

**Part 1            General**

**1.1                SUMMARY**

- .1        Supply and installation of Silvertone parking fence and parking posts complete with automotive receptacles

**1.2                RELATED SECTIONS**

- .1        Section 01330 - Submittal Procedures
- .2        Section 16132 – Outlet Boxes, Conduit Boxes and Fittings
- .3        Section 16141 – Wiring Devices

**1.3                Measurement Procedures**

- .1        Measure supply and erection of parking fence in metres erected in accordance with the Construction Drawings and Specifications and approved by the Contract Administrator, as measured by the Contract Administrator.
- .2        Measure supply and erection of parking posts on a unit basis for each post erected in accordance with the Construction Drawings and Specifications and approved by the Contract Administrator, as measured by the Contract Administrator.
- .3        Measure supply and installation of parking plugs in units installed in accordance with the Construction Drawings and Specifications and approved by the Contract Administrator, as measured by the Contract Administrator.

**1.4                Basis of Payment**

- .1        Supply and erection of parking fence will be paid for at the Contract Unit Price per linear metre for “Parking Fence”, which price shall be payment in full for all work described and all other items incidental to the installation of parking fence, including granular material around posts.
- .2        Supply and erection of parking posts will be paid for at the Contract Unit Price per linear post for “Parking Posts”, which price shall be payment in full for all work described and all other items incidental to the installation of parking posts, including granular material around posts.
- .3        Supply and installation of parking plugs will be paid for at the Contract Unit Price for “Parking Plugs”, which price shall be payment in full for all work described and all other items incidental to the installation of parking plugs, including cable and anchoring materials.

**1.5                Submittals**

- .1        Parking Fence and Parking Posts with Automotive Receptacles:
  - .1        Shop Drawings: submit shop drawings in accordance with Section 01330 - Submittal Procedures.

- .1 Provide mounting details for parking plugs and electrical cable.

## **1.6 Design and Performance Criteria**

- .1 Parking Fence and Parking Posts with Automotive Receptacles:
  - .1 Design Requirements: provide parking fence suitable for mounting receptacles.

## **1.7 Waste Management and Disposal**

- .1 Separate and recycle waste materials.

## **Part 2 Products**

### **2.1 Parking Fence**

- .1 Pressure-treated posts:
  - .1 Material: pressure treated pine
  - .2 Size: 150mm x 150mm x 2200mm
  - .3 Finish: Silvertone
- .2 Pressure-treated rails:
  - .1 Material: pressure treated pine
  - .2 Size: 38mm x190mm
  - .3 Finish: Silvertone

### **2.2 Parking Posts**

- .1 Pressure-treated wood posts:
  - .1 Material: pressure treated pine
  - .2 Size: 200mm x 200mm x 2200mm
  - .3 Finish: Silvertone

### **2.3 Granular Backfill:**

- .1 Material: 20mm down crushed limestone

## **Part 3 Execution**

### **3.1 Parking Fence and Parking Posts**

- .1 Installation:
  - .1 Install parking fence and parking posts as shown on the Construction Drawings.
  - .2 Set posts plumb and level, with same top elevation in rows.
  - .3 Install fence rails level at consistent height as indicated on the drawings.
  - .4 Backfill around posts with thoroughly tamped 20mm down crushed limestone.
  - .5 Securely anchor electrical cabling and mount automotive receptacles as shown in the Construction Drawings.

**3.2 Quality Control**

- .1 Field Tests: Required.
- .2 Field Inspection: Required

**END OF SECTION**

**Part 1            General**

**1.1                SECTION INCLUDES**

- .1        Demolition of Structures: methods and procedures for demolition of structures & parts of structures,

**1.2                RELATED SECTIONS**

- .1        Section 01330 - Submittal Procedures.

**1.3                REFERENCES**

- .1        Canadian Standards Association (CSA International)
  - .1        CSA S350-M1980 (R1998), Code of Practice for Safety in Demolition of Structures.

**1.4                SITE CONDITIONS**

- .1        Review designated substance report and take precautions to protect environment.
- .2        Should material resembling spray or trowel-applied asbestos or other hazardous substance be encountered, stop work, take preventative measures, and notify Contract Administrator.
  - .1        Do not proceed until written instructions have been received from Contract Administrator.
- .3        Notify Contract Administrator before disrupting building access or services.

