages/Plans-and-Specifications.aspx)
NOTES:

1. MODIFIED STRUCTURE MOUNTED GUIDE RAIL BARRIER GRANTED TL3 DESIGNATION BY FHWA.

2. PROVIDE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH PUBLICATION 408.

3. LOCATE RAIL SPLICES AT EXPANSION JOINTS AND AT OTHER LOCATIONS WHERE NECESSARY. PROVIDE RAILS AS LONG AS PRACTICAL, WITH A MINIMUM OF THREE POSTS BETWEEN SPLICES, UNLESS OTHERWISE REQUIRED FOR EXPANSION.

4. PROVIDE RAIL TUBES CONTINUOUS OVER NOT LESS THAN TWO RAILING POSTS. NO WELDED BUTT SPLICES WILL BE ALLOWED IN THE RAIL TUBE SECTIONS.

5. PLACE POST AND POST ANCHOR BOLTS NORMAL TO GRADE AND RAILS PARALLEL TO GRADE.

6. COAT ALL SURFACES OF THE BASE PLATE IN CONTACT WITH CONCRETE WITH CAULKING COMPOUND PRIOR TO ERECTION. AFTER ERECTION AND ALIGNMENT, SEAL OPENINGS BETWEEN THE METAL SURFACES AND THE CONCRETE WITH CAULKING COMPOUND MEETING THE REQUIREMENTS OF SECTION 705, PUBLICATION 408.

7. DO NOT USE DEFLECTION JOINTS WITH PA STRUCTURE MOUNTED GUIDE RAIL BRIDGE BARRIERS.

8. PROVIDE POST SPACINGS ON THE PLANS.

9. FOR LOCATION OF DRAIN HOLES IN RAIL TUBES, SEE BC-706M.

10. FOR DEAD LOAD CALCULATIONS, THE WEIGHT OF PA STRUCTURE MOUNTED GUIDE RAIL BRIDGE BARRIERS ARE 181 LBS/FT.

11. STRUCTURAL STEEL ASTM A709, GRADE 36 OR 50, UNLESS OTHERWISE NOTED. IS 220 LBS/FT FOR NO WEARING COURSE (h = 0), 270 LBS/FT FOR 2 1/2" THICK WEARING COURSE AND 425 LBS/FT FOR 11" THICK WEARING COURSE.
Interim Revision to Bridge Standard Drawing(s) | BD-632M, R.C. BOX CULVERT- PRECAST, April 29, 2016, Sheet 4 – TRANSVERSE SECTION and NOTE 20 Corruptions related to threaded inserts.

BACKGROUND: It was noticed that there was some potential confusion on the proper detailing required for the hooks and threaded inserts which are used to connect a cast-in-place concrete slab to the top of a precast box culvert. As a result, it was decided to remove two dimensions from the Transverse Section detail and to revise Note 20.

Sheet 4 – TRANSVERSE SECTION: Remove 1 ½” depth of insert and 1 ½” CLR. dimension to top of hook. Also, replace ‘BOLTS’ with ‘HOOK’ in threaded insert call-out.

Sheet 4 – NOTES: Note 20 – insert ‘AND DETAILED’ after ‘PRECAST BOX’ and delete “, SEE SPECIAL PROVISIONS” at end of sentence. The corrected statement is indicated with red markups in the attached 8½”x11” sheet.

Please note that implementation of this correction and clarification is immediate.

Direct any questions concerning the above issue to:

Guozhou Li, P.E.
PennDOT, Bureau of Project Delivery
Bridge Design and Technology Division
Phone: (717) 214-8773 Fax: (717) 787-2882
guli@pa.gov

Archived copies of all previously distributed e-Notifications can be obtained from the PENNDOT Bridge Standards website at http://www.penndot.gov/ProjectAndPrograms/Bridges/Pages/Plans-and-Specifications.aspx
e-Notification No. 59, BD-632M, Sht. 4 – TRANSVERSE SECTION
Correction:

NOTES correction:

17. REQUIRED DIMENSION FOR BAR LENGTH IS THE TOTAL OF THE THEORETICAL CUT-OFF LENGTH PLUS THE REQUIRED ANCHORAGE.

18. HAUNCH SIZE SHOWN IS BASED ON AASHTO M273. HAUNCH MAY BE MODIFIED IF THE BOX IS CUSTOM DESIGNED TO SATISFY DESIGN, TRANSPORTATION AND CONSTRUCTION REQUIREMENTS, BUT NOT LESS THAN 6" X 6".

