

**Part 1            General**

**1.1                REFERENCES**

- .1        Canadian General Standards Board (CGSB)
  - .1        CAN/CGSB-25.20-95, Surface Sealer for Floors.
- .2        Canadian Standards Association (CSA)
  - .1        CSA-A23.1- 94, Concrete Materials and Methods of Concrete Construction.

**1.2                PERFORMANCE REQUIREMENTS**

- .1        Product quality and quality of Work in accordance with Section 01 61 00 - Common Product Requirements.
- .2        Submit written declaration that components used are compatible and will not adversely affect finished flooring products and their installation adhesives.

**1.3                PRODUCT DATA**

- .1        Submit product data in accordance with Section 01 33 00 - Submittal Procedures.
- .2        Include application instructions for concrete floor treatment.

**1.4                WASTE MANAGEMENT AND DISPOSAL**

- .1        Separate and recycle waste materials in accordance with Section 01 74 00 – Cleaning and Waste Management.
- .2        Place materials defined as hazardous or toxic waste in designated containers.
- .3        Ensure emptied containers are sealed and stored safely for disposal away for public.
- .4        Use chemical hardeners that are non-toxic, biodegradable and have zero or low VOC's.
- .5        Dispose of surplus chemical and finishing materials in accordance with Federal, Provincial and Municipal regulations.
- .6        Dispose of waste from stripping of floors in a manner that will not have unfavourable effects on the environment.

**1.5                ENVIRONMENTAL REQUIREMENTS**

- .1        Temporary lighting:
  - .1        Minimum 1200 W light source, placed 2.5 m above floor surface, for each 40 sq m of floor being treated.
- .2        Electrical power:
  - .1        Provide sufficient electrical power to operate equipment normally used during construction.
- .3        Work area:

- .1 Make the Work area water tight protected against rain and detrimental weather conditions.
- .4 Temperature:
  - .1 Maintain ambient temperature of not less than [10] EC from 7 days before installation to at least 48 hours after completion of Work and maintain relative humidity not higher than 40% during same period.
- .5 Moisture:
  - .1 Ensure concrete substrate is within moisture limits prescribed by paint and/or sealant manufacturer.
- .6 Safety:
  - .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials.
- .7 Ventilation:
  - .1 Ventilate enclosed spaces in accordance with Section 01 51 00 - Temporary Utilities.
  - .2 Provide continuous ventilation during and after coating application.

## **Part 2 Products**

### **2.1 CHEMICAL HARDENERS**

- .1 Type 1- Sodium silicate.
- .2 Water: potable.
- .3 Ensure that curing agents are compatible with specified finish materials. Remove curing agents prior to application of finish material if the different materials are not compatible.

### **2.2 SURFACE SEALER & FINISH**

- .1 To MPI Code INT 3.2D – Polyurethane, Pigmented.
  - .1 Apply a base coat of epoxy paint, to MPI #77, and
  - .2 Apply a top coat of polyurethane to MPI #72.

### **2.3 WET CURE**

- .1 Clear polyethylene film to ASTM C171, minimum thickness 0.15 mm.

### **2.4 MIXES**

- .1 Mixing, ratios and application in accordance with manufacturer's instructions.

### **2.5 JOINT SEALANT**

- .1 Joint sealants to Section 07 92 00 – Joint Sealants.

**Part 3 Execution**

**3.1 EXAMINATION**

- .1 Verify that surfaces are ready to receive Work and elevations are as indicated on drawings.

**3.2 PREPARATION OF SLAB**

- .1 Rub exposed sharp edges of concrete with carborundum to produce 3 mm radius edges unless otherwise indicated.
- .2 Saw cut control joints to CSA-A23.1, 24 hours maximum after placing of concrete.

**3.3 APPLICATION**

- .1 After floor treatment is dry, seal control joints and joints at junction with vertical surfaces with sealant.
- .2 Apply floor treatment in accordance with Sealer manufacturer's written instructions.
- .3 Clean overspray. Clean sealant from adjacent surfaces.
- .4 Finish concrete floor surfaces in accordance with CAN3-A23.1M.
- .5 Uniformly spread, screed, and float concrete. Do not use grate tampers or mesh rollers. Do not spread concrete by vibration.
- .6 Steel trowel surfaces that will receive carpeting, resilient flooring.
- .7 Steel trowel all surfaces left exposed to view.
- .8 Apply hardener on concrete floor surfaces that do not receive additional flooring material. Apply in accordance with manufacturer's recommendations.
- .9 Apply sealer on floor surfaces to receive hardener. Apply in accordance with manufacturer's recommendations.
- .10 Saw cut control joints as called for to CAN3-A23.3-M94.

**3.4 TOLERANCES**

- .1 Maintain surface flatness, with maximum variation of 3 mm in 3 m.
- .2 In areas with floor drains, maintain floor level at walls and pitch surfaces uniformly to drains at 20 mm per meter nominal as indicate on drawings.

**3.5 PROTECTION**

- .1 Protect finished installation in accordance with manufacturer's instructions.

