1 General

1.1 GENERAL REQUIREMENTS

.1 Comply with requirements listed in Division 1

1.2 RELATED WORK

.1 Steel Hollow Metal Doors Section 08 11 00

1.3 REFERENCE STANDARDS

.1 Standard hardware location dimensions in accordance with Canadian Metric Guide for Steel Doors and Frames (Modular Construction) prepared by Canadian Steel Door and Frame Manufacture's Association.

.2 CAN/CGSB-69.18-M90/ANSI/BHMAA156.1-1981, Butts and Hinges.

.3 CAN/CGSB-69.19-M89/ANSI/BHMAA156.3-1984, Exit Devices.

.4 CAN/CGSB-69.20-M90/ANSI/BHMAA156.4-1986, Door Controls (Closers).

.5 CAN/CGSB-69.21-M90/ANSI/BHMAA156.5-1984, Auxiliary Locks & Products.

.6 CAN/CGSB-69.22-M90/ANSI/BHMAA156.6-1986, Architectural Door Trim.

.7 CAN/CGSB-69.24-M90/ANSI/BHMAA156.8-1982, Door Controls - Overhead Holders.

.8 CAN/CGSB-69.29-M90/ANSI/BHMAA156.13-1980, Mortise Locks and Latches.

.9 CAN/CGSB-69.34-M90/ANSI/BHMAA156.18-1984, Materials and Finishes.

.10 CAN/CGSB-69.34-M89/ANSI/BHMAA156.19-1984, Power Assist and Low Energy Power Operated Doors.

1.4 QUALITY ASSURANCE

.1 Meet all requirements of the local building code and all other applicable regulations.

.2 Products listed in Part 2 of this specification establish the minimum requirements for this project. Approval for alternate products must be requested in writing seven (7) days prior to tender closing date. Deviation from specified products will require the supply and installation of correct products, any/all associated costs.

1.5 REQUIREMENTS REGULATORY AGENCIES

.1 Use ULC/ULI listed and labeled hardware for doors in fire separations and exit doors.

1.6 SUBMITTALS

.1 Alternate products must be submitted 5 days prior to tender closing for approval.
.2 Prepare and submit three (3) copies of a detailed hardware schedule listing product numbers size and finishes. Include three (3) sets of catalog cuts.
.3 Furnish other sections with two (2) complete sets of hardware templates for related fabricating and installation.
.4 Submit for owner review and comments two (2) key schedules listing the door number, hardware heading or item, and the key group.
.5 Where electrical hardware is to be supplied, provide wiring diagrams showing all wire termination points. Where electrical hardware is to be supplied and installed provide the contractor with riser diagrams listing the correct wire runs and back box sizes as well as 115 VAC requirements.

1.7 SAMPLES

.1 Submit samples in accordance with Section 01 33 00 - Shop Drawings, Product Data, Samples.
.2 Identify each sample by label indicating applicable specification paragraph number, brand name and number, finish and hardware package number.
.3 After approval samples will be returned for incorporation into the Work.

1.8 PRODUCT DELIVERY, HANDLING, AND STORAGE

.1 Deliver each hardware item in its original package complete with all fasteners, keys, templates, and installation instructions required for installation.
.2 Clearly mark each container with the door opening number and the hardware schedule item or heading number.
.3 The contractor must store hardware delivered in a secure area. The storage area must contain adequate shelf space to hold all the hardware off the floor. Ensure the area is kept dry and clean.
.4 When requested, package items of hardware separately for delivery to other fabricators for their installation.

1.9 SITE INSTRUCTION

.1 Manufacturers of products supplied to this project are to provide a site instruction to the finishing hardware installers, detailing how each of their products are to be installed. This instruction is to provide a thorough knowledge of the product and its function prior to installation.

.2 Each manufacturer of product supplied to this project is to provide the end user with a product seminar, combining function, servicing and trouble-shooting. Furnish the end user with service/parts manuals and instructions for each product used on site.

1.10 MAINTENANCE DATA

.1 Provide operation and maintenance data for door closers, lock sets, door holders and fire exit hardware for incorporation into manual specified in Section 01730 Operation and Maintenance Manual.

.2 Brief maintenance staff regarding proper care, cleaning, and general maintenance.

1.11 MAINTENANCE MATERIALS

.1 Supply two sets of wrenches for door closers lock sets and fire exit hardware.

1.12 WARRANTY

.1 Provide a written warranty for a period of one (1) year for all hardware supplied, 5 years on cylindrical locks and 10 year on door closers (lifetime on closer shell).

PART 2

PRODUCTS

2.1 BUTT HINGES

.1 All butt type hinges will be five knuckle ball bearing.

.2 Exterior out swing doors must be non-ferrous and have non-removable pins (NRP).

.3 Where the door width exceeds 3'0" (914mm) supply 5" (127) high hinges.

.4 Supply two (2) hinges for doors up to 5'0" (1525 mm) high and an additional hinge for each 2'5" (760 mm) or fraction thereof in door height.

.5 Specified Products: Mont-Hinge BB1079

2.2 CENTER HUNG PIVOTS

.1 Center hung pivots will be “Camtrol” double- acting type, with surface mounted floor pivot, and frame mounted head pivot, that can bear up to 100 lbs per door.

.2 Pivot set shall have steel anchor arms and complete pivot housing for door thickness of 1 ¾", and door width up to 44".

.3 Camtrol pivot shall have only three moving parts in each pivot, and allows snug application without rounding door edge.

.4 Specified products: Hager

2.3 CONTINUOUS HINGES

.1 All full height hinges must be knuckle type with nylon bearings between each knuckle.

.2 Supply an aluminum hinge for out swinging exterior doors and a steel hinge for all labeled and interior doors.

.3 Specified products: Gallery Specialty Hardware CH931/CH941

2.4 LOCKS AND LATCHSETS

.1 Locksets and latchsets are to be cylindrical, lever type, and meet ANSI Grade 1 or 2, A117.1 Accessibility, and ULC requirements.

.2 Lever trim must have concealed through bolt mounting, and the levers are to be solid cast with a return to the door face. All locks are to have heavy duty cast mounting plates, threaded hub and locking nut, and stainless steel interlocking spindle.

.3 Provide ¾" latch throw for pairs of labeled doors.

.4 All locksets and cylinders supplied for this project must have 6-pin cores, master keyed as directed.

.5 Specified products: Schlage ND-P-OME Series / AL-P-OME Series

2.5 EXIT DEVICES

.1 All exit devices will be low profile push pad style devices. Outside trim will have the same trim design as the locksets. Furnish all devices in dull chrome plated finish. Exit hardware must have the correct life safety or fire rated labels attached to the active case. Ensure that the actuating push pad covers 1/2 of the door opening.

.2 Exit devices installed on exterior doors must have dead-locking latch bolts to ensure tamper-proof security.

.3 Where pairs of double egress doors are detailed to have two (2) vertical rod exit devices, provide fire labeled devices less bottom rods.

.4 Specified products: Von Duprin 98 / 9827 Series

2.7 DOOR CLOSERS

.1 Door closers will all have full adjustment features including back check, closing speed, and latch speed control.

.2 All interior door closers will have reduced opening force spring power to meet the barrier free codes of 22N (5 lbs.)

.3 Surface mounted door closers are to be located on the room side of the door whenever possible or as directed by the architect.

