

09 00 00 Finishes**09 20 00 Gypsum Board Assemblies:**

1. Submittals Required
2. Product Technical Data Sheets
 - a. Prime check: All drywall assemblies are to be reviewed by Queen's Facility's Project Manager after mud and primer are complete. Trades to anticipate corrective measures will be required prior to approval to continue onto painting top costs.

Gypsum Board and Associated Components

Product:

Board

1. 16 mm Type X – Typical.
2. High abuse board in corridors and foyers on minimum of lower 2440mm.
3. Mold resistant board in damp areas.
4. Cement board or other purpose made panel for wet areas.

Studs

1. Non load bearing channel studs, 24 gauge or better hot dipped galvanized with service holes at 457mm AFF. Spaced regular intervals of no more than 610mm OC.
2. Where abuse resistant non load bearing channel studs, 20 gauge or better hot dipped galvanized with service holes at 457mm AFF. Spaced regular intervals of no more than 610mm OC.
3. Use horizontal metal channel header, footer and mid-span reinforcement.

Accessories

1. Always use appropriate corner beads, tear away reveals, J-mold and casing beads with metal or plastic reinforcement.
2. Drywall screws to be corrosion resistant, purpose made.
3. Acoustic gasket or sealant to be applied to top and bottom of stud wall and surrounding penetrations such as electrical and data boxes.
4. Control joints as indicated.
5. Acoustic insulation and channels.
6. Paintable fire rated caulking.
7. Approved Manufacturers include but not limited to:
 - a. CGC
 - b. Certainteed
 - c. Trimtex
 - d. Amerimas
 - e. Roxul

Installation:

1. Certified installer.
2. Coordinate blocking within studs with all counters, finish or architectural woodwork and suspended furnishings.
3. Stud vertical and horizontal tolerance of 1:1000.

Quality Standards:

1. Acoustic insulation and channels to be used between rooms and dividing suites.
2. Partitions to extend to underside of deck.
3. Stagger electrical and data on either side of partition.
4. Finish Levels
5. Where a fire resistance rating is required for the gypsum board assembly, details of construction should be in accordance with reports of fire tests of assemblies that have met the requirements of the fire rating imposed.

Level 0 – Used in temporary construction. Unfinished. No taping, finishing or corner beads are required.

Level 1 – Use in plenum areas above ceilings, in attics, in areas where the assembly would generally be concealed.

All joints and interior angles shall have tape embedded in joint compound. Accessories in corridors and other areas with pedestrian traffic. Tape and fastener heads need not be covered with joint compound. Surface shall be free of excess joint compound. Tool marks and ridges are acceptable.

Level 2 – Use for surfaces in garages, warehouse storage, under tile or other similar areas where surface appearance is not of primary importance.

All joints and interior angles shall have tape embedded in joint compound and shall be immediately wiped with a joint knife or trowel, leaving a thin coating of joint compound over all joints and interior angles. Fastener heads and accessories shall be covered with a coat of joint compound. Surface shall be free of excess joint compound. Tool marks and ridges are acceptable.

Level 3 – Use in areas which are to receive heavy texture (spray or hand applied) finishes before final painting, or where commercial-grade (heavy duty) wall coverings are to be applied as the final decoration. This level of finish is not to be used where smooth painted surfaces or where lighter weight wall coverings are specified. The prepared surface shall be coated with a drywall primer prior to the application of final finishes.

All joints and interior angles shall have tape embedded in joint compound and shall be immediately wiped with a joint knife or trowel, leaving a thin coating of joint compound over

all joints and interior angles. One additional coat of joint compound shall be applied over all joints and interior angles. Fastener heads and accessories shall be covered with two separate coats of joint compound. All joint compounds shall be smooth and free of tool marks and ridges. The prepared surface shall be covered with a drywall primer and reviewed prior to the application of the final decoration.

Level 4 – Use where residential grade (light duty) wall coverings, flat paints or light textures are to be applied. The prepared surface shall be coated with a drywall primer prior to the application of final finishes. Joints and fasteners must be sufficiently concealed if the wall covering material is light weight, contains limited pattern, has a glossy finish or has any combination of these features. In critical lighting areas, flat paints applied over light textures tend to reduce joint photographing.