**Part 2            Products**

**2.1                NOT USED**

- .1        Not used.

**Part 3            Execution**

**3.1                PROTECTION**

- .1        Prevent movement, settlement, or damage to adjacent structures, utilities, and parts of building to remain in place. Provide bracing and shoring required.
- .2        Keep noise, dust, and inconvenience to occupants to minimum.
- .3        Protect building systems, services and equipment.
- .4        Provide temporary dust screens, covers, railings, supports and other protection as required.

**3.2 DEMOLITION SALVAGE AND DISPOSAL**

- .1 Remove designated parts of existing building to permit new construction. Sort materials into appropriate piles for reuse and recycling.
- .2 Refer to demolition drawings and specifications for items to be salvaged for reuse.
- .3 Remove items to be reused, store as directed by Contract Administrator, and re-install under appropriate section of specification.
- .4 Trim edges of partially demolished building elements to tolerances as defined by Contract Administrator to suit future use.
- .5 Dispose of removed materials, to appropriate recycling facilities except where specified otherwise, in accordance with authority having jurisdiction.

**END OF SECTION**

**Part 1            General**

**1.1                Related Sections**

- .1            Section 02723 - Granular Sub-base.

**1.2                Measurement Procedures**

- .1            Granular base will be part of the work for the Storage Building and Parking Posts and Wood Fencing. There will be no separate payment for Granular Base.

**1.3                References**

- .1            City of Winnipeg Standard Construction Specifications CW 3110 "Sub-grade, Sub-base and Base Course Construction".

**Part 2            Products**

**2.1                Materials**

- .1            Granular base: material in accordance with CW 3110, crushed limestone or crushed concrete base course material.
  - .1            Use 100mm depth of 20mm down crushed base material.

**Part 3            Execution**

**3.1                Sequence of Operation**

- .1            Place and compact granular base in accordance with the Construction Drawings and CW 3110.

**3.2                Site Tolerances**

- .1            Finished base surface to be within plus or minus 10 mm of established grade and cross section, but not uniformly high or low.

**3.3                Protection**

- .1            Maintain finished base in condition conforming to this Section until succeeding material is applied or until acceptance by Contract Administrator.

**END OF SECTION**

**Part 1            General**

**1.1                Related Sections**

- .1        Section 02761 - Painted Traffic Lines and Markings

**1.2                Measurement Procedures**

- .1        Pavement surface cleaning will be part of the work for Line Painting. There will be no separate payment for pavement surface cleaning and removal of pavement markings.

**1.3                Waste Management and Disposal**

- .1        Remove from site and dispose of all packaging materials at appropriate recycling facilities.
- .2        Do not dispose of unused solvent materials into landfill. Divert materials to municipal hazardous materials depot.

**Part 2            Products**

**2.1                Materials**

- .1        Abrasives and solvents used for removal of paint, oil, grease, rubber deposits: proprietary products specially designed for pavement cleaning, subject to approval by Contract Administrator.

**Part 3            Execution**

**3.1                Removing Pavement Markings**

- .1        Remove rubber tire deposits and paint markings, in areas where existing concrete surfacing is to receive new paint markings: by sand, water blasting, rotary grinding, or other method approved by Contract Administrator.
- .2        Exercise care to avoid dislodging of coarse aggregate particles, excessive removal of fines, damage to joint and crack sealers.
- .3        Do not heat pavement surfaces above 120°C, when using heater planning equipment.

**3.2                Pavement Surface Cleaning**

- .1        Remove sealing compound which has protruded excessively. Legally dispose removed material.
- .2        Remove dust, contaminants, loose and foreign materials, oil and grease

**END OF SECTION**

**Part 1            General**

**1.1                RELATED SECTIONS**

- .1        Section 01330 - Submittal Procedures
- .2        Section 02721 – Granular Base

**1.2                References**

- .1        City of Winnipeg Standard Construction Specifications CW 3410 “Asphaltic Concrete Pavement Works”.

**1.3                SAMPLES**

- .1        Submit samples in accordance with Section 01330 - Submittal Procedures.
- .2        Submit to Contract Administrator, samples of material for sieve analysis at least 2 weeks before beginning Work.