.4 Provide all mounting plates for door closers required for use with concealed overhead door stops.

.5 Door closers are to have full body covers to match the project finishes. Installation instructions must be inside all door closer covers.

.6 At high abuse and exterior door locations door closers shall be equipped with a rigid main arm c/w shock absorbing spring located in the soffit plate. Alternately furnish these doors with a grade one closer and separate overhead doorstop.

.7 Specified products: LCN 4011 / 4021 / 4031 Series

2.8 ELECTROMAGNETIC LOCKS

.1 Furnish Electromagnetic locks to exceed ANSI/BHMA A156.23 Grade 3 standards, and listed by Underwriters Laboratories Canada where required. Electromagnetic locks are to have fully automatic voltage selection, modular design, and armature housing which holds the armature in place, eliminating noise and sagging.

.2 It is the responsibility of the finishing hardware supplier to provide Riser Diagrams, Point to Point Diagrams and method of operation notes for each of the openings utilizing these products.

.3 Specified products: Locknetics 320+ Series

2.9 DOOR OPERATORS

.1 Door operators will be supplied and installed by this section. The operator must include hydraulic door control features including back check and latch speed. Wiring / electrical connection will be by Division 16, Electrical, and include hook up of all wire runs and all hook up to related releasing hardware (i.e.: electric strike/mag lock).

.2 Supply the activating switches as required to suit the details shown in elevation or as listed in the hardware schedule.

.3 Specified products: LCN9540 Series

2.10 PULLS AND PLATES

.1 Supply door trim as listed in the hardware schedule. Pulls are supplied with back to back (BTB) or through bolt mounting as required. When push plates are listed with door pulls, install the push plate to conceal the through bolt.

.2 All kickplates, push plates, and bumper plates must have all sides beveled and corners rounded to ensure there are no sharp edges. Supply plates with tape mounting or if screws are listed, with counter sunk screw holes. The plates will be .050 thick unless listed otherwise, and sized to suit door width. Kickplate will be door width less 1.5" (35 mm) for single doors, and less 1" (25 mm) for pairs of doors.

.3 Specified products: Ives, Gallery Specialty Hardware

2.11 DOOR STOPS AND HOLDERS

.1 Wall stops are only to be used on proper wall conditions such as block or masonry. Supply floor stops with sufficient height to suite the floor condition or undercut of doors.
.2 Overhead stops and holders will be surface mounted unless there is a conflict with door closers or other hardware.
.3 Electromagnetic door holders will be heavy duty, tri-voltage, standard profile, and recessed wall mount.
.4 Specified products: Gallery Specialty Hardware, Glynn-Johnson, LCN

2.12 DOOR SEALS

.1 Perimeter seals must be supplied to fully cover all gaps between the door, frame, and floor condition to seal against weather, sound, or smoke.
.2 Frame gasketing must be closed cell neoprene. The extruded housing must have a rib to prevent distortion during installation. Aluminum frames will be equipped with felt inserts by the frame supplier.
.3 Door bottoms will be heavy duty and have an adjustment screw to ensure proper contact with the floor. Supply the correct drop insert for carpet where required.
.4 Thresholds must be installed to ensure the door bottom makes full contact. Supply thermally broken thresholds for all exterior door openings.
.5 Specified products: Unique Weatherstrip & Thresholds

2.13 KEYING

.1 Door locks, cylinders, and cabinet locks to be keyed under a new factory registered Grand Master key system, using a Schlage Security Everest “D” Registered Keyway. Prepare a detailed keying schedule showing all doors grand master keyed, master keyed, keyed differently, keyed alike or keyed alike in groups as directed, and in conjunction with the owner’s representative.
.2 Provide three (3) keys for every lock and cylinder in this contract.
.3 Provide three (3) Master keys for every MK and GMK group in this contract.
.4 Stamp keying code numbers on all keys and cylinders supplied.
.5 Provide temporary construction cylinders during building construction.
.6 Provide all permanent lock cylinders and keys to Owner’s representative on site.

PART 3 EXECUTION

3.1 INSPECTION

.1 The Architectural Hardware Consultant (A.H.C.) supplying hardware for this project shall inspect all the door openings to ensure that hardware installation is complete, and that all hardware items are installed and operating as intended.

.2 A written report is to be furnished to the Contractor, Architect & Owner detailing each opening in need of corrective action. A final inspection will be required to confirm satisfactory operation.

3.2 INSTALLATION

.1 The general contractor shall obtain a copy of ANSI/DHI A115.1G-94, "Installation Guide for Doors and Hardware". It is the intent of this document to be used as a reference guide in the proper handling, storage, and installation of finishing hardware, and doors and frames. This document can be obtained through the Door and Hardware Institute.

.2 Other trades installing hardware must follow all manufacturer's instructions including door closer adjustment, handing of locksets as required, and degree of door swing. Advise the consultants if door frames are not square and plumb and prevent proper door installation.

.3 Mount hardware to suit door elevations. Unless otherwise directed by the consultant, install hardware at the following mounting heights:

Locksets	40"	(1015mm)
Exit device	40"	(1015mm)
Push/Pull	42"	(1065mm)
Deadlock	60"	(1524mm)
Deadlock	48"	(1220mm) per OBC intent.

.4 When requested, the hardware supplier will instruct the installer as to how various newer or unusual items that are required to be installed for proper performance.

3.3 HARDWARE SCHEDULE

Set 1 – At Exterior Accessible Entrance Door

1 Electric strike	HES 9600 12vdc fail secure x 2005 630
1 Automatic door operator	Besam SW200i push mount 618
2 Operator switches	Camden 7536
1 Switching network	Camden CX33 install mode 6
1 Card reader and power supply	By Division 28

END OF SECTION

1 General

1.1 RELATED WORK

.1 Section 01 56 10: Environmental Protection

1.2 REFERENCE STANDARDS

.1 Perform work in accordance with the following standards:
- .2 Canadian Construction Safety Code, latest edition.
- .3 NBC Latest Edition, Part 8 - Safety Measures at Construction and Demolition sites.
- .4 CSA S350 - Code of Practice for Safety in Demolition of Structures.
- .5 NFC Latest Edition- Part 6 governing installation and maintenance of portable fire extinguishers.
- .6 CSA C22.1, "Canadian Electrical Code", governing temporary electrical installations.
- .7 Transportation of Dangerous Goods Acts.

1.3 WORK INCLUDED

.1 Demolition, removal and disposal of the all work itemized on the drawings.

.2 Coordinate removals in order to maintain services as required for operation.

.3 Obtain all necessary permits required to perform the above noted work.

1.4 EXISTING CONDITIONS

.1 Take over structures to be demolished based on their condition on date that the contract is awarded.

.2 Inspect adjacent existing property to extent possible and ensure that its condition and stability is recorded.

.3 Photograph adjacent existing properties in sufficient detail to record its conditions before Work of this Section commences. These photographs will be used to compare the condition of adjacent construction before and after performance of Work of this Section in the event damage of adjacent construction is claimed as a result of demolition.

.4 Should unlabelled drums or potentially hazardous materials be encountered in the course of demolition, stop work and notify the Architect. Do not proceed until written instructions have been received from the Architect.

1.6 PROTECTION

.1 For demolition within the existing Campus provide dust proof partitions, negative air pressure and all other measures required to maintain a clean environment for the building occupants.

