



CODE STUDY

Project Name: USM Department Reorganization – GLICKMAN LIBRARY				Date: 11/16/2015	
Location: Portland, Maine				Project #: 15457	
Scope:	New <input type="checkbox"/>	Addition <input type="checkbox"/>	Renovation <input checked="" type="checkbox"/>	Protection:	Fully Sprinkled Supervised Fire Alarm
Occupancy Classification	Mixed Use in building – A and B – See Life Safety Plan			Construction Type	1B
Existing Building Area	Floor B:	13,500 SF	Existing Building Height	Approximately 90'	
	Floor 1:	21,650 SF			
	Floor 2:	18,550 SF			
	Floor 3:	18,800 SF			
	Floor 4:	13,500 SF			
	Floor 5:	13,500 SF			
	Floor 6:	13,500 SF			
	Floor 7:	13,500 SF			
	Total:	126,500 SF			
Area of Renovation	Office 302:	125 SF	9.1 % of 3 rd Floor Area 1.4 % of Building Area		
	Office 303:	125 SF			
	Office 304:	125 SF			
	Office 305:	140 SF			
	Open Office Area:	1,200 SF			
	Total:	1,715 SF			

Code Heading	IEBC/IBC 2009	NFPA 101-2009	Remarks
401 Classification of Work	IEBC Chapter 4	43.1.4 Compliance Renovations, modifications, reconstructions shall comply with each specific section of this Chapter	The proposed use is the same as the previous use in this space. The renovation is addressing the addition of office spaces in an existing assembly (Library) use.
404.1 Alteration – Level 2	Work area = 1,715 SF Total Building Area = 126,500 SF. Comply with Chapters 6 for Level 1 alterations and Chapter 7 for Level 2 alterations	43.5.2.3 Where the work area exceeds 50% of building area, the work shall be considered Reconstruction	Level 3/Reconstruction applies when work area exceeds 50% of aggregate area of building. Work area is less than 50% building area, therefore not considered Level3/Reconstruction



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601 Alterations – Level 1 Compliance	Level-1 alterations shall meet requirements of Chapter 6. Building or portions of building shall not be made less safe	Renovation-Renovations shall comply with this section. New work shall comply with requirements for existing buildings (Chapter 13, Existing Assembly). The work shall not make the building less conforming than was before renovations	Level of renovations are Renovations and Modifications
701 Alterations – Level 2 Compliance	New construction shall meet IBC except: <ul style="list-style-type: none"> • Ceiling height: 7' • Dead end corridors • Exterior windows – light and ventilation requirements 	Modifications-Modifications shall comply with this section and the section for Renovations. 43.5.1.3 Newly constructed elements components and systems shall comply with other sections of the code as applicable to new construction.	NFPA Modifications requires new work and extension of existing systems to comply with other sections of the code (Chapter 13, Existing Assembly)
602.1 Materials and Methods	All new work shall comply with materials and methods requirements of IBC, IECC, IMC, IPC as applicable for: <ul style="list-style-type: none"> • material specification • detail of installation, joints, penetrations, continuity of elements 	43.4.4 Reconfiguration of any system, installation of equipment shall comply with requirements for Modifications	
602.1 Interior Finish	Comply with IBC Chapter 8 for new work	43.4.3 New interior finishes shall meet the requirement for new construction.	All interior finishes comply with that for new construction.



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703.4 Interior Finish	Interior finishes in work area (L1,L2) shall comply with IBC or be treated with fire retardant coating Where work area exceeds 50% of floor area, finishes in corridors and exits serving work area must comply with new	13.3.3 Interior finish shall be according to section 10.2 Corridors and Lobbies: Class A or B Enclosed Stairs: Class A Assembly areas > 300: Class A or B Assembly areas <300: Class A, B or C Floor: no requirements	Work area does not exceed 50% of floor area.
603.1 Fire Protection	Maintain the level of fire protection provided		
704.1 Fire Protection	Requirements limited to work areas except where noted	13.3.1 Vertical Openings shall comply with 8.6 13.3.2 Hazardous areas including general storage rooms shall be separated in accordance with 8.3 or protected in accordance with 8.7	No boiler, refrigerating machinery, large transformer, storage, laundry, or maintenance shop areas on floor requiring separation
704.1.1 Corridor Ratings	Reduction in required ratings of corridors with sprinkler system if exit stair landings serving the floor are covered	13.3.6 Corridors: no requirements	No work to existing exit enclosures, corridors. Sprinkler system will be modified in area of work to meet NFPA 13.



