

HOSPITAL STANDARDS

203.303 BUILDING COMPONENTS, INTERIORS, FINISHES

This document contains requirements for finish elements for a hospital building and is in alignment with the UniFormat II, Level 2 classification – C30. The document is subdivided into the following parts per the UniFormat II, Level 3 classifications.

UNIFORMAT II classification					MoP	
Level 1 Major Elements		Level 2 Group Elements		Level 3 Individual Elements		Document Number
C	Interiors	C30	Finishes	C3010	Wall Finishes	203.303
				C3020	Floor Finishes	
				C3025	Base Finishes	
				C3030	Ceiling Finishes	

ELEMENT C3010, WALL FINISHES. Includes general design requirements for finish surfaces on interior vertical surfaces. Specific items of note include:

1. Design requirements
2. Substrate requirements
3. Painting
4. Ceramic Tile
5. Plastic Paneling
6. Materials

ELEMENT C3020, FLOOR FINISHES. Includes general design requirements for interior flooring finishes. Specific items of note include:

1. Design requirements
2. Substrate requirements
3. Testing requirements
4. Moisture mitigation
5. Submittal requirements
6. Flooring material requirements
7. Installation requirements

ELEMENT C3025, BASE FINISHES. Includes general design requirements for the interior finishes at the intersection of walls and floors. Specific items of note include:

1. Base finishes
2. Materials
3. Submittal requirements

[ELEMENT C3030, CEILING FINISHES](#). Includes general design requirements for the interior finishes of ceilings. Specific items of note include:

1. Ceiling finishes
2. Submittal requirements

ELEMENT C3010, WALL FINISHES

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PART 1 - GENERAL**1.01 OVERVIEW**

- A. This document includes requirements for paint, ceramic tile, wall coverings and other similar wall finishes for hospital buildings.
- B. Plastic paneling and supergraphics are also referenced in this document.
- C. Plastic sheet wall protection is referenced in 203.301, C1030.

PART 2 - DESIGN CRITERIA**2.01 GENERAL**

- A. The following general design criteria apply to all rooms of a hospital building.
- B. Specify wall finishes appropriate to project specific conditions and requirements.
 - 1. Paint is the most common finish for wall surfaces in a hospital building.
 - 2. Ceramic tile walls are most often used as the wall surface in bathrooms within a hospital building.
 - 3. Plastic paneling and plastic panel as a wall protection is addressed below.
 - 4. Vinyl wall coverings and other wall similar fabric-type materials are addressed in the public and clinical care and clinical support sections below.
 - 5. Supergraphics in hospital buildings in either public rooms or in the tenant areas are common. Supergraphics may influence the branding and wayfinding design elements and as such the supergraphics are project specific and shall be coordinated with BJC Director of Design.
- C. Refer to Room Data Sheet for wall finish requirements by room.
- D. Coordinate wall finishes and colors with entity/tenant specific standards.
- E. **Do not install vapor impervious finish materials on exterior walls in which the substrate is a paper-faced gypsum board.**
- F. Rated walls shall be labeled according to BJC requirements. Refer to document 203.301.
- G. Plastic Paneling. Plastic paneling is a typical surface applied to gypsum board walls for areas that are subject to moisture, aggressive cleaning, and chemicals. Such rooms may include invasive procedure areas, sterile and soiled rooms, dietary

and food prep, etc. Refer to Room Data Sheets for use in specific rooms and locations.

1. Exposed surface of plastic paneling shall be smooth-faced and without texture.
2. Factory provided caps and covers shall be used at transitions between panel to panel and between panels and other surfaces. There shall be no exposed edge condition, including at outside corners. Consider terminating panels at inside corners where possible.
3. Provide sealant behind, beneath and within caps and trims to maintain continuous seamless surfacing. Note sealant locations on the drawings.

- H. Paint standards for all areas are based on products manufactured by The Sherwin Williams Company.

2.02 PUBLIC AREAS

- A. Painted Gypsum Board Wall Surfaces. The following table identifies approved paint systems for wall surfaces of public areas within a hospital building.

1. Typical Rooms. Most common rooms and those without excessive exposure to contact, abrasion, cleaning, humidity/moisture levels, chemicals and biological contaminants.
2. Wet Rooms. Rooms with excessive exposure to higher humidity/moisture levels, and those that must withstand regular scrubbing and cleaning. Such rooms may include public rest rooms. **Note: The following systems for these rooms and surfaces currently indicate only epoxy-type paint systems. BJC is currently reviewing other paint systems due to reported touch-up and recoating issues. Until there is a different system approved by BJC, epoxy systems are considered conditionally approved and the use of epoxy systems must be approved by the Facility Director and BJC Director of Design for every project.**

Table. Paint standards for wall surfaces in public rooms within a hospital building.

Note: "Conditionally Permitted" requires pre-approval of use by BJC Director of Design.

		HOSPITAL BUILDING		
		PUBLIC AREAS		
		Typical Rooms and Areas	Wet Rooms and Areas	
Gypsum Board Wall Surface	Standard System	Approval status	Permitted	Conditionally Permitted
		Comments	Latex, Standard	Epoxy
		MPI level	G3	G5
		Primer	Harmony, Interior Latex primer, B11	ProMar 200 Zero VOC Interior Latex primer B28W2600
		Intermediate Coat	Harmony Interior Latex Eg-Shel, B9	Pro Industrial Precatalyzed Water Based Epoxy Semi-Gloss K46
		Top Coat	Harmony Interior Latex Eg-Shel, B9	Pro Industrial Precatalyzed Water Based Epoxy Semi-Gloss K46
	Optional System 1	Approval status	Permitted	Conditionally Permitted
		Comments	Latex, Anti-microbial	Epoxy
		MPI level	G3	G3
		Primer	ProMar 200 Zero VOC Interior Latex primer B28W2600	ProMar 200 Zero VOC Interior Latex primer B28W2600
		Intermediate Coat	Paint Shield Interior Latex Eg-Shel Microbicidal D12W51	Pro Industrial Precatalyzed Water Based Epoxy Eg-Shel K45
		Top Coat	Paint Shield Interior Latex Eg-Shel Microbicidal D12W51	Pro Industrial Precatalyzed Water Based Epoxy Eg-Shel K45
	Optional System 2	Approval status	Conditionally Permitted	n/a
		Comments	Epoxy, High Performance	n/a
		MPI level	G3	n/a
		Primer	ProMar 200 Zero VOC Interior Latex primer B28W2600	n/a
		Intermediate Coat	Pro Industrial Water Based Catalyzed Epoxy Eg-Shel B73-300	n/a
		Top Coat	Pro Industrial Water Based Catalyzed Epoxy Eg-Shel B73-300	n/a

B. Ceramic Tile (wall surface). Ceramic tile as a wall surface in public rooms of a hospital building is generally limited to the public rest rooms. Typically, this includes the wet wall and side walls adjacent to toilets, urinals and sinks (in order to comply with code requirements for water-resistant surfaces adjacent to plumbing fixtures). The height of the tile shall be to a minimum height of 5'-0" above the floor, unless otherwise directed and unless otherwise indicated. The following table identifies ceramic tile types and describes their characteristics in accordance with the Tile Council of North America (TCNA) Handbook.

1. Type. Ceramic tile in public rooms of a hospital building shall be certified by the Porcelain Ceramic Tile Association (PCTA) as Porcelain type (porcelain clay body), glazed, impervious, shall meet the requirements of ASTM C373,

shall be manufactured by either the extruded or pressed method, shall be either standard or large format size. Tiles that are not certified by PCTA as porcelain ceramic tile are not permitted. These permitted characteristics are represented by the shaded blue cells in the following table.

Table. Ceramic Tile Types for wall surfaces in public areas of hospital buildings including properties and characteristics in accordance with ANSI A137.1 and as the TCNA Handbook.

Highlighted cells represent the type of tile used as wall surfaces due to their low water absorption characteristics and durability.

