Partie 1 General

1.1 RELATED REQUIREMENTS

.1 The list of Work in this division is indicative but non-limiting. It does not exclude Work described in other specification divisions shown on the drawings or required for full execution of the Work as intended on the drawings.

.2 Section 05 12 23 Structural Steel for Buildings.

.3 Section 06 10 01 Structural Carpentry .

.4 Section 09 80 00 Acoustic Treatment.

.5 Section 09 91 23 Interior Painting.

.6 Division 26 Electricity.

1.2 REFERENCES

.1 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-1.40-97, Anticorrosive Structural Steel Alkyd Primer.

.2 Handbook of the Canadian Institute of Steel Construction.

.2 Green Seal Environmental Standards (GSES)

.1 Standard GS-03-93, Anti-Corrosive Paints.

.2 Standard GS-11-97, Architectural Paints.

.3 Standard GS-36-00, Commercial Adhesives.

.3 Health Canada/Workplace Hazardous Materials Information System (WHMIS)

.1 Material Safety Data Sheets (MSDS).

.4 The Master Painters Institute (MPI)

.1 Architectural Painting Specification Manual - February 2004.

.1 MPI No. 79, Primer, Alkyd, Anticorrosive for Metal.

.2 MPI EXT 5.1 A to Z, Structural Steel and Metal Fabrications.

.5 American society for testing and material (ASTM International Inc.)

.1 ASTM A36/A36M-08, Standard Specification for Carbon Structural Steel.

.2 ASTM A307-07b, Standard Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.

.3 ASTM A325-07a, Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength.

.4 ASTM A325M-08, Standard Specification for Structural Bolts, Steel, Heat Treated 830 MPa Minimum Tensile Strength Metric.

.5 ASTM A490M-04ae, Standard Specification for High-Strength Steel Structural Bolts, Classes 10.9 and 10.9.3, for Structural Steel Joints Metric.

.6 Association canadienne de normalisation (CSA)/CSA International

.1 CSA G40.20/G40.21-F04, Exigences générales relatives à l'acier de construction laminé ou soudé/Aciers de construction.

.2 CAN/CSA-S16-F01(C2007), Règles de calcul aux états limites des charpentes en acier.

.3 CAN/CSA-S136-07, North American Specifications for the Design of Cold Formed Steel Structural Members.

.4 CSA W47.1-F03, Certification des compagnies de soudage par fusion de l'acier.

.5 CSA W48-F06, Métaux d'apport et matériaux associés pour le soudage à l'arc.

.6 CSA W55.3-1965(R2003), Resistance Welding Qualification Code for Fabricators of Structural Members Used in Buildings.

CSA W59-F03, Construction soudée en acier (soudage à l'arc).

1.3 ACTION AND INFORMATIONAL SUBMITTALS

.1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

.2 Product Data:

.1 Submit manufacturer's printed product literature and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.

.2 Submit two copies WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 35 29.06 - Health and Safety Requirements.

.3 Submit required shop drawings, indicating, illustrating or explaining the following:

.1 Dimensions of pit and required clearances.

.2 Arrangement of motor, levers and other accessories for operating lifting system.

.3 Names of manufacturers, type or style designations, part numbers, and hp and rpm of motor.

.4 Factory test data of motor operation.

.5 Details of electrical equipment.

.6 Details of assembly.

.7 Generally, shop drawings must show arrangement, sizes, capacities (loads), assembly methods, materials and finish, clearances, anchoring, installation details, rough installation measurements, operation, controls, wiring diagrams.

.8 Assembly drawings:

.1 Assembly drawings must show details and information needed to assemble and mount the lift, particularly:

.1 Work method.

.2 Assembly order.

.3 Type of materials used for assembly.

.4 Temporary bracing.

.9 Fabrication drawings:

.1 Fabrication details showing assemblies, components and manufactur must bear seal and signature of engineer licensed to practice in Quebec, Canada.

.4 Quality control: submit documents and submittals in accordance with Section 01 45 00 – Quality Control.

.1 Manufacturer's Instructions: submit manufacturer's installation instructions and special handling criteria, installation sequence, cleaning procedures and maintenance.

.2 Manufacturer's Field Reports: submit manufacturer's written reports within 3 days of review, verifying compliance of Work, as described in PART 3, FIELD QUALITY CONTROL.

.5 Closeout Submittals:

.1 Provide operation and maintenance data for dock levelers for incorporation into manual specified in Section 01 78 00 - Closeout Submittals and include:

.1 Motor and assembly:

.1 Complete description and sequence of operation together with wiring diagrams showing electrical connections, manufacturer's instructions covering maintenance requirements, and parts catalogue giving complete list of repair and replacement parts with cuts and identifying numbers.

