

# REPORT OF NOVA SERVICES



**Cherokee County Arts Center**  
Canton, Cherokee County, Georgia

**PREPARED FOR:**

Cherokee County Board of Commissioners  
1130 Bluffs Parkway  
Canton, Georgia 30114

NOVA Project Number: 10102-3022152

September 8, 2022



September 8, 2022

**Cherokee County Board of Commissioners**  
1130 Bluffs Parkway  
Canton, Georgia 30114

**Attention:** Mr. Allen Kronenberger  
Construction Manager

**Subject:** Limited Environmental, Structural, and Building Enclosure  
Assessment & Consulting Services Executive Summary Report  
**Cherokee County Arts Center**  
Canton, Cherokee County, Georgia  
NOVA Project Number 10102-3022152

Mr. Kronenberger:

**NOVA Engineering and Environmental, LLC (NOVA)** has completed the requested NOVA Services for the Cherokee County Arts Center located at 94 North Street in Canton, Cherokee County, Georgia (Subject Property). We appreciate your selection of NOVA and for the opportunity to be of service on this project. Please feel free to contact us if you have any questions or if we may be of further assistance.

Sincerely,  
**NOVA Engineering and Environmental, LLC**

A handwritten signature in blue ink, appearing to read "Nick DaSantos".

Nickolaus DaSantos  
Business Unit Manager  
Environmental Services  
AHERA No. 19051  
EPA Lead Inspector No. 2006

A handwritten signature in blue ink, appearing to read "Kurt W. Heinrichs".

Kurt W. Heinrichs, P.E.  
Principal Engineer  
Georgia Registration No. 18741

A handwritten signature in blue ink, appearing to read "James Keeney".  
James Keeney, CCC, GC  
Vice President/STP

## LIST OF APPENDICES

- Task 1 – BUILDING ENCLOSURE SERVICES REPORT & ADA COMPLIANCE ASSESSMENT REPORT
- Task 2 – STRUCTURAL CONDITION ASSESSMENT REPORT
- Task 3 – ENVIRONMENTAL SERVICES REPORT
- Task 4 – LIFE SAFETY CONDITION SURVEY REPORT

## DESCRIPTION OF SUBJECT PROPERTY

The Subject Property is currently identified as the Cherokee County Arts Center located at 94 North Street in Canton, Cherokee County, Georgia (Subject Property). The subject site consists of an approximate 12,200 square foot two-and-a-half story brick structure, constructed circa 1926. The structure consists of a partial below grade/ground level and a first and second floor. The building includes a two-story portico supported by Corinthian order style columns. There is a steeple on the shingled roof, located near the south elevation. We understand the structure was originally constructed as a church (religious facility).

## EXECUTIVE SUMMARY

The following sections provides a brief Executive summary of NOVA's observations/findings/recommendations for the Scope of Work presented in NOVA's Proposal Number 002-05221247, dated April 15, 2022.

### **Building Enclosure Services:**

The existing building envelope condition is generally considered to be in fair to poor condition for a building of similar age and construction. The exterior vertical brick veneers are in fair condition while some repairs are warranted. The mortar condition is also fair although some repointing is needed at this time. Of particular concern is what appears to be a loose Keystone located above the central arched window on the east elevation. It is also located directly above a walkway and could present a hazard. The sealants installed at window perimeters and other wall penetrations are in poor condition. The recently installed aluminum framed window systems appear to be in good condition, while the wood framed windows are in poor condition and require repairs. The two (2) restroom windows located at the south end of the ground floor should be replaced. The paint coating systems on wood fascia, steeple, and other trims are in fair to poor condition and need to be addressed to avoid further deterioration of the wood. The concrete steps and upper landing on the south elevation are in poor condition and may contributing to substantial interior water intrusion. The roof is aged and will likely need to be replaced, the shingles exhibit a loss of ceramic granules and wear. We also performed storm drain mapping services, it appears water runoff drains to 3 points on this site. Two (2) drains terminate in a sump pit on the west side of the building, one drain is piped to an interior sump in a mechanical room on the north side of the building and the 3<sup>rd</sup> is piped though a curb and drains onto the street surface at the front of the building.

### **ADA Compliance Assessment:**

The main property was constructed in 1926, prior to the adoption of the listed federal ADA guidelines. Even though constructed prior to these guidelines the site and building must still have readily achievable barriers removed and strive to be brought into compliance. Our interpretation is this building should generally comply with the 1991/2004 DOJ ADAAG Standard, unless alterations are made then compliance should meet the DOJ 2010 ADA Standards for Accessible Design.

The building originally served as a religious institution. The architectural building style is similar in construction to religious institutions of the early 20<sup>th</sup> century. A simple structure having intersecting ridge lines terminating at the gabled ends. The entrance to the facility consists of steep stairs to the second floor. Alternate entrances are provided along the east elevation providing access to the ground floor. The building area totals approximately 12,192 square feet comprised of a ground floor, first floor and second floor which are publicly accessible. NOVA reviewed the building for interior and exterior accessibility compliance.

The property is not in total compliance with accessibility standards. Non-compliant issues were determined to exist under three (3) of the four (4) Americans with Disabilities Act recommended priorities for removal of barriers. The four (4) priorities and summary of associated deficiencies are as follows:

- **Priority 1 – Approach and Entrance**
  - Accessible parking space not provided on shortest accessible route
  - No Handicap (?) Van Accessible parking space signage is present
  - Noncompliant slopes at accessible parking space and access aisle
  - Parking signage at accessible parking space does not meet minimum height requirements.
  - Ramp along accessible route exceeds maximum allowable slopes
  - Directional signage at non-accessible entrances not provided
- **Priority 2 – Access to Goods and Services**
  - Tactile star at jambs of elevator not provided
  - Theater seating lacks designated accessible seating and companion chairs.
- **Priority 3 – Toilet Rooms**
  - Directional signage to accessible restroom location not provided.
  - Restroom in East Classroom is designated as accessible but does not meet accessible requirements.
- **Priority 4 – Additional Access**
  - No noted deficiencies under priority 4.



### **Structural Condition Survey:**

The subject structure was observed to be in fair to good structural condition with no observed signs of settlement related distress. Minor tuckpoint repair is required along sections of the interior and exterior masonry walls and arches throughout the structure. The main entrance stairs along the south end of the structure needs further evaluation to determine the extent of the distress cracks and delamination's of the concrete and coating. The two (2) stairs along the northwest end of the building should be removed and replaced due to significant observed concrete, masonry, and steel structural related distress. Also, the handrails of the two (2) stairs do not meet the current building code requirements.

### **Environmental Services:**

A brief summary of materials containing potentially hazardous substance is presented below. This summary is provided for convenience and should not be substituted for review of the full report, including all attachments as provided herein.

### **Asbestos Containing Material**

During this study, one hundred fifty-five (155) samples (containing 91 total layers) of plaster, joint compound, tape, wallboard, grout, mortar, ceiling tile, leveler, glue, theater curtain material, floor tile, mastic, wrap, sink coating, cove base, cement, Thermal System Insulation (TSI), vibration dampener, glazing material, caulking, and tread material were analyzed by NOVA using Polarized Light Microscopy (PLM) with three (3) of the analyzed samples indicating Asbestos Containing Material (ACM). A sample location plan is included in Appendix A of the attached full Report.

### **Caulking Material**

- One (1) sample of the caulking material associated with a side window located at the Subject Property indicated >1% asbestos (2% Chrysotile Asbestos). Consequently, we believe all of the caulking material that has not been determined to be non-asbestos containing, should be considered Asbestos Containing Material (ACM).

### **Vibration Dampener**

- Two (2) samples of the cloth vibration dampener material associated with the upper-level HVAC unit at the Subject Property indicated >1% asbestos (60% Chrysotile Asbestos). Consequently, we believe all of the cloth vibration dampener material located at the Subject Property, should be considered Asbestos Containing Material (ACM).

A complete list of suspected ACM samples obtained is shown in the laboratory report (included in Appendix B).

### **Lead Based Paint & Lead Containing Paint**

One hundred eighty-three (183) X-ray fluorescence (XRF) analyzer readings were made by NOVA throughout the interior of the Subject Property structure to determine the presence of Lead Based Paint (LBP).

### **Lead Based Paint**

Lead Based Paint (LBP) is defined as a paint or varnish containing lead at a concentration >0.5% by weight when determined by laboratory analysis. LBP is also defined by HUD as 1.0 mg/cm<sup>2</sup> when determined using an XRF analyzer.

The predominant LBP material identified by the NOVA survey include:

- Painted surfaces of the wood windows, doors, frames, ceilings, baseboards, railing, trim, columns, soffits, and siding located at the Subject Property.

### **Lead Containing Paint**

OSHA does not define Lead Based Paint based on lead content. Any detectable lead in a paint or varnish makes it lead paint for purposes of complying with OSHA regulations to determine worker exposure. Consequently, for purposes of this study, Lead Containing Paint is considered any detectable level of lead.

The predominant LCP material identified by the NOVA survey include:

- Painted surfaces of wood doors, frames, trim, windows, and railing.
- Coated surfaces of ceramic;
- Painted surfaces of plaster walls and ceilings
- Painted surfaces of metal railing and plates.

### **Hazardous Building Material**

NOVA surveyed potential Hazardous Building Material (HBM) that were reasonably accessible/observed at the Subject Property. Potential HBM observed at the Subject Property include incandescent lighting, fluorescent lighting, ballasts, refrigerators, thermostats, High Intensity Discharge (HID) lighting, Light Emitting Diode (LED) Lighting, water fountains, exit signs, fire extinguishers, HVAC Units, microwaves, and miscellaneous facility cleaning/maintenance chemicals.

The names and locations of all the material identified in the HBMI are included in the table located in Task 3 section 5.2 of this report.

## **Fungi**

A total of six (6) air-particle samples were collected and subsequently analyzed by EMSL Analytical, Inc. with the following findings:

- Fungi spores identified from the air-particle sample readings on the interior of the Subject Property include Ascospores, Aspergillus/Penicillium, and Basidiospores, Cladosporium, and Triadelphia.
- Fungi spores identified from the air-particle sample readings on the exterior of the Subject Property include Alternaria, Ascospores, Aspergillus/Penicillium, Basidiospores, Bipolaris, Blakeslea/Choanephora, Cercospora, Cladosporium, Curvularia, Fusarium, Ganoderma, Myxomycetes, Oidium, Pestalotia, Pithomyces, and Torula.
- Fungi spores identified on the interior of the Subject Property that were not identified on the exterior of the Subject Property include Triadelphia.

Currently there are no set clearance levels regarding fungi. Professional inspectors frequently compare the types and levels of fungal organisms detected from the interior of a space to the exterior of a space, as a way of interpreting microbiological results. The qualitative diversity of airborne fungi outdoors should be similar to that measured indoors in the absence of fungi contamination.

Based on the results of the laboratory analytical data obtained during the Limited Fungi Air Quality Assessment sampling program, it is NOVA's recommendation that best housekeeping and cleaning practices be continued moving forward in an effort to prevent possible future settled fungi growth and/or accumulation. NOVA also recommends that air filters located throughout the Subject Property be changed per the manufactures recommended specifications

Please note that the services provided by NOVA were a limited assessment of current conditions at specific locations identified by the Client during NOVA's site visit. It is possible that fungi may be present at additional locations that may not become apparent until encountered by renovation and/or demolition activities. In addition, fungi conditions can change with time and may be different in the future. This variability in conditions is an inherent owner-assumed risk in fungi assessments.

## **Life Safety Condition Survey:**

NOVA performed a walk-through condition survey of the life safety systems of the facility. Numerous configuration, handrail and egress code violations were noted in the exterior and interior stairways throughout the facility. Several code violations were also noted in the mechanical, electrical and fire suppression system were also noted. Significant modifications will be required to meet current life safety code requirements.

## **TASK 1**

# **BUILDING ENCLOSURE SERVICES REPORT & ADA COMPLIANCE ASSESSMENT REPORT**



September 2, 2022

**Cherokee County Arts Center**  
94 North Street  
Canton, Georgia 30114

**Attention: Allen Kronenberger**  
**Construction Manager**

**Subject: Report of Limited Visual Building Envelope Condition Assessment**  
94 North Street  
Canton, Georgia 30114  
NOVA Project Number: 10102-3022152

Dear Mr. Kronenberger:

**NOVA Engineering and Environmental, LLC (NOVA)** has completed the authorized limited visual building envelope condition Assessment of the subject building, Cherokee County Arts Center, located at 94 North Street in Canton, Georgia. This assessment involved a field investigation, further described in the following sections of this report. Our work was performed in general accordance with our proposal number 002-05221247 dated April 15, 2022.

### **SITE AND PROJECT INFORMATION**

Our understanding of this project is based on our previous experience with similar projects, and a brief review the building documents and drawings provided to us.

Based on our review of the provided drawings the subject building was originally constructed circa 1923 and served as religious institution. The architectural building style is similar in construction to religious institutions of the early 20<sup>th</sup> century. A simple structure having intersecting ridge lines terminating at the gabled ends. The entrance to the facility consists of a substantial overhang that is supported by four (4) fluted wood columns two stories in height. The column are capped with capitals that appear to be Tower of the Winds style from the Corinthian order of column design. A steeple is centered on the roofs ridgeline on the south elevation of the building.

The building was purchased by Cherokee County and repurposed, it currently serves as the Cherokee Arts Center as well as event leasing space. The subject building review included the ground floor, first floor, second floor, an attic space, and a steeple. In sum the building area totals approximately 12,192 sf according to the documents provided to us.



NOVA was asked to perform a limited visual building envelope condition assessment of the building depicted below to document roof and wall conditions that require maintenance or repair. The attic and the steeple were also included in our observations and recommendations.

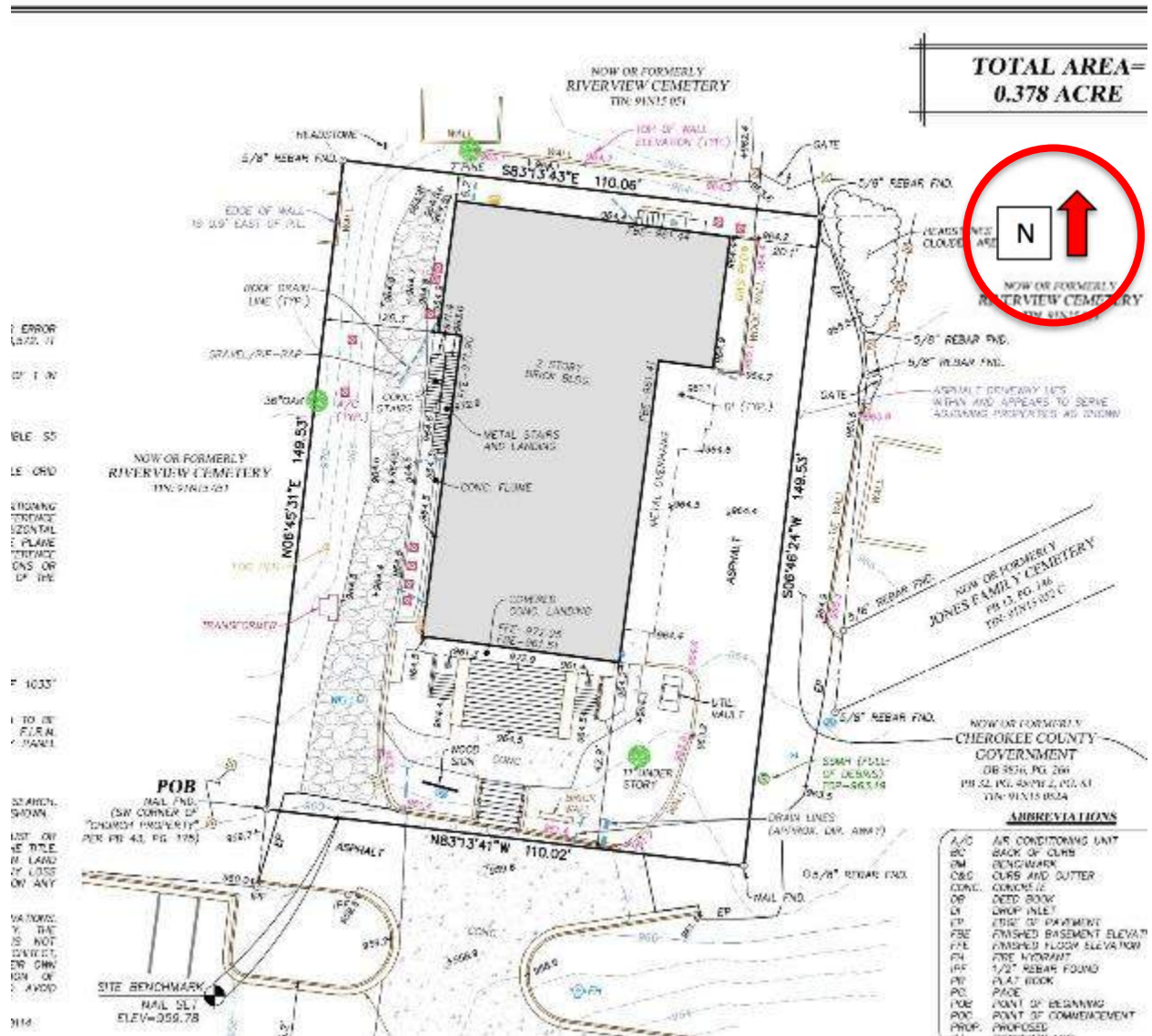


Figure 1: Topographic plan of subject building

In preparation for the assessment NOVA reviewed the following architectural drawings to develop an understanding of the construction of the subject building. The drawings observed were:

- The Arts Center Project for Cherokee County Arts Council Phase One – dated: 1-25-2000 – Roy H. Taylor III

- The Arts Center Project for Cherokee County Arts Council Phase Two – dated: 3-20-2001 – Roy H. Taylor III  
Masonry

## OBSERVATIONS

NOVA representatives traveled to the subject site to perform the limited building condition assessment on the dates of August 8 and 9, 2022. NOVA building envelope representatives included Mr. Mark Girton and Mr. Max Flores. Mr. Alan Kronenberger, Senior Construction Manager for Cherokee County, provided access to the various rooms and enclosures of the building. A boom lift was utilized to observe and document inaccessible portions of the roof, accessible areas of the upper walls and the steeple.

During our interior walk we observed evidence of possible water leaks at several locations. Most of the evidence consisted of blistered paint as well as efflorescence trapped behind some of the painted rooms and ceilings.

We also walked attic spaces to observe the underside of the wood decking. In locations we observed the underside of the decking appears to be sound. In a location, directly below the steeple structure, daylight was visible through the steeple wall. Directly below this occurrence we observed that cardboard boxes stored in the area exhibited water staining. Photographs number 2 through 18 generally show interior observations.

Upon completing our interior walk of the building interior, we began our exterior envelope review.

Our significant findings are as follows:

### Building Envelope (Photos 19-53):

Detailed ss-built drawings were not available for review. Based upon our observation, the exterior walls appeared to be multi-wythe brick masonry, the exterior face of the brick appears to be glazed. The brick appears to be run in common bond coursing with headers located at approximately every seventh brick course. The stair and upper landing, on the south elevation, consists of cast-in-place concrete that is covered by a pedestrian grade coating.

The deficiencies observed included:

### Masonry

- Isolated areas of spalled brick, some areas of spalling appeared to be naturally caused while others are a result of physical installation of lighting and other types of penetrations. (Photos 25-30)

- Exterior wall mounted lighting fixtures are poorly attached to the masonry in some locations (Photos 35-36)
- A stone keystone located above one of the aluminum framed arched windows, on the east elevation, appears to be loose. It is located above the center window above the canvas covered walkway. (Photos 40-43)
- Deteriorated mortar located in random locations (Photos 44-48)
- Exterior efflorescence and lime deposits, notably visible along the front entrance stair.
- Cracks in cast concrete coping atop the front stair walls

#### South Entrance Stair:

- The concrete exhibits delamination within the layers
- The pedestrian coating is in poor condition.
- Stress cracks are present in the coated monolithically placed concrete coping on the stair side walls.

#### Roofing (Photos 54-87)

Roofing system on the subject building included fiberglass reinforced architectural laminated shingle installed over a felt underlayment on wood plank deck that is secured to wood joists.

A steeple constructed, on the building's south elevation, is centered on the ridgeline running north and south. The steeple is wood framed construction and clad with painted wood wall panels that appear to tongue and groove. Roofing on the hexagonal shaped steeple includes copper roofing over felt underlayment on wood decking. Horizontal seams are the flat folded type while the vertical seams are folded 1-inch-high standing seams. The exposed steeple floors consist of copper with folded seams.

The Shingle roof exhibited the following deficiencies:

- Surface rusted metal flashing components, typical
- The sealants on the chimney flashing is in a deteriorated condition
- Downspouts for covered walkway ties into a primary downspout that has insufficient capacity to facilitate proper drainage, water sprays from the tied in downspouts
- Exposed wood and poorly applied sealant on dormer pop-up roof
- Dormer roof slope insufficient for shingle application
- Splits in wood trim along underside of roof edge, some signs of water damage possibly due to poor water drainage
- Loose screws for gutter and poorly formed edge metal on the building wing on the east elevation
- Raised shingles caused by nails backing out.
- Holes in shingles at isolated locations
- Shingles exhibit some loss of the protective ceramic granules especially along primary ridge

- Shingle repairs evident around chimney, north side of roof

The steeple exhibited the following deficiencies:

- Cracks and chipped paint typical
- Floor of steeple consists of flat seam copper roof, some improper/temporary repairs observed
- At least one location of the tongue and groove wall panels where panel interlocks appeared to be open, it appears to be the source of daylight we observed from attic space.

The window systems include either operable wood frames or fixed metal frames.. Doors include both solid wood swinging doors as well as aluminum framed storefront systems.

The deficiencies observed included:

- Wood frame windows exhibit weathered paint as well as some wood frame rot caused by leaks, frame rot is in the windows in the bathrooms located on the southside of the building.
- Perimeter sealants around windows and doors appear to exhibit UV (ultraviolet) deterioration as well as some adhesive failure.
- Glazing putty securing glass to mullions and frames in many cases are cracked
- Steel lintels supporting brick above window openings exhibit some rusting
- Aluminum fixed frame windows exhibited some adhesive failure of the perimeter sealants

## CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and conceptual recommendations for repair are based on our onsite observations, limited review of the available building drawings, and our experience with similar projects.

Immediate repair is defined by NOVA as work that should be performed within 1 year. If there are defects that result in leaks, they should be addressed as soon as possible to avoid further contamination or damage to the structure. We will also include a list of maintenance repair items to mitigate moisture intrusion and prolong the service life of the structure:

The vertical envelope of the building is in overall fair condition when compared to other structures of similar age and type of construction. We suggest the following repairs be performed to extend the serviceable life of the façade: .

Overall, the condition of the shingle roofing system is poor and repair would generally not be economically feasible for long term positive results. We estimate the remaining serviceable life to be 2 to 3 years with continued maintenance. The metal roofing used on portions of the

steeple are in fair shape but require repairs to those areas exhibiting previously applied temporary repairs. We estimate the remaining service life of these components to be 10+ years with continued maintenance.

#### **Year 2022- Immediate Repair**

- Check stability of the loose keystone located above the center of the arched window on east elevation, reattach as necessary as soon as it potentially appears to be safety issue.
- Seal up open gaps on the exterior of the steeple tongue and groove wall panels
- Low sloped shingled dormer, replace shingles with appropriate roofing system, clean, prime and repaint exposed wood trim

#### **Year 2023-2024**

- Repair/Replace deteriorated wood framed windows in south side restrooms
- Remove loose paint from wood window frames, remove and replace perimeter caulking and repaint windows.
- Repair or replace cracked glazing putty at perimeter of glass in wood frames
- Scrape and paint rusted steel window lintels
- Route and seal cracks in entrance exterior stair walls
- Spot repointing of mortar in areas exhibiting excessive erosion
- Seal wall penetrations in brick not currently sealed including piping and conduit
- Cut out and replace perimeter sealants around aluminum framed doors and windows

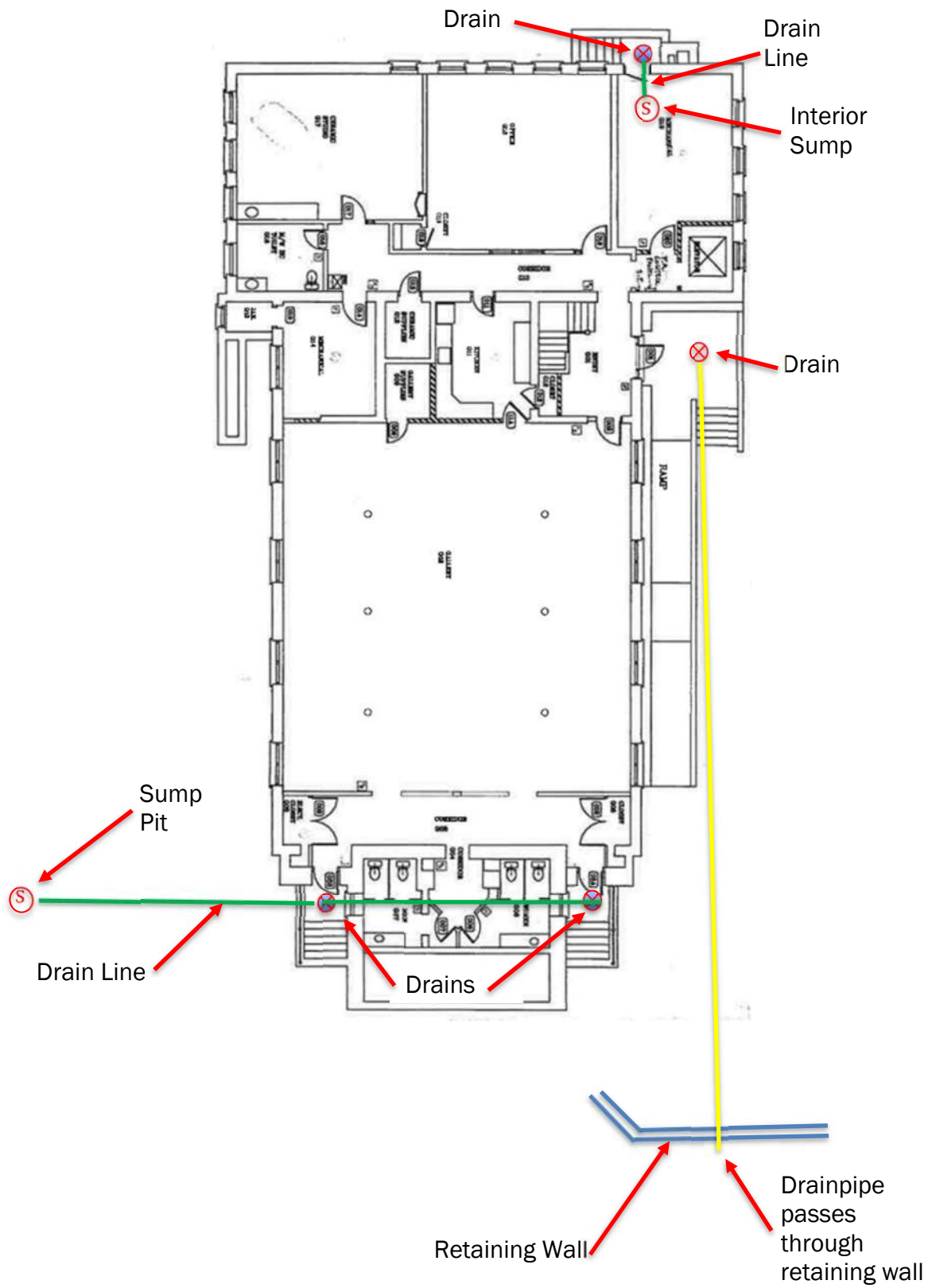
#### **Year 2024-2025**

- Remove and replace the existing shingle roofing
- Scrape and clean wood fascia, repair cracks and repaint
- Remove existing inappropriate repairs in copper roofing and properly patch
- Clean and resolder existing flat seam copper flooring
- Replace brick with spalled or broken brick faces

#### **Exterior Drain Mapping (Photos 88-94)**

As a part of our scope of work NOVA performed mapping of the four exterior drains placed level with the slab at 4 locations. These locations included two entrances on the south elevation, one location at entrance on the east elevation and one location at a rear entrance on the north elevation. The purpose was to determine where each of the drain lines terminate. Figure 2 below indicates our findings.





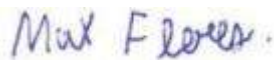
**GROUND FLOOR PLAN**  
*Figure 2*

## CLOSING

We appreciate the opportunity to be of service on this project. We would be glad to assist the project management team to perform the additional evaluation and prepare design drawings and material specifications to solicit bids from qualified contractors and accomplish the recommended repairs. Please feel free to contact us if you have any questions or if we may be of further assistance.

Sincerely,

**NOVA ENGINEERING AND ENVIRONMENTAL, LLC**



Max Flores  
Staff Engineer  
Building Enclosure & Facilities Services



Mark Girton  
Senior Project Manager  
Building Enclosure & Facilities Services



James Keeney, CCC, GC.  
Vice President/STP  
Building Enclosure & Facilities Services

Attachments: Photos 1 through 87



Photo 1: Partial south elevation



Photo 2: Interior view of mechanical room, note cracked plaster and efflorescence.



**Photo 3:** Efflorescence on interior side of exterior backed masonry wall.



**Photo 4:** Blistered and peeling paint at suspected leak locations





**Photo 5:** Blistered paint filled with efflorescence.



**Photo 6:** Blistered paint filled with efflorescence, south women's restroom, located below from exterior stairs





**Photo 7:** Water-stained ceiling tile



**Photo 8:** Paint blistering in south women's restroom



**Photo 9:** Blistered paint



**Photo 10:** Fallen plaster





**Photo 11:** Stained ceiling tile



**Photo 12:** Blistered paint, efflorescence, men's restroom south side.



**Photo 13:** Beadboard ceiling exhibiting previous moisture damage



**Photo 14:** Apparent water damage above balcony.



**Photo 15:** Open lap in steeple wood siding in close proximity to balcony leaks



**Photo 16:** Water damaged box in vicinity of gap in wood siding





**Photo 17:** Water stained ceiling tile



**Photo 18:** Blistered and peeling paint



Photo 19: Overview of south elevation



Photo 20: Cast concrete coping crack





**Photo 21:** Cracked bed joint below concrete coping



**Photo 22:** Brick mortar joint below concrete coping open





**Photo 23:** Appears to be previous mortar repair



**Photo 24:** Perimeter sealant around window, poor condition





**Photo 25:** Concrete deck at entrance, above restrooms, is spalled.



**Photo 26:** Open joint between masonry and wood window frame.





**Photo 27:** Efflorescence and lime staining on face of brick



**Photo 28:** Overview east elevation, arrow points out keystone believed to be loose





**Photo 29:** Keystone believed to be loose above aluminum framed arched window



**Photo 30:** Paint peeling from wood fascia





**Photo 31:** Overview of north elevation



**Photo 32:** Spalled masonry brick because of performing penetrations





**Photo 33:** Spalled masonry brick because of performing penetrations.



**Photo 34:** Spalled brick, possibly occurring during fixture installation.





Photo 35: Deteriorating mortar

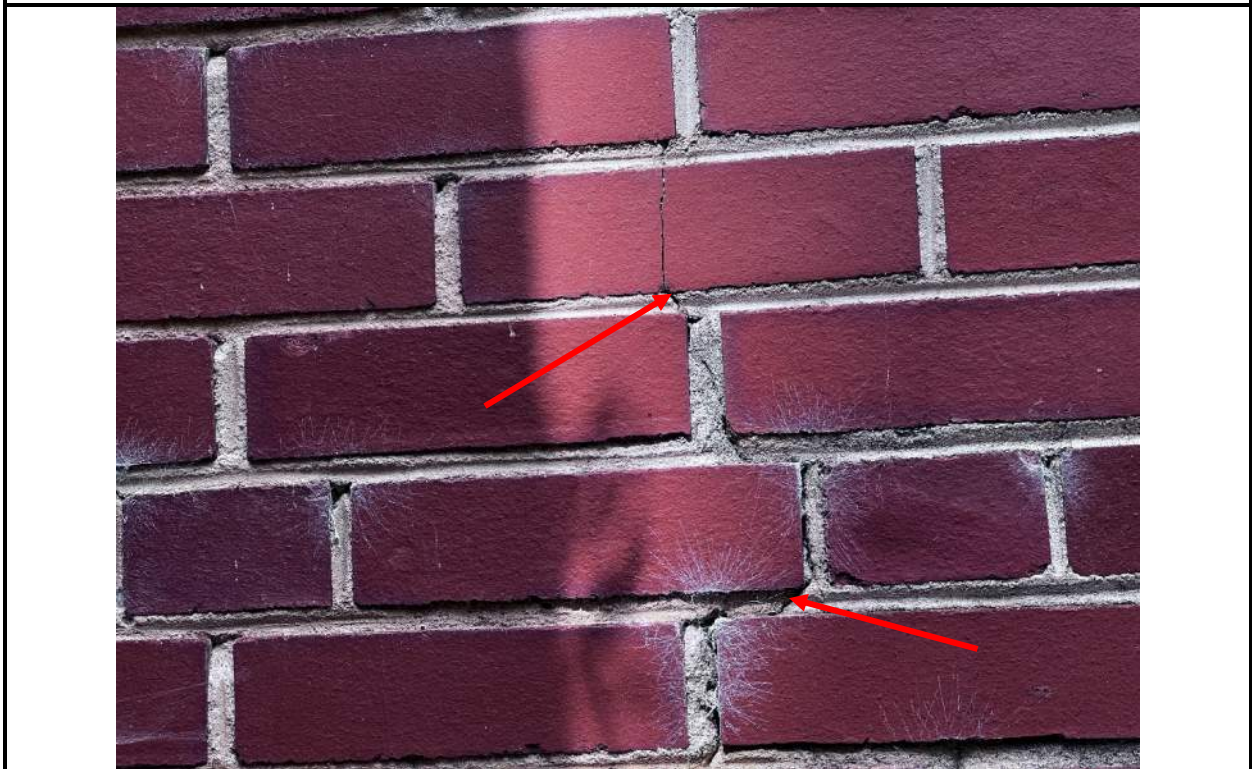


Photo 36: Minor settlement cracking in brick





**Photo 37:** Eroded and missing mortar, in vicinity of wall damage in basement level mechanical room



**Photo 38:** Eroded and missing mortar, in vicinity of wall damage in basement level mechanical room



**Photo 39:** Unsealed pipe penetrations



**Photo 40:** Deteriorated control joint



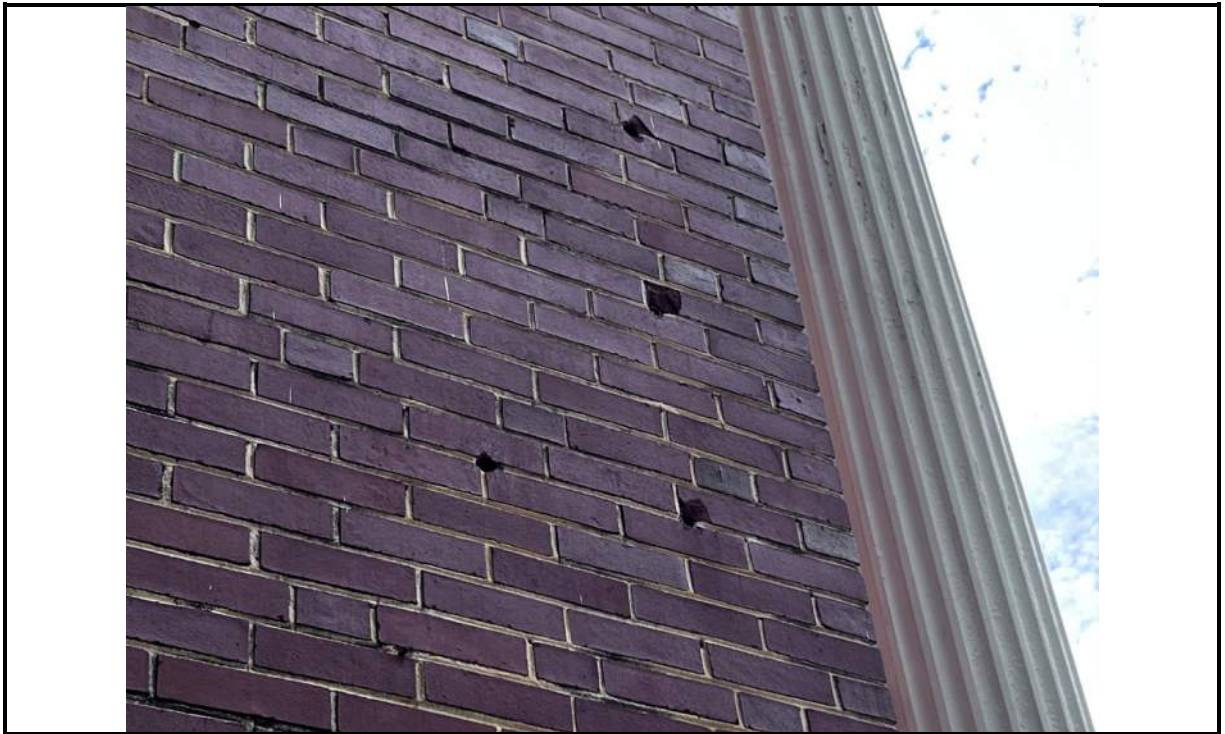


**Photo 41:** Unsealed wall penetration



**Photo 42:** Spalled brick Rowlock band





**Photo 43:** Open penetrations in masonry



**Photo 44:** Partial elevation view of west elevation

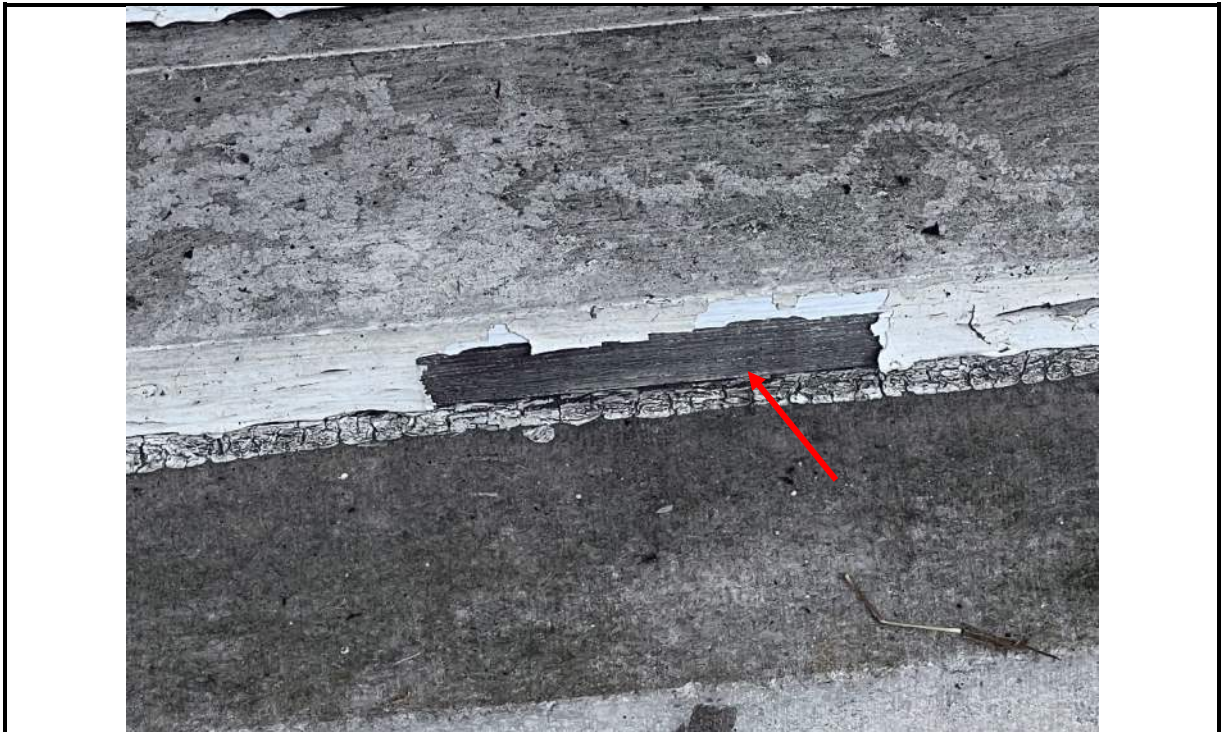


**Photo 45:** Vision lite openings infilled with metal, penetrations abandoned and taped over



**Photo 46:** Cracked glazing putty, typical most wood window frames





**Photo 47:** Exposed and weathered wood sill, sealant also failed



**Photo 48:** Deteriorated wood sill below window



**Photo 49:** Glazing putty deterioration, typical condition most wood framed windows



**Photo 50:** Deteriorated wood gable vent, perimeter sealant is also in a deteriorated condition





**Photo 51:** Adhesive failure of sealant around aluminum framed window systems



**Photo 52:** Many lintels above windows exhibit some metal corrosion



**Photo 53:** Threshold sill below door exposed and rotted



**Photo 54:** Overview of roof layout





**Photo 55:** Overview of steeple exterior floor



**Photo 56:** Overview of steeple exterior floor, bell pulleys still in place





**Photo 57:** Steel roof support post exhibiting weathering and cracking



**Photo 58:** Previous repairs performed are temporary in nature and need to be maintained



**Photo 59:** Previous repairs performed are temporary in nature and need to be maintained

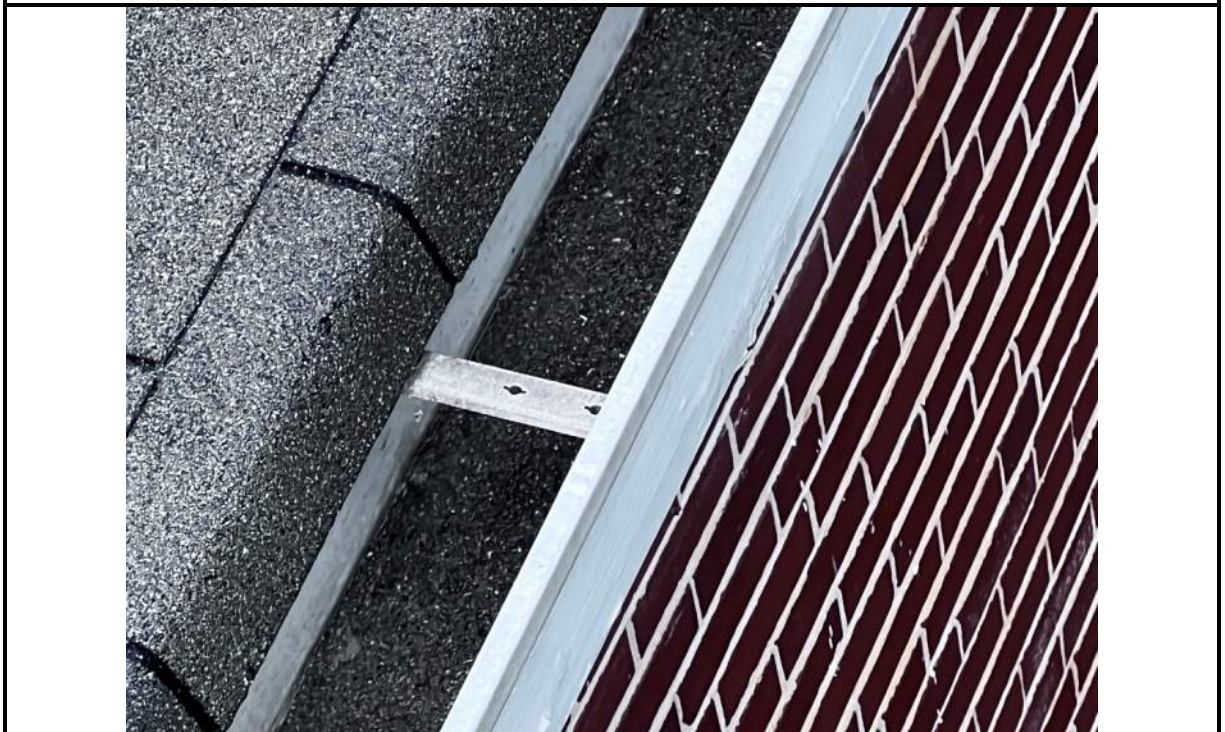


**Photo 60:** Overview of conditions typical all sides, paint in poor condition and exposed wood causing checking and cracking of the wood.





**Photo 61:** Steeple exterior wall panel in location of visible light in attic space (ref. photo 15)



**Photo 62:** Some gutters indicate the amount of ceramic granule loss from shingles





**Photo 63:** Poorly performed edge metal flashing, also note loose gutter screw



**Photo 64:** Shingle or edge metal does not cover the exposed top edge of gutter, roof may drip at this location



**Photo 65:** Metal cornice return cap exhibits some corrosion



**Photo 66:** Corrosion of metal counter flashing around steeple





**Photo 67:** Erosion of ceramic granules from shingle surface



**Photo 68:** Hole in shingle, fiberglass reinforcing exposed



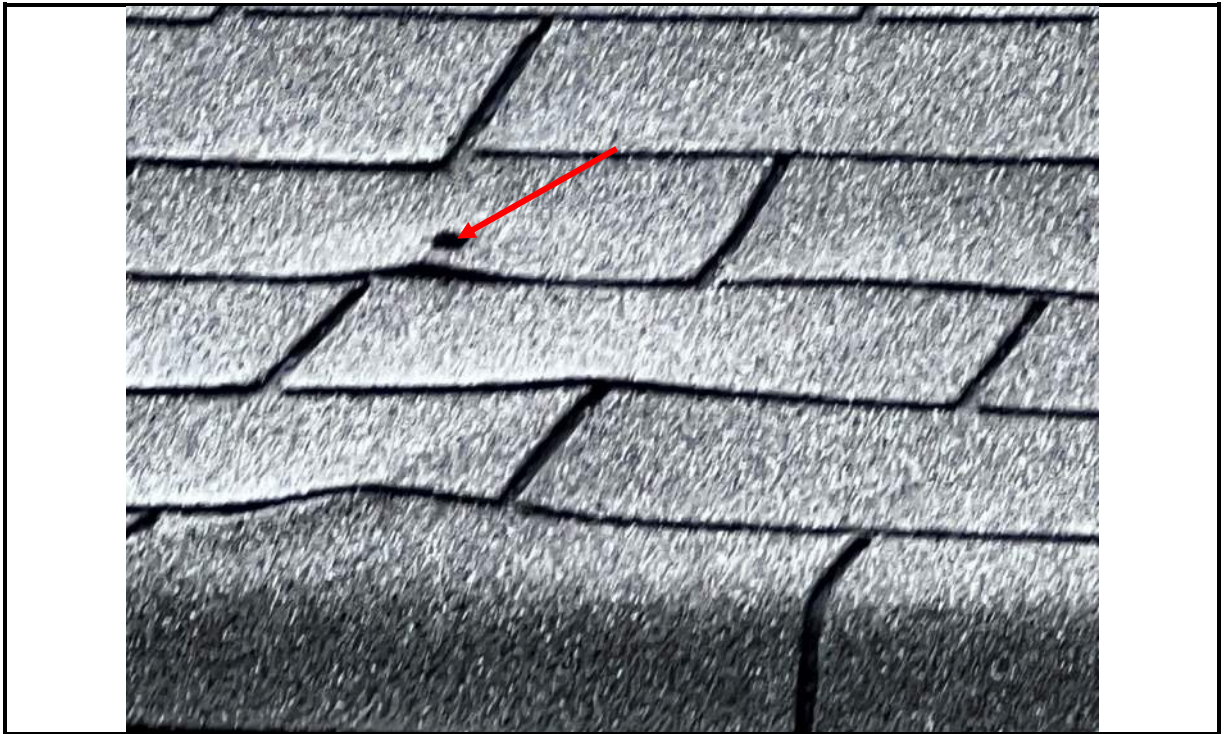


**Photo 69:** Erosion of ceramic granules from shingle surface



**Photo 70:** Erosion of ceramic granules from shingle surface





**Photo 71:** Nail securing shingle backed out causing a puncture to shingle above



**Photo 72:** Shingle nails beginning to backout and raise the shingle tab above.





**Photo 73:** Roof pop-up dormer, insufficient slope for shingles



**Photo 74:** Exposed and deteriorated wood on 3-sides of popped up area





**Photo 75:** Exposed and deteriorated wood on 3-sides of popped up area



**Photo 76:** Location of previous roof repairs





**Photo 77:** Chimney counter flashing exhibited deteriorated sealant as well as mortar erosion



**Photo 78:** Metal component surface corrosion





**Photo 79:** Wood trim at eaves and fascia exhibit paint peeling and some cracking



**Photo 80:** Wood trim at eaves and fascia exhibit paint peeling and some cracking



**Photo 81:** Capacity of main downspout insufficient with the additional gutter tie-ins.



**Photo 82:** Partial view of full length cornice return at building entrance.





**Photo 83:** Exposed edge of wood substrate.



**Photo 84:** Isolated areas of metal corrosion on cornice return.



**Photo 85:** Open metal lap on cornice metal.



**Photo 86:** Exposed wood at edge of cornice metal.





**Photo 87:** Small crack in the top of the column capital.



**Photo 88:** NOT USED



**Photo 89:** Drain location #1.



**Photo 90:** Drain location #2





**Photo 91:** Location # 2 drain outlet.



**Photo 92:** Location #3





Photo 93: Location #4.