**Part 2            Products**

**2.1                MATERIALS**

- .1        Prime coat: in accordance with CW 3410.
- .2        Tack coat: in accordance with CW 3410.
- .3        Asphalt cement: in accordance with CW 3410.
- .4        Asphalt concrete: in accordance with CW3410, Type 1A.

**Part 3            Execution**

**3.1                FOUNDATIONS**

- .1        Foundations shall be constructed as shown on the Construction Drawings.

**3.2                PAVEMENT THICKNESS**

- .1        Pavements for parking lots:
  - .1        75 mm Type 1A.
- .2        Pavements for walkways:
  - .1        75 mm Type 1A



**3.3 PAVEMENT CONSTRUCTION**

- .1 Asphalt pavement to be constructed in accordance with the Construction Drawings and CW 3410.

**END OF SECTION**

**Part 1            General**

**1.1                Related Work**

- .1            Section 02722 - Pavement Surface Cleaning and Removal of Pavement Markings

**1.2                References**

- .1            CAN/CGSB-1.5-M91, Low Flash Petroleum Spirits Thinner.
- .2            CGSB1-GP-12c-68, Standard Paint Colours.
- .3            CGSB1-GP-71-83, Method, of Testing Paints and Pigments.
- .4            CGSB1-GP-74M-79, Paint, Traffic, Alkyd.

**Part 2            Products**

**2.1                Materials**

- .1            Paint:
  - .1            To CGSB1-GP-74M, alkyd traffic paint.
  - .2            Colour: to CGSB1-GP-12C, yellow 505-308.
  - .3            Upon request, Contract Administrator will supply a qualified product list of paints applicable to work. Qualified paints may be used but Contract Administrator reserves right to perform further tests.
- .2            Thinner: to CAN/CGSB-1.5.

**Part 3            Execution**

**3.1                Equipment Requirements**

- .1            Paint applicator to be an approved pressure type distributor capable of applying paint in single, double and dashed lines. Applicator to be capable of applying marking components uniformly, at rates specified, and to dimensions as indicated, and to have positive shut-off.

**3.2                Condition of Surfaces**

- .1            Pavement surface to be dry, free from standing water, frost, ice, dust, oil, grease and other foreign materials.

**3.3                Application**

- .1            Lay out pavement markings.

- .2 Unless otherwise approved by Contract Administrator, apply paint only when air temperature is above 10 C, wind speed is less than 60 km/h and no rain is forecast within next 6 h.
- .3 Apply traffic paint evenly at rate of 3m<sup>2</sup>/L.
- .4 Do not thin paint unless approved by Contract Administrator.
- .5 Symbols and letters to conform to dimensions indicated or standard Universal Access symbol dimensions.
- .6 Paint lines to be of uniform colour and density with sharp edges.
- .7 Thoroughly clean distributor tank before refilling with paint of different colour.

**3.4 Tolerance**

- .1 Paint markings to be within plus or minus 12mm of dimensions indicated.
- .2 Remove incorrect markings in accordance with Section 02722 - Pavement Surface Cleaning and Removal of Pavement Markings.

**3.5 Protection of Completed Work**

- .1 Protect pavement markings until dry.

**END OF SECTION**

**Part 1            General**

**1.1                Related Sections**

- .1        Section 01330 - Submittal Procedures
- .2        Section 03300 - Cast-in-Place Concrete

**1.2                Measurement Procedures**

- .1        Measure supply and erection of chain link fence in metres erected and approved by the Contract Administrator, as measured by the Contract Administrator.
- .2        Measure supply and erection of chain link fence double gates in units erected and approved by the Contract Administrator, as measured by the Contract Administrator.

**1.3                Basis of Payment**

- .1        Supply and erection of chain link fence will be paid for at the Contract Unit Price per linear metre for "Chain Link Fencing", which price shall be payment in full for all work described and all other items required for the installation of chain link fencing, including concrete piles for corner posts.
- .2        Supply and erection of chain link fence double gates will be paid for at the Contract Unit Price for "Chain Link Double Gates", which price shall be payment in full for all work described and all other items required for the installation of chain link gates, including concrete gate post piles and wheels.

**1.4                References**

- .1        City of Winnipeg Standard Construction Specifications CW 3550 - Chain Link Fencing

**1.5                Shop Drawings**

- .1        Submit shop drawings in accordance with Section 01330 - Submittal Procedures.
- .2        Drawings to indicate sizes of line and corner posts, gate posts and corner post and gate post footings.

