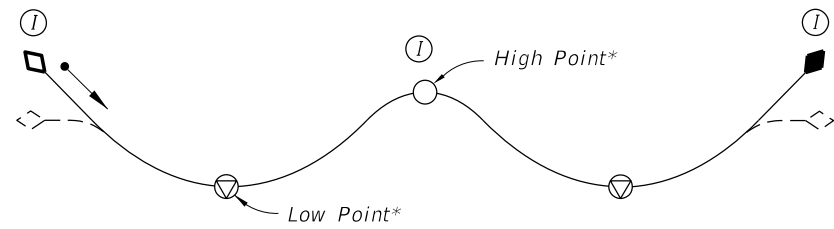
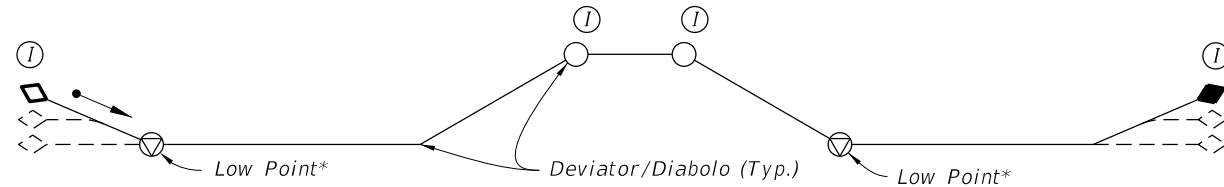


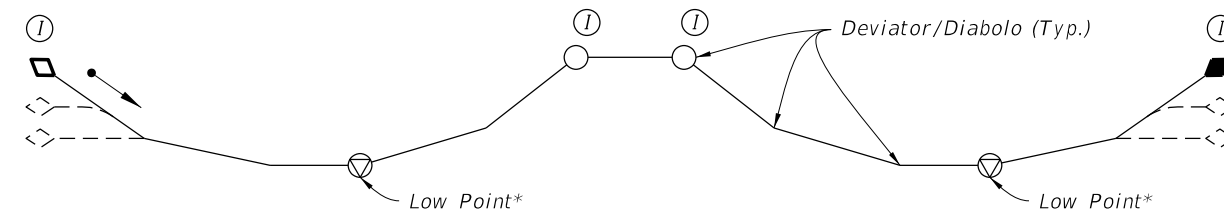
TYPICAL PROFILES FOR TENDONS WITH FLEXIBLE FILLER



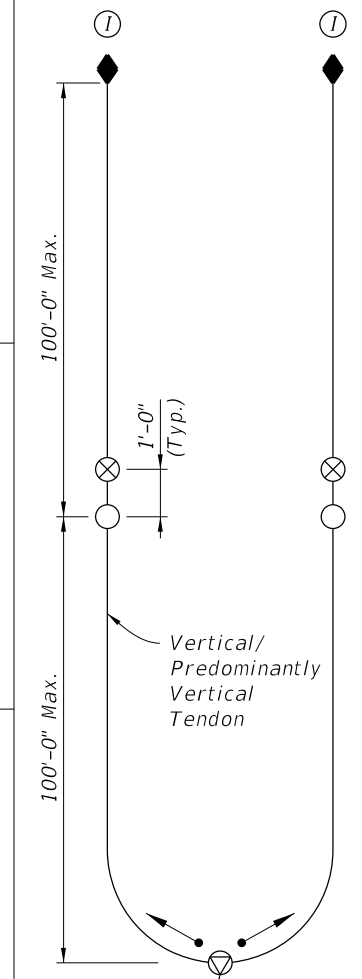
**Profile F1**  
(2 Span Profile shown; Profiles for 3 or more Spans similar)



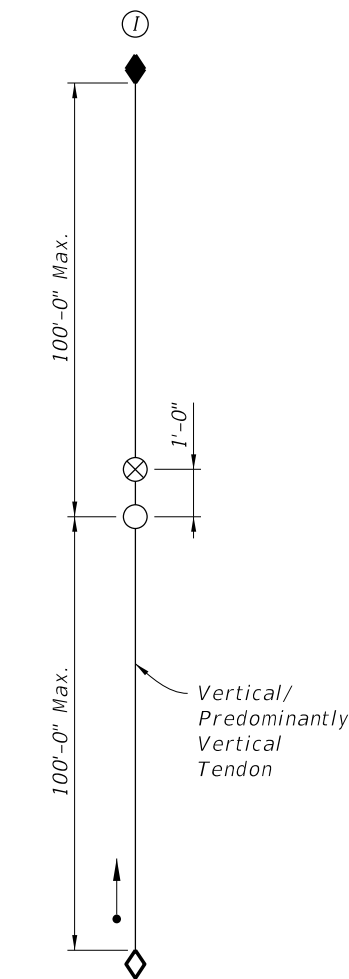
**Profile F2**  
(2 Span Profile shown; Profiles for 3 or more Spans similar)



**Profile F3**  
(2 Span Profile shown; Profiles for 3 or more Spans similar)



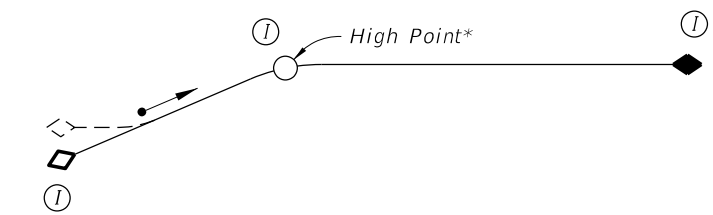
**Profile F8**  
Vertical/  
Predominantly  
Vertical  
Tendon



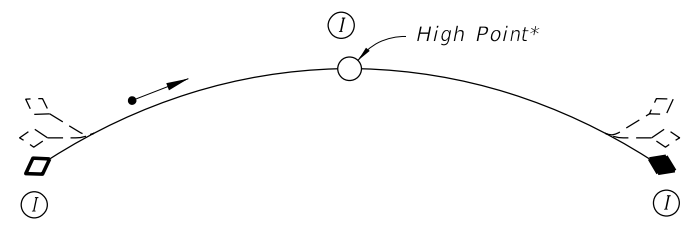
**Profile F9**  
Vertical/  
Predominantly  
Vertical  
Tendon

