
Date: January 16, 2023

Re: **RFP-23-22 Construction and Commissioning of the Peterborough Organics Facility**

Take notice that the City of Peterborough has issued addendum number 4 for Request for Proposals # RFP-23-22 which is the fourth addendum issued to date.

You will be required to confirm you have downloaded and reviewed this addendum in bids&tenders™ prior to submitting your bid.

The following outlines amendments to the original documentation for the above noted Request for Proposals.

Item 1 – Questions and Answers

Question 1:

- a) Item 9.20 - Excavation - Please provide a breakdown/location of what areas of work this item covers
- b) Item 9.21 - Granular A - Please provide a breakdown/location of what areas of work this item covers
- c) Item 11.7 - Excavation - Does this item cover the excavation for the the structural footings, foundations and floor slab of the Biofilter.
- d) Item 11.8 - Granular A - Does this item cover the supply and placement of Granular A Backfill and Base to the structural footings, foundations and floor slab of the Biofilter.
- e) Please provide a detailed description of what work/material, etc. is required within each item. Typically this is provided within the SP's, the one provided gives a general overview only and does not get into the specifics of what work/material, etc. is required under each item and how payment for such is to be paid.

Answer 1:

- a) This Item covers excavation for granular underlay beneath slabs and buildings as specified on S100, S200, S300, S400, and S500
 - b) This Item covers granular underlay beneath slabs and buildings as specified on S100, S200, S300, S400, and S500.
 - c) Yes, that is correct.
 - d) Yes, that is correct.
-

e) Refer to contract package for scope and materials used. As this will be a Lump Sum contract the Items cover all work and the Contractor will be responsible for carrying out all work under the respective items. Where any aspect of the work is not explicitly included in any item, the Contractor shall assign such items to a listed item that will be performed at generally the same time (construction sequence) for the purpose of payment

Question 2:

a) Referencing Q/A 14 Addendum 2, we understand that all surplus material is to be hauled to an owner chosen landfill. With the implementation of the new soil regulation 409/19, can the owner provide clarity and advise of special receiving requirements, test criteria, tipping fees as well as documentation and tracking requirements and confirm the owner is bearing all associated costs with the exception of trucking/transportation. We would further like to highlight, depending on the test criteria stipulated, temporary stockpile of the surplus material may be required.

b) Specification call for epoxy coated tie wire, galvanized and epoxy coated reinforcing. Typically we don't see this unless on bridges and dams. Please confirm this is required in all the structures as it's very expensive.

c) Drawing S200 Concrete Note #27 specifies a hardener to be applied to all concrete floor slabs that are to remain exposed. Specification 033513 1.1.2 specifies the hardener only for slabs in the office and receiving buildings. Please clarify the areas that require concrete hardener.

d) Attachment #8 is the responsibility matrix. In Add#2 you issued the Installation guide from SG. It also has the responsibility matrix. These 2 documents don't match exactly. Which one takes precedence?

e) Would the Owner accept a maintenance bond instead of an irrevocable letter of credit of 2% of Contract price

Answer 2:

a) Refer to Answer 1 c) of Addendum 3

b) Unless otherwise noted, ALL reinforcing steel shall be Grade 400W plain in accordance with Section 032000 (2.2.2.)

c) Hardeners will only be applied to slabs in the office and receiving buildings.

d) Attachment 8 – Composting Equipment Responsibility Matrix, as issued with the RFP takes precedence.

e) An irrevocable letter of credit is required and the Owner will not accept a maintenance bond.

Question 3:

a) In drawing S105, there are details for H3 and J3 door jambs but it is not assigned to any doors on the door schedule. Please advise where this detail is applicable.

- b) What interior finish will the Mechanical Room at the Receiving Building get? Please provide room finish schedule for the Receiving Building
- c) Please provide division 08 specifications for Hollow Metal Doors & Frame, Solid Core Wood Door & Frame, Aluminum Openings, Glazing, and Door Hardware.
- d) Typically there is some sort of waterproofing and rigid insulation on the exterior of a foundation wall but that is not shown on any of the drawings. Please confirm that any type of waterproofing and insulation for the exterior side of the foundation is not required on this project.
- e) Only the overhead doors at the Receiving Station has the remarks for High Speed Coiling Doors, however, the Office Building also has overhead doors. Are we to assume the same specifications for Office building overhead doors? Otherwise, please provide specifications for overhead doors that are not high speed.