.2 Prevent movement, settlement or damage of adjacent properties, structures, services, paving, roadways, and parking areas. Make good damage and be liable for injury caused by demolition.

.3 Prevent debris from blocking existing surface drainage systems, which must remain in operation.

.4 Ensure safe passage of the public past area of demolition.

.5 Prevailing weather conditions and weather forecast shall be considered. Demolition work shall not proceed when extreme weather conditions constitute a hazard to the works and site.

.6 Protect existing items designated to remain. In event of damage, immediately replace such items or make repairs to approval of the Architect at no additional cost to the Owner.

.7 Protect the supply of electricity to areas of property to remain in service.

.8 Protect telephone service to areas of property to remain in service.

.9 Protect water and sewer service to areas of the property to remain in service.

.10 Take precautions to support structures and, if safety of building being demolished or adjacent structures or services, etc. appears to be endangered, cease operations and notify the Architect.

.11 Prevent debris from blocking surface drainage system, mechanical and electrical systems which must remain in operation.

.12 Ensure that adjacent properties, and other equipment are protected from damage resulting from Work of this Section. Install protection consisting of fences, barricades, signs, and substantial construction to provide physical protection.

.13 Post danger signs in conspicuous locations to warn persons that demolition is in progress.

.14 Erect protection to provide safe access which must be maintained to existing buildings and support area of the building being demolished.

.15 Protect existing services from damages. Where required, arrange to relocate existing active services to ensure that they function continuously in safety and without risk of damage. Cap off and remove unused services encountered during demolition after approval is given by the Architect and utilities or jurisdictional authorities, whichever may apply.

.16 Maintain security of areas in which demolition is proceeding by control of access through enclosing fences, barricades, and hoardings during times Work is in progress, and by locking hardware otherwise.

.17 Maintain security of areas in which demolition is proceeding while Work is shut down because of a strike or a lockout.

.18 Prevent spread of dust beyond the demolition area by wetting, or by other approved means, as it accumulates.

.19 Keep sidewalks, streets, and roads free of dust and debris from demolition Work. Clean up accumulations as they occur.

.20 Provide up-to-date proof of certification of all equipment to be used on site.

.21 Temporary shoring and protection shall be designed by a professional engineer registered or licensed to practice in Nova Scotia.

1.7 SALVAGEABLE MATERIALS

.1 Salvage, recycling or reuse of materials or equipment from the buildings to be demolished is encouraged.

.2 Re-grade and label salvageable lumber as required by law.

.3 The Contractor shall protect the owner from any claims, however, rising, from the salvage, recycling or reuse of materials or equipment from the demolished buildings.

3 Execution

3.1 ENVIRONMENTAL PROTECTION

.1 Perform work in an environmentally acceptable manner. Comply with requirements of Sections 01 56 10.

3.2 PREPARATION

.1 Obtain all necessary permits and approvals.

.2 Inspect site and verify with the Architect items designated for removal and items to be preserved.

.3 Locate and protect utility lines to remain. Notify utility companies before starting demolition.

.4 Employ rodent and vermin exterminators to comply with Health and Environmental regulations.

3.3 EXAMINATION

.1 Before commencing Work, ensure in examination of the site and Work to be demolished that all possible factors concerning demolition are investigated, and that the following are know in particular:
- .1 Methods and means available for material handling, disposal, storage, and transportation.
- .2 Construction details of structures to be demolished.
- .3 Construction details of other existing and adjacent properties.
- .4 Location of utility and other services.

.2 Review demolition Work to be performed in all its details. Do not proceed without review of the demolition methods that will be used.

3.4 DEMOLITION - GENERAL

.1 Remove any equipment or materials intended for reuse, recycling or salvage.

.2 Sub-Contractor shall provide a detailed description of the proposed methods and procedures for demolition prior to commencing work on the site.

.3 Do not disrupt active or energized utilities designated to remain undisturbed.

.4 At end of each day's work leave site in safe condition so that no part is in danger of toppling or falling.

.5 Carefully remove and lower structural framing and other heavy or large objects.

.6 Demolish to minimize dusting and noise. Spray water on structures during demolition as required and when ever requested by the Architect to control dust.

.7 Remove and dispose of all demolition items and materials from site in accordance with authorities having jurisdiction and as per "3.8 Disposal of Material" of this section.

.8 In removal of pavements, curbs and gutters:
- .1 Square up adjacent surfaces to remain in place by saw cutting or other approved method.
- .2 Protect adjacent joints and load transfer devices.
- .3 Protect underlying granular materials.

.9 Remove existing equipment, services, and obstacles where required for refinishing or making good of existing surfaces, and replace as work progresses.

.10 Demolish concrete walls in small sections. Carefully remove and lower structural framing and other heavy or large objects.

.11 Dispose of materials not designated for salvage or re-use in work, off site.

.12 Do not sell or burn materials on site.

3.5 DISPOSAL OF MATERIAL

.1 Reuse, recycling and salvage of materials and equipment is permitted and encouraged with regulatory requirements. Do not reuse salvaged material in this project unless approved by the Architect.

.2 Sale of materials shall not take place on or from the site.

.3 All debris must be disposed off site at an approved disposal facility.

.4 The contractor will provide a waste disposal plan to the Architect and obtain approval for the disposal plan in writing from the NSDOE, and the Architect prior to commencement of work at the site.

3.6 RESTORATION

.1 Upon completion of work, remove debris, trim surfaces and leave work sites clean to a condition satisfactory to the Architect.

.2 Reinstated areas must be considered safe by the Architect.

.3 Reinstate areas in existing works outside area of demolition to conditions that existed prior to commencement of work.

END OF SECTION

1 General

1.1 RELATED WORK

.1	Steel door frames	Section 08 11 10
.2	Glazing:	Section 08 80 00
.3	Painting:	Section 09 90 00

1.2 SHOP DRAWINGS

.1 Submit shop drawings in accordance with Section 01 30 00.

.2 Indicate door types and cutouts for glazing and louvres.

1.3 WASTE MANAGEMENT AND DISPOSAL

.1 Not Used.

2 Products

2.1 MATERIALS

.1 Sheet steel: 18 ga. base thickness, commercial grade steel to ASTM A366-72, Class 1 finished to ASTM A526(1975) A40 paintable galvanneal.

.2 Glazing stops: minimum 20 ga. base thickness sheet steel with A40 paintable galvanneal finish to ASTM A525-80a screw fixed.

.3 Door Core:

.1 Exterior Doors: Hollow steel, vertically stiffened with steel ribs and all voids filled with incombustible, semi-rigid fibrous insulation or urethane, 1.5 lb./cu.ft., minimum density.

.2 Interior Doors: Honeycomb, structural core consisting of kraft paper having 3/4" cell size to thickness indicated.

.4 Fire Doors: Fire doors shall carry a Fire Underwriter's Laboratory label of classes as required by the drawings.

.5 Primer: for touch up to CGSB 1-GP-181M+Amdt-Mar-78.

2.2 FABRICATION

.1 The following fabricators are approved to perform work of this section:

.1 Apex Industries Ltd.., Baron Fleming Ltd.,., Daybar Industries Ltd., Artek.

.2 Fabricate steel doors as detailed, in accordance, with Canadian Steel Door and Frame Manufacturer's Association, "Canadian Manufacturing Specifications for Steel Doors and Frames", 1978 for hollow steel construction, except where specified otherwise.

