

APPENDIX B1

Part 3 of City RFQ for ADO's

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RFQ No. Doc2399202340

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~~Appendix D – Master Service Agreement between the City and General Contractors~~ **NOT INCLUDED**

1. **Background**

.1 **Accessibility for Ontarians with Disabilities Act and City's Commitment**

The Accessibility for Ontarians with Disabilities Act, 2005 (AODA) is provincial legislation designed to achieve accessibility for Ontarians with disabilities with respect to goods, services, facilities, accommodation, employment, buildings, structures and premises by January 1, 2025.

In August 2009, City Council adopted and endorsed a 'Statement of Commitment to Creating an Accessible City'. In June 2018, City Council adopted the City of Toronto Corporate Accessibility Policy, which states that the City will ensure accessibility at all its facilities and public spaces.

Refer to Appendix A for the City Corporate Accessibility Policy.

.2 **Corporate Real Estate Management Capital Accessibility Upgrades Program**

The Corporate Real Estate Management (CREM) Division is implementing an accessibility upgrades program for over 350 City buildings under its management with the intent to complete most of it by the end of 2024.

These buildings will be upgraded to meet the requirements of the latest version of the Toronto Accessibility Design Guidelines (TADG) wherever feasible.

In order to complete the accessibility upgrades at these buildings, CREM is establishing a roster of general contractors under a separate procurement call. The work assignments will be carried out pursuant to a second stage competition process consisting of a tender for a group of five (5) to twenty (20) construction projects, bundled generally by a geographic area.

Depending on the project, the work will consist of major and / or minor renovations to the exterior and interior spaces of existing buildings. The majority of buildings, spaces and sites are currently occupied and operational with a short list of vacancies.

In some cases where a building is planned for other repair, rehabilitation, or renovation work, all scopes will be combined together with the accessibility upgrades in the same tender package for a general contractor.

The need for new automatic door openers at these buildings was identified as part of the accessibility upgrades. The City of Toronto estimates between 4,000 – 5,000 low voltage door operators will be required to complete the upgrades.

The City of Toronto will direct general contractors selected to deliver accessibility upgrades to procure automatic door openers, push buttons and associated services defined in this RFQ from the Successful Supplier at the unit pricing negotiated by the City.

2. **Scope of Work and Associated Deliverables**

Please refer to Appendix B of Part 3 – Technical Specifications and Requirements for Deliverables. The Specifications detail the Scope of Work requirements in detail by type of equipment. The information provided in this section is a summary of requirements only – refer to the Appendices listed for the full requirements of this Request for Quotation.

- .1 The scope of this RFQ is for the provision of unit pricing for the Supply, Delivery and Installation of Automatic Door Openers and Push Buttons for the City of Toronto's Accessibility Upgrades Capital Program to Various Locations, as and when required from the date of award. General contractors selected to deliver accessibility upgrades will procure Automatic Door Openers, Push Buttons and all associated services from the Successful Supplier at the unit pricing negotiated by the City under this RFQ.
- .2 The selected Supplier will be required to execute a Contract with the City for the provision of unit pricing for the Deliverables. Subsequently, the selected Supplier will be required to enter into contracts to supply, deliver and install automatic door openers, push buttons and necessary equipment with general contractors chosen by the City to deliver accessibility upgrades to City buildings. Master Service Agreement between the City and general contractors is included in Appendix D to this Part 3 - Technical Specifications and Requirements for Deliverables. **Suppliers should review the terms and conditions set out in Part 2 (FORM OF AGREEMENT) to understand the Contract being entered into with the City.**

3. Performance Security – Not Applicable

4. Work Hours

The work on the accessibility upgrades will be executed according to a strategy devised by general contractors to ensure continuity of operation of the existing facilities, and to also minimize disruption to occupants. After hours and weekend work will be required for a majority of the projects to minimize the disruption to the facility and occupants. Detailed specifications and requirements will be provided in each Tender.

