

Issued for Addendum A-01

March 24th 2014



**Expansion of the commercial processing facilities
Saint-Bernard-de-Lacolle, Crossing border services**

PWGSC No. R.035717.001
CBSA No. 410784
PRAA No. 224-A-21151-00

SUMMARY

ADDENDUM No A-01

The present addendum is an update of the documents issued for tenders. It replaces or completes the documents already issued and is an integral part of the contractual documents.

The following changes in the tender documents are effective immediately. This addendum will form part of the contract documents.

1. GENERALITIES:

1. The height of the beams for the installation of curtain rails (note # 10 in the drawings) on axes 6, 8, 10 between B and D is now: installation height under beams at 4900mm above the finished floor.

2. DRAWING MODIFICATIONS:**A-001**

1. Replace footnote 40 in the caption notes the following two notes:
 - a. **40A**: CLIPED METAL COATING, COULOR A
 - b. **40B**: CLIPED METAL COATING, COULOR b
2. Add the following composition in the legend ceilings:
 - a. Light weight concrete ceiling (BL)
 - i. 13mm LIGHTWEIGHT CONCRETE PANEL WITH ACRYLIC COATING;
 - ii. METAL FURRING 22mm @ 300mm C/C;
 - iii. STRUCTURAL STEEL SILL PLATE 90mm @ 1200mm C/C;
 - iv. SUSPENSION IN METALLIC STUDS 90mm @ 1200mm C/C LATERALLY BRACED @ 2400mm C/C.

A-005

1. Room C.4.5 requires a horizontal fire separation for the 1.5 hrs ceiling.
2. Room C3.1a requires a 0 hr fire separation.
3. ESC-2A requires a 1 hr fire separation.
4. Note: The labels of the partitions will be corrected in the drawings.

A300

1. Glass in exterior doors integrated in curtain walls shall be V-04 type:
 - a. For the following doors: #C-3.17B and #ESC-1A-B.
2. On detail 3, ELEVATION EAST, modify glass type for V-01 for curtain wall between axis 2.4 and 3 (floor level) for the glass type V-02. Also modify detail 5.
3. For type F-2 windows, glass type shall be V-02.
4. In the legend for windows and spandrel panels, modify types as follow:
 - a. V-04 SEALED UNIT WITH CLEAR GLASS WITH FILM
 - b. TP-1 SPANDREL PANELS SEALED WITH CLEAR GLASS WITH FILM

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A553

1. On detail 6, replace gypsum ceiling for a suspended ceiling with acoustic tiles as shown on plan A200.

For all sheets in the 500-serie

1. Remove every tag indicating wall types. For all wall type identification, refer only to the following drawings: A005, A100 and A101.

A600

1. On détail 3, modify the note: "ACOUSTIC CAULKING SEE DETAIL ON A001" for the following note: "FIRE RESISTANT SEALING ENSEMBLE".
2. On detail 5, reference to the detail for the portative fire extinguisher has been added, the new detail 9 on page A582 is included in this addendum.

A650

1. On detail 8, modify the steps definition as follow: "5 BARS GRATING STAIR TREADS" for the following note: "STAIR TREAD WITH NON-SKID STEEL PLATE, 6mm, FOLDED IN 'L'.

A800

1. Modify the drawing title for the following:

ARCHITECTURE
ARCHITECTURE
PLAN D'AMÉNAGEMENT NIVEAU 1
FURNITURE PLAN LEVEL 1

A801

1. Modify the drawing title for the following:

ARCHITECTURE
ARCHITECTURE
PLAN D'AMÉNAGEMENT NIVEAU 2
FURNITURE PLAN LEVEL 2

A900

1. In the FINISH LEGEND add the following materials:
 - a. AG GALVANISED STEEL
 - b. AGP GALVANISED STEEL PAINTED
 - c. AP PAINTED STEEL
 2. All exterior stairs to be in GALVANISED STEEL PAINTED (AGP),
 3. All interior stairs to be in painted steel (AP).
 4. For the floor marking, plan 2 colors to be chosen by the architect.
 5. Modify description of B1 for: SEALED CONCRETE
 6. Modify description of B2 for: SEALED CONCRETE
 7. Eliminate B4 material.
 8. Eliminate BB2 material.
 9. Rename material BB1 with BB.
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SUMMARY

3. ARCHITECTURAL SPECIFICATIONS: (60 pages 8,5 X 11 format)

1. Section **00 00 10**, Table of contents
Replace pages 1 to 4 by pages 1, 2, 3 and 4 attached and identified addendum A-01.
4 pages 8,5 X 11
2. Section **01 35 13** - Special Project Procedures for Canada Border Services Agency Security Requirements
Replace page 4 by pages 4 and 5 attached and identified addendum A-01.
Add Annex A of the section 01 35 13 attached and identified addendum A-01.
3 pages 8,5 X 11
3. Section **04 05 00**, Common Work Results for Masonry
Replace pages 2 and 5 by pages 2 and 5 attached and identified addendum A-01.
2 pages 8,5 X 11
4. Section **04 22 00**, Concrete Unit Masonry
Replace pages 3, 5 and 6 by pages 3, 5 and 6 attached and identified addendum A-01.
3 pages 8,5 X 11
5. Section **07 21 16**, Blanket Insulation
Replace page 3 by page 3 attached and identified addendum A-01.
1 page 8,5 X 11
6. Section **07 21 29.03**, Sprayed insulation – Polyurethane Foam
Replace pages 1 to 4 by pages 1 to 5 attached and identified addendum A-01.
5 pages 8,5 X 11
7. Section **07 26 00**, Vapour Retarders and Air Barriers
Replace page 5 by page 5 attached and identified addendum A-01.
1 page 8,5 X 11
8. Section **07 46 13**, Preformed Metal Siding
Replace pages 4 and 5 by pages 4 and 5 attached and identified addendum A-01.
2 pages 8,5 X 11
9. Section **07 61 10**, Sheet Metal siding
Replace page 5 by page 5 attached and identified addendum A-01.
1 page 8,5 X 11
10. Section **07 81 00**, Applied Fireproofing
Replace pages 1 and 4 by pages 1 and 4 attached and identified addendum A-01.
2 pages 8,5 X 11
11. Section **08 44 13**, Glazed Aluminum Curtain Walls
Replace page 9 by page 9 attached and identified addendum A-01.
1 page 8,5 X 11

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12. Section **08 71 00 T** Door Hardware
Replace pages 7, 8, 9 and 13 by pages 7, 8, 9 and 13 attached and identified addendum A-01.
Add the page 14 attached and identified addendum A-01.
5 pages 8,5 X 11
 13. Section **08 80 50**, Glazing
Replace pages 5 to 9 by pages 6 to 10 attached and identified addendum A-01.
Pages were adjusted et renumbered according to articles modified by the present addendum.
6 pages 8,5 X 11
 14. Section **09 21 16**, Gypsum Board Assemblies
Replace pages 4 and 10 by pages 4 and 10 attached and identified addendum A-01.
2 pages 8,5 X 11
 15. Section **09 30 13**, Ceramic Tiling
Replace pages 2 and 5 to 6 by pages 2 and pages 5 to 7 attached and identified addendum A-01.
Pages were adjusted et renumbered according to articles modified by the present addendum.
4 pages 8,5 X 11
 16. Section **09 91 23**, Painting
Replace pages 7, 8 and pages 10 to 17 by pages 7, 8 and pages 10 to 17 attached and identified addendum A-01.
Pages 14 to 17 were only adjusted et renumbered according to articles modified by the present addendum.
10 pages 8,5 X 11
 17. Section **11 13 16**, Dock seals
New section added, include new pages 1 to 4 attached and identified addendum A-01.
4 pages 8,5 X 11
 18. Section **12 21 20**, Rails and curtains
New section added, include new pages 1 to 6 attached and identified addendum A-01.
6 pages 8,5 X 11
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4. DRAWING LIST ISSUED IN THIS ADDENDUM:

# DRAWING	REVISION	DESCRIPTION	FORMAT
A005.1		FIRE-SEPARATION PLAN EXTRACT	11 x 17
A005.2		FIRE-SEPARATION PLAN EXTRACT	11 x 17
A005.3		FIRE-SEPARATION PLAN EXTRACT	11 x 17
A005.4		FIRE-SEPARATION PLAN EXTRACT	11 x 17
A021.1		SITE PLAN EXTRACT	11 x 17
A021.2		SITE PLAN EXTRACT	11 x 17
A100	2	LEVEL ONE GROUND FLOOR PLAN	A0
A101	2	SECOND FLOOR PLAN	A0
A200	2	REFLECTED CEILING PLAN LEVEL 1 GROUND FLOOR PLAN	A0
A201	2	REFLECTED CEILING PLAN SECOND FLOOR	A0
A300.1		BUILDING ELEVATION EXTRACT	11 x 17
A502.1		WALL SECTION EXTRACT	11 x 17
A502.2		WALL SECTION EXTRACT	11 x 17
A550.1		ENVELOPE SECTION DETAIL	11 x 17
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A580.1		DETAIL PLAN VIEW	11 x 17
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A601.1		HANDRAIL DETAIL	11 x 17
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A602.1		VERTICAL CIRCULATION STAIRWELL 5A	11 x 17
A602.2		VERTICAL CIRCULATION STAIRWELL 3A	11 x 17
A602.3		VERTICAL CIRCULATION STAIRWELL 3A	11 x 17
A650.1		LADDER DETAIL	11 x 17
A650.2		LADDER AND RAILING DETAIL	11 x 17

STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS

- .1 See enclosed **addendum no. 1** – Structural / Mechanical / Electrical (**140** pages 8,5 X 11) dated March 24th, 2014.

END OF ADDENDUM A-01

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Addendum A-01**Addendum A-01****.3 Entering the construction site:**

- .1 Workers and delivery drivers will access to the barrier south of the LIP-travelers via Highway 15 south **(point 1 on the annex A)**. They will request the opening of the gate using the intercom by declining their names, name of the company they work for and by mentioning that they must go to the site of construction. All vehicles must move cautiously using the shortest route leading to the site of the construction, as shown in the accompanying sketch. In rare circumstances, their access may be denied temporarily due to an exceptional operational situation. An alternative route and instructions will be provided to them. A photo ID may be required. A signature may be required in a register.
- .2 All deliveries must be made between 7:00 am and 7:30 or after 8:00 in the morning. Outside of these hours, the Contractor shall provide to the security guard the list of all the deliveries that must be made to the site, 48 hours in advance. The following details shall appear on this list: vendor name, details of the items delivered, date and time of delivery. Delivery vehicles not announced under this procedure may be denied access to the site and the vehicle will be returned to the Contractor's expense.

.4 Exiting the site

- .1 Workers and delivery drivers will pass through the barrier that controls the output of the secondary inspection area of the commercial sector **(point 2 on the annex A)**. All workers and deliverymen who must travel through this area of inspection must obtain prior express authorization from the security guard and they will be under his supervision until they leave the site. This monitoring will be exercised within the limits of the site and the exit point of the barrier. A photo ID may be required. A signature may be required in a register.

1.14 Movement of construction employees on CBSA Property

- .1 Subject to the requirements of good security, the CBSA manager will permit the Contractor and his employees as much freedom of action and movement as is possible.
- .2 However, notwithstanding paragraph above, the CBSA manager may :
 - .1 Prohibit or restrict access to any part of the border crossing facilities;
 - .2 Require that in certain areas of the border crossing site, either during the entire construction project or at certain intervals, construction employees only be allowed access when escorted by CBSA commissioners.

1.15 Completion of Construction Project

- .1 Upon completion of the construction project or, when applicable, the takeover of a facility, the Contractor shall remove all remaining construction material, tools and equipment that are not specified to remain to CBSA as part of the construction contract.

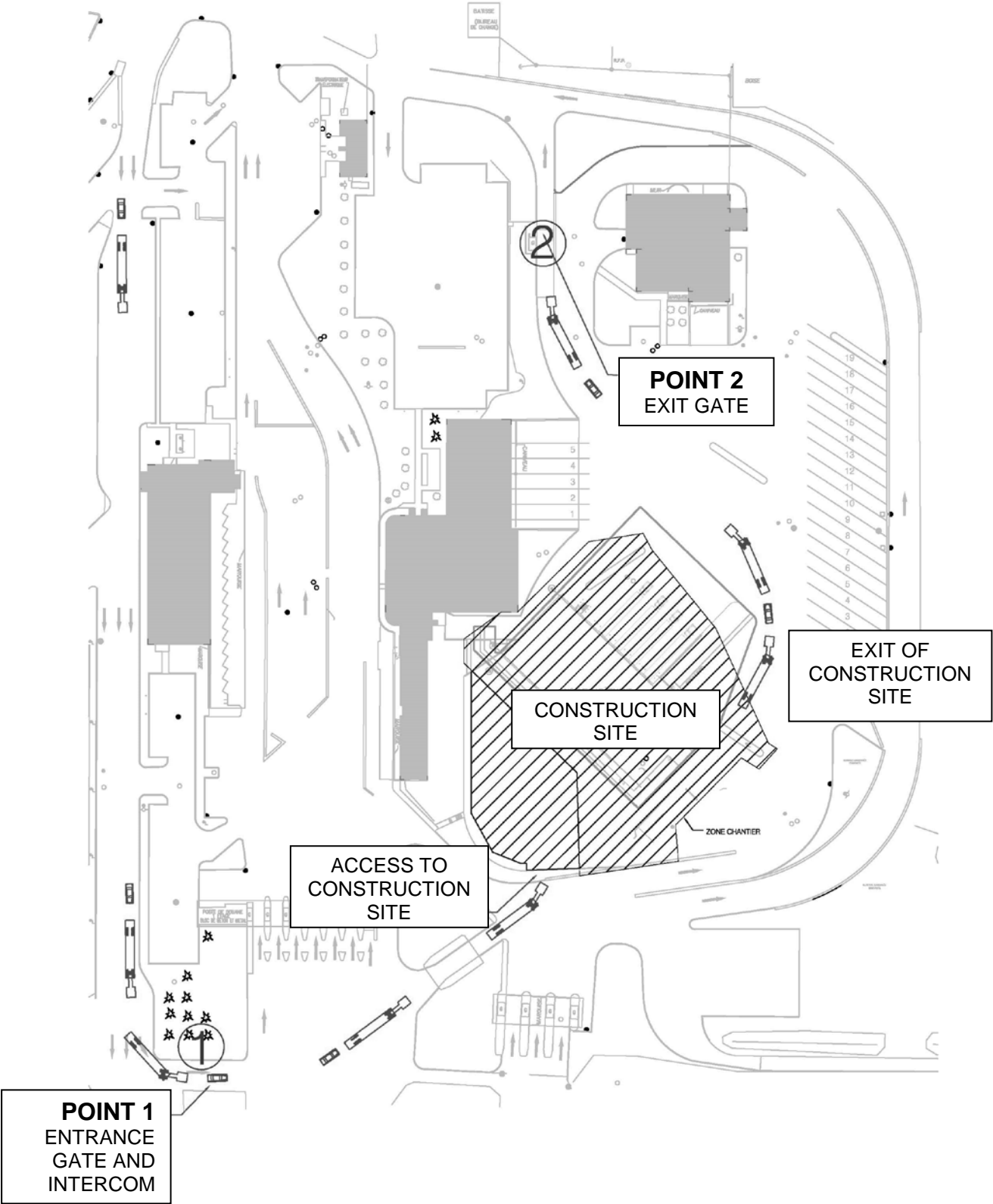
PART 2 - PRODUCTS

2.1 Not used .1 Not used.

PART 3 - EXECUTION

3.1 Not used .1 Not used.

END OF SECTION



TRAFFIC TO THE SITE ACCESS AND EXIT

Addendum A-01**1.5 Action submittals**

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Provide manufacturer's printed product literature, specifications and datasheet and include product characteristics, performance criteria, limitations and colours.
 - .2 Provide two copies of Workplace Hazardous Materials Information System (WHMIS) - Material Safety Data Sheets (MSDS) in accordance with Section 01 35 29.06 - Health and Safety Requirements and 01 35 43 - Environmental Procedures.
- .3 Samples:
 - .1 Provide samples as follows:
 - .1 Two of each type of masonry unit specified, including special shapes, supplemented with specific requirements in Sections.
 - .2 Two cured and coloured samples of mortar and grout, illustrating mortar colour and colour range, supplemented with specific requirements in Section 04 05 12 - Masonry Mortar and Grout.
 - .3 Two of each type of masonry accessory and flashing specified, supplemented by specific requirements in Section 04 05 23 - Masonry Accessories.
 - .4 Two of each type of masonry anchorage, reinforcement and connector proposed for use, supplemented by specific requirements in ~~Section 04 05 19 - Masonry Anchorage and Reinforcing~~ **on drawings**.
 - .5 Samples: used for testing and when accepted become standard for material used.
 - .2 Submit samples tested to laboratories employing technicians certified/trained in procedures for testing masonry units.
- .4 Shop Drawings:
 - .1 Provide drawings stamped and signed by professional engineer registered or licensed in Province of Quebec, Canada.
 - .2 Provide shop drawings detailing temporary bracing required, designed to resist wind pressure and lateral forces during installation.