Answer 3:

- a) These details pertain to doors 115 and 116. Updated door schedule - S105 SCHEDULE 2023-01-11 is provided
- b) Receiving Building and Doghouse Finish Schedule is available to download
- c) The following Specifications are provided Specifications for Metal Doors and Frames (081100 - Metal Doors and Frames), Door Hardware (087100 - Door Hardware), Aluminum Doors and Frames (081116 - Aluminum Doors and Frames), Glazing (088000 – Glazing) and the related specification for Sealants (079000 – Sealants) are provided along with updated Table of Contents (000110 - Table of Contents v3). There are no Solid Core Wood Doors & Frames for this project.
- d) Insulation shall be installed as shown on drawings. If no insulation is shown, none is required.
- e) See response to Question 5 below

Question 4:

- a) The Doghouse wall and roof assembly does not mention any drywall on the inside and also no details of interior finishes. Please confirm that all 4 doghouse will not require any of the mentioned details. No finish is required inside the doghouses
- b) In sheet S304, Detail 14 – Doghouse Layout has Screen Opening has size of 572 mm x 610 mm, and Detail 15 – Doghouse Elevation has Screen Opening has Size 368 mm x 600 mm. Detail 18 – Doghouse Wall Details, Screen Opening has width of 400 mm. Please confirm which size should we consider for Screen Openings.

Answer 4:

- a) Receiving Building and Doghouse Finish Schedule is available to download
- b) Use 368mm x 600mm

Question 5:

Please provide the specifications for insulated sectional overhead doors located at shops area (dwg#S105).

Answer 5:

The sectional overhead doors shall be CANDOOR 2" Commercial Insulated Steel Sectional Overhead Doors or an approved equivalent. Colour and finishing options if desired must be chosen by owner. Window configuration as shown in construction drawings or selected by owner.

Question 6:

Drawing C400 - Indicates a 150mm PVC Sanitary Sewer Pipe running out of the Office/Maintenance Building, however there is no pay item for this within Schedule 3. Please clarify.

Answer 6:

Sanitary Item has been added to bid form for 12 m of 150 mm PVC DR 35 sanitary sewer and quantities have been revised for 200 mm PVC DR 35 sanitary sewer Item and Flush and CCTV Item

Question 7:

a) Addendum # 2 – Answer 1, a The equalization pipe should be 300mm Corrugated Dual Wall High Density – Please provide pay Item in the Schedule of Prices.

b) Price Summary Appendix C – Schedule 11 BioFilter - Pay Item 11.9 Bio-filter Media. – Qty.840 m3. The calculated volume of media above HAHN Bio Filter floor panels to top of side wall is 675 m3. Please advise do we need to provide 840 m3 of media as indicated-?

c) Price Summary Appendix C – Schedule 2 – Removals – Pay Item 2.3 Please indicate location of indicated pipe removal on drawing C-200

Answer 7:

a) Storm Item has been added to bid form for the equalization pipes (3 X 4.5 m = 13.5m)

b) Please provide enough media to fill the structure from the top of the HAHN panels, leaving 300mm of space from the top

c) Item 2.3 is for the removal of the existing 600mm CSP culvert at the Bensfort Rd (Emergency) entrance and is indicated with an "X" as per the drawing legend

Question 8:

a) Reference Special Provisions. Item 1 - General Description and Summary of Works: Third paragraph specifies "Equipment and systems indicated on contract drawings shall be installed complete with all accessories required for a complete functional and warranted installation in accordance with industry standards, in compliance with applicable codes and to the satisfaction of the Engineer. Furnish at no additional

cost, any appurtenant fittings, materials or accessories, not herein or elsewhere mentioned specifically, but necessary for the operation of the equipment and system.” This paragraph needs to be re-worded as it transfers design risk from the Engineer to the Contractor. This is not a design-build contract, therefore the engineer cannot transfer this risk onto the contractor. Suggest the following: “Equipment and systems indicated on contract drawings shall be installed complete with all accessories required for a complete functional and warranted installation in accordance with industry standards, in compliance with applicable codes and to the satisfaction of the Engineer. The Contractor will be fully compensated for any appurtenant fittings, materials or accessories, not herein or elsewhere mentioned specifically, but necessary for the operation of the equipment and system.”

b) Reference Special Provisions. Item 7 – Maintenance Security: Please confirm is a Maintenance Security Bond would be an acceptable instrument.

c) Reference Special Provisions. Item 15 – Hours of Work: Assume we have yet to complete the schedule, nonetheless it would be worth an rfi to confirm that a request to work additional hours and potentially weekends will not be an issue. Perhaps the following: a. In reference to Item 15 – Hours of Work: Given the aggressive schedule, it will be a requirement to work extended hours during the work day, and potentially through weekends. Please confirm in advance that the City will allow the contractor to work outside of the “normal” working hours of 7:30am to 5:30pm.