5. Insurance Requirements

- .1 The Supplier shall comply with all insurance requirements, and all WSIB prior to the execution of the Contract. The Supplier shall bear all costs, expenses, losses and damages of its own and those of the General Contractor and the City, which may arise as a result of the Supplier failing to or delaying in promptly complying with this condition.
- .2 The Supplier agrees to purchase and maintain in force, at its own expense and for the duration of the Contract and as required in any contract with a general contractor, pursuant to this RFQ, the following policies of insurance, which policies shall be in a form and with an insurer acceptable to the City. A certificate evidencing these policies signed by the insurer or an authorized agent of the insurer must be delivered to the City prior to the commencement of services:
 - a) Commercial General Liability provided that the policy:
 - (i) is in the amount of not less than Two Million Dollars (\$2,000,000.00), per occurrence;

- (ii) adds the City of Toronto as an additional insured;
 - (iii) includes a clause which will provide the City with thirty (30) days' prior written notice of cancellation (15 days if cancellation is due to non-payment of premium).
- b) Automobile Liability insurance with a minimum limit of Two Million Dollars (\$2,000,000) for all owned or leased licensed motorized vehicles used in the performance of services.

It is understood and agreed that the coverage and limits of liability noted above are not to be construed as the limit of liability of the vendor in the performance of services. It is also agreed that the above insurance policies may be subject to reasonable deductible amounts, which deductible amounts shall be borne by the vendor. At the expiry of the policies of insurance, original signed Certificates evidencing renewal will be provided to the City without notice or demand.

The successful vendor is responsible for any loss or damage whatsoever to any of its materials, goods, equipment or supplies and will maintain appropriate all-risk coverage as any prudent owner of such materials, goods, supplies and equipment. The successful vendor shall have no claim against the City or the City's insurers for any damage or loss to its property and shall require its property insurers to waive any right of subrogation against the City.

6. Delivery

- .1 The Supplier must deliver the specified Deliverables as per their Quotation without substitution or deviation.
- .2 The Supplier shall provide staff who are qualified to undertake the installation services required under the terms of this RFQ. The Supplier's staff must be certified to maintain, repair, install and set-up the types of equipment and associated parts in Part 5 – Pricing Form.
- .3 Late Delivery, partial shipments or shipment of unauthorized Product may result in the Contract being cancelled.
- .4 The Supplier shall restore all property temporarily removed, damaged, or destroyed during the supply, delivery, and installation of Deliverables to the reasonable satisfaction of the City or to its previous state and at no cost to the City. The Supplier, before final payment, shall remove all surplus materials and any debris of every nature resulting from its operation and put the site(s) in a neat, orderly condition; thoroughly clean. If the Supplier fails to clean up at the completion of the supply, delivery, and installation of the Products, then the City may do so and charge the Supplier for the costs thereof, or deduct said costs from any monies still owing to the Supplier through the general contractor.
- .5 The Supplier shall furnish all labour, materials, services, supplies, tools, equipment, apparatus, transportation, facilities and incidentals required and perform all operations necessary to accomplish the complete installation of the Deliverables.

- .6 A hard copy packing slip must accompany the products delivered and include at a minimum, the purchase order number, the requisitioner's name and address, a description of the items delivered complete with serial numbers, part numbers, and quantity shipped.

7. Substitutions of Deliverables

- .1 Suppliers must not substitute contract approved product(s), commodity(s) or service(s) without prior written approval from City of Toronto through the approval by the Consultant, on either City of Toronto letter head or City of Toronto originating email. This will be enforced via subsequent tender documents. Any approved substitution must meet or exceed the approved good, approved commodity or approved service to be substituted, at no additional cost to the City of Toronto. Supplier will reimburse all substitution evaluation costs, including labour and testing costs, to City of Toronto PMMD Standards and Specifications Unit.

8. Warranty

- .1 Please refer to Part 3 - Technical Specifications and Requirements for Deliverables - Appendix B, Section 1.10

9. Usage Reports

- .1 If requested, the Supplier shall demonstrate the ability to provide an electronic Usage Report in MS Excel 2013 or higher version, of invoice details by providing the following report criteria:

Dollar value and usage information by,

- a) Cost Centre
 - b) Location
 - c) Invoice Number
 - d) By quantity
 - e) By automatic door opener type
 - f) By delivery date
 - g) Usage
 - h) Cumulative Total by month or as requested by the City
- .2 The Supplier shall be required to submit to the City of Toronto, "Usage Reports" on a monthly basis, or as requested, within 30 days after the end of each month and 15 days after the Term expiry date based on Part 5 – Pricing Form and the above report criteria. The Supplier shall also provide a cumulative report at the end of the Contract term based on the aforementioned criteria.
- .3 The City may further request a detailed Usage Report at any time during the Term to verify releases on the Contract. The Supplier will provide the information within five (5) Business Days of request. Usage Reports shall be provided by the Supplier at no cost to the City.
- .4 **If requested**, a sample Usage Report detailing the criteria noted above should be included by the Supplier. If a sample Usage Report is not included with Bid submission, the Supplier will provide the report within five (5) Business Days of

request at no cost to the City. Failure to provide the sample report within the specified period may result in the Supplier being declared Non-Compliant.

