

NC Rehab Code Case Study

Atherton Mill

January 26, 2002; rev 4/12/02

PART A: Project Data and Classification

1. Project name & location

Renovation of the Atherton Mill Building E, Charlotte, NC

2. Project description

Atherton Mill consists of 5 buildings; A, B, C, D & E. This project is in Building E. The Building E footprint consists of the following;

- floors 1& 3 @ 7275sf
- floor 4 @5915sf
- existing 1st floor mezzanine @1867sf plus 1360sf core = 3227sf

Construction is IBC Type IV (SBC Type III, heavy timber).

In Building E, The last use was “b” office space. The proposed plan use calls for:

- Retention of tenant separation wall dividing core and mezzanine
- Proposed occupancy is office space
- Work area size:
 - 1st floor core @ 975sf
 - 1st floor open office area @ 3565sf
 - existing mezzanine @ 1175sf
 - proposed mezzanine expansion @ 745sf

There will be some new framing and finishes to create conference rooms and break area. The proposed mezzanine expansion must be considered. Also there will be some reuse of existing framing, systems and finishes.

The Atherton Mill is historic.

3. Plan availability

Both existing and proposed plans are attached.

4. Scope declaration and justification

There are no change of use considerations.

The proposed first floor conference and break room appear to be carved out of existing open space; this work is limited in size. The work declaration seems to hinge on the proposed mezzanine expansion.

- If the mezzanine stays as is, the work is ALTERATION
- If the mezzanine is expanded, it will involve significant structural work in a large part of the office, and maintaining safety would be an issue in this area. Consequently, in this case, the work area would be considered RECONSTRUCTION.

(Continued)

PART B: NC Rehab Code Requirements

1. If the project is HISTORIC

- Requests for variation considered: 1.33a.2
- Original or replica materials allowed: 1.33b.1
- Exterior walls not required to be modified to meet fire resistive wall constr: 1.33b.2
- Existing lath and plaster may substitute for 1 hr fire resistive constr: 1.33b.3
- Ext'g egress door opngs and corridors may be approved if enough width for a person: 1.33b.5
- Ext'g front or main egress door need not swing in exit direction if less than 50 occ: 1.33b.6
- Ext'g transoms may remain: 1.33b.7
- Ext'g interior finishes may remain if historic: 1.33b.8
- Ext'g stairways may retain tread, riser and width dimensions: 1.33b.9
 - enclosure requirement omitted at 1st and 2nd floor
 - only smoke limiting constr req'd
- existing handrails may remain
- existing ceiling heights may remain

2. If the project is ALTERATION

- existing alarms, sprinklers and standpipes maintained: 1.6c.2
- may not diminish accessibility: 1.6c.3
- May not use some products and practices: 1.6d
 - Re: wood paneling, carpet, electric L&L, and selected plumbing materials
 - Restriction on removal of lead based paint: 1.6d.6
- Specific requirements on other products and practices: 1.6e
 - Water saver water closets
 - Apply accessibility requirements on selected items or areas:
 - work in bath or toilet rooms: 1.6e.2
 - new or replacement doors: 1.6e.3
 - replacement entry steps: 1.6e.4
 - safety glazing requirements apply to selected areas: 1.6e.6
 - any removed fireproofing material must be replaced with equal rating: 1.6e.7
 - electrical repair/replacement requirements for the following: 1.6e.8
 - receptacles
 - plug fuse replacement
 - receptacle grounding
 - grounding of ranges, ovens, cooktops, and cloths dryers,
 - new refrigerants to comply with the mechanical code
- if the building exceeds Basic Requirements, may not decrease below 2002 NCSBC requirements: 1.6f
- All new materials comply with 1.8 materials and methods
 - On handrails and guardrails; apply new requirements if 50% replaced, match existing if less, compliance sections specified: 1.6h.2
- All new building elements comply with 1.9: 1.6j
 - New floor openings comply with IBC 707: 1.9a.3
 - New door openings comply with IBC1003.3 &714: 1.9a.5
 - New openings in fire rated assemblies protected per IBC 711: 1.9a.6
 - New exit discharge complies with IBC 1005.3: 1.9a.7

- New exit stairs comply with IBC 1005.3: 1.9a.8
- New elevators comply with IBC chapt 30. 1.9a.10
- new corridors comply with IBC 1004.3.2.1 –1004.3.2.3, 1004.3.2.4, and 1004.3.2.5: 1.9a.11
- New tenant separation requirements per IBC 708: 1.9a.20
- New electrical equipment must comply with 1.9a.18
- Further accessibility requirements: 1.6k
 - If space altered is primary work area, provide accessible path within disproportionate limits
 - Where technically infeasible(see definitions in 1.3), comply to maximum extent feasible.