All joints and interior angles shall have tape embedded in joint compound and shall be immediately wiped with a joint knife or trowel, leaving a thin coating of joint compound over all joints and interior angles. In addition, two separate coats of joint compound shall be applied over all flat joints and one separate coat of joint compound applied over interior angles. Fastener heads and accessories shall be covered with three separate coats of joint compound. All joint compounds shall be smooth and free of tool marks and ridges. The prepared surface shall be covered with a drywall primer prior to the application of the final decoration.

Level 5 - Uniform surface and minimize the possibility of joint photographing and of fasteners showing through the final decoration. This level of finish is required where gloss, semi-gloss or saturated, bright and dark colours are specified or when flat joints are specified over an untextured surface, or where critical lighting conditions occur. The prepared surface shall be coated with a drywall primer prior to the application of final decoration.

All joints and interior angles shall have tape embedded in joint compound and immediately wiped with a joint knife or trowel, leaving a thin coating of joint compound over all joints and interior angles. Two separate coats of joint compound shall be applied over all flat joints and one separate coat of joint compound applied over interior angles. Fastener heads and accessories shall be covered with three separate coats of joint compound. A thin skim coat of joint compound shall be trowel applied to the entire surface. Excess compound is immediately sheared off, leaving a film or skim coating of compound completely covering the paper. As an alternative to a skim coat, a material manufactured especially for this purpose may be applied. The surface must be smooth and free of tool marks and ridges. The prepared surface shall be covered with a drywall primer prior to the application of the final decoration.

09 30 00 Tiling

Submittals Required:

1. Product Technical Data Sheets for all materials, adhesives and accessories
2. Materials including full size tiles / tile selection boards, grout colours, trim profiles

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3. Drawings indicating patterns, locations including plans and elevations
4. All detail drawings and specification for waterproofing and finishing of shower systems

Tile and Associated Components:**Wall Tile:**

1. Wall tile on shower walls, behind and beside toilets if not throughout entire washroom.
2. Wall tile sheen to be matte and non-reflective. Texture to be smooth.
3. Wall tile in custodial areas to be chemical resistant, matte and smooth.
4. Minimize grout lines by selecting larger format tiles.
5. Spacing between tiles to be no greater than 3mm.

Floor Tile:

1. ANSI A137.1-2012 Dynamic Coefficient of Friction (DCOF) 0.42 Wet for level interior floors.
2. ANSI A137.1 – 2012 Dynamic Coefficient of Friction (DCOF) greater than 0.42 Wet for ramps or sloped interior floors.
3. Through bodied porcelain.
4. Rectified
5. Minimize grout lines by selecting larger format tiles.
6. Spacing between tiles to be no greater than 3mm.
7. Commercial tiles for all installations, medium to heavy commercial ratings.
8. Heavy traffic rated tiles in foyers and corridors.
9. Minimize grout lines by selecting larger format tiles.
10. Spacing between tiles to be no greater than 3mm.
11. Mosaic tile in showers and other areas where sloping is not gradual.

Specialty Profiles:

1. Use coves, bullnoses and corner profiles when not using stainless steel or aluminum profiles at all joints and edges.

Mortar and Grout:

1. Use system from one manufacturer.
2. Grout lines no greater than 3mm.
3. Technical grouts / urethane grouts to be used on all floors.
4. Epoxy grouts in wet areas.
5. All grouts to be stain resistant and non-shrinking.
6. Use fast cure mortar and grout on all projects with fast turn over on ongoing traffic.
7. Topping / leveler / primers.
8. Prepare existing surfaces by scarifying subfloor.
9. Do not exceed maximum thickness recommended by manufacturer. Select appropriate product.

Profiles and Transitions:

1. Transitions to be OBC and AODA compliant.
2. Use coves, bullnoses and corner profiles.

3. Fabricated in porcelain, stainless steel or aluminum profiles at all joints and edges.
4. Acceptable manufacturers / suppliers include and are not limited to:
 - a. Schluter
 - b. Ardex
 - c. Mapei
 - d. Tak
 - e. Flextile
 - f. Laticrete
 - g. Sika
 - h. Sherwin Williams

Installation:

1. Work to be performed to TIMAC Installation Manual 2009/2010 and all amendments.
2. Surface tolerance of 1:800.
3. All stages of work must have clean and prepared surface prior to proceeding with next step.
4. Do not begin installation until substrates are properly prepared. If substrate preparation is the responsibility of another trade notify Project Manager, Consultant or Contractor prior to proceeding.
5. Proceeding with work over unsatisfactory substrate indicates acceptance by trade and will be considered when remediation work or warranty work arises.