**1.6                Waste Management and Disposal**

- .1        Separate and recycle waste materials.

**Part 2            Products**

**2.1                Materials**

- .1        Concrete mixes and materials: in accordance with Section 03300- Cast-in-Place Concrete.
  - .1        Nominal coarse aggregate size: 20-5.

- .2 Compressive strength: 20 MPa minimum at 28 days.
- .2 Chain Link Fence:
  - .1 In accordance with the Construction Drawings and CW 3550
  - .2 Height of fence: 1.83 m, or as otherwise shown on the Construction Drawings.
  - .3 Acceptable material: heavy duty galvanized chain link.
- .3 Posts, braces and rails: to CAN/CGSB-138.2, galvanized steel pipe. Dimensions as indicated on the Construction Drawings.
- .4 Gates: in accordance with CW3550.
  - .1 Furnish double gates with galvanized malleable iron hinges, latch and latch catch with provision for padlock, which can be attached and operated from either side of installed gate.
  - .2 Furnish double gates with wheels, each gate, and chain hook to hold gates open.
- .5 Grounding rod: 16 mm diameter copperwell rod, 3 m long.

## **2.2 Finishes**

- .1 Galvanizing:
  - .1 For chain link fabric: to CAN/CGSB-138.1 Grade2.
  - .2 For pipe: 550 g/m<sup>2</sup> minimum to ASTM A90.
  - .3 For other fittings: to CAN/CSA-G164.

## **Part 3 Execution**

### **3.1 Grading**

- .1 Remove debris and correct ground undulations along fence line to obtain smooth uniform gradient between posts. Provide clearance between bottom of fence and ground surface of 30 mm to 50 mm.

### **3.2 Erection of Fence**

- .1 Erect fence along lines as indicated on Construction Drawings and to CAN/CGSB-138.3.
- .2 Excavate post holes for posts with concrete piles to dimensions indicated on the Construction Drawings.
- .3 Space line posts 3 m apart, measured parallel to ground surface.
- .4 Install straining posts at sharp changes in grade, where directed by Contract Administrator.
- .5 Install corner posts complete with concrete piles where change in alignment exceeds 10<sup>0</sup>.
- .6 Install end posts complete with concrete piles at ends of fence and at buildings.
- .7 Install gate posts complete with concrete piles on both sides of gate openings.

- .8 Concrete piles: place concrete in excavated holes then embed posts into concrete to depths indicated. Extend concrete 50 mm above ground level and slope to drain away from posts. Brace to hold posts in plumb position and true to alignment and elevation until concrete has set.
- .9 Do not install fence fabric until concrete piles have cured minimum of 5 days.
- .10 Install braces between end and gate posts and nearest line post, placed in centre of panel and parallel to ground surface. Install braces on both sides of corner and straining posts in similar manner.
- .11 Install top rails between posts and fasten securely to posts and secure waterproof caps and overhang tops.
- .12 Install bottom tension wires, stretch tightly and fasten securely to end, corner, gate and straining posts with turnbuckles and tension bar bands.
- .13 Lay out fence fabric. Stretch tightly to tension recommended by manufacturer and fasten to end, corner, gate and straining posts with tension bar secured to post with tension bar bands spaced at 300 mm intervals: knuckled selvedge at bottom; twisted selvedge at top.
- .14 Secure fabric to top rails, line posts and bottom tension wire with tie wires at 450 mm intervals. Give tie wires minimum two twists.
- .15 Install grounding rods at corners of each fence.

### **3.3 Installation of Gates**

- .1 Install gates in locations as indicated.
- .2 Level ground between gate posts. Set gate bottom approximately 40 mm above ground surface.
- .3 Install gate stops as directed by the Contract Administrator.

### **3.4 Touch up**

- .1 Clean damaged surfaces with wire brush removing loose and cracked coatings. Apply two coats of organic zinc-rich paint to damaged areas. Pre-treat damaged surfaces according to manufacturers' instructions for zinc-rich paint.

### **3.5 Cleaning**

- .1 Clean and trim areas disturbed by operations. Dispose of surplus material as directed by Contract Administrator.

**END OF SECTION**