*Note: the body of the Glazed Wall Tile type is considered non-vitreous, however the glaze creates an impervious finish. It should be noted that the Glazed Wall Tile is more susceptible to chipping and cracking from impact due in part to the less dense and more absorptive tile body. It's use as a wall tile is limited to hospital building Clinical care and clinical support projects.

ceramic tile types (approx. tile thickness)	surface coating	Suitable for floor applications		natural clay body		porcelain clay body		Manufactured by pressed method		Manufactured by extruded method		Mosaic, surface area less than 9 sq. in.	Standard Format, surface area greater than 9 sq. in.	Large Format, surface area greater than 9 sq. in. and one edge measures more than 15"	Impervious (0.5% or less absorption)	Vitreous (0.5% to 3.0% absorption)	Semi-Vitreous (3.0% to 7.0% absorption)	Non-Vitreous (7.0% to 20.0% absorption)
		Suitable for floor applications	Suitable for wall applications															
Porcelain	glazed		X		X			X	X			X	X		X			
	unglazed	X			X			X	X			X	X		X			
Pressed Floor	glazed		X		X			X				X	X			X	X	X
	unglazed	X			X			X				X	X			X	X	X
Mosaic (1/4" to 3/8" thick)	glazed		X		X			X	X			X			X	X	X	X
	unglazed	X	X		X			X	X			X			X	X	X	X
Quarry (3/8" to 3/4" thick)	glazed		X		X				X				X		X	X	X	
	unglazed	X			X				X				X		X	X	X	
Glazed Wall Tile *	glazed only		X					X					X		X			X

- Grout. Where wall tile is used in the public areas of a hospital building, epoxy grout is required.
- Substrate. Wall tile shall be backed with cementitious board, unless otherwise approved in writing by BJC Corporate Architect and BJC Design Project Manager.
- Lighting on tile wall surfaces. Where designs include lighting a ceramic tile wall, location of such lighting fixtures shall not be directly above the tile. Severe lighting angles can create shadowing and cause the tile installation to appear out of plane and corners out of alignment (lippage). Therefore, where tile will be washed with light, locate the wall washing fixtures a minimum of 12" horizontally from the wall.
- Layout. Layout tile designs and patterns so that cut tiles are no less than 2" in any dimension.

- C. Vinyl wall coverings are only permitted in the public rooms of a hospital with approval from BJC Director of Design. Where encountered in renovation projects, Design Professional shall coordinate with BJC Design Project Manager for extent of removal, including areas that may be beyond the immediate scope and limits of construction.
- D. BJC Director of Design shall approve use of supergraphics in the public rooms of a hospital.

2.03 CLINICAL CARE AND CLINICAL SUPPORT AREAS

- A. Painted Gypsum Board Wall Surfaces. The table identifying approved paint systems for clinical care and clinical support rooms of a hospital building.
 - 1. Typical Rooms. Most common rooms and those without excessive exposure to contact, abrasion, cleaning, humidity/moisture levels, chemicals and biological contaminants.
 - 2. Wet Rooms. Rooms with excessive exposure to higher humidity/moisture levels, and those that must withstand regular scrubbing and cleaning. Such rooms may include rest rooms. **Note: The following systems for these rooms and surfaces currently indicate only epoxy-type paint systems. BJC is currently reviewing other paint systems due to reported touch-up and recoating issues. Until there is a different system approved by BJC, epoxy systems are considered conditionally approved and the use of epoxy systems must be approved by the Facility Director and BJC Director of Design for every project.**
 - 3. Invasive Procedure and Sterile Rooms. Rooms with excessive exposure to higher humidity/moisture levels and biological contaminants, and those that must withstand routine scrubbing and cleaning with harsh chemicals. Such rooms may include Invasive Procedure Rooms, Sterile Core areas, Compounding Pharmacies, Clinical Laboratories, and some non-invasive procedure rooms. Coordinate specific color requirements with facility and BJC Director of Design within operating rooms. **Note: The following systems for these rooms and surfaces currently indicate only epoxy-type paint systems. BJC is currently reviewing other paint systems due to reported touch-up and recoating issues. Until there is a different system approved by BJC, epoxy systems are considered conditionally approved and the use of epoxy systems must be approved by the Facility Director and BJC Director of Design for every project.**

Table. Paint standards for wall surfaces in clinical care and clinical support rooms within a hospital building.

Note: "Conditionally Permitted" requires pre-approval of use by BJC Director of Design.

		HOSPITAL BUILDING			
		CLINICAL CARE AND CLINICAL SUPPORT AREAS			
		Typical Rooms and Areas	Wet Rooms and Areas	Invasive Procedure and Sterile Rooms	
Gypsum Board Wall Surface	Standard System	Approval status	Permitted	Conditionally Permitted	Conditionally Permitted
		Comments	Latex, Standard	Epoxy	Epoxy
		MPI level	G3	G5	G5
		Primer	Harmony, Interior Latex primer, B11	ProMar 200 Zero VOC Interior Latex primer B28W2600	Pro Industrial Pro Ceryl Universal primer, B66-310
		Intermediate Coat	Harmony Interior Latex Eg-Shel, B9	Pro Industrial Precatalyzed Water Based Epoxy Semi-Gloss K46	Pro Industrial Precatalyzed Water Based Epoxy Semi-Gloss K46
		Top Coat	Harmony Interior Latex Eg-Shel, B9	Pro Industrial Precatalyzed Water Based Epoxy Semi-Gloss K46	Pro Industrial Precatalyzed Water Based Epoxy Semi-Gloss K46
	Optional System 1	Approval status	Permitted	Conditionally Permitted	Conditionally Permitted
		Comments	Latex, Anti-microbial	Epoxy	Epoxy
		MPI level	G3	G3	G3
		Primer	ProMar 200 Zero VOC Interior Latex primer B28W2600	ProMar 200 Zero VOC Interior Latex primer B28W2600	ProMar 200 Zero VOC Interior Latex primer B28W2600
		Intermediate Coat	Paint Shield Interior Latex Eg-Shel Microbicial D12W51	Pro Industrial Precatalyzed Water Based Epoxy Eg-Shel K45	Pro Industrial Water Based Catalyzed Epoxy Eg-shel, B73-360
		Top Coat	Paint Shield Interior Latex Eg-Shel Microbicial D12W51	Pro Industrial Precatalyzed Water Based Epoxy Eg-Shel K45	Pro Industrial Water Based Catalyzed Epoxy Eg-shel, B73-360
	Optional System 2	Approval status	Conditionally Permitted	n/a	n/a
		Comments	Epoxy, High Performance	n/a	n/a
		MPI level	G3	n/a	n/a
		Primer	ProMar 200 Zero VOC Interior Latex primer B28W2600	n/a	n/a
		Intermediate Coat	Pro Industrial Water Based Catalyzed Epoxy Eg-Shel B73-300	n/a	n/a
		Top Coat	Pro Industrial Water Based Catalyzed Epoxy Eg-Shel B73-300	n/a	n/a

- B. Ceramic Tile (wall surface). Ceramic tile as a wall surface in clinical care and clinical support areas of a hospital building is generally limited to the rest rooms. Typically, this includes the wet wall and side walls adjacent to toilets, urinals and sinks (in order to comply with code requirements for water-resistant surfaces)

adjacent to plumbing fixtures). The height of the tile shall be a minimum of 5'-0" a.f.f. unless otherwise directed and unless otherwise indicated.

1. Type. Ceramic tile in clinical care and clinical support rooms of a hospital building shall be certified by the Porcelain Ceramic Tile Association (PCTA) as Porcelain type (porcelain clay body), glazed, impervious, shall meet the requirements of ASTM C373, shall be manufactured by either the extruded or pressed method, shall be either standard or large format size. Tiles that are not certified by PCTA as porcelain ceramic tile are not permitted. These permitted characteristics are represented by the shaded blue cells in the following table.
2. Glazed Wall Tile type are not permitted.

Table. Ceramic Tile Types for wall surfaces in clinical care and clinical support rooms of hospital buildings including properties and characteristics in accordance with ANSI A137.1 and as the TCNA Handbook.

Highlighted cells represent the type of tile used as wall surfaces due to their low water absorption characteristics.