Shower System:

1. Shower system waterproofing must be a complete system from one manufacturer.
2. Provide a well-planned solution from substrate to decorative surface.

09 51 00 Acoustic Ceilings**Submittals Required:**

1. Product Technical Data Sheets for all materials, components, and accessories.
2. Clearly identify profiles including sizes and colours.
3. Drawings indicating patterns, orientation and coordination with other trades.
4. All details drawings indicating special installations or intersections at other materials.

Ceiling Tile and Associated Components:

1. Use ceiling system appropriate to application. Below is standard environment. Lab and Kitchen environments must be systems designed for those specialty areas.

Ceiling Tile:

1. Use ceiling system appropriate to environment.
2. Use system from one manufacturer.
3. White with square edge is standard.
4. Class A fire rated.

5. Dimensional stability and humidity resistant (Flexural Tensile Strength) in 100% relative humidity. Class 1/C/0N in accordance with BS EN 13964:
 - a. Little to no fissuring unless matching existing.
 - b. Only match existing when repairing partial ceiling less than 25% of area in one room.
 - c. Sound Absorption 0.70 or greater – ISO 354.
 - d. Light Reflection 85%.
 - e. Does not harbor micro-organisms.
 - f. Cleanable
 - g. Contains no Urea – Formaldehyde.
 - h. Low emitting materials.
 - i. Preference for recyclable or compostable materials as well as recycled content.

Grid and Profiles:

1. Use system from one manufacturer.
2. 24mm Fire Rated White Aluminum Grid is standard for mains and cross tees.
3. Wall angles to be used at wall, reveals are optional.
4. Clouds and Edges not abutting a wall or bulkhead will be completed with Perimeter Trim profile minimum 50mm high.
5. Access Doors at all shut offs, etc.
6. Acceptable manufacturers / suppliers include and are not limited to:
 - a. Armstrong
 - b. Certaineed
 - c. CGC
 - d. Rockfon

Installation:

1. Work to be performed to manufacturers written instructions and all amendments.
2. Ceilings and Interior Systems Construction Association (CISCA) publishes industry accepted practices for proper methods of installing various types of systems.
3. Becoming familiar with the building and any special or unusual conditions, investigate above existing ceilings.
4. Surface tolerance of 1:1000.
5. Layout to maximize using full tiles.
6. Cut tiles to be no less than 75mm.
7. Proceeding with work over unsatisfactory substrate indicates acceptance by trade and will be considered when remediation work or warranty work arises.

09 65 00 Resilient Flooring**Submittals Required:**

1. Product Technical Data Sheets for all materials, components, and accessories.
2. Clearly identify option(s) including sizes and colours.
3. Drawings indicating patterns, orientation, and coordination with other trades.

4. Sample minimum 150 X 150 mm.

09 65 13 Resilient Bases, accessories, and stairs:

1. Rubber construction
2. OBC and AODA compliant.
3. Acceptable manufacturers / suppliers include and are not limited to:
 - a. Burke
 - b. Johnsonite
 - c. Roppe

Resilient Flooring and Associated Components:

1. Use flooring appropriate to application.
2. CAN/ULC – S102.2.
3. ASTM 648 Class 1 FR.
4. ASTM E662 < 450.
5. Low emitting materials. Floor Score Certified or other approved third-party testing.
6. Contains no Urea – Formaldehyde.
7. Preference for recyclable or compostable materials as well as high recycled and bio-based content.
8. Slip resistance ASTM D2047: SCOF > 0.6.
9. TRRL Pendulum Test BS7976 PTV > 36.
10. Ramp test R10.
11. Dimensional stability.
12. Minimum 10-year commercial warranty.
13. Castor Chair resistance: No wear. EN 425.

