

ADDENDUM # 002

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD MONSIGNOR UYEN CATHOLIC SCHOOL

255 LARK STREET, CHATHAM, ONTARIO

TENDER NO.: 618-CP1510

RWAI Project No. 1506

Documents prepared by:

St. Clair Catholic District School Board

AND

Randy Wilson Architect Inc. Suite 1Q, 280 Queens Avenue London, Ontario N6B 1X3

> Issue Date: Monday, May 1, 2015

This addendum forms part of the Contract Documents and amends the original drawings and specifications issued for Bid on April 14, 2015.

TABLE OF CONTENTS

ADDENDUM # 2 (Including cover)	4 Page(s)
Attached Mandatory Site Visit Attendance list	1 Page(s)
Section 08110 – METAL DOORS AND FRAMES	7 Page(s)
Section 08210 – WOOD DOORS	4 Page(s)
Section 08520 – ALUMINUM WINDOWS	12 Page(s)
Section 09510 – ACCOUSTIC CEILING	4 Page(s)
FINISH SCHEDULE	2 Page(s)
PLUMBING SPECS	2 Page(s)
Revised Architectural	7 sheet(s)
TOTAL PAGE COUNT FOR THIS ADDENDUM	43 Page(s)

PART A - GENERAL

1.1 TENDER QUESTION(S)

a. Question:

I see there is quite a number of power and data receptacles, is this to be included as part of our price

Would we be supplying empty conduit and empty boxes only?

GC to provide conduit, outlet & data boxes and covers and power. Use close circuit to serve outlets

b. Question:

I assume the service columns and projectors are by others and part of the new PA system

Answer:

Service column by GC, with the exception of the speaker installation. However the opening into the millwork service column will by GC in coordination with the PA System contractor

1.2 Attached Mandatory Site Visit Attendance list

PART B - SPECIFICATIONS

BID FORM

11) SEPARATE PRICES

It is accepted that the intent of separate prices is to allow the Owner to add work outlined below, at the Owner's discretion.

The following prices have <u>not been</u> included in the base bid amount. The following prices include labour, material, tools, equipment, overhead and profit, but exclude HST.

Separate Price # 1 Remove existing porcelain ceramic tile and Supply, install Terrazzo floor

Œ	•											
Ψ				_								

INSTRUCTION TO BIDDERS

a. 1.03 BID DOCUMENTS

.4 Bids shall be received no later than **11:00 a.m. on Friday, May 8, 2015.** local time as indicated on the timeclock of the SCCDSB Reception

Section 08110 – METAL DOORS AND FRAMES

See new Section attached

Section 08210 – WOOD DOORS

See new Section attached

Section 08520 – ALUMINUM WINDOWS

See new Section attached

Section 09510 – ACCOUSTIC CEILING

See revised Section attached

FINISH SCHEDULE

See revised Schedule attached

PLUMBING SPECS

See new Section attached

PART C - ARCHITECTURAL DRAWINGS

A000 - COVER SHEET

Refer to revision clouds and addendum 1 tags for changes to drawing.

A100 -FLOOR PLAN & PLAN DETAILS

Refer to revision clouds and addendum 1 tags for changes to drawing.

A200 - REFLECTED CEILIG PLAN

New Drawing. Refer to revision clouds and addendum 1 tags for changes to drawing.

D100 - DEMOLITION PLAN, DEMOLITION NOTES

Refer to revision clouds and addendum 1 tags for changes to drawing.

A810 –INTERIOR ELEVATIONS

Refer to revision clouds and addendum 1 tags for changes to drawing.

A900 - MILLWORK DETAILS

Refer to revision clouds and addendum 1 tags for changes to drawing.

A901 – MILLWORK DETAILS

New Drawing. Refer to revision clouds and addendum 1 tags for changes to drawing.

PART D - STRUCTURAL DRAWINGS

RESERVED

PART E - MECHANICAL / ELECTRICAL DRAWINGS

RESERVED

Architectural Sketches Included

N/A

END OF ADDENDUM # 002



RWAI1312 - Project No: 618- CP1510 Monsignor Uyen Catholic School Interior Renovations Mandatory Site Visit SIGN-IN LIST

Randy Wilson Architect Inc Suite 1Q – 280 Queens Ave London, Ontario N6B 1X3 Tel: 519 439 06 1 Fax: 519 438 5962 rwai@rwarchitect.ca

April 29, 2015 @ 4:00pm

TTENDEES			
<u>Contractors</u>	Phone	<u>Email</u>	Signature
NINMAR OBCKER	x. 512-351-44	retimedeiros aciamara	7.10
TCI Tita Contractina			184
Alliance General	519751-1111	allianc Sebellnet.	a St
LOARING CONGT	519-734-900	CARLO E LOAR WG CONSTRUCTION. COM	4
BHGC	519-344-4855	guro@BH-GC.com.	Affally
SPI			
Vince Ferro Conss	519-969-4020	paul a noneyderfux	
Honey Elect.	210-800-1668	paul a honeyelestat	of gard duly
Deliged Comme	519-969-166	Info@diligaha	HE
			01.0
(c)			

PART 1 - GENERAL

.1 Description

.1 General Requirements

Division 1, General Requirements, is part of this Section and apply as if repeated here.

.2 Work Performed by Other Sections Related to This Section is Specified in

Section 06200: Hanging of Wood Doors

Section 07920: Caulking Frames

Section 08710: Supply of Finish Hardware

Section 09900: Painting and Finishing

.3 <u>Installation of Products Supplied by This Section is Specified in</u>

Section 04200: To build anchors/frames in masonry.

Section 06200: To set up frames in masonry openings.

Section 06200: To install hollow metal doors.

Section 09250: To install and anchor frames in drywall partitions.

.2 Quality Assurance

.1 Subcontractor Qualifications

Provide fabrications specified in this Section only by a Subcontractor who has adequate plant, equipment and skilled tradesmen to perform it expeditiously, and is known to have been responsible for satisfactory installations similar to that specified.

.2 Requirements of Regulatory Agencies

- .1 Construct fire rated doors and frames of ratings indicated in accordance with validating label requirements, otherwise required by jurisdictional authorities.
- .2 Ensure hardware and installation meet CAN4-S104 requirements, Standard Method for Fire Tests of Door Assemblies adopted by Insurance Advisory Organization, when applicable.
- Doors and frames indicated as labelled, to meet conditions of NFPA No. 80, for installation, and shall have attached ULC labels.

.3 References

.1 Reference Standards

Reference standards quoted in Contract Documents refer to: ASTM A366-72, Specification for Steel, Carbon, Cold-Rolled Sheet, Commercial Quality.

ASTM A525-81, Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, General Requirements.

ASTM A526-80, Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Commercial Quality.

ASTM A780-80, Standard Practice for Repair of Damaged Hot-Dip Coatings. CGSB Specification 1-GP-132M, Primer, Zinc Chromate, Low Moisture Sensitivity.

CGSB Specification 1-GP-140M, Primer, Red Lead, Iron Oxide, Oil Alkyd Type. CGSB Specification 31-GP-105M, Coating, Conversion, Zinc Phosphate, for Paint Base.

CGSB Specification 1-GP-181M, Coating, Zinc Rich, Organic, Ready Mix. CSA Standard G164-M1981, Hot-Dip Galvanizing of Irregularly shaped Articles.

.4 Submittals

.1 Shop Drawings

Submit shop drawings.

.5 **Delivery, Storage, and Handling**

- .1 Brace frame units to prevent distortion in shipment. Protect finished surfaces by sturdy protective wrappings.
- .2 Ensure that doors are stored in a secure dry location to ensure they are not damaged until hung. Remove wrappings when finally stored in location secure from damage. Store doors vertically, resting on planks, with blocking between to allow air to circulate.
- .3 Repair damage to finishes immediately as it occurs with matching specified finish materials.

PART 2 - PRODUCTS

.1 Materials

.1 Steel Sheet

Cold-rolled, stretcher levelled to meet specified requirements of ASTM Specification A366 or SAE Specification 1010: galvanized sheet, commercial quality, to meet specified requirements of ASTM Specification A526.

.2 Prime Paint

- .1 General: Ensure that primers are compatible with specified finish paint.
- .2 Primer: To meet requirements of CGSB Specification 1-GP-132, 1-GP-81, or 1-GP-140.

.3 Galvanizing

- .1 Full galvanized sheet steel; coating to meet specified requirements of ASTM Specification A525, zinc coating designation Z275.
- .2 Wiped coated sheet steel; zinc wiped coating to meet specified requirements of ASTM Specification A525, zinc coating ZF75.
- .3 Galvanized accessories; zinc coating to meet specified requirements of CSA Standard G164, including Appendix A.

.4 Zinc Rich Paint

To meet specified requirements of CGSB Specification 1-GP-181.

