

Alberta Construction Trade Definitions

2015



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Section 1: Introduction

The following trade definitions were developed and refined with the assistance of the appropriate trade associations and trade contractors in an attempt to establish a set of guidelines for trades to use when tendering a project. The definitions herein are intended to supplement the specifications by providing the contractor a complete list of inclusions and exclusions pertaining to the work scope being tendered.

These definitions do not add work items nor exclude them from a prime contract, but where work under each scope is included in the contract documents, the trade definitions designate which contractor is responsible to do that work. It does not eliminate the requirements of the contractor to follow and abide by all applicable codes including but not limited to the Worker's Compensation Board, Occupational Health & Safety and all applicable building codes etc.

These trade definitions will be reviewed on a yearly basis. All member companies and trade associations may request changes to any or all trade definitions by providing their request in writing to the Alberta Construction Association or the Edmonton Construction Association, care of the Trade Definition Committee, before January 1st of each year. The request must include the change, reason for the change and the effect on the other scopes. The Trade Definition Committee will review and rule on all requests. Changes to the definitions will be finalized and published on March 1st each year.

This document is for use during the tender process and is intended to coordinate job site activities.

Section 2: Trade Associations

The following is the list of trade associations that participated in the development of the trade scope definitions herein:

1. Alberta Cladding and Decking Association
2. Alberta Coating Contractors Association
3. Alberta Roofing Contractors Association
4. Alberta Wall and Ceiling Association
5. Architectural Woodwork Manufacturers Association of Canada
6. Canadian Automatic Sprinkler Association
7. Electrical Contractors Association of Alberta
8. Landscape Alberta Nursery Trades Association
9. Mechanical Contractors Association of Alberta
10. Alberta Floor Covering Association
11. Sheet Metal Contractors Association of Alberta

Section 3: Building Information Modeling (BIM)

DEFINITION:

BIM is a computer aided design system that renders a 4D accurate digital representation of a building being designed or built. In addition to the 3D graphic attributes for all components in the building can be added. Specifications for all the components of the building can be attached to each item.

If a detailed outline of the equipment, personnel and meeting requirements are provided in the tender documents each trade scope will allow for the associated costs in their tender.

If the tender documents require each trade to assist in the development of a BIM model with no detailed outline of the assistance requirements ALL contractors shall include and exclude the following items in their tender:

INCLUDED:

1. Supply appropriate personnel to assist in development of the BIM model by providing information with respect to the individual trade scope with regards to:
 - a. Equipment and material being supplied;
 - b. Installation requirements of material and equipment being installed;
 - c. Provide the appropriate information (dimensions, sizes, clearances, quantities) of all products being installed to assist with interference and coordinate the final installation of equipment and systems;
 - d. Supply personnel to attend meetings as specified to assist in the development of the BIM model.
Note: If meeting requirements are not detailed in the tender documents it will be assumed that one (1) person will be required to attend one (1) meeting weekly with a duration of four (4) hours.

EXCLUDED:

1. Supply of equipment, software or computer operators;
2. Computer generated drawings.

Note: Unless otherwise specifically noted in the tender documents all computer drafting is to be carried out by the General Contractor, Engineer or personnel designated by the Owner with no costs to be borne for this service by the Sub-Contractor.

Section 4: Commissioning

DEFINITION:

Commissioning is the verification of a product or systems functionality by checking all aspects of the system and comparing the results with the requirements of the tender documents.

All contractors shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Equipment start-up by appropriately trained or manufacturer certified technicians;
2. Verification of equipment, materials and systems to ensure they meet design intent and specifications;
3. Documentation for completed system and equipment commissioning and/or testing;
4. Completing and submitting commissioning documents supplied by the Owner's commissioning agent.

EXCLUDED:

1. 3rd party commissioning;
2. Development and supply of commissioning sheets required for 3rd party commissioning.

Section 5: Piling – Timber, Pipe, Steel, Sheet and Precast Concrete

DEFINITION:

This tender shall be for the supply and installation of timber, pipe, steel sheet and precast concrete piling and all components necessary for a complete installation;

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Concrete within pipe piles;
2. Equipment necessary to install the piles;
3. Load testing of piles, when specified in the tender documents;
4. Protection of concrete in piles from freezing;
5. Engineered drawings;
6. Where a pile foundation is designed by a piling contractor he shall be responsible for the adequacy of the surrounding services and/or structures to withstand the vibrations or other effects of the piling installation proposed by the piling contractor.
7. Provision and maintenance of all lines and levels as required;
8. Provision and maintenance of stakes indicating pile locations;
9. Trade specific lighting to perform tasks;
10. Trade cleanup - cleanup for work carried out by this trade;
11. Warranty and/or Guarantee;
12. Submittals and O&M documentation as specified in the tender documents;
13. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
14. Protection of other trades' work from damage when performing this trades scope of work;
15. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Building permits;
2. Concrete testing;
3. Hand trimming or cutting of tops and top treatment of piles or caissons. Straightening, cutting to specified elevations and removal of laitance from rebar;
4. Inspection services;
5. Installation of dowels;
6. Pile caps;
7. Piles for site work not detailed on structural drawings such as light standards, fence posts, planters and sign bases;
8. Placing of pile dowels and anchor bolts;
9. Removal of man-made obstructions either below ground or overhead which interfere with the piling contractor's work;
10. Removal of tailings and pre-bore material;
11. Responsibility for damage to subsurface structures, services and utilities whose exact location has not been established and identified on the site by the tender documents prior to commencement of the piling work;
12. Shoring and protection of any banks, structures, services and utilities as well as continued maintenance and protection of same;
13. Supply and maintain complete access, egress and working surface suitable for the free movement of piling rigs and ancillary equipment;
14. Temporary heat, general lighting, power, sanitation and water for general construction;
15. Hoarding;
16. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;

17. Supply and maintenance of garbage and recycling bins for construction waste;
18. Removal of construction waste from job site;
19. General site security;
20. Removal of excess tailings – by General Contractor;
21. Pile casings are excluded unless specifically identified in the specifications.

Section 6: Piling - Drilled Cast-In-Place, and Expanded Base Piles

DEFINITION:

This tender shall be for the supply and installation of drilled cast-in-place and expanded base piling and all components necessary for a complete installation;

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Equipment necessary to install the piles;
2. Facilities and equipment for inspections;
3. Load testing of piles when specified in the tender documents;
4. Protection of concrete in piles from freezing;
5. Supply only of dowels; Set by the General Contractor;
6. Where a pile foundation is designed by a piling contractor he shall be responsible for the adequacy of surrounding services and/or structures to withstand the vibrations or other effects of the piling installation proposed by the piling contractor;
7. Straightening, cutting to specified elevations and removal of laitance from rebar;
8. Provision and maintenance of all lines and levels as required;
9. Provision and maintenance of stakes indicating pile locations;
10. Temporary heat for protection of work in this scope.
11. Trade specific lighting to perform tasks;
12. Trade cleanup - cleanup for work carried out by this trade;
13. Warranty and/or Guarantee;
14. Submittals and O&M documentation as specified in the tender documents;
15. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
16. Protection of other trades' work from damage when performing this trades scope of work;
17. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
18. Provide quantity of tailings to be removed;

EXCLUDED:

1. Building permits;
2. Concrete testing;
3. Extension of any piles above grade level;
4. Hand trimming or cutting of tops of piles or caissons.
5. Inspection services;
6. Installation of dowels;
7. Pile caps;
8. Piles for site work not detailed on structural drawings such as light standards, fence posts, planters and sign bases;
9. Placing of pile dowels and anchor bolts;
10. Removal of man-made obstructions either below ground or overhead which interfere with the work in this scope;
11. Removal of tailings and pre-bore material;
12. Responsibility for damage to sub-surface structures, services and utilities whose exact location has not been established and identified by the purchaser prior to commencement of the piling work;
13. Shoring and protection of any banks, structures, services and utilities as well as continued maintenance and protection of same;

14. Supply and maintain complete access, egress and working surface suitable for the free movement of piling rigs and ancillary equipment;
15. Temporary heat, general lighting, power, sanitation and water for general construction;
16. Hoarding;
17. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
18. Supply and maintenance of garbage and recycling bins for construction waste;
19. Removal of construction waste from job site;
20. General site security.
21. Pile casings are excluded unless specifically identified in the specifications.

Section 7: Exterior Landscaping

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Excavation of shrub beds and tree pits;
2. External irrigation systems, including sleeves, trenching and backfill: the mechanical contractor shall provide suitably sized and accessible water service to a landscaped area, including such back-flow prevention devices, meters or other equipment as necessary to comply with all government codes and regulations (see Mechanical Included and Electrical Included);
3. Fine grading and preparation of topsoil for seed and sod bed;
4. Maintenance of new landscape construction as specified in the tender documents;
5. Pedestrian aggregate paths and trails;
6. Placing and spreading of topsoil obtained onsite or off-site as specified; providing soil mixes and soil screening, as specified;
7. Seeding and/or sodding as specified;
8. Supply and installation of landscape materials as specified on the landscape drawings/plans;
9. Supply and installation of plant material;
10. Supply and installation of fertilizer and soil amendments as specified;
11. Supply and installation of tree grates and tree guards, precast concrete tree boxes, wooden and precast concrete planters;
12. Supply and installation of wood edger's, wood retaining walls, screening, wood free-standing or attached pagodas, pergolas and gazebos;
13. Trees and shrubs specified to be moved and stored, or moved to another location;
14. Use and application of specified horticultural materials, i.e. pesticides, sterilants, lime, etc.
15. Supply and installation of soil structuring systems for tree planting in hard surface applications.
16. Scaffolding/man lifts where required to perform work by this trade scope;
17. Trade specific lighting to perform tasks;
18. Trade cleanup - cleanup for work carried out by this trade;
19. Warranty and/or Guarantee;
20. Submittals and O&M documentation as specified in the tender documents;
21. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
22. Protection of other trades' work from damage when performing this trades scope of work;
23. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Asphalt paving and integral edging;
2. Concrete, except for precast concrete items specifically noted under included;
3. Gabion structures;
4. Indoor landscaping;
5. Interlocking pavers, paving stones, turf-stones/grass-paver systems, sidewalk blocks and modular block retaining walls; including the excavation and compaction of sub grade, and supply and compaction of base;
6. Metal tree grate frames;
7. Painting;
8. Precast concrete accessories required to match the building precast features;
9. Removal or disposal of excess top soil or sub soil from on-site stockpiles;
10. Hoisting;
11. Repair of landscape areas not specifically identified;
12. Tree demolition or removal;
13. Water proofing or insulation of planters, parking structures or roof top landscaping.

14. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
15. Temporary heat, general lighting, power, sanitation and water for general construction;
16. Hoarding;
17. Final Cleanup before turnover;
18. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
19. Supply and maintenance of garbage and recycling bins for construction waste;
20. Removal of construction waste from job site;
21. General site security.

Section 8: Reinforcing Steel – Supply and Installation

DEFINITION:

This tender shall be for the supply including freight to site of all reinforcing steel bars and welded mesh or structural wire fabric required for poured-in-place concrete in accordance with tender drawings and specifications.

The Contractor providing the pricing for this section shall include for both the Supply and Installation of the Reinforcing Steel.

Sub Section A: Supply of Reinforcing Steel

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Stud Rails;
2. Epoxy coated rebar and patch kit;
3. One hour free unloading time;
4. Fabrication of bars; this shall include smooth rods for joints and threaded reinforcing bars cut, bent, bundled and tagged or colour coded;
5. Mechanical and exothermic couplers - supply only;
6. Preparation of placing drawings and bar lists;
7. Supply reinforcing steel for concrete filled masonry and du-al and similar type blocks;
8. Supply of welded wire mesh or structural wire fabric in flat sheets or rolls;
9. Support and/or spacer bars when specified or specifically shown on the drawings;
10. Welded wire mesh or structural wire fabric for concrete encased conduits or duct;
11. Rock or soil anchors or equivalent bars;
12. Post tensioning cables and accessories required to provide a complete PT system as specified in the bid documents;
13. Embedded plates with rebar welded to it.
14. Warranty and/or Guarantee;
15. Submittals and O&M documentation as specified in the tender documents;
16. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
17. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Accessories for masonry or du-al or similar type blocks, including 9ga. wire ties or similar type ties;
2. Continuity strip;
3. Inspection or testing;
4. Light gauge forms and temperature reinforcement when specified to be included in the structural steel documents (see Structural Steel Included);
5. Placing, placing accessories, tie wire and epoxy coated tie wire, inserts, post tensioning cables, accessories and supports;
6. Reinforcing steel used in drilled cast-in-place piles, dynamically cast-in-place piles and pipe piles;
7. Supply of caisson and pile dowels.
8. Dowel protection;
9. Hoisting equipment and Operators for off-loading;
10. Dowels welded to Pile Plates.

Sub-Section B: Installation of Reinforcing Steel

DEFINITIONS:

Installation shall mean providing labour only to facilitate the receiving, unloading, handling and storage of reinforcing steel material at the project site, including moving to final location, assembling, pre- assembling, installation, initial correction and adjustment.

Hoisting shall mean raising and lowering only of all reinforcing steel materials on site from delivery trucks, site storage areas and pre-assembly areas to another designated place at the work site. Hoisting includes equipment and operator but does not include labour or rigger.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Installation of mechanical and exothermic couplers, including machinery and labour to install;
2. Installation of reinforcing steel and welded wire fabric;
3. Supply and installation of accessories tie wire and epoxy coated tie wire;
4. Supply all materials required for temporary and/or permanent connection of the component parts of the reinforcing steel;
5. Supply and installation of support and spacer bars not specified nor specifically shown on the drawings;
6. "Touching Up" of epoxy coated reinforcing bars;
7. Tying reinforcing into cages for masonry where shown on drawings (see Masonry Excluded).
8. Post tension cables, accessories, supports and anchorage reinforcement;
9. Scaffolding/man lifts where required to perform work by this trade scope;
10. Trade specific lighting to perform tasks;
11. Trade cleanup - cleanup for work carried out by this trade;
12. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
13. Warranty and/or Guarantee;
14. Submittals and O&M documentation as specified in the tender documents;
15. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
16. Protection of other trades' work from damage when performing this trades scope of work;
17. Section 4: Commissioning as it applies to this trade scope;
18. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
19. Rigging equipment and labour for unloading and hoisting.

EXCLUDED:

1. Caisson and pile dowels;
2. Expansion sleeves, caps, wrapping, greasing and accessories;
3. Field welding;
4. Hoisting;
5. Inserts;
6. Lifting of mesh during pouring of concrete;
7. Chairing of mesh prior to pour;
8. Lines, templates and grades;
9. Placing bars and supply and placing of accessories to du-al or similar type blocks;
10. Reinforcing steel for masonry including dowels;
11. Tying reinforcing steel to water stops;
12. Scaffolding which supports concrete formwork.
13. Maintenance of Dowel protection after initial installation;
14. Drilling and grouting of Dowels;

15. Aerial work platform with Operator;
16. Fall protection anchor points.
17. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
18. Temporary heat, general lighting, power, sanitation and water for general construction;
19. Hoarding;
20. Final Cleanup before turnover;
21. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
22. Supply and maintenance of garbage and recycling bins for construction waste;
23. Removal of construction waste from job site;
24. General site security.

Section 9: Masonry

DEFINITION:

This tender shall be for the supply and installation of Brick, Tile, Stone and Concrete Block Construction.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Anchors & ties;
2. Brick, units as specified in the tender documents;
3. Building air barrier and insulation used behind masonry facing;
4. Building-in of miscellaneous metals (supplied by others) in masonry;
5. Built-in metal flashing - supplied by others;
6. Caulking (other than firestopping),
 - (a) Masonry to masonry and;
 - (b) Caulking of joints in masonry or masonry to other materials, including caulking where it forms part of the expansion or control joint, where masonry is the last work to be installed;
7. Cavity wall flexible sheet membrane, behind masonry, which forms part of the building air barrier or vapour barrier and where masonry is the last component to be installed, including connection to work of preceding trade where required. If connection is required by any trade following the masonry installation then the masonry contractor provides a minimum of 200 mm, unless otherwise specified, of overlap material beyond the exterior point of the masonry system;
8. Cavity wall insulation complete with adhesives, anchors, etc., behind masonry, where masonry is the last component to be installed;
9. Clay flue lining;
10. Clay tiles;
11. Cleaning of masonry;
12. Clear waterproofing of exterior masonry only (waterproofing is all clear finishes to masonry not included under Special Wall Coatings Scope) (see Painting, Excluded);
13. Concrete and grout fill in masonry only;
14. Concrete blocks, glued blocks and glass blocks;
15. Cutting required for other trades in new work only;
16. Damp proof course in masonry;
17. Demolition of existing masonry when the materials are to be re-used or retained as specified;
18. Hoisting;
19. Samples as specified in the tender documents;
20. Installation only of precast concrete band courses, copings, sills and heads which fall within masonry cladding, including supply and installation of insulation and vapour barrier behind these items;
21. Loose fill or foam insulation in masonry;
22. Masonry laid with mortar containing bonding agents regardless of being pre-laid or otherwise;
23. Mortar;
24. Non-rigid and fabric flashing when built into masonry;
25. Parging of cavity masonry walls only when specified;
26. Reinforcing steel placed only in masonry - supplied by others to the job site, clearly tagged and identified as to end use;
27. Stone (natural and artificial), granite, terracotta facing over 50 mm, including anchorages;
28. Testing of material of this trade where specifically called for in the masonry specifications;
29. Weep holes and venting devices;
30. Wire reinforcing to mortar joints;
31. Scaffolding/man lifts where required to perform work by this trade scope;
32. Trade specific lighting to perform tasks;
33. Trade cleanup - cleanup for work carried out by this trade;
34. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.

35. Warranty and/or Guarantee;
36. Submittals and O&M documentation as specified in the tender documents;
37. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
38. Protection of other trades' work from damage when performing this trades scope of work;
39. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Anchor slot;
2. Demolition, (see Included above);
3. Dual blocks;
4. Fabrication and tying of reinforcing steel (see Reinforcing Steel – Placement, Included);
5. Installation of frames;
6. Permanent lateral support devices on top of masonry walls;
7. Temporary heat for mortar shack;
8. Temporary support and shoring for lintels;
9. Welding;
10. Inspection.
11. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
12. Temporary heat, general lighting, power, sanitation and water for general construction;
13. Hoarding;
14. Final Cleanup before turnover;
15. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
16. Firestopping;
17. Supply and maintenance of garbage and recycling bins for construction waste;
18. Removal of construction waste from job site;
19. Temporary Wind-Bracing.
20. General site security.

Section 10: Structural Steel

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Anchors for structural steel;
2. Base plates and bearings for structural steel members;
3. Beams, purlins, girts forming part of the structural steel frame;
4. Bearing plates and angles for structural steel members for the support of steel deck;
5. Bins and hoppers of 6 mm plate or heavier, attached to the structural steel frame;
6. Bracing for steel members, trusses or frames;
7. Brackets attached to the structural steel;
8. Bridge bearings connected to the structural steel members;
9. Cables for permanent bracing or suspension systems;
10. Canopy framing if attached to the structural steel frame;
11. Cold formed channels and two (2) girts when used as structural members;
12. Columns;
13. Conveyor galleries and supporting bents (exclusive of conveyor stringers, deck plate and supporting posts which are normally part of the conveyor assembly);
14. Crane rails and stops, excluding unless otherwise noted final alignment of the rails;
15. Curb angles and plates attached to the structural steel frame if shown on the structural steel drawings;
16. Diaphragms for bridges;
17. Deck support angles at columns, walls, if shown on the structural steel drawings;
18. Door frame supports attached to the structural steel frame;
19. Embedded items connecting structural steel;
20. Expansion joints connected to the structural steel frame (excluding expansion joints for bridges);
21. Field bolts to connect structural steel components;
22. Floor plates, roof plates (raised pattern or plain) and steel grating connected to the structural steel frame;
23. Girders;
24. Grillage beams of structural steel;
25. Hangers supporting structural steel framing;
26. Jacking girders;
27. Lintels if attached to steel frame and shown on the structural drawings;
28. Mechanical roof support and floor opening framing shown on structural drawings;
29. Monorail beams of standard structural steel shapes;
30. Open-web steel joists, including anchors, bridging, headers and trimmers; also, when specified-to be included in the structural steel contract documents, light-gauge forms and temperature reinforcement;
31. Sash angles attached to the structural steel frame. See Reinforcing Steel Excluded;
32. Separators, angles, tees, clips and other detail fittings essential to the structural steel frame;
33. Shear connectors/studs, except when installed through sheet steel deck by deck installer;
34. Shelf angles attached to the structural steel frame if shown on structural drawings;
35. Shop fasteners or welds, and fasteners required to assemble parts for shipment;
36. Steel tubes or cores for composite columns;
37. Steel window sills attached to the structural steel frame;
38. Struts;
39. Suspended ceiling supports of structural steel shapes at least 75 mm in depth;
40. Temporary components to facilitate transportation to the site;
41. Tie, hanger and sag rods forming part of the structural steel frame;
42. Trusses;
43. Steel stairs, walkways, ladders and handrails forming part of the structural steelwork. Only if shown on the structural drawings and specifically noted by the structural engineer to be supplied by the structural fabricator;

44. Field Connection Materials:
 - a. When the fabricator erects the structural steel, he shall supply all material required for temporary and for permanent connection of the component parts of the structural steel.
 - b. When the erection of the structural steel is not part of the fabricator's contract, unless otherwise specified, the fabricator shall furnish appropriate bolts and nuts (plus washers, if required) or special fasteners, of suitable size and in sufficient quantity for all field connections of steel to steel which are specified to be thus permanently connected, plus an over-allowance of two per cent of each size to cover waste.
 - c. Unless otherwise specified in the tender documents, welding electrodes, back-up bars, temporary shims, levelling plates, fitting-up bolts and drift pins required for the structural steel shall not be furnished by the fabricator when the erection of the structural steel is not part of the fabricator's contract.
45. Unloading and hoisting;
46. Inspection when specified in the tender documents;
47. Hoarding when required for special welding procedures.
48. Scaffolding/man lifts where required to perform work by this trade scope;
49. Trade specific lighting to perform tasks;
50. Trade cleanup - cleanup for work carried out by this trade;
51. Warranty and/or Guarantee;
52. Submittals and O&M documentation as specified in the tender documents;
53. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
54. Protection of other trades' work from damage when performing this trades scope of work;
55. Section 4: Commissioning as it applies to this trade scope;
56. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
57. Priming, where specified;
58. Prepare steel finish to receive special coatings, where specified;

EXCLUDED:

1. Loose bolts other than for fastening items of structural steel;
2. Placing of embedded items;
3. Steel deck regardless of specification;
4. Supply and installation of grouting;
5. Supply and/or installation of shear connectors which penetrate steel deck;
6. V-rib pans;
7. Inspection – when not specified in the tender documents.
8. Bins and hoppers not covered in Section 10: Structural Steel Inclusions;
9. Bridge bearings not connected to structural steel items;
10. Catch basin frames;
11. Concrete for filling HSS columns. Concrete is to be supplied and poured in columns by others;
12. Connection material for other trades (e.g. precast concrete);
13. Conveyor stringers, deck plate and supporting posts;
14. Drain pipes;
15. Drilling of holes into masonry or concrete, including core drilling of anchor rods for bridges and drilling for deck support angles;
16. Edge forming less than 3.2mm thick for steel deck;
17. Grout;
18. Hoppers and chutes;
19. Lag bolts, machine bolts and shields or inserts for attaching shelf angles, trimmer angles and channels to masonry, or concrete;
20. Machine bases, rollers and pulleys;
21. Metal-clad doors and frames;
22. Miscellaneous Steel;

23. Shear connectors through sheet steel deck, by Section 22: Metal Deck;
24. Sheet steel cladding;
25. Sheet steel deck, by Section 22: Metal Deck;
26. Sheet steel flashing;
27. Shoring under composite floors and stub girders;
28. Steel doors;
29. Steel sash;
30. Steel stacks;
31. Steel tanks and pressure vessels;
32. Temporary bracing for other trades.
33. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
34. Temporary heat, general lighting, power, sanitation and water for general construction;
35. Hoarding;
36. Final Cleanup before turnover;
37. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
38. Firestopping;
39. Supply and maintenance of garbage and recycling bins for construction waste;
40. Removal of construction waste from job site;
41. General site security.

Section 11: Miscellaneous Steel – Supply and Installation

Definitions:

Installation shall mean providing labour only to facilitate the receiving, unloading, handling and storage of miscellaneous steel material at the project site, including moving to final location, assembling, pre- assembling, installation, initial correction and adjustment.

Hoisting shall mean raising and lowering only of all miscellaneous steel materials on site from delivery trucks, site storage areas and pre-assembly areas to another designated place at the work site. Hoisting includes equipment and operator but does not include labour or rigger.

Unless otherwise specified in the tender documents, the following items are considered miscellaneous steel and shall be supplied, fabricated, shipped to site and installed under this section.

When the miscellaneous steel fabricator erects miscellaneous steel, all material required for temporary and/or permanent connections of the component parts of the miscellaneous steel shall be supplied by that contractor.