Addendum A-01**1.6 Information submittals**

- .1 Certificates: provide manufacturer's product certificates certifying materials comply with specified requirements.
- .2 Test and Evaluation Reports:
 - .1 Provide certified test reports to certify compliance of product and materials with specified performance characteristics and physical properties.
 - .2 Test reports to certify compliance of masonry units and mortar ingredients with specified performance characteristics and physical properties.
 - .3 Provide data for masonry units, in addition to requirements set out in referenced CSA and ASTM Standards, indicating initial rates of absorption.
- .3 Installer Instructions: provide manufacturer's installation instructions, including storage, handling, safety and cleaning.

Addendum A-01**2.2 Materials****Addendum A-01**

- .1 Masonry materials and accessories are specified in sections referred to Related Sections.
 - .1 Mortars and masonry grouts, prescribed and described in Section 04 05 12;
 - .2 Masonry reinforcement and connectors prescribed and described in ~~Section 04 05 19~~ and shown on structural drawings **(S-14)** and **specifications**;
 - .3 Masonry accessories prescribed and described in Section 04 05 23;
 - .4 Concrete masonry units, prescribed and described in Section 04 22 00;
 - .5 fire and smoke assemblies prescribed and in Section 07 84 00 – Fire Stopping;
 - .6 Joint sealer works prescribed and described in Section 07 92 10.
 - .7 Works also include installation of metal works required in masonry works, such as free lintels where shown, as the case may be, and supports and lateral anchors. These items are supplied by Section 05 50 00 – Metal Fabrications.
- .2 The work of this section include all accessories and others works necessary for the full implementation of the works of this section.

PART 3 - EXECUTION**3.1 Installers**

- .1 Experienced and qualified masons to carry out erection, assembly and installation of masonry work.

3.2 Manufacturer's instructions

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.3 Examination

- .1 Examine conditions, substrates and work to receive work of this Section.
- .2 Examine openings to receive masonry units. Verify opening size, location, and that opening is square and plumb, and ready to receive work of this Section.
 - .1 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .2 Proceed with installation after unacceptable conditions have been remedied and after receipt of written approval from Departmental Representative.
- .3 Verification of Conditions:
 - .1 Verify that:
 - .1 Substrate conditions which have been previously installed under other sections or contracts, are acceptable for product installation in accordance with manufacturer's instructions prior to installation of concrete block.
 - .2 Field conditions are acceptable and are ready to receive work.
 - .3 Built-in items are in proper location, and ready for roughing into masonry work.
 - .2 Commencing installation means acceptance of existing substrates.

Addendum A-01**PART 2 - PRODUCTS****2.1 Materials**

- .1 Standard concrete block units, standard type, to CAN/CSA-A165 Series (CAN/CSA-A165.1) Series -94 and all subsequent revisions.

Addendum A-01

- .2 **Standard Concrete Unit Masonry type (SR1)** : heavy or light, fire resistant as indicated, with reinforcement, to CAN/CSA-A165 Series, low pressure cured (high temperature) process :
 - .1 Hollow concrete blocks : Type H/15/A/M.
 - .2 Solid concrete block : Type SS/25/A/M.
 - .3 Modular dimensions: 390mm length x 190mm height x width as indicated on drawings.
 - .4 Fire rating as indicated in drawings: Fire rating characteristics, manufacture aggregate used and thickness of concrete elements must conform to Chapter 2 of the National Building Code of Canada Supplement, latest edition. Provide appropriate concrete thickness for fire rating walls of 1hr, 1,5hr and 2hr resistance.
 - .5 Maximum moisture content of 35% on delivery
 - .6 All concrete blocks must contain a minimum of 40% pre-consumer recycled (post-industrial) content or must contain a minimum of 20% postconsumer recycled (postconsumer) content or have at least 20% reduction of Portland cement in relative regular block.
- .3 Ensure all blocks are free from cracks, splits, laminations or other defects which may impair the strength and durability. Ensure face of concrete masonry units are uniform texture, free from spalled or broken edges.
- .4 All other fire rated block walls must incorporate blocks acceptable for use in noted fire rated assembly, and must be acceptable to Authority having jurisdiction.
- .5 Use special blocks for jambs, lintels, bond beams, sash blocks, base blocks and additional shapes as indicated.

2.2 Reinforcement**Addendum A-01**

- .1 Reinforcement ~~in accordance with Section 04 05 19 – Masonry Anchorage and Reinforcing~~ as indicated on structural drawings (S-14).

2.3 Connectors**Addendum A-01**

- .1 Connectors ~~in accordance with Section 04 05 19 – Masonry Anchorage and Reinforcing~~ as indicated on structural drawings (S-14).

2.4 Mortar and Grout

- .1 Grout and grout mixes in accordance with Section 04 05 12 - Masonry Mortar and Grout.

2.5 Accessories

- 1 Lateral support lintels : See section 05 50 00 – Metal fabrication
 - .1 Two parts anchors, 12,7 mm diameter, for anchoring to concrete slabs.
 - .1 Part embedded to the supporting wall: galvanized steel, with 2 holes for screws in the wall of support and two holes for the tie.

- .5 Where new masonry joined masonry walls already in place, the Contractor shall clean existing faces and will moisten as needed to ensure adhesion.

3.5 Installation

- .1 Concrete block units:
- .1 Bond: Stack with vertical joints staggered, or as indicated on drawings.
 - .2 Coursing height: 200mm for one block and one joint.
 - .3 Jointing:
 - .1 Flush where ceramic finish or gypsum panelling is specified;
 - .2 Concave joints where exposed or where paint or other finish coating is specified (or any other type of thin coating) and cork covering.
 - .4 Starting block height: Block cut to 140mm height for all concrete blocks walls.
- .2 Concrete blocks lintels :
- .1 Install reinforced concrete block lintels over openings in masonry where steel or reinforced concrete lintels are not indicated. Use "U" shape concrete lintels with two (2) reinforcing steel bars as shown, and fill with grout of 15 MPa.
 - .3 End bearing: not less than 200mm as indicated on drawings.
- .3 Lateral Support of block walls :
- .1 For lateral support of the top of the masonry walls, provide 12mm space to allow concrete slab deflection. Steel angles : See section 05 50 00 and structural documents.

3.6 Reinforcement

Addendum A-01

- .1 Install reinforcing in accordance with ~~Section 04 05 19 – Masonry Anchorage and Reinforcing~~, **as indicated on structural drawings (S-14)** and supplemented as follows:
- .1 Reinforced blocks; where vertical reinforcement is required, fill all cells with mortar.
 - .2 Use blocks with filled cells to the top of masonry walls of all height. Install reinforced concrete block lintels (bond beams) at top of any reinforced wall or partition with unsupported.
 - .3 Unless otherwise indicated, install frames heavy-duty reinforcement anchor, every two (2) courses.
 - .4 Masonry block wall - security separation type **(SR2)** on perimeters of room **C-3.10, C-3.11, C-3.12A and C-3.12B;**
 - .1 Install vertical reinforcing to each concrete blocks (a rod every 2 cells);
 - .2 Fill **all** cells with epoxy mortar;
 - .3 Install frames heavy-duty reinforcement **every two (2) rows.**

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- ~~.4.2~~ Masonry units sealer : (See section 09 91 23 – Painting)
- .1 Apply 2 coats of sealer to all exposed masonry units surfaces, or as indicated to the finish schedule.

3.7 Construction

- .1 Cull out masonry units, in accordance with CAN/CSA A165 and approved range of colour samples, with chips, cracks, broken corners, excessive colour and texture variation.
- .2 Build in miscellaneous items such as bearing plates, steel angles, bolts, anchors, inserts, sleeves and conduits.
- .3 Construct masonry walls using running bond unless otherwise noted.

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- .4 Build around frames previously set and braced. Fill behind hollow frames within masonry walls with mortar or grout and embed anchors.
- .5 Fit masonry closely against electrical and plumbing outlets so collars, plates and covers overlap and conceal cuts.
- .6 Install movement joints and keep free of mortar where indicated.
- .7 Hollow Units: spread mortar setting bed from outside edge of face shells. Gauge amount of mortar on top and end of unit to create full joints, equivalent to shell thickness. Avoid excess mortar.
- .8 Solid Units: apply mortar over entire vertical and horizontal surfaces. Avoid bridging of airspace between brick veneer and backup wall with mortar.
- .9 Ensure compacted head joints. Use full or face-shell joint as indicated.
- .10 Tamp units firmly into place.
- .11 Do not adjust masonry units after mortar has set. Where resetting of masonry is required, remove, clean and reset units in new mortar.
- .12 Tool exposed joints concave for interior work; strike concealed joints flush.
- .13 After mortar has achieved initial set up, tool joints.
- .14 Do not interrupt bond below or above openings.

3.8 Field quality control

- .1 Site Tests, Inspection: in accordance with Section 04 05 00 - Common Work Results for Masonry, supplemented as follows:
 - .1 Concrete masonry units will be sampled and tested by independent testing agency appointed and paid by Departmental Representative, in accordance with CSA S304.1.
 - .2 Notify inspection agency minimum of 24 hours in advance of requirement for tests.
- .2 Manufacturer's Field Services: in accordance with Section 04 05 00 - Common Work Results for Masonry.

3.9 Cleaning

- .1 Clean in accordance with Section 01 74 11 –.Cleaning, supplemented as follows:
 - .1 Progress Cleaning: Allow mortar droppings on masonry to partially dry then remove by means of trowel, followed by rubbing lightly with small piece of block. Clean wall surface with suitable brush or burlap.
- .2 If the cleaning methods are not sufficient, use alternative method approved by Departmental.

3.10 Protection

- .1 Brace and protect concrete unit masonry in accordance with Section 04 05 00 - Common Work Results for Masonry.

END OF SECTION

Addendum A-01**Addendum A-01**

- .3 **Semi-rigid mineral fibre insulation boards** : for insulation panels work forming part of exterior walls type **M-1**, **M-2**, **M-3** and **M-4**, parapets, **spandrel panels TP-1** and as indicated in the drawings;
- .1 Semi-rigid mineral fibre insulation, friction type installation, comply to CAN/ULC S702, type 1, to meet RSI = 0,76 / 25,4mm to ASTM C518, moisture content less than 0.1% absorption to ASTM C1104, 0 flame spread and smoke developed to CAN/ULC S102. Thickness as indicated on drawings.
- .4 **Rock fibre flexible batt insulation product**: Comply to CAN/ULC-S702, RSI = 0.70 / 25 mm (R = 4.00 / 1"), density of 12.58 kg/m³ (0.79 lb/ft³), thickness and locations as indicated on drawings, **in spandrel panels TP-2** and where required to complete the continuity of the insulation.

Addendum A-01**2.2 Accessories**

- .1 Insulation clips: Impale type, perforated 50 x 50 mm cold rolled carbon steel 0.8 mm thick, adhesive back, spindle of 2.5 mm diameter annealed steel, length to suit insulation, 25 mm diameter washers of self locking type.
- .2 Nails: galvanized steel, length to suit insulation plus 25mm, to CSA B111.
- .3 Staples: 12mm minimum leg.
- .4 Tape: as recommended by manufacturer.

PART 3 - EXECUTION**3.1 Manufacturer's instructions**

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.2 Insulation installation

- .1 Install insulation to maintain continuity of thermal protection to building elements and spaces and to ASTM C1320.
- .2 Fit insulation closely between metal studs and elements to be covered and around electrical boxes, pipes, ducts, frames and other objects in or passing through insulation.
- .3 Do not compress insulation to fit into spaces.
- .4 Do not enclose insulation until it has been inspected and approved by Departmental Representative.
- .5 Refer to Section 08 11 14 – Metal doors and frames., for mineral fibre acoustic insulation installation in frames of interior doors.
- .6 Keep insulation minimum 75mm from heat emitting devices such as recessed light fixtures, and minimum 50mm from sidewalls of CAN/ULC-S604 Type A chimneys and CAN/CGA-B149.1 and CAN/CGA-B149.2 Type B and L vents.

Addendum A-01**PART 1 - GENERAL****1.1 Conditions**

- .1 All General Conditions, general instructions, additional specific instructions and addendum are part of this section.
- .2 This section must be read and related drawings examined, together with all sections and drawings describing works that are complementary, subordinate, prerequisite or otherwise related to work described.
- .3 The Contractor / subcontractor shall provide all materials, equipment, labor and services required for the complete execution of Sprayed insulation work, including all the accessories required, so that works perfectly fulfill the purposes for which they are intended.

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- .4 The application must be at least 75mm thick to all surfaces indicated on the drawings.**

1.2 Related sections**Addendum A-01**

- .1 Division 1 – General Requirements
- .2 Division ~~4 5~~ – ~~Masonry~~ Steel structure.
- .3 Section 07 21 13 – Board Insulation.
- .4 Section 07 21 16 – Blanket Insulation.
- .5 Section 07 26 00 – Vapour Retarders and Air Barriers.

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- .6 Section ~~07 52 00~~ **07 61 10** – ~~Modified Bituminous Membrane Roofing Sheet~~ **Metal siding.**

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- .7 Section ~~07 92 10~~ **07 84 00** – ~~Joint Sealing~~ **Firestopping.**

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- .8** Section 08 44 13 – Glazed aluminum curtain walls.
- .9** Section 09 21 16 – Gypsum Board Assemblies.

1.3 References

- .1 Works covered by this section must comply with the latest version or latest revision, of standards, codes and regulations listed below.
- .2 Canadian Urethane Foam Contractors' Association Inc. (CUFCA)
- .3 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .4 Underwriters' Laboratories of Canada (ULC)
 - .1 CAN/ULC-S101, Fire Endurance Tests of Building Construction and Materials.
 - .2 CAN/ULC-S102, Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
 - .3 CAN/ULC-S705.1, Standard for Thermal Insulation - Spray Applied Rigid Polyurethane Foam, Medium Density, Material Specification.

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- .4 CAN/ULC-S705.2, Standard for Thermal Insulation - Spray Applied Rigid Polyurethane Foam, Medium Density, Application.
- .5 Standard for Thermal Insulation - Spray Applied Rigid Polyurethane Foam, Medium Density – Installer responsibilities.