.5 Panel Insulation

At exterior: Polyurethane: closed cell rigid board, density; 32 kg/cubic metre.

.6 Grilles

E.H. Price, Series STG1, steel, prime painted, sizes as shown on Door Schedule.

.7 Door Bumpers

Single stud rubber at interior openings.

.8 **Door Core Materials**

- .1 Honeycomb: Structural small cell 25mm (1") maximum Kraft paper 'honeycomb'. Weight: 36.3 (80lb) per ream (minimum). Density: 16.5kg/m³ (1.03pcf) minimum, sanded to required thickness.
- .2 Temperature Rise Rated (TRR): Solid slab core of non-combustible, inorganic composite to limit temperature rise on the "unexposed" side of door to 250°C at 60 Minutes to ULC CAN4-S104—M80, ASTM E2074-00e1 or NFPA 252-2008.
- .3 Polystyrene: EPS polystyrene, Type 1, density: 16 to 32 kg/m3 (1 to 2 pcf), thermal values: RSI 1.06 (R 6.0) minimum, conforming to ASTM C578-09e1.

.9 Adhesives

- .1 Heat resistant, single component, polyurethane reactive (water) hot melt, thermoset adhesive.
- .2 Rigid insulation cores: Heat resistant, epoxy resin based, low viscosity, contact cement.
- .3 Lock seam doors: fire resistant, resin reinforced polychloroprene, high viscosity sealant-adhesive.

.10 Acceptable Manufacturers

- .1 All Steel Doors 2000 Ltd.
- .2 Artek Door (1985) Ltd.
- .3 Daybar Industries Ltd.
- .4 Fleming-Baron Door Products, an ASSA ABLOY group company.
- .5 Trillium Steel Doors Limited.
- .6 Vision Hollow Metal Limited.

.2 <u>Door and Frame Systems</u>

.1 Exterior Framing

- .1 2.0 mm thick steel frames, fully welded; minimum 170 mm jamb depth.
- .2 Frame sizing shall be of the metric size shown in Door and Frame Schedules.

.2 Interior Frames

- .1 For Masonry Partitions: 1.6 mm thick welded construction; knocked-down construction where Door and Frame Schedule makes reference to "suit existing construction"; minimum 170mm jamb depth factory welded.
- .2 For Drywall Partitions: 1.6 mm thick welded construction; throat size to suit partition.
- .3 Frame sizing shall be of the metric size shown in Door and Frame Schedules.

.3 Doors

- .1 Interior: Wood by 08210.
- .2 Door sizing shall be of the metric size shown in Door and Frame Schedule or to suit existing openings.

.3 Fabrication

.1 General

- .1 Fit & assemble fabrication in shop where possible. Make trial assembly in shop when not possible.
- .2 Fabricate, reinforce and anchor component parts and assemblies, to support loads usage will impose without deflection detrimental to function, appearance or safety.
- .3 Reinforce components to resist stresses imposed by hardware in use.
- .4 Prepare frames and doors for specified hardware with mortises, and reinforcement. Drill and tap to template information. Incorporate steel reinforcement of
 - : 1.6 mm thick flush bolts, locks & strikes.
 - : 6.4 mm for hinges.
 - : 4.8 mm for push/pulls and panic devices.
 - : 2.7 mm thick for surface mounted hardware, and door closer brackets and arms.
- .5 Install metal mortar guards of minimum 0.76 mm thick steel at cutouts for hardware in frames installed in masonry walls.
- .6 Reinforce all frames for closers.
- .7 Provide for anticipated expansion and contraction of frames and supports.
- .8 Fit elements at intersections & joints accurately together in true planes, plumb & level.
- .9 Weld frame and door assemblies together. Weld continuously at joints exposed to view or at joints through which air or water could penetrate from the exterior of building to the interior.
- .10 Where welding is impossible, connections may be bolted. Ream drilled holes and leave exposed edges clean and smooth.
- .11 Isolate from each other dissimilar metals, and metal from concrete or masonry or prevent electrolysis.
- .12 Ensure that exterior doors and frames are tightly fitted, and drips are installed on frames of out-swinging doors, to prevent entry of water where exposed to weather.

.2 Pressed Steel Door Frames and Screen Frames

- .1 Supply frames to suit construction conditions and dimensions indicated on drawings and in Door and Frame Schedule.
- .2 Schedule of fabrication and delivery must be such that it will not delay the project.
- .3 Fabricate interior frames of wipe coat galvanized steel and exterior frames of full galvanized sheet steel.
- .4 Fabricate steel frames in minimum thickness of 1.6 mm thick sheet steel unless otherwise specified or indicated.
- .5 Use 2.0 mm thick sheet steel for exterior frames.
- .6 Minimum frame material thickness applies only to doors not otherwise requiring heavier gauges to meet specified fire rated construction as required by validating underwriter's test.
- .7 Fabricate removable stops of minimum 0.91 mm thick steel. Do not weld stop corners.
- .8 Install recessed weatherstripping in stops of exterior doors.
- .9 Finish frame with one coat of galvanized primer on zinc coated surfaces exposed to view.
- .10 Where members join at corners, cut mitres and weld continuously along inside of sections.
- .11 Where tubular frame sections meet frame members, join by butt welding.
- .12 Attach two 1.2 mm thick steel channel spreaders at bottom of door frames to maintain square alignment, secured to facilitate removal after frames that extend only to finish floor are built in.
- .13 Incorporate structural stiffeners for frame members as shown on Drawings. Securely anchor them at bottom and top. Where they extend above ceiling, anchor to concrete or structural framing to suit site conditions.
- .14 Install 3 bumpers in interior frames at single opening latch jambs, and 2 at double door frame heads.
- .15 Fasten removable stops by countersunk Phillips head screws at approximately 225 mm o.c. symmetrically spaced on stop length.
- Anchor frames at floor by 1.5 mm thick angle clips, welded to frame and provided with two holes for floor anchorage.
- .17 For frames in masonry walls attach adjustable Tee-anchors fabricated from galvanized steel same gauge as frame. Install anchors on each jamb. Install 3 anchors for openings 2285 mm high.
- .18 For frames in stud walls, weld L clip at bottom of frame for anchor to floor slabs.

.3 Steel Doors and Panels

- .1 Fabricate steel doors and panels to a thickness of 45mm (1-3/4"). Unless indicated otherwise.
- .2 Insulated doors and panels:
 - .1 Face sheets fabricated from 1.5 mm (0.06") 16 gauge steel.
 - .2 Insulation core: Polystyrene.
 - .3 Longitudinal edges mechanically interlocked.
 - .1 Adhesive assisted with edge seams visible.

- .3 Interior doors and panels:
 - .1 Face sheets fabricated from 1.5 mm (0.06") 16 gauge steel.
 - .2 Honeycomb core.
 - .3 Longitudinal edges mechanically interlocked
 - .1 Adhesive assisted with edge seams visible.
- .4 Temperature rise rated doors and panels:
 - .1 Face sheets fabricated from 1.3mm (0.05") 18 gauge steel.
 - .2 TRR asbestos free core.
 - .3 Longitudinal edges mechanically interlocked.
- .5 Fabricate of composite metal face construction with each face formed from flush sheet steel without visible seams, free of scale, pitting, coil brakes, buckles and waves.
- .6 Formed edges shall be true and straight with minimum radius for the thickness of steel used.
- .7 Lock and hinge edges shall be bevelled 3 mm in 50 mm (1/8" in 2") unless hardware or door swing dictates otherwise.
- .8 Top and bottom of doors shall be provided with inverted, recessed, 1.5mm (0.06") 16 gauge steele end channels, welded to each face sheet at 50 mm (2") on centre maximum.
- .9 Prior to shipment, mark each door with an identification number as shown on the approved submittal drawings.
- .10 Exterior doors shall be provided with factory installed flush PVC top caps. Fire labelled exterior doors shall be provided with factory installed flush steel top caps.
- .11 Blank, reinforce, drill and tap doors for mortised, templated hardware. Locate to manufacturer's standard unless indicated otherwise.
- .12 Holes 12.7mm (1/2") and larger shall be factory prepared.
- .13 Glazing:
 - .1 For glazing materials up to and including 8 mm (5/16") thick, doors shall be provided with 1 mm (0.04") 20 gauge steel glazing trim and snap-in glazing stops.
 - .2 For glazing materials greater than 8 mm (5/16") thick, doors shall receive 1 mm (0.04") 20 gauge steel trim and screw fixed glazing stops. Screws shall be #6 x 32mm (1 ¼") oval head Tek™ (self-drilling) type at 305 mm (12") on centre maximum.
 - .3 Glazing trim and stops shall be accurately fitted (within 0.39 mm (0.015") tolerance), butted at corners, with removable glazing stops located on the 'push' side of the door.
- .14 Fabricate closing stiles of paired doors as indicated or scheduled.
- .15 Where indicated in schedule, prepare doors and panels for installation of fire-rated door grilles. If required to meet door grille manufacturer's rated design, provide reinforcement around door grill opening.