A. Miscellaneous Steel Supply Only

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Access doors and frames — except trade-name items and those required for servicing mechanical and electrical equipment;
2. Angles and channel frames for doors and wall openings — drilling and tapping to be specified as being done by others;
3. Benches and brackets;
4. Bolts — only include those bolts and anchors required for anchoring miscellaneous steel supplied under this list;
5. Bumper posts and rails;
6. Burglar/security bars;
7. Clothes line poles, custom fabricated types only;
8. Coat rods, custom fabricated types only;
9. Corner protection angles;
10. Expansion joint angles, plates custom fabricated, etc., including types made from steel, or a combination of steel and non-ferrous metal;
11. Fabricated convector frames and enclosures;
12. Fabricated items where clearly detailed or specified and made from 2.0 mm (14ga.) and heavier steel, except where included in another division;
13. Fabricated steel framing for curtain walls, storefronts and soffits where shown on architectural drawings, not detailed on structural drawings and not enclosed by architectural metal;
14. Fabricated wire mesh and expanded metal partitions and screens;
15. Fire escapes;
16. Flag poles — steel custom fabricated. (Excluding hardware);
17. Custom fabricated foot scrapers, mud and foot grilles, including pans, but less chains;
18. Frames, grating and plate covers for manholes, catch basins, sumps, trenches, hatches, pits, etc., except cast iron, frames and covers;
19. Gates, grilles, grillwork and architectural louvers, excluding baked enamel or when forming part of mechanical system;

20. Grating type floors and catwalks — excluding those forming part of active mechanical system;
21. Handrails, balusters and any metal brackets attached to steel rail including plastic cover, excluding steel handrails forming part of structural steel framing;
22. Joist hangers, custom fabricated types only as specified on tender drawings;
23. Joist strap anchors;
24. Lintels, unless shown on structural drawings;
25. Mat recess frames, custom fabricated types only;
26. Mobile chalk and tack board frames, custom fabricated types only;
27. Monorail beams of standard shapes, excluding trade name items, unless shown on structural drawings;
28. Shop drawings and/or erection diagrams.
29. Shop preparation and/or priming;
30. Sleeves if specified, except for mechanical and electrical division;
31. Steel ladders and ladder rungs not forming part of structural steel or mechanical work;
32. Steel stairs and landings not forming part of structural steel;
33. Steel hangers for the support of stair midlandings or stringers;
34. Table and counter legs, frames and brackets, custom fabricated types only;
35. Thresholds and sills, custom fabricated types only;
36. Vanity and valance brackets, custom fabricated types only;
37. Steel fill plates - steel.
38. Bins and hoppers not included in Structural Steel, see Structural Steel Included;
39. Canopy framing not attached to structural steel;
40. Door and corner guards;
41. Overhead Door frames not covered in Section 10: Structural Steel Included;
42. Edge forming less than 3.2 mm thick for steel deck and not covered in Section 21: Metal Deck;
43. Embedded steel parts not required for structural steel or deck;
44. Flagpoles and supports;
45. Floor plates, roof plates and grating not covered in Section 10: Structural Steel Included;
46. Hose and tire storage brackets;
47. Lintels over wall recesses;
48. Lintels which are either an integral part of door frames or not attached to the structural steel frame;
49. Members made from gauge material except cold-formed channels indicated in Section 10: Structural Steel Inclusions;
50. Shelf angles not covered in Section 10: Structural Steel Inclusions;
51. Steel stairs, landings, walkways, ladders and handrails;
52. Steel window sills not covered in Section 10: Structural Steel Inclusions;
53. Support for sheet steel deck at column cut outs and for openings not requiring framing connected to structural steel;
54. Trench covers;
55. Trim angles, eave angles or fascia plates not directly attached to the structural steel frame;
56. Warranty and/or Guarantee;
57. Submittals and O&M documentation as specified in the tender documents;
58. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
59. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Bases and supports for mechanical and electrical equipment where detailed on mechanical or electrical drawings;
2. Bolts other than for anchoring items of miscellaneous steel;
3. Cast iron frames and covers for manhole and catch basins;
4. Chain link and woven wire mesh;
5. Glulam connections and anchorages;
6. Joist hangers, trade-name type;
7. Metal cladding and covering, less than 2.0 mm (14ga.);

8. Precast concrete connections and anchorages in building structure. Reinforcing steel or mesh;
9. Roof and floor hatches when trade-name items;
10. Sheet metal items, steel decking and siding and their attachments, closures, etc., less than 2.0 mm (14ga.);
11. Shoring under composite floors and stub-girders;
12. Steel stacks;
13. Steel reinforcement for architectural metal storefronts, curtain walls and windows;
14. Stud shear connectors when used with steel deck. Stone anchors;
16. Thimbles and breeching, also mechanical fire dampers;
17. Window and area wells;
18. Bins and hoppers constructed of steel less than 2.0 mm (14ga.).
19. Drilling and tapping for angles and channel frames for doors and wall openings (See Included).

B. Miscellaneous Steel Installation Only

This contractor shall include and exclude the following items regardless of where they may appear in the Architectural or Structural documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Unloading and Hoisting;
2. Inspection;
3. Installation of stairs, handrails, wall rails which require field welding for installation and other steel items which require field welding for installation;
4. Supply of all materials and equipment required for temporary and/or permanent connection of the component parts of the miscellaneous steel;
5. Welding to install or join together supplied items which require field welding or assembly or would be unreasonable to be shipped in one piece for others to install;
6. Scaffolding/man lifts where required to perform work by this trade scope;
7. Trade specific lighting to perform tasks;
8. Trade cleanup - cleanup for work carried out by this trade;
9. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
10. Warranty and/or Guarantee;
11. Protection of other trades' work from damage when performing this trades scope of work;

EXCLUDED:

1. Coring and grouting;
2. Placing of embedded items;
3. Steel deck regardless of specifications;
4. Any items which do not require field welding for installation.
5. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
6. Temporary heat, general lighting, power, sanitation and water for general construction;
7. Hoarding;
8. Final Cleanup before turnover;
9. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
10. Firestopping;
11. Supply and maintenance of garbage and recycling bins for construction waste;
12. Removal of construction waste from job site;
13. General site security.

Section 12: Architectural Woodwork - Supply

DEFINITION:

This tender shall be for the supply of architectural woodwork, in a finished state, freight to site, built-up or knocked-down depending on job conditions.

Finished state means surfaces are to be sanded, dusted, cleaned and marks, stains and spots removed, ready for receipt of any specified undercoat and finish coat, or where specified to be shop applied finished, with the finish already applied, or constructed from a prefinished material (standing and running trim or site constructed millwork not included). In addition to above, when finish is specified to be shop applied then this contractor shall also fill nail holes.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

EXTERIOR:

1. Clear wood preservative where specified;
2. Exterior moulding, fascia, and trim from clear "D and Better, first and seconds" material. Random length-only;
3. Glass and plastic glazing including sealed units and removable double glazing panels installed where it occurs in architectural woodwork. Factory or site installation at architectural woodwork contractor's option;
4. Ornamental wood columns, posts, brackets, (including half timbering), if specified of clear kiln dried "D and Better, first and seconds" material;
6. Plywood (including overlay faced type) where detailed with solid wood edging. Supplied in 2400 mm lengths, unless otherwise specified;
7. Wood doors, including plastic laminate or fibreboard faced-doors and cores for metal clad one side (metal cladding, fitting or machining for hardware not included). Exterior wood patio sliding doors with hardware;
8. Wood Screens or shutters, wood vents, louvres or sun baffles, wood seats, benches or planters, if specified of clear kiln dried "D and Better, first and seconds" material. (No metal parts included other than implanted rods in seats and benches);
9. Wood stairs (stringers long and knocked-down), handrails, railings and balustrades (not cut to length) if specified of clear kiln dried "D and Better" material;
10. Custom designed wood window frames and sash, door frames complete with wood trim including wood, fibreboard panels and insulation to same. Wood sash to be factory fitted, including supply and installation of workable sash hardware, weather stripping and flyscreens to same;
11. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

INTERIOR:

12. Computer keyboard trays and CPU holders whether factory fabricated or trade name;
13. Custom built wood and/or plastic laminate or plastic laminate covered push and pull bars and guard rails to both wood and metal doors and frames (no metal fastening devices);
14. Glass and plastic glazing and fibreboard supplied and installed where it is completely surrounded by architectural woodwork and in wood doors, including sealed units and/or removable glazing panels;
15. Hardwood plywood, (unfinished, or brand name pre-finished if specified) for all wall or ceiling panelling (no backing material);
16. Interior wood trim to metal or trade name windows as, and if, detailed on drawings;
17. Mirrors where installed in wood frames;
18. Openings cut out, wood mouldings and glass supplied and fitted in wood doors (does not include metal glazing stops unless specified);
19. Openings cut out and wood mouldings supplied and fitted for metal grilles in wood doors (does not include

- metal grilles or installation of same);
20. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
 21. Plastic laminate and fibreboard base and kick plates to architectural woodwork. (Supplied only, no screws or material for attaching);
 22. Plastic laminate wall rails and window stools when applied to wood substrate. Plastic laminate coverings to walls, ceilings and metal doors (strapping, backing, glue, and installations not included). Plastic laminate panelling complete with wood substrate where specifically called for "factory fabricated" (see Excluded);
 23. Pressure treated fireproofing of architectural woodwork items where specified. Does not include sanding after treatment;
 24. Factory applied finishes to architectural woodwork, when specified, excluding site touch-up. Matching materials to be provided by this trade to others for site touch-up;
 25. Toilet and shower partitions of wood and plastic laminate covered, complete with hardware;
 26. Venetian blinds between the glass in wood frames or sash if wood frames are supplied by the architectural millwork supplier;
 27. Wood and plastic faced cabinets, complete with wood bases and splashback, tables, benches (items constructed from dimensional lumber not specified of clear kiln dried "D and Better" material regardless of location-not included), pews, seats, desks, shelving, convector covers of wood and plastic laminate attached to architectural woodwork. **NOTE:** The following hardware to architectural woodwork (casework only) whether specified under Cash Allowance or not is included in this tender: drawer slides and shelf standards (factory installed), clips (supplied only), lazy susans (factory installed); workable cabinet hardware, limited to hinges, catches, pulls, locks, casters, sliding door tracks, sheaves or glides (supplied and factory installed). Jobsite adjusting of hardware is not included;
 28. Wood boards, interior siding, battens and mouldings where exposed to view for decorative and display purposes (any grade);
 29. Wood display cases supplied only as architectural woodwork factory fabricated fixture including glass, standards, brackets and sliding track. Interior lining other than wood and plastic laminate material not included. **NOTE:** To jobsite built showcases; plastic laminate, hardwood and wood trim only supplied loose for jobsite fitting;
 30. Wood doors, bifold doors (only brand name wood bifold doors will be supplied with the required hardware the manufacturer includes with the doors), plastic laminate, overlay plywood or fibreboard faced, mineral core, sound rated doors c/w seals when specified, lead lined doors and cores for metal clad one side. (Hardware for doors, bevelling, fitting or machining for hardware or other specialty doors not included);
 31. Wood eggcrate ceiling panels or other types of wood diffusers where supplied separately from lighting fixtures for luminous ceilings and valance and cove lighting (see Electrical Excluded);
 32. Wood frames, borrowed light frames, and wood sash complete with workable hardware;
 33. Wood ironing boards in wood cabinets (including workable hardware);
 34. Wood lockers;
 35. Wood or wood composite mouldings, rails, random lengths unless otherwise specified (no end trimming or factory assembling);
 36. Wood, plastic laminate, fibreboard, polymer, plastic and synthetic marble counter tops, including splashback, aluminium moulding for same, or self-edge, (no jobsite labour). Wood counter tops for metal cladding (no cladding). (Does not include glue for jobsite installation);
 37. Wood, plastic, or wood-and-metal tote drawers or trays in architectural woodwork cabinets including metal or wood slides;
 38. Wood shelves for metal standards or metal frames where detailed (no metal framing, standards, or brackets);
 39. Wood stairs (knocked-down with stringers long), wood balustrades and handrails (not cut to length), wood plugs included;
 40. Wood or wood composite trim for notice or bulletin boards;
 41. Wood or wood composite valances, including plastic laminate faced, plywood or overlay plywood type, solid wood or plastic laminate, (not including blocking unless specified as clear material).
 42. Warranty and/or Guarantee;
 43. Submittals and O&M documentation as specified in the tender documents;
 44. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Caulking whatsoever or door weather-stripping;
2. Chalkboard, whiteboard, tackboard or corkboard of any kind;
3. Cleaning of glass or plastic (other than confined areas);
4. Cloth, burlap, or vinyl fabric of any kind;
5. Coat rods or coat hooks or supports for coat rods/hooks of any material except wood;
6. Counter balanced hardware to interior pass through doors;
7. Counter tops with integral sink or basin, including counter tops, splash-backs and fascia of the same material connected thereto (see Mechanical Sub-Section B Included);
8. Cutting of holes for metal grilles, grommets, sinks, specialty items, or electrical and mechanical fittings into architectural woodwork fixtures;
9. Decking or sheathing to walls, ceilings, floors;
10. Door cores, frames, or trim for metal cladding;
11. Exterior plywood other than edged plywood;
12. Exterior wall facing, siding, fascia siding, or soffit materials other than trim and edged plywood, items constructed from dimensional lumber not specified of clear kiln dried "D and Better" material regardless of location;
13. Fence and sidewalk material;
14. Glass blocks;
15. Glue or adhesive for jobsite installation;
16. Hardware or installation or machining for same, except to sash and cabinets;
17. Items or materials not constructed entirely of wood or composite materials containing wood fiber other than those listed as included;
18. Jobsite assembly and/or installation and/or fitting of architectural woodwork;
19. Linoleum, carpet, tile or any other floor covering material for covering of wood fixtures, cabinets or stairs, or metal trim for same;
20. Machining, bevelling or fitting of doors to receive hardware, (except fire rated doors);
21. Materials for floor covering of any kind;
22. Materials for interior coverings to walls, beams, ceilings and posts (except siding solid wood boards and battens and hardwood plywood and plastic laminate panels);
23. Metal astragal (unless forming an integral part of fire labelled wood doors);
24. Metal clad wood doors, frames, panels, or glazing of same;
25. Metal covering of doors, frames, windows, counter tops, and splashback;
26. Metal feet, metal legs, decorative legs and leveling feet and brackets made of non-wood products, or pipe hanging rods;
27. Metal fixtures and counter-tops or wood bases to same;
28. Metal inserts into doors and other architectural woodwork; metal frames to cabinets, tables and benches; metal casing, base or other metal trims; metal fastening brackets;
29. Metal lining or metal sash for fume cabinets, drawers, or bins. Metal drawers or metal inserts to cabinets (i.e. metal file card holders, etc.);
30. Metal louvres, grilles, kick-plates or thresholds;
31. Metal sash, frames, doors, corner posts, glass or glazing, or panels of any kind for same;
32. Metal screens, shades, blinds, or guards, except flyscreens to sash;
33. Mirrors in metal frames, or attached with rosettes or clips;
34. Overhead garage-type doors, or glass and hardware for same (wood frames and trim supplied knocked-down where detailed and specified as "D and Better" clear material);
35. Painting, priming, acid-proofing, staining, oiling, preservative treatment, or fireproofing other than pressure treating;
36. Plastic skylights or domes;
37. Providing space for painting contractor or others for any painting or priming of exterior or interior architectural woodwork (clear-dip preservative done by architectural woodwork when specified).
38. Re-additions and/or renovations to existing buildings: no material will be supplied for patching, repairing, extending or replacing existing work unless clearly specified and detailed;
39. Re-supply of glass, plastic, or plastic laminate, broken or damaged on the job after delivery in good order;
40. Sanding of standing and running trim other than drum sanding of flats;

41. Site measurements;
42. Specialty folding or sliding doors of fabric, wood and/or metal (wood bifold doors, wood frames and trim where specified and detailed to be supplied), except exterior wood sliding patio doors;
43. Stair landings of any kind, structural or support material for same;
44. Structural framing material, rough bucks, cant strips, furring strips, blocking or backing;
45. Trade-name toilet and shower partitions;
46. Trade-name cooler or freezer doors;
47. Trade-name furniture, cabinet work, or counter tops and wood bases to same;
48. Trellis screening, pagodas and pergolas;
49. Upholstery work;
50. Wall mounted shelf standards, or clips and brackets to same;
51. Wood, fibreboard or plastic letters;
52. Wood and/or plastic laminated rails when they are an integral part of Entrances, Storefronts and Windows or Curtainwall;
53. Wood bumpers to exterior or loading bays (except clear material "D or Better" where specified);
54. Wood frames, outside trim to same, for vinyl, plastic and metal covered windows, except where combined in mullion, or transom frames with custom wood windows and/or glazing in wood;
55. Wall protection of plastic or non-wood materials.

Section 13: Architectural Woodwork – Installation

This tender shall be for the installation of all Interior items delivered freight to site under the Architectural Woodwork Supply Scope and all other items from the following list which are clearly indicated to be required by the plans and specifications.

Installation shall mean receiving, unloading, handling, uncrating and storage of Architectural Woodwork at the project site, including moving to final location, assembling, installation, correction and adjustment.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Caulking;
2. Cut outs for grommets, electrical and mechanical fixtures incorporated in Architectural Woodwork;
3. Demolition of existing installations when the materials are to be re-used or retained as specified (when specifications call for refinishing of existing installation, this contractor shall remove the items so specified and deliver to factory for refinishing);
4. Unloading and hoisting;
5. Installation of closet rods and coat hooks where attached to Architectural Woodwork (closet rods and coat hooks supplied by others);
6. Installation of metal grilles to Architectural Woodwork (see Mechanical Sub-Section C Included);
7. Installation of wall mounted standards and brackets (supply by others);
8. Installation of wood siding and panelling to interior walls and ceilings;
9. Machining, bevelling or fitting for door hardware and the installation of the door hardware. Door hardware to be supplied by others;
10. Cash Allowance and/or contingency funds when a specific dollar amount is listed in Division 01 or this trade's specification section;
11. Scaffolding;
12. Physical measurements of dimensions required from the project site;
13. Trade cleanup - cleanup for work carried out by this trade;
14. Supply of nails, screws, glue, caulking and fasteners required to install Architectural Woodwork;
15. Testing where specifically required by the specifications;
16. Trade clean up;
17. Wood ceiling (except those which are part of suspended ceiling system) and wood light boxes;
18. Wood stops to glazed screens finish nailed on one side, other side tacked only;
19. All architectural millwork supplied with a factory finish shall have the fastening holes filled and touched up by the installer;
20. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
21. Section 4: Commissioning as it applies to this trade scope;
22. Mark out backing in walls as required for all equipment provided by this scope;
23. Protection of other trades work from damage when performing this trades scope of work;

EXCLUDED:

1. Architectural Woodwork excluded under supply scope unless otherwise noted under Included in this scope;
2. Architectural Woodwork included under supply scope EXTERIOR, see Included;
3. Firestopping;
4. Hoarding;
5. Installation of metal doors and metal door frames;
6. Rough bucks and nailing strips concealed behind drywall;
7. Temporary heat, light, power and sanitation and water;
8. Filling of nail holes on site installed woodwork. (See Section 36 Painting Included)

9. Final Cleanup before turnover;
10. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
11. Supply and maintenance of garbage and recycling bins for construction waste;
12. Removal of construction waste from job site;
13. General site security.

Section 14: Architectural (finishing) Hardware – SUPPLY ONLY

This contractor shall include the supply only of the following items, regardless of where they may appear in the Tender Documents, unless specifically noted otherwise in this Scope. Architectural hardware supplied is to be included as they relate to:

- Wood doors and frames
- Hollow metal doors and frames
- Aluminum door and frames
- Detention doors and frames

INCLUDED:

1. Butts, Pivots, Hinges, Floor Hinges, Spring Hinges (Double and single acting).
2. Locksets, Latch Sets, Privacy Sets and Exit Devices complete with Standard or Electric Strikes, Deadlocks and Padlocks. Cylinders for all Master keyed items.
3. Electrified Locksets, Throw Bolts, Hinges, Exit Devices, and Magnetic Locks.
4. Push and Pull Plates, Push and Pull Bars.
5. Kick Plates, Armour, Mop and Stretcher (except hardboard and as described in Excluded).
6. Closing Devices, including Surface, Concealed, Overhead and Floor Type, complete with all required brackets to ensure proper and complete installation.
7. Stops, Holders and Bumpers, including the following types: Overhead, Surfaces and Concealed, Wall and Floor Mounted, Crash Chain Stops.
8. Handrail Brackets (Name brand only).
9. Weather-stripping, Sound Proofing and Threshold
 - a. Threshold – Aluminum, Brass or Bronze
 - b. Weather-stripping for Head, Jamb, Meeting Stile and Door Bottom
 - c. Automatic Door Bottoms.
10. Fire Safety Devices (these components must be compatible with the main fire safety system as provided under the electrical scope). These devices are attached to (or concealed in) the door or/and frame and are part of the door control system.
11. Door Silencers – Rubber Mutes.
12. Door Bolts – Manual and automatic, including Flush, Surface, Cane, Cremona, Barrel, Chain and Slide.
13. Co-ordinators.
14. Mullion – Removable Type (Trade Name).
15. Door Viewers.
16. Letter Box Plates.
17. Keys, Key Blanks and Key Control Cabinets.
18. Chain Door Guards.
19. Exit Alarms, Battery Operated.
20. Pocket Door Hardware, including Frame, Track and Hangers.
21. Electrically assisted or operated closers.
22. All hardware for doors in demountable partitions.
23. Card readers, proximity readers, door position switches including all components required for a complete and working access control system.
24. Push button access controls.
25. Key switches relating to electrified door hardware.
26. Security bars (name brand only.).
27. Uninterrupted power supply – battery backup only for hardware supplied in the Hardware trade definition.
28. Warranty and/or Guarantee;
29. Submittals and O&M documentation as specified in the tender documents;
30. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
31. Hardware templates;
32. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
33. Section 4: Commissioning as it applies to this trade scope.

EXCLUDED:

1. Installation of all hardware (except auto openers/closers as described in Included);
2. Electrical Hook-up or connection of Alarms, Locks, Magnets, Strikes, Detectors or Magnetic Holders and Door Closers;
3. Custom-made handrail Brackets, Kick, Push and Pull Plates and Bars, Thresholds or Sills;
4. Window Hardware;
5. Hardboard, Plastic Laminate, PVC Kick plates and Push plates when they are to match the Wall Protection that is specified;
6. Cabinet Hardware;
7. Wood Locker Hardware;
8. Overhead Door Hardware;
9. Bi-fold Door and Hardware Package;
10. Sliding Door and Hardware Package;
11. Folding Door and Hardware Package;
12. Aluminum Sliding and Automatic Door Hardware;
13. Aluminum Door Hardware;
14. Metal Toilet Partition Hardware;
15. Smoke and ionization detectors (Wall or Ceiling Mounted) that are not part of the door closer/holder unit;
16. Mail Chutes or Holding Units;
17. Surface mounted wood or plastic laminated push-pull or guard bars for aluminum, wood or metal doors or sidelites;
18. Door signs, nameplates or numbers;
19. Weld-on hinges supplied complete with steel drywall frame;
20. Supply of all wire for electronic hardware;
21. Fastening devices used to install millwork to walls or floors;
22. Cutting of tactile cues to handrail, unless dimensions are provided by the General Contractor in a timely fashion;
23. Metal handrail brackets;
24. Offload of hardware at site;
25. Unless otherwise noted in the tender documents finishing hardware is to be installed by the General Contractor.

Section 15: Access Control Systems - Supply & Installation

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

Access Control systems shall be included as they relate to:

- Wood Doors and Frames
- Hollow Doors and Frames
- Aluminum Doors and Frames
- Demountable Partitions

INCLUDED:

1. Keypads;
2. Card Readers;
3. Biometric Readers;
4. Request to exit devices (motion sensor, push button, or other device) unless directed otherwise in the tender documents;
5. Door Position Switches;
6. Door Controllers;
7. Main Controllers;
8. Wireless Controllers;
9. Credentials (ID cards, fobs, etc.);
10. Programmers and Update Devices;
11. Setup of System;
12. Training of End User.
13. Door security and/or monitoring systems including remote devices, card access readers, annunciators, central processing unit, etc., as required by the system including wiring. Components of a trade name door security and/or monitoring system which is specified to be supplied by one supplier and which must be door and/or door frame mounted shall be supplied by the electrical contractor for installation by the door and/or frame supplier, otherwise, all door and/or door frame mounted components shall be supplied and installed by others; wiring for these components shall be by the electrical contractor in either case;
14. Scaffolding/man lifts where required to perform work by this trade scope;
15. Trade specific lighting to perform tasks;
16. Trade cleanup - cleanup for work carried out by this trade;
17. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
18. Warranty and/or Guarantee;
19. Submittals and O&M documentation as specified in the tender documents;
20. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
21. Protection of other trades' work from damage when performing this trades scope of work;
22. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
23. Section 4: Commissioning as it applies to this trade scope.

EXCLUDED:

1. Cameras, unless directed otherwise in the tender documents;
2. Modifications needed to mount equipment and pedestals, rails and other surfaces.
3. Security, unless directed otherwise in the tender documents;
4. Network Patch Panels, Networking Wiring and Network or Computer Setup;
6. Installation of wiring and/or conduit;
7. Architectural Hardware (unless directed otherwise in the tender documents);
8. Mounting of Power Supplies and other devices requiring 120 VAC.
9. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;

10. Temporary heat, general lighting, power, sanitation and water for general construction;
11. Door wiring for overhead and automatic doors - electrical supply hook up, interconnecting wiring, conduit and boxes. Control devices by others. (See Section 47 Electrical Included)
12. Hoarding;
13. Final Cleanup before turnover;
14. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
15. Firestopping;
16. Supply and maintenance of garbage and recycling bins for construction waste;
17. Removal of construction waste from job site;
18. General site security.