Photo 94: Location #4 Sump Pit



# **AMERICANS with DISABILITIES (ADA) COMPLIANCE ASSESSMENT REPORT**



**Cherokee Arts Center**  
94 North Street  
Canton, GA 30114

## **PREPARED FOR:**

Cherokee County Board of Commissioners  
1130 Bluffs Parkway  
Canton, GA 30114

NOVA Project Number: 10102-3022152

Report Date: September 2, 2022

## EXECUTIVE SUMMARY

NOVA's Ms. Desiré Mahanna and Ms. Ashley Montford performed an ADA Compliance Assessment on the property known as the Cherokee County Arts Center located at 94 North Street in Canton, Georgia. The site visit was performed on August 24, 2022. The site includes a three-story historical building reportedly constructed in 1923. NOVA performed an ADA Compliance Assessment of the exteriors and interiors of the building. NOVA performed these services in general accordance with our proposal number 10109-05221247, dated April 15, 2022.

## CONSIDERATIONS

The Americans with Disabilities Act (ADA), Title III, was enacted in 1990. As part of this provision the ADA Accessibility Guideline (ADAAG) was developed. Since this time varying modifications and reprints (2004) have occurred to this document. Many other documents have been developed to assist/interpret compliance guidelines. Some such publications are; the Department of Justice (DOJ) 28 CFR regulation July 26, 1991, the DOJ ADA Title III Technical Assistance Manual 1993/1994 and the DOJ 2010 ADA Standards for Accessible Design. The 2010 Standard does not address existing facilities unless altered. In addition to the federal standard listed, a site must meet local governing accessibility codes. As defined under Title III of the ADA, existing facilities considered to be "public accommodations" must take steps to remove architectural and communication barriers that are deemed "readily achievable" under the retroactive requirements. Interpretation of the ADA standards can many times be "gray". NOVA bases our conclusions and recommendations on our interpretation of the standards. These interpretations may differ from others. Factors to be considered in determining whether or not an action is readily achievable include the nature and cost of the action, the number of employees at the subject property, use of the building and the financial resources of ownership and tenants. The decision as to which actions are to be undertaken as readily achievable is to be determined by the building owner in consultation with its accountants, attorneys and design/construction professionals.

For this survey NOVA utilized a modified version of the "ADA Checklist for Readily Achievable Barrier Removal" provided by the ADA National Network. This checklist takes into consideration the 1991 Standards and provides input concerning DOJ 2010 Standards for Accessible Design (ADAAG). The checklist is structured in the ADA's recommended priorities for removal of barriers. Cursory recapping the recommended priorities; Priority 1 – Approach and Entrance, Priority 2 – Access to Goods and Services, Priority 3 – Toilet Rooms and Priority 4 – Additional Access. Some sections of this checklist are marked as not applicable (N/A) or have been removed because they have no relevance to this site. Below is a brief narrative recap of our findings and observations. The checklist has the applicable individual property elements observed along with brief comments about the condition and possible solutions.



## **GENERAL DESCRIPTION/CONCLUSIONS**

The main property was constructed in 1923, prior to the adoption of the listed federal ADA guidelines. Even though constructed prior to these guidelines the site and building must still have readily achievable barriers removed and strive to be brought into compliance. Our interpretation is these buildings should comply with the 1991/2004 DOJ ADAAG Standard, unless alterations are made then compliance should meet the DOJ 2010 ADA Standards for Accessible Design.

The building originally served as a religious institution. The architectural building style is similar in construction to religious institutions of the early 20<sup>th</sup> century. A simple structure having intersecting ridge lines terminating at the gabled ends. The entrance to the facility consists of steep stairs to the second floor. Alternate entrances are provided along the east elevation providing access to the ground floor. The building area totals approximately 12,192 square feet comprised of a ground floor, first floor and second floor which are publicly accessible. The subject building review for accessibility compliance included the interiors and exteriors

The property is not in total compliance with accessibility standards. Non-compliant issues were determined to exist under three of the four of the Americans with Disabilities Act recommended priorities for removal of barriers. The four priorities this property was assessed for are:

- Priority 1 – Approach and Entrance
- Priority 2 – Access to Goods and Services
- Priority 3 – Toilet Rooms
- Priority 4 – Additional Access

## **OBSERVED NON-COMPLIANT ELEMENTS**

Below are the general observed non-compliant elements:

### **Priority 1 – Approach and Entrance**

- One accessible parking space is provided. It is not provided on the shortest accessible route to the building. Additionally, it exceeds maximum allowable running slope. *Recommendation: Relocate accessible parking space to the spot furthest left where access aisle adjoins accessible route to ramp to enter the building. NOTE: This area is also noncompliant as to slope requirements. Remediation of asphalt in this area will be required.*
- No Van Accessible Parking space is provided. This parking area has four parking spaces of which one is designated accessible. *Recommendation: This one accessible parking space should also be striped to meet van accessible requirements and be provided a van accessible parking sign.*
- Parking signage at accessible parking space is mounted too low. *Recommendation: Install post mounted accessible parking signage at head of accessible parking spaces no less than 60" above grade measured to bottom of sign.*
- Ramp to accessible entrance exceeds maximum allowable running slope of 8.3%. Measurements were obtained of 9.4% and 10.2% along the ramp run. *Recommendation: Remediate ramp to meet requirements of no more than 8.3% running slope.*
- Non-accessible entrances do not have directional signage to accessible entrance. Additionally, the accessible entrance does not have designated accessible entrance signage. *Recommendation: Install signage.*

### **Priority 2 – Access to Goods and Services**

- Elevator does not have tactile star on jambs of main entry level. *Recommendation: Install tactile star signage.*
- The theater seating has sufficient space for wheelchair seating in front of the first row on both the left and right sections. However, this is not designated as accessible seating, nor does it include companion seating for wheelchair guests. *Recommendation: Designate areas for wheel chair seating and provide companion seating.*

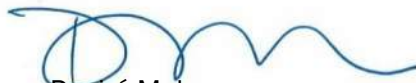
### **Priority 3 – Toilet Rooms**

- The restrooms on the third and first floors are not designated as accessible and do not meet accessible requirements. The second-floor restrooms are designated accessible and generally meet the requirements. *Recommendation: Directional signage should be provided on the first and third floors indicating that accessible restrooms are located on the second floor. Alternatively, first and third floor restrooms can be reconfigured to meet requirements.*
- Restroom in the east classroom is designated accessible but does not meet all requirements. The toilet is mounted too far from the wall and sits too low and accessories are mounted too high over an obstruction (cabinet). Additionally, proper clearance between toilet and sink of 42" is not provided and grab bars are not provided. *Recommendation: Reconfigure restroom to meet accessibility requirements or remove signage indicating this restroom is accessible and provide directional signage to the accessible restroom on the second floor.*

### **CLOSURE**

We appreciate the opportunity to have been of service to you on this project and look forward to working with you on this and future projects. Should you require any additional information concerning our report, feel free to contact us.

Respectfully Submitted:  
**NOVA ENGINEERING & ENVIRONMENTAL, LLC**



Desiré Mahanna  
Business Unit Manager



James C. Keeney, GC, CCC  
Vice President

Attachments:    Photographs  
                         ADA Checklist





PHOTO #1: View of south elevation and entrance to the Cherokee Arts Center.



PHOTO #2: View of east elevation and accessible entrance.



PHOTO #3: View of Ramp to accessible entrance from parking area.



PHOTO #4: View of ramp on accessible route.





PHOTO #5: View running slope being obtained along ramp.



PHOTO #6: Running slope of 10.4% obtained (Non-Compliant). Running slopes on ramps should not exceed 8.3%.



PHOTO #7: View of cross slope being obtained on ramp.



PHOTO #8: Cross slope of 0.5% obtained (Compliant). Cross slopes should not exceed 2.08%.





PHOTO #9: Height of gripping surface at railing on ramp is 35". (Compliant).



PHOTO #10: Ramp width is 60". (Compliant).



PHOTO #11: Railings include 12" overhang (Compliant).



PHOTO #12: Edge protection is provided along full ramp run.





**PHOTO #13:** Designated accessible parking space. Note, it is not provided along the shortest accessible route and requires user to walk behind other vehicle to get to accessible route. (Non-Compliant).



**PHOTO #14:** Signage height is 27" (Non-Compliant). Signs are required to be mounted a minimum of 60" above the grade of the parking space.



**PHOTO #15:** Access aisle width measurement of 82" (Compliant).



**PHOTO #16:** Accessible parking space width measurement of 110" (Compliant).





PHOTO #17: Running slope of access aisle being obtained.



PHOTO #18: Running slope of 2.3% at access aisle (Non-Compliant). Running and cross slopes in access aisles and parking spaces should not exceed 2.08%.



PHOTO #19: Cross slope of access aisle being obtained.



PHOTO #20: Cross slope measurement of 0.7% obtained (Compliant). Running and cross slopes in access aisles and parking spaces should not exceed 2.08%.





PHOTO #21: Suggested area to relocate accessible parking space to. Note: Remediation of cross and running slopes will be required.



PHOTO #22: Alternate entrance – non accessible. Directional signage should be posted directing to accessible entrance.



PHOTO #23: Alternate entrance – non accessible. Directional signage should be posted directing to accessible entrance.



PHOTO #24: Elevator provided to access additional floors.





PHOTO #25: Elevator opening width is 36" (Compliant).



PHOTO #26: Call button height of 42" (Compliant)



PHOTO #27: Audible and visual floor indicators. (Compliant).



PHOTO #28: Operation buttons within compliant heights. (Compliant).



PHOTO #29: Tactile star not provided at floor signage. (Non-Compliant).



PHOTO #30: Emergency call box provided in elevator. (Compliant).



PHOTO #31: Elevator cab measurements 69" x 51" (Compliant).



PHOTO #32: Elevator cab measurements 69" x 51" (Compliant).





PHOTO #33: Women's restroom on 2<sup>nd</sup> floor is designated accessible.



PHOTO #34: Door closing speed of 4.13 seconds at women's restroom on second floor (Non-Compliant)



PHOTO #35: Overview of lavatory area in women's restroom second floor.



PHOTO #36: Overview of accessible stall in women's restroom, second floor.



PHOTO #37: Sink height of 34" in women's restroom second floor. (Compliant)



PHOTO #38: Soap dispenser height of 45" in women's restroom second floor (Compliant).



PHOTO #39: Mirror height of 40" in women's restroom second floor (Compliant).



PHOTO #40: Toilet height of 18" in women's restroom second floor (Compliant).





PHOTO #41: Men's restroom on second floor is designated as accessible.



PHOTO #42: Door closing speed of 3.15 seconds at men's restroom on second floor (Non-Compliant).



PHOTO #43: Overview of lavatory area in men's restroom on second floor.



PHOTO #44: Mirror height of 41 inches in men's restroom on second floor (Compliant).



PHOTO #45: Sink height of 34" in men's restroom on second floor (Compliant).



PHOTO #46: Urinal handle at 39" in men's restroom on second floor (Compliant).



PHOTO #47: Toilet height of 18" in men's restroom on second floor (Compliant).



PHOTO #48: 42" Grab bar located in men's restroom on second floor (Compliant).





PHOTO #49: Overview of theater. Accessible seating could be placed at open space on front row on left and right sections.



PHOTO #50: View of ramps in theater (Compliant).



PHOTO #51:



PHOTO #52:



PHOTO #53: Accessible restroom signage in east classroom.



PHOTO #54: Overview of accessible restroom in east classroom.



PHOTO #55: Toilet height of 16" (Non-Compliant).



PHOTO #56: Mirror and soap dispenser height at 40" (Compliant).





PHOTO #57: Toilet center is 22" from wall (Non-Compliant). Should be between 16-18".



PHOTO #58: Paper-towel holder mounted too high for over an obstruction.



PHOTO #59: 36" opening on accessible route in building (Compliant).



PHOTO #60: 36" opening at accessible entry, and lever handle is provided (Compliant).



# ADA Checklist for Readily Achievable Barrier Removal

---

Based on the 2010 ADA Standards for Accessible Design

---



Produced by  
**Institute for Human Centered Design**  
[www.HumanCenteredDesign.org](http://www.HumanCenteredDesign.org)

**[www.ADAchecklist.org](http://www.ADAchecklist.org)**  
2011



**ADA National Network**  
**[www.ADAta.org](http://www.ADAta.org)**

Questions on the ADA 800-949-4232 voice/tty  
Questions on checklist 617-695-0085 voice/tty  
[ADAinfo@NewEnglandADA.org](mailto:ADAinfo@NewEnglandADA.org)

---



This checklist was produced by the New England ADA Center, a project of the Institute for Human Centered Design and a member of the ADA National Network. This checklist was developed under a grant from the Department of Education, NIDRR grant number H133A060092-09A. However the contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government.

**Questions or comments on the checklist contact the New England ADA Center at 617-695-0085 voice/tty or [ADAinfo@NewEnglandADA.org](mailto:ADAinfo@NewEnglandADA.org)**

**For the full set of checklists, including the checklists for recreation facilities visit [www.ADAchecklist.org](http://www.ADAchecklist.org).**

---

# ADA Checklist for Readily Achievable Barrier Removal

---



PRIORITY 1 – APPROACH AND ENTRANCE

PRIORITY 2 – ACCESS TO GOODS AND SERVICES

PRIORITY 3 – TOILET ROOMS

PRIORITY 4 – ADDITIONAL ACCESS



---

## ADA Checklist for Readily Achievable Barrier Removal

---

# Priority 1 – Approach & Entrance



Project: Cherokee County Arts Center

---

Building: Cherokee County Arts Center

---

Location: 94 North Street Canton, Georgia

---

Date: August 31, 2022

---

Surveyors: Desiré Mahanna, Ashley Montford

---

NOVA Project No. 10102-3022152

---

---

**An accessible route from site arrival points and an accessible entrance should be provided for everyone.**

---



Institute for Human Centered Design  
[www.HumanCenteredDesign.org](http://www.HumanCenteredDesign.org)  
November 2011



ADA National Network  
Questions on the ADA 800-949-4232 voice/tty  
[www.ADAchecklist.org](http://www.ADAchecklist.org)

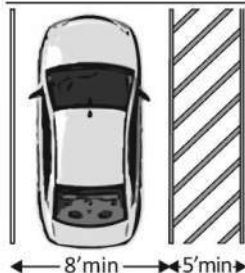
---

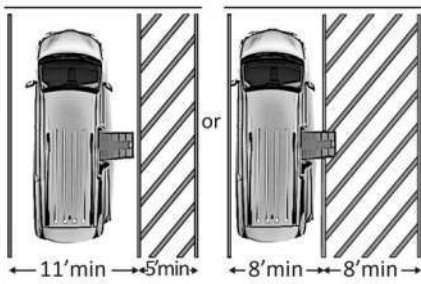
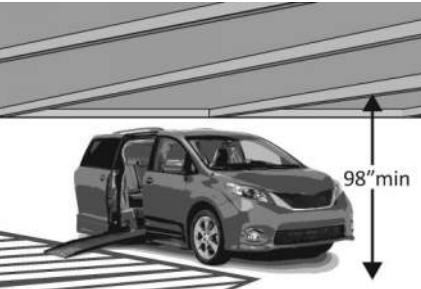
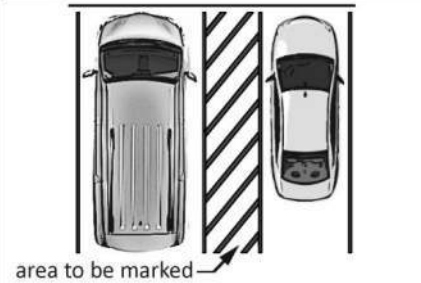
This checklist was produced by the New England ADA Center, a project of the Institute for Human Centered Design and a member of the ADA National Network. This checklist was developed under a grant from the Department of Education, NIDRR grant number H133A060092-09A. However the contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government.

Questions or comments on the checklist contact the New England ADA Center at 617-695-0085 voice/tty or [ADAinfo@NewEnglandADA.org](mailto:ADAinfo@NewEnglandADA.org)


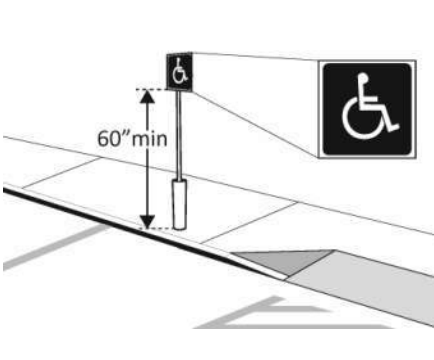

For the full set of checklists, including the checklists for recreation facilities visit [www.ADAchecklist.org](http://www.ADAchecklist.org).



Priority 1 – Approach & Entrance			Comments	Possible Solutions												
1.1	Is there at least one route from site arrival points (parking, passenger loading zones, public sidewalks and public transportation stops) that does not require the use of stairs?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  If yes, location of route: East Elevation														
<b>Parking (2010 Standards – 208 &amp; 502) Note: Accessible parking spaces should be identified by size, access aisle and signage.</b>																
1.2	If parking is provided for the public, are an adequate number of accessible spaces provided?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  Total #: 4  Accessible #: 1	<table border="1"> <thead> <tr> <th>Total Spaces</th> <th>Accessible Spaces</th> </tr> </thead> <tbody> <tr> <td>1 - 25</td> <td>1</td> </tr> <tr> <td>26 - 50</td> <td>2</td> </tr> <tr> <td>51 - 75</td> <td>3</td> </tr> <tr> <td>76 - 100</td> <td>4</td> </tr> <tr> <td colspan="2">100+ see 2010 Standards 208.2</td> </tr> </tbody> </table>	Total Spaces	Accessible Spaces	1 - 25	1	26 - 50	2	51 - 75	3	76 - 100	4	100+ see 2010 Standards 208.2		
Total Spaces	Accessible Spaces															
1 - 25	1															
26 - 50	2															
51 - 75	3															
76 - 100	4															
100+ see 2010 Standards 208.2																
1.3	Of the accessible spaces, is at least one a van accessible space?*	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	*For every 6 or fraction of 6 parking spaces required by the table above, at least 1 should be a van accessible space.	Install van accessible signage at the one accessible parking space and restripe for van accessible.												
1.4	Are accessible spaces at least 8 feet wide with an access aisle at least 5 feet wide?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  Measurement: 110" and 82"														

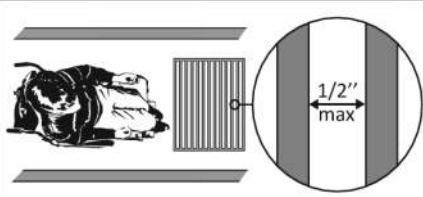
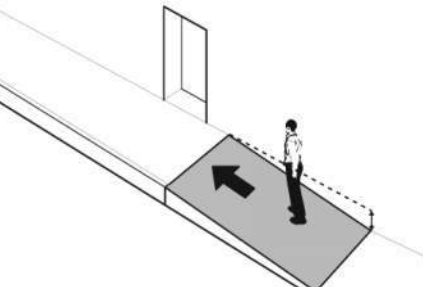
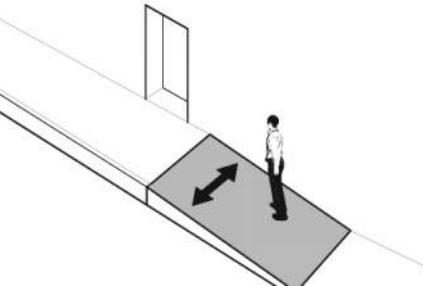
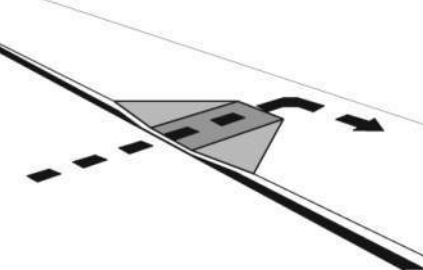
<p><b>1.5</b> Is the van accessible space:</p> <p>At least 11 feet wide with an access aisle at least 5 feet wide? Or At least 8 feet wide with an access aisle at least 8 feet wide?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Measurement:</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Measurement:</p>			<p>Install van accessible signage, restripe to meet van accessible requirements.</p>
<p><b>1.6</b> Is at least 98 inches of vertical clearance provided for the van accessible space?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Measurement:</p>			<p>Install van accessible signage, restripe to meet van accessible requirements.</p>
<p><b>1.7</b> Are the access aisles marked so as to discourage parking in them?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>Striping is poor and extremely faded.</p>	<p>Restripe parking spaces.</p>
<p><b>1.8</b> Is the slope of the accessible parking spaces and access aisles no steeper than 1:48 in all directions?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Measurement:</p> <p>2.3% Running Slope</p>		<p>Running Slope of designated access aisle and parking space is 2.3%</p>	<p>Overlay asphalt at parking area to achieve proper slopes.</p>

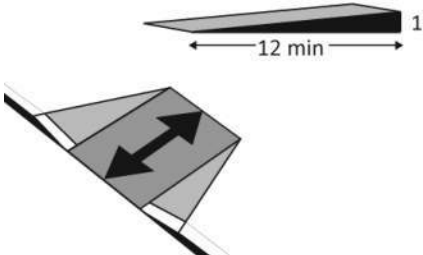
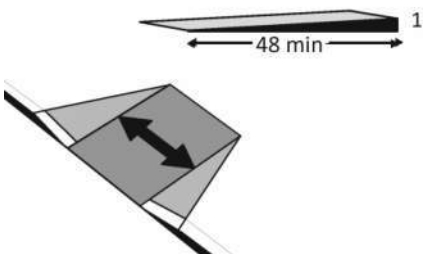
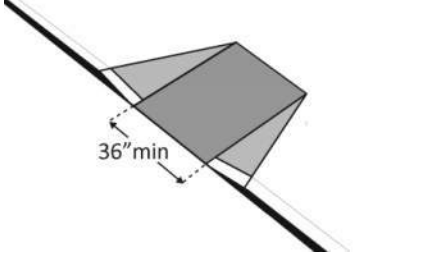
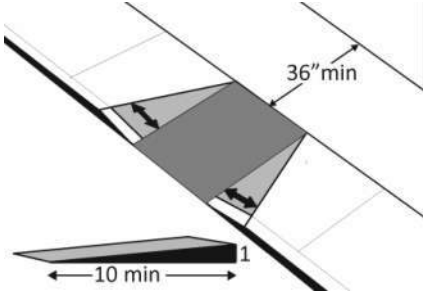


<p><b>1.9</b> Do the access aisles adjoin an accessible route?</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<p><b>1.10</b> Are accessible spaces Identified with a sign that includes the International Symbol of Accessibility?</p> <p>Is the bottom of the sign at least 60 inches above the ground?</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  Measurement: 27"			<p>Mount signage at appropriate height on a sign post.</p>
<p><b>1.11</b> Are there signs reading "van accessible" at van accessible spaces?</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<p><b>1.12</b> Of the total parking spaces, are the accessible spaces located on the closest accessible route to the accessible entrance(s)?</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

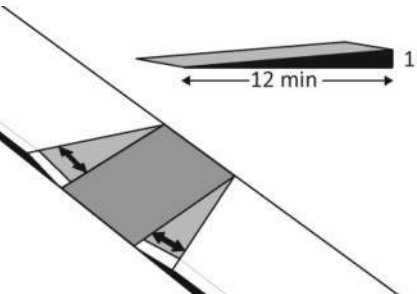
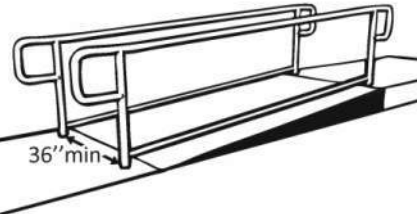
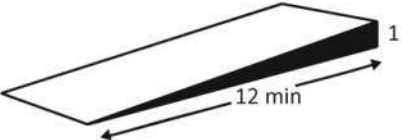
Exterior Accessible Route (2010 Standards – Ch.4)				
1.13	Is the route stable, firm and slip-resistant?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
1.14	Is the route at least 36 inches wide?  Note: The accessible route can narrow to 32 inches min. for a max. of 24 inches. These narrower portions of the route must be at least 48 inches from each other.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  Measurement: 60"	<p>The diagram illustrates the width requirements for an accessible route. The top part shows a person in a wheelchair on a path that is at least 36 inches wide. The bottom part shows a path that narrows to 32 inches, with the narrow sections being no more than 24 inches wide and separated by a section that is at least 48 inches wide.</p>	
1.15	If the route is greater than 200 feet in length and no less than 60 inches wide, is there a passing space no less than 60 x 60 inches?	<input type="checkbox"/> Yes <input type="checkbox"/> No  Measurement:	<p>The diagram shows a passing space for two wheelchairs. The space is at least 60 inches wide and 60 inches deep, allowing two people in wheelchairs to pass each other.</p>	N/A

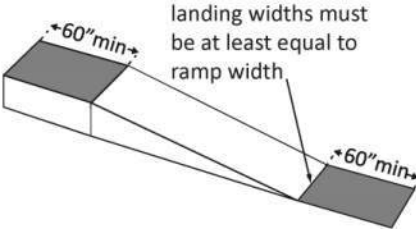
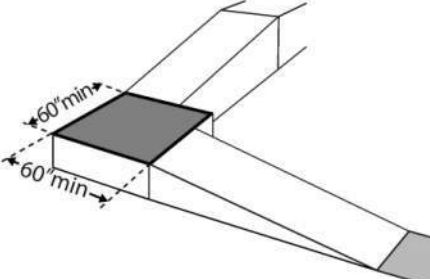
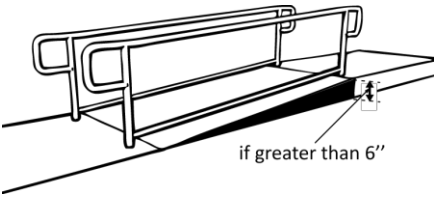


<p><b>1.16</b> If there are grates or openings on the route, are the openings no larger than ½ inches to the dominant direction of travel?</p> <p>Is the long dimension perpendicular to the dominant direction of travel?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>N/A</p>	
<p><b>1.17</b> Is the running slope no steeper than 1:20, i.e. for every inch of height change there are at least 20 inches of route run?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>			
<p><b>1.18</b> Is the cross slope no steeper than 1:48?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>			
<p><b>Curb Ramps</b> (2010 Standards – 406)</p>				
<p><b>1.19</b> If the accessible route crosses a curb, is there a curb ramp?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>N/A</p>	

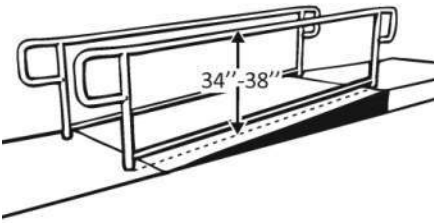
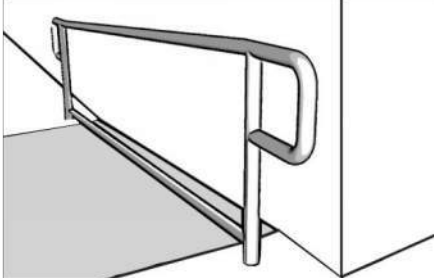
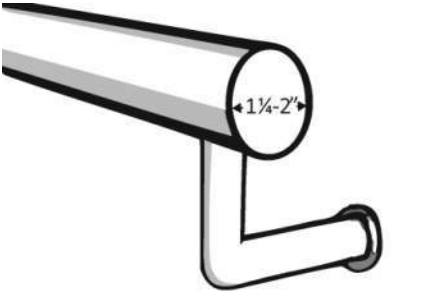
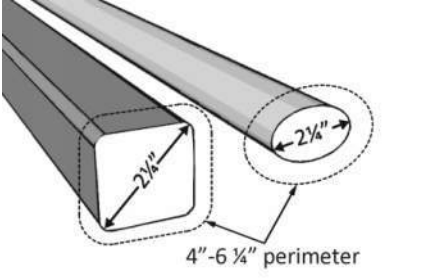
<p><b>1.20</b> Is the running slope of the curb ramp no steeper than 1:12, i.e. for every inch of height change there are at least 12 inches of curb ramp run?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		<p>N/A</p>	
<p><b>1.21</b> Is the cross slope of the curb ramp, excluding flares, no steeper than 1:48?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		<p>N/A</p>	
<p><b>1.22</b> Is the curb ramp, excluding flares, at least 36 inches wide?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		<p>N/A</p>	
<p><b>1.23</b> At the top of the curb ramp is there a level landing (slope no steeper than 1:48 in all directions) that is at least 36 inches long and at least as wide as the curb ramp?</p> <p>If there are curb ramp flares, are the slopes of the flares no steeper than 1:10, i.e. for every inch of height change there are</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		<p>N/A</p>	

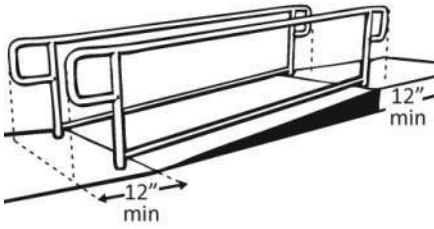
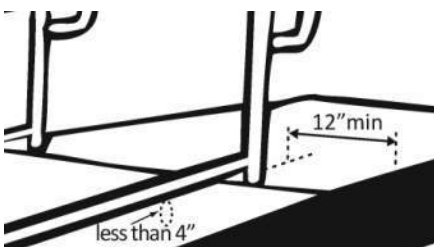



at least 10 inches of flare run?				
<p><b>1.24</b> If the landing at the top is less than 36 inches long, are there curb ramp flares?</p> <p>Are the slopes of the flares no greater than 1:12, i.e. for every inch of height change there are at least 12 inches of flare run?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		N/A	
<b>Ramps</b> (2010 Standards – 405 & 505) <b>Note: If any portion of the accessible route is steeper than 1:20, it should be treated as a ramp.</b>				
<p><b>1.25</b> If there is a ramp (other than curb ramps), is it at least 36 inches wide? If there are handrails, measure between the handrails.</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement: 60"</p>			
<p><b>1.26</b> Is the surface stable, firm and slip resistant?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>1.27</b> For each section of the ramp, is the running slope no greater than 1:12, i.e. for every inch of height change there are at least 12 inches of ramp run?</p> <p>Note: Rises no greater than 3 inches with a slope no steeper than 1:8 and rises no greater than 6</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Measurement: 10.2%</p>		<p>Running slope measurements obtained include 10.2% and 9.4% which exceed the allowable 8.3%.</p>	<p>Remediate ramp to achieve running slope of no more than 8.3%.</p>

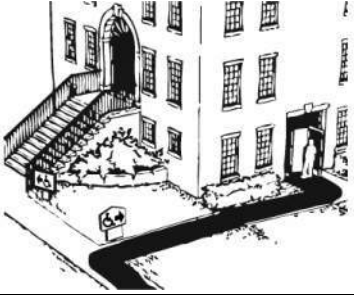


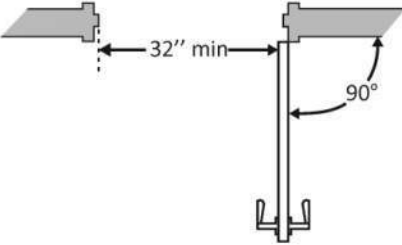
<p>inches with a slope no steeper than 1:10 are permitted when such slopes are necessary due to space limitations.</p>				
<p><b>1.28</b> Is there a level landing that is at least 60 inches long and at least as wide as the ramp:</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>1.29</b> Is there a level landing where the ramp changes direction that is at least 60 x 60 inches?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>N/A</p>	
<p><b>1.30</b> If the ramp has a rise higher than 6 inches, are there handrails on both sides?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			

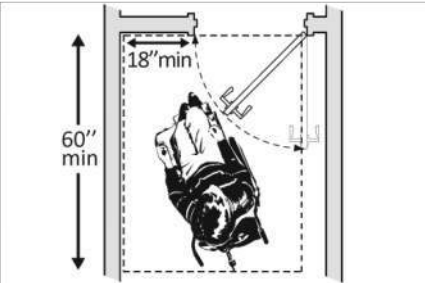
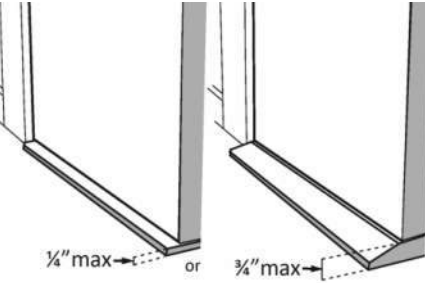
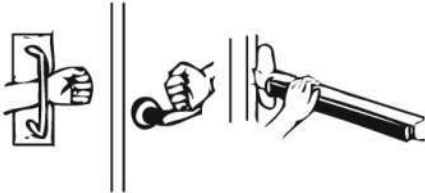


<p><b>1.31</b> Is the top of the handrail gripping surface no less than 34 inches and no greater than 38 inches above the ramp surface?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement: 35"</p>			
<p><b>1.32</b> Is the handrail gripping surface continuous and not obstructed along the top or sides?</p> <p>Is the bottom of the handrail gripping surface obstructed for no more than 20 percent of its length?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>1.33</b> If the handrail gripping surface is circular, is it no less than 1 1/4 inches and no greater than 2 inches in diameter?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>1.34</b> If the handrail gripping surface is non-circular, is it no less than 4 inches and no greater than 6 1/2 inches in perimeter and no more than 2 1/4 inches in cross section?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		<p>N/A</p>	

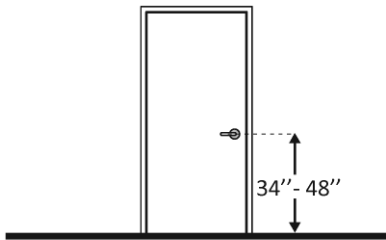
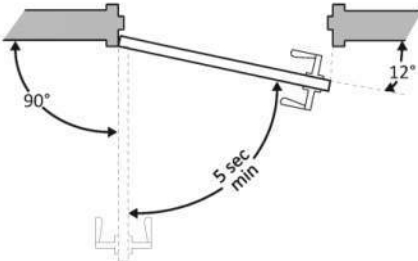
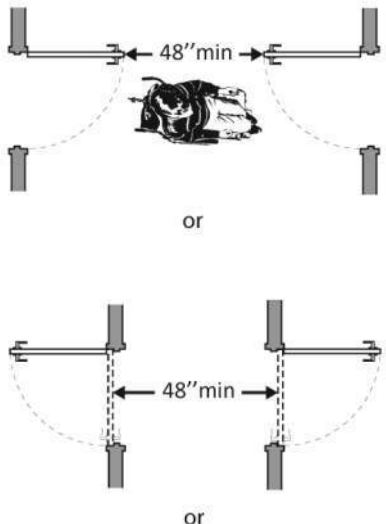
<p><b>1.35</b> Does the handrail:</p> <p>Extend at least 12 inches horizontally beyond the top and bottom of the ramp?</p> <p>Return to a wall, guard, or landing surface?</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<p><b>1.36</b> To prevent wheelchair casters and crutch tips from falling off:</p> <p>Does the surface of the ramp extend at least 12 inches beyond the inside face of the handrail?</p> <p>Or</p> <p>Is there a curb or barrier that prevents the passage of a 4-inch diameter sphere?</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>Entrance</b> (2010 Standards – 404)				
<p><b>1.37</b> Is the main entrance accessible?</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<p>Main entrance not accessible, but alternate entrances are.</p>	
<p><b>1.38</b> If the main entrance is not accessible, is there an alternative accessible entrance?</p> <p>Can the alternative accessible entrance be used independently and during the same hours as the main entrance?</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

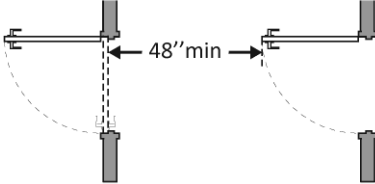



				
<b>1.39</b> Do all inaccessible entrances have signs indicating the location of the nearest accessible entrance?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Install signs at non accessible entrances.
<b>1.40</b> If not all entrances are accessible, is there a sign at the accessible entrance with the International Symbol of Accessibility?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Install sign
<b>1.41</b> Is the clear opening width of the accessible entrance door at least 32 inches, between the face of the door and the stop, when the door is open 90 degrees?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

<p><b>1.42</b> If there is a front approach to the pull side of the door, is there at least 18 inches of maneuvering clearance beyond the latch side plus at least 60 inches clear depth?</p> <p>On both sides of the door, is the ground or floor surface of the maneuvering clearance level (no steeper than 1:48)?</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<p><b>1.43</b> Is the door threshold edge no more than ¼ inch high?</p> <p>Or</p> <p>No more than ¾ inch high if slope is beveled no steeper than 1:2?</p> <p>Note: The first ¼ inch of the threshold may be vertical; the rest must be beveled.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<p><b>1.44</b> Is the door equipped with hardware, including locks, that is operable with one hand and does not require tight grasping, pinching, or twisting of the wrist?</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			



<p><b>1.45</b> Are the operable parts of the door hardware no less than 34 inches and no greater than 48 inches above the floor or ground surface?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	 <p>A side-view diagram of a door with a handle. A vertical double-headed arrow indicates the height from the floor to the handle, labeled '34" - 48"'. The door is shown in a closed position.</p>		
<p><b>1.46</b> If the door has a closer, does it take at least 5 seconds to close from an open position of 90 degrees to a position of 12 degrees from the latch?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	 <p>A diagram showing a door in an open position at 90 degrees. An arrow indicates the door closing to a 12-degree position. A curved arrow with the text '5 sec min' indicates the required time for the door to close.</p>	<p>N/A</p>	
<p><b>1.47</b> If there are two doors in a series, e.g. vestibule, is the distance between the doors at least 48 inches plus the width of the doors when swinging into the space?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	 <p>Two diagrams illustrating door swing clearance. The top diagram shows two doors swinging towards each other, with a horizontal double-headed arrow between their closed positions labeled '48" min'. A wheelchair is shown in the space between the doors. The bottom diagram shows two doors swinging away from each other, with a horizontal double-headed arrow between their closed positions labeled '48" min'. The word 'or' is placed between the two diagrams.</p>	<p>N/A</p>	

				
<b>1.48</b> If provided at the building entrance, are carpets or mats no higher than ½ inch thick?	<input type="checkbox"/> Yes <input type="checkbox"/> No		N/A	
<b>1.49</b> Are edges of carpets or mats securely attached to minimize tripping hazards?	<input type="checkbox"/> Yes <input type="checkbox"/> No		N/A	

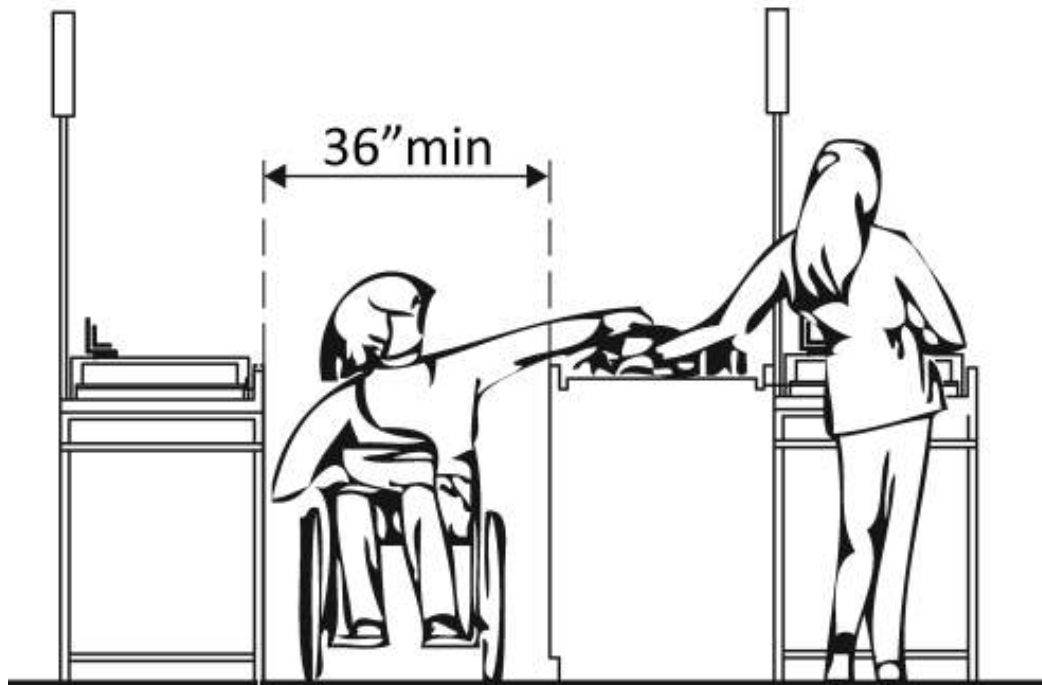


---

## ADA Checklist for Readily Achievable Barrier Removal

---

# Priority 2 – Access to Goods & Services



Project: Cherokee County Arts Center

---

Building: Cherokee County Arts Center

---

Location: 94 North Street Canton, Georgia

---

Date: August 31, 2022

---

Surveyors: Desiré Mahanna, Ashley Montford

---

NOVA Project No. 10102-3022152

---

---

**The layout of the building should allow people with disabilities to obtain goods and services and to participate in activities without assistance.**

---



Institute for Human Centered Design  
[www.HumanCenteredDesign.org](http://www.HumanCenteredDesign.org)  
November 2011



ADA National Network  
Questions on the ADA 800-949-4232 voice/tty  
[www.ADAchecklist.org](http://www.ADAchecklist.org)

---

---

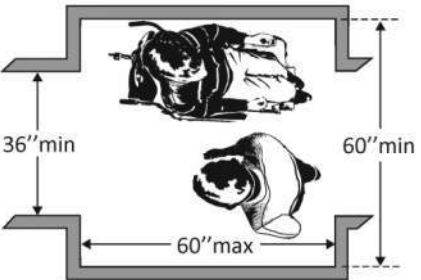
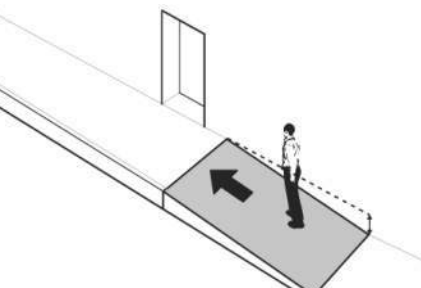
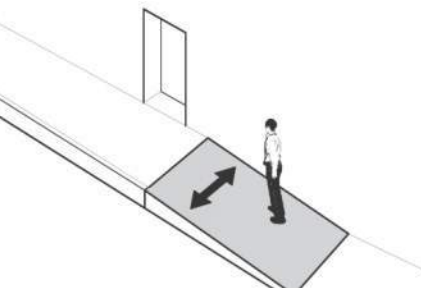

This checklist was produced by the New England ADA Center, a project of the Institute for Human Centered Design and a member of the ADA National Network. This checklist was developed under a grant from the Department of Education, NIDRR grant number H133A060092-09A. However the contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government.

Questions or comments on the checklist contact the New England ADA Center at 617-695-0085 voice/tty or [ADAinfo@NewEnglandADA.org](mailto:ADAinfo@NewEnglandADA.org)

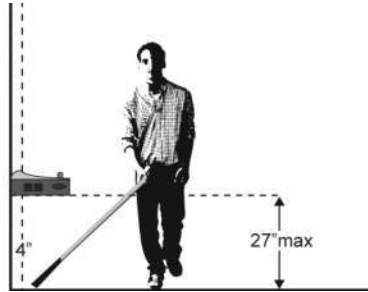
For the full set of checklists, including the checklists for recreation facilities visit [www.ADAchecklist.org](http://www.ADAchecklist.org).



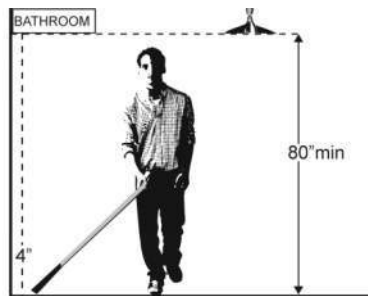
Priority 2 – Access to Goods & Services		Comments	Possible Solutions
2.1	Does the accessible entrance provide direct access to the main floor, lobby and elevator?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Interior Accessible Route</b> (2010 Standards – Ch.4)			
2.2	Are all public spaces on at least one accessible route?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
2.3	Is the route stable, firm and slip-resistant?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
2.4	Is the route at least 36 inches wide?  Note: The accessible route can narrow to 32 inches min. for a max. of 24 inches. These narrower portions of the route must be at least 48 inches from each other.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>The diagram consists of two parts. The top part shows a person in a wheelchair on a path between two parallel lines, with a vertical double-headed arrow indicating a minimum width of 36 inches. The bottom part shows a person in a wheelchair on a path that has a wider section and two narrower sections. The narrower sections are each labeled '24" max' and are separated by a section labeled '48" max'. The minimum width of the narrower sections is indicated as '32" min'.</p>

<b>2.5</b> If the route is greater than 200 feet in length and no less than 36 inches wide, is there a passing space no less than 60 x 60 inches?	<input type="checkbox"/> Yes <input type="checkbox"/> No		N/A	
<b>2.6</b> Is the running slope no steeper than 1:20, i.e. for every inch of height change there are at least 20 inches of route run?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>2.7</b> Is the cross slope no steeper than 1:48?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>2.8</b> Do all objects on circulation paths through public areas, e.g. fire extinguishers, drinking fountains, signs, etc., protrude no more than 4 inches into the path? Or If an object protrudes more than 4 inches, is the bottom leading edge at 27 inches or lower above the floor?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	 <p style="text-align: center;">Or</p>		

Or  
Is the bottom leading edge at  
80 inches or higher above the  
floor?