Answer 8:

a) The contractor will be paid for the above as long as it is reflected within their lump sum pricing to complete the job.

b) An irrevocable letter of credit is required and the Owner will not accept a maintenance bond. (as per answer to Question 2 e)

c) Hours of work can be negotiated with the successful proponent. The type of work and associated noise pollution will need to be discussed to confirm acceptable working hours. See Addendum 3 Answer 8 c)

Question 9:

We received the separate Special Provisions attachment on January 3rd. Given this was supposed to have been provided with Addendum #2 on December 23rd, would the Owner extend the questions period past January 9th so that we can have adequate time to review and comment on these provisions.

Answer 9:

The question period was extended once and will not be extended again.

Question 10:

a) In specification section 051223 - 3.6.1 (page 6/6), it mentions paint in accordance with Section 09 91 23 – Interior Painting, please provide related specification section.

b) Please provide the list of items and related specification of the furniture for this job. (Ref dwg#S103)

- c) Please provide the list of items and related specification of the furniture for this job. (Ref dwg#S103)
- d) Please provide the list of items and related specification of the locker area fixtures for this job. (Ref dwg#S103)
- e) Please provide the specific product of the U-drain commercial system located in Shop area (Dwg#S102)

Answer 10:

- a) Painting Specification is provided
- b) Office furniture is not required under this contract
- c) Office furniture is not required under this contract
- d) Lockers and related fixtures are not required under this contract
- e) Product line is U-Drain Commercial – Stainless Steel. Updated specification for Slab Trenches is provided

Question 11:

SGC (GC 5.5)

In SGC (GC 5.5) the last sentence states, “Amend the second line of paragraph 5.5.4 by deleting the number “5” and replacing it with “61”.

GC 5.5.4 states, “Subject to the provision of paragraph 10.4.1 of GC 10.4 – WORKERS’ COMPENSATION, and any legislation applicable to the Place of the Work, the Owner shall, no later than 5 calendar days after the issuance of a final certificate for payment, pay the Contractor as provided in Article A-5 of the Agreement – PAYMENT and in any event, in compliance with Payment Legislation.”

This CCDC document is a generic document that does not specifically address Ontario prompt payment legislation timing, therefore the days mentioned, “5” or “61”, are irrelevant. Whether a typical progress certificate for payment or a final certificate for payment, the Ontario Construction Act prevails. Therefore, the timing of payment is triggered by the issuance of a “proper invoice” not a payment certificate.

Delete GC 5.5.4 and replace with the proposed language as follows:

5.5.4 No later than 5 Days following the issuance of the Certificate of Substantial Performance [or comparable document for ready-for-takeover], the Contractor shall submit the following to the Owner:

- a) a Proper Invoice that covers the unpaid work completed up to the date of Substantial Performance [ready-for-takeover] of the Contract and which complies with the requirements for a Proper Invoice as specified in the Construction Act;
- b) proof of publication of the Certificate of Substantial Performance.

5.5.5 The Owner and the Consultant shall review the Proper Invoice and advise the Contractor of any disputed amounts in accordance with the Construction Act.

5.5.6 The Owner and the Consultant shall review the documents submitted by the Contractor and advise the Contractor of any amounts that the Owner refuses to pay and shall in accordance with the Construction Act.

5.5.7 The Owner shall pay the undisputed amount to the Contractor in accordance with the provisions of Article A-5 - Payment and the Construction Act.

SGC (GC 11.1.9)

In the new clause 11.1.9, we propose to delete the second paragraph in its entirety. It states,

“In the event of a claim, any deductible or self-insured retention under these policies of insurance shall be the sole responsibility of the Contractor and that this coverage shall preclude subrogation claims against the City and any other person insured under the policy and be primary insurance in response to claims. Any insurance or self-insurance maintained by the City and any other person insured under the policy shall be considered excess of the Contractor's insurance and shall not contribute with it. The minimum amount of insurance required herein shall not modify, waive, or otherwise alter the Contractor's obligation to fully indemnify the City under this Agreement.”

Depending on the supervening event, insurance coverage would need to be determined whether the Contractor's or the Owner's insurance would cover the loss. Sometimes subrogation is necessary and helps to distribute the risk as appropriate. Where an insurer has paid out money to an insured, subrogation enables the insurer to recoup all or some of that money from a third party who caused or contributed to the loss. Therefore, if a loss is the responsibility of the owner, then the Owner's insurance should cover the loss (and the deductible) and the same would apply to the Contractor. The same principle would apply to indemnity. To keep this agreement equitable, this paragraph must be deleted.

SGC (GC 12.3)

In the new clause 12.3.9, we propose to delete this clause in its entirety. It states, “The provisions of GC 12.3 shall not deprive the Owner of any action, right or remedy otherwise available to the Owner for the Contractor's failure to fulfill its obligations or responsibilities under the Contract and shall not be construed as a waiver of claims in favour of the Contractor or as limitation on the time in which the Owner may pursue such other action, right to remedy. The warranties set out in the Contract are supplemental to and do not limit or preclude the application of any other conditions and warranties, express or implied, by law or trade usage.”