.4 Finishing

- .1 File and grind exposed welds smooth so that assemblies have appearance of one piece construction. Fill depressions with metal filler and finished
- .2 For primed surfaces, clean, scrape and remove rust, mill scale, grease and other surface deposits from steel following fabrication. Apply full smooth coat of primer in shop. Force paint into corners and open spaces.
- .3 For surfaces with zinc coating, clean and smooth ground surfaces at welds, fill if necessary, and coat all areas from which galvanizing has been removed with zinc rich paint coating of 0.1 mm minimum.

PART 3 - EXECUTION

.1 Examination

.1 Take field dimensions of construction into which fabrications of this Section are incorporated before they are fabricated. Field adaption of work fabricated in error or without field check will not be allowed without approval.

.2 Installation

.1 Pressed Steel Frames

- .1 Setting up of pressed steel frames in masonry walls is included in Section 06200.
- .2 Building in of pressed steel frames is included in Section 04200 of Specification.
- .3 Setting up and building in of pressed steel frames in metal stud drywall partitions is included in Section 05500 and Section 09250.
- .4 Secure frames to floor construction with two fasteners each jamb, set and brace securely to maintain true alignment until built in.

.2 Doors

.1 Wood Doors by Section 08210, installation by Section 06200 finish hardware supplied and installed by Section 08710.

.3 Adjustment and Cleaning

- .1 Refinish damaged and defective fabrications before completion. Refinish exposed surfaces to ensure that no variation in appearance is discernible.
- .2 Clean surfaces in preparation for specified finishing at completion of installation.
- .3 Final cleaning is specified in Section 01710.

End of Section

PART 1 - GENERAL

.1 Description

.1 General Requirements

Division 1 and General Requirements is a part of this Section and shall apply as if repeated here.

.2 <u>Work Performed by Other Sections Related to This Section is Specified in</u>

Section 06200: Installation of hardware supplied by Section 08710. Section 06410: Casework – to supply teacher and tall cabinet doors.

Section 08110: Metal Doors and Frames Section 08710: Supply of Hardware Section 09900: Painting and Finishing

.3 <u>Installation of Work Supplied by This Section is Specified in</u>

Section 06200: To install doors.

.2 Quality Assurance

.1 Manufacturer Qualifications

Manufacturers approved for fabrication of doors specified in this Section are

- : Super Structure Door Co. of Canada Limited
- : Cambridge Doors
- : Premium Forest
- : Premdor Inc.

.2 Requirements of Regulatory Agencies

- .1 Construct fire rated doors of indicated ratings in accordance with validating label requirements and as otherwise required by jurisdictional authorities.
- .2 Ensure that fire rated doors, together with specified frames, hardware and installation, meet requirements of NFPA No. 80, Standard for, Fire Doors and Windows, as adopted by Insurance Advisory Organization, and attach ULC labels for specified rating.

.3 References

.1 Reference Standards

Reference standards quoted in Contract Documents refer to: AWI 7th Edition Version 1.2 1999. CSA Standard 0132.2-M1977, Wood Doors.

.4 Delivery, Storage, and Handling

- .1 Package doors: identify with labels.
- .2 Store doors flat at site in piles with bottom face on bottom of piles protected from moisture by water resistant material under skids supporting piles, top of piles covered, and air circulation provided at sides of piles.

.3 Protect fire rated doors from moisture continuously from time of manufacture to completion of building.

.5 Site Conditions

.1 Environmental Requirements

- .1 Install doors only in areas that have dried out and where no further installation of damp materials is contemplated.
- .2 Moisture readings of building surfaces at storage and installation locations shall not exceed 15%.

.6 Warranty

.1 Extended Warranty

- .1 Submit warranty for wood doors specified this Section covering period for 2 years beyond the expiration of the warranty period specified in the General Conditions to the Contract.
- .2 Defects in doors shall include, but not be restricted to, surface blemishes, showing of core ghost lines, splitting, delamination, sagging, deterioration of core, and warping and twisting in excess of deformation allowed by CSA Standard 0132.2.
- .3 Replacement under the warranty shall include fitting, installation, reinstallation of hardware, grilles and glass, and finishing to match replaced door.

PART 2 - PRODUCTS

.1 General

- .1 Wood doors to meet or exceed AWI 7th Edition Version 1.2 1999.
- Doors shall be pre-fitted, bevelled and machines for mortise hardware items as per templates and approved hardware schedules provided.
- .3 Doors shall be factory finished.
- .4 Flush Interior Doors: 45mm thick, solid core construction, AWI type construction.

.2 Materials

.1 Cores of Flush Doors

- .1 Doors to be on piece core construction, no voids, Stiles and rails to be electrically glue bonded to particle core prior to abrasive sanding.
 - .1 Non-rated or 20 minute doors to meet AWI Section 1300, Type PC-5 at a minimum 33lbs/ft3 particle board type to meet ANSI A208.1 LD-2.
 - .2 45, 60 or 90 minute fire rated doors to meet AWI Section 1300, Type FD-5 mineral core (fire rated), complete with minimum 125mm wide tectonic blocking for closers, flush bolts, mortise pockets and fire exit devices.

.2 Wood Veneer Facing

- .1 Wood Veneer facing: AWI AA Grade plain sawn Birch species. Slip matched
- .2 Edge: close grain match Birch face veneer.

.3 Grilles

Metal: Hart and Cooley No. T980V, prime painted, sizes as shown on Door Schedule.

.4 Glass stops

Wood glass stops; premium grade Birch.

.3 Fabrication

.1 General

- .1 Fabricate doors, transom panels, side panels, to meet or exceed AWI Quality Standards for premium quality, for service in interior locations, in standard and non-standard sizes, and to designs as indicated on Drawings and Schedules.
- .2 Fabricate doors 44.5 mm thick of solid core construction unless indicated otherwise on Drawings or Schedules.
- .3 Incorporate solid wood blocking at locations where hinges, locksets, closures, and similar hardware is installed and applied.
- .4 Indicate top and hinge side on each door.

.2 Solid Core Door Construction

- .1 Construct solid core doors of 5 or 7 plies.
- .2 Fabricate of framed construction with particle board cores, minimum density of 450 kg/cu.m., 57 mm minimum top and bottom rails, and minimum 38.1 mm stiles using Type II, urea-water resistant adhesive. Bond rails, stiles and faces to core.

.3 Edge Strips

- .1 Laminate minimum 19 mm vertical edge strips to stiles.
- .2 Edge strips of stiles shall be of same species and grade as face veneer.
- .3 Match grain and colour of edge strips to face veneer in doors with stained/clear finishes.
- .4 Seal door edges in shop.
- .5 Bevel edges of lock stiles of single-acting doors.

.4 Glass Lights

- .1 Prepare doors to receive glass as indicated on Drawings and Schedules.
- .2 Fabricate framing and stops as detailed.
- .3 Glue and mechanically fasten glass stops on exterior side only for security, mechanically fasten glass stops on interior.
- .4 Glass is specified for installation under the work of Section 08800.

.5 **Door Grilles**

- .1 Prepare doors to receive grilles as indicated on Drawings and Schedules.
- .2 Fabricate framing and stops as detailed.
- .3 Install grilles.

.6 Panels

- .1 Fabricate panels for transoms, for side panels, of same core, edge, and facing materials as for doors.
- .2 Rebate top of doors and bottom of transom panels.
- .3 In faces of natural or stained finish, match veneers of panels to adjoining doors. Use full length veneers to attain continuous grain sequence.

.7 Fire Rated Doors

Fabricate fire rated doors for openings and with facings, indicated on Drawings and Schedules.

PART 3 - EXECUTION

.1 <u>Installation</u>

.1 Installation of wood doors is included in Section 06200.

End of Section

PART 1 - GENERAL

.1 <u>Description</u>

.1 General Requirements

Division 1 and General Requirements, is a part of this Section and shall apply as if repeated here.

.2 Work Related to this Section Performed by Other Sections

Section 04200: Unit Masonry

.3 Work Performed by this Section but Specified Elsewhere

Section 07920: To specify joint sealants. Section 08800: To specify glazing.

