

## **DIVISION 01 – GENERAL REQUIREMENTS**

### Section 01 11 13 – Work Covered by Contract Documents

- .1 Engineered Temporary Shoring Design Drawings
  - .1 Contractor and temporary shoring designer to visit site and review all spaces impacted by shoring. Contractor to ensure temporary shoring is designed around any obstructions.
  - .2 Submit engineered temporary shoring drawings within three (3) weeks of contract award, for the Consultant's review. Shop drawings are to be provided for all required shoring designed and sealed by an engineer licensed to practice in the province of Ontario.
  - .3 Design to minimize interior finish replacement costs and inconvenience to Building Users and Owner wherever possible.
  - .4 Temporary shoring design engineer and contractor to make regular maintenance inspections. A minimum three (3) maintenance inspection letters are required.
  - .5 Structural shoring engineer must have minimum ten (10) years previous experience shoring existing buildings undergoing localized reinforced concrete repairs. Design must be as economical as possible and have minimum impact to building interior and facilities used.
- .2 Engineered Temporary Shoring Review Letters
  - .1 Provide letters from the design engineer approving the installed shoring. Stamped letters are required before removals are permitted. A minimum of one (1) shoring review letter is required.
  - .2 Demolition cannot commence until the shoring design engineer has performed an onsite review, and the contractor has provided their written approval letter to the Consultant.
- .3 Engineered Temporary Shoring
  - .1 Provide temporary support to existing structural elements/loads, where required, to ensure the building is maintained in a safe condition and damage is not caused to building elements. Any damage as a result of inadequate shoring or support shall be rectified at no additional cost to the Owner.
  - .2 All labour, equipment, materials and supervision required to supply, install, maintenance and remove temporary shoring systems in accordance with the Project Drawings and Specifications.
  - .3 The Contractor's temporary shoring design engineer to determine where temporary shoring is required but, as a bare minimum, costing for temporary shoring at locations noted in the Project Drawings must be included.

---

WORK COVERED BY CONTRACT DOCUMENTS

4600 Dixie Road, Mississauga, ON  
Peel Regional Police - Division 12 Interior & Exterior Renovations  
25-0210-00

Section 01 11 13  
Page 2  
2026-04-10

---

- .4 The Contractor's temporary shoring design engineer must determine where other shoring is required prior to tender close. No additional shoring costs will be entertained after tender close.
- .5 Remove and reinstate exterior soffit cladding as required to install temporary shoring and complete the work.
- .4 Topside Concrete Repairs
  - .1 Perform all sounding and complete mark-outs for the Consultant's review. Provide a map with quantities, for Consultant's review prior to site visit.
  - .2 Provide all required supplemental steel, couplers, welding, epoxy-anchored dowels, etc., as part of this cost.
- .5 Through-Slab Concrete Repairs
  - .1 Perform all sounding and complete mark-outs for the Consultant's review. Provide a map with quantities, for Consultant's review prior to site visit.
  - .2 Provide all required supplemental steel, couplers, welding, epoxy-anchored dowels, etc., as part of this cost.
- .6 Galvanic Anodes
  - .1 Provide all labour, equipment, materials and supervision required to supply and install new galvanic anodes in accordance with the Project Details and Specifications.
- .7 Vertical Wall Concrete Repair
  - .1 Perform all sounding and complete mark-outs for the Consultant's review. Provide a map with quantities, for Consultant's review prior to site visit.
  - .2 Provide all required supplemental steel, couplers, welding, epoxy-anchored dowels, etc., as part of this cost.
- .8 Shallow Concrete Repairs
  - .1 Provide all labour, equipment, materials and supervision required to perform localized shallow concrete repairs in accordance with the Project Details and Specifications.
- .9 Parging Replacement
  - .1 Provide all labour, equipment, materials and supervision required to replace the parging coat at the topside/horizontal surface of all stair side walls in accordance with the Project Details and Specifications.
- .10 Elastomeric Deck Coating – Installation
  - .1 Wholesale replacement of all sealant fillet beads at the suspended slab and slab-on-grade areas.

- .2 Includes all surface preparation, details, crack details, upturns, tie-ins, termination reglets, as indicated in the Project Drawings and Specifications.
- .3 Prepare surfaces and install new UV-resistant, elastomeric traffic deck coating system in accordance with Project Drawings and specifications. Masking tape at edges for straight finish mandatory.
  - .1 New vapour permeable elastomeric waterproofing to be installed on entire extent of slab-on-grade. System includes primer and topcoat. Include for 150 mm minimum upturns on stair side walls.
  - .2 New vapour impermeable elastomeric waterproofing to be installed on entire extent of suspended slab. System includes base and topcoat. Include for 150 mm minimum upturns on stair side walls.
- .11 Elastomeric Wall Coating – Overcoating
  - .1 Prepare surfaces and install new UV-resistant, elastomeric wall coating system to overcoat existing stair side walls. Masking tape at edges for straight finish mandatory.
  - .2 Locally remove all loose paint by mechanical means and 100% power washing.
  - .3 Include route-and-seal of all concrete cracks and construction joints.
  - .4 Install two coats of elastomeric coating. Adhesion testing to be reviewed by the consultant on site prior to commencing the work. Include for adhesion testing on the existing coating and on the concrete wall.
- .12 Localized Foundation Wall Waterproofing Repair
  - .1 Locally remove the entire existing debonded waterproofing system down to the concrete wall and prepare the surface. Repair area to extend until well-bonded waterproofing is identified, which can remain in place.
  - .2 Apply two coats of cold applied waterproofing (45mils each coat) and embed reinforcing fabric in the two coats.
  - .3 Overlap the new waterproofing over the existing a minimum of 8" around the patch perimeter.
  - .4 Install protection board overtop of entire repair patch to match the existing. Protection board must be adhered outside of the waterproofing repair patch.
  - .5 At cracks less than 1/8" wide:
    - .1 Apply 45mils coat of cold applied waterproofing, 6" wide (3" on each side of crack) prior to installing new 90mils fully reinforced cold applied waterproofing system.
  - .6 At cracks between 1/8" - 1/4" wide:
    - .1 Saw cut crack into a 1/4" x 1/4" wide gap and fill with sealant.

---

WORK COVERED BY CONTRACT DOCUMENTS

4600 Dixie Road, Mississauga, ON

Section 01 11 13

Peel Regional Police - Division 12 Interior & Exterior Renovations

Page 4

25-0210-00

2026-04-10

---

- .2 Apply 45mils coat of cold applied waterproofing, 6" wide (3" on each side of crack) prior to installing new 90mils fully reinforced cold applied waterproofing system.

1.2 UNIT PRICES

- .1 Topside Concrete Repairs (incl. supplementary steel, dowels, etc, engineered temporary shoring under Item 3) (sq ft)
- .2 Through-Slab Concrete Repairs (incl. supplementary steel, dowels, etc, engineered temporary shoring under Item 3) (sq ft)
- .3 Vertical Wall Concrete Repairs (incl. supplementary steel, dowels, etc, engineered temporary shoring under Item 3) (sq ft)
- .4 Concrete Slab Shallow Soffit Repairs (incl. repair mortar)
- .5 Elastomeric Deck Coating – Installation (sq.ft)
- .6 Elastomeric Wall Coating – Overcoating (sq.ft)
- .7 Elastomeric Wall Coating – Full Replacement (sq.ft)

END OF SECTION 01 11 13

## **DIVISION 3 – CONCRETE WORK**

### **Section 03 31 00 – Reinforcing Steel (for Cast-in-Place Concrete)**

#### **1. GENERAL**

##### **1.1 SCOPE OF WORK**

- .1 Provide all labour, materials, equipment and supervision necessary to prepare and supplement existing reinforcing steel in accordance with Specification Section 03 40 00, for the following concrete repairs:
  - .1 Localized structural topside repairs.
  - .2 Localized structural through-slab and slab-on-grade repairs.
  - .3 Localized vertical wall repairs.

##### **1.2 GENERAL REQUIREMENTS**

- .1 For the duration of the warranty periods, the concrete repairs performed under this contract shall not:
  - .1 Spall, scale, or crack excessively.
  - .2 Debond from existing substrate.
  - .3 Delaminate due to reinforcing steel corrosion.

##### **1.3 REFERENCES**

- .1 The work will confirm with the most current version of the Ontario Building Code (OBC), amended by O. Reg 423/12 Minister's Ruling MR-06-S-07, any applicable acts of any authority having jurisdiction and the following:
  - .1 CAN/CSA S448- Repair of Reinforced Concrete in Buildings and Parking Structures
  - .2 American Concrete Institute (ACI) SP-66,
  - .3 ACI Detailing Manual (most current)
  - .4 ASTM International
    - 1. ASTM A 82/A 82M, Standard Specification for Steel Wire, Plain, for Concrete Reinforcement (most current).
    - 2. ASTM A 143/A 143M, Standard Practice for Safeguarding Against Embrittlement of Hot-Dip Galvanized Structural Steel Products and Procedure for Detecting Embrittlement (most current).
    - 3. ASTM A 185/A 185M, Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete.