Section 16: Architectural Metal Panels

Definition: This tender shall be for the supply and installation of Architectural Metal Panels. The surface is flat faced or custom curved. The metal panels shall be formed from aluminium, steel, galvanized steel or galvalume, stainless steel, copper or other metals. The finish or coating is shop applied, pre-painted, anodized or porcelain enamel.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

INCLUDED:

1. Architectural Metal Panels formed from aluminium or steel or other metals, with either a shop applied, pre-painted, anodized or porcelain enamel, finish/coating;
2. Aluminium composite panel systems;
3. Factory insulated metal building panels;
4. Related caulking, flashing and fasteners incorporated into the system;
5. Clips and sub-girts;
6. Plywood or gypsum board when forming part of the panel system (i.e. Laminated);
7. Related insulation, adhesives, vapour barriers and air barriers;
8. Flexible sheet membrane which forms part of the building air barrier directly behind the Architectural Panel System including connection to work of preceding trade where required. If connection is required by any trade following the metal panel installation then the metal panel contractor provides a maximum 200 mm, unless otherwise specified, of overlap material beyond the exterior point of the Architectural Metal Panel System;
9. Manufacturer's warranty only beyond the normal one year maintenance warranty;
10. Hoisting;
11. When any prefinished metal flashing of the Architectural Panel System is required by other trades that specifically matches the panel colour and gauge and is not duplicated by the supply of the prefinished flat sheets applicable to preformed metal wall and metal roofing, then it is to be supplied by this trade freight included to the contractors shop (see Excluded);
12. Supply and/or installation of materials and other work that may be assigned by pretender ruling.
13. Scaffolding/man lifts where required to perform work by this trade scope;
14. Trade specific lighting to perform tasks;
15. Trade cleanup - cleanup for work carried out by this trade;
16. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
17. Warranty and/or Guarantee;
18. Submittals and O&M documentation as specified in the tender documents;
19. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
20. Protection of other trades' work from damage when performing this trades scope of work;
22. Section 4: Commissioning as it applies to this subcontractor scope;
23. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Fabrication and/or installation of any flashing material not incorporated into Architectural Metal Panel System (i.e. Flat prefinished sheet material for built-up roofing contractor);
2. Extruded aluminium wall or soffit cladding;
3. Metal spandrel and infill panels incorporated into glazed systems;
4. Metal roofing and metal wall and soffit cladding;
5. Wood or metal components of the wall (unless incorporated in the panel system) used to construct parapets, pony walls, structural frames, etc.;

6. Factory pre-assembled translucent panels;
7. Insulation or vapour barrier behind structure which panel system is fastened to;
8. Backing and support for other trades;
9. Stainless steel items which do not form a part of the Architectural Metal Panels System.
10. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
11. Temporary heat, general lighting, power, sanitation and water for general construction;
12. Hoarding;
13. Final Cleanup before turnover;
14. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
15. Firestopping;
16. Supply and maintenance of garbage and recycling bins for construction waste;
17. Removal of construction waste from job site;
18. General site security.

Section 17A: Preformed Wall Cladding and Metal Soffit

This tender shall be for the supply and installation of preformed metal wall cladding and metal soffit.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Cladding roll formed from sheet steel (pre-painted, galvanized, galvalume finish), stainless or weathering steel, aluminum or other metals;
2. Liner panel of materials listed (item 1 above) forming part of a preformed metal wall and/or soffit cladding assembly;
3. Aluminum soffit, fascia, siding, gutter and downspouts;
4. Gutter and downspouts that form an integral part of the preformed metal wall and soffit cladding;
5. Related closures, caulking, flashings and fasteners incorporated into the system;
6. Internal sub-grits;
7. Related insulation, adhesives, vapour barriers and air barriers including other materials from the barriers to the finished metal surface;
8. Stationary louvers of matching materials (installed in cladding) including wire mesh or bird screens;
9. Translucent panels to match cladding profile;
10. Flexible sheet membrane which forms part of the building air barrier directly behind the metal cladding system including connection work of preceding trade where required. If connection is required by any trade following the metal cladding installation then the cladding contractor provides a minimum 200 mm, unless otherwise specified, of overlap material beyond the exterior point of the metal cladding system;
11. Manufacturer's warranty only beyond the normal one year maintenance warranty;
12. Hoisting;
13. When any pre-finished metal flashing of the cladding system is required by other trades that specifically matches in colour and gauge that specified for the metal wall cladding, then the pre-finished flat sheets are to be supplied by this trade freight included to the contractors shop (see Excluded), the supply of flashing material does not apply to this trade if duplicated under the metal roofing scope;
14. Supply and/or installation of materials and other work that may be assigned by pretender ruling;
15. Scaffolding/man lifts where required to perform work by this trade scope;
16. Trade specific lighting to perform tasks;
17. Trade cleanup - cleanup for work carried out by this trade;
18. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
19. Warranty and/or Guarantee;
20. Submittals and O&M documentation as specified in the tender documents;
21. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
22. Protection of other trades' work from damage when performing this trades scope of work;
23. Testing if specified;
24. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
25. Flashings for equipment openings as they pertain to wall penetrations.
26. Installation of flexible membranes around or onto window framing or openings.

EXCLUDED:

1. Metal deck;
2. Fabrication, installation of any flashing material not incorporated into metal cladding system (i.e. flat pre-finished material for built-up roofing contractor);
3. Wood or metal components of the wall (unless as incorporated in the preformed metal wall system) used to construct parapets, pony walls, structural frames, etc.;
4. Gypsum board and metal support for same;
5. Metal spandrel and infill panels incorporated into glazed systems;
6. Extruded aluminium wall cladding;
7. Metal roofing;
8. Insulation or vapour barrier behind structure which cladding system is fastened to;
9. Metal soffit and/or wall cladding if profile, gauge and colour is to match metal roofing;
10. Architectural Metal Panels;
11. Factory pre-assembled translucent panels;
12. Backing and supports for other trades;
13. Structural purlins and girts;
14. Metal linear ceiling profiles used as a wall ceiling or soffit, see Component Ceiling Systems Included;
15. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
16. Temporary heat, general lighting, power, sanitation and water for general construction;
17. Hoarding;
18. Final Cleanup before turnover;
19. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
20. Firestopping;
21. Supply and maintenance of garbage and recycling bins for construction waste;
22. Removal of construction waste from job site;
23. General site security.

Section 17B: Vinyl Siding, Metal Siding and Metal Soffit

This tender shall be for the supply and installation of vinyl and metal siding.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

INCLUDED:

1. Cladding roll formed from sheet steel (pre-painted, galvanized, galvalume finish), stainless or weathering steel, aluminum or other metals;
2. Liner panel of materials listed (item 1 above) forming part of a preformed metal wall and/or soffit cladding assembly;
3. Aluminum soffit, fascia, siding, gutter and downspouts;
4. Gutter and downspouts that form an integral part of the preformed metal or vinyl siding and soffit;
5. Related closures, caulking, flashings and fasteners incorporated into the system;
6. Internal sub-grits;
7. Related insulation, adhesives, vapour barriers and air barriers including other materials from the barriers to the finished metal surface;
8. Stationary louvers of matching materials (installed in cladding) including wire mesh or bird screens;
9. Flexible sheet membrane which forms part of the building air barrier directly behind the vinyl and metal siding including connection work of preceding trade where required. If connection is required by any trade following the vinyl and metal siding installation then the cladding contractor provides a minimum 200 mm, unless otherwise specified, of overlap material beyond the exterior point of the metal cladding system;
10. Manufacturer's warranty only beyond the normal one year maintenance warranty;
11. Hoisting;
12. When any pre-finished metal flashing of the cladding system is required by other trades that specifically matches in colour and gauge that specified for the vinyl and metal siding, then the pre-finished flat sheets are to be supplied by this trade freight included to the contractors shop (see Excluded), the supply of flashing material does not apply to this trade if duplicated under the metal roofing scope;
13. Supply and/or installation of materials and other work that may be assigned by pretender ruling.
14. Scaffolding/man lifts where required to perform work by this trade scope;
15. Trade specific lighting to perform tasks;
16. Trade cleanup - cleanup for work carried out by this trade;
17. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
18. Warranty and/or Guarantee;
19. Submittals and O&M documentation as specified in the tender documents;
20. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
21. Protection of other trades' work from damage when performing this trades scope of work;
24. Testing if specified;
25. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
26. Flashings for equipment openings as they pertain to wall penetrations.
27. Installation of flexible membranes around or onto window framing or openings.

EXCLUDED:

1. Metal deck;
2. Fabrication, installation of any flashing material not incorporated into vinyl and metal siding (i.e. flat pre-finished material for built-up roofing contractor);
3. Wood or metal components of the wall (unless as incorporated in the preformed metal wall system) used to construct parapets, pony walls, structural frames, etc.;
4. Gypsum board and metal support for same;
5. Metal spandrel and infill panels incorporated into glazed systems;
6. Extruded aluminum wall cladding;
7. Metal roofing;
8. Insulation or vapour barrier behind structure which cladding system is fastened to;
9. Metal soffit and/or wall cladding if profile, gauge and colour is to match metal roofing;
10. Architectural Metal Panels;
11. Factory pre-assembled translucent panels;
12. Backing and supports for other trades;
13. Structural purlins and girts;
14. Metal linear ceiling profiles, see Component Ceiling Systems.
15. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
16. Temporary heat, general lighting, power, sanitation and water for general construction;
17. Hoarding;
18. Final Cleanup before turnover;
19. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
20. Firestopping;
21. Supply and maintenance of garbage and recycling bins for construction waste;
22. Removal of construction waste from job site;
23. General site security.

Section 18: Roofing and Related Sheet Metal

DEFINITIONS

The roof is the weather proof covering on top of a roof deck structure that together with the walls forms a separator between the inside and outside environments of a building.

A roofing assembly generally consists of a membrane or primary roof covering designed to weather proof the roof deck structure and may incorporate thermal insulation, and a vapour retarder, to improve the building's thermal resistance.

A roofing system is an external assembly of interacting roofing components installed to complete the roof assembly above the roof deck structure and inner face and top of adjacent parapet walls.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Shop drawings for sloped insulation systems and roof accessories;
2. Protection of other trades work from damage by the roofing contractor;
3. Hoisting of roofing materials;
4. Demolition of the existing roofing system when it is to be immediately followed with the installation of a new roofing system;
5. Control joint covers including roof area dividers and expansion joints.
6. All types of membrane flashing when they form part of and are installed in conjunction with the roofing system;
7. Acoustical deck insulation when supplied by others in a pre-formed custom fit condition;
8. Thermally formed skylights, smoke and access hatches which incorporate a base frame in a single unit;
9. Supply and installation of roofing materials including:
 - a. Primary roof membrane systems;
 - b. Gypsum board when applied over a roof deck as part of the roofing system;
 - c. Auxiliary leveling surfaces, strapping and Z-bars;
 - d. Roof Air/Vapour barriers;
 - e. Preformed rigid roof insulation;
 - f. Cants manufactured from insulation;
 - g. Bitumen including hot and cold process asphalt, pitch and modified bitumen and roofing adhesives;
 - h. Aggregates for membrane protection and gravel ballast, including concrete pavers not exceeding a unit mass of 45kg (100 lbs.);
 - i. Bituminous emulsions;
 - j. Bituminous primers;
 - k. Roof walkways;
 - l. Caulking, sealants, sealing compounds, gaskets, backing rod and packing;
 - m. Coatings;
 - n. Reinforcing fabric and membranes;
 - o. Mechanical roof fasteners;
 - p. Protection mats, filter fabrics and separator sheets;
 - q. Steep-slope roofing materials, underlayments and flashings;
10. Flexible sheet membranes which form part of the building's air barrier or vapour retarders which are installed in a location that does not require another trade to construct components over the flexible sheet membrane. The roofing contractor will make connection to flexible sheet membranes install by other trades prior to the application of the roofing system, provided that a minimum of 200mm (8") of compatible membrane/material is accessible to complete the tie-in. Unless otherwise specified, the roofing contractor will provide a minimum 200mm (8") of overlapping material extending beyond the exterior point of the roofing system for any membrane connections required by any trade after installation of the roofing system.
11. Sheet Metal Flashing of all metal types forming part of the roofing system including:
 - a) Eaves troughing, downspouts and metal splash pans,
 - b) Gum cups/pots/boxes,
 - c) Parapet, curb and control joint flashing,

- d) Control joint covers
- e) Any prefinished metal flashing of the roofing system in stock and chosen from standard 8000 or 10,000 colour series in 22, 24 and 26 gauge metal;
- 12. One-hour fire watch. Re: hot-work.
- 13. Scaffolding/man lifts where required to perform work by this trade scope;
- 14. Trade specific lighting to perform tasks;
- 15. Trade cleanup - cleanup for work carried out by this trade;
- 16. Warranty and/or Guarantee;
- 17. Submittals and O&M documentation as specified in the tender documents;
- 18. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
- 19. Protection of other trades' work from damage when performing this trades scope of work;
- 20. Section 4: Commissioning as it applies to this subcontractor scope;
- 21. Installation of flashings for drains and plumbing vents – as supplied by others;
- 22. Flashing all roof curbs and sleepers if required (seal into roof membrane);
- 23. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

- 1. Supply of roof specialties including mechanical roof drains, vent flashings, fall arrest anchors and roof jacks;
- 2. Metal sleeves for through deck openings, vents, etc.
- 3. Preformed or field cut reglets;
- 4. Separate curbs for skylights, hatches and roof mounted H.V.A.C. equipment;
- 5. Insulating of roof curbs;
- 6. Structural decking or deck infill, including structural stramit, and any component below the decking;
- 7. Through wall flashing;
- 8. Wood or metal roofing system components used to construct parapets, perimeter and curb blocking, curbs, control joints and sleeper supports;
- 9. Any membrane to be covered by material not installed by the roofing contractor (see Included);
- 10. Poured-in-place, light, medium or heavy concrete fill and paving blocks exceeding 45 kg (100 lbs.) each in mass;
- 11. Inspection and/or testing;
- 12. Metal roofing and related flashings;
- 13. Wood and metal walkways;
- 14. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
- 15. Temporary heat, general lighting, power, sanitation and water for general construction;
- 16. Hoarding;
- 17. Final Cleanup before turnover;
- 19. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
- 20. Firestopping;
- 21. Supply and maintenance of garbage and recycling bins for construction waste;
- 22. Removal of construction waste from job site;
- 23. General site security;
- 24. Installation of counter flashings for mechanical vents, ducts and chimneys is by others.

Section 19: Vegetated Roof Systems

DEFINITIONS – A vegetated roof system is a waterproof roofing assembly on top of a roof deck structure, together with exterior walls, and overburden forming a roof assembly able to support living plants while separating the inside and outside environments of a building.

Vegetated roof systems also termed as green roofs, eco-roofs, or landscaped roofs, of varying slopes include both conventional and protected membrane systems. The components above the roofing membrane consists of rigid insulation for protected membrane systems, and must include a membrane protection layer for conventional membrane systems, a root barrier, drainage layer, filter layer, growing medium (a.k.a. engineered soil), paving stones or loose gravel for non- vegetated zones, and specially selected living plants. The assembly may include a moisture retention layer, an irrigation system, ponds or landscape features.

Vegetated roofs are categorized based on type of installation:

- **Substrate System:** growing medium is conveyed onto a combination of components required for containment, drainage, and protection from root penetration. The vegetation is planted onsite.
- **Modular System:** self-contained trays of growing medium and plants grown offsite and placed onto the roof surface. A protection layer is installed between the roof membrane and trays.
- **Pre-Grown Vegetated Blanket System:** thin mats or rolls of vegetation grown offsite and placed over a combination of components required for containment, drainage, and protection from root penetration. Additional thickness of growing medium may also be installed in accordance with project requirements.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Supply and installation of vegetated roof components includes:
 - a. Roof membrane protection layer in sheets, mats or boards (See Excluded);
 - b. Root barrier;
 - c. Drainage layer;
 - d. Moisture retention layer (optional);
 - e. Filter cloth;
 - f. Growing medium (maximum depth of 200 mm) or g) Modular pre-grown vegetated trays;
2. Curbs or dividers to contain and separate the vegetated roof assembly from non-vegetated zones (See Excluded);
3. Placement of gravel (maximum grain size of 64 mm) or concrete pavers (not exceeding 45 kg each) in non-vegetated zones;
4. Compaction and levelling of growing medium substrate to specified minimum thickness (See Excluded);
5. Supply and installation of soil stabilization systems or materials for steep sloped applications;
6. ARCA accepted electronic leak detection system installation including testing prior to and after completion of vegetated roof assembly included in the roofing contractors scope of work (See Excluded);
7. Installation of subsurface irrigation drip lines when supplied by others.
8. Scaffolding/man lifts where required to perform work by this trade scope;
9. Trade specific lighting to perform tasks;
10. Trade cleanup - cleanup for work carried out by this trade (including cleaning all debris from roof drains);
11. Warranty and/or Guarantee;
12. Submittals and O&M documentation as specified in the tender documents;
13. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
14. Protection of other trades' work from damage when performing this trades scope of work;
15. Section 4: Commissioning as it applies to this subcontractor scope;
16. Installation of flashings for drains and plumbing vents – as supplied by others;
17. Flashing all roof curbs and sleepers if required (seal into roof membrane);
18. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Supply, connection, and commissioning of integrated irrigation systems;
2. Supplemental irrigation including supply of water, hoses, and spraying equipment;
3. Temporary protection from other trades of the roof membrane surface, plants and growing medium, or other components not installed by the roofing contractor;
4. Electronic leak detection testing after planting or successive work by others on or adjacent to the vegetated roof section;
5. Prevention measures for growing medium erosion or displacement from wind or rain, as well as prevention of over compaction of growing medium caused by storage of materials or traffic from other trades;
6. Poured-in-place or pre-cast concrete curbs or planter boxes, concrete fill, and paving blocks exceeding 45kg (100 lbs.) each in mass;
7. Landscaping or decorative features on or adjacent to the growing medium including ponds, fountains, lighting, large rocks greater than 64 mm in size, etc.;
8. Patio's, decks, or decorative pathway's for use by people for non-maintenance purposes on the roof surface, including safety railings or barriers;
9. Planting or seeding including ongoing maintenance of the plants and growing medium during and after vegetation establishment period;
10. Growing medium preparation such as watering, fertilizing, and amending to meet planting, landscaping or irrigation requirements of the project;
11. Growing medium infill for planter boxes greater than 200 mm in depth.
12. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
13. Temporary heat, general lighting, power, sanitation and water for general construction;
14. Hoarding;
15. Final Cleanup before turnover;
16. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
17. Firestopping;
18. Supply and maintenance of garbage and recycling bins for construction waste;
19. Removal of construction waste from job site;
20. General site security.
21. Installation of counter flashings for mechanical vents, ducts and chimneys is by others;

Section 20: Metal Roofing

Definition: This tender shall be for the supply and installation of metal roofing.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

INCLUDED:

1. Related closures, caulking, flashings and fasteners incorporated into the system;
2. Internal sub-girts and clip systems;
3. Liner panel of materials listed (item 1 above) forming part of the preformed metal roofing assembly;
4. Gypsum board when applied over a roof deck as part of the roofing system;
5. Auxiliary boards such as plywood and/or wood strapping when applied over a roof deck as part of the metal roofing system;
6. Related insulation, adhesives, vapour barriers and air barriers;
7. Flexible sheet membranes which form part of the building air barrier directly behind the metal roofing system including connection to work of the preceding trade where required. If connection is required by any trade following the metal roofing installation then the metal roofing contractor provides a minimum 200 mm, unless otherwise specified, of overlap material beyond the exterior point of the metal roofing system;
8. Gutter and downspouts that form an integral part of the preformed metal roofing system;
9. Installation only of acoustical insulation strips for acoustic steel deck which is supplied by others in a preformed custom fitted condition;
10. Metal soffits and/or wall cladding if profile, gauge and colour is to match metal roofing including related insulation, vapour barrier and sub-girts;
11. Acrylic or polycarbonate skylights, fibreglass skylights (when same profile as metal roof), smoke or access hatches, all when used within the "Preformed metal roofing" area;
12. Hoisting of roofing materials;
13. Scaffolding;
14. When any prefinished metal flashing is required by the other trades that specifically matches in colour and gauge that specified for the metal roofing, then the prefinished flat sheets are to be supplied by this trade freight included to the contractors shop. (See Excluded);
15. Installation of flashings for drains and plumbing vents supplied by others;
16. Scaffolding/man lifts where required to perform work by this trade scope;
17. Trade specific lighting to perform tasks;
18. Trade cleanup - cleanup for work carried out by this trade;
19. Warranty and/or Guarantee;
20. Submittals and O&M documentation as specified in the tender documents;
21. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
22. Protection of other trades' work from damage when performing this trades scope of work;
23. Section 4: Commissioning as it applies to this subcontractor scope;
24. Installation of flashings for plumbing vents – as supplied by others;
25. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Fabrication and/or installation of any flashing material not incorporated into metal roof system (i.e. Flat pre-painted material for built up roofing contractor);
2. Wood or metal components of the roofing (unless incorporated in the preformed metal roofing system) used to construct; parapets, perimeter and curb blocking, curbs, control joints and sleeper supports;
3. Metal soffits and/or wall cladding (see Included);
4. Aluminum / glass or aluminum / fibreglass skylight systems or skylights outside the preformed metal roofing area;
5. Separate curbs for skylights or hatches, etc.,
6. Through wall flashing;
7. Backing and supports for other trades;
8. Purlins or other structural materials;
9. Insulation or vapour barrier behind structure which metal roofing is fastened to;
10. Roof drains connected to an internal system.
13. Structural metal deck or any component below the decking;
14. Supply and installation of fall arrest anchors;
15. Inspection and testing;
16. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
17. Temporary heat, general lighting, power, sanitation and water for general construction;
18. Hoarding;
19. Final Cleanup before turnover;
20. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
21. Firestopping;
22. Supply and maintenance of garbage and recycling bins for construction waste;
23. Removal of construction waste from job site;
24. General site security.
25. Installation of counter flashings for mechanical vents, ducts and chimneys is by others;

Section 21: Metal Deck

Definition: This tender shall be for the supply and installation of metal deck.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

This contractor shall supply and install all metal decking including but not limited to the following;

- a. Metal roof deck;
- b. Metal floor deck;
- c. Acoustic roof deck;
- d. Pre-painted roof deck;
- e. Metal deck to wall areas;

INCLUDED:

1. Steel and foam cell deck closures where installed between structural support and decking;
2. Supply only, notched metal or foam cell deck closures incorporated into other construction from top or underside of deck;
3. Cutting of openings in deck marked by other trades at the time of deck installations;
4. Reinforcing of pre-marked openings in roof deck up to 450 mm across the flutes and 300 mm in floor decking;
5. Shear connectors when shown field welded through the metal deck;
6. Touch up top (and bottom side of decking where architecturally exposed), where metallic coating has been burned or marred by welding (see Excluded);
7. Metal cover plates over deck at change of plane or direction;
8. Hoisting;
9. Supply and/or installation of materials and other work that may be assigned by pretender ruling;
10. Acoustic insulation strips for acoustic roof deck supply only to the trade requiring.
11. Edge forming less than 3.2 mm thick for steel deck Section 22: Metal Decking;
12. Scaffolding/man lifts where required to perform work by this trade scope;
13. Trade specific lighting to perform tasks;
14. Trade cleanup - cleanup for work carried out by this trade;
15. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
16. Warranty and/or Guarantee;
17. Submittals and O&M documentation as specified in the tender documents;
18. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
19. Protection of other trades' work from damage when performing this trades scope of work;
20. Section 4: Commissioning as it applies to this subcontractor scope;
21. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Reinforcing or structural framing of openings larger than mentioned in 5 of inclusions;
2. Field painting including touch-up to the underside of deck, top cords or flanges of supporting steel members where discolouration due to welding has occurred on non-exposed deck;
3. Mechanical clips, nails, adhesives or other fasteners for securing insulation, thermal barrier or vapour retarder to steel deck;

4. Cutting and drilling of holes for attachment of suspended ceiling hangers or for attachment of any work by other trades;
5. Bearing plates, shelf angles, supports at steel columns and/or other structural materials required to support the steel deck;
6. Wood nailers, cants, vapour retarder, insulation, thermal barrier, waterproofing membrane and ballast;
7. Architectural trim;
8. Forming at floor deck perimeter or openings;
9. Cutting openings in floor deck after concreting;
10. Shoring under composite floors;
11. Supply and/or installation of shear connectors not welded through metal deck;
12. Shear transfer elements;
13. Metal cladding;
14. Metal roofing;
15. Caulking;
16. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
17. Temporary heat, general lighting, power, sanitation and water for general construction;
18. Hoarding;
19. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
20. Firestopping;
21. Supply and maintenance of garbage and recycling bins for construction waste;
22. Removal of construction waste from job site;
23. Final cleaning before turnover;
24. General site security.