Or



2.9 Are there elevators or platform  
lifts to all public stories?\*

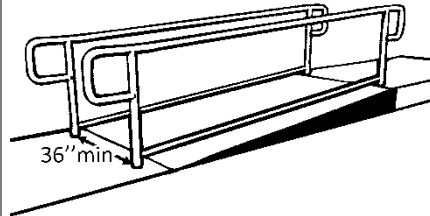
☒ Yes ☐ No



Photo #:

**Ramps** (2010 Standards 404 & 505)

**2.10** If there is a ramp, is it at least 36 inches wide? If there are handrails, measure between the handrails.

☒ Yes ☐ No


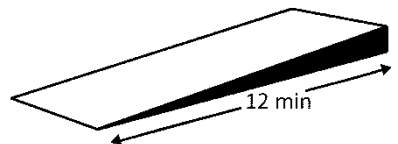
**2.11** Is the surface stable, firm and slip resistant?

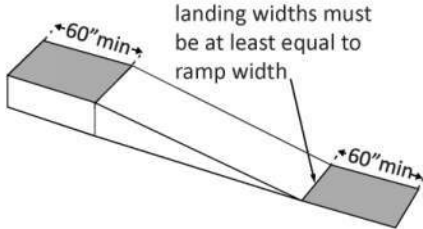
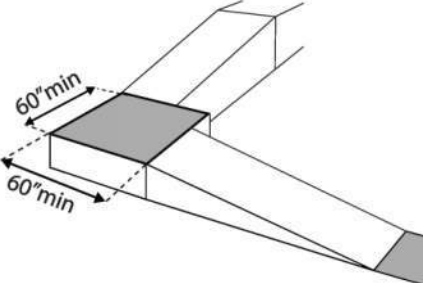
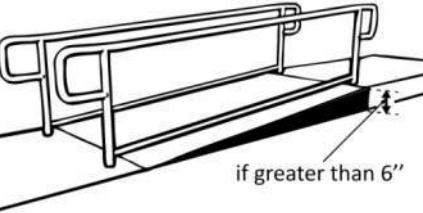
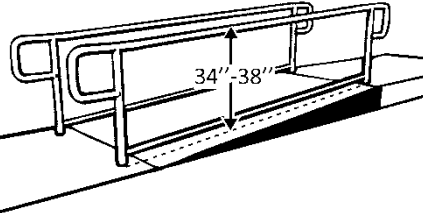
☒ Yes ☐ No

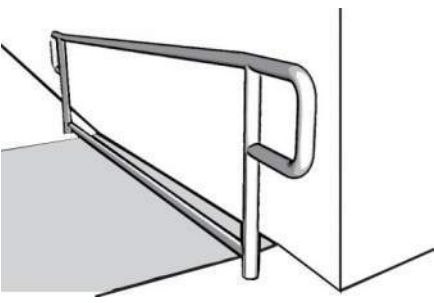
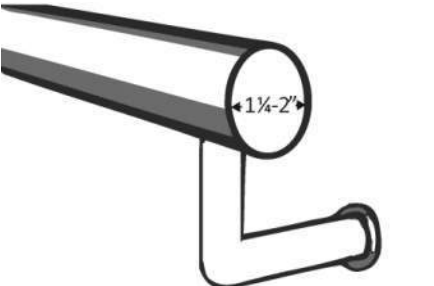
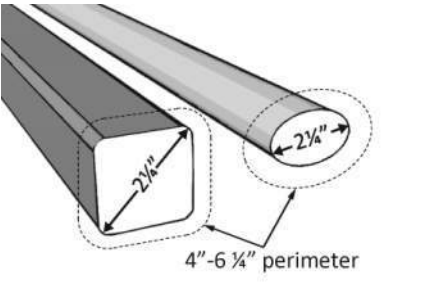
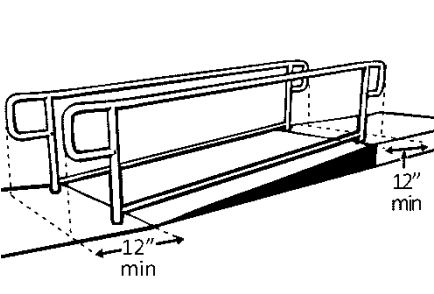
**2.12** For each section of the ramp, is the running slope no greater than 1:12, i.e. for every inch of height change there are at least 12 inches of ramp run?

☒ Yes ☐ No
**Note:**

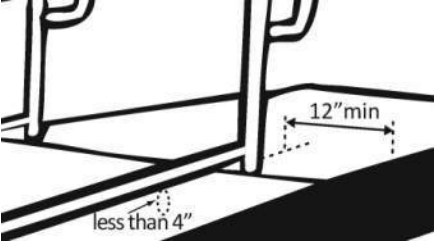
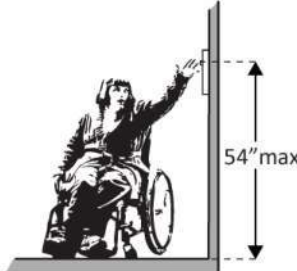
Rises no greater than 3 inches with a slope no steeper than 1:8 and rises no greater than 6 inches with a slope no steeper than 1:10 are permitted when due to space limitations.

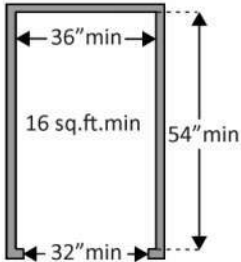
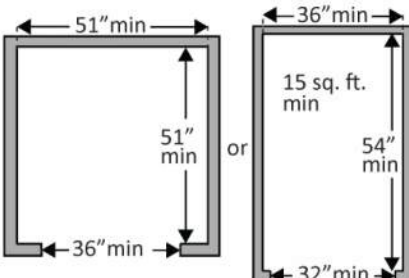
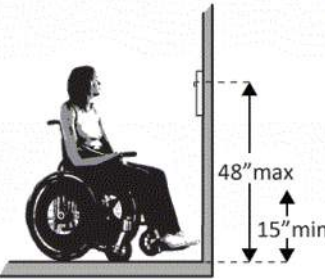


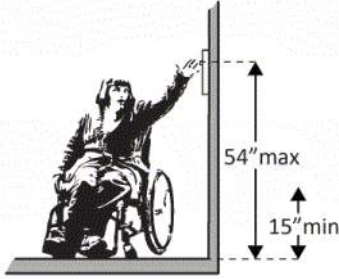

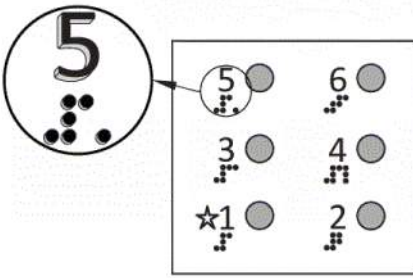
<p><b>2.13</b> Is there a level landing that is at least 60 inches long and at least as wide as the ramp:</p> <p>At the top of the ramp?</p> <p>At the bottom of the ramp?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>N/A</p>	
<p><b>2.14</b> Is there a level landing where the ramp changes direction that is at least 60 x 60 inches?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>N/A</p>	
<p><b>2.15</b> If the ramp has a rise higher than 6 inches are there handrails on both sides?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>N/A</p>	
<p><b>2.16</b> Is the top of the handrail gripping surface no less than 34 inches and no greater than 38 inches above the ramp surface?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		<p>N/A</p>	

<p><b>2.17</b> Is the handrail gripping surface continuous and not obstructed along the top or sides?</p> <p>If there are obstructions, is the bottom of the handrail gripping surface obstructed by no more than 20%?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		N/A	
<p><b>2.18</b> If the handrail gripping surface is circular, is it no less than 1 ¼ inches and no greater than 2 inches in diameter?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		N/A	
<p><b>2.19</b> If the handrail gripping surface is non-circular, is it no less than 4 inches and no greater than 6 ½ inches in perimeter and no more than 2 ¼ inches in cross section?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		N/A	
<p><b>2.20</b> Does the handrail:</p> <p>Extend at least 12 inches beyond the top and bottom of the ramp?</p> <p>Return to a wall, guard, or landing surface?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		N/A	

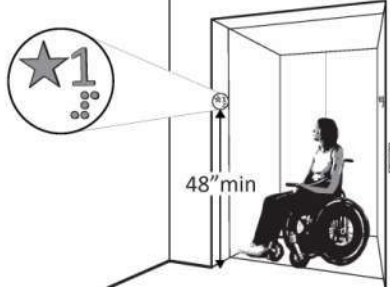



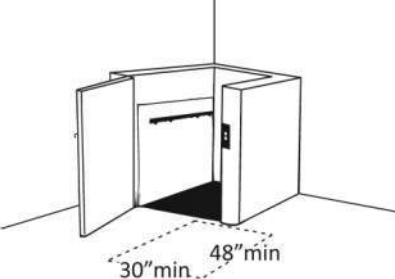
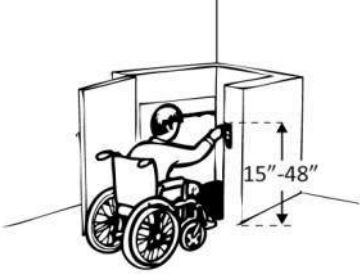
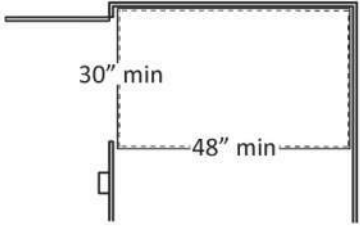
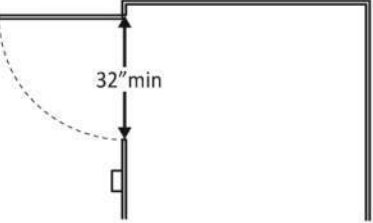
<p><b>2.21</b> To prevent wheelchair casters and crutch tips from falling off:</p> <p>Does the surface of the ramp extend at least 12 inches beyond the inside face of the handrail?</p> <p>Or</p> <p>Is there a curb or barrier that prevents the passage of a 4-inch diameter sphere?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		N/A	
<b>Elevators – Full Size &amp; LULA (limited use, limited application) (2010 Standards – 407 &amp; 408) Note: LULA elevators are often used in alterations.</b>				
<p><b>2.22</b> If there is a full size or LULA elevator, are the call buttons no higher than 54 inches above the floor?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement: 42"</p>			
<p><b>2.23</b> If there is a full size or LULA elevator, does the sliding door reopen automatically when obstructed by an object or person?*</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>2.24</b> If there is a LULA elevator with a swinging door:</p> <p>Is the door power-operated?</p> <p>Does the door remain open for at least 20 seconds when activated?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		N/A	

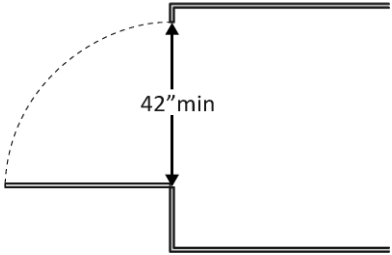
<p><b>2.25</b> If there is a full size elevator:</p> <p>Is the interior at least 54 inches deep by at least 36 inches wide with at least 16 sq. ft. of clear floor area?</p> <p>Is the door opening width at least 32 inches?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement: 69x51</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement: 36"</p>			
<p><b>2.26</b> If there is a LULA elevator, is the interior:</p> <p>At least 51 x 51 inches with a door opening width of at least 36 inches?</p> <p>Or</p> <p>At least 54 inches deep by at least 36 inches wide with at least 15 sq. ft. of clear floor area and a door opening width of at least 32 inches?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		N/A	
<p><b>2.27</b> If there is a full size or LULA elevator, are the in-car controls:</p> <p>No less than 15 inches and no greater 48 inches above the floor?</p> <p>Or</p> <p>Up to 54 inches above the floor for a parallel approach?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>	 <p>Or</p>	N/A	

				
<b>2.28</b> If there is a LULA elevator, are the in-car controls centered on a side wall?	<input type="checkbox"/> Yes <input type="checkbox"/> No Measurement:		N/A	
<b>2.29</b> If there is a full size or LULA elevator:  Are the car control buttons designated with raised characters?  Are the car control buttons designated with Braille?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>2.30</b> If there is a full size or LULA elevator, are there audible signals which sound as the car passes or is about to stop at a floor?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

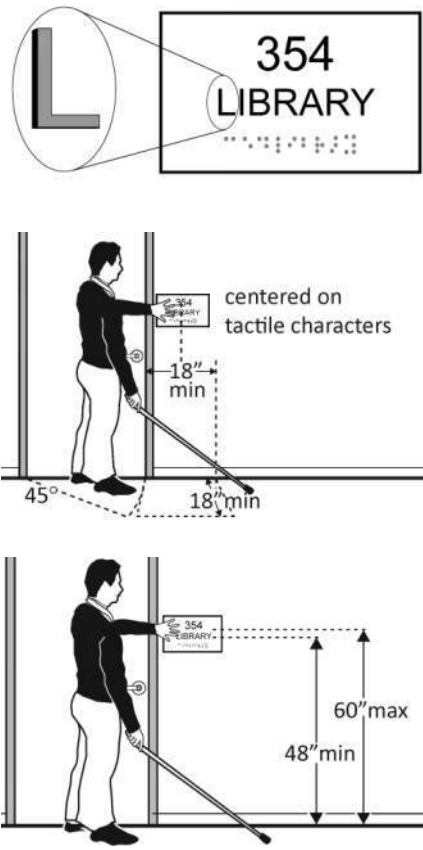


<p><b>2.31</b> If there is a full size or LULA elevator:</p> <p>Is there a sign on both door jambs at every floor identifying the floor?</p> <p>Is there a tactile star on both jambs at the main entry level?</p> <p>Do text characters contrast with their backgrounds?</p> <p>Are text characters raised?</p> <p>Is there Braille?</p> <p>Is the sign mounted between 48 inches to the baseline of the lowest character and 60 inches to the baseline of the highest character above the floor?*</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			<p>Install tactile star.</p>
<p><b>Platform Lifts</b> (2010 Standards – 410)</p>				
<p><b>2.32</b> If a lift is provided, can it be used without assistance from others?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>N/A</p>	

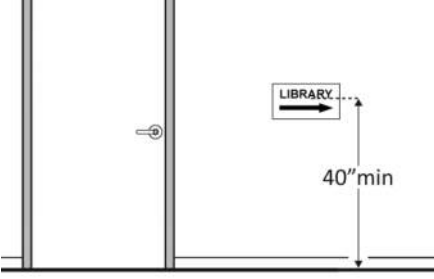
<b>2.33</b> Is there a clear floor space at least 30 inches wide by at least 48 inches long for a person using a wheelchair to approach and reach the controls to use the lift?	<input type="checkbox"/> Yes <input type="checkbox"/> No  Measurement:		N/A	
<b>2.34</b> Are the lift controls no less than 15 inches and no greater than 48 inches above the floor?	<input type="checkbox"/> Yes <input type="checkbox"/> No  Measurement:		N/A	
<b>2.35</b> Is there a clear floor space at least 30 inches wide by at least 48 inches long inside the lift?	<input type="checkbox"/> Yes <input type="checkbox"/> No  Measurement:		N/A	
<b>2.36</b> If there is an end door, is the clear opening width at least 32 inches?	<input type="checkbox"/> Yes <input type="checkbox"/> No  Measurement:		N/A	

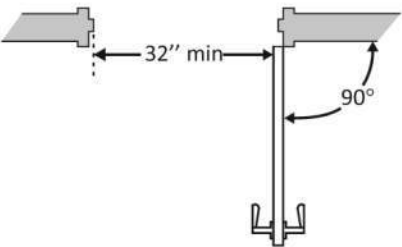
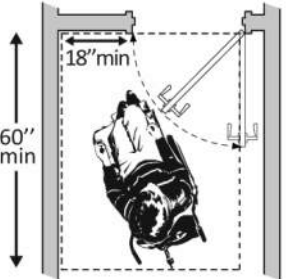
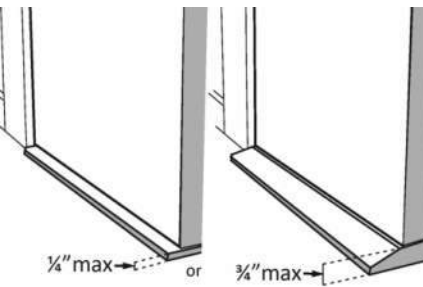
<b>2.37</b> If there is a side door, is the clear opening width at least 42 inches?	<input type="checkbox"/> Yes <input type="checkbox"/> No Measurement:		N/A	
---	--	--	-----	--


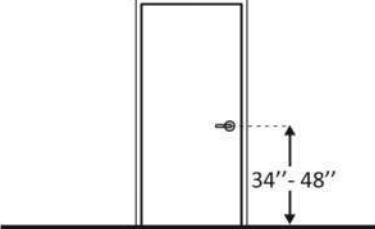
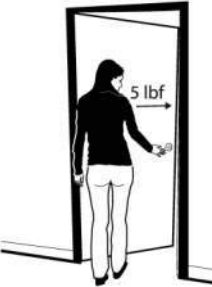
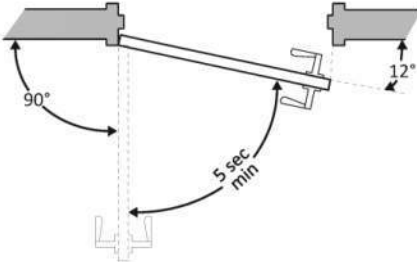
**Signs (2010 Standards – 703) Note: “Tactile characters” are read using touch, i.e. raised characters and Braille.**

<b>2.38</b> If there are signs designating permanent rooms and spaces not likely to change over time, e.g. room numbers and letters, room names, and exit signs:  Do text characters contrast with their backgrounds?  Are text characters raised?  Is there Braille?  Is the sign mounted: On the wall on the latch side of the door?  Note: Signs are permitted on the push side of doors with closers and without hold-open devices.  With clear floor space beyond the arc of the door swing between the closed position	<input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Yes <input type="checkbox"/> No  Measurement:		N/A	
--	--	---	-----	--



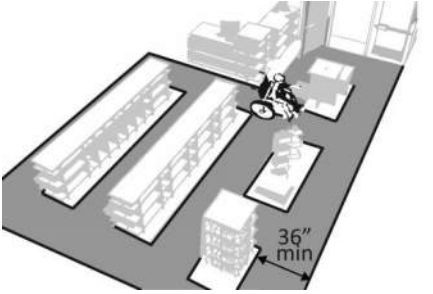

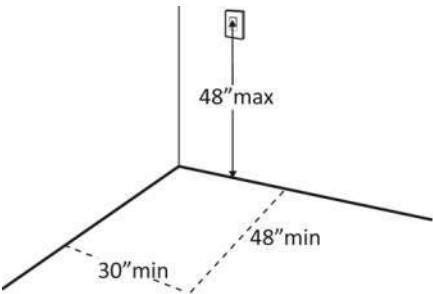
<p>and 45-degree open position, at least 18 x 18 inches centered on the tactile characters?*</p> <p>So the baseline of the lowest character is at least 48 inches above the floor and the baseline of the highest character is no more than 60 inches above the floor? *</p> <p>Note: If the sign is at double doors with one active leaf, the sign should be on the inactive leaf; if both leaves are active, the sign should be on the wall to the right of the right leaf.</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>			
<p><b>2.39</b> If there are signs that provide direction to or information about interior spaces:</p> <p>Do text characters contrast with their backgrounds?</p> <p>Is the sign mounted so that characters are at least 40 inches above the floor?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		<p>N/A</p>	
<p><b>Interior Doors – to classrooms, medical exam rooms, conference rooms, etc. (2010 Standards – 404)</b></p>				

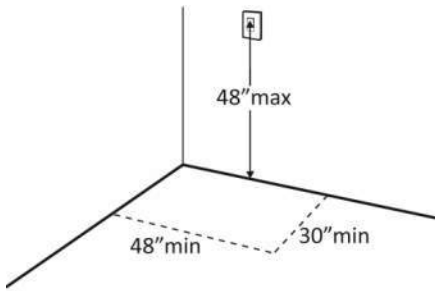
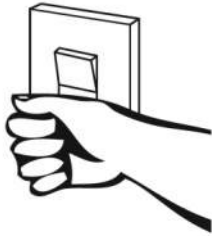
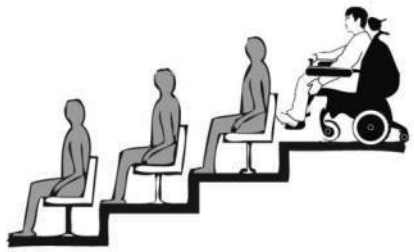
<p><b>2.40</b> Is the door opening width at least 32 inches clear, between the face of the door and the stop, when the door is open 90 degrees?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>2.41</b> If there is a front approach to the pull side of the door, is there at least 18 inches of maneuvering clearance beyond the latch side plus at least 60 inches clear depth?</p> <p>On both sides of the door, is the floor surface of the maneuvering clearance level (no steeper than 1:48)?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>2.42</b> Is the door threshold edge no more than ¼ inch high?</p> <p>Or</p> <p>No more than ¾ inch high if slope is beveled no steeper than 1:2?</p> <p>Note: The first ¼ inch of the threshold may be vertical; the rest must be beveled.</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			

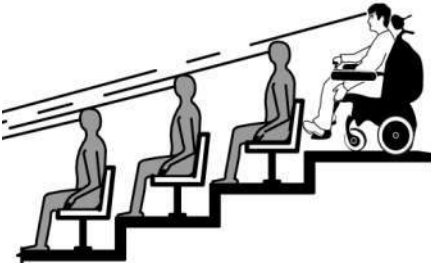
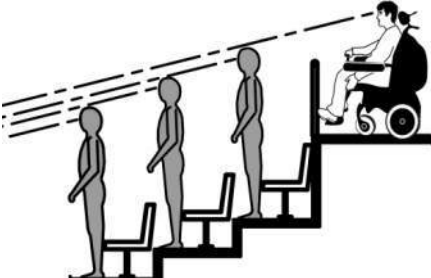

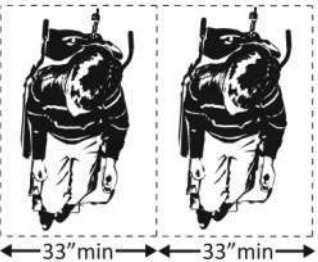
<b>2.43</b> Is the door equipped with hardware that is operable with one hand and does not require tight grasping, pinching and twisting of the wrist?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>2.44</b> Are the operable parts of the hardware no less than 34 inches and no greater than 48 inches above the floor?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>2.45</b> Can the door be opened easily (5 pounds maximum force)?  Note: You can use a pressure gauge or fish scale to measure force. If you do not have a pressure gauge or fish scale you will need to judge whether the door is easy to open.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>2.46</b> If the door has a closer, does it take at least 5 seconds to close from an open position of 90 degrees to a position of 12 degrees from the latch?	<input type="checkbox"/> Yes <input type="checkbox"/> No  Measurement:		N/A	



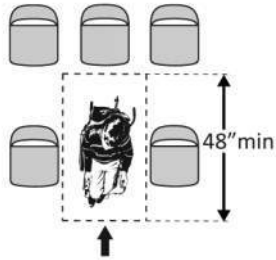
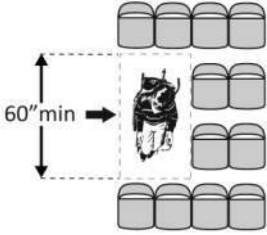
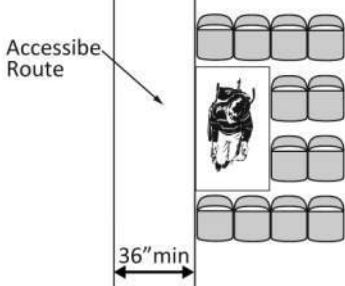
**Rooms and Spaces – stores, supermarkets, libraries, etc.** (2010 Standards – 302, 304, & 402)

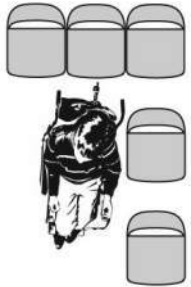

<b>2.47</b> Are aisles and pathways to goods and services, and to one of each type of sales and service counters, at least 36 inches wide?	<input type="checkbox"/> Yes <input type="checkbox"/> No		N/A	
<b>2.48</b> Are floor surfaces stable, firm and slip resistant?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>2.49</b> If there is carpet:  Is it no higher than ½ inch?  Is it securely attached along the edges?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>Controls – light switches, security and intercom systems, emergency/alarm boxes, etc.</b> (2010 Standards – 309)				
<b>2.50</b> Is there a clear floor space at least 30 inches wide by at least 48 inches long for a forward or parallel approach?  Are the operable parts no higher than 48 inches above the floor?*	<input type="checkbox"/> Yes <input type="checkbox"/> No Measurement:  <input type="checkbox"/> Yes <input type="checkbox"/> No Measurement:		N/A	


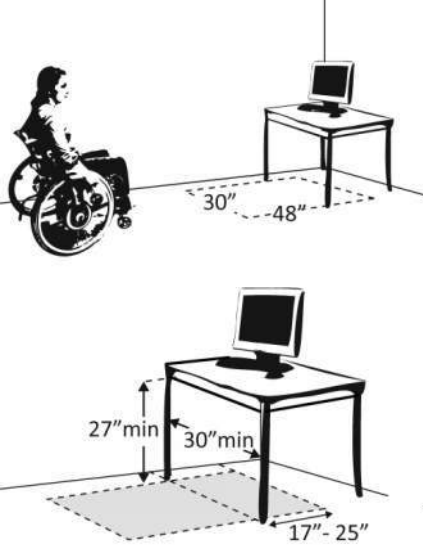
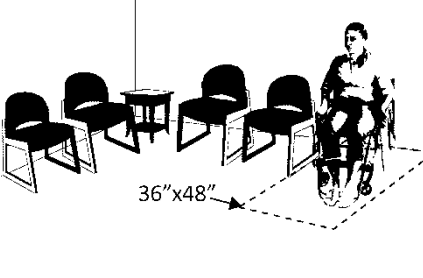
																
<b>2.51</b> Can the control be operated with one hand and without tight grasping, pinching, or twisting of the wrist?	<input type="checkbox"/> Yes <input type="checkbox"/> No		N/A													
<b>Seating: Assembly Areas – theaters, auditoriums, stadiums, theater style classrooms, etc. (2010 Standards – 221 &amp; 802)</b>																
<b>2.52</b> Are an adequate number of wheelchair spaces provided?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<table border="1"> <thead> <tr> <th># of Seats</th> <th>Wheelchair Spaces</th> </tr> </thead> <tbody> <tr> <td>4 - 25</td> <td>1</td> </tr> <tr> <td>26 - 50</td> <td>2</td> </tr> <tr> <td>51 - 150</td> <td>4</td> </tr> <tr> <td>151 - 300</td> <td>5</td> </tr> <tr> <td colspan="2">300+ see 2010 Standards 221.2.1.</td> </tr> </tbody> </table>	# of Seats	Wheelchair Spaces	4 - 25	1	26 - 50	2	51 - 150	4	151 - 300	5	300+ see 2010 Standards 221.2.1.		Area sufficient for wheel chair seating is provided at the front of the theater on both sides.	Add signage indicating wheelchair seating.
# of Seats	Wheelchair Spaces															
4 - 25	1															
26 - 50	2															
51 - 150	4															
151 - 300	5															
300+ see 2010 Standards 221.2.1.																
<b>2.53</b> Are wheelchair spaces dispersed to allow location choices and viewing angles equivalent to other seating, including specialty seating areas that provide distinct services and amenities?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Area sufficient for wheel chair seating is provided at the front of the theater on both sides.													

<b>2.54</b> Where people are expected to remain seated, do people in wheelchair spaces have a clear line of sight over and between the heads of others in front of them?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>2.55</b> Where people are expected to stand, do people in wheelchair spaces have a clear line of sight over and between the heads of others in front of them?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>2.56</b> If there is a single wheelchair space, is it at least 36 inches wide?	<input type="checkbox"/> Yes <input type="checkbox"/> No		N/A	
<b>2.57</b> If there are two adjacent wheelchair spaces, are they each at least 33 inches wide?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			



<b>2.58</b> If the wheelchair space can be entered from the front or rear, is it at least 48 inches deep?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>2.59</b> If the wheelchair space can only be entered from the side, is it at least 60 inches deep?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>2.60</b> Do wheelchair spaces adjoin, but not overlap, accessible routes?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>2.61</b> Is there at least one companion seat for each wheelchair space?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Add companion seat.

<b>2.62</b> Is the companion seat located so the companion is shoulder-to-shoulder with the person in a wheelchair?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<b>2.63</b> Is the companion seat equivalent in size, quality, comfort and amenities to seating in the immediate area?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<b>Seating: At dining surfaces (restaurants, cafeterias, bars, etc.) and non-employee work surfaces (libraries, conference rooms, etc.)</b> (2010 Standards – 226 & 902)				
<b>2.64</b> Are at least 5%, but no fewer than one, of seating and standing spaces accessible for people who use wheelchairs?	<input type="checkbox"/> Yes <input type="checkbox"/> No  Total #:  Wheelchair #:		N/A	
<b>2.65</b> Is there a route at least 36 inches wide to accessible seating?	<input type="checkbox"/> Yes <input type="checkbox"/> No  Measurement:		N/A	

<p><b>2.66</b> At the accessible space(s), is the top of the accessible surface no less than 28 inches and no greater than 34 inches above the floor?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No Measurement:		N/A	
<p><b>2.67</b> Is there a clear floor space at least 30 inches wide by at least 48 inches long for a forward approach?</p> <p>Does it extend no less than 17 inches and no greater than 25 inches under the surface?</p> <p>Is there knee space at least 27 inches high and at least 30 inches wide?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No Measurement:  <input type="checkbox"/> Yes <input type="checkbox"/> No Measurement:  <input type="checkbox"/> Yes <input type="checkbox"/> No Measurement:		N/A	
<b>Seating: General – reception areas, waiting rooms, etc. (2010 Standards – 801)</b>				
<p><b>2.68</b> Is there at least one space at least 36 inches wide by at least 48 inches long for a person in a wheelchair?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No Measurement:		N/A	



**Benches – In locker rooms, dressing rooms, fitting rooms** (2010 Standards – 803 & 903)

**2.69** In locker rooms, dressing rooms and fitting rooms, is there at least one room with a bench?

☐ Yes ☐ No

N/A

**2.70** Is there a clear floor space at least 30 inches wide by at least 48 inches long at the end of the bench and parallel to the short axis of the bench?

☐ Yes ☐ No

Measurement:

Is the bench seat at least 42 inches long and no less than 20 inches and no greater than 24 inches deep?

☐ Yes ☐ No

Measurement:

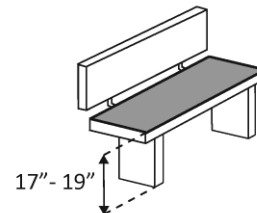
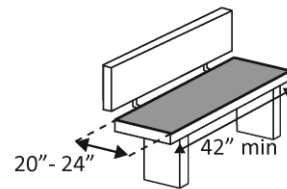
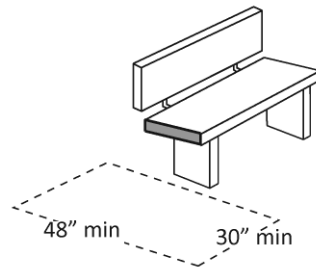
Does the bench have back support or is it affixed to a wall?

☐ Yes ☐ No

Is the top of the bench seat no less than 17 inches and no greater than 19 inches above the floor?

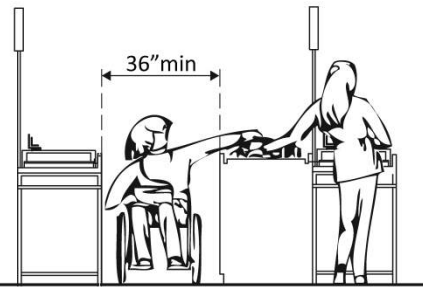
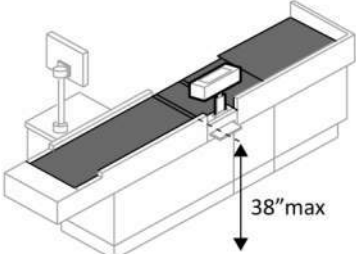
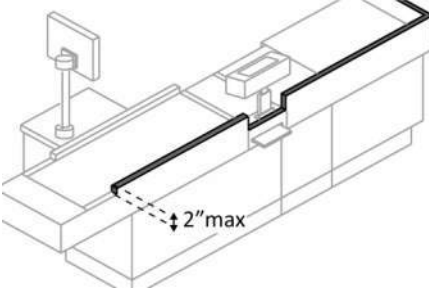
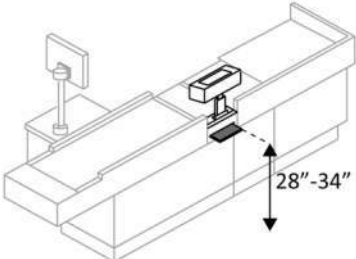
☐ Yes ☐ No


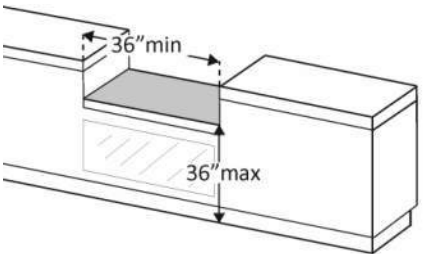
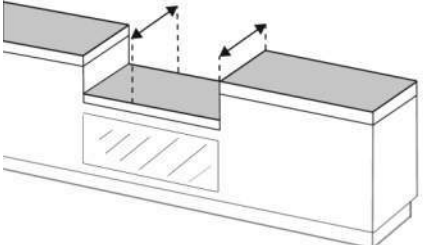
Measurement:



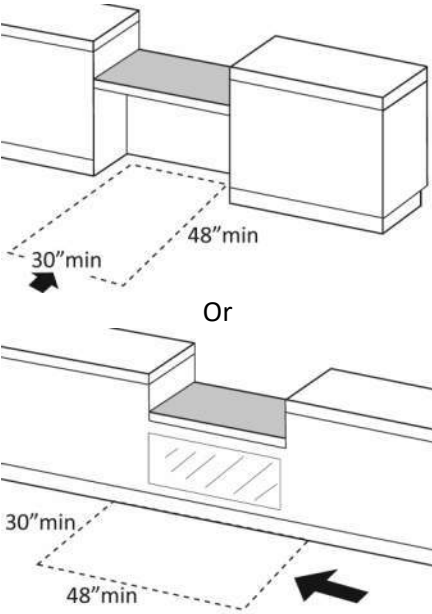
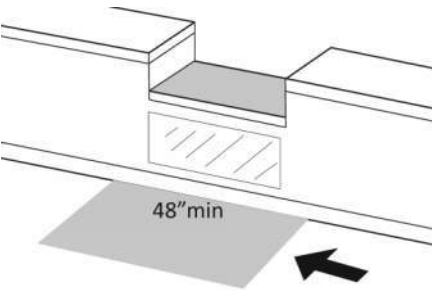
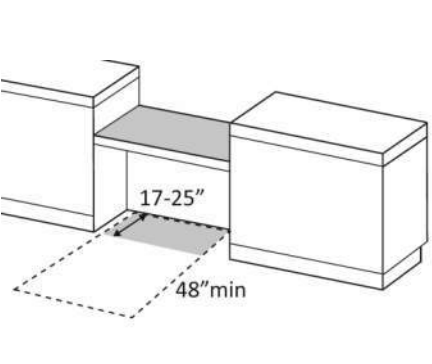
N/A

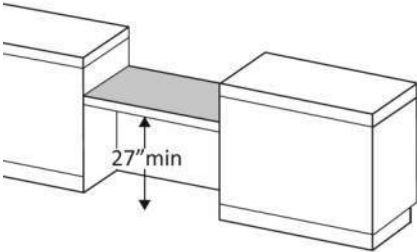
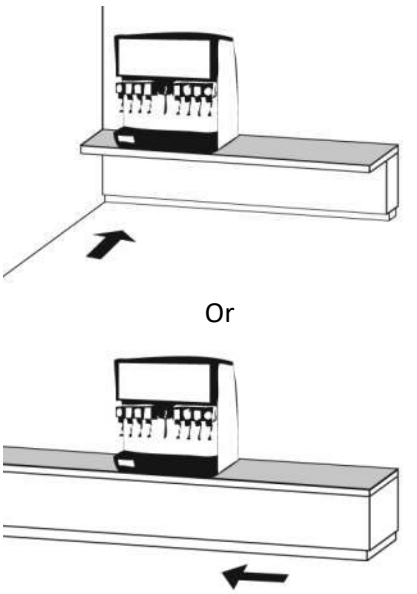
**Check-Out Aisles – supermarkets, large retail stores, etc.** (2010 Standards – 904)

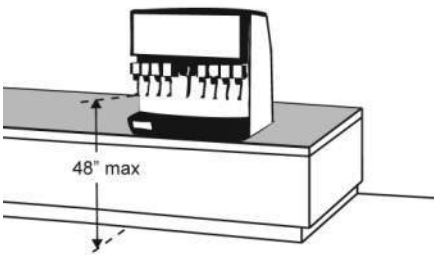
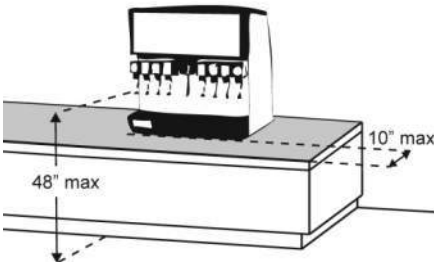
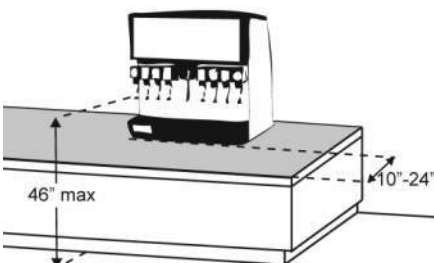
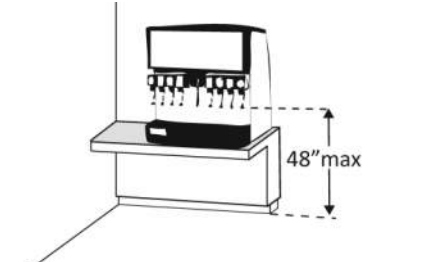
<p><b>2.71</b> Is the aisle at least 36 inches wide?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		<p>N/A</p>	
<p><b>2.72</b> Is the counter surface of at least one aisle no higher than 38 inches above the floor?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		<p>N/A</p>	
<p><b>2.73</b> Is the top of the counter edge protection no higher than 2 inches above the counter surface?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		<p>N/A</p>	
<p><b>2.74</b> If there is a check writing surface, is the top no less than 28 inches and no greater than 34 inches above the floor?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		<p>N/A</p>	

<b>2.75</b> If there is more than one check-out aisle is there a sign with the International Symbol of Accessibility at the accessible aisle?	<input type="checkbox"/> Yes <input type="checkbox"/> No		N/A	
<b>Sales &amp; Service Counters – banks, stores, dry cleaners, auto repair shops, fitness clubs, etc. (2010 Standards – 904)</b>				
<b>2.76</b> Is there a portion of at least one of each type of counter that is:  No higher than 36 inches above the floor?   At least 36 inches long?	<input type="checkbox"/> Yes <input type="checkbox"/> No  Measurement:   <input type="checkbox"/> Yes <input type="checkbox"/> No  Measurement:		N/A	
<b>2.77</b> Does the accessible portion of the counter extend the same depth as the counter top?	<input type="checkbox"/> Yes <input type="checkbox"/> No  Measurement:		N/A	

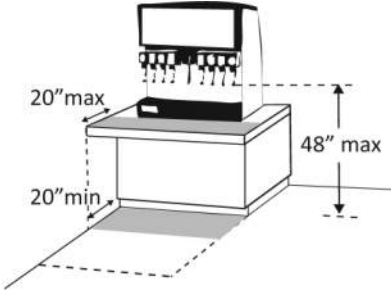
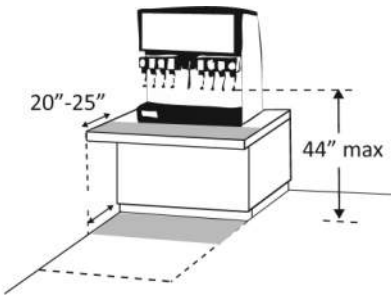
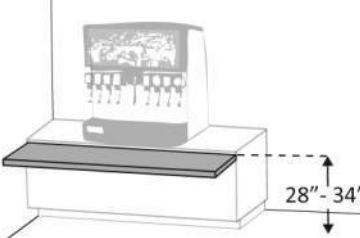


<p><b>2.78</b> Is there a clear floor space at least 30 inches wide by at least 48 inches long for a forward or parallel approach?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Parallel Measurement:   <input type="checkbox"/> Forward Measurement:		N/A	
<p><b>2.79</b> For a parallel approach, is the clear floor space positioned with the 48 inches adjacent to the accessible length of counter?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No  Measurement:		N/A	
<p><b>2.80</b> For a forward approach:</p> <p>Do no less than 17 and no greater than 25 inches of the clear floor space extend under the accessible length of the counter?</p> <p>Is there at least 27 inches clearance from the floor to the</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No  Measurement:   <input type="checkbox"/> Yes <input type="checkbox"/> No		N/A	

bottom of the counter?	Measurement:			
<b>Food Service Lines – in cafeterias, salad bars, eat-in fast food establishments, etc. (2010 Standards – 904)</b>				
<b>2.81</b> Does at least one of each type of self-service shelf or dispensing device for tableware, dishware, condiments, food and beverages have a forward or parallel approach?	<input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Forward  <input type="checkbox"/> Parallel		N/A	

<b>2.82</b> If there is an unobstructed parallel approach, is the shelf or dispensing device no higher than 48 inches above the floor?	<input type="checkbox"/> Yes <input type="checkbox"/> No Measurement:		N/A	
<b>2.83</b> If there is a shallow obstruction no deeper than 10 inches with a parallel approach, is the shelf or dispensing device no higher than 48 inches above the floor?	<input type="checkbox"/> Yes <input type="checkbox"/> No Measurement:		N/A	
<b>2.84</b> If there is an obstruction no less than 10 inches and no greater than 24 inches deep with a parallel approach, is the shelf or dispensing device no higher than 46 inches above the floor?	<input type="checkbox"/> Yes <input type="checkbox"/> No Measurement:		N/A	
<b>2.85</b> If there is an unobstructed forward approach, is the shelf or dispensing device no higher than 48 inches above the floor?	<input type="checkbox"/> Yes <input type="checkbox"/> No Measurement:		N/A	



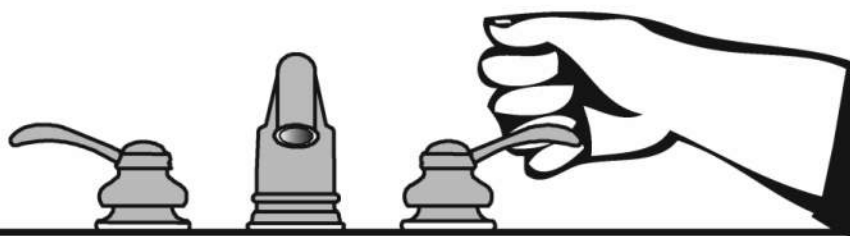
<p><b>2.86</b> If there is an obstruction no deeper than 20 inches with a forward approach:</p> <p>Does clear floor space extend under the obstruction that is at least the same depth as the obstruction?</p> <p>Is the shelf or dispensing device no higher than 48 inches above the floor?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		N/A	
<p><b>2.87</b> If the obstruction is no less than 20 inches and no greater than 25 inches deep with a forward approach:</p> <p>Does clear floor space extend under the obstruction that is at least the same depth as the obstruction?</p> <p>Is the shelf or dispensing device no higher than 44 inches above the floor?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		N/A	
<p><b>2.88</b> If there is a tray slide, is the top no less than 28 inches and no greater than 34 inches above the floor?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		N/A	

---

# The ADA Checklist for Readily Achievable Barrier Removal

---

## Priority 3 - Toilet Rooms



Project: Cherokee County Arts Center

---

Building: Cherokee County Arts Center

---

Location: 94 North Street Canton, Georgia

---

Date: August 31, 2022

---

Surveyors: Desiré Mahanna, Ashley Montford

---

NOVA Project No. 10102-3022152

---

---

**When toilet rooms are open to the public they should be accessible to people with disabilities.**

---



Institute for Human Centered Design  
[www.HumanCenteredDesign.org](http://www.HumanCenteredDesign.org)  
November 2011



ADA National Network  
Questions on the ADA 800-949-4232 voice/tty  
[www.ADAchecklist.org](http://www.ADAchecklist.org)

---





This checklist was produced by the New England ADA Center, a project of the Institute for Human Centered Design and a member of the ADA National Network. This checklist was developed under a grant from the Department of Education, NIDRR grant number H133A060092-09A. However the contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government.

Questions or comments on the checklist contact the New England ADA Center at 617-695-0085 voice/tty or [ADAinfo@NewEnglandADA.org](mailto:ADAinfo@NewEnglandADA.org)

For the full set of checklists, including the checklists for recreation facilities visit [www.ADAchecklist.org](http://www.ADAchecklist.org).



Priority 3 – Toilet Rooms		Comments	Possible Solutions
3.1	If toilet rooms are available to the public, is at least one toilet room accessible? (Either one for each sex, or one unisex.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
3.2	Are there signs at inaccessible toilet rooms that give directions to accessible toilet rooms?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3.3	If not all toilet rooms are accessible, is there a sign at the accessible toilet room with the International Symbol of Accessibility?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Accessible Route</b> (2010 Standards – Chapter 4)			
3.4	Is there a route to the accessible toilet room(s) that does not include the use of stairs?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	Is the route accessible? (See Priority 2 Interior Accessible Route for specifics.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

**Signs at Toilet Rooms** (2010 Standards – 703)

**3.5** Do text characters contrast with their backgrounds?

☒ Yes ☐ No

Are text characters raised?

☒ Yes ☐ No

Is there Braille?

☒ Yes ☐ No

Is the sign mounted:  
On the wall on the latch side of  
the door?

☒ Yes ☐ No

Note:

Signs are permitted on the push  
side of doors with closers and  
without hold-open devices.