- LEGEND:**
- Strand, Wire or Bar Tendon
  - ◊ Anchorage with Filler Inlet at lower end of Tendon
  - ◆ Anchorage with Filler Outlet at higher end of Tendon
  - ⋄ - - - Alternate tendon profile immediately adjacent to Anchorage
  - ⊗ Supplementary Filler Inlet
  - Filler Port / Outlet
  - ▽ Drain (See Specifications Section 462 for additional Drain location requirements)
  - Direction of Filler Flow
  - Ⓜ Inspection Location

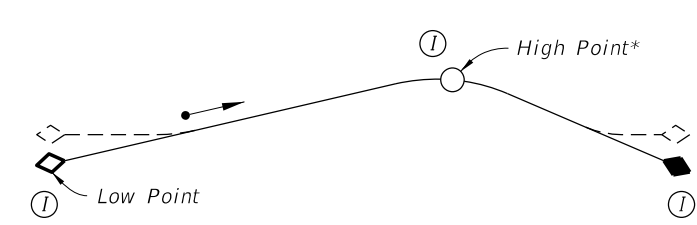
\* Adjust location to coincide with the true high or low point(s) of the tendon.



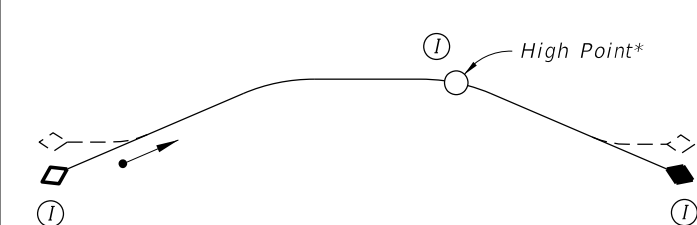
**Profile F12**



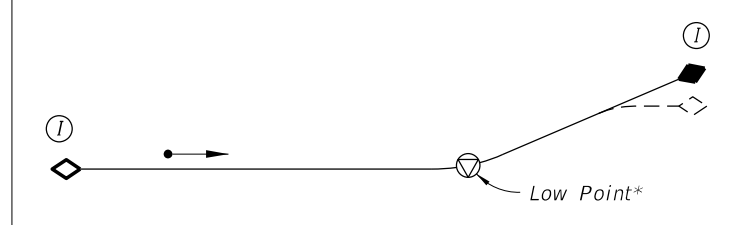
**Profile F4**



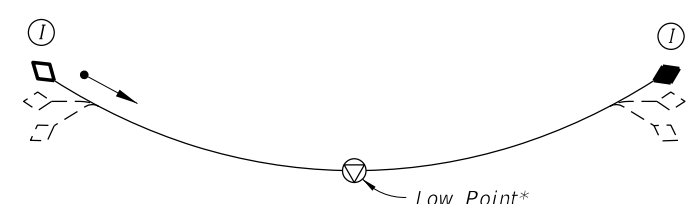
**Profile F6**



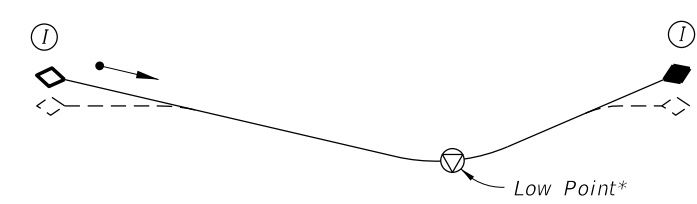
**Profile F10**



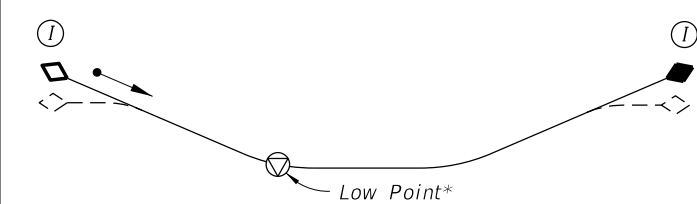
**Profile F13**



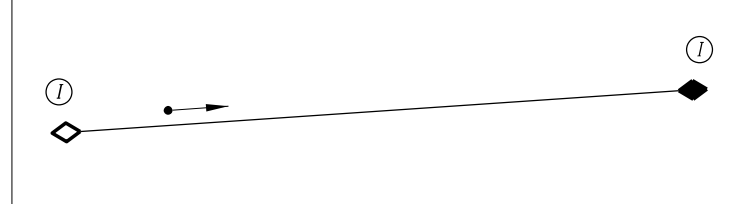
**Profile F5**



**Profile F7**




**Profile F11**



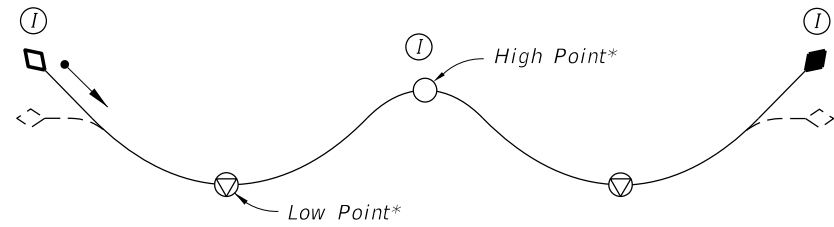
**Profile F14**

10/26/2016 9:17:11 AM

LAST REVISION 11/01/16	REVISION	DESCRIPTION:	 <b>FY 2017-18 DESIGN STANDARDS</b>	<b>POST-TENSIONING TENDON PROFILES</b>	INDEX NO. <b>21801</b>	SHEET NO. <b>1 of 2</b>
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TYPICAL PROFILES FOR TENDONS WITH GROUT FILLER

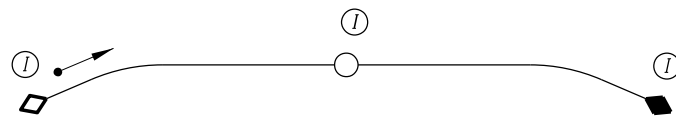
NOTE: See Sheet 1 of 2 for Typical Profiles for Tendons with Flexible Filler and for Legend of Symbols.