19. INDICATES ADDITIONAL EXCAVATION FOR BEDDING MATERIAL BELOW THE BOTTOM OF PRECAST R.C. BOX CULVERT WITH LIMITS AS SHOWN. BACKFILL SPACE WITH 2A OR #8 COARSE AGGREGATE.

20. THREADED INSERTS TO BE INCORPORATED IN PRECAST BOX BY THE FABRICATOR, SEE SPECIAL PROVISIONS.
PennDOT e-Notification No. 60

July 29, 2016

Interim Revision to Bridge Standard Drawing(s)

| Interim Revision to Bridge Standard Drawing(s) | BD-604M, GRID REINFORCED CONCRETE BRIDGE DECK, April 29, 2016, Sheets 2 and 4 – TYPICAL EXPANSION/RELIEF JOINT – DETAIL A clarification and 3” bearing bar size deletion from TABLE 1 |

BACKGROUND: It was noticed that there was an inconsistency due to a note on the soon to be released BC-726M – STEEL GRID REINFORCED CONCRETE BRIDGE DECK was not on BD-604M. It was also brought to our attention that the 3” bearing bar size is no longer available and therefore needs to be removed from this standard’s Table 1.

Sheet 2 – TYPICAL EXPANSION/RELIEF JOINT – DETAIL A: Add ‘SEE EXTRUSION NOTE’ call-out to top weld of extrusion to trim plate. Also add the following note:

EXTRUSION NOTE: ONE PIECE EXTRUSION IN LIEU OF TWO PIECE MEMBER (EXTRUSION AND PLATE COMBINATION) IS PERMITTED. WELD IN ACCORDNCE WITH AASHTO/AWS D1.5M SPECIFICATIONS. (FULL PENETRATION WELD AND N.D.T. REQUIRED)

Sheet 4 – TABLE 1: Remove 3” bearing bar size data and row from Table 1. The corrected Table is indicated with red markups in the attached 8½”x11” sheet.

Please note that implementation of this correction and clarification is immediate.

Direct any questions concerning the above issue to:

Guozhou Li, P.E.
PennDOT, Bureau of Project Delivery
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Phone: (717) 214-8773 Fax: (717) 787-2882
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BD-604M, Sht. 4 – TABLE 1 correction:

**MAXIMUM SPANS FOR INFINITE FATIGUE LIFE**

<table>
<thead>
<tr>
<th>BEARING BAR (IN)</th>
<th>BEARING BAR SPACING (IN)</th>
<th>NUMBER OF SUPPLEMENTAL BARS (SEE NOTE 3)</th>
<th>MAXIMUM SPAN (FT) (SEE NOTE 2)</th>
<th>TYPE OF CONCRETE FILL</th>
<th>OVERALL DECK WEIGHT (STEEL AND CONCRETE)</th>
<th>CANTILEVER PROBABLE SPACING AND SPACING (SEE NOTE 1)</th>
<th>MAXIMUM OVERHANG</th>
<th>MAXIMUM OVERHANG BASED ON 0.60 X INTERIOR SPAN (FT)</th>
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</thead>
<tbody>
<tr>
<td>3/8</td>
<td>6</td>
<td>6</td>
<td>4.0</td>
<td>OVERFILL</td>
<td>60</td>
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<tr>
<td>4/16</td>
<td>6</td>
<td>6</td>
<td>1.0</td>
<td>OVERFILL</td>
<td>83</td>
<td>83</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>1/2</td>
<td>6</td>
<td>6</td>
<td>1.0</td>
<td>FLUSH FILL</td>
<td>83</td>
<td>83</td>
<td>4.0</td>
<td>4.0</td>
</tr>
</tbody>
</table>