---

REINFORCING STEEL FOR CAST-IN-PLACE CONCRETE

4600 Dixie Road, Mississauga, ON  
Peel Regional Police - Division 12 Interior & Exterior Renovations  
25-0210-00

Section 03 30 00  
Page 2  
2026-04-10

---

4. ASTM A 775/A 775M, Standard Specification for Epoxy-Coated Reinforcing Steel Bars.
- .5 CSA International
  1. CSA-A23.1/A23.2, Concrete Materials and Methods of Concrete Construction/Test Methods and Standard Practices for Concrete (most current).
  2. CAN/CSA-A23.3, Design of Concrete Structures (most current).
  3. CSA-G30.18-09, Carbon Steel Bars for Concrete Reinforcement.
  4. CSA-G40.20/G40.21, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel (most current).
  5. CAN/CSA-G164, Hot Dip Galvanizing of Irregularly Shaped Articles (most current).
  6. CSA W186-M1990(R2007), Welding of Reinforcing Bars in Reinforced Concrete Construction (most current).
- .6 Reinforcing Steel Institute of Canada (RSIC)
  1. RSIC, Reinforcing Steel Manual of Standard Practice. Where there are differences between the Specifications and Drawings and the codes, standards, or acts, the most stringent shall govern (most current).

#### 1.4 SUBMITTALS

- .1 Reinforcing Steel Shop Drawing: Prepare reinforcement drawings in accordance with RSIC Manual of Standard Practice. Submit drawings stamped and signed by a professional engineer registered or licensed in Ontario. Indicate placing of reinforcement and:
  - .1 Bar bending details.
  - .2 Lists.
  - .3 Quantities of reinforcement.
  - .4 Sizes, spacings, locations of reinforcement and mechanical splices if approved by Consultant, with identifying code marks to permit correct placement without reference to structural drawings.
  - .5 Indicate sizes, spacings and locations of chairs, spacers and hangers.
  - .6 Detail lap lengths and bar development lengths to CAN/CSA-A23.3.
  - .7 Mill Test Report: Provide Consultant with certified copy of mill test report of reinforcing steel, prior to beginning reinforcing work.
  - .8 Reinforcing Steel Bills of Lading
  - .9 Reinforcing Steel Welding Shop Drawings and Inspection Reports
  - .10 Upon request, submit in writing to the Consultant the proposed source of reinforcement material to be supplied.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with the manufacturer's written instructions.
- .2 Deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Store materials in accordance with manufacturer's recommendations in clean, dry, well-ventilated areas.
- .4 Replace defective or damaged materials with new.
- .5 Take extraordinary care when handling epoxy-coated reinforcing steel to prevent damage to the epoxy-coating. Bundle and transport epoxy-coated reinforcement in accordance with ASTM A775/A775M-19. Epoxy-coated reinforcing bars shall not be dropped or dragged and shall be lifted with spreaders and non-metallic slings. Bar-to-bar abrasion and excessive handling of bundles must be prevented.
- .6 The contractor shall repair all damages to the epoxy coating using a manufacturer's approved epoxy patching materials. If damaged areas rust before being repaired, the rust shall be completely removed before the steel surfaces are repaired.
- .7 Coat cut ends of epoxy-coated reinforcing with approved epoxy patching material.

2. PRODUCTS

2.1 MATERIALS

- .1 Reinforcing Steel: Bare Billet Steel, Grade 400/Grade 350/Grade 300, to CSA-G30.18. Bar sizes in accordance with the Project Details and Drawings. Substitute different size bars only if permitted in writing by the Consultant.
- .2 Wire Welded Mesh: Hot-Dip Galvanized 102x102 MW9.1/MW9.1 to ASTM A 185/A 185M. To be delivered in sheets.
- .3 Cold-Drawn Annealed Steel Wire Ties: to ASTM A 82/A 82M.
- .4 Deformed Steel Wire for Concrete Reinforcement: to ASTM A 82/A 82M.
- .5 Chairs, Bolsters, Bar Supports, Spacers: to CSA-A23.1/A23.2. Chairs, bolsters, bar supports, and spacers shall be epoxy-coated or plastic. The use of pebbles, pieces of broken stone or brick, pipe, or wooden blocks will not be permitted.
- .6 Plain round bars: to CSA-G40.20/G40.21.
- .7 Epoxy-Coated Reinforcing Steel: Fabrication, handling and shipping of epoxy-coated steel shall conform with MTO Form 905 and CSA-S413-14.
- .8 Epoxy Coating of Non-Prestressed Reinforcing: to ASTM A 775/A 775M.
- .9 Epoxy-Coated Reinforcing Steel Wire Ties: to ASTM A1064/A1064M.

2.2 FABRICATION

- .1 Fabricate reinforcing steel in accordance with CSA-A23.1/A23.2 and the Reinforcing Steel Manual of Standard Practice by the Reinforcing Steel Institute of Canada, unless otherwise indicated.
- .2 Obtain Consultant's written approval for locations of reinforcement splices other than those shown on placing drawings.
- .3 Upon approval of Consultant, weld reinforcement in accordance with CSA W186.
- .4 Ship bundles of bar reinforcement, clearly identified in accordance with bar bending details and lists.

### 2.3 SOURCE QUALITY CONTROL

- .1 Upon request, provide Consultant with a certified copy of the mill test report of reinforcing steel, showing physical and chemical analysis, minimum 4 weeks prior to beginning reinforcing work.
- .2 Upon request inform Consultant of proposed source of material to be supplied.

### 2.4 NEW EPOXY-COATED REINFORCING STEEL

- .1 Fabrication and handling of epoxy-coated steel reinforcing bars to be in accordance with ASTM D3963.
- .2 Epoxy-coated reinforcing bars should be lifted using a spreader bar or strongback with multiple pick-up points to minimize sag. Nylon or padded slings should be used. Do not use bare chains or cables.
- .3 Bundles of rebar to be stored on suitable material such as timber cribbing. At no time should steel be stored directly on the ground.
- .4 If the steel is to be exposed and stored outdoors for more than 30 days, it should be covered with suitable opaque material that minimizes condensation.
- .5 Bar supports are to be non-conductive material or plastic bar supports.

## 3. EXECUTION

### 3.1 FIELD BENDING

- .1 Do not field bend or field weld reinforcement except where indicated or authorized by Consultant.
- .2 When field bending is authorized, bend without heat, applying slow and steady pressure.
- .3 Replace bars, which develop cracks or splits.

### 3.2 PLACING REINFORCEMENT

- .1 Place reinforcing steel [as indicated on placing drawings] [and] in accordance with [CSA-A23.1/A23.2].

---

REINFORCING STEEL FOR CAST-IN-PLACE CONCRETE

4600 Dixie Road, Mississauga, ON

Section 03 30 00

Peel Regional Police - Division 12 Interior & Exterior Renovations

Page 5

25-0210-00

2026-04-10

---

- .2 Use plain round bars as slip dowels in concrete.
- .3 Paint portion of dowel intended to move within hardened concrete with [one coat of asphalt paint].
- .4 When paint is dry, apply thick even film of mineral lubricating grease.
- .5 Prior to placing concrete, obtain Consultant's approval of reinforcing material and placement.
- .6 Ensure cover to reinforcement is maintained during concrete pour.
- .7 Protect coated portions of bars with covering during transportation and handling.

3.3 EPOXY COATED STEEL FIELD TOUCH-UP

- .1 Touch up damaged and cut ends of epoxy coated or galvanized reinforcing steel with compatible finish to provide continuous coating.

3.4 FIELD TOUCH-UP

- .1 Touch up damaged and cut ends of epoxy coated or galvanized reinforcing steel with compatible finish to provide continuous coating.

END OF SECTION 03 30 00

**DIVISION 3 – CONCRETE WORK**

## Section 03 40 00 – Concrete Repairs

**1. GENERAL****1.1 SCOPE OF WORK**

- .1 Provide all materials, labour, plant and equipment necessary to repair deterioration and delaminated structural concrete at slabs, walls, etc., as identified by the Consultant and in accordance with the Project Details, including:
  - .1 1/R500 Typical Through-Slab Concrete Repair Detail
  - .2 2/R500 Typical Topside Concrete Repair Detail
  - .3 3/R500 Typical Vertical Wall Concrete Repair Detail
  - .4 4/R500 Typical Slab-on-Grade Concrete Repair Detail
- .2 Provide all materials, labour, plant and equipment necessary to install new sacrificial galvanic anodes in concrete repair patches.

**1.2 REFERENCES**

- .1 The work will confirm with the most current version of the Ontario Building Code (OBC), amended by O. Reg 423/12 Minister's Ruling MR-06-S-07, any applicable acts of any authority having jurisdiction and the following:
  - .1 CAN/CSA S448- Repair of Reinforced Concrete in Buildings and Parking Structures
  - .2 CAN/CSA A23.1-14 - Concrete Materials and Methods of Concrete Construction
  - .3 CAN/CSA A23.2-14 - Methods of Test for Concrete
  - .4 CAN/CSA A23.3-14 - Design of Concrete Structures for Buildings
  - .5 CAN/CSA A3000-13 – Cementitious Materials Compendium
  - .6 CAN/CSA S413-14 - Parking Structures
  - .7 CAN/CSA-O325-07 (R2012) - Construction Sheathing
  - .8 CSA S269.1-1975 (R2003) - Falsework for Construction Purposes
  - .9 CSA S269.3-M92 (R2013) - Concrete Formwork
  - .10 CAN/CSA A283-06 (R2011) - Qualification Code for Concrete Testing Laboratories
  - .11 ACI 117-10 - Standard Specifications for Tolerances for Concrete Construction and Materials
  - .12 ASTM C260/C260M-10a - Specification for Air Entraining Admixtures for Concrete
  - .13 ASTM C494/C494M-13- Specification for Chemical Admixtures for Concrete

- .14 Standards referenced by the Standards noted above are to apply even if they are not included in the list.
- .15 Where there are differences between the Specifications and Drawings and the codes, standards or acts, the most stringent shall govern.

