# 4X

# DRILL AND GROUT #6 or #8 epoxy coated tie BARS

(Effective April 5, 2024; Revised May 28, 2025)

Description. This work consists of furnishing, drilling and grouting #6 or #8 epoxy coated tie bars into existing concrete pavement, concrete shoulders or concrete curb and gutter at the locations shown on plan details.

Materials. Materials shall be according to the following Articles/Sections of the Standard Specifications:

 Item Article/Section

(a) Epoxy Coated Reinforcement Bars .............................................................................1006.10

(b) NonShrink Grout ........................................................................................................ 1024.02

(c) Chemical Adhesive…………………………………………………………………………..1027

CONSTRUCTION REQUIREMENTS

General. Bar holes shall be drilled as shown on the plans and parallel to the grade with a vertical tilt tolerance of 1/8” in 12”. The drilling operations shall not crack or spall the existing concrete. Holes shall be blown clean and dry prior to placing the grout or adhesive. If compressed air is used, the pneumatic tool lubricator shall be bypassed and a filter installed on the discharge valve to keep water and oil out of the lines. The installation shall be with methods and tools conforming to the grout or adhesive manufacturer’s recommendations. The minimum required pull-out strength of the installed tie bars shall be 11,000 lb.

1. Longitudinal Construction Joint. The #6 epoxy coated tie bars shall be installed at a spacing of 36”.

(b) Transverse Construction Joints. The #8 epoxy coated tie bars shall be installed at a spacing equal to twice the spacing of the existing longitudinal reinforcement.

(c) The grout shall be of a consistency such that the bar may be easily inserted into the hole with flow surrounding the bar and without appreciable runout of grout after the bar is fully inserted to the depth as described in plan details.

The grout should be thicker than the consistency recommended by the manufacturer’s directions. The grout shall be injected to the back of the hole to eliminate air pockets prior to inserting the bar. The quantity of material used shall be such that the grout is dispersed along the entire length of the bar and voids are filled. After the material has been positioned at the back of the hole, the bar shall be fully inserted, using a back-and-forth twisting motion, leaving the proper length exposed as shown on the plans.

Method of Measurement. This work will be measured for payment as follows:

1. Contract Quantities. The requirement for use of contract quantities shall be according to Article 202.07(a) of the Standard Specifications.
2. Measured Quantities. This work will be measured for payment as each.

Basis of Payment. This work will be paid for at the contract unit price per each for DRILL AND GROUT #6 TIE BARS or DRILL AND GROUT #8 TIE BARS, which price shall include all labor, materials, and equipment to satisfactorily complete the work.