When substantial completion is officially achieved, the Owner should already know what the Contractor's failures were and remedied or claimed for them. It is unequitable to have unrestricted amounts of time with which to make a claim. If there are warranty issues, the Contractor would be obliged to correct such deficiencies during the warranty period under the stipulations of warranty, nothing more. All claims by the owner need to be made prior to substantial completion. Therefore, to keep this agreement equitable, this paragraph must be deleted, especially if the owner wishes to keep GC 13.2.2 where the Contractor releases the Owner from all claims or actions which occur after ready-for-takeover (substantial completion).

SGC (GC13.2)

In this section, the Owner has deleted GC 13.2.5 in its entirety. It states,

“The Owner waives and releases the Contractor from all claims arising from acts or omissions which occur after the Ready-for-Takeover date, except for:

.1 indemnification for claims advanced against the Owner by third parties, as referenced in paragraph 13.2.3.2;

.2 claims respecting toxic and hazardous substances for which a right of indemnity could be asserted by the Owner against the Contractor, as referenced in paragraph 13.2.3.3;

.3 claims arising under GC 12.3 – WARRANTY; and

.4 claims for which Notice in Writing has been received by the Contractor from the Owner within 395 calendar days following the Ready-for-Takeover date.”

This is an inequitable request, especially when paired with the added clause GC 12.3.9. By keeping GC 13.2.2, the Owner wants the contractor to release it from all claims or actions which occur after ready-for-takeover (substantial completion) yet wants to reserve its right to claim after ready-for-takeover (substantial completion) by deleting GC 13.2.5. This is not an equitable agreement. Please reinstate GC13.2.5.

Answer 11:

- i. The City agrees to the substitution of GC .5.5.4 to 5.5.7 as requested.
- ii. The City will not delete or alter Supplementary General Conditions 11.1.9, 12.3.9 or 13.2.2
- iii. The City will not reinstate GC 13.2.5

Question 12:

- a) Schedule 9 – Receiving Building – Please provide an item for the required Walls/Footings for this structure. Also please provide an item and quantity for the Reinforcing Steel required in the Walls/Footings.
- b) Schedule 9 – Mechanical Building – Please provide an item for the required Floor Slab for this structure. Also please provide an item and quantity for the Reinforcing Steel required in the Floor Slab.

Answer 12:

- a) Updated bid form is provided
- b) Updated bid form is provided

Note that an updated bid form for Schedule 9 – Electrical is also provided. Item added for the provision of the power supply to the pond aerator pump.

Question 13:

- a) Item 9.13 – Bunker – Concrete - Slab: Does this item include the exterior Concrete Slabs around and in between all eight (8) bunkers, please confirm.
- b) As the closing date has been extended by a week, we would also request that the question period be extended by the same amount of time.

Answer 13:

- a) Yes, this item includes the surrounding slab.
- b) The question period was extended once and will not be extended again. (as per response to Question 9)

Question 14:

At the Technical Brief Meeting held December 14th, it was noted that the pre-purchased Gore® System will be delivered to site in two shipments, sometime in the Spring/Summer 2023. Please advise the following:

- a) Shipment #1
 - i. Please advise the contents included in Shipment #1.
 - ii. Please advise the delivery date to site for shipment #1. As the Spring/Summer is very ambiguous.
- b) Shipment #2
 - i. Please advise the contents included in Shipment #2.
 - ii. Please advise the delivery date to site for shipment #2. As the Spring/Summer is very ambiguous

Answer 14:

- a) Shipment #1 will consist of ACO Components as follows and are anticipated to be delivered to the City prior to the start of construction:

ACO Component	QTY	
SG100T Channel	756	
Aero Channel Outlet Cap w/ 6" PVC	34	
Water Trap Assembly	8	
ACO Clean Out Assembly	16	
Wall Cap	792	
Wall Cap 20 Degree	18	
Wall Cap Round End	18	

b) Shipment # 2 will be the Control Systems (two cabinets per bunker (high voltage / low voltage) as well as probes and cables. The communications box and cover fastening system will also be included). It is anticipated that Shipment # 2 will be delivered to the City prior to the start of construction.

Question 15:

a) Please provide the pay item for misc. metals for all the buildings.

b) Please provide the specific product of the 600x600 hatch located in Biofilter (Dwg#S501, S502)

Answer 15:

a) The Contractor shall assign such items to a listed item that will be performed at generally the same time (construction sequence) for the purpose of payment

b) Grate as per OPSD 400.050

Question 16:

a) Reference pay item 1.7 Heavy Duty Silt Fence Barrier and also reference drawing C200 notes 'Maintain Existing Heavy Duty Silt Fence as per OPSD 219.130'. Is the intent of Pay item 1.7 to install New Silt Fence Barrier or is it there to maintain the existing barrier. Please advise

b) Reference pay item 1.9 Fibre Roll Flow Check Dam and also reference drawing C200 notes 'Maintain Existing Fibre Roll Check Dams as per OPSD 219.191'. Is the intent of Pay item 1.9 to install New Check Dams or is it there to maintain the existing fibre roll check dams. Please advise.

c) Reference drawing C-901 Composite Utility Plan shows yard piping. From review of the documents, no typical sections were provided that shows the buildup and material backfill. Please provide typical sections and confirm the following.

i. Is yard piping to the underside of asphalt is to be backfilled in granular material?

ii. Is yard piping to the underside of grassed areas to be backfilled with native material?