1.4 Submittals

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit two (2) copies WHMIS MSDS - Material Safety Data Sheets.
- .3 Manufacturer's Instructions: submit manufacturer's installation instructions and special handling criteria, installation sequence and cleaning procedures.

1.5 Test Reports

- .1 Submit, in accordance with Section 01 45 00 - Quality Control, certified test reports for insulation from approved independent testing laboratories, indicating compliance with specifications for specified performance characteristics and physical properties.
- .2 Submit test reports in accordance with CAN/ULC-S101 for fire endurance and CAN/ULC-S102 for surface burning characteristics.

1.6 Quality Assurance

- .1 Applicators to conform to CUFCA Quality Assurance Program.

Addendum A-01**.2 Qualifications:**

- .1 Installer:** person specializing in sprayed insulation installations with 5 years documented experience and approved by manufacturer.
- .2 Manufacturer:** company with minimum 5 years experience in producing of material used for work required for this project, with sufficient production capacity to produce and deliver required units without causing delay in work.

1.7 Mock-up

- .1 Construct mock-up in accordance with Section 01 45 00 - Quality Control.
- .2 Allow 24 hours for inspection of mock-up by Departmental Representative before proceeding with sprayed insulation work.

1.8 Safety Requirements

- .1 Protect workers as recommended by CAN/ULC-S705.2 and manufacturer's recommendations:
 - .1 Workers must wear gloves, respirators, protective clothing and eye protection when applying foam insulation.
 - .2 Workers must not eat, drink or smoke while applying foam insulation.

Addendum A-01**1.9 Protection**

- .1 Ventilate area in accordance with Section 01 51 00 - Temporary Utilities.
- .2 Ventilate area to receive insulation by introducing fresh air and exhausting air continuously during and 24 hour after application to maintain non-toxic, unpolluted, safe working conditions.
- .3 Provide temporary enclosures to prevent spray and noxious vapours from contaminating air beyond application area.
- .4 Protect adjacent surfaces and equipment from damage by overspray, fall-out, and dusting of insulation materials.

Addendum A-01**1.10 Low VOC materials**

- .1 The VOC content of all adhesives, sealants and sealant primers used on the inside of the building (i.e. to the inside of the sealing system) must be less than the VOC content limits of the State of California's South Coast Air Quality Management District (SCAQMD) Rule #1168, June 2006.
- .2 All paints, coatings and architectural finishes used inside the building (i.e. to the inside of the sealing system) and applied on site must :
 - .1 Architectural paints and coatings applied to interior walls and ceilings must not exceed the VOC content limits established in Green Seal Standard GS-11, Paints, First Edition, May 20, 1993.
 - matte paintings;
 - Not matte paintings.
 - .2 Anti-corrosive and anti-rust paints applied to interior ferrous metal substrates must not exceed the VOC content limit established in Green Seal Standard GC-03, Anti-Corrosive Paints, Second Edition, January 7, 1997.
 - .3 Clear wood finishes, floor coatings, stains, primers, and shellacs applied to interior elements must not exceed the VOC content limits established in South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1, 2004.

1.11 Waste Management and Disposal

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal.
- .2 Remove from site and dispose of all packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper, plastic, polystyrene, corrugated cardboard packaging material in appropriate on-site bins for recycling in accordance with Waste Management Plan.
- .4 Fold up metal banding, flatten and place in designated area for recycling.
- .5 Dispose of waste foam daily in location designated by Departmental Representative and decontaminate empty drums in accordance with CAN/ULC-S705.2.
- .6 Divert metal drums from landfill to metal recycling facility as approved by Departmental Representative and to CAN/ULC-S705.2.

Addendum A-01**1.12 Environmental Requirements**

- .1 Apply insulation only when surfaces and ambient temperatures are within manufacturers' prescribed limits.
- .2 Protect adjacent surfaces and do not proceed with the installation of insulation in windy conditions without adequate protection.

PART 2 - PRODUCTS**Addendum A-01****2.1 Generals**

- .1 Contractor/subtrade shall provide all materials, equipment, labour and services required for the complete execution of the foam insulation work in a manner that the finished work perfectly fulfills the intended purposes.
- .2 Work of the present section includes, without limitation, the supply and installation of the following elements :
 - .1 Preparatory works for material installation.
 - .2 Foam insulation of exterior wall junctions, doors, windows and soffits, as indicated in the drawings.
 - .3 The installation of fire protection on sprayed insulation materials, where required inside the building, according to codes regulations.

2.2 Materials

- .1 Polyurethane spray insulation : foam, in accordance with CAN/ULC-S705.1, (including modifications 1 and 2), type 2. RSI = 1.17/25mm, of thicknesses indicated and applied to substrate as indicated, 34kg/m³ density in accordance with ASTM D-1622, no VOC after 24hres when tested to CAN/ULC-S774.
- .2 Primer : as recommended by the insulation manufacturer and CAN/ULC S-705.2, and in accordance with the type of surfaces to isolate.
- .3 Primers: in accordance with manufacturer's recommendations for surface conditions.

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- .4 Thermal shield for polyurethane foam insulation :
 - .1 Portland cement based flame retardant coating approved by Underwriters Laboratories (ULC).
 - .2 Density : 384 kg/m³.
 - .3 Bond strength : 2441 kg/m².

PART 3 - EXECUTION**3.1 Manufacturer's instructions**

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.2 Application

- .1 Apply insulation in accordance with manufacturer's written instructions using the appropriate clean, well functioning equipment and tools. Ensure that surfaces to receive insulation do not suffer any undue pressure..
- .2 Prior to commencing work, practice an adherence test to ensure adherence to insulation.

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- .3 Prepare surfaces as required to obtain proper substrate conditions for the sprayed insulation. Ensure that all joint membranes are applied and that the vapour barrier installation is completed and approved.
- .4 Apply polyurethane foam insulation to substrates as indicated.
- .5 Prior to commencing the work, ensure that openings, perforations and other non-essential cavities are adequately sealed to avoid having the product spread beyond those places to insulated.
- .6 Apply insulation to clean surfaces in accordance with CAN/ULC-S705.2-05 and manufacturer's printed instructions. Use primer where recommended by manufacturer.
- .7 Apply sprayed foam insulation uniformly, in a manner to achieve the indicated thickness.
- .8 Protect adjacent surfaces and installed anchors.
- .9 Install sprayed insulation around masonry anchors and supports between rigid insulation panels on top of foundation walls to fill any voids. Cut the excess insulation so that the face of the sprayed insulation is flush with the panel faces.
- .10 Install Fire Protection material on all exposed insulation sprayed surfaces inside the building, as required by codes.

Addendum A-01**3.3 Field quality control****Addendum A-01****3.4 Cleaning**

- .1 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.
- .1 Proceed in accordance with Section 01 74 11 — Cleaning.
- .2 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

END OF SECTION

Addendum A-01**.3 Fixations :**

- .1 Nails, screws and staples: to CSA A82.31.
- .2 Screws (1 5/8") for outside partitions, carbon steel, self-tapping screws with anti-corrosive coating, appropriate lengths and dimensions with 10mm Phillips trumpets heads.
- .3 Protective plastic washers 50mm diameter ;

2.5 Accessories

- .1 Joint sealing tape: air resistant pressure sensitive adhesive tape, type recommended by vapour barrier manufacturer, 100mm wide.
- .2 Sealants: Compatible with vapor barrier used and recommended by sheet material manufacturer, in accordance with Section 07 92 10 – Joint Sealing.
- .3 Attachments: Galvanized steel bars and anchors, 50mm.

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- .4 Inner-wall flashings, see Section 07 61 10 – Sheet Metal siding.

PART 3 - EXECUTION**3.1 Manufacturer's instructions**

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.2 Examination

- .1 Verify that surfaces and conditions are ready to accept the Work of this section.
- .2 Ensure all surfaces are clean, dry, sound, smooth, continuous and comply with air barrier manufacturer's requirements.
- .3 Report any unsatisfactory conditions to the Departmental Representative.
- .4 Do not start work until deficiencies have been corrected. Commencement of Work implies acceptance of conditions.

3.3 Preparation

- .1 Remove loose or foreign matter which might impair adhesion of materials.
- .2 Ensure all substrates are clean of oil or excess dust; all masonry joints struck flush, and open joints filled; and all concrete surfaces free of large voids, spalled areas or sharp protrusions.
- .3 Ensure all substrates are free of surface moisture prior to application of self-adhesive membrane and primer.
- .4 Ensure metal closures are free of sharp edges and burrs.
- .5 Prime substrate surfaces to receive adhesive and sealants in accordance with manufacturer's instructions.

Addendum A-01**1.9 Extended Warranty**

- .1 For work of the present Section 07 46 13 – Preformed Metal Siding, the warranty period of 12 months is extended to **five (5) years**.
- .2 Provide written warranty, prepared and signed by both the manufacturer and the installer, in the name of Her Majesty the Queen, chief of Canada, certifying that the work specified under the present section shall remain free of defect due to workmanship or materials for a period of **five (5) years** from the date of final acceptance of the work. The warranty should indicate that the finishes are warranted against excessive non-uniform fading and pitting or corrosion and will remain consistent without cracking, chipping, and delamination or otherwise deteriorate or corrode.
- .3 Guarantees should include prompt correction of any defects upon receipt of a written notification from Departmental Representative that defects exist. Rectification work shall include labor, materials, equipment and services required to repair the defective parts of the work, and, in the case of manufactured items, supply and installation of parts new, replacement, at no cost to the satisfaction of Departmental Representative, during or outside normal working hours. Guarantees should also include the correction of any other parts and finishes of the building and any damaged to other surrounding property.

PART 2 - PRODUCTS**2.1 Materials and Finishes**

- .1 Galvanized steel sheet, cold rolled, to CAN/CGSB-93.2, grades A, and CSA-S136, Type 2 zinc coating.
- .2 Type 1 galvanized finish: heat galvanized, at a rate of 610 g/m² (2 oz/ft²), in accordance with CAN/CSA-G164 and ASTM A153/A153M.
- .3 Type 2 galvanize finish: hot dip zinc coating designation "Z275", in accordance with ASTM A653/A653.
- .4 Welding materials for steel: in accordance with CSA W59, of same composition as the materials to be welded, certified by the Canadian Welding Bureau.
- .5 Pre-painted finish for metal surfaces : modified polyester enamel, 100 % oven fired ceramic pigments, factory applied.
- .6 Aluminum sheet alloy 5754H42 high-performance aluminum-magnesium.

**2.2 Aluminum Metal
Exterior Cladding****Addendum A-01**

- .1 Aluminum modular panels with recess joint, sheet ~~2 mm~~ **3mm** thick, with concealed fastening system.
 - .1 Aluminum extrusions for the fastening system, comply with CAN/CGSB-93.2, alloy 6063-T6 and/or 6061-T6.
 - .2 Aluminum Plate panel system, comply with CAN/CGSB-93.2, 3003-H14/3105-H14 for painted finish, 2mm thickness.
 - .3 The mounting supports and brackets and reinforcements components will not leave any visible mark on the outer surface of the panels.
 - .4 All fasteners used for panels and supports installation (screws, rivets etc.) to be non-corrosive metal compatible with the aluminum cladding.

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- .2 The aluminum will be free of any visible imperfections such as tool marks, stains etc.. uniform in colour and gloss. Panels to be plumbed, true, level and in alignment, and according to dimensions shown on drawings.
- .3 The system will include extruded aluminum rail supports and all required panel's stiffeners. The system will be « dry set » type without sealer. Include all the seals to meet applicable codes in regard to wind loads, infiltration of air and water penetration. Design and install the entire system as a "Open Vented Rain Screen System", including openings for draining water moisture to the exterior.
- .4 Aluminum finish as will be described below:
 - .1 Exterior exposed aluminum surfaces ; to AAMA 2605, 3-coat, thermal setting enamel consisting of primer, colour coat and clear coat with 70% minimum fluoropolymer resin and polvinylidene fluoride (PVDF), 0,04 mm (1,6 mil) minimum total thickness, two (2) colours choose by Departmental Representative from the RAL color chart, as indicated and located on drawings (see notes 40A and 40B).

Addendum A-01**2.3 Anchor Rails**

- .1 Galvanized steel sheet folded and assembled to « Z » form as indicated on drawings, 16 gauge minimum thickness, to ASTM A446, grade 'A' with Z275 galvanized coating to ASTM A525M, provided with slotted holes 600mm c/c to allow adjustment, stainless steel bolts 10mm. Dimensions and spacing shown on the drawings.
- .2 Girts ("Z-bars") : Galvanized steel sheet folded to Z and U shapes, minimum thickness of 18 calibre, in accordance with ASTM A446, grade 'A' with Z275 galvanized zinc coating in accordance with ASTM A525M of sizes and spaced as indicated on drawings. Use two steel sheet angles to form adjustable girts.
- .3 Metal furring: Galvanized sheet steel, folded, omega type, 25 mm thick, 18 calibre, in accordance with ASTM A446, grade 'A' with galvanized zinc coating Z275 to ASTM A525M.
- .4 Aluminum extrusions as recommended by the manufacturer.

2.4 Accessories

- .1 Provide finish profiles, furring, wall baseboards and all other elements required to complete execution of metal cladding work.
- .2 Exposed trim: inside corners, outside corners, cap strip, drip cap, undersill trim, starter strip and window/door trim of same material, same colour as cladding, with fastener holes pre-punched.
- .3 Sealing strips as recommended by the manufacturer
- .4 Air/vapour barrier, modified bituminous sheet, self-adhesive, refer to Section 07 26 00 – Vapour Retarders and Air Barriers.

Addendum A-01**PART 2 - PRODUCTS****2.1 General****Addendum A-01**

- .1 Wall systems in this section include, without limitation, the supply and installation of:
 - .1 The installation of sloped metal siding of exterior walls, including staples, moldings and all required to allow complete sealing system accessories.
 - .2 Required supports, **inner** wall flashings and various connections, **in coordination with work of the Section 07 26 00 – Vapour Retarders and Air Barriers.**
 - .3 All adhesives, anchors, fasteners, moldings, and other accessories required for metal siding sheets works.

2.2 Sheet metal materials

- .1 Prefinished steel panel identified « Stapled metal sheet » on drawings : Sheet metal to ASTM A 653/A653M (latest revision). Prefinished steel with factory applied silicone modified polyester. The steel core zinc coated Z-275 (G-90) on each side, to ASTM A924/A924M (latest revision), 0,65mm thickness (gauge 24).
 - .1 Metal cladding panel, according to drawings;
 - .2 Grade A steel with a minimum elastic limit of 230MPa (33,000lbs/sq.in.) and assuming a maximum stress of 144MPa (20,625 lbs/sq.in.);
 - .3 Panel dimensions: 600mm X 600mm height;
 - .4 Layout as indicated to the drawings;
 - .5 Exterior finish ; to AAMA 2605, 3-coat, thermal setting enamel consisting of primer, colour coat and clear coat with 70% minimum fluoropolymer resin and polvinylidene fluoride (PVDF), 0,04 mm (1,6 mil) minimum total thickness, two (2) colours choose by Departmental Representative from the RAL color chart.
- .2 Metal furring: Galvanized sheet steel to ASTM A 653/A653M (latest revision), gauge 16. Dimension and spacing as recommended by manufacturer.