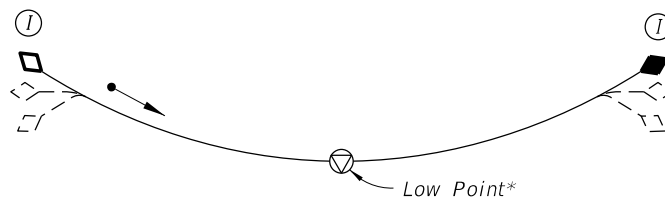
**Profile G1**  
(2 Span Profile shown; Profiles for 3 or more Spans similar)



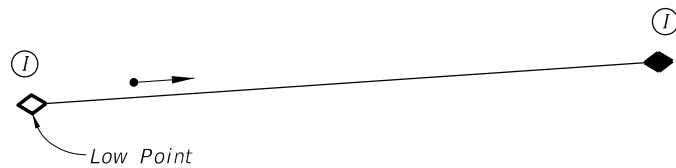
**Profile G2**  
(Profile for Single Cell Box shown; Profiles for Multiple Cell Boxes similar)



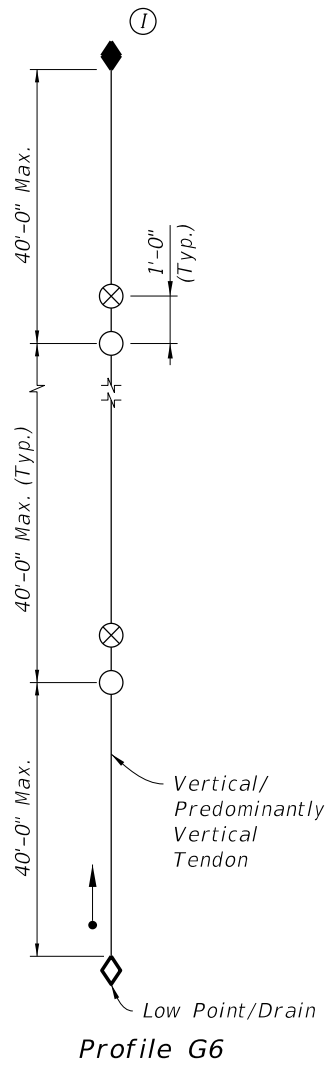
**Profile G3**



**Profile G4**



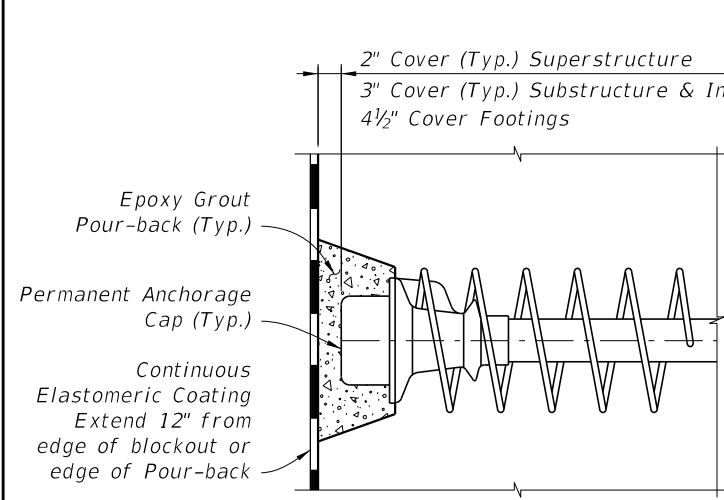
**Profile G5**



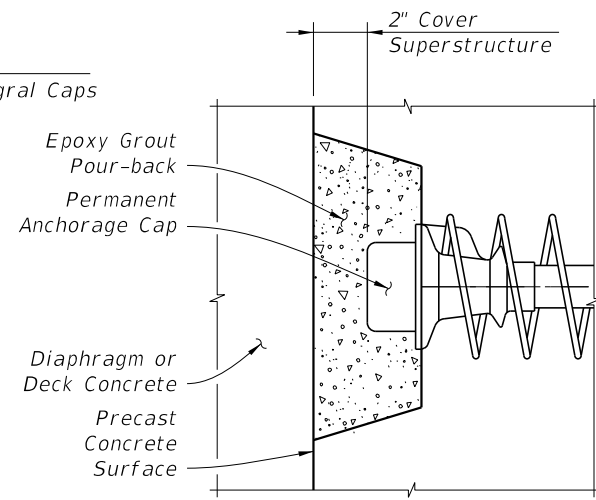
**Profile G6**

10/26/2016 9:17:13 AM

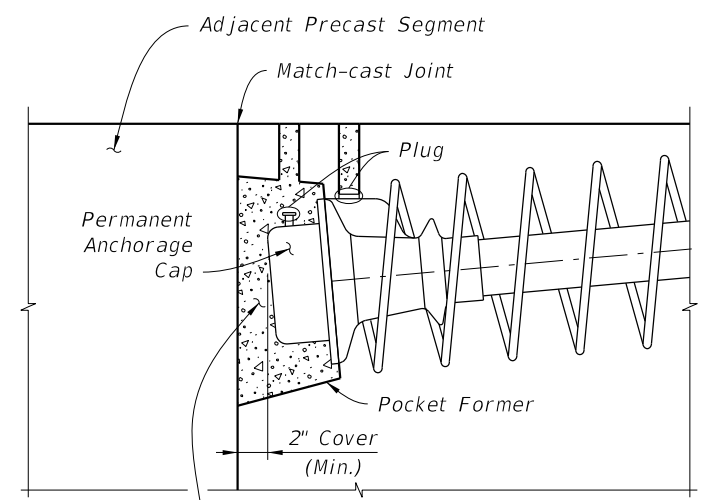
LAST REVISION	7/22/16	REVISION	DESCRIPTION:
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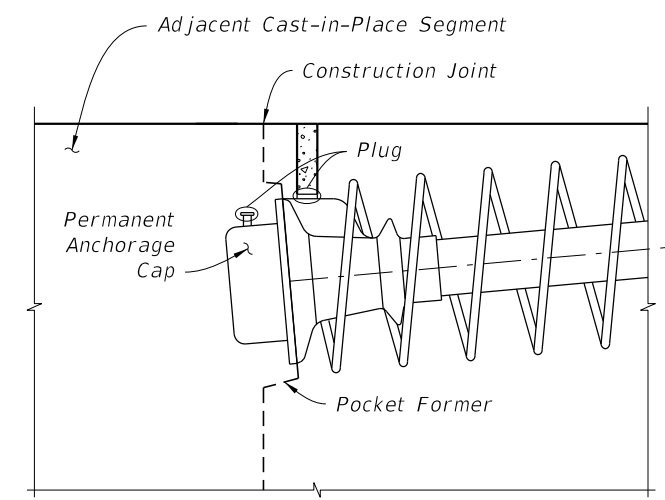
TYPE 1