*Note: the body of the Glazed Wall Tile type is considered non-vitreous, however the glaze creates an impervious finish. It should be noted that the Glazed Wall Tile is more susceptible to chipping and cracking from impact due in part to the less dense and more absorptive tile body. It's use as a wall tile is limited to hospital building Clinical care and clinical support projects.

ceramic tile types (approx. tile thickness)	surface coating	Suitable for floor applications		Suitable for wall applications		natural clay body		porcelain clay body		Manufactured by pressed method		Manufactured by extruded method		Mosaic, surface area less than 9 sq. in.		Standard Format, surface area greater than 9 sq. in.		Large Format, surface area greater than 9 sq. in. and one edge measures more than 15"		Impervious (0.5% or less absorption)		Vitreous (0.5% to 3.0% absorption)		Semi-Vitreous (3.0% to 7.0% absorption)		Non-Vitreous (7.0% to 20.0% absorption)	
Porcelain	glazed		X				X	X	X	X				X	X			X									
	unglazed	X					X		X	X				X	X			X									
Pressed Floor	glazed		X			X			X					X	X						X	X	X	X			
	unglazed	X				X			X					X	X							X	X	X	X		
Mosaic (1/4" to 3/8" thick)	glazed		X			X	X		X	X				X							X	X	X	X			
	unglazed	X	X			X	X		X	X				X							X	X	X	X			
Quarry (3/8" to 3/4" thick)	glazed		X			X				X					X						X	X	X				
	unglazed	X				X				X					X						X	X	X				
Glazed Wall Tile *	glazed only		X							X					X						X						X

3. Grout. Where wall tile is used in the clinical care and clinical support spaces of a hospital building, epoxy grout is required.
4. Substrate. Wall tile shall be backed with a glass-mat water-resistant gypsum core or fiber cement tile backer board.
5. Layout. Layout tile designs and patterns so that cut tiles are no less than 2" in any dimension.

- C. Vinyl wall coverings. Not permitted. Where existing vinyl wall coverings are encountered in renovation projects, Design Professional shall coordinate with BJC Design Project Manager for extent of removal, including areas that may be beyond the immediate scope and limits of construction.

PART 3 - SPECIAL CONTRACT DOCUMENT REQUIREMENTS

3.01 GENERAL

- A. Properly detail transitions between changes in wall finishes. This includes both horizontal and vertical transitions.

3.02 PAINT

- A. Project specifications should refer to the Master Painters Institute (MPI) standards for product and execution requirements.

PART 4 - PRODUCTS

4.01 PAINT

- A. Paint products manufactured by The Sherwin Williams Company will only be specified for BJC projects. No substitutions permitted.

4.02 CERAMIC TILE

- A. Where porcelain tile is required, product must meet the requirements of ASTM C373, and be certified by the Porcelain Ceramic Tile Association (PCTA).

End of C3010 – Wall Finishes

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ELEMENT C3020 – FLOOR FINISHES

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PART 1 - GENERAL**1.01 OVERVIEW**

- A. This document includes carpet, ceramic tile, stone flooring, resilient flooring, resinous flooring systems, terrazzo, concrete sealers and other floor finishes for hospital buildings.
- B. This document includes moisture mitigation systems for concrete slabs.
- C. This document includes floor expansion joint requirements.
- D. This document references floor levelness requirements.
- E. Refer to and include in Project documents the “*Flooring Scope of Work Checklist*” as provided in Chapter 7, Specification Masters, Division 00.

PART 2 - DESIGN CRITERIA**2.01 GENERAL**

- A. The following general design criteria apply to both public areas and clinical care/clinical support rooms of a hospital building.
 - 1. Public areas are the non-clinical, public portions of the hospital building.
 - 2. Clinical care and clinical support areas are those areas other than the public areas that are for direct or indirect patient care including inpatient zones, diagnostic and treatment zones, and clinical support zones.
- B. Specify floor finishes appropriate to project specific conditions and requirements.
 - 1. Coordinate requirements with Chapter 1, Flooring Guideline.
 - 2. Coordinate with Room Data Sheets for floor finishes by room.
 - 3. Coordinate floor finish materials with BJC Design Project Manager.
- C. Coordinate floor finish patterns and colors BJC Design Project Manager, Director of Design and with entity finish standards.
- D. Selection of floor finishes is an important design effort that must include, but not necessarily be limited to, considerations for cleanliness, slip-resistance, durability, maintenance, and mobility (walking and wheeled) requirements.

Table. Types of permitted floor coverings within a hospital building.

			HOSPITAL BUILDING	
			PUBLIC AREAS	CLINICAL CARE AND CLINICAL SUPPORT AREAS
CP Conditionally Permitted (requires pre-approval of use by BJC Director of Design)				
NP Not Permitted				
NR Not Recommended				
P Permitted				
R Recommended				
Ceramic Tile	Porcelain	glazed	NP	NP
		unglazed	P	P
	Pressed Floor	glazed	NP	NP
		unglazed	NP	NP
	Mosaic	glazed	NP	NP
		unglazed	CP	CP
	Quarry	glazed	NP	NP
		unglazed	CP	CP
	Glazed Wall Tile	glazed	NP	NP
	Resilient Tile	Rubber Tile		NP
Vinyl Tile		VCT	CP	CP
		SVT (LVT)	P	P
Resilient Sheet	Rubber Sheet		NP	NP
	Vinyl Sheet	backed	CP	P
		unbacked	CP	P
Tile Carpet			P	NP
Sheet Carpet			CP	NP
Resinous Flooring			CP	P
Stone Tile Flooring			CP	NP
Cork Flooring			NP	NP
Linoleum			NP	NP
Wood Flooring			NP	NP
Static-Control Resilient Flooring			NP	CP
Resilient Athletic Flooring			NP	CP
Terrazzo			CP	CP

E. Expansion Joints. Design spaces and areas with consideration for existing and new floor expansion joints. Layout spaces so as to minimize the number of times floor expansion joints occur and where they cross traffic areas. Review floor expansion joint locations with BJC Design Project Manager and Corporate Architect.

1. Joint Design. Coordinate joint design with the anticipated types of traffic including walkers, wheelchairs, wheeled equipment, and other mobility assisting devices. Recessed type joint covers that create a flush condition across both sides of the joint and flush to the joint cover are required. Use of surface mounted and raised expansion joint covers shall be approved in writing by BJC Design Project Manager and BJC Corporate Architect.
2. Flush Joint Covers in Existing Concrete Slabs. Where existing concrete slab edges at an expansion joint are not constructed to receive flush joint covers, the following methods should be considered and reviewed with BJC Design Project Manager and Corporate Architect.

- a. Preferred method. Remove portion of existing slab edges either side of joint as necessary to install joint system flush. Existing slabs must be evaluated for fire separation requirements, embedded items, and structural integrity.
- b. Optional method. Float floors with floor leveling material either side of joint so that the face of the joint cover and the floor surfaces on either side are flush conditions.

F. All floor coverings can be affected by excessive moisture. Design Professional must consider the materials and systems to be used and develop a comprehensive strategy for ensuring the successful installation of finished floors. Coordinate with BJC Corporate Architect. Coordinate with manufacturers’ requirements for all materials to be installed as the total flooring system.

2.02 PUBLIC AREAS

A. Architect shall submit a binder containing approved interior material control samples at the completion of design for each flooring type, pattern and color.

B. Substrate Requirements.

1. Newly Placed Concrete Slabs. Moisture testing, flatness testing, slab preparation for moisture mitigation, and moisture mitigation as described below are all required for newly placed concrete slabs in public areas of hospital buildings that will receive floor finishes.

a. Moisture Testing. While newly placed slabs will not be dry enough for flooring to be installed without mitigation, perform moisture testing for areas to receive floor coverings to establish baseline conditions and provide test results to BJC Project Manager and BJC Corporate Architect. Frequency of tests should be discussed with BJC Project Manager and may not need to comply with the prescriptive requirements identified in the ASTM standards since all new concrete slabs that will receive floor finishes will receive topical moisture mitigation system that complies with BJC requirements, regardless of the results of the moisture tests.