Section 22: Entrances, Storefronts and Windows

DEFINITIONS:

This tender shall be for the supply and installation of materials and components within the fenestration, connected to, and forming an integral part of this scope, and for extruded aluminium wall cladding, aluminium laminated panels, and aluminium formed sheet panels, porcelain panels and asbestos cement panels, except for infill panels forming part of other trade scopes.

Fenestration means within a floor span.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Anchoring devices:
 - (a) Supply and installation of anchors which are part of the framing;
 - (b) Supply only of anchors or inserts which are part of the structure;
2. Architectural glass and metal doors including sliding, swinging, revolving and balanced doors, complete with hardware (including plastic and/or plastic laminate push pulls where an integral part of the door (see Architectural Woodwork, Included). All components for complete installation of automatic doors (including any interconnecting wiring [see Electrical Included] and pumps and piping), when they form an integral part and are within the fenestration of this scope, commissioning NOT included;
3. Architectural metal patio or balcony doors, complete with hardware;
4. Architectural metal sills, flashing and trims forming part of entrances, storefronts and windows and other architectural metal sills, flashing and trims of matching materials (see Excluded);
5. Caulking (other than firestopping), joint backing and perimeter sealing;
6. Demolition of existing installations when the materials are to be re-used or retained as specified;
7. Darkroom revolving doors of architectural metals;
8. Electrical security and monitoring devices, mounted on doors and door frames within this scope, i.e. locks, card readers, door monitors, switches, strike release, panic devices, magnets, etc., supplied and installed; wiring by electrical (see Electrical Included). Installation only of components for trade name security and monitoring systems specified to be furnished by one supplier to the electrical contractor and which must be mounted on doors and frames within this scope; supplied by the electrical contractor for installation by this contractor;
9. Extruded aluminium wall cladding (see Definitions);
10. Factory pre-assembled translucent panels;
11. Flexible sheet membrane which forms part of the building air barrier and is an integral part of the entrances, storefronts and windows system including connection to work of preceding trade where required. If connection is required by any trade following the entrances, storefronts and windows installation then the entrances, storefronts and windows contractor provides a minimum of 200 mm, unless otherwise specified, of overlap material beyond the exterior point of the entrances, storefronts and windows system;
12. Fly screens to venting windows;
13. Architectural metal framing;
14. Glass, glazing and glazing materials;
15. Glazing and architectural metal framing that is sloped in excess of 15 degrees beyond vertical, or curved which is connected to and forming part of this scope as per definitions.
16. Guard rails including architectural metal and wood and plastic laminate where they are an integral part of, and built into metal entrances and storefronts and special windows (installation only of rails other than metal attached to special windows);
17. Hoisting;
18. Industrial steel sash;
19. Infill panels, including insulation where it forms an integral part of a panel;
20. Initial cleaning between removable/non-removable multiple glazing;

21. Insulation within the fenestration;
22. Interior architectural metal glazed partitions, including recreational arena and court glass and glazing;
23. Manufacturer's warranty only beyond the normal one year maintenance warranty;
24. Entrances and storefronts (interior or exterior);
25. Preparation of framing for hardware supplied by others for doors not covered under Included;
26. Shop drawings and engineering of entrances, storefronts and windows to the specified design criteria;
27. Single glazing, multiple glazing and sealed units, plastic, fibre glass and similar materials;
28. Spandrel and infill panels, e.g. extruded aluminium wall cladding, asbestos cement, porcelain, etc. including insulation where it forms an integral part of a panel;
29. Stiffeners and/or steel reinforcement where required and where it is enclosed by the architectural metal section (see Excluded);
30. Supply only of architectural framing to be embedded in concrete;
31. Supply and installation of operating hardware;
32. Testing where specifically required by the specifications;
33. Thermally formed wall domes or pyramids which are not part of or connected to the roofing system;
34. Venetian blinds between glass supplied under this scope.
35. Scaffolding/man lifts where required to perform work by this trade scope;
36. Trade specific lighting to perform tasks;
37. Trade cleanup - cleanup for work carried out by this trade;
38. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
39. Warranty and/or Guarantee;
40. Submittals and O&M documentation as specified in the tender documents;
41. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
42. Protection of other trades' work from damage when performing this trades scope of work;
43. Section 4: Commissioning as it applies to this subcontractor scope;
44. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Concrete;
2. Doors, door frames and entrances, storefronts and window frames of steel, wood, metal clad wood, plastic laminate, polyvinyl chloride and fibreglass;
3. Glass, plastic or asbestos panels when supplied and installed under Architectural Woodwork
4. Installation of membranes or flashing, included under this scope, which cannot be installed or fastened during entrances, storefronts and windows installation;
5. Insulation, support or furring members, within entrance and storefront systems and windows, that are normally supplied and erected by others;
6. Interior wood sills or surrounds;
7. Insulation within framing supplied and erected by others;
8. Pressed steel frames;
9. Moveable, demountable partitions;
10. Shower doors;
11. Structural steel (except as noted in Included);
12. Sun control devices not between glass i.e. venetian blinds, drapes, sunshades, louvers etc. unless connected to the aluminum window frame system;
13. Sun screens, bird screens, guard screens;
14. Supply of flashing, sills or trim prefinished to match any materials not included in this scope (see Included);
15. Supply and installation of non-rigid membrane air/vapour barriers which form part of the structure and connects to the entrances, storefronts and windows (see Included);
16. Weather louvers mechanical and architectural (see Mechanical Section 43 Sub Section C: Included);
17. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;

18. Temporary heat, general lighting, power, sanitation and water for general construction;
19. Hoarding;
20. Final Cleanup before turnover;
21. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
22. Firestopping;
23. Supply and maintenance of garbage and recycling bins for construction waste;
24. Removal of construction waste from job site;
25. General site security.

Section 23: Hollow Metal Doors and Pressed Steel Frames – Supply Only

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

All the following shall apply as they relate to:

- Finish Door Hardware
- Access Control
- Security Systems

INCLUDED:

1. All Hollow Metal Doors and Pressed Steel Frames (except access doors for Mechanical and Electrical equipment);
2. Preparation of both Doors and Frames to accept approved Hardware (except mounting holes 12mm (½”) diameter or smaller);
3. Reinforcing of Doors and Frames for surface applied Hardware;
4. Provide suitable low voltage connection boxes on both Doors and Frames to allow for electrified hardware connections;
5. Provide suitable Electrical Raceways in Doors and Frames to accommodate wiring for electrified hardware (unless directed otherwise in the tender documents);
6. Suitable Anchoring System to allow for the proper installation of frames;
7. Suitable Frame Spreader Bars for maintaining Frame integrity during transport;
8. Preparation of Doors to accept glass as described in the tender documents;
9. Touch-up priming where coating abraded during the assembly process for the purpose of reducing the incidence of oxidation (rust) (not as a final prime coat);
10. Glazing Bead or Stop complete with suitable fastening devices.
11. Warranty and/or Guarantee;
12. Submittals and O&M documentation as specified in the tender documents;
13. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section.
14. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Installation of Doors and Frames;
2. Blast Resistant Doors and Frames;
3. Detention Doors and Frames;
4. Stainless Steel Doors and Frames;
5. Acoustic Doors and Frames;
6. Glass and Glazing;
7. Caulk and Caulking;
8. Insulation within Frames;
9. Hoarding or Flashings;
10. Finish Painting or full Priming;
11. Crating for Land or Sea transport;
12. Pre-hanging of Doors;
13. Final cleaning or prepping of Doors or Frames to receive finish Paint;
14. Termination of electrified Hardware;
15. Fastening devices other than required to meet Fire Rating parameters (existing masonry application);
16. Cladding of Doors and Frames;
17. Access doors and frames for Mechanical and Electrical.

Section 24: Glass and Glazing

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Caulking (other than firestopping), joint backing and perimeter sealing to glass and glazing;
2. Demolition of existing installations when the materials are to be re-used or retained as specified;
3. Glass doors (except in architectural woodwork) and sliding hardware, including locks, for site fabricated display cases;
4. Handcrafted leaded stained glass, glass, plastics, x-ray and asbestos infill panels to:
 - (a) Balustrades (other than escalators);
 - (b) Hollow metal;
 - (c) Metal clad wood doors;
 - (d) Metal display cases;
 - (e) Metal frames other than those falling under:
 - curtain wall scope;
 - entrances, storefronts and windows scope;
 - (f) Pressed steel (frames and applied stops to be pre-drilled, fitted and installed complete with fastening devices by supplier prior to glazing by this trade);
 - (g) Prefinished demountable partitioning;
5. Glass shelving (except in architectural woodwork) including shelf standards, clips and brackets;
6. Glass smoke baffles and sprinkler baffles including shimming, fasteners and caulking for fastening of the glass to the supporting system (supporting system supplied and installed by others);
7. Hoisting;
8. Manufacturer's warranty only beyond the normal one year maintenance warranty;
9. Mirrors, including glass, plastics, stainless steel, chrome plated in standard and tilting tamperproof frames, J moulds and clips, unless specified to be part of Architectural Woodwork (see Architectural Woodwork 2.12);
10. Shop drawings and engineering of glass and glazing to the specified design criteria;
11. Scaffolding/man lifts where required to perform work by this trade scope;
12. Trade specific lighting to perform tasks;
13. Trade cleanup - cleanup for work carried out by this trade;
14. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
15. Warranty and/or Guarantee;
16. Submittals and O&M documentation as specified in the tender documents;
17. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
18. Protection of other trades' work from damage when performing this trades scope of work;
19. Section 4: Commissioning as it applies to this subcontractor scope;
20. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Concrete;
2. Glass to architectural woodwork;
3. Glass to overhead doors;
4. Glass to curtain wall and entrances, storefronts and windows;
5. Mirrors, glass, polycarbonate and acrylic in wood frames or standard manufactured cabinets, display cases, furniture, fixtures, casework, countertops and tabletops;

6. Railing, capping and supports to balustrades and wall rails;
7. Recreational arena and court glass and glazing;
8. Shower doors;
9. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
10. Temporary heat, general lighting, power, sanitation and water for general construction;
11. Hoarding;
12. Final Cleanup before turnover;
13. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
14. Firestopping – for all trades scopes other than Mechanical and Electrical;
15. Supply and maintenance of garbage and recycling bins for construction waste;
16. Removal of construction waste from job site;
17. General site security;
18. Precut glass stops and beads for demountable partitions to be supplied by the demountable partition trade scope.

Section 25: Curtain Wall

DEFINITIONS:

This tender shall be for the supply and installation of components within the fenestration, connected to, and forming an integral part of this scope.

Curtain Wall is that fenestration which continues past one or more floor spans.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Anchoring devices:
 - a. supply and installation of anchors which are part of the grid;
 - b. supply only of anchors or inserts which are part of the structure;
2. Architectural glass and metal doors including sliding, swinging, revolving and balanced doors, complete with hardware (including plastic and/or plastic laminate push pulls where an integral part of the door (see architectural woodwork), all components for complete installation of automatic doors, (including any interconnecting wiring (see Electrical Included) and pumps and piping) when they form an integral part and are within the fenestration of this Scope;
3. Architectural metal sills, flashing and trims forming part of the curtain wall and other architectural metal sills, flashing and trims of matching materials/finish (see Excluded);
4. Caulking (other than firestopping), joint backing and perimeter sealing;
5. Demolition of existing installations when the materials are to be re-used or retained as specified;
6. Electrical security and monitoring devices, mounted on doors and door frames within this scope, i.e. locks, card readers, door monitors, switches, strike release, panic devices, magnets, etc., supplied and installed; wiring by electrical (see Electrical Included). Installation only of components for trade name security and monitoring systems specified to be furnished by one supplier to the electrical contractor and which must be mounted on doors and frames within this scope supplied by the electrical contractor for installation by this contractor;
7. Factory pre-assembled translucent panels;
8. Flexible sheet membrane which forms part of the building air barrier and is an integral part of the curtain wall system including connection to work of preceding trade where required. If connection is required by any trade following the curtain wall installation then the curtain wall contractor provides a maximum of 200 mm, unless otherwise specified, of overlap material beyond the exterior point of the curtain wall system;
9. Fly screens to venting windows;
10. Glass, glazing and glazing materials;
11. Glazing and architectural metal framing that is sloped in excess of 15 degrees beyond vertical, or curved, within the curtain wall;
12. Guard rails including architectural metal and wood and plastic laminate where they are an integral part of and built into the curtain wall (installation only of rails other than metal attached to the curtain wall);
13. Hoisting;
14. Initial cleaning between removable/non-removable multiple glazing;
15. Insulation within the curtain wall;
16. Manufacturer's warranty only beyond the normal one year maintenance warranty;
17. Preparation of framing for hardware supplied by others where doors are not part of this trade;
18. Scaffolding;
19. Shop drawings and engineering of curtain wall system to the specified design criteria;
20. Skylights - glazed architectural metal framing, flat or sloped greater than 15 degrees, or curved, not attached to window framing, entrances and storefronts framing and not included under Roofing scope;
21. Spandrel and infill panels - e.g. asbestos cement, porcelain, extruded aluminium wall cladding, etc. including insulation where it forms an integral part of a panel;
22. Stiffeners and/or steel reinforcement where required and where it is enclosed by the architectural metal section;
23. Testing where specifically required by the specifications;

24. Venetian blinds between glass supplied under this scope.
25. Scaffolding/man lifts where required to perform work by this trade scope;
26. Trade specific lighting to perform tasks;
27. Trade cleanup - cleanup for work carried out by this trade;
28. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
29. Warranty and/or Guarantee;
30. Submittals and O&M documentation as specified in the tender documents;
31. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
32. Protection of other trades' work from damage when performing this trades scope of work;
33. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
34. Section 4: Commissioning as it applies to this subcontractor scope;

EXCLUDED:

1. Concrete work;
2. Doors, door frames and curtain wall frames of steel, wood, metal clad wood, plastic laminate, polyvinyl chloride and fibreglass.
3. Flashing, sills or trim prefinished to match any materials not included in this scope;
4. Glass or plastic panels when supplied and installed under Architectural Woodwork;
5. Insulation, support or furring members, within curtain wall systems, that are normally supplied and erected by others;
6. Interior wood sills or surrounds;
7. Shower doors;
8. Skylights which are thermally formed and incorporate a base frame only which relate to the roofing system;
9. Structural steel (except as noted in Included);
10. Sun control devices not between glass i.e. Venetian blinds, drapery, etc.
11. Sun screens, bird screens, guard screens, sunshades and louvers attached to the frame unless connected to the aluminum window frame system;
12. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
13. Temporary heat, general lighting, power, sanitation and water for general construction;
14. Hoarding;
15. Final Cleanup before turnover;
16. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
17. Firestopping;
18. Supply and maintenance of garbage and recycling bins for construction waste;
19. Removal of construction waste from job site;
20. General site security.

Section 26: Lath, Plaster and Stucco

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Acrylic plaster systems;
2. Beads, plaster stop and expansion joints, casing and trim which are an integral part of the work;
3. Building paper for lathing, plastering and stucco systems;
4. Caulking (other than firestopping) to structural, mechanical or electrical penetrations in lath and plaster or stucco systems;
5. Caulking (other than firestopping) where it forms part of the expansion or control joint;
6. Fire rating to recessed fixtures when constructed of materials within this scope;
7. Flexible sheet membrane which forms part of the building air barrier directly behind a plaster or stucco system including connection to work of preceding trade where required. If connection is required by any trade following the plaster or stucco installation then the lath, plaster and stucco contractor provides a minimum of 200 mm, unless otherwise specified, of overlap material beyond the exterior point of the plaster or stucco system;
8. Hoisting;
9. Inserts, hangers, trim and support mouldings capable of supporting light fixtures (electrical light fixtures exceeding 610 mm x 1220 mm shall be independently supported by others);
10. Inserts, hangers, trim and support mouldings capable of supporting radiant panels and mechanical grilles (panels and grilles exceeding 610 mm x 1220 mm shall be independently supported by others);
11. Inspection;
12. Installation only of access doors;
13. Installation only of metal door frames supported by steel stud and plaster system only;
14. Installation only of pre-manufactured metal deck filler covered with plaster or stucco;
15. Installation only of plaster trims (frames) for lighting fixtures (excluding lighting fixture components);
16. Lathing systems and metal furring for plaster and stucco;
17. Lathing systems for ceramic, mosaic tile;
18. Metal channels lighter than 2.0 mm (14ga.) for plaster systems;
19. Plastering and stucco - plain, acoustical, ornamental, cast or moulded, textured plaster applied to concrete, including veneer plaster systems, veneer board and all other gypsum plaster based casts and moulded shapes;
20. Plaster sound baffles;
21. Rigid insulation when used as plaster or stucco base;
22. Sound insulation to plaster and stucco system only (mineral wool, fibrous batt, fibre board, noise stop board, resilient sound board, gasket and caulking) all directly behind plaster and stucco only;
23. Steel stud partitions for plaster systems only, including load bearing steel studs, 12 gauge thickness or lighter, (0.1017 inches/2.593/97mils) where required to support lath and plaster systems and where lath and plaster is specified for both sides of the wall. See Drywall Included;
24. Testing of material where specified;
25. Thermal insulation (batt, rigid or loose fill attic insulation) directly behind plaster, including where walls are strapped (not to include cavity wall insulation);
26. Vapour barrier directly behind plaster.
27. Scaffolding/man lifts where required to perform work by this trade scope;
28. Trade specific lighting to perform tasks;
29. Trade cleanup - cleanup for work carried out by this trade;
30. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
31. Warranty and/or Guarantee;
32. Submittals and O&M documentation as specified in the tender documents;
33. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
34. Protection of other trades' work from damage when performing this trades scope of work;

35. Supply and installation of prefinished metal mouldings for support of radiant panels when installed as an integral part of the Lath and Plaster Ceiling Systems.
36. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Building paper under finishes other than lath, plaster or stucco;
2. Corner guards or expansion joint covers which are pre-manufactured and surface mounted;
3. Exterior gypsum sheathing and metal suspension for same;
4. Installation of air grilles, access panels and accessories if independently suspended;
5. Poly vapour hats (see Electrical Included);
6. Steel door frames for steel stud partitions;
7. Steel studs or suspension systems when any material other than lath, plaster or stucco is applied to one or both sides;
8. Supply of access doors;
9. Supports for light fixtures and radiant panels exceeding 610 mm x 1220 mm;
10. Thermal insulation except for batt insulation directly behind plaster system only and rigid insulation where used as a plaster or stucco base;
11. Supply of trims and/or mouldings for radiant panels when specified to be supplied with the radiant panel (see Mechanical). This contractor to install;
12. Supply and installation of backing in steel stud partitions – by others;
13. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
14. Temporary heat, general lighting, power, sanitation and water for general construction;
15. Hoarding;
16. Final Cleanup before turnover;
17. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
18. Firestopping;
19. Supply and maintenance of garbage and recycling bins for construction waste;
20. Removal of construction waste from job site;
21. General site security.

Section 27: Drywall

DEFINITIONS:

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Caulking (other than firestopping) to structural, mechanical or electrical penetrations in drywall systems;
2. Drywall metal accessories, e.g. corner bead, casing bead, metal trim;
3. Exterior gypsum sheathing or rigid or semi-rigid insulation when used as a sheathing material and applied directly to the exterior surface of steel studs only;
4. Factory laminated vinyl gypsum board if there are no prefinished demountable partitions on the project to be tendered;
5. Fire rating to recessed fixtures in drywall systems;
6. Flexible sheet membrane which forms part of the building air barrier directly behind a drywall system including connection to work of preceding trade where required. If connection is required by any trade following the drywall installation then the drywall contractor provides a minimum of 200mm, unless otherwise specified, of overlap material beyond the exterior point of the drywall system;
7. Gypsum board backing and/or metal suspension system where ceiling is partially or wholly covered with acoustic tile or wood or other material. Joint treatment on exposed or unexposed to be included;
8. Gypsum board including joint treatment where applicable;
9. Hoisting;
10. Inserts, hangers, trim and support mouldings capable of supporting light fixtures (electrical light fixtures exceeding 610mm x 1220mm shall be independently supported by others);
11. Inserts, hangers, trim and support mouldings capable of supporting radiant panels and mechanical grilles (panel and grilles exceeding 610mm x 1220mm shall be independently supported by others);
12. Inspection;
13. Installation only of access doors to drywall surfaces;
14. Installation only of drywall trims (frames) to drywall surfaces for lighting fixtures (excluding lighting fixture components);
15. Installation only of pre-manufactured metal deck fillers when covered with drywall
16. Installation only of steel door frames supported by metal stud and drywall system;
17. Metal suspension system and/or metal furring capable of supporting all appurtenances supported by ceiling, for exposed drywall or spray-textured ceilings;
18. Scaffolding;
19. Sound baffles made of materials described in this scope, including lead shielding;
20. Sound and fire insulation to drywall system only (mineral wool, ceramic, fibrous batt, fibre board, noise stop board, acoustical lead shielding, resilient sound bar, gasket and caulking) all directly behind drywall;
21. Sprayed drywall texture to drywall and ceiling and to concrete surface including the primer paint for same (see Painting Excluded);
22. All steel studs, including load bearing studs (see Drywall Excluded, Lath and Plaster Included, Demountable Partitions Included & Excluded);
23. Supply and installation of cementitious wall board (see Tile, Terrazzo, Marble and Granite Included);
24. Thermal insulation (batt, rigid or loose fill attic insulation) directly behind drywall, including where wall are strapped (not to include cavity wall insulation);
25. Vapour barrier directly behind drywall.
26. Scaffolding/man lifts where required to perform work by this trade scope;
27. Trade specific lighting to perform tasks;
28. Trade cleanup – cleanup for work carried out by this trade;
29. General cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup;
30. Warranty and /or Guarantee;
31. Submittals and O&M documentation as specified in the tender documents;
32. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;

33. Protection of other trades' work from damage when performing this trades scope of work;
34. Supply and installation of prefinished metal mouldings for support of radiant heating panels when installed as an integral part of the drywall ceiling system.
35. Supply and installation of all sheet lead sound baffles and sound barriers where required for sound attenuation and which are integral to the drywall system or above drywall partitions installed by this trade.
36. Supply and installation of security mesh or panels (up to 9ga.) in drywall or ceiling assemblies.
37. Engineering costs associated with this trade required for the design of steel stud framing and/or wall systems to suit a specific project, as indicated in the tender documents.
38. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
39. Section 4: Commissioning as it applies to this subcontractor scope;

EXCLUDED:

1. Building paper;
2. Corner guards or expansion joint covers which are pre-manufactured and surface mounted;
4. General and final clean up;
5. Gypsum board or exterior gypsum sheathing when applied over a roof deck as part of the roofing system;
6. Hoarding;
7. Installation of air grilles, access panels and accessories if independently suspended;
8. Metal furring for direct attachment of metal siding;
9. Poly vapour hats (see Electrical Included);
10. Steel studs for lath and plaster systems, both sides, and no sheathing or other materials attached (see Lath, Plaster and Stucco Included & Excluded);
11. Steel studs for prefinished demountable partitions;
12. Supports for light fixtures and radiant panels exceeding 610mm x 1220mm;
13. Temporary heat, light, power, sanitation and water;
14. Trims and/or mouldings for radiant panels when specified to be supplied with the radiant panel. (See Mechanical);
15. Supply and installation of backing in steel stud partitions – by others;
16. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
17. Temporary heat, general lighting, power, sanitation and water for general construction;
18. Hoarding;
19. Final cleanup before turnover;
20. Security costs. Where security is required for trades to complete their work these services and costs for same will be provided by the General Contractor.
21. Firestopping;
22. Supply and maintenance of garbage and recycling bins for construction waste;
23. Removal of construction waste from job site;
24. General site security.

Section 28: Tile, Terrazzo, Marble and Granite

DEFINITIONS:

This scope shall be for the supply and installation of Tile, Terrazzo, Marble, Granite, and Slate and Stone construction.

Tile is the following products provided they do not exceed 50 mm in thickness:

- (a) Burned clay products, (includes pavers) either glazed or unglazed, as used in the tile industry;
- (b) Composition materials, marble tiles, terrazzo tiles, glass mosaics and all substitute materials for tile made in tile-like units;
- (c) mixtures in tile-like form of cement, metals and other materials, that are made for and intended for use as a finished floor surface, stair treads, stair risers, stair base and stringer, promenade roofs, walks, walls, ceilings, swimming pools and all places where tile is used to form a finished interior or exterior surface for practical use, sanitary finish or decorative purposes (excludes resilient floor coverings, acoustic or ceiling tile).