With clear floor space beyond  
the arc of the door swing  
between the closed position  
and 45-degree open position, at  
least 18 x 18 inches centered on  
the tactile characters? \*

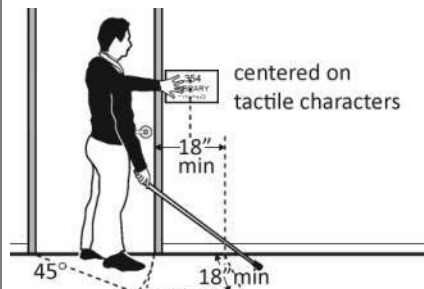
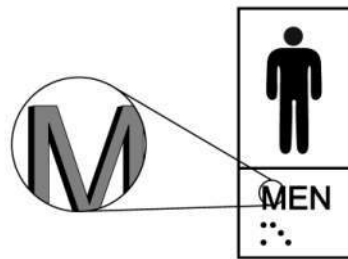
☒ Yes ☐ No

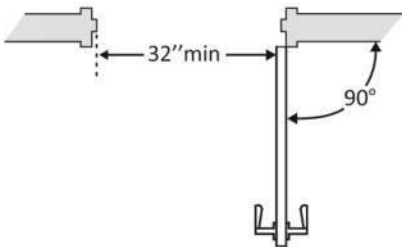
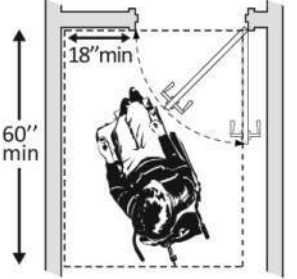
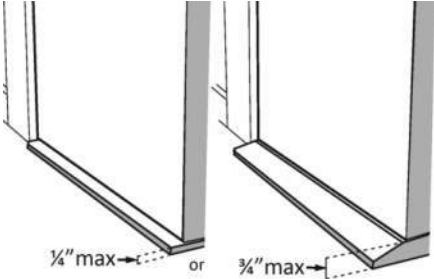
So the baseline of the lowest  
character is at least 48 inches  
above the floor and the  
baseline of the highest  
character is no more than 60  
inches above the floor? \*

☒ Yes ☐ No

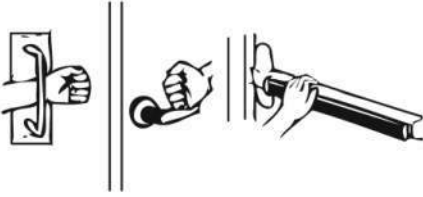
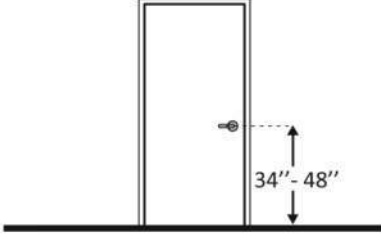

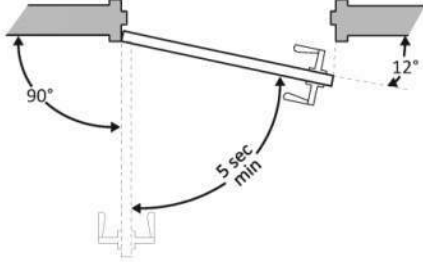
Note:

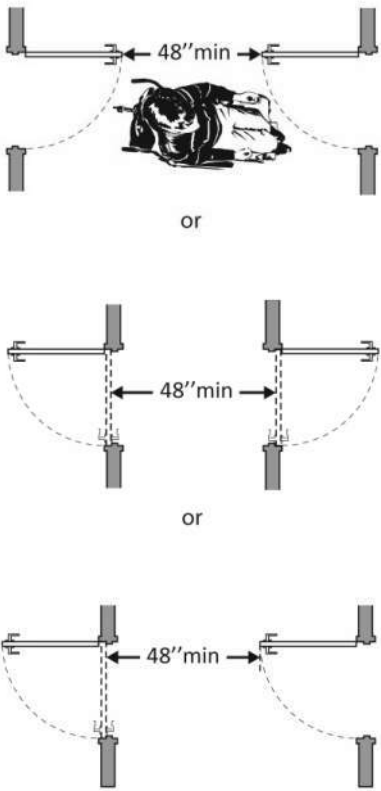
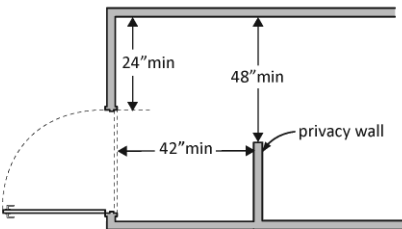
If the sign is at double doors  
with one active leaf, the sign  
should be on the inactive leaf; if  
both leaves are active, the sign

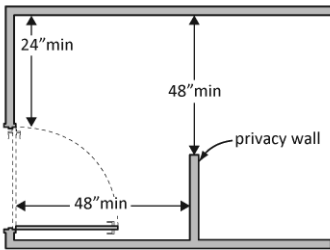

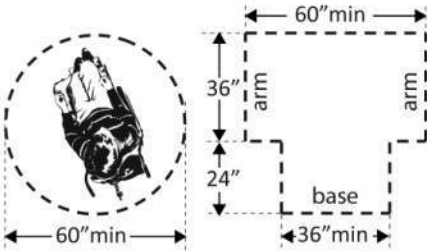
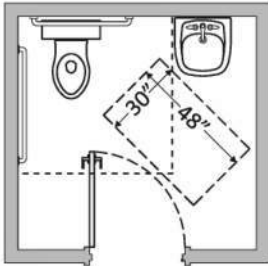


<p>should be on the wall to the right of the right leaf.</p>				
<b>Entrance</b> (2010 Standards – 404)				
<p><b>3.6</b></p>				
<p><b>3.7</b> If there is a front approach to the pull side of the door is there at least 18 inches of maneuvering clearance beyond the latch side plus 60 inches clear depth?</p> <p>On both sides of the door, is the floor surface of the maneuvering clearance level (no steeper than 1:48)?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>3.8</b> Is the door threshold edge no more than ¼ inch high?</p> <p>Or</p> <p>No more than ¾ inch high if slope is beveled no steeper than 1:2?</p> <p>Note: The first ¼ inch of the threshold may be vertical; the rest must be beveled.</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			

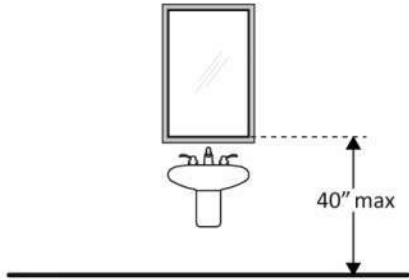
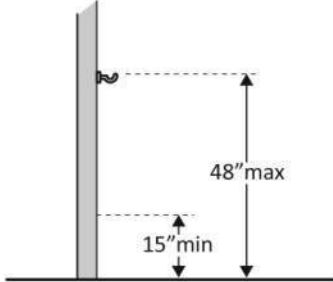
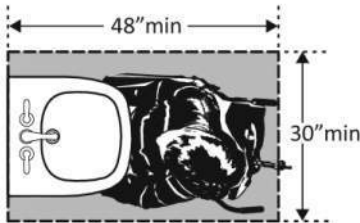


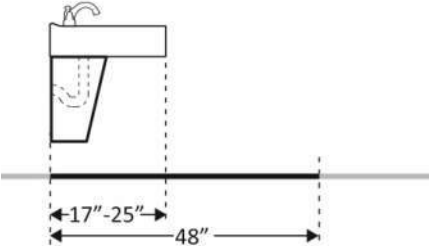
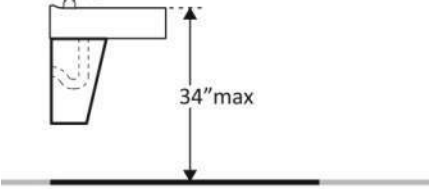
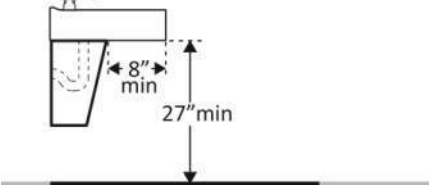
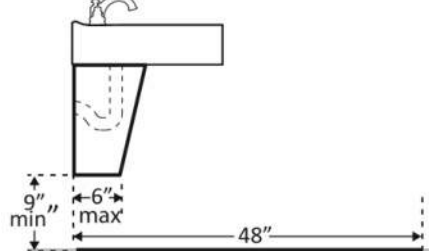
<p><b>3.9</b> Is the door equipped with hardware that is operable with one hand and does not require tight grasping, pinching, or twisting of the wrist? Check door handle and lock (if provided).</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<p><b>3.10</b> Are the operable parts of the door hardware mounted no less than 34 inches and no greater than 48 inches above the floor?</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<p><b>3.11</b> Can the door be opened easily (5 pounds maximum force)?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No		<p>Pull force was not measured during this survey.</p>	<p>Pull force was not measured during this survey.</p>
<p><b>3.12</b> If the door has a closer, does it take at least 5 seconds to close from an open position of 90 degrees to a position of 12 degrees from the latch?</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<p>Door closes in 4.13 seconds at women's restroom on 2<sup>nd</sup> floor Door closes in 3.15 seconds in men's restroom on 2<sup>nd</sup> floor.</p>

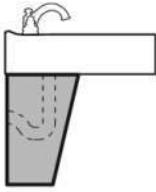
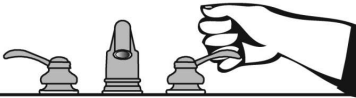
<p><b>3.13</b> If there are two doors in a series, e.g. vestibule, is the distance between the doors at least 48 inches plus the width of the doors when swinging into the space?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>N/A</p>	
<p><b>3.14</b> If there is a privacy wall and the door swings out, is there at least 24 inches of maneuvering clearance beyond the door latch side and 42 inches to the privacy wall?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>N/A</p>	

<p><b>3.15</b> If there is a privacy wall and the door swings in, is there at least 24 inches of maneuvering clearance beyond the door latch side and at least 48 inches to the privacy wall if there is no door closer or at least 54 inches if there is a door closer?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		<p>N/A</p>	
<p><b>In the Toilet Room</b></p>				
<p><b>3.16</b> Is there a clear path to at least one of each type of fixture, e.g. lavatory, hand dryer, etc., that is at least 36 inches wide?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>3.17</b> Is there clear floor space available for a person in a wheelchair to turn around, i.e. a circle at least 60 inches in diameter or a T-shaped space within a 60-inch square?*</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>3.18</b> In a single user toilet room if the door swings in and over a clear floor space at an accessible fixture, is there a clear floor space at least 30 x 48 inches beyond the swing of the door?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>N/A</p>	

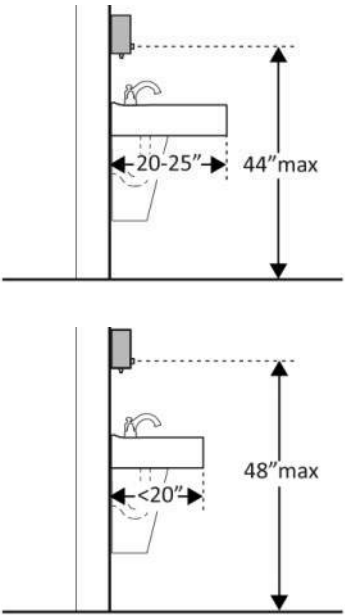


<p><b>3.19</b> If the mirror is over a lavatory or countertop, is the bottom edge of the reflecting surface no higher than 40 inches above the floor? Or If the mirror is not over the lavatory or countertop, is the bottom edge of the reflecting surface no higher than 35 inches above the floor?*</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement: 39"</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>3.20</b> If there is a coat hook, is it no less than 15 inches and no greater than 48 inches above the floor?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		N/A	
<p><b>Lavatories</b> (2010 Standards – 606) Note: 2010 Standards refer to sinks in toilet rooms as lavatories.</p>				
<p><b>3.21</b> Does at least one lavatory have a clear floor space for a forward approach at least 30 inches wide and 48 inches long?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>			

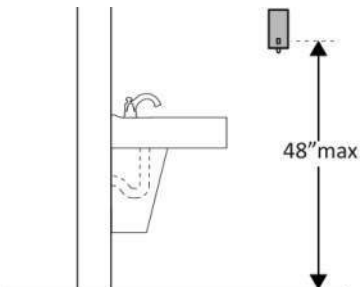
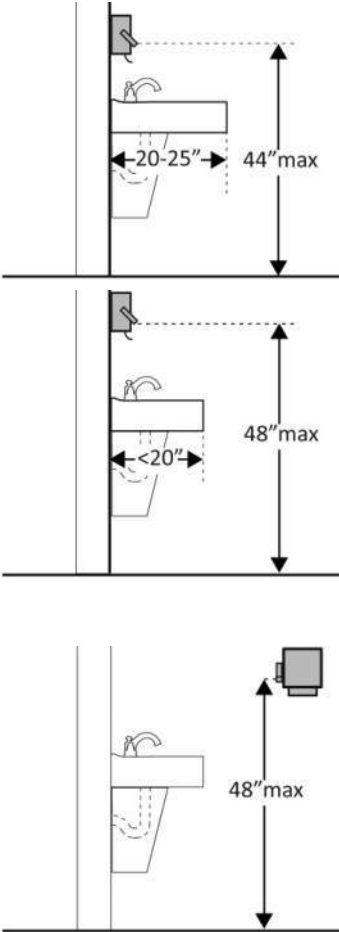
<p><b>3.22</b> Do no less than 17 inches and no greater than 25 inches of the clear floor space extend under the lavatory so that a person using a wheelchair can get close enough to reach the faucet?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>3.23</b> Is the front of the lavatory or counter surface, whichever is higher, no more than 34 inches above the floor?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Measurement: 34"</p>			
<p><b>3.24</b> Is there at least 27 inches clearance from the floor to the bottom of the lavatory that extends at least 8 inches under the lav for knee clearance?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>3.25</b> Is there toe clearance at least 9 inches high?</p> <p>(Space extending greater than 6 inches beyond the available toe clearance at 9 inches above the floor is not considered toe clearance.)</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			

<b>3.26</b> Are pipes below the lavatory insulated or otherwise configured to protect against contact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>3.27</b> Can the faucet be operated without tight grasping, pinching, or twisting of the wrist?  Is the force required to activate the faucet no greater than 5 pounds?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

**Soap Dispensers and Hand Dryers** (2010 Standards – 603)

<b>3.28</b> Are the operable parts of the soap dispenser within one of the following reach ranges:  Above lavatories or counters no less than 20 inches and no greater than 25 inches deep: no higher than 44 inches above the floor?  Above lavatories less than 20 inches deep: no higher than 48 inches above the floor?  Not over an obstruction: no higher than 48 inches above the	<input type="checkbox"/> Yes <input type="checkbox"/> No Measurement:  <input type="checkbox"/> Yes <input type="checkbox"/> No Measurement:  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Measurement: 45"			
--	--	---	--	--



<p>floor?</p>				
<p><b>3.29</b> Are the operable parts of the hand dryer or towel dispenser within one of the following reach ranges:</p> <p>Above lavatories or counters no less than 20 inches and no greater than 25 inches deep: no higher than 44 inches above the floor?</p> <p>Above lavatories less than 20 inches deep: no higher than 48 inches above the floor?</p> <p>Not over an obstruction: no higher than 48 inches above the floor?</p> <p>Can the operable parts of the hand dryer or towel dispenser be operated without tight grasping, pinching or twisting of the wrist?</p> <p>Is the force required to activate the hand dryer or towel</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p> <p>48"</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>			

dispenser no greater than 5 pounds?	Measurement:			
-------------------------------------	--------------	--	--	--

**Water Closets in Single-User Toilet Rooms and Compartments (Stalls)** (2010 Standards – 603 & 609) **Note:** 2010 Standards refer to toilets as water closets.

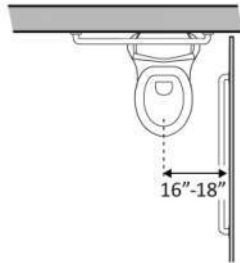
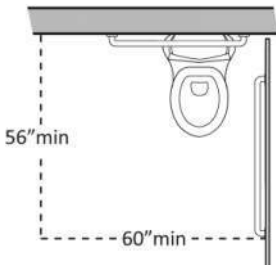
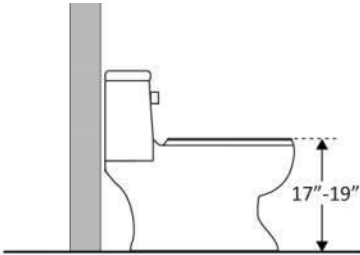
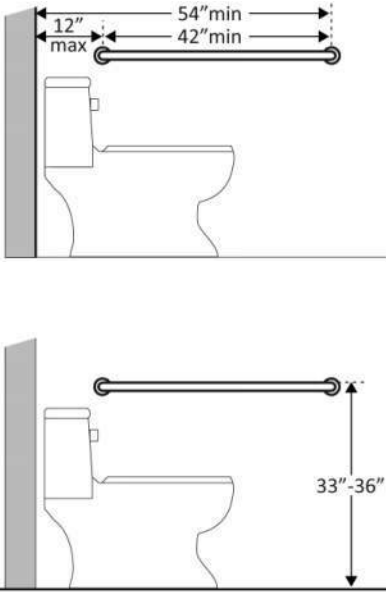
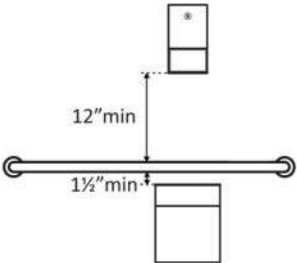
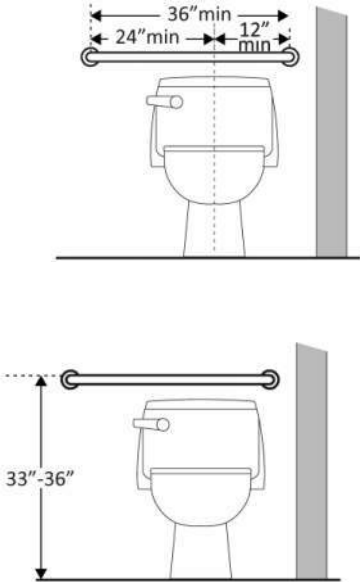
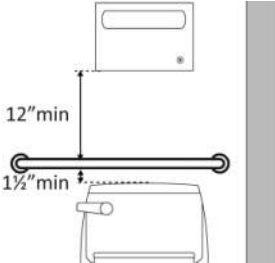
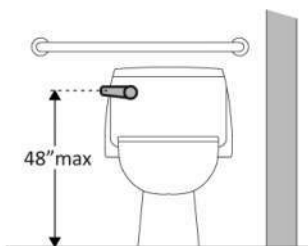
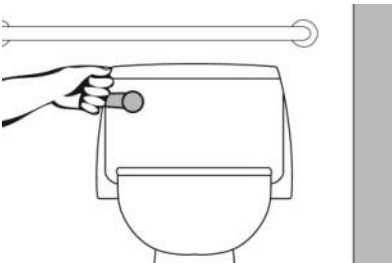
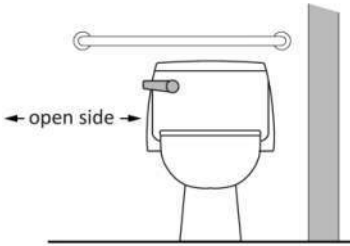
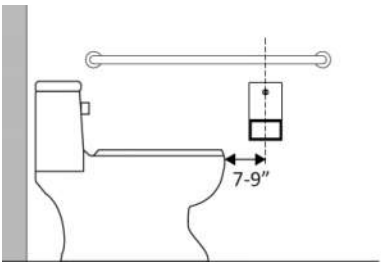
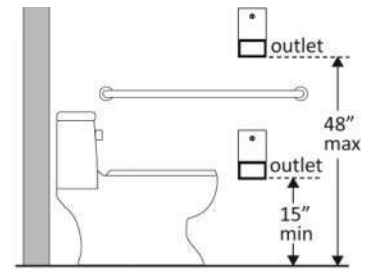
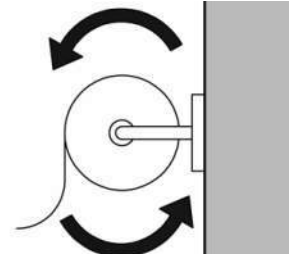
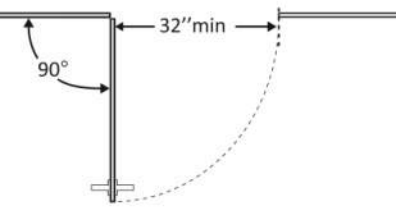
<b>3.30</b> Is the centerline of the water closet no less than 16 inches and no greater than 18 inches from the side wall or partition?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Second floor accessible restrooms comply.  East classroom restroom does not. Measured at 22"	
<b>3.31</b> Is clearance provided around the water closet measuring at least 60 inches from the side wall and at least 56 inches from the rear wall?*	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  Measurement:			

			Photo #:	
<p><b>3.32</b> Is the height of the water closet no less than 17 inches and no greater than 19 inches above the floor measured to the top of the seat?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement: 18"</p>		<p>East Classroom restroom does not comply.</p> <p>Second floor accessible restrooms comply.</p>	
<p><b>3.33</b> Is there a grab bar at least 42 inches long on the side wall?</p> <p>Is it located no more than 12 inches from the rear wall?</p> <p>Does it extend at least 54 inches from the rear wall?</p> <p>Is it mounted no less than 33 inches and no greater than 36 inches above the floor to the top of the gripping surface?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement: 42"</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement: 12"</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement: 54"</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>East Classroom restroom does not comply.</p> <p>Second floor accessible restrooms comply.</p>	

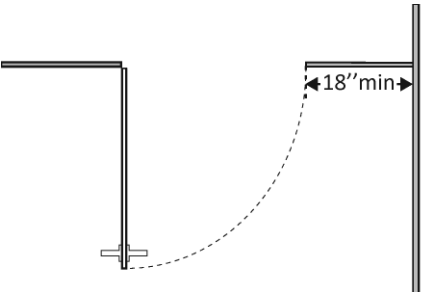
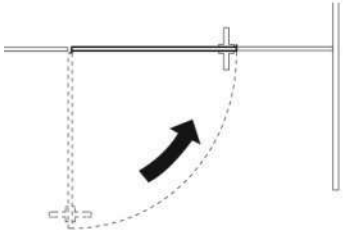

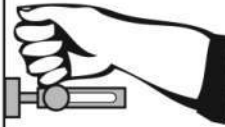


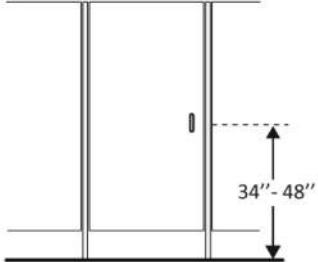
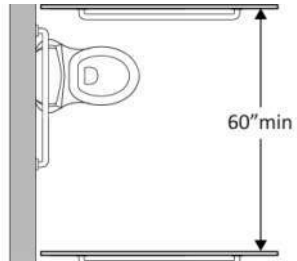
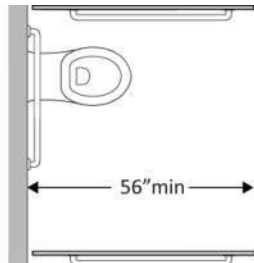
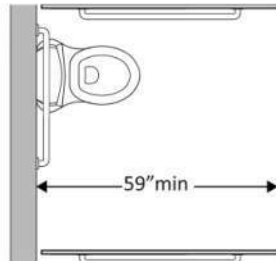
<p>Is there at least 12 inches clearance between the grab bar and protruding objects above?*</p> <p>Is there at least 1½ inches clearance between the grab bar and projecting objects below?*</p> <p>Is the space between the wall and the grab bar 1 ½ inches?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>3.34</b> Is there a grab bar at least 36 inches long on the rear wall?</p> <p>Does it extend at least 12 inches from the centerline of the water closet on one side (side wall)?</p> <p>Does it extend at least 24 inches on the other (open) side?</p> <p>Is it mounted no less than 33 inches and no greater than 36 inches above the floor to the top of the gripping surface?</p> <p>Are there at least 12 inches clearance between the grab bar and protruding objects above?*</p> <p>Are there at least 1½ inches</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>East Classroom restroom does not comply.</p> <p>Second floor accessible restrooms comply.</p>	

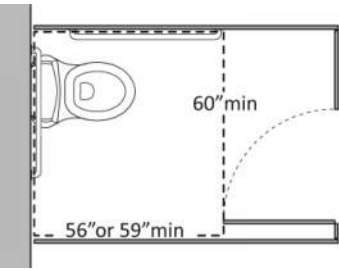
<p>clearance between the grab bar and projecting objects below?*</p> <p>Is the space between the wall and the grab bar 1 ½ inches?</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<p><b>3.35</b> If the flush control is hand operated, is the operable part located no higher than 48 inches above the floor?</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<p><b>3.36</b> If the flush control is hand operated, can it be operated with one hand and without tight grasping, pinching, or twisting of the wrist?</p> <p>Is the force required to activate the flush control no greater than 5 pounds?</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<p><b>3.37</b> Is the flush control on the open side of the water closet?</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

<p><b>3.38</b> Is the toilet paper dispenser located no less than 7 inches and no greater than 9 inches from the front of the water closet to the centerline of the dispenser?*</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>3.39</b> Is the outlet of the dispenser:</p> <p>Located no less than 15 inches and no greater than 48 inches above the floor?</p> <p>Not located behind grab bars?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>3.40</b> Does the dispenser allow continuous paper flow?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>Toilet Compartments (Stalls)</b> (2010 Standards – 604)</p>				
<p><b>3.41</b> Is the door opening width at least 32 inches clear, between the face of the door and the stop, when the door is open 90 degrees?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement: 36"</p>			



<p><b>3.42</b> If there is a front approach to the pull side of the door, is there at least 18 inches of maneuvering clearance beyond the latch side plus 60 inches clear depth?*</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<p><b>3.43</b> Is the door self-closing?</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<p><b>3.44</b> Are there door pulls on both sides of the door that are operable with one hand and do not require tight grasping pinching or twisting of the wrist?*</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<p><b>3.45</b> Is the lock operable with one hand and without tight grasping, pinching or twisting of the wrist?</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

<b>3.46</b> Are the operable parts of the door hardware mounted no less than 34 inches and no greater than 48 inches above the floor?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>3.47</b> Is the compartment at least 60 inches wide?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<b>3.48</b> If the water closet is wall hung, is the compartment at least 56 inches deep?	<input type="checkbox"/> Yes <input type="checkbox"/> No		N/A	
<b>3.49</b> If the water closet is floor mounted, is the compartment at least 59 inches deep?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

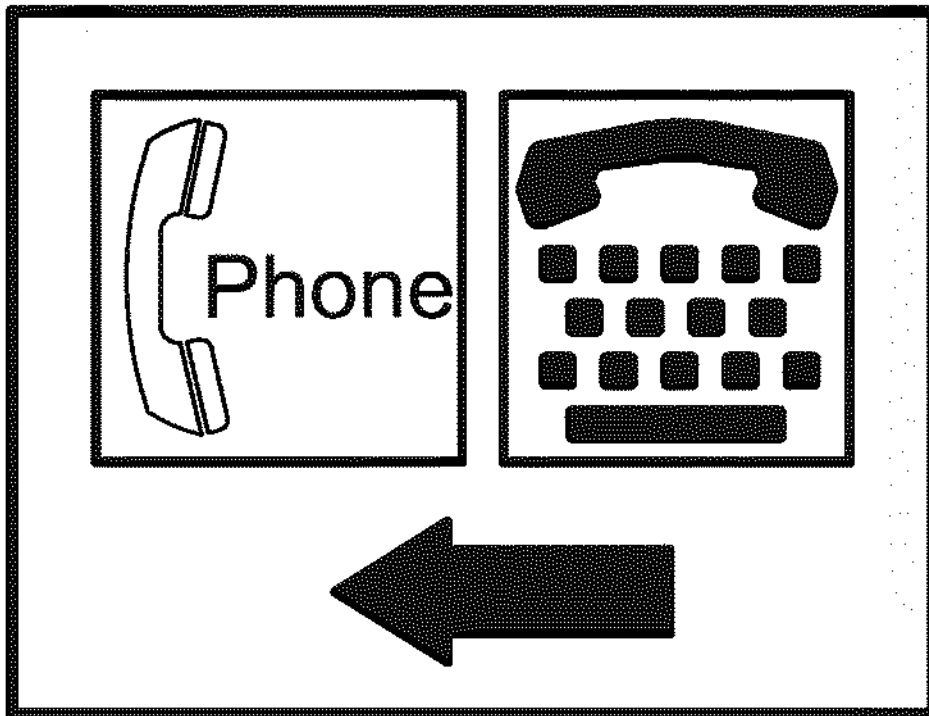
<b>3.50</b> If the door swings in, is the minimum required compartment area provided beyond the swing of the door (60 inches x 56 inches if water closet is wall hung or 59 inches if water closet is floor mounted)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
---	---	--	--	--

---

## ADA Checklist for Readily Achievable Barrier Removal

---

### Priority 4 – Additional Access



Project: Cherokee County Arts Center

Building: Cherokee County Arts Center

Location: 94 North Street Canton, Georgia

Date: August 31, 2022

Surveyors: Desiré Mahanna, Ashley Montford

NOVA Project No. 10102-3022152

**Amenities such as drinking fountains and public telephones should be accessible to people with disabilities.**



Institute for Human Centered Design  
[www.HumanCenteredDesign.org](http://www.HumanCenteredDesign.org)  
November 2011



ADA National Network  
Questions on the ADA 800-949-4232 voice/tty  
[www.ADAchecklist.org](http://www.ADAchecklist.org)

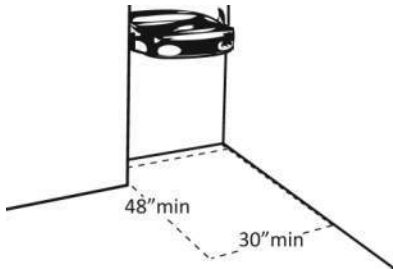
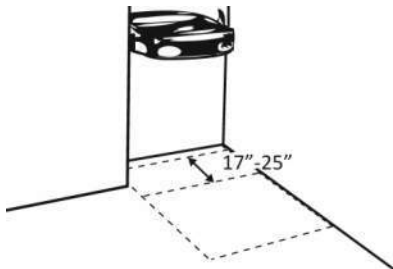
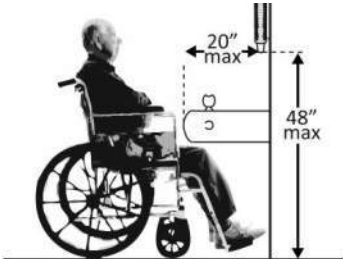


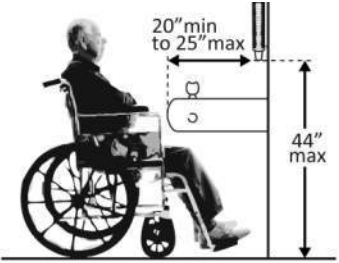

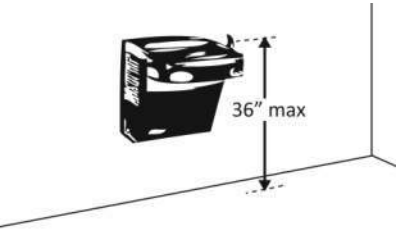
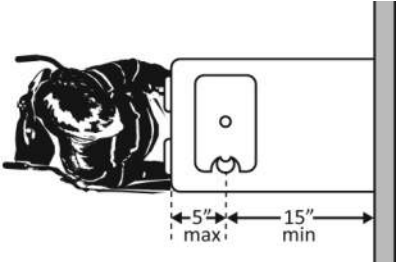


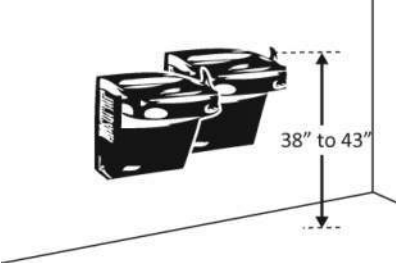
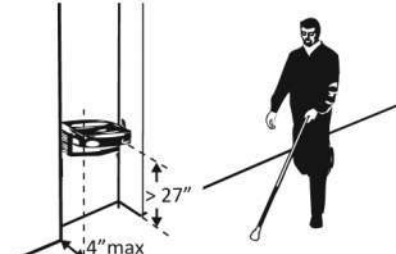
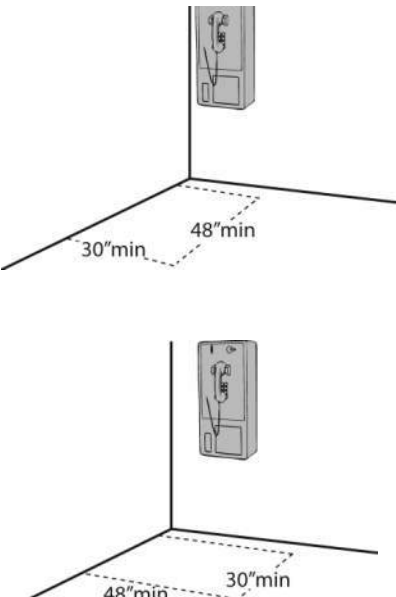
This checklist was produced by the New England ADA Center, a project of the Institute for Human Centered Design and a member of the ADA National Network. This checklist was developed under a grant from the Department of Education, NIDRR grant number H133A060092-09A. However the contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government.

Questions or comments on the checklist contact the New England ADA Center at 617-695-0085 voice/tty or [ADAinfo@NewEnglandADA.org](mailto:ADAinfo@NewEnglandADA.org)

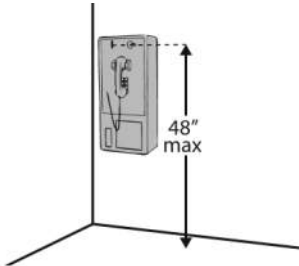
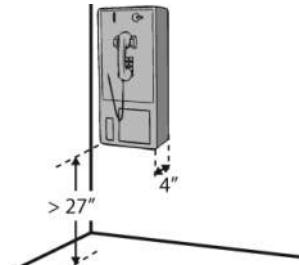


For the full set of checklists, including the checklists for recreation facilities visit [www.ADAchecklist.org](http://www.ADAchecklist.org).




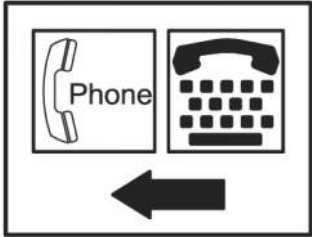
Priority 4 – Additional Access		Comments	Possible Solutions
<b>Drinking Fountains</b> (2010 Standards – 602)			
<b>4.1</b> Does at least one drinking fountain have a clear floor space at least 30 inches wide x at least 48 inches long centered in front of it for a forward approach?*	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
<b>4.2</b> If there is a forward approach, do no less than 17 inches and no greater than 25 inches of the clear floor space extend under the drinking fountain?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Measurement:		
<b>4.3</b> If the drinking fountain is no deeper than 20 inches, are the operable parts no higher than 48 inches above the floor?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		



<p><b>4.4</b> If the drinking fountain is no less than 20 inches and no greater than 25 inches deep, are the operable parts no higher than 44 inches above the floor?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>4.5</b> Can the control be operated with one hand and without tight grasping, pinching or twisting of the wrist?</p> <p>Is the force required to activate the control no more than 5 pounds?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>4.6</b> Is the spout outlet no higher than 36 inches above the floor?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p><b>4.7</b> Is the spout:</p> <p>At least 15 inches from the rear of the drinking fountain?</p> <p>No more than 5 inches from the front of the drinking fountain?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			

<p><b>4.8</b> If there is more than one drinking fountain, is there at least one for standing persons?</p> <p>Is the spout outlet no lower than 38 inches and no higher than 43 inches above the floor?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		N/A	
<p><b>4.9</b> If the leading (bottom) edge of the fountain is higher than 27 inches above the floor, does the front of the fountain protrude no more than 4 inches into the circulation path?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Measurement:</p>		N/A	
<p><b>Public Telephones</b> (2010 Standards – 704) TTY's are devices that employ interactive text-based communication through the transmission of coded signals across the telephone network. They are mainly used by people who are deaf and/or cannot speak.</p>				
<p><b>4.10</b> Does at least one telephone have a clear floor space at least 30 inches wide x at least 48 inches long for a parallel or forward approach?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		N/A	




<b>4.11</b> Is the highest operable part of the telephone no higher than 48 inches above the floor?	<input type="checkbox"/> Yes <input type="checkbox"/> No Measurement:		N/A	
<b>4.12</b> If the leading (bottom) edge of the telephone is higher than 27 inches above the floor, does the front of the telephone protrude no more than 4 inches into the circulation path?	<input type="checkbox"/> Yes <input type="checkbox"/> No Measurement:		N/A	
<b>4.13</b> Does at least one telephone have a volume control?	<input type="checkbox"/> Yes <input type="checkbox"/> No		N/A	
<b>4.14</b> Is the volume control identified by a pictogram of a telephone handset with radiating sound waves?	<input type="checkbox"/> Yes <input type="checkbox"/> No		N/A	

<b>4.15</b> Does at least one telephone have a TTY?	<input type="checkbox"/> Yes <input type="checkbox"/> No		N/A	
<b>4.16</b> Is the touch surface of the TTY keypad at least 34 inches above the floor?	<input type="checkbox"/> Yes <input type="checkbox"/> No Measurement:		N/A	
<b>4.17</b> Is the TTY identified by the International Symbol of TTY?	<input type="checkbox"/> Yes <input type="checkbox"/> No		N/A	
<b>4.18</b> Do signs that provide direction to public telephones also provide direction to the TTY?	<input type="checkbox"/> Yes <input type="checkbox"/> No		N/A	

<b>4.19</b> Do telephones that do not have a TTY provide direction to the TTY?	<input type="checkbox"/> Yes <input type="checkbox"/> No	 	N/A	N/A
--	--	---	-----	-----

**Fire Alarm Systems** (2010 Standards – 702)

<b>4.20</b> If there are fire alarm systems, do they have both flashing lights and audible signals?	<input type="checkbox"/> Yes <input type="checkbox"/> No		N/A	

## **TASK 2**

### **STRUCTURAL CONDITION SURVEY REPORT**





August 22, 2022

**Cherokee County Board of Commissioners**  
1130 Bluffs Parkway  
Canton, Georgia 30114

**Attention: Mr. Allen Kronenberger**  
Construction Manager

**Subject: Report of Limited Structural Condition Assessment**  
**CHEROKEE COUNTY ARTS CENTER**  
94 North Street  
Canton, Georgia 30114  
NOVA Project Number 10102-3022152

Dear Mr. Kronenberger:

**NOVA Engineering and Environmental, LLC (NOVA)** has completed the requested Visual Structural Condition Survey for the subject building located at 94 North Street in Canton, Georgia and identified as the Cherokee County Arts Center in correspondence with NOVA Proposal 002-05221247.

### **PROJECT INFORMATION**

Our understanding of the project is based on information provided by you, a brief review of the provided partial Phase One and Phase Two architectural and structural drawings by Roy H Taylor III, RA Architecture, Design, Planning, and our experience with similar projects.

The subject site consists of an approximate 12,200 square foot two-and-a-half story brick structure, constructed circa 1926 (shown below in Figure 1). It consists of a ground, first, and second floor. The building includes a two-story portico supported by Corinthian order style columns. There is a steeple on the shingle roof, located near the south elevation. The building is currently occupied and is used as an arts center and church.



Figure 1: Overview of subject structure (front) viewing the southwest corner.

## EXECUTIVE SUMMARY

The subject structure was observed to be in fair to good structural condition with no observed signs of settlement related distress. Minor tuckpoint repair is required along sections of the interior and exterior masonry walls and arches throughout the structure. The main entrance stairs along the south end of the structure need further evaluation to determine the extent of the cracks and delaminations of the concrete and coating. The two (2) stairs along the northwest end of the building should be removed and replaced due to significant observed concrete, masonry, and steel structural related distress. Also, the handrails of the two (2) stairs do not meet the current building code requirements.

## OBSERVATIONS AND FINDINGS

On July 20, 2022, NOVA representatives Mr. Jacob Townsend, EIT and Kurt Heinrichs, Professional Structural Engineer, traveled to the subject site to perform a visual structural condition survey of readily accessible exterior, interior, and roof level areas of the subject building. Our observations regarding the structural condition assessment of the subject structure are presented below. The subject structure exterior walls appear to be a 4"x8" nominal glazed, multi width, red load bearing brick wall approximately 16" thick with rowlock every 6<sup>th</sup> course. The partially below grade ground floor walls along the north portion of the

subject structure appeared to be cast-in-place concrete walls with the previously mentioned exterior red brick façade. The interior was noted as wooden partition walls with finished plaster or sheet rock finishes and wooden flooring throughout.

NOVA performed a visual structural condition survey during a walk-through of the building's interior and exterior. A ladder was used to remove the ceiling panel to access and view the underside of the roof framing.. Our significant observation of the structural condition of the exterior and interior of the subject building are presented below. Select photos of observed conditions of the structural components are attached at the end of this report.

### **Exterior Observations**

- The glazed, red brick masonry exterior of the structure was in fair condition with some minor spalls, cracks, and separations at joints. Some areas of masonry pop-outs or missing mortar was observed throughout the exterior brick masonry walls. No signs of significant settlement of the building were reported or noted during our walk-through condition survey.
- Several areas of the brick masonry façade appeared to have been infilled with similar brick masonry, possibly from infilled original construction windows. Some separations and cracks were noted around these infill joints and emanating from the corners of these infill brick masonry areas.
- The concrete staircase along the main entrance at the south face of the subject structure emanating from the first floor to grade was observed to have spalls, cracks in the concrete throughout the steps and sidewalls. Signs of delamination of the finish coating and concrete material were also noted. Further evaluation of the integrity of the concrete staircase is required to determine the extent of required repairs.
- The elevated concrete slab near the south entrance had observed signs of cracks, spalls in the concrete material. The perimeter of the elevated slab had select portions of the concrete material separate from the structure which will require patch repair.
- The concrete staircases with red brick sidewalls, adjacent to the south staircase emanating from grade to the basement floor were observed to have cracks in the concrete material and some minor spalls, cracks, and separations at joints in the brick material were also noted. Tuckpoint repair is required.
- The multilevel, painted, metal fire escape stairwell emanating from the second floor to grade along the northwest wall of the subject structure was observed to have signs of peeling paint and low severity corrosion was noted in several locations. The handrail

did not appear to meet the building code requirements.

- The concrete stairwell emanating from the first floor to grade of the subject structure was observed to be severely damaged and signs of delamination of the concrete material was noted throughout. The risers of the stairwell were field measured as approximately 4.5–7.0 inches across the (13) thirteen steps. The painted metal handrails were measured to be approximately 32” from the top of the concrete step, which does not meet current building code requirements. Replacement of the stair with a code compliant steel stair is recommended.
- The wooden steeple located on the south portion of the shingle roof had signs of peeling paint and slight corrosion of the flashing around the base near the shingle roof material. Remove and replace rotten wood around the base of the steeple and prime and paint will be required.
- The brick chimney located near the north portion of the shingle roof was observed to be in fair condition with some minor spalls, cracks, and separations at joints. Minor tuckpoint repair as required.

### Interior Observations

- No signs of significant settlement related distress were noted along the interior brick walls or basement concrete floor. However, several vertical cracks and some step cracks were noted along the perimeter brick walls and arched doorways. Minor tuckpoint repair is required.
- The basement, perimeter concrete walls were in good condition, but had observed signs peeling paint from possible water infiltration at isolated locations.
- The ceiling of select second floor rooms were observed to have peeling paint from possible water infiltration from the roof above.
- The underside of the timber trusses, wooden roof deck, and the wooden roof joists appeared to be in generally good structural condition. However, signs of previous water infiltration were observed around the underside of the wooden roof deck near the steeple along the south end of the roof.
- The wooden interior handrails along the staircase and interior openings throughout the subject structure were measured to be 24–32 inches from the top of the wooden floor, which do not meet current building code requirements.



## CONCLUSIONS & RECOMMENDATIONS

The following conclusions and conceptual recommendations for repair are based on our observations to date, the information provided to us and our experience with similar evaluation projects.

The subject 3-story building was generally observed to be in fair to good structural condition. No signs of significant settlement related distress were reported or noted during our walk-through condition survey. Several minor cracks and separation were noted in the exterior brick masonry and in the interior brick and concrete walls. Our significant observations and conceptual recommendations for repair are presented below.


1. Several cracks and separations were noted in the exterior brick façade. The cracks and spalls in the brick façade should be tuckpoint repaired.
2. Several vertical and step cracks or separations were observed within the perimeter interior brick and concrete walls. Some of the cracks and separations appear to be along or emanating from infill areas or arches of previous window openings. The remaining cracks in the brick and concrete walls should be tuckpoint repaired and repainted.
3. A further investigation of the main south entrance should be conducted with Ground Penetrating Radar testing, chain drag, and core sampling to determine the location and extent of the concrete deterioration for the design of future concrete repairs.
4. The severely damaged concrete staircase emanating from the first floor of northwest portion of the subject structure should be removed and replaced with an equivalent system in compliance with the required building code specifications. A replacement steel staircase should be considered.
5. The multilevel metal fire escape staircase emanating from the second floor should be cleaned, primed, and painted to maintain the structural integrity of the staircase. Alternatively, the stair could be removed and replaced with code compliant handrails
6. NOVA recommends the below grade interior concrete walls be cleaned and a waterproof crystalline coating (such as Xypex) be applied to prevent future water infiltration into the ground floor of the subject structure.
7. The steeple wood should be checked for wood decay, replace damaged wood components as required. Prime and paint and apply waterproof coating to repaired wooden components.

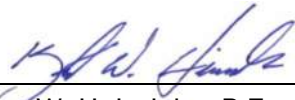
## CLOSING

We appreciate the opportunity to provide these services to the Cherokee County Board of Commissioners on this important project. Please contact us at (770) 425-0777 with any questions or if we may be of further service.

Sincerely,

NOVA Engineering and Environmental LLC

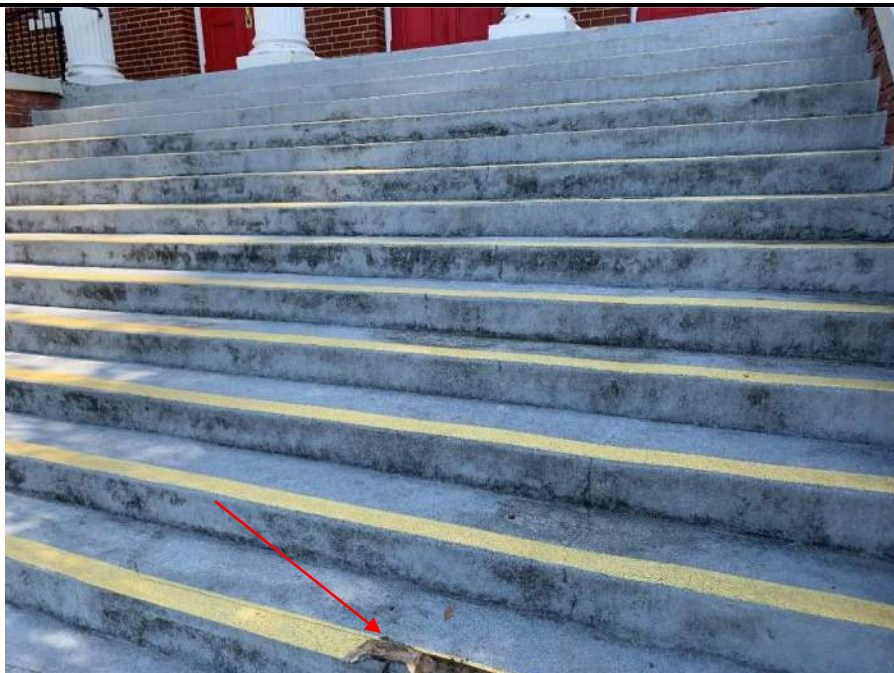
Signed:   
Jacob M. Townsend, EIT  
Staff Engineer

Reviewed:   
Kurt W. Heinrichs, P.E.  
Principal Engineer  
Georgia Registration No. 18741

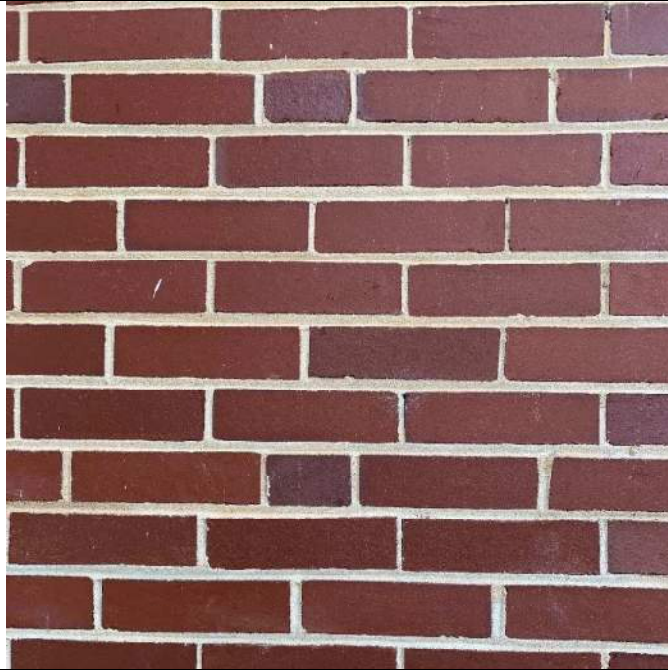
Attachments: Photographs 1 – 30



**Photo 1:** Overview of subject structure – south elevation view (front).



**Photo 2:** Main south entrance stairs, signs of cracks and delamination of concrete and coating.



**Photo 3:** Typical exterior glazed, red brick section.



**Photo 4:** Observed missing elevated concrete slab material and brick facade near south main entrance columns.





**Photo 5:** More Observed missing elevated concrete slab material and brick facade near south main entrance columns.



**Photo 6:** Typical exterior brick spall damage. Recommend replace damaged brick.



**Photo 7:** Typical mortar loss between exterior masonry brick. Tuckpoint repair recommended.



**Photo 8:** Isolated, low-severity stair-step crack in exterior brick façade.





**Photo 9:** Overview of northwest corner exterior stairs emanating from first floor to grade. Note, handrail does not meet current building code requirements.