Answer 16:

a) This Item is for new silt fencing and is only to be used as directed by the Owner/Contract Administrator

b) This item is for new fibre roll check dams and is only to be used as directed by the Owner/Contract Administrator.

c) Pipe installation shall be as per the related OPSS and OPSD documents as referenced in the related indexes as shown on C-100 and the Storm and Sanitary Sewer Pipe Identification table as shown on C-400

Question 17:

Does any electrical equipment, conduit, or wire need to be explosion proof inside or outside of the buildings, bunkers, or biofilter locations?

Answer 17:

No. There is no required for explosion proof wiring, none of the areas of the project are considered to have explosive atmosphere hazards.

Question 18:

- a) Drawing E101 Note #7 - Where is the IT Cabinet Located?
- b) In the biofilter area the only electrical shown is the sump pump, is that all that's required?
- c) What size and style are the bunker power connection cabinets on drawing E103?
- d) Is there a specific manufacturer for the backup generator you would recommend, or can it be any equivalent that meets the specs on drawing E106?
- e) Item 30 Note #1 calls for a propane fired engine but note #6 calls for natural gas. Please clarify.

Answer 18:

- a) The IT cabinet is to be located in the end of bunker on Bunkers 1 and 5.
- b) In addition to the sump pump the city has requested an exterior GFI, weatherproof receptacle be added to the exterior of the biofilter area at the South East corner. Provide a dedicated 120V, 20A circuit from Panel B to supply the receptacle.
- c) The power connection cabinets are part of the equipment supplied by others (Free Issued Equipment), electrical contractor is responsible to provide wiring and terminations to cabinets. Exact size of equipment will have to be coordinated with supplier.
- d) Generator supplier is Generac/Total Power, contact for generator is Ken Blazey: 905-362-9441 mobile: 416-992-5375 email: ken@totalpower.ca OR Bryan Nicholson mbnicholson@totalpower.ca
- e) Generator fuel is to be propane gas. As per Answer 8 b) from Addendum 3 the City will consider a diesel option for the generator.

Question 19:

a) Reference Schedule of Prices, Items 1.13 Earth Excavation - Grading, 1.14 Earth Excavation - Surplus, 9.20 Excavation (Structural and Buildings), 11.7 Excavation (Biofilter). All of these items deal with the excavation and grading of site, including excavation of structures. Please confirm all excavation that is not yard piping is to be encapsulated within these 4 line items.

b) Reference Schedule of Prices, Items 1.13 Earth Excavation - Grading, and 1.14 Earth Excavation - Surplus. Please confirm Item 1.13 with a quantity of 27,000m³ is for the excavation and placement of fill. Please confirm Item 1.14 with a quantity of 5,500 m³ is for the excavation and disposal of material at the landfill.

Answer 19:

- a) Yes. This is correct
- b) Yes. This is correct

End of Addendum #4

1 BASIS OF DESIGN:

- 1.1.1 Trench drain system for use in a compost receiving facility and shop. Refer to contract drawings for placement.

2 DESCRIPTION:

- 2.1.1 Includes: Linear depressions in slabs on grade to collect and transmit liquids. Includes excavation, formwork, accessories, reinforcement, concrete, finishing, and trench cover.

3 PERFORMANCE AND DESIGN REQUIREMENTS:

- 3.1.1 Loads: 23.79, Minimum required loads.
- 3.1.1.1 Live load: 23.79 kPa - uniform, static and dynamic
- 3.1.1.2 Concentrated: Minimum 61.75 kN acting over an area of 750x750 mm
- 3.1.2 Surface Tolerances : CSA A23.1-19/A23.2-14 , Clause 22, straight edge method; conventional.
- 3.1.3 Subgrade: Type A granular compacted to 98% standard proctor density.
- 3.1.4 Refer to Civil Specifications for Grading Requirements
- 3.1.5 Concrete:
- 3.1.5.1 Refer to construction drawings for 28 day compressive strength.
- 3.1.6 Reinforcing: deformed steel billet bars, to Grade 400W.
- 3.1.7 Trench Drain Frames: U-Drain Commercial Series.
- 3.1.8 Trench Covers: Included in frame.
- 3.1.9 Prefabricated Trench Drain Systems: Manufactured precast concrete, polymer, trench drains with galvanized steel covers.
- 3.1.10 Existing Slabs: Saw cut openings for construction of new trenches.
- 3.1.11 Components below Flood Elevation: Unaffected by flood water.

