REQUEST FOR BOARD ACTION

HENDERSON COUNTY
BOARD OF COMMISSIONERS

MEETING DATE: January 18, 2006

SUBJECT: Presentation of HSMM Building Assessment for the Tuxedo Elementary School

ATTACHMENTS: "Final" Preliminary Draft Building Assessment for Henderson County – Tuxedo Elementary School

SUMMARY OF REQUEST:
In November of 2005, the Board of Commissioners authorized the firm of Hayes, Seay, Mattern & Mattern (HSMM) to conduct a building assessment of the Tuxedo Elementary School. HSMM has completed this assessment and a copy of the "final" preliminary draft is attached. Representatives from HSMM will present their final report to the Board of Commissioners during the January 18, 2006 meeting. The enclosed draft contains all relevant information with the exception of an asbestos report and asbestos abatement costs. This information will be included in the final report that will be presented on January 18, 2006.

COUNTY MANAGER'S COMMENTS\RECOMMENDATION:
Staff recommends acceptance of the final report.

Building Assessment
Tuxedo Elementary School
for
Henderson County

HSMM

January 2006

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Scope of Study

A building assessment of the former Tuxedo Elementary School shows the facility to be generally in good condition. Depending on the next use for the facility, system upgrades or replacements may be necessary to function well for the remainder of its useful life. According to Preservation North Carolina, a private, non-profit organization whose mission is to protect and promote historic buildings for re-use, well-built school buildings of 1920's-vintage have been restored in a variety of new ways: as condominiums, affordable housing, libraries, business technology/training centers and cultural, recreational and community centers, among others.

The scope of this assessment does not include the study of the Tuxedo School for a particular use. The HSMM team of architects and engineers, along with the AAA Environmental Group, has visited the school site and visually observed existing conditions; no operation of building systems occurred. The team has reviewed previous studies and reports and some of the information provided in those reports is included here for descriptive purposes. This report will focus on the feasibility of renovating Tuxedo School for an, as yet, undetermined future use.

Site Description

The 6.93 acre property has three existing entrances off Old U.S. Highway 25 and has about 600' of road frontage. Although the road is below the site there appears to be no limit to placing future access points in different locations from the existing ones.

The site terraces up from the east with a parking area below the level of the existing buildings and a playfield on the upper terrace at the west end of the site. South of the buildings is a relatively large level area originally used as an activity area. There is a severe slope to the area between the upper playfields and the terrace where the buildings are located. There is a less steep slope between the parking area and the building terrace but there is not an accessible pathway from the parking area to the building as it is currently configured. The westernmost drive does provide access to the building at grade.

The site presents a good view of the main building from the highway, and its orientation faces the easternmost entrance to the site. The kindergarten building is mostly hidden from view of the road. Views from the second floor of the main

building overlook the neighboring homes and provide a distant view of the lake beyond and its vacation houses.

The asphalt paving is in deteriorated condition and will need to be replaced for any future use. There are no sidewalks connecting the site to the surrounding neighborhood.

Public water and sewer are not available for use at this site at this time. The on-site water well and sanitary septic field have proven adequate for both of the school buildings throughout their history and would probably be adequate for any type of future facility requiring similar plumbing fixture unit counts. If the next building use has a much higher plumbing fixture count, the water well and septic field should be replaced with public water and sewer.

General Building Condition:
Kindergarten Building

The 2600 SF Kindergarten Building was constructed in 1956 and consists of two classrooms and a boiler room. Its design is typical of school buildings designed in the 50's, with windows extending the width of the exterior wall and stretching from cabinet height to the underside of the roof structure. Skylights (blocked out in one room) provided light to the interior of the rooms. Floors are mostly carpet or sheet vinyl over concrete, with tile in the single toilets off the classrooms.

Exterior walls are 12-inch cavity brick walls. Partition walls are brick walls. There was some cracking in the interior masonry wall where it intersects with the exterior wall. It is assumed that most of this cracking is caused by either thermal movement of the building or soil settlement under the wall. Additional detailed investigation is required to find the definite cause of the cracking in the wall. All the remaining walls appear to be in good condition.