TYPE 2

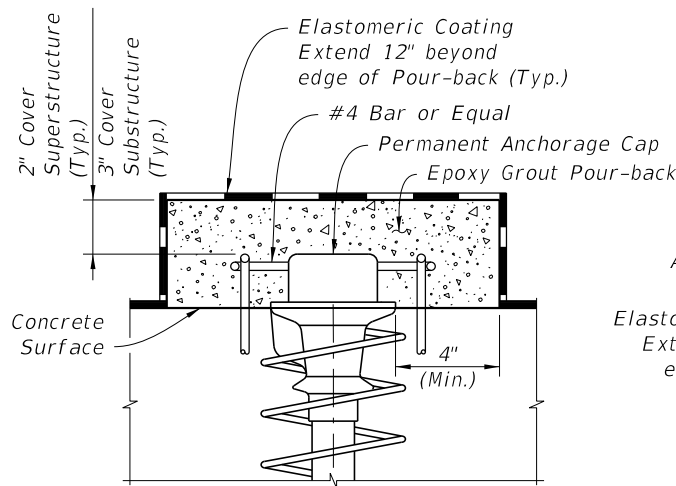


TYPE 3A

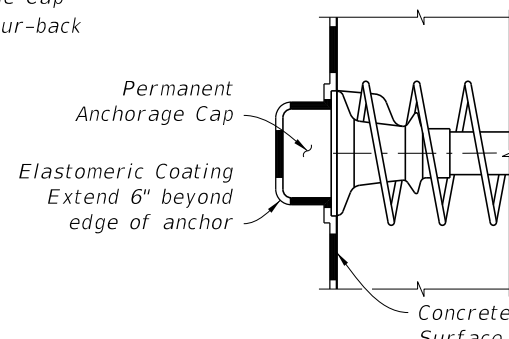


TYPE 3B

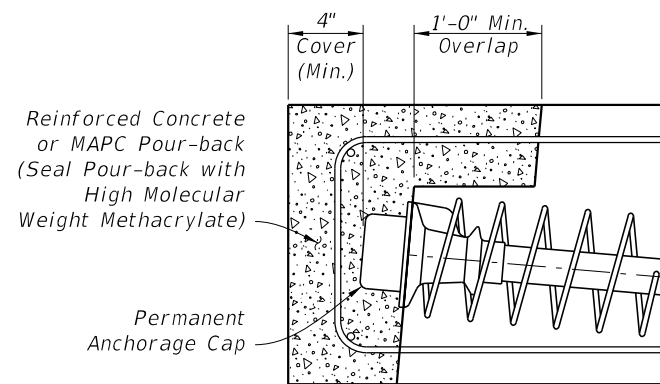
Epoxy Grout Pour-back placed after permanent tendons anchored in adjacent segment have been stressed



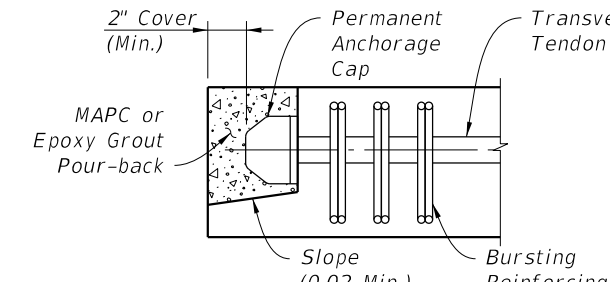
TYPE 4



TYPE 5



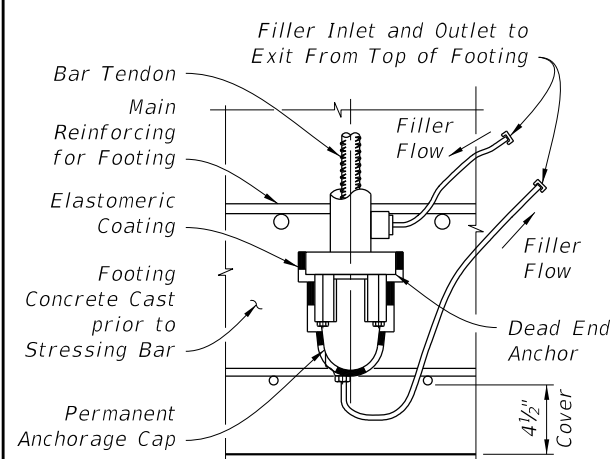
TYPE 6



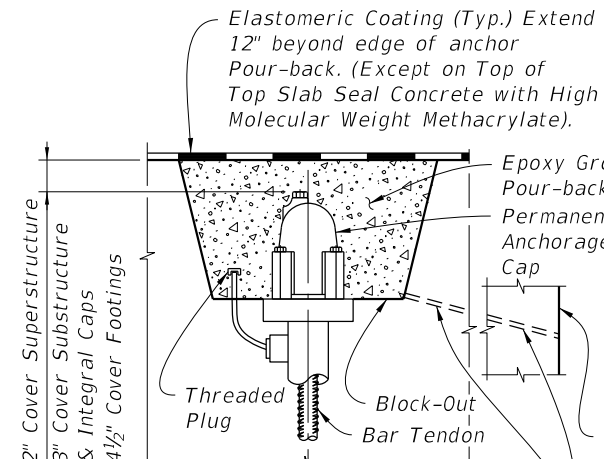
TYPE 7

- Type 7 Notes:
1. Traffic or Pedestrian/Bicycle Railing not shown for clarity.
  2. Where Pour-back is not protected by Traffic or Pedestrian/Bicycle Railing, Coat Pour-back with High Molecular Weight Methacrylate.