09 65 16 Resilient Sheet flooring:

1. Homogeneous construction.
2. Damp mop / light buff for cleaning. No wax / sealant.
3. Heat weld with colour matched weld, small welds using sharp, hot tool.
4. Flash cove base with all associated components installed in all washrooms, kitchens, labs.
5. Acceptable manufacturers / suppliers include and are not limited to:
 - a. Altro
 - b. Armstrong
 - c. Flashcove
 - d. Forbo
 - e. Johnsonite
 - f. Nora
 - g. Polyflor

09 65 19 Resilient Tile or Plank:

1. Castor Chair resistance: No wear. EN 425
2. Wear layer: > 0.51mm (.20")

3. Damp mop / light buff for cleaning. No wax / sealant
4. Stagger planks no less than 150mm, random/irregular ashlar installation.
5. Direct glue installations
6. Acceptable manufacturers / suppliers include and are not limited to:
 - a. Armstrong
 - b. Forbo
 - c. Karndean
 - d. Interface
 - e. Ivc Moduleo
 - f. Johnsonite
 - g. Polyflor

09 65 19.19 Vinyl Composition Tile Flooring:

1. Installation of composite floor includes 2 coats of sealant.
2. Acceptable manufacturers / suppliers include and are not limited to:
3. Armstrong
4. Johnsonite

09 65 43 Linoleum Sheet / Tile

1. Damp mop / light buff for cleaning. No wax / sealant.
2. Net fit seams in linoleum unless otherwise directed.
3. When heat welding use colour matched weld, small welds using sharp, hot tool.
4. Flash cove base with all associated components installed in all washrooms and labs.
5. Acceptable manufacturers / suppliers include and are not limited to:
 - a. Forbo
 - b. Johnsonite

Installation

1. Work to be performed to manufacturers written instructions and all amendments.
2. Adhesives applied smoothly to avoid telegraphing tool marks.
3. Roll floors with weighed roller.
4. Perform work with sharp blades and recut piece where overcutting has occurred.
5. Cuts to be greater than 100mm.
6. Becoming familiar with the building and any special or unusual conditions.
7. Layout to minimize seams and cuts.
8. Proceeding with work over unsatisfactory substrate indicates acceptance by trade and will be considered when remediation work or warranty work arises.

09 68 00 Carpeting

1. Floor carpeting is not a standard floor finish except in specialized areas (i.e. library) or with special permission.

2. A separate document will be issued by Facilities when required which contains specifications for types of carpet, adhesives, installation requirement, guarantees, lifting and removal of existing carpet, and floor preparation
3. The university carpeting policy applies to all sectors of the university community and permits the installation of carpet if specific circumstances are satisfied. These circumstances are:
 - a. Housekeeping Services must be satisfied that the installation of carpet is consistent with the uses of the area and will not result in higher housekeeping costs.
 - b. The Department of Occupational Health and Safety must be satisfied that the installation of carpeting will not represent a safety hazard.
 - c. The quality of carpeting to be installed must be consistent with a standard established by the Purchasing Department.
 - d. Maintenance of the carpeting will be the responsibility of Housekeeping Services and they will determine the appropriate level of maintenance unless some mutually agreeable arrangement concerning maintenance is reached.
 - e. Individual departments will be responsible for cleaning costs requested in addition to the regular cleaning schedule.
 - f. Carpet installation shall be done under the supervision of Facilities. All costs associated with the purchase and installation of the carpet and reparation costs incurred at the time of removal are the responsibility of the respective department.
 - g. Carpets shall be purchased with the assistance of the Purchasing Department to ensure carpet quality meets university standards for wear and maintenance.

09 90 00 Painting and Coating

General

1. The purpose of this document is to provide a guideline for the standardization of the interior and exterior paint systems within the Queen's University campus. The intention of this document is to provide the comprehensive source of information and guidance for those involved with paint systems within the Queen's University campus.
2. These guidelines will be adhered to by Queen's staff and external contractors for paint related work at Queen's University. This applies to all new and renovated space as well as moves, adds and changes in the campus.

Submittals Required:

1. Transmittal sheet.
2. Product data sheets for each product, colour and finish (electronic submission), label indicating:
 - a. MPI system / product identifier
 - b. Sheen
 - c. Location of application.
 - d. Draw Downs of each colour and finish (physical submission), label indicating:
 - e. Product base

- f. Sheen
- g. Formula
- h. Location of application.

Summary of existing conditions and proposed system including:

1. Interior or Exterior Assessment: a reference to the level of deterioration i.e. RIN 4.2 Concrete Masonry Surfaces.
2. DSD Level, this will provide the contractor with required level of abatement and preparation i.e. DSD 3 (severe). This then should be followed by:
 - a. Interior or Exterior Surface Preparation will provide the trades clear instruction on what they are required to do. i.e. RIN 4.2 DSD-3 wash, manual removal of loose and flaking, block filler and primer, multiple coats of primer, etc.
 - b. Interior / Exterior Systems Maintenance Repainting or Painting This will provide the appropriate primer and top coat, number of coats appropriate to the DSD level as well as the MPI Approved Product number i.e. RIN 4.2 K would use MPI 138, 139, 140 or 141 Products.
3. MPI Approved Product List will assist with further identifying the correct product based the characteristics, such as VOC'S, E2-3 and desired sheen. See references 09 90 00 6.2.