The roof consists of a concrete slab supported by steel members. The slab and the interior steel members appear to be in good condition. Most of the exterior exposed steel members have visible rust and require immediate attention to provide rust inhibitive treatment. The canopy connecting the Kindergarten Building to the Main Building is in poor condition and would be unlikely to remain as part of a future use for the buildings.

The overall building structure was found to be in good condition, with no visual evidence of any significant structural problems.

General Building Condition:
Main School Building

The Main Building is a classic two-story school structure constructed as a grade school in 1924. A kitchen and dining room addition was added in 1952. The building has spaces designed as class rooms, administrative offices, and a multi-purpose auditorium / activity room with a small stage. Currently, this space serves as a precinct voting place. The original building is approximately 15,650 SF (not including a basement boiler room) and the 1952 addition is just over 2000 SF.

Reflecting the challenges of lighting these buildings at the time, the windows are very large and the ceilings are high, typically exceeding 12 feet.

Exterior walls are 12-inch cavity brick walls. Portions of the rear walls are plastered masonry. Partition walls are either brick or wood. All the walls appear to be in good condition.

The floor and roof consists of wood decking on 2x14 wood joists. The floor and roof framing members are not exposed to view in most of the areas of the building.

The overall building structure was found to be in good condition, with no visual evidence of any significant structural problems. Some cracks and staining on the ceiling caused by roof leaks were observed in some areas of the building. Additional detailed investigation is required to find the cause of the cracks and water leakage.

The Tuxedo Elementary School appears to be in good condition structurally, with no visual evidence of any significant structural problems. If a full code upgrade of the structural systems is required for gravity loads and seismic loads, a major structural reinforcing project will be required throughout the building.

Building Systems - Mechanical and Plumbing:
Kindergarten Building

The existing heating system for the Kindergarten building consists of an oil-fired heating hot water furnace and “heating only” wall hung fin tube radiators. The furnace and hot water circulating pump have 153,000 BTUH output, appear to be in good running condition, and could probably be re-used in the building’s next use. The wall hung fin tube radiators hung along the walls appeared in good condition though the radiator exterior covers were damaged in various locations. It is recommended to replace all existing radiator covers with new covers with the next facility use.

There is no air conditioning in the building and the only means at this time for ventilating the space is opening windows. A new air conditioning system will have to be installed if the new building use dictates conditioned air.

There are no existing toilet exhaust fans for the three toilet areas. Fans will be required in the future since none of the toilet areas have operable windows which allow fans to be omitted in toilet spaces.

The plumbing system has a 40 gallon electric hot water heater which is appears in good condition and could be re-used if the building’s new use will allow it. All existing plumbing fixtures are children’s type installed at children’s plumbing heights. The plumbing fixtures are old, damaged in some cases, and all fixtures should be replaced with the building’s next use. The teacher’s bathroom plumbing fixtures are old and all should be replaced in the future.

There is no existing fire protection system or sprinklers in this building.

Building Systems - Mechanical and Plumbing:
Main Building

The existing heating for the main School building consists of a basement oil-fired steam boiler and steam radiators installed throughout the building in various locations. The boiler has 892,000 BTUH steam output, appears in good working condition, and could probably be re-used in the building's new life. The boiler level control appears to have had a manual reset button installed and should be adequate. All building steam radiators, controller, and steam traps could be re-used if the occupants would accept steam heat. The existing steam condensate pump appears in good working order and could be re-used. There are also a few electric baseboard wall heaters which have been installed in the building over the years due to partition additions which could be re-used if needed.

There is no air conditioning in the main building and the only ventilation is opening windows and allowing air to travel up numerous building ventilation grilles and out of the building via a "chimney effect". Due to the relatively cool climate during the summer in this area and the buildings high ceilings, this ventilation system may be adequate in future building uses. If air conditioning is desired, a new air conditioning system will be needed.

There are no toilet exhaust fans installed in the toilet areas. All toilet areas observed have operable windows meaning toilet fans will not have to be installed but it is recommended to do so due to winter conditions.

The plumbing system had a small 10 gallon hot water heater which is fine for a facility without shower facilities. This water heater will probably need replacing when fixture counts exceed its heating capacity. All plumbing fixtures were old, dirty, and would require replacing with the new building use.

There is no existing fire protection or sprinkler system in this building.