3. If the project is RECONSTRUCTION specifically here, if the mezzanine is expanded unless the building is historic and excepted by 1.33

3a. General requirements

- existing alarms, sprinklers and standpipes maintained: 1.7c.2
- may not diminish accessibility: 1.7c.3
- May not use some products and practices: 1.7d
 - Re: carpet, electric L&L, and selected plumbing materials
 - Restriction on removal of lead based paint: 1.7d.6
- Specific requirements on other products and practices: 1.7e
 - Water saver water closets
 - Apply accessibility requirements on selected items or areas:
 - work in bath or toilet rooms: 1.7e.2
 - new or replacements doors: 1.7e.3
 - replacement entry steps: 1.7e.4
 - safety glazing requirements apply to selected areas: 1.7e.6
 - any removed fireproofing material must be replaced with equal rating: 1.7e.7
 - electrical repair/replacement requirements for the following: 1.7e.8
 - receptacles
 - plug fuse replacement
 - receptacle grounding
 - grounding of ranges, ovens, cooktops, and cloths dryers,
 - new refrigerants to comply with the mechanical code
- All new materials comply with 1.8 materials and methods
 - On handrails and guardrails; apply new requirements if 50% replaced, match existing if less, compliance sections specified: 1.7f.2
- All new building elements comply with 1.9: 1.7g
 - New floor systems to comply with IBC 1607: 1.9a.1
 - If number of stories increase, comply with limits of IBC T503: 1.9a.2
 - New floor openings comply with IBC 707:1.9a.3
 - New door openings comply with IBC1003.3 &714: 1.9a.5
 - New openings in fire rated assemblies protected per IBC 711: 1.9a.6
 - New exit discharge complies with IBC 1005.3: 1.9a.7
 - New exit stairs comply with IBC 1005.3: 1.9a.8
 - New elevators comply with IBC chapter 30: 1.9a.10

- new corridors comply with IBC 1004.3.2.1 –1004.3.2.3, 1004.3.2.4, and 1004.3.2.5: 1.9a.11
- newly constructed mezzanines comply with IBC 505: 1.9a.12
 - minimum clear ht above and below of 7ft: 505.1
 - area limit of 1/3 of room area in which mezzanine occurs: 505.2
 - two means of egress required per 505.3, unless: common path of travel is max 75', or max 100' if 30 occupants or max 100' building is sprinkled (1004.2.5).
 - Mezzanine must be open and unobstructed, with exceptions: 505.4
- New tenant separation requirements per IBC 708: 1.9a.20
- New electrical equipment must comply with 1.9a.18
- Comply with Basic or Supplemental requirements for that use
- Further accessibility requirements: 1.6k
 - If space altered is primary work area, provide accessible path within disproportionate limits
 - Where technically infeasible(see definitions in 1.3), comply to maximum extent feasible.

3b. Basic and Supplemental Use requirements for all uses from 1.11

- Means of egress capacity per 1.11 Table 1
- Ext'g interior finishes must have min flame spread of I in exits and II in exit access: Table 2

3c. Business use Basic Requirements from 1.17

- 2 exits required: 1.17a
- 2 egress doors required in spaces or rooms with occupant load greater 50 or 75' travel: 1.17b
- exit capacity per 1.11: 1.17c
- max 35ft existing dead end: 1.17d
- means of egress lighting required at 1 fcl: 1.17e
- exit signs required: 1.17f
- handrails required one side: 1.17g
- provide guards where elev drop is greater than 30": 1.17h
- vertical opening protection of 30 minute rating required: 1.17i
- reinforce deficient/unsound structural elements: 1.17j
- Plumbing facility requirements per 1.17k: 1 unisex wc, 1 lav, 1dwc, 1 service sink
 - Ventilate per 1.17L
- Interior finishes to comply with 1.11: 1.17m
- Exposed framing shall comply with firestop/draftstop req'ts of IBC 716: 1.17o
- Supplemental Requirements per 1.17A:
 - Manual alarm required: 1.17A.a
 - If work area exceeds 50% of building floor area, provide vertical opening protection throughout: 1.17A.b
- Special Technical Requirements per 1.30:
 - Existing alarm systems accepted if they comply with 1.8 or the code in effect at the date of their installation: 1.30f

Filename: Case Study-Atherton Mill revised.doc
Directory: P:\meck\RehabCode\caseStudies\Case Studies\All Other Case
Studies\Atherton Mill
Template: C:\Documents and Settings\susie.TDGI\Application
Data\Microsoft\Templates\Normal.dot
Title: NC Rehab Code
Subject:
Author: bartljn
Keywords:
Comments:
Creation Date: 4/23/2002 7:21 AM
Change Number: 2
Last Saved On: 4/23/2002 7:21 AM
Last Saved By: Kari Lanning
Total Editing Time: 1 Minute
Last Printed On: 5/21/2002 8:47 AM
As of Last Complete Printing
Number of Pages: 4
Number of Words: 1,240 (approx.)
Number of Characters: 7,072 (approx.)