.2 System Description

.1 Tolerances

- .1 Fabricate frames to a tolerance of + 1.5mm for vertical, horizontal, and diagonal dimensions of units under 1830mm, and + 3mm for dimensions greater than 1830mm.
- .2 Erect component parts within following tolerances
 - : Variations from plumb:
 - 3mm maximum variation in storey height or 3m run, cumulative
 - : Variations from level:
 - 3mm maximum variation in any bay or 6m run, non-cumulative
 - : Variations from theoretical calculated plan or elevation location related to established floor lines, column lines and other fixed elements of the structure, including variations for plumb and level:
 - : Offsets in end-to-end or edge-to-edge alignment of adjoining members: 1.5mm maximum offset in any alignment.
 - Maintain tolerances for glazing as recommended by glass manufacturer.
- .4 Maintain locations of mullions related to, and within installed tolerances, of ceilings of walls as indicated on Drawings. Verify location of ceiling grid at each floor.

.2 Design

.3

- .1 The entire window installation shall be based on the rain screen principle.
- .2 The system shall provide:
 - : Such gaskets, baffles, overlaps and seals as required to provide a rain screen barrier to effectively deter rain water entry into cavities.
 - : The necessary air seals to eliminate air passage from system cavities into the building and vice versa, and to assure adequate pressure equalization of the system cavities with the outside.
- .3 The air and vapour seals required to eliminate air borne vapour infiltration from the building into the system cavities.
- .4 Openings between cavities and outside shall be of sufficient cross section to provide pressure equalization. All openings must be effectively baffled to minimize direct water entry.

.5 Thermally, the grid members shall have a resistance to heat transfer equal to or better than that of the area along the bottom of the sealed glass units.

.3 Structural Requirements

.1 Window systems must withstand a minimum windload of (30 psf) 1500 Pa with a maximum deflection of span/200.

.4 Performance

- .1 Air infiltration shall not exceed 3.05 to the power of negative four cu.m/s/sq.m. of curtain wall at 75 Pa pressure difference.
- .2 There shall be no water infiltration into the building under 50% of design wind load
- .3 No condensation shall form on any interior surfaces of the aluminum members before any of the exposed area of the 25mm sealed units reaches the dew point temperature.

.3 Quality Assurance

.1 Glazing Requirements

Conform to recommendations of Flat Glass Marketing Association (FMGA), Glazing Manual 1980 (GM) and Glazing Sealing Systems Manual 1970 (GSSM).

.2 Prequalified Subcontractors

Perform Work of this Section only by a Subcontractor approved by one of the systems manufacturers approved for this Project and who has adequate plant, equipment and skilled tradesmen to perform it expeditiously and is known to have been responsible for satisfactory installations similar to that specified during a period of the immediate past five years.

Perform Work of this Section by only one of the following pre-qualified Subcontractors:

Windspec Inc. Pedden Glass Alwind Ltd.

.3 Quality Assurance

.3 Requirements of Regulatory Agencies

Conform to requirements of authorities having jurisdiction in the fabrication and installation of components specified in this Section.

.4 References

.1 Reference Standards

Reference standards quoted in Contract Documents refer to: ASTM A167-81a, Specification for Stainless and Heat Resisting Chromium-Nickel Steel Plate, Sheet and Strip. ASTM A480-81, Specification for General Requirements for Flat Rolled Stainless and Heat Resisting Steel Plate, Sheet and Strip.

ASTM A525-76, Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, General Requirements.

ASTM A780-80, Standard Practice for Repair of Damaged Hot-Dip Coatings.

CGSB Specification 41-GP-19Ma, Rigid Vinyl Extrusions for Windows and Doors.

CGSB Specification 1-GP-108M, Paint, Acid and Alkali Resistant, Black.

CGSB Specification 1-GP-132M, Primer, Zinc Chromate, Low Moisture Sensitivity.

CGSB Specification 1-GP-181M, Coating, Zinc Rich, Organic, Ready Mix.

CAN3-G40.21-M81, Structural Quality Steel.

CSA Standard G164-M1981, Hot Dip Galvanizing of Irregularly Shaped Articles.

.5 Submittals

.1 Shop Drawings

- .1 Submit shop drawings showing and describing in detail system assemblies, including: large scale details of members and materials, of brackets and anchorage devices, and of connection and jointing details, fully dimensioned layout for positioning of brackets and anchorage devices to structures; dimensions, gauges, thicknesses; glazing details, description of materials, including catalogue numbers, products and manufacturers' names; aluminum alloy and temper designations, metal finishing specifications; and degree of torquing required for bolted connections; and other pertinent data and information.
- .2 Shop drawings will contain the minimum following details:
 - :jamb, head, and sill of units at junctions of facings, including air vapour seal
 - :structure required for system that is supplied with system and not part of building structure
 - :anchorage system
 - :dielectric separator details
 - :separator/slip gasket details
 - :thermal separator details
 - :flashing details

.2 Samples

- .1 Submit samples of unit frame profiles, glass and glazed sample assembly and insulated metal panel assembly prior to fabrication of units. Sample acceptance will be for colour, appearance, glazing methods only.
- .2 Submit samples for each finish and colour required. Submit samples finished on the specified alloy on 600mm lengths of extrusions or 600mm square of sheet or plate, showing maximum range or variation in colour and shade, and matching the Architect's samples in each case. Sample submittal and acceptance shall be for colour, texture and specular gloss.

.3 Maintenance Instructions

Submit maintenance instructions for incorporation into Project Data Book.

.6 Delivery, Storage and Handling

- .1 Suitable storage at site shall be provided by the Contractor. Parts shall be stored in this area to permit natural ventilation over their finished surfaces.
- .2 Under conditions of high humidity, heating or forced ventilation shall be provided to prevent the accumulation of surface moisture.
- Deliver, handle and store units by methods approved by manufacturer. Store units at site on wood platforms raised above grade or in enclosures protected from elements and corrosive materials, and with resilient pads provided for full bearing support of frame. Stack units vertically in manner to prevent racking. Do not remove from crates or other protective covering until ready for installation.
- .4 Protection of this work shall be the responsibility of this Section and the methods used shall be agreed with the Contractor.
- Do not permit foreign materials such as splashing of concrete, mortar, plaster or paint, which could damage the finish, to remain on the surface of aluminum work. All materials of this nature must be immediately removed, and where conditions are such that this will not be possible, the exposed surface of aluminum exposed to abuse shall be protected by removable aluminized vinyl protection throughout the period that work proceeds on the building. The protective materials must be carefully removed on completion of the building, and in such a manner that no damage occurs to the aluminum finish.

.7 Warranty

.1 Extended Warranty

- .1 Warrant installation specified in this Section covering the period for four years beyond the expiration of the warranty period specified in the General Conditions to the Contract.
- .2 Without restricting the generality of the warranty, defects shall include failure to maintain true lines, plumbness and weather tightness under all conditions.
- .2 Promptly remedy defects and/or failures upon written notification that such exist. Remedy shall include labour, materials, equipment and services required to make good defective work, and to replace such work, without removal of non-defective work, and to make good any work, components and finishes and Owner's property damaged or disturbed in course of remedying defects and/or failures.

PART 2 - PRODUCTS

.1 Materials

.1 Aluminum

- .1 Extrusions: AA6063-T5, alloy and temper for framing, and otherwise where not exposed to suit specified and fabricator's requirements.
- .2 Exposed Anodized Sheet and Plate: AA 5005-H14, alloy and temper, or AA 1100-H14, anodizing quality.
- .3 Exposed sheets where painted: AA100-H14, alloy and temper.
- .4 Non-exposed sheets: AA3003-H14, aloy and temper, mill finish, or Alcan "Utility Sheet".

.5 Exposed surfaces of aluminum shall be free of die marks, scratches, blisters, "leave-off" marks, or other blemishes which are visible.

.2 Steel

.1 Steel Sheet: Galvanized steel sheet to meet specified requirements of ASTM Specification A525, zinc coating designation ZF275.

.3 Stainless Steel

ASTM Specifications A480-81, and A167-81a, Type 304.

.4 Finishes

Anodic clear coating, Architectural Class 1, AA-M12C22A41 (.0004")

.5 Glass

To meet specified requirements of Section 08800; 25 mm sealed insulating glass units and single glazing and as specified herein.

.6 Glazing Gaskets

Either neoprene of EPDM (ethylene propylene diene monomer) with dimensional tolerances and durometer hardness and of suitable size and shape to meet requirements of the specifications and their specific application. Gaskets shall be virgin material as manufactured by Tremco Manufacturing Company (Canada) Limited or other approved manufacturer. Gaskets shall conform to Tremco Information Bulletins:

For EPDM - TDB-460-1 or equal.

For Neoprene - TDB-270-1 or equal.

.7 Glazing Tape

Polyisobutylene, with continuous molded-in synthetic rubber shim, in colour selected, Polyshim Tape by Tremco (Canada) Limited, or equivalent as approved.

.8 Sealants and Sealant Materials

To meet specified requirements of Section 07920 and design performance requirements.

.9 Fastenings

Stainless steel, Type 300 series, or double cadmium plated steel, selected to prevent galvanic action between fasteners and components fastened. Where exposed in finished surfaces, use oval-head countersunk Phillips head screws with shank diameter one screw size smaller than the diameter of holes in fastened material, and colour to match adjacent surfaces.