Building Systems - Electrical:
Kindergarten Building

The Kindergarten Building is fed from an overhead drop located at the north east corner. This service feed comes from an off campus, pole mounted transformer of an unknown size. The electrical service is 120/240Vac, single phase, and feeds directly into a 200A service disconnect located in a storage area on the north east building corner. This electrical space contains a 200A, 24 circuit panel that is used for building distribution.

Each of the two existing classrooms has minimal use of electrical outlets. The outlets that are in the classrooms are wall mounted in exposed boxes and placed in positions that make practical use difficult. All conduits to the electrical devices were surface mounted. There were no outside outlet devices observed on this building.

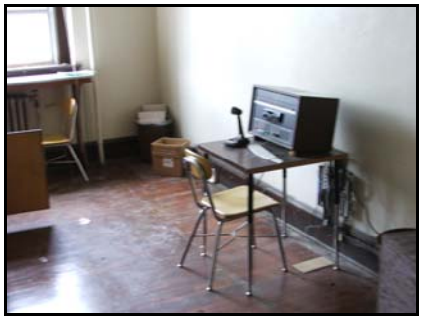
The existing lighting in the classrooms is three rows of suspended fluorescent lighting in various states of repair. There was no observed outside lighting by the classroom entrances or the covered walkway.

Each of the classrooms has ceiling mounted smoke detectors along with a single station horn / strobe and single pull station located by the exit door.

Building Systems - Electrical:
Main Building

The main school building is fed from an overhead drop located at the building's north end. This service comes from an off campus, pole-mounted transformer of an unknown size. The electrical service is 120/240Vac, single phase, and feeds into a sealed tray located in the basement boiler room. At this location, the service is split into 2 – 200A runs feeding the north and south building ends. There are smaller, 125A lighting panels located in the 1st floor copy room and a 2nd floor hallway that are used for further distribution.

All of the classrooms, office areas, and auxiliary rooms have a minimal number of electrical outlets. All of the outlets are surface boxes, wall mounted, and in locations that make their use impractical. All conduits to the outlet boxes are surface mounted. There were no outlets observed in the hallways or stairwell areas.



The existing lighting in all areas consists of a combination of surface mounted and suspended fluorescent fixtures. The ceiling height in the majority of the areas is approximately 12 feet. There are wall mounted lighting fixtures with shatter-proof lenses on the stairwell landing areas. There is minimal outside lighting at the building entrances and none observed for the covered walkway.

All areas have ceiling-mounted smoke detectors and the hallway and classroom areas have single station horn/strobes with single pull stations by each exit door. The restrooms however, appeared to have no strobes / horns. Located in the main office is a multi-point fire panel for monitoring the individual detection zones.

There has been an attempt to run LAN cable and data points to each classroom. A dual point LAN connection point was observed in each classroom located in various locations. There is what appears to be a classroom used for teaching computer classes on the main floor next to the main office. Several “loose” LAN cables have been pulled into the room and coiled on the floor. Located in the main office area is a small room that has been set up as a telecommunications room with “cabling racks" installed.

Hazardous Materials Observations

(to be completed by AAA Environmental)

Building Code Analysis

Until recently, the challenges involved in bringing existing buildings, especially older ones, up to current building code requirements have been extensive and, in some cases, too expensive for owners based on the proportion of rehabilitation proposed.

Effective January 1, 2006, the NC Rehabilitation Code (NCRC) will be available to all jurisdictions in the state. This code is intended to relieve the regulatory pressures brought to bear on existing buildings by the use of the new building codes as the standards for occupant safety. According to Mecklenburg County Code Enforcement, the lead local jurisdiction of the code, "applying code requirements for new buildings to old buildings can be a major headache for builders and developers." Often, this has contributed towards inaction involving existing buildings, and many were allowed to become dilapidated, unsafe and eventually demolished.

The Rehabilitation Code allows building owners to determine code requirements in advance of beginning a project in an existing building. The code is based on four principles:

1. Undertaking a rehabilitation project does not require that all components of the building must be affected.
2. No building should be made less safe than it was when the project began.
3. A building owner should be able to predict the cost and scope of the project requirements before it begins.
4. The code requirements for the project should be in proportion to the planned work, with assurances for life safety.

Further, the Rehabilitation Code is applied to a project based on Categories of Work. The NCRC has developed a Decision Diagram matrix (included in Appendix) that utilizes the following work categories to determine applicable code requirements.