.3 Mortise, reinforce, drill and tap doors and reinforcements to receive hardware using templates provided by finish hardware supplier. Reinforcement gauges to meet or exceed CSDFMA specification.

.4 Make provision for louvres and glazing as indicated and provide necessary glazing stops.

.5 Construct rail and stile doors in same manner as flush doors.

.6 Conceal weld where possible; if exposed, grind and buff smooth to match adjacent surfaces.

.7 Touch up doors with primer where galvanized finish damaged during fabrication.

.8 All exterior door joints to be sealed to prevent moisture penetration.

.9 Top of all exterior doors to be fitted with vinyl cap.

.10 Weep holes to be provided in bottom closure channel of all exterior doors.

3 Execution

3.1 INSTALLATION

.1 Installation of hollow metal doors supplied by this Section and finishing hardware supplied under Work of Section 08 71 00 is specified under Work of Section 06 20 00.

3.2 ADJUSTMENT AND CLEANING

.1 Refinish damaged and defective work before completion of project.

.2 Adjust operable parts for correct function.

END OF SECTION

1 GENERAL

1.1 GENERAL CONDITIONS

.1 The General Conditions of the contract as well as provisions of Division 1 at the beginning of these specifications shall be deemed to apply and be a part of this section of the specification.

1.2 WORK INCLUDED

.1 The intent of this section of the specification is to complement the drawings in describing all of the glass and glazing work for the project.

.2 Installation of glass for work described in the following Sections are part of the work of this Sections:

.1 08 11 00 Steel Hollow Metal Doors

.2 08 11 10 Pressed Steel Frames

1.3 EXTENDED WARRANTY

.1 Submit a warranty of the Work of this Section covering the period for four years beyond the expiration of the performance bond specified in the General Conditions.

.2 Defective Work shall include, but not be restricted to: leaking, loosening of whole or of parts of units, breakage or deformation of work, glass breakage (other than by accidental cause), seal failure and fading or discolouration of factory applied finishes.

2 PRODUCTS

2.1 WORK INCLUDED

.1 Clear Sheet Glass: to CAN2-12.2-M76 B quality.

.2 Polished Plate or Float Glass to CAN2-12.3-M76, glazing quality.

.3 Fire Rated Glass: to CAN4- S-104, 3/16" (5mm) thick. Standard of Acceptance: FireLite by TPG.

.4 Vision Glass, Insulating Glass Units: Factory sealed double glazed units. Outer lite 6mm heat resistant, colour to be specified by Architect; Inner lite 6 mm tempered, low E solar ban 60 (or ES72) on number 3 surface float glass; with a hermetically sealed space of ½" width complete with low E argon and warm edge spacer.

.1 Standard of Acceptance: Prelco 2E272 or PPG Solar Ban 60

.5 Spandrel panels: One lite 6mm heat strengthened glass, complete with Ceramic Frit. Colour determined by Architect.

2.2 GLAZING AND SEALING COMPOUND MATERIALS

.1 Glazing Compound: oil base, to CGSB 19-GP-6M, Type 1.

.2 Sealant Compound: one component acrylic base, to CGSB 19-GP-5M+Amdt-Nov-79, gun grade.

.3 Glazing Tape: glazing gaskets, 10-15 durometer hardness, paper release.

.4 Setting Blocks: neoprene, Shore "A" durometer hardness 70-90.

.5 Spacer shims: neoprene, Shore "A" durometer hardness 40-50.

.6 Primer-sealers and cleaners: to glass manufacturer's standard.

3 EXECUTION

3.1 WORKMANSHIP

.1 Minimum of one Red Seal glazer to be on site during all curtain wall and glazing work.

.2 Remove protective coatings and clean contact surfaces with solvent and wipe dry.

.3 Apply primer-sealer to contact surfaces.

.4 Place setting blocks as per manufacturer's instructions.

.5 Install glass, rest on setting blocks, ensure full contact and adhesion at perimeter.

.6 Install removable stops, without displacing tape or sealant.

.7 Provide edge clearance of 1/8" minimum.

.8 Insert space shims to center glass in space. Place shims at 2'-0" o.c. and keep 1/4” below sight line.

.9 Apply cap bead of sealant at exterior void.

.10 Apply sealant to uniform and level line, flush with sightline and tooled or wiped with solvent to smooth appearance.

.11 Do not cut or abrade tempered glass.

3.2 INSTALLATION

.1 All glass units will be glazed using one of the two methods described below:

.1 Glass units shall be bedded to the exterior with Butyl tape; a heel bead of acoustic sealant shall be applied to the complete interior perimeter of the glass unit to seal the unit to the sash or frame. An interior finish of removable vinyl "Vision Strip" shall be applied and inserted into the open channel and anchored into the acoustic heel bead.

.2 Glass units shall be bedded to the exterior with Butyl tape, recessed 1/8" minimum. Fill the recess with a bead of Silglaze. Glass unit to be further bedded in a seal of acoustic sealant around the complete interior perimeter to seal glass unit to the sash or frame. An interior finish of Butyl tape shall be used to bed the interior stop to the glazing unit.

3.3 ADJUSTMENT AND CLEANING

.1 Replace scratched, etched, or defective glazing resulting from manufacture, setting, handling, or storage before or during installation.

.2 Immediately remove sealant and compound droppings from finished surfaces. Remove labels after work is completed.

END OF SECTION

1 General

1.1 GENERAL CONDITIONS

.1 The General Conditions of the contract as well as provisions of Division 1 at the beginning of these specifications shall be deemed to apply and be a part of this section of the specification.

1.2 WORK INCLUDED

.1 Supply and install all suspended T-Bar grid systems to all areas identified within the Room Finishes Schedule.

1.3 RELATED WORK

.1 Acoustical Tile: Section 09 51 10.

.2 Trim for recessed mechanical fixtures: See Mechanical.

.3 Trim for recessed light fixtures: See Electrical.

1.4 REFERENCE STANDARDS

.1 Installation to ASTM C636-76(1981) except where specified otherwise.

1.5 DESIGN CRITERIA

.1 Maximum deflection: 1/360th of span to ASTM C635-78 deflection test.

2 Products

2.1 MATERIALS

.1 Exposed tee bar grid components: two directional 24" x 24" shop painted satin sheen white. Components die cut. Main tee with double web, rectangular bulb and 1" rolled cap on exposed face. Cross tee with rectangular bulb; web extended to form positive interlock with main tee webs; lower flange extended and offset to provide flush intersection. colour.

.2 Hanger Wire: galvanized soft annealed steel wire, 9 ga.

.3 Hanger Inserts: purpose made.

.4 Accessories: splices, clips, wire ties, retainers and wall mounting flush reveal, to complement suspension system components, as recommended by system manufacturer.

.5 Provide special made components at recessed radiant heating panels as required and as detailed on the drawings.

.6 Manufacturer and Product: 15/16” Tee System By USG, Class A Fire Rating

3 Execution

3.1 INSTALLATION

.1 Install hangers as per manufacturers instructions.

.2 Do not erect ceiling suspension system until work above ceiling has been inspected by Architect.

.3 Lay out system according to reflected ceiling plans.

.4 Ensure suspension system is co-ordinated with location of related components.

.5 Install wall mould to provide correct ceiling height. Finished ceiling system to be level within 1:1000.

.6 Completed suspension system to support super-imposed loads, such as lighting fixtures, diffusers and grilles, speakers and radiant heating panels.