1.4 QUALITY ASSURANCE

.1 Pre-Installation Meetings: convene pre-installation meeting one week prior to beginning work of this Section, with Departmental Representative and in accordance with Section 01 32 16.07 - Construction Progress Schedule - Bar (GANTT) Chart to verify project requirements.

.2 Qualifications:

.1 Manufacturer: specializing in fabrication of specified products with minimum 10 years experience.

.2 Installer: specializing in the field with minimum 10 years experience.

1.5 DELIVERY, STORAGE AND HANDLING

.1 Packing, shipping, handling and unloading

.1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.

.2 Deliver materials in original packaging, in good condition and bearing manufacturer’s seal and label intact.

.2 Waste Management and Disposal:

.1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

1.6 EXTRA MATERIALS

.1 Provide maintenance materials in accordance with Section 01 78 00 - Closeout Submittals.

.2 Provide complete set of tools necessary to maintain and adjust every part of dock leveler.

.3 Provide high pressure cartridge refill type grease gun and extra cartridge of recommended lubricant.

1.7 ACCEPTABLE PRODUCTS AND MATERIALS

.1 Where a particular brand name is stipulated, see Instructions to Bidders for procedure for requesting approval of substitute materials and products

Partie 2 Products

2.1 MATERIALS

.1 Lifting beam:

.1 Steel beams and supports, according to required profiles, and loads in multifunctional room. Load criteria: 2 tonnes (1 tonne *load*).

.2 Design calculations by engineer licensed to practice in Quebec, Canada and in compliance with documents, to determine dimensions and profiles of lifting beam components.

.1 Painted S beams suspended from structural wood trusses, as indicated on drawings.

.2 HSS tie bars as indicated on drawings.

.3 HSS girts, as indicated on drawings.

.4 Anchor plates and reinforcing plates to secure lifting beam to support structure, as indicated on drawings.

.5 Stop plates, as indicated on drawings.

.6 Anchor bolts, nuts, washers and spacers, as indicated on drawings.

.7 Paint: shop-applied urethane acrylic enamel.

.8 Colour: black.

.3 Hoists:

.1 1 hp motor.

.2 Load capacity: 1 tonne (*load*).

.3 Lifting height: 15 metres.

.4 Lifting speed: 8 m/min.

.5 Translation speed: 10 m/min.

.6 Power: 3-phase/600 volts

.7 Steel weave cable 10 mm diameter.

.8 Lifting motor power: 3 kw.

.9 Weight: 290 kg.

.10 Minimum bend radius: 2.5 m.

.11 Rubber bumpers on motor.

.12 Black paint.

.2 Operating station:

.1 4-function lever connected to motor with 3-metre cable and security cable, as indicated on drawings.

.3 Electric power supply from secondary panel, as indicated in Division 26.

.1 Power supply: 550-600 V, 3-phase, 60 Hz, 1 hp.

.2 Electrical connections as indicated in Division 26 - Electricity – General Work Results, including fused disconnect switch connected to control panel or starter.

2.2 FINISH

.1 Paint exposed ferrous metal work black unless otherwise specified.

.2 Free surfaces of rust and coat with rust resistant paint.

.3 Clean but do not paint surfaces to be field welded.

.4 After final installation, touch up paint damaged by assembly work.

.1 Paint: balack urethane acrylic enamel.

.5 Prior to assembly:

.1 Sandblast metal surfaces to SSPC-SP6.

.2 Apply two coats urethane acrylic enamel, 3 mils dry film (each coat) over 8 mils dry film base coat.

Partie 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance:

.1 For motor and assembly:

.1 Comply with manufacturer’s written requirements and recommendations, including product data sheets, handling, storage and operation of products, technical data, to allow proper operation without damage to hoist.

3.2 INSTALLATION

.1 Install intermediate supports, lifting beam and bracing, securing firmly to building structure and in compliance with engineer’s requirements and as indicated on drawings.

.2 Ensure compliance with clearances indicated on drawings.

.3 Install electrical motors, controller units, pushbutton stations, relays and other electrical equipment required for proper operation.

.4 Make connections as indicated in Division 26.

.5 Touch up shop primer to bolts, welds, and burned or scratched surfaces at completion of installation.

.6 Adjust operating components to ensure smooth continuous raising and lowering of platforms.

3.3 FIELD QUALITY CONTROL

.1 Site Tests: conduct operating tests for approval of Departmental Representative including.

.1 Operation to maximum limits of travel in "UP", "DOWN", "FORWARD", and "REVERSE" directions.

.2 Demonstration of drop limitation.

.3 Any other test required by Departmental Representative to ensure full compliance with specification requirements.

.4 Demonstration of loading capacity.

.2 Manufacturer's Field Services:

.1 Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.

3.4 CLEANING

.1 Proceed in accordance with Section 01 74 11 - Cleaning.

END OF SECTION