- Repair
- Renovation
- Alteration
- Reconstruction
- Change of Use
- Additions

Since it is almost certain that any plans for the Tuxedo School buildings would entail a change of use, the extent of life safety improvements that would be required depends on whether the intended change is to a use where the hazards to safety are increased. In other words, changing from the original use of the buildings as a school to residential, for example, would be to a lesser hazard category. Going from a school to a banquet hall would be an increase in hazard, as would a hospital or nursing home use. It appears that future uses such as a community hall, library, art

gallery, bakery, television studio, assisted living facility, or retail store (as selected examples) would be of equal hazard to the original use.

There are further provisions that would be applied if the Tuxedo School is, or will be, considered a Historic Building (listed on the National Register or in a contributing classification or in a local historic district).

Depending on the answers above, the building owner will choose whether the existing building project will fall under the categories of “repair, renovation, alteration or reconstruction.” The NCRC establishes the extent of work (including product and practice requirements) for each category.

If the project involves any new construction such as an addition to an existing building or a new, stand-alone building, that work will be designed under the requirements of the North Carolina Building Code, and not the NCRC.

With no determination for a future use for Tuxedo School at the time of this report, a specific building code analysis utilizing the NCRC is not possible at this time. With the January 2006 statewide adoption of the NCRC however, any re-use of the buildings will have the option to use this code to safely and sensibly meet the requirements for rehabilitating Tuxedo School. Additional information on the NCRC, including case studies, can be found at www.ncrehabcode.com.

Project Budget Estimates

Basis of Budget Estimates

Developing a budget estimate for this project is difficult because the final configuration of the project has not been determined. Given this scenario, we have provided a range for the budget based on three levels of renovation. We will provide some description of the criteria that we used in developing these estimates.

Category 1

This will be the most basic of renovations so that the building meets the bare minimum code requirements. This building would have a very low intensity of use such as storage, polling place, law enforcement training. Basically, to continue it's current use with renovations intended to preserve the building. The following table explains each budget item for Category 1:

Budget Item	Explanation
Demolition	Demolition will be limited to those items required to be repaired and/or abated.
Haz Mat Abatement	The hazardous materials that are present will need to be removed. At this point, we have assumed that the abatement costs will be the same for all three materials. It is possible that further investigation will determine that some materials can be encapsulated and left in place.
Building	Architectural work will involve little rework of the building with most being cosmetic repairs to the facilities. There will be some intensive work to bring the facility in compliance with ADA. A stair/elevator addition is anticipated. Exterior work will be required on the roof and exterior walls to prevent water intrusion.
Structural	Structural work is anticipated to be minimal. There will be repair due to water and settlement damage. There will also be some new work due to renovations of the building.
HVAC	Re-use the existing heating system. Provide window air conditioning units. Provide ventilation for the toilets.
Plumbing	Re-use the existing well and septic field. Replace the existing plumbing fixtures.
Fire Protection	A new fire sprinkler system is provided in all categories.
Electrical	Replace the electrical service and upgrade the distribution system to meet code. Provide interior and exterior lighting to meet code and use requirements. Provide minimum fire detection system. Upgrade existing IT systems as required.
Site	Provide parking, sidewalks, driveways and landscaping for a low-level intensive use for a facility of this size. Minimal regrading of the site is anticipated.

Category 2
This level of renovation is intended to bring the building up to modern standards so that the building could be reused in a manner similar to the former use as a school. Potential uses would be county offices, community building, light retail. The following table explains each budget item for Category 2:

Budget Item	Explanation
Demolition	More demolition will be required than in Category 1, but extensive demolition is not anticipated.
Haz Mat Abatement	The hazardous materials that are present will need to be removed. At this point, we have assumed that the abatement costs will be the same for all three materials. It is possible that further investigation will determine that some materials can be encapsulated and left in place.
Architectural	Some rework of the floor plans is anticipated. All building finishes will require work. There will be some intensive work to bring the facility in compliance with ADA. A stair/elevator addition is anticipated. Exterior work will be required on the roof and exterior walls to prevent water intrusion.
Structural	Structural work is anticipated to be minimal. There will be repair due to water and settlement damage. There will be more extensive new work due to renovations of the building.
HVAC	Re-use the existing heating system. Provide a new central air conditioning system. Provide ventilation for the toilets.
Plumbing	Re-use the existing well and septic field. Replace the existing plumbing fixtures.
Fire Protection	A new fire sprinkler system is provided in all three categories.
Electrical	Replace the electrical service and upgrade the distribution system to meet code and use requirements. Provide interior and exterior lighting to meet code and use requirements. Provide fire detection system. Upgrade existing IT systems as required.
Site	Provide parking, sidewalks, driveways and landscaping for a medium-level intensive use for a facility of this size. Minimal regrading of the site is anticipated.

