

**PARKING STANDARDS**

**603.302 BUILDING COMPONENTS, INTERIORS, STAIRS**

This document contains requirements for stair elements for a parking structure and is in alignment with the UniFormat II, Level 2 classification – C20. The document is subdivided into the following parts per the UniFormat II, Level 3 classifications.

UNIFORMAT II classification						MoP Document Number
Level 1 Major Elements		Level 2 Group Elements		Level 3 Individual Elements		
C	Interiors	C20	Stairs	C2010	Stair Construction	603.302
				C2020	Stair Finishes	

[ELEMENT C2010, STAIR CONSTRUCTION](#). Includes general design requirements for egress and monumental type stairs. Specific items of note include:

1. Construction
2. Materials

[ELEMENT C2020, STAIR FINISHES](#). Includes general design requirements for the interior finishes of egress and monumental type stairs. Specific items of note include:

1. Wall finishes
2. Tread and riser finishes
3. Stringer finishes
4. Submittal requirements

**ELEMENT C2010, STAIR CONSTRUCTION**

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**PART 1 - GENERAL****1.01 OVERVIEW**

- A. Includes construction of stairs and associated railings.

**PART 2 - DESIGN CRITERIA****2.01 GENERAL**

- A. Stairs in parking garages shall be designed as egress type stairs unless otherwise directed.
- B. Handrails at both sides of stairs shall be 1-1/4" diameter steel pipe. All welded connections shall be ground smooth before finishing.

**2.02 BASIC EGRESS STAIRS**

- A. Stairs Within Enclosed and Conditioned Areas
  - 1. Typical stairs and landings shall be constructed as one of the following.
    - a. Self-supporting cast-in-place or precast concrete.
    - b. Concrete filled metal pan treads, steel risers, and structural channel stringers. Intermediate landings shall be reinforced concrete metal pan construction with steel channel supports connected to surrounding structure.
- B. Stairs In Unenclosed and/or Unconditioned Areas
  - a. Self-supporting cast-in-place or precast concrete.

**PART 3 - SPECIAL CONTRACT DOCUMENT REQUIREMENTS****3.01 GENERAL**

- A. Proper detailing of the expansion joint (where required as determined by structural engineer) between the parking structure and stair shaft is required. Architect to coordinate joint system design.

- B. Indicate code required clearances in egress stairs at all landings. Indicate and dimension any structural elements, utilities or other obstructions within the stair to ensure they do not encroach on egress requirements.
- C. All standpipes shall be dimensioned (where occurs) and all valves and fittings shall be indicated and shown to comply with egress clearance requirements.
- D. Clearly indicate stair wall construction. Indicate fire-resistance ratings and indicate all thru-penetration assemblies.

#### PART 4 - PRODUCTS

##### 4.01 GENERAL

- A. Not Applicable.

End of C2010 – Stair Construction

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**ELEMENT C2020 – STAIR FINISHES**

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**PART 1 - GENERAL****1.01 OVERVIEW**

- A. Includes finishes for treads, risers, landings, exposed structure, handrails and guardrails.

**PART 2 - DESIGN CRITERIA****2.01 GENERAL**

- A. Designs should encourage and promote stair travel for all BJC facilities.
- B. Typical stairs in a parking structure are considered to be basic egress stair type. The characteristics of the basic egress stair are that it meets the egress requirements for the building and the stair is not expected to receive traffic during normal operations. The finishes are generally minimal. However, stair finishes in parking garages vary, coordinate requirements with BJC Director of Design and Design Project Manager.
- C. All handrails shall return to a wall, post or guardrail. Coordinate with AHJ for bottom of run handrail extension requirements.
- D. All exposed steel in stairs shall be primed and painted.
- E. Avoid surface mounted conduit. Where possible, conceal conduit within walls and ceiling construction.
- F. Where egress stairs continue below the level of exit discharge, a gate and sign approved by the AHJ shall be installed at the floor level before the start of the stair run. Gate shall be metal, primed and painted with bumpers to prevent metal to metal contact. Sign shall be shown in the contract documents, and noted as Owner furnished and installed.

**2.02 BASIC EGRESS STAIRS**

- A. Stair finishes for this stair type are as follows, unless otherwise directed.
  - 1. Floor levels and intermediate stair landings: Concrete, sealed. Slip resistant.
  - 2. Stair treads: Sealed concrete. Provide cast iron with anti-slip sand cast finish nosing, suitable for heavy traffic areas and exterior conditions. Protect nosing from damage during construction.
  - 3. Walls: Unfinished.
  - 4. Ceilings: Unfinished.

5. Metals. Stringers, guardrails, handrails, metal deck at underside of landings, underside of tread pan and riser, miscellaneous exposed steel surfaces shall be primed and painted. Handrails and guardrails shall be welded and all surfaces ground smooth before finishing.

- B. Coordinate with entity specific requirements.

### PART 3 - SPECIAL CONTRACT DOCUMENT REQUIREMENTS

#### 3.01 GENERAL

- A. Submit interior material control samples to BJC Design Project Manager for review.

### PART 4 - PRODUCTS

#### 4.01 GENERAL

- A. Not Applicable.

End of C2020 – Stair Finishes

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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.

603.302 – Interiors, Stairs		
Issue	Description of Issue	Prepared by
2016 v1	Original Issue	G. Zipfel
2018 v1	Combined documents and updated	G. Zipfel