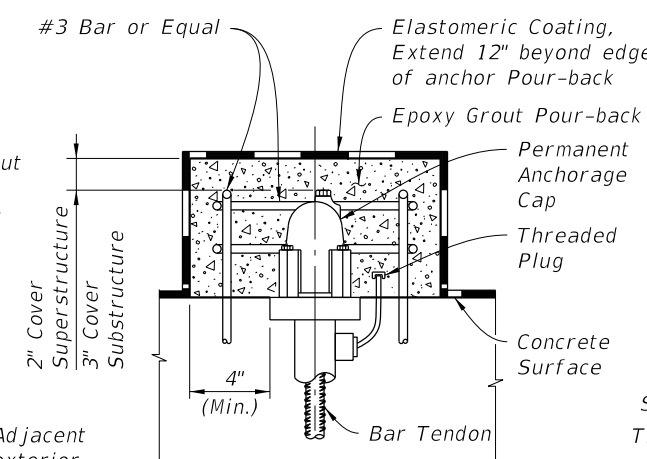
ANCHORAGE PROTECTION FOR STRAND TENDONS



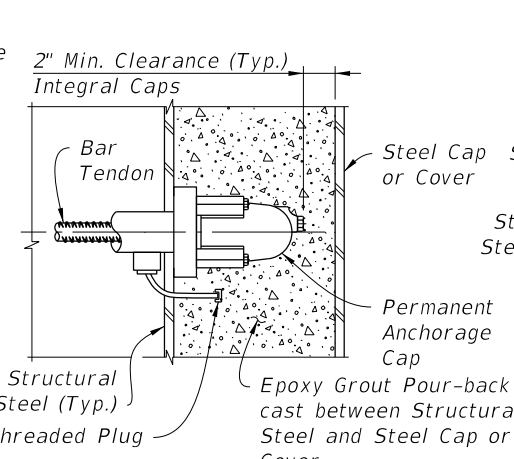
TYPE 8



TYPE 9

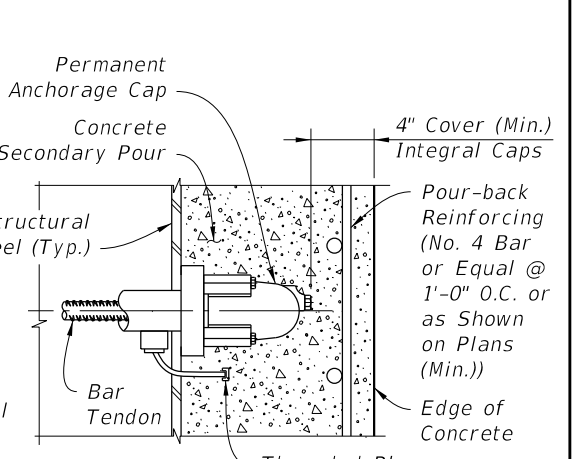


TYPE 10



TYPE 11

(Shear Studs not Shown for Clarity)



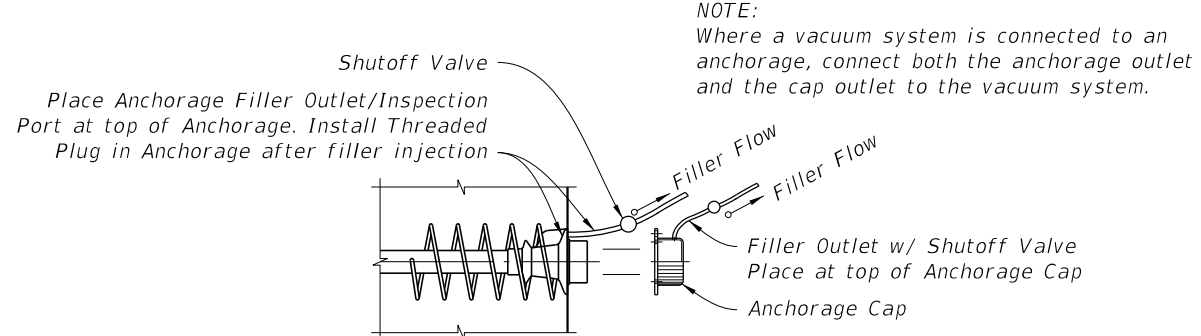
TYPE 12

(Shear Studs not Shown for Clarity)

