

1 (August 3, 2015)
2 Verification tests shall be performed to verify the design of the anchor system.
3 These ground anchor test results shall verify the Contractor's design and be
4 accepted by the Engineer prior to ordering anchor material for the tieback
5 retaining walls. The tests shall be performed on sacrificial test anchors. A
6 minimum of two successful verification tests shall be conducted. The locations
7 shall be close to the anchor location of the production anchors. The test
8 locations shall be selected by the Contractor and accepted by the Engineer,
9 except where specific permanent ground anchor rows between specific station
10 limits are shown in the Plans.
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12 Verification test anchors shall be constructed using the same procedures and
13 anchor geometry (drill hole diameter, bond length, unbonded length) as the
14 production anchors.
15
16 The anchor tested shall be loaded to 150 percent of the factored design load
17 (FDL). The prestressing tendon shall be proportioned such that the maximum
18 stress does not exceed 80 percent of the ultimate strength of the steel. The
19 jack shall be positioned at the beginning of the test such that unloading and
20 repositioning of the jack during the test will not be required.
21
22 The verification tests shall be made by incrementally loading the anchors in
23 accordance with the following schedule.
24
25 AL - Anchor Alignment Load
26 FDL - Factored Design Load
27
28

<u>Load</u>	<u>Hold Time</u>
29 AL	1 Min.
30 0.25FDL	10 Min.
31 0.50FDL	10 Min.
32 0.75FDL	10 Min.
33 1.00FDL	10 Min.
34 1.15FDL	60 Min.
35 1.25FDL	10 Min.
36 1.50FDL	10 Min.
37 AL	1 Min.

38
39 The test load shall be applied in increments of 25 percent of the factored
40 design load. Each load increment shall be held for at least 10 minutes.
41 Measurement of anchor movement shall be obtained at each load increment.
42 The load-hold period shall start as soon as the test load is applied and the
43 anchor movement, with respect to a fixed reference, shall be measured and
44 recorded at 1 minute, 2, 3, 4, 5, 6, 10, 20, 30, 40, 50, and 60 minutes.
45
46 The verification test will be considered successful if the anchor meets the
47 criteria for a performance tested ground anchor in Section 6-17.3(9), and in
48 addition, a pull-out failure does not occur at the 1.50FDL maximum load.
49
50 The Engineer will give the Contractor a written order concerning ground
51 anchor construction within seven working days after completion of the
52 verification tests. This written order will either confirm the bond lengths as

- 1 shown in the Contractor's plans for ground anchors or reject the anchors
- 2 based upon the result of the verification tests.
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