- 1) Alkalinity. ASTM F710 (requirements referenced in ASTM F710).
- 2) Emission Rate. ASTM F1869, Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.
- 3) Relative Humidity. ASTM F2170, Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.

b. Flatness Testing. Before installing finished flooring, concrete slabs must be tested in accordance with the straightedge method. Where floor slabs exceed 1/4” in 10’, provide cementitious floor fill in areas as required to achieve the flatness identified. Include in project specifications criteria

for identifying a unit cost for floor fill. Refer to Unit Costs specification in Chapter 7. Note that this test, while somewhat related, is not the same as is required of the concrete slabs for floor flatness and floor levelness after slabs are placed.

- c. Slab Preparation. Prepare slabs to receive topical moisture mitigation system.
 - 1) Remove by mechanical means (sand, grind, and bead-blast) all curing agents, sealers, chemical compounds, foreign materials, floor coatings and compounds (including but not limited to those that contain soap, wax, oil and/or silicone). Do not use chemicals and/or solvents to remove such materials.
 - 2) Prepare concrete surface by mechanical means (bead-blasting) to a minimum concrete surface profile of 3 (per International Concrete Repair Institute, CSP 3) and as required by manufacturer's requirements.
 - 3) Install primers and leveling material according as required by manufacturer and project specific conditions.
 - d. Install topical moisture mitigation system. Install topical moisture mitigation system per manufacturer's requirements. See Flooring Guideline for list of BJC approved manufacturers.
2. Existing Concrete Slabs. Moisture testing, flatness testing, and general slab preparation, is required for existing concrete slabs in public areas of hospital buildings that will receive floor finishes. When any one moisture test result exceeds the limits identified, slab preparation for moisture mitigation and installation of a topical moisture mitigation system is required.
- a. Moisture Testing. Test slabs according to the requirements identified below. Provide test results to BJC Project Manager and BJC Corporate Architect.
 - 1) Alkalinity. ASTM F710 (requirements referenced in ASTM F710). 9.0 ph or less is required.
 - 2) Emission Rate. ASTM F1869, Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride. Maximum permissible rate is 3lbs/1,000 sf/24 hours.
 - 3) Relative Humidity. ASTM F2170, Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes. Maximum permissible relative humidity level is 75%.
 - b. Flatness Testing. Before installing finished flooring, concrete slabs must be tested in accordance with the straightedge method. Where floor slabs exceed 1/4" in 10', provide cementitious floor fill in areas as required to achieve the flatness identified. Include in project specifications criteria for identifying a unit cost for floor fill. Refer to Unit Costs specification in Chapter 7. Note that this test, while somewhat related, is not the same

as is required of the concrete slabs for floor flatness and floor levelness after slabs are placed.

- c. General Slab Preparation.
 - 1) Remove by mechanical means (sand, grind, and bead-blast) all curing agents, sealers, chemical compounds, foreign materials, floor coatings and compounds (including but not limited to those that contain soap, wax, oil and/or silicone). Petroleum-based construction layout markings (including but not limited to Sharpies, grease pens or pencils, spray paint, etc.) and petroleum-based spills on concrete floors shall be removed completely by bead blasting (to prevent ghosting of the markings through to the floor surface). Do not use chemicals and/or solvents to remove such materials.
 - d. Slab Preparation for Topical Moisture Mitigation. Prepare slabs to receive topical moisture mitigation system.
 - 1) Prepare concrete surface by mechanical means (bead-blasting) to a minimum concrete surface profile of 3 (per International Concrete Repair Institute, CSP 3) and as required by manufacturer's requirements.
 - 2) Install primers and leveling material according as required by manufacturer and project specific conditions.
 - e. Install topical moisture mitigation system. Install topical moisture mitigation system per manufacturer's requirements. See Flooring Guideline for list of BJC approved manufacturers.
- C. Ceramic Tile Flooring. Ceramic Tile Flooring is categorized in one of the 5 major types of ceramic tile that meet ANSI A137.1 and as defined in accordance with the TCNA Handbook. Refer to the Flooring Guideline for additional information and requirements. Ceramic Tile flooring as described below is approved for interior use within certain public areas within a hospital building. Locations include but are not necessarily limited to public bathrooms. In some instances, ceramic tile may be used in main floor lobby areas.
- 1. Ceramic Tile Type. Unglazed, Porcelain ceramic tile, certified by the Porcelain Tile Certification Agency (PTCA). Standard format size is preferred due to increased grout area for slip resistance. Large format conditionally permitted with approval from BJC Director of Design.

Table. Ceramic Tile Types for floor surfaces in public rooms of hospital buildings including properties and characteristics in accordance with ANSI A137.1 and as the TCNA Handbook.

Highlighted cells represent the type of tile used as floor surfaces in public areas of a hospital building due to their low water absorption characteristics and durability.

*Note: the body of the Glazed Wall Tile type is considered non-vitreous, however the glaze creates an impervious finish. It should be noted that the Glazed Wall Tile is more susceptible to chipping and cracking from impact due in part to the less dense and more absorptive tile body. It's use as a wall tile is limited to hospital building Clinical care and clinical support projects.

ceramic tile types (approx. tile thickness)	surface coating	Suitable for floor applications		Suitable for wall applications		natural clay body		porcelain clay body		Manufactured by pressed method		Manufactured by extruded method		Mosaic, surface area less than 9 sq. in.		Standard Format, surface area greater than 9 sq. in.		Large Format, surface area greater than 9 sq. in. and one edge measures more than 15"		Impervious (0.5% or less absorption)		Vitreous (0.5% to 3.0% absorption)		Semi-Vitreous (3.0% to 7.0% absorption)		Non-Vitreous (7.0% to 20.0% absorption)		
Porcelain	glazed		X				X			X	X				X	X				X								
	unglazed	X					X			X	X				X	X				X								
Pressed Floor	glazed		X				X			X					X	X					X	X	X	X				
	unglazed	X					X			X					X	X					X	X	X	X				
Mosaic (1/4" to 3/8" thick)	glazed		X			X	X			X	X			X						X	X	X	X	X				
	unglazed	X	X			X	X			X	X			X							X	X	X	X				
Quarry (3/8" to 3/4" thick)	glazed		X			X					X				X						X	X	X					
	unglazed	X				X					X				X						X	X	X					
Glazed Wall Tile *	glazed only		X							X					X					X							X	

2. Epoxy grout is required for all tile flooring. There are no exceptions to this requirement. Grout sealers are incompatible with epoxy grout and therefore are not required.
3. Tile flooring and installation shall comply with the latest edition of the TCNA Handbook for Ceramic, Glass, and Stone Tile Installation.
4. Waterproofing and Crack Isolation. Use of a fabric-reinforced, fluid-applied system is required beneath all tile flooring installations.
 - a. Material type: Liquid latex rubber or elastomeric polymer with a fabric reinforcement membrane.
 - b. Membrane/system selection shall be reviewed by BJC Corporate Architect and Design Project Manager. Coordination with substrates, existing conditions, project characteristics and finished flooring is required.
 - c. Membrane shall extend up walls a minimum of 6' above finished floor.

- D. Resilient Tile Flooring. The classification of resilient tile flooring includes those made from rubber and those made from vinyl. This flooring is approved for use in certain public areas of a hospital building in accordance with the following requirements.
1. Rubber tile floor coverings are not permitted in public areas of hospital buildings unless otherwise approved in writing by BJC Director of Design.
 2. Vinyl tile flooring are further classified as solid vinyl or vinyl composition tile (VCT) types. Their approval for interior use in public areas of a hospital building is as follows.
 - a. Vinyl composition tiles (VCT) requires routine maintenance of the wearing layer. As such, its use in the public rooms of a hospital building type is conditionally permitted and limited to building support type spaces. Use of VCT beyond those building support areas must be approved by BJC Director of Design.
 - 1) Minimum thickness shall be 0.125 in.
 - 2) Vinyl composite tile floors shall receive floor polish as recommended by flooring manufacturer. Floor polish shall be provided and applied by Owner's housekeeping group at the completion of the project unless otherwise directed.
 - b. Solid vinyl tile, which includes luxury vinyl tile (LVT), is approved for use in public areas of a hospital building.
 - 1) Minimum tile thickness shall be 0.125 in.
 - 2) Do not seal or wax solid vinyl tile. If required by manufacturer, coordinate requirements with BJC Corporate Architect and BJC Director of Design.
 3. Adhesives. Provide adhesives in accordance with the traffic conditions described. Adhesive type shall be used throughout entire room and not limited to isolated areas or portions of a room.
 - a. Provide standard clear thin spread adhesive for light to moderate foot and wheeled traffic areas.
 - b. Provide epoxy adhesive for moderate to heavy foot and wheeled traffic areas.
 4. Layouts and Patterns. Patterns and layouts of resilient tile flooring shall be clearly communicated in the drawings. Approval of layout and pattern by BJC Design Project Manager is required. In general, the following conditions apply.
 - a. Corridor locations, LVT planks shall be oriented so as to run parallel to the length of the corridor.