END OF SECTION

1 GENERAL REQUIREMENTS

1.1 GENERAL

1.1.1 All conditions of the contract apply to the work of this Section.

1.2 SCOPE OF WORK

1.2.1 This Section of the contract includes all painting with the exception of those items as specified, called for or implied by the drawings and specification, together with all necessary incidentals whether referred to or not, as will be required to complete the work to the full intent and meaning of the drawings and specifications. In addition to painting called for on the drawings the work includes but is not limited to painting the following and related work:

1.2.1.1 Concrete block walls where indicated on Room Finish Schedule.

1.2.1.2 Miscellaneous metals as indicated on Room Finish Schedule.

1.2.1.3 Drywall where indicated on Room Finish.

1.2.1.4 Glazing rebates and stops of hollow metal sections before glass is installed.

1.2.1.5 Metal doors and frames where indicated on Door Schedule.

1.2.1.6 Removal of switch plate and receptacle covers, removable trim, etc., prior to painting to permit painting, to entire wall surface.

1.2.1.7 Re-install covers, trim, etc., after paint is thoroughly dry.

1.2.1.8 Mechanical ductwork – exposed in Vehicle Bays.

1.2.1.9 Electrical conduit where exposed.

1.3 WORK NOT REQUIRING PAINTING

1.3.1 Stainless steel, chrome, baked enamel, plastic laminate, glass, tile, equipment name or specification plates, washroom fixtures, prefinished mechanical equipment, walls and other surfaces not called to be painted on drawings.

1.4 SUBMITTALS

1.4.1 Prior to painting work on job site, paint surface sample panels of an area approximately 3000 mm x 3000 mm on each surface requiring painting. Paint as many surface sample panels as may be required to receive approval. Approved surface sample panels, shall be considered to be the standard to which all subsequent work shall be matched.

1.4.2 Submit a list of materials proposed for use on work, prepared by paint manufacturer, in writing through painting Subcontractor and Contractor, to Consultant for review not later than 30 days after award of contract. This list shall bear manufacturer's official certification that materials listed thereon are equal to those specified herein. If products to be used are from various manufacturers submit a list from each manufacturer.

- 1.4.3 This shall in no way be construed as permitting substitution of materials for those specified or approved for this work by the Consultant.
- 1.4.4 Accompanying the materials list, submit to the Consultant two copies of the full range of colours available in each of the proposed products.

1.5 PROTECTION AND STORAGE

- 1.5.1 Deliver materials to and store on site in the manufacturer's sealed and labelled containers. Materials are subject to inspection and approval by the Consultant before seals are broken. Unlabelled containers and container's with broken seals will be rejected.
- 1.5.2 Store containers of paint, varnish, thinner and other volatile materials in well ventilated places where they will not be exposed to excessive heat or direct rays of sun. Keep tightly closed when not in actual use. Remove used cloths from building every night and when not in use, take precautions against spontaneous combustion by drenching with water, or placing in air-tight covered metal containers.
- 1.5.3 Protect work of other trades against paint splattering and make good at own expense any such damage.
- 1.5.4 Provide adequate tarpaulin or drop-sheets for adjacent surfaces and floors.
- 1.5.5 Remove finished hardware, switch plates, etc., from items and surfaces to be painted or coated, and re-affix on completion of painting or coating. Pay costs for removal and replacement of work of other trades, as required to complete the work of this Section.
- 1.5.6 Post with "Wet Paint" signs and bar from contact, finished areas liable to contact during drying.
- 1.5.7 Maintain CO2 fire extinguisher of minimum 10 kg. capacity in paint storage area.

1.6 ENVIRONMENTAL REQUIREMENTS

- 1.6.1 Do not apply paint finish in area where dust is being generated.
- 1.6.2 Maintain minimum air temperatures of 10°C for paint 18°C for varnish in areas to be painted for 24 hours prior to and after application.

1.7 WHMIS

- 1.7.1 Submit MSDS - Material Safety Data Sheet for each material specified.

1.8 MAINTENANCE DATA

- 1.8.1 Provide maintenance data for painting materials to Owner and Contract Administrator.

1.9 STANDBY PARTS

- 1.9.1 Upon completion of this portion of the work, deliver to the Owner a new unused extra gallon of paint of each colour and coating material used, with all such extra tightly sealed in clearly labelled containers.