.10 Exposed Anchors

Aluminum or stainless steel with aluminum materials; and otherwise to match metal anchored. Non-exposed: as for exposed or may be galvanized steel.

.11 Bituminous Paint

To meet specified requirements of CGSB Specification 1-GP-108.

.12 Separator/Slip Gaskets

Nylon as suitable for connection detail at moving faces of connections.

.13 Thermal Separator

Solid extruded and thermally resistant sections with a durometer hardness of Shore "A" 50, ±5.

.14 Supporting Angles, Plates, Bars, Rods and Other Steel Accessories

- .1 Mild steel CAN3-G40.21-M78, thickness as required to sustain imposed loads and in no case less than 4.8mm thick.
- .2 Galvanize steel after fabrication where installed on exterior side of vapour retarder/air barrier. Prime paint steel where installed on interior side of vapour retarder/air barrier.

.15 Thermal Insulation

- .1 Rigid glass fibre board, AF530 wall insulation manufactured by Fiberglas Canada Inc. in thickness indicated on Drawings with black coating on outer surface.
- .2 Loose Insulation: Glass fibre, density of 12 kg/cu.m, by Fiberlgas Canada Inc.

.3 Foam Insulation

- .1 One or two part, polyurethane, with a nominal density of 40 kg/m³, coefficient of linear expansion of 0.00006 mm/m/°C, water vapour transmission of 73 Ng/Pa5m² and thermal conductivity of 0.02 W/m°K.
- .2 Similar to products as produced by BASF Canada Inc.

.16 Aluminum Sills

Extruded aluminum sections, of same thickness and of same finish and colour as window framing.

.17 Hardware

Dull chrome-over-nickel finish.

.18 Screens

- .1 To CGSB 79 GP #1IM
- .2 Fiberglass mesh in an independent, removal aluminum frame, positioned in between vertical double hung slider units, or interior face for awning units, or exterior face for hopper units.

.2 Products

- .1 Specified manufacturers' catalogue references to Windspec Inc. establish the minimum standards for the products listed in this Section.
- .2 Unspecified materials which form a part of completed assemblies shall be of manufacturers' standard.
- .3 Products of the following manufacturer are considered as acceptable alternatives, provided that they meet the minimum requirements of the products listed and must submit technical literature, samples, drawings and performance data for comparison:

Windspec Ltd.
Alumicor Limited
Alwind Industries Ltd.
Fulton Limited

.4 Fixed Framing

.1 Framing: AALCOR 220 Series .2 Frame Depth: 5 7/8 inches (150 mm)

.3 Material Thickness: .070 inches.4 Finish: clear anodized

.5 Glazing: Type 1, insulating glass units

Composite building panels
Operable window units

.6 Sills: extruded, aluminum sills, clear anodized finish.

.5 Vertical Sliding Window

.1 Framing: AALCOR 420 Series
.2 Frame Depth: 5 7/8 inches (150 mm)

.3 Material Thickness: .070 inches

.4 Style: Double hung, vertical slider

.5 Finish: clear anodized

.6 Glazing: exterior lite: 6 mm tinted, tempered, body colour to be

selected by architect.

Interior lite: 6 mm clear, low emissivity

.7 Screens: as specified to fit between vertical sliding units at bottom

only

.8 Hardware: locking handles,

.9 Sills: extruded, aluminum sills, clear anodized finish.

.3 Fabrication

- .1 Ensure glazing rebate provided with depth and width to accommodate specified glass in accordance with glass manufacturer's recommendations. Install glazing gaskets anchored to aluminum extrusions.
- .2 Provide structural support for air barrier tie-in.

.3 Framing Members

- .1 Fabricate generally to dimensions/profiles indicated on drawings. Meet specified requirements and clearances to other construction components.
- .2 Reinforce members and joints with steel plates, bars, rods or angles for rigidity and strength as needed to fulfil performance requirements. Use

concealed stainless steel fasteners for jointing that cannot be welded.

- .3 Provide glass setting, supports and stops to minimize possibility of glass breakage caused by structural inadequacy of frames, stops and frame joints, solar and thermal induced forces, within limitations of specified design performance criteria, as recommended by glass manufacturer.
- .4 Design system to ensure that site glazing may be performed in accordance with the construction schedule and within the environmental limitations specified in Section 08800.

.4 Assembly of Units

- .1 Join members by welding where specified and otherwise where practicable.
- .2 Join members where specified, and otherwise where welding is impracticable, by mechanical methods. Reinforcement or fasteners visible on faces of members where exposed to view will not be acceptable.
- .3 Weld with electrodes and by methods recommended by the base metal manufacturer, and in accordance with CSA Standards W47.1, W47.2 and W59 as applicable, and to avoid distortion or discolouration of exposed faces. Make welds continuous unless otherwise shown.

 Grind exposed welds flush, to match adjacent metal.
- .4 Join members in shop fabricated units to fit flush with hairline joints.
- Incorporate weep holes to drain off pocketed water. Baffle to prevent entry of driven water to conform to specified performance.
- .6 Except where shipping makes impossible, fabricate units in shop and ship completely assembled.

.5 Vapour Retarder and Air Barrier

Maintain integrity of vapour retarder and air barrier system within systems installed by this Section and between systems and adjoining construction.

.6 Dissimilar Materials

- .1 Protect material from electrolytic action when dissimilar metals are in contact with one another with two coats of bituminous paint or other approved means.
- .2 Protect aluminum concealed in contact with masonry with two coats of bituminous paint.

.7 Anchors

- .1 Incorporate anchorage to structure to support units adequately when subjected to specified loads.
- .2 Allow for complete adjustment in anchorage for levelling and positioning of units during installation.

.8 Fastenings

- .1 Where fastenings are exposed to dampness or moisture, use cadmium plated steel for steel-to-steel, aluminum for aluminum-to-aluminum, and stainless steel otherwise or alternatively for all above.
- .2 Where fastenings are not exposed to dampness or moisture, cadmium plated steel may additionally be used for all combinations of metals noted in immediately preceding sub-paragraph

.9 Thermal Movement

Fabricate exterior units and assemblies to provide for expansion and contraction of component members and between units when subjected to surface temperatures from -34 deg.C to 82 deg.C.

.10 Mullions

Fabricate mullions to provide for specified thermal movement without damage to adjacent units.

.11 Dissimilar Materials

- .1 Protect material from electrolytic action when dissimilar metals are in contact with one another.
- .2 Protect aluminum concealed in contact with masonry with a heavy coating of bituminous paint.

.12 Anchors

- .1 Incorporate anchorage to structure for units at sills, heads and jambs on 450mm centres generally, and to support units adequately when subjected to specified loads.
- .2 Allow for complete adjustment in anchorage for levelling and positioning of units during installation.

.13 Attachment of Hardware

- .1 Match hardware fastenings to metal of hardware.
- .2 Attach hardware by bolts or machine screws into tapped reinforcing plates.

.14 Weather stripping

- .1 Secure weather stripping in place by mechanical means or into formed recesses with keys, and in a manner to enable its removal and replacement without special tools.
- .2 Ensure that continuity of weather stripping is maintained around openings.

.15 **Thermal Break**

Incorporate a thermal break in frames.

.16 Finishing

.1 For surfaces with zinc coating, clean and smooth ground surfaces at welds and prime areas from which zinc has been removed with a coating of zinc rich paint of minimum 0.102 mm thickness. Immediately following damage to galvanized protection prepare and repair surfaces to meet specified requirements of ASTM Specification A780.

.17 **Sills**

- .1 Fabricate sills of extruded aluminum as indicated on drawings and finish as specified for frames.
- .2 Include jamb deflectors.
- .3 Fabricate sills in minimum length of 3650 mm or as required by openings or closing lengths. Include cover and splice plates at joints. Sills shall extend full length of any masonry opening on which they are seated.
- .4 Prefabricate mitered, reinforced and sealed corner sections.
- .5 Incorporate for concealed anchorage of sills, and means for adjustment of level and position during installation.

PART 3 - EXECUTION

.1 Examination

- .1 Take critical site dimensions to ensure that adjustments in fabrication or installation are provided for, that allowance is made for possible deflection of structure at heads, and that clearances to other construction have been maintained.
- .2 Ensure that anchors and inserts, installed by others, are adequate to meet specified requirements, and make adaptations before installation.

