Part 1 General

1.1 SECTION INCLUDES

1. Continuous wire reinforcement and reinforcing rods.
2. Masonry anchors and ties.
3. Masonry repair systems including helical ties.

1.2 RELATED REQUIREMENTS

1. Division 01 of this Specification.
2. Section 04 03 05.16 - Period Masonry Grouting
3. Section 04 05 10 - Masonry Mortar and Grout.
4. Section 04 26 16 - Reinforced Unit Masonry.

1.3 REFERENCE STANDARDS

1. CSA G30.18:21 Carbon steel bars for concrete reinforcement
2. CSA A370:14 Connectors for masonry
3. CAN/CSA A371-14 Masonry construction for buildings
4. ANSI B212.15 - Cutting Tools - Carbide-tipped Masonry Drills and Blanks for Carbide-tipped Masonry Drills
5. ASTM E3121 - Standard Test Methods for Field Testing of Anchors in Concrete or Masonry
6. SAE J405 - Chemical Compositions of SAE Wrought Stainless Steels

1.4 INFORMATIONAL SUBMITTALS

1. Section 01 33 00: Submission procedures.

1.5 CLOSEOUT SUBMITTALS

1. Section 01 77 00: Project Close-out.

Part 2 Products

2.1 MATERIALS

1. Steel Wire: ASTM A1064/A1064M .
2. Steel Bars, Bars, Plates, Angles: CSA-G40.20/G40.21, Type W.
3. Steel Bolts: ASTM A307, Type A.
4. Helical Ties: Type 304 Stainless Steel

2.2 MASONRY CONNECTORS

1. Single Wythe Joint Reinforcement (Type 1): CAN/CSA-A370, continuous Ladder type; cold drawn steel wire, 4 mm side rods with 4 mm cross ties.
2. Masonry Repair and Re-anchoring:

1. Helical (screw-in) Wall Anchors: CAN/CSA-A370, stainless steel 304, diameter 10 mm, length 450 mm.

3. Bar Reinforcing Steel: CSA-G30.18, Grade 400R, deformed billet bars, uncoated finish.

2.3 FABRICATION

1. Fabricate connectors to CAN/CSA-A370.
2. Fabricate bar reinforcing to CSA-A23.1/A23.2.

Part 3 Execution

3.1 INSTALLATION

1. Install anchors and reinforcing as indicated on project drawings.
2. Reinforcing bar and ladder reinforcing:
    1. To CAN/CSA-A370 and CAN/CSA-A23.1.
3. Helical ties:
    1. Drill all holes for helical ties using carbide-tipped drill bits of the diameter recommended by the manufacturer.
    2. Drill holes with rotohammer setting set as recommended by the manufacturer. It is suggested to use rotation only mode for soft or hollow materials.
    3. Drill holes for helical wall ties accurately and squarely without excessive drill bit wobble at locations and spacing specified in the Contract Documents. Drill holes at an angle of approximately 30 degrees to the base material, as noted on the project drawings.
    4. Drill holes continuously and to the specified embedment depth through all facing and back-up base materials to be tied together.
    5. Install helical ties into holes pre-drilled in base materials using the manufacturer's recommended installation tool.
    6. Drive the helical tie into the base material until the helical tie is countersunk beyond the facing base-material surface as specified or to the depth permitted by the installation tool. Install specified patch / repair material to match existing finish surface material.
    7. Where the helical tie manufacturer recommends use of special tools for installation of ties, such tools shall be used.

End of Section