2.3 Accessories

- .1 Isolation coating: alkali resistant bituminous paint.
- .2 Plastic cement: to CAN/CGSB-37.5.
- .3 Metal siding underlay: recommended by system manufacturer.
- .4 Sealant: Asbestos-free sealant, compatible with systems materials, recommended by system manufacturer.
- .5 Cleats: of same material, and temper as sheet metal, minimum 50mm wide. Thickness same as sheet metal being secured.
- .6 Concealed tape, non-skinning, non-drying, butyl rubber. 3mm thick.
- .7 Fasteners: recommended by system manufacturer, length and thickness according to metal siding
- .8 Washers: of same material as sheet metal, 1 mm thick with rubber gaskets.
- .9 Touch-up paint: as recommended by sheet metal roofing manufacturer.

Addendum A-01**PART 1 - GENERAL****1.1 Conditions**

- .1 All General Conditions, general instructions, additional specific instructions and addendum are part of this section.
- .2 This section must be read and the related drawings examined, together with all sections and drawings describing works that are complementary, subordinate, prerequisite or otherwise related to work described.
- .3 The Contractor / subcontractor shall provide all materials, equipment, labor and services required for supply and application of sprayed fireproofing material, including all accessories required, so that works perfectly fulfill the purposes for which they are intended.

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- .4 **The application of fireproofing material must provide 1 hour, 1,5 hours or 2 hours fire resistance as indicated in the drawings.**

1.2 Related sections

- .1 Division 1 – General Requirements.
- .2 Division 05 – Structural Metals
- .3 Section 07 84 00 – Firestopping.

1.3 References

- .1 Works covered by this section must comply with the latest version or latest revision, of standards, codes and regulations listed below.
- .2 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .3 Underwriter's Laboratories of Canada (ULC)
 - .1 CAN/ULC-S101. Standard Methods of fire Endurance Tests of Building Construction and Materials.
 - .2 CAN/ULC-S102. Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
- .4 American Society for Testing and Materials International (ASTM) :
 - .1 D2240 : Standard Test Method for Rubber Property – Durometer Hardness
 - .2 E-605 : Standard Test Methods for Thickness and Density of Sprayed Fire-Resistive Material Applied to Structural Members.
 - .3 E736: Standard Test Methods for Cohesion/adhesion of Sprayed Fire-Resistive Material Applied to Structural Members.
 - .4 E759: Standard Test Methods for Effect of Deflection of Sprayed Fire-Resistive Material Applied to Structural Members.
 - .5 E760: Standard Test Methods for Effect of Impact on Bonding of Sprayed Fire-Resistive Material Applied to Structural Members.
 - .6 E761: Standard Test Methods for Compressive Strength of Sprayed Fire-Resistive Material Applied to Structural Members.
 - .7 E859: Standard Test Methods for Air erosion of Sprayed Fire-Resistive Material Applied to Structural Members.
 - .8 E937: Standard Test Methods for Corrosion of Steel of Sprayed Fire-Resistive Material Applied to Structural Members.

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- .6 Protect adjacent surfaces and equipment from damage by overspray, fall-out, and dusting of fireproofing materials.

1.8 Waste management and disposal

- .1 Works are governed by a Waste **management plan** in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal. The work of this section shall be made in accordance with the requirements of this plan.

1.9 Ambient Conditions

- .1 At temperatures less than 5 degrees C, ensure that 5 degrees C air and substrate temperature is maintained during and for 24 hours after application. Ensure that natural ventilation to properly dry the fireproofing during and subsequent to its application is provided. In enclosed areas lacking openings for natural ventilation, ensure that interior air is circulated and exhausted to the outside.
- .2 Maintain relative humidity within limits recommended fireproofing manufacturer.
- .3 Ensure that natural ventilation to properly dry fireproofing during and subsequent to its application is provided.
- .4 In enclosed areas lacking openings for natural ventilation, provide minimum of four (4) air exchanges per hour by forced air circulation.

1.10 Warranty

- .1 For work of the present Section 07 81 00 – Applied Fireproofing, the warranty period of 12 months is extended to **five (5) years**.
- .2 Provide written warranty, in the name of Canada, certifying that the works are guaranteed for a period of **five (5) years** from the date of final acceptance of the work.

PART 2 - PRODUCTS**2.1 General****Addendum A-01**

- .1 Fire rating must comply with the requirements of the NBC. 1 hour, **1.5 hrs or 2 hrs** fire-rating is required, where indicated on drawings, **for all work supporting the second floor level.**

2.1 Materials

- 1 Sprayed fireproofing: ULC certified asbestos-free mineral fibre fireproofing qualified for use in ULC Designs specified and fungus resistant for 28 days.
- .2 **Cementitious Fireproofing spay applied :**
 - .1 Gypsum base cementitious fireproofing, with vermiculite or other materials specially formulated for spray application, factory blended, labeled ULC approval, and approved for use in ULC specifications, dry density minimum average of 240 kg/m³, bond strength of 16,2kPa and a compressive strength with 10% deformation of 68,9kPa, Gray color.
 - .3 The fire resistive component should have indicated fire rating. Fireproofing to be applied under existing hollowed concrete slabs.
 - .4 Curing compound: type recommended by fireproofing manufacturer, qualified

Addendum A-01**Addendum A-01**

- .4 Spandrels, **identified TP1 et TP2** : internally reinforced insulated panels with air tight fittings, interior face of 22 calibre galvanized steel, welded prior to galvanization, vapour barrier where indicated on drawings. Exterior face of glass type as indicated on drawings.
- .5 Flashings: 1.6 mm thick aluminum, finish to match curtain wall mullion sections where exposed, secured with concealed fastening method.
- .6 Vapour retarder: specified in Section 07 26 00 – Vapour Retarders and Air Barriers.
- .7 Aluminum finish panels, where indicated on drawings.
 - .1 Aluminum panel; 3 mm thickness, identified « **TP2** ») on drawings;
 - .2 Reinforcements and extruded aluminum profiles where required.

Addendum A-01**.3 Concealed fasteners and anchors.**

- .8 Pressure plates and covers: Extruded aluminum, types and sizes as indicated on drawings.
- .9 Vertical joints: structural silicone
- .10 Aluminum Windows: Refer to specifications on section 08 51 13 – Aluminum windows, and indications on drawings.
- .11 Aluminum doors: Refer to specifications on section 08 11 16 – Aluminum Doors and Frames, and indications on drawings.
- .12 Vestibules: curtain wall system as indicated to detailed drawings, with frame adapter for doors.

2.4 Accessories

- .1 Thermal break : extrusion of stretched Polyvinyl Chloride (PVC) or extruded semi-rigid vinyl, compressed to form tight joints between principal sections and pressure plates.
- .2 Setting blocks : for glazing, neoprene, appropriate dimensions, Shore A durometer index of 80-90.
- .3 Spacers, weep holes and sealant fittings for glass spandrels, as required and as recommended by manufacturer, with fittings to prevent penetration of exterior humidity.
- .4 Anchors and fasteners: stainless steel or aluminum, 3 mm minimum thickness.
- .5 Insulation tape and cushion: for use between steel anchors and aluminum extrusions, 3 mm thick, of closed cell polyethylene (EVA) as required.
- .6 Structural glazing Silicone sealant : High-Performance Silicone sealant, medium-modulus one part, conforms to ASTM C920 type S, Grade NS, Class 25 and CAN/CGSB-19.13.
- .7 Joint sealer for glazing, co-extruded EPDM mastic : extruded glazing fitting composed of EPDM special rubber combined with a portion of pre-extruded sealant for mastic method.
- .8 Isolation cladding: alkali resistant bituminous paint.

Addenda-01

Door: C3.2-B	C-3.2B DE C4.2		MGR
	" " - 915mm x 2135mm x 45mm U/L 60		PMC/CAP
	3 HINGE(S) "super heavy-duty" (non-removable pin) T4A3786 - 114mm x 101mm + F.N.A.	652	McKinney
	1 KEY LOCK(S) (mortise) "super heavy-duty" (stroreroom) ML2057 x LWA x D134 x SS118/M17	630	Corbin
	1 DOOR CLOSER(S) (surface) (standard arm) 8501	689	Norton
	1 KICK PLATE(S) k0-050 - 254mm x 864mm x B4E	630	Trimco
	1 DOOR STOPPER(S) (wall mounted) 1270 CX	626	Trimco
Door: C3.2C-A	C-3.2C DE C-3.2B		MDR
Addenda-01	" " - 915mm x 2135mm x 45mm U/L 45min		PMC/CAP
	3 HINGE(S) "super heavy-duty" (non-removable pin) T4A3786 - 114mm x 101mm + F.N.A.	652	McKinney
	1 KEY LOCK(S) (mortise) "super heavy-duty" (stroreroom) ML2057 x LWA x D134 x SS118/M17	630	Corbin
	1 ELECTRIC STRIKE(S) (mortise) (fail secure) 1006CS + LBSM X 12/24vdc + astragal 150	630	H.E.S.
	1 DOOR CLOSER(S) (surface) (parallel arm) P 8501	689	Norton
	1 KICK PLATE(S) k0-050 - 254mm x 864mm x B4E	630	Trimco
	1 DOOR STOPPER(S) (wall mounted) 1270 CX	626	Trimco
	2 CARD READER(S) (by others)		
Door: C3.2C-B	C-3.2C DE PLUMBING ACCESS		MGR
	" " - 810mm x 2135mm x 50mm		PMC/CAP
	3 HINGE(S) "super heavy-duty" (institutionnal) 4-½FM-ICS - 114mm x 114mm + trx-pin	630	Folger Adam
	1 KEY LOCK(S) FOR DETENTION 12 x 10-4db x HM (paracentric key)	Galv.	Folger Adam
	1 DOOR HANDLE(S) RECESSED(S) 1111B – 127mm x 127mm + tamperproof screw	630	Trimco

Addenda-01

Door: C3.2C-C	C-3.2D DE C-3.2C		MGR
Addenda-01	" " - 915mm x 2135mm x 45mm U/L 45min		PMC/CAP
	3 HINGE(S) "super heavy-duty" (non-removable pin) T4A3786 - 114mm x 101mm + F.N.A.	652	McKinney
	1 KEY LOCK(S) (mortise) "super heavy-duty" (stroreroom) ML2057 x LWA x D134 x SS118/M17	630	Corbin
	1 ELECTRIC STRIKE(S) (mortise) (fail secure) 1006CS + LBSM X 12/24vdc + astragal 150	630	H.E.S.
	1 DOOR CLOSER(S) (surface) (parallel arm) P 8501	689	Norton
	1 KICK PLATE(S) k0-050 - 254mm x 864mm x B4E	630	Trimco
	1 DOOR STOPPER(S) (wall mounted) 1270 CX	626	Trimco
	2 CARD READER(S) (by others)		
Door: C3.2D-B	C-3.2D @ C-4.2		MG
	" " - 915mm x 2135mm x 45mm U/L 60		PMC/CAP
	3 HINGE(S) "super heavy-duty" (non-removable pin) T4A3786 - 114mm x 101mm + F.N.A.	652	McKinney
	1 KEY LOCK(S) (mortise) "super heavy-duty" (stroreroom) ML2057 x LWA x D134 x SS118/M17	630	Corbin
	1 ELECTRIC STRIKE(S) (mortise) (fail secure) 1006CS + LBSM X 12/24vdc + astragal 150	630	H.E.S.
	1 DOOR CLOSER(S) (surface) (standard arm) 8501	689	Norton
	1 KICK PLATE(S) k0-050 - 254mm x 864mm x B4E	630	Trimco
	1 DOOR STOPPER(S) (wall mounted) 1270 CX	626	Trimco
	1 CARD READER(S) (by others)		

Addenda-01

Door: C3.3A Addenda-01	C-3.1A DE C3-3A " " - 915mm x 2135mm x 45mm U/L 0h		MDR PMC/CAP
	3 HINGE(S) "super heavy-duty" (non-removable pin) T4A3786 - 114mm x 101mm + F.N.A.	652	McKinney
	1 KEY LOCK(S) (mortise) "super heavy-duty" (storreroom) ML2057 x LWA x D134 x SS118/M17	630	Corbin
	1 ELECTRIC STRIKE(S) (mortise) (fail secure) 1006CS + LBSM X 12/24vdc + astragal 150	630	H.E.S.
	1 DOOR CLOSER(S) (surface) (parallel arm) P 8501	689	Norton
	1 KICK PLATE(S) k0-050 - 254mm x 864mm x B4E	630	Trimco
	1 DOOR STOPPER(S) (wall mounted) 1270 CX	626	Trimco
	1 CARD READER(S) (by others)		
Door: C3.4 Addenda-01	C-3.1A from C-3.4 " " 2/960mm x 2135mm x 45mm U/L 0h		MGR/MDRA PMC/CAP
	8 HINGE(S) "super heavy-duty" (non-removable pin) T4A3786 - 114mm x 101mm + F.N.A.	652	McKinney
	2 FLUSHBOLTS 3917 x 305mm + strike 3910/630	626	Trimco
	1 DEAD KEY LOCK(S) (mortise) "super heavy-duty" ML2011 x D134 x ASANL/M17 (installation at 1524mm f.f.)	626	Corbin
	2 DOOR PULL(S) & GRIP(S) 1191-5J (489mm) x "G" assembling (back/back)	630	Trimco
	1 AUTOMATIC DOOR OPENER SW200i x interruptor x 120vac/15a	628	Besam
	2 PUSH / EXIT SWITCH(S) (narrow) CM 8100	630	Besam
	1 SENSOR(S) "BODYGUARD"	Noir	Besam
	1 DOOR HOLDER(S) (surface) 9-Seriesx required width (stopper only)	630	Rixson
	1 DOOR CLOSER(S) (surface) (parallel arm / integrated stopper) CPS 8501 (inactive door)	689	Norton
	2 KICK PLATE(S) K0-050 - 254mm x 950mm x B4E	630	Trimco

Addenda-01

Door: C4.5	C-4.2 @ C-4.5		MG/MDA
	" " - 1/915mm + 1/590mm x 2135mm x 45mm U/L 45		PMC/CAP
	6 HINGE(S) "regular" (interim) (non-removable pin) TA2714 - 114mm x 101mm + F.N.A.	652	McKinney
	2 FLUSHBOLTS 3917 x 305mm + strike 3910/630	626	Trimco
	1 KEY LOCK(S) (mortise) "super heavy-duty" (classroom) ML2055 x LWA x D134 x SS118/M17	630	Corbin
	1 DOOR CLOSER(S) (surface) (standard arm) 8501	689	Norton
	1 KICK PLATE(S) K0-050 - 254mm x 864mm x B4E	630	Trimco
	1 DOOR STOPPER(S) (wall mounted) 1270 CX	626	Trimco
Door: C4.5-A	C-4.2 @ C-4.5A		MD
	" " - 915mm x 2135mm x 45mm		PMC/CAP
	3 HINGE(S) "regular" (interim) (non-removable pin) TA2714 - 114mm x 101mm + F.N.A.	652	McKinney
	1 KEY LOCK(S) (mortise) "super heavy-duty" (entrance/office) ML2065 x LWA x D134 x SS118/M17	630	Corbin
	1 KICK PLATE(S) k0-050 - 254mm x 864mm x B4E	630	Trimco
	1 DOOR STOPPER(S) (wall mounted) 1270 CX	626	Trimco
Door: C6.1	C-4.1 DE C-6.1		MGR/MDRA
	" " - 2/915mm x 2700mm x 45mm U/L 45		PMC/CAP
	8 HINGE(S) "super heavy duty" (non removable pin) T4A3786 - 114mm x 101mm + F.N.A.	652	McKinney
	2 AUTOMATIC FLUSHBOLT 3810 x 305mm	626	Trimco
	1 KEY LOCK(S) (mortise) "super heavy duty" (storeroom) ML2055 x LWA x D134 x SS118/M17	630	Corbin
	2 DOOR CLOSER(S) (surface) (parallel / integrated stopper + holder) CPSH 8501 + 6890/6891	689	Norton
	1 COORDONNATEUR(S) DE DOOR(S) (surface) 3094 x required width	Noir	Trimco
	2 KICK PLATE(S) K0-125 - 915mm x 940mm x B4E	630	Trimco
	2 ELECTROMAGNETIC DOOR HOLDER 994 x 24vdc (.068amp)	628	Rixson