### 1.3 SUBMITTALS

- .1 Shoring: See Specification Section 03 42 00, Shoring.
- .2 Slab Scanning Certificate: Prior to commencing any concrete or drain removals, perform GPR scans of the suspended slab at the repair areas to identify locations of reinforcing steel and embedded electrical conduits. Do not damage, disturb or relocate any existing services, unless specifically requested by the Consultant.
- .3 Certificate of Concrete Production Facilities: The contractor must submit the supplier's valid "Certificate of Concrete Production Facilities" as issued by the Ready Mixed Concrete Association of Ontario (RMCAO), including certification that all raw materials used in the production of concrete proposed for the work comply with the requirements of the specifications and CSA A23.1-14.
- .4 As-Built Drawings: The contractor must submit as-built plan and elevation drawings showing the size and location of all complete concrete repairs.

### 1.4 QUALIFICATIONS

- .1 Concrete repairs must be performed by a tradesperson having at least five (5) years of experience in localized concrete repairs to existing reinforced concrete structures, with skilled mechanics, thoroughly trained and competent in all phases of the work. Phases include mark-outs, removals, reinforcing steel preparation, concrete installation, shoring, etc.
- .2 Provide proof of qualifications if requested by the Consultant.

### 1.5 GENERAL REQUIREMENTS

- .1 For the duration of the warranty periods, the concrete repairs performed under this contract shall not:
  - .1 Spall, scale or crack excessively.
  - .2 Debond from existing substrate.
  - .3 Delaminate due to reinforcing steel corrosion.

### 1.6 TESTING

- .1 Contractor to confirm testing requirements with the Consultant prior to starting work.
- .2 Contractor to commission a third-party testing agency (approved by the Consultant) to perform concrete testing (air, slump, compression, etc).

## 2. PRODUCTS

- .1 All materials to be placed in accordance with the Contract specifications, and the manufacturer's requirements, whichever is more stringent.

### 2.2 CEMENTITIOUS SLURRY

- .1 For ready-mix concrete, use a cementitious slurry with maximum 0.4 water-to-cement ratio and 1:1 sand mixture.
- .2 For packaged concrete, prepare cementitious slurry in accordance with manufacturer's instructions.
- .3 Latex bonding agents are not permitted.

### 2.3 READY MIX CONCRETE

- .1 Structural Concrete Repair Material
  - .1 Exposure Class = C-1, for exposure to freezing, thawing and deicing salts
  - .2 28-Day Compressive Strength = 35 MPa
  - .3 Aggregate Size = 20mm
  - .4 Air Content = 5-8%
  - .5 Slump Before Super P = As indicated by Concrete Supplier
  - .6 Slump After Super P = Maximum 150 mm
  - .7 Chloride Ion Permeability = <1500 Coulombs within 91 days
  - .8 DCI Corrosion Inhibitor = 10L/m<sup>3</sup>

### 2.4 PRE-PACKAGED CONCRETE

- .1 Topside or Through-Slab Concrete Repairs
  - .1 SikaEmaco 1060 EX (formerly MEmaco T 1060 EX) (min. repair depth 38mm)
  - .2 FA-S10 Concrete, by King Packaged Materials Company (Sika) (min. repair depth 38mm)
  - .3 RS-S10 Concrete, by King Packaged Materials Company (Sika) (min. repair depth 38mm)
  - .4 Or approved equivalent.
- .2 Vertical Concrete Repairs
  - .1 SikaEmaco 440, (formerly MEmaco S 440) (10mm aggregate, min. repair depth 38mm)

---

## CONCRETE REPAIRS

4600 Dixie Road, Mississauga, ON  
Peel Regional Police - Division 12 Interior & Exterior Renovations  
25-0210-00

Section 03 40 00  
Page 4  
2026-04-10

---

- .2 RS-S10 SCC Concrete, by King Packaged Materials Company (Sika) (min. repair depth 38mm)
- .3 MS-S10 SCC Concrete, by King Packaged Materials Company (min. repair depth 38mm, closed form repairs only)
- .4 Or approved equivalent.
- .3 Soffit Concrete Repairs
  - .1 Sika 123, by Sika Canada (max. repair layer thickness 38mm)
  - .2 Sika MonoTop 410F (max. repair layer thickness 50mm)
  - .3 Or approved equivalent.

### 2.5 GALVANIC ANODES

- .1 XP4 anodes by Vector Corrosion (160g zinc)
- .2 MasterProtect 8160CP by MBCC Group (formerly BASF), (Sika) (160g zinc)
- .3 Sika Galvashield XP4, Type AC (160g zinc)
- .4 Or approved equivalent.

## 3. EXECUTION

### 3.1 SHORING

- .1 See Specification Section 03 42 00, Shoring.

### 3.2 FORMWORK

- .1 Form all new cast-in-place concrete.
- .2 All formwork and falsework shall be designed by a Professional Engineer retained by the Contractor.

### 3.3 PREPARATORY WORK

- .1 The Contractor will identify, and mark deteriorated and delaminated concrete areas for the Consultant's review and approval. The Consultant's approval must be obtained before commencing removals.
- .2 Mark-outs to be completed with chalk or crayon, not spray paint.
- .3 The concrete repair quantities will be based on the original mark-outs and modified for reinforcing steel extension, etc., with the Consultant's review and approval. Payment will not be certified for concrete repair extensions not pre-approved by the Consultant.
- .4 Mark on the building plan or building elevation drawing(s), where appropriate, the location and size of the Consultant approved repair areas. Submit this plan/drawing(s) to the Consultant.

---

## CONCRETE REPAIRS

4600 Dixie Road, Mississauga, ON  
Peel Regional Police - Division 12 Interior & Exterior Renovations  
25-0210-00

Section 03 40 00  
Page 5  
2026-04-10

---

- .5 The Contractor will identify rough concrete which may adversely affect the bond of the new waterproofing or coating, for the Consultant's review.
- .6 Transfer soffit delamination markings to the top surface of the slab. Mark these areas so they can be distinguished from marked top surface delaminated repair areas.
- .7 Where soffit repairs exceed 4 square feet, a through-slab repair will be performed.

### 3.4 CONCRETE REMOVAL

- .1 Avoid cutting existing reinforcement during construction unless designed and/or approved by the Consultant.
- .2 Do not overcut repair edges.
- .3 Prior to commencing concrete removals, the Contractor will temporarily remove and store the existing mechanical and electrical services affected by repair areas. The Contractor will provide temporary services during construction, as required, and will reinstate all services after the repair work is completed. This cost is to be included in the Base Contract, not through an allowance.
- .4 The use of rivet busters is not permitted.
- .5 Pneumatic hammer size is limited to 15-lb maximum.
- .6 Where concrete is to be removed by pneumatic hammers, provide a 12mm deep vertical edge at the limit of the repair area. Mechanically roughen and sandblast this edge. Feather edges are not permitted. Extension to chase feather edging will be performed at the Contractor's own cost.
- .7 Do not overrun saw-cut lines.
- .8 Square all concrete repair patches.
- .9 Do not damage or cut existing steel reinforcement, unless approved by the Consultant. Determine the concrete cover over the embedded steel and adjust the method of providing the perimeter vertical edge accordingly, to prevent damage to the steel.
- .10 Where delamination has occurred, remove the concrete from around all reinforcement until a length of 100 mm of non-corroded reinforcement is uncovered.
- .11 Soffit removals along a crack or spall:
  - .1 Remove loose and delaminated concrete to expose the full circumference of the two layers of bottom reinforcement.
  - .2 Install stainless steel anchors at 250 mm spacing, in both directions, and tie anchor heads together with 1.5mm diameter stainless steel wire.
- .12 Where directed by the Consultant, sound concrete may also be removed in the vicinity of approved repair areas in order to minimize the number of small patches, square patches, to eliminate unrepaired concrete areas projecting into patches, etc.

- .13 At approved repair areas, remove concrete to a minimum uniform depth of 25mm beyond the deepest steel reinforcement.
- .14 Sound the surface where concrete has been removed to locate fractures and loose remaining concrete. Remove this material without creating new fractures.
- .15 Sandblast all exposed concrete surfaces.
- .16 Remove all loose dust or dirt from the surface of the concrete and maintain it this way until new concrete is placed.

### 3.5 REINFORCING STEEL PREPERATION

- .1 Report to the Consultant for design and construction of the replacement of existing steel reinforcement if any reinforcement is corroded.
- .2 Refer to Specification 03 31 00, Reinforcing Steel.