**Photo 11**

**Photo 10:** Side View of previous stair. Note brick and concrete spall distress.



**Photo 11:** Observed severely damaged concrete stairs. Significant repair or remove and replace required.



**Photo 12:** Subject structure concrete drain adjacent to concrete stairs, observed ponding of water runoff from roof drain system.





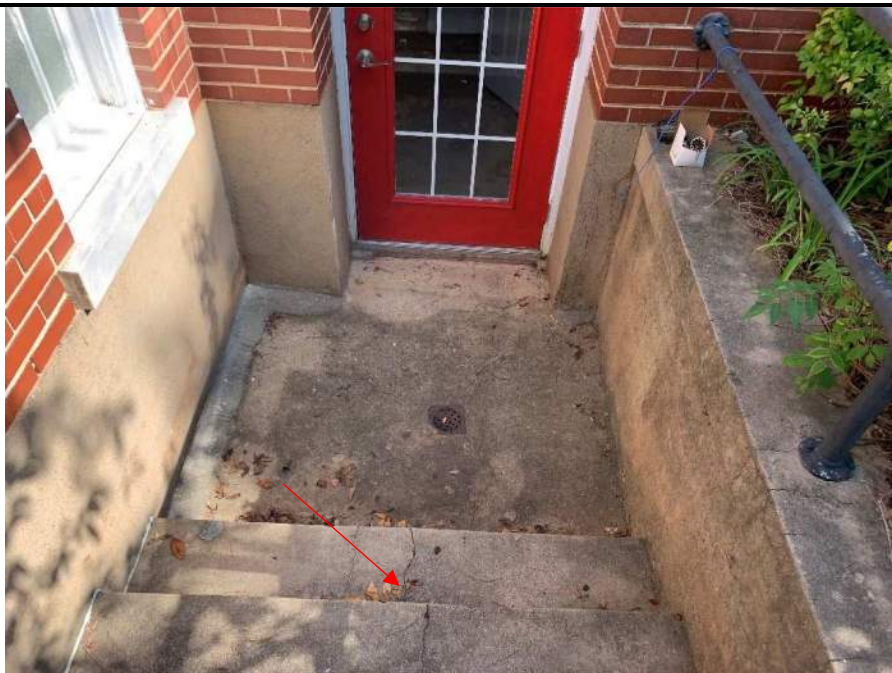
**Photo 13:** Overview of steel fire escape staircase near northwest corner of building.



**Photo 14:** Previous steel fire escape connection to concrete slab on grade. Note, peeling paint. Recommended clean, prime, and paint steel staircase.



**Photo 15:** Overview of south entrance stairwell to ground floor. Recommend tuckpoint repair of exterior brick.

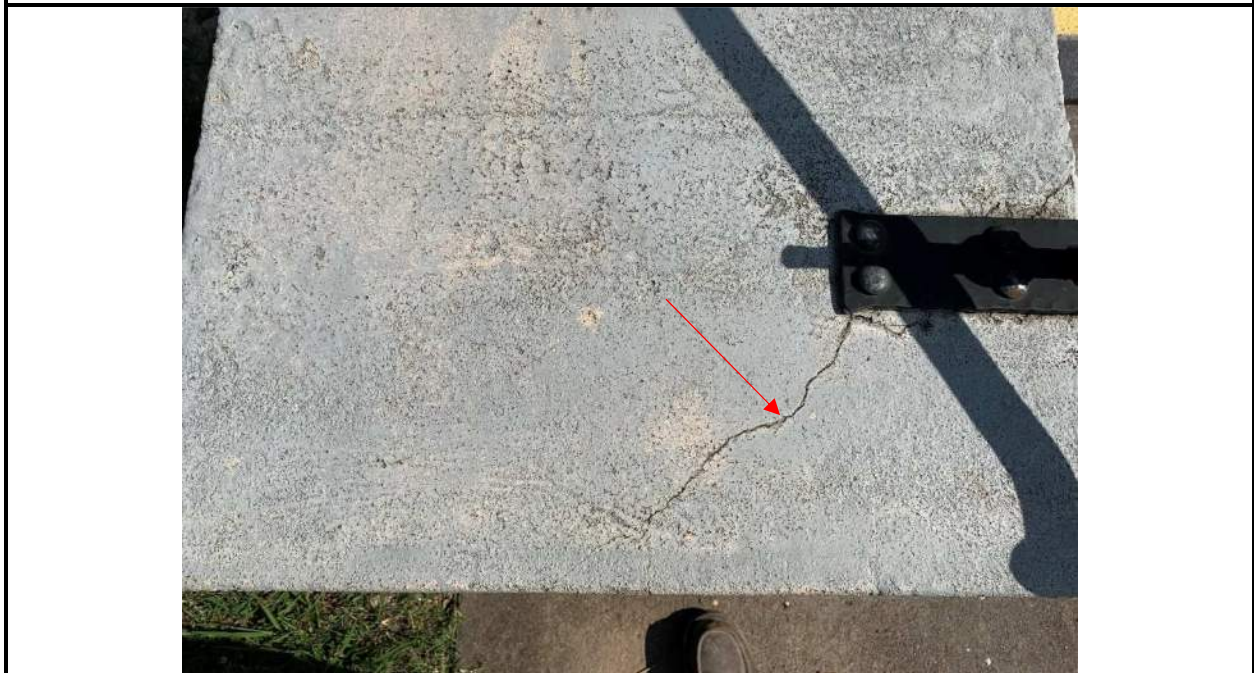


**Photo 16:** Concrete stairwell and slab of previous staircase. Note cracking in concrete.





**Photo 17:** Overview of the top of south entrance stairwell and handrail.



**Photo 18:** Previous stairwell and handrail, near grade. Crack width approximately 0.125 inches. Clean and apply elastomeric coating should be considered.



**Photo 19:** Overview of ground floor mechanical room, previously enclosed window.



**Photo 20:** Existing wall/column section of ground floor mechanical room. Recommend fill in opening with similar brick material.





**Photo 21:** Observed crack/separation in previously filled in ground floor window.



**Photo 22:** Typical cracks/separations and peeling paint in perimeter walls.



**Photo 23:** Overview of second floor existing condition.



**Photo 24:** More observed peeling paint in wall near second floor fire escape doorway.



**Photo 25:** Observed second floor peeling paint in ceiling of theatre room. Possible water infiltration related damage.



**Photo 26:** More observed second floor peeling paint in ceiling of theatre room. Possible water infiltration related damage.



**Photo 27:** Overview of steeple near south elevation. Flashing appears to be in fair condition with slight corrosion. Recommend prime, and paint wood components. Remove and replace of rotten wood near flashing material as required.



**Photo 28:** Overview of brick chimney near north portion of shingle roof. Observed spalls and separation in joints. Recommend tuckpoint repair.





**Photo 29:** Overview of the underside of the roof deck framing, timber trusses, and wood joist. Note, truss components appear to be in good structural condition with observed signs of previous water infiltration near the steeple framing.



**Photo 30:** Observed signs of previous water infiltration near the steeple near the south end of the structure.

## **TASK 3**

### **ENVIRONMENTAL SERVICES REPORT**

# REPORT OF ENVIRONMENTAL SERVICES



**Cherokee County Arts Center**  
Canton, Cherokee County, Georgia

**PREPARED FOR:**

Cherokee County Board of Commissioners  
1130 Bluffs Parkway  
Canton, Georgia 30114

NOVA Project Number: 3022152

September 6, 2022



September 6, 2022

**Cherokee County Board of Commissioners**  
1130 Bluffs Parkway  
Canton, Georgia 30114

**Attention:** Mr. Allen Kronenberger  
Construction Manager

**Subject:** Report of Environmental Services  
**Cherokee County Arts Center**  
Canton, Cherokee County, Georgia  
NOVA Project Number 3022152

Mr. Kronenberger:

**NOVA Engineering and Environmental, LLC (NOVA)** has completed the Environmental Services for the Cherokee County Arts Center located at 94 North Street in Canton, Cherokee County, Georgia (Subject Property). We appreciate your selection of NOVA and for the opportunity to be of service on this project. Please feel free to contact us if you have any questions or if we may be of further assistance.

Sincerely,  
**NOVA Engineering and Environmental, LLC**

A handwritten signature in blue ink, appearing to read "Curtis Moses".

Curtis Moses  
Staff Professional  
Environmental Services  
AHERA No. 18965  
EPA Lead Inspector No. 1969

A handwritten signature in blue ink, appearing to read "Nick DaSantos".

Nickolaus DaSantos  
Business Unit Manager  
Environmental Services  
AHERA No. 19051  
EPA Lead Inspector No. 2006



# TABLE OF CONTENTS

<b>1.0</b>	<b>SUMMARY.....</b>	<b>1</b>
1.1	ASBESTOS CONTAINING MATERIAL.....	1
1.2	LEAD BASED PAINT & LEAD CONTAINING PAINT .....	2
1.1	HAZARDOUS BUILDING MATERIAL .....	2
1.2	FUNGI .....	3
<b>2.0</b>	<b>INTRODUCTION.....</b>	<b>4</b>
2.1	DESCRIPTION OF SUBJECT PROPERTY .....	4
2.2	PURPOSE.....	4
2.3	LIMITATIONS .....	4
2.4	USER RELIANCE.....	5
<b>3.0</b>	<b>ASBESTOS CONTAINING MATERIAL.....</b>	<b>6</b>
3.1	FIELD AND LABORATORY SERVICES.....	6
3.2	ASBESTOS ABATEMENT .....	8
<b>4.0</b>	<b>LEAD BASED PAINT &amp; LEAD CONTAINING PAINT .....</b>	<b>9</b>
4.1	DEFINITIONS .....	9
4.2	FIELD AND LABORATORY SERVICES.....	9
4.3	LEAD ABATEMENT ACTIVITIES .....	15
<b>5.0</b>	<b>HAZARDOUS BUILDING MATERIAL INVENTORY.....</b>	<b>17</b>
5.1	FIELD SERVICES .....	17
5.2	HAZARDOUS BUILDING MATERIAL INVENTORY.....	17
5.3	HAZARDOUS BUILDING MATERIAL INVENTORY CONCLUSIONS .....	18
<b>6.0</b>	<b>FUNGI.....</b>	<b>20</b>
6.1	FIELD AND LABORATORY SERVICES.....	20
6.2	FUNGI IDENTIFIED AT THE SUBJECT PROPERTY .....	20
6.3	DISCUSSION.....	20
6.4	RECOMMENDATIONS AND CONCLUSIONS .....	23

## LIST OF APPENDICES

APPENDIX A – SAMPLE LOCATION PLANS & SITE PHOTOGRAPHS

APPENDIX B – LABORATORY ANALYTICAL DATA & XRF DATA

APPENDIX C – PERSONNEL QUALIFICATIONS

APPENDIX D – QUALIFICATIONS OF CONCLUSIONS

## 1.0 SUMMARY

NOVA Engineering and Environmental, LLC. (NOVA) has completed the Environmental Services for the Cherokee County Arts Center located at 94 North Street in Canton, Cherokee County, Georgia (Subject Property).

A brief summary of our findings is presented below. This summary is provided for convenience and should not be substituted for review of the full report, including all attachments as provided herein.

### 1.1 ASBESTOS CONTAINING MATERIAL

During this study, one hundred fifty-five (155) samples (containing 91 total layers) of plaster, joint compound, tape, wallboard, grout, mortar, ceiling tile, leveler, glue, theater curtain material, floor tile, mastic, wrap, sink coating, cove base, cement, Thermal System Insulation (TSI), vibration dampener, glazing material, caulking, and tread material were analyzed by NOVA using Polarized Light Microscopy (PLM) with three (3) of the analyzed samples indicating Asbestos Containing Material (ACM). A sample location plan is included in Appendix A of this Report.

#### Caulking Material

- A total of one (1) sample of the caulking material associated with a side window located at the Subject Property indicated >1% asbestos (2% Chrysotile Asbestos). Consequently, we believe all of the caulking material that has not been determined to be non-asbestos containing, should be considered Asbestos Containing Material (ACM).

#### Vibration Dampener

- A total of two (2) samples of the cloth vibration dampener material associated with the upper-level HVAC unit at the Subject Property indicated >1% asbestos (60% Chrysotile Asbestos). Consequently, we believe all of the cloth vibration dampener material located at the Subject Property, should be considered Asbestos Containing Material (ACM).

A complete list of suspected ACM samples obtained is shown in the laboratory report (included in Appendix B).

## 1.2 LEAD BASED PAINT & LEAD CONTAINING PAINT

One hundred eighty-three (183) X-ray fluorescence (XRF) analyzer readings were made by NOVA throughout the interior of the Subject Property structure to determine the presence of Lead Based Paint (LBP).

### Lead Based Paint

Lead Based Paint (LBP) is defined as a paint or varnish containing lead at a concentration >0.5% by weight when determined by laboratory analysis. LBP is also defined by HUD as 1.0 mg/cm<sup>2</sup> when determined using an XRF analyzer.

The predominant LBP material identified by the NOVA survey include:

- Painted surfaces of the wood windows, doors, frames, ceilings, baseboards, railing, trim, columns, soffits, and siding located at the Subject Property.

### Lead Containing Paint

OSHA does not define Lead Based Paint based on lead content. Any detectable lead in a paint or varnish makes it lead paint for purposes of complying with OSHA regulations to determine worker exposure. Consequently, for purposes of this study, Lead Containing Paint is considered any detectable level of lead.

The predominant LCP material identified by the NOVA survey include:

- Painted surfaces of wood doors, frames, trim, windows, and railing located at the Subject Property;
- Coated surfaces of ceramic located at the Subject Property;
- Painted surfaces of plaster walls and ceilings located at the Subject Property; and
- Painted surfaces of metal railing and plates located at the Subject Property.

## 1.1 HAZARDOUS BUILDING MATERIAL

NOVA surveyed potential Hazardous Building Material (HBM) that was reasonably observed at the Subject Property. Potential HBM observed at the Subject Property include incandescent lighting, fluorescent lighting, ballasts, refrigerators, thermostats, High Intensity Discharge (HID) lighting, Light Emitting Diode (LED) Lighting, water fountains, exit signs, fire extinguishers, HVAC Units, microwaves, and miscellaneous facility cleaning/maintenance chemicals.

The names and locations of all the material identified in the HBMI are included in the table in Section 5.2 of this report.

## 1.2 FUNGI

A total of six (6) air-particle samples were collected by NOVA and subsequently analyzed by EMSL Analytical, Inc. with the following findings:

- Fungi spores identified from the air-particle sample readings on the interior of the Subject Property include Ascospores, Aspergillus/Penicillium, and Basidiospores, Cladosporium, and Triadelphia.
- Fungi spores identified from the air-particle sample readings on the exterior of the Subject Property include Alternaria, Ascospores, Aspergillus/Penicillium, Basidiospores, Bipolaris, Blakeslea/Choanephora, Cercospora, Cladosporium, Curvularia, Fusarium, Ganoderma, Myxomycetes, Oidium, Pestalotia, Pithomyces, and Torula.
- Fungi spores identified on the interior of the Subject Property that were not identified on the exterior of the Subject Property include Triadelphia.

Currently there are no set clearance levels regarding fungi. Professional inspectors frequently compare the types and levels of fungal organisms detected from the interior of a space to the exterior of a space, as a way of interpreting microbiological results. The qualitative diversity of airborne fungi outdoors should be similar to that measured indoors in the absence of fungi contamination.

Based on the results of the laboratory analytical data obtained during the Limited Fungi Air Quality Assessment sampling program, it is NOVA's recommendation that best housekeeping and cleaning practices should be continued moving forward in an effort to prevent possible future settled fungi growth and/or accumulation. NOVA also recommends that air filters located throughout the Subject Property should be changed per the manufactures recommended specifications.

Please note that the services provided by NOVA were a limited assessment of current conditions at specific locations identified by the Client during NOVA's site visit. It is possible that fungi may be present at additional locations that may not become apparent until encountered by renovation and/or demolition activities. In addition, fungi conditions can change with time and may be different in the future. This variability in conditions is an inherent owner-assumed risk in fungi assessments.



## 2.0 INTRODUCTION

### 2.1 DESCRIPTION OF SUBJECT PROPERTY

The Subject Property is identified as the Cherokee County Arts Center located at 94 North Street in Canton, Cherokee County, Georgia (Subject Property). Specifically, the Environmental Services for the Subject Property include a Pre-Renovation Asbestos Containing Material (ACM) Survey, Lead Based Paint (LBP) Survey, Hazardous Building Material Inventory (HBMI), and Fungi Air Quality Assessment.

The subject site consists of an approximate 12,200 square foot two-and-a-half story brick structure, constructed circa 1926. It consists of a ground, first, and second floor. The building includes a two-story portico supported by Corinthian order style columns. There is a steeple on the shingled roof, located near the south elevation.

### 2.2 PURPOSE

As requested by Cherokee County Board of Commissioners (CLIENT), the Pre-Renovation Asbestos Containing Material (ACM) Survey, Lead Based Paint (LBP) Survey, Hazardous Building Material Inventory (HBMI), and Limited Fungi Air Quality Assessment was performed in an effort to identify Asbestos-Containing Material (ACM), Lead Based Paint (LBP), and Hazardous Building Material at the Subject Property. This work has been performed in general accordance with applicable state and federal regulations, and routine industry practice.

ACM sampling was performed in general accordance with the Asbestos Hazard Emergency Response Act (AHERA) guidelines and ASTM E2356-10, "Standard Practice for Comprehensive Building Asbestos Survey" as a Baseline Survey. Deviations from the Baseline Survey protocols include:

- Determination of ACM quantities were excluded from the scope of work

### 2.3 LIMITATIONS

NOVA has performed the Pre-Renovation Asbestos Containing Material (ACM) Survey, Lead Based Paint (LBP) Survey, Hazardous Building Material Inventory (HBMI), and Limited Fungi Air Quality Assessment which is a limited inquiry into a property's environmental status and is not sufficient to discover every potential source of ACM, LBP, Hazardous Building Material (HBM), or fungi associated with the property to be evaluated. No survey/sampling can wholly eliminate uncertainty regarding the potential for ACM, LBP, HBM, or fungi in connection with a property.

Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for ACM, LBP, HBM, and fungi in connection with a property. The level of inquiry is variable. Not every property will warrant the same level of assessment for ACM, LBP, HBM, and fungi.

Consistent with good commercial or customary practices, the appropriate level of assessment will be guided by the type of property subject to assessment, the intended use of the property, the expertise and risk tolerance of the CLIENT, and the information developed in the course of the assessment.

NOVA's findings, opinions, conclusions and recommendations are based on information obtained through visual assessment of surficial conditions in readily accessible areas. It is possible that additional ACM, LBP, HBM, or fungi exist or may subsequently become known that may impact or change the assessment after NOVA's services are complete.

NOVA's assessment represents our professional opinion, only. Therefore, NOVA cannot, under any circumstances, make a statement of warranty or guarantee, expressed or implied, that ACM, LBP, HBM, and fungi are limited to those that are discovered while we are performing the Sampling.

## 2.4 USER RELIANCE

NOVA's Pre-Renovation Asbestos Containing Material Survey, Lead Based Paint Survey, Hazardous Building Material Inventory, and Limited Fungi Air Quality Assessment, along with the findings and conclusions contained in the report, either in completed form, summary form, or by extraction, is prepared, and intended, for the sole use of Cherokee County Board of Commissioners (CLIENT) and therefore may not contain sufficient information for other purposes or parties. The CLIENT is the only intended beneficiary of this report. The contents of NOVA's report will continue to be the property of NOVA. NOVA's report may not be disclosed to, used by, or relied upon by, any person or entity other than the CLIENT without the express written consent of NOVA.

Authorization for disclosure to a third party or authorization for third-party reliance on a final report of any report will be considered by NOVA upon the written request of the CLIENT. NOVA reserves the right to deny authorization to allow disclosure or reliance of NOVA's report to third parties.

## 3.0 ASBESTOS CONTAINING MATERIAL

### 3.1 FIELD AND LABORATORY SERVICES

Mr. Curtis Moses, NOVA professional, and federal and state certified asbestos inspector, performed the field work for the Pre-Renovation Asbestos Containing Material Survey at the Subject Property.

#### 3.1.1 ASBESTOS CONTAINING MATERIAL SAMPLING

The building area was visually assessed by NOVA to identify suspect ACM, which were then grouped into three categories according to their intended use:

- **Surfacing Material** such as sprayed-on or troweled fireproofing, acoustical and decorative insulation, textured “popcorn” finishes, paint, stucco, etc.
- **Thermal System Insulation (TSI)**, such as pipe, boiler and storage tank insulation, and insulation on ducts, pumps, heat exchangers, and other equipment.
- **Miscellaneous Material**, such as floor and ceiling tiles, wallboard, asbestos-cement board, siding and other building material that did not fall into one of the previously mentioned categories.

Where applicable, material with similar texture, color and general appearance were considered homogeneous for sampling purposes, including visually similar material on different floors. NOVA’s assessment also included touching representative samples to determine friability, a mechanical classification defined as whether a material can be crumbled, pulverized, or reduced to powder by hand pressure.

Bulk samples were subsequently obtained in general accordance with the AHERA (40 CFR 763.86, Sampling) and ASTM E2356-10 procedures. The samples were placed in appropriate containers, and the containers sealed and labeled with a unique identification number. The samples were subsequently transported (following routine industry practices and chain-of-custody procedures) to EMSL Analytical, LLC (EMSL) for analysis.

The ACM samples were analyzed for asbestos using Polarized Light Microscopy (PLM) methods in accordance with EPA Method 600/R-93/116. Copies of the complete asbestos laboratory report and chain-of custody are included in Appendix B.

Using the results of the laboratory analysis and NOVA’s visual assessment, the asbestos containing building material can be further categorized into three groups:

- **Friable ACM** - Material means any material containing more than one percent (1%) asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR part 763 Section 1, Polarized Light Microscopy, that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.
- **Category I Nonfriable ACM** - Asbestos-containing packing, gaskets, resilient floor covering, and asphalt roofing products containing more than one percent (1%) asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR part 763, Section 1, Polarized Light Microscopy.
- **Category II Nonfriable ACM** - Any material, excluding Category I Nonfriable ACM, containing more than one percent (1%) asbestos as determined using the methods specified in Appendix A, Subpart F, 40 CFR part 763, Section 1, Polarized Light Microscopy that, when dry, *cannot* be crumbled, pulverized, or reduced to powder by hand pressure.

During this study, one hundred fifty-five (155) samples (containing 91 total layers) of plaster, joint compound, tape, wallboard, grout, mortar, ceiling tile, leveler, glue, theater curtain material, floor tile, mastic, wrap, sink coating, cove base, cement, Thermal System Insulation (TSI), vibration dampener, glazing material, caulking, and tread material were analyzed by NOVA using Polarized Light Microscopy (PLM) with three (3) of the analyzed samples indicating Asbestos Containing Material (ACM). A sample location plan is included in Appendix A of this Report.

#### **Caulking Material**

- A total of one (1) sample of the caulking material associated with a side window located at the Subject Property indicated >1% asbestos (2% Chrysotile Asbestos). Consequently, we believe all of the caulking material that has not been determined to be non-asbestos containing, should be considered Asbestos Containing Material (ACM).

#### **Vibration Dampener**

- A total of two (2) samples of the cloth vibration dampener material associated with the upper-level HVAC unit at the Subject Property indicated >1% asbestos (60% Chrysotile Asbestos). Consequently, we believe all of the cloth vibration dampener material located at the Subject Property, should be considered Asbestos Containing Material (ACM).

A complete list of suspected ACM samples obtained is shown in the laboratory report (included in Appendix B).



***Determination of the actual quantities of ACM at all locations should be made by the abatement contractor during a site inspection prior to beginning abatement.***

### **3.2 ASBESTOS ABATEMENT**

Any component, which is similar in appearance to, and is in the general vicinity or similar application of samples identified as containing asbestos, as well as any other material not shown by proper sampling and analysis to be non-asbestos containing, should be handled as asbestos-containing material (ACM). As previously noted, determination of the actual quantities of ACM at all locations should be made by the contractor during a site inspection prior to beginning abatement.

ACM should be abated (removed) prior to disturbance by maintenance, renovation and/or demolition by a licensed asbestos abatement contractor and disposed at an approved solid waste disposal facility.

Abatement is highly regulated and consists of several parts. In addition to the demolition/renovation permit, a ten (10) day advance notification to the Georgia Environmental Protection Division (GA-EPD) is required.

During abatement, third party monitoring is recommended to review if the asbestos is adequately managed and contained during the abatement process and to document clearance and re-occupancy criteria established for the project.

Most Clients also request an abatement management report. This report compiles pertinent data regarding the personnel, abatement, and asbestos disposal for liability management after the fact should there be concerns later from workers or others.

The ten (10) day notice, abatement, third party oversight, and management report are not included with the authorized scope of work for this project, but we can provide these supplemental services, if desired. Please note that the means and methods necessary for ACM abatement, as well as worker protection and monitoring, are the sole responsibility of the abatement contractor.

## 4.0 LEAD BASED PAINT & LEAD CONTAINING PAINT

### 4.1 DEFINITIONS

**Lead Based Paint (LBP)** is defined as a paint or varnish containing lead at a concentration  $>0.5\%$  by weight when determined by laboratory analysis, (1972, Lead Based Paint Poison Prevention Act (LBPPPA)). LBP is also defined by HUD as  $1.0 \text{ mg/cm}^2$  when determined using x-ray fluorescence (XRF) analyzer. These concentrations are applicable for housing and child-care facilities; however, these concentration levels are also frequently used as targets in commercial projects to allow flexibility in future area usage.

**Lead Containing Paint (LCP)** was defined as a paint or varnish containing lead at a concentration  $>0.06\%$  by weight (600 ppm) when determined by laboratory analysis, (1978, LBPPPA). In 2009, LCP was further defined as containing lead at a concentration  $>0.009\%$  by weight (90 ppm) for certain consumer products and residential use.

*Please note that OSHA does not define Lead Based Paint based on lead content. Any detectable lead in a paint or varnish makes it lead paint for purposes of complying with OSHA regulations to determine worker exposure. Consequently, for purposes of this study, Lead Containing Paint is considered any detectable lead.*

### 4.2 FIELD AND LABORATORY SERVICES

Mr. Curtis Moses, a NOVA professional and EPA certified lead inspector, performed the field work for the Lead Based Paint Survey at the Subject Property.

One hundred eighty-three (183) X-ray fluorescence (XRF) analyzer readings were made by NOVA throughout the interior of the Subject Property structure to determine the presence of Lead Based Paint (LBP).

#### 4.2.1 LEAD BASED PAINT SAMPLING

Where applicable, material with similar texture, color and general appearance were considered homogeneous for sampling purposes, including visually similar material on different floors and/or different buildings.

NOVA's XRF readings are presented below:

No.	Time	Units	Component	Substrate	Side	Condition	Color	Results	PbC	Error
1	8/8/2022 13:17	cps							3.99	0
2	8/8/2022 13:20	mg / cm ^2	calibration					positive	1	0.1
3	8/8/2022 13:22	mg / cm ^2	calibration					positive	1.1	0.1

No.	Time	Units	Component	Substrate	Side	Condition	Color	Results	PbC	Error
4	8/8/2022 13:23	mg / cm ^2	calibration					positive	1	0.1
5	8/8/2022 13:24	mg / cm ^2	wall	plaster	A	poor	white	negative	< LOD	0.03
6	8/8/2022 13:25	mg / cm ^2	wall	plaster	D	poor	white	negative	< LOD	0.03
7	8/8/2022 13:25	mg / cm ^2	ceiling	plaster	D	poor	white	negative	< LOD	0.03
8	8/8/2022 13:26	mg / cm ^2	window	wood	D	poor	white	positive	12.8	7.9
9	8/8/2022 13:26	mg / cm ^2	window	wood	D	poor	white	positive	10.2	4.8
10	8/8/2022 13:26	mg / cm ^2	baseboard	wood	A	poor	white	negative	< LOD	0.03
11	8/8/2022 13:27	mg / cm ^2	door	wood	B	poor	white	negative	< LOD	0.03
12	8/8/2022 13:28	mg / cm ^2	wall	plaster	B	poor	white	negative	< LOD	0.03
13	8/8/2022 13:29	mg / cm ^2	window	wood	B	poor	white	positive	< LOD	10.95
14	8/8/2022 13:29	mg / cm ^2	window	wood	B	poor	white	negative	< LOD	0.03
15	8/8/2022 13:29	mg / cm ^2	door	wood	B	poor	white	positive	7.9	2.6
16	8/8/2022 13:30	mg / cm ^2	baseboard	wood	A	poor	white	negative	< LOD	0.03
17	8/8/2022 13:30	mg / cm ^2	column	wood	A	poor	white	negative	< LOD	0.03
18	8/8/2022 13:31	mg / cm ^2	trim	wood	A	poor	white	negative	< LOD	0.03
19	8/8/2022 13:31	mg / cm ^2	door	wood	A	poor	white	negative	< LOD	0.03
20	8/8/2022 13:31	mg / cm ^2	door	wood	A	poor	white	negative	< LOD	0.03
21	8/8/2022 13:32	mg / cm ^2	wall	plaster	A	poor	white	negative	< LOD	0.03
22	8/8/2022 13:32	mg / cm ^2	ceiling	wood	A	poor	black	negative	< LOD	0.03
23	8/8/2022 13:33	mg / cm ^2	ceiling	wood	A	poor	black	positive	7.5	2.5
24	8/8/2022 13:33	mg / cm ^2	column	metal	A	poor	black	negative	< LOD	0.03
25	8/8/2022 13:34	mg / cm ^2	column	metal	A	poor	black	negative	< LOD	0.03
26	8/8/2022 13:34	mg / cm ^2	wall	drywall	A	poor	white	negative	< LOD	0.03
27	8/8/2022 13:35	mg / cm ^2	wall	wood	A	poor	brown	negative	0.06	0.03
28	8/8/2022 13:35	mg / cm ^2	door	wood	C	poor	white	negative	< LOD	0.03
29	8/8/2022 13:36	mg / cm ^2	door	wood	C	poor	white	negative	< LOD	0.03
30	8/8/2022 13:37	mg / cm ^2	wall	plaster	B	poor	green	negative	< LOD	0.03
31	8/8/2022 13:38	mg / cm ^2	cabinet	wood	B	intact	green	negative	< LOD	0.03
32	8/8/2022 13:38	mg / cm ^2	cabinet	wood	B	intact	white	negative	< LOD	0.03
33	8/8/2022 13:38	mg / cm ^2	door	wood	C	intact	white	positive	6.7	3.5
34	8/8/2022 13:39	mg / cm ^2	door	wood	C	intact	white	negative	< LOD	0.03
35	8/8/2022 13:39	mg / cm ^2	window	wood	C	intact	white	positive	12.5	5.3
36	8/8/2022 13:39	mg / cm ^2	wall	plaster	C	intact	white	negative	< LOD	0.03
37	8/8/2022 13:40	mg / cm ^2	door	wood	C	intact	white	positive	14.1	3.4
38	8/8/2022 13:40	mg / cm ^2	door	wood	C	intact	white	negative	< LOD	0.03
39	8/8/2022 13:40	mg / cm ^2	door	wood	D	intact	white	negative	< LOD	0.03
40	8/8/2022 13:40	mg / cm ^2	door	wood	D	intact	white	negative	< LOD	0.03
41	8/8/2022 13:40	mg / cm ^2	door	wood	D	intact	white	negative	< LOD	0.03
42	8/8/2022 13:41	mg / cm ^2	wall	plaster	B	intact	white	negative	< LOD	0.03
43	8/8/2022 13:41	mg / cm ^2	baseboard	wood	C	intact	white	positive	8.1	3.8
44	8/8/2022 13:42	mg / cm ^2	floor	ceramic	A	intact	brown	negative	< LOD	0.03
45	8/8/2022 13:43	mg / cm ^2	door	wood	C	intact	white	negative	< LOD	0.03

No.	Time	Units	Component	Substrate	Side	Condition	Color	Results	PbC	Error
46	8/8/2022 13:43	mg / cm ^2	door	metal	D	intact	tan	negative	< LOD	0.03
47	8/8/2022 13:43	mg / cm ^2	door	metal	D	intact	tan	negative	< LOD	0.03
48	8/8/2022 13:44	mg / cm ^2	wall	plaster	B	intact	white	negative	< LOD	0.03
49	8/8/2022 13:46	mg / cm ^2	door	wood	C	intact	red	positive	2.7	0.5
50	8/8/2022 13:46	mg / cm ^2	door	wood	A	intact	white	positive	11.6	5
51	8/8/2022 13:46	mg / cm ^2	door	wood	A	intact	white	negative	< LOD	0.03
52	8/8/2022 13:47	mg / cm ^2	door	wood	A	intact	white	negative	< LOD	0.03
53	8/8/2022 13:47	mg / cm ^2	door	wood	A	intact	white	negative	< LOD	1
54	8/8/2022 13:47	mg / cm ^2	door	wood	A	intact	yellow	negative	< LOD	0.03
55	8/8/2022 13:48	mg / cm ^2	wall	plaster	B	intact	yellow	negative	< LOD	0.03
56	8/8/2022 13:48	mg / cm ^2	wall	plaster	B	intact	blue	negative	0.04	0.02
57	8/8/2022 13:49	mg / cm ^2	floor	concrete	B	intact	green	negative	< LOD	0.03
58	8/8/2022 13:50	mg / cm ^2	wall	plaster	C	intact	white	negative	< LOD	0.03
59	8/8/2022 13:50	mg / cm ^2	door	wood	C	intact	white	positive	11.9	5.2
60	8/8/2022 13:50	mg / cm ^2	door	wood	C	intact	white	negative	< LOD	0.03
61	8/8/2022 13:51	mg / cm ^2	window	wood	B	intact	white	positive	10.2	2.9
62	8/8/2022 13:51	mg / cm ^2	window	wood	B	intact	white	positive	6.1	3
63	8/8/2022 13:51	mg / cm ^2	wall	drywall	A	intact	white	negative	< LOD	0.03
64	8/8/2022 13:52	mg / cm ^2	wall	drywall	B	intact	white	negative	< LOD	0.03
65	8/8/2022 13:52	mg / cm ^2	wall	drywall	C	intact	white	negative	< LOD	0.03
66	8/8/2022 13:53	mg / cm ^2	column	wood	C	intact	white	negative	< LOD	0.03
67	8/8/2022 13:53	mg / cm ^2	rail	wood	B	intact	brown	positive	9.6	2.8
68	8/8/2022 13:54	mg / cm ^2	baseboard	wood	C	intact	white	positive	10.7	3.1
69	8/8/2022 13:54	mg / cm ^2	floor	wood	C	intact	green	negative	< LOD	0.03
70	8/8/2022 13:59	mg / cm ^2	test	wood	C	intact	green	positive	1	0.1
71	8/8/2022 14:00	mg / cm ^2	test	wood	C	intact	green	positive	1	0.1
72	8/8/2022 14:01	mg / cm ^2	test	wood	C	intact	green	positive	1	0.1
73	8/9/2022 7:09	cps							3.78	0
74	8/9/2022 7:14	mg / cm ^2	test					positive	1	0.1
75	8/9/2022 7:15	mg / cm ^2	test					positive	1	0.1
76	8/9/2022 7:16	mg / cm ^2	test					positive	1	0.1
77	8/9/2022 7:24	mg / cm ^2	wall	plaster	A	intact	tan	negative	< LOD	0.75
78	8/9/2022 7:24	mg / cm ^2	door	wood	A	intact	brown	negative	< LOD	0.03
79	8/9/2022 7:24	mg / cm ^2	door	wood	A	intact	brown	positive	4	2
80	8/9/2022 7:25	mg / cm ^2	ceiling	plaster	A	intact	white	negative	< LOD	0.03
81	8/9/2022 7:25	mg / cm ^2	window	wood	A	intact	white	negative	< LOD	0.03
82	8/9/2022 7:26	mg / cm ^2	window	wood	A	intact	white	negative	< LOD	0.03
83	8/9/2022 7:26	mg / cm ^2	rail	metal	A	intact	black	negative	< LOD	0.03
84	8/9/2022 7:27	mg / cm ^2	window	wood	B	intact	brown	negative	< LOD	0.03
85	8/9/2022 7:27	mg / cm ^2	rail	metal	C	intact	brown	negative	< LOD	0.03
86	8/9/2022 7:28	mg / cm ^2	ceiling	plaster	C	intact	white	negative	< LOD	0.9
87	8/9/2022 7:29	mg / cm ^2	trim	wood	A	intact	brown	negative	< LOD	0.06



No.	Time	Units	Component	Substrate	Side	Condition	Color	Results	PbC	Error
88	8/9/2022 7:29	mg / cm ^2	trim	wood	A	intact	brown	negative	< LOD	0.08
89	8/9/2022 7:29	mg / cm ^2	window	wood	A	intact	brown	negative	< LOD	0.03
90	8/9/2022 7:30	mg / cm ^2	wall	wood	B	intact	brown	negative	< LOD	0.03
91	8/9/2022 7:31	mg / cm ^2	stage	wood	B	intact	brown	negative	< LOD	0.03
92	8/9/2022 7:31	mg / cm ^2	stage	wood	B	intact	black	negative	< LOD	0.03
93	8/9/2022 7:32	mg / cm ^2	wall	plaster	D	intact	tan	negative	< LOD	0.03
94	8/9/2022 7:32	mg / cm ^2	floor	wood	D	intact	brown	negative	< LOD	0.03
95	8/9/2022 7:33	mg / cm ^2	wall	plaster	C	intact	plaster	negative	< LOD	0.03
96	8/9/2022 7:34	mg / cm ^2	door	wood	C	intact	brown	negative	< LOD	0.03
97	8/9/2022 7:34	mg / cm ^2	door	wood	C	intact	brown	positive	9.2	4.3
98	8/9/2022 7:34	mg / cm ^2	door	wood	C	intact	brown	negative	< LOD	0.03
99	8/9/2022 7:34	mg / cm ^2	door	wood	C	intact	brown	negative	< LOD	0.03
100	8/9/2022 7:35	mg / cm ^2	wall	plaster	B	intact	tan	negative	< LOD	0.06
101	8/9/2022 7:35	mg / cm ^2	window	wood	B	intact	white	positive	9.2	4.3
102	8/9/2022 7:35	mg / cm ^2	window	wood	B	intact	white	positive	7.1	3.6
103	8/9/2022 7:36	mg / cm ^2	baseboard	wood	B	intact	white	positive	10.6	3.4
104	8/9/2022 7:36	mg / cm ^2	door	wood	B	intact	white	negative	< LOD	0.03
105	8/9/2022 7:36	mg / cm ^2	door	wood	B	intact	white	negative	< LOD	0.03
106	8/9/2022 7:37	mg / cm ^2	door	wood	C	intact	white	positive	11.5	3.7
107	8/9/2022 7:38	mg / cm ^2	wall	drywall	C	intact	tan	negative	< LOD	0.03
108	8/9/2022 7:43	mg / cm ^2	floor	ceramic	C	intact	tan	negative	< LOD	0.07
109	8/9/2022 7:44	mg / cm ^2	wall	plaster	D	intact	white	negative	< LOD	0.03
110	8/9/2022 7:44	mg / cm ^2	window	wood	D	intact	white	negative	< LOD	0.03
111	8/9/2022 7:45	mg / cm ^2	ceiling	plaster	D	intact	white	negative	< LOD	0.03
112	8/9/2022 7:45	mg / cm ^2	trim	wood	D	intact	white	positive	13.2	4
113	8/9/2022 7:46	mg / cm ^2	baseboard	wood	C	intact	white	negative	< LOD	0.03
114	8/9/2022 7:47	mg / cm ^2	baseboard	wood	C	intact	white	positive	4.4	1.2
115	8/9/2022 7:47	mg / cm ^2	floor	wood	C	intact	brown	negative	< LOD	0.03
116	8/9/2022 7:48	mg / cm ^2	cabinet	wood	C	intact	white	negative	< LOD	0.03
117	8/9/2022 7:48	mg / cm ^2	wall	plaster	C	intact	white	negative	0.03	0.02
118	8/9/2022 7:49	mg / cm ^2	door	wood	A	intact	white	negative	< LOD	0.03
119	8/9/2022 7:49	mg / cm ^2	door	wood	A	intact	white	positive	7.3	3.5
120	8/9/2022 7:50	mg / cm ^2	wall	plaster	A	intact	white	negative	< LOD	0.03
121	8/9/2022 7:50	mg / cm ^2	wall	plaster	A	intact	white	negative	< LOD	0.03
122	8/9/2022 7:50	mg / cm ^2	window	wood	C	intact	white	positive	8.4	3.9
123	8/9/2022 7:51	mg / cm ^2	window	wood	C	intact	white	positive	8.9	2.7
124	8/9/2022 7:51	mg / cm ^2	wall	plaster	C	intact	blue	negative	< LOD	0.03
125	8/9/2022 7:52	mg / cm ^2	wall	drywall	A	intact	pink	negative	< LOD	0.03
126	8/9/2022 7:52	mg / cm ^2	window	wood	D	intact	white	positive	4.4	2
127	8/9/2022 7:53	mg / cm ^2	ceiling	wood	A	intact	white	positive	8.3	3.9
128	8/9/2022 7:53	mg / cm ^2	ceiling	wood	A	intact	white	positive	7.2	2.9
129	8/9/2022 7:55	mg / cm ^2	door	wood	C	intact	white	positive	< LOD	12.45

No.	Time	Units	Component	Substrate	Side	Condition	Color	Results	PbC	Error
130	8/9/2022 7:55	mg / cm ^2	wall	plaster	C	intact	white	negative	< LOD	0.03
131	8/9/2022 7:55	mg / cm ^2	wall	plaster	C	intact	white	negative	0.3	0.14
132	8/9/2022 7:56	mg / cm ^2	rail	metal	C	intact	green	negative	< LOD	0.03
133	8/9/2022 7:56	mg / cm ^2	rail	wood	C	intact	brown	negative	< LOD	0.15
134	8/9/2022 7:57	mg / cm ^2	rail	wood	C	intact	white	positive	13.1	8.4
135	8/9/2022 7:58	mg / cm ^2	floor	ceramic	C	intact	green	negative	< LOD	0.03
136	8/9/2022 7:59	mg / cm ^2	door	wood	D	intact	blue	negative	< LOD	0.03
137	8/9/2022 7:59	mg / cm ^2	door	wood	D	intact	blue	negative	< LOD	0.03
138	8/9/2022 8:00	mg / cm ^2	rail	wood	D	intact	black	negative	< LOD	0.03
139	8/9/2022 8:00	mg / cm ^2	rail	wood	D	intact	black	negative	< LOD	0.03
140	8/9/2022 8:00	mg / cm ^2	window	wood	D	poor	white	negative	< LOD	0.03
141	8/9/2022 8:01	mg / cm ^2	window	wood	A	poor	white	positive	13.3	5.5
142	8/9/2022 8:02	mg / cm ^2	door	wood	A	poor	red	negative	< LOD	0.03
143	8/9/2022 8:03	mg / cm ^2	wall	concrete	A	poor	gray	negative	< LOD	0.03
144	8/9/2022 8:05	mg / cm ^2	stairs	concrete	A	poor	gray	negative	< LOD	0.03
145	8/9/2022 8:06	mg / cm ^2	stairs	concrete	A	poor	yellow	negative	< LOD	0.03
146	8/9/2022 8:06	mg / cm ^2	column	wood	A	poor	white	positive	1.2	0.2
147	8/9/2022 8:06	mg / cm ^2	column	wood	A	poor	white	positive	11.5	3.5
148	8/9/2022 8:07	mg / cm ^2	door	wood	A	poor	red	positive	4.2	2.2
149	8/9/2022 8:07	mg / cm ^2	door	wood	A	poor	white	positive	7.2	3.5
150	8/9/2022 8:08	mg / cm ^2	rail	metal	A	poor	black	positive	1.5	0.4
151	8/9/2022 8:08	mg / cm ^2	rail	metal	A	poor	black	negative	< LOD	0.03
152	8/9/2022 8:09	mg / cm ^2	rail	metal	A	poor	black	negative	< LOD	0.44
153	8/9/2022 8:09	mg / cm ^2	rail	metal	A	poor	green	negative	< LOD	0.03
154	8/9/2022 8:09	mg / cm ^2	rail	metal	A	poor	green	negative	< LOD	0.06
155	8/9/2022 8:10	mg / cm ^2	rail	metal	A	poor	green	negative	< LOD	0.2
156	8/9/2022 8:10	mg / cm ^2	window	wood	B	poor	white	positive	12.1	5.3
157	8/9/2022 8:10	mg / cm ^2	door	wood	B	poor	white	positive	< LOD	14.25
158	8/9/2022 8:11	mg / cm ^2	door	wood	B	poor	red	negative	< LOD	0.03
159	8/9/2022 8:12	mg / cm ^2	plate	wood	B	poor	black	negative	0.04	0.02
160	8/9/2022 8:12	mg / cm ^2	rail	wood	B	poor	black	negative	< LOD	0.2
161	8/9/2022 8:12	mg / cm ^2	rail	wood	B	poor	black	negative	< LOD	0.24
162	8/9/2022 8:13	mg / cm ^2	plate	wood	C	poor	black	negative	0.03	0.02
163	8/9/2022 8:14	mg / cm ^2	window	wood	C	poor	white	positive	3.4	2
164	8/9/2022 8:14	mg / cm ^2	window	wood	C	poor	white	positive	11.3	7.3
165	8/9/2022 8:14	mg / cm ^2	door	wood	C	poor	white	positive	< LOD	15
166	8/9/2022 8:15	mg / cm ^2	door	wood	C	poor	red	positive	3.6	1.6
167	8/9/2022 9:42	mg / cm ^2	wall	plaster	C	intact	white	negative	< LOD	0.03
168	8/9/2022 9:43	mg / cm ^2	wall	plaster	C	intact	white	negative	< LOD	0.03
169	8/9/2022 9:44	mg / cm ^2	wall	plaster	C	intact	white	negative	< LOD	0.03
170	8/9/2022 9:44	mg / cm ^2	window	wood	C	intact	white	negative	< LOD	0.09
171	8/9/2022 9:45	mg / cm ^2	floor	concrete	C	intact	gray	negative	0.06	0.03

No.	Time	Units	Component	Substrate	Side	Condition	Color	Results	PbC	Error
172	8/9/2022 9:55	mg / cm ^2	calibration					positive	1	0.1
173	8/9/2022 9:56	mg / cm ^2	calibration					positive	1.1	0.1
174	8/9/2022 9:57	mg / cm ^2	calibration					positive	1	0.1
175	8/9/2022 13:12	cps							3.91	0
176	8/9/2022 13:12	mg / cm ^2	calibration					positive	1.1	0.1
177	8/9/2022 13:15	mg / cm ^2	calibration					positive	1	0.1
178	8/9/2022 13:16	mg / cm ^2	calibration					positive	1	0.1
179	8/9/2022 13:50	mg / cm ^2	soffit					positive	17.1	9.4
180	8/9/2022 13:50	mg / cm ^2	trim					positive	< LOD	16.65
181	8/9/2022 13:50	mg / cm ^2	siding					positive	16	9.7
182	8/9/2022 14:30	mg / cm ^2	siding					positive	12.5	1.5
183	8/9/2022 14:32	mg / cm ^2	calibration					positive	1	0.1

< LOD = below level of detection

One hundred eighty-three (183) X-ray fluorescence (XRF) analyzer readings were made by NOVA throughout the interior of the Subject Property structure to determine the presence of Lead Based Paint (LBP).