Addenda-01**Door: C6.1****C-4.1 DE C-6.1****" " - 2/915mm x 2700mm x 45mm U/L 45****MGR/MDRA****PMC/CAP**

8 HINGE(S) "super heavy-duty" (non-removable pin)	652	McKinney
T4A3786 - 114mm x 101mm + F.N.A.		

2 AUTOMATIC FLUSHBOLT	626	Trimco
3810 x 305mm		

1 KEY LOCK(S) (mortise) "super heavy-duty" (storeroom)	630	Corbin
ML2055 x LWA x D134 x SS118/M17		

2 DOOR CLOSERS (surface) (parallel stopper)	689	Norton
P 8501		

1 DOOR COORDINATOR (surface)	Noir	Trimco
3094 x required width		

2 KICK PLATES	630	Trimco
K0-125 - 915mm x required width + B4E		

2 ELECTROMAGNETIC DOOR HOLDER(S)	628	Rixson
** 994 x 24vdc (.068amp.)		

2 DOOR POSITION SWITCHES (concealed)	Grey	Securitron
** DPS - M		

1 MAGNALOCK (double)		Securitron
** DM62BD x 24vdc		

1 POWER SUPPLY		Securitron
** BPS-2 + RB-4-24 + B-24-5		

1 MORTISE KEYSWITCH (hold)	630	Securitron
** MK A2		

1 MORTISED CYLINDER (threaded)	626	Corbin
1000-118 x CM		

1 PUSH / EXIT SWITCH (emergency exit)	630	Securitron
** PE 2		

1 LOCAL ALARM	630	Securitron
** PZ 1 (86db)		

**** ELECTRIFIED ITEM**

Addendum A-01

~~2.1~~**2.2 Flat Glass****Addendum A-01**

- .1 Polished or float glass (**V**) : to CAN/CGSB-12.3, "glazing quality", 6mm thick.
- .2 Wired glass (**VA**) : Polished both sides to CAN/CGSB-12.11, square style wire mesh, 6 mm thick.
- .3 Tempered glass (**VT**) : to CAN/CGSB-12.1, clear glass, 6mm (1/4") thick, or indicated on drawings.
- .4 Tempered glass (**VTT**) : to CAN/CGSB-12.1, clear glass, frosted (frosted one face), 6mm (1/4") thick, or indicated on drawings.
- .5 Laminated safety glass (**VL1**) : glass and polycarbonate for glass partition to ASTM C1036 and ASTM C1172, **24mm** total thickness, with following composition :
 - .1 Clear tempered glass, 6mm thick;
 - .2 Elasto-plastic interlayer film SGP 1.5mm thick;
 - .3 Polycarbonate 9mm thick ;
 - .4 Elasto-plastic interlayer film SGP 1.5mm thick;
 - .5 Clear tempered glass, 6mm thick.
- .6 Multi-laminated glass (**VL2**) With intumescent interlayer and polycarbonate sheet, for **90min** fire-rating, to ASTM C1036 and ASTM C1172, **37mm** total thickness, with following composition :
 - .1 Multiple sheets clear glass assembly, fire and flame resistant;
- .7 Surface compressive stresses limits are:
 - .1 100MPa for tempered glass.
- .8 A heat Soak test is required for all tempered glass unit. The manufacturer must provide to the Departmental Representative the required documents certifying that each glass plates has been tested, and a written certification that all tempered glass of the project have suffered Heat Soak verification in accordance with applicable standards.

2.3 Sealed Insulating Glass

- .1 Refer to doors and frames schedule for of various glass type locations.
- .2 Insulating glass unit (**V-01**) for vision glass of exterior windows and curtain walls, to CAN/CGSB-12.8, **25 mm** total thickness, with following composition :
 - Exterior
 - .1 Clear tempered glass, 6 mm thick, with low emissivity film LowE 272 on surface 2.
 - .2 12mm air space sealed and separated with non-metallic gray spacer around perimeter. Inert gas fill, Argon, to a minimum of 90%.
 - .3 Clear tempered glass, 6mm thick.
 - Interior
 - .4 Sealed units must meet or exceed the following characteristics :
 - Visible light transmission: 70 %
 - Exterior light reflected : 11 %
 - Total solar energy transmitted : 34 %
 - Total solar energy reflected : 29 %
 - U factor in winter : 0.24
 - Relative heat gain: 95
 - Darkening coefficient : .46
 - Condensation level : I=66

Addendum A-01**Addendum A-01**

- .3 Insulating glass unit (**V-02**) for vision glass with ~~serigraphy (screen print)~~ **printed film (PET)** of exterior windows and curtain walls, to CAN/CGSB-12.8, **29 mm** total thickness, with following composition :
- Exterior
- .1 Heat treated glass, 6 mm, with low emissivity film Low E 272 on surface 2.
 - .2 12mm air space sealed and separated with non-metallic gray spacer around perimeter. Inert gas fill, Argon, to a minimum of 90%.
 - .3 Laminated glass, 10.5mm thickness, consisting of :
 - .1 Clear glass, 5mm thick;
 - .2 Polyethylene terephthalate interlayer film with double UV ink printing film fused to the glass and ethylene-vinyl acetate (EVA), 0.5mm.
 - .3 Clear glass, 5mm thick;
 - .4 Note:
color printing No1 (outside): Red Pantone
Color printing no2: Pure White.
Electronic Template to be provided to the contractor by Departmental Representative
- Interior
- .4 Sealed units must meet or exceed the following characteristics :
Visible light transmission: 70 %
Exterior light reflected : 11 %
Total solar energy transmitted : 34 %
Total solar energy reflected : 29 %
U factor in winter : 0.24
Relative heat gain: 95
Darkening coefficient : .46
Condensation level : I=66
- .4 Insulating glass unit (**V-03**) for vision glass of exterior doors, to CAN/CGSB-12.8, **19 mm** total thickness, with following composition :
- .1 A composition similar to V-01, with **7mm** spacer.

Addendum A-01

- .5 Insulating glass unit (**V-04**) for vision glass of ~~exterior doors windows and curtain walls~~, to CAN/CGSB-12.8, ~~23.5mm 25mm~~ total thickness, with following composition :

Exterior**Addendum A-01**

- .1 ~~Heat treated~~ **Clear tempered** glass, 6 mm, with ~~fritted ceramic finish 50% opacity gray dots~~ **low emissivity film LowE 272** applied on surface 2.
- .2 ~~7mm 12mm~~ air space sealed and separated with non-metallic gray spacer around perimeter. Inert gas fill, Argon, to a minimum of 90%.

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- .3 ~~Heat treated~~ **Laminated** glass, ~~6mm, with low emissivity film LowE SN68 on surface 3~~ **10,5mm** total thickness, with following composition :

- .1 Clear glass 5mm;
- .2 Interlayer Polyethylene Terephthalate film with dual UV printing ink film fused to the glass and ethylene-vinyl-acetate film (EVA), 0.5mm;
- .3 Clear glass 5mm
- .4 Note :
Color printing no1 (exterior side) : Red Pantone
Color printing no2 : Pure White.
Patterns will be transmitted to the Contractor in electronic format by Departmental Representative.

Addendum A-01Interior**Addendum A-01**

- .4 Sealed units must meet or exceed the following characteristics :

Visible light transmission: **70%** ~~37%~~

Exterior light reflected : **11%** ~~47%~~

Total solar energy transmitted : **34%** ~~49%~~

Total solar energy reflected : **29%** ~~30%~~

U factor in winter : **0,24** ~~0,25~~

Relative heat gain: **95** ~~70~~

Darkening coefficient : **.46** ~~.34~~

Condensation factor : I=66

2.4 Spandrel glazing

- .1 Refer to drawings for of various glass type locations.

Addendum A-01

- .2 Spandrel glass unit (**TP1**) for glass panels with **printed film (PET)** serigraphy (screen print) of spandrel panels, in accordance with CAN/CGSB-12.8. **29 mm** ~~25 mm~~ overall thickness. ~~Outside tempered glass, clear, 6mm thick, with NEAT silicone dioxide treatment on face 1. Inside tempered glass, clear, 6mm thick, with ceramic coating applied on surface 3 Charcoal 24-8025 color, fused during the soaking process, to CAN/CGSB 12.9.~~ **with following composition :**

Addendum A-01Exterior

- .1 Heat treated glass, 6 mm, with low emissivity film LowE 272 applied on surface 2.
- .2 12mm air space sealed and separated with non-metallic gray spacer around perimeter. Inert gas fill, Argon, to a minimum of 90%.
- .3 Laminated glass 10,5mm total thickness, with following composition :
- .1 Clear glass 5mm;
 - .2 Interlayer Polyethylene Terephthalate film with dual UV printing ink film fused to the glass and ethylene-vinyl-acetate film (EVA), 0.5mm;
 - .3 Clear glass 5mm
 - .4 Note :
Color printing no1 (exterior side) : Red Pantone
Color printing no2 : Pure White.
White printing no2 will cover 100% of surfaces for TP1 assemblies
Patterns will be transmitted to the Contractor in electronic format by Departmental Representative.

Interior

- .4 Sealed units must meet or exceed the following characteristics :

Visible light transmission: 70%

Exterior light reflected : 11%

Total solar energy transmitted : 34%

Total solar energy reflected : 29%

U factor in winter : 0,24

Relative heat gain: 95

Darkening coefficient : .46

2.5 Accessories

- .1 Setting blocks: Neoprene, 80-90 Shore A durometer hardness to ASTM D2240, minimum 100 mm length, to suit glazing method, glass light weight and area
- .2 Spacer shims: Neoprene, 50-60 Shore A durometer hardness to ASTM D2240, 75 mm long x one half height of glazing stop x thickness to suit application. Self adhesive on one face.

Addendum A-01

- .3 Glazing tape:
 - .1 Preformed butyl compound with integral resilient tube spacing device, 10-15 Shore A durometer hardness to ASTM D2240; coiled on release paper; gray colour.
- .4 Glazing bead: resilient polyvinyl chloride or silicone, extruded shape to suit glazing channel retaining slot, colour as selected for installation in aluminum mouldings.
- .5 Beading (for doors and steel frames): Glazing beads shall be manufactured from solid steel bars of 20mm x 20mm or 25mm x 25mm as indicated; glazing beads should fit properly, butted joint corners and secured to frame members with self-tapping screw tamper « TORX Plus » type; See also 08 11 14 – Metal doors and frames.
- .6 Glazing clips: manufacturer's standard type.
- .7 Lock-strip gaskets: to ASTM C542, black neoprene for cavity model or splinted for bedded strip. Sill gaskets must bear interior channel and evacuation holes for water, corners gasket, moulded but injection-bedded to main gaskets.
- .8 Sealant: silicone rubber bases single component or according to glass manufacturer's recommendations.
- .9 Prime-sealers and cleaners: to glass manufacturer's standard.
- .10 **Speak-Thru** : Made of heavy stainless steel, brushed finish, with concentric circular louvers spaced to deflect projectiles, mesh section (pass-thru). All elements and components are stainless steel type 304 finish 04. Bullet proof (level 3) all fasteners and screws to be stainless steel vandal-proof « TORX Plus » type. 1 Speak-Thru required for « control station ». Dimensions: 152mm diameter.

2.6 Fabrication

- .1 Tempered glass shall be fabricated using horizontal dipping process, without the use of clamps and discretely bear the marking « architectural tempered glass ».
- .2 All sealed glass units shall be fabricated in accordance with CAN/CGSB-12.8 and by a manufacturer who shall provide a certificate confirming that the sealed glass units comply with IGMAC certification requirements. Insulating glass products shall bear a valid number listed on the IGMAC certified product list, latest edition, and shall be clearly identified as IGMAC certified.
- .3 The glass assemblies must be constructed so that no Low E film, comes into contact with the interlayer spacers (Delete Edge), in accordance with applicable standards

Addendum A-01**Addendum A-01****2.7 Couleurs des pellicules imprimées**

.1 **Red PANTONE :** **Official Red**
Pantone® 485C
CMYK: C0 M93 Y95 K0
RGB: R213 G43 B30
WEB: D52B1E

.2 **Pure White :** **Signal White**
RAL9003
Proposed sample to be approved by Departmental Representative

PART 3 - EXÉCUTION**3.1 Manufacturer's Instructions**

.1 Compliance: Comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.2 Examination

.1 Verify that openings for glazing are correctly sized and within tolerance.

.2 Verify that surfaces of glazing channels or recesses are clean, free of obstructions, and ready to receive glazing.

3.3 Preparation

.1 Clean contact surfaces with solvent and wipe dry.

.2 Seal porous glazing channels or recesses with substrate compatible primer or sealer.

.3 Prime surfaces scheduled to receive sealant.

3.4 Exterior Glass Panels – Dry Mount (premoulded panels)

.1 Cut self-adhesive tape to appropriate length and place on glazing glass. Seal corners by abutting the self-adhesive tape and covering the joints with sealant product.

.2 Place setting blocks at an interval equivalent to one quarter of the glass panel width, in a manner that the end blocks are maximum 150 mm from the panel corners.

.3 Place glass panel on setting blocks and press to fixed glass bead exerting sufficient pressure to obtain perfect contact between surfaces.

.4 Place moveable glass beads without displacing glass panel self-adhesive tape and exert sufficient pressure to obtain perfect contact between surfaces.

.5 Cut away excess self-adhesive tape.

3.5 Interior Glass Panels – Dry Mount (self-adhesive tape/self-adhesive tape)

.1 Install glass panels in doors and interior glass partitions with steel frames as indicated on drawings.

.2 Cut self-adhesive tape to the appropriate length and press to permanent glass beads so that the tape extends 1.6mm above the vision line.

Addendum A-01

- .3 Place setting blocks at an interval equivalent to one quarter of the glass panel width, in a manner that the end blocks are maximum 150mm from the panel corners.
- .4 Place glass panel on setting blocks and press against self-adhesive tape to as to obtain perfect contact between surfaces all along the glass panel or glazing.
- .5 Place self-adhesive tape along the edge of the glass panel.
- .6 Place moveable glass beads without displacing self-adhesive tape and exert pressure along the self-adhesive tape in order to obtain perfect contact between the two surfaces.
- .7 Cut away excess self-adhesive tape with appropriate knife.

3.6 Cleaning

- .1 Perform cleaning after installation to remove construction and accumulated environmental dirt.
- .2 Remove traces of primer, caulking.
- .3 Remove glazing materials from finish surfaces.
- .4 Remove labels after work is complete.
- .5 Clean glass and mirrors using approved non-abrasive cleaner in accordance with manufacture's instructions.
- .6 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

3.7 Protection

- .1 After installation, mark light with an "X" by using removable plastic tape or paste. Do not mark heat absorbing or reflective glass units.

