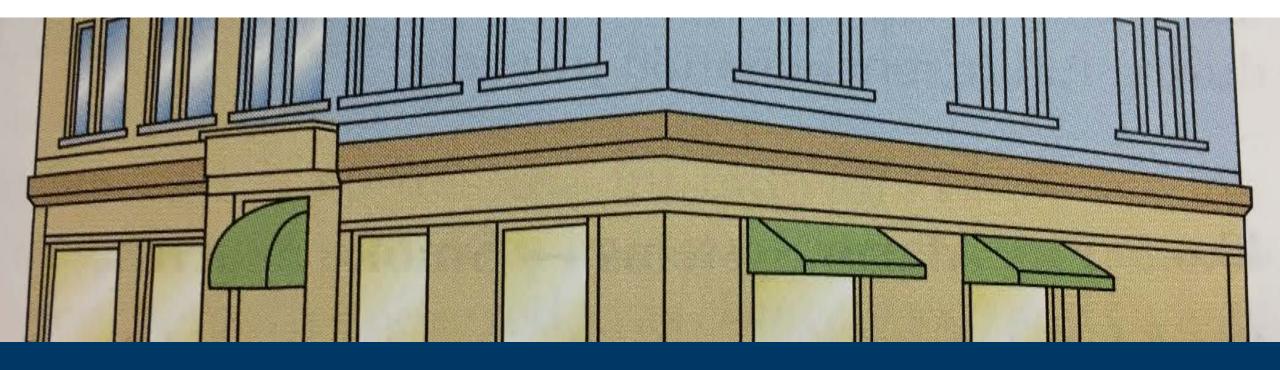


#### Minnesota Healthcare Engineers Association, Fall Conference

Bob Dehler, P.E. | Engineering Program Manager

September 14, 2017





Categories of Rehabilitation Work in Healthcare Facilities

Bob Dehler, P.E.

#### Building Rehabilitation Requirements, 2000 edition

#### Chapter 4

Meet requirements for new construction (as nearly as practicable)

#### • Chapters 18/19

- Major renovation, performed planned work per new requirements and sprinkler entire compartment
- Minor renovation, perform planned work per new requirements

#### Building Rehabilitation Requirements, 2012 edition

- Chapter 4
  - Meet chapter 43
- Chapters 18/19 (18.1.1.4.3.4)
  - Major renovation (>4,500sqft or >50% smoke compartment),
    perform work per chapter 43 and sprinkler smoke compartment
  - Minor renovation if not sprinklered, perform work per chapter 43 and meet the non-sprinklered provisions of 18.4.3

## Purpose and Scope

 Chapter 43 is full of information and can be a little confusing. For the most part, this chapter will not change the way MDH enforces the LSC or when we perform plan reviews/inspections. The basic intent of this chapter is to permit construction that maintains or improves safety in existing buildings without requiring full compliance with new construction requirements in all instances

## Basic Concepts

- Chapter 43 is only for existing buildings
- Building cannot be less conforming to the code (reduce the existing level of safety)
- Existing features can be repaired or renovated to existing requirements
- New features must be constructed to new requirements

### Categories of Rehabilitation Work

- Repair
- Renovation
- Modification
- Reconstruction
- Change of use
- Change of occupancy classification
- Addition

### Categories of Rehabilitation Work

- As you move down the list of categories of work the code requirements increase
- More than one rehabilitation work category is permitted to be part of a singe construction project
- To make plan review and inspection as smooth as possible, use the categories of rehabilitation work listed in Chapter 43

## Repair

The patching, restoration, or painting of materials, elements, equipment, or fixtures for the purpose of maintaining such material, elements, equipment, or fixtures in good or sound condition

## Repair

- The work shall be done using like materials
- The work shall not make the building less conforming with the other sections of the code
- The new work can comply with the requirements for existing buildings
  - Possible to reduce to new but never less than existing

#### Renovation

The replacement in kind, refinishing, replacement, strengthening, or upgrading of building elements, materials equipment or fixtures that does not result in a reconfiguration of the building spaces

#### Renovation

- The work shall be done using like materials
- The work shall not make the building less conforming with the other sections of the code
- The new work can comply with the requirements for existing buildings
- Interior finish materials must meet the requirements for new construction
- The reconfiguration or extension of any system, or the installation of any additional equipment, shall comply with the requirements of modification – comply with new construction