### **Lead Based Paint**

Lead Based Paint (LBP) is defined as a paint or varnish containing lead at a concentration >0.5% by weight when determined by laboratory analysis. LBP is also defined by HUD as 1.0 mg/cm<sup>2</sup> when determined using an XRF analyzer.

The predominant LBP material identified by the NOVA survey include:

- Painted surfaces of the wood windows, doors, frames, ceilings, baseboards, railing, trim, columns, soffits, and siding located at the Subject Property.

### **Lead Containing Paint**

OSHA does not define Lead Based Paint based on lead content. Any detectable lead in a paint or varnish makes it lead paint for purposes of complying with OSHA regulations to determine worker exposure. Consequently, for purposes of this study, Lead Containing Paint is considered any detectable level of lead.

The predominant LCP material identified by the NOVA survey include:

- Painted surfaces of wood doors, frames, trim, windows, and railing located at the Subject Property;
- Coated surfaces of ceramic located at the Subject Property;

- Painted surfaces of plaster walls and ceilings located at the Subject Property; and
- Painted surfaces of metal railing and plates located at the Subject Property.

#### 4.3 LEAD ABATEMENT ACTIVITIES

The US EPA has stated that solid architectural components coated with LBP are less likely to be hazardous because of the small ratio of lead paint to total waste mass (*US EPA, 1993, Applicability of RCRA Disposal Requirements to Lead-Based Paint Abatement Wastes, Final Report, EPA 747-R-93-006 Technical Programs Branch, Office of Pollution Prevention and Toxics, March 1993*).

The US Army conducted a study which concluded that whole-building demolition debris is not likely to exceed the toxicity characteristic standard for lead if it is handled as a single, whole waste stream and disposed of all together (*US Dept. of the Army, US Army Environmental Hygiene Agency, Interim Final Report, Lead-Based Paint Contaminated Debris Waste Characterization Study No. 27-26-JK44-92. May 1993*). Consequently, whole-building demolition debris is typically considered a non-hazardous waste with regard to lead under RCRA.

We believe the greatest impact of LBP and/or LCP may be on the contractor's salvage activities of railing, doorframes, etc., particularly activities that include cutting, grinding, sanding or scraping.

As previously noted, OSHA does not define lead paint based on content. Any detectable lead in paint makes it lead paint for purposes of complying with OSHA regulations to determine worker exposure.

- The contractor must conduct an initial exposure assessment of all workplaces and operations where lead or lead-containing material is being used, disturbed or removed to determine whether any employee may be exposed to lead at or above the action level.
- Personnel involved in LBP or LCP must be monitored and directed by a Competent Person who will determine appropriate compliance controls and procedures.
- The Lead in Construction standard's action level is 30 ug/m<sup>3</sup> calculated as an 8-hour time-weighted average.



In addition, on April 22, 2008, EPA issued a rule requiring the use of lead-safe practices and other actions aimed at preventing lead poisoning. Under the rule, beginning April 22, 2010, contractors performing abatement, renovation, repair and painting projects that disturb lead-based paint in homes, child-care facilities, and schools (K-12) built before 1978 must be certified by EPA and must follow specific lead-safe work practices to prevent lead contamination.

Persons performing lead-based paint (LBP) abatement activities must:

- Be certified
- Work for a Certified Lead Firm

Persons performing renovation work must:

- Be a certified Renovator
- Work for a Certified Renovation Firm

The EPA and the also regulate the LBP and LCP waste stream resulting from abatement and renovation activities. A potential lead waste material must be analyzed for toxicity using the Toxicity Characteristic Leachate Procedure (TCLP).

- If TCLP results from waste stream of paint chips, dust (including dust from floor refinishing operations), soil, and/or stripper sludge are less than 5 milligrams per liter (5 parts per million or ppm), the waste may usually go to a municipal solid waste (MSW) or construction debris (CD) landfill, depending on concentrations and landfill operator requirements.
- If greater than 5 milligrams per liter (5 ppm) must comply with Georgia State Rules for Hazardous Waste Management.

Please note that the means and methods necessary for LBP and/or LCP abatement or demolition, as well as worker protection and monitoring, are the sole responsibility of the contractor.

## 5.0 HAZARDOUS BUILDING MATERIAL INVENTORY

### 5.1 FIELD SERVICES

Mr. Curtis Moses, a NOVA Professional, performed the field work for the Hazardous Building Material Inventory (HBMI) for the Subject Property.

### 5.2 HAZARDOUS BUILDING MATERIAL INVENTORY

NOVA surveyed potential Hazardous Building Material (HBM) that was reasonably observed at the Subject Property. Potential HBM observed at the Subject Property include incandescent lighting, fluorescent lighting, ballasts, refrigerators, thermostats, High Intensity Discharge (HID) lighting, Light Emitting Diode (LED) Lighting, water fountains, exit signs, fire extinguishers, HVAC Units, microwaves, and miscellaneous facility cleaning/maintenance chemicals.

The materials identified are listed below:

#### SUMMARY OF HAZARDOUS BUILDING MATERIAL FINDINGS

MATERIAL / EQUIPMENT	LOCATION	ESTIMATED QUANTITY
4' Fluorescent Ballast	Throughout	31
4' Fluorescent Bulbs	Throughout	112
2' Fluorescent Ballast	Throughout	12
2' Fluorescent Bulbs	Throughout	48
LED Lighting	Show Room	58
Incandescent Lighting	Throughout	28
Stage Lighting	Theater	12
HID Lighting	Throughout	26
HVAC/AHU Units	Mechanical Rooms	5
Electronic Thermostats	Throughout	8
Exit Signs	Throughout	18
Refrigerators	Kitchens and Offices	3
Water Fountain Bank	Hallway	1
Fire Extinguishers	Throughout	6
Microwaves	Kitchens and Offices	2

*Additionally, small batteries and chemicals associated with cleaning/maintenance were observed throughout the facility.*

It should be noted that the above list is an approximation of what was observed by NOVA at the time of the site reconnaissance.

Based on the findings of random checks, the majority of ballasts at the Subject Property are labeled as “Non-PCB” containing.

Ballasts that are not labeled as Non-PCB containing should be assumed to be PCB-containing. Emergency exit signs and exit lighting units are assumed to contain nickel-cadmium batteries.

Electronic equipment such as cell phones, smoke detectors, laptop computers can contain batteries. Additional batteries are stored throughout the building and likely associated with the fire, emergency lighting, and security alarm systems. These batteries should be disposed in accordance with applicable regulations.

### 5.3 HAZARDOUS BUILDING MATERIAL INVENTORY CONCLUSIONS

NOVA surveyed potential Hazardous Building Material (HBM) that was reasonably observed at the Subject Property. Potential HBM observed at the Subject Property include incandescent lighting, fluorescent lighting, ballasts, refrigerators, thermostats, High Intensity Discharge (HID) lighting, Light Emitting Diode (LED) Lighting, water fountains, exit signs, fire extinguishers, HVAC Units, microwaves, and miscellaneous facility cleaning/maintenance chemicals.

The removal and proper disposal of the HBM identified within this report should be managed in accordance with the following rules:

- Solid Waste Management – Georgia Environmental Rule 391-3-4
- Hazardous Waste Management – Georgia Environmental Rule 391-3-11

Batteries: All batteries should be removed from equipment and transported for recycling in accordance with applicable regulations. Additional batteries likely associated with the security, emergency lighting, and fire warning systems should be disposed properly.

Air-Conditioning Units: Prior to disposal of units, refrigerant fluids should be removed from the equipment and transported for recycling or disposal in accordance with applicable regulations.

PCB-Containing Ballasts: Ballasts should be removed and disposed in accordance with 40 CFR 761.62 and all other applicable regulations.

Fluorescent and Incandescent Light Bulbs: Bulbs should be disposed in accordance with Resource Conservation & Recovery Act (RCRA):

- Subtitle C: Hazardous Waste (40 CFR Parts 261, 262), or if found to be non-hazardous;
- Subtitle D: Municipal & Other Non-Hazardous Waste (40 CFR 258).

Chemical Waste: All chemicals, including cleaning/maintenance chemicals, should be removed, transported and disposed in accordance with applicable regulations.

Fire Extinguishers: All chemical containing fire extinguishers should be removed, transported and disposed in accordance with applicable regulations.

High-Intensity-Discharge (HID) Lighting: Should be disposed in accordance with the federal Universal Waste Rule (see 40 CFR 273).

Electronic devices: Computer monitors, computer hard drives, printers, telephones, refrigerators, LED lighting, thermostats, and microwave ovens can contain chemicals such as lead, cadmium, chromium, mercury and copper. Caution should be used during the removal of these devices, and they should be disposed in accordance with applicable regulations.



## 6.0 FUNGI

### 6.1 FIELD AND LABORATORY SERVICES

Mr. Curtis Moses, a NOVA professional, performed the field work for the Limited Fungi Air Quality Assessment for the Subject Property.

Six (6) air-particle samples collected at the Subject Property were placed in the appropriate containers, and the containers were sealed and labeled with a unique identification number. The samples were subsequently transported (following routine industry practices and chain-of-custody procedures) to EMSL Analytical, LLC (EMSL) for analysis.

The air-particle samples were analyzed for fungi spores using analysis of fungal spores and particulates by optical microscopy (Methods MICRO-SOP-201, ASTM D7391). Copies of the complete laboratory reports and chain-of custodies are included in Appendix B of this report.

### 6.2 FUNGI IDENTIFIED AT THE SUBJECT PROPERTY

A total of six (6) air-particle samples were collected by NOVA and subsequently analyzed by EMSL Analytical, Inc. with the following findings:

- Fungi spores identified from the air-particle sample readings on the interior of the Subject Property include Ascospores, Aspergillus/Penicillium, and Basidiospores, Cladosporium, and Triadelphia.
- Fungi spores identified from the air-particle sample readings on the exterior of the Subject Property include Alternaria, Ascospores, Aspergillus/Penicillium, Basidiospores, Bipolaris, Blakeslea/Choanephora, Cercospora, Cladosporium, Curvularia, Fusarium, Ganoderma, Myxomycetes, Oidium, Pestalotia, Pithomyces, and Torula.
- Fungi spores identified on the interior of the Subject Property that were not identified on the exterior of the Subject Property include Triadelphia.

### 6.3 DISCUSSION

Six (6) total air-particle samples were obtained by NOVA and subsequently analyzed by EMSL Analytical, Inc. with the following interior and exterior sample findings:

**Alternaria:** A very common allergen with a mediated response. It is often found in carpets, textiles, and on horizontal surfaces in building interiors.

It is also often found on window frames. Outdoors it may be isolated from samples of soil, seeds, and plants. It is commonly found in outdoor samples. It can be associated with Type I allergies (hay fever, asthma).

**Ascospores:** Ascospores belong to members of the Phylum Ascomycota, which encompasses a plethora of genera worldwide. Forcible ejection or passive release is commonly disseminated by wind or insects.

**Aspergillus:** Aspergillus spp. in indoor air is often higher than outdoors at any given time. The amount of spores in the air is significantly increased when cleaning is carried out mechanically, for example, when carpets are vacuum cleaned. Species of Aspergillus have been isolated from damp walls, wallpaper, PVC/paper wall covering, gypsum board, floor, carpet and mattress dust, upholstered-furniture dust, acrylic paint, UFFI, leather, HVAC insulations, filters and fans, humidifier water, shoes, leather, bird droppings, potted plant soil, plastic, and decomposing plant matter.

**Basidiospores:** Basidiospores belong to the members of the Phylum Basidiomycota, which includes mushrooms, shelf fungi, rusts, and smuts. Natural Habitat includes Forest floors, lawns, and plants (saprobes or pathogens depending on genus).

**Bipolaris:** Plant pathogen occurring in many plants, causing leaf rots, crown rot, and root rot on warm season turf grasses. It can be associated with allergic and chronic invasive sinusitis.

**Blakeslea/Choanephora:** Species comprise a very small proportion of the fungal biota and may be more common in the southeastern areas of the United States. Two species are placed by some taxonomists into Blakeslea. No information is available regarding health effects, or toxicity. Allergenicity has not been studied. Rarely found but may be identified on surfaces by tape lifts, tease mounts from bulk samples, and in air by culturable (Andersen) and spore trap samples.

**Cercospora:** Cercosporas natural habitat a parasite on higher plants, commonly causes leaf spot diseases. Mode of dissemination is irrigation water, insects, and rain wind. Potential for opportunistic pathogens unknown.

**Cladosporium:** An exceedingly common organism, found on dead herbaceous and woody plants, textiles, rubber, paper, and foodstuffs of all kinds. Indoors, it is found in floor, carpet, and mattress dust, damp acrylic painted walls, wallpaper, HVAC insulation, filters and fans. Cladosporium is very common on wet building material (e.g., gypsum board, acrylic painted walls, wood, wallpaper, carpet and mattress dust, HVAC fans, and wet insulation in mechanical cooling units). It is a condition for production of Stachybotrys toxins. Surfaces exposed to air with a relative humidity above 55% and subjected to temperature fluctuations are ideal for toxin production.

**Curvularia:** Contaminant. Opportunistic pathogen. Found in air, soil, and textiles. Curvularium can cause infections in eyes and sinuses.

**Fusarium:** It is widely distributed in soil and associated with plants. Most species are harmless saprobes, and are relatively abundant members of the soil microbial community.

Some species produce mycotoxins in cereal crops that can affect human and animal health if they enter the food chain. The main toxins produced by these *Fusarium* species are fumonisins and trichothecenes.

**Ganoderma:** A genus of polypore mushrooms that grow on wood, and include about eighty (80) species, many from tropical regions. Because of their extensive use in traditional Asian medicines, and their potential in bioremediation, they are a very important genus economically. Ganoderma can be differentiated from other polypores because they have a double-walled basidiospore.

**Myxomycetes:** Commonly found on decaying logs, stumps and dead leaves (particularly in forested regions). These organisms have both dry and wet spores. Wind disperses the dry fruiting body spores, whereas the wet amoebic phase is motile. Type I allergies (hay fever, asthma). Occasionally found indoors. They are occasionally seen and identified on tape lifts. Distinctive especially when fragments of the lacy fruiting bodies are present.

**Oidium:** Natural habitat includes plant varieties causing mildew disease. Suitable substrates in the indoor environment include houseplants. Allergenic potential unknown.

**Penicillium:** Penicillium species are very common fungi. About 200 species have been described. They are commonly called the blue or green fungi because they produce large quantities of greenish, bluish or yellowish spores which give them their characteristic colors. Spores of Penicillium are found in the air and soil. Most Penicillium species are active producers of toxins. Penicillium chrysogenum is the most common Penicillium species in indoor environments. It is widespread and has a wide range of habitats. In indoor environments, it is extremely common on damp building materials, walls and wallpaper, floor, carpet mattress, and upholstered furniture dust. It produces a number of toxins of moderate toxicity. It is allergenic and can infect immuno-compromised patients.

**Pestalotia:** A large genus of melan-coniaceous fungi having black acervuli with 3-or more celled spores, the two (2) terminal cells being usually hyaline and the apical one provided with one (1) or more hyaline appendages. Over 170 species have been described, some of which are parasitic, producing diseases of cultivated plants. *P. Guepini* is very destructive to leaves of the tea-plant.

**Pithomyces:** Occurring in paper, *Pithomyces* require high levels of water for germination.

**Torula:** Found in leaves, plant roots, plant litter, soil and wood. Type I allergies (hay fever, asthma). Some species cause stains in hardwoods.

**Triadelphia:** *Triadelphia* is a saprophyte that usually grows on dead wood materials. Effects on humans are not known.

## 6.4 RECOMMENDATIONS AND CONCLUSIONS

Currently there are no set clearance levels regarding fungi. Professional inspectors frequently compare the types and levels of fungal organisms detected from the interior of a space to the exterior of a space, as a way of interpreting microbiological results. The qualitative diversity of airborne fungi outdoors should be similar to that measured indoors in the absence of fungi contamination.

Based on the results of the laboratory analytical data obtained during the Limited Fungi Air Quality Assessment sampling program, it is NOVA's recommendation that best housekeeping and cleaning practices should be continued moving forward in an effort to prevent possible future settled fungi growth and/or accumulation. NOVA also recommends that air filters located throughout the Subject Property should be changed per the manufactures recommended specifications.

Please note that the services provided by NOVA were a limited assessment of current conditions at specific locations identified by the Client during NOVA's site visit. It is possible that fungi may be present at additional locations that may not become apparent until encountered by renovation and/or demolition activities.

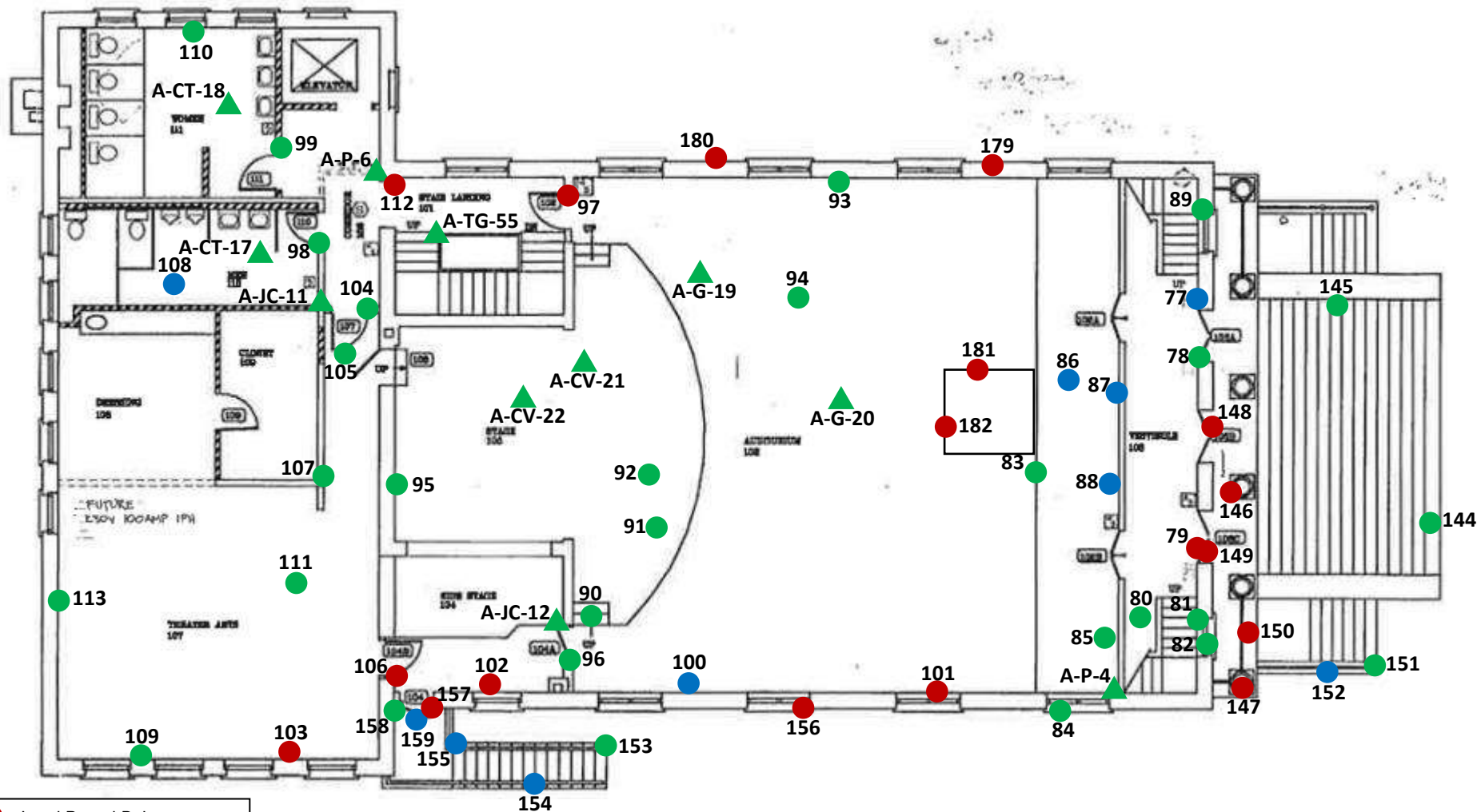
In addition, fungi conditions can change with time and may be different in the future. This variability in conditions is an inherent owner-assumed risk in fungi assessments.



APPENDIX A

SAMPLE LOCATION PLANS  
&  
SITE PHOTOGRAPHS



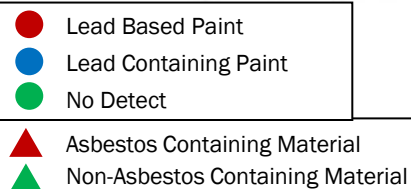


- Lead Based Paint
- Lead Containing Paint
- No Detect
- ▲ Asbestos Containing Material
- ▲ Non-Asbestos Containing Material

**SAMPLE LOCATION PLAN**  
1<sup>st</sup> Floor



**CHEROKEE COUNTY BOARD OF COMMISSIONERS**  
Cherokee County Arts Center  
Canton, Cherokee County, Georgia  
NOVA Project Number 3022152



**NOVA**  
PROFESSIONAL | PRACTICAL | PROVEN

**CHEROKEE COUNTY BOARD OF COMMISSIONERS**  
Cherokee County Arts Center  
Canton, Cherokee County, Georgia  
**NOVA Project Number 3022152**



**CHEROKEE ARTS CENTER**  
Canton, Cherokee County, Georgia  
NOVA Project Number 3022152



**Photograph 1:** Typical view of the 4' Fluorescent light ballasts located at the Subject Property.



**Photograph 2:** Additional view of the 4' fluorescent light ballasts located at the Subject Property.

**CHEROKEE ARTS CENTER**  
Canton, Cherokee County, Georgia  
NOVA Project Number 3022152



**Photograph 3:** Typical view of the 2' Fluorescent light ballasts located at the Subject Property.

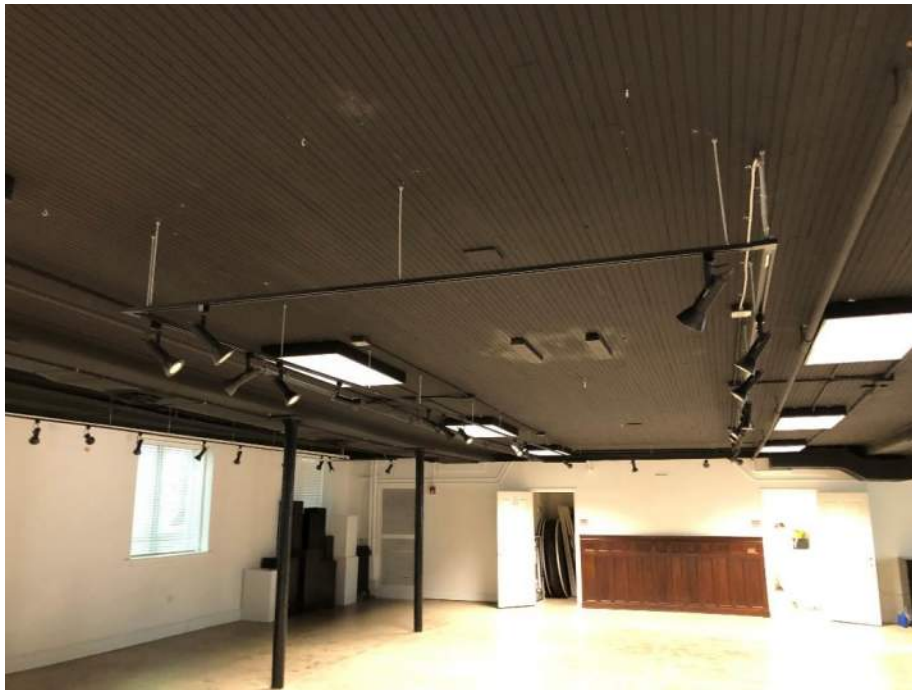


**Photograph 4:** View of the incandescent lighting located at the Subject Property.

**CHEROKEE ARTS CENTER**  
Canton, Cherokee County, Georgia  
NOVA Project Number 3022152



**Photograph 5:** View of the stage lighting located at the Subject Property.



**Photograph 6:** View of an LED lighting located at the Subject Property.

**CHEROKEE ARTS CENTER**  
Canton, Cherokee County, Georgia  
NOVA Project Number 3022152



**Photograph 7:** Typical view of an exit sign located at the Subject Property.



**Photograph 8:** Typical view of a refrigerator located at the Subject Property.



**CHEROKEE ARTS CENTER**  
Canton, Cherokee County, Georgia  
NOVA Project Number 3022152

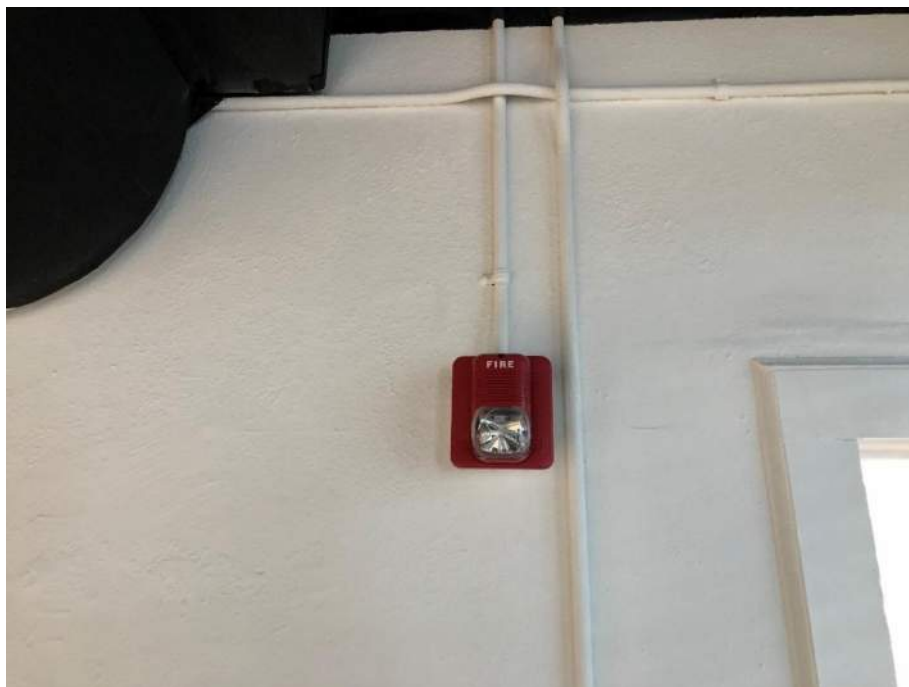


**Photograph 9:** Typical view of a water fountain unit located at the Subject Property.



**Photograph 10:** Typical view of a fire extinguisher located at the Subject Property.

**CHEROKEE ARTS CENTER**  
Canton, Cherokee County, Georgia  
NOVA Project Number 3022152



**Photograph 11:** Typical view of the HID lighting located at the Subject Property.



**Photograph 12:** Typical view of an electronic thermostat located at the Subject Property.

**CHEROKEE ARTS CENTER**  
Canton, Cherokee County, Georgia  
NOVA Project Number 3022152



**Photograph 13:** Typical view of a microwave located at the Subject Property.



**Photograph 14:** Typical view of an HVAC unit located at the Subject Property.

## APPENDIX B

### LABORATORY ANALYTICAL DATA & XRF DATA





# EMSL Analytical, Inc.

2205 Corporate Plaza Parkway SE, Suite 200 Smyrna, GA 30080

Tel/Fax: (770) 956-9150 / (770) 956-9181

<http://www.EMSL.com> / [atlantalab@emsl.com](mailto:atlantalab@emsl.com)

EMSL Order: 072205525

Customer ID: NOVA30

Customer PO:

Project ID:

Attention: Curtis Moses

Nova Engineering & Environmental, Inc.

3900 Kennesaw 75 Parkway

Suite 100

Kennesaw, GA 30144

Project: CHAC

Phone: (678) 982-5576

Fax: (770) 425-1113

Received Date: 08/10/2022 11:00 AM

Analysis Date: 08/12/2022 - 08/16/2022

Collected Date:

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
A-P-1-Skim Coat 072205525-0001	Plaster - Lower Level RR	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-P-1-Base Coat 072205525-0001A	Plaster - Lower Level RR	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-P-2-Skim Coat 072205525-0002	Plaster - Lower Level - Janitors Closet	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-P-2-Base Coat 072205525-0002A	Plaster - Lower Level - Janitors Closet	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-P-3-Skim Coat 072205525-0003	Plaster - 3rd Fl Center Class	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-P-3-Base Coat 072205525-0003A	Plaster - 3rd Fl Center Class	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-P-4 072205525-0004	Plaster - Theater	Various Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-P-5-Skim Coat 072205525-0005	Plaster - 3rd Fl. Class RR	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-P-5-Base Coat 072205525-0005A	Plaster - 3rd Fl. Class RR	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-P-6 072205525-0006	Plaster - 2nd Fl. Hall	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-P-7-Skim Coat 072205525-0007	Plaster - 3rd Fl. Mech.	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-P-7-Base Coat 072205525-0007A	Plaster - 3rd Fl. Mech.	Tan Fibrous Homogeneous	<1% Hair	100% Non-fibrous (Other)	None Detected
A-JC-8-Joint Compound 072205525-0008	Joint Compound - Lower Level Elec. Closet	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-JC-8-Tape 072205525-0008A	Joint Compound - Lower Level Elec. Closet	White Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
A-JC-9-Joint Compound 072205525-0009	Joint Compound - Lower Level Kitchen	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-JC-9-Drywall 072205525-0009A	Joint Compound - Lower Level Kitchen	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 08/16/2022 16:48:53



# EMSL Analytical, Inc.

2205 Corporate Plaza Parkway SE, Suite 200 Smyrna, GA 30080

Tel/Fax: (770) 956-9150 / (770) 956-9181

<http://www.EMSL.com> / [atlantalab@emsl.com](mailto:atlantalab@emsl.com)

EMSL Order: 072205525

Customer ID: NOVA30

Customer PO:

Project ID:

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
A-JC-9-Tape 072205525-0009B	Joint Compound - Lower Level Kitchen	White Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
A-JC-10 072205525-0010	Joint Compound - Lower Level Storage	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-JC-11-Joint Compound 072205525-0011	Joint Compound - 2nd Floor - Hall	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-JC-11-Drywall 072205525-0011A	Joint Compound - 2nd Floor - Hall	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-JC-12 072205525-0012	Joint Compound - 2nd Floor - Stage	Various Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-JC-13 072205525-0013	Joint Compound - 2nd Floor - Art Class	Various Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-JC-14 072205525-0014	Joint Compound - 3rd Floor - Mech.	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-GM-15 072205525-0015	Grout/Mortar - Mechanical Room	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-GM-16 072205525-0016	Grout/Mortar - 3rd Floor Hall	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-CT-17 072205525-0017	2X2 Ceiling Tile - 2nd Fl. RR	Gray Fibrous Homogeneous	30% Min. Wool	70% Non-fibrous (Other)	None Detected
A-CT-18 072205525-0018	2X2 Ceiling Tile - 2nd Fl. RR	Various Fibrous Homogeneous	20% Cellulose 35% Min. Wool	45% Non-fibrous (Other)	None Detected
A-G-19-Leveler 072205525-0019	Glue - Carpet - Theater	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-G-19-Glue 072205525-0019A	Glue - Carpet - Theater	Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-G-20-Leveler 072205525-0020	Glue - Carpet - Theater	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-G-20-Glue 072205525-0020A	Glue - Carpet - Theater	Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-CV-21 072205525-0021	Theater Curtain - Front	Green Fibrous Homogeneous	80% Synthetic	20% Non-fibrous (Other)	None Detected
A-CV-22 072205525-0022	Theater Curtain - Rear	Black Fibrous Homogeneous	80% Synthetic	20% Non-fibrous (Other)	None Detected
A-FT-23-Floor Tile 072205525-0023	12X12 - Green/White - Lower Kitchen	Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 08/16/2022 16:48:53



# EMSL Analytical, Inc.

2205 Corporate Plaza Parkway SE, Suite 200 Smyrna, GA 30080

Tel/Fax: (770) 956-9150 / (770) 956-9181

<http://www.EMSL.com> / [atlantalab@emsl.com](mailto:atlantalab@emsl.com)

EMSL Order: 072205525

Customer ID: NOVA30

Customer PO:

Project ID:

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
A-FT-23-Mastic 072205525-0023A	12X12 - Green/White - Lower Kitchen	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-FT-23-White Layer 072205525-0023B	12X12 - Green/White - Lower Kitchen	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-FT-24-Floor Tile 072205525-0024	12X12 - Green/White - Lower Kitchen	Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-FT-24-Mastic 072205525-0024A	12X12 - Green/White - Lower Kitchen	Clear Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-FT-25-Floor Tile 072205525-0025	12X12 - Green/Tan - Lower RR	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-FT-25-Mastic 072205525-0025A	12X12 - Green/Tan - Lower RR	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-FT-25-Leveler 072205525-0025B	12X12 - Green/Tan - Lower RR	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-FT-26-Floor Tile 072205525-0026	12X12 - Green/Tan - 3rd Fl. RR	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-FT-26-Mastic 072205525-0026A	12X12 - Green/Tan - 3rd Fl. RR	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-CM-27-Wrap 072205525-0027	Cement On HVAC Unit - Lower Mech.	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-CM-27-Mastic 072205525-0027A	Cement On HVAC Unit - Lower Mech.	White Non-Fibrous Homogeneous	2% Synthetic	98% Non-fibrous (Other)	None Detected
A-CM-28-Wrap 072205525-0028	Cement On HVAC Unit - Lower Mech.	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-CM-28-Mastic 072205525-0028A	Cement On HVAC Unit - Lower Mech.	White Non-Fibrous Homogeneous	2% Synthetic	98% Non-fibrous (Other)	None Detected
A-W-29 072205525-0029	Wallboard - Mech - Lower At Door	Various Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
A-W-30 072205525-0030	Wallboard - Mech - 3rd Fl.	Various Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
A-SM-31 072205525-0031	Sink Mastic - Classroom	Gray Non-Fibrous Homogeneous	20% Synthetic	80% Non-fibrous (Other)	None Detected
A-SM-32 072205525-0032	Sink Mastic - Art Room	Gray Non-Fibrous Homogeneous	20% Synthetic	80% Non-fibrous (Other)	None Detected
A-CB-33 072205525-0033	Covebase Glue - 3rd Fl. RR	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-CB-34 072205525-0034	Covebase Glue - 3rd Fl. RR	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 08/16/2022 16:48:53



# EMSL Analytical, Inc.

2205 Corporate Plaza Parkway SE, Suite 200 Smyrna, GA 30080

Tel/Fax: (770) 956-9150 / (770) 956-9181

<http://www.EMSL.com> / [atlantalab@emsl.com](mailto:atlantalab@emsl.com)

EMSL Order: 072205525

Customer ID: NOVA30

Customer PO:

Project ID:

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
A-CM-35-Wrap 072205525-0035	Cement On HVAC - 3rd Fl. Mech	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-CM-35-Mastic 072205525-0035A	Cement On HVAC - 3rd Fl. Mech	Gray Non-Fibrous Homogeneous	2% Synthetic	98% Non-fibrous (Other)	None Detected
A-CM-35-Adhesive 072205525-0035B	Cement On HVAC - 3rd Fl. Mech	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-CM-36-Mastic 072205525-0036	Cement On Duct System - Attic	Gray Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
A-CM-36-Wrap 1 072205525-0036A	Cement On Duct System - Attic	Silver Fibrous Homogeneous	5% Glass	95% Non-fibrous (Other)	None Detected
A-CM-36-Wrap 2 072205525-0036B	Cement On Duct System - Attic	Brown Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
A-CM-37-Mastic 072205525-0037	Cement On Duct System - Attic	Gray Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
A-CM-37-Wrap 1 072205525-0037A	Cement On Duct System - Attic	Silver Fibrous Homogeneous	5% Glass	95% Non-fibrous (Other)	None Detected
A-CM-37-Wrap 2 072205525-0037B	Cement On Duct System - Attic	Brown Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
A-TSI-38-Wrap 072205525-0038	TSI On Duct System - Attic	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-TSI-38-Adhesive 072205525-0038A	TSI On Duct System - Attic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-TSI-39-Wrap 072205525-0039	TSI On Duct System - Attic	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-TSI-39-Adhesive 072205525-0039A	TSI On Duct System - Attic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-TSI-40-Wrap 072205525-0040	TSI On Duct System - Attic	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-TSI-40-Adhesive 072205525-0040A	TSI On Duct System - Attic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-TSI-41-Tape 072205525-0041	Tape On Duct Connections - Attic	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-TSI-41-Adhesive 072205525-0041A	Tape On Duct Connections - Attic	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-TSI-41-Wrap 072205525-0041B	Tape On Duct Connections - Attic	Gray Fibrous Homogeneous	80% Synthetic	20% Non-fibrous (Other)	None Detected
A-TSI-42-Tape 072205525-0042	Tape On Duct Connections - Attic	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 08/16/2022 16:48:53





# EMSL Analytical, Inc.

2205 Corporate Plaza Parkway SE, Suite 200 Smyrna, GA 30080

Tel/Fax: (770) 956-9150 / (770) 956-9181

<http://www.EMSL.com> / [atlantalab@emsl.com](mailto:atlantalab@emsl.com)

EMSL Order: 072205525

Customer ID: NOVA30

Customer PO:

Project ID:

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
A-TSI-42-Adhesive 072205525-0042A	Tape On Duct Connections - Attic	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-TSI-42-Wrap 072205525-0042B	Tape On Duct Connections - Attic	Gray Fibrous Homogeneous	80% Synthetic	20% Non-fibrous (Other)	None Detected
A-TSI-43-Tape 072205525-0043	Tape On Duct Connections - Attic	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-TSI-43-Adhesive 072205525-0043A	Tape On Duct Connections - Attic	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-TSI-43-Wrap 072205525-0043B	Tape On Duct Connections - Attic	Gray Fibrous Homogeneous	80% Synthetic	20% Non-fibrous (Other)	None Detected
A-V-44 072205525-0044	Vibration Damper - 3rd Fl. HVAC	Gray Fibrous Homogeneous	20% Synthetic	20% Non-fibrous (Other)	60% Chrysotile
A-V-45 072205525-0045	Vibration Damper - 3rd Fl. HVAC	Gray Fibrous Homogeneous	20% Synthetic	20% Non-fibrous (Other)	60% Chrysotile
A-GL-46 072205525-0046	Glazing - Rear Window	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-GM-47 072205525-0047	Grout/Mortar - Front Lot Side Wall	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-GL-48 072205525-0048	Glazing - Side Window	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-C-49 072205525-0049	Caulking - Frame - Front (Lot Entry)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-C-50 072205525-0050	Caulking - Frame - Rear Exit	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-C-51 072205525-0051	Caulking - Frame - Side Window	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
A-CT-52 072205525-0052	Ceiling Tile 2X2 (Dot) - Lower RR	Gray Fibrous Homogeneous	60% Cellulose 5% Min. Wool	35% Non-fibrous (Other)	None Detected
A-CT-53 072205525-0053	Ceiling Tile 2X2 (Dot) - Lower RR	Gray Fibrous Homogeneous	60% Cellulose 5% Min. Wool	35% Non-fibrous (Other)	None Detected
A-TG-54-White Layer 072205525-0054	Tread Glue - Stairwell	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-TG-54-Brown Layer 072205525-0054A	Tread Glue - Stairwell	Brown Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
A-TG-55-White Layer 072205525-0055	Tread Glue - Stairwell	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-TG-55-Brown Layer 072205525-0055A	Tread Glue - Stairwell	Brown Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected

Initial report from: 08/16/2022 16:48:53



## EMSL Analytical, Inc.

2205 Corporate Plaza Parkway SE, Suite 200 Smyrna, GA 30080

Tel/Fax: (770) 956-9150 / (770) 956-9181

<http://www.EMSL.com> / [atlantalab@emsl.com](mailto:atlantalab@emsl.com)

EMSL Order: 072205525

Customer ID: NOVA30

Customer PO:

Project ID:

Analyst(s)

Anthony Sanaie (81)

Violedah Richardson (10)

Violedah Richardson, Laboratory Manager  
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc Smyrna, GA NVLAP Lab Code 101048-1

Initial report from: 08/16/2022 16:48:53



## Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

072205525

EMSL Analytical, Inc.  
2205 Corporate Plaza Pkwy SE  
Suite 200  
Smyrna, GA 30080  
PHONE: (770) 956-9150  
EMAIL: [astantlab@emsl.com](mailto:astantlab@emsl.com)

EMSL ANALYTICAL, INC.  
TESTING LABS • PRODUCTS • TRAINING

Customer Information	Customer ID:	NOVA30		Billing ID:		
	Company Name:	NOVA Eng.		Company Name:		
	Contact Name:	C. MASES		Billing Contact:		
	Street Address:	3900 Kennesaw 75 Pkwy		Street Address:		
	City, State, Zip:	Kennesaw, GA, 30144	Country:	City, State, Zip:		Country:
	Phone:			Phone:		
	Email(s) for Report:	CMASES@USA.NOVA.com		Email(s) for Invoice:		

Project Name/No:		CHAC		Purchase Order:	
EMSL LIMS Project ID:			US State where samples collected:	State of Connecticut (CT) must select project location:	
(If applicable, EMSL will provide)				<input type="checkbox"/> Commercial (Taxable)	<input type="checkbox"/> Residential (Non-Taxable)
Sampled By Name:	C. MASES	Sampled By Signature:			
				No. of Samples in Shipment:	

Turn-Around-Time (TAT)									
<input type="checkbox"/> 3 Hour	<input type="checkbox"/> 4-5 Hour	<input type="checkbox"/> 6 Hour	<input type="checkbox"/> 24 Hour	<input type="checkbox"/> 32 Hour	<input type="checkbox"/> 48 Hour	<input type="checkbox"/> 72 Hour	<input type="checkbox"/> 96 Hour	<input checked="" type="checkbox"/> 1 Week	<input type="checkbox"/> 2 Week
TEM Air 3-6 Hour, please call ahead to schedule. 32 Hour TAT available for select tests only; samples must be submitted by 11:30 am.									

<b>PCM Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> NIOSH 7400 w/ 8hr. TWA <b>PLM - Bulk (reporting limit)</b> <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) <input type="checkbox"/> POINT COUNT <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) POINT COUNT w/ GRAVIMETRIC <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) <input type="checkbox"/> NIOSH 9002 (<1%) <input type="checkbox"/> NYS 198.1 (Friable - NY) <input type="checkbox"/> NYS 198.6 NOB (Non-Friable - NY) <input type="checkbox"/> NYS 198.8 (Vermiculite SM-V)			<b>Test Selection</b> <b>TEM - Air</b> <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312 <b>TEM - Bulk</b> <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (Non-Friable - NY) <input type="checkbox"/> TEM EPA 600/R-93/116 w/ Milling Prep (0.1%) <b>Other Test (please specify)</b>			<b>TEM - Settled Dust</b> <input type="checkbox"/> Microvac - ASTM D5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Qualitative via Filtration Prep <input type="checkbox"/> Qualitative via Drop Mount Prep <b>Soil - Rock - Vermiculite (reporting limit)*</b> <input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (<0.25%) <input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (<0.1%) <input type="checkbox"/> TEM EPA 600/R-93/116 with milling prep (<0.1%) <input type="checkbox"/> TEM Qualitative via Filtration Prep <input type="checkbox"/> TEM Qualitative via Drop Mount Prep		
---	--	--	--	--	--	--	--	--

\*Please call with your project-specific requirements.

<input type="checkbox"/> Positive Stop - Clearly Identified Homogeneous Areas (HA)	Filter Pore Size (Air Samples)	<input type="checkbox"/> 0.8um	<input type="checkbox"/> 0.45um
--	--------------------------------	--------------------------------	---------------------------------

Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
A-P-1	Plaster - Lower level RR		
A-P-2	- Lower level - Sanitators closet		
A-P-3	- 3rd Fl. Center Class		
A-P-4	- Theater		
A-P-5	- 3rd Fl. Class RR		
A-P-6	- 2nd Fl. Hall		
A-P-7	- 3rd Fl. Mech.		

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Method of Shipment:	Client	Sample Condition Upon Receipt:	
Relinquished by:	<i>[Signature]</i>	Received by:	<i>[Signature]</i>
Date/Time:	8/10/22	Date/Time:	8-10-22 11:00 am
Relinquished by:	<i>[Signature]</i>	Received by:	<i>[Signature]</i>
Date/Time:		Date/Time:	

Controlled Document - COC-05 Asbestos R15 4/23/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL ANALYTICAL, INC.  
TESTING LABS • PRODUCTS • TRAINING

# Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.  
2205 Corporate Plaza Pkwy SE  
Suite 200  
Smyrna, GA 30080  
PHONE: (770) 956-9150  
EMAIL: atlant@emsl.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
A-SC-8	Joint Compound - Lower level Elec. Closet		
A-SC-9	- Lower level Kitchen		
A-SC-10	- Lower level <del>Hall</del> storage		
A-SC-11	- 2nd Floor - Hall		
A-SC-12	- 2nd Floor - Stage		
A-SC-13	- 3rd Floor - Art class		
A-SC-14	↓ - 3rd Floor - Mech.		
A-GM-15	Grout/Mortar - mechanical room		
A-GM-16	↓ - 3rd Floor Hall		
A-C7-17	2x2 Ceiling Tile - 2nd Fl. RR		
A-C7-18	↓		
A-G-19	Glue - Carpet - Theater		
A-G-20	↓ - ↓ - Lower Storage		
A-CU-21	Theater Curtain - Front		
A-CU-22	↓ - Rear		
A-F7-23	12x12-Green/White - Lower Kitchen		
A-F7-24	↓		
A-F7-25	↓ Tan - Lower RR		
A-F7-26	↓ ↓ - 3rd Fl. RR		
A-CM-27	Cement on HVAC unit - Lower mech.		
A-CM-28	↓		
A-W-29	Wallboard - Mech - Lower at door		
A-W-30	↓ - Mech - 3rd Fl.		
A-Sm-31	Sink Mastic - Classroom		
A-Sm-32	↓ - Art room		

Method of Shipment:

Sample Condition Upon Receipt:

Relinquished by:

Date/Time:

Received by:

Date/Time:

Relinquished by:

Date/Time:

Received by:

Date/Time:

Controlled Document - COC-95 Asbestos R15 4/23/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.