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Application of a coat or coats of cement mortar, prepared to proper tolerance to receive tile on floors, walls and ceilings regardless of whether the cement mortar coat is wet or dry at the time the tile is applied to it;
2. Caulking (other than firestopping) between individual tiles, or marble, granite, slate or precast terrazzo panels;
3. Cementitious wallboard when used as a backing for this trade;
4. Cleaning of installed products (i.e. acid cleaning);
5. Decorative tile inserts in other materials;
6. Hoisting;
7. Inspection;
8. Laying, cutting or setting and sealing of all tile where used for floors, bases, walls, ceilings, walks, promenade roofs, exterior veneers, stair treads, stair risers, facings, hearths, fireplaces and decorative inserts, together with any marble plinths, thresholds or window stools used in connection with any tile work;
9. Scaffolding;
10. Scratch coat for ceramic tile;
11. Setting of tile by the adhesive method with organic and/or inorganic thin bed bonding materials where such bonding material is applied to the backing surface and/or the backing of tile units or sheets of tile;
12. Setting, sealing and installation of prefabricated tile systems;
13. SLATE, where used as above in place of tile and 50 mm thick and less;
14. STONE (Natural and Artificial), MARBLE, GRANITE, SLATE, PRECAST TERRAZZO or CULTURED MARBLE where used as a floor or wall finish, interior or exterior, same as tile and where same is 50 mm thick or under, regardless of size or shape;
15. Supply of non-slip tile nosing for poured concrete stairs;
16. Testing;
17. TERRAZZO where used as a finish for walls, floors, bases, curbs, stair treads, stair risers, stair base and stair stringer, which is poured in place, contains an aggregate which is to be ground. Includes rustic terrazzo - either ground or not;
18. Waterproofing material or coating when part of the backing system for installation of materials used by this trade.
19. Scaffolding/man lifts where required to perform work by this trade scope;
20. Trade specific lighting to perform tasks;
21. Trade cleanup - cleanup for work carried out by this trade;
22. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
23. Warranty and/or Guarantee;
24. Submittals and O&M documentation as specified in the tender documents;
25. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;

26. Protection of other trades' work from damage when performing this trades scope of work;
27. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Caulking between materials in this scope and others, e.g. metal, glass or brick, etc.
2. Continuous metal supporting angles, metal slots, boxes or anchorages which are built into the structural wall;
3. Expansion joints, flashing;
4. Lead pans;
5. Metal lath;
6. Miscellaneous iron work and manufactured specialty items, mat sink age frames;
7. Testing of pools, showers, etc.
8. Waterproof membranes when not used in conjunction with materials used by this trade;
9. Wood grounds.
10. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
11. Temporary heat, general lighting, power, sanitation and water for general construction;
12. Hoarding;
13. Final Cleanup before turnover;
14. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
15. Firestopping;
16. Supply and maintenance of garbage and recycling bins for construction waste;
17. Removal of construction waste from job site;
18. General site security.

Section 29: Component Ceiling Systems & Manufactured Acoustical Units

DEFINITION:

This tender shall be for the supply and installation of:

- (a) Manufactures acoustical units when used for the primary purpose of acoustical sound absorption;
- (b) Manufactured components that form an integral part of a suspended ceiling system installed as an interior ceiling finish and/or exterior soffit;
- (c) The same manufactured component materials as above when used as an interior wall finish and/or exterior cladding;

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Component ceiling systems consisting of one or more of the following:
 - (a) Cellulose, mineral or glass fibre acoustical tile;
 - (b) Cellulose, mineral or glass fibre acoustical ceiling lay-in-panels;
 - (c) Gypsum ceiling lay-in panels (See Drywall Included);
 - (d) Perforated and/or unperforated metal pan ceiling panels;
 - (e) Vinyl or plastic ceiling panels;
 - (f) Wood veneer ceiling panels;
 - (g) Linear metal and/or wood linear ceiling and/or soffit system;
 - (h) All luminous ceiling, decorative lenses and/or valence lay in panel, leaf-type reflectors, egg crate louvres, and/or light diffusers weather made of metal plastic wood or glass
2. Component ceiling suspension systems specifically designed for the support of component ceiling system or when used as a wall finish consisting of:
 - (a) Adhesives, staples, nails, screws, etc. for attachment of ceiling systems components and/or manufactured acoustical units;
 - (b) Carrying channels and furring channels (not exceeding 2.0mm thick or 14ga materials) when used:
 - i) As an integral part of component ceiling systems;
 - ii) To meet ULC designs;
 - iii) To support manufactured acoustical units;
 - (c) Concealed and/or semi-concealed suspension systems;
 - (d) Exposed metal grid suspension systems;
 - (e) Inserts and hangers capable of supporting component ceiling systems and all superimposed loads (electrical light fixtures exceeding 610mm x 1220mm shall be independently supported by other);
 - (f) Inserts, hangers, trim and support mouldings capable of providing perimeter support for edge radiant heat panels when installed as an integral part of the component ceiling system, and when trim and support materials are specified to match the ceiling system;
 - (g) Metal and/or wood linear ceiling suspensions and furring systems;
 - (h) Metal and plastic mouldings required in conjunction with the direct support of the component ceiling suspension systems installed by this trade. (See Electrical Excluded);
 - (i) Furring required to accept materials installed by this trade;
 - (j) Sound isolation hangers which form an integral part of the hanger assembly of a component ceiling suspension system;
3. Demolition of existing installations when the materials are to be re-used or retained as specified;
4. Fire protective boxes and/or blankets for electrical fixtures and mechanical diffusers as required in ULC designs for floor/roof – ceiling assemblies;
6. Hoisting and material handling;
7. Inspection;
8. Insulating blankets laid directly on top of ceiling suspension system installed by this trade;

9. Luminous light and/or decorative lenses and/or louvres, including metal and/or plastic support moulding when installed in architectural valences not constructed by this trade (see Electrical Excluded);
10. Manufactured acoustical units consisting of:
 - (a) Sound absorbing wall panels;
 - (b) Sound absorbers;
 - (c) Suspended sound baffles;
11. Preformed architectural light coves and valances when used as a direct support or forming an integral part of a component ceiling system installed by this trade;
12. Preformed metal break-shapes (not exceeding 2.0mm thick or 14ga material) when used as a direct support of or forming an integral part of a ceiling system installed by this trade;
13. Preformed valance and curtain pockets when used as a direct support or forming an integral part of a component ceiling system installed by this trade;
14. Scaffolding as required by this trade;
15. Scaffolding/man lifts where required to perform work by this trade scope;
16. Trade specific lighting to perform tasks;
17. Trade cleanup - cleanup for work carried out by this trade;
18. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
19. Warranty and/or Guarantee;
20. Submittals and O&M documentation as specified in the tender documents;
21. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
21. Protection of other trades' work from damage when performing this trades scope of work;
22. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Acoustical plaster ceiling finishes and suspension systems;
2. Acoustical wall treatment where constructed of materials that are not a manufactured acoustical material and recognized as an acoustically rated unit. E.g. carpet underlay, sprayed wall coatings and coverings, etc.
3. Caulking;
4. Drywall, plaster or wood fabricated valance pockets, curtain pockets, architectural light coves and valances;
5. General and final clean up;
6. Gypsum board and/or plaster ceiling finishes and suspension systems;
7. Inserts and hanger supports for Electrical and Mechanical fixtures exceeding 610mm x 1220mm;
8. Trims and/or moulding for radiant panels when specified to be supplied with the radiant panel;
9. Gypsum board backing including suspension systems;
10. Hoarding;
13. Job fabricated enclosures for acoustical batt and/or blankets;
14. Light lenses, egg crate lenses or louvres when forming an integral part of an individual light fixture when part of electrical scope;
15. Luminous light and/or decorative lenses, including metal and/or plastic support moulding when installed as a sign band;
16. Metal flashing when not of the same colour or material as the prefinished metal linear fascia and soffits;
17. Metal mouldings or suspension that is not an integral part of work done by this trade;
18. Non-factory applied finishes or site finishing of any work under this trade section except for touch-up;
19. Perforated or un-perforated metal and/or hardboard liners, wall cladding or exterior soffits when comprised of metal siding or decking products;
20. Preparation of concrete, wood or gypsum surfaces to receive work by this trade;
21. Preparation of reflected ceiling drawings;
22. Removal of existing materials except as provided in Included;
23. Sound absorption panels and/or sound dampening systems used for mechanical and equipment;
24. Sound attenuation barriers where used in plenum space above partitions connected and/or sealed to ceiling system or structure above;
25. Sprayed applied acoustical materials;

26. Structural components required to meet specific ULC designs other than that forming an integral part of component ceiling systems;
27. Supplementary safety chains and support devices as may be required for electrical, mechanical, etc. fixtures;
28. Wood blocking, trims and casings for materials other than those used by this trade.
29. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
30. Temporary heat, general lighting, power, sanitation and water for general construction;
31. Hoarding;
32. Final Cleanup before turnover;
33. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
34. Firestopping;
35. Supply and maintenance of garbage and recycling bins for construction waste;
36. Removal of construction waste from job site;
37. General site security.

Section 30: Resilient Floor Coverings

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Verification of moisture and alkalinity testing that was not done by others. This may mean conducting moisture indicator testing (not moisture testing).
2. Minor preparation of substrate surfaces including filler and primer, sub-floors to be made level and true by others (General Contractor).
3. Acclimatization of all materials.
4. Approved panel underlayment when specified prior to the installation of resilient flooring.
5. Following types of resilient flooring:
 - a. Vinyl sheet and tile flooring including solid vinyl and vinyl composition tile.
 - b. Linoleum sheet and tile flooring,
 - c. Rubber sheet and tile flooring.
 - d. Cork tile flooring,
 - e. Specialty resilient flooring (safety flooring, gym flooring, etc.).
 - f. Conductive flooring.
6. Following types of bases:
 - a. Vinyl and rubber base.
 - b. Self-cove and flash coved resilient sheet flooring bases including trim capping.
7. Vinyl and rubber stair coverings (treads, risers, stringers, nosings, landing coverings, and hazard warning strips).
8. Resilient floor coverings for exterior locations.
9. Fixed resilient flooring mats and runners when specified in conjunction with regular resilient flooring installation, or when sold separately.
10. Resilient flooring accessories, including:
 - a. Reducing / transition strips.
 - b. Nosings, including metal.
11. Adhesives with application.
12. Custom installation requirements when specified (such as heat welding, flash coving, provision of special drains, water jet cutting for inlay work, etc.).
13. Seaming plans when so specified.
14. Removal of packaging material and remnants specifically pertaining to this trade.
15. Provision and packaging of maintenance materials and excess stock as specified.
16. Provision of care and maintenance instructions for Owner's Maintenance Manual.
17. Caulking to own work where required.
18. All resilient flooring cash allowance and/or contingency funds specifically called for in the Contract Documents (specifications).
19. Trade specific lighting to perform tasks;
20. Trade cleanup - cleanup for work carried out by this trade;
21. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
22. Warranty and/or Guarantee;
23. Submittals and O&M documentation as specified in the tender documents;
24. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
25. Protection of other trades' work from damage when performing this trades scope of work;
26. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Water;
2. Barricades;
3. Hoisting;
4. Secure, heated, on-site storage;
5. Substrate testing including moisture (vapour emission) and alkalinity tests;
Note: This work may be included where flooring is the only contract (as in the installation of resilient flooring in existing rooms or areas) subject to prior agreement with the Owner.
6. All other preparation of surfaces required for installation of resilient flooring including substrate preparation, and supply and installation of self-leveling cementitious underlayment and poured latex toppings.
7. Trowelled-on latex underlayment except when specified in conjunction with specific installation systems.
8. Maintenance and protection of installed resilient flooring prior to Substantial Performance. Such protection shall be provided by others using materials and methods acceptable to the resilient floor covering manufacturer.
9. Repairs to damage by others during and after completion and acceptance of the work.
10. Cleaning and sealing or the application of any other type of protective coatings, unless specified.
11. Base to demountable partitions, unless specified.
12. Loose laid resilient mats and runners.
13. Resilient flooring as an integral part of access flooring systems, unless specified.
14. Resilient bulletin / tack boards on walls, unless specified.
15. Resilient desk top coverings to millwork, unless specified.
16. Temporary heat, general lighting, power, sanitation and water for general construction;
17. Hoarding;
18. Final Cleanup before turnover;
19. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
20. Supply and maintenance of garbage and recycling bins for construction waste;
21. Removal of construction waste from job site;
22. General site security.

Section 31: Carpeting

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Verification of moisture and alkalinity testing that was not done by others.
2. Minor preparation of substrate surfaces including filler and primer, sub-floors to be made level and true by others (General Contractor).
3. Acclimatization of all materials.
4. Approved panel underlayment when specified prior to the installation of carpet flooring.
5. Carpet cushion (underlay).
6. Broadloom carpet for:
 - a. Tacked installations.
 - b. Tack-less installations.
 - c. Direct glue down installations.
 - d. Wall carpet.
 - e. Base, excluding metal wall capping, incorporated in wall structure.
 - f. Specialty installation such as display stands. etc.
 - g. Outdoor / exterior installation.
7. Modular carpet or tile for loose laid and glue-down installations.
8. Fixed carpet mats and runners when specified in conjunction with regular carpet installation, or when sold separately.
9. Carpet accessories. including:
 - a. Binder bars.
 - b. Reducing strips.
 - c. Nosings (other than wood or metal).
10. Resilient (rubber and vinyl) and wood base and stair stringers when so specified.
11. Adhesives with application.
12. Seaming plans when so specified.
13. Removal of packaging material and remnants specifically pertaining to this trade.
14. Provision and packaging of maintenance materials and excess stock as specified.
15. Provision of care and maintenance instructions for Owners Maintenance Manual,
16. All carpet cash allowance and/or contingency funds specifically called for in the Contract Documents (specifications).
17. Scaffolding/man lifts where required to perform work by this trade scope;
18. Trade specific lighting to perform tasks;
19. Trade cleanup - cleanup for work carried out by this trade;
20. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
21. Warranty and/or Guarantee;
22. Submittals and O&M documentation as specified in the tender documents;
23. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
24. Protection of other trades' work from damage when performing this trades scope of work;
25. Section 4: Commissioning as it applies to this subcontractor scope;
26. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Water.
2. Hoarding and barricades.
3. Secure, heated, on-site storage.
4. Substrate testing including moisture (vapour emission) and alkalinity tests.
Note that this work may be included in the work where flooring is the only contract (as in the installation of hardwood flooring in existing rooms or areas) subject to prior agreement with the Owner;
5. All other preparation of surfaces required for installation of resilient flooring including substrate preparation, and supply and installation of self-leveling cementitious underlayment and poured latex toppings.
6. Trowelled-on latex underlayment except when specified in conjunction with specific installation systems.
7. Base to demountable partitions, unless specified.
8. Loose laid carpet mats and runners,
9. Carpet as an integral part of access flooring systems, unless otherwise specified_
10. Carpet bulletin and tack boards on walls.
11. Maintenance and protection of installed carpet flooring prior to Substantial Performance.
Such protection shall be provided by others using materials and methods acceptable to the carpet manufacturer.
12. Repairs to damage by others during and after completion of work.
13. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
14. Temporary heat, general lighting, power, sanitation and water for general construction;
15. Hoarding;
16. Final Cleanup before turnover;
17. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
18. Firestopping;
19. Supply and maintenance of garbage and recycling bins for construction waste;
20. Removal of construction waste from job site;
21. General site security.

Section 32: Finished Flooring

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

Sub-Section A: Hardwood Flooring

INCLUDED:

1. Verification of moisture and alkalinity testing that was not done by others. This may mean conducting moisture indicator testing (not moisture testing);
2. Minor preparation of substrate surfaces including filler and primer, sub-floors to be made level and true by others (General Contractor).
3. Acclimatization of all materials.
4. Approved moisture barrier or sheathing membrane when specified.
5. Approved resilient / acoustical underlayment when specified.
6. All hardwood flooring including, but not limited to the following:
 - a. Solid strip and plank flooring.
 - b. Solid parquet flooring (including self-adhesive parquet flooring).
 - c. Engineered strip and plank flooring.
 - d. Engineered parquet flooring (including self-adhesive engineered parquet flooring).
 - e. Acrylic impregnated wood flooring.
 - f. Strip block flooring.
 - g. Sports flooring including sub-floors, resilient pads, vent-cove base, and floor sockets.
 - h. Special proprietary hardwood flooring systems.
 - i. Wood base and quarter round trim.
 - j. Wood stair assemblies (i.e., wood treads, risers, nosings, and stringers (excluding metal nosings) where indicated).
7. Hardwood flooring accessories, including:
 - a. Mouldings and trims.
 - b. Reducing / transition strips.
 - c. Thresholds.
 - d. Expansion fillers.
8. All adhesives required for installation.
9. All fasteners required for installation (nails, staples, screws, etc.).
10. All site-applied surface finishes, seals, stains, and bleaches, including site touch-up of factory applied finishes.
11. Layout / pattern plans when so specified.
12. Removal of packaging material and remnants specifically pertaining to this trade.
13. Provision and packaging of maintenance materials and excess stock as specified.
14. Provision of care and maintenance instructions for Owners Maintenance Manual.
15. All hardwood flooring cash allowance and/or contingency funds specifically called for in the Contract Documents (specifications).
16. Scaffolding/man lifts where required to perform work by this trade scope;
17. Trade specific lighting to perform tasks;
18. Trade cleanup - cleanup for work carried out by this trade;
19. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
20. Warranty and/or Guarantee;
21. Submittals and O&M documentation as specified in the tender documents;
22. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
23. Protection of other trades' work from damage when performing this trades scope of work;
24. Supply of the appropriate personnel for assisting in the coordination of system installations;
25. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Water;
2. Barricades;
3. Hoisting;
4. Secure, heated, on-site storage;
5. Substrate testing including moisture (vapour emission) and alkalinity tests.
Note that this work may be included in the work where flooring is the only contract (as in the installation of hardwood flooring in existing rooms or areas) subject to prior agreement with the Owner;
6. All other preparation of surfaces required for installation of resilient flooring including substrate preparation, and supply and installation of self-leveling cementitious underlayment and poured latex toppings.
7. Maintenance and protection of installed hardwood flooring prior to Substantial Performance. Such protection shall be provided by others using materials and methods acceptable to the hardwood flooring manufacturer;
8. Repairs to damage by others during and after completion of work.
9. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
10. Temporary heat, general lighting, power, sanitation and water for general construction;
11. Hoarding;
12. Final Cleanup before turnover;
13. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
14. Firestopping;
15. Supply and maintenance of garbage and recycling bins for construction waste;
16. Removal of construction waste from job site;
17. General site security.

Sub-Section B: Laminate Flooring

INCLUDED:

1. Verification of moisture and alkalinity testing that was not done by others. This may mean conducting moisture indicator testing (not moisture testing).
2. Minor preparation of substrate surfaces including filler and primer, sub-floors to be made level and true by others (General Contractor).
3. Acclimatization of all materials.
4. Approved panel underlayment when specified prior to the installation of laminate flooring.
5. Approved moisture barrier or sheathing membrane when specified.
6. Approved resilient / acoustical underlayment when specified.
7. All laminate flooring.
8. Laminate flooring accessories. including:
 - a. Mouldings and trims.
 - b. Reducing / transition strips.
 - c. Thresholds.
9. Layout / pattern plans when so specified.
10. Site touch-up of factory applied finishes after installation as required.
11. Removal of packaging material and remnants specifically pertaining to this trade.
12. Provision and packaging of maintenance materials and excess stock as specified.
13. Provision of care and maintenance instructions for Owner's Maintenance Manual.
14. All laminate flooring cash allowance and/or contingency funds specifically called for in the Contract Documents (specifications).
15. Scaffolding/man lifts where required to perform work by this trade scope;
16. Trade specific lighting to perform tasks;
17. Trade cleanup - cleanup for work carried out by this trade;
18. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
19. Warranty and/or Guarantee;
20. Submittals and O&M documentation as specified in the tender documents;
21. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
22. Protection of other trades' work from damage when performing this trades scope of work;
23. Section 4: Commissioning as it applies to this subcontractor scope;
24. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Water.
2. Barricades.
3. Hoisting.
4. Secure, heated, on-site storage.
5. Substrate testing including moisture (vapour emission) and alkalinity tests.
Note that this work may be included in the work where flooring is the only contract (as in the installation of hardwood flooring in existing rooms or areas) subject to prior agreement with the Owner;
6. All other preparation of surfaces required for installation of resilient flooring including substrate preparation, and supply and installation of self-leveling cementitious underlayment and poured latex toppings.
7. Final cleaning and vacuuming, except as noted in the Guide Study / Specification Guide.
 - a. Maintenance and protection of installed laminate flooring prior to Substantial Performance. Such protection shall be provided by others using materials and methods acceptable to the laminate floor covering manufacturer.
 - b. Repairs to damage by others during and after completion of work.
8. Temporary heat, general lighting, power, sanitation and water for general construction;
9. Hoarding;
10. Final Cleanup before turnover;

11. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
12. Firestopping;
13. Supply and maintenance of garbage and recycling bins for construction waste;
14. Removal of construction waste from job site;
15. General site security.

Sub-Section C: Other Flooring

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Verification of moisture and alkalinity testing that was not done by others.
2. Minor preparation of substrate surfaces including filler and primer, sub-floors to be made level and true by others (General Contractor).
3. Approved panel underlayment when specified prior to the installation of flooring.
4. Approved moisture barrier or sheathing membrane when specified.
5. Acclimatization of all materials.
6. Approved resilient / acoustical underlayment when specified.
7. Following types of flooring:
 - a. Bamboo flooring.
 - b. Cork flooring.
 - c. Other flooring types not listed in other sections.
8. Following types of bases:
 - a. Vinyl and rubber base.
9. Flooring accessories, including:
 - a. Mouldings and trims.
 - b. Reducing / transition strips.
 - c. Thresholds.
 - d. Expansion fillers.
10. Adhesives with application.
11. All site-applied surface sealers, stains, and finishes including site touch-up of factory applied finishes or pre-finished flooring.
12. Removal of packaging material and remnants specifically pertaining to this trade.
13. Provision and packaging of maintenance materials and excess stock as specified.
14. Provision of care and maintenance instructions for Owner's Maintenance Manual.
15. Caulking to own work where required.
16. All flooring cash allowance and/or contingency funds specifically called for in the Contract Documents (specifications).
17. Trade specific lighting to perform tasks;
18. Trade cleanup – cleanup for work carried out by this trade;
19. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
20. Warranty and/or Guarantee;
21. Submittals and O&M documentation as specified in the tender documents;
22. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
23. Protection of other trades' work from damage when performing this trades scope of work;
24. Section 4: Commissioning as it applies to this subcontractor scope;
25. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Secure, heated on-site storage.
2. Water.
3. Barricades.
4. Hoisting.
5. Substrate testing including moisture (vapour emission) and alkalinity tests. Note that this work may be included in the work where flooring is the only contract (as in the installation of hardwood flooring in existing rooms or areas) subject to prior agreement with the Owner;
6. All other preparation of surfaces required for installation of resilient flooring including substrate preparation, and supply and installation of self-leveling cementitious underlayment and poured latex toppings;

7. Trowelled-on latex underlayment except when specified in conjunction with specific installation systems.
8. Maintenance and protection of installed flooring prior to Substantial Performance. Such protection shall be provided by others using materials and methods acceptable to the floor covering manufacturer.
9. Repairs to damage by others during and after completion and acceptance of the work.
10. Cleaning and sealing or the application of any other type of protective coatings, unless specified.
11. Final cleaning;
12. Base to demountable partitions, unless specified.
13. Temporary heat, general lighting, power, sanitation and water for general construction;
14. Hoarding;
15. Final Cleanup before turnover;
16. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
17. Firestopping;
18. Supply and maintenance of garbage and recycling bins for construction waste;
19. Removal of construction waste from job site;
20. General site security.

Section 33: Special Wall Coverings

DEFINITION:

This tender shall be for the supply and installation of Permanent Type Coating Systems having the following distinguishing characteristics:

- (a) Applied only by factory trained franchised applicators; and
- (b) multi-coat system producing a finished dry film thickness of not less than 250 um with or without obtaining special decorative features by incorporating rock aggregate, marble chips, coloured ceramic granules, sound absorbing particles, reinforcing fibreglass, etc.; and
- (c) Test results have been published in reference to the following: incombustibility, chemical resistance, exceptional durability eliminating deterioration due to oxidation, moisture, and ultra violet exposure, abrasion resistance, elasticity, etc.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Coatings:
 - (a) Clear, natural and pigmented sealants - where supplied only by franchise manufacturers;
 - (b) Cementitious coatings where supplied only by franchise manufacturers;
 - (c) Epoxies - 2 components, catalyst cured, minimum of 250 um dry film thickness exclusive of filler coats;
 - (d) Exposed aggregate coatings;
 - (e) Neoprene - hypalon;
 - (f) Textured coatings - using polyurethane, rubber vinyl acoustical particles;
 - (g) Vinyl acrylics - interior, exterior, textured;
 - (h) Vinyl;
2. Hoisting;
3. Inspection;
4. Temporary ventilation during application of product;
5. Scaffolding/man lifts where required to perform work by this trade scope;
6. Trade specific lighting to perform tasks;
7. Trade cleanup - cleanup for work carried out by this trade;
8. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
9. Warranty and/or Guarantee;
10. Submittals and O&M documentation as specified in the tender documents;
11. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
12. Protection of other trades' work from damage when performing this trades scope of work;
13. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Paint products generally sold over the counter and applied by the purchaser;
2. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
3. Temporary heat, general lighting, power, sanitation and water for general construction;
4. Hoarding;
5. Final Cleanup before turnover;
6. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
7. Firestopping;
8. Supply and maintenance of garbage and recycling bins for construction waste;
9. Removal of construction waste from job site;
10. General site security.