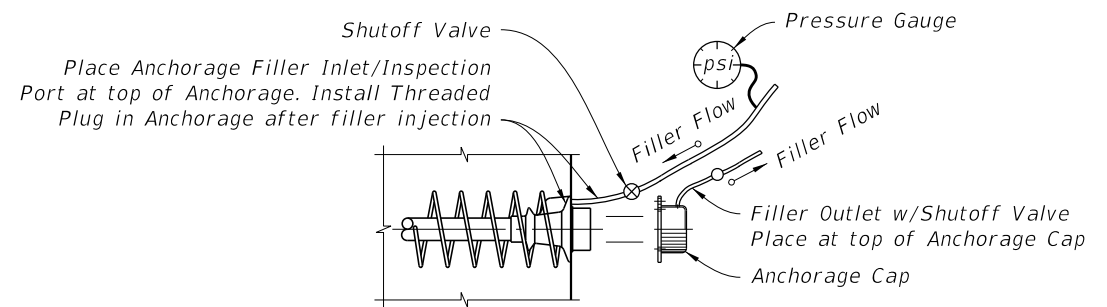
ANCHORAGE PROTECTION FOR BAR TENDONS

10/26/2016 9:17:31 AM

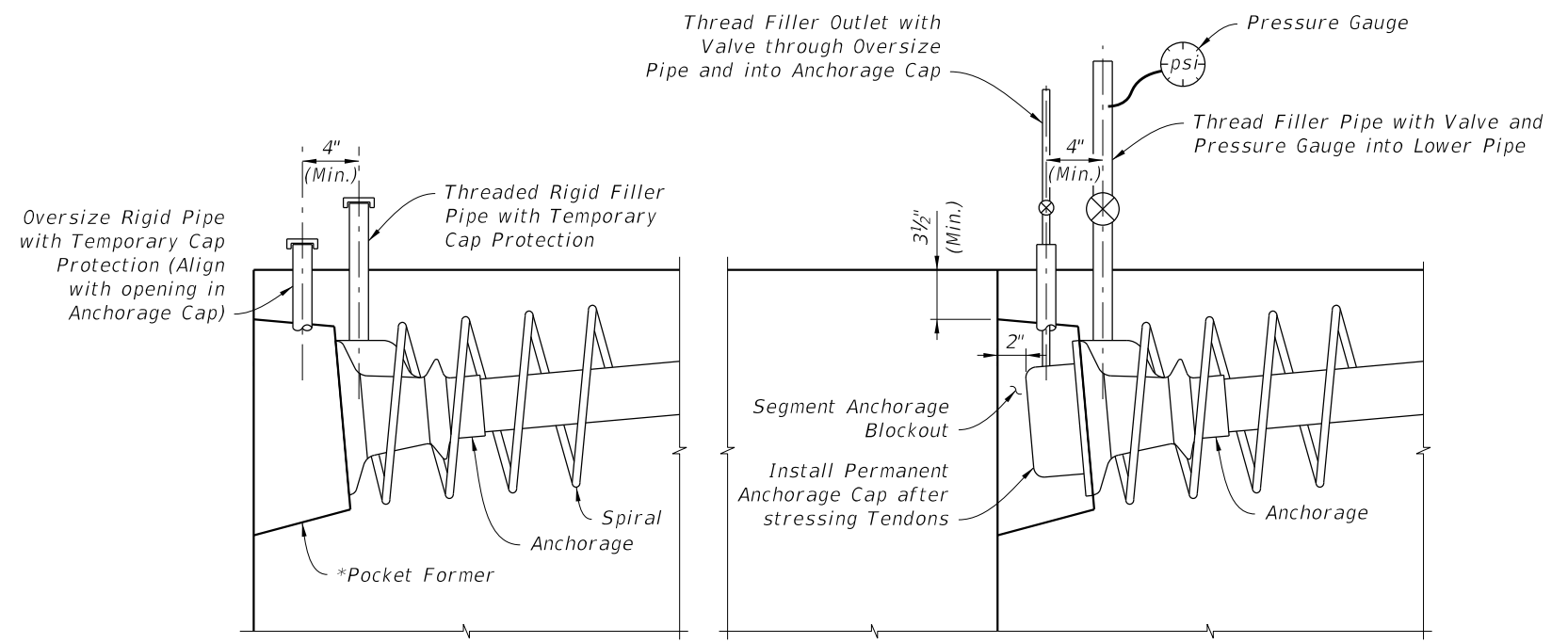
LAST REVISION 11/01/16	REVISION	DESCRIPTION:
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**FACE INSPECTED ANCHORAGE WITH FILLER OUTLET**