10. Product and Service Specifications

- .1 The Supplier shall be able to provide the Deliverables within the Greater Toronto Area (GTA) as defined in Appendix B of Part 3 – Technical Specifications and Requirements for Deliverables.
- .2 The Supplier shall provide emergency repair Services as and when required during
- .3 All work must be performed to the Ministry of Labour requirements and to manufacturer's specification.
- .4 All specifications are minimum requirements that must be met or exceeded. Bids containing one or more items that do not meet or exceed the minimum specifications will be declared Non-Compliant.
- .5 Suppliers must fully complete the Specifications Form in Part 4 – Submission Items by entering “yes”, meaning the Deliverables being quoted meet or exceed the minimum specifications, or “no”.
- .6 Suppliers that do not fully complete the Specification Forms will be declared Non-Compliant.
- .7 **Optional Maintenance Service.** The City may require that the successful bidder performs service once a year on the automatic swing door units for the period of the warranty (2 years) in its entirety (to the total of 2 services over 2 years). Warranty begins once Substantial Completion is provided for the building where the equipment is installed.

Any defective item in relation to the opening that may affect the performance of the auto operator units or its warranty is to be reported immediately to the City of Toronto facilities maintenance department. This may include but is not limited to: Hinges, pivots, seals, thresholds, locks, panic bars, security devices or any site condition not listed here.

A checklist including the following inspection points is to be submitted to City of Toronto facilities maintenance department upon completion of each service:

- TIGHTEN TOP DOOR TRACK, SLIDE BLOCK & PIN
- CU TIGHTEN DOOR ARMS, LUBE ROD ENDS
- TIGHTEN ROD ARM BOLTS
- CHECK OPERATOR MOUNT BOLTS
- OPERATOR LOVE JOY COUPLER (WEAR, TIGHTNESS)
- MOTOR LOVE JOY COUPLER (WEAR, TIGHTNESS)
- EXAMINE LOVE JOY SPIDER
- TEST & ADJUST MOTION DETECTORS
- TIGHTEN MOTOR BOLTS
- EXAMINE MOTOR BRUSHES
- OPERATOR RUBBER GROMMETS

- EXAMINE & ADJUST DOOR LIMITER
- TEST OPERATION (OPENING, CLOSING, BACK & LATCH)
- INSPECT & TEST (ACTIVE & SAFETY CARPETS, SCANS OR PUSH SWITCHES)
- INSPECT & LUBE TOP DOOR PIVOT
- INSPECT & LUBE BOTTOM DOOR PIVOT
- ADJUST DOOR PIVOTS IF NECESSARY
- INSPECT & LUBE HINGES
- INSPECT FINGERGUARD
- INSPECT DOOR WEATHER-STRIPPING (TOP, BOTTOM, & SIDES)
- INSPECT DOOR HANDLES & PUSH BARS
- CHECK DOOR LOCK

APPENDICES:

APPENDIX A – CITY OF TORONTO CORPORATE ACCESSIBILITY POLICY

APPENDIX B – TECHNICAL SPECIFICATIONS 08 71 13 LOW ENERGY AUTO OPERATORS

APPENDIX C – FAIR WAGE POLICY

APPENDIX D – MASTER SERVICE AGREEMENT BETWEEN THE CITY AND GENERAL CONTRACTORS

APPLICABLE CITY POLICIES

For a copy of the City of Toronto Procurement Policies, please download a copy of the Policy by clicking any of the links as provided below or by visiting the following website (www.toronto.ca/purchasing/policies):

(1) **FAIR WAGE POLICY***

*Fair Wage Policy – (extracted from Schedule A of the City of Toronto Municipal Code, Chapter 67)
FW R (10/07)

The policy and schedules are available on the Fair Wage Office website – www.toronto.ca/fairwage

LABOUR TRADES CONTRACTUAL OBLIGATIONS IN THE CONSTRUCTION INDUSTRY*

Labour Trades Contractual Obligations – (extracted from Schedule B of the City of Toronto Municipal Code, Chapter 67)