.7 Support light fixtures and diffusers with additional ceiling suspension hangers within 6" of each corner and at maximum 24" around perimeter of fixture.

.8 Interlock cross member to main runner to provide rigid assembly.

.9 Install suspension system to manufacturer's instructions.

.10 Frame at openings for light fixtures, air diffusers and at changes in ceiling heights.

.11 Provide mouldings and trim as required for recessed radiant heating panels. See details on mechanical drawings. Note that both support for heating panels and ceiling trim is by this trade section.

3.2 CLEANING

.1 Touch up scratches, abrasions, voids and other defects in painted surfaces.

.2 Final cleaning is specified in Section 01 77 00.

END OF SECTION

1 General

1.1 GENERAL CONDITIONS

.1 The General Conditions of the contract as well as provisions of Division 1 at the beginning of these specifications shall be deemed to apply and be a part of this section of the specification.

1.2 WORK INCLUDED

.1 To complete all interior & exterior gypsum board & steel stud on walls and ceilings as shown or specified and summarized but not restricted to:

- .1 Metal stud partitions.
- .2 Suspended gypsum board ceilings and bulkheads.
- .3 Furring systems and enclosures as described herein and indicated on drawings.
- .4 Installation of pressed steel frames in steel stud partitions.
- .5 Miscellaneous drywall as required to complete the project.

1.3 RELATED WORK

.1 Section 06 10 00: Rough Carpentry

.2 Section 08 11 10: Pressed Steel Frames

1.4 REFERENCE STANDARDS

.1 Do work in accordance with CSA A82.31-M1980 except where specified otherwise.

1.5 LEED DOCUMENTATION

.1 Not Used.

2 Products

2.1 GYPSUM BOARD

.1 Plain: to CSA A82.27-M1977 standard and Type X, thickness as noted on drawings, 4'-0" wide x maximum practical length, ends square cut, edges tapered.

.2 Water resistant board: to CSA A82.27-M1977 Standard ½" thick, 4'-0" wide x maximum practical length.

.3 Abuse resistant drywall to be Fiberock VHI, 5/8" thick.

- .1 Acceptable Alternate: Comfort Guard IR by Temple Inland.

2.2 METAL FURRING AND SUSPENSION SYSTEMS

.1 Metal furring runners, hangers, tie wires, inserts, anchors: to CSA A82.30-M1980, galvanized.

.2 Drywall furring channels: 0.5 mm core thickness galvanized steel channels for screw attachment of gypsum board.

.3 Resilient drywall furring: 0.5 mm base steel thickness galvanized steel for resilient attachment of gypsum board, except 16 ga. for drywall secured to existing steel structure.

2.3 FASTENINGS AND TIES

.1 Screws: to CSA A82.31-M1980. Self-drilling, self-tapping, case hardened, Philips head, drywall screws, with corrosion resistant finish.

.2 Hangers: 9 ga. galvanized soft annealed steel wire.

2.4 ACCESSORIES

.1 Casing beads, corner beads fill type: 0.5 mm base thickness commercial grade sheet steel with Z275 zinc finish to ASTM A525M-80, perforated flanges; one piece length per location.

.2 Acoustic Sealant: to CGSB 19-GP-21M as manufactured by Tremco Manufacturing Co. or Inmont Presstite Ltd.

.3 Polyethylene: to Can 2-51.33-M80, 6 mil.

.4 Joint Compound: to CSA A82.31-M1980, asbestos free.

.5 Joint Tape: 2" x 0.012" thick, perforated paper with chamfered edges.

.6 Control Joists: Crimped rolled-formed zinc, with flanges for tape reinforcement, or two casing beads, set with gap for movement and backed with flexible air seal membrane.

.7 Special purpose made angles and channels as required and as detailed to support radiant heating panels.

2.5 PARTITION SYSTEM

.1 Interior Steel Studs: 25 ga. steel, galvanized, having knurled flanges 1 1/4" wide edges double back at least 3/16", with girts as required, and with service access holes. Sizes as indicated on drawings.

.2 Partition Runners: as specified for studs, with flanges a minimum of 7/8" high, and to suit width of studs.

.3 Bracing Channels: 18 ga. 1 1/2" x 3/4" cold rolled steel, wipe coated.

.4 Hanger Devices: Zinc coated annealed steel wire; 9 ga. to support a maximum weight of 310 lbs. per hanger.

2.6 ACOUSTIC INSULATION

.1 Type: Unfaced Mineral fiber acoustical insulation complying with ASTM C665, Type I.

.2 Size: to fill stud cavity.

.3 Surface Burning Characteristics:

.1 Maximum flame spread: 10

.2 Maximum smoke developed: 10

.4 Combustion Characteristics:

.1 Passes ASTM E 119 test.

.5 Sound Transmission Class: STC 45.

3 Execution

3.1 METAL STUD SYSTEM

.1 Align partition tracks at floor and ceiling and secure at 2'-0" o.c. maximum.

.2 Install damproof course under stud shoe tracks of partitions on slabs on grade.

.3 Place studs vertically at 16" o.c. and not more than 2" from abutting walls, and at each side of openings and corners. Position studs in tracks at floor and ceiling. Cross brace studs as required to provide rigid installation to manufacturer's instructions.

.4 Erect metal studding to tolerance of 1:1000.

.5 Attach studs to bottom and ceiling track using screws.

.6 Co-ordinate simultaneous erection of studs with installation of service lines. When erecting studs ensure web openings are aligned.

.7 Co-ordinate erection of studs with installation of door/window frames and special supports or anchorage for work specified in other Sections.

.8 Provide two studs extending from floor to ceiling at each side of openings wider than stud centres specified. Secure studs together, 2" apart using column clips or other approved means of fastening place alongside frame anchor clips.

.9 Erect track at head of door/window openings and sills of sidelight/window openings to accommodate intermediate studs. Secure track to studs at each end, in accordance with manufacturer's instructions. Install intermediate studs above and below openings in same manner and spacing as wall studs.

.10 Frame openings and around built-in equipment, cabinets, access panels, on four sides. Extend framing into reveals. Check clearances with equipment suppliers.

.11 Provide 1 1/2" stud or furring channel secured between studs for attachment of fixtures behind laboratory basins, toilet and bathroom accessories, and other fixtures including grab bars and towel rails, attached to steel stud partitions.

.12 Install steel studs or furring channel between studs for attaching electrical and other boxes.

.13 Extend partitions from floor to underside of structure except where noted otherwise on drawings.

.14 Install two continuous beads of acoustical sealant under studs and tracks around perimeter of sound control partition.

.15 Install mineral wood insulation to fill steel stud cavity in exterior wall assembly.

3.2 SUSPENDED AND FURRED CEILINGS

.1 Erect hangers and runner channels for suspended gypsum board ceilings in accordance with CSA A82.31-M1980 except where specified otherwise.

.2 Support light fixtures by providing additional ceiling suspension hangers within 6" of each corner and at maximum 2'- 0" around perimeter of fixture.

.3 Support heating panels as per mechanical details.

.4 Install work level to tolerance of 1:1200.

.5 Frame with furring channels, perimeter of openings for access panels, light fixtures, diffusers, grilles.

.6 Install furring channels parallel to, and at exact locations of steel stud partition header tracks.

.7 Fur for gypsum board faced vertical bulkheads within or at termination of ceilings.