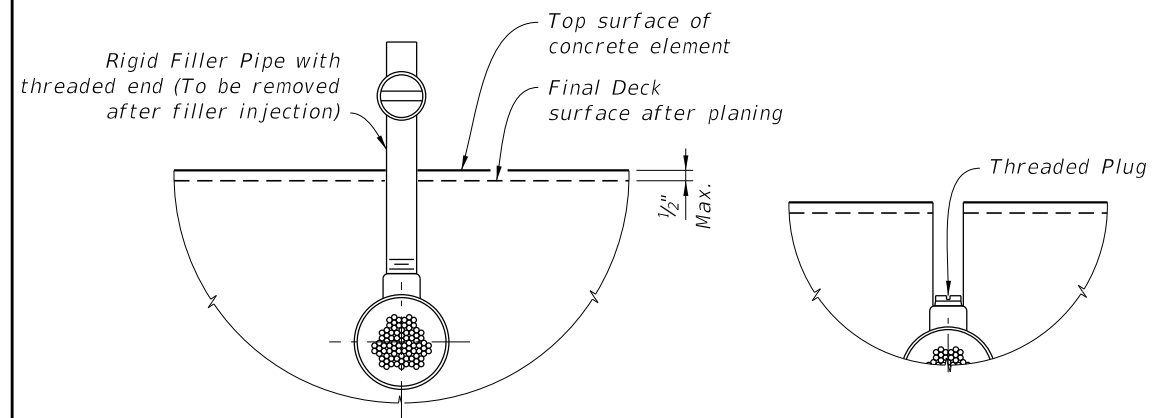


**FACE INSPECTED ANCHORAGE WITH FILLER INLET**



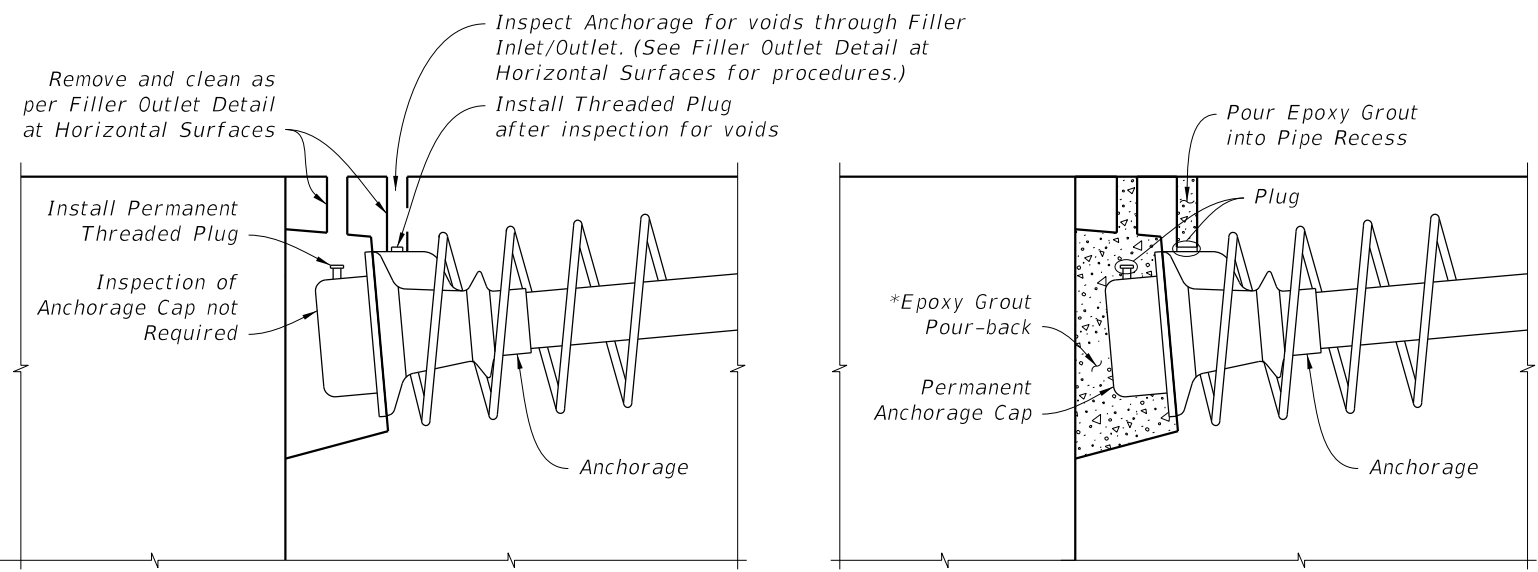
**1 INSTALLATION & SHIPPING**

**2 FILLER INJECTION**



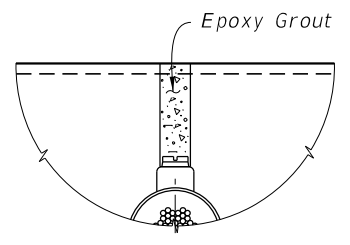
**1 FILLER OUTLET CONNECTION TO DUCT**

**2 POCKET PREPARATION**



**3 INSPECTION**

**4 PROTECTION**



**3 FILLING POCKET**

- PROCEDURE:**
1. Remove Rigid Filler Pipe.
  2. Inspect Tendon for voids as necessary.
  3. Vacuum inject as required. If grout is used, allow grout to cure. If flexible filler is used, replace filler displaced by inspection. Remove pipe used for vacuum injecting.
  4. Clean threads and rethread as required.
  5. Install Threaded Plug into Outlet to form a tight fit.
  6. Over-ream hole (1/4" Ø over-ream). Clean and roughen sides.
  7. Fill Pocket with Epoxy Grout.

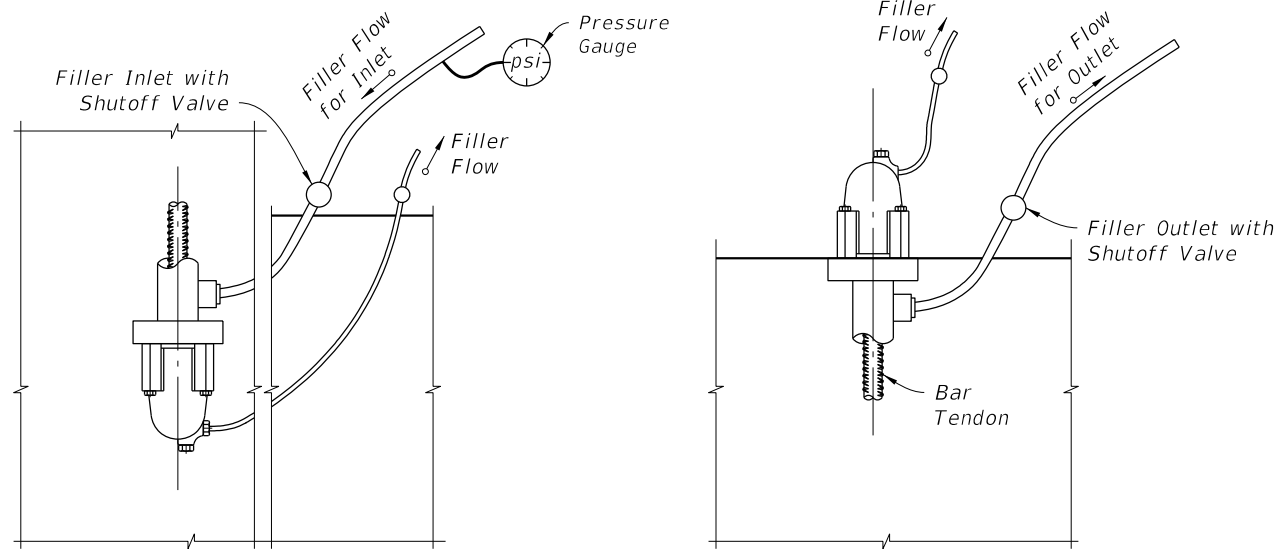
== FILLER OUTLET DETAIL AT HORIZONTAL SURFACES ==

**TOP INSPECTED ANCHORAGE WITH FILLER INLET INSTALLATION, FILLER INJECTION, INSPECTION & PROTECTION**

- NOTES:**
1. Holes used for the Inspection and Filler Inlets/Outlets may be formed using tapered pipes or mandrels.
  2. Where a vacuum system is connected to an anchorage, connect both the anchorage outlet and the cap outlet to the vacuum system.
- \* Round Pocket Former - Gravity fed placement of epoxy grout acceptable  
 Modified Square Pocket Former - Gravity fed placement of epoxy grout acceptable  
 Square Pocket Former - Vacuum epoxy grouting required

10/26/2016 9:18:41 AM

LAST REVISION 11/01/16	REVISION	DESCRIPTION:	 <b>FY 2017-18 DESIGN STANDARDS</b>	<b>POST-TENSIONING ANCHORAGE AND TENDON FILLING DETAILS</b>	INDEX NO. <b>21803</b>	SHEET NO. <b>1 of 2</b>
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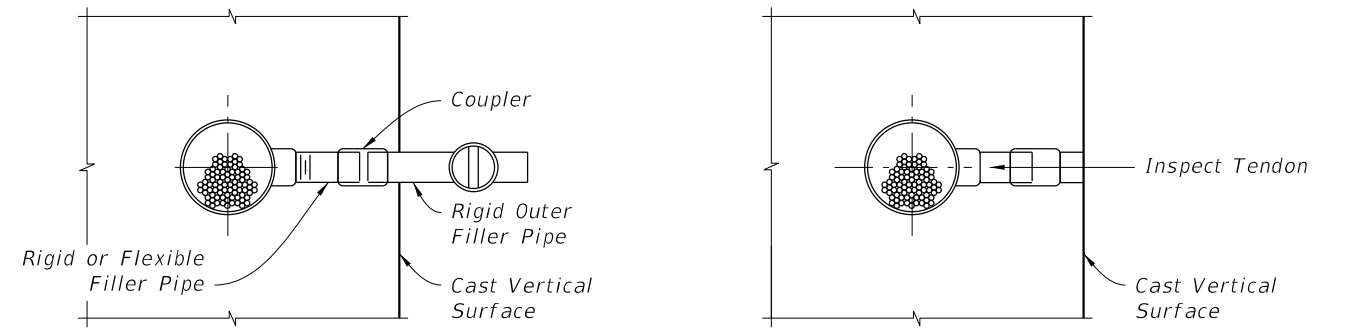


NOTES:  
 1. Anchor or Nut to allow for flow of Filler into Cap.  
 2. Where a vacuum system is connected to an anchorage, connect both the anchorage outlet and the cap outlet to the vacuum system.