Section 34: Spray Applied Fireproofing

DEFINITIONS:

This tender shall be for the supply and installation of spray applied fireproofing including all components necessary for a complete installation;

Spray applied fireproofing may comprise various products performing the function of providing a fire resistant surface as an integral part of an overall construction assembly. The governing factor and criteria are the Classification of Assemblies based on Fire Resistance Tests performed by ULC and Underwriters Laboratories Inc.; Spray fireproofing is normally applied by a franchised applicator appointed by the manufacturer;

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Fibrous fireproofing, cementitious fireproofing, surface sealers, primers and paints as recommended by the manufacturer;
2. Hoisting;
3. Inspection;
4. Materials performing a dual function of providing spray fireproofing and spray insulation when specified under spray applied fireproofing;
5. Special ventilation when required during application;
6. Surface treatment;
7. Supply and/or installation of materials and other work that may be assigned by pretender riding;
8. Scaffolding/man lifts where required to perform work by this trade scope;
9. Trade specific lighting to perform tasks;
10. Trade cleanup - cleanup for work carried out by this trade;
11. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
12. Warranty and/or Guarantee;
13. Submittals and O&M documentation as specified in the tender documents;
14. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
15. Protection of other trades' work from damage when performing this trades scope of work;
16. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Drywall fireproofing;
2. Plaster and stucco fireproofing;
3. Sprayed soundproofing and sprayed air seal including spray applied fire retardant to same;
4. Vermiculite, vermiculite concrete.
5. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
6. Temporary heat, general lighting, power, sanitation and water for general construction;
7. Hoarding;
8. Final Cleanup before turnover;
9. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
10. Firestopping;
11. Supply and maintenance of garbage and recycling bins for construction waste;
12. Removal of construction waste from job site;
13. General site security.

Section 35: Firestopping

DEFINITIONS:

This tender shall be for the supply and installation of materials and components, including incidental items required for a complete installation, for the sealing, with firestopping materials, of penetrations through, and junctions between, fire-rated walls, floors, ceilings and roof structure.

Firestopping materials shall be those that will remain in place and prevent the passage of flame or hot gasses when subject to the standard fire exposure in ULC-S115, "Standard Methods of Fire Endurance Test of Building Construction Materials", for a period of time equal to the fire protection rating required for the specified grade of fire separation.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Forms or damming;
2. Primers;
3. Testing when specified to be part of this subcontract.
4. Scaffolding/man lifts where required to perform work by this trade scope;
5. Trade specific lighting to perform tasks;
6. Trade cleanup - cleanup for work carried out by this trade;
7. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
8. Warranty and/or Guarantee;
9. Submittals and O&M documentation as specified in the tender documents;
10. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
11. Protection of other trades' work from damage when performing this trades scope of work;
12. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
13. Trade specific Firestopping. The Firestopping contractor will submit separate prices to the following trade scopes:
 - A. Prime Mechanical – the prime mechanical contractor will carry the Firestopping costs for ALL trades in the mechanical scope.
 - B. Electrical – will carry the Firestopping costs for All Electrical.
 - C. General Contractor – will carry the Firestopping costs for ALL trade scopes other than Mechanical and Electrical.

EXCLUDED:

1. Backing, supports and finishes for other trades;
2. Caulking (other than firestopping);
3. Centering or alignment of pipes, conduit or devises passing through a penetration;
4. Fire rating to recessed fixtures in drywall systems (see Drywall Included);
5. Fire rating to recessed fixtures in lath, plaster and stucco systems (see Lath, Plaster and Stucco Included);
6. Fire rating to recessed fixtures in component ceiling systems (see Component Ceiling Systems Included);
7. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
8. Temporary heat, general lighting, power, sanitation and water for general construction;
9. Hoarding;
10. Final Cleanup before turnover;
11. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
12. Supply and maintenance of garbage and recycling bins for construction waste;
13. Removal of construction waste from job site;
14. General site security.

Section 36: Painting

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Application and/or removal of protective and/or decorative coatings except those covered under special wall coatings;
2. Application of Coatings of:
 - (a) Bitumens applied as paints;
 - (b) Emulsions;
 - (c) Fibreglass;
 - (d) Hypalon;
 - (e) Lacquers;
 - (f) Mastic;
 - (g) Paints;
 - (h) Plastics;
 - (i) Stains;
 - (j) Varnishes;
3. Application, using pastes or adhesives, of:
 - (a) Burlap;
 - (b) Cambric-backed wood veneers;
 - (c) Cottons;
 - (d) Damasks;
 - (e) Grass cloth;
 - (f) Muslin;
 - (g) Paper;
 - (h) Paper backed metal foils;
 - (i) Rubber sheeting for tank linings;
 - (j) Vinyl wall fabrics;
4. Filling of nail holes, on-site only (see Architectural Woodwork Included & Excluded);
5. Fire-retardant paint and clear coating to architectural woodwork and wood panelling, excluding pressure treated items;
6. Hoisting;
7. Inspection;
8. Miscellaneous Applications of:
 - (a) Gold leaf;
 - (b) Metallizing;
 - (c) Silver leaf;
9. On-site mechanical and electrical painting, including primary colour coding of all pipes, ducts and equipment. Mechanical or electrical contractor to identify where required;
10. Painting of recreational lines and markings on resilient floor coverings;
11. Scaffolding/man lifts where required to perform work by this trade scope;
12. Trade specific lighting to perform tasks;
13. Trade cleanup - cleanup for work carried out by this trade;
14. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
15. Warranty and/or Guarantee;
16. Submittals and O&M documentation as specified in the tender documents;
17. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
18. Protection of other trades' work from damage when performing this trades scope of work;
19. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Clear finishes or hardeners to concrete floors;
2. Clear finishes to exterior masonry (see Masonry Included);
3. Coatings specified under special wall coatings;
4. Filling of nail holes in Architectural Woodwork specified to be shop applied finished;
5. Mechanical and electrical stencilling, plastic decals for flow arrows, identification, plastic and/or canvass, coloured tape and/or secondary banding;
6. Painting of recreational lines and markings and finishes on hardwood floors;
7. Painting to temporary hoardings or dust walls;

8. Primer paint and priming for sprayed drywall texture to drywall, ceiling and concrete surfaces (see Drywall Included);
9. Priming to miscellaneous metals and structural steel as defined in miscellaneous steel, structural steel and mechanical scopes;
10. Shop applied finishes to architectural woodwork (see Architectural Woodwork Included).
11. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
12. Temporary heat, general lighting, power, sanitation and water for general construction;
13. Hoarding;
14. Final Cleanup before turnover;
15. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
16. Firestopping;
17. Supply and maintenance of garbage and recycling bins for construction waste;
18. Removal of construction waste from job site;
19. General site security.

Section 37: Prefinished Demountable Partitions

DEFINITIONS:

Prefinished – means exposed components that do not require jobsite finishing.

Demountable – readily dismantled and re-erected using prefinished component parts.

This contractor shall include the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this Scope.

INCLUDED:

1. Chalkboards, tackboards and display boards which are incorporated and an integral part in the prefinished demountable partition system;
2. All prefinished components and accessories for prefinished demountable partitions including aluminum, plastic and pre-finished metal frames, battens, bases, ceiling trim, etc. which are part of the demountable manufacturer's system;
3. Factory applied vinyl covered board, (except where used as lay in panels for component ceiling systems):
 - a. be supplied and installed by the prefinished demountable partition contractor when prefinished demountable partitions are specified on the project;
 - b. be supplied and installed by the drywall contractor when prefinished demountable partitions are not specified on the project;
4. Aluminum door and window frames for use in demountable partitions;
5. Installation only of hollow metal door and window frames in demountable partitions;
6. Matching perimeter prefinished panels and/or trims as specified;
7. Supply of glass stops and or glazing beads for installation by the Glass and Glazing contractor;
8. Hoisting;
9. Prefinished surfaces which form part of the prefinished demountable system;
10. Sound Insulations and internal linings for prefinished demountable partitions;
11. Steel studding, steel furring, etc. for prefinished demountable partitions, except where drywall is installed on one side (see Drywall Included);
12. Scaffolding/man lifts where required to perform work by this trade scope;
13. Trade specific lighting to perform tasks;
14. Trade cleanup - cleanup for work carried out by this trade;
15. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
16. Warranty and/or Guarantee;
17. Submittals and O&M documentation as specified in the tender documents;
18. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
19. Protection of other trades' work from damage when performing this trades scope of work;
20. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Supply and installation of backing in steel stud partitions – by others;
2. Folding partitions, operable walls and moveable acoustical screens;
3. All gypsum board application requiring taping and filling on the jobsite;
4. Supply and installation of glass and glazing;
5. Supply and installation of wood frames, doors, hardware etc.;
6. Supply and installation of all doors and hardware;
7. Surface mounted chalkboards, tackboards, display cabinets, chair rails, handrails and any prefinished millwork items;
8. Staining, varnishing or painting of doors and metal frames;
9. Temporary heat, light, power and sanitation;
10. Chalkboards, tackboards, display cabinets, chair-rails, handrails, and any prefinished millwork items.

11. Supply of hollow metal frames or lights and the sorting and loading of hollow pressed steel door and/or window frames;
12. Supply and installation of glass in hollow metal frames;
13. Backing and preparation of aluminum frames to receive hardware;
14. Rubber base;
15. Temporary heat, general lighting, power, sanitation and water for general construction;
16. Hoarding;
17. Final Cleanup before turnover;
18. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
19. Firestopping;
20. Supply and maintenance of garbage and recycling bins for construction waste;
21. Removal of construction waste from job site;
22. General site security;
23. Supply and installation of backing in steel stud partitions – by others;
24. Vinyl coated gypsum lay in panels, see Component Ceiling Systems Included.

Section 38: Raised Access Flooring

DEFINITION:

This tender is for the supply and installation of manufactured raised access floor systems and related accessories.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Access floor panels prefinished or unfinished, constructed of one or more of the following:
 - (a) Light weight concrete;
 - (b) Steel clad wood core;
 - (c) Welded metal/aluminum;
 - (d) Prefinished floor finishes when incorporated as integral part of the access floor panel:
 - (i) Carpet;
 - (ii) High pressure plastic laminate;
 - (iii) Resilient floor coverings;
 - (iv) Other;
2. Access floor substructure consisting of:
 - (a) Adhesives, screws, bolts and anchors;
 - (b) Pedestal base plates;
 - (c) Pedestal heads;
 - (d) Sound deadening pads and/or covers;
 - (e) Stringers.
3. Accessories (pre-manufactured only):
 - (a) Electrical service centres (packaged equipment) when incorporated into floor panels;
 - (b) Fascia trims;
 - (c) Gaskets;
 - (d) Grilles that are part of the integrated floor system;
 - (e) Grommets;
 - (f) Handrails;
 - (g) Metal and rubber nosing;
 - (h) Panel lifting devices;
 - (i) Panel trims and mouldings;
 - (j) Perforated damped or undamped access floor panels when specified;
 - (k) Ramps complete with rubber mats and runners;
 - (l) Steps complete with floor finish;
 - (m) Under floor baffles and/or plenum dividers;
4. Cleaning and final preparation of prefinished panels as specified;
5. Cutting of panels for electrical and mechanical services and equipment when indicated on drawings;
6. Hoisting and material handling;
7. Inspection;
8. Maintenance material;
9. Metal and/or wood shims;
10. Protection of finished surfaces;
11. Testing;
12. Under-floor cross bridging when specified;
13. Trade specific lighting to perform tasks;
14. Trade cleanup - cleanup for work carried out by this trade;
15. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
16. Warranty and/or Guarantee;
17. Submittals and O&M documentation as specified in the tender documents;

18. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
19. Protection of other trades' work from damage when performing this trades scope of work;
20. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;

EXCLUDED:

1. Baseboards:
 - a) Carpet base and mouldings (unless material finish of access floor) (see Carpeting);
 - b) Prefinished extruded vinyl plastic (see Prefinished Demountable Partitioning);
 - c) Rubber and vinyl baseboard (see Resilient Floor Coverings);
2. Caulking;
3. Connection of building ground (see Electrical Included);
4. Electrical connection of service centres;
5. Floor finishes when jobsite applied over access floor panels, e.g. carpet, tile;
6. Ledger angles and anchors set into concrete;
7. Mechanical grilles which are not a part of the integrated floor system;
8. Preparation of access floor panels to receive jobsite applied floor coverings;
9. Under-floor subfloor preparation;
10. Wood blocking, trims and casings for materials other than those used by this trade.
11. Temporary heat, general lighting, power, sanitation and water for general construction;
12. Hoarding;
13. Final Cleanup before turnover;
14. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
15. Firestopping;
16. Supply and maintenance of garbage and recycling bins for construction waste;
17. Removal of construction waste from job site;
18. General site security.

Section 39: Dumbwaiters

DEFINITION:

This tender shall be for supply and installation of dumbwaiters and all components necessary for a complete installation.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Electrical wiring and conduit from all controllers to signals and operating circuits;
2. Hoisting;
3. Inspection;
4. Licenses;
5. Scaffolding/man lifts where required to perform work by this trade scope;
6. Trade specific lighting to perform tasks;
7. Trade cleanup - cleanup for work carried out by this trade;
8. Warranty and/or Guarantee;
9. Submittals and O&M documentation as specified in the tender documents;
10. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
11. Protection of other trades' work from damage when performing this trades scope of work;
12. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
13. Section 4: Commissioning as it applies to this trade scope.

EXCLUDED:

1. Providing feeder wires to controllers;
2. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
3. Temporary heat, general lighting, power, sanitation and water for general construction;
4. Hoarding;
5. Final Cleanup before turnover;
6. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
7. Firestopping;
8. Supply and maintenance of garbage and recycling bins for construction waste;
9. Removal of construction waste from job site;
10. General site security.

Section 40: Elevators

DEFINITION:

This tender shall be for supply and installation of elevators and all components necessary for a complete installation.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Door operating equipment;
2. Drilling and casing plunger hole for hydraulic elevators;
3. Electric elevators;
4. Electrical wiring and conduit from all controllers to signals and operating circuits;
5. Elevator doors and sills;
6. Elevator entrances (except freight elevator entrance frames);
7. Hoisting;
8. Hydraulic elevators;
9. Inspection;
10. Licenses;
11. Parking garage hoists;
12. Piping incidental to hydraulic elevators;
13. Speed-ramps;
14. Supply and installation of temporary hoisting beams required for use of elevator installer only.
15. Scaffolding/man lifts where required to perform work by this trade scope;
16. Trade specific lighting to perform tasks;
17. Trade cleanup - cleanup for work carried out by this trade;
18. Warranty and/or Guarantee;
19. Submittals and O&M documentation as specified in the tender documents;
20. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
21. Protection of other trades' work from damage when performing this trades scope of work;
22. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
23. Section 4: Commissioning as it applies to this trade scope.

EXCLUDED:

1. Hoisting and divider beams;
2. Providing feeder wires to controllers;
3. Providing the hoistway structure including supports for both guide rails and machine beams;
4. Providing the pit and machine room;
5. Providing ventilation of pit, hoistway and machine room;
6. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
7. Temporary heat, general lighting, power, sanitation and water for general construction;
8. Hoarding;
9. Final Cleanup before turnover;
10. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
11. Firestopping;
12. Supply and maintenance of garbage and recycling bins for construction waste;
13. Removal of construction waste from job site;
14. General site security.

Section 41: Moving Walkways

DEFINITION:

This tender shall be for supply and installation of moving walkways and all components necessary for a complete installation.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Electrical wiring and conduit from all controllers;
2. Hoisting;
3. Inspection;
4. Licenses;
5. Scaffolding/man lifts where required to perform work by this trade scope;
6. Trade specific lighting to perform tasks;
7. Trade cleanup - cleanup for work carried out by this trade;
8. Warranty and/or Guarantee;
9. Submittals and O&M documentation as specified in the tender documents;
10. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
11. Protection of other trades' work from damage when performing this trades scope of work;
12. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
13. Section 4: Commissioning as it applies to this trade scope.

EXCLUDED

1. Providing feeder wires to controllers;
2. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
3. Temporary heat, general lighting, power, sanitation and water for general construction;
4. Hoarding;
5. Final Cleanup before turnover;
6. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
7. Firestopping;
8. Supply and maintenance of garbage and recycling bins for construction waste;
9. Removal of construction waste from job site;
10. General site security.

Section 42: Escalators

DEFINITION:

This tender shall be for supply and installation of escalators and all components necessary for a complete installation.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Electrical wiring and conduit from all controllers to signals and operating circuits;
2. Hoisting;
3. Inspection;
4. Licenses;
5. Scaffolding/man lifts where required to perform work by this trade scope;
6. Trade specific lighting to perform tasks;
7. Trade cleanup - cleanup for work carried out by this trade;
8. Warranty and/or Guarantee;
9. Submittals and O&M documentation as specified in the tender documents;
10. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
11. Protection of other trades' work from damage when performing this trades scope of work;
12. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
13. Section 4: Commissioning as it applies to this trade scope.

EXCLUDED:

1. Providing feeder wires to controllers;
2. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
3. Temporary heat, general lighting, power, sanitation and water for general construction;
4. Hoarding;
5. Final Cleanup before turnover;
6. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
7. Firestopping;
8. Supply and maintenance of garbage and recycling bins for construction waste;
9. Removal of construction waste from job site;
10. General site security.

Section 43: Mechanical

The format under this Trade Definition is based on the premise that the mechanical tender normally includes the basic categories of plumbing, heating, ventilation and sheet metal, refrigeration, HVAC controls, sprinklers, insulation and incinerators and all items commonly associated with the above categories which are normally laid out in the drawings and specifications. The purpose of this definition is to identify, which of the subcontractors in the mechanical division are responsible for each sub-division of the work and it does not limit or restrict the work as defined within the specifications.

DEFINITIONS:

This Trade Definition consists of seven sections, as follows:

- Sub-Section A: General Mechanical Items -Items common to more than one section of the Mechanical Division;
- Sub-Section B: Prime Mechanical;
- Sub-Section C: Ventilation and Sheet Metal;
- Sub-Section D: HVAC Controls;
- Sub-Section E: Refrigeration;
- Sub-Section F: Insulation;
- Sub-Section G: Sprinkler;

EACH TENDER IN THIS CATEGORY SHALL INCLUDE AND EXCLUDE APPLICABLE ITEMS, UNLESS OTHERWISE NOTED WITHIN THE DEFINITION, FROM SECTION 1 PLUS ALL OTHER ITEMS FROM THE SPECIFIC SECTION FOR WHICH THE SUB-BID OR SUB-SUB BID APPLIES.

Packaged equipment, so specified under the mechanical scopes, shall mean pre-wired equipment supplied in a completely electrically operable state after one final connection of power wiring, and remote control connections if specified.

Sub-Section A: General Mechanical Items

The following items and requirements are common to more than one section of the Mechanical Division and, wherever applicable, shall be included or excluded, unless specifically noted in this trade definition, by the Prime Mechanical subcontractor and each of the sub-trade contractors submitting bids to the Prime Mechanical subcontractor:

INCLUDED:

1. Access panels, supply only, to provide access for servicing mechanical systems/components supplied under this Scope;
2. Alignment and grouting for mechanical equipment;
3. Anchor bolts, bases and supports made of steel for mechanical equipment;
4. Catwalks, ladders and gratings supporting and/or servicing equipment, where shown on mechanical drawings only;
5. Demolition of existing installations when the materials are to be re-used or retained as specified;
6. Excavation:
 - a) Exterior excavation including cutting of existing surface materials as required, shoring, pumping, bedding and the first 300 mm of protective cover. Backfill, tamping and disposal of surplus excavated material by others (see Sub-Section B, Excluded).
 - b) Interior excavation including shoring, pumping, bedding and first 300 mm of protective cover. Backfill, tamping and disposal of surplus excavated material by others (see Sub-Section B, Excluded);
7. Hoisting;
8. Identification and labelling, other than painted, including plastic decals for arrow flow, plastic and/or canvas, coloured tape and/or secondary colour banding (see Sub-Section A, Excluded);
9. Manufacturer's warranty only beyond the normal one year warranty period;
10. Operation and maintenance manuals and as-built and/or record drawings. Sub-trade contractors are responsible

to provide such items specific to their work, of such quality and quantity as may be specified, to the Prime Mechanical contractor who shall be responsible for tabulating, binding, coordinating and final submission of such documentation, including transfer drafting and final as-built as specified;

11. Permits, licenses and inspections as required for work under this Scope;
12. Priming to catwalks, ladders, gratings, steel supports, hangers and other miscellaneous support steel supplied under this Scope (See Painting Excluded);
13. Roughing-in and connecting only, as shown on the tender documents, for specialty items, cabinets or equipment that is supplied and installed by others;
14. Sleeving as specified for mechanical systems, except under Sub-Section F Insulation;
15. Supply of trims and/or mouldings for radiant panels when specified to be supplied with the radiant panel. Installation by others;
16. Variable speed controllers including those which are mechanically or hydraulically initiated and operated and those which are electrical when specified as part of packaged equipment;
17. Vibration isolation for equipment supplied under this Scope including steel and metal frames/inertia bases for equipment bases. (Prime Mechanical contractor shall include isolation for HVAC Controls air compressors);
18. Firestopping for mechanical installations.
19. Scaffolding/man lifts where required to perform work by this trade scope;
20. Trade specific lighting to perform tasks;
21. Trade cleanup - cleanup for work carried out by this trade;
22. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
23. Warranty and/or Guarantee;
24. Submittals and O&M documentation as per the tender documents. To be provided by each trade scope;
25. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section (Prime Mechanical contractor to include Cash Allowance and/or contingency funds for mechanical sub-trade contractors);
26. Protection of other trades' work from damage when performing this trades scope of work;
27. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
28. Section 4: Commissioning as it applies to this trade scope;

EXCLUDED:

1. Alterations of services, as specified in the tender documents, required for specialty items, cabinets or equipment not supplied under this subcontract;
2. Backing and backing materials, supply and installation;
3. Back-plastering for fire protection;
4. Building permits;
5. Catwalks, ladders, gratings and supports where detailed on architectural or structural drawings (see Included);
6. Cutting, coring and patching - when pertaining to renovations, alterations or additions;
7. Electrical: All 120V wiring is supplied and installed by the electrical contractor.
 - (a) Motor starters, multi-speed and protection switches, including variable speed drives which are electrically initiated or operated, without exception other than that equipment which forms an integral part of packaged equipment requiring one power connection only;
 - (b) Electrical wiring for controls which directly switch the power line to motors and duct heaters ("directly" means not through the magnetic coil (See Electrical control wiring and power wiring) ;
8. Frost boxes;
9. Painting (on-site) (see Painting Included);
10. Poured-in-place concrete;
11. Supply and installation of concrete for equipment metal frames/inertia bases is by others;
12. Variable speed drives which are electrically initiated or operated unless specified to be part of packaged equipment;
13. Waterproofing and/or sound proofing to wall, floor and ceiling penetrations.
14. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
15. Temporary heat, general lighting, power, ventilation, sanitation and water for general construction;
16. Hoarding;
17. Final Cleanup before turnover;

18. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
19. Supply and maintenance of garbage and recycling bins for construction waste;
20. Removal of construction waste from job site;
21. General site security.
22. Mark out backing in walls as required for all equipment provided by this scope.

