

General Notes:

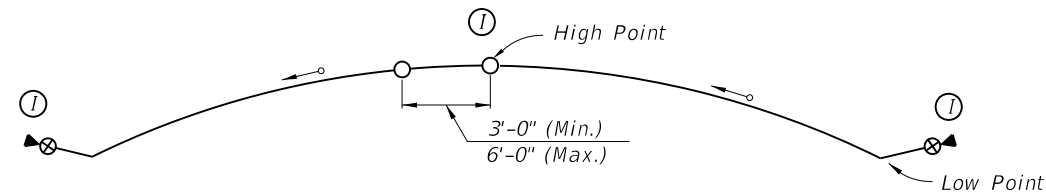
1. The details shown on Indices No. 21801, 21802, and 21803 depict the final condition of the post-tensioning system. The standards assume certain methods to obtain the required final condition. The Contractor may elect to modify these methods with the approval of the Engineer of Record provided the post-tensioning system is protected from contamination during all intermediate steps and the final condition conforms with the requirements of the Contract Documents.
2. See Specifications for grouting procedures, and post-tensioning systems.
3. See Specifications for surface preparation and other details of the epoxy grout pour-backs (Post-Tensioning).
4. See Specifications for surface preparation and other details of the elastomeric coating (Elastomeric Coating System).
5. See Specifications for surface preparation and other details of the Magnesium Ammonium Phosphate Concrete (Magnesium Ammonium Phosphate Concrete) (MAPC).
6. If deviations from these standard methods are proposed, the Contractor shall demonstrate through a mock-up or other methods that his proposed grouting plan adequately fulfills the requirement of fully grouted tendons.
7. The Contractor shall attach pressure gauges to all grout inlets during the grouting operation. Locations of all pressure gauges shall be noted on the grouting operations plan.
8. The grout outlets shown shall be adjusted to accommodate the true high point of the tendon in the completed structure.
9. All grout inlets / outlets are to be sealed using threaded plugs with the exception of inlets / outlets exiting to a vertical face or exiting from the bottom of the bottom soffit.
10. All grout inlets / outlets exiting on vertical surfaces shall be directed toward the inside face of exterior girders or toward the interior of cellular boxes.
11. See Index No. 21802 for "POST-TENSIONING ANCHORAGE PROTECTION".
12. See Index No. 21803 for "POST-TENSIONING ANCHORAGE AND GROUTING DETAILS".

Legend:

- |     |                              |   |                         |
|-----|------------------------------|---|-------------------------|
| —○— | Strand Tendon                | ⊗ | Optional Grout Outlet   |
| —▲— | End Anchor with Grout Outlet | ⊗ | Drain / Grout Inlet     |
| ⊗   | Grout Inlet                  | → | Direction of Grout Flow |
| ○   | Grout Outlet                 | Ⓢ | Inspection Location     |

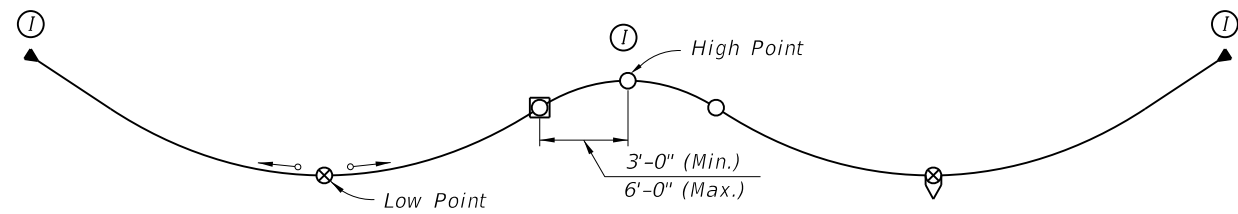
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LAST REVISION 07/01/14	REVISION	DESCRIPTION:	<b>2015 DESIGN STANDARDS</b>	<b>POST-TENSIONING VERTICAL PROFILES</b>	INDEX NO. <b>21801</b>	SHEET NO. <b>1 of 2</b>
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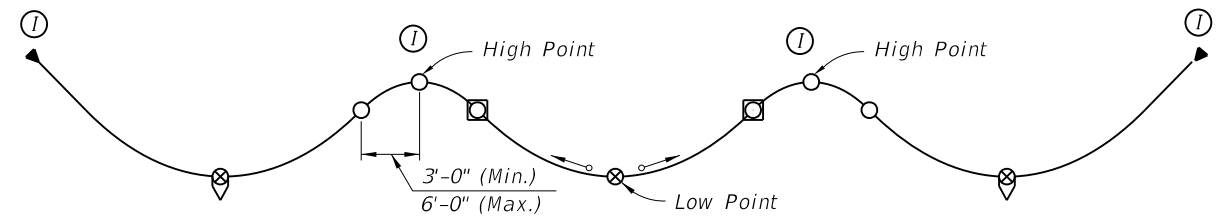