(2) **ACCESSIBILITY STANDARDS FOR CUSTOMER SERVICE TRAINING REQUIREMENTS POLICY**

(3) **ENVIRONMENTALLY RESPONSIBLE PROCUREMENT STATEMENT**

(4) **POLICY ON DONATIONS TO THE CITY FOR COMMUNITY BENEFITS**

(5) **RIGHT TO REJECT DEBTORS AND SET OFF POLICY**

SECTION 08 71 13 – LOW ENERGY AUTOMATIC DOOR OPERATORS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This section includes the following types of automatic door operators:
 - 1. Low-energy door operators for swinging doors.
- B. Related Sections:
 - 1. Division 8 Sections for “Aluminum-Framed Entrances and Storefronts” for entrances furnished and installed separately in Division 8 Section.
 - 2. Division 8 Section “Door Hardware” for hardware to the extent not specified in this section.
 - 3. Division 8 Section “Glazing” for materials and installation requirements of glazing for automatic entrances.
 - 4. Division 26 and 28 Sections for electrical connections including conduit and wiring for automatic entrance operators and access-control devices.

1.3 REFERENCES

- A. References: Comply with the version year adopted by the Authority Having Jurisdiction.
 - 1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
 - 2. OBC – Ontario Building Code.
 - 3. CUL – Approved for use in Canada.
 - 4. NFPA 80 - Fire Doors and Windows.
 - 5. NFPA 101 - Life Safety Code.
- B. American National Standards Institute (ANSI) / Builders Hardware Manufacturers Association (BHMA).
 - 1. ANSI/BHMA A156.19 Standards for Power Assist and Low Energy Power Operated Doors.
- C. Underwriters Laboratories (UL).
 - 1. UL10C – Positive Pressure Fire Tests of Door Assemblies.
 - 2. UL 325 - Standard for Safety for Door, Drapery, Gate, Louver, and Window Operators and Systems.

1.4 DEFINITIONS

- A. Activation device: Device that, when actuated, sends an electrical signal to the door operator to initiate the door operation.
- B. Monitored Safety Devices: A tested system that works in conjunction with the automatic door control that detects the presence of a person or an object within a zone where contact could occur and provides a signal to stop the movement of the door.
- C. AAADM: American Association of Automatic Door Manufacturers.
- D. Operating ambient Temperature Range: minus 30 C to 50 degrees C.
- E. For automatic door terminology, refer to ANSI/BHMA A 156.19 for definitions of terms.

1.5 PERFORMANCE REQUIREMENTS

- A. General: Provide automatic doors that have been designed and fabricated to comply with specified performance requirements, as demonstrated by testing manufacturers corresponding systems.
- B. Compliance:
 - 1. OBC Ontario Building Code – Most Current Edition
 - 2. ANSI/BHMA A 156.19 American National Standard for Power Operated Doors Pedestrian Doors.
 - 3. UL 325 Listed
 - 4. NFPA 101 Life Safety Code
 - 5. CUL Approved for use in Canada
 - 6. UL Listed Fire Door Operator with Automatic Closer
- C. Automatic Door equipment accommodates medium to heavy pedestrian traffic.
- D. Opening Force Requirements:
 - 1. Power-Operated swinging doors shall open with a manual force not to exceed 30 lbf (133N) to set the door in motion and 15 lbf to fully open the door with force applied at 1" (25mm) from the latched edge of the door. The required force to prevent a stopped door from opening or closing shall not exceed 15 lbf (67N) measured 1" (25mm) from the latch edge of the door at any point during the opening or closing.
- E. Closing Time:
 - 1. Door operators shall be field adjustable to close 90 degrees to 10 degrees in 3 seconds or longer per ANSI/BHMA A 156.19 standard.
 - 2. Door shall be field adjusted to close from 10 degrees to fully closed position in not less than 1.5 seconds.

1.6 SUBMITTALS

- A. Comply with Division 01 – Submittal Procedures.
- B. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles fabrication, operational descriptions and finishes.
- C. Shop Drawings: For automatic entrances. Include plans, elevations, sections, details, hardware mounting heights, additional accessories and attachments to other work.
- D. Samples: color samples of exposed finish as required.
- E. Manufacturers Field Reports: Submit manufacturer's field reports from AAADM certified technician of inspection and approval of doors for compliance with ANSI/BHMA A 156.19 after completion of installation.
- F. Operating and Maintenance Manuals: Provide manufacturers operating, owners and maintenance manuals for each item specified as required in Division 01, Closeout Submittals.