EMSL ANALYTICAL, INC.  
TESTING LABS • PRODUCTS • TRAINING

# Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.

2205 Corporate Plaza Pkwy SE

Suite 200

Smyrna, GA 30080

PHONE: (770) 956-9150

EMAIL: atlantalab@emsl.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
A-CB-33	Carbase Glue - 3rd Fl. RR		
A-CB-34	↓ - ↓		
A-CM-35	Cement on HVAC - 3rd Fl. Mech.		
A-CM-36	Cement on duct system - Attic		
A-CM-37	↓ - ↓		
A-TSI-38	TST on duct system - Attic		
A-TSI-39	↓ ↓ ↓		
A-TSI-40	↓ ↓ ↓		
A-TSI-41	Tape on duct connections - Attic		
A-TSI-42	↓ ↓ ↓		
A-TSI-43	↓ ↓ ↓		
A-U-44	Vibration Damper - 3rd Fl. HVAC		
A-U-45	↓ - ↓		
A-GL-46	Glazing - Rear window		
A-GM-47	Grout/mortar - Front Lot Side wall		
A-GL-48	Glazing Side window		
A-C-49	Caulking - Frame - Front (Lot Entry)		
A-C-50	C ↓ - Rear exit		
A-C-51	↓ ↓ - Side window		
A-C-52	Ceiling Tile 2x2 (Dot) - Lower RR		
A-C-53	↓ ↓		
A-TG-54	Tread Glue - Stairwell		
A-TG-55	↓ ↓ ↓		

Method of Shipment:

Sample Condition Upon Receipt:

Relinquished by:

Date/Time:

Received by:

Date/Time

Relinquished by:

Date/Time:

Received by:

Date/Time

Controlled Document - COC-05 Asbestos R15 4/23/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



# EMSL Analytical, Inc.

2205 Corporate Plaza Parkway SE, Suite 200 Smyrna, GA 30080

Tel/Fax: (770) 956-9150 / (770) 956-9181

<http://www.EMSL.com / atlantalab@emsl.com>

EMSL Order: 072205479

Customer ID: NOVA30

Customer PO:

Project ID:

Attention: Curtis Moses

Nova Engineering & Environmental, Inc.

3900 Kennesaw 75 Parkway

Suite 100

Kennesaw, GA 30144

Project: CHAC

Phone: (678) 982-5576

Fax: (770) 425-1113

Collected Date:

Received Date: 08/10/2022 11:00 AM

Analyzed Date: 08/15/2022

## Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	072205479-0001			072205479-0002			072205479-0003		
Client Sample ID:	A1			A2			A3		
Volume (L):	75			75			75		
Sample Location:	Basement RR 1			Theater 2			Mech 1		
Spore Types	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	1*	10*	20	-	-	-	-	-	-
Aspergillus/Penicillium	-	-	-	-	-	-	1	40	50
Basidiospores	1	40	80	-	-	-	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	1	40	100	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoecum	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Blakeslea/Choanephora	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Oidium++	-	-	-	-	-	-	-	-	-
Pestalotia++	-	-	-	-	-	-	-	-	-
Torula++	-	-	-	-	-	-	-	-	-
Triadelphia	-	-	-	-	-	-	1	40	50
<b>Total Fungi</b>	<b>2</b>	<b>50</b>	<b>100</b>	<b>1</b>	<b>40</b>	<b>100</b>	<b>2</b>	<b>80</b>	<b>100</b>
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Daoxin Li, PH.D, Microbiology Laboratory Manager  
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. Skin & Fibrous ratings: 1 (1-25%), 2 (26-50%), 3 (51-75%), 4 (76-100%) of the background particles.

Samples analyzed by EMSL Analytical, Inc Smyrna, GA AIHA-LAP, LLC-EMLAP Accredited #100662

Initial report from: 08/15/2022 03:46 PM

For information on the fungi listed in this report, please visit the Resources section at [www.emsl.com](http://www.emsl.com)



# EMSL Analytical, Inc.

2205 Corporate Plaza Parkway SE, Suite 200 Smyrna, GA 30080

Tel/Fax: (770) 956-9150 / (770) 956-9181

<http://www.EMSL.com / atlantalab@emsl.com>

EMSL Order: 072205479

Customer ID: NOVA30

Customer PO:

Project ID:

Attention: Curtis Moses

Nova Engineering & Environmental, Inc.

3900 Kennesaw 75 Parkway

Suite 100

Kennesaw, GA 30144

Project: CHAC

Phone: (678) 982-5576

Fax: (770) 425-1113

Collected Date:

Received Date: 08/10/2022 11:00 AM

Analyzed Date: 08/15/2022

## Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	072205479-0004			072205479-0005			072205479-0006		
Client Sample ID:	A4			A5			A6		
Volume (L):	75			75			75		
Sample Location:	Classroom 3			Exterior - Rear			Exterior - Lot		
Spore Types	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	2	90	1.7
Ascospores	1	40	100	14	620	14.1	28	1200	22.1
Aspergillus/Penicillium	-	-	-	11	490	11.1	6	300	5.5
Basidiospores	-	-	-	48	2100	47.7	18	800	14.7
Bipolaris++	-	-	-	-	-	-	1	40	0.7
Chaetomium++	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	11	490	11.1	56	2500	46
Curvularia	-	-	-	1	40	0.9	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	1	40	0.7
Ganoderma	-	-	-	1	40	0.9	1	40	0.7
Myxomycetes++	-	-	-	4	200	4.5	6	300	5.5
Pithomyces++	-	-	-	1	40	0.9	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Blakeslea/Choanephora	-	-	-	3	100	2.3	-	-	-
Cercospora++	-	-	-	-	-	-	1	40	0.7
Oidium++	-	-	-	1	40	0.9	-	-	-
Pestalotia++	-	-	-	1	40	0.9	2	90	1.7
Torula++	-	-	-	4	200	4.5	-	-	-
Triadelphia	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>1</b>	<b>40</b>	<b>100</b>	<b>100</b>	<b>4400</b>	<b>100</b>	<b>122</b>	<b>5440</b>	<b>100</b>
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Daoxin Li, PH.D, Microbiology Laboratory Manager  
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. Skin & Fibrous ratings: 1 (1-25%), 2 (26-50%), 3 (51-75%), 4 (76-100%) of the background particles.

Samples analyzed by EMSL Analytical, Inc Smyrna, GA AIHA-LAP, LLC-EMLAP Accredited #100662

Initial report from: 08/15/2022 03:46 PM

For information on the fungi listed in this report, please visit the Resources section at [www.emsl.com](http://www.emsl.com)



**EMSL ANALYTICAL, INC.**  
TESTING LABS • PRODUCTS • TRAINING

# Microbiology Chain of Custody Form

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.  
2205 Corporate Plaza Pkwy SE, Suite 200  
Smyrna, GA 30080

072205479

PHONE: (770) 956-9150

EMAIL: atlantalab@EMSL.com

If Bill-To is the same as Report-To leave this section blank. Third-party billing requires written authorization.

Customer Information	Customer ID:	NOVA Eng.		Billing Information	Billing ID:	NOVA30	
	Company Name:	NOVA			Company Name:		
	Contact Name:	C. MOSES			Billing Contact:		
	Street Address:	3900 Kennesaw 75 Hwy			Street Address:		
	City, State, Zip:	Kennesaw, GA, 30144	Country:		City, State, Zip:		Country:
	Phone:				Phone:		
	Email(s) for Report:	CMOSESG@USANOA.COM			Email(s) for Invoice:		

Project Information			
Project Name/No:	CHAC		Purchase Order:
EMSL LIMS Project ID: (If applicable, EMSL will provide)	State Samples Collected:	Zip Code Samples Collected:	State of Connecticut (CT) must select project location: <input type="checkbox"/> Commercial (Taxable) <input type="checkbox"/> Residential (Non-taxable)
Sampled By Name:	Sampled By Signature:		No. of Samples in Shipment

Sterile, Sodium Thiosulfate Preserved Bottle Used: ☐ Biocide Used in Source (specify)

Public Water Supply Samples: ☐ Note: All results may automatically be reported to DOH if required by State.

Turn-Around-Time (TAT)

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 32\* Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☒ 1 Week ☐ 2 Week

## MICROBIOLOGY TEST CODES

M001 Air-O-Cell	M174 MoldSnap	M012 Pseudomonas aeruginosa (P/A***)	M115 Sewage Screen - Water (P/A***)
M030 MICRO 5	M032 Allergenco-D	M024 Pseudomonas aeruginosa (MFT*)	M116 Sewage Screen - Water (MPN**)
M041 Fungal Direct Examination		M015 Heterotrophic Plate Count	M117 Sewage Screen - Swab (P/A***)
M169 Pollen ID & Enumeration		M017 Total Coliform & E. Coli (Colilert P/A***)	M013 Sewage Screen - Swab (MFT*)
M280 Dust Characterization Level-1		M018 Total Coliform & E. Coli (MFT*)	M730 Methicillin-resistant Staph. aureus (MRSA)
M281 Dust Characterization Level-2		M114 Total Coliform & E. Coli Enumeration (Colilert MPN**)	M031 Rapid-growing non-TB Mycobacteria Detection & Enumeration
M005 Viable Fungi-Air Samples (Genus ID & Count)		M019 Fecal Coliform (MFT*)	M014 Endotoxin Analysis
M006 Viable Fungi-Air Samples (Includes Penicillium, Aspergillus, Cladosporium, Stachybotrys Species ID & Count)		M020 Fecal Streptococcus (MFT*)	M044 Group Allergen (Cat, Dog, Cockroach, Dust Mite)
M007 Culturable Fungi-Surface Samples (Genus ID & Count)		M029 Enterococci (MFT*)	M095 Bacteroides
M008 Culturable Fungi-Surface Samples (Includes Penicillium, Aspergillus, Cladosporium, Stachybotrys Species ID & Count)		M129 Enterococci (Enterolert P/A***)	Other - See Analytical Price Guide for Test Code
M009 Bacteria Culture Gram Stain & Count		M180 Real Time qPCR-ERMI 36 Panel	Legionella Analysis Please use EMSL Legionella COC
M010 Bacteria Count & ID - 3 Most Prominent		M025 Sewage Screen - Water (MFT*)	
M011 Bacteria Count & ID - 5 Most Prominent			

\*MFT= Membrane Filtration Technique

\*\*MPN = Most Probable Number

\*\*\*P/A = Presence/Absence

Sample #	Sample Location/Description	Sample Type (Matrix)	Potable / Non-Potable (Only for Water)	Test Code	Volume/Area	Date / Time Collected	Temperature (Lab Use Only)
Example: Sample 1	Kitchen	Water	Potable	M017	1,000 ml	1/1/2021 3:30pm	
A1	Basement RA ①	Air	—	M001	75L	0936 10/7	
A2	Theater ②	↓	—	↓	75L	0958	
A3	Mech ①	↓	—	↓	75L	0947	
A4	Classroom ③	↓	—	↓	75L	1239	
A5	Exterior - Row	↓	—	↓	75L	1455	
A6	Exterior - lot	↓	—	↓	75L	1506	

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Method of Shipment:	Client		Sample Condition Upon Receipt:
Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-34 Micro R13 03/02/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



No.	Time	Units	Component	Substrate	Side	Condition	Color	Results	PbC	Error
1	8/8/2022 13:17	cps							3.99	0
2	8/8/2022 13:20	mg / cm ^2	calibration					positive	1	0.1
3	8/8/2022 13:22	mg / cm ^2	calibration					positive	1.1	0.1
4	8/8/2022 13:23	mg / cm ^2	calibration					positive	1	0.1
5	8/8/2022 13:24	mg / cm ^2	wall	plaster	A	poor	white	negative	< LOD	0.03
6	8/8/2022 13:25	mg / cm ^2	wall	plaster	D	poor	white	negative	< LOD	0.03
7	8/8/2022 13:25	mg / cm ^2	ceiling	plaster	D	poor	white	negative	< LOD	0.03
8	8/8/2022 13:26	mg / cm ^2	window	wood	D	poor	white	positive	12.8	7.9
9	8/8/2022 13:26	mg / cm ^2	window	wood	D	poor	white	positive	10.2	4.8
10	8/8/2022 13:26	mg / cm ^2	baseboard	wood	A	poor	white	negative	< LOD	0.03
11	8/8/2022 13:27	mg / cm ^2	door	wood	B	poor	white	negative	< LOD	0.03
12	8/8/2022 13:28	mg / cm ^2	wall	plaster	B	poor	white	negative	< LOD	0.03
13	8/8/2022 13:29	mg / cm ^2	window	wood	B	poor	white	positive	< LOD	10.95
14	8/8/2022 13:29	mg / cm ^2	window	wood	B	poor	white	negative	< LOD	0.03
15	8/8/2022 13:29	mg / cm ^2	door	wood	B	poor	white	positive	7.9	2.6
16	8/8/2022 13:30	mg / cm ^2	baseboard	wood	A	poor	white	negative	< LOD	0.03
17	8/8/2022 13:30	mg / cm ^2	column	wood	A	poor	white	negative	< LOD	0.03
18	8/8/2022 13:31	mg / cm ^2	trim	wood	A	poor	white	negative	< LOD	0.03
19	8/8/2022 13:31	mg / cm ^2	door	wood	A	poor	white	negative	< LOD	0.03
20	8/8/2022 13:31	mg / cm ^2	door	wood	A	poor	white	negative	< LOD	0.03
21	8/8/2022 13:32	mg / cm ^2	wall	plaster	A	poor	white	negative	< LOD	0.03
22	8/8/2022 13:32	mg / cm ^2	ceiling	wood	A	poor	black	negative	< LOD	0.03
23	8/8/2022 13:33	mg / cm ^2	ceiling	wood	A	poor	black	positive	7.5	2.5
24	8/8/2022 13:33	mg / cm ^2	column	metal	A	poor	black	negative	< LOD	0.03
25	8/8/2022 13:34	mg / cm ^2	column	metal	A	poor	black	negative	< LOD	0.03
26	8/8/2022 13:34	mg / cm ^2	wall	drywall	A	poor	white	negative	< LOD	0.03
27	8/8/2022 13:35	mg / cm ^2	wall	wood	A	poor	brown	negative	0.06	0.03
28	8/8/2022 13:35	mg / cm ^2	door	wood	C	poor	white	negative	< LOD	0.03
29	8/8/2022 13:36	mg / cm ^2	door	wood	C	poor	white	negative	< LOD	0.03
30	8/8/2022 13:37	mg / cm ^2	wall	plaster	B	poor	green	negative	< LOD	0.03
31	8/8/2022 13:38	mg / cm ^2	cabinet	wood	B	intact	green	negative	< LOD	0.03
32	8/8/2022 13:38	mg / cm ^2	cabinet	wood	B	intact	white	negative	< LOD	0.03
33	8/8/2022 13:38	mg / cm ^2	door	wood	C	intact	white	positive	6.7	3.5
34	8/8/2022 13:39	mg / cm ^2	door	wood	C	intact	white	negative	< LOD	0.03
35	8/8/2022 13:39	mg / cm ^2	window	wood	C	intact	white	positive	12.5	5.3
36	8/8/2022 13:39	mg / cm ^2	wall	plaster	C	intact	white	negative	< LOD	0.03
37	8/8/2022 13:40	mg / cm ^2	door	wood	C	intact	white	positive	14.1	3.4
38	8/8/2022 13:40	mg / cm ^2	door	wood	C	intact	white	negative	< LOD	0.03
39	8/8/2022 13:40	mg / cm ^2	door	wood	D	intact	white	negative	< LOD	0.03
40	8/8/2022 13:40	mg / cm ^2	door	wood	D	intact	white	negative	< LOD	0.03
41	8/8/2022 13:40	mg / cm ^2	door	wood	D	intact	white	negative	< LOD	0.03
42	8/8/2022 13:41	mg / cm ^2	wall	plaster	B	intact	white	negative	< LOD	0.03

No.	Time	Units	Component	Substrate	Side	Condition	Color	Results	PbC	Error
43	8/8/2022 13:41	mg / cm ^2	baseboard	wood	C	intact	white	positive	8.1	3.8
44	8/8/2022 13:42	mg / cm ^2	floor	ceramic	A	intact	brown	negative	< LOD	0.03
45	8/8/2022 13:43	mg / cm ^2	door	wood	C	intact	white	negative	< LOD	0.03
46	8/8/2022 13:43	mg / cm ^2	door	metal	D	intact	tan	negative	< LOD	0.03
47	8/8/2022 13:43	mg / cm ^2	door	metal	D	intact	tan	negative	< LOD	0.03
48	8/8/2022 13:44	mg / cm ^2	wall	plaster	B	intact	white	negative	< LOD	0.03
49	8/8/2022 13:46	mg / cm ^2	door	wood	C	intact	red	positive	2.7	0.5
50	8/8/2022 13:46	mg / cm ^2	door	wood	A	intact	white	positive	11.6	5
51	8/8/2022 13:46	mg / cm ^2	door	wood	A	intact	white	negative	< LOD	0.03
52	8/8/2022 13:47	mg / cm ^2	door	wood	A	intact	white	negative	< LOD	0.03
53	8/8/2022 13:47	mg / cm ^2	door	wood	A	intact	white	negative	< LOD	1
54	8/8/2022 13:47	mg / cm ^2	door	wood	A	intact	yellow	negative	< LOD	0.03
55	8/8/2022 13:48	mg / cm ^2	wall	plaster	B	intact	yellow	negative	< LOD	0.03
56	8/8/2022 13:48	mg / cm ^2	wall	plaster	B	intact	blue	negative	0.04	0.02
57	8/8/2022 13:49	mg / cm ^2	floor	concrete	B	intact	green	negative	< LOD	0.03
58	8/8/2022 13:50	mg / cm ^2	wall	plaster	C	intact	white	negative	< LOD	0.03
59	8/8/2022 13:50	mg / cm ^2	door	wood	C	intact	white	positive	11.9	5.2
60	8/8/2022 13:50	mg / cm ^2	door	wood	C	intact	white	negative	< LOD	0.03
61	8/8/2022 13:51	mg / cm ^2	window	wood	B	intact	white	positive	10.2	2.9
62	8/8/2022 13:51	mg / cm ^2	window	wood	B	intact	white	positive	6.1	3
63	8/8/2022 13:51	mg / cm ^2	wall	drywall	A	intact	white	negative	< LOD	0.03
64	8/8/2022 13:52	mg / cm ^2	wall	drywall	B	intact	white	negative	< LOD	0.03
65	8/8/2022 13:52	mg / cm ^2	wall	drywall	C	intact	white	negative	< LOD	0.03
66	8/8/2022 13:53	mg / cm ^2	column	wood	C	intact	white	negative	< LOD	0.03
67	8/8/2022 13:53	mg / cm ^2	rail	wood	B	intact	brown	positive	9.6	2.8
68	8/8/2022 13:54	mg / cm ^2	baseboard	wood	C	intact	white	positive	10.7	3.1
69	8/8/2022 13:54	mg / cm ^2	floor	wood	C	intact	green	negative	< LOD	0.03
70	8/8/2022 13:59	mg / cm ^2	test	wood	C	intact	green	positive	1	0.1
71	8/8/2022 14:00	mg / cm ^2	test	wood	C	intact	green	positive	1	0.1
72	8/8/2022 14:01	mg / cm ^2	test	wood	C	intact	green	positive	1	0.1
73	8/9/2022 7:09	cps							3.78	0
74	8/9/2022 7:14	mg / cm ^2	test					positive	1	0.1
75	8/9/2022 7:15	mg / cm ^2	test					positive	1	0.1
76	8/9/2022 7:16	mg / cm ^2	test					positive	1	0.1
77	8/9/2022 7:24	mg / cm ^2	wall	plaster	A	intact	tan	negative	< LOD	0.75
78	8/9/2022 7:24	mg / cm ^2	door	wood	A	intact	brown	negative	< LOD	0.03
79	8/9/2022 7:24	mg / cm ^2	door	wood	A	intact	brown	positive	4	2
80	8/9/2022 7:25	mg / cm ^2	ceiling	plaster	A	intact	white	negative	< LOD	0.03
81	8/9/2022 7:25	mg / cm ^2	window	wood	A	intact	white	negative	< LOD	0.03
82	8/9/2022 7:26	mg / cm ^2	window	wood	A	intact	white	negative	< LOD	0.03
83	8/9/2022 7:26	mg / cm ^2	rail	metal	A	intact	black	negative	< LOD	0.03
84	8/9/2022 7:27	mg / cm ^2	window	wood	B	intact	brown	negative	< LOD	0.03

No.	Time	Units	Component	Substrate	Side	Condition	Color	Results	PbC	Error
85	8/9/2022 7:27	mg / cm ^2	rail	metal	C	intact	brown	negative	< LOD	0.03
86	8/9/2022 7:28	mg / cm ^2	ceiling	plaster	C	intact	white	negative	< LOD	0.9
87	8/9/2022 7:29	mg / cm ^2	trim	wood	A	intact	brown	negative	< LOD	0.06
88	8/9/2022 7:29	mg / cm ^2	trim	wood	A	intact	brown	negative	< LOD	0.08
89	8/9/2022 7:29	mg / cm ^2	window	wood	A	intact	brown	negative	< LOD	0.03
90	8/9/2022 7:30	mg / cm ^2	wall	wood	B	intact	brown	negative	< LOD	0.03
91	8/9/2022 7:31	mg / cm ^2	stage	wood	B	intact	brown	negative	< LOD	0.03
92	8/9/2022 7:31	mg / cm ^2	stage	wood	B	intact	black	negative	< LOD	0.03
93	8/9/2022 7:32	mg / cm ^2	wall	plaster	D	intact	tan	negative	< LOD	0.03
94	8/9/2022 7:32	mg / cm ^2	floor	wood	D	intact	brown	negative	< LOD	0.03
95	8/9/2022 7:33	mg / cm ^2	wall	plaster	C	intact	plaster	negative	< LOD	0.03
96	8/9/2022 7:34	mg / cm ^2	door	wood	C	intact	brown	negative	< LOD	0.03
97	8/9/2022 7:34	mg / cm ^2	door	wood	C	intact	brown	positive	9.2	4.3
98	8/9/2022 7:34	mg / cm ^2	door	wood	C	intact	brown	negative	< LOD	0.03
99	8/9/2022 7:34	mg / cm ^2	door	wood	C	intact	brown	negative	< LOD	0.03
100	8/9/2022 7:35	mg / cm ^2	wall	plaster	B	intact	tan	negative	< LOD	0.06
101	8/9/2022 7:35	mg / cm ^2	window	wood	B	intact	white	positive	9.2	4.3
102	8/9/2022 7:35	mg / cm ^2	window	wood	B	intact	white	positive	7.1	3.6
103	8/9/2022 7:36	mg / cm ^2	baseboard	wood	B	intact	white	positive	10.6	3.4
104	8/9/2022 7:36	mg / cm ^2	door	wood	B	intact	white	negative	< LOD	0.03
105	8/9/2022 7:36	mg / cm ^2	door	wood	B	intact	white	negative	< LOD	0.03
106	8/9/2022 7:37	mg / cm ^2	door	wood	C	intact	white	positive	11.5	3.7
107	8/9/2022 7:38	mg / cm ^2	wall	drywall	C	intact	tan	negative	< LOD	0.03
108	8/9/2022 7:43	mg / cm ^2	floor	ceramic	C	intact	tan	negative	< LOD	0.07
109	8/9/2022 7:44	mg / cm ^2	wall	plaster	D	intact	white	negative	< LOD	0.03
110	8/9/2022 7:44	mg / cm ^2	window	wood	D	intact	white	negative	< LOD	0.03
111	8/9/2022 7:45	mg / cm ^2	ceiling	plaster	D	intact	white	negative	< LOD	0.03
112	8/9/2022 7:45	mg / cm ^2	trim	wood	D	intact	white	positive	13.2	4
113	8/9/2022 7:46	mg / cm ^2	baseboard	wood	C	intact	white	negative	< LOD	0.03
114	8/9/2022 7:47	mg / cm ^2	baseboard	wood	C	intact	white	positive	4.4	1.2
115	8/9/2022 7:47	mg / cm ^2	floor	wood	C	intact	brown	negative	< LOD	0.03
116	8/9/2022 7:48	mg / cm ^2	cabinet	wood	C	intact	white	negative	< LOD	0.03
117	8/9/2022 7:48	mg / cm ^2	wall	plaster	C	intact	white	negative	0.03	0.02
118	8/9/2022 7:49	mg / cm ^2	door	wood	A	intact	white	negative	< LOD	0.03
119	8/9/2022 7:49	mg / cm ^2	door	wood	A	intact	white	positive	7.3	3.5
120	8/9/2022 7:50	mg / cm ^2	wall	plaster	A	intact	white	negative	< LOD	0.03
121	8/9/2022 7:50	mg / cm ^2	wall	plaster	A	intact	white	negative	< LOD	0.03
122	8/9/2022 7:50	mg / cm ^2	window	wood	C	intact	white	positive	8.4	3.9
123	8/9/2022 7:51	mg / cm ^2	window	wood	C	intact	white	positive	8.9	2.7
124	8/9/2022 7:51	mg / cm ^2	wall	plaster	C	intact	blue	negative	< LOD	0.03
125	8/9/2022 7:52	mg / cm ^2	wall	drywall	A	intact	pink	negative	< LOD	0.03
126	8/9/2022 7:52	mg / cm ^2	window	wood	D	intact	white	positive	4.4	2

No.	Time	Units	Component	Substrate	Side	Condition	Color	Results	PbC	Error
127	8/9/2022 7:53	mg / cm ^2	ceiling	wood	A	intact	white	positive	8.3	3.9
128	8/9/2022 7:53	mg / cm ^2	ceiling	wood	A	intact	white	positive	7.2	2.9
129	8/9/2022 7:55	mg / cm ^2	door	wood	C	intact	white	positive	< LOD	12.45
130	8/9/2022 7:55	mg / cm ^2	wall	plaster	C	intact	white	negative	< LOD	0.03
131	8/9/2022 7:55	mg / cm ^2	wall	plaster	C	intact	white	negative	0.3	0.14
132	8/9/2022 7:56	mg / cm ^2	rail	metal	C	intact	green	negative	< LOD	0.03
133	8/9/2022 7:56	mg / cm ^2	rail	wood	C	intact	brown	negative	< LOD	0.15
134	8/9/2022 7:57	mg / cm ^2	rail	wood	C	intact	white	positive	13.1	8.4
135	8/9/2022 7:58	mg / cm ^2	floor	ceramic	C	intact	green	negative	< LOD	0.03
136	8/9/2022 7:59	mg / cm ^2	door	wood	D	intact	blue	negative	< LOD	0.03
137	8/9/2022 7:59	mg / cm ^2	door	wood	D	intact	blue	negative	< LOD	0.03
138	8/9/2022 8:00	mg / cm ^2	rail	wood	D	intact	black	negative	< LOD	0.03
139	8/9/2022 8:00	mg / cm ^2	rail	wood	D	intact	black	negative	< LOD	0.03
140	8/9/2022 8:00	mg / cm ^2	window	wood	D	poor	white	negative	< LOD	0.03
141	8/9/2022 8:01	mg / cm ^2	window	wood	A	poor	white	positive	13.3	5.5
142	8/9/2022 8:02	mg / cm ^2	door	wood	A	poor	red	negative	< LOD	0.03
143	8/9/2022 8:03	mg / cm ^2	wall	concrete	A	poor	gray	negative	< LOD	0.03
144	8/9/2022 8:05	mg / cm ^2	stairs	concrete	A	poor	gray	negative	< LOD	0.03
145	8/9/2022 8:06	mg / cm ^2	stairs	concrete	A	poor	yellow	negative	< LOD	0.03
146	8/9/2022 8:06	mg / cm ^2	column	wood	A	poor	white	positive	1.2	0.2
147	8/9/2022 8:06	mg / cm ^2	column	wood	A	poor	white	positive	11.5	3.5
148	8/9/2022 8:07	mg / cm ^2	door	wood	A	poor	red	positive	4.2	2.2
149	8/9/2022 8:07	mg / cm ^2	door	wood	A	poor	white	positive	7.2	3.5
150	8/9/2022 8:08	mg / cm ^2	rail	metal	A	poor	black	positive	1.5	0.4
151	8/9/2022 8:08	mg / cm ^2	rail	metal	A	poor	black	negative	< LOD	0.03
152	8/9/2022 8:09	mg / cm ^2	rail	metal	A	poor	black	negative	< LOD	0.44
153	8/9/2022 8:09	mg / cm ^2	rail	metal	A	poor	green	negative	< LOD	0.03
154	8/9/2022 8:09	mg / cm ^2	rail	metal	A	poor	green	negative	< LOD	0.06
155	8/9/2022 8:10	mg / cm ^2	rail	metal	A	poor	green	negative	< LOD	0.2
156	8/9/2022 8:10	mg / cm ^2	window	wood	B	poor	white	positive	12.1	5.3
157	8/9/2022 8:10	mg / cm ^2	door	wood	B	poor	white	positive	< LOD	14.25
158	8/9/2022 8:11	mg / cm ^2	door	wood	B	poor	red	negative	< LOD	0.03
159	8/9/2022 8:12	mg / cm ^2	plate	wood	B	poor	black	negative	0.04	0.02
160	8/9/2022 8:12	mg / cm ^2	rail	wood	B	poor	black	negative	< LOD	0.2
161	8/9/2022 8:12	mg / cm ^2	rail	wood	B	poor	black	negative	< LOD	0.24
162	8/9/2022 8:13	mg / cm ^2	plate	wood	C	poor	black	negative	0.03	0.02
163	8/9/2022 8:14	mg / cm ^2	window	wood	C	poor	white	positive	3.4	2
164	8/9/2022 8:14	mg / cm ^2	window	wood	C	poor	white	positive	11.3	7.3
165	8/9/2022 8:14	mg / cm ^2	door	wood	C	poor	white	positive	< LOD	15
166	8/9/2022 8:15	mg / cm ^2	door	wood	C	poor	red	positive	3.6	1.6
167	8/9/2022 9:42	mg / cm ^2	wall	plaster	C	intact	white	negative	< LOD	0.03
168	8/9/2022 9:43	mg / cm ^2	wall	plaster	C	intact	white	negative	< LOD	0.03



No.	Time	Units	Component	Substrate	Side	Condition	Color	Results	PbC	Error
169	8/9/2022 9:44	mg / cm ^2	wall	plaster	C	intact	white	negative	< LOD	0.03
170	8/9/2022 9:44	mg / cm ^2	window	wood	C	intact	white	negative	< LOD	0.09
171	8/9/2022 9:45	mg / cm ^2	floor	concrete	C	intact	gray	negative	0.06	0.03
172	8/9/2022 9:55	mg / cm ^2	calibration					positive	1	0.1
173	8/9/2022 9:56	mg / cm ^2	calibration					positive	1.1	0.1
174	8/9/2022 9:57	mg / cm ^2	calibration					positive	1	0.1
175	8/9/2022 13:12	cps							3.91	0
176	8/9/2022 13:12	mg / cm ^2	calibration					positive	1.1	0.1
177	8/9/2022 13:15	mg / cm ^2	calibration					positive	1	0.1
178	8/9/2022 13:16	mg / cm ^2	calibration					positive	1	0.1
179	8/9/2022 13:50	mg / cm ^2	soffit					positive	17.1	9.4
180	8/9/2022 13:50	mg / cm ^2	trim					positive	< LOD	16.65
181	8/9/2022 13:50	mg / cm ^2	siding					positive	16	9.7
182	8/9/2022 14:30	mg / cm ^2	siding					positive	12.5	1.5
183	8/9/2022 14:32	mg / cm ^2	calibration					positive	1	0.1

< LOD = below level of detection

## APPENDIX C

### PERSONNEL QUALIFICATIONS



## NICKOLAUS DASANTOS

### Environmental Business Unit Manager

#### PROFESSIONAL EXPERIENCE

Mr. DaSantos began his career in 2003 is a Manager with NOVA's Environmental Group in Kennesaw, Georgia. Mr. DaSantos has experience as an environmental consultant performing all aspects of Phase I and Phase II Environmental Site Assessments (ESAs), Risk Hazard Assessments (RHAs), National Environmental Policy Act (NEPA) Assessments, Georgia Environmental Policy Act (GEPA) Assessments, Prospective Purchaser Corrective Action Plans (PPCAPs), Hazardous Site Response Act (HSRA) Notifications, Brownfield Applications, Compliance Status Reports (CSRs), Oversight for the assessment, excavation, removal and remediation of Underground Storage Tanks (USTs), and the installation of soil borings/groundwater monitoring wells, surface and groundwater sampling, soil sampling, multi-incremental soil sampling, stockpile soil sampling, Toxicity Characteristic Leaching Procedure (TCLP) sampling, Mold Assessments, Radon Assessments, Radon Mitigation Design, Radon Mitigation Installation Oversight, biocell construction/remediation, and Vapor Intrusion Assessments, Vapor Intrusion Mitigation (VIMS) Design, Vapor Intrusion Mitigation System Installation Oversight.

Mr. DaSantos is experienced in performing pre-renovation/pre-demolition asbestos inspections, lead based paint inspections, mold inspections, as well as large asbestos, lead based paint, and hazardous materials abatement oversight projects.

Mr. DaSantos is also experienced in assessment and remediation of hazardous waste sites impacted by chlorinated solvents, petroleum hydrocarbons, and other chemical substances released into the environment. Mr. DaSantos has knowledge of state and federal environmental programs and government regulations, including RCRA, HSRA, CERCLA, UST/LUST, AHERA, ASHARA, and OSHA.

#### Education:

BS, Natural Science, with emphasis in Geology, University of Alaska at Anchorage 2011

BA, Philosophy, University of Georgia 2000

Certificate of Environmental Ethics, University of Georgia, 2000

#### REPRESENTATIVE PROJECT EXPERIENCE

##### Utilities

Georgia Pacific Center Renovations, Atlanta, GA

##### Water/Wastewater

Roswell Groundwater Well Treatment, Roswell, GA

Riverside Drive WTP-Chemical Bldg, Gainesville, GA

##### Aviation

McCollum Airport Control Tower, Marietta, GA

Charlie Brown Airport Site, Atlanta, GA

Taxiway Extension-LaFayette Airport, LaFayette, GA

AJR| Existing FBO Building Site, Cornelia, GA

##### Transportation

DOT-74A Welcome Ctr - South (Lake Park), Lake Park, Georgia

GDOT MMIP 400 Exp Lanes PI#0001757, Kennesaw, Georgia

SR57@Kaolin Pipe Line 1.8 MI S of Gordon, Gordon, Georgia

GDOT I-285 Express Lanes PI #0001758, Kennesaw, Georgia

GDOT Muscogee SR85/ US27 PI0013926, Columbus, Georgia

GDOT I-285 @ I-20 W Interch PI #0013918, Various, Georgia

Delta Museum, Atlanta, Georgia

Henry County Roadway, McDonough, Georgia

US 280/SR 300 from E of Lake Blackshear, Cordele, Georgia



### **Certifications / Registrations:**

U.S. EPA Lead Inspector  
Certification No. 2006

Certified Niton XRF Operator  
ASHERA (Asbestos) Building  
Inspector/Asbestos in Buildings:  
Management Plan  
(Management Planner)  
Certificate No. 18557

Asbestos Abatement Designer  
Certificate No. 4320

Control of Respirable Crystalline  
Silica Dust

40-hour HAZWOPER Training

NC Asbestos Accreditation  
Inspector/Mgmt. Planner  
Certificate No. 122569

US 80 Bull River Bridge/Lazeratto  
Bridge, Tybee Island, Georgia

US 41 and US 411 Interchange,  
Cartersville, Georgia

SR10 from Ft. Gordon ACP/Gate 6  
to SR223, na, Georgia

Cobb Noonday Creek Trail  
Extension, Woodstock, Georgia

US27/SR1 Widening Turnberry Ln to  
SR315, na, Georgia

Cobb Rottenwood Creek Trail, Phase  
1, Marietta, Georgia

Atlanta Airport Travel Center Site,  
Atlanta, Georgia

Old Atlanta Road Improvements,  
Suwanee, Georgia

Andrew Jackson Highway Tract  
LBP/ACM Sur, Charlotte, North  
Carolina

Barnwell Rd at SR140 / Holcomb  
Bridge Rd, Johns Creek, Georgia

Bartow County Cass-White Road  
Phase II (, Cartersville, Georgia

SR141/N Druid Hills to Ashford  
Dunwoody, Brookhaven, Georgia

GDOT GEC MMIP SR 400 Express  
Lanes, v, Georgia

GDOT GEC MMIP I-285/I-20 East  
Interchange, Atlanta, Georgia

GDOT GEC MMIP I-285/I-20 E.  
Interchange, Kennesaw, Georgia

Cedarcrest Rd-Harmony Grove  
Church Rd, Dallas, Georgia

GDOT SR15 Sparta ByPass,  
Kennesaw, Georgia

SR 211 Widening, Braselton,  
Georgia

GDOT SR120 Abbotts Bridge Rd  
PI#721000, Kennesaw, Georgia

SR100 @ Clarks Creek  
PI#0013821, Kennesaw, Georgia

GDOT SR201 @ Tanyard Creek PI  
#0013816, Kennesaw, Georgia

GDOT SR156 @ Salacoa Creek NW  
of Ranger, Ranger, Georgia

Design Services for the McDonough  
Pkwy a, McDonough, Georgia

Multi-Use Path - State Rt. 3/US Hwy  
41, Atlanta, Georgia

Columbus Georgia Railroad Yard,  
Columbus, Georgia

CR742/Bass Road P.I. # 0014896,  
Kennesaw, Georgia

GDOT Clarke County SR 10 Loop PI  
0013715, Bogart, Georgia

Barrow County SR 82 PI 0013819,  
Bogart, Georgia

GDOT Muscogee SR22 Spur  
PI0014170, Columbus, Georgia

GDOT SR376 @Alapahoochee River  
PI0014073, Statenville, Georgia

GDOT SR37 @Ochlockonee River  
PI0014901, Moultrie, Georgia

GDOT SR3 CONN @ CR392 Upper  
Riverdale Rd, Riverdale, Georgia

GDOT I-985 @CS991/Elachee Road  
PI No. 0013922, Gainesville,  
Georgia

Buford Springs Connector  
Roundabout, Atlanta, Georgia

SR-81 at SR-162, Covington,  
Georgia

GDOT SR 1/SR 20/US 27 @ Etowah  
River & N, Rome, Georgia

Pacolet Milliken Diversion Pond  
Dredging, Drayton, South Carolina

### **Education**

LBP Operation & Maint. Plan (O&M  
Plan), Newnan, GA

Phase I ESA - 80 Jackson St.,  
Newnan, GA

4219 Etowah Drive SE, Acworth, GA  
Cy Grant Gymnasium, Clarksville, GA

Agnes Scott College - Rebekah Hall,  
Decatur, GA

Georgia Gwinnett College-C3  
Academy, Lawrenceville, GA

Pettit 095 Building, Atlanta, GA



UWG Substation Relocation, Carrollton, GA	KSU Abatement Oversight, Kennesaw, GA
J-269 UWG Biology Building #58 Site, Carrollton, GA	KSU English Building-Floor Tile/Mastic A, Kennesaw, GA
Oglethorpe University - Goslin Hall , Atlanta, GA	KSU English Building-Floor Tile/Mastic A, Kennesaw, GA
J-296 Academic Learning Center, Kennesaw, GA	KSU Howell Residence Hall Floor Tile Aba, Marietta, GA
Albany Residence Halls 3 & 4, #200A/200B, Albany, GA	J-235 Crosland Tower, Tunnel & Connector, Atlanta, GA
Albany Residence Halls 5 & 6, Freshman Dorm, Albany, GA	GSU - Chilled Water Utility Relocation, Atlanta, GA
Albany South & East Residence Halls, Albany, GA	Dalton State College-Sequoia Hall Renova Dalton Georgia
Darton Commons, Albany, GA	KSU English Building-Floor Tile/Mastic A, Kennesaw, GA
Darton Village South, Albany, GA	GTRI Cobb South Campus Site, Marietta, GA
Gordon Village Albany Georgia	Morehouse School of Medicine – Mixed Use, Atlanta, GA
Gordon Commons, Albany, GA	Rockefeller Hall, Atlanta, GA
Anderson Hall – Cochran, Albany, GA	MGSU Macon New Residence Hall Site, Macon, GA
Gateway Hall A&B – Cochran, Albany, GA	Wellstar Clinic, 3215 Campus Loop Road, Kennesaw, GA
Harris Hall - Cochran, Albany, GA	J-330 - University of West Georgia, Carrollton, GA
Regents Hall - Cochran, Albany, GA	KSU Center, 3333 Busbee Drive NW, Kennesaw, GA
Warrior Hall - Cochran, Albany, GA	GSU Window Restoration Monitoring, Atlanta, GA
Aviation Hall - Eastman, Albany, GA	KSU Marietta Campus English Building, Marietta, GA
Talmadge Hall - Cochran, Albany, GA	Oglethorpe University-Goodman Hall Renov, Atlanta, GA
Browning Hall - Cochran, Albany, GA	Kennesaw State University-Student Center, Kennesaw, GA
College Station - Macon, Albany, GA	KSU-New Housing Site(Kennesaw Campus) , Kennesaw, GA
KSU, Marietta, GA	Mike Cottrell College of Business UNG BO, Dahlonega, GA
KSU Library Building - Phase 2, Kennesaw, GA	Howell Hall, KSU - Marietta Campus, Marietta, GA
KSU Courtyard "A", Kennesaw, GA	Dalton State College Bandy Gym Student R, Dalton, GA
KSU Commons "B", Kennesaw, GA	
KSU Housing "C", Kennesaw, GA	
KSU Howell "D", Kennesaw, GA	
KSU Hornett Village "E", Kennesaw, GA	
KSU Dining Hall "E", Kennesaw, GA	
KSU Special Interest F.1, Kennesaw, GA	
KSU Community Center F.2, Kennesaw, GA	

Gwinnett Technical College Building 100, Lawrenceville, GA	Clairemont Elementary School, Decatur, GA
TCSG-236 Lanier Technical College, GA	Clayton Co Information Technology Bldg, Atlanta, GA
TCSG-334 North Georgia Technical College, Clarkesville, GA	King Springs Elementary School, Smyrna, GA
North Greenville University Wetlands, Tigerville, SC	Jonesboro High School Jonesboro Georgia
UNCC Student Counseling Center, Charlotte, NC	Winnona Park Elementary School, Decatur, GA
UNCC - Colvard 2000, Charlotte, NC	East Point Auditorium Site, East Point, GA
Dug Gap Elementary School Site, Dalton, GA	Laurens County Schools, East Dublin, GA
Fulton Science Academy Site, Alpharetta, GA	Goshen Valley Boys Ranch Addition, Waleska, GA
Valley Point Middle School Fieldhouse, Dalton, GA	Oconee County Elementary School, Watkinsville, GA
Jordan Hall, Atlanta, GA	Decatur City Schools AHERA, Decatur, GA
Renfroe Middle School, Decatur, GA	Ficquett Elementary School, Covington, GA
30.38 Acre Ada Street Site, Blue Ridge, GA	Atlanta Public Schools AHERA 3 Year, Atlanta, GA
Pine Log Elementary School - 500 Block, Rydal, GA	Renfroe Middle School, Decatur, GA
KIPP South Fulton Academy, East Point, GA	Former Blalock Elementary, Atlanta, GA
Renfroe Middle School Renovations, Decatur, GA	Jacobs Ladder School Expansion, Atlanta, GA
Decatur High School, Decatur, GA	City Schools of Decatur, Decatur, GA
ECLC Modular Classroom Site, Decatur, GA	Renfroe Middle School-Limited Indoor Air, Decatur, GA
Cherokee County Ball Ground Site, Canton, GA	Ficquett Elementary School, Newton, GA
Antioch Elementary School, Dalton, GA	240 Barber Road, Marietta, GA
Riverwood High School Site, Sandy Springs, GA	Upper Mill Creek High School, Buford, GA
Cartersville Primary School, Cartersville, GA	Chattahoochee High School, Johns Creek, GA
Decatur High School Renovations, Decatur, GA	Creekside High School, Fairburn, GA
KIPP Vision Primary School, Atlanta, GA	Northview High School, Johns Creek, GA
College Heights Early Childhood Learning, Decatur, GA	Decatur High School, Decatur, GA



St. Jude Catholic School, Atlanta,  
GA

Winnona Park Elementary School,  
Decatur, GA

Beaverdam Elementary School,  
Elberton, GA

Forest Park Middle School, Forest  
Park, GA

Morningside Elementary School,  
Atlanta, GA

New Canton High School, Canton,  
GA

Booker T Washington High School,  
Atlanta, GA

Atlanta Public Schools Legionella  
Sampling, Atlanta, GA

APS Legionella Sampling Retesting,  
Atlanta, GA

APS-Legionella Sampling Testing,  
Atlanta, GA

APS Legionella 2nd Event Re-  
Sampling, Atlanta, GA

APS-Limited Fungir Air Assessment,  
Atlanta, GA

City Schools of Decatur Legionella  
Sampling, Decatur, GA

Kipp South Fulton Academy,  
Atlanta, GA

City School of Decatur Limited  
Drinking, Decatur, GA

Existing Gymnasium – KIPP Soul  
Campus, Atlanta, GA

Anson Co. Schools AHERA 3 Yr Re-  
Insp, Wadesboro, NC

Anson County Proposed Middle  
School Site, Wadesboro, NC

# The Environmental Institute

## Nickolaus DaSantos

Social Security Number - XXX-XX-6996

Nova Engineering - 3900 Kennesaw 75 Parkway, Kennesaw, GA 30144

*Has completed 8 hours of coursework and satisfactorily  
passed an examination that meets all criteria required for  
EPA/AHERA/ASHARA (TSCA Title II) Approved Reaccreditation*

### *Asbestos in Buildings: Inspector & Management Planner Refresher*

August 16, 2022

Course Date

19051

Certificate Number

August 16, 2022

Examination Date

August 15, 2023

Expiration Date



  
Beverly B. Campbell - Course Director/Training Manager

(Approved by the ABIH Certification Maintenance Committee for 1 CM point - Approval #11-583)  
(FL Provider Registration #FL49-0001342 - Inspector Ref. Course #0002805 - Mgmt. Plan Ref. Course #0002806)  
TEI - 1395 S. Marietta Parkway SE - Building 100, Suite 124- Marietta, GA 30067  
Phone: 770-427-3600 - Website: [www.tei-atl.com](http://www.tei-atl.com)



---

# ***The Environmental Institute***

---

## ***Nickolaus DeSantos***

Social Security Number - XXX-XX-6996

Nova Engineering & Environmental, LLC - 3900 Kennesaw 75 Parkway, Suite 100, Kennesaw, GA 30144

*Has completed 8 hours of coursework and satisfactorily passed the hands-on skills assessment and an examination that meets training criteria in accordance with requirements for Lead-Based Paint Activities in Target Housing and Child-Occupied Facilities as regulated by Georgia DNR/EPD Chapter 391-3-24 and U. S. EPA TSCA 40 CFR Part 745 for the refresher course titled*

### ***Lead Inspector Refresher***

***December 15, 2021***

Course Date

***December 15, 2021***

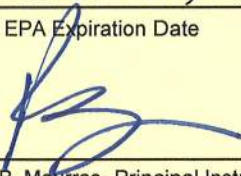
Examination Date

***December 14, 2023***

Georgia Expiration Date

***December 14, 2024***

EPA Expiration Date



Bonnie B. Maurras- Principal Instructor

***2006***

Certificate Number



(Approved by the ABIH Certification Maintenance Committee for 1 CM point - Approval #11-584)

(State of Georgia Accredited - Certification No. 20-0799-006SR - September 21, 1999)

TEI - 1395 S. Marietta Parkway SE - Building 100, Suite 124 - Marietta, GA 30067

Phone: 770-427-3600 - Website: [www.tei-atl.com](http://www.tei-atl.com)



## CURTIS MOSES

### Staff Professional

#### PROFESSIONAL EXPERIENCE

Mr. Moses is a Staff Professional with NOVA's Environmental Group. Mr. Moses has experience as an environmental professional providing various aspects of environmental consultation. His experience includes performing pre-renovation/pre-demolition asbestos inspections, lead based paint inspections, lead risk assessments, indoor air quality studies, microbial assessments, Phase I Site Assessments as well as large-scale asbestos and lead abatement oversight. He has worked in this industry since 2006.