2 PRODUCTS

2.1 MATERIALS

- 2.1.1 Use materials specified herein.
- 2.1.2 Products of following manufacturers will be accepted subject to approval of List of Materials required by Item 1.5 by Consultant. The Consultant reserves right to reject materials which are not equal to specified material. Contractor will be required to supply specified material for those materials rejected at no additional cost to Contract.
- 2.1.3 Painting and finishing materials shall be the manufacturer's top line in each case. These will be acceptable only if they conform to or exceed the requirements of the stated C.G.S.B. quality standards.
- 2.1.4 Manufacturer:
- Glidden
 - Canadian Pittsburgh Paints
 - Benjamin Moore & Company Ltd.
 - Pratt and Lambert
 - Colour Your World-Division of
 - Tone Craft Ltd.
 - Sherwin Williams
 - Para Paints
- 2.1.5 Insofar as practicable, paint shall be factory mixed for immediate application without thinning or other adulterations at the site. Paint and coating materials shall be used up within the period of the shelf-life recommended by the manufacturers.
- 2.1.6 Colours as follows: All references listed are ICI paint numbers.
- Office:
 - Walls: 10YY 68/110
 - HM Door frames: 80YR 19/177
 - (except inside of Washroom and Vehicle Bays)
 - Washrooms: 60YR 30/094
 - Shop:
 - Walls: 10BB 65/094
 - HM Doors and Frames: 10BB 29/174

- 2400 High free standing
- block wall (both sides) 10BB 29/174
- Steel Bollards: 30YR 20/595
- Exposed Gypsum Wall Board
- Ceilings and Bulkheads: 30GY 88/014
- Round duct in Shop: Match ceiling colour

3 EXECUTION

3.1 INSPECTION

- 3.1.1 Check all surfaces with electric moisture meter in presence of Contractor and Consultant, and do not proceed if reading is higher than 12-15 without written permission from Consultant.
- 3.1.2 Proceed with work only when surfaces and conditions are satisfactory for production of a first class job.
- 3.1.3 Remove dust, grease, rust and extraneous matter from surfaces except that rust occurring on items specified to be primed under other Sections shall be removed and work re-primed under those Sections.

3.2 PROTECTION

- 3.2.1 Provide drop cloths and other protection for full protection of items not being painted.

3.3 PREPARATION

- 3.3.1 Concrete and Masonry
 - Test surfaces for alkalinity with pink litmus paper or other recognized method in presence of Contractor and Consultant.
 - Where extreme alkalinity occurs, wash surface with 4% solution tetrapotassium pyrophosphate [142 gm per 4.55 litres of water] where latex base is to be used and with zinc sulphate solution [1.36 per 4.55 litres water] where other paint bases are to be used.
- 3.3.2 Metal
 - Clean unpainted and shop painted metal, remove loose rust and prime bare metal with zinc chromate primer. Feather out edges to make touch-up patches inconspicuous.
- 3.3.3 Galvanized Surfaces

- Phosphatize galvanized metal surfaces using CGSB 31-GP-116 pretreatment or prime with galvanized metal primer. Ensure painted ductwork is properly prepared prior to painting.

3.3.4 Woodwork

- Inspect millwork to assure surfaces are smooth free from machine marks and that nailheads have been countersunk. Seal knots and sapwood in surfaces to receive paint, with a sealer compatible with finish specified.
- Finish surfaces same as nearest or adjoining surfaces, unless otherwise specified or directed by Consultant.
- Paint and protect prior to construction of surrounding work surfaces which may be eventually inaccessible.
- Sand smooth woodwork and clean surfaces free of dust before applying first coat. In case of painted woodwork fill nail holes, splits and scratches with non-shrinking filler after coat is dry. When these occur on a surface to receive a transparent finish, use putty tinted to match local grain condition. Between coats sand lightly with No. 00 sandpaper and remove dust.

3.4 APPLICATION

- 3.4.1 Finishes and number coats specified in the Schedule are intended to cover surfaces completely. If they do not, apply further coats until complete coverage is achieved as required at no additional cost to contract.
- 3.4.2 Paint entire plane of areas exhibiting incomplete or unsatisfactory coverage. Patching not acceptable.
- 3.4.3 Apply primer-sealer coats by brush or roller method.
- 3.4.4 Permit paint to be dry and hard before applying succeeding coats, touch up suction spots and sand between coats with No. 00 sandpaper. Dust clean.
- 3.4.5 Apply final coats on smooth surfaces by roller or brush. Hand brush wood surfaces. Spray paint metal deck, liner and roof structural steel components.
- 3.4.6 Finish work to have a uniform sheen, colour and texture, free from brush or roller marks, sags, runs or other defects.
- 3.4.7 Apply materials to provide proper performance of the material.
- 3.4.8 Vary each coat in tone to permit supervision identification.
- 3.4.9 Exterior paints shall be factory tinted to required colours.