1.7 QUALITY ASSURANCE

- A. Manufacturer Qualifications: 10 years minimum of documented experience in manufacturing door equipment similar to that indicated within this specification with a proven record of successful service performance.
- B. Installer Qualifications: Installers, trained by the primary product manufacturers, with a minimum 5 years documented experience installing and maintenance of units similar in material, design, and extent to that indicated in this specification and whose work has resulted in construction with a record of successful in-service performance. Manufacturer's authorized representative who is trained and approved for installation and maintenance of units by AAADM required for this Project

- C. Source Limitations for Automatic Operators: Obtain each type of automatic door operator and supplementary components specified in this section from a single source / single manufacturer where possible.
- D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- E. Power-Operated Door Standard: ANSI/BHMA A 156.19 Current year.
- F. Emergency-Exit Door Requirements: Comply with requirements of authorities having jurisdiction for automatic entrances serving as a required means of egress.

1.8 PROJECT CONDITIONS

- A. Field Measurements: Verify actual dimensions of openings to receive automatic entrances by field measurements before fabrication.

1.9 COORDINATION

- A. Coordinate door operators with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish. Coordinate hardware for automatic entrances with hardware required for rest of project.
- B. Electrical System Roughing-in: Coordinate layout and installation of automatic power door operator with connections to power supplies and access-control system.

1.10 WARRANTY

- A. Automatic Door Operators to be free of defects in material and workmanship for a period of 2 years from the date of substantial completion. This includes the installation of said products.
- B. Safety Sensors to be free of defects in material and workmanship for a period of 2 years from the date of substantial completion.
- C. Activation Devices (Push Buttons (all types) / Wave Buttons / Wireless Buttons / Safety Sensors / Motion Sensors) shall be free of defects in material and workmanship for a period of 2 years from the date of substantial completion.
- D. During the warranty period all warranty work shall be performed during evening hours.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Requests for substitution and product approval in compliance with the specification must be submitted in writing and in accordance with the procedures outlined in Division 1. Approval of requests is at the discretion of the architect, owner, and their designated consultants.
- B. Pre- Approved models are listed below: others may acceptable to the owner. To present a substitution proceed with substitution procedures as outlined in division 1. All substitutions must meet all the criteria of this specification to be considered.
- C. PRE-APPROVED MODELS
- D. Auto operators

(1) Dorma light duty interior use - ED100, Dorma heavy duty exterior and high traffic use ED250

(2) Besam light duty interior use - SW100, Besam heavy duty exterior and high traffic use SW200i

(3) Omega light duty interior use – OA-100, Omega heavy duty exterior and high traffic use OA-100HD

E. Activation Devices

(1) Camden

(2) BEA

(3) WIKK

F. Emergency Call Kits

(1) Camden CX-WEC10K2

G. Push to Lock Kits

(1) Camden Aura CX-WC13XSM or CX-WC13XFM

H. Safety Sensors

(1) Optex - OA-EDGE with LED Indicator

2.2 AUTOMATIC SWING DOOR OPERATOR

A. An Integrated, self-learning automatic swing door operator with an advanced CPU, a multistage gearbox with real time adaptive software and available user interface.

1. Automatic Door Configuration:
 - a. Configuration: Single swing door or pair of doors swinging.
 - b. Traffic Pattern: One Way
 - c. Mounting: Surface applied

B. Control Features

1. Power-hold Close
2. Built in Lock Delay
3. On-Off-Hold Open switch control to control door function, (Automatic-Hold Open- Exit Only)
4. On-Off Power Switch
5. Fire Alarm Integration
6. Field Adjustable Handing
7. Push and Go
8. Power Assist Opening Activation
9. Intergrated Connections for Monitored Safety Sensors and other accessories.
10. Integrated access control
11. Wind Load and Stack Pressure microprocessor monitored with power boost to ensure secure opening and closing in changing conditions.