**NOTES**

1. ATTACH ELEMENT ACCORDING TO SPECIFICATION.
2. USE OVERFILL TO ATTACH ELEMENTS IN LIEU OF TWO PIECE MEMBER (EXTRUSION AND PLATE COMBINATION) IS PERMITTED. WELD IN ACCORDANCE WITH AASHTO/AWS D1.5M SPECIFICATIONS. (FULL PENETRATION WELD AND N.D.T. REQUIRED)
3. PANEL WIDTH TO MATCH DEPTH VARIES TO MATCH OVERALL DECK PROFILE.
4. 1/2" THICK TRIM PLATE DEPTH VARIES TO MATCH OVERALL DECK PROFILE.
5. A 1/4" THICK TRIM PLATE DEPTH VARIES TO MATCH OVERALL DECK PROFILE.
6. ALTER THE DESIGN AS NECESSARY TO MEET THE SPECIFICATIONS.
7. GRID MOVE AS NECESSARY TO MEET THE SPECIFICATIONS.
8. SPLICE AT JUNCTIONS AS NECESSARY TO MEET THE SPECIFICATIONS.
PennDOT e-Notification No. 61

September 20, 2016

Interim Revision to Bridge Standard Drawing(s)  BD-632M, R. C. BOX CULVERT, April 29, 2016, Sheet 8 – STRUCTURE MOUNTED GUIDE RAIL – SECTION F-F: Correction of cast-in-place anchor hook’s size for anchor bolts

BACKGROUND: An inconsistency between BD-609, Sheet 1 and BD-632M, Sheet 8 on the size of the anchor hook for the 7/8” post anchor bolts was brought to our attention. In the recently released BD-632M, its SECTION F-F listed the size of this anchor as a #7 and the BD-609M showed it as a #6. After checking the write-up for the crash testing of this barrier type we confirmed that the #6 is the correct size.

Sheet 8 – SECTION F-F: correct size of anchor hook cast within deck/top slab to be #6 instead of #7.
The corrected SECTION F-F is indicated with red markups in the attached 8½”x11” sheet.

Please note that implementation of this correction is immediate.

Direct any questions concerning the above issue to: Guozhou Li, P.E.
PennDOT, Bureau of Project Delivery Bridge Design and Technology Division Phone: (717) 214-8773 Fax: (717) 787-2882 guli@pa.gov

Archived copies of all previously distributed e-Notifications can be obtained from the PENNDOT Bridge Standards website at http://www.penndot.gov/ProjectAndPrograms/Bridges/Pages/Plans-and-Specifications.aspx
SECTION F-F

- CURB REINFORCEMENT SHOWN FOR CLARITY, SEE BD-609M.
- SEE RC-52M FOR TYPE 2 STRONG POST GUIDE RAIL DETAILS.
- S7 REINFORCEMENT REQUIRED AT POST LOCATIONS ONLY.
  SEE SLAB REINFORCEMENT BAR DETAILS THIS SHEET.

NOTE:
PRIOR TO CONSTRUCTING HEADWALL/CURB AND TOP SLAB, INSTALL ANCHOR BOLTS IN THE MECHANICAL SPlices, ENSURE PROPER PLACEMENT AND ALIGNMENT.
Interim Revision to Bridge Standard Drawing(s)  |  BD-632M, R. C. BOX CULVERT, April 29, 2016, Sheets 4 & 7 – PRECAST DETAILS: Addition of 3/4”x 3/4” Chamfers to precast box culverts segments

BACKGROUND: It was suggested that chamfers be provided on the edges of the precast concrete box culvert segments and precast end sections to minimize the risk of loss of material caused by shipping and handling of these segments. A 3/4” x 3/4” chamfer will be added to the four corners of the box culvert segments and the bottom two corners and the top four corners of the precast end sections.

Sheet 4 – BOX DETAILS – WELDED WIRE FABRIC: added 3/4” x 3/4” chamfers to four corners of box segment along with the following call-out: 3/4” x 3/4” CHAMFER (TYP.)

