

Tieback Anchors:

1. Tieback holes shall be drilled with a continuous flight auger, 12 inches (or as approved by Engineer) diameter. The specialty subcontractor shall submit proposed tieback length to the Special Inspector for approval; tieback length, subject to 20 foot minimum in primary zone, shall be determined from the design loads. Tieback angle shall be 22-1/2 degrees (plus or minus 7-1/2 degrees). Auger must be positioned at an inclination such that a projection of the hole centerline coincides with the design tieback elevation at the soldier beam face.
2. To position drilling rig at the proper attitude, excavation may be benched or filled at tieback locations.
3. Angle of tieback can be increased or decreased by approximately 7-1/2 degrees by the specialty sub-contractor's field superintendent with prior approval of the Special Inspector, if deemed necessary due to field conditions encountered.
4. Tieback hole casing or use of a hollow stem auger for grouting before withdrawal will be required if danger of overburden collapse is determined. Specialty sub-contractor will be responsible for redrills or tieback replacement for those which fail to meet test loads, and for all costs involved. Abandoned holes must be grouted.
5. High strength rod anchors shall be installed in the holes using spiders to center each anchor in each hole. Anchor is to project from the hole sufficiently so a coupler nut may be fitted. After anchor installation, high strength grout is to be immediately injected into the primary penetration zone.
6. Install stiffener plates as shown on the detail. Specialty sub-contractor will be responsible for providing additional remedial steel bracing at soldier beam to prevent soldier beam from twisting if horizontal drill angle is greater than 1.0 degree off of a line parallel to the centerline of the soldier beam web.
7. After grout has attained the minimum strength specified, stress rod to 140% of the design load and hold for 10 minutes. After test, reduce stress to design load and set lock nut. Hydraulic jacks shall be calibrated and certified by a testing laboratory. Laboratory data, including a calibration chart, shall be delivered to the Special Inspector.
8. Contractor shall install wedge washers as required to correct any misalignment of anchor with angled steel plate seat. Anchors shall be stressed straight and true. Kinking or sharp curvature in anchors under tension shall be cause for rejection. Anchor shall show no excessive movement at the test load during testing period and the testing jack shall be capable of holding test load for 10 minutes without bleeding off of pressure.
9. In the event of a failure of a tieback to achieve the test load, the ultimate load will be recorded. This particular tie will then be assigned a value of 50% and locked at this 50% load. An additional tie will be drilled, and location of this new tie shall be determined by agreement between the specialty sub-contractor's field superintendent and the Special Inspectors. The additional tie shall attain the balance of the required load plus a 40% test load.

OWNERSHIP OF DOCUMENTS

These drawings and calculations, and the ideas and designs incorporated therein, as instruments of professional service, are the property of LAWRENCE B. KARP and are not to be used, in whole or part, for any other project without the express written authority of LAWRENCE B. KARP.