.2 Installation

.1 General

- .1 Coordinate fabrication of components specified in this Section with requirements of other Sections to ensure proper anchorage and fitting.
- .2 Install components and units plumb, level and in accordance with shop drawings, by qualified experienced tradesmen and to conform to fabricator's instructions at location of testing and at site.
- .3 Do not force units into place, nor superimpose on them loads for which they were not designed.
- .4 Coordinate with Other Contractors, make provisions, and install vapour retarder and air barrier to ensure complete continuity and integration of vapour retarder and air barrier system.
- .5 Provide structural support for air barrier to prevent its displacement or its loss of seal when subjected to forces specified for design performance.
- .6 Install metal flashing to drain cavities in system. Secure flashings permanently to prevent displacement, leaks, and noise.
- .7 Provide for thermal movement to take place between shop fabricated assemblies and between assemblies and adjacent construction.
- .8 Secure units by non-corrosive anchorage materials. Use of wood or fibre is not acceptable.
- .9 Conceal anchors, clips, blocking, and all other attachments.
- .10 Install reinforcing and supporting members as indicated and required structurally as part of the work of this Section.
- .11 Seal metal-to-metal joints between components included in the work of this Section to ensure a weather tight assembly, and in accordance with sealant manufacturer's specifications.
- .12 Install insulation where aluminum is exposed to the exterior to ensure that thermal conductance to interior of building is no more than thermal conductance of insulating glass units.

- .13 Install units with consideration for finish variations. Abrupt variations of appearance or colour in adjacent components will not be acceptable without approval before installation.
- .14 Coat all damaged prime painted surfaces of anchorage with rust inhibiting paint after welding is completed.
- .15 Apply two coats zinc rich paint to metal surfaces bared by removal of galvanizing.
- Apply one coat of prime paint to metal surfaces bared by removal of shop applied primer.

.2 Operable Windows

- .1 Install windows plumb, level and in accordance with shop drawings, by qualified experienced workers and to conform to fabricator's instructions.
- .2 Do not force window units into place, nor superimpose on them loads for which they were not designed.
- .3 Provide for thermal movement to take place between windows and adjacent construction.
- .4 Secure windows by non-corrosive and inorganic anchorage materials.
- .5 Conceal anchors, clips, blocking, and all other attachments.
- .6 Install reinforcing and supporting members as specified or indicated for units specified in this Section.

.3 Caulking

Caulk joints between frame members and sills and adjacent construction as a part of the work of this Section and in accordance with Section 07921 of the specifications.

.4 Glazing

Install glass and composite building panels in units, as part of work of this Section and in accordance with Sections 07240 or Section 08800 of these specifications. Include manufacturer's standard glazing components to create prime seals.

.3 Adjustment and Cleaning

.1 Adjusting

- .1 Adjust operating units to operate smoothly and fit tightly when closed and locked.
- .2 Adjust hardware to operate smoothly, with proper tension and lubricate.
- .3 Ensure that weather stripping does not cause binding to prevent closing and locking, and that it makes weather tight contact.

.2 Cleaning on Completion of Installation

- .1 Remove deposits which affect appearance or operation of units.
- .2 Remove protective materials.
- .3 Clean interior and exterior surfaces by washing with clear water; or with water and soap or detergent; followed by a clear water rinse.
- .4 Clean and restore stained metal surfaces in accordance with manufacturer's recommendations. Replace if cleaning is impossible.
- .5 Final cleaning is specified in Section 01710.

.4 Protection

- .1 Immediately upon completion of installation, suitably protect vulnerable edges, and exposed corners and surfaces. Protection shall prevent damage by mortar, paint or other hazards from the work of other trades.
- .2 Protect prefinished surfaces of metal with protective coatings or wrappings to remain in place until construction completion. Use materials recommended by finishers or manufacturers of metals to ensure that method is sufficiently protective, easily removed, and harmless to finish.
- .3 Remove protection from metal glazing surfaces before installation of glass.
- .4 Maintain protection from time of installation to final cleanup in accordance with Sections 01040 and 01500.

End of Section

PART 1 - GENERAL

.1 <u>Description</u>

.1 General Requirements

Division 1 and General Requirements, is a part of this Section and shall apply as if repeated here.

.2 Work Performed by Other Sections Related to This Section is Specified in:

Section 09250: Gypsum Drywall, Bulkheads, Ceilings

Drawings: Mechanical Services Drawings: Electrical Fixtures

.2 System Description

.1 Tolerances

- .1 Install ceilings within 3.2 mm of dimensioned height above floor unless approved otherwise. Level within maximum tolerance of 3mm in 3 m.
- .2 Install framing members to ensure that deflection of each member does not exceed 1/360 of its span under dead load and loads imposed by mechanical and electrical equipment and fixtures supported by ceiling.

.3 Quality Assurance

.1 Subcontractor Qualifications

Install acoustical ceilings specified in this Section only by Subcontractor who has adequate equipment and skilled mechanics to perform it expeditiously, and is known to have been responsible for satisfactory installations similar to that specified during a period of at least five years.

.4 References

.1 Reference Standards

Reference standards quoted in Contract Documents refer to: CAN/CSA-A82.27-M91, Gypsum Board Products

.5 Submittals

.1 Samples

Submit two samples of each specified acoustical board and exposed grid material.

.6 **Delivery, Storage, and Handling**

- .1 Package finish materials.
- .2 Store materials in protected dry area.
- .3 Ensure that finish metal members are not bent, dented, or otherwise deformed.

.7 Site Conditions

- .1 Install acoustical ceilings in areas closed and protected against weather, maintained at no less than 10°C.
- .2 Do not install acoustical ceilings in any area unless satisfied that construction in place has dried out, and that no further installation of damp materials is contemplated.

PART 2 - PRODUCTS

.1 Materials

.1 Accessories

Fabricate miscellaneous clips, splicers, connectors, screws, other standard accessories of steel, zinc coated or cadmium plated, of strength and de-sign compatible with suspension methods and system specified. Include special accessories to provide complete assembly of acoustical ceilings.

.2 Hangers

Galvanized annealed steel wire; 2.8 mm dia. to support a maximum weight of 68 kg per hanger, #9 ga. to support a maximum weight of 140 kg per hanger. Galvanized annealed steel rod; 4.8 mm dia. to support maximum weight of 250 kg/hanger.

.3 Hanger Anchoring Devices

Phillips Red Head by Phillips Drill Company of Canada Limited, Thornhill, Ontario

- : T32, self drilling for use in concrete deck.
- : WS-3822 wedge anchor with tie wire insert for use in composite concrete and steel deck.
- : SDI-3822 for use in steel floor deck, with screw screw eye bolts to suit inserts.

.4 Exposed Tee Ceiling Grid System

- .1 Two directional, 610 mm X 610 mm. and/or 610 mm X 1220 mm
- .2 Main Beams: 0.508 mm steel, bulb tees.
- .3 Cross Tees: 0.508 mm steel, with tongues to interlock with main beams.
- .4 Wall Moulding: Angle section to match tees.
- .5 Finish: Baked vinyl enamel, white.

.5 Acoustical Units

.1 Acoustical units shall match submitted samples with no perceptible visual variations within a building area. Fabricate edges uniformly and true to fit suspension system, and maintain true lines and surface planes.

.2 Acoustic Units

Type 1

Pattern: Non-directional Fissured – Cortega 823

Colour: White

Edge: Regular, lay-in (square) Size: 610 mm X 1220 mm (Imperial)

Thickness: 15 mm

Noncombustible

Manufacturer: Armstrong

Type 2

Pattern: Non-directional Fissured – Cortega 823

Colour: White

Edge: Regular, lay-in (square)
Size: 610 mm X 610 mm (Imperial)

Thickness: 15 mm

Noncombustible

Manufacturer: Armstrong

PART 3 - EXECUTION

.1 Examination

.1 Ensure that environmental conditions and installations preceding that of this Section are satisfactory, and will permit compliance with the quality and dimensions required of acoustical ceilings.