**END OF SECTION**

**Part 1            General**

**1.1                REFERENCES**

- .1 Canadian Standards Association (CSA)
  - .1 CAN/CSA A23.4-00/A251-00 Precast Concrete - Materials and Construction/Qualification Code for Architectural and Structural Precast Concrete Products

**1.2                SCOPE OF WORK**

- .1 Provide precast splash pads where required and shown on drawings to ensure positive drainage away from building at downspout or drain outlet locations.

**1.3                DRAINAGE STANDARD**

- .1 Install splash pads to guarantee a minimum slope of 3% away from building without settlement for a minimum distance of 3 meters.

**1.4                PROTECTION**

- .1 Protect bench marks and existing structures, lawns, roads, sidewalks, paving and curbs against damage from vehicular or foot traffic.

**1.5                WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate and recycle waste materials in accordance with Section 01 74 00 – Cleaning and Waste Management.
- .2 Place materials defined as hazardous or toxic waste in designated containers.
- .3 Ensure emptied containers are sealed and stored safely for disposal away for public.
- .4 Use chemical hardeners that are non-toxic, biodegradable and have zero or low VOC's.
- .5 Dispose of surplus chemical and finishing materials in accordance with Federal, Provincial and Municipal regulations.
- .6 Dispose of waste from stripping of floors in a manner that will not have unfavourable effects on the environment.

**1.6                WARRANTY**

- .1 Make good any settlement of splash/pads fill and topsoil for a period of one year from Substantial Completion of the project. Pay all costs in making good paving, lawns, etc., damaged by such settlement, at no cost to The City or Contract Administrator.

**Part 2            Products**

**2.1                PRECAST CONCRETE SPLASH PADS**

- .1 Precast Concrete Splash Pads: to be Barkman Concrete Ltd. 12" mm (305 mm) wide x 30" (762 mm) long, Natural, model No: 105604. Locate at all rainwater leader locations.

- .1 Provide mounting brackets at all splashpad locations and install as per manufacturer instructions.
- .2 Levelling course: shall be 6 mm dia. crushed limestone down
- .3 Contact for Splash Pads and Mounting Brackets:  

Barkman Concrete  
909 Gateway Road  
Winnipeg. MB R2K 3L1  
Telephone No. (204) 667-3310

## **2.2 SUBSTITUTIONS**

- .1 Refer to Section B7 – Substitutes of Bid Opportunity 668-2017.

## **2.3 FILL MATERIALS**

- .1 Sub-surface gravel: Pit-run, crushed natural stone, free from shale, clay, friable materials and debris.
- .2 Surface Gravel (exposed): Clean natural stone, free from clay, shale and organic matter, 19mm to 38mm (5/8" to 1 1/2") size.
- .3 Sand: Clean natural river or bank sand, free from silt, clay, loam friable or soluble materials, and organic matter.
- .4 Crushed Stone: Angular crushed natural limestone, free from shale, organic matter and debris, maximum stone size 12mm (1/2") (75% passing).
- .5 Sub-soil: Free from roots, rock larger than 76mm (3") in size and building debris.

## **2.4 TOPSOIL**

- .1 In accordance with Section 32 91 19 – Topsoil Placement and Grading.

## **Part 3 Execution**

### **3.1 PREPARATION**

- .1 Determine extent of modification required to existing surface conditions to accommodate new splash pads.
- .2 Locate splash pads to ensure best drainage away from building and the least interference with landscape or building elements such as shrubs, walkways, windows etc.
- .3 Perform minor excavations as required to sub-surface for final grades.
- .4 Carefully remove existing sod and retain for replacement as required.
- .5 Firmly compact sub-soil to receive any required fill.

**3.2 BACKFILLING AND TOPSOIL**

- .1 In accordance with Sections 31 23 10 – Excavation, Trenching and Backfilling and 32 91 19 – Topsoil Placement and Grading.
- .2 Backfill areas to grades, levels and elevations as required with appropriate fill and topsoil materials to ensure positive drainage away from the building.
- .3 Perform backfilling and topsoil operations systematically and as early as possible to allow maximum time for natural settlement and required compaction.
- .4 Firmly compact fill to receive finished surface material.

**3.3 GRAVEL BED**

- .1 In accordance with Section 32 11 23 – Aggregate Base Courses.
- .2 Provide a compacted gravel bed of minimum 100 mm (4") depth beneath new splash pads.
- .3 Gravel levelling base to extend min. 75 mm (3") past splash pads.

**3.4 SPLASH PADS PLACEMENT**

- .1 Place splash pads on compacted material to fully support concrete with no hollows or bows below.
- .2 Ensure required 3% slope.
- .1 Install Barkman Concrete Natural Splash Pads as per manufacturer's specifications.
- .2 Install Barkman Concrete Mounting Brackets as per manufacturer's specifications

**3.5 CLEAN-UP**

- .1 Remove all excess materials and leave the Site finished and in clean condition in accordance with Section 01 74 00 – Cleaning and Waste Management.

**END OF SECTION**