.8 Fur above suspended ceilings for gypsum board fire and sound stops as indicated.

3.3 WALL FURRING

.1 Install wall furring for gypsum board wall finishes in accordance with CSA A82.31-M1980, except where specified otherwise.

.2 Fur openings and around built-in equipment, cabinets, access panels, on four sides. Extend furring into reveals. Check clearances with equipment suppliers.

.3 Fur beams, duct shafts, columns, pipes and exposed services where indicated.

3.4 GYPSUM BOARD APPLICATION

.1 Do not apply gypsum board until bucks, anchors, blocking, electrical and mechanical work are approved.

.2 Apply gypsum board to metal furring or framing using screw fasteners. Maximum spacing of screws 12" o.c.

.3 Extend all drywall to u/s of structure except where noted otherwise on the drawings.

.4 Where partitions call for acoustic insulation, apply 1/2" diameter bead of acoustic sealant continuously around periphery of each face of partitioning to seal gypsum board/structure junction where partitions abut fixed building components. Seal full perimeter of cut-outs around electrical boxes, ducts, etc., in partitions where perimeter sealed with acoustical sealant.

3.5 ACCESSORIES

.1 Erect accessories straight, plum or level, rigid and at proper plane. Use full length pieces where practical. Make joints tight, accurately aligned and rigidly secured. Mitre and fit corners accurately, free from rough edges. Secure at 6"o.c.

.2 Install casing beads around perimeter of suspended ceilings.

.3 Install casing beads where gypsum board butts against surfaces having no trim concealing junction and where indicated. Seal joints with sealant.

.4 Install insulating strips continuously at edges of gypsum board or casing beads abutting metal window or exterior door frames, to provide thermal break.

.5 Install acoustic insulation where indicated on drawings.

3.6 CONTROL JOINTS

.1 Locate control joints in all gypsum board walls over 30' in length or height. Space joints at 30' on centre horizontally and vertically.

.2 Construct control joints of preformed units set in gypsum board facing and supported independently on both sides of joint.

.3 Provide continuous polyethylene dust barrier behind and across control joints.

.4 Install control joints straight and true.

3.7 TRIM

.1 Install trim as indicated.

.2 Minimize joints; use corner pieces and splicers.

3.8 ACCESS DOORS

.1 Provide and install access doors to electrical and mechanical fixtures specified in respective Sections.

.2 Rigidly secure frames to furring or framing systems.

3.9 ACOUSTIC INSULATION AND APPLICATION

.1 Obtain installer's written report listing conditions detrimental to performance of work in this section. Do not proceed with installation of insulation until unsatisfactory conditions have been corrected.

.2 Comply with manufacturer's instructions for particular conditions of installation in each case.

.3 Sound Attenuation Batts may be friction-fit in place until the interior finish is applied. Install batts to fill entire stud cavity. If stud cavity is less than 96" in height, cut lengths to friction-fit against floor and ceiling tracks. Walls with penetrations require that insulation be carefully cut to fit around outlets, junction boxes and other irregularities.

.4 Where walls are not finished on both sides of insulation does not fill the cavity depth, supplementary support must be provided to hold product in place.

.5 Where insulation must extend higher than 8 feet, temporary support shall be provided to hold product in place until the finish material is applied.

3.10 INSTALLATION OF PRESSED STEEL FRAMES IN STEEL STUD PARTITIONS

.1 Install hollow metal door frames supplied under Section 08 11 10.

.2 Brace frames in place to prevent displacement until anchored into masonry and remove spreaders at floor after frames are anchored.

3.11 TAPING AND FILLING

.1 Finish face panel joints and internal angles with joint system consisting of joint compound, joint tape and taping compound installed according to manufacturer's directions and feathered out onto panel faces.

.2 Finish corner beads, control joints and trim as required with two coats of joint compound and one coat of taping compound, feathered out onto panel faces.

.3 Fill screw head depressions with joint and taping compounds to bring flush with adjacent surface of gypsum board so as to be invisible after painting is completed.

.4 Sand lightly to remove burred edges and other imperfections. Avoid sanding adjacent surface of board.

.5 Completed installation to be smooth, level or plumb, free from waves and other defects and ready for painting.

3.12 ADJUSTMENT AND CLEANING

.1 Remove droppings and excess of joint compound from Work of others, and from Work of this Section, before it sets.

.2 Make good to cut-outs for services and other Work, fill in defective joints, holes and other depressions with joint compound.

.3 Make good defective work, and ensure that surfaces are smooth, evenly textured and within specified tolerances to receive finish treatments.

END OF SECTION

1 General

1.1 GENERAL CONDITIONS

.1. The general conditions of the contract as well as provisions of Division 1 at the beginning of these specifications shall be deemed to apply and be a part of this section of the specification.

1.2 WORK INCLUDED

.1 Supply and install acoustic tile ceiling panels as specified and indicated on drawings.

.2 Supply and install acoustic wall panels as specified and indicated on the drawings.

1.3 LEED DOCUMENTATION

.1 Not used.

1.4 RELATED WORK

.1 Section 09 13 00: Suspension System for Acoustical Ceilings

.2 Section 09 21 16: Gypsum Board

.3 Mechanical Services: See drawings.

.4 Electrical Services: See drawings.

1.5 ENVIRONMENTAL CONDITIONS

.1 Permit wet work to dry before commencement of installation.

.2 Maintain uniform minimum temperature of 15°C and humidity of 20-40% before and during installation.

.3 Store materials in work area 48 hours prior to installation.

1.6 SAMPLES

.1 Submit duplicate full size samples of ceiling tile in accordance with Section 01300.

1.7 EXTENDED WARRANTY

.1 Provide an extended warrantee for the work of this section covering a period of four (4) years from date of Substantial Completion of the Contract. Warranty shall cover all defects in manufacture and installation.

2 Products

2.1 MATERIALS

1. Acoustical Ceiling Tile

    1. Manufacturer: USG
    2. Model: USG Radar High-NRC Panel, Fire Rated, item No., 22111
    3. Type: ASTM 1264
    4. NRC min .70
    5. Colour: White
    6. Edge: SQ
    7. Size: 24" x 24" x 3/4", nondirectional
    8. Recycled content – 51%
    9. Locations: All locations as noted to receive new t-bar ceiling.

3 Execution

3.1 INSTALLATION

1. Acoustical ceiling tiles:

    1. Do not install acoustical tiles until work above ceiling has been inspected by Architect and Mechanical and Electrical Engineers.

    2. Cut panels neatly to fit off-module grid and with sufficient clearances to ensure removal without damage.

    3. Coordinate ceiling work to accommodate components of other sections, such as light fixtures, diffusers and sprinkler heads to be built into acoustical ceiling components.

3.2 ADJUSTMENT AND CLEANING

.1 Replace acoustical tiles and panels which are visibly damaged, marred or discoloured.

END OF SECTION

1 General

1.1 SAMPLES

.1 Submit samples of each specified flooring, base and stair material.

.2 Submit full size tile of each colour specified.

1.2 MAINTENANCE DATA

.1 Provide maintenance data for resilient flooring for incorporation into Operation and Maintenance Manual specified in Section 01 73 00.

1.3 EXTRA STOCK

.1 Deliver to Owner on completion of Work, and as he directs, 2% of the quantity of flooring installed of each material and colour (including base), in labelled packages.