3.5 MECHANICAL AND ELECTRICAL PAINTING

- 3.5.1 Read Mechanical and Electrical Sections for extent of painting work to be done under those Sections.
- 3.5.2 Finish paint primed mechanical equipment.

- 3.5.3 Replace identification markings on mechanical and electrical work when painted over or spattered.
- 3.5.4 Remove grilles, covers, access panels for mechanical and electrical systems from installed locations and paint separately, if these items are not factory finished.
- 3.5.5 Paint interior surfaces of ducts that are visible through grilles and louvers with primer and one coat of flat black metal paint to limit of sight line.
- 3.5.6 Finish paint primed or finished mechanical equipment: heaters, convectors.

3.6 FIELD QUALITY CONTROL

- 3.6.1 Locate testing area in Building to establish standard of workmanship, texture, gloss and coverage where designated.
- 3.6.2 Apply samples of all finishes on each type of surface to be coated with correct material, number of coats, colour, texture and degree of gloss required.
- 3.6.3 Retain test area until completion of work. Use approved work in test areas as standard for corresponding work throughout Building. Correct and refinish work which does not compare with approved finishes.

3.7 PAINTING SCHEDULE

3.7.1 General

- Refer to Schedule of Surfaces and Number of Coats.
- Finish listed exposed surfaces, as indicated in Limits of Work and as described hereunder in addition to neutralizing treatment, filling, touch-up treatments, coatings and primings as specified and required.
- Exposed means visible in the completed work. In case of closets, cabinets and drawers it includes interiors.
- The Consultant shall have option of having wood painted or transparent finish applied.
- Bring to attention of Consultant for clarification and instructions, instances where materials specified are not suitable for a particular job application or are contrary to manufacturer's recommendations for use on a particular surface.
- Finishes shall match approved samples but Consultant reserves right to make reasonable changes to finish specifications to obtain desired results without additional cost to contract.
- Gloss terms values [ASTM D523-67 "Test for Specular Gloss"] as follows:

<u>Gloss Term</u>	<u>Gloss Value</u>
Flat	5 to 20
Eggshell	20 to 40

Semi-Gloss	40 to 60
Gloss, Medium	60 to 80
Gloss, High	80 to 90

- A colour chart giving colour schemes and gloss values for various areas will be prepared by Consultant.
- Unless otherwise noted; finish work, interior and exterior, as indicated on Drawings, Finish Schedule and specified herein.
- Contractor to allow for painting exposed ductwork in painted ceiling areas. Ducts will be painted same colour as roof deck and steel.

3.7.2 Exterior Schedule

- Galvanized Metal:
 - 1st Coat Vinyl wash primer 1-GP-121M
 - 2nd Coat Steel primer 1-GP-40d
 - 3rd Coat Exterior enamel 1-GP-59M
- Primed Ferrous Metal Surfaces
 - 1st Coat Spot priming 1-GP-40d
 - 2nd Coat Exterior enamel 1-GP-59M (Semi Gloss)
 - 3rd Coat Repeat second coat

3.7.3 Interior Schedule

- Galvanized and Zinc coated Metal (including steel roof deck):
 - 1st Coat Vinyl wash primer 1-GP-121M
 - 2nd Coat Enamel Undercoat 1-GP-38M
 - 3rd Coat Flat 1-GP-100M
- Primed Metal Surfaces:
 - Touch up primer as required
 - 1st Coat Alkyd enamel 1-GP-57M
 - 2nd Coat Repeat first coat
- Gypsum Board Ceilings:
 - 1st Coat Primer-sealer 1-GP-119M
 - 2nd Coat Alkyd flat 1-GP-118M
- Gypsum Board Walls:
 - 1st Coat Primer-sealer 1-GP-118M
 - 2nd Coat Eggshell Enamel 1-GP-57M
 - 3rd Coat Repeat second coat

3.8 PAINT MANUFACTURERS INSPECTION REPORTS

- 3.8.1 Arrange to have Paint manufacturer's Representative of product being used on project, submit written inspection report to Consultant.

- 3.8.2 Representative to visit site as many times as required to assist painting Contractor in proper application of products to ensure a satisfactory job.
- 3.8.3 Representative to submit a written inspection report to Consultant at following times:
- Prior to painting to see that proper surface preparation is carried out.
 - At final completion of painting to ensure a satisfactory job has been obtained.

3.9 MAINTENANCE PROCEDURES

- 3.9.1 At completion of project submit three copies of manufacturer's cleaning procedures in regards to each paint product type and gloss finish specified herein.

3.10 CLEAN UP

- 3.10.1 During the progress of the job, do not allow the accumulation of empty containers or other excess items except in areas specifically set aside for said purposes.
- 3.10.2 Completion, remove all paint and traces of paint from surfaces not scheduled to be painted. Sweep all floors of dry fog fallout accumulation.

END OF SECTION