### 3.6 SACRIFICIAL ANODE INSTALLATION

- .1 Contractor to obtain written recommendation from the anode manufacturer on the required spacing and submit for Consultant's review minimum 2 weeks before commencing work.
- .2 Install anode units and repair material immediately following preparation and cleaning of the steel reinforcement.
- .3 Galvanic anodes shall be installed along the perimeter of the repair, along the interface between new and old concrete, in a grid pattern throughout the entire repair area at a maximum spacing to be determined on-site with Consultant.
- .4 Place the galvanic anodes as close as possible to the patch edge while still providing sufficient clearance between anodes and substrate to allow the repair material to fully encase the anode with a minimum concrete or mortar cover over the anode of (25mm). If necessary, increase the size of the repair cavity to accommodate the anodes.
- .5 Place the anode such that the preformed BarFit™ groove fits along a single bar or at the intersection between two bars and secure to each clean bar.
- .6 If less than 1 in. (25 mm) of concrete cover is expected, place anode beneath the bar and secure to clean reinforcing steel.
- .7 The tie wires shall be wrapped around the cleaned reinforcing steel at least one full turn in opposite directions and then twisted tight to create a secure electrical connection and allow no anode movement during concrete placement.
- .8 Electrical Continuity:
  - .1 If repair materials with resistivity greater than 15,000 ohm-cm are to be used or if the resistivity is unknown, pack Galvashield Embedding Mortar between the anode and the substrate concrete to create a conductive grout bridge ensuring no voids exist.

- .2 Confirm electrical connection between anode tie wire and reinforcing steel by measuring DC resistance (ohm) or DC potential (mV) with a multi-meter.
- .3 Electrical connection is acceptable if the DC resistance measured with the multi-meter is  $1 \Omega$  or less or the DC potential is 1 mV or less.
- .4 Confirm electrical continuity of the exposed reinforcing steel within the repair area. If necessary, electrical continuity shall be established by tying discontinuous steel to continuous steel using steel tie wire.
- .5 Electrical continuity between test areas is acceptable if the DC resistance measured with multi-meter is  $1 \Omega$  or less or the potential is 1 mV or less.

### 3.7 CONCRETE INSTALLATION

- .1 Contractor cannot add water to ready mix concrete.
- .2 Comply with the requirements of CSA A23.1.
- .3 Wet substrates to receive new concrete and maintain continuously moist, in a saturated surface dry condition with no standing water, for a minimum of 24 hours prior to placing concrete.
- .4 Standing water shall be blown off concrete surface prior to cementitious slurry application.
- .5 Brush cementitious slurry onto the clean concrete with a stiff brush no more than 15 minutes before concrete placement. Bonding agent must be tacky, not dry, prior to concrete placement.
- .6 Contractor to ensure proper consolidation between concrete pour lines.
- .7 Ensure the reinforcement is maintained in position to maintain the minimum concrete cover shown on drawings.
- .8 Vibrate concrete with mechanical vibrators during placement.
- .9 The bond between the new and old concrete must withstand a minimum stress of 1034 kPa.
- .10 Ready-Mix Concrete:
  - .1 Remove and dispose of the first cubic meter of concrete from each truck.
  - .2 Concrete placement to commence within 90 minutes of batch time.
  - .3 Concrete placement to stop within 120 minutes of batch time. Exceptions to this time frame will be permitted only with the Consultant's permission if previously approved chemical admixtures are used. The admixture must be shown on the Ready Mix Ticket.
- .11 Pre-Packaged Concrete Repair Materials:
  - .1 Mix and install repair material in accordance with manufacturer's instructions.

- .2 Manufacturer's representative is to be present on site at the time of concrete placement.

### 3.8 MEANS AND METHODS OF PLACEMENT

- .1 Equipment and machinery used to facilitate concrete placement cannot be supported by any part of the structure.

### 3.9 FINISHING

- .1 The concrete finish is to be a trowel finish to produce a dense smooth finish and match the existing concrete finish prior to new elastomeric coating installation.
- .2 Finish all concrete surfaces to match adjacent elevations and slope away from walls and columns.

### 3.10 CURING & PROTECTION

- .1 **Completely restrict the new concrete vehicular traffic until a minimum period of seven days cure and the concrete has reached 75 percent (75%) of the specified 28 day compressive strength. Compressive strength cylinders to be site cured.**
- .2 Cure and protect concrete ready mix concrete in accordance with CAN/CSA-A23.1-14.
- .3 Cure and protect pre-packaged concrete repair materials per manufacturer's recommendations.
- .4 The use of curing sealing compounds is not permitted wherever the concrete is to be waterproofed or coated with a flooring system.
- .5 Wet curing must begin as soon as finishing is completed on any area.
- .6 **Wet cure ready-mixed concrete at 10°C for a minimum of 7 days.** Self-consolidating concrete may require longer, confirm with supplier.
- .7 Cure pre-packaged concrete repair materials per manufacturer's recommendations.

### 3.11 TESTING

- .1 Concrete cylinders to be site-cured for a minimum 24 hours, or longer if requested by the Consultant.
- .2 Reject and do not place concrete which does not meet the specified air and slump requirements shown on the approved concrete mix design.
- .3 Test all concrete using a testing firm certified in accordance with CSA A283, retained by the Contractor, paid through the Contract cash allowances and approved by the Consultant.
- .4 Testing firm is to conduct all tests in accordance with CSA A23.2-14.

- .5 Provide casual labour to the testing firm's field personnel for the purpose of obtaining and handling sample materials. Provide free access to all portions of the work, and cooperate with the testing firm.
- .6 Advise testing firm a minimum 24 hours in advance of concrete placement.
- .7 Samples of the concrete are to be taken the end of the chute of the concrete supply truck.
- .8 Testing firm to take a minimum of three test cylinders for a strength test and not less than one strength test for each 20m<sup>3</sup> of concrete, or portion thereof, for each type of concrete placed and not less than one test for each type of concrete placed in any one day.
- .9 Testing firm is to report results of tests immediately to the Contractor. The Contractor is responsible for ensuring that the concrete meets the requirements of the specifications. Report adverse test results to the Consultant immediately.
- .10 Testing firm is to submit to the Consultant Contractor and concrete supplier certified copies of test results within five days of test.
- .11 For all Portland cement concrete compressive strength tests, 100mm by 200mm or 150mm by 300mm cylinders shall be used.
- .12 In accordance with requirements of A23.1-14, provide storage facilities for site storage of all cylinders.

### 3.12 REPAIR OF SURFACE DEFECTS

- .1 Surface defects will be repaired at the Contractor's expense. Defects include, but aren't limited to: bugholes, honeycombing, fins, burs, etc.
- .2 Repair of surface defects shall begin immediately after form removal. For repair with epoxy mortar, concrete shall be dry.
- .3 Repair of surface defects shall be tightly bonded and shall result in concrete surfaces of uniform colour, texture and matching adjacent surfaces, free of shrinkage racks.

### 3.13 COLD WEATHER CONCRETING

- .1 When the ambient temperature is at or below 5°C, or when there is a probability of the ambient temperature falling below 5°C within 24 hour of concrete placement, provide all equipment necessary, have in-place and employ the following measures to protect the concrete before concrete placement starts:
- .2 Provide temporary equipment for heating concrete materials and forms. Protect, insulate and maintain the proper temperature and humidity of the concrete during curing in accordance with CSA A23.1.
- .3 When fresh concrete is to be cast against existing concrete, prevent the loss of heat by extending the protection for the fresh concrete at least 600mm over the existing.
- .4 Insulate, or enclose within the protective housing, tie rods, reinforcement or metal which projects from the concrete being protected.

---

CONCRETE REPAIRS

4600 Dixie Road, Mississauga, ON  
Peel Regional Police - Division 12 Interior & Exterior Renovations  
25-0210-00

Section 03 40 00  
Page 10  
2026-04-10

---

- .5 Maintain housing, enclosures and supplementary heat in place for entire period of protection, except that sections may be temporarily removed as required to permit placing additional forms or concrete provided the uncovered concrete is not permitted to freeze.
- .6 Locate heating units to avoid heating concrete locally or drying it excessively. Avoid high temperature and dry heating within enclosures.
- .7 Take particular care to maintain edges and corners of concrete at the required temperature because of their greater vulnerability to freezing.
- .8 Provide sufficient insulation, and heat as necessary, to prevent freezing of soil which is against structural elements.
- .9 The application of deicing salts on completed work is not permitted.

END OF SECTION 03 40 00

## **DIVISION 3 – CONCRETE WORK**

### Section 03 42 00 - Shoring

#### **1. GENERAL**

##### **1.1 SCOPE OF WORK**

- .1 Provide all materials, labour, plant and equipment necessary for:
  - .1 Engineered design, supply, install, maintain and dismantle temporary shoring system needed to support the existing structure during removals/demolitions and for means and methods of construction needed to facilitate structural repairs (such as support of existing mechanical/electrical infrastructure, support for additional construction load weight, etc).
- .2 Means and methods of construction are completely and solely the responsibility of the Contractor.
- .3 We expect temporary shoring scope will include, as a minimum:
  - .1 Temporary shoring of the existing slab to facilitate structural concrete repair removals at slabs and walls.
- .4 Shoring costs to include all required removal of soffit cladding and interior finishes to access the slab underside and temporary rerouting of mechanical electrical, where totally unavoidable to design around.