Sheet 7 – SECTION E-E: added 3/4” x 3/4” chamfers to the bottom two corners and the top four edges of the end section along with the following call-outs: 3/4”x3/4” CHAMFER (TYP.)

The above two details have been corrected in this e-Notification. Modification of other details in this standards related to this are not being shown in this e-Notification. However they need to be consistent with this modification and are to be updated in the next release of this standard.

The red markups of the above two referenced details indicating the 3/4” chamfers are provided in the attached 8½”x11” sheet.

Please note that implementation of these chamfers is immediate.

Direct any questions concerning the above issue to:

Guozhou Li, P.E.
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Bridge Design and Technology Division
Phone: (717) 214-8773 Fax: (717) 787-2882
guli@pa.gov
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e-Notification No. 62, BD-632M, Sheet 4 – Addition of Chamfers:

**BOX DETAILS – WELDED WIRE FABRIC**

(for 2'-0" or more of cover)

see BC-798M for post tension strand details

no scale

---

e-Notification No. 62, BD-632M, Sheet 7 – Addition of Chamfers:

SECTION E-E
BACKGROUND: Contractors shared their concern that this standard needed to include a requirement to blast clean the edges of the panels to create an exposed aggregate surface to ensure that closure pours result in a solid concrete deck.

Sheet 1 – DRAWING NOTES: added NOTE 6:

INTERFACE OF PRECAST PANELS ALONG THE TRANSVERSE AND LONGITUDINAL JOINTS SHALL BE BLAST CLEANED TO CREATE AN EXPOSED AGGREGATE FINISH.

Sheet 1 – SEQUENCE OF CONSTRUCTION notes: added the following text to Notes 6 and 12 using the ■ symbol: PRE-WET PRECAST INTERFACE OF JOINT WITH WATER TO CREATE A SATURATED SURFACE CONDITION.

The red markups of the above referenced Notes are provided in the attached 8½"x11" sheet.

Please note that implementation of these note modifications is immediate.

Direct any questions concerning the above issue to:

Guozhou Li, P.E.
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guli@pa.gov

Archived copies of all previously distributed e-Notifications can be obtained from the PennDOT Bridge Standards website at http://www.penndot.gov/ProjectAndPrograms/Bridges/Pages/Plans-and-Specifications.aspx
e-Notification No. 63, BD-605M, Sheet 1 – Note Modifications:

**DRAWING NOTES**

5. THE INSIDE FACES OF THE SHEAR BLOCKOUTS AND ALL SHEAR KEYS SHALL BE BLAST CLEANED TO HAVE AN EXPOSED AGGREGATE FINISH.

6. INTERFACE OF PRECAST PANELS ALONG THE TRANSVERSE AND LONGITUDINAL JOINTS SHALL BE BLAST CLEANED TO CREATE AN EXPOSED AGGREGATE FINISH.

**SEQUENCE OF CONSTRUCTION**

5. ADJUST EACH PANEL TO PROPER ELEVATION USING VERTICAL ADJUSTMENT DEVICES. ADJUST TORQUE IN VERTICAL ADJUSTMENT DEVICE TO PROPERLY DISTRIBUTE DECK DEAD LOAD TO BEAMS (AS DETERMINED BY DESIGN).

6. PLACE FORMWORK FOR TRANSVERSE JOINTS. COUPLE POST-TENSIONING DUCTS (IF REQUIRED). FILL TRANSVERSE JOINTS WITH ULTRA HIGH PERFORMANCE CONCRETE IN ACCORDANCE WITH ULTRA HIGH PERFORMANCE CONCRETE STANDARD SPECIAL PROVISION, IF APPLICABLE OR NON-SHRINK EPOXY GROUT PER SECTION 1080.2(c) OF PENNDOT PUB.408.

11. PLACE FORMWORK FOR LONGITUDINAL JOINT IN ACCORDANCE WITH ULTRA HIGH PERFORMANCE CONCRETE STANDARD SPECIAL PROVISION.

12. FILL LONGITUDINAL CLOSURE POUR WITH ULTRA HIGH PERFORMANCE CONCRETE IN ACCORDANCE WITH ULTRA HIGH PERFORMANCE CONCRETE STANDARD SPECIAL PROVISION.