Sub-Section B: Prime Mechanical

INCLUDED:

1. Air compressors (except as noted in glass trades scopes for automatic doors, HVAC Controls and Instrumentation Included), vacuum pumps, piping, regulators and accessories. Also oxygen and acetylene systems and accessories;
2. Counter tops with integral sink or basin, including counter-tops, splash-backs and fascia of the same material connected thereto (see Architectural Woodwork Excluded);
3. Distribution and installation of thermowells, control valves, remotely controlled sluice gates, orifice plates and primary measuring elements as related to instrumentation (see Instrumentation Excluded);
4. Drip pans under mechanical piping;
5. Dry mop, wet mop and vacuum systems (see Electrical Included);
6. Electric boilers;
7. Emergency Generators:
 - (a) Piping for fuel, coolants and exhaust for generator prime movers. Flex connections, radiator, and muffler to be supplied with units (see Electrical Included);
 - (b) Fuel tanks for power plant equipment complete with dispensing units and piping (see Electrical Included);
 - (c) For remote radiators only, piping and associated equipment including valves, pumps, expansion tanks and coolant;
8. Fire Standpipe System: Standalone type when not connected to a combination sprinkler/standpipe system fire pump, and including:
 - (a) Fire pumps, control panels, motors, engine and fuel system, fire hose cabinets, fire extinguishers and fire extinguisher cabinets, excluding wiring and connections (see Electrical Included);
 - (b) Carbon dioxide, dry chemical and halon systems including piping, outlets, associated detectors and control panels, including integrated kitchen equipment fire protection systems, excluding wiring and connections (see Electrical Included);
9. Supply of flashing for drains and plumbing vents. Installation by others;
10. Frames and covers made of cast iron for catch basins and/or manholes. Trade name gratings, regardless of material. Sump frames and covers and/or non-ferrous items not covered in miscellaneous steel (see Miscellaneous Steel Included);
11. Gas vent grilles;
12. Grilles for top outlet and bottom inlet for wall fin radiation, induction units and cabinet heaters when installed in architectural cabinets including extension collars (architectural cabinets supplied and installed by others);
13. Hospital and hydro-therapy equipment that is connected to water and/or waste;
14. Humidifiers except in furnace;
15. Incinerators c/w burners and draft inducers. Breeching, stack and refractory lined chimneys c/w counter flashing, storm collars, wall brackets and supports;
16. Induction units;
17. Laboratory sinks, faucets, gas outlets and factory-built fume hoods and/or cabinets, complete with all components, except when an integral part of casework;
18. Lubrication equipment, fuel and oil storage tanks complete with dispensing units and piping;
19. Medical gas systems, piping and equipment;
20. Operational gas tests;
21. Packaged self-contained air cooled water chillers including start-up when no field installed inter-connecting refrigeration piping required for these chillers;
22. Piping and connections to automotive hoists (hoists supplied and installed by others);

23. Pneumatic tube systems and related controls;
24. Radiant water or liquid heating panels;
25. Self-contained control valves:
 - (a) Differential pressure;
 - (b) Domestic hot water;
 - (c) Pressure;
 - (d) Temperature (including radiator valves);
26. Sewage Disposal:
 - (a) Prefabricated septic tanks and supply and install fittings and piping for that poured- in-place;
 - (b) Leeching lines for sewage disposal systems (including backfill of gravel, straw and loam to provide a complete installation for field to finish grade);
27. Shower cabinets, complete with manufactured receptors, doors or curtains and rods;
28. Site services including: sanitary and storm sewers (except culverts for yard drainage), precast and masonry catch basins and manholes, water services and fire hydrants;
29. Soap dispensing systems complete with piping and tanks;
30. Solar water or liquid heating systems (see Electrical 95 Included);
31. Steam cleaners/steam jenny permanently connected to water or waste;
32. Steel chimneys or breeching heavier than 10ga. when not refractory lined;
33. Supply and installation of companion flanges for orifice plates (see Instrumentation Excluded);
34. Supply and installation of supports for radiant panels exceeding 610 mm x 1220 mm;
35. Swimming pool mechanical equipment, including supply and drain piping, except when packaged pool is specified;
36. Thermostats not directly involving HVAC control systems;
37. Water service for external irrigation systems, suitably sized, to exterior of building including such back-flow prevention devices, metres or other equipment as necessary to comply with all government codes and regulations (see Exterior Landscaping Included);
38. Weeping tile for sewage disposal systems only;
39. Work/materials/equipment included under Mechanical – Sub Section A;
40. Excavation and first 1' of pipe cover for interior underground services.
41. Trade specific Firestopping. The Firestopping contractor will submit separate prices to the following trade scopes:
 - A. Prime Mechanical – the prime mechanical contractor will carry the Firestopping costs for ALL trades in the mechanical scope.
 - B. Electrical – will carry the Firestopping costs for all Electrical.
 - C. General Contractor – will carry the Firestopping costs for ALL trade scopes other than Mechanical and Electrical.
42. Scaffolding/man lifts where required to perform work by this trade scope;
43. Trade specific lighting to perform tasks;
44. Trade cleanup - cleanup for work carried out by this trade;
45. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
46. Warranty and/or Guarantee;
47. Submittals and O&M documentation as specified in the tender documents;
48. Cash Allowance and/or contingency funds when a specific dollar amount is listed in Division 01 or the mechanical specifications (Prime Mechanical contractor to include Cash Allowance and/or contingency funds for mechanical sub-trade contractors);
49. Protection of other trades' work from damage when performing this trades scope of work;
50. Section 4: Commissioning as it applies to this subcontractor scope;
51. Sleeving as specified for this trade.

EXCLUDED:

1. Clean-outs or clean-out access for building weeping tile systems;
2. Cutting in and installation of door grilles;
3. Excavating and backfilling for underground tanks or dry well pits (see Sub Section A, Included);
4. Instrumentation where not related to HVAC controls;
5. Supply and installation of automotive hoists;

6. Trims or mouldings for radiant panels, except when supplied with the radiant panel;
7. Underground sprinkler and/or irrigation systems (see Exterior Landscaping Included);
8. Vapour barrier and insulation not applied to Mechanical system;
9. Washroom accessories;
10. Work/materials/equipment excluded under Mechanical – Sub Section A.
11. Services and service charges for gas, water and sewer as levied by municipality or utility company.
12. Medical gas bottles or initial medical gas system charging;
13. Medical gas system certification costs;
14. Backfill and compaction of interior underground services after first 300mm of cover.
15. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
16. Temporary heat, general lighting, power, sanitation and water for general construction;
17. Hoarding;
18. Final Cleanup before turnover;
19. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
20. Supply and maintenance of garbage and recycling bins for construction waste;
21. Removal of construction waste from job site;
22. General site security.

Sub-Section C: Ventilation and Sheet Metal

INCLUDED:

1. Air curtains except gas or oil fired units, where no duct connections are required;
2. Air duct silencers;
3. Air filters:
 - (a) Charcoal and odour filters;
 - (b) Dry-pak filters;
 - (c) Electronic/electrostatic filters;
 - (d) Filter gauges;
 - (e) Flat permanent type;
 - (f) Grease filters (when canopy supplied by this contractor);
 - (g) Roll type filters;
 - (h) Throw-away type,Except for packaged air handling units that include filter sections
4. Air mixing baffles and air blenders;
5. Air terminal boxes complete with electric, electronic or pneumatic actuators, controllers and integral fan section, electric or water coils;
6. Air troffer boots;
7. Airflow measuring devices (self-contained) when used for measuring only and not interfaced with any other system or device;
8. Attenuator boxes, tabulators and pressure reducing valves for air supply;
9. Back-draft and barometric dampers, self-acting;
10. Balancing of air system including sound measurement pertaining to air systems;
11. Breeching and/or chimneys, sealed or otherwise, 3.5 mm (10 gauge) or lighter, Types A, B and C, not refractory lined; Breeching & Chimneys—: Revised Breeching and/or chimneys, 3.5mm (10 gauge) or lighter, Types A, B, and C, not factory lined; ---to---Breeching and/or chimneys, sealed or otherwise, 3.5mm (10 gauge) or lighter, Types A, B, and C, not factory lined;
12. Canopies and hoods, domestic range hoods, ducted and non-ducted, except where called for under kitchen equipment;
13. Carbon monoxide exhaust systems complete with associated equipment and accessories, excluding monitors;
14. Combination fire/smoke dampers; including electric, electronic or pneumatic actuators and end switches;
15. Counter flashing for all exterior refrigeration units;
16. Counter flashing that pertain to this scope;
17. Direct-fired make-up air units except where no duct connections are required;
18. Drain pans for equipment under the mechanical scope (not packaged units);
19. Duct cleaning;
20. Duct furnaces;
21. Duct insulation, internal only (see Excluded);
22. Dust or material collector systems complete with associated equipment and accessories, when air handling;
23. Electric duct mounted coils and electric heaters requiring duct connections;
24. Electric motor operated back draft dampers only when specified as part of an exhaust fan and/or roof hood;
25. Factory built solid fuel burning fireplaces and associated metal flues;
26. Fans:
 - (a) Booster fans,
 - (b) Exhaust air fans;
 - (c) Exhaust fans which are remote from factory built fume hoods or fume cabinets;
 - (d) Return air fans;
 - (e) Stratification elimination fans;
 - (f) Supply air fans;except for packaged units with integral water, steam or glycol coils, where fan is not separated by ductwork or flexible connection;
27. Fire dampers and fire stop flaps;

28. Flexible type air ducts;
29. Garbage and linen chutes of metal construction;
30. Gas fired unit heaters and furnaces requiring duct connections;
31. Gauges (self-contained) which indicate system air flow and/or pressure and do not interface with controls system;
32. Gravity relief vents and intakes;
33. Humidifiers when used in conjunction with furnaces;
34. Indirect fired self-contained heating and/or cooling units, including de-humidifiers, except where no duct connections are required;
35. Induced draft fans, except when in conjunction with incinerators and/or except when an integral part of a heating boiler;
36. Isolation for ventilation equipment;
37. Integrated ceiling system components as follows:
 - (a) Linear air boots when installed into but not forming an integral part of the ceiling system;
 - (b) Supply, installation and connection of flexible duct;
38. Manual smoke dampers;
39. Manually operated balancing dampers;
40. Installation of counter flashings for mechanical vents, ducts and chimneys is by others;
41. Paint spray booths;
42. Plenums and casings except concrete, masonry and drywall construction shafts or tunnels in which case only an internal metal liner and/or internal insulation, if specified, will be provided;
43. PVC/plastic combustion air and flue venting;
44. Registers, grilles, diffusers and supply only of door grilles;
45. Self-contained duct-mounted heat reclaiming units requiring no other connections;
46. Self-contained gas-fired classroom heating and ventilating units complete with all shelving, counters and accessories;
47. Sheet metal and non-metallic air handling ductwork including hangers and supports except concrete, masonry and drywall construction shafts or tunnels in which case only an internal metal liner and/or internal insulation, if specified, will be provided;
48. Spray eliminators in built-up plenums;
49. Thermometers (self-contained) which indicate system air temperatures, and do not interface with controls system;
50. VAV box operators, controllers pneumatic;
51. Ventilation and exhaust ducting for emergency generators;
52. Weather louvres (mechanical and matching architectural) complete with bird screen, related sheet metal blank-off panels and filler pieces, except for louvres of cladding materials having the same finish as the wall cladding system, and forming an integral part thereof;
53. Welded sheet metal kitchen exhaust duct including the supply and installation of associated high temperature insulation and metal liner to protect combustible materials;
54. Welding fume extraction systems complete with central blower/turbine dust collection unit c/w PVC ducting and related accessories;
55. Work/materials/equipment included under Mechanical – Sub Section A;
56. Electric Heating that is fan powered and/or ducted (all other electric heat is by the Electrical Contractor).
57. Scaffolding/man lifts where required to perform work by this trade scope;
58. Trade specific lighting to perform tasks;
59. Trade cleanup - cleanup for work carried out by this trade;
60. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
61. Warranty and/or Guarantee;
62. Submittals and O&M documentation as specified in the tender documents;
63. Protection of other trades' work from damage when performing this trades scope of work;
65. Sleeving as specified for this trade;
66. Supply and installation of motorized dampers (operators supplied and installed by the Building Management System contractor).

EXCLUDED:

1. External insulation of concrete, masonry and drywall shafts, tunnels or plenums;
2. Mud grilles, foot grilles, pedigril grilles including those used in conjunction with ventilation systems;
3. Indirect fired, self-contained heating and/or cooling units, including dehumidifiers, except where duct connections are required;
4. Ventilation grilles, caps and/or louvres for: (a) attic, (b) soffit or (c) crawl spaces (see Included);
5. Work/materials/equipment excluded under Mechanical – Sub Section A;
6. Electric Heating, except where duct connections are required;
7. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
8. Temporary heat, general lighting, power, sanitation and water for general construction;
9. Hoarding;
10. Final Cleanup before turnover;
11. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
12. Supply and maintenance of garbage and recycling bins for construction waste;
13. Removal of construction waste from job site;
14. General site security.

The following items **Excluded** from this sub-trade tender will be **Included** by the Prime Mechanical contractor:

15. Air washers,
16. Coil supports and hangers;
17. Drip pans under mechanical piping;
18. Dry mop, wet mop and vacuum systems;
19. Fume cabinets;
20. Gas fired unit heaters and furnaces not requiring duct connections;
21. Gas vent grilles;
22. Gas, water and rain connections;
23. Gauges indicating Air Flow and/or Pressure and Thermometers for Packaged Air Handling Units supplied by the Prime Mechanical Contractor;
24. Operational gas tests;
25. Cash Allowance and/or contingency funds when a specific dollar amount is listed in Division 01 or the Ventilation and Sheet Metal specifications;
26. Spray eliminator units in packaged units only;
27. Steam grid humidifiers;
28. Vitrified pipe except when used in conjunction with air collection systems.
29. Electric heat not fan powered or ducted.
30. Scrubbers and odour/gas absorber units. (Dry type requiring only drain connections);
31. Firestopping;

Sub-Section D: Building Management System

DEFINITION:

Building Management System (BMS) is a computer-based control system installed in buildings that controls and monitors the building's mechanical and electrical equipment including but not limited to ventilation, lighting, power systems, fire systems, and security systems.

INCLUDED:

1. **Environmental Control:**
 - 1.1 Air conditioning controls (manual and automatic);
 - 1.2 Boiler controls (not specified as part of pre-wired package boilers);
 - 1.3 Control compressor c/w accessories;
 - 1.4 Cooling controls (manual and automatic);
 - 1.5 Heating controls (manual and automatic);
 - 1.6 Humidification controls (manual and automatic);
 - 1.7 Supply and installation of operators for motorized dampers (dampers supplied and installed by Ventilation contractor);
 - 1.8 Refrigeration controls (manual and automatic) and inter-locking wiring between the chiller control panel and remote chiller starters;
 - 1.9 Remote reading gauges, transmitters and recorders for HVAC controls;
 - 1.10 Supply and installation of all electric/electronic motors, controllers and sensors required to meet a VAV box Direct Digital Control Specification which forms part of the Building Management System;
 - 1.11 Ventilation and air flow controls (manual and automatic);
 - 1.12 Domestic hot water controls (not specified as part of a packaged hot water system);
 - 1.13
 - A. Conduit and wire from lighting interface module to FMS.
 - B. All network wiring and programming (including addressing & trend logs).
 - C. Qualified factory trained representative for programming and networking.
 - D. Commissioning of systems.
2. **Building Management System (BMS):**
 - 2.1 Centralization of air conditioning, heating, ventilation, humidification and refrigeration equipment operation;
 - 2.2 Centralized temperature, humidity, pressure and flow indication and recorders;
 - 2.3 Centralized control and monitoring of equipment and devices provided by other trades where identified as part of the BMS (all items provided by other trades and controlled from the BMS shall be complete with electrical contractors) Refer to Sub-Section D Section 5 - 3rd Party Integration;
3. **Building Life Safety Control and Equipment Safety Control:**
 - 3.1 High temperature warning thermostats (fire-stats);
 - 3.2 Low temperature warning thermostats (freeze protection thermostats);
 - 3.3 Motorized smoke dampers - supplied to mechanical contractor on jobsite for unloading, distribution and installation by others;
 - 3.4 Shut-down safety devices forming part of HVAC controls;
 - 3.5 Supply and installation of all gas detection and control devices inter-faced with HVAC equipment or BMS;
4. **General Items:**
 - 4.1 HVAC control wiring and/or air piping required for all BMS and HVAC controls supplied under this trade scope;
 - 4.2 electrical wiring, additional:
 - (a) Boiler feed water and water treatment control wiring;
 - (b) Control wiring for gas detection and control devices interfaced with HVAC equipment or BMS;
 - (c) Magnetic starter coils and relay coils supplied under the electrical scope and intended for HVAC controls or BMS, including inter-locking between starters, contactors and/or relays;
 - (d) Remote thermostats and remote pre-wired auxiliary control panels for packaged HVAC equipment;

- (e) Water treatment and water softening equipment for mechanical systems;
- 4.3 Electrical thermostats and time clocks including guards for same, used only for equipment under mechanical scope intended for HVAC controls. (Adapter plates for electrical contractor);
- 4.4 Supply and installation of pneumatic tubing to static pressure operated HVAC controls, BMS;
- 4.5 Work/materials/equipment included under Mechanical - Section 1.
- 4.6 Scaffolding/man lifts where required to perform work by this trade scope;
- 4.7 Trade specific lighting to perform tasks;
- 4.8 Trade cleanup - cleanup for work carried out by this trade;
- 4.9 General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
- 4.10 Warranty and/or Guarantee;
- 4.11 Submittals and O&M documentation as specified in the tender documents;
- 4.12 Protection of other trades’ work from damage when performing this trades scope of work;
- 4.13 Sleeving as specified for this trade.
- 4.14 Network cabling between FMS and other lower level building systems such as, but not limited to:
 - a. Lighting
 - b. Fire alarm
 - c. Power Metering
 - d. Access Control
 - e. Building Management
- 4.15 Networking components required by other building systems for own standalone operation;
- 4.16 Addressing of lower level building systems;
- 4.17 Trend logs and alarms of lower level building systems;
- 4.18 Commissioning of lower level building systems;

5. 3rd Party HVAC Controls Integration:

Applies if package equipment controls are supplied by others and are required to interface the BMS via open protocols.

The supplier of the package equipment control shall have factory trained personnel responsible for:

- 5.1 Programming, start-up and commissioning of the package equipment controls;
- 5.2 Installation and setup of any required software;
- 5.3 Addressing of equipment controls to match the BMS standard defined by the HVAC controls subtrade contractor;
- 5.4 Wiring of any “loose” or auxiliary controls devices required to make this supplied equipment operable;

The HVAC Controls Sub-trade Contractor is responsible for:

- 5.5 Wiring of thermostats and valves for zone control devices supplied by the equipment supplier;
- 5.6 Wiring of the communication network between packaged zone controllers and the BMS interface device;
- 5.7 Programming and BMS graphics to display the required data from the package equipment control;

EXCLUDED:

- 1. Control power supply outlets as outlined in Electrical Included;
- 2. Control wiring for liquid level controls for sumps, condensate pumps, fuel storage tanks and control wiring for fire pumps, and booster pumps;
- 3. Fire alarm fan shut-down and start-up relays and wiring;
- 4. HVAC controls - when specified as integral part of packaged equipment (see Included);
- 5. Motorized dampers - when specified as integral part of packaged equipment (see Included);
- 6. Power/demand meters and associated contacts required for monitoring through a BMS;
- 7. Wiring of smoke or smoke/fire motorized dampers, end switches, electric damper operators and solenoid valves required for the activation of pneumatic smoke or smoke/fire damper operators (see Electrical, Included);
- 8. Work/materials/equipment excluded under Mechanical –Sub Section A;
- 9. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
- 10. Temporary heat, general lighting, power, sanitation and water for general construction;
- 11. Hoarding;
- 12. Final Cleanup before turnover;

13. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
14. Supply and maintenance of garbage and recycling bins for construction waste;
15. Removal of construction waste from job site;
16. General site security;
17. Controls and/or instrumentation piping related to the Process Instrumentation scope;
18. Wiring for plumbing fixtures (see Electrical Included);
19. Wiring of pool system controls;
20. Wiring of integrated systems other than network connections to the BMS system other than items noted in Sub Section D Section 5 - 3rd Party HVAC Controls Integration;
21. Wiring of medical systems and related scope;
22. Wiring of package shop exhaust systems, unless wiring requirements are clearly defined in the HVAC Controls scope;
23. Motorized dampers, see Ventilation and Sheet Metal.

The following items Excluded from this sub-trade tender will be Included by the Prime Mechanical contractor:

17. Liquid level controls for sumps, condensate pumps, cooling towers, and fuel storage tanks;
18. Cash Allowance sum and/or contingency funds when a specific dollar amount is listed in Division 01 or the HVAC Controls specifications;
19. Safety high and low limit controls;
20. Self-Contained control valves:
 - (a) Differential pressure;
 - (b) Domestic hot water;
 - (c) Pressure;
 - (d) Temperature (including radiator valves);
21. Self-contained filter gauges;
22. Thermometers and pressure gauges for the heating and cooling system;
23. Thermostats not directly involving HVAC control systems.
24. Electric, electronic or pneumatic actuators and end switches for combination fire/smoke dampers (see Mechanical Sub Section C, Ventilation and Sheet Metal);
25. Firestopping;
26. Dampers;

Sub-Section E: Refrigeration

INCLUDED:

1. Air-cooled condensers complete with field installed inter-connecting refrigeration piping;
2. Drip pans under refrigeration piping;
3. Evaporative condensers complete with field installed inter-connecting refrigeration piping
4. Isolation of equipment;
5. Packaged refrigeration self-contained air-cooled cooling only units, including dehumidifiers, without ductwork;
6. Packaged self-contained integral DX fan coil compressor section for use with remote condensing section with or without ductwork;
7. Packaged refrigeration self-contained water-cooled cooling only units without ductwork;
8. Prefabricated coolers and freezers and/or associated refrigeration equipment (when not part of food services tender document);
9. Refrigerated dew-point controlled units (environment chambers);
10. Refrigerated room (window or wall type) air conditioners without ductwork;
11. Refrigeration chillers, liquid and air condensers complete with interconnecting refrigeration piping;
12. Refrigeration compressors, liquid receivers, thermal expansion valves, refrigeration piping, related refrigeration controls, DX refrigeration coils in built-up or add-on systems, DX fan coil units without ductwork;
13. Refrigeration controls, cooling only (excluding wiring) (when not specified under HVAC controls tender document);
14. Supply and installation of evaporate cooling towers, condenser water pumps, tanks and piping when part of an ammonia brine refrigeration system for an ice arena or ice making plant;
15. Water-cooled condensers complete with field-installed inter-connecting refrigeration piping;
16. Work/materials/equipment included under Mechanical – Sub Section A.
17. Scaffolding/man lifts where required to perform work by this trade scope;
18. Trade specific lighting to perform tasks;
19. Trade cleanup - cleanup for work carried out by this trade;
20. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
21. Warranty and/or Guarantee;
22. Submittals and O&M documentation as specified in the tender documents;
25. Protection of other trades' work from damage when performing this trades scope of work;
26. Sleeving as specified for this trade.

EXCLUDED:

1. Absorption and centrifugal chiller units;
2. Chilled condensing, water piping, pumps, cooling towers, and installation of same except in the supply and installation of condenser water pumps, tanks and piping when part of an ammonia brine refrigeration system for an ice arena or ice making plant;
3. Flashing and counter flashing for exterior units, gum pots, roof curbs and related water proofing;
4. Gas, water, drainage, condensate drains and connection of the same;
5. Insulation of refrigeration piping and equipment;
6. Matching distribution circuit to DX coils not supplied by this subcontractor;
7. Cash Allowance and/or contingency funds when a specific dollar amount is listed in Division 01 or the Refrigeration specifications (Prime Mechanical contractor to include);
8. Prefabricated coolers and freezers and associated refrigeration equipment when there is a food service scope of work on the project;
9. Refrigerated cooling coils when integral part of a steam or hot water "fan coil" packaged unit;
10. Spray coil humidifier and dehumidifier section;
11. Vapour barrier, insulation, heat grid for recessed floor slabs under refrigerated fixtures and area;
12. Work/materials/equipment excluded under Mechanical – Sub Section A.
13. Firestopping;

14. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
15. Temporary heat, general lighting, power, sanitation and water for general construction;
16. Hoarding;
17. Final Cleanup before turnover;
18. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
19. Firestopping;
20. Supply and maintenance of garbage and recycling bins for construction waste;
21. Removal of construction waste from job site;
22. General site security.

Sub-Section F: Insulation

INCLUDED:

1. Insulation for:
 - (a) Breeching, stacks and furnace flues;
 - (b) Cooling piping, vessels and equipment;
 - (c) Emergency generator exhausts;
 - (d) External duct insulation and equipment insulation (sound and thermal) complete with cladding and covering;
 - (e) External insulation for incinerator breeching or stacks;
 - (f) Heating piping, vessels and equipment;
 - (g) Plumbing piping, vessels and equipment;
 - (h) Pneumatic tubing;
 - (i) Precast manholes;
 - (j) Refrigeration piping, vessels and equipment;
2. Insulation finishes and weatherproofing;
3. Underground insulation conduits;
4. Work/materials/equipment included under Mechanical – Sub Section A.
5. Scaffolding/man lifts where required to perform work by this trade scope;
6. Trade specific lighting to perform tasks;
7. Trade cleanup - cleanup for work carried out by this trade;
8. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
9. Warranty and/or Guarantee;
10. Submittals and O&M documentation as specified in the tender documents;
11. Protection of other trades' work from damage when performing this trades scope of work;

EXCLUDED:

1. Asbestos removal;
2. Factory insulated equipment;
3. Insulation of concrete, masonry and drywall construction shafts, tunnels or plenums (see Mechanical Sub Section C, Included);
4. Cash Allowance sum and/or contingency funds when a specific dollar amount is listed in Division 01 or the Insulation specifications (Prime Mechanical contractor to include);
5. Pipe covering protection saddles, shields and supports;
6. Refractory linings;
7. Sleeves and packing for same;
8. Vibration and sound absorption pads and isolators;
9. Work/materials/equipment excluded under Mechanical – Sub Section A.
10. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
11. Temporary heat, general lighting, power, sanitation and water for general construction;
12. Hoarding;
13. Final Cleanup before turnover;
14. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
15. Firestopping;
16. Supply and maintenance of garbage and recycling bins for construction waste;
17. Removal of construction waste from job site;
18. General site security.

Sub-Section G: Sprinklers and Fire Protection

DEFINITION:

Work under this sub-subcontract starts at either a flanged connection at the water meter location or point of entry of water service into the building.

INCLUDED:

1. Automatic sprinkler systems with associated detection, control panel and alarm devices, excluding wiring and connection (See Electrical Included);
2. Fire pump, control panel, motors, engines and fuel systems when pumps supply sprinkler system only, excluding wiring and connections;
3. Foam system, including tanks, pumps, piping, outlets and associated detectors and control panels excluding wiring and connection;
4. Fire standpipe system when connected to a combination sprinkler/standpipe system with or without fire pump and including:
 - a. Fire pump, controller, hose cabinets and extinguisher located in fire hose cabinets, excluding wiring and connection (See Electrical Included);
5. Fire pump, control panels, motors, engine and fuel systems when pumps supply sprinkler system or combination sprinkler/standpipe system excluding wiring and connection (See Electrical Included);
6. Fire suppression gas system including control panel, detection and alarm device excluding wiring;
7. Room integrity testing for gas systems;
8. The supply and install of industrial dry electrical systems;
9. The supply and install of fire extinguishers;
10. The supply and install of air sampling systems;
11. The design and install of standalone standpipe system;
12. Pipe and system identification and tagging;
13. Drip pans under sprinkler piping.
14. Scaffolding/man lifts where required to perform work by this trade scope;
15. Trade specific lighting to perform tasks;
16. Trade cleanup - cleanup for work carried out by this trade;
17. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
18. Warranty and/or Guarantee;
19. Submittals and O&M documentation as specified in the tender documents;
20. Protection of other trades' work from damage when performing this trades scope of work;
21. Sleeving as specified for this trade.
22. Work/materials/equipment excluded under Mechanical – Sub Section A.