##### **1.2 SUBMITTALS**

- .1 Engineered Shoring & Bracing Drawings: The contractor must submit shoring and bracing drawing(s) a minimum three (3) weeks prior to concrete removal. The drawing(s) will:
  - .1 Be signed and sealed by a Professional Engineer registered to practice in the jurisdiction that applies to this project.
  - .2 Clearly indicate that the contractor and shoring design engineer have visited site together, reviewed the repair areas and all impacted spaces, reviewed as-built conditions, and that the design is based on confirm existing conditions.
  - .3 Clearly indicate design loads.
  - .4 Clearly show the design criteria, including limits of concrete slab, column and wall removal and the procedural sequence to be followed for shoring installation.
  - .5 Include lateral bracing as required, including where large sections of suspended slab are completely removal adjacent columns or foundation walls. Lateral forces behind foundation walls to be supported during construction.
  - .6 Minimizes impact on existing conditions in the surrounding areas. Contractor and shoring design must account for all existing conditions which might be impacted by shoring- such as pipes, radiators, parking spaces, etc.,- and ensure temporary

---

## SHORING

4600 Dixie Road, Mississauga, ON  
Peel Regional Police - Division 12 Interior & Exterior Renovations  
25-0210-00

Section 03 42 00  
Page 2  
2026-04-10

---

shoring is designed around obstructions. Design will minimize interior finish replacement costs and inconvenience to Building Users and Owner wherever possible.

.7 Include header and sill plates at each post shore or tower shore support.

.2 Engineered Shoring Review Letters:

.1 Demolition cannot commence until the shoring design engineer has performed an onsite review and the Consultant has received the designers' written approval that shoring installation is in accordance with their design and that demolition can commence. Written approval must be in the form of a stamped letter on the design engineers company letterhead, signed by the design engineer.

.2 Minimum one (1) intermediate shoring review letter is required during the course of construction.

## 2. PRODUCTS

### 2.1 PRODUCTS

.1 Shoring materials by Contractor's shoring design engineer.

## 3. EXECUTION

### 3.1 EXECUTION

.1 Shoring is to be installed prior to the start of concrete removal.

.2 Shoring is to be maintained until the repair concrete has reached 75% of its specified 28 day compressive strength.

.3 Slabs are to be shored for a minimum two levels or to the slab-on-grade level, unless otherwise indicated herein or on the contract drawings.

.4 Contractor responsible for management and maintenance of shoring. Inspect and check installed shoring and bracing components to ensure that supports, fastenings, wedges, ties, and parts are secure.

END OF SECTION 03 42 00

**DIVISION 7 – THERMAL AND MOISTURE PROTECTION**

## Section 07 14 14 – Cold Fluid Applied Waterproofing

**1. GENERAL****1.1 SCOPE OF WORK**

- .1 Provide all labour, equipment, materials and supervision required to locally repair the existing waterproofing with a fully reinforced Aqua-Bloc 770-06 by Bakor system at the foundation wall.
- .2 Work includes all required surface preparation including localized removal of existing debonded waterproofing, tie-ins to existing well-bonded waterproofing and detailing at cracks in the concrete wall.

**1.2 REFERENCES**

- .1 Specification American Society for Testing and Materials (ASTM):
  - .1 ASTM D412, Standard Test Method for Vulcanized Rubber and Thermoplastic Elastomers - Tension
  - .2 ASTM D570, Standard Test Method for Water Absorption of Plastics
  - .3 ASTM D882, Standard Test Method for Tensile Properties of Thin Plastic Sheet
  - .4 ASTM D903, Standard Test Method for Peel or Stripping Strength of Adhesive Bonds
  - .5 ASTM D1876, Standard Test Method for Peel Resistance of Adhesives (T-Peel Test)
  - .6 ASTM D1970, Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection
  - .7 ASTM D2243, Standard Test Method for Freeze-Thaw Resistance of Water-Borne Coatings
  - .8 ASTM D5385, Standard Test Method for Hydrostatic Pressure Resistance of Waterproofing Membranes
  - .9 ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials
  - .10 ASTM E96, Standard Test Methods for Water Vapor Transmission of Materials
  - .11 ASTM E154, Standard Test Methods for Water Vapour Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover
- .2 Canadian General Standards Board (CGSB):

- .1 CAN/CGSB 37.58, Membrane, Elastomeric, Cold-Applied Liquid, for Non-Exposed Use in Roofing and Waterproofing

### 1.3 SUBMITTALS

- .1 Material Data Sheets: The contractor must submit the data sheets for proposed materials (waterproofing membrane, reinforcing fabrics, protection boards, etc.) to the Consultant for approval two weeks prior to mobilization.
- .2 Four (4) weeks prior to starting the work, the contractor shall submit the following:
  - .1 A letter from the manufacturer approving proposed concrete patching materials.
  - .2 List of the materials to be provided under this section.
  - .3 Manufacturer's product data and specifications for each material.
  - .4 Cold fluid applied elastomeric waterproofing membrane manufacturer's written project recommendations.

### 1.4 QUALITY ASSURANCE

- .1 Perform the work in accordance with the manufacturer's written project recommendations.
- .2 Components used in this section shall be sourced from one manufacturer; including fluid applied waterproofing membrane, sealants, primers, mastics and adhesives.

### 1.5 QUALIFICATIONS

- .1 The applicator has demonstrated installing this system.
- .2 The applicator shall be familiar with and fully equipped to apply cold fluid applied elastomeric waterproofing membrane and shall be familiar with good waterproofing practices.
- .3 The applicator shall be acceptable to Consultant for installation of cold fluid applied elastomeric waterproofing membrane.
- .4 Use single Contractor for all waterproofing work.
- .5 The applicator can provide evidence of previous project experience if requested by the Consultant.

### 1.6 DELIVERY, STORAGE AND HANDLING

- .1 Delivery of Materials:
  - .1 Materials shall be delivered to the jobsite in undamaged and clearly marked containers indicating the name of the manufacture and product.
  - .2 Remove damaged materials from the site immediately.

.2 Storage of Materials:

- .1 Cold fluid applied waterproofing should be stored in closed containers outdoors.
- .2 Store materials in accordance with manufacturer's written instructions, raised off the ground and cover with a weather proof flame resistant sheeting or tarpaulin.
- .3 Store cold fluid applied waterproofing in closed containers outdoors.
- .4 Keep solvent away from open flame or excessive heat.
- .5 Protect products from direct sunlight until ready for use.

Handling:

- .1 Material shall be handled in accordance with sound material handling practices and in accordance with manufacturer's written instructions.

1.7 ENVIRONMENTAL REQUIREMENTS

- .1 No installation work shall be performed during rainy or inclement weather and on frost or wet covered surfaces.
- .2 Temporary protection of the membrane shall be provided to prevent mechanical damage or damage from spillage of oil or solvents until such time as permanent protection is provided.
- .3 Do not permit traffic of any kind over unprotected membrane. Apply protection course as soon as possible in accordance with published literature after waterproofing membrane installation.
- .4 No waterproofing will be conducted when the temperature (ambient and/or substrate) is below the manufacturers' minimum specified temperature. The Contractor will provide temporary heat to facilitate installation in order to meet construction schedule.

1.8 COORDINATION

- .1 Ensure continuity of the water seal throughout the scope of this section.
- .2 Ambient Conditions:
  - .1 Install materials outlined in this Section after completion of work by other Sections is complete; to provide adequate dry, clean, level, and plumb surfaces for installation and adhesion.
  - .2 Apply when ambient air and substrate temperatures are above temperature range indicated by fluid applied waterproofing membrane manufacturer, during time of install, and for a minimum of forty-eight (48) hours after installation, unless otherwise indicated.
  - .3 Ensure surfaces are sound, dry, clean and free of oil, grease, dirt, excess mortar or other contaminants.

- .4 Do not permit traffic of any kind over unprotected waterproof membranes. Apply protection course as soon as possible in accordance with manufacturers written instructions.

## 1.9 WARRANTY

- .1 Contractor Warranty: Warrant that the fluid applied waterproofing membrane and membrane flashings will stay in place and remain leak proof for two (2) years. Defects and deficiencies such as leakage, debonding, failure to stay in place, splitting, cracks and blisters are to be corrected by the Contractor at no cost to the Owner during the warranty period. Repairs shall include removal of all overburden/finishes necessary to access membrane and reinstatement of overburden and finishes satisfactory to the Owner.

## 1.10 CONSULTANT REVIEW

- .1 The Contractor shall provide access, permit inspection, correct any defects and obtain written approval to proceed from the Consultant prior to commencing with each phase of work.
- .2 Material and adhesion tests may be conducted at the discretion of the Consultant on a random basis to show that the specified thickness and bond have been achieved. The Contractor shall repair all test areas as part of the work in accordance with this section. All waterproofing membrane installation failing material, thickness and adhesion tests shall be rectified in accordance with manufacturer and Consultant approved methods. Rectified areas will be retested until results confirm compliance with the manufacturer's written requirements.
- .3 The Consultant's general review during construction are undertaken to inform the Owner of the Contractor's performance and shall in no way augment the Contractor's quality control or relieve the Contractor of contractual responsibility.