Re Painting (Maintenance) and Painting Systems

1. To comply with Master Painters Institute Manuals for Paint and Re-Painting.
2. Always evaluate and test surfaces prior to purchasing product.
3. If conditions are found to be deficient for a professional final product; trades are required to stop work and contact General Contractor or Facilities Project Manager with recommended corrective action. Work is not to commence until after written instruction is provided.
4. Proceeding with work indicates acceptance of conditions and any corrective measures will be to responsibility of the trade / general contractor.
5. Remove all signs and reinstall at 1525mm AFF to center line on latch side of doors.
6. Remove all cover plates, signage, tape, stickers, adhesive, filth, oils and any other objects that will impair a professional finished product.
7. Sand and scrape loose material
8. Clean and dry all surfaces
9. Apply appropriate filler and sand.
10. Apply appropriate primer.
11. Perform prime check, correct surfaces and re-prime prior to proceeding with topcoats.
12. A minimum of two topcoats are always required.
13. Patching indicates paint of full plane from corner to corner.
14. Fenestrations in walls and ceilings are considered part of the surface and are to be painted.
15. Columns and structural elements are to be re-painted unless otherwise directed. Exposed concrete and prefinished and in good condition metal excluded.
16. Where doors and trim being to be painted this is to be both faces unless otherwise directed in contract.

17. Visual contrast of 70% is required between floor and wall or wall base and adjacent wall or floor.
18. Visual contrast of 70% is required on door or trim and adjacent wall.

09 91 13 Exterior Painting Systems

1. Products, preparation and application must be capable of performing in corrosive, heavy commercial traffic, high abuse, wet conditions.
2. Ambient surface temperature must be 50F / 10C for duration of the cure time, typical cure time is 28 days
3. General Exterior Metal System: This is a general system and does not replace evaluation, research and application of the correct system according to Master Painters Institute Manuals for Paint and Re-Painting Manuals.
4. Primer:
 - a. Based on evaluation of substrate, deterioration and previous products applied.
 - b. MPI No. 301 Water Based Epoxy Primer.
 - c. MPI VOC Level: E2.
 - d. Metal works, doors, trim, and handrails.
 - e. Appropriate primer.
 - f. Exterior Urethane Enamel.
 - g. Gloss Level 4-5
 - h. MPI No. 161
 - i. MPI VOC Level: E3
 - j. 2 top coats minimum.
 - k. Handrails must have smooth finish. Many coats with sanding in between.

09 91 23 Interior Painting Systems

1. General Interior Systems: This is a general system and does not replace evaluation, research and application of the correct system according to Master Painters Institute Manuals for Paint and Re-Painting Manuals.

Primer:

1. Based on evaluation of substrate, deterioration and previous products applied.
2. MPI VOC Level: E3
3. Tinted when covering or applying bright or saturated colours.

Walls:

1. High Performance Architectural Latex.
2. Gloss Level 3 (Eggshell).
3. MPI No. 139
4. MPI VOC Level: E3
5. 2 top coats.

Accent Walls:

1. High Performance Architectural Latex

2. Gloss Level 2-3
3. MPI No. 139
4. MPI VOC Level: E3
5. 2 top coats, Light colours.
6. 4 top coats colourful or dark colours.
7. 8 coats for highly saturated colours like red, yellow or blue.

Ceilings:

1. Interior Latex Flat
2. Gloss Level 2
3. MPI No. 53
4. MPI VOC Level: E3
5. 2 top coats.

Metal works, doors, trim, handrails:

1. Pre-catalyzed Water Based Epoxy
2. Gloss Level 4-5
3. MPI No. 141
4. MPI VOC Level: E3
5. 2 top coats.
6. Both sides of doors and frames.
7. Handrails must have smooth finish. Many coats with sanding in between.

References and Resources

1. Masters Painters Institute
2. <http://mpi.net/>
3. Masters Painters Institute Approved Product List
http://paintinfo.com/mpi/approved/Partner_index.shtml