PRE-WET PRECAST INTERFACE OF JOINT WITH WATER TO CREATE A SATURATED SURFACE CONDITION.
**PennDOT e-Notification No. 64**

**November 29, 2016**

| Interim Revision to Bridge Standard Drawing(s) | BD-617M, PA TYPE 10M BRIDGE BARRIER, April 29, 2016, Sheet 10 – SECTIONS N-N & P-P: correction of missing longitudinal rebar in top of curb. |

**BACKGROUND:** It was pointed out to us that one of the top three #4 longitudinal rebars in the curb had been eliminated without any explanation being given.

**Sheet 10 – SECTIONS N-N & P-P:** added #4 longitudinal rebar back in top of curb as had been shown in these details before the 2016 release.

The red markups of the above referenced details are provided in the attached 8½"x11" sheet.

Please note that implementation of these corrections is immediate.

Direct any questions concerning the above issue to:

Guozhou Li, P.E.
PennDOT, Bureau of Project Delivery
Bridge Design and Technology Division
Phone: (717) 214-8773 Fax: (717) 787-2882
guli@pa.gov

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SECTION N-N
(BARRIER ON STRUCTURE)

SECTION P-P
(BARRIER ON STRUCTURE)
Bureau of Project Delivery  
Bridge Design and Technology Division  

PennDOT e-Notification No. 66  

December 20, 2016  

<table>
<thead>
<tr>
<th>Interim Revision to Bridge Standard Drawing(s)</th>
<th>BD-662M, I-BEAM &amp; PA BULB-TEE BEAM REINFORCEMENT DETAILS, April 29, 2016, Sheets 1 &amp; 2 – BEAM ELEVATIONS: End of Beam callout PRESTRESS ZONE + 2” replaced with SEE GENERAL NOTE 10.</th>
</tr>
</thead>
</table>

**BACKGROUND:** Prestress Concrete Beam fabricators have requested that General Note 10 be listed instead of PRESTRESS ZONE + 2” which has impacted shop drawings approval.

**Sheet 1:**  
STANDARD PA I-BEAM & AASHTO I-BEAM - ELEVATIONS: end of beam callout PRESTRESS ZONE + 2” replaced with SEE GENERAL NOTE 10.

ADDITIONAL NOTCH REINF. END VIEW: removed callout LOWER LIMIT OF 601 BARS TO BE 2” ABOVE PRESTRESS ZONE and added dimension lines with SEE GENERAL NOTE 10 for distance from bottom of beam to 601 rebar.

**Sheet 2:**  
PA BULB-TEE BEAM - ELEVATION: end of beam callout PRESTRESS ZONE + 2” replaced with SEE GENERAL NOTE 10 ON SHEET 1.

ADDITIONAL NOTCH REINF. END VIEW: removed callout LOWER LIMIT OF 601 BARS TO BE 2” ABOVE PRESTRESS ZONE and added dimension lines with SEE GENERAL NOTE 10 ON SHEET 1 for distance from bottom of beam to 601 rebar.

The red markups of the above referenced details are provided in the attached three (3) 8½”x11” sheets.

Please note that implementation of these corrections is immediate.

Direct any questions concerning the above issue to:

Guozhou Li, P.E.  
PennDOT, Bureau of Project Delivery / Bridge Design and Technology Division  
Phone: (717) 214-8773 Fax: (717) 787-2882  
guli@pa.gov
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http://www.penndot.gov/ProjectAndPrograms/Bridges/Pages/Plans-and-Specifications.aspx
e-Notification No. 66, BD-662M, Sheet 1 change (cont.):

TYPICAL END REINF.
WITHOUT NOTCH

TYPICAL END REINF.
WITH NOTCH

AASHTO I-BEAM - ELEVATION

SEE GENERAL NOTE 10

PRESTRESS ZONE "2"

TYPICAL END REINF.
AASHTO I-BEAM - ELEVATION

ADDITIONAL NOTCH
REINF. END VIEW

SEE GENERAL NOTE 10

LOWER LIMIT OF 601 BARS TO BE 2" ABOVE PRESTRESS ZONE

(1) MODIFY 401 BAR, AS REQ'D, TO ACCOMMODATE BEAM NOTCH.