### Modification

The reconfiguration of any space; the addition, relocation, or elimination of any door or window; the addition or elimination of load-bearing elements; the reconfiguration or extension of any system; or the installation of any additional equipment

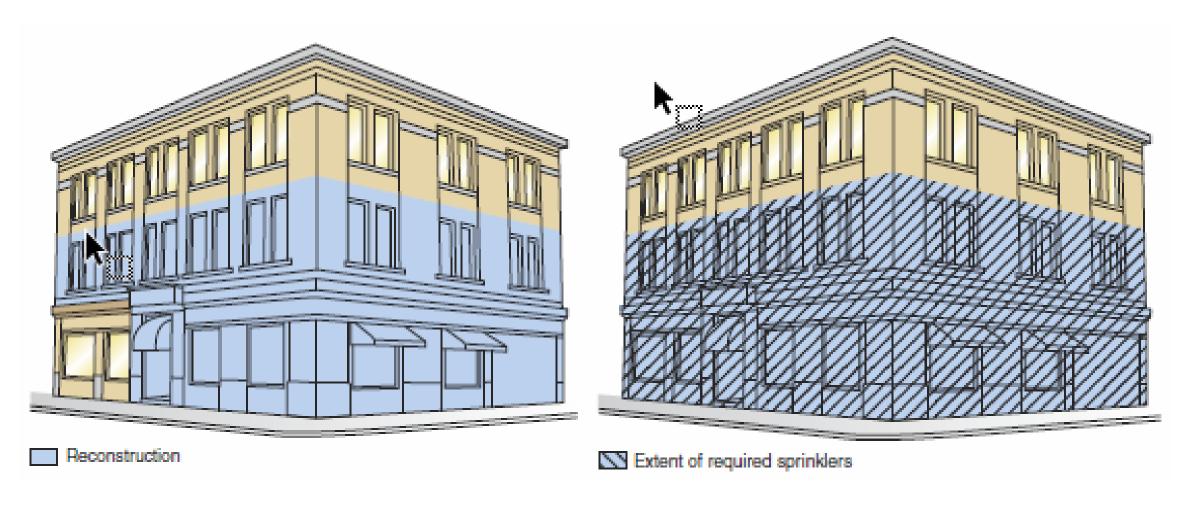
### Modification

- Newly constructed elements, components, and systems shall comply with new construction
- A modification in an entire building or occupancy shall be considered a reconstruction
- A modification that is exclusively electrical, plumbing, mechanical, fire protection system, or structural shall not be considered a reconstruction
- Where the total area of the rehabilitation work areas exceeds 50% of the area of the building (or entire occupancy), the work shall be considered a reconstruction

The reconfiguration of a space that affects an exit or a corridor shared by more than one occupant space; or the reconfiguration of a space such that the rehabilitation work is not permitted to be occupied because existing means of egress and fire protection systems, or their equivalent, are not in place or continuously maintained

- In a building with rehabilitation work areas involving over 50% of the aggregate building area, automatic sprinkler system shall be provided on the highest floor containing rehabilitation work and on all floors below
- Any story with rehabilitation work over 50% of a story, an automatic sprinkler system shall be provided throughout the story

- In a building with rehabilitation work areas involving over 50% of the aggregate building area, the means of egress in the rehabilitation work area and the means of egress serving the work area shall be provided with illumination (7.8), emergency lighting (7.9), and marking of means of egress (7.10) in accordance with the requirements of new construction
- Any story with rehabilitation work over 50% of a story, the means of egress throughout the floor shall be provided with illumination, emergency lighting, and marking of means of egress in accordance with the requirements of new construction





#### Overview...

- Repairs Fixing things (patching, painting, restoration)
- Renovations Replacing of building element or equipment
- Modification Installing a new element or system or reconfiguring space
- Reconstruction Modifications that affect egress or over 50% of building area

# Change of Use

A change in the purpose or level of activity within a structure that involves a change in application of the requirements of the Code

# Change of Use

- A change of use that does not change the occupancy classification shall comply with the requirements in accordance with the applicable new occupancy chapter
- Meet requirements applicable to the work category (if any)
- If the change of use creates a hazardous area you have two options:
  - Change of use complies with the new occupancy chapter
  - Existing healthcare facilities fully protected by an automatic sprinkler system, the space does not exceed 250sqft, used for storage of combustible supplies, smoke partition walls and self closing door; requirements for new construction shall not apply