Category 3
This will be the most extensive renovations so that the building is brought to modern standards and is adapted for a more intensive use. Potential uses would be a healthcare, residential or assisted living facility. The following table explains each budget item for Category 3:

Budget Item	Explanation
Demolition	Extensive demolition of interior walls and finishes is anticipated.
Haz Mat Abatement	The hazardous materials that are present will need to be removed. At this point, we have assumed that the abatement costs will be the same for all three materials. It is possible that further investigation will determine that some materials can be encapsulated and left in place.
Architectural	A full rework of the building is anticipated. The floor plans will be revised. All new finishes will be included. There will be some intensive work to bring the facility in compliance with ADA. A stair/elevator addition is anticipated. Exterior work will be required on the roof and exterior walls to prevent water intrusion. New windows and roofing will be included.
Structural	Structural work could be more intensive than in other categories. The more intensive use of the building could result in structural enhancements to the building to resist increased gravity and lateral loads. There will be repair due to water and settlement damage. There will be more extensive new work due to renovations of the building.
HVAC	Provide a new HVAC system for the whole facility.
Plumbing	Provide new water and sewer facilities. Replace the existing plumbing fixtures.
Fire Protection	A new fire sprinkler system is provided in all three categories.
Electrical	Provide completely new electrical service and distribution, fire detection, and IT systems.
Site	Provide parking, sidewalks, driveways and landscaping for a high-level intensive use for a facility of this size. Minimal regrading of the site is anticipated.

Soft Costs

The soft costs are those to be expended by the Owner, but not included in the Construction contract. These costs are expressed as a percentage of the Total Construction Cost and are as follows:

Budget Item	Explanation
Fees, Permits, Testing	This item covers design fees, geotechnical fees, testing, etc. This percentage is reduced as the project cost increases.
Escalation costs	Given the volatile costs in construction, we added some escalation since the project will not start in the near future. This number will need to be adjusted depending on when the project starts.
Construction Contingency	Since this is a renovation of an old building, we recommend that a contingency of at least 10% be carried for unforeseen conditions.
Fixed Furn. and Equipment	This is the cost of equipment to be provided by the Owner. We have increased this percentage as the use of the building has intensified.
IT (voice/data)	This is the cost of equipment and infrastructure for voice and data communication. We have increased this percentage as the use of the building has intensified.

PROJECT BUDGET ESTIMATE

	Budget Item	Category 1 Unit Cost	Category 1 Cost	Category 2 Unit Cost	Category 2 Cost	Category 3 Unit Cost	Category 3 Cost
Construction Costs	Demolition	$1.0/sf	$ 20,250	$2.0/sf	$ 40,500	$3.0/sf	$ 60,750
	Haz Mat Abatement	$1.0/sf	$ 20,250	$1.0/sf	$ 20,250	$1.0/sf	$ 20,250
	Architectural	$15.0/sf	$ 303,750	$30.0/sf	$ 607,500	$50.0/sf	$1,012,500
	Structural	$1.0/sf	$ 20,250	$2.0/sf	$ 40,500	$5.0/sf	$ 101,250
	HVAC	$2.0/sf	$ 40,500	$7.0/sf	$ 141,750	$12.0/sf	$ 243,000
	Plumbing	$2.0/sf	$ 40,500	$2.0/sf	$ 40,500	$5.0/sf	$ 101,250
	Fire Protection	$2.5/sf	$ 50,625	$2.5/sf	$ 50,625	$2.5/sf	$ 50,625
	Electrical	$8.0/sf	$ 162,000	$10.0/sf	$ 202,500	$12.0/sf	$ 243,000
	Site	LS	$ 100,000	LS	$ 175,000	LS	$ 300,000
Total Construction Costs			$ 758,125		$1,319,125		$2,132,625
Soft Costs	Fees, Permits, Testing	12%	$ 90,975	11%	$ 145,104	10%	$ 213,263
	Escalation costs	10%	$ 75,813	10%	$ 131,913	10%	$ 213,263
	Construction Contingency	10%	$ 75,813	10%	$ 131,913	10%	$ 213,263
	Fixed Furn. & Equipment	3%	$ 22,744	5%	$ 65,956	7%	$ 149,284
	IT (voice/data)	3%	$ 22,744	5%	$ 65,956	7%	$ 149,284
Total Soft Costs			$ 288,088		$ 540,841		$ 938,355
Total Project Cost			$1,046,213 $52/sf		$1,859,966 $92/sf		$3,070,980 $152/sf