AASHTO I-BEAM

ADDITIONAL NOTCH
REINF. END VIEW

SEE GENERAL NOTE 10

LOWER LIMIT OF 601 BARS TO BE 2" ABOVE PRESTRESS ZONE

(1) MODIFY 401 BAR, AS REQ'D, TO ACCOMMODATE BEAM NOTCH.
e-Notification No. 66, BD-662M, Sheet 2 change:

PA BULB-TEE BEAM - ELEVATION

NOTES:
1. FOR GENERAL NOTES AND TYPICAL CAMBER DIAGRAM SEE SHEET 1.
2. FOR AASHTO AND PA I-BEAM DETAILS, SEE SHEET 1.
3. BEAM ENDS ARE PERMITTED TO BE CLIPPED TO AVOID INTERFERENCE WITH ANOTHER BEAM OR BACKWALL. CLIP MUST NOT EXTEND INTO THE WEB UNLESS THE REQUIRED BEAM NOTCH EXTENDS TO THE WEB.
BACKGROUND: Designers have been confused about whether or not pile anchorage is required on footings since the seismic design criteria has been modified.

Sheet 1:

PILE ANCHORAGE DETAILS: Replace “(REQUIRED FOR SEISMIC ZONE 2 ONLY)” note beneath title with the following criteria:

REQUIRED IF ANY OF THE FOLLOWING CONDITIONS EXISTS:
1. SITE CLASS E & F
2. RESPONSE ACCELERATION COEFFICIENT GREATER THAN OR EQUAL TO 0.1
3. PILE IS SUBJECT TO UPLIFT FORCES AT STRENGTH OR EXTREME LIMIT STATES.

The red markups of the above referenced detail is provided on the attached 8½"x11" sheet.

Please note that implementation of this correction is immediate.

Direct any questions concerning the above issue to:

Guozhou Li, P.E.
PennDOT, Bureau of Project Delivery / Bridge Design and Technology Division
Phone: (717) 214-8773 Fax: (717) 787-2882
guli@pa.gov

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### TABLE 1
SIZE OF THREADED BAR BASED ON PILE SIZE

<table>
<thead>
<tr>
<th>PILE SIZE</th>
<th>BAR SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP 8 x 36</td>
<td>#5</td>
</tr>
<tr>
<td>HP 10 x 42</td>
<td>#5</td>
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<td>HP 10 x 57</td>
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</tr>
<tr>
<td>HP 12 x 84</td>
<td>#7</td>
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<td>HP 14 x 73</td>
<td>#6</td>
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<td>HP 14 x 89</td>
<td>#7</td>
</tr>
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<td>HP 14 x 102</td>
<td>#7</td>
</tr>
<tr>
<td>HP 14 x 117</td>
<td>#8</td>
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</tbody>
</table>

### CIP-PILE ANCHORAGE DETAIL B

(CREQUIRED FOR SEISMIC ZONE 2 ONLY)

**REQUIRED IF ANY OF THE FOLLOWING CONDITIONS EXIST:**
1. SITE CLASS E & F
2. RESPONSE ACCELERATION COEFFICIENT GREATER THAN OR EQUAL TO 0.1
3. PILE IS SUBJECT TO UPLIFT FORCES AT STRENGTH OR EXTREME LIMIT STATES.

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**e-Notification No. 67**

BD-621M, SHT.1
(APRIL 29, 2016)

REPLACEMENT OF NOTE LOCATED DIRECTLY BENEATH THE TITLE OF ANCHORAGE DETAILS
**PennDOT e-Notification No. 68**

**March 28, 2017**

**Interim Revision to Bridge Standard Drawing(s)**

| Interim Revision to Bridge Standard Drawing(s) | BD-601M, CONCRETE DECK SLAB, April 29, 2016, Sheet 10 – TABLE 4 Deck Slab Reinforcement: Revision of data for three beam spacings. |

**BACKGROUND:** Design values in Table 4, although provided adequate strength, had an inconsistency in deck thickness and rebar size that was pointed out by designers, and as a result, revisions are being made to the values for three beam spacings.