C. Door Control Features:

1. Door Weight Max: Light Duty Operators for interior use 220lbs
2. Door Weight Max: Heavy Duty Operators for exterior & high traffic use 600lbs

D. Header Size: **not to exceed** 4 5/16" Height x 6" Depth

2.3 ACTIVATION DEVICES

1. Push Plate(Standard Application) : Hard wired, 4 ½" x 4 ½" square or 6" round stainless steel push plate engraved with "Push to Open" with a handicap logo and complete with mounting box (surface or flush mount – site determined) made by the same manufacturer. Mounting boxes on the exterior shall be complete with weathertight seals.
2. Wireless Push Plate (Site Related Alternate Device) : Radio controlled, 900 MHZ wireless or kinetic, 4 ½" x 4 ½" square or 6" round stainless steel push plate engraved with "Push to Open" with a handicap logo and complete with mounting box (surface or flush mount – site determined) made by the same manufacturer. Mounting boxes on the exterior shall be complete with weathertight seals.
3. Touchless Wave Plate (Owner Optional Device): 4 ½" x 4 ½" square with LED lit activation sensor. Microwave or infrared technology has an adjustable range of 1"-28" and complete with mounting box (surface or flush mount – site determined) made by the same manufacturer. Mounting boxes on the exterior shall be complete with weathertight seals.
4. All Openings requiring the use of access control devices (card readers, intercoms) shall be equipped with an advanced logic relay CX-33 from Camden Controls.

E.

OBC UNIVERSAL & BARRIER FREE WASHROOM REQUIRMENTS

1. All universal and barrier free washrooms are to be equipped with an emergency call kit as outlined in OBC. This kit shall contain the following items:
 - 1) "PRESS FOR ASSITANCE" Maintained mushroom button & assistance requested LED Annunciator with adjustable sounder
 - 2) Single gang LED Dome light with adjustable sounder
 - 3) White Panel sign 6" x 10 5/8" with red letters on a white background stating "IN THE EVENT OF AN EMERGENCY PUSH EMERGENCY BUTTON AND AUDIBLE AND VISUAL SIGNAL WILL ACTIVATE"
2. All universal and barrier free washrooms are to be equipped with a Push to Lock kit. This kit shall contain the following items:
 - 1) Hard wired, 4 ½" x 4 ½" square stainless-steel push plate engraved with "Push to Open" with a handicap logo and complete with mounting box (surface or flush mount – site determined) made by the same manufacturer.
 - 2) Hard wired, 4 ½" x 4 ½" square stainless steel push plate engraved with "Push to Open" with a handicap logo and complete with AURA LED switchable mounting box (surface or flush mount – site determined) made by the same manufacturer.
 - 3) Hard wired, 4 ½" x 4 ½" square stainless-steel push plate engraved with "Push to Lock" and complete with AURA LED switchable mounting box (surface or flush mount – site determined) made by the same manufacturer.
 - 4) 1 x Door Contact
 - 5) 1x CX33 Logic Relay

2.4 SAFETY DEVICES

- A. Provide door controls in accordance with ANSI/BHMA standards A 156.19 and complying with cited BHMA standard for condition of exposure and for long-term, maintenance-free operation under normal traffic load. When presence sensors are used, they shall be monitored in accordance with ANSI/BHMA A 156.10. Coordinate controls with door operation and door operators.
- B. Door Mounted Presence Sensor:
 1. Adaptive Door Mounted Sensor System (When required – to be determined by the architect:

- a. Adaptive Door Mounted Safety Systems (ADMSS): Door mounted presence sensor, where the sensor shall be mounted on both the swing (pull) side and the approach (push) side of the door. No header mounted sensor is required.
 - 1) The sensor shall provide a full detection pattern that covers the entire swing path of the door and provides detection in the fully open and full close position. While the door is in motion, the pattern shall be capable of providing door panels from 24" to 48"
 - 2) The sensor will provide secondary activation as required for "knowing act" doorways.
 - 3) Sensors to be field installed and adjusted in accordance with applicable safety standards.
- b. System will reactivate a closing door, stop/stall an opening door, keep a closed door closed and keep an open-door open if a person is within the detection zone of the sensors.
- c. System shall be equipped with an external LED display that allows installer to easily determine detection area and make fine adjustments.
- d. Sensor automatically learns distance to floor and automatically adjusts based upon application requirements.
- e. Sensor shall cover entire door width minus 1" and be equipped with the correct quantity of sensors required to properly cover the entire area of detection.