Data		
	Kindergarten Building	2600 sf
	Main Building	15650 sf
	Kitchen Addition	2000 sf
	Total Building	20250 sf

Appendix

REHABILITATION CODE
MATRIX
Summarizing Categories of Work and Applicable Requirements

	REPAIR	RENOVATION	ALTERATION	RECONSTRUCTION	CHANGE OF USE	ADDITION
	1.4	1.5	1.6	1.7	1.31	1.32
Certain Materials Prohibited/Required 1.4-1.7	√	√	√	√	√[d]	√[e]
Not Diminish Structural Strength, System Capacity 1.4-1.7	√	√	√	√	√[d]	√[e]
Materials & Methods 1.8		√	√	√	√[d]	√[e]
New Building Elements - Comply with NCSBC 1.9			√	√	√[d]	√[e]
Basic Requirements[a] 1.10-1.30			c	√	To be determined according to Hazard Index d	√[e]
Supplemental Requirements[b]				√	√[d]	√[e]
Special Change of Use Requirements					To be determined according to Hazard Index	

NOTES:

[a] Apply only to the work area of the project.

[b] Apply to the work area of the project but may apply beyond.

[c] Cannot reduce the level of compliance with the Basic Requirements.

[d] Any other work voluntarily undertaken in connection with a change of use must comply with the requirements of the appropriate category.

[e] Work in the existing building must comly with the requirements of the appropriate category. The addition itself must comply with the subcodes for new construction and cannot extend the size of the building beyond the limits allowed by this subcode.