END OF SECTION

Addendum A-01**2.3 Accessories**

- .1 Metal furring runners, hangers, tie wires, inserts, and anchors: to Section 09 22 16 – Non-structural Metal Framing and complying to ASTM C1047 and CAN/CSA A82.30, galvanized. In the case of elements part of exterior walls and soffits, channels to be zinc-coated to a minimum of 275g/m² (designation Z275) to ASTM-A653M.
- .2 Drywall mouldings: Casing beads, corner beads and edge trim, 0,5mm core thickness galvanized (Z275) steel channels, to ASTM A525M-86, base thickness, perforated flanges, one piece length per location.
 - .1 Corner bead
 - .2 L moulding.
 - .3 J moulding.
- .3 Gypsum board control joint channels: zinc coated steel, 44mm wide by 13mm deep, to ASTM C1047.
- .4 Transition reveal moulding: Pre-finished extrude aluminum trim, minimum 2.5mm thick, one piece length, tapered and grooved. Aluminum Alloy 6063, temper T5, tensile strength 31Ksi.
 - .1 Wall reveal 11mm (7/16") X 9,5mm (3/8") wide, for 12mm gypsum panels.
 - .2 Wall reveal de 16mm (5/8") X 9,5mm (3/8") wide, for 16mm gypsum panels.
 - .3 Transition moldings to be installed at junctions of gypsum finishes and adjacent baseboards and door frame, or as indicated on drawings.

2.4 Fasteners

- .1 Nails, screws and clips: to ACNOR A82.31. Type S screws for interior partitions. Carbon steel screws for exterior uses with self tapping tip and rustproof coating, of appropriate length and dimensions, with Phillips 10mm trumpet head.
- .2 Adhesive: to CAN/CGSB-71.25-0M88 and ASTM C-557.

2.5 Joints

- .1 Joint compound: to ASTM C475, asbestos-free, regular, for general use.
- .2 Fast drying joint compound: plaster and joint compound, to ASTM C475, asbestos free, rapid drying time of 1-2 hours, of adherent quality.
- .3 Bonding agent for plaster: to ASTM C631, vinyl acetate homopolymer emulsion.
- .4 Joint tape, regular: cross-fiber tape, for gypsum board joints.
- .5 Joint sealer: see section 07 92 10 – Joint Sealing.

Addendum A-01**2.6 Acrylic coating**

- .1 Acrylic coating :
 - .1 Acrylic-based mortar compound, compatible with alkaline concrete surfaces and to be mixed with type 10 Portland cement, in accordance with manufacturer's printed instructions
 - .2 Mesh of glass fiber with alkali resistant coating, according to EIMA 105.01, and Minimum coating weight: 14%
 - .3 Trims "L" and "V" for control joints, maximum of 5 meters spacing.
 - .4 Color to be choose by Departmental Representative in the standard range of the manufacturer.

Addendum A-01**3.7 Access panels**

- .1 Install access doors to electrical and mechanical fixtures specified in respective sections.
- .2 Rigidly secure frames to furring or framing systems.
- .3 Coordinate locations with divisions 23 to 26.

Addendum A-01**3.8 Acrylic coating**

- .1 Where indicated in the drawings apply acrylic coatings according to manufacturer's recommendations.
 - .1 Finish exposed surfaces of light concrete panels on foundation walls with continuous plastering coating up to 150mm below ground level.
 - .2 Apply the coating to obtain a uniform thickness, texture and finish.

3.9 Cleaning

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
 - .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

3.10 Protection

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by gypsum board assemblies installation.

END OF SECTION

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- 6 Terrazzo Tile and Marble Association of Canada (TTMAC)
 - .1 Tile Specification Guide 09 30 00, Tile Installation Manual.
 - .2 Tile Maintenance Guide.

1.4 Action and informational submittals

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Provide product data in accordance with Section 01 33 00 - Submittal Procedures:
 - .1 Include manufacturer's information on:
 - .1 Ceramic tile, marked to show each type, size, and shape required.
 - .2 Chemical resistant mortar and grout (Epoxy and Furan).
 - .3 Cementations backer unit.
 - .4 Dry-set Portland cement mortar and grout.
 - .5 Divider strip.
 - .6 Elastomeric membrane and bond coat.
 - .7 Reinforcing tape.
 - .8 Levelling compound.
 - .9 Latex-Portland cement mortar and grout.
 - .10 Commercial Portland cement grout.
 - .11 Organic adhesive.
 - .12 Slip resistant tile.
 - .13 Waterproofing isolation membrane.
 - .14 Fasteners.

Addendum A-01**.15 Slip resistant strips with yellow and black grout.**

- .3 Provide samples in accordance with Section 01 33 00 - Submittal Procedures:
 - .1 Base tile: submit duplicate, 300mm x 300mm sample panels of each colour, texture, size, and pattern of tile.
 - .2 Floor tile: submit duplicate, 300mm x 300mm sample panels of each colour, texture, size, and pattern of tile.
 - .3 Trim shapes, bullnose cap and cove including bullnose cap and base pieces at internal and external corners of vertical surfaces, each type, colour, and size.
 - .4 Adhere tile samples to 12 mm thick plywood and grout joints to represent project installation. Incorporate aluminum trims and accessories.

1.5 Quality Assurance

- .1 Quality Assurance Submittals:
 - .1 Manufacturer's Instructions: manufacturer's installation instructions.

1.6 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.

1.7 Low VOC materials

- .1 The VOC content of all adhesives, sealants and sealant primers used on the inside of the building (i.e. to the inside of the sealing system) must be less than the VOC content limits of the State of California's South Coast Air Quality Management District (SCAQMD) Rule #1168, June 2006.

Addendum A-01**2.7 Accessories**

- .1 Profiles and finish mouldings in extruded aluminum clear anodized aluminum at all angles, vertical and horizontal borders, corners, transitions and over ceramic wall bases;
 - .1 Anodized aluminum transition trim, 11mm thickness, where indicated on drawings.
 - .2 Edge moulding, extrude anodized aluminum, round with 6mm radius and 12,5mm thickness, where indicated on drawings.
 - .3 Reducer strip, anodized aluminum profile, perforated with texture surface and inclined about 10degree, non-protruding edge for a smooth transition between tile and adjacent surfaces
- .2 Sealant: See Section 07 92 10 - Joint Sealing.

Addendum A-01**2.8 Slip resistant strips**

- .1 Slip resistant strips for concrete steps
 - .1 Pure zinc profiles :
 - .1 Slip resistant strips, 10mm X 10mm U-shaped.
 - .2 For Safety bands 10mm x 50mm wide.
 - .2 Anti-slip product
 - .1 Resin and hardener: « carborandum» type or two components epoxy grout.
 - .2 color: black (antislip bands) and yellow (Safety bands).

2.9 Cleaning compounds

- .1 Specifically designed for cleaning masonry and concrete and which will not prevent bond of subsequent tile setting materials including patching and leveling compounds and elastomeric waterproofing membrane and coat.
- .2 Materials containing acid or caustic material are not acceptable.

PART 3 - EXECUTION**3.1 Manufacturer's instructions**

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.2 Levelling

- .1 Apply levelling compound as per manufacturer's instructions in required locations.
- .2 Apply patching material to patch cracks, joints, holes and other defects. Do not fill break joints.
- .3 Let dry 24 hours before tile installation.

3.3 Waterproofing membrane installation

- .1 Install waterproofing membrane as recommended by manufacturer prior to the installation of ceramic tile on floors and walls of the showers.
- .2 The substrate to receive membrane must be dry and free from dirt.
- .3 Prepare the two components mixture as recommended by manufacturer.
- .4 In corners, embed fiberglass mesh while cementitious membrane is still fresh.

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- .5 Apply the membrane with trowel, overlaps of 50mm to a thickness of 2mm. Be sure to completely fill the holes of the support (apply sufficient pressure).
- .6 Wait 72 hours before testing with water.

3.4 Workmanship

- .1 Do tile work in accordance with TTMAC Tile Installation Manual 2006/2007, "Ceramic Tile", except where specified otherwise.
- .2 Apply tile or backing coats to clean and sound surfaces.
- .3 Fit tile around corners, fittings, fixtures, drains and other built-in objects. Maintain uniform joint appearance. Cut edges smooth and even. Do not split tiles.
- .4 Maximum surface tolerance 1:800.
- .5 Make joints between tile uniform, width according to approved samples, plumb, straight, true, even and flush with adjacent tile. Ensure sheet layout not visible after installation. Align patterns.
- .6 Lay out tiles so perimeter tiles are minimum 1/2 size.
- .7 Sound tiles after setting and replace hollow-sounding units to obtain full bond.
- .8 Use aluminum finish mouldings at inside and outside corners, at termination of wall tile panels, as well as where panel abuts projecting surface or dissimilar plane.
- .9 Install divider strips at junction of tile flooring and dissimilar materials.
- .10 Allow minimum 24 h after installation of tiles, before grouting.
- .11 Clean installed tile surfaces after installation and grouting cured.
- .12 All ceramic works wall tiles to be continuous behind the equipment excepting mirrors.

Addendum A-01**3.5 ant slip and safety strips**

- .1 When pouring cement steps, insert rods strips. Install Styrofoam inserts in zinc strips to keep groove clean.
 - .1 Install two (2) anti-slip strips, full width, in front of all concrete steps, as indicated on drawings.
 - .2 Install safety strips, full width in front of first and last concrete steps of each stair flight and intermediate landings.

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- .2 After setting of the concrete, remove styrofoam tab and fill zinc strips with carborandum or epoxy compound. The compound should exceed 1.5mm from the level of steps.
 - .1 Fill anti-slip strips with black grouting specified.
 - .2 Fill Safety strips with yellow grouting specified.

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**3.5 Floor sealer and
protective coating**

- .1 Apply in accordance with manufacturer's instructions.

3.6 Cleaning

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

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- .3 Test for moisture using calibrated electronic Moisture Meter. Test concrete floors for moisture using « Cover patch test ».
- .4 Test concrete, masonry and plaster surfaces for alkalinity as required. Alkalinity level in accordance with manufacturer's instructions.
- .3 Surface and Environmental Conditions:
 - .1 Apply paint finish in areas where dust is no longer being generated by related construction operations or when wind or ventilation conditions are such that airborne particles will not affect quality of finished surface.
 - .2 Apply paint to adequately prepared surfaces and to surfaces within moisture limits.
 - .3 Apply paint when previous coat of paint is dry or adequately cured.
 - .4 Provide shelter when the paint is applied in cold or wet condition.. Heat the substrate and the ambient air to comply with the of temperature and humidity conditions recommended by the manufacturer. Protect areas until the paint is dry or the weather conditions are adequate.
 - .5 Organize work so that the painting surface exposed to direct sunlight is completed early in the morning.
 - .6 Removing paint coatings that were exposed to frost, excessive moisture, rain, snow or condensation. Prepare these surfaces again and repaint.
- .4 Additional interior application requirements:
 - .1 Apply paint finishes when temperature at location of installation can be satisfactorily maintained within manufacturer's recommendations.
 - .2 Apply paint in occupied facilities during silent hours only. Schedule operations to approval of Departmental Representative such that painted surfaces will have dried and cured sufficiently before occupants are affected.
- .5 The beginning of coating work or paint coating means the acceptance of the substrate condition by the applicator and that the manufacturer certifies that all support verifications indicated above are satisfied.
- .6 Protect against stains and spills all the elements with a permanent finish. Removed during painting works, electrical plates, sockets and other similar equipments, and protect all the hardware surface mounted.

PART 2 - PRODUCTS**2.1 General**

- .1 Refer to drawings, doors and frames finihes and finish schedule for the locations of various types of finishes.
- .2 Work described in this section include, without limitation, the supply and application of paint on the following new and existing finishes, within the work areas indicated in the drawings:
 - .1 Gypsum partitions and ceilings.
 - .2 Existing ~~e~~CColumns, walls, partitions, doors and frames, ~~within work areas~~
Interior and exterior.
 - .3 Painting of walls and ceilings surfaces of all ~~existing~~ premises within the work areas.
 - .4 ~~Now and existing~~ **Interior and exterior** metal fabrications.
 - .5 **Interior and exterior** stairs, handrails and balustrades;
 - .6 Finish carpentry and millwork.
 - .7 Steel doors and frames.

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- .8 Apparent electromechanical elements such as ventilation ducts, conduits, pipes, etc.
- .9 Plywood panels supporting electrical panels.
- .10 Concrete block wall and precast concrete walls.
- .11 Temporary protection of adjacent work.
- .12 Special coatings on finished concrete walls, columns and floors.
- .13 All visible structural elements including ceiling steel decking.
- .14 All steel bollards.
- .3 The work will also include, but are not limited to the supply and application of epoxy paint finishes and epoxy coatings, as indicated **on drawings and** in finish schedule.
- .4 Galvanized steel elements ~~are not to paint~~ **to be painted**, unless otherwise indicated.

2.2 Materials

- .1 Paint materials listed in the MPI Approved Products List (APL) are acceptable for use on this project.
- .2 Provide paint materials for paint systems from single manufacturer.
- .3 Only qualified products with E2 or E3 "Environmentally Friendly" rating are acceptable for use on this project.
- .4 Conform to latest MPI requirements for interior painting work including preparation and priming.
- .5 Materials (primers, paints, coatings, varnishes, stains, lacquers, fillers, thinners, solvents, etc.) in accordance with MPI Architectural Painting Specification Manual "Approved Product" listing.
- .6 Linseed oil, shellac, and turpentine: highest quality product from approved manufacturer listed in MPI Architectural Painting Specification Manual, compatible with other coating materials as required.
- .7 Provide paint products meeting MPI "Environmentally Friendly" E1, E2 or E3 ratings based on VOC (EPA Method 24) content levels.
- .8 Use MPI listed materials having minimum E2 or E3 rating where indoor air quality (odour) requirements exist.
- .9 Paints, coatings, adhesives, solvents, cleaners, lubricants, and other fluids:
 - .1 Water-based;
 - .2 Manufactured without compounds which contribute to ozone depletion in the upper atmosphere;
 - .3 Manufactured without compounds which contribute to smog in the lower atmosphere;
 - .4 Do not contain methylene chloride, chlorinated hydrocarbons, toxic metal pigments;
- .10 Formulate and manufacture water-borne surface coatings with no aromatic solvents, formaldehyde, halogenated solvents, mercury, lead, cadmium, hexavalent chromium or their compounds.
- .11 Flash point: 61 degrees C or greater for water-borne surface coatings and recycled water-borne surface coatings.

Addendum A-01**2.6 Interior painting systems****Addendum A-01**

- .1 **System No 1**, For gypsum board walls (**office area - Wing A – First floor**) :
- .1 One (1) coat interior latex primer-sealer to CGSB 1.119-2000 and MPI no. **50 149**, certified Green Seal.
 - .2 Two (2) coats of 100 % acrylic interior latex paint, Platinum finish, to CGSB 1.209-2003 and MPI no. **53 52**, certified Green Seal.

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- .2 **System No 1B**, ~~For gypsum board walls (all detention areas) :~~
- ~~.1 One (1) coat interior latex primer-sealer and interior undercoat 100% acrylic latex to CGSB1 Green Seal.~~
 - ~~.2 Two (2) coats of water based epoxy bi component, high gloss, Green Seal approved.~~ **Unused system.**

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- .3 **System No 2**, For gypsum board ceilings (~~office area – Wing 1A~~) : (Including exposed conduits)
- .1 One (1) coat interior latex primer-sealer to CGSB 1.119-2000 and MPI no.149, certified Green Seal.
 - .2 Two (2) coats of interior acrylic latex paint, flat finish, to CGSB 1.100-99 and MPI no.143, certified Green Seal.

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- .4 **System No 3**, ~~For concrete slab ceiling – services and mechanical rooms (including ventilation ducts, exposed electrical conduits, sprinkler conduits, etc.);~~
- ~~.1 One (1) coat interior latex primer sealer to CGSB 1.119-2000 and MPI no.149, certified Green Seal.~~
 - ~~.2 Two (2) coats of interior acrylic latex paint, flat finish, to CGSB 1.100-99 and MPI no.143, certified Green Seal.~~
 - ~~.3 Spray applied paint.~~ **Unused system.**

- .5 **System No 4**, For exposed concrete block walls (**except the detention areas**) :
- .1 One (1) coat interior latex primer-sealer to CGSB 1.119-2000 and MPI no.149, certified Green Seal.
 - .2 Two (2) coats of interior latex paint 100 % acrylic, Velvet finish, to, ONGC 1.209-2003 and MPI no.144, certified Green Seal.