#### Certifications /Registrations:

NIOSH 582, Certificate No.  
2260  
AHERA (Asbestos) Building  
Inspector, Certificate  
No.18965  
South Carolina (Asbestos)  
No. BI-00805  
North Carolina (Asbestos)  
No. 12831  
Alabama (Asbestos)  
No.  
AIN0516610139  
West Virginia  
(Asbestos) No.  
AI008032  
U.S. EPA Lead Risk Assessor  
Certificate No. 1849  
GA EPD Lead Risk  
Assessor Certificate No.  
70RA00715  
U.S. EPA Lead Inspector,  
Certificate No. 1969  
North Carolina Lead Risk  
Assessor No. 120265

#### REPRESENTATIVE PROJECT EXPERIENCE

##### Airport

Taxiway Extension-LaFayette Airport,  
LaFayette, GA  
AJR| Existing FBO Building Site,  
Cornelia, GA

##### Education

Read Hall Renovations & Additions,  
GA  
J-273 Atlanta Metropolitan State  
College, Atlanta, GA  
GA Tech Baseball Stadium  
Renovation, Atlanta, GA  
GT Chandler Stadium Bldg Envelope,  
Atlanta, GA  
NGTC Aquaponics/ Hydroponics Lab,  
Clarkesville, GA  
Atlanta's John Marshall Law School  
Parki, Atlanta, GA  
KSU English Building Asbestos  
Survey, GA  
KSU Library Building, GA  
Proposed Edgewood Ave. Student  
Housing, GA  
Gwinnett Tech. College Student  
Affairs, GA  
LBP Operation & Maint. Plan (O&M  
Plan), Newnan, GA  
Phase I ESA - 80 Jackson St.,  
Newnan, GA  
Cy Grant Gymnasium, Clarksville, GA  
Agnes Scott College - Rebekah Hall,  
Decatur, GA  
Norton Hall - Kennesaw State  
University, Marietta, GA

Pettit 095 Building, Atlanta, GA  
Kennesaw State University - Marietta  
Cam, Marietta, GA  
KSU Library Building - Phase 2,  
Kennesaw, GA  
J-269 UWG Biology Building #58 Site,  
Carrollton, GA  
Oglethorpe University - Goslin Hall  
Ren., Atlanta, GA  
New Housing - Macon, Macon, GA  
KSU Abatement Oversight,  
Kennesaw, GA  
Talmadge Hall - Cochran, Albany, GA  
Browning Hall - Cochran, Albany, GA  
KSU English Building-Floor  
Tile/Mastic A, Kennesaw, GA  
Dalton State College-Sequoia Hall  
Renova, Dalton, GA  
KSU - Marietta Campus - Building B  
Mecha, Marietta, GA  
GTRI Cobb South Campus Site,  
Marietta, GA  
Morehouse School of Medicine -  
Mixed Use, Atlanta, GA  
KSU Howell Residence Hall Floor Tile  
Aba, Marietta, GA  
Rockefeller Hall, Atlanta, GA  
Wellstar Clinic, 3215 Campus Loop  
Road, Kennesaw, GA  
J-330 - University of West GA - Col,  
Carrollton, GA  
KSU Center, 3333 Busbee Drive NW,  
Kennesaw, GA  
GSU Window Restoration Monitoring,  
Atlanta, GA



GA EPD Lead Inspector,  
Certificate No. 60INS00215  
Control of Respirable  
Crystalline Silica Dust  
Training 40 Hr. HAZWOPER,  
Certificate No.  
2749407 8 Hr.  
HAZWOPER  
Certificate No.  
1608045175860  
Radiation Safety  
and Operation,  
Certificate  
No. RS0038000001TmqA  
Geo-Seal Certified Inspector  
472018

120 E Memorial Drive, Dallas, GA  
KSU Marietta Campus English  
Building, Marietta, GA  
Oglethorpe University-Goodman Hall  
Renov, Atlanta, GA  
897 South Milledge Avenue Site,  
Athens, GA  
Kennesaw State University-Student  
Center, Kennesaw, GA  
Mike Cottrell College of Business UNG  
BO, Dahlonega, GA  
Howell Hall, KSU - Marietta Campus,  
Marietta, GA  
Dalton State College Bandy Gym  
Student R, Dalton, GA  
Gwinnett Technical College Building  
100 , Lawrenceville, GA  
1398 Reinhardt College Parkway  
Site, Canton, GA  
Howell Hall Abatement, Marietta, GA  
Select Dormitories-Oglethorpe  
University, Atlanta, GA  
TCSG-334 North GA Technical  
College, Clarkesville, GA  
Colvard North, Level 2000  
Renovation, NC  
UNCC Student Counseling Center,  
Charlotte, NC  
UNCC Sycamore Hall Renovation,  
Charlotte, NC  
UNCC - Colvard 2000, NC  
New Cherokee Middle School "C", GA  
St. Pius X High School, GA  
Woodland HS Renovations,  
Cartersville, GA  
AHERA 3 Year, GA  
Our Lady of the Assumption School,  
GA  
Immaculate Heart of Mary AHERA, GA  
Decatur Schools AHERA, GA  
St. John Neumann Catholic School,  
GA  
758 Scott Boulevard, GA  
Decatur High School, GA  
Lovett Field House, GA  
1083 Marietta Hwy Site, GA  
Marist School - Enviro Services, GA  
Norcross Cluster Elm. School, GA

International Community School,  
Decatur, GA  
Dug Gap Elementary School Site,  
Dalton, GA  
Fulton Science Academy Site,  
Alpharetta, GA  
Valley Point Middle School  
Fieldhouse, Dalton, GA  
Jordan Hall, Atlanta, GA  
100 College Street, Adairsville, GA  
AHERA 3-Year Re-Inspection/Update  
to O&M, Decatur, GA  
Renfroe Middle School, Decatur, GA  
Pine Log Elementary School - 500  
Block, Rydal, GA  
KIPP South Fulton Academy, East  
Point, GA  
Renfroe Middle School Renovations,  
Decatur, GA  
Decatur High School, Decatur, GA  
ECLC Modular Classroom Site,  
Decatur, GA  
740 Cameron Alexander Blvd. Site,  
Atlanta, GA  
222 Piedmont Confirmatory Limited  
ACM, Atlanta, GA  
569 Martin Luther King Jr. Site,  
Atlanta, GA  
Cartersville Primary School,  
Cartersville, GA  
Decatur High School Renovations,  
Decatur, GA  
KIPP Vision Primary School, Atlanta,  
GA  
College Heights Early Childhood  
Learning, Decatur, GA  
Clairemont Elementary School,  
Decatur, GA  
Heard Mixon Elementary School - 2nd  
Grad, Covington, GA  
Clayton Co Information Technology  
Bldg, Atlanta, GA  
Winnona Park Elementary School,  
Decatur, GA  
East Point Auditorium Site, East  
Point, GA  
Oconee County Elementary School,  
Watkinsville, GA

Decatur City Schools AHERA, Decatur, GA  
Ficquett Elementary School, Covington, GA  
Atlanta Public Schools AHERA 3 Year Re-I, Atlanta, GA  
Renfroe Middle School, Decatur, GA  
540 Kentucky Street, Decatur, GA  
Multiple Sites-Alpharetta & Cumming GA, Alpharetta, GA  
City Schools of Decatur, Decatur, GA  
Renfroe Middle School-Limited Indoor Air, Decatur, GA  
Ficquett Elementary School, Newton, GA  
Decatur High School, Decatur, GA  
St. Jude Catholic School, Atlanta, GA  
Winnona Park Elementary School, Decatur, GA  
5710 Namon Wallace Drive Site, Cumming, GA  
1890 Donald Lee Howell Parkway, Atlanta, GA  
Booker T Washington High School, Atlanta, GA  
Atlanta Public Schools Legionella Sampli, Atlanta, GA  
APS Legionella Sampling Retesting, Atlanta, GA  
APS-Legionella Sampling Testing, Atlanta, GA  
Old Hickory Flat Gym, Canton, GA  
APS Legionella 2nd Event Re-Sampling, Atlanta, GA  
APS-Limited Fungir Air Assessment, Atlanta, GA  
City Schools of Decatur Legionella Sampl, Decatur, GA  
City School of Decatur Limited Drinking, Decatur, GA  
Existing Gymnasium - KIPP Soul Campus, Atlanta, GA  
Anson Co. Schools AHERA 3 Yr Re-Insp, Wadesboro, NC  
Kiddie Academy Site - Harrisburg Ph. I, Harrisburg, NC

#### Government

U.S. Courthouse/Post Office - Columbus, Columbus, GA  
GS-P-03-14-AZ-0028 Peachtree Summit Fed, Atlanta, GA  
U.S. Courthouse/Post Office - Columbus, Columbus, GA  
Sam Nunn Federal Building PDS, Atlanta, GA  
Columbus Federal Courthouse Site, Columbus, GA  
2630 Tuttle Building, Atlanta, GA  
Paulding County - New GA Library, Dallas, GA  
Ponce City Market, GA  
1.7-Acre Chattin Drive Site, GA  
Environmental Assessment-Clayton County, GA  
130 East Main Street, GA  
Cobb County Water Laboratory, GA  
Cherokee County Fire Station #17, GA  
555 Battlecreek Road, GA  
3121 Norman Berry Drive Site, East Point, GA  
Forsyth County Courthouse Site, Cumming, GA  
11575 Maxwell Road Site, Roswell, GA  
CDBG HOME Lead Assessment, Canton, GA  
Bells Ferry Station #1, Acworth, GA  
55 Savannah Street Site, Newnan, GA  
956 Univeter Road Site, Canton, GA  
242 Hames Road Site, Canton, GA  
511 Chattin Drive Site, Canton, GA  
Fire Station 11 Site, Canton, GA  
Cherokee County Historic Courthouse Site, Canton, GA  
310 Technology Parkway, Peachtree Corners, GA  
1467 Reinhardt College Parkway Site, Canton, GA  
Jones Building Renovations, Canton, GA  
204 Main Street Site, Adairsville, GA  
Fire Station 24, Canton, GA  
East Pointe Fire Station Site, East Point, GA  
East Point City Hall Limited Phase II, East point, GA



Juvenile Justice Center-Building C-  
Offic, Cumming, GA  
Fire Station 2 and Fire Station 3,  
Canton, GA  
Forsyth County Detention Center,  
Cumming, GA  
Cobb County Fire Station 7, Marietta,  
GA  
Juvenile Justice Center Courthouse,  
Cumming, GA  
Cherokee County Sheriff's Office -  
IAQ, Cherokee, GA  
Fire Station 15, Canton, GA  
430 Commerce Park Drive, Marietta,  
GA  
Fire Station 15, Canton, GA  
Juvenile Justice Center, Cumming, GA  
1.10-Acre Namon Wallace Road Site,  
Cumming, GA  
25 Jefferson Street, Newnan, GA  
Animal Services Site, Cumming, GA  
Douglas County Courthouse  
Renovations, Douglasville, GA  
Six Fulton County Libraries, College  
Park, GA  
Dick's Creek Water Reclamation  
Facility, Cumming, GA  
Cherokee County Historical Society  
Site, Canton, GA  
East Point City Hall - Radon Testing,  
East Point, GA  
8485 West Courthouse Square Road  
Site, Douglasville, GA  
11565 Maxwell Road Site, Atlanta,  
GA  
5130 South Jett Road Site,  
Woodstock, GA  
Dick's Creek Water Reclamation  
Facility/, Suwanee, GA  
Nicholson Library New Annex,  
Nicholson, GA  
Forsyth County Juvenile Court Site,  
Cumming, GA  
2115 Chloe Road Sexton Hall,  
Cumming, GA  
57 E Broad Street, Newnan, GA  
Escambia County, AL Courthouse  
ENV, Brewton, AL

Fulton County Courthouse Facility,  
Atlanta, GA  
Lee Arrendale Prison- BE Condition  
Asses, Alto, GA  
GBA-180 2 Capitol Square  
Renovation, GA  
GBA-181 Capitol Plaza, GA  
Fernbank Museum of Natural History,  
Atlanta, GA  
GBA-184 GEMA & Homeland Security  
Agency, Atlanta, GA  
DCY-104 Central PDC Conversion,  
Caldwell, GA  
GDOT Building Capital Square, GA  
Asheville Federal Courthouse Site,  
Asheville, NC  
Metro State Prison Site, Atlanta, GA  
GDPS Buildings 26 & 29, Atlanta, GA  
GEMHSA Bldgs 1 and 2, Atlanta, GA  
Augusta State Medical Prison,  
Augusta, GA  
Pulaski State Prison, Hawkinsville, GA  
Washington State Prison Dental  
Clinic, Davisboro, GA  
Arnall Building Site, Milledgeville, GA  
Lee Arrendale Prison- Envelope  
Cond., Alto, GA  
Metro State Prison - Phase 2,  
Atlanta, GA

### Healthcare

South Dekalb Plaza-Humana,  
Decatur, GA  
Newnan Hospital Redevelopment, GA  
Dacula Medical Office Building, GA  
Hamilton Mill Medical Office Building,  
GA  
Newnan Hospital Redevelopment, GA  
Atlanta VA Specialty Outpatient Clinic,  
Decatur, VA  
1460 E. Victory Drive - ACM Survey,  
Savannah, GA  
113 Minis Avenue - ACM Survey,  
Garden City, GA  
475 Gateway Center Blvd. - ACM  
Survey, Brunswick, GA  
312 N. River Street - ACM Survey,  
Claxton, GA

1357 Hembree Road Site, Roswell, GA  
USRC Fitzgerald 0144 Site, Fitzgerald, GA  
1605 CHANTILY DRIVE SITE, Atlanta, GA  
Emory Winship at Midtown, Atlanta, GA  
Grady Health System Aldredge Bldg ENV, Atlanta, GA  
CDC Roybal East Parking Deck, Atlanta, GA  
Clinical Decision Unit Kennestone, Marietta, GA  
CDU Kennestone - Mastic Abatement, Marietta, GA  
400 S Pinetree Blvd-Southwestern State C, Thomasville, GA  
Woodbridge for Clinton Sr. Lvg. Asbestos, Clinton, NC  
Appalachian Regional HCS Expansion Ph. 1, Boone, NC

#### **Hotel**

North Decatur Road Properties, Atlanta, GA  
Piedmont Center - Suite 600, Atlanta, GA  
Stone Mountain Marriott Renovation, Stone mountain, GA

#### **Manufacturing**

Majestic Logistics Center-UPS, Atlanta, GA  
Glock Facility, GA  
Former Larkin Coils Inc. Facility, Atlanta, GA  
Stonewall Tell Road Site, Atlanta, GA  
Stonewall Tell Road Development Site, College Park, GA  
Lenny Boy Brewery - 3000 S. Tryon Asbest, Charlotte, NC  
1599 Memorial Drive, Atlanta, GA  
6300 Button Gwinnett Drive, Atlanta, GA  
Indian Trail Distribution Center, Lilburn, GA  
5000 Kristie Way, Chamblee, GA

#### **Multifamily/Mixed-Use**

Donald Lee Hollowell Parkway Project, Atlanta, GA  
Donald Lee Hollwell Project, Atlanta, GA  
Ponce City Market, GA  
8th and Spring St. Sewer Line Relocation, GA  
Ponce City Market - Parcel F, GA  
Oxford Encore (Special Inspections), GA  
250 East Ponce de Leon Parking Deck, Decatur, GA  
Peachtree & Stratford Development, Atlanta, GA  
563 Memorial Drive, Suites R1-R2-R3, Atlanta, GA  
39-Acre Collier Ridge Tract, Atlanta, GA  
ALTA Dairies, Atlanta, GA  
348 Mitchell Street - Environmental Serv, Atlanta, GA  
Memorial Drive Tract, Atlanta, GA  
20-Acre Halcyon Tract, Alpharetta, GA  
Canton Mills Apartments, Canton, GA  
Silica Dust Sampling-8 Hour TWA, Atlanta, GA  
Huff Road Tract, Atlanta, GA  
The Fields at Peachtree Corners Aptmen, Norcross, GA  
Anglier Avenue Tract, Atlanta, GA  
Canton Mill Apartments, Canton, GA  
1979 Mars Hill Road Site, Acworth, GA  
CPH No. W13775 WM XPS #86874 Gurley, AL, AL  
CPH No. W13766 WM XPS #86869 Grant, AL, AL  
CPH No. W13765 WM XPS #86870 Hokes Bluff, AL  
CPH No. W13805 WM XPS #87109 Campobello,, SC  
CPH No. W13776 WM XPS #86887 Gray Court, SC  
Ashley Place Apartments, Charlotte, NC

#### **Office**

425 Horizon Drive, GA

GA Pacific 27th Floor Supplemental ACM, GA	Environmental Consultation, Atlanta, GA
GA Pacific - Loading Dock Asbestos Sampl, Atlanta, GA	3750 Crown Road and 3849 Browns Mill Roa, Atlanta, GA
Grant Building CAPEX Roof Replacement, Atlanta, GA	The Candler Building Site, Atlanta, GA
Ponce City Market Service Building, GA	Equitable Building, Atlanta, GA
MailChimp at PCM, GA	300 & 306 Luckie Street, Atlanta, GA
Atlantic Yards, Atlanta, GA	Grant Building Site, Atlanta, GA
Project Fusion, Atlanta, GA	Silica Dust Sampling - Multiple Projects, Marietta, GA
Project Fusion-Holder, Atlanta, GA	Peachtree Center Renovations ACM, Atlanta, GA
Project Acorn, GA	The Candler Building ACM Roof Sampling, Atlanta, GA
730 Peachtree Street, GA	673 & 771 Juniper Street, Atlanta, GA
GA Pacific Center LBP, GA	58 Hospital Road, Newnan, GA
West Peachtree & 14th Street, GA	Midtown Heights Site, Atlanta, GA
Yancey Augusta, GA	One Baltimore Place, Atlanta, GA
1000 Circle 75 Building, GA	Larkin Building B, Atlanta, GA
2150 Parklake, GA	Confidential - Project Fusion, Atlanta, GA
133 Univeter Road, GA	48th Floor ACM Sampling, Atlanta, GA
Heritage Maclellan Apartments, LLC, Chattanooga, TN	Post Centennial Park Site, Atlanta, GA
Ponce City Market-7th Floor Air Testing, Atlanta, GA	Peachtree Summitt Federal Building, Atlanta, GA
359 East Paces Ferry, Atlanta, GA	1600 Dunwoody Club Drive Site, Atlanta, GA
2700 Delk Road Site, Marietta, GA	Lifecycle Building Center, Atlanta, GA
Zep Facility - 1360 Annex, Atlanta, GA	330 Auburn Avenue, Atlanta, GA
1776 Peachtree Street Site, Atlanta, GA	22 7th Street & 21 8th Street, Atlanta, GA
The Candler Building, Atlanta, GA	25th Floor Montag Server Room, Atlanta, GA
Proposed NCR Office Development Site, Atlanta, GA	GA Pacific Renovations Ph III & IV, Atlanta, GA
222 Piedmont Avenue NE, Atlanta, GA	1400 Lake Hearn Drive, Atlanta, GA
Barrett Business Center Site, Kennesaw, GA	3225 Cumberland Blvd Site, Atlanta, GA
CryoLife Renovations, Kennesaw, GA	760 Herlong Avenue Site, Rock Hill, SC
The Pointe at CommNet, Atlanta, GA	1900 Lake Park Drive, Smyrna, GA
6105 Peachtree Dunwoody Site, Sandy Springs, GA	GA Pacific-Supplemental Sampling, Atlanta, GA
1905 Scenic Highway Site, Snellville, GA	7 East Building, Newnan, GA
GA Pacific Center Renovations Phase, Atlanta, GA	Solomon and Martin Street Site, Atlanta, GA
SGPS-Suite 410 Expansion, Norcross, GA	1439 Peachtree Street, Atlanta, GA
Old Genuine Parts Building, Atlanta, GA	1330 West Peachtree Street Site, Atlanta, GA
1700 Commerce Drive, Atlanta, GA	

202 Milton Avenue SE, Atlanta, GA  
795 South Cobb Drive Expansion,  
Marietta, GA  
Waldo's Old Fourth Yard Project,  
Atlanta, GA  
1850 Parkway Place, Marietta, GA  
GMA Office Renovations, Atlanta, GA  
Promenade II - 18th Floor, Atlanta, GA  
550 Farr Building 2nd and 3rd Floor,  
Atlanta, GA  
1944 Piedmont Site, Atlanta, GA  
Docutab Site, Atlanta, GA  
Tuttle Building Hazardous Materials,  
Atlanta, GA  
27 8th Street, Atlanta, GA  
Stone Mountain 3rd Floor, Stone  
Mountain, GA  
75 Atlanta Street, Marietta, GA  
111 John Wesley Dobbs Avenue,  
Atlanta, GA  
Lake Mirror Road Site, Forest Park,  
GA  
1044 Booth Road Site Warner  
Robins, GA, Warner Robbins, GA  
1975 Lakeside Parkway, Tucker, GA  
748 Virginia Avenue, Hapeville, GA  
GA's Own IAQ, Atlanta, GA  
75 Bennett Street NW, Atlanta, GA  
170 Mitchell Street SW, Atlanta, GA  
Kennesaw First Baptist, Kennesaw,  
GA  
Hampton Inn Project, Atlanta, GA  
Concourse One - Mastic Sampling,  
Atlanta, GA  
2329 Cheshire Bridge Road Site,  
Atlanta, GA  
Tuttle Building Suite 233, Atlanta,  
GA  
Former Johns Creek Rite Aid Radon,  
Johns Creek, GA  
1111 Quintard Avenue Site, Anniston,  
NC  
2730 & 2732 Candler Road, Decatur,  
GA  
100 Peachtree Street, Atlanta, GA  
335A Academy Drive Site, Dallas, GA  
1170 Howell Mill Road Fungi, Atlanta,  
GA

Asbestos Containing Material  
Awareness T, Atlanta, GA  
Project Fusion, Atlanta, GA  
Sharon Towers Development  
Environmental, Charlotte, NC  
1451 Bryant Street Asbestos & Paint  
Surv, Charlotte, NC  
305 Doggett Street ENV, Charlotte,  
NC  
3811 Kimwell Drive ACM & LBP  
Survey, Winston-Salem, NC

### Recreational

Atlanta United Training Ground -  
Academy, Marietta, GA  
72 GA Avenue, Atlanta, GA  
Herodian Way 10-Acre Outparcel, GA  
Warren/Holyfield Boys and Girls Club,  
Atlanta, GA  
Harland Boys & Girls Club Site,  
Atlanta, GA  
Utopian Center for the Arts  
Subsurface E, Riverdale, GA  
3350 Gwinnett Place Drive Site,  
Duluth, GA

### Religious

St. John The Evangelist, Atlanta, GA  
St. JohnThe Evangelist, GA  
Central Baptist Church Additions,  
Newnan, GA  
St. Jude the Apostle AHERA, GA  
Saint Peter Claver Catholic School  
AHERA, GA  
St. Pius Catholic HS Ahera, GA  
Christ the King Catholic School, GA  
Beth Jacob of Atlanta, GA  
4900 Ivey Road - 9.33 Acre Lot,  
Acworth, GA  
First Baptist Church of Newnan  
Renovatio, Newnan, GA  
810 Joseph E. Boone Blvd. Site,  
Atlanta, GA  
Our Lady of the Mount Roman  
Catholic Chu, Lookout Mountain, GA  
Cathedral of St. Philip Renovations,  
Atlanta, GA  
Our Lady of the Mount Roman  
Catholic Chu, Lookout Mountain, GA



Cathedral of Christ the King  
Renovations, Atlanta, GA  
Cathedral of Christ the King  
Renovations, Atlanta, GA  
Westminster Presbyterian Church-  
Sanctuary, Atlanta, GA  
Cathedral of Christ the King  
Gymnasium, Atlanta, GA  
1255 Collier Road Site, Atlanta, GA  
Our Lady of Mount Roman Catholic  
Church, Lookout Mountain, GA  
St. Jude Catholic School, Atlanta, GA  
4280 Atlanta Road, Smyrna, GA  
AHERA 3 Year Re-Inspection/Our  
Lady of t, Atlanta, GA  
Interfaith Outreach Home Site,  
Doraville, GA  
Basilica of the Sacred Heart of Jesus  
Si, Atlanta, GA  
St. Jude AHERA 3 Year Re-Inspection,  
Atlanta, GA  
St. Jude the Apostle Catholic Church,  
Sandy Springs, GA  
St. John Neumann Catholic Church,  
GA  
Selwyn Ave Presbyterian Church -  
Asbesto, Charlotte, NC

#### **Residential**

Residential Tower & Parking Deck, GA  
198 Old Hull Road Site, Athens, GA  
3455 Old AL Road, GA  
6024 and 6038 Roswell Road, GA  
Mabry Road Tract, GA  
Oak Forest Circle Tract, GA  
Oakridge Plantation Tract, GA  
3rd and Peachtree, GA  
2420 Peachtree Road Site, GA  
6151 Avery Street, GA  
935 Confederate Avenue Bldg 18, GA  
1000 West Peachtree Street, Atlanta,  
GA  
12th Street Project, Atlanta, GA  
312 South Candler Street Site,  
Decatur, GA  
455 Coleman Drive Site, Roswell, GA  
Residential Site - Loxley, AL, Loxley,  
GA

824 Santa Fe Trail Site, Woodstock,  
GA  
33059 Residential Site, Loxley, AL  
1719 Scenic Road ACM, Snellville, GA  
Ponce De Leon Project, Atlanta, GA  
504 Thrasher Street, Norcross, GA  
Lenbrook Expansion, Atlanta, GA  
West Wieuca Road Tract, Atlanta, GA  
Central Baptist Church Additions,  
Newnan, GA  
701 and 711 North Price Road,  
Buford, GA  
Lidl 690 Holcomb Bridge Road,  
Roswell, GA  
2015 Memorial Tract Drive, Atlanta,  
GA  
Peachtree City Site, Peachtree City,  
GA  
Dilbeck Road Tract, Atlanta, GA  
Shepherd Center Share Apartments,  
Atlanta, GA  
1722 Harbin Road SW, Atlanta, GA  
Tatum Road Property, Palmetto, GA  
933 Kirkwood Avenue SE, Atlanta, GA  
Eleven Residential Structures,  
Austell, GA  
1072 West Peachtree Street, Atlanta,  
GA  
Hapeville Assemblage-60 Parcels,  
Hapeville, GA  
566 Church Street, Marietta, GA  
848 Tanner Road Site, Greenville, SC  
Hampton Court Apartments, GA  
Bradley Park Apartments, Cumming,  
GA  
Brookside Heights Apartments,  
Cumming, GA  
Greenville Downtown Lofts,  
Greenville, SC  
S. Suber Road Lead & Asbestos  
Survey, Greer, SC  
2444 Vail Avenue Pre-Demo,  
Charlotte, NC

#### **Retail**

Procter & Gamble, GA  
Laundry Commons, GA  
Tarrant City Family Dollar, AL  
Tri-Cities Plaza, GA

OxBlue Corporation Building  
Renovation, GA  
2865 Log Cabin Drive Site, GA  
Floor & Decor - Buford Store, Buford,  
GA  
Twelve Greater Atlanta Area Sites,  
Greater Atlanta Area, GA  
Stonecrest Mall - H & M, Lithonia, GA  
Stonecrest Mall Site, Lithonia, GA  
1599/1605 Memorial Drive Sites,  
DeKalb, GA  
3760 & 3780 South Cobb Drive Site,  
Smyrna, GA  
Franklin Plaza Shopping Center,  
Marietta, GA  
1402 Brevard Road Site Phase I ESA  
Updat, Asheville, NC  
Atlantic Station - T3 West Midtown,  
Atlanta, GA  
Atlantic Station - Block C, Atlanta, GA  
129 North Avenue, Atlanta, GA  
Atlantic Station Buildings 5 and 6  
Demo, Atlanta, GA  
Underground Atlanta Mold Sampling,  
Atlanta, GA  
NTB 930-Anderson, SC, Atlanta, GA  
10102 Main Street Site, Woodstock,  
GA  
Phase II - Alta Dairies, Atlanta, GA  
NTB - 885 Marathon Parkway,  
Lawrenceville, GA  
30 Ac. Johnston Road-Providence  
West Sit, Charlotte, NC  
Underground Atlanta Block 3 & 4,  
Atlanta, GA  
Presidential Markets Shopping  
Center Sui, Snellville, GA  
North Point-Former Babies R Us,  
Alpharetta, GA  
Atlanta Underground Supplemental  
Samplin, Atlanta, GA  
Atlanta Dairies Music Venue, Atlanta,  
GA  
Hapeville Theater, Hapeville, GA  
Ponce City Market ACM, Atlanta, GA  
Presidential Markets Shopping Ctr  
#110, Snellville, GA  
Sandtown Crossing, Atlanta, GA

Bo Ginn Aquarium Site, College Park,  
GA  
1020 Spring Street, Atlanta, GA  
Dirty Dogs Car Wash - Douglasville,  
Douglasville, GA  
Atlanta Mission Ethel Street Shelter,  
Atlanta, GA  
Presidential Markets Shopping  
Center-AMC, Snellville, GA  
Amsterdam Walk, Atlanta, GA  
5500 Frontage Road, Forest Park, GA  
Former Johns Creek Rite Aid Radon,  
Johns Creek, GA  
3201 Peachtree Corners Circle,  
Peachtree Corners, GA  
Frito-Lay Sites, Spanish fort, AL  
2772 Candler Road, Decatur, GA  
862 Harbins Road, Dacula, GA  
Lidl Norcross Jimmy Carter Blvd,  
Norcross, GA  
4285 Washington Road, Evans, GA  
2172 Lawrenceville Suwanee Road,  
Suwanee, GA  
Walmart Express - Dawson, GA ENV,  
GA  
Walmart Express - Pelham, GA ENV,  
GA  
Waldo Rood Site - Pet Palace, Cary,  
NC

### Transportation

DOT-74A Welcome Ctr - South(Lake  
Park), Lake Park, GA  
GDOT MMIP 400 Exp Lanes  
PI#0001757, Kennesaw, GA  
GDOT I-285 @ I-20 W Interch PI  
#0013918, Various, GA  
GDOT Master On-Call Drilling  
Contract, Carroll, GA  
GDOT I-285 @ I-20 West Interchange  
TO#4, Various, GA  
Delta Museum, GA  
Henry County Roadway, McDonough,  
GA  
Andrew Jackson Highway Tract  
LBP/ACM Sur, Charlotte, NC  
GDOT GEC MMIP I-285/I-20 E.  
Interchange, Kennesaw, GA



GDOT SR3 CONN @ CR392 Upper  
Riverdale Rd, Riverdale, GA  
US 17 Bridge Replmnt. over Edisto  
River, Columbia, SC  
SCDOT US1 Bridge Repl. over Shaws  
Creek, Charleston, SC

**Utilities**

GA Pacific Center Renovations,  
Atlanta, GA

**Water/Wastewater**

Riverside Drive WTP-Chemical Bldg,  
Gainesville, GA  
Oglethorpe University Residential  
Covid in Water Sampling  
Atlanta, GA

---

# ***The Environmental Institute***

---

---

## ***Curtis Moses***

---

Social Security Number - XXX-XX-9977

Nova - 3900 Kennesaw 75 Parkway, Kennesaw, GA 30144

*Has completed 4 hours of coursework and satisfactorily  
passed an examination that meets all criteria required for  
EPA/AHERA/ASHARA (TSCA Title II) Approved Reaccreditation*

### ***Asbestos in Buildings: Inspector Refresher***

May 17, 2022

Course Date

18965

Certificate Number

May 17, 2022

Examination Date

May 16, 2023

Expiration Date



Beverly B Campbell  
Beverly B. Campbell - Course Director/Training Manager

(Approved by the ABIH Certification Maintenance Committee for 1/2 CM point - Approval #11-577)

(Florida Provider Registration Number FL49-0001342 - Course #FL49-0002805)

TEI - 1395 S. Marietta Parkway SE - Building 100, Suite 124 - Marietta, GA 30067

Phone: 770-427-3600 - Website: [www.tei-atl.com](http://www.tei-atl.com)



# ***The Environmental Institute***

## ***Curtis Moses***

Social Security Number - 9977

NOVA Engineering & Environmental - 3900 Kennesaw 75 Parkway, Kennesaw, GA 30144

*Has completed 8 hours of coursework and satisfactorily passed the hands-on skills assessment and an examination that meets training criteria in accordance with requirements for Lead-Based Paint Activities in Target Housing and Child-Occupied Facilities as regulated by Georgia DNR/EPD Chapter 391-3-24 and U. S. EPA TSCA 40 CFR Part 745 for the refresher course titled*

### ***Lead Inspector Refresher***

*February 2, 2021*

Course Date

*1969*

Certificate Number

*February 2, 2021*

Examination Date

*February 1, 2023*

Georgia Expiration Date

*February 1, 2024*

EPA Expiration Date



Bonnie B. Maurras - Principal Instructor

David W. Hogue - Training Manager

(Approved by the ABIH Certification Maintenance Committee for 1 CM point - Approval #11-584)

TEI - 1395 S. Marietta Parkway SE - Building 100, Suite 124 - Marietta, GA 30067

Phone: 770-427-3600 - Website: [www.tei-atl.com](http://www.tei-atl.com)

(State of Georgia Accredited - Certification No. 20-0799-006SR - September 21, 1999)

## APPENDIX D

### QUALIFICATIONS OF CONCLUSIONS

## QUALIFICATIONS OF CONCLUSIONS

The findings and opinions presented are relative to the dates of our site work and should not be relied on to represent conditions at substantially later dates or locations not investigated.

The opinions included herein are based on information obtained during the study and our experience. If additional information becomes available which might impact our environmental conclusions, we request the opportunity to review the information, reassess the potential concerns and modify our opinions, if necessary.

Assessments may include interviews, a review of documents prepared by others or other secondary information sources. NOVA has not verified the provided information and has no responsibility for the accuracy or completeness of the information.

Although this assessment has attempted to identify the potential for environmental impacts to the subject property, potential sources of contamination may have escaped detection due to: (1) the limited scope of this assessment, (2) the inaccuracy of public records, (3) the presence of undetected or unreported environmental incidents, (4) inaccessible areas and/or (5) deliberate concealment of detrimental information. It was not the purpose of this study to determine the actual presence, degree or extent of contamination at the site, except as specifically described in the previous sections of this report. This would require additional exploratory work, including supplemental sampling and laboratory analysis.

This report is intended for the sole use of ***Cherokee County Board of Commissioners***. The scope of work performed during this study was developed for purposes specifically intended by ***Cherokee County Board of Commissioners*** and may not satisfy other user requirements. Use of this report or the findings and conclusions by others will be at the sole risk of the user.

Our professional services have been performed, our findings obtained, our conclusions derived and our recommendations prepared in accordance with generally accepted engineering practices and principles. This statement is in lieu of all other statements or warranties, either expressed or implied.

## **TASK 4**

### **LIFE SAFETY CONDITION SURVEY REPORT**



## **PROJECT INFORMATION**

The subject site consists of an approximately 12,200 square foot two-and-a-half story sprinklered brick and wood framed structure, constructed circa 1926. It consists of a ground, first, and second floor. The building includes a two-story portico supported by Corinthian order style columns. There is a steeple on the shingle roof, located near the south elevation. The building is currently occupied and is used as a church and arts center.

### **TASK 4: LIFE SAFETY CONDITION SURVEY**

Mr. Ron Alexander, CBO, Senior Building Inspector of NOVA has performed a visual condition survey of the facility and documented the existing conditions as it relates to life safety hazards and assessed ease of access for the subject building. NOVA provides the following determinations regarding the safety and security of the building and the properties' compliance with existing condition section of the life-safety codes. Determinations were made with respect to the nature of the occupancy, access, and egress movements, and from medical emergencies perspectives. Where applicable, determination mentioned herein are followed by applicable code requirements, intended to aid in corrective measure should these issues be addressed. Applicable codes referenced in the assessment include but not limited to 120-3-3 Rules and Regulations for the State Minimum Fire Safety Standards (as mandated by Ga Code Title 25-2-12), NFPA 101 Life Safety Code, the International Fire Code (IFC), and other applicable Ga. State adopted codes. A written report with conceptual recommendations for compliance is provided. Select photographs are also be included. The inspection identified several life safety concerns with the facility, and those items have been documented below:

#### **Exterior Conditions**

There are several conditions noted with the exterior of the structure and surrounding grounds. At the front entry of the building, there is a wide concrete/masonry staircase leading upwards to the main floor of the structure, with two smaller masonry stairways leading downward on either side of the larger staircase. There is approximate 8ft wide level walkway at the bottom of the main entry, and another set of stairs leading downward to the adjacent drive (no landing at street). The left side of the structure has two sets of stairs. One of masonry construction with metal rails serving the main floor, and the second constructed of steel with a landing at mid height serving the second floor. Along the back side of the structure there is small set of stairs leading downward to the ground level. The right side of the structure has another set of steps with an adjacent wheelchair ramp. The current condition of these ingress and egress points poses several life safety concerns. These conditions are individually addressed below:

- The larger staircase on the front has several areas where the concrete has delaminated and spalled in several locations, with large cracks in other areas. This situation poses a tripping hazard in these areas. The main staircase was also noted to have inconsistent riser heights at the top and bottom of the flight which also poses a tripping hazard. Handrail on the larger

staircase appears sound, however the current configuration does not conform to current codes. Corrective measures should be in accordance with NFPA 101 chapters 7 and 43.

- The two smaller stairs on either side of the front entry have a few concerns as well. The right and left stairs are missing handrails, and the right side does not have a landing at the top of the stairs. Corrective measures should be in accordance with NFPA 101 chapters 7 and 43.
- Lower stairs adjacent to the street have concerns as well. The handrail configuration does not meet current standards and the landing width at the bottom of the stairs does not meet current code. Corrective measures should be in accordance with NFPA 101 chapters 7 and 43.
- Egress from the left side masonry stairs is obstructed at the top and bottom of the stairs by columns which support the adjacent steel stairs. The concrete stairs have deteriorated to a point of spalls and cracking causing a tripping hazard. Corrective measures should be in accordance with NFPA 101 chapters 7 and 43.
- The steel stairs on the left side are obstructed at the bottom of the flight by a rain leader crossing the egress path. Paint is chipping and peeling off stairs and rails which can also cause a tripping hazard, especially during snow and ice conditions. Corrective measures should be in accordance with NFPA 101 chapters 7 and 43.
- Both the left side exit doors lead out to a step. Corrective measures should be in accordance with NFPA 101 chapters 7 and 43.
- Neither of the egress components on the left side have handrails or guardrails. Guardrails are missing on all areas, and handrails do not comply with current standards. Corrective measures should be in accordance with NFPA 101 chapters 7 and 43.
- There is unprotected opening along the egress path as well. In fire condition this could result in the path being blocked by fire progressing through the adjacent windows. Corrective measures should be in accordance with NFPA 101 chapter 7.
- The small stair on the rear side has a few concerns as well. The staircase is missing handrails. There is no landing at the top of the stairs. Awning is obstructing head clearance at the top of the stairs. A rain leader obstructing egress path at top of stairs. Door does not meet egress requirements. And there are unprotected openings in the path of egress. Corrective measures should be in accordance with NFPA 101 chapters 7 and 43.

## **Interior Conditions**

The first floor is currently an assembly occupancy, with accessory use rooms behind the stage area (labeled Green Room). The second floor is used as classrooms which also appear to be in support of the primary use and has a mechanical room on the rear left. The ground floor has one large open space, two-bathroom areas, two mechanical rooms, an elevator equipment room, utility closets and a couple storage space in the rear. The ground floor appeared to unoccupied at the time of inspection. Given the open area of the ground floor, the overall current use of the structure is considered an assembly occupancy. All three levels are served by one staircase in the right rear and one elevator off the staircase area. There were several life safety concerns noted with the interior of the existing structure. The following is a list concerns noted during the inspection:

- The elevator inspection card was not current.

- Mechanical room off elevator area contains gas fired appliances. There was no combustion air source noted in the room. Combustion air shall be sized and applied in accordance with the International Mechanical Code.
- No record of recent fire alarm and detection system testing noted for the building., Alarm and detection system shall be periodically tested in accordance with NFPA 72, and the IFC.
- No area smoke detectors noted in mechanical rooms. Smoke detectors should be installed and maintained in accordance with NFPA 101.
- Return air is being drawn from mechanical room off back rear corner of lower level as an open plenum. There are openings in this room leading to areas not served by this unit. Return air plenums should be installed and maintained in accordance with the international Mechanical Code, with respect to applicable section of the International Energy Conservation Code.
- Kitchen counter receptacles in lower level not GFCI protected. GFCI protected receptacles should be in accordance with the NFPA 70.
- No record of alarm testing. Periodic testing should be in accordance with requirements of NFPA 72,
- Main electrical room is sprinklered. Enclosure/equipment is not shield or weather resistant. Electrical equipment should be protected in accordance with NFPA 70 (National Electrical Code) article 110 to protect from sprinkler system activation.
- Main staircase in rear of building is not enclosed and is open to three levels. Staircases should be in accordance with all applicable section of the NFPA 101 as it relates to applicable primary and secondary means of egress.
- Main staircase has no guardrails or handrails. Corrective measures should be in accordance with NFPA 101 chapters 7 and 43.
- Stage curtain does not appear to be noncombustible materials. Stage curtain should be in accordance with applicable sections of the NFPA 101.
- Rear stage door has no landing in front of door. Corrective measures should be in accordance with NFPA 101 chapters 7 and 43.
- Drop cords stretched across stage floor.
- Sprinkler heads obstructed by ducts at ceiling in green room. Sprinkler head placement should be in accordance with NFPA 13.
- Panel in green room does not have cover. Electrical enclosures should be in accordance with the National Electrical code.
- No direction sign in corridor off green room. No exit sign above green room exit door. Exit should be marked in accordance with chapter 7 of the NFPA 101.
- Exit sign not working in main area below balcony.
- Head clearance is obstructed at both balcony staircase landings. Staircases should be in accordance with NFPA 101.
- No handrails serving balcony staircases. Guardrail across front of balcony seating not secure. Corrective measures should be in accordance with NFPA 101 chapters 7 and 43.
- Emergency light over staircase at second floor hanging loose.
- Sprinkler head box missing wrench.
- Window locks missing on several of the windows throughout the structure.

- Classroom receptacles missing protective caps, Daycare counter missing GFCI receptacles, and other above counter receptacles not GFCI protected. Receptacles should be in accordance with NFPA 70.
- Panel blocked in second floor mechanical room. Clearance should be maintained in front of panel boards in accordance with NFPA 70.

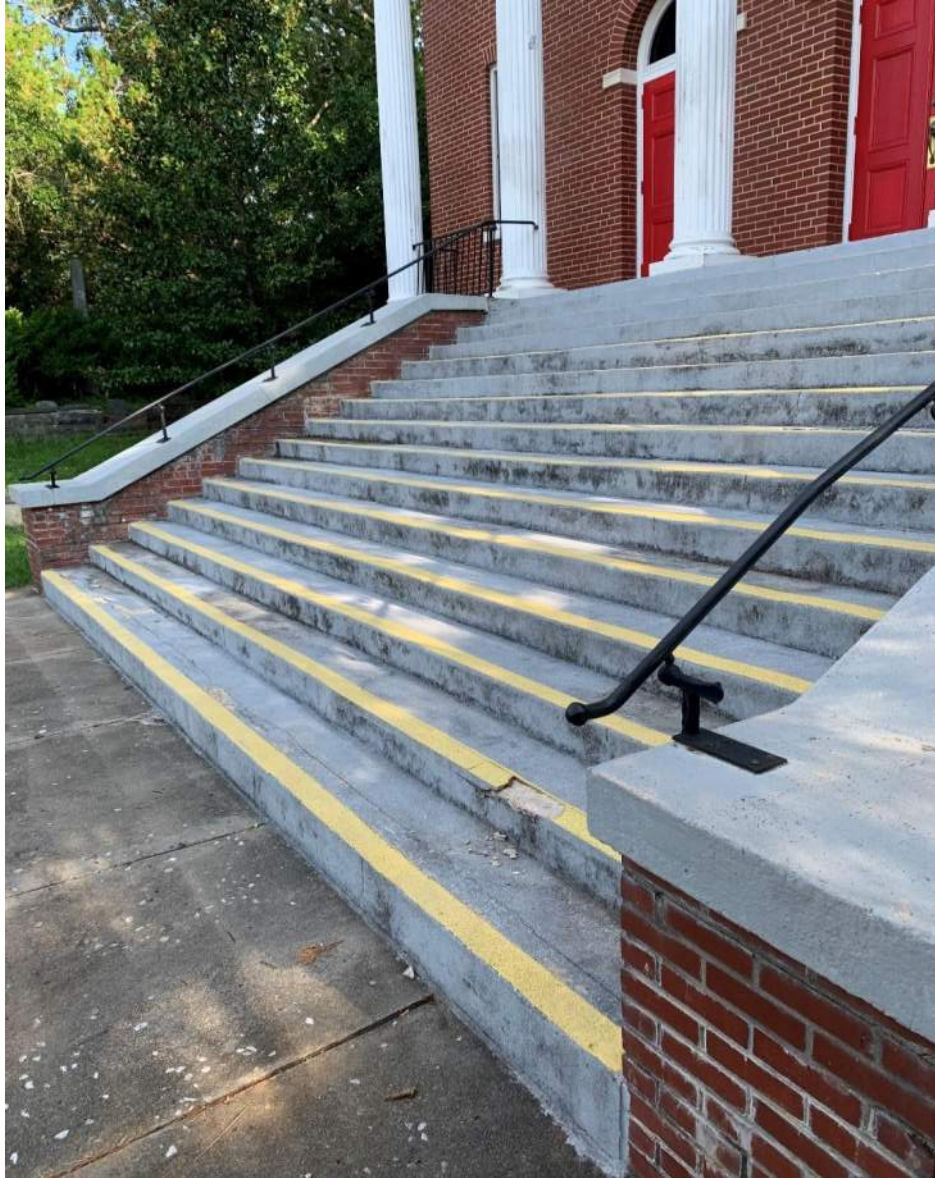


Photo 1:Front Entry Stairs





Photo 2: Front Ground Floor Stairs Left Side



Photo 3: Lower Stairs at Street





Photo 4: Left Side Exit Staircases



Photo 5: Left Side Concrete/Brick Masonry Stairs





Photo 6: Rear Stairs to Ground Level



Photo 7: Right Side Entrance





Photo 8: Rear Right Mechanical Room



Photo 9: Ground Level Left Rear Mechanical Room





Photo 10: Countertop Receptacles



Photo 11: Ground Floor Electrical Room



Photo 12: Sprinkler Head Over Electrical



Photo 13: Ground Floor Gang Bathroom Doors





Photo 14: Main Interior Staircase



Photo 15: Main Staircase