2.5 ELECTRICAL

- A. Provide 115-120 volt, 60 cycle, single phase, maximum 15 ampere service for 1-2 operators, 30 ampere service for 3-4 operators, and as follows:
 1. Coordinate with Division 26 for provision of service to each operator from junction box for multiple operators.
 2. Provide electrical conduit and wiring from specified controls to operators as outlined on manufacturer's drawings.

2.6 FINISHES

- B. Anodized Finish:
- C. Operators shall be finished in the most appropriate finish listed below to match the opening and the existing building finishes.
 1. Clear Anodized Finish:
 2. Dark Bronze or Black Anodized Finish:

EXECUTION

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine doors and frames with Installer present, for compliance with requirements for installation tolerances, wall and floor construction and other conditions affecting performance of automatic entrances.
- B. Examine roughing in for electrical source power to verify actual locations of wiring connections.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Do not install damaged components. Fit frame joints to produce hairline joints free of burrs and distortion. Rigidly secure non-movement joints.

- B. Entrances: Install automatic entrances plumb and true in alignment with established lines and grades without warp or rack of framing members and doors. Anchor securely in place.
 - 1. Install surface-mounted hardware using concealed fasteners to greatest extent possible.
 - 2. Set headers, carrier assemblies, tracks, operating brackets, and guides level and true to location with anchorage for permanent support.
- C. Door Operators: Connect door operators to electrical power distribution system as specified in Division 26 Sections.
- D. Sealants: Comply with requirements specified in Division 07 Section "Joint Sealants" to provide seal between the operator housing and wall surface. Installation.
- E. Signage: Apply signage on both sides of each door and each sidelight as required by ANSI/BHMA A 156.19

3.3 FIELD QUALITY CONTROL

- A. Manufacturer's representative shall provide technical assistance and guidance for installation of automatic doors.
 - 1. Factory trained and AAADM certified representative shall test and inspect each automatic door to determine compliance of the installed system to ANSI/BHMA A 156.19

3.4 ADJUSTING

- A. Adjust door operators and controls for smooth and safe operation.

3.5 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by automatic operator installation promptly after installation .

3.6 DEMONSTRATION

- A. Engage a factory authorized representative to train Owner's maintenance personnel to adjust, operate, and maintain safe operation of automatic entrances.

END OF SECTION 087113

Standard Packages

Package #1A

Door Description: Single door with card access and latch retraction panic bars (Exterior)

Quantity	Item Description
1	Heavy Duty Model Operator
2	4 ½" x 4 ½" Push Button – C/W Barrier free logo & "Push to Open"
1	4 ½" x 4 ½" Surface Mount Box (Interior)
1	4 ½" x 4 ½" Surface Mount Box Weatherized (Exterior)
1	CX-33 Logic Relay
1	Latch Retraction Panic Bars TO BE PROVIDED BY HARDWARE SUPPLIER

Package #1B

Door Description: Pair of doors with card access and latch retraction panic bars (Exterior)

Quantity	Item Description
2	Heavy Duty Model Operator
2	4 ½" x 4 ½" Push Button – C/W Barrier free logo & "Push to Open"
1	4 ½" x 4 ½" Surface Mount Box (Interior)
1	4 ½" x 4 ½" Surface Mount Box Weatherized (Exterior)
1	CX-33 Logic Relay
2	Latch Retraction Panic Bars TO BE PROVIDED BY HARDWARE SUPPLIER

Package #1C

Door Description: Pair of doors with card access and latch retraction panic bars (Exterior)

Quantity	Item Description
1	Heavy Duty Model Operator
2	4 ½" x 4 ½" Push Button – C/W Barrier free logo & "Push to Open"
1	4 ½" x 4 ½" Surface Mount Box (Interior)
1	4 ½" x 4 ½" Surface Mount Box Weatherized (Exterior)
1	CX-33 Logic Relay
1	Latch Retraction Panic Bars TO BE PROVIDED BY HARDWARE SUPPLIER

Package #2A

Door Description: Single door with Push / Pull Application (Exterior)

Quantity	Item Description
1	Heavy Duty Model Operator
2	4 ½" x 4 ½" Push Button – C/W Barrier free logo & "Push to Open"
1	4 ½" x 4 ½" Surface Mount Box (Interior)
1	4 ½" x 4 ½" Surface Mount Box Weatherized (Exterior)
1	Key Switch to turn off at night CM2210 x 7224
1	Mortise Cylinder for Key Switch