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704.2 Automatic Sprinkler System	<ul style="list-style-type: none"> • High Rise Buildings: Install where work areas have OL>30 and there is an existing sprinkler riser • Install in work area if all apply: <ul style="list-style-type: none"> ○ Required by IBC for occupancy use in work area ○ Work area exceeds 50% of floor area ○ Sufficient municipal water supply ○ Work area use requires it. • Windowless stories • Other areas per IBC 903.2.11.6 	13.3.5 Extinguishing requirements: sprinkler system required for the following existing assembly occupancies: Bars Dance Halls Discoteques Nightclubs Festival Seating Exhibit or display space	Existing building has a supervised sprinkler system.
704.4 Fire Alarms and Detection	Fire alarm system shall be installed in work areas for occupancies E, I, R except if there is an existing approved system	13.3.4 Provide a fire alarm system (9.6) in all assembly occupancies with OL>300	Existing fire alarm system will be modified within work area. Modifications are designed per IBC/NFPA
604.1 Means of Egress	Maintain the level of protection provided	43.4.2 Capacity of egress shall comply with 7.2 unless AHJ permits or previously found to be adequate	Maintaining the level of egress protection. Not effected by the proposed work.



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705.1 Means of Egress	<p>Requirements of this section apply to exits and corridors within the work area shared by more than one tenant.</p> <ul style="list-style-type: none"> • Min No. Exits.: 2 • Egress Doorways <ul style="list-style-type: none"> ○ All areas with OL>50 shall have 2 exits • Openings in corridor walls <ul style="list-style-type: none"> ○ Corridor doors shall not be hollow core ○ Door sash, grill, opening, sealed with materials consistent with wall construction • Dead end corridor shall not exceed 35, allowed to be 50' if building has a fire alarm system in other than A and H occupancies 	<p>13.2.1 Means of Egress All means of egress shall be in accordance with Chapter 7</p> <p>13.2.2.3 Stairs- Compliance with 7.2.2 shall be permitted</p> <p>13.2.2.4 Smokeproof Enclosures – Compliance with 7.2.3 shall be permitted</p> <p>13.2.3 Capacity of Means of egress: Comply with 7.3</p> <ul style="list-style-type: none"> • Corridor min width: 44" <p>89.2.4 Number of exits: 2</p> <p>89.2.5 Arrangement of egress</p> <ul style="list-style-type: none"> • Dead end: 50 ft • Common path of travel: 75 ft <p>89.2.6 Travel Distance</p> <ul style="list-style-type: none"> • Max travel distance: 200 ft 	<p>Work area serves only one tenant – USM.</p> <p>Egress exceeds min requirement</p> <p>No work to corridor walls or exit stairs. Work consists of removing stacks and installing offices in the interior of the library.</p>
Occupant Load		<p>13.1.7 Occupant load for means of egress shall be from table 7.3.1.2</p> <p>Business Use: 100 SF/oc Library-Stacks: 100 SF/oc Library-Reading: 50 SF/oc</p>	<p>Converting approximately 1,200 SF from library-stacks to business use. No change in occupancy load factor.</p>
605.1 Accessibility	<p>Comply with accessibility standards of IBC except where technically infeasible. Where infeasible, comply to the maximum extent feasible.</p>		<p>New configuration of space designed to meet accessibility requirements</p>
706 Accessibility	<p>Comply with 605</p>		



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707 Structural	Minimum design loads on existing structural elements that do not support additional loads as a result of the alteration shall be those applicable at time of original building construction		No additional loads created by alterations
708 Electrical	Comply with Chapter 5 <ul style="list-style-type: none"> • Electrical in new partitions comply with NFPA 70- NEC • Electrical in A-1,A-2,A-3, A-5, H, I meet the materials and methods requirements of Chapter 5. • Chapter 5 allows wiring and equipment being repaired to be replaced or repaired with like material 		All new work per NFPA 70
709 Mechanical	Comply with International Mechanical Code		Mechanical systems in work areas designed to comply with IMC
710 Plumbing	Where OL increases by >20%, provide quantity of fixtures for new OL		Converting approximately 1,200 SF from library-stacks to business use. No change in occupancy load factor.
710 Energy Conservation	Alterations do not require entire building to comply with IECC. Alterations shall conform to the energy requirements.		