- b. Waiting rooms, niches and similar areas off corridors shall be an accent color.
- E. Tile Carpet Flooring. This flooring is approved for use in certain public areas of a hospital building and as indicated in the Room Data Sheets.
- F. The following types of floor coverings are either conditionally permitted, not permitted, and/or not recommended and must be approved by BJC Director of Design for use in public rooms of a hospital building.
 - 1. Resilient Sheet Flooring
 - 2. Sheet Carpet
 - 3. Resinous Flooring
 - 4. Stone Tile Flooring
 - 5. Cork Flooring
 - 6. Linoleum
 - 7. Wood Flooring
 - 8. Static-Control Resilient Flooring
 - 9. Resilient Athletic Flooring
 - 10. Terrazzo Flooring

2.03 CLINICAL CARE AND CLINICAL SUPPORT AREAS

- A. Architect shall submit a binder containing approved interior material control samples at the completion of design for each flooring type, pattern and color.
- B. Substrate Requirements.
 - 1. Newly Placed Concrete Slabs. Moisture testing, flatness testing, slab preparation for moisture mitigation, and moisture mitigation as described below are all required for newly placed concrete slabs in Clinical care and clinical support areas of hospital buildings that will receive floor finishes.
 - a. Moisture Testing. While newly placed slabs will not be dry enough for flooring to be installed without mitigation, perform moisture testing for areas to receive floor coverings to establish baseline conditions and provide test results to BJC Project Manager and BJC Corporate Architect. Frequency of tests should be discussed with BJC Project Manager and may not need to comply with the prescriptive requirements identified in the ASTM standards since all new concrete slabs that will receive floor finishes will receive topical moisture mitigation system that complies with BJC requirements, regardless of the results of the moisture tests.
 - 1) Alkalinity. ASTM F710 (requirements referenced in ASTM F710).
 - 2) Emission Rate. ASTM F1869, Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.

- 3) Relative Humidity. ASTM F2170, Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.
 - b. Flatness Testing. Before installing finished flooring, concrete slabs must be tested in accordance with the straightedge method. Where floor slabs exceed 1/4" in 10', provide cementitious floor fill in areas as required to achieve the flatness identified. Include in project specifications criteria for identifying a unit cost for floor fill. Refer to Unit Costs specification in Chapter 7. Note that this test, while somewhat related, is not the same as is required of the concrete slabs for floor flatness and floor levelness after slabs are placed.
 - c. Slab Preparation. Prepare slabs to receive topical moisture mitigation system.
 - 1) Remove by mechanical means (sand, grind, and bead-blast) all curing agents, sealers, chemical compounds, foreign materials, floor coatings and compounds (including but not limited to those that contain soap, wax, oil and/or silicone). Do not use chemicals and/or solvents to remove such materials.
 - 2) Prepare concrete surface by mechanical means (bead-blasting) to a minimum concrete surface profile of 3 (per International Concrete Repair Institute, CSP 3) and as required by manufacturer's requirements.
 - 3) Install primers and leveling material according as required by manufacturer and project specific conditions.
 - d. Install topical moisture mitigation system. Install topical moisture mitigation system per manufacturer's requirements. See Flooring Guideline for list of BJC approved manufacturers.
2. Existing Concrete Slabs. Moisture testing, flatness testing, and general slab preparation, is required for existing concrete slabs in Clinical care and clinical support areas of hospital buildings that will receive floor finishes. When any one moisture test result exceeds the limits identified, slab preparation for moisture mitigation and installation of a topical moisture mitigation system is required.
 - a. Moisture Testing. Test slabs according to the requirements identified below. Provide test results to BJC Project Manager and BJC Corporate Architect.
 - 1) Alkalinity. ASTM F710 (requirements referenced in ASTM F710). 9.0 ph or less is required.
 - 2) Emission Rate. ASTM F1869, Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride. Maximum permissible rate is 3lbs/1,000 sf/24 hours.

- 3) Relative Humidity. ASTM F2170, Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes. Maximum permissible relative humidity level is 75%.
- b. Flatness Testing. Before installing finished flooring, concrete slabs must be tested in accordance with the straightedge method. Where floor slabs exceed 1/4” in 10’, provide cementitious floor fill in areas as required to achieve the flatness identified. Include in project specifications criteria for identifying a unit cost for floor fill. Refer to Unit Costs specification in Chapter 7. Note that this test, while somewhat related, is not the same as is required of the concrete slabs for floor flatness and floor levelness after slabs are placed.
- c. General Slab Preparation.
 - 1) Remove by mechanical means (sand, grind, and bead-blast) all curing agents, sealers, chemical compounds, foreign materials, floor coatings and compounds (including but not limited to those that contain soap, wax, oil and/or silicone). Petroleum-based construction layout markings (including but not limited to Sharpies, grease pens or pencils, spray paint, etc.) and petroleum-based spills on concrete floors shall be removed completely by bead blasting (to prevent ghosting of the markings through to the floor surface). Do not use chemicals and/or solvents to remove such materials.
- d. Slab Preparation for Topical Moisture Mitigation. Prepare slabs to receive topical moisture mitigation system.
 - 1) Prepare concrete surface by mechanical means (bead-blasting) to a minimum concrete surface profile of 3 (per International Concrete Repair Institute, CSP 3) and as required by manufacturer’s requirements.
 - 2) Install primers and leveling material according as required by manufacturer and project specific conditions.
- e. Install topical moisture mitigation system. Install topical moisture mitigation system per manufacturer’s requirements. See Flooring Guideline for list of BJC approved manufacturers.
- C. Ceramic Tile Flooring. Ceramic Tile Flooring is categorized in one of the 5 major types of ceramic tile that meet ANSI A137.1 and as defined in accordance with the TCNA Handbook. Refer to the Flooring Guideline for additional information and requirements. Ceramic Tile flooring is approved for interior use in clinical care and clinical support areas of hospital buildings, and most commonly used as the floor covering material in bathrooms.
 - 1. Ceramic Tile Type. Unglazed, Porcelain ceramic tile, certified by the Porcelain Tile Certification Agency (PTCA). Standard format size is preferred due to increased grout area for slip resistance. Large format conditionally permitted with approval from BJC Director of Design.

Table. Ceramic Tile Types for floor surfaces in clinical care and clinical support rooms of hospital buildings including properties and characteristics in accordance with ANSI A137.1 and as the TCNA Handbook.

Highlighted cells represent the type of tile used as floor surfaces Clinical care and clinical support areas of a hospital building due to their low water absorption characteristics and durability.