## 2. PRODUCTS

### 2.1 MATERIALS

- .1 Fluid Applied Waterproofing Membrane:
  - .1 Cold applied, elastomeric, one component waterproofing membrane, in compliance with CGSB 37.58 and having the following properties:
    1. Colour: Black
    2. Solids by Weight: 65%
    3. Application Temperature: -12 deg C (10.4 deg F) minimum.
    4. Water Vapour Permeance (ASTM E96): 2.9 ng/Pa.m2.s., (0.05 perms)
    5. Elongation (ASTM D412): 1500%
    6. Recovery: 85%

7. Basis of Design Product:
  - .1 Aqua-Bloc 770-06 by Henry Company.
  - .2 Or approved equivalent.
- .2 Fabric Reinforcement: Unsaturated spun bonded polyester mat reinforcement sheet having the following physical properties:
  - .1 Grab tensile strength: MD (24 lbs.) 107N; XMD (22 lbs.) 98N
  - .2 Trapezoid Tear: MD (8.5 lbs.) 38N; XMD (8.5 lbs.) 38N
  - .3 Mullen Burst: 117 kPa (17 psi)
  - .4 Thickness: 0.2 mm (8 mils)
  - .5 Basis of Design Product:
    1. Polyester Fabric Reinforcement Sheet by Henry Company
    2. Or approved equivalent.
- .3 Protection Board:
  - .1 Extruded flexible twin wall board made of polypropylene copolymer and having the following physical properties:
    - .2 Thickness 2mm (80 mils)
    - .3 Tensile Strength Yield Point: 32 kg/cm<sup>2</sup>
    - .4 Tensile Strength Point of Failure: 242 kg/cm<sup>2</sup>
    - .5 Elongation: 167%
    - .6 Compression Strength (ASTM D695): 0.54 kg/cm<sup>2</sup>
    - .7 Impact Strength at 0 degrees C (32 degrees F): 8.9 kg/cm
  - .8 Basis of Design Product:
    1. 990-31 Polypropylene Protection Board by Henry Company.
    2. Or approved equivalent.
- .4 Insulation: per architectural specification.
- .5 Drainage Boards: per architectural specification.
- .6 Sealants:
  - .1 Joint and crack treatment and termination sealant.
  - .2 Basis of Design Product:
    1. Henry 925 BES Sealant.
    2. Or approved equivalent.
- .7 Auxiliary Materials:

- .1 Securement Bars: Continuous aluminum, stainless steel or galvanized metal, 3mm x 25mm x 25mm (1/8" x 1" x 1") in size and shall be pre-drilled for non-corrosive screw attachment on a maximum of 200mm (8") centers.

### 3. EXECUTION

#### 3.1 GENERAL

- .1 Prepare surfaces and install the cold fluid-applied waterproofing systems in accordance with the manufacturer's instructions and these specifications. Where requirements vary, follow whichever is more stringent. Manufacturer letters approving alternatives will not be accepted.
- .2 Work shall be scheduled so as to provide a watertight seal at the end of each working day on the areas worked upon during the day.

#### 3.2 SURFACE PREPARATION

- .1 Follow manufacturer's written instructions for patch repair of existing asphaltic waterproofing membrane on foundation walls.
- .2 Ensure work area is dust tight and nearby building finishes are fully protected prior to sandblasting. Mask adjacent surfaces such as surrounding windows, vents, walls, etc.
- .3 All surfaces must be sound, clean and free of oil, grease, dirt, excess mortar or other contaminants. Concrete surfaces shall be free of large voids and spalled areas.
- .4 Wall areas exhibiting residue from the original dampproofing membrane are to be primed in accordance with the manufacturer's recommendations.
- .5 Voids, cracks, holes and other damaged horizontal or vertical surfaces shall be repaired before application of the membrane.
- .6 All masonry mortar joints shall be repointed before application of the membrane.

#### 3.3 EXAMINATION

- .1 Examine substrates to receive work and surrounding adjacent surfaces for conditions affecting installation.
- .2 Notify Consultant of any discrepancies. Proceed with installation after verification and correction of surface conditions acceptable to manufacturer.
- .3 Where applicable, perform moisture tests and poly tests and confirm the moisture levels are within acceptable levels prior to waterproofing installation. Torching of the substrate is not permitted.

#### 3.4 INSTALLATION

- .1 Fluid Applied Waterproofing Membrane – Two Coat Application:

- .1 Apply a full and continuous coat of liquid applied waterproofing membrane at approximately 1.5 l/m<sup>2</sup> (3.6 gal. US/100ft<sup>2</sup>).
- .2 Embed fabric reinforcement into wet coating of liquid applied waterproofing membrane, ensuring no fishmouths or wrinkles are created and allow to set.
- .3 Apply second full and continuous coat of liquid applied waterproofing membrane at 1.5 l/m<sup>2</sup> (3.6 gal./100ft.<sup>2</sup>) and allow to cure.
- .2 Protection Board Installation:
  - .1 Install protection board over the fluid applied waterproofing membrane to prevent damage from backfilling.
  - .2 Apply protection board adhesive in 13mm (1/2") wide strips spaced at 457mm (18") o/c to fluid applied waterproofing membrane.
  - .3 Immediately embed protection board and press into adhesive to ensure full contact.
  - .4 Backfill once protection board adhesive has fully cured.

### 3.5 FIELD QUALITY CONTROL

- .1 Final Observation and Verification:
  1. Final inspection of fluid applied waterproofing membrane shall be carried out by the Owner's representative, and the contractor.
  2. Fluid applied waterproofing membrane is not designed for permanent UV exposure. Apply protection board as soon as possible after installation of fluid applied waterproofing membrane. Refer to manufacturer published literature for product limitations.

### 3.6 CLEANING AND PROTECTION

- .1 Progress Cleaning: Leave work area clean at the end of each work day, ensuring safe movement of passing pedestrians.
- .2 Waste Management: Co-ordinate recycling of waste materials and packaging at appropriate facility, diverting waste from landfill. Certified installer shall be responsible for ensuring waste management efforts are practiced

END OF SECTION 07 14 14

**DIVISION 7 – THERMAL AND MOISTURE PROTECTION**

## Section 07 18 00 – Thermal and Moisture Protection

**1. GENERAL****1.1 SCOPE OF WORK**

- .1 Provide all labour, materials, equipment and supervision necessary for:
  - .1 Wholesale removal and disposal of existing traffic coatings, existing sealants (including route-and-sealed cracked below) in the Work Areas identified on the drawings.
  - .2 Wholesale supply and installation of new elastomeric traffic deck coating system, including surface preparation, new sealants, all details, overlaps, terminations, upturns, etc.

**1.2 SAMPLES AND CERTIFICATES**

- .1 Prior to mobilization, submit a minimum of 300mm x 300mm samples of colour and texture to the Owner for mock-up selection confirmation.
- .2 Adhere samples to masonite or plywood backing to represent materials and project materials and installation.
- .3 Submit copy of test data from certified independent testing laboratory confirming performance requirements of membrane traffic topping.
- .4 After completion of elastomeric traffic deck coating installation, submit certificate, signed by both applicator and manufacturer, stating that installed work complies with specified requirements.

**1.3 MOCK-UP**

- .1 Provide the Owner physical colour samples from the manufacturer for both the elastomeric traffic deck coating system, for them to select mock-up colours.
- .2 A minimum of two (2) weeks prior to mobilization, prepare a minimum of one (1) 2m x 2m mock-up at a location selected by the Owner. The Manufacturer's representative must be onsite during all stages on installation (surface preparation, primer, base coat, top coats, etc).
- .3 The Consultant must be notified for review as desired.
- .4 The Contractor to obtain written approval of the mock-up aesthetic from the Owner prior to proceeding.

- .5 The Contractor will arrange for adhesion testing of the overcoat in the presence of the manufacturer, and provide a written letter from the manufacturer confirming acceptance (testing can be paid through the Testing Allowance).
- .6 Modify, remove or replace and re-install mock-up work which may not be acceptable.

#### 1.4 MAINTENANCE DATA

- .1 Provide instruction manuals for proper procedures to be taken in the cleaning and maintenance of membrane traffic topping including recommended cleaning agents.

#### 1.5 QUALITY ASSURANCE

- .1 Work of this Section shall be executed by qualified applicator approved by material manufacturer. Applicator shall have minimum five (5) years proven satisfactory experience installing the exact traffic coating systems, having experience in this type of work, having adequate equipment and skilled personnel to expediently complete work of this Section in an efficient and very best workmanship manner. Submit proof of experience.
- .2 Provide a full time qualified supervisor at the site to direct work of this Section.
- .3 The system manufacturer shall review and approve joint layouts, methods of providing joints, concrete curing and finishing methods and related details prior to application. Manufacturer's representative shall submit written report indicating the slab was prepared and in a condition suitable for membrane application.
- .4 A site inspection shall be made by authorized personnel prior to commencing installation of the system for purposes of reviewing and approving related conditions affecting performance requirements of this specification.

#### 1.6 TECHNICAL SUPERVISION

- .1 Ensure that a qualified technical representative of the elastomeric traffic deck coating manufacturer is on site during initial preparation and entire application period to review application procedure and to check quality of completed system.
- .2 Forward review reports for the manufacturer to the Consultant immediately. These reports are required in order to certify payment.

#### 1.7 ENVIRONMENTAL CONDITIONS

- .1 Ensure that temporary heat is being provided in area of work to maintain slab surface temperature at a minimum of 5 deg. C. for a minimum period of 48 hours before, during and for 48 hours after application of traffic topping system.
- .2 Do not apply materials to wet, iced or frosted surfaces or in areas exposed to snow, sleet or rain during application period.

- .3 Ensure that working areas are well ventilated. Workers must wear protective masks as required by MSDS standards.
- .4 Do not use materials near fire or flame.
- .5 Ensure salts of any kind, from any source, and other contaminants, are not allowed on substrates which are to receive traffic topping system.
- .6 Take all safety precautions recommended by traffic topping manufacturer and by authorities having jurisdiction when handling and applying membrane traffic topping materials.