## Change of Use

Any repair, renovation, modification, or reconstruction work undertaken in connection with a change of use shall comply with the requirements of the particular work type

The change in the occupancy classification of a structure or portion of a structure

 When a change of occupancy occurs within the same or lesser hazard classification category, the new occupancy can meet the existing requirements. All automatic sprinkler and detection, alarm, and communication systems and requirements for hazardous areas must meet new construction requirements

 When a change of occupancy occurs within a higher hazard classification category, the new occupancy must meet the new construction requirements. All automatic sprinkler and detection, alarm, and communication systems and requirements for hazardous areas must meet new construction requirements

#### **Table 43.7.3 Hazard Categories and Classifications**

Hazard Category	Occupancy Classification
1 (highest hazard)	Industrial or storage occupancies with high hazard contents
2	Health care, detention and correctional, residential board and care
3	Assembly, educational, day care, ambulatory health care, residential,
	mercantile, business, general and special-purpose industrial,
	ordinary hazard storage
4 (lowest hazard)	Industrial or storage occupancies with low hazard contents

#### Addition

An increase in the building area, aggregate floor area, building height, or number of stories of a structure

#### Addition

- An addition affects the structure by creating an increase in at least one of the four categories that follow:
  - Building area
  - Aggregate floor area
  - Height
  - Number of stories

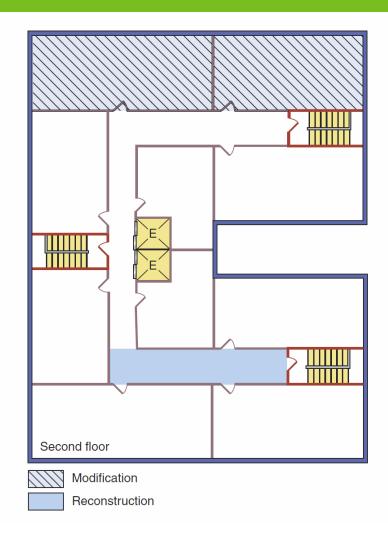
### Addition

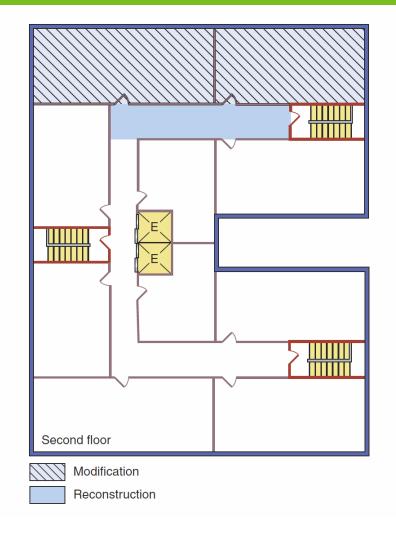
- The addition shall comply with new construction requirements
- The existing building shall comply with existing construction requirements
- Sprinkler new and existing areas where sprinklers are required for new construction unless the new and existing areas are separated

# Multiple Work Categories

- More than one work category on a project is permitted
- Where the areas are separate, each category is applied independently
- If you have modification and reconstruction in the same area then reconstruction rules apply

## Multiple Work Categories





#### Examples with Typical Work Categories

- Replacement of a swatch of corridor carpeting –
  Repair
- Replacement of carpeting Renovation
- Replacement of a few ceiling tiles Repair
- Replacement of entire ceiling Renovation

#### Examples with Typical Work Categories

- Patching a hole in a wall Repair
- Removal and replacement of wall Renovation
- Removal, replacement and relocation of a wall –
  Modification
- Replacement of faulty door closer Repair
- Replacement of a door Renovation

#### Examples with Typical Work Categories

- A patient sleeping room is rehabilitated to be used as equipment storage –
  Change of use, can meet existing requirements if fully sprinklered building
- A patient sleeping room is rehabilitated to be used as soiled linen storage –
  Change of use, must meet new requirements according to table 18.3.1



Categories of Rehabilitation Work in Healthcare Facilities

### Thank You!