*Note: the body of the Glazed Wall Tile type is considered non-vitreous, however the glaze creates an impervious finish. It should be noted that the Glazed Wall Tile is more susceptible to chipping and cracking from impact due in part to the less dense and more absorptive tile body. It's use as a wall tile is limited to hospital building Clinical care and clinical support projects.

ceramic tile types (approx. tile thickness) surface coating

		Suitable for floor applications	Suitable for wall applications	natural clay body	porcelain clay body	Manufactured by pressed method	Manufactured by extruded method	Mosaic, surface area less than 9 sq. in.	Standard Format, surface area greater than 9 sq. in.	Large Format, surface area greater than 9 sq. in. and one edge measures more than 15"	Impervious (0.5% or less absorption)	Vitreous (0.5% to 3.0% absorption)	Semi-Vitreous (3.0% to 7.0% absorption)	Non-Vitreous (7.0% to 20.0% absorption)
Porcelain	glazed		X		X	X	X		X	X	X			
	unglazed	X			X	X	X		X	X	X			
Pressed Floor	glazed		X		X	X			X	X		X	X	X
	unglazed	X			X	X			X	X		X	X	X
Mosaic (1/4" to 3/8" thick)	glazed		X	X	X	X	X	X			X	X	X	X
	unglazed	X	X	X	X	X	X	X			X	X	X	X
Quarry (3/8" to 3/4" thick)	glazed		X	X			X		X		X	X	X	
	unglazed	X		X			X		X		X	X	X	
Glazed Wall Tile *	glazed only		X			X			X		X			X

2. Epoxy grout is required for all tile flooring. There are no exceptions to this requirement. Grout sealers are incompatible with epoxy grout and therefore are not required.
3. Tile flooring and installation shall comply with the latest edition of the TCNA Handbook for Ceramic, Glass, and Stone Tile Installation.
4. Waterproofing and Crack Isolation. Use of a fabric-reinforced, fluid-applied system is required beneath all tile flooring installations.
 - a. Material type: Liquid latex rubber or elastomeric polymer with a fabric reinforcement membrane.
 - b. Membrane/system selection shall be reviewed by BJC Corporate Architect and Design Project Manager. Coordination with substrates, existing conditions, project characteristics and finished flooring is required.
 - c. Membrane shall extend up walls a minimum of 6' above finished floor.

- D. Resilient Tile Flooring. The classification of resilient tile flooring includes those made from rubber and those made from vinyl. This flooring is approved for use in certain clinical care and clinical support areas of a hospital building in accordance with the following requirements.
1. Rubber tile floor coverings are not permitted in clinical care and clinical support areas of hospital buildings unless otherwise approved in writing by BJC Director of Design.
 2. Vinyl tile flooring are further classified as solid vinyl or vinyl composition tile (VCT) types. Their approval for interior use in clinical care and clinical support areas of a hospital building is as follows.
 - a. Vinyl composition tiles (VCT) requires routine maintenance of the wearing layer. As such, its use in clinical care and clinical support areas of hospital buildings is conditionally permitted and requires approval by BJC Director of Design and Corporate Architect.
 - 1) Minimum thickness shall be 0.125 in.
 - 2) Vinyl composite tile floors shall receive floor polish as recommended by flooring manufacturer.
 - b. Solid vinyl tile, which includes luxury vinyl tile (LVT), is approved for use.
 - 1) Minimum tile thickness shall be 0.125 in.
 - 2) Do not seal or wax solid vinyl tile. If required by manufacturer, coordinate requirements with BJC Corporate Architect and BJC Director of Design.
 3. Adhesives. Provide adhesives in accordance with the traffic conditions described. Adhesive type shall be used throughout entire room and not limited to isolated areas or portions of a room.
 - a. Provide standard clear thin spread adhesive for light to moderate foot and wheeled traffic areas.
 - b. Provide epoxy adhesive for moderate to heavy foot and wheeled traffic areas.
 4. Layouts and Patterns. Patterns and layouts of resilient tile flooring shall be clearly communicated in the drawings. Approval of layout and pattern by BJC Design Project Manager is required. In general, the following conditions apply.
 - a. Corridor locations, LVT planks shall be oriented so as to run parallel to the length of the corridor.
 - b. Patient room locations, LVT planks shall be oriented so as to run parallel to the corridor/exterior wall.

- c. Patient room locations, accent color shall be used at the nurse work area.
 - d. Inpatient areas in which part of the patient’s recovery/therapy includes walking (Cardiac, Rehabilitation, etc.) the corridor patterning shall include distance markers in the floor covering as follows.
 - 1) Corridors shall have accent planks spaced 20’-0” apart. Accent width shall be the width of the LVT (typically 4” wide) and shall extend from the patient room side of the corridor wall a distance of 6’-0”.
 - e. Inpatient areas where staff corridors cross the core rooms shall consider an accent color.
 - f. Waiting rooms, niches and similar areas off corridors shall consider an accent color.
- E. Resilient Sheet Flooring. The classification of resilient sheet flooring includes those made from rubber and those made from vinyl. This flooring is approved for use in certain clinical care and clinical support areas of a hospital building in accordance with the following requirements.
- 1. Rubber. Rubber sheet floor coverings (backed and unbacked types) are not permitted in clinical care and clinical support areas of hospital buildings unless otherwise approved in writing by BJC Director of Design.
 - 2. Vinyl. Vinyl sheet floor coverings are further classified as those with a reinforcing backing material (backed) and those without a backing (unbacked). Their approval for interior use in clinical care and clinical support areas of a hospital building is as follows.
 - a. Unbacked sheet vinyl floors are required in locations where the floor covering may be exposed to bodily fluids, biological, chemical or other contaminants. These areas include but are not limited to Soiled Utility/ Soiled Holding, Operating Rooms and surgery suites, invasive procedure rooms, etc. Coordinate use of unbacked sheet vinyl flooring with BJC Design Project Manager. Clearly indicate backed and unbacked sheet vinyl floors on drawings.
 - 1) Minimum thickness shall be 0.080 in.
 - 2) Unless specifically required by flooring manufacturer, floor polish for sheet vinyl floor coverings is not required and not acceptable. Use of floor polish causes the need to regularly maintain the finish.
 - b. Backed sheet vinyl floors are permitted in locations where seamless floor is required but where there is little to no exposure to bodily fluids, biological, chemical or other contaminants. Such rooms may include but not be limited to Medication Room, Clean Supply, Nourishment, etc.
 - 1) Minimum wear layer thickness shall be .020 in and minimum backing layer to be .050 in. for a minimum overall thickness of .070 in.

- 2) Unless specifically required by flooring manufacturer, floor polish for sheet vinyl floor coverings is not required and not acceptable. Use of floor polish causes the need to regularly maintain the finish.
 3. Seams. All sheet vinyl floor covering seams shall be heat-welded seams only.
 - a. Flooring layout and patterns shall be designed so as to minimize the amount of seams. Flooring contractor to provide seaming diagram to BJC Design Project Manager for review and approval.
 - b. Welding rods shall be color-matched to flooring material unless otherwise directed by BJC Design Project Manager. Patterned welding rods are not permitted due to concerns with shear failures.
 4. Orientation. In corridor locations, wood-grained textures shall be oriented so as to run parallel to the length of the corridor.
 5. Integral-Flash-Cove. Integral-flash-cove-base shall be provided in areas where the floor covering may be exposed to bodily fluids, biological, chemical or other contaminants. In general, these are areas that require unbacked sheet vinyl floor coverings. Where required, the following conditions apply.
 - a. Cove Strip: 1-inch (25-mm) radius, securely adhered to both wall and floor substrate. Cap strip shall be secured so as to eliminate the potential for puncture at cove. Where floor supported furnishings are planned to be against walls with integral flash cove base, coordinate furnishing selections so that coved flooring does not bear load of the furnishing supports.
 - b. Cap Strip: Square stainless steel type cap provided by manufacturer. Provide sealant at top of cap strip to wall surface.
 - c. Cove height: Minimum 4” high. 6” in some instances. Refer to Room Data Sheets.
- F. Resinous Flooring. The classification of resinous flooring includes those systems that are trowel-applied and those that utilize the broadcast method. Refer to flooring guideline for characteristics of each system. This flooring is approved for use in certain clinical care and clinical support areas of a hospital building in accordance with the following requirements.
1. Trowel-Applied Method. Use may include areas where the flooring must create the slope to drain condition or where rubber chips in the mix can provide greater comfort and cushion under foot.
 2. Broadcast Method. Locations may include bathrooms and other wet areas where slip resistance is a primary consideration.
- G. The following types of floor coverings must be approved by BJC Director of Design for use in Clinical care and clinical support rooms of a hospital building.