## 1.8 WARRANTY

- .1 The system manufacturer shall provide a written single-source performance warranty, signed and issued in the name of Owner stating that the membrane traffic topping system work of this Section is warranted against defects related to workmanship and material deficiency for a period of **five (5) years** from date of Certificate of Substantial Performance and that all defects will be repaired, including making good of materials and areas disturbed or damaged due to location and rectification of defects.
- .2 The following conditions shall be specifically covered under the warranty:
  - .1 Cohesive or adhesive failure of the system
  - .2 Weathering deficiencies resulting in failure of the system
  - .3 Abrasion or tear failure of the system resulting from normal traffic use.
  - .4 Pinholes, failure to bridge narrow cracks, shifting, raveling etc.
- .3 The system manufacturer shall submit a detailed warranty statement consistent with the terms of this specification prior to bid closing date for approval. The approved warranty shall be made part of the contractual agreement and shall represent the sole warranty statement for the project.
- .4 Hairline cracks arising from normal shrinkage and/or expansion and contraction of concrete shall not be considered as structural failure, but shall be considered normal and consequently the warranty shall not be voided as a result of such minor defects.

## 2. MATERIALS

### 2.1 ALL PRODUCTS ARE TO BE FROM A SINGLE MANUFACTURER.

- .1 Approved Products
  - .1 Sikalastic Pedestrian Traffic 1500
    - 1. For suspended slabs, a vapour impermeable system is to be installed, consisting of:
      - .1 Primer: not required.
      - .2 Basecoat: Sikalastic M 200

- .3 Topcoat: Sikalastic TC 225 (UV-Resistant)
  - .4 Sand: 16–30 rounded quartz sand
  - .5 Crack and Joint Sealant: as recommended by manufacturer.
  - .6 \*All colours to be selected by Owner, samples to be provided by the Contractor.
2. For slab-on-grade, a vapour permeable system is to be installed, consisting of:
- .1 Primer: Sikalastic P 255 (formerly MasterSeal P 255) (mandatory)
  - .2 Basecoat: shall not be installed.
  - .3 Topcoat: Sikalastic TC 225 (UV-Resistant)
  - .4 Sand: 16–30 rounded quartz sand
  - .5 Crack and Joint Sealant: as recommended by manufacturer.
  - .6 \*All colours to be selected by Owner, samples to be provided by the Contractor.
- .2 Or approved equivalent.

### 3. EXECUTION

#### 3.1 WORKMANSHIP AND CONTROL

- .1 Materials shall be stored in a manner to be kept absolutely dry and free from foreign matter during all phases of the Work.
- .2 Materials condemned or rejected shall be removed from the site and be replaced at no additional cost.
- .3 For materials that allow for variable mix proportions, consult with injection material manufacturer's technical representative for the appropriate mix proportions. Submit to Consultant written recommendation from manufacturer for review prior to commencement of injection.
- .4 Prior to use of any multi-component grout the Contractor shall demonstrate their ability to use these products using proper injection/mixing equipment. The Contractor will be asked to submit their procedure for safe use of these products.

#### 3.2 SURFACE PREPARATION- GENERAL

- .1 Do not proceed with application of the elastomeric traffic deck coating system until other work which infringes on traffic topping has been completed or a suitable protection plan has been proposed and approved.

- .2 Examine and test surfaces which are to receive membrane traffic topping and ensure that surfaces are acceptably dry and free from conditions which will adversely affect execution, permanence and quality of work.
- .3 Do not install waterproofing until:
  - .1 New concrete has achieved the specified 28-day cure time; AND
  - .2 The concrete meets the minimum moisture readings using a digital gauge (to be paid for by the Contractor); AND
  - .3 No moisture is observed on poly-tests (to be conducted by taping 450mm x 450 mm sheets to the concrete substrate for a minimum of 16 hours prior to waterproofing and confirming that no evaporation, condensation, or other indicating or moisture present in the slab is observed. A minimum of 1 test per 500 sq. m. must be conducted by the Contractor).
- .4 Torching of the substrate is not permitted.
- .5 Remove existing waterproofing and sealants from the slab surfaces. The removal method is not to cause damage to the slab topside. Any damage to the slab as a result of the removal method will be repaired by the Contractor at no additional cost to the Owner.
- .6 The concrete slab surfaces are to be sufficiently prepared to provide clean, dry and sound substrate entirely free from fins, sharp edges, asphalt, grease, oil, paint, laitance, curing agents and other foreign substances.
- .7 As a minimum, horizontal concrete surfaces are to be shot-blasted prior to waterproofing. As a minimum, vertical concrete surfaces are to be dry sandblasted prior to waterproofing. Resulting surface should meet CSP 5 or greater. (Note: Payment for waterproofing systems using lesser methods of surface preparation will not be certified, even if the manufacturer provides written approval of the application).
- .8 A maximum of 24 hours shall be allowed to elapse between the abrasive blast cleaning operation and primer installation.
- .9 Acid etching is not an acceptable method of surface preparation.
- .10 Route minimum 12 mm x 12 mm reglets at the perimeter of all repair patches.
- .11 All reglets must be routed prior to primer installation.
- .12 All rough surfaces with an amplitude exceeding 1.0mm should be ground and/or filled with a latex bonded mortar, or 100% solids epoxy mortar compatible with the waterproofing system.
- .13 Remove all dust and dirt from substrate surfaces by blowing all debris from surfaces with clean, dry, oil-free air or by vacuuming with an industrial type vacuum cleaner.
- .14 Mask and protect all surfaces which are to be left exposed and which do not require membrane traffic topping. Ensure neat, straight lines.

### 3.3 SURFACE PREPARATION- CONCRETE CRACKS

- .1 In addition to all requirements outlined in Section 3.2, Surface Preparation- General, include the following:
  - .1 Cracks < 1.6mm Wide (and Non-Moving):
    - 1. Treat the crack with a stretch coat of waterproofing membrane prior to installation the full elastomeric traffic deck coating system, see Section 3.4, below.
  - .2 Cracks > 1.6mm Wide (and/or Moving):
    - 2. Route minimum 6mm x 6mm along the crack and install a primer and compatible urethane sealant. Dry sandblast the routed crack prior to sealant installation. Ensure that sealants are cured in accordance with the manufacturer's instructions prior to installing the new elastomeric traffic deck coating system.

### 3.4 SURFACE PREPARTION- VERTICAL SURFACES

- .1 In addition to all requirements outlined in Section 3.1, Surface Preparation- General, include the following:
  - .1 Install heal bead of compatible sealant at all vertical upturns prior to installing the new elastomeric traffic deck coating system. Ensure that sealants are cured in accordance with the manufacturer's instructions prior to installing the new elastomeric traffic deck coating system.
  - .2 Perform all surface preparation required to upturn the elastomeric traffic coating system a minimum 100mm at all adjacent vertical surfaces. Ensure the costs for surface preparation (ie. removal of masonry glazing, parging rough surfaces, protection of adjacent finishes, etc) is included in the installation cost.

### 3.5 PRIMER APPLICATION

- .1 Prime surfaces that are to receive an elastomeric traffic coating in accordance with the manufacturer's recommendations. Roller or machine-apply primer as required to achieve manufacturer's application rates.
- .2 Ensure that the primer cure time is within the manufacturer's instructions. Primer must be cured prior to membrane installation, but it must not be left longer than the manufacturer recommends without priming or completely removing and recoating (at the Contractor's expense).

### 3.6 INSTALLATION

- .1 As part of the base cost, install a flood coat to even out surface irregularities.
- .2 Install elastomeric traffic deck coating layers (membrane, wearcourse, intermediate, etc) to the thicknesses stipulated in manufacturer's written instructions. The thicknesses are to be considered minimums, not averages, even if otherwise stated by the manufacturer.

- .3 The minimum installed elastomeric traffic deck coating thicknesses are to meet manufacturers specifications.
- .4 Remove all door thresholds, carry the elastomeric traffic deck coating system below and then replace the thresholds. All costs to work around door frames and coordinate with building contractors are to be included in the installation cost.
- .5 Temporarily remove all existing bollards, speed bumps, tire steps, metal guards, etc., in order to install a continuous elastomeric traffic deck coating system along the entire slab surface and upturns.
- .6 Apply membrane and wear course using a notched squeegee, followed by back-rolling.
- .7 Carry membrane at least 150 mm up vertical surfaces, columns, walls, curbs, sleeves and the like.
- .8 Remove unbonded aggregate and apply a tie coat, including surface preparation and primer, in accordance with the manufacturer's specifications.
- .9 At new and existing drains, provide a double application of waterproofing. Apply coatings so as to maintain moisture protection continuity.

### 3.7 PROTECTION

- .1 Bar traffic from completed work for a minimum of 5 days.
- .2 Where work of other trades may be required over the completed work, apply temporary protection board to cover installed traffic deck coating until directed by Consultant for their removal.
- .3 Report in writing to Consultant, any and all damage to traffic deck coating caused by work of other trades.