**Sheet 10, TABLE 4:**

For beam spacing, $S = 8$'-$6$":
- $T = 8$" instead of $8 1/2$".
- $S_2 = #5 @5-1/2$" instead of $#6 @ 5-1/2$".
- $So = 4'-10$" instead of $4'-11$".

For beam spacings, $S = 12$'-9" & 13'-9":
- $S_1 = #5 @5-1/2$" instead of $#6 @ 7$".
- $S_3 = #5 @6$" instead of $#5 @ 7$".

The red markups of the above referenced Table are provided on the attached 8½"x11" sheet.

Please note to implement these revisions as directed by the District Bridge Engineer.

Direct any questions concerning the above issue to:

Guozhou Li, P.E.
PennDOT, Bureau of Project Delivery / Bridge Design and Technology Division
Phone: (717) 214-8773 Fax: (717) 787-2882
guli@pa.gov

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[http://www.penndot.gov/ProjectAndPrograms/Bridges/Pages/Plans-and-Specifications.aspx](http://www.penndot.gov/ProjectAndPrograms/Bridges/Pages/Plans-and-Specifications.aspx)
<table>
<thead>
<tr>
<th>S</th>
<th>T (in.)</th>
<th>S1</th>
<th>S2</th>
<th>S3</th>
<th>S3'</th>
<th>S6</th>
<th>S7</th>
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**TABLE 4: DISTANCE FROM DESIGN SECTION FOR NEGATIVE MOMENT TO CENTERLINE OF BEAM = 12 IN.**

**USE FOR:**
- PRECAST PRESTRESSED PA BULB-TEE AND I-BEAMS WITH TOP FLANGE WIDTH ≥ 36"
- STEEL I-BEAMS OR STEEL CLOSED BOXES WITH TOP FLANGE WIDTH ≥ 48"

**NOTES:**
- * PRECAST PRESTRESSED PA BULB-TEE AND I-BEAMS WITH TOP FLANGE WIDTH > 36"
- USE FOR:

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**e-Notification No. 68**

**BD-601M, SHT.10**

(April 29, 2016)

**EDIT VALUES OF TABLE 4**
Interim Revision to Bridge Standard Drawing(s)

**BACKGROUND:** In the April 2016 Edition version of BD-656M, the rebar cover in concrete diaphragms was increased from 1 ½” to 2 ½” which caused the thickness of all concrete diaphragms to increase by 2”. The increased diaphragm thicknesses were not carried through to BD-653M which caused there to be inconsistencies that are being addressed by this e-Notification.

**Sheet 1, FRAMING PLAN FOR SPREAD BOX BEAMS:**
At two Intermediate diaphragm call-outs: thickness increased from 10" to 1'-0".
Spread box beam interior diaphragm thickness call-out: replace 10" with 1'-0".
End diaphragms for abutments w/o backwalls: thickness increased from 1'-3" to 1'-6".
End diaphragms for abutments with backwalls: thickness increased from 1'-0" to 1'-2".
End diaphragms at pier: thickness increased from 1'-0" to 1'-2".

**Sheet 1, FRAMING PLAN FOR I-BEAMS:**
At two Intermediate diaphragm call-outs: thickness increased from 10" to 1'-0".
End diaphragms for abutments with backwalls: thickness increased from 1'-0" to 1'-2".
End diaphragms at pier: thickness increased from 1'-0" to 1'-2".

The red markups of the above referenced details are provided on the attached 8½"x11" sheet.