GLOSSARY

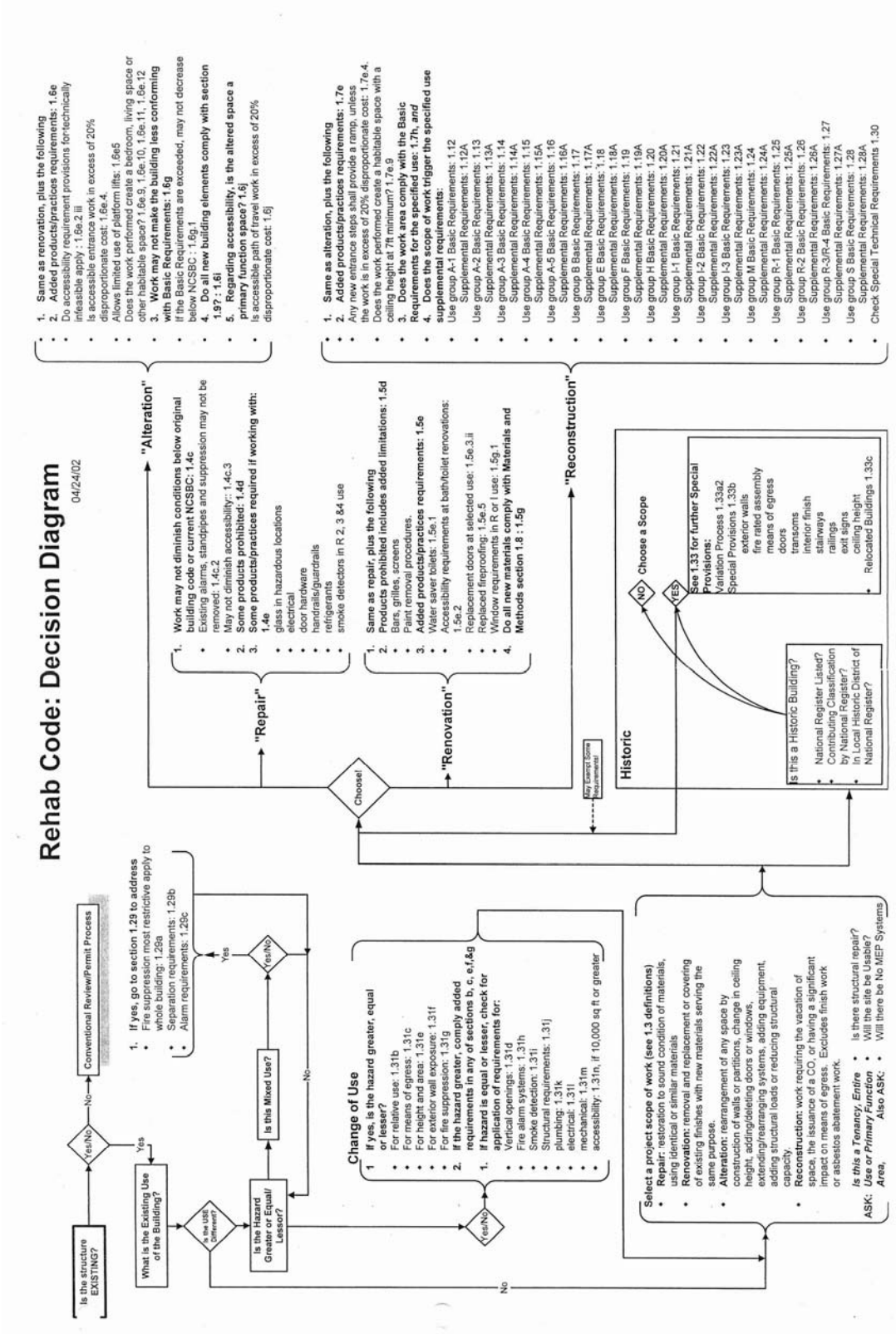
Repair means the restoration to a good or sound condition of materials, systems and/or components identical to or closely similar to the existing.

Renovation means the removal and replacement or covering of existing interior or exterior finish, trim, doors, windows, or other materials with new materials that serve the same purpose and do not change the configuration of space. Renovation shall include the replacement of equipment or fixtures.

Alteration means the rearrangement of any space by the construction of walls or partitions or by a change in ceiling height, the addition or elimination of nay door or window, the extension or rearrangement of any system, the installation of any additional equipment or fixtures and any work which reduces the load-bearing capacity of or which imposes additional loads on a primary structural component.

Reconstruction means any project where the extent and nature of the work is such that the work area cannot be occupied while the work is in progress and where a new certificate of occupancy is required before the work area can be reoccupied. Reconstruction may include repair, renovation, alteration or any combination thereof. Reconstruction shall not include projects comprised only of floor finish replacement, painting or wallpapering, or the replacement of equipment or furnishings. Asbestos hazard abatement and lead hazard abatement projects shall not be classified as reconstruction solely because occupancy of the work area is not permitted.