1. Sheet Carpet
2. Stone Tile Flooring
3. Cork Flooring
4. Linoleum
5. Wood Flooring
6. Static-Control Resilient Flooring
7. Resilient Athletic Flooring
8. Terrazzo Flooring

PART 3 - SPECIAL CONTRACT DOCUMENT REQUIREMENTS

3.01 GENERAL

- A. Refer to Flooring Guideline for additional documentation requirements.
- B. Flooring Installation – Scope of Work Checklist is included in the specification masters and should be included in every project with slab prep, demolition or new flooring installation activities. Complete the checklist prior to commencing any flooring activity and submit to BJC Design Project Manager for review.
- C. Where multiple floor finishes occur or where specific patterning and layout is important, provide interior floor finish plans indicating material type and locations. Dimension finish plan complete with work points or match lines as required.
- D. Unless otherwise directed, furnish a minimum of 5% extra materials to owner at completion of project for each type of size, pattern, color used. Extra material shall be packaged with protective covering and identified with labels describing contents and project information. Coordinate exact amount of extra materials with Owner's requirements and project size.

PART 4 - PRODUCTS

4.01 GENERAL

- A. Coordinate with entity specific standards regarding acceptable manufacturers and products.

End of C3020 – Floor Finishes

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ELEMENT C3025 – BASE FINISHES

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PART 1 - GENERAL**1.01 OVERVIEW**

- A. This document includes wall base finishes based on specific floor types for hospital buildings.

PART 2 - DESIGN CRITERIA**2.01 GENERAL**

- A. The following general design criteria apply to both public and clinical care and clinical support rooms of a hospital building.
- B. Coordinate with Room Data Sheets for approved flooring types by room.
- C. Coordinate wall base finishes with entity specific standards.
- D. Architect shall submit a binder containing approved interior material control samples at the completion of design for each wall base type and color.
- E. Specify wall base material appropriate to project specific conditions and requirements. Coordinate with entity and BJC project manager.

2.02 PUBLIC AREAS

- A. The following types of wall base are permitted in public areas of a hospital building.
- B. Resilient base. Resilient base shall be in accordance with ASTM F-1861. This wall base is approved for use in certain public areas of a hospital building in accordance with the following requirements. Refer to Room Data Sheets for locations by room.
 - 1. Type: TPR (rubber, thermoplastic) 100% rubber.
 - a. Type TV (vinyl, thermoplastic) is conditionally permitted only when approved by BJC Director of Design.
 - 2. Manufacturing Method: Group I (solid, homogeneous)
 - 3. Style: Cove (base with toe)
 - 4. Minimum Thickness: 0.125 inch (3.2 mm)
 - 5. Height: Typical minimum base height shall be 4 inches (102 mm).
 - 6. Lengths: The following are permitted based on the location and exposure.

- a. Coils in areas clinical type areas (to minimize the number of seams and reduce infection risk)
 - b. Manufacturer's standard straight lengths in less clinical, public type areas (where number of seams do not pose an infection risk)
7. Inside and Outside Corners: Either job-formed or pre-formed.
 8. Finish: Satin
- C. Ceramic Tile Base. Provide unglazed porcelain ceramic tile base at all rooms with ceramic tile flooring.
1. Provide rounded edged stainless steel outside corners at ceramic tile wall base unless otherwise directed.
- D. Other Decorative-Type Wall Base. Other wall base materials may be considered for certain public areas of a hospital building (main entrance and lobby spaces) when approved by BJC Director of Design. These types may include but not be limited to the following:
1. Stone tile
 2. Wood
 3. Stainless steel
 4. Terrazzo

2.03 CLINICAL CARE AND CLINICAL SUPPORT AREAS

- A. The following types of wall base are permitted in clinical care and clinical support areas of a hospital building.
- B. Resilient base. Resilient base shall be in accordance with ASTM F-1861. This wall base is approved for use in certain clinical care and clinical support areas of a hospital building (where seamless conditions are not required) in accordance with the following requirements. Refer to Room Data Sheets for locations by room.
1. Type: TPR (rubber, thermoplastic) 100% rubber.
 - a. Type TV (vinyl, thermoplastic) is conditionally permitted only when approved by BJC Director of Design.
 2. Manufacturing Method: Group I (solid, homogeneous)
 3. Style: Cove (base with toe)
 4. Minimum Thickness: 0.125 inch (3.2 mm)
 5. Height: Typical minimum base height shall be 4 inches (102 mm).
 6. Lengths: The following are permitted based on the location and exposure.
 - a. Coils in areas clinical type areas (to minimize the number of seams and reduce infection risk)
 - b. Manufacturer's standard straight lengths in less clinical, public type areas (where number of seams do not pose an infection risk)
 7. Inside and Outside Corners: Either job-formed or pre-formed.

8. Finish: Satin
- C. Ceramic Tile Base. Provide unglazed porcelain ceramic tile base at all rooms with ceramic tile flooring.
 1. Tile shall be covered base type and not straight
- D. Integral-Flash-Cove. Integral-flash-cove-base shall be provided in areas where the floor covering may be exposed to bodily fluids, biological, chemical or other contaminants. In general, these are areas that require unbacked sheet vinyl floor coverings or epoxy (resinous) type floors. Where required, the following conditions apply.
 1. Cove Strip: 1-inch (25-mm) radius, securely adhered to both wall and floor substrate. Cap strip shall be secured so as to eliminate the potential for puncture at cove. Where floor supported furnishings are planned to be against walls with integral flash cove base, coordinate furnishing selections so that coved flooring does not bear load of the furnishing supports.
 2. Cap Strip: Square stainless steel type cap provided by manufacturer. Provide sealant at top of cap strip to wall surface.
 3. Cove height: Minimum 4" high. 6" may be required in some instances. Refer to Room Data Sheets.

PART 3 - SPECIAL CONTRACT DOCUMENT REQUIREMENTS

3.01 GENERAL

- A. Where multiple wall base types occur or where specific layout is important, provide interior floor finish plans indicating material type and locations.
- B. Unless otherwise directed, furnish a minimum of 5% extra materials to owner at completion of project for each type of size, color used. Extra material shall be packaged with protective covering and identified with labels describing contents and project information.

PART 4 - PRODUCTS

4.01 GENERAL

- A. Coordinate with entity specific standards regarding acceptable manufacturers and products.

End of C3025 – Base Finishes

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ELEMENT C3030 – CEILING FINISHES

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PART 1 - GENERAL**1.01 OVERVIEW**

- A. This document includes requirements for painted gypsum board and suspended acoustical panel and grid ceiling systems for hospital buildings.

PART 2 - DESIGN CRITERIA**2.01 GENERAL**

- A. The following general design criteria apply to both public and clinical care and clinical support rooms of a hospital building.
- B. Specify ceiling finishes appropriate to project specific conditions and requirements.
- C. Refer to Room Data Sheet for wall finish requirements by room.
- D. Coordinate wall base finishes with entity specific standards.
- E. Specify ceiling finishes appropriate to project specific conditions and requirements.
- F. Refer to Room Data Sheet for ceiling finish requirements by room.
- G. Paint standards for both public and clinical care and clinical support areas are based on products manufactured by The Sherwin Williams Company.

2.02 PUBLIC AREAS

- A. Painted Gypsum Board Ceiling Surfaces. The following table identifies approved interior paint systems for ceiling surfaces of public areas within a hospital building.
 - 1. Typical Rooms. Most common rooms and those without excessive exposure to contact, abrasion, cleaning, humidity/moisture levels, chemicals and biological contaminants.
 - 2. Wet Rooms. Rooms with excessive exposure to higher humidity/moisture levels, and those that must withstand regular scrubbing and cleaning. Such rooms may include public rest rooms. **Note: The following systems for these rooms and surfaces currently indicate only epoxy-type paint systems. BJC is currently reviewing other paint systems due to reported touch-up and recoating issues. Until there is a different system approved by BJC, epoxy systems are considered conditionally approved and the use**

of epoxy systems must be approved by the Facility Director and BJC Director of Design for every project.

Table. Paint standards for ceiling surfaces in public areas within a hospital building.

Note: "Conditionally Permitted" requires pre-approval of use by BJC Director of Design.