Package #2B

Door Description: Pair of doors with Push / Pull Application (Exterior)

Quantity	Item Description
2	Heavy Duty Model Operator
2	4 ½" x 4 ½" Push Button – C/W Barrier free logo & "Push to Open"
1	4 ½" x 4 ½" Surface Mount Box (Interior)
1	4 ½" x 4 ½" Surface Mount Box Weatherized (Exterior)
1	Key Switch to turn off at night CM2210 x 7224
1	Mortise Cylinder for Key Switch

Package #2C

Door Description: Pair of doors with Push / Pull Application (Exterior)

Quantity	Item Description
1	Heavy Duty Model Operator
2	4 ½" x 4 ½" Push Button – C/W Barrier free logo & "Push to Open"
1	4 ½" x 4 ½" Surface Mount Box (Interior)
1	4 ½" x 4 ½" Surface Mount Box Weatherized (Exterior)
1	Key Switch to turn off at night CM2210 x 7224
1	Mortise Cylinder for Key Switch

Package #3

Door Description: Single door with card access (interior)

Quantity	Item Description
1	Standard Duty Model Operator
2	4 ½" x 4 ½" Push Button – C/W Barrier free logo & "Push to Open"
2	4 ½" x 4 ½" Surface Mount Box (Interior)
1	CX33 Logic Relay
1	Electric Strike TO BE PROVIDED BY HARDWARE SUPPLIER

Package #3B

Door Description: Pair of doors with card access (interior)

Quantity	Item Description
2	Standard Duty Model Operator
2	4 ½" x 4 ½" Push Button – C/W Barrier free logo & "Push to Open"
2	4 ½" x 4 ½" Surface Mount Box (Interior)
1	CX33 Logic Relay
1	Electric Strike TO BE PROVIDED BY HARDWARE SUPPLIER

Package #3C

Door Description: Pair of doors with card access and latch retraction panic bars (Interior)

Quantity	Item Description
2	Standard Duty Model Operator
2	4 ½" x 4 ½" Push Button – C/W Barrier free logo & "Push to Open"
2	4 ½" x 4 ½" Surface Mount Box (Interior)
1	CX-33 Logic Relay
2	Latch Retraction Panic Bars TO BE PROVIDED BY HARDWARE SUPPLIER

Package #3D

Door Description: Pair of doors with card access and latch retraction panic bars (Interior)

Quantity	Item Description
1	Standard Duty Model Operator
2	4 ½" x 4 ½" Push Button – C/W Barrier free logo & "Push to Open"
2	4 ½" x 4 ½" Surface Mount Box (Interior)
1	CX-33 Logic Relay
1	Latch Retraction Panic Bars TO BE PROVIDED BY HARDWARE SUPPLIER

Package #4

Door Description: Single door push/pull washroom mult-stall (Interior)

Quantity	Item Description
1	Standard Duty Model Operator
2	4 ½" x 4 ½" Push Button – C/W Barrier free logo & "Push to Open"
2	4 ½" x 4 ½" Surface Mount Box (Interior)

Package #5

Door Description: Single door barrier free washroom or universal washroom (Interior)

Quantity	Item Description
1	Standard Duty Model Operator
1	Push to Lock Kit – CX-WC13XSM
1	Emergency Call Kit – CX-WEC10K2
1	Electric Strike - TO BE PROVIDED BY HARDWARE SUPPLIER

ACCESSORY ITEMS 1

QTY	Item Description
2	4 ½" x 4 ½" Wave Buttons with LED Indicator Stainless Steel Finish, with wave logo and "wave to open" – in lieu of standard buttons
2	4 ½" x 4 ½" Wireless Button Kit, includes transmitter & receiver, Stainless Steel Button with barrier free logo & "Push to Open" – in lieu of standard buttons
2	6" Round Button with surface mount box, stainless steel button with barrier free logo & "Push to Open" – in lieu of standard Buttons
2	6" x 6" Square Button with surface mount box, stainless steel button with barrier free logo & "Push to Open" – in lieu of standard Buttons

ACCESSORY ITEMS 2

QTY	Item Description
2	Motion sensor activation – example: BEA Eagle
2	Safety Sensors Push and pull side (see specifications) – Example: Optex OA-Edge-2 with LED indicator.
1	CX-33 Logic Relay
1	L021 lock out relay
1	Le21 lock out relay
1	24V Transformer