### 3.8 FIELD QUALITY CONTROL

- .1 Site inspection by the independent inspection company and the consultant will be made to ensure that the requirements for cleaning, preparation and proper application and thickness of the membrane traffic topping system is being made. Areas not meeting approval shall be redone at Contractor's own expense.
- .2 Cut tests of completed system and after application of the waterproofing membrane will be performed to measure dry film thickness. A minimum of one cut test will be performed for every 250 m<sup>2</sup> of membrane. Contractor to repair all damaged areas at no extra cost.
- .3 To evaluate bonding of the elastomeric traffic deck coating system to substrate and between membrane and wearcourse direct tensile pull tests will be conducted by the designated testing agency. The minimum adhesion shall not be less than 1.5 MPa. Contractor to repair bond test locations at no additional cost.
- .4 If the elastomeric traffic deck coating system adhesion test results are less than 1.5 MPa, payment certification shall be as follows:

---

ELASTOMERIC TRAFFIC DECK COATING

4600 Dixie Road, Mississauga, ON

Section 07 18 00

Peel Regional Police - Division 12 Interior & Exterior Renovations

Page 8

25-0210-00

---

2026-04-10

- .1 If the average adhesion of the tested locations is between 1.49 MPa and 1.00 MPa, with no locations less than 0.90 MPa, 75% of the waterproofing cost will be certified.
- .2 If the average adhesion of the tested locations is between 0.99 MPa and 0.90 MPa, with no locations less than 0.85 MPa, 50% of the waterproofing cost will be certified.
- .3 Otherwise, the waterproofing cost will not be certified.
- .5 In order to the Consultant to certify payment, the Contractor must provide third-party testing reports confirming the above-noted adhesion requirements are met.

END OF SECTION 07 18 00

**DIVISION 9 – FINISHES**

## Section 09 98 00 – Elastomeric Coating

**1. GENERAL****1.1 SECTION INCLUDES**

- .1 Provide all labour, equipment, materials and supervision required to supply and install elastomeric coating at the walls at the northwest loading dock. Work includes all required surface preparation including localized removal of existing loose coating and route and sealing cracks in the wall. The intent is to overcoat the existing wall coating.

**1.2 SUBMITTALS**

- .1 Submit the manufacturer's standard colour chart for colour selection by the owner.
- .2 Submit two (2) 12"X12" samples for each colour chosen by the Owner. Samples to be on plywood backing. Include on the backside of samples, project name, date material identification, colour identification.
- .3 Manufacturer's representative shall submit written report indicating that the exterior wall surfaces of the existing stairwells was prepared and in a condition suitable for elastomeric wall coating application.

**1.3 MOCK-UP**

- .1 Construct mock-ups two (2) weeks prior to commencement of the work to demonstrate the substrate preparation, application of the coating, and adhesion of the coating to the substrate.
- .2 Adhesion testing to be reviewed by the consultant on site prior to commencing the work. Include for adhesion testing on the existing coating and on the concrete wall.
- .3 Upon receipt of written confirmation from the Consultant, the mock-up may remain as part of the finished work.
- .4 The approved mock-up shall be the standard to which all work shall be performed.

**1.4 PRODUCT DELIVERY, STORAGE AND HANDLING**

- .1 Deliver all materials to the job-site in their original unopened containers with labels indicating manufacturer, product name and designation, colour, expiration date, pot life, and curing time.
- .2 Store all materials in strict accordance with the manufacturer's recommendations.
- .3 Keep the materials dry and protected from the weather, freezing and contamination. Do not store for long periods in direct sunlight.

- .4 Take all precautionary measures necessary to prevent fire hazards and spontaneous combustion. Provide an appropriate fire extinguisher in the storage area.
- .5 The Contractor shall be responsible for, and shall safeguard, all materials and equipment being used on the site.
- .6 Remove rejected or contaminated materials from the site.

## 1.5 ENVIRONMENTAL REQUIREMENTS

- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials. Labelling and provision of MSDS sheets shall be acceptable to Labour Canada.
- .2 Ensure that all materials, containers, rags, etc. are disposed of in accordance with the local Waste Management Plan and hazardous material disposal regulations and requirements.

## 1.6 WARRANTY

- .1 The system manufacturer shall provide a written single-source performance warranty, signed and issued in the name of Owner stating that the work of this Section is warranted against defects related to workmanship and material deficiency for a period of **five (5) years** from date of Certificate of Substantial Performance and that all defects will be repaired, including making good of materials and areas disturbed or damaged due to location and rectification of defects.
- .2 The following conditions shall be specifically covered under the warranty:
  - .1 Cohesive or adhesive failure of the system
  - .2 Weathering deficiencies resulting in failure of the system
  - .3 Pinholes, failure to bridge narrow cracks, shifting, raveling etc.
- .3 The system manufacturer shall submit a detailed warranty statement consistent with the terms of this specification prior to bid closing date for approval. The approved warranty shall be made part of the contractual agreement and shall represent the sole warranty statement for the project.
- .4 Hairline cracks arising from normal shrinkage and/or expansion and contraction of concrete shall not be considered as structural failure, but shall be considered normal and consequently the warranty shall not be voided as a result of such minor defects.

## 2. MATERIALS

### 2.1 GENERAL

- .1 Materials shall be delivered to the site in their original containers, with labels intact and seals unbroken. The presence of any unauthorized materials or containers for such, on site, shall be sufficient cause for rejection of ALL paint materials on site at that time.
- .2 The colour shall be as approved by the Owner.

### 2.2 WALL COATING

- .1 Approved Products
  - .1 Sika Thorocoat – 400 (formerly MProtect HB 400).
  - .2 Or approved equivalent.

### 2.3 PRIMER

- .1 As per manufacturer's recommendations.

### 2.4 SEALANTS

- .1 Refer to Section 07 90 00.

## 3. EXECUTION

### 3.1 SCHEDULING

- .1 Operations shall be phased in such a manner to provide a minimum of inconvenience to the Owner and to the occupants of the building.
- .2 Sealant replacement shall be complete prior to application of the coating.

### 3.2 ENVIRONMENT

- .1 Do not apply coating in temperatures below those required by the manufacturer.
- .2 Do not coat surfaces during rainy, foggy, or frosty weather or when the relative humidity is greater than or equal to 80 %.
- .3 Test for moisture content in each location immediately prior to commencing application of coating. Do not apply coating on surfaces where moisture content exceeds 5%.
- .4 Do not commence coating work when adequately controlled ventilation is not available.

### 3.3 TEMPORARY PROTECTION

- .1 Protect floors, equipment, and other surfaces with temporary protective covers such as dust sheets, tarpaulins, or polyethylene sheeting to the satisfaction of the Owner.

- .2 Post warning signs a minimum of 100 feet from the work area.
- .3 Set up wind breaks when needed.
- .4 Keep oily rags, waste, and other similar combustible materials in closed metal containers. Take every precaution necessary to avoid spontaneous combustion.

### 3.4 SURFACE PREPARATION

- .1 Carry out surface preparation in accordance with the Manufacturer's written project specific recommendations.
- .2 100% powerwashing of the existing substrate prior to coating is required. Thoroughly powerwash the exterior wall to remove residual surface contaminants. Mix degreasing agent into the water as established during the mock-up.
- .3 Locally remove existing loose coating down to the concrete wall and prepare the surface in accordance with the Manufacturer's written project specific recommendations.
- .4 Include for route and sealing of localized cracks in the concrete wall prior to commencing coating work. Sealants to be compatible with the elastomeric wall coating.
- .5 Upon completion of the surface preparation, the concrete finish surface should be sound, dry, free from dust, laitance, oil, grease, fats, curing compounds, rust, paints, chemicals, impregnation's, waxes, foreign particles, disintegrated concrete and any substance detrimental to the bonding coating of the elastomeric coating.
- .6 Ensure that all bond inhibiting material is removed from the substrate prior to proceeding.

### 3.5 APPLICATION

- .1 Sealants:
  - .1 All sealant and concrete work shall be completed prior to application of the coating and shall have sufficient time to cure.
  - .2 Install new sealant at all interfaces prior to proceeding with the coating installation.
- .2 Prime surfaces to receive elastomeric coating in accordance with manufacturer's recommendations. Roller or spray apply primer as required to achieve manufacturer's application rates.
- .3 Install elastomeric wall coating to minimum dry thickness as required by the manufacturer. Apply all materials in strict accordance with the manufacturer's printed instructions. Two coats of the manufacturer's recommended thickness are required. First coat is to be tinted a lighter colour in order to discern between coats.
- .4 Use only suitable, clean equipment in good condition.
- .5 Apply only in dust-free, suitable conditions on surfaces free from machine, tool, or sandpaper marks, insects, grease, dirt, loose paint, etc., or any other condition liable to impair the final finish or to prevent production of good results.

---

ELASTOMERIC WALL COATING

4600 Dixie Road, Mississauga, ON

Section 09 98 00

Peel Regional Police - Division 12 Interior & Exterior Renovations

Page 5

25-0210-00

2026-04-10

---

- .6 Conform to the Owner's colour schedule and exactly match approved samples.
- .7 Coatings are intended to cover all surfaces perfectly. Surfaces imperfectly covered shall receive additional coats at no extra cost to the Owner.
- .8 Apply materials evenly without runs, sags, wrinkles, overlapping, bristles, overspray, or other evidence of faulty workmanship.
- .9 To ensure correct coverage, the Contractor shall retain all empty containers on the site until the Consultant has verified the area covered to the gallonage of material used. This verification shall be carried out on a daily basis.

### 3.6 FIELD QUALITY CONTROL

- .1 The contractor is to perform wet film thickness measurements during coating installation. The contractor is to perform a minimum of 1 measurement for every 500 sq. ft. to ensure proper application thickness is being achieved.
- .2 The Consultant may perform cut tests after application of the elastomeric wall coating to measure dry film thickness. If tests are performed, a minimum of one cut test will be performed for every 1000 sq. ft. of membrane. Contractor to repair all damaged areas at no extra cost.

END OF SECTION 07 98 00