		HOSPITAL BUILDING		
		PUBLIC AREAS		
		Typical Rooms	Wet Rooms	
Gypsum Board Ceiling Surface	Standard System	Approval status	Permitted	Conditionally Permitted
		Comments	Latex, Standard	Epoxy
		MPI level	G3	G5
		Primer	Harmony, Interior Latex primer, B11	ProMar 200 Zero VOC Interior Latex primer B28W2600
		Intermediate Coat	Harmony Interior Latex Eg-Shel, B9	Pro Industrial Precatalyzed Water Based Epoxy Semi-Gloss K46
		Top Coat	Harmony Interior Latex Eg-Shel, B9	Pro Industrial Precatalyzed Water Based Epoxy Semi-Gloss K46
	Optional System 1	Approval status	Permitted	Conditionally Permitted
		Comments	Latex, Anti-microbial	Epoxy
		MPI level	G3	G3
		Primer	ProMar 200 Zero VOC Interior Latex primer B28W2600	ProMar 200 Zero VOC Interior Latex primer B28W2600
		Intermediate Coat	Paint Shield Interior Latex Eg-Shel Microbicidal D12W51	Pro Industrial Precatalyzed Water Based Epoxy Eg-Shel K45
		Top Coat	Paint Shield Interior Latex Eg-Shel Microbicidal D12W51	Pro Industrial Precatalyzed Water Based Epoxy Eg-Shel K45
	Optional System 2	Approval status	Conditionally Permitted	n/a
		Comments	Epoxy, High Performance	n/a
		MPI level	G3	n/a
		Primer	ProMar 200 Zero VOC Interior Latex primer B28W2600	n/a
		Intermediate Coat	Pro Industrial Water Based Catalyzed Epoxy Eg-Shel B73-300	n/a
		Top Coat	Pro Industrial Water Based Catalyzed Epoxy Eg-Shel B73-300	n/a

- B. Acoustical Panel and Suspended Grid: 2’x2’ and 2’x4’ panels are permitted. Other sized panels are conditionally permitted with approval from BJC Director of Design. All ceilings shall be seismically braced as required by code. Type of panel – refer to Room Data Sheets for specific panel type.

2.03 CLINICAL CARE AND CLINICAL SUPPORT AREAS

- A. Painted Gypsum Board Ceiling Surfaces. The following table identifies approved paint systems for ceiling surfaces of clinical care and clinical support rooms within a hospital building.

1. Typical Rooms. Most common rooms and those without excessive exposure to contact, abrasion, cleaning, humidity/moisture levels, chemicals and biological contaminants.
2. Wet Rooms. Rooms with excessive exposure to higher humidity/moisture levels, and those that must withstand regular scrubbing and cleaning. Such rooms may include public rest rooms. **Note: The following systems for these rooms and surfaces currently indicate only epoxy-type paint systems. BJC is currently reviewing other paint systems due to reported touch-up and recoating issues. Until there is a different system approved by BJC, epoxy systems are considered conditionally approved and the use of epoxy systems must be approved by the Facility Director and BJC Director of Design for every project.**
3. Invasive Procedure and Sterile Rooms. Rooms with excessive exposure to higher humidity/moisture levels and biological contaminants, and those that must withstand routine scrubbing and cleaning with harsh chemicals. Such rooms may include Invasive Procedure Rooms, Sterile Core areas, Compounding Pharmacies, Clinical Laboratories, and some non-invasive procedure rooms. Coordinate specific color requirements with facility and BJC Director of Design within operating rooms. **Note: The following systems for these rooms and surfaces currently indicate only epoxy-type paint systems. BJC is currently reviewing other paint systems due to reported touch-up and recoating issues. Until there is a different system approved by BJC, epoxy systems are considered conditionally approved and the use of epoxy systems must be approved by the Facility Director and BJC Director of Design for every project.**

Table. Paint standards for ceiling surfaces in clinical care and clinical support rooms within a hospital building.

Note: "Conditionally Permitted" requires pre-approval of use by BJC Director of Design.

		HOSPITAL BUILDING			
		CLINICAL CARE AND CLINICAL SUPPORT AREAS			
		Typical Rooms and Areas	Wet Rooms and Areas	Invasive Procedure and Sterile Rooms	
Gypsum Board Ceiling Surface	Standard System	Approval status	Permitted	Conditionally Permitted	Conditionally Permitted
		Comments	Latex, Standard	Epoxy	Epoxy
		MPI level	G3	G5	G5
		Primer	Harmony, Interior Latex primer, B11	ProMar 200 Zero VOC Interior Latex primer B28W2600	Pro Industrial Pro Ceryl Universal primer, B66-310
		Intermediate Coat	Harmony Interior Latex Eg-Shel, B9	Pro Industrial Precatalyzed Water Based Epoxy Semi-Gloss K46	Pro Industrial Precatalyzed Water Based Epoxy Semi-Gloss K46
		Top Coat	Harmony Interior Latex Eg-Shel, B9	Pro Industrial Precatalyzed Water Based Epoxy Semi-Gloss K46	Pro Industrial Precatalyzed Water Based Epoxy Semi-Gloss K46
	Optional System 1	Approval status	Permitted	Conditionally Permitted	Conditionally Permitted
		Comments	Latex, Anti-microbial	Epoxy	Epoxy
		MPI level	G3	G3	G3
		Primer	ProMar 200 Zero VOC Interior Latex primer B28W2600	ProMar 200 Zero VOC Interior Latex primer B28W2600	ProMar 200 Zero VOC Interior Latex primer B28W2600
		Intermediate Coat	Paint Shield Interior Latex Eg-Shel Microbicial D12W51	Pro Industrial Precatalyzed Water Based Epoxy Eg-Shel K45	Pro Industrial Water Based Catalyzed Epoxy Eg-shel, B73-360
		Top Coat	Paint Shield Interior Latex Eg-Shel Microbicial D12W51	Pro Industrial Precatalyzed Water Based Epoxy Eg-Shel K45	Pro Industrial Water Based Catalyzed Epoxy Eg-shel, B73-360
	Optional System 2	Approval status	Conditionally Permitted	n/a	n/a
		Comments	Epoxy, High Performance	n/a	n/a
		MPI level	G3	n/a	n/a
		Primer	ProMar 200 Zero VOC Interior Latex primer B28W2600	n/a	n/a
		Intermediate Coat	Pro Industrial Water Based Catalyzed Epoxy Eg-Shel B73-300	n/a	n/a
		Top Coat	Pro Industrial Water Based Catalyzed Epoxy Eg-Shel B73-300	n/a	n/a

- B. Acoustical Panel and Suspended Grid: 2'x2' and 2'x4' panels are permitted. Other sized panels are conditionally permitted with approval from BJC Director of Design. All ceilings shall be seismically braced as required by code. Type of panel – refer to Room Data Sheets for specific panel type.

PART 3 - SPECIAL CONTRACT DOCUMENT REQUIREMENTS

3.01 GENERAL

- A. Reflected ceiling plans shall include the height of ceiling surfaces above finished floor on plan drawings.
- B. Unless otherwise directed, furnish a minimum of 5% extra materials to owner at completion of project for each type of size, color used. Extra material shall be packaged with protective covering and identified with labels describing contents and project information.

PART 4 - PRODUCTS

4.01 GENERAL

- A. Coordinate with entity specific standards regarding acceptable manufacturers and products.

End of C3030 – Ceiling Finishes

END OF DOCUMENT 203.303

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RESPONSIBILITY MATRIX

The following matrix identifies those individuals, roles or departments responsible for maintaining the accuracy of the information and those responsible for providing input. Refer to Preface for detailed explanation.

	BJC HealthCare													Hospital/Entity				
	PD&C						Clinical Asset Management (CAM)	Risk Management	Real Estate	Ergonomics	Infection Prevention (IP)	Info Systems, Data, Telecom (IS)	Other:	Standards Review Committee	Facilities Engineering	Housekeeping	Security	Other:
	Corporate Architect	Corporate Engineer	Director of Planning	Director of Design	Director of Construction	Other:												
Primary Authorship	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Secondary Authorship	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DOCUMENT REVISION HISTORY

The following table indicates the date the document originated and any subsequent revisions.

203.303 – Interiors, Finishes		
Issue	Description of Issue	Prepared by
2012 v1	Original Issue	G. Zipfel
2012 v2	Miscellaneous Review/Clarifications	G. Zipfel/B. Temple
2016 v1	reissued	G. Zipfel
2018 v1	Combined documents and renamed as 203.303	G. Zipfel