.2 Installation

- .1 Coordinate installation of acoustical ceiling systems specified in this Section with that of other Sections. Ensure that adequate preparation is made for attachment of hangers and fasteners. Install framing for support and incorporation of flush-mounted and recessed service components. Ensure adequacy of supports by consultation and verification of methods and locations of installations specified in Divisions 15 and 16.
- .2 Install hangers before sprayed fireproofing.
- .3 Install hanger anchoring devices in appropriately drilled holes.
- .4 Screw apply hanger anchoring devices to metal floor deck.
- .5 Do not use through the roof hangers.
- .6 Do anchor hangers from or make attachment to, ducts, pipes, conduit, or the support framing installed by other Sections.
- Space hangers for supporting grid at 1220 mm max. centers each way, and to suit structure and ceiling system. Secure hangers to structure by a permanent method as approved. Secure wire hangers to framing by bending sharply upward and wrapping securely with 3 turns. Install hangers free of kinks and at no more than 5° off vertical. Install extra hangers at each corner of lighting fixtures. Reinforce other ceiling equipment with hangers.
- .8 Install the entire hanger and suspension grid to adequately support the ceiling assembly, including services incorporated, with a maximum specified deflection for each component member, and free from horizontal movement.
- .9 Lay out ceilings with acoustic units evenly spaces in each area, with grid lines symmetrical about room axes, columns and service element, and with maximum border widths of equal dimensions on opposite sides of areas, or as indicated on reflected ceiling plans. Provide angle moldings to match exposed grid where

- ceilings abut walls or other vertical surfaces. At curved or circular element, cut vertical legs and bend track to conform to element.
- .10 Frame around recessed fixtures, diffusers, grilles, and openings.
- .11 Maintain true surface planes, and component and joint lines throughout each area.
- .12 Butt joints between components tightly together.
- .13 Install grid system ceilings as specified by the manufacturer of the system. Ensure that methods of installation used are acceptable to the manufacturer of each system component and Architect.
- .14 Brace system to maintain alignment of grid.
- .15 Install acoustical panels in exposed tee system. Cut panels neatly to fit off-module grid, with sufficient clearances to ensure removal without damage.
- .16 Do not install acoustical units with broken or marred edges exposed to view.
- .17 Install hold-down clips at each panel. Adapt installation to provide ceiling access where required for services.
- .18 Mark access panels in an unobtrusive manner.
- .19 Where retention clips are specified for Type 3 ceilings, install clips in accordance with manufacturers' written instructions.

.3 Adjustment and Cleaning

- .1 Clean soiled/discoloured surfaces of exposed ceiling surfaces on ceiling installation completion.
- .2 Replace components which are visibly damaged, marred, or uncleanable.

.4 Extra Stock

.1 Provide 2 sealed cartons of each specified acoustical board for Owner's use. Deliver to site at conclusion of project.

End of Section

St. Clair Catholic District School Board Monsignir Uyen Catholic School Renovation

SB

Stone Base

SPF

Sports Flooring

Randy Wilson Architect Incorporated

Precast Concrete Slab



Existing

EPF

Epoxy Flooring

RWAI # 1506 2015.04.27

Abbreviations

PCS

GYP	Gypsum Wall Board	CPT	Carpet Tile	EXP	Exposed Structure	PT	Paint	HW	Hardwood	EP PT	Epoxy Paint
CMU	Concrete Masonry Unit	VCT	Vinyl Composite Tile	LAT	Lay-in Acoustic Tile	SRTC	Service Room Traffic Coating	WB	Wood base finish to match floor	TBD	To Be Determined
GLZ	Glazing	CT	Ceramic Tile	RES	Resilient Sheet Flooring	STN	Stain	-	None	ws	Wood Soffit
CONC	Concrete	PCT	Porcelain Tile	Anod	Anodized Aluminum Frames	SEAL	Concrete Sealer	N/A	Not Applicable		
RUB	Rubber Flooring	RB	Resilient Base	SV	Sheet Vinyl	MP	Movable Partition	OPEN	Open to adjacent room		

EX

Room	Room	Floor			North		East		South		West		Ceiling			Remarks
No.	Name	Material	Finish	Base	Mat'l	Finish	Mat'l	Finish	Mat'l	Finish	Mat'l	Finish	Mat'l	Finish	Height	1
100	Secretary	EX	-	EX	CMU	PT	CMU	PT	CMU	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
101	Girl's Change Room	EX	-	EX	CMU	PT	CMU	PT	CMU	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
102	Principal	EX	-	EX	CMU	PT	CMU	PT	CMU	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
103	Gymnasium	EX	-	EX	CMU	PT	CMU	PT	CMU	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
104	Vice Principal	EX	-	EX	CMU	PT	CMU	PT	CMU	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
105	Boy's Change Room	EX	-	EX	CMU	PT	CMU	PT	CMU	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
106	Classroom	EX	-	EX	CMU	PT	GYP	PT	CMU	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
107	Classroom	EX	-	EX	CMU	PT	CMU	PT	CMU	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
108	Classroom	EX	~~~~	EX	CMU	PT	CMU	PT	CMU	PT	GYP	PT	EX			Paint all hollow metal doors and frames.
109	Classroom	VÇT/ĘX		RB/EX	CMU	PT	CMU	PT	CMU	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
110	Meeting Room	ĒΧ	1	EX	CMU	PT	CMU	PT	CMU	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
111	Storage	EX	-	EX	CMU	PT	-	-	-	-	CMU	PT	EX			Paint all hollow metal doors and frames.
113	Library	EX	-	EX	CMU	PT	CMU	PT	CMU	PT	CMU	PT	EX			Paint walls as shown on floor plan.
113A	Meeting Room	EX	-	EX	CMU	PT	CMU	PT	CMU	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
113B	Storage Room	EX	-	EX	CMU	PT	CMU	PT	CMU	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
115	Storage Room	EX	-	EX	CMU	PT	CMU	PT	CMU	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
116	Staff Room	EX		EX	CMU	PT	CMU	PT_	CMU	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
447	Classica	VOT/EV	1	DD/EV	CMU	T DT	CVD/CMIL		CMIL		CMI	· · · · · · ·	ACT - TYPE 1	$\overline{}$	MATCHEY	Paint all hollow metal doors and frames. For
117	Classroom	VCT/EX	-	RB/EX	CMU	PT	GYP/CMU	PT	CMU	PT	CMU	PT	ACT - TYPE T		MATCH EX	ceiling tile see specs.
117A	W.R	VÇT		, RB	CMU	PT	CMU	PT	GYP	PT	GYP	PT	ACT - TYPE 1		2400	For ceiling tile see specs.
118	Boy's Washroom	EX	T	EX	CMU	PT	CMU	PT	CMU	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
120	Girl's Washroom	EX	-	EX	CMU	PT	CMU	PT	CMU	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
123	Classroom	EX	-	EX	CMU	PT	CMU	PT	GYP	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
125	Classroom	EX	-	EX	GYP	PT	CMU	PT	GYP	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
127	Classroom	EX	-	EX	GYP	PT	CMU	PT	CMU	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
132	Classroom	EX	-	EX	CMU	PT	CMU	PT	GYP	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
134	Classroom	EX	-	EX	GYP	PT	CMU	PT	GYP	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
136	Classroom	EX	-	EX	GYP	PT	CMU	PT	CMU	PT	CMU	PT	EX			Paint all hollow metal doors and frames.
V01	Vest.	EX	-	EX	CMU	PT	Glass	-	СМИ	PT	Glass	-	ACT - TYPE 2		MATCH EX	Paint all hollow metal doors and frames. All walls above lockers to be painted
CR1-1	Corridor	EX	-	EX	CMU	PT	CMU	PT	СМИ	PT	CMU	PT	ACT - TYPE 2		MATCH EX	Paint all hollow metal doors and frames. All walls above lockers to be painted
V02	Vest.	EX	-	EX	CMU	PT	СМИ	PT	СМИ	PT	CMU	PT	ACT - TYPE 2		MATCH EX	Paint all hollow metal doors and frames. All walls above lockers to be painted
CR1-2	Corridor	EX	-	EX	CMU	PT	СМИ	PT	CMU	PT	CMU	PT	ACT - TYPE 2		MATCH EX	Daint all hallow motal doors and frames All
CR1-3	Corridor	EX	-	EX	CMU	PT	СМИ	PT	CMU	PT	СМИ	PT	ACT - TYPE 2		MATCH EX	Paint all hollow metal doors and frames. All walls above lockers to be painted. Vest at Wesr ends to be included as part of corridor CR1-3 for new finishes
CR1-4	Corridor	EX	-	EX	CMU	PT	СМИ	PT	СМИ	PT	СМИ	PT	ACT - TYPE 2		MATCH EX	Paint all hollow metal doors and frames. All walls above lockers to be painted

1506 - Finish Schedule Page 1

St. Clair Catholic District School Board Monsignir Uyen Catholic School Renovation

Randy Wilson Architect Incorporated

Abbreviations

GYP	Gypsum Wall Board	CPT	Carpet Tile	EXP	Exposed Structure	PT	Paint	HW	Hardwood	EP PT	Epoxy Paint
CMU	Concrete Masonry Unit	VCT	Vinyl Composite Tile	LAT	Lay-in Acoustic Tile	SRTC	Service Room Traffic Coating	WB	Wood base finish to match floor	TBD	To Be Determined
GLZ	Glazing	CT	Ceramic Tile	RES	Resilient Sheet Flooring	STN	Stain	-	None	ws	Wood Soffit
CONC	Concrete	PCT	Porcelain Tile	Anod	Anodized Aluminum Frames	SEAL	Concrete Sealer	N/A	Not Applicable		
RUB	Rubber Flooring	RB	Resilient Base	SV	Sheet Vinyl	MP	Movable Partition	OPEN	Open to adjacent room		
PCS	Precast Concrete Slab	SB	Stone Base	SPF	Sports Flooring	EX	Existing	EPF	Epoxy Flooring		