Profile 13

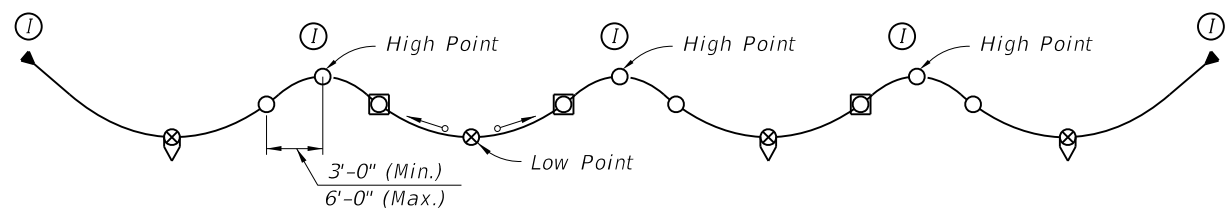
**Post-Tensioning Vertical Profiles for Staged Grouting**  
*(Simultaneous Low Point Grouting through a Manifold is not Permitted)*



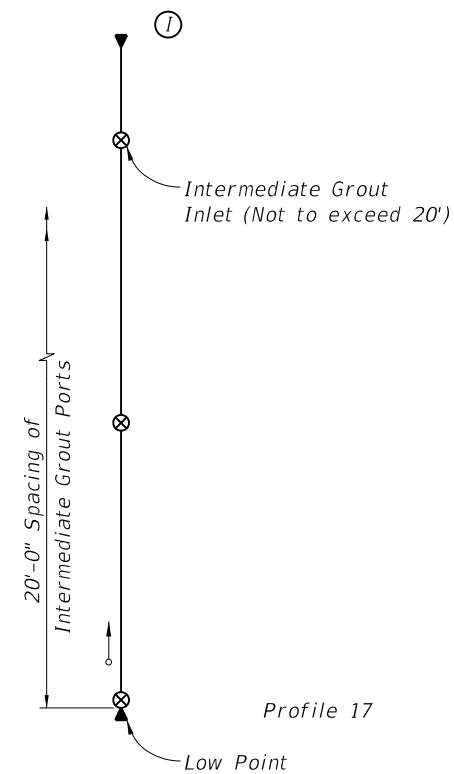
Profile 14



Profile 15



Profile 16



Profile 17

NOTES: Grouting Procedures

1. Take into account longitudinal grade, if any, and establish direction of grouting.
2. Orient end anchors so that grout outlet is at the top.
3. Provide grout outlets at all anchors.
4. Provide grout inlet at low point of all tendon profiles.
5. For tendons longer than 150 feet, additional grout outlets are required.
6. Incorporate the information on these drawings into the grouting operations plan.
7. In the grouting plan, show
  - a. Direction of grouting
  - b. Locations of grout inlets & outlets
  - c. Staged grouting operations
  - d. Sequence of opening & closing vents
  - e. Procedures for time delayed grout phasing of the tendons.
8. After grouting, inspect all anchors and high points for voids.
9. Vacuum grout voids and seal post-tensioning system in accordance with the specifications.

Legend:

- |   |                              |   |                              |
|---|------------------------------|---|------------------------------|
| — | Strand Tendon                | □ | Optional Grout Outlet        |
| ▶ | End Anchor with Grout Outlet | ⊗ | Drain / Optional Grout Inlet |
| ⊗ | Grout Inlet                  | → | Direction of Grout Flow      |
| ○ | Grout Outlet                 | Ⓢ | Inspection Location          |

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07/01/14	



POST-TENSIONING VERTICAL PROFILES

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