Appendix


Rehab Code: Decision Diagram
04/24/02
Is the structure EXISTING?
Yes/No
No
Conventional Review/Permit Process
Yes
What is the Existing Use of the Building?
Is the Use Different?
Yes
Is the Hazard Greater or Equal/ Lesser?
Yes/No
Yes
Is this Mixed Use?
Yes/No
No
No
1. If yes, go to section 1.29 to address
Fire suppression most restrictive apply to whole building: 1.29a
Separation requirements: 1.29b
Alarm requirements: 1.29c
Change of Use
1 If yes, is the hazard greater, equal or lesser?
For relative use: 1.31b
For means of egress: 1.31c
For height and area: 1.31e
For exterior wall exposure: 1.31f
For fire suppression: 1.31g
2. If the hazard greater, comply added requirements in any of sections b, c, e,f,&g
1. If hazard is equal or lesser, check for application of requirements for:
Vertical openings: 1.31d
Fire alarm systems: 1.31h
Smoke detection: 1.31i
Structural requirements: 1.31j
plumbing: 1.31k
electrical: 1.31l
mechanical: 1.31m
accessibility: 1.31n, if 10,000 sq ft or greater
Yes/No
No
Select a project scope of work (see 1.3 definitions)
Repair: restoration to sound condition of materials, using identical or similar materials
Renovation: removal and replacement or covering of existing finishes with new materials serving the same purpose.
Alteration: rearrangement of any space by construction of walls or partitions, change in ceiling height, adding/deleting doors or windows, extending/rearranging systems, adding equipment, adding structural loads or reducing structural capacity.
Reconstruction: work requiring the vacation of space, the issuance of a CO, or having a significant impact on means of egress. Excludes finish work or asbestos abatement work.
ASK: Is this a Tenancy, Entire Use or Primary Function Area,
• Is there structural repair?
• Will the site be Usable?
Also ASK: • Will there be No MEP Systems
Choose!
"Repair"
1. Work may not diminish conditions below original building code or current NCSBC: 1.4c
Existing alarms, standpipes and suppression may not be removed: 1.4c.2
2. May not diminish accessibility:: 1.4c.3
3. Some products prohibited: 1.4d
Some products/practices required if working with: 1.4e
glass in hazardous locations
electrical
door hardware
handrails/guardrails
refrigerants
smoke detectors in R 2, 3 &4 use
"Renovation"
1. Same as repair, plus the following
Products prohibited includes added limitations: 1.5d
Bars, grilles, screens
Paint removal procedures.
3. Added products/practices requirements: 1.5e
Water saver toilets: 1.5e.1
Accessibility requirements at bath/toilet renovations: 1.5e.2
Replacement doors at selected use: 1.5e.3.ii
Replaced fireproofing: 1.5e.5
Window requirements in R or I use: 1.5g.1
4. Do all new materials comply with Materials and Methods section 1.8 : 1.5g
"Alteration"
1. Same as alteration, plus the following
2. Added products/practices requirements: 1.7e
Any new entrance steps shall provide a ramp, unless the work is in excess of 20% disproportionate cost: 1.7e.4.
Does the work performed create a habitable space with a ceiling height at 7ft minimum? 1.7e.9
3. Does the work area comply with the Basic Requirements for the specified use: 1.7h, and
4. Does the scope of work trigger the specified use supplemental requirements:
Use group A-1 Basic Requirements: 1.12
Supplemental Requirements: 1.12A
Use group A-2 Basic Requirements: 1.13
Supplemental Requirements: 1.13A
Use group A-3 Basic Requirements: 1.14
Supplemental Requirements: 1.14A
Use group A-4 Basic Requirements: 1.15
Supplemental Requirements: 1.15A
Use group A-5 Basic Requirements: 1.16
Supplemental Requirements: 1.16A
Use group B Basic Requirements: 1.17
Supplemental Requirements: 1.17A
Use group E Basic Requirements: 1.18
Supplemental Requirements: 1.18A
Use group F Basic Requirements: 1.19
Supplemental Requirements: 1.19A
Use group H Basic Requirements: 1.20
Supplemental Requirements: 1.20A
Use group I-1 Basic Requirements: 1.21
Supplemental Requirements: 1.21A
Use group I-2 Basic Requirements: 1.22
Supplemental Requirements: 1.22A
Use group I-3 Basic Requirements: 1.23
Supplemental Requirements: 1.23A
Use group M Basic Requirements: 1.24
Supplemental Requirements: 1.24A
Use group R-1 Basic Requirements: 1.25
Supplemental Requirements: 1.25A
Use group R-2 Basic Requirements: 1.26
Supplemental Requirements: 1.26A
Use group R-3/R-4 Basic Requirements: 1.27
Supplemental Requirements: 1.27A
Use group S Basic Requirements: 1.28
Supplemental Requirements: 1.28A
Check Special Technical Requirements 1.30
"Reconstruction"
May Exempt Some Requirements
Historic
NO Choose a Scope
YES
See 1.33 for further Special Provisions:
Variation Process 1.33a2
Special Provisions 1.33b
exterior walls
fire rated assembly
means of egress
doors
transoms
interior finish
stairways
railings
ext signs
ceiling height
Relocated Buildings 1.33c
Is this a Historic Building?
National Register Listed?
Contributing Classification by National Register?
In Local Historic District of National Register?