EXCLUDED:

1. Cash Allowance and /or contingency funds when a specific dollar amount is listed in Division 01 or the sprinkler specification (prime mechanical contractor to include);
2. Water service from source to meter location (mechanical contractor to supply flanged connection);
3. Wet and dry pipe standpipe c/w Siamese connection and all connected hand hose cabinets and equipment;
4. Master control valve at point of water entry of water service into building if required;
5. Painting of pipe;
6. Commercial Kitchen Fire Suppression systems;
7. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
8. Temporary heat, general lighting, power, sanitation and water for general construction;
9. Hoarding;
10. Final Cleanup before turnover;

11. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
12. Firestopping ;
13. Supply and maintenance of garbage and recycling bins for construction waste;
14. Removal of construction waste from job site;
15. General site security.

Section 44: Commercial Kitchen Fire Suppression Systems

DEFINITION:

Work under this sub-section starts at a mechanical gas valve (valve supplied by this Contractor and installed by others)
This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Fire Suppression System shall be designed, constructed and installed by this contractor in accordance with local codes;
2. Approved wet chemical system includes cylinder, piping network, hangers & supports, heads (nozzles) mechanical detection i.e. fusible links, control head c/w fuel shut-off device with manual re-set and micro-switch for Fire Alarm Panel monitoring.
3. Installation shall be completed by Factory Trained & Authorized Technicians only
4. Scaffolding/man lifts where required to perform work by this trade scope;
5. Trade specific lighting to perform tasks;
6. Trade cleanup - cleanup for work carried out by this trade;
7. Warranty and/or Guarantee;
8. Submittals and O&M documentation as specified in the tender documents;
9. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
10. Protection of other trades' work from damage when performing this trades scope of work;
11. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
12. Section 4: Commissioning as it applies to this trade scope.

EXCLUDED:

1. Accessible Exhaust / Ductwork, Filters, Fans, & Hood;
2. Use Inspection, & Maintenance of commercial cooking equipment, exhaust, cleaning. Gas Valve to be installed by certified gas-fitter
3. Micro-switch to be supplied by Fire Protection Contractor only. All electrical work to be installed by other division. I.e. Electrical SOW. (dry contacts provided for electrical contractor to tie-in the kitchen suppression system into base building Fire Alarm System as per code requirements.
4. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
5. Temporary heat, general lighting, power, sanitation and water for general construction;
6. Hoarding;
7. Final Cleanup before turnover;
8. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
9. Firestopping;
10. Supply and maintenance of garbage and recycling bins for construction waste;
11. Removal of construction waste from job site;
12. General site security.

Section 45: Commercial Kitchen Equipment

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Supply of all commercial kitchen equipment (excluding plumbing fixtures noted on the mechanical drawings as supplied by the mechanical contractor);
2. Delivery, uncrate and place all appliances and equipment;
3. Pre-wire of equipment to a single point of hook-up.
 - If there is more than five (5) pieces of equipment requiring an electrical junction box or panel – panel to be supplied by the Electrical contractor;
 - Connection of equipment to panel is by the Commercial Equipment Supplier;
4. Final connection to electrical and mechanical services;
5. Refrigeration requirements for all coolers and freezers.
6. Scaffolding/man lifts where required to perform work by this trade scope;
7. Trade specific lighting to perform tasks;
8. Trade cleanup - cleanup for work carried out by this trade;
9. Warranty and/or Guarantee;
10. Submittals and O&M documentation as specified in the tender documents;
11. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
12. Protection of other trades' work from damage when performing this trades scope of work;
13. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
14. Section 4: Commissioning as it applies to this trade scope.

EXCLUDED:

1. Drain line from coolers;
2. Exhaust fan ducting;
3. Fire suppression
4. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
5. Temporary heat, general lighting, power, sanitation and water for general construction;
6. Hoarding;
7. Final Cleanup before turnover;
8. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
9. Firestopping;
10. Supply and maintenance of garbage and recycling bins for construction waste;
11. Removal of construction waste from job site;
12. General site security.

Section 46: Instrumentation

This tender shall be for supply and installation, unless noted otherwise in this definition, of wiring, control lines, controls and instruments necessary to monitor process equipment and manufacturing machinery and shall also include the controlling of the processes for same.

A **control valve** means a valve which is remotely controlled through pneumatic, electric or hydraulic means.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Air compressors, dryers, after-coolers and air distribution piping used for Instrumentation only;
2. Check out, calibrating and commissioning of instrumentation and associated control systems upon completion of installation;
3. Control panels and consoles associated with instrumentation;
4. Core drilling, sleeves and supports;
5. Devices for monitoring and controlling the processes including, but not limited to, air sets, bubble tubes, recorders, computers, telemetry, counters, controllers, push buttons, lockout devices, thermo-sensors, gauges, speed controls, integrators, totalizers, probes, transducers, transmitters, control valves and remotely controlled sluice gates;
6. Electrical wiring associated with instrumentation including raceways, wire ways and cable trays except where raceways, wire ways and cable trays are common to electrical and instrumentation systems in which case they shall be supplied and installed under the electrical scope;
7. Excavation:
 - a. In the case of conduit and electrical lines the instrumentation contractor shall be responsible for all excavating to facilitate the installation of his work. All backfill by others except bedding and planking where specified for the protection of the electrical installation;
 - b. In the case of pneumatic or hydraulic piping the instrumentation contractor shall be responsible for all excavation to facilitate the installation of his work including shoring, pumping, bedding and the first 300 mm of protective cover over piping. Remaining backfill, tamping and disposal of surplus material by others;
8. Hoisting;
9. Inspections;
10. Manufacturer's warranty only, other than the normal one year maintenance warranty;
11. Mounting of all instrumentation devices, other than those noted under exclusions;
12. Permits;
13. Pneumatic & hydraulic piping associated with instrumentation;
14. Power supplies which are primarily intended for instrumentation, which shall include battery banks and battery chargers;
15. Primary measuring elements including orifice plates, venturies, dahl tubes, parshall flumes (other than structural), magnetic flow meters and turbine flow meters;
16. Scaffolding/man lifts where required to perform work by this trade scope;
17. Trade specific lighting to perform tasks;
18. Trade cleanup - cleanup for work carried out by this trade;
19. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
20. Warranty and/or Guarantee;
21. Submittals and O&M documentation as specified in the tender documents;
22. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
23. Protection of other trades' work from damage when performing this trades scope of work;
24. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
25. Section 4: Commissioning as it applies to this trade scope.

EXCLUDED:

1. Backfill and removal of excess material except as required under Included;
2. Concrete;
3. Control power supply outlets as outlined in Electrical Included,
4. Cutting, including core drilling and patching when pertaining to renovations, alterations or additions;
5. Distribution and installation of motorized dampers;
6. Distribution and installation of thermowells, control valves, remotely controlled sluice gates, orifice plates and primary measuring elements as related to instrumentation (see Mechanical Sub Section B, Included);
7. Instrumentation components specified as part of packaged equipment which is supplied by others;
8. Painting on-site;
9. Pressure tapping including block valves. (The instrumentation contractor to be responsible for locating pressure tapping);
10. Push-buttons, selector switches and indicating lights which come supplied with motor starters;
11. Supply and installation of companion flanges for orifice plates (see Mechanical Sub Section B, Included);
12. Supply and installation of meter body process lines;
13. Supply and installation of sampling lines;
14. Supports where detailed on architectural or structural drawings;
15. Waterproofing, fire-stopping and/or soundproofing in wall, floor and ceiling penetrations;
16. Weirs and weir plates.
17. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
18. Temporary heat, general lighting, power, sanitation and water for general construction;
19. Hoarding;
20. Final Cleanup before turnover;
21. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
22. Firestopping;
23. Supply and maintenance of garbage and recycling bins for construction waste;
24. Removal of construction waste from job site;
25. General site security.

Section 47: Electrical

DEFINITIONS:

The format under this Trade Definition is based on the premise that the electrical tender normally includes the basic categories of:

- (a) Audio visual systems - complete;
 - (b) Audio visual nurse call systems (incorporating voice transmission/patient wander) - complete;
 - (c) Intercommunication system (internal, standalone) - complete;
 - (d) Integrated school sound / intercommunication systems - complete;
 - (e) Sound distribution / Paging systems (including sound masking speech privacy system) - complete;
 - (f) RF television system - complete;
 - (g) CCTV system - complete;
 - (h) Telephone system - complete;
- and all items commonly associated with the above categories which are normally laid out in the drawings and specifications.

Complete for basic categories (a) to (h) listed above means supply and installation of all equipment and wire, including time clocks where they are for exclusive use of the system being installed. All device and equipment boxes and terminal cabinets are to be supplied to the electrical contractor for installation. Electrical contractor is to supply and install raceway system including pull boxes.

Packaged equipment, so specified under the mechanical scopes, shall mean pre-wired equipment supplied in a completely electrically operable state after one final connection of power wiring, and remote control connections if specified.

HVAC controls means controls for equipment that affects temperature and humidity within a building provided that the controls do not directly switch the power lines to the motors and duct heaters, in which case the wiring of such controls shall be the responsibility of the electrical contractor.

And all items commonly associated with the above categories which are normally laid out in the drawings and specification

Complete for basic categories (a) to (h) listed above means supply and installation of all equipment and wire, including time clocks where they are for exclusive use of the system being installed. All device and equipment boxes and terminal cabinets are to be supplied to the electrical contractor for installation. Electrical contractor is to supply and install raceway system including pull boxes.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. Access panels for walls, ceilings and floors, where required for items under electrical scope - to be supplied to respective trade for installation, e.g. to ceiling contractor, etc.
2. Alarm and detection systems - for systems under the electrical scope;
3. Appliances and furniture, electrical - requiring a permanent electrical connection only;
4. Balancing - for systems under the electrical scope;
5. Batteries - for systems under the electrical scope;
6. Battery chargers - for systems under the electrical scope;
7. Burglar alarm systems;
8. Buss duct;
9. Cables, electrical and heating,
10. Cable trays;
11. Car heater posts (requiring CSA approval);

12. Circuit breakers - for systems under the electrical scope;
13. Clocks and Clock systems;
14. Contactors including those required for BMS control and monitoring;
15. Control consoles - except for HVAC controls and pre-wired factory-packaged equipment;
16. Control devices - for equipment under mechanical Scope which constitute protective control required by the Canadian Electrical Code;
17. Control panels - except for HVAC controls and pre-wired factory-packaged equipment;
18. Control power supply outlets - provided at locations shown on the electrical drawings and terminated in terminal cabinets or outlet boxes. Alternatively, if no control power supply outlets are shown on the electrical drawings, the electrical contractor shall provide such outlets adjacent to the source where the power circuit originates. The wiring beyond control power supply shall fall under the scope of control wiring (see Section 46 Instrumentation Excluded);
19. Control wiring - for motors, solenoids, relays and duct heaters under the mechanical scope, except pre-wired packaged equipment and HVAC controls that do not directly switch the power lines to the motors and duct heaters. Control wiring shall include all necessary wiring materials and connections, and the installations of controls that do not require mechanical connections;
20. Core drilling - for electrical, except if provided for under pre-cast and post-tensioned slabs specifications (see Included);
21. Demolition of existing electrical installations when the materials are to be re-used or retained as specified;
22. Detectors - for systems under the electrical scope;
23. Dimmer systems;
24. Distribution equipment, electrical;
25. Door wiring for electric locking mechanisms including interconnecting wiring.
26. Door wiring for overhead and automatic doors - electrical supply hook up, interconnecting wiring, conduit and boxes. Control devices and electrically activated holding devices by others.
27. Drainage connections for conduit systems (excluding drain lines);
28. Duct heaters (see Included);
29. Electrical thermostats - except for equipment supplied under mechanical scope. (Thermostats supplied under mechanical scope, if to be installed by electrical contractor, must be complete with adapter plates);
30. Electrical wiring for automatic underground sprinkler and/or irrigation systems (see Section 7 Exterior Landscaping Included);
31. Electronic systems - for items in the electrical scope;
32. Emergency power and lighting systems - electrical;
Including:
 - (a) Conduit and wire from lighting interface module to Facility Management Systems;
 - (b) All network wiring and programming (including addressing & trend logs);
 - (c) Qualified factory trained representative for programming and networking;
 - (d) Commissioning of systems;
33. Excavation - the electrical contractor shall be responsible for all excavating to facilitate the installation of his work. All backfill by others except sand and planking where specified for the protection of the electrical installation;
34. Fastenings - (screws, bolts, hangers, straps, etc.) for electrical equipment and systems;
35. Fire alarm systems - including fire phone systems, and fire alarm fan-shut-down and start-up relays and wiring. Also including wiring and connections only for fire protection systems and smoke or smoke/fire damper activation and monitoring;
Including:
 - (a) Conduit and wire from Fire Alarm interface module to Facility Management Systems;
 - (b) All network wiring and programming (including addressing & trend logs);
 - (c) Qualified factory trained representative for programming and networking;
 - (d) Commissioning of systems;
 (See Section 43 Mechanical Sub Section B Included, Sub Section D Included and Sub Section G Included);
36. Floor duct systems, electrical;
37. Gas detection systems, electrical (when causing an alarm only);
38. Generators - electrical;
39. Grounding systems;
40. Hand and hair dryers, electric;

41. Heat pumps - requiring only electrical connections;
42. Heating:
 - (a) Electrical base board heating;
 - (b) Heater (a self-contained, forced air electric heater with enclosure requiring only electrical connections and no ductwork connections);
 - (c) Electric unit heaters;
 - (d) Heating cables, heating tape;
 - (e) Radiant electrical heating panels;
 - (f) Controls for above items unless forming part of HVAC controls under mechanical scope;
43. Hoisting;
44. Holes to be cut into floor duct systems (see Included);
45. Horns and sirens - for systems under the electrical scope;
46. Identification and labelling, other than painted, including plastic decals for arrow flow, plastic and/or canvas, coloured tape and/or secondary colour banding (see Excluded and Section 36 Painting Included);
47. Inspection (Electrical Protection Branch);
48. Instrument panels - for systems under electrical scope;
49. Interrupter switches - for systems under electrical scope;
50. Laboratory equipment, electrical - except those items included in a factory assembled casework product;
51. Licenses;
52. Lighting fixtures (complete manufactured units): All luminous elements consisting of a light source (and ballasts if required) mounted separately or as components of an overall ceiling system including fixtures for coffered ceilings, air troffers and indoor or outdoor flood lighting, to include lamps for same, lenses, globes, guards and all types of diffusers (also supports if detailed on electrical drawings only, except for fluorescent fixtures larger than 610 mm x 1220 mm);
53. Lightning protection systems;
54. Luminous ceilings: including electrical lighting fixtures and raceways only but excluding leaf- type reflectors, egg-crate reflectors, plastic or glass lenses and diffusers and all supports for same. (For lighting fixtures see included);
55. Manufacturer's warranty only, other than the normal one year maintenance warranty;
56. Marine lighting - to mechanical systems other than packaged equipment;
57. Medical gas alarm and special fire protection systems - supply and install conduit, wire and connections only;
58. Meters - for systems under the electrical scope and power meters requiring connection to the HVAC/BMS; Including:
 - (a) Conduit and wire from power meter interface module to Facility Management Systems;
 - (b) All network wiring and programming (including addressing & trend logs);
 - (c) Qualified factory trained representative for programming and networking;
 - (d) Commissioning of systems.
 (See Section 43 Mechanical Sub Section D Excluded);
59. Motor control centres;
60. Motor starters - all motor starters and protection switches without exception other than that equipment which forms an integral part of packaged equipment requiring a power connection only (where applicable, see Definitions);
61. Multi-speed switches including variable speed drives which are electrically initiated and operated;
62. Nurses call systems and equipment, visual (audio-visual types under sound sub-bid);
63. Operating room lights;
64. Panels, electrical;
65. Cash Allowance and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specifications section;
66. Permits - as required for electrical work only;
67. Poly vapour hats;
68. Power plant equipment, (excluding fuel tanks, piping for fuel, coolants and exhaust and vent ducting) complete with prime mover, flex connections, radiator and muffler when the major function is to drive electric generators:
 - (a) For remote radiators only, piping and associated equipment including valves, pumps, expansion tanks and coolant will be provided under the mechanical scope (see Mechanical Sub Section B Included);
69. Power supplies - for systems under the electrical scope;

70. Power wiring - for equipment under the mechanical scope, shall include, without limiting the scope, all necessary wiring materials and connections for motors requiring protective control by the Canadian Electrical Code, heaters, lamps, electro static filters, and controls that directly switch the power lines to such equipment. Wiring to solenoids shall fall in the category of control wiring (see Electrical Included and Section 43 Mechanical Sub Section D Excluded);
71. Power wiring for vacuum systems installed by the mechanical contractor (see Section 43 Mechanical Sub Section B Included);
72. Primary distribution centres;
73. Protection devices and equipment;
74. Raceways - for systems under the electrical scope;
75. Rectifiers - for systems under the electrical scope;
76. Refrigerated rooms and coolers - electrical supply hook up only;
77. Regulators - for systems under the electrical scope;
78. Relays - for systems under the electrical scope;
79. Resistors - for systems under the electrical scope;
80. Roughing-in and connecting, only as shown on the tender documents, specialty items, cabinets or equipment supplied and installed by others;
81. Sauna, electrical;
82. Secondary distribution system;
83. Send/receiving devices - for systems under the electrical scope;
84. Service, electrical;
85. Services, aerial (other than utility);
86. Mark out backing in walls as required for all equipment provided by this scope;
87. Signalling systems - for items under the electrical scope;
88. Signs, electrical;
89. Sirens for systems under the electrical scope;
90. Site facilities, electrical;
91. Sleeves, through poured-in-place concrete and masonry where required for electrical conduit, wire or equipment;
92. Smoke detection systems, electrical;
93. Snow melting cables;
94. Solar power and heating systems (electrical) (see Section 43 Mechanical Sub Section B, Included),
95. Sprinkler annunciator systems, electrical;
96. Substations (electrical portion);
97. Supports - where detailed on electrical drawings only (see Electrical Included and Excluded);
98. Surveillance systems (television bid under sub-trade (g));
99. Switch boards;
100. Switches - all types of electrical switches for systems under the electrical scope except where part of packaged equipment supplied by others;
101. Teleautograph devices;
102. Telephone systems, private automatic (bid under sub-trade (d));
103. Temperature control system and devices for electric heating supplied by the electrical trade;
104. Thermocouple wiring and thermocouple sensor wiring except for HVAC controls;
105. Time recording system;
106. Timers and time clocks - for systems under the electrical scope;
107. Transformers - for systems under the electrical scope;
108. Valance and cove lighting; including electrical lighting fixtures and raceways only but excluding leaf-type reflectors, egg crate reflectors, plastic or glass lenses and diffusers and all supports for same. (For lighting fixtures see Included);
109. Wall panels - for systems under the electrical scope;
110. Watchman's clocking equipment - for systems under the electrical scope;
111. Wiring devices and plates - for systems under the electrical scope;
112. Wiring and equipment for transformer vaults;
113. Wire for branch circuits, feeders - for systems under the electrical scope;
114. Wiring - line voltage (field) wiring of food services refrigeration systems including the wiring of line voltage time clocks, thermostats and solenoids;

115. X-ray viewers;
116. Network cabling between Facility Management Systems and other lower level building systems such as, but not limited to:
 - f. Lighting
 - g. Fire alarm
 - h. Power Metering
 - i. Access Control
 - j. Building Management
117. Networking components required by other building systems for own standalone operation;
118. Addressing of lower level building systems;
119. Trend logs and alarms of lower level building systems;
120. Commissioning of lower level building systems;
121. Firestopping for electrical installations.
122. Trade specific Firestopping. The Firestopping contractor will submit separate prices to the following trade scopes:
 - A. Prime Mechanical – the prime mechanical contractor will carry the Firestopping costs for ALL trades in the mechanical scope.
 - B. Electrical - will carry the Firestopping costs for all Electrical.
 - C. General Contractor – will carry the Firestopping costs for ALL trade scopes other than Mechanical and Electrical.
123. Scaffolding/man lifts where required to perform work by this trade scope;
124. Trade specific lighting to perform tasks;
125. Trade cleanup - cleanup for work carried out by this trade;
126. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup.
127. Warranty and/or Guarantee;
128. Submittals and O&M documentation as specified in the tender documents;
129. Protection of other trades’ work from damage when performing this trades scope of work;
130. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
131. Section 4: Commissioning as it applies to this trade scope;
132. Wiring of plumbing fixtures – including low voltage.

EXCLUDED:

1. Alterations of services, as specified in the tender documents, required for specialty items, cabinets or equipment not supplied under this subcontract;
2. Backfill and removal of surplus material;
3. Backing and backing materials, supply and installation;
4. Concrete;
5. Control and protection devices for refrigerated rooms and coolers;
6. Control and protection devices for overhead and automatic doors, wiring for overhead doors;
7. Control wiring for equipment under mechanical scope intended for HVAC controls, including solenoids, valves and dampers;
8. Cutting, including core drilling and patching - when pertaining to renovations, alterations or additions;
9. Door access card readers or other devices which are door and/or door frame mounted except when part of systems furnished by one supplier (see Included); wiring for same regardless of supplier is by electrical contractor;
10. Door holding devices forming part of door hardware system;
11. Drain lines,
12. Food service and laundry equipment unless specified in the electrical specifications;
13. Fuel tanks, piping for fuel, coolants and exhaust and vent ducting for power plant equipment;
14. Installation of plaster trims (frames) for lighting fixtures;
15. Instrumentation;
16. Laboratory equipment which is part of factory assembled casework product;
17. Luminous light lenses and/or decorative lenses and/or louvres, including metal and/or plastic support

- mouldings when installed in architectural valences; (see Component Ceiling Systems Included, Architectural Woodwork and Lath, Plaster & Stucco and Drywall);
18. Manhole covers and frames;
 19. Painting (on site) (see Included);
 20. Portable appliances and portable furniture, and electrical fixtures, devices and cords affixed thereto;
 21. Shop equipment or tools;
 22. Soundproofing in wall, floor and ceiling penetrations;
 23. Supports where detailed on architectural or structural drawings (see Included);
 24. Thermostats and guards for equipment under mechanical scope;
 25. Trims or mouldings for lighting fixtures other than manufactured plaster trims and those supplied with the fixture;
 26. Valances and coves for lighting fixtures (see Component Ceiling Systems Included);
 27. Variable speed controllers that are mechanically or hydraulically initiated and operated or part of packaged equipment so specified under the mechanical scopes;
 28. Waterproofing in wall, floor and ceiling penetrations;
 29. Wiring for electric elevators, hydraulic elevators, parking garage hoists, escalators, dumbwaiters, conveyors, moving walkways, speed ramps, except as noted under Elevators and Escalators scopes.
 30. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
 31. Temporary heat, general lighting, power, sanitation and water for general construction;
 32. Hoarding;
 33. Final Cleanup before turnover;
 34. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
 35. Supply and maintenance of garbage and recycling bins for construction waste;
 36. Removal of construction waste from job site;
 37. General site security.
 38. Services and service charges for electrical, telephone and television as levied by the municipality or utility company.

Section 48: Facility Management Systems

Multiple building systems are to be integrated into a single building system via open protocols.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED:

1. All programming required to integrate all building systems being combined;
2. A qualified and factory trained technician with experience in integration and networks;
3. Installation and setup of any hardware or software required to allow connection to lower level building systems being integrated;
4. All networking components to successfully connect to the building systems;
5. Provide network addressing to other vendors prior to the 3rd party building system work being started;
6. A single interface with full colour graphics for controlling and monitoring all connected building systems;
7. Any required energy or other dashboards;
8. Protection from damages of existing building systems while performing this scope;
9. Scaffolding/man lifts where required to perform work by this trade scope;
10. Trade specific lighting to perform tasks;
11. Trade cleanup - cleanup for work carried out by this trade;
12. Warranty and/or Guarantee;
13. Submittals and O&M documentation as specified in the tender documents;
14. Cash allowances and/or contingency funds when a specific dollar amount is listed in Division 01 or this trades specification section;
15. Protection of other trades' work from damage when performing this trades scope of work;
16. Section 3: Building Information Modeling (BIM) as it applies to this trade scope;
17. Section 4: Commissioning as it applies to this trade scope.

EXCLUDED:

1. Network cabling between FMS and other lower level building systems such as, but not limited to:
 - a. Lighting
 - b. Fire alarm
 - c. Power Metering
 - d. Access Control
 - e. Building Management
2. Networking components required by other building systems for own standalone operation;
3. Addressing of lower level building systems;
4. Trend logs and alarms of lower level building systems;
5. Commissioning of lower level building systems;
6. Scaffolding when required to perform work by multiple trades, i.e. Common scaffold/platform;
7. Temporary heat, general lighting, power, sanitation and water for general construction;
8. Hoarding;
9. Final Cleanup before turnover;
10. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
11. Firestopping;
12. Supply and maintenance of garbage and recycling bins for construction waste;
13. Removal of construction waste from job site;
14. General site security.