1.4 ENVIRONMENTAL REQUIREMENTS

.1 Maintain air temperature and structural base temperature at flooring installation area above 20°C for 48 h before, and for 48 h after installation.

2 Products

2.1 MATERIALS

.1 Vinyl composition tile: to ASTM F1066 – 04(2018) 1/8" thick, 12" x 12" size.

.2 Acceptable Manufacturers: Armstrong

.3 Colours: To be selected by Architect from ‘Imperial Texture’ collection, maximum of 3 colours.

.4 Floor Patterns: As noted in the drawings.

.5 Colour field will be from manufacturer's standard colour selection. Border will be from premium colour selection.

.6 Resilient base: top set coved rubber, minimum 4'-0" length and 4" high, including premoulded end stops and external corners. Colour to be selected from manufacturer's standard colours.

.1 Acceptable Material: Flextile; Johnsonite.

.7 Accessories:

.1 Reducer Strips: Provide 1/8" thick vinyl reducer strips, in same colour as tile, where tile flooring terminates.

.8 Primers and adhesives: recommended by flooring manufacturer for specific material on applicable substrate.

.9 Sub-floor filler and leveller: white premix latex requiring water only to produce cementitious paste as recommended by flooring manufacturer for use with their product.

.10 It is this responsibly of this section to ensure that sub floor is suitable to receive flooring no matter the amount or type of floor filler required.

.11 Sealer: type recommended by flooring manufacturer.

.12 Wax: type recommended by flooring manufacturer.

3 Execution

3.1 INSPECTION

.1 Ensure floors are dry, by using test methods recommended by tile manufacturer, and exhibit negative alkalinity, carbonization or dusting.

3.2 SUB-FLOOR TREATMENT

.1 Remove sub-floor ridges and bumps. Fill low spots, cracks, joints, holes and other defects with sub-floor filler.

.2 Prime concrete to flooring manufacturer's printed instructions.

.3 Existing conditions:

.1 Some portions of existing floor is vinyl tile to be removed by the demolition section.

.2 Other portions of the floor are painted concrete.

.3 It is responsibly of this section to ensure that sub floor is suitable to receive tile flooring no matter the amount preparation or type/amount of floor filler required.

.4 Sandblast if required at discretion of architect.

3.3 TILE APPLICATION

.1 Apply adhesive uniformly using recommended trowel in accordance with flooring manufacturer's instructions. Do not spread more adhesive than can be covered by flooring before initial set takes place.

.2 Lay flooring with joints parallel to building lines to produce symmetrical tile pattern. Border tiles minimum half tile width.

.3 Install flooring to square grid pattern with all joints aligned with pattern grain alternating, all to Architect's approval.

.4 Cut tile and fit neatly around fixed objects.

.5 Terminate flooring at center line of door in openings where adjacent floor finish or colour is dissimilar.

3.4 BASE APPLICATION

.1 Lay out base to keep number of joints at minimum.

.2 Set base in full bed of adhesive, tightly against wall and floor surfaces.

.3 Install straight and level to variation of 1:1000.

.4 Scribe and fit to door frames and other obstructions. Use premoulded end pieces at flush door frames.

.5 Cope internal corners. Use premoulded corner units for right angle external corners. Use formed straight base material for external corners of other angles.

.6 Install toeless type base before installation of carpet on floors.

3.5 ACCESSORIES

.1 Install reducer strips at terminations of resilient tile flooring where edges are exposed to view.

.2 At door openings, install reducer strips and carpet adapters under doors.

.3 Secure strips and adapters to subfloor with contact bond adhesive to ensure complete bond.

3.6 CLEANING AND WAXING

.1 Remove excess adhesive from floor, base and wall surfaces without damage.

.2 Thoroughly clean floor using a large heavy duty automated floor scrubber.

.3 Seal floor and base surface. Provide 3 coats of sealer. Successive coats can be applied as soon as floor is dry. In carpeted areas, clean, seal and wax base surface before carpet installation.

.4 Provide two coats of wax following the sealing of the floor.

.5 Spray clean and buff floor and base surface for final inspection before building takeover by Owner.

3.7 PROTECTION OF FINISHED WORK

.1 Prohibit traffic on floor for 48 hours after installation.

.2 Final cleaning is specified in Section 01 70 00.

END OF SECTION

1 General

1.1 RELATED WORK

.1 Gypsum Board Assemblies: Section 09 21 16

1.2 WASTE MANAGEMENT AND DISPOSAL

.1 Collect, separate and recycle all site generated waste materials.

1.3 LEED DOCUMENTATION

.1 Not used.

1.4 REFERENCE STANDARDS

.1 The best practices specified or recommended in CAN2-85.100-M81 shall govern for materials, methods and procedures.

1.5 ENVIRONMENTAL REQUIREMENTS

.1 Do not apply paint finish in areas where dust is being generated.

.2 Ensure that all areas in which paint is applied are well-ventilated and broom clean.

.3 Do not apply paint unless a uniform minimum 50°F air temperature has been achieved in the installation area for 24 hours prior to and after application.

1.6 PROTECTION

.1 Cover or mask surface adjacent to those receiving finish to protect work of others from damage and soil.

1.7 PRODUCT DELIVERY, STORAGE AND HANDLING

.1 Deliver to site each container sealed and labelled with manufacturer's name, catalogue number or brand name, colour, formulation type, reducing instructions, and reference standard specification number if applicable.

.2 Store only acceptable project materials at site, and in an area specifically set aside for purpose that is locked, ventilated, maintained at a temperature of over 4°C, and protected from direct rays of sun. Ensure that health and fire regulations are complied with in storage area.

1.8 EXTRA STOCK

.1 Deliver to Owner on completion of Work, and as he directs, sealed containers of each finish painting material applied, and in each colour. Label each container as for original, including mixing formula. Provide one litre of extra stock when less than 40 litres are used for project, 4 litres of extra stock when 40 to 50 litres are used, and 8 litres of extra stock when over 150 litres are used.

1.9 ECO-LOGO

.1 All paint products are to be "Eco-Logo" approved products. Supply appropriate certificate from manufacturer.

.2 All paints to be premium low order, zero VOC.

1.10 TECHNICAL REPRESENTATION

.1 Manufacturer's Obligations

.1 The manufacturer shall play an active role in the application of his product during the period of this contract. The manufacturer shall be represented at all these meetings by a qualified technical representative, trained as a paint inspector with a minimum of 5 years experience. The technical representative shall be approved by the Architect.

.2 The project shall be subdivided into "Sectors of Work":

.1 A minimum of three inspections per sector from the Manufacturer's representative must be made prior to and during application of this work to ensure proper application.

.2 After each visit provide a written report to the Architect within 5 working days.

.3 30 days prior to any painting, a prejob conference shall be held to confirm methods, materials, etc. for this contract. Items to be present: specifications, finish schedule, colour schedule, product data sheets - MSDS.

1.11 PREJOB CONFERENCE

.1 After the award of this contract and prior to the preparation of a mock sample area, a pre-job conference shall be held with the following people present:

.1 The Architect, Owner and Project Manager

.2 The applicator and his designated inspectors and crew supervisors who will be working on site on this project

.3 The paint manufacturer's trained paint inspector.

1.12 COLOUR SELECTION

.1 Colours will be selected by the Architect.

.2 Contractor to allow for a total of 6 colours.