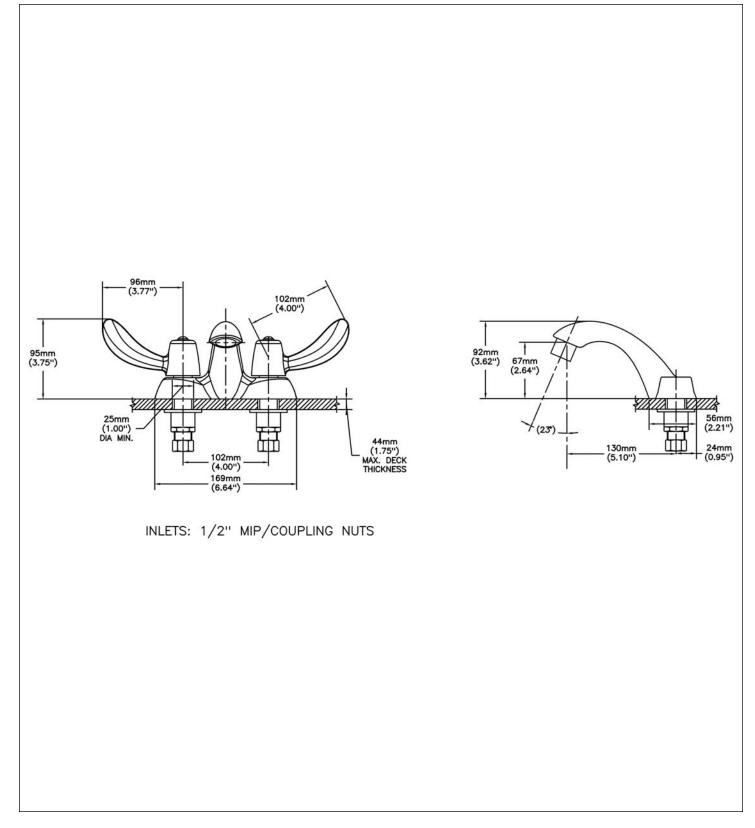
Room	Room	Floor			North		East		South		West		Ceiling			Remarks
No.	Name	Material	Finish	Base	Mat'l	Finish	Mat'l	Finish	Mat'l	Finish	Mat'l	Finish	Mat'l	Finish	Height	
V03	West Vestibule	EX	-	EX	CMU	PT	CMU	PT	CMU	PT	CMU	PT	ACT - TYPE 2		MATCH EX	Paint all hollow metal doors and frames.
V04	South Vestibule	EX	-	EX	CMU	PT	CMU	PT	CMU	PT	CMU	PT	ACT - TYPE 2		MATCH EX	Paint all hollow metal doors and frames.

1506 - Finish Schedule Page 2

2015.04.27

- 2.10.8.1 **Sink**: Franke Kindred Aristaline LBS6808, 521 mm x 508 mm x 203 mm (200 x 20-1/20 x 80) 20 gauge, Type 302 stainless steel single bowl countertop sink,with backledge drilled for 200 mm (80) centre faucet set. Sink complete with 90mm (3-1/20) crumb cup strainer and 40 mm (1-1/20) tailpiece, self-rimming with gasket and hold down clamps.
- 2.10.8.2 **Faucet**: Chicago faucet Ecast, Model 116.706.AB.1 with dual beam infrared sensor, lead free cast brass body designed for 4O c-c mounting. Provide hardwired 12 volt A/C transformer and E2805 vandal resistant .5 gpm (1.9 l/min) spray outlet. Connect tempered water to faucet using Lawler Model 516 thermostatic mixing valve with inline check stops. Temperature range 35°C to 46°C (95°F to 115°F).
- 2.10.8.3 **Supplies**: McGuire H170BVRB supplies, heavy pattern, chrome plated, polished, short rigid horizontal integral sweat tubes with vandalproof loose key ball valve angle stops, escutcheons and braided flexible risers.
- 2.10.8.4 **Drain**: McGuire 155A drain, chrome plated with open grid strainer. McGuire 8872C P Trap, 32 mm (1-1/4O), chrome plated, polished cast brass with cleanout and escutcheon.

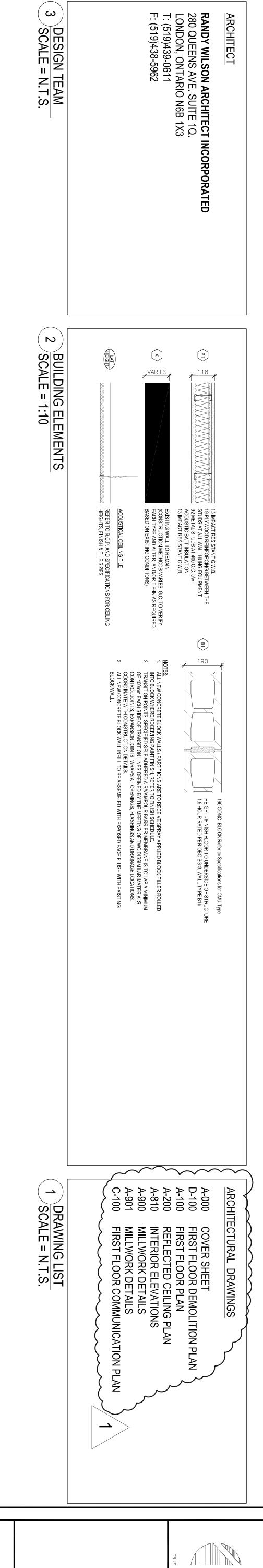




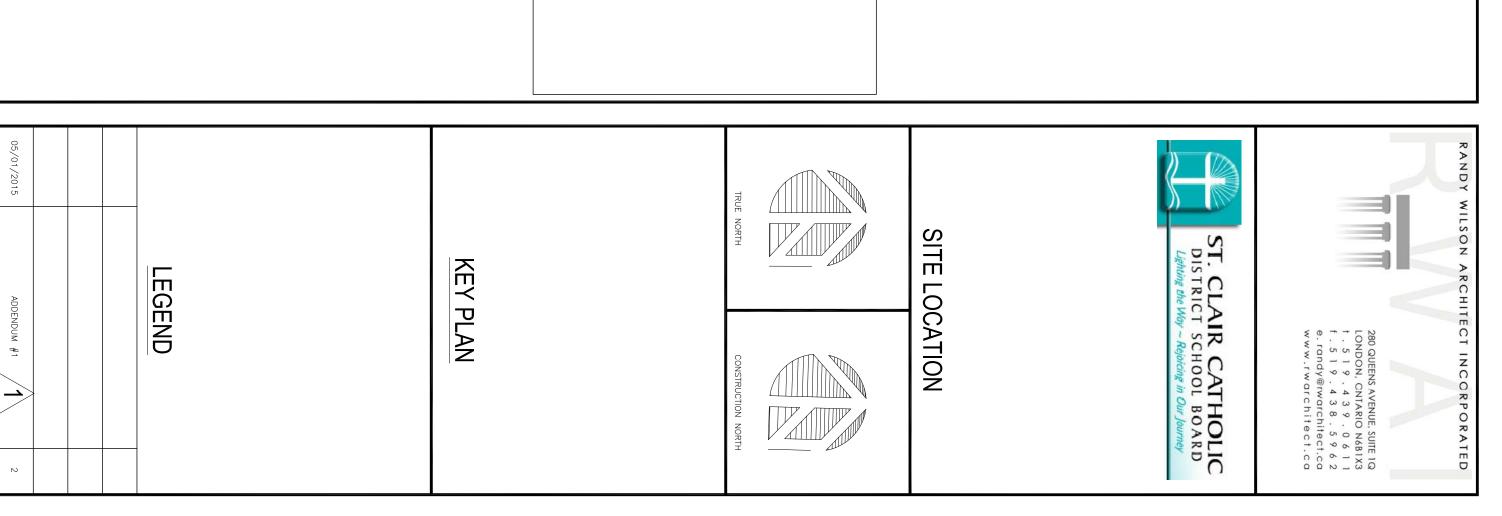
Delta reserves the right (1) to make changes to specifications and materials, and (2) to change or discontinue models, both without notice or obligation. Dimensions are for reference. Measurement may vary plus or minus 6mm(0.25"). Mounting locations are suggested only. Check with local codes for requirements in your area. This spec was produced April 11, 2012.

MONSIGN OR UYEN CATHOLIC LIC DISTRICT

255 LARK STREET. CHATHAM, ONTARIO N7L 1G9 SCCDSB PROJECT #: 618-CP-1510



ယ



ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD MONSIGNOR UYEN CATHOLIC SCHOOL

ADDENDUM #1

COVER SHEET

ATE PLOTTED: 4/30/2015 6:49 PM

A000