Please note to implement these revisions immediately. Direct any questions concerning the above issue to:

Guozhou Li, P.E.
PennDOT, Bureau of Project Delivery / Bridge Design and Technology Division
Phone: (717) 214-8773 Fax: (717) 787-2882
guli@pa.gov

Archived copies of all previously distributed e-Notifications can be obtained from the PennDOT Bridge Standards website at [http://www.penndot.gov/ProjectAndPrograms/Bridges/Pages/Plans-and-Specifications.aspx](http://www.penndot.gov/ProjectAndPrograms/Bridges/Pages/Plans-and-Specifications.aspx)
PennDOT e-Notification No. 73

September 7, 2018

Interim Revision to Bridge Standard Drawing(s)  BD-632M, R. C. BOX CULVERT, Aug. 4, 2017, Sheet 1 – Correction of Note 11, Sheet 4 – (Precast Detail) addition of min. and max. for chamfer, and Sheet 9 – addition of max. and min. to ‘F’ dimension in Slab/Wall detail.

BACKGROUND: It was a typo for foot symbol to be used instead of the inch symbol in note 11, it was suggested that a min. and max. be added to the chamfers on Sheet 4, and to add a max. and a min. to the ‘F’ dimension on Sheet 9.

Sheet 1 – NOTES: revised note 11. To revise the drain from 2’ minimum thick to 2” minimum thick

Sheet 4 – BOX DETAILS – WELDED WIRE FABRIC: added MIN. / 1”X1” MAX. after 3/4” X 3/4”

Sheet 9 – CONFIGURATION FOR SLAB/WALL WITH POST-TENSIONING: added MAX., 1”MIN. after ‘F’ 1 ½”

The above changes have been corrected in this e-Notification. Modification of other details in this standard are not being shown in this e-Notification. However, they need to be consistent with this modification and are to be updated in the next release of this standard.

The red markups are provided in the two attached 8½”x11” sheets.

Please note to implement these revisions immediately. Direct any questions concerning the above issue to:

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e-Notification No. 73, BD-632M, Sheet 1 – Revision of Note 11:

11. USE 4" Ø FORMED WEEp HOLES AT 15'-0" MAXIMUM CENTERS PLACED AT A MINIMUM 1'-8" ABOVE BOTTOM OF SLAB OR 6'-0" ABOVE NORMAL FLOW LINE, FOR DETAILS SEE BC-751M, FOR WEEP HOLES LOCATED IN THE COMPACTED NO. 2A COARSE AGGREGATE AREAS OR FLOWABLE BACKFILL AREAS, PROVIDE PREFORMED DRAIN CONFORMING TO PUB.408 SECTION 825.2(c), WHICH IS MINIMUM THICK X 4'-0" WIDE CENTERED HORIZONTALLY ON WEEP HOLE, SEE PREFORMED DRAIN DETAIL ON SHEET 5.

2"

e-Notification No. 73, BD-632M, Sheet 4 – Addition of min./max. to Chamfer callout:

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MIN./1" X 1" MAX.

MINIMUM LENGTH EQUAL TO SPACING OF LONGITUDINAL WIRES PLUS 2" (TYP.)

TOP SLAB THICKNESS

NOTE: FOR LESS THAN 2'-0"
SEE SHEET 1 TYPICAL TOP SLAB REINFORCEME

SEE CORNER REINFORCEMENT DETAILS

AS REQ'D.

SEE NOTE 17
THIS SHEET

SPAN (S)

AS REQ'D.

SEE NOTE 18
THIS SHEET

WALL THICKNESS
1'-0"
(TYP.)

SEE NOTE 17
 THIS SHEET
1'-0" MIN. BEDDING
SEE NOTE 19 THIS SHEET

BOX DETAILS – WELDED WIRE FABRIC

(FOR 2'-0" OR MORE OF COVER)
SEE BC-798M FOR POST TENSION STRAND DETAILS
NO SCALE
e-Notification No. 73, BD-632M, Sheet 9 – Addition of min./max. to ‘F’ dimension:

**CONFIGURATION FOR SLAB/WALL WITH POST-TENSIONING**

- Min. slab/wall thickness = \( T \)
- \( T = A + B + C + D + E + F + G + H \)
- Min. slab/wall thickness = \( T \)
- \( T = A + B + C + D + E + F + G + H \)

Note: Place post-tensioning ducts only in corner raunches when wall thicknesses are 11/3.