**INLET END**  
 (EMBEDDED ANCHORAGE SHOWN; ANCHORAGE AT CONCRETE SURFACE SIMILAR)

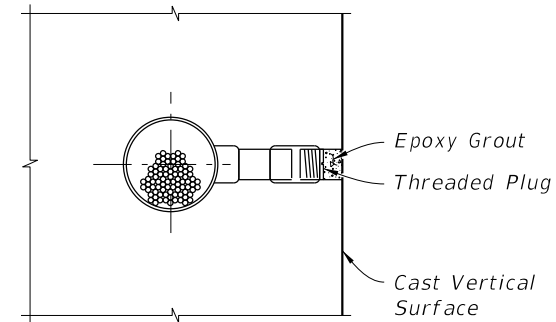
**OUTLET END**

**FILLER INLET AND OUTLET DETAILS FOR BAR TENDONS**  
 (VERTICALLY ORIENTED TENDON SHOWN; HORIZONTALLY ORIENTED TENDON SIMILAR)



**1 FILLER OUTLET CONNECTION TO TENDON**

**2 POCKET PREPARATION**

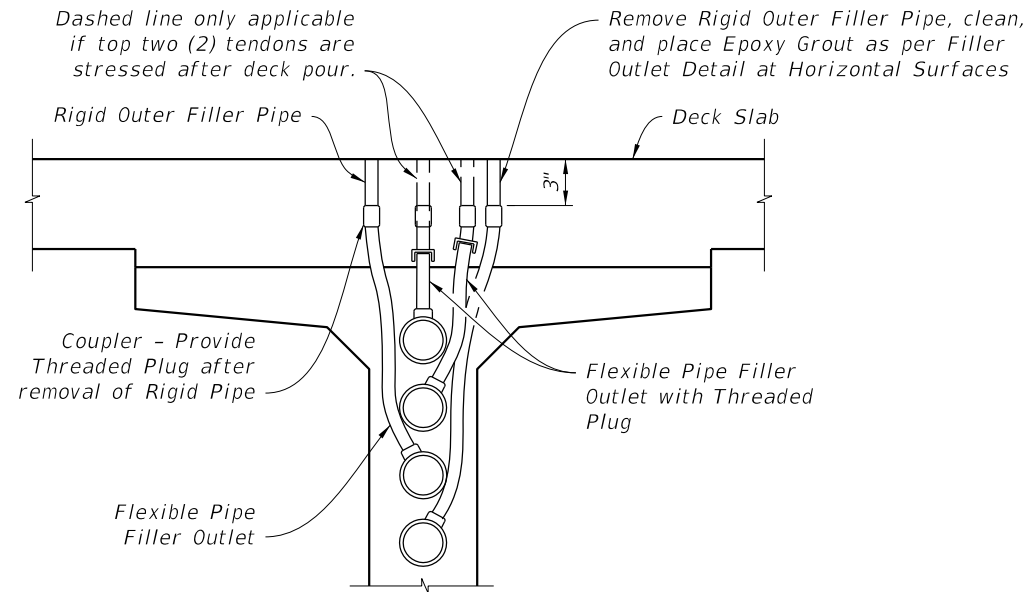


**3 FILLING POCKET**

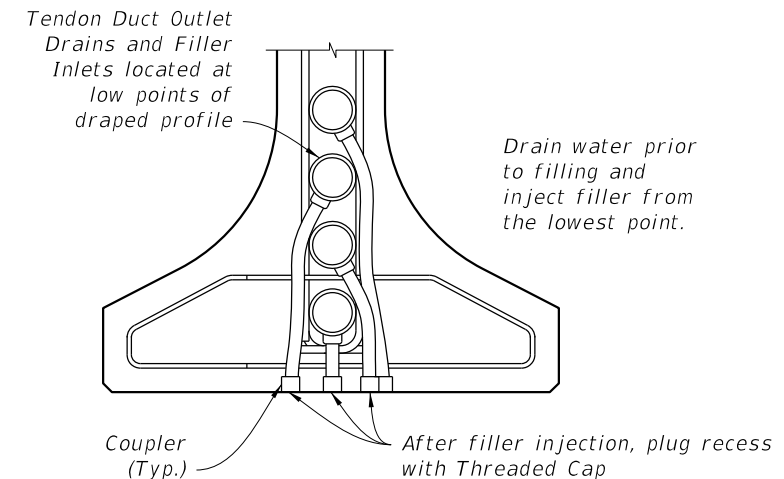
**PROCEDURE:**

1. Remove Rigid Filler Pipe or drill Grout in flexible pipe.
2. Inspect tendon for voids.
3. Vacuum inject as required. If grout is used, allow grout to cure. If flexible filler is used, replace filler displaced by inspection. Remove pipe used for vacuum injecting.
4. Install Threaded Plug into Outlet to form a tight fit.
5. Over-ream hole ( $\frac{1}{4}$ "  $\varnothing$  over-ream). Clean and roughen sides.
6. Fill pocket with epoxy grout.

**FILLER OUTLET DETAIL AT VERTICAL SURFACES**



**TENDONS AT HIGH POINTS AND 3' FROM HIGH POINTS (FILLER OUTLET)**



**TENDONS AT LOW POINTS (FILLER INLET / DRAIN)**

**FILLER INLET AND OUTLET DETAILS FOR I-GIRDERS**  
 DETAILS FOR C.I.P. BOXES WITH INTERNAL TENDONS SIMILAR. WEB REINFORCING NOT SHOWN FOR CLARITY.

10/26/2016 9:18:43 AM

LAST REVISION 11/01/16	DESCRIPTION:	 <b>FY 2017-18</b> <b>DESIGN STANDARDS</b>	<b>POST-TENSIONING ANCHORAGE AND TENDON FILLING DETAILS</b>	INDEX NO. <b>21803</b>	SHEET NO. <b>2 of 2</b>