2 Products

2.1 MATERIALS

.1 Acceptable Manufacturers: Benjamin Moore or approved equal.

.2 Paint materials: to Ecologo and CGSB Standards listed in Finishing Formulae.

.3 Paint materials for each coating formulae to be products of a single manufacturer.

3 Execution

3.1 EXAMINATION

.1 Ensure that surfaces to receive finishing materials are satisfactory for specified materials; have been provided as specified in the Work of other Sections; will not adversely affect execution, permanence, or quality of Work; and can be put into an acceptable condition by means of preparation specified in this section.

.2 Defective painting and finishing Work resulting from application to unsatisfactory surfaces will be considered the responsibility of those performing the Work of this Section.

3.2 EXTENT OF WORK

.1 All new work in finished areas is to be painted.

.2 Where a room or surface is called to be painted, all work in the room or surface other than pre-finished work is to be painted.

3.3 PREPARATION OF SURFACES

.1 General:

.1 Vacuum clean interior areas immediately before finishing work commences.

.2 Remove from surfaces: grease, oil, dirt, dust, ridges, and other soil and materials that would adversely affect the adhesion or appearance of finish coatings.

.3 Rust on surfaces primed under work of other Sections shall be removed and the areas re-primed under the Work of these Sections.

.4 Finish, patch and smooth surfaces to remove cracks, holes, ridges, and similar blemishes.

.5 Touch-up damaged prime coats on shop primed metals with same priming material. Feather out edges of shop coat and smooth repair coat into shop coat surfaces.

.6 Scrub mildewed surfaces with a solution of tri-sodium phosphate, bleach with a solution of one part sodium hypochlorite (Javex) to three parts water, and rinse with clear water.

.2 Masonry:

.1 Fill minor holes and cracks in concrete, and concrete masonry with Portland cement grout.

.2 Remove dirt, scale, loose mortar, and similar foreign matter by brushing.

.3 Touch up shop paint primer on steel with CGSB 1-GP-40M to CGSB 85-GP-14M.

.4 Prepare galvanized steel and zinc coated surfaces to CGSB 85-GP-16M.

.5 Gypsum Board:

.1 Fill minor holes and depressions, caused by accidental damage, with drywall joint compound, and sand smooth when it is set, taking care not to raise nap of paper cover.

.6 Wood:

.1 Sand finish surfaces smooth with No. 00 sandpaper.

.2 Clean soiled surfaces with an alcohol wash.

.3 Wipe off dust and other loose dirt, or vacuum clean before application of coatings.

.4 Seal knots, pitch, and sapwood with two coats of uncut orange shellac, or an application of special sealer.

.5 After prime coat is dry and sanded, fill nail and screw holes, and cracks with wood filler, or with putty for interior work and caulking compound for exterior work. Colour fillers to match wood or stain if surfaces are given clear final coatings. Smooth, sand and prime fillers when set.

3.4 APPLICATION

.1 Consult with Architect before proceeding with application of finishes to surfaces for which a formula is given in specification.

.2 Apply paint to concrete block by spray and back roll method.

.3 Sand and dust between each coat to remove defects.

.4 Finish bottoms, edges, tops and cutouts of doors after fitting as specified for door surfaces.

.5 Finish closets and alcoves as specified for adjoining rooms.

.6 Apply each coat only after preceding coat is dry and hard, or as otherwise directed by material manufacturer.

.7 Priming and Back Priming:

.1 Verify, by review of other sections of this specification, the extent of surfaces primed under work of other sections. Priming of un-primed surfaces shall be included in Work of this Section.

.2 Back-prime exterior and interior woodwork, frames, fitments and similar work as soon as it is delivered and before installed. Use exterior primer compatible to finish coat for exterior work, and enamel under-coater for

interior work to receive paint or enamel finishes. Prevent primer from running over faces.

.3 Prime tops and bottoms of painted wood doors with enamel under-coater, and tops and bottoms of clear finished doors with gloss varnish. When doors are stained apply varnish after staining. Remove doors to prime and finish.

.4 Brush out and force primers into grain of wood, and into crevices, cracks and joints in all materials.

3.5 MECHANICAL AND ELECTRICAL EQUIPMENT

.1 Paint exposed conduits, pipes, hangers and other mechanical and electrical equipment occurring in finished areas. Colour and texture to match adjacent surfaces, except as noted otherwise.

.2 Paint all exterior louvres, etc.

.3 Keep sprinkler heads free from paint.

.4 Paint both sides of plywood backboards for equipment before installation.

3.6 COLOURS

.1 Colours of paints, including shades of stains, shall be applied to match approved samples.

.2 Colours will be selected by the Architect.

3.7 INTERIOR FINISHES

.1 Formula 7: for gypsum board walls apply: one coat latex primer-sealer ICI #8130 Spedwall primer, two coats latex eggshell enamel. ICI #59311 No VOC Lifemaster

.2 Formula 9: for gypsum board ceilings, apply: one coat primer sealer ICI # 8130 Spedwall primer one coat flat paint ICI #59170 No VOC Lifemaster

.3 Formula 16: for primed ferrous metal surfaces apply: one coat enamel undercoat ICI # 9431 Ultra, two coats gloss enamel Devoe #4208 Devflex

.4 Formula 18: for woodwork to receive natural finish apply: one coat shellac CGSB 1-GP-16M-Amdt-Feb-81, Type 2; two coats varnish gloss CGSB 1-GP-36M, Type 1, PPG #77-5 series; one coat varnish satin finish CGSM 1-GP-36M, Type 2, PPG #77-9

.5 Formula 16: for primed ferrous metal surfaces apply:
one coat enamel undercoat ICI #9431 Ultra
Two coats gloss enamel Devoe #4208 Devflex

.6 Formula 17: for galvanized and zinc coated metal apply (after etching): one coat galvanized metal primer two coats enamel semi-gloss enamel Devoe #4216 Devflex one coat varnish satin finish ICI #1880 Varnish

.7 Formula 20: for metal doors: one coat enamel undercoat primer Devoe # 4020 Devflex primer, two coats finish coats Devoe #4216 Devflex acrylic

.8 Formula 22: Interior metal door frames: spray two coats Devoe #4216 Devflex in desired colour-satin finish

.9 Formula 24: for insulation covering apply: one coat tinted enamel undercoat ICI # 250 Gripper, one coat egg shell enamel ICI # 59311 No VOC Lifemaster

3.8 EXTERIOR FINISHES

.1 Formula 30: for galvanized and zinc coated metal apply: New spancaled galvanized metal - Abrade with fine sand paper to remove passivation. Apply: 1 coat Pitt-Tech Primer, Devoe # 4020 Devflex Primer, 2 coats Pitt-Tech Gloss, Devoe #4208 Devflex

.2 Formula 31: for all exterior doors, frames, miscellaneous trim, mechanical and electrical equipment: 1 coat Pitt-Tech Primer, Devoe #4020 Devflex Primer, 2 coats Pitt-Tech Gloss, Devoe #4208 Devflex

.3 Formula 32: For all exposed concrete faces on tilt-up concrete panels

.1 Solid Color (Waterborne Finish)

.1 1st Coat: Sherwin-Williams Loxon Concrete and Masonry Prier, LX02 Sereis

.2 2nd and 3rd Coat: Sherwin-Williams Loxon Self-Cleaning Acrylic, LX13 Series

END OF SECTION