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- .6 **System No 4B**, For exposed concrete block walls ~~and concrete ceilings~~ (all ~~detention~~ **garage sectors and inspection** areas) :
- .1 One (1) coat interior latex primer-sealer and interior undercoat 100% acrylic latex to CGSB1 Green Seal.
 - .2 Two (2) coats of water-based epoxy bi-component, high gloss, Green Seal approved.

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- .7 **System No 5**, ~~For of shower rooms walls (detention areas) identified SEM to the Finishes Schedule :~~
- ~~.1 One (1) coat latex concrete obturator, interior and exterior, to CGSB 1.188,~~
 - ~~.2 One (1) coat interior latex primer sealer and interior undercoat 100% acrylic latex to CGSB1 Green Seal.~~
 - ~~.3 Two (2) coats of water based epoxy bi component, high gloss, Green Seal approved.~~ **Unused system.**

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- .8 **System No 7**, For galvanised metal surfaces (Steel doors and frames and others metal surfaces not pre-painted) :
- .1 Prepare surfaces to CGSB 31-GP-107 and according to primer manufacturer recommendations'.
 - .2 Surfaces to be treated with metal conditioner and rust remover solution such as Sico 635-104.
 - .3 Pressure rinse with clear water.
 - .4 One (1) coat metal latex primer to MPI no.134.
 - .5 Two (2) coats of interior latex paint 100 % acrylic, Velvet finish, to, ONGC 1.195-99 and MPI no. ~~133 147~~, certified Green Seal.

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- .9 **System No 8**, For ferrous metal surfaces, railings and handrails :
- .1 One (1) coat multi-surface sandable water based acrylic primer, to ASTM-D3363 :
 - .2 Two (2) coats of interior water based acrylic urethane semi-gloss, to ASTM-D3363 :

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- .10 **System No 9**, For ferrous metal surfaces, steel structural elements, ~~paneling~~ :
- .1 One (1) coat multi-surface sandable water based acrylic primer, to ASTM-D3363 :
 - .2 Two (2) coats of 100 % acrylic interior latex paint, Platinum finish, to CGSB 1.209-2003 and MPI no.52, certified Green Seal.

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- .11 **System No 11**, ~~Plywood support panels for mechanical equipment rooms, electrical and Telecom :~~
~~.1 1 coat interior latex and 1 intumescent paint.~~ **Unused system**

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- .12 **System No 12**, ~~Existing elevator doors to be painted :~~
~~.1 1 primer coat according to manufacturers instructions.~~
~~.2 Electrostatic applied alkyd based paint, finish to Departmental Representative's choice.~~ **Unused system**

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- .13 **Concrete curb**, concrete bases for mechanical rooms and pavements markings in the inspection area and exterior parking spaces :
- .1 Alkyd resins marking paint for floors to CGSB 1-GP-74M.
 - .2 Color : yellow 505-308, to CGSB 1-GP-12c.

2.7 Concrete sealers**Addendum A-01**

- .1 **System No 31**, For **poured** concrete walls **and concrete on steel** columns (~~BA B1~~) : clear, thermoplastic acrylic solvent based, to ASTM D-3960-89. Apply two (2) coats of sealer to all surfaces. According to manufacturer recommendations

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- .2 **System No 32**, For concrete floors and slabs sealer (~~BB B2~~) **of technical rooms** : clear, water based densifier liquid and sealer for concrete, with silicate and silicate polymers, Zero VOC, to ASTM C-779 and ASTM C-1679,

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- .3 **System No 33, (B2)** two-component epoxy resins coating, for concrete floors and slabs, acid resistant, low viscosity self-priming system.
- .2 Chemical resistance: no acceptable alteration in accordance to ASTM-D1308, after 5 days immersion.
 - .3 System with integrated curbs (height 200mm).
 - .4 Color: Standard color to be choose by Departmental Representative.
 - .5 Texture: orange peel floor finish, to be validated by the Departmental Representative.

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- .6 Coating system Thickness:
 - .1 3mm (1/8") in all inspection areas and adjoining premises;
 - .2 20mils, for all floors of the detention area.

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- .4 **System No 35**, Coating system to be applied to parking pit concrete floor and walls : Waterproof penetrating coating for horizontal and vertical concrete surfaces.
 - .1 Aqueous-based penetrating sealer, Silane concentrated base emulsion.
 - .2 Apply three (3) coats of sealer coating to all surfaces, using brush, roller, or low pressure sprayer.

Addenda A-01**2.8 Exterior paints**

- .1 **System No E1**, For ferrous metal primed surfaces :
 - .1 Two (2) coats two components epoxy paint primer, applied by brush and / or roller, 5-8 mils thickness when dry;
 - .2 Two (2) coats of two-component urethane paint, 3 to 5 mils thickness when dry.
 - .3 Note, clean surface with TSP and rinse.
- .2 **System No E2**, For galvanized metal surfaces such as galvanized doors and frames :
 - .1 One (1) coat acrylic primer for galvanized metal, selected from the products listed in the MPI No.134 category;
 - .2 Two (2) coats of acrylic enamel paint finish, selected from the products listed in the MPI No.133 category, 3 to 5 mils thickness when dry.
- .3 **System No 3 — Galvanized metal surfaces (exterior):**
 - .1 One (1) coat acrylic primer for galvanized metal, selected from the products listed in the MPI No.134 category;
 - .2 Two (2) coats of single component acrylic urethane water-based paint, industrial quality, zero VOC.
- .4 For all exterior painting work, pretreat surfaces with rust metal cleaner and rinse with pressure water.

PART 3 - EXECUTION**3.1 Manufacturer's instructions**

- .1 Compliance : comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and data sheet.

Addendum A-01**3.2 General**

- .1 Perform preparation and operations for interior painting in accordance with MPI Architectural Painting Specifications Manual and to CAN/CGSB-85.100, except where specified otherwise.

Translation is added

- .2 Existing conditions
 - .1 Examining existing substrates to ensure that their condition will not affect surface preparation for painting. Prior to work, notify the Departmental Representative, of any, damage, defects or unsatisfactory circumstances identified.

Addendum A-01**Addendum A-01****Translation is added.**

- .3 The beginning of work imply unreserved acceptance of the relevant surfaces and the Contractor will be responsible for finish condition.
- .4 Protect all surfaces, including surfaces where sealants are prescribed, against paint stains and other damages related to work. Use a sufficient number of protective covering and non-staining and removable masking tape.
- .5 Protect or remove hardware parts and other prefinished items, such as appliances, equipment or accessories adjacent to work. After completion of work, clean and make good of all surfaces and equipments.
- .6 Paint walls and ceilings prior to installation of new mechanical and electrical equipment; touch up painted surfaces after installation.
- .8 All metal surfaces, primed, galvanized or galvanized to be painted as indicated.
- .9 Paint openings edges in drywall before installing access doors or other items, if applicable.
- .10 Ensure that ambient lighting is similar to the final lighting project requirements.
- .11 Paint all exposed surfaces of concrete structure, including columns, beams, bracing, ties, braces and various structures elements.
- .12 Paint all exposed mechanical components such as insulated ductwork or plumbing conduits. Paint all exposed sprinkler piping.
- .13 Unless otherwise indicated, touch-up paint in hallways must be extend on each side of the work performed to the first wall edge or plane change to a maximum of 6m of linear wall.

3.3 Inspection

- .1 Investigate existing substrates for problems related to proper and complete preparation of surfaces to be painted. Report to Departmental Representative damages, defects, unsatisfactory or unfavourable conditions before proceeding with work. The corrections must be made before starting work. The application of materials represents an implicit acceptance of surfaces.
- .2 Surfaces must be free of curing compound, laitance, dust, dirt, grease, oil and other contaminants that can affect the adhesion of the coating.
- .3 Conduct moisture testing of surfaces to be painted using properly calibrated electronic moisture meter, except test concrete floors for moisture using simple "Cover patch test". Do not proceed with work until conditions fall within acceptable range as recommended by manufacturer.
- .4 Maximum moisture content as follows:
 - .1 Plaster and gypsum board: 12%.
 - .2 Concrete : 4 %.
 - .3 Wood : 15 %.

Addendum A-01**3.4 Preparation**

- .1 Protection
 - .1 Protect existing building surfaces and adjacent structures from paint spatters, markings and other damage by suitable non-staining Covers or masking. If damaged, clean and restore surfaces as directed by Departmental Representative.
 - .2 Protect items that are permanently attached such as Fire Labels on doors and frames.
 - .3 Protect factory finished products and equipment.
 - .4 Protect building occupants and general public in and about the building.
- .2 Surface Preparation:
 - .1 Remove electrical cover plates, light fixtures, surface hardware on doors, bath accessories and other surface mounted equipment, fittings and fastenings prior to undertaking painting operations. Identify and store items in secure location and re-installed after painting is completed.
 - .2 Move and cover furniture and portable equipment as necessary to carry out painting operations. Replace as painting operations progress.
 - .3 Place « WET PAINT » signs in occupied areas as painting operations progress. Signs to approval of Departmental Representative.
- .3 Clean and prepare surfaces in accordance with MPI Architectural Painting Specification Manual requirements. Refer to MPI Manual in regard to specific requirements and as follows:
 - .1 Remove dust, dirt, and other surface debris by vacuuming and wiping with dry, clean cloths.
 - .2 Wash surfaces with a biodegradable detergent and bleach where applicable and clean warm water using a stiff bristle brush to remove dirt, oil and other surface contaminants.
 - .3 Rinse scrubbed surfaces with clean water until foreign matter is flushed from surface.
 - .4 Allow surfaces to drain completely and allow to dry thoroughly.
 - .5 Prepare surfaces for water-based painting, water-based cleaners should be used in place of organic solvents.
 - .6 Use trigger operated spray nozzles for water hoses.
 - .7 Many water-based paints cannot be removed with water once dried. Minimize use of mineral spirits or organic solvents to clean up water-based paints.
- .4 Prevent contamination of cleaned surfaces by salts, acids, alkalis, other corrosive chemicals, grease, oil and solvents before prime coat is applied and between applications of remaining coats. Apply primer, paint, or pre-treatment as soon as possible after cleaning and before deterioration occurs.
- .5 Where possible, prime non-exposed surfaces of new wood surfaces before installation. Use same primers as specified for exposed surfaces.
 - .1 Apply vinyl sealer to MPI #36 over knots, pitch, sap and resinous areas.
 - .2 Apply wood filler to nail holes and cracks.
 - .3 Tint filler to match stains for stained woodwork.
- .6 Sand and dust between coats as required to provide adequate adhesion for next coat and to remove defects visible from a distance up to 1000 mm.
- .7 Sand existing surfaces with smooth and high gloss finish coating in order to facilitate adhesion of new paint.

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- .8 Thoroughly clean interior existing metal surfaces, previously painted :
 - .1 clean previously painted surfaces, leaving them clean, dry and free of any contaminants that may interfere with the adhesion of new paint
 - .2 Loose paint: scrape and sand the edges of scales, prime bare surfaces as recommended primers.
 - .3 Refer to Section 02 83 10 For work in presence of Hazardous materials – Lead-base Abatement – Minimum precautions, for work related to existing paint materials.
- .9 Clean metal surfaces to be painted by removing rust, loose mill scale, welding slag, dirt, oil, grease and other foreign substances in accordance with MPI requirements. Remove traces of blast products from surfaces, pockets and corners to be painted by brushing with clean brushes, blowing with clean dry compressed air or vacuum cleaning.
- .10 Touch up of shop primers with primer as specified.
- .11 Do not apply paint until prepared surfaces have been accepted by Departmental Representative.

3.5 Application

- .1 Method of application to be as approved by Departmental Representative and product manufacturer.
Apply paint by brush, roller, air sprayer or airless sprayer.
Conform to manufacturer's application instructions unless specified otherwise.
- .2 Brush and Roller Application:
 - .1 Apply paint in uniform layer using brush and/or roller type suitable for application, and required finish surface.
 - .2 Work paint into cracks, crevices and corners.
 - .3 Paint surfaces and corners not accessible to brush using spray, daubers and/or sheepskins. Paint surfaces and corners not accessible to roller using brush, daubers or sheepskins.
 - .4 Brush and/or roll out runs and sags, and over-lap marks. Rolled surfaces free of roller tracking and heavy stipple.
 - .5 Remove runs, sags and brush marks from finished work and repaint.
 - .6 Apply one coat of paint on all edges of wooden doors and steel doors (4 edges).
- .3 Spray application:
 - .1 Isolate application area to prevent surrounding air contamination by toxious fumes.
 - .2 Protect adjacent surfaces and equipment against off limits projection damage.
 - .3 Provide and maintain equipment that is suitable for intended purpose, capable of atomizing paint to be applied, and equipped with suitable pressure regulators and gauges.
 - .4 Keep paint ingredients properly mixed in containers during paint application either by continuous mechanical agitation or by intermittent agitation as frequently as necessary.
 - .5 Apply paint in uniform layer, with overlapping at edges of spray pattern. Back roll first coat application.
 - .6 Brush out immediately all runs and sags.
 - .7 Use brushes and rollers to work paint into cracks, crevices and places which are not adequately painted by spray.

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- .4 Use dipping, sheepskins or daubers only when no other method is practical in places of difficult access.
- .5 Apply coats of paint continuous film of uniform thickness. Repaint thin spots or bare areas before next coat of paint is applied.
- .6 Allow surfaces to dry and properly cure after cleaning and between subsequent coats for minimum time period as recommended by manufacturer.
- .7 Sand and dust between coats to remove visible defects.
- .8 Finish surfaces both above and below sight lines as specified for surrounding surfaces, including such surfaces as tops of interior cupboards and cabinets and projecting ledges.
- .9 Finish closets and alcoves as specified for adjoining rooms.
- .10 Finish top, bottom, edges and cut-outs of doors after fitting as specified for door surfaces.
- .11 Paint walls 100 mm (4 ") above suspended ceiling installation line.
- .12 Unless otherwise noted, apply at least 2 coats of paint on all surfaces to be painted over primer and base coats.
- .13 Paint glazing rabbet and stops prior to glass installation.
- .14 Registers, access doors and any other removable element shall be removed, painted and reinstalled when thoroughly dry.
- .15 Paint mounting panels before installation of mechanical or electrical equipments.
- .16 Generally, do not paint over caulking except those in modified elastomeric latex, which should be painted a minimum of three days after their application; color adjacent substrates.

3.6 Mechanical/electrical equipment

- .1 Paint finished area exposed conduits, piping, hangers, ductwork and other mechanical and electrical equipment with colour and finish to match adjacent surfaces, except as indicated.
- .2 Paint exposed conduits, piping, hangers, ductwork indicated to Mechanical and Electrical divisions according to colours indicated in Mechanical and Electrical divisions. In mechanical, electrical and other utility rooms, keep original material. Touch up scratches and marks.
- .3 Other unfinished areas: leave exposed conduits, piping, hangers, ductwork and other mechanical and electrical equipment in original finish and touch up scratches and marks.
- .4 Touch up scratches and marks on factory painted finishes and equipment with paint as supplied by manufacturer of equipment.
- .5 Do not paint over nameplates.

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- .6 Keep sprinkler heads free of paint.
- .7 Paint inside of ductwork where visible behind grilles, registers and diffusers with primer and one coat of matt black paint.
- .8 Paint both sides and edges of backboards for telephone and electrical equipment before installation. Leave equipment in original finish except for touch-up as required, and paint conduits, mounting accessories and other unfinished items.
- .9 Do not paint interior transformers and substation equipment.
- .10 Remove all and removable elements from mechanical and electrical equipment and reinstall after paint has completely dried.

3.7 Site tolerances

- .1 Walls : no defects visible from a distance of 1000 mm at 90 degrees to surface.
- .2 Ceilings : no defects visible from floor at 45 degrees to surface when viewed using final lighting source.
- .3 Final coat to exhibit uniformity of colour and uniformity of sheen across full surface area.

3.8 Restoration

- .1 Clean and re-install hardware items removed before undertaken painting operations.
- .2 Remove protective and warning signs as soon as practical after operations cease.
- .3 Remove paint splashings on exposed surfaces that were not painted. Remove smears and spatter immediately as operations progress, using compatible solvent.
- .4 Protect freshly completed surfaces from paint droppings and dust to approval of Departmental Representative. Avoid scuffing newly applied paint.
- .5 Restore areas used for storage, cleaning, mixing and handling of paint to clean condition as approved by Departmental Representative.

3.9 Cleaning

- .1 At completion, clean paint stains on surfaces that have not been painted (hardware, equipment or accessories).
- .2 Clean and evacuate daily from site, all debris and unused materials generated by the work of this section.
- .3 At completion, remove all debris, unused materials and tools.

END OF SECTION

PART 1 - GENERAL**1.1 Conditions**

- .1 All General Conditions, general instructions, additional specific instructions and addendum are part of this section.
- .2 This section must be read and the related drawings examined, together with all sections and drawings describing works that are complementary, subordinate, prerequisite or otherwise related to work described.
- .3 The Contractor / subcontractor shall provide all materials, equipment, labor and services required for the complete execution of loading dock seal works, including all accessories required, so that works perfectly fulfill the purposes for which they are intended.

1.2 Related sections

- .1 Division 1 – General Requirements.
- .2 Division 3 - Concrete structure.
- .3 Section 05 50 00 – Metal Fabrications.
- .4 Section 07 92 10 – Joint Sealing.
- .5 Section 08 36 13.02 – Sectional metal doors.
- .6 Section 11 13 19.13 – Loading dock levelers.

1.3 References

- .1 Works covered by this section must comply with latest version or latest revision, of standards, codes and regulations listed below.
- .2 ASTM International
 - .1 ASTM A 653/A 653M, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - .2 ASTM A 924/A 924M, Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
 - .3 ASTM D 1056, Specification for Flexible Cellular Materials-Sponge or Expanded Rubber.

**1.4 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 data sheets for loading dock seals and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Shop Drawings:
 - .1 Indicate on drawings:
 - .1 Dimensions and required clearances.
 - .2 Fastening methods for dock seals.
 - .3 Sealing dock components and characteristics.

- .4 Samples:
 - .1 Submit duplicate samples of:
 - .1 300mm x 300mm pieces of dock seal and covering material.

- 1.5 Closeout submittals**
 - .1 Submit in accordance with Section 01 78 00 - Closeout Submittals.
 - .2 Operation and Maintenance Data: submit operation and maintenance data for dock seal care, cleaning and maintenance for incorporation into manual.

- 1.6 Delivery, storage and handling**
 - .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
 - .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
 - .3 Storage and Handling Requirements:
 - .1 Store materials off ground indoors and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect loading dock seals from nicks, scratches, and blemishes .
 - .3 Replace defective or damaged materials with new.

- 1.7 Waste management and disposal**
 - .1 Works are governed by a Waste **management plan** in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal. The work of this section shall be made in accordance with the requirements of this plan.

PART 2 - PRODUCTS

- 2.1 Generals**
 - .1 Refer to drawings for related details of dock seals required.
 - .2 Work of the present section includes, without limitation, the supply and installation of the followings :
 - .1 The supply and installation of loading dock seals for all docks, according to dimensions and location on drawings.
 - .2 All adhesives, anchors, fasteners, profiles, moldings, and other accessories necessary for the installation of loading dock seals.
 - .3 The work includes all related works for loading dock seals provided or shown on drawings and not specifically described in present sections or other sections, but shown in the drawings and / or necessary for the complete execution of loading dock seals works.
 - .1 The Contractor shall consult all drawings and documents to ascertain to note and identify all loading dock doors seals works part of its work, when preparing its bid.

2.2 Loading dock seals

- .1 Head curtain dock seal for loading dock doors with adjustable lintel composed of 300mm x 300mm high density polyurethane foam pads attached to 50mm thick dried wooden frames and covered with fabrics.
 - .1 Equip movable header with torsion spring assembly protected with weatheguard fabric.
- .2 Construct dock seals consisting of polyurethane foam components factory mounted to 50mm thick seasoned wood completely encased in steel and steel channel frames and covered with fabric.
 - .1 Polyurethane foam: ASTM D 1056, unaffected by moisture, heat or cold and retaining resiliency to -40 degrees C.
 - .2 Covering fabric: minimum (40 oz.) 1,13 kg/m, vinyl coated nylon, waterproof under a static pressure of 500mm water column, and remaining flexible to -40 degrees C.
 - .3 Provide foam covered fabric sides and a adjustable header.
 - .4 The fabric cover must be provided with air escape holes, and fabric cover provide 125mm wide integral yellow guide stripes sewn to full length of each jamb and header.
- .3 Dimensions:
 - .1 2440 mm (8 ft.) wide by 3050mm (10 ft.) height, with height adjustable head seal.

PART 3 - EXECUTION**3.1 Examination**

- .1 Verification of Conditions: verify conditions of substrates and elements previously installed under other Sections or Contracts are acceptable for loading dock seals installation in accordance with manufacturer's instructions prior to loading dock seals installation.
 - .1 Visually inspect substrate in presence of Departmental Representative.
 - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied [and after receipt of written approval from Departmental Representative.

3.2 Installation

- .1 Install loading dock seals in accordance with manufacturer's instructions and as indicated.

3.3 Adjusting

- .1 Adjust loading dock seals components for correct function and operation in accordance with manufacturer's written instructions.
- .2 Lubricate moving parts to operate smoothly and fit accurately.

3.4 Cleaning

- .1 Progress Cleaning: clean in accordance with Section 1 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

3.5 Protection

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by loading dock seals installation.

END OF SECTION

PART 1 - GENERAL**1.1 Conditions**

- .1 All General Conditions, general instructions, additional specific instructions and addendum are part of this section.
- .2 This section must be read and the related drawings examined, together with all sections and drawings describing works that are complementary, subordinate, prerequisite or otherwise related to work described.
- .3 The Contractor / subcontractor shall provide all materials, equipment, labor and services required for the complete execution of rails and dividing curtains works, including all accessories required, so that works perfectly fulfill the purposes for which they are intended.

1.2 Related sections

- .1 Division 1 – General Requirements.
- .2 Division 5 - Steel structure.
- .3 Section 05 50 00 – Metal Fabrications.
- .4 Section 08 36 13.02 – Sectional metal doors.

1.3 References

- .1 Works covered by this section must comply with latest version or latest revision, of standards, codes and regulations listed below.
- .2 Aluminum Association Designation System For Aluminum Finishes (AA).
 - .1 DAF 45, Designation System For Aluminum Finishes.
- .3 Quebec Construction Code - Current Edition
- .4 ASTM International
 - .1 ASTM A 653/A 653M, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - .2 ASTM B221, Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles and Tubes.
- .5 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .6 Underwriters' Laboratories of Canada (ULC)
 - .1 CAN/ULC-S102, Standard Method of Test for Surface Burning Characteristics of building Materials and Assemblies.
- .7 National Fire Protection Association (NFPA)
 - .1 NFPA 701, Standard Methods of Fire Tests for Flame Propagation of Textiles and Films.

- 1.4 Design requirements**
- .1 Design curtains to following requirements:
 - .1 Allow replacement of wear susceptible parts by user or manufacturer.
 - .2 Guarantee of at least five-years of available replacement parts following discontinued products by manufacture.
 - .3 Provide instructions for replacing or repairing worn parts, including inventory numbers for parts and procedures for ordering replacement parts.
- 1.5 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 data sheets and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Provide the manufacturer's instructions where the work requires special handling, installation and cleaning.
 - .3 Submit two (2) copies of WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 35 29.06 - Health and Safety.
 - .4 Shop Drawings:
 - .1 Indicate dimensions in relation to support elements, operating details, top rail, conditions between adjacent curtains, corner conditions, anchorage details, hardware and accessories details, connections and required clearances.
 - .2 The drawings shall indicate, in plan, scaled 1: 50, railing layouts required dimensions and location of suspension brackets and any other support. The drawings must indicate the general arrangement and typical rail installation, clearances, installation heights and maneuvering.
 - .5 Samples:
 - .1 Submit duplicate samples of each of the elements and accessories described in this section.
 - .2 Submit one (1) representative working sample of proposed rail, slides and curtain fasteners.
 - .3 500mm x 500mm pieces for each of the fabrics and colors specified, 300mm length for linear elements, unit accessories, etc. ...
 - .4 After approval samples will be returned for incorporation in the Work.
- 1.6 Closeout submittals**
- .1 Provide operation and maintenance data for rails and dividing curtains for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.
 - .2 Operation and Maintenance Data: submit operation and maintenance data for curtains and rails care, cleaning and maintenance for incorporation into manual.
- 1.7 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, store and handle materials in accordance with manufacturer's written instructions.

- 1.8 Low VOC materials**
- .1 The VOC content of all adhesives, sealants and sealant primers used on the inside of the building (i.e. to the inside of the sealing system) must be less than the VOC content limits of the State of California's South Coast Air Quality Management District (SCAQMD) Rule #1168, June 2006.
- 1.9 Waste management and disposal**
- .1 Works are governed by a Waste **management plan** in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal. The work of this section shall be made in accordance with the requirements of this plan.
- 1.10 Warranty**
- .1 For work of the present Section 12 21 20 – Rails and curtains, the warranty period of 12 months is extended to five (5) years.
 - .2 Provide a written, signed and issued in the name of Canada, guaranteeing railing systems and dividing curtains against any defects of material, fabrication and installation for a period of **five (5) years** from the date of provisional acceptance.

PART 2 - PRODUCTS

- 2.1 Generals**
- .1 Refer to drawings for related details of rails and separation curtains required.
 - .2 Work of the present section includes, without limitation, the supply and installation of the followings :
 - .1 The supply and installation of railings and separation (dividing) curtains for dock operations, according to dimensions and location on drawings.
 - .2 All adhesives, anchors, fasteners, profiles, moldings, and other accessories necessary for the installation of rails and curtains.
 - .3 The work includes all related works for rails and separation curtains provided or shown on drawings and not specifically described in present sections or other sections, but shown in the drawings and / or necessary for the complete execution of rails and curtains works.
 - .1 The Contractor shall consult all drawings and documents to ascertain to note and identify all rails and curtains works part of its work, when preparing its bid.
- 2.2 Manufacturer**
- .1 Unless otherwise indicated, all curtains and rails must be from the same manufacturer.
- 2.3 Materials**
- .1 Curtain rails :
 - .1 Surface mounted, as indicated in the drawings.
 - .2 Heavy duty extruded aluminum, No. 6063-T4, use maximum possible length.
 - .3 Dimensions : 35mm x 19mm, according to the manufacturer by weight of the curtains to be supported, linear type (straight type).
 - .4 Coupling splices.
 - .5 Finish : Clear anodized aluminum.

- .6 Provide aluminum accessories such as joints connecting the end fittings of in sufficient quantity.
- .2 Parts and accessories:
 - .1 Slides: frame and nylon wheels with hook connected to the frame by a chain stainless steel, aluminum hooks.
 - .2 Provide at least slides spaced 300mm c/c and one (1) slide at each end, or as indicated by the manufacturer.
 - .3 Fixed hook ends.
 - .4 Mounting accessories: wall supports, fittings, ceiling supports, hangers.
 - .5 Screws and bolts compatible with the rails and as recommended by the manufacturer.
 - .6 Chain attachments to wall or column to retain curtain in open position.
- .3 Installation height: Bottom of steel supports 4900mm to finished floor, and suspended as indicated in ceiling plans.
- .4 Height curtains :
 - .1 Top of curtain: immediately under the slides;
 - .2 Bottom finish of curtains: 200mm from finish floor.
- .5 Curtain fabric :
 - .1 Vinyl / polyester fabric, full height, unperforated.
 - .2 Highly-resistant fibers, without PVC material, lead free, formaldehyde-free, halogen-free, hypoallergenic, 100% recyclable, certified to NFPA 701 fire resistant, antimicrobial, mildew resistant, odorless, and antistatic.
 - .3 All fabric shall be inherently flame retardant. Certification indicating compliance shall be supplied with the curtains.
 - .4 Wash in hot water 160oF or dry cleaned.
 - .5 Weight: 610g/m2 (18 oz)
 - .6 Elongation / shrinkage: 2%
 - .7 Constructions: 1000 X 1300 Denier.
 - .8 Grab tensile test (method 5100): minimum 1776N X 1776N (400 X 400lb).
 - .9 Color to be selected by Departmental Representative from the manufacturer standard range.

2.4 Fabrication

- .1 Curtains fabrication :
 - .1 Prepare the components according to manufacturer's recommendations.
 - .2 Bottom of all curtain sections to have a 100mm (4") chain pocket sewn in with chain of sufficient weight.
 - .3 Provide a hem at top of curtain sections reinforced with a canvas. Install no.12 grommets every 120mm, or as recommended by the manufacturer according to the weight of curtain section supported.
 - .4 Panels to be double sided finish: length to be 20% greater than required opening.
 - .5 All full length panels are to be installed so that they hang 200mm above the finished floor.
- .2 Fabricate rails to allow smooth movement of slides and curtains, and as indicated in the drawings and layouts.
- .3 Supply and install anchors appropriate to existing conditions, such as flanges anchor bolts and steel anchors.

2.5 Openings

- .1 Provide separation curtains (in 2 sections) to axes 6, 8 and 10, from axis B to axis D, according to layouts and indications shown in the drawings.

PART 3 - EXECUTION**3.1 Manufacturer's Instructions**

- .1 Compliance: comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.2 Examination

- .1 Verification of Conditions: verify conditions of substrates and elements previously installed under other Sections or Contracts are acceptable for loading dock seals installation in accordance with manufacturer's instructions prior to rails and curtains installation.
 - .1 Visually inspect substrate in presence of Departmental Representative.
 - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied [and after receipt of written approval from Departmental Representative.
- .2 All measurements must be taken on site before rails fabrication.

3.3 Installation

- .1 The installation of rails and curtains should be made by a certificate installer recognized by the manufacturer. Take all measurements on site prior to fabrication.
- .3 Install the rails and curtains separators according to the instructions of the manufacturer and approved shop drawings.
- .4 Securely fastened curtain rails to structural elements using screws and bolts.
- .5 Coordinate on site railing installation according to Departmental Representative instructions. Install reinforcements required the smooth operation.
- .6 Insert slides in quantities corresponding railing lengths.
- .7 Hang curtains slides. Install curtains only when all work that may damage or dirt curtains have been completed.
- .8 Proceed to test all moving parts. Make all necessary adjustments.
- .9 Adjust the sliders curtains separators so that they work smoothly.

3.4 Adjusting

- .1 Adjust the curtains sliders so that they work smoothly.
- .2 Lubricate moving parts to operate smoothly and fit accurately.

3.5 Cleaning

- .1 Progress Cleaning: clean in accordance with Section 1 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

3.6 